

RESURVEY
TEXAS - NEW MEXICO
BOUNDARY
1911

Texas

Dated July 10, 1913

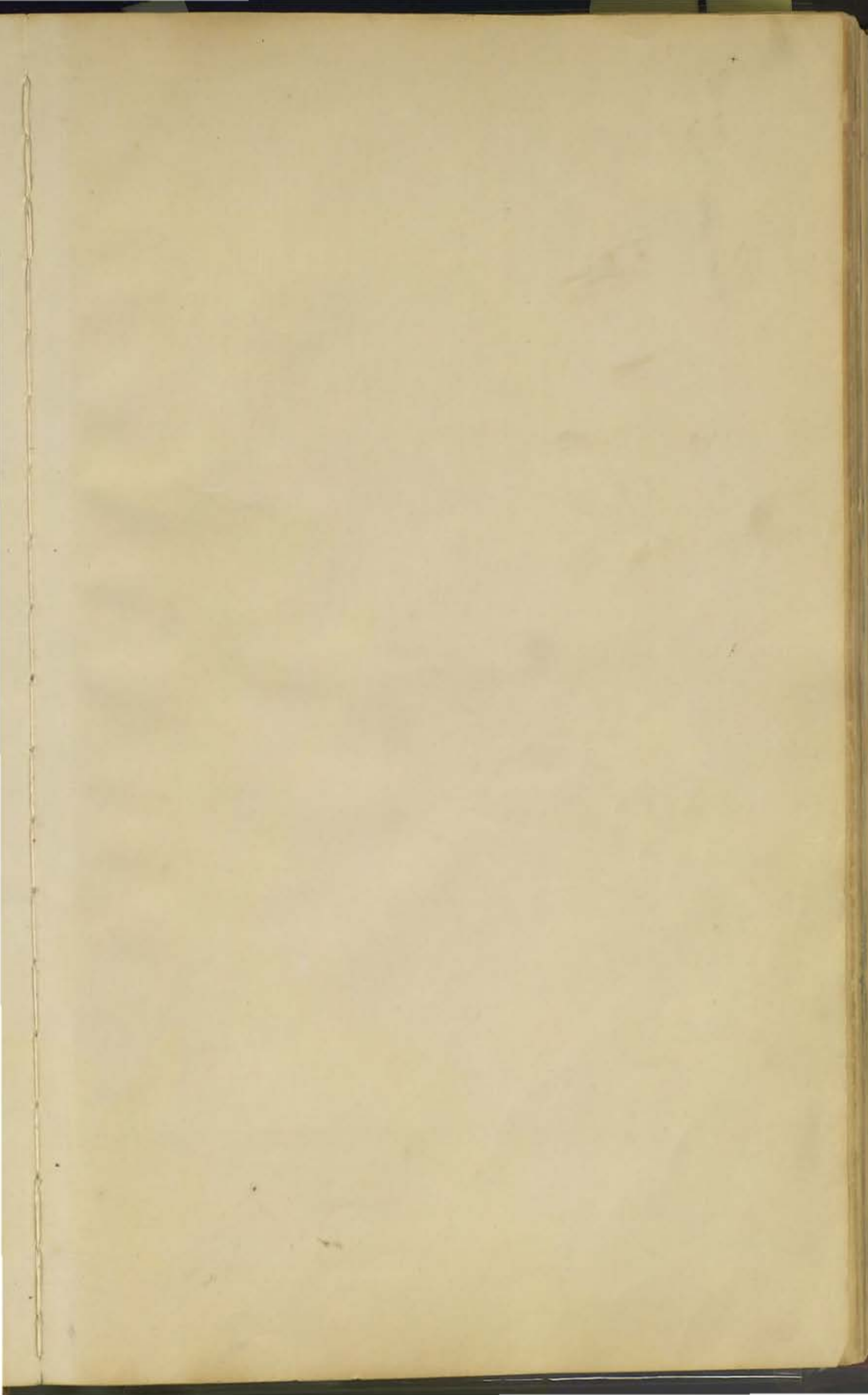
Austin Texas J. S. Robison
Commissioner Genl. Land Office

See S. B. No 478 - Chapst. 24 Act. May 27/31 ³⁵⁸
Page 478 ³⁵⁰ Special Laws, Reg. Session 42nd
Legislature - extending boundaries of counties to
state line -

FOR REMONUMENTATION OF NW CORNER
OF TEXAS SEE FIELD NOTES OF 4-24-1991
IN ITEM 5.1, SHELF 4, METAL BOOK SHELVES 10-20-1999 dhw/ghl

Number # 81686

For Revised Photocopy of this volume, see El Paso ~~Public~~ (H)



MARLIN SURVEYOR DIES
MARLIN, April 7.—(7)—E. S. Hunnicutt, 78, land surveyor, died at his Marlin home Saturday. He was a central figure in the state re-survey of capitol syndicate lands years ago.

AUSTIN STATESMAN
April 10/32

R E P O R T
Upon the Resurvey ^{and location} of the

B O U N D A R Y L I N E

Between the
STATES OF TEXAS AND NEW MEXICO

Same being

The One Hundred and Third Meridian West from Greenwich from parallel of latitude thirty-six degrees thirty minutes north to parallel of latitude thirty-two degrees north, and the thirty-second parallel from said One Hundred and Third Meridian to the Rio Grande; as originally surveyed by John H. Clark in Eighteen Hundred and Fifty-nine and Sixty.

FRANCIS M. COCKRELL, Commissioner on Part of United States.

SAM R. SCOTT, Commissioner on Part of Texas.

G. D. D. KIRKPATRICK, U.S. Surveyor & As'st Supervisor,

LEE S. MILLER, U. S. Surveyor, ^{and Robert S. Humeant}

Surveyors for Texas, Surveyors for the Commission.

Survey commenced, April 17, 1911.

Survey completed, September 26, 1911.

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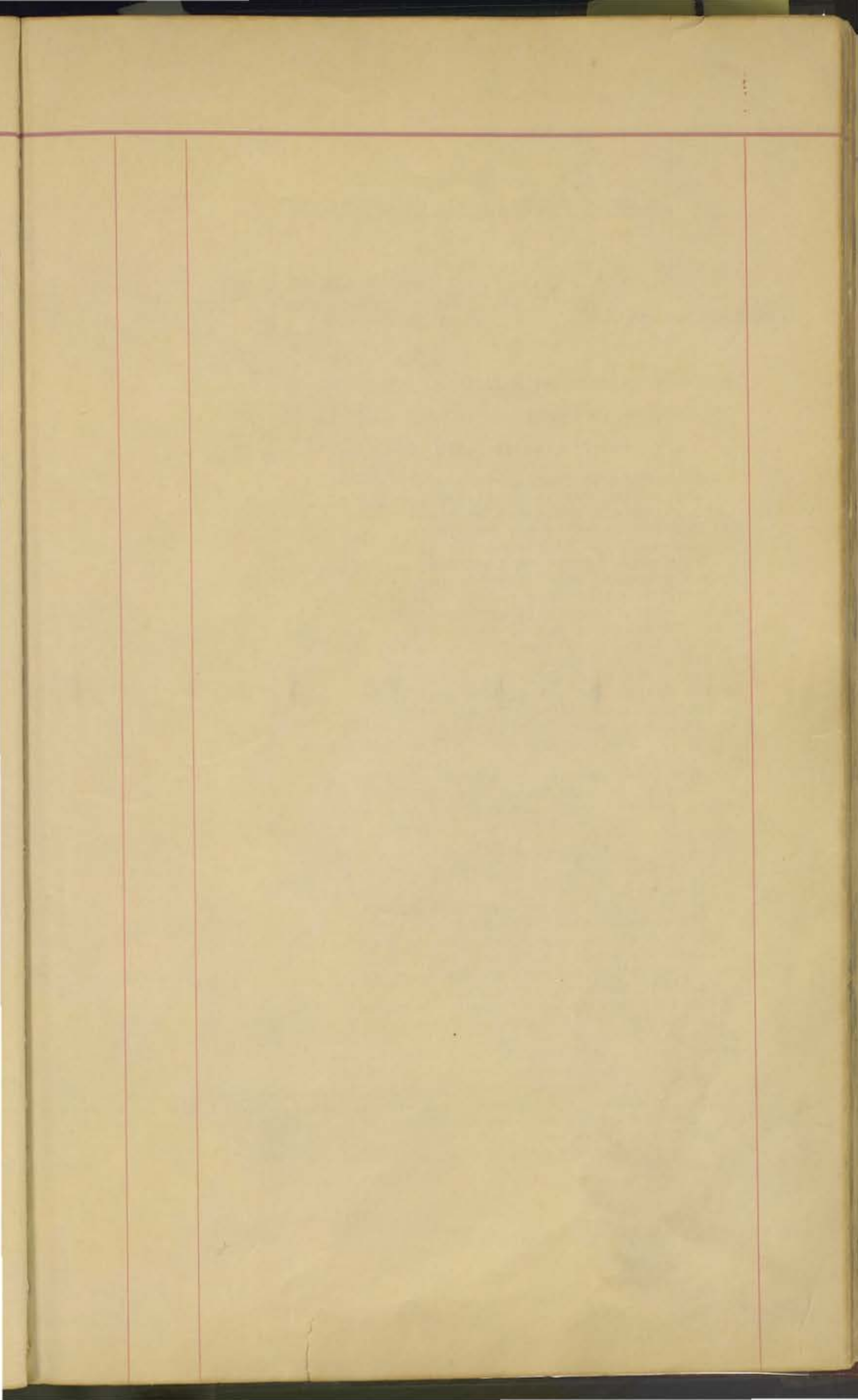
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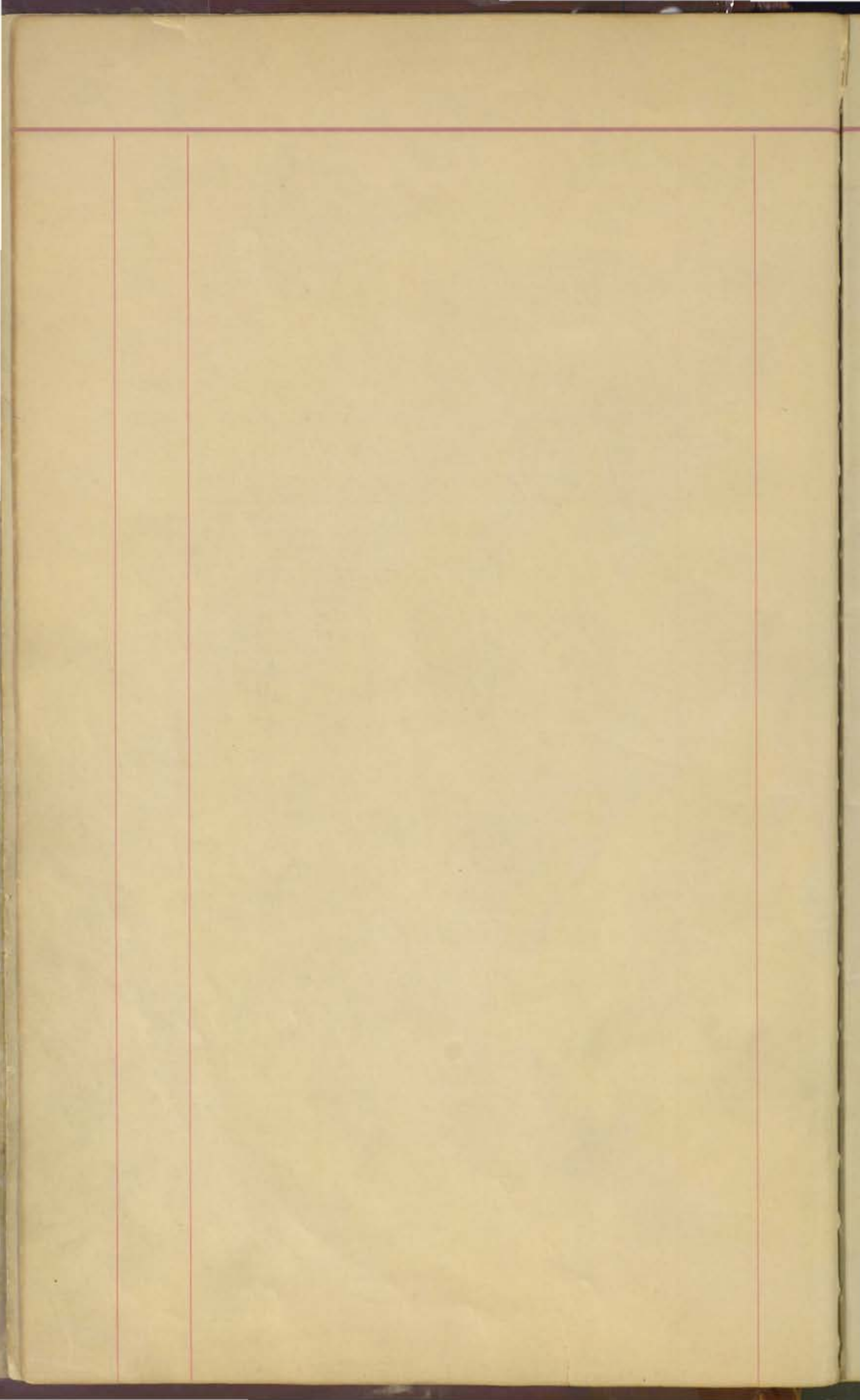
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RESURVEY TEXAS AND NEW MEXICO BOUNDARY.

Hon. Fred Dennett,
Commissioner, General Land Office,
Washington, D. C.

*and O. B. Colquitt
Governor of Texas.*

Sir:

The "Joint Resolution reaffirming boundary line between Texas and the Territory of New Mexico" approved February 16, 1911, is as follows:

Whereas the constitutional convention recently held in the Territory of New Mexico submitted for acceptance or rejection the draft of a proposed constitution for the State of New Mexico, to be voted upon by the voters of said proposed new State on the twenty-first day of January, nineteen hundred and eleven, which proposed constitution contains a clause attempting to annul and set aside the boundary lines heretofore legally run, marked, established, and ratified by the United States and the State of Texas, said lines between the Territory of New Mexico and the State of Texas having been run by John H. Clark, the boundary commissioner acting for the United States in eighteen hundred and fifty-nine and eighteen hundred and sixty, the said lines being now known and recognized as the Clark lines; and

Whereas the United States and the State of Texas have patented land based upon the Clark lines as the boundary between Texas and the Territory of New Mexico: Therefore be it

RESOLVED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE UNITED STATES OF AMERICA IN CONGRESS ASSEMBLED, That any provision of said proposed constitution that in any way tends to annul or change the boundary lines between the State of Texas and the Territory or State of New Mexico shall be of no force or effect, but shall be construed so as not in any way to change, affect, or alter the said boundary lines known as the Clark lines and heretofore run and marked by him as a commissioner on the part of the United States and concurred in by the State of Texas, and the former ratification of said Clark lines by the United States by the Act approved March third, eighteen hundred and ninety-one, and the State of Texas by the joint resolution passed March twenty-fifth, eighteen hundred and ninety-one, shall be held and deemed a conclusive location and settlement of said boundary lines.

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SEC. 2. That the President of the United States is hereby authorized, in conjunction with the State of Texas, to reestablish and re-mark the boundary lines heretofore established and marked by John H. Clark between New Mexico and the State of Texas, and for such purpose he is hereby authorized and empowered to appoint a commissioner, who, in conjunction with such commissioner as may be appointed by and on behalf of the State of Texas for the same purpose, shall re-mark the boundary between the Territory of New Mexico and the State of Texas as follows: Beginning at the point where the one hundred and third degree of longitude west from Greenwich intersects the parallel of thirty-six degrees and thirty minutes north latitude, as determined and fixed by John H. Clark, the commissioner on the part of the United States in the years eighteen hundred and fifty-nine and eighteen hundred and sixty; thence south with the line run by said Clark for the said one hundred and third degree of longitude to the thirty-second parallel of north latitude to the point marked by said Clark as the southeast corner of New Mexico; and thence west with the thirty-second degree of north latitude as determined by said Clark to the Rio Grande.

SEC. 3. That the part of the line run and marked by monuments along the thirty-second parallel of north latitude and that part of the line marked by monuments along the one hundred and third degree of longitude west from Greenwich, the same being the east and west and north and south lines between Texas and New Mexico, and run by authority of the Act of Congress approved June fifth, eighteen hundred and fifty-eight, and known as the Clark lines, which said lines as run by said Clark have been confirmed, as aforesaid, by the Act of Congress approved March third, eighteen hundred and ninety-one, and the joint resolution of the Legislature of Texas passed March twenty-fifth, eighteen hundred and ninety-one, shall remain the true boundary lines of Texas and New Mexico: PROVIDED, That it shall be the duty of the commissioners appointed under this Act to re-mark said old Clark monuments and line where they can be found and identified by the original monuments now on the ground, or where monuments are now missing or the lines can not be found but their original position can be shown by competent parol evidence or by the topographic maps or field notes made by said Clark, the monuments so found or their position so identified shall determine the true position and course of the boundary lines as marked by said Clark to the full extent of the survey made by him, and where no survey was actually originally made on said lines it shall be the duty of the said commissioners to run a straight line between the nearest points determined by the Clark map, field notes, and survey, and when said straight lines have been so run, marked, and agreed upon by the commissioners they shall thereafter form the true boundary lines.

SEC. 4. That the sum of twenty thousand dollars, or so much thereof as may be necessary, be, and the same is hereby, appropriated, out of any

money in the Treasury not otherwise appropriated, to carry out the purpose of this Act: PROVIDED, That the person or persons appointed and employed on the part of the State of Texas shall be paid by the said State.

Approved, February 16, 1911.

In order to carry out the provisions of said law the President caused to be issued the following instructions:

"I have the honor to transmit herewith, for your signature, the appointment of Francis M. Cockrell as Commissioner to survey and mark the boundary line between the State of Texas and Territory of New Mexico, for which provision, including appropriation for expense, was made in Senate Joint Resolution No. 124, approved February 16, 1911.

Under the direction of the two Commissioners authorized by the Resolution, the General Land Office will carry into immediate execution the provisions of the Joint Resolution referred to in manner as follows:

Field Organization.

The field organization shall be made up of the Boundary Commissioners supplemented by the necessary surveying party, consisting of Arthur D. Kiader, U. S. Supervisor of Surveys, in charge, assisted by

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G. D. D. Kirkpatrick, U. S. Surveyor, now assistant supervisor of public surveys in New Mexico, both of the General Land Office, detailed for the purpose by the Commissioner of the General Land Office with the approval of the Secretary of the Interior and the Boundary Commissioners, together with chainmen, flagmen, and the necessary other field assistants who shall be employed by Assistant U. S. Surveyor Kirkpatrick, with the approval of the Boundary Commissioners, for the period of service. The surveying personnel and assistants, outfit and transportation equipment to be assembled at Monahans, Texas, at such date as may be designated by the Boundary Commissioners, prepared and in every respect ready to proceed with the execution of the field work.

Instrumental Equipment.

The Commissioner of the General Land Office will loan, without charge, to the Boundary Commissioners, the necessary surveying instruments and complete equipment of necessary steel tapes and other sundry smaller tools, which shall be returned upon completion of the field work.

Camp Outfit.

The Commissioner of the General Land Office will loan, without charge, to the Boundary Commissioners, a complete camp outfit consisting of the necessary tents and cooking utensils, which shall also be returned upon completion of the field work.

Transportation Equipment.

The necessary teamsters and other assistants, and teams, wagons and pack animals will be hired by the U.S. Surveyor in charge of the line party, with the approval of the Boundary Commissioners.

Clark Monuments.

The original Clark monuments, as identified by the Boundary Commissioners, shall be remarked in their original position, as provided by the Resolution, by the construction of concrete monuments with appropriate marks on brass tablets, as follows:

A sub-surface base of one cubic yard with a super-surface monument thirty inches high, eighteen inches in diameter at the top and twenty-four inches in diameter at the base, upon the top of which a brass plate, suitably imbedded by means of flanges, will be set, upon which brass plate appropriate marks will be cast or cut significant of the Clark survey. (See diagram attached).

Mile Corners.

The successive mile points shall be monumented with iron posts, three feet long, three inches diameter, suitably flanged, filled with concrete, set twenty-four inches in the ground, and surmounted with brass cap upon which appropriate marks will be cast or cut significant of the dependent resurvey authorized by the above act of Congress. (See diagram attached).

Direction of Survey.

It is proposed that the survey of both the north and south, and the east and west lines, constituting the boundary to be remarked, shall be initiated at the Clark monument marking the southeast corner of New Mexico, and all distances on both lines be

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counted therefrom.

Random Lines.

Random lines, accurately referred to the true meridian by daily Polaris observation, will be projected between the successive original Clark monuments, upon which random lines temporary corners will be set at intervals of one mile.

True Lines.

The position of the original Clark monuments and line having been identified by the Boundary Commissioners and suitably remonumented, and the exact locus of the original Clark monuments and line having thus been determined by means of the above random line, the true line between each of the successive original Clark monuments will be determined by correction of each random line for alignment by proportionate measurement to the right or left from each temporary mile corner, upon which successive true lines permanent mile corners will be established.

Field Notes and Plats.

The U. S. Surveyor in charge of the line party shall prepare, in triplicate, complete field notes and plats of the entire above dependent resurvey, which will be submitted to the Boundary Commissioners for examination and approval, who will make final returns and reports to the Commissioner of the General Land Office. Upon acceptance of the resurvey the original plat and field notes thereof will be filed as a permanent record in the General Land Office, the duplicate will be filed with the Commissioner of the General Land Office at Austin, Texas, and the triplicate will be filed with the U. S. Surveyor General at Santa Fe, New Mexico.

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Disbursements.

The U. S. Surveyor in charge of the line party shall be designated a special disbursing agent under the above appropriation, filing suitable bond, to receive all advances of funds, and who shall be required to make all disbursements, upon certification by the Boundary Commissioners, incident to salaries, transportation and subsistence of the U.S. Boundary Commissioner, the survey party and other actual necessary expenditures incident to the execution of the provisions of the above Act of Congress.

Very respectfully,

(Signed) R. A. Ballinger,
Secretary.

The President.

March 9, 1911.

The foregoing method of executing said boundary survey is hereby approved and the Secretary of the Interior directed to see that the same is promptly carried into effect.

(Signed) Wm. H. Taft.

(The diagrams of the markings of brass plates herein mentioned, follow the notes of survey).

On the same 9th day of March, 1911, the President appointed Francis M. Cockrell to be a Commissioner to reestablish and remark the boundary line between the State of Texas and the Territory of New Mexico under the provisions of said law, who, as such Commissioner, duly qualified on the 10th day of March, 1911.

The State of Texas on the 13th day of April, 1911, duly appointed Hon. Sam R. Scott, of Waco, Texas, a Commissioner on the part of the State of Texas for the same purpose, who duly qualified as such.

Under date of March 29, 1911, the Secretary of the Interior notified the Commissioners.

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"That the Commissioner of the General Land Office has proceeded with the necessary preliminary arrangements to assemble the surveying personnel and assistants, outfit and transportation equipment at Monahans, Texas, prepared and in every respect ready to proceed April 15, 1911, with the execution of the field work incident to remarking the boundary line between Texas and New Mexico."

and that

"the preliminary arrangements are in charge of Arthur D. Kidder, Supervisor of Surveys."

On the 15th day of April, 1911, Francis M. Cockrell, Commissioner on the part of the United States, and Samuel R. Scott, Commissioner on the part of the State of Texas, and Arthur D. Kidder, U. S. Supervisor of Surveys in charge, and G. D. D. Kirkpatrick, U. S. Surveyor, *and Robert S. Humeicutt Surveyor for Texas*, with their chainmen, flagmen, and other necessary assistants and the outfit and transportation/ equipment assembled at Monahans, Texas, and proceeded to the southeast corner of New Mexico.

The Commissioners found and identified the position of the original monument of John H. Clark as located by him at the southeast corner of New Mexico at the intersection of the thirty-second parallel north latitude with the one hundred and third meridian west from Greenwich, and designated as monument No. 32 in his survey of said parallel, and remarked it by a concrete monument with a six inch brass plate upon which were marked "Clark Boundary of 1859. SE. COR. NEW MEX. General Land Office Reestablishment 1911, United States Boundary Commission", and in center "New Mexico" in the half square and opposite the angle, "Texas". The Commissioners found and identified Clark monument No. 31 on the said parallel, west of said southeast corner of New Mexico and remarked it by a concrete monument with a six inch brass plate with appropriate markings showing it was Clark's monument No. 31 on the thirty-second parallel of north latitude.

The Commissioners also found and identified Clark's monument No. 1 on his survey of the one hundred

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and third meridian north of the southeast corner of New Mexico, and remarked it by a concrete monument with a six inch brass plate with appropriate markings showing it was Clark's monument No. 1 on said meridian.

The Commissioners then decided to have the Clark meridian line surveyed and marked upon the face of the earth from said southeast corner through Clark monument No. 1 to the thirty-third parallel north latitude, the end of Clark's survey from the said southeast corner, and then to have a random line surveyed to a point on the thirty-fourth parallel, which would be intersected by Clark's line from the northwest corner of Texas extended south, and thence continuing north to the northwest corner of Texas, which was done accordingly.

When Clark's monuments No. 5, near mile corner post 161, and No. 6, near mile corner post 167, were found and identified, the Commissioners decided to have a line tentatively run southward to a point about 184 miles south of the northwest corner of Texas near mile corner post 126, which was done, after which the random line to the northwest corner of Texas was completed.

In the extension of the line, Clark's monuments Nos. 2, 3, 4, 7, 8, 12, 13, 14, 18, 19, 20, 22, 23, 24 and 25, could not be found or identified by the Commissioners. The Commissioners, however, found and identified Clark's monuments Nos. 1, 5, 6, 9, 10, 11, 15, 16, 17 and 21, and remarked each one of them by a concrete monument with a six inch brass plate upon which was marked "Clark Boundary 1859 General Land Office Reestablishment 1911, United States Boundary Commission", with a straight line in the center north and south with "Texas" on the east, and "New Mexico" on the west side, and on the north end, "Clark Mon. No. ", giving each a number. On arriving at the northwest

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corner of Texas the Commissioners found and identified the position of the original monument of Clark as located by him at the intersection of the one hundred and third meridian and the parallel of thirty-six degrees and thirty minutes north latitude for the northwest corner of Texas and designated by him as "Monument No. 26", and remarked it by a concrete monument with a six inch brass plate upon which were marked "Clark Boundary 1859, NW. Cor. Texas, General Land Office Reestablishment 1911 United States Boundary Commission", with one-half square in the center with "Texas" in it and opposite the angle "New Mexico." The random line was then retraced and corrected and straight lines run between the representative Clark monuments to Clark monument No. 5, from which the Clark meridian was extended to the thirty-fourth parallel of north latitude. The Commissioners decided that the thirty-fourth parallel of north latitude was the end of Clark's survey from the northwest corner of Texas and the thirty-third parallel of north latitude was the end of Clark's survey from the southeast corner of New Mexico, and that no survey was actually, originally made by said Clark between these two parallels.

The Commissioners had a straight line run and marked between the said parallels of north latitude and concrete monuments erected at each of said parallels with six inch brass plates marked so as to show what they were. The parallels of latitude thirty-three and thirty-four north, were fixed at the proportional distances between the southeast corner of New Mexico and the northwest corner of Texas, recognizing the former as being in latitude thirty-two degrees nought minutes and nought seconds and the latter in thirty-six degrees thirty minutes and nought seconds. The line was then continued to the southeast corner of New Mexico. The numbering of the monuments followed the

Clark numbering on the meridian line, No. 1 being the nearest the southeast corner, and 21 the nearest one found to the northwest corner of Texas.

Beginning at the southeast corner of New Mexico and extending north to the northwest corner of Texas the entire line was marked upon the face of the earth and each of the successive mile corners was monumented with iron posts three feet long and three inches in diameter, suitably flanged, filled with concrete, generally set twenty-four inches in the ground and surmounted with a brass cap, upon which was marked "Clark Boundary 1859 General Land Office Reestablishment 1911, United States Boundary Commission", with a straight line in the center running north and south with "Texas" on the east side and "New Mexico" on the west side and "Mile Corner No. ", with the number of the miles, over the north end, thus each mile post shows its distance from the southeast corner in miles, 310 such mile corner posts were erected between the southeast corner of New Mexico and northwest corner of Texas.

Thirty-second Parallel Line.

The Commissioners decided to run a random line from the southeast corner of New Mexico, designated by Clark as "Monument No. 32", westward along the thirty-second parallel to Clark's Monument No. 31 on that parallel which had already been found and identified and monumented as hereinbefore stated, and thence to the Rio Grande, which was done accordingly. Clark, in his survey of the thirty-second parallel, numbered his monuments from the Rio Grande eastward to the southeast corner of New Mexico, No. 1 being near the river and No. 31 near the southeast corner, which was designated as No. 32. The distances between the monuments were not stated. The Commissioners retained the Clark

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numbering of the monuments found and identified, but numbered the mile corner posts from the southeast corner to the Rio Grande, No. 1 being one mile west of the southeast corner and No. 209 ^{near} ~~at~~ the Rio Grande. From the Rio Grande the line eastward to the southeast corner of New Mexico along the thirty-second parallel was corrected and the true Clark line located and monumented sometimes on the north and sometimes on the south of said parallel, but not a considerable distance at any time.

Clark monuments numbered 4, 8, 11, 12, 14, 15, 16, 22, 24, 25, 26 and 31 were found and identified and remarked by concrete monuments with six inch brass plates upon which were marked "Clark Boundary 1859, General Land Office Reestablishment 1911, United States Boundary Commission" with a straight line in the center running east and west and "Texas" on the south side and "New Mexico Clark Mon. No. ", giving each a number, on the north side of this line.

The Commissioners were unable to find or identify either of Clark's monuments numbered 1, 2, 3, 5, 6, 7, 9, 10, 13, 17, 18, 19, 20, 21, ²³ 27, 28, 29 or 30.

Beginning at the southeast corner and extending westward to the Rio Grande the entire line was marked upon the face of the earth and each of the successive mile corners were monumented with iron posts three feet long, three inches in diameter, suitably flanged, filled with concrete, generally set twenty-four inches in the ground and surmounted with a brass cap upon which was marked "Clark Boundary 1859 General Land Office Reestablishment 1911, United States Boundary Commission", with a straight line in the center, running east and west and with "Texas" on the south side and New Mexico

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Mile Corner No. " giving the number of miles, on the north side, thus showing on each corner post the number of miles distant from said south east corner. 209 such mile corner posts were set on said parallel.

It is due to the surveyors and their assistants to say that they were diligent, careful and energetic in the performance of their respective duties, and frequently under conditions and circumstances unpleasant and disagreeable.

The surveyors in charge of the line parties collected much data in regard to Clark's survey, reports and field notes relative to the Clark monuments and the identification of many of them at different times by other United States and Texas surveyors, which were duly considered by the Commissioners and which are hereto attached.

The surveyor in charge also prepared in triplicate complete field notes and plats of the entire *and location of said boundary line* dependent resurvey and submitted them to the Commissioners who approved them and they are hereto attached, *and* *made a part hereto* Respectfully,

Francis M. Lockrell

Commissioner on the part of the
United States.

Sam R. Scott

Commissioner on the part of
Texas.

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Data in regard to Clark's survey, reports, field notes and monuments and their identification by the United States and Texas Surveyors.

The United States in the Act of September 9, 1850, "An Act proposing to the State of Texas the Establishment of her Northern and Western boundaries," proposed to Texas "that her boundary on the north shall commence at the point at which the meridian of one hundred degrees west from Greenwich is intersected by the parallel of thirty-six degrees and thirty minutes north latitude, and shall run from said point due west to the meridian of one hundred and three degrees west from Greenwich; thence her boundaries shall run due south to the thirty-second degree of north latitude; thence on the said parallel of thirty-two degrees of north latitude to the Rio Bravo del Norte, and thence with the channel of said river to the Gulf of Mexico".

The State of Texas by its law of November 25, 1850, accepted the boundary so proposed, and by its law of February 11, 1854, authorized the appointment of a Commissioner to run and mark the State boundary line in conjunction with a United States Commissioner.

The United States, by its Act of June 5, 1858, authorized the President of the United States to appoint a suitable person, or persons, who in conjunction with such person, or persons, as may be appointed by and on behalf of the State of Texas,

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for the same purpose, shall run and mark the boundary lines between the Territories of the United States and the State of Texas:

"Beginning at the point where the one-hundredth degree of longitude west from Greenwich crosses Red River and running thence north to the point where said one-hundredth degree of longitude intersects the parallel of thirty-six degrees and thirty minutes north latitude; and thence west with said parallel of thirty-six degrees and thirty minutes north latitude to the point where it intersects the one hundred and third degree of longitude west from Greenwich; and thence south with the said one hundred and third degree of longitude to the thirty-second parallel of north latitude; and thence west with the said thirty-second degree of north latitude to the Rio Grande."

Under said laws John H. Clark was duly appointed a Commissioner on the part of the United States and William R. Scurry on the part of the State of Texas. The Commissioners began their survey at the Rio Grande on the thirty-second parallel of north latitude and projected the line on said parallel to the one hundred and third meridian west from Greenwich and erected on said line thirty-two monuments including the monument at the southeast corner of New Mexico. The one hundred and third meridian was determined by triangulation and measurement from Frontera, Texas, a point of the United States and Mexican boundary survey, the longitude of which was accepted as correct. The survey of the one hundred and third meridian was then begun and carried north to the thirty-third parallel of north latitude as reported by Mr. Clark, the Texas Commissioner having withdrawn May 11, 1859. The projection of the meridian north was abandoned for the want of water and provisions by Clark, who proceeded to the northwest corner of Texas, which he established

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at the intersection of the one hundred and third meridian with the parallel of latitude thirty-six degrees and thirty minutes north and designated "Monument No. 26". Another Texas Commissioner joined him there and the one hundred and third meridian was projected southward for a considerable distance and discontinued. A hiatus was left between the termini of the surveys of the one hundred and third meridian north from the southeast corner of New Mexico and south from the northwest corner of Texas.

In response to the resolution of the Senate of January 6, 1882, the Commissioner of the General Land Office made a report accompanied by the then available reports, field notes and memoranda made by Commissioner Clark published in Senate Executive Document No. 70, 41st Congress, First Session. The Commissioner of the General Land Office, in his report stated:

"No report of said survey on the part of the Commissioner for the State of Texas was ever made. Several partial reports were made by John H. Clark, United States Commissioner, and his report of September 30, 1861, covers briefly the whole field of operations by both Commissioners in establishing said boundary. * * * the work of Commissioner Clark was terminated in January, 1862, by the direction of the department. * * * No part of said boundary survey has ever been officially agreed upon or accepted by the two governments as contemplated in the act of Congress authorizing the survey."

In a partial report of Clark, June 3, 1859, he says, "I have just returned to the Pecos from the establishment of the corner & the tracing of the 103d meridian, about forty miles."

In a partial report of October 27, 1859, Clark, after his establishment of the northwest corner of Texas, says:

"The 103d meridian was taken up and surveyed across the Canadian and to a point on the Llano Estacado south of the 34th parallel, a distance, with the survey from the Kansas boundary of about 240 miles."

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In a summary of his work giving distances surveyed during the season of 1859, from January 15 to September 21, the following appears:

"On the 103d meridian north (triangulation) 70 miles.

On the 103d meridian south (triangulation) 29 miles.

On the 103d meridian again south (triangulation) 9 miles.

Continued survey on 103d merid. south (triangulation) 111 miles.

To sand hills on the Llano Estacado, 103d meridian, 35 miles."

making a total on the one hundred and third meridian of 184 miles.

In a partial report of July 16, 1860, Clark says:

"This completes the field work of the boundary except the small part of the 103d meridian lying in the center of the staked plain and heretofore reported. I purpose running out and marking the arc that remains (about 50') of this meridian on my return."

In a partial report of November 14, 1860, Clark, referring to his efforts to trace and mark the small arc of the meridian, says:- "For want of water he could not get within fifty miles of the point he had reached last year."

In his last and fullest report of September 30, 1861, made in answer to requests of the Commissioner of the General Land Office, he says:

"Having completed the 32nd parallel, I turned northward on the 103d meridian, * * * * * The meridian was traced up to the 33d parallel."

In referring to the marking of the northwest corner of Texas, he says:

"The fixing and marking of the corner being accomplished, the prolongation of the one hundred and third meridian was begun August 23, * * * * * and the line continued and marked as far down as the 34th parallel. * * * * *"

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Again he says:

"The 103rd meridian being thus traced, and marked to the 34th parallel from the north and to the 33d parallel from the south, it may, for all practicable purposes be considered as completed."

In this same report referring to his effort to survey the arc of the meridian, he says:

"I reached & ascended the bluff of the Staked Plain August 10, but was forced to retrace my steps in two days for water. So entirely dried up was the plain that I could not get within 40 miles of the point I had attained the year before."

Clark's records of the terminus of the one hundred and third meridian as projected from the south may be summarised as follows:

	Distances from the SE. cor. of New Mexico.	
By surveyor's notes	34.5 or 35	miles
By astronomical notes. (Latitude 32°20'44.68")	23.8	"
By astronomical station, map (Lat. 32°33'30")	38.5	"
By monument on map (Lat. 32°33')	38.0	"
By topography shown on map, complete with trail of Boundary Commission. (Lat. 32°50')	57.0	"
By topography on map, incomplete (Lat. 33°)	68.9	"
By summary of distances of survey (Clark)	70.0	"
By statements in preliminary reports, made twice (Latitude 33°)	68.9	"
By statement in preliminary report	40.0	"
By statement in preliminary report, all meridian complete except 50' of arc, about 57.4 miles.		

Clark's record of the terminus of the 103rd meridian as projected from the north may be summarized as follows:

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	Distances from the NW. cor. of Texas.	
By surveyor's notes	155.0	miles
By astronomical notes and survey (Lat. 34° 13')	155.8	"
By monument on map (Lat. 34° 13' 50")	156.5	"
By topography on map, com- plete (Lat. 34° 05')	166.4	"
By topography on map, incom- plete (Lat. 33° 30')	206.8	"
By summary of distances of survey (Clark) 175 or	184.0	"
By statement in preliminary report, S. of 34th parallel	205.5	"
By statement in preliminary report, to the 34th parallel	172.36	"
By statement in preliminary report. Two days' travel plus 40.00 miles from Lat. 35° N.	175.0	"
By statement in preliminary report, two days' travel plus 50.00 miles from Lat. 35°	184.0	"

The foregoing data shows that Clark's records and reports are inconsistent, indefinite and incomplete.

This Clark line was confirmed by the United States by the law of March 3, 1891, in the following words:

" * * * * * And the boundary line between the said Public Land Strip and Texas, and between Texas and New Mexico, established under the Act of June fifth, Eighteen Hundred and Fifty-eight, is hereby confirmed."

The Clark line was confirmed by the State of Texas by the Act of March 25, 1891, Prior to the confirmation of Clark's line R. B. Willison, U. S. Deputy Surveyor, in January, 1872, found and identified Clark monuments 9, 10, 11, 13, 15, 17 and closed his lines upon them.

Taylor and Fuss, U. S. Deputy Surveyors, in 1883, found and identified Clark monuments 15 and 17 and closed lines on them.

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W. S. Mabry, Surveyor of the Oldham District in Texas, acting in accordance with a resolution of the Texas State Land Board of February 20, 1885, relative to the correction of the lines of the Capitol Leagues in Oldham County adjacent to and overlapping Clark's lines, found and identified Clark's monuments 5, 6, 7, 9, 10, 11, 12, 13, 15, 16, 17 and 21, and found and identified the location of Clark monument No. 26, the northwest corner of Texas.

After the confirmation of the Clark boundary line in 1891, W. D. Twitchell, a special deputy surveyor of the Howard Land District of Texas, acting under the direction of the Commissioner of the General Land Office of Texas, and Mark Howell, County Surveyor, Chaves County, New Mexico, traced and re-marked ^{in 1892} a portion of Clark's line on the one hundred and third meridian, including what they believed to be the hiatus of said meridian as left by Clark unsurveyed. They found Clark monuments 11, 10, 9, 8, 7, 6, 5 and 1, on the one hundred and third meridian, No. 32, being the southeast corner of New Mexico, and No. 31, on the thirty-second parallel.

In 1899 Levi S. Preston, U. S. Deputy Surveyor, investigated the north portion of the one hundred and third meridian in surveying public lands in New Mexico and found and identified the location of Clark monument No. 26, being the northwest corner of Texas, and Clark monuments Nos. 15, 16, 17 and 21 on said meridian.

Preston's survey indicates that the present NW. corner of Texas is in its proper position with reference to the monument on the 37th parallel established by Joseph E. Johnston, U. S. Army, upon which monument Clark based the longitudinal position of said NW. corner.

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Arthur D. Kidder, U. S. Examiner of Surveys, in 1893, in examining the boundary lines between Texas and New Mexico and Oklahoma, found and identified the location by Clark of the northwest corner of Texas, and Clark monuments Nos. 1, 5, 6, 9, 10, 11 and 12, on the one hundred and third meridian, and Clark Monument Nos. 4 and 31, on the thirty-second parallel, and identified the location of Clark monument No. 32, the southeast *Maurry Harris, and afterwards identified by* corner of New Mexico, *as marked by Mr. Twitchell, the* Texas Surveyor. *and which* ^{was} *determined by us, to be* *the corner actually located by Clark in 1854, at D.E. Cor. N. 7th.* In 1881 Messrs. Easley and Sanders, U. S. Deputy Surveyors, found and identified Clark monument No. 4, on the thirty second parallel, and closed the public land surveys of T. 26 S., R. 3 E., N.M., on the parallel as defined by said monument.

Under contract No. 193, dated July 13, 1883, Messrs. Warner and Armstrong, U. S. Deputy Surveyors, found and identified Clark monuments Nos. 22, 25, 26 on the thirty second parallel, and closed the subdivisional lines of Tps. 26 S., Rs. 21 and 32 E., inclusive, New Mexico, on said parallel as defined by the monuments mentioned.

The notes of the official surveys of Mabry, Preston and Kidder, herein referred to, and of Chaney and Smith, in 1881, practically agree that the northwest corner of Texas is an authentic reestablishment of Clark's intersection of the one hundred and third meridian and the parallel thirty-six degrees and thirty minutes.

The monuments established by Clark to mark his survey of the thirty second parallel and the one hundred and third meridian are described by him as follows:

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"I append here a list of the monument, with a brief description.

A. They were not put up at regular intervals, as will be seen by reference to the maps on which they are represented, but on prominent points, roads, and where there was a possibility of the location of land or other question of jurisdiction. They were made of stone or earth, and show the position in latitude or longitude by inscriptions, as also the initial letters of the territories separated thereby, in most cases the dates too were added. Their inscriptions were cut in on the stone or wood. B.

MONUMENTS ON 32D PARALLEL.

1. Initial point, a pyramid of stone 8 feet high, whitewashed, with inscriptions on all sides. It stands 600 feet from the bank of the river, and between them lies the road from El Paso to Fort Fillmore.

2. On the first ridge of sand, built of stone around a stick of timber.

3. On the first plateau, of a stick of timber; a cotton-wood tree barked.

4. On the first spur of Franklin Mountains cut by the line, is of stone, & whitewashed six feet high. All four of these monuments can be seen from the road along the valley.

5. Directly east of the Franklin Mountain, and on the road leading from El Paso to the salt lakes. It is a large mound of earth, capped with a slab of stone bearing the inscriptions.

6. On the open prairie extending from the Franklin to Hueco Mountains. It is a mound of earth.

7. A mound of earth on the road leading from Hueco tanks to the Mesilla Valley.

8. Of earth on the ridge immediately north of the Hueco tanks.

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9. Is built of stone in a canyon of the Hueco Mountain.

10. On the easternmost hill of the Hueco Mountain system; of stone.

11 & 12. One on each side of the mail route; one of earth, the other made of stone.

13. Is on a ridge of the Cornudas Mountains, and of stone.

14. Also of stone on the table land lying east of the mts.

15. This is on the same table land, & similar to the above.

16 & 17. These are near to and on each side of the mail route where the line crosses it the second time. They can be seen from Crow Spring; are pyramids of adobe built around stakes bearing the necessary inscriptions.

18. Is on a swell of ground just at the base of the first ridge, west of the Guadalupe Mountain system. It is of stone whitened, and is visible from the mail route or road about Crow Spring.

19. Is of stone on the top of Guadalupe Mt.

20. Is at the east base of the mountain and due north of Independence Spring. It is of stone.

21. At Soda Creek, where the parallel crosses it, and is of stone.

22 & 23. Are mounds of earth, within seeing distance of each other on opposite sides of Delaware Creek. These monuments in pairs were put up with the object of showing the direction of the boundary.

24. Of earth, capped with a block of stone having the inscriptions, on the east side of the road leading up the Pecos.

25. On the bluff near the west bank of the Pecos; made of stone and gravel.

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26. Is on the Llano Estacado near Pope's well; of stone with a large stick of timber in the centre.

27. A mound of earth at supply camp on the plain. Has a large stick of timber in the centre.

28. Is of earth on the highest ridge of the plain between supply camp and the White Sand Hills. The soil here is formed almost entirely of sand. A flag-staff was left in this mound.

29. Is near some bluff in sandy soil; of earth.

30. Near some natural mounds in a depression of the prairie; the soil of which this monument is made is rather firm.

31. Is on the trail of the commission to the White Sand Hills, where there is a depression of firm ground surrounded on all sides by hills of sand. It is a mound of earth, which is firm enough, probably, to resist the action of the wind.

32. At the intersection of the 32d parallel and the 103d meridian. This is a mound of very sandy soil; it has a bottle buried in it which contains the latitude & longitude of the point, a list of the names of the members of the commission, and the date of its erection.

MONUMENTS ON 103D MERIDIAN

1. This is a mound of tolerably firm soil on the road leading to & from the water in the White Sand Hills. It is thrown up around a stick of timber, on which is inscribed the markings necessary to indicate the line.

2. Is a mound of earth & near some slight bluffs.

3. This is similar to No. 2, except that a board, instead of a stake, contains the inscriptions.

4. Is a mound just on the northern edge of a great sand belt. It is built of firm soil around a flag-staff.

5. As all the monuments on the plain, with a single exception No. 5 is also a mound of earth. It is on a slight roll or swell of the plain & near a large rain-water pond.

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6. This mound is on a flat plain of the prairie and has nothing to mark it; it can, however, be seen at a great distance.

7. Is placed near the main break of Red River, on the northern side.

8. To the north of the north break of Red River stands No. 8. The plain here is as level as a table.

9. The only one of stone on the Llano; it is near the bluffs, and can be seen much better from the valley than from up on the plain. All the monuments on the plain north of the great sand belt will remain conspicuous for many years if not interfered with; the soil of which they are made is very close & tenacious.

10 and 11. These are earthen mounds, erected on each side of the Albuquerque & Fort Smith road, and are close enough to show the direction of the boundary across the roads.

12. This mound is a little less than a mile north of the road, from which it can be seen.

13. Is a mound, and south of the Cañada de Truxillo but a short distance.

14. Monument 14 is on a ridge directly north of this creek. The soil is a little sandy here.

15. A mound of earth, near the edge of a red sandstone bluff, which forms the southern bank of the Canadian.

16. This is of stone; in sight from No. 15 and on the north bank of the river. The angle at which the line crosses the river is shown by these two monuments.

17. Is on the first ridge, which is somewhat sandy, north of the river and made of earth.

18. On an Indian trail leading east & west; stone.

19. Earthen mound; on a ridge between two branches of Flag Creek.

20. A mound of rather loose soil in Sand Valley. There is much sand along the line marked by this & the following 4 mounds.

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21. Stands on the south bank of the Maj. Long Creek and on a firm gravelly knoll.
22. Mound of light soil on a sandy flat.
23. Is north of some large sand-hills. The soil is and sandy loose/& liable to drift.
24. Of light soil, but not sandy; will resist the action of the wind.
25. This mound is of firm & close soil, & is in sight from the corner monument.
26. The corner monument - the intersection of the 103d meridian with the parallel $36^{\circ} 30'$. It is an earthen mound, larger than most of the others; and there is in sight of it, besides monument No. 25, No. 1 on the parallel; so that there are three monuments in sight from the apex marking this angle of the boundary.
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P A R T O N E.

THE ONE HUNDRED AND THIRD MERIDIAN.

RESURVEYED BY G. D. D. KIRKPATRICK, U. S. SURVEYOR.

Ed
Robert T. Hunicutt
Surveyor for Texas.

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The resurvey of the one hundred and third meridian and thirty second parallel, described in the following notes, is in accordance with my detail and instructions from the Commissioner of the General Land Office, dated March 29, 1911.

The general operations and technical methods of the line parties were supervised by Mr. Arthur D. Kidder, Supervisor of Surveys of the U. S. General Land Office, under the direction of the Boundary Commission.

ORGANIZATION OF LINE PARTY.

In addition to the Boundary Commission the line party engaged in the survey of the random and true lines of the 103rd meridian from the SE. corner of New Mexico to the NW. corner of Texas; the random and true lines of the 32nd parallel from the SE. corner of New Mexico to monument No. 31; and the true line of said parallel from monument No. 31 to monument No. 24, was organized as follows:

G. D. D. Kirkpatrick, U. S. Surveyor, Chief of Party,
and Instrumentman.

Frank J. Ivie, Flagman,

Karl B. Wilson, Chainman.

Charles W. Devendorf, Chainman,

Louis H. Kirk, Chainman,

Dozier Richburg, Chainman,

Jeff Hutchinson, Cornerman and Teamster of Line
Wagon.

S. D. Mitchell, Teamster.

J. J. Armstrong, Teamster.

Preston Lane, Teamster.

S. H. Griffin, Teamster.

Gus Hines, Cook.

Ross Mitchell, Laborer.

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The transportation equipment consisted of the following:

One two-horse spring wagon, for line use.

One two-horse line freight wagon.

One four-horse camp freight wagon.

One four-horse water tank wagon.

Two four-mule camp freight wagons.

The assistants to the Commissioner on the part of Texas, Mr. R. S. Hunnicutt, Texas Surveyor, and Mr. Lee V. Hunnicutt, Assistant Texas Surveyor, *and participated in* were present with the party ~~making~~ the survey of the random and true lines from the SE. corner of New Mexico to monument No. 31 on the 32nd parallel, the projection of the random line from the SE. corner of New Mexico to the NW. corner of Texas, and the fixation of the true line from the NW. corner of Texas to mile corner No. 138. After the completion of this portion of the work Messrs. Hunnicutt joined Mr. Miller's party on the 32nd parallel.

DESCRIPTION OF INSTRUMENTS.

The surveys were executed with a Young & Son's mountain transit No. 8497, size No. 10, equipped with Smith solar attachment. The general specifications of the instrument are as follows:

Non-working parts aluminum alloy.

Power of telescope 22 diameters.

Plate graduated to thirty minutes; reading by two double verniers to single minutes.

Graduations $4\frac{3}{4}$ ins.; numbered from 0° to 180°

Full vertical circle, reading to single minutes.

Verniers of the solar attachment read to single minutes of arc.

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Watch: Hamilton, railroad, 21 jewels.

A canvas wind shield $5\frac{1}{2}$ ft. square was used to protect the instrument from the action of the winds which generally prevail in the region traversed by the survey.

One wooden sight rod, 8 ft. long, with steel shoe.

One wooden sight rod, 6 ft. long, with steel shoe.

One 66 ft. Lufkin steel tape, standard.

One four-chain Keuffel and Esser steel tape, width $1\frac{1}{8}$ ".

One five-chain Lufkin steel tape, width $1\frac{1}{8}$ ".

One eight-chain Lufkin steel tape, width $1\frac{1}{8}$ ".

Two W. & L. E. Gurley clinometers.

All numbers marked on the monuments were marked with steel figures of $\frac{1}{4}$ inch size.

METHOD OF SURVEY.

All random lines were projected by the method of double back and fore sights. The lengths of the sights averaged about 30.00 chains depending upon the atmospheric conditions existing at the time. The practice was to make a preliminary setting of the forward flag, at which point a marking board 12 ins. long was secured in a horizontal position across line by means of stakes driven into the ground; the top of the board being about 10 ins. above the ground. On the top of this board the final settings, with the instrument in the direct and reversed position, were marked, and the mean of the same determined. At this point a lath was firmly driven into the ground and the middle of the top carefully plumbed over the mean point of the settings.

The marking board was then removed and taken to the next station, the instrument being set up over the top of the lath, which was usually about 3 or $3\frac{1}{2}$ ft. above the ground.

The laths were flagged, and left as back sights, thus dispensing with the services of a back flagman.

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The courses of all lines were based on true meridians determined by time observations of Polaris every clear evening or morning. The watch error usually being determined at the preceding noon, by observing the transit of the sun across the meridian, or by altitude observations of the sun during the afternoon; or in instances where this was not possible, and several days elapsed between the time of observation for error of watch and an observation of Polaris, a test was made subsequent to the Polaris observation to ascertain if any error of consequence had developed in the watch time.

In observing Polaris the various sights with the instrument in the direct and reversed position, were marked on a board securely nailed to stakes firmly driven into the ground. An endeavor always was made to locate the board on which the sights were marked, at least 20.00 chains from the instrument, but in all cases this was not possible. The mean point of the sights on Polaris was determined and the distance from said point to the station of observation carefully measured. After the computation of the azimuth of the star, and the determination of the angle between the azimuth line and the position of the true random line of proper bearing through the station of observation; the total azimuth distance was computed and laid off in the proper direction from the mean point of the sights on Polaris, on a line at right angles to a line joining the station of observation with the said mean point of the sights. The line thus determined indicated the direction of the true random line, and the difference in bearing between this line and the random as actually run, represented the accumulated error in alinement since the last observation. The accumulative errors were determined by computation from measurements, and not by means of angle measurement on the plates of the instrument.

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In the records of the observations in the following notes the statement "Sights on Polaris marked * * * chs. north of station" refers to the distance that the marking board was located north of the station of observation, and the statement "azimuth distance laid off to the east etc." refers to the distance laid off from the mean point of the sights on Polaris as above described.

The statement "true random line" refers to the random having the course intended to be run, the statement "actual random line" refers to the random line as actually run on the ground.

The accumulative error in alinement that developed in the projection of the random line between successive Polaris observation stations, was adjusted on the theory that said accumulation was uniform, and at a proportionate rate per mile. The adjustment, therefore, of any point on the actual random to a line having the proper bearing through an initial point, or point of previous adjustment, would be the length of the run to said point, from the initial point, or point of previous adjustment, into the tangent of $\frac{1}{2}$ the angular difference between the initial and final bearings of the line within the limits of the run. In this survey the practice was to compute the adjustment of the line at each mile corner or other monument falling within the limits of each run between Polaris observations, with reference to a line of proper bearing through the initial point of the run; and then to apply the adjustment of the line at the initial point of the run to the adjustment of each corner in order to determine their total adjustments with reference to a line of the proper bearing through preceding Clark monument or angle point of the survey. This plan was followed in projecting each section of the random

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line between successive Clark monuments.

After each Polaris observation the actual random line was adjusted to its proper course as indicated by said observation, and continued. The temporary mile corners were adjusted to the true line in the direction necessary to preserve the proper mileage distances from the initial point of the survey. The mile corners from No. 127 to No. 310 inclusive, were permanently established before those from No. 2 to No. 126 inclusive, subsequently corners from No. 127 to No. 137 inclusive were adjusted westward to the final true line and in the direction necessary to preserve the proper mileage distances south from mile corner No. 138. Mile corners from No. 68 to 126 inclusive were then adjusted to the true line, and in the direction necessary to preserve the proper mileage distances from the initial point, or SE. corner of New Mexico. This method of adjusting the temporary mile corners from No. 69 to 137 inclusive made necessary the shortening of one mile several links, and said shortage was placed between mile corners No. 126 and 127, between which corners the random line from the south was connected with the random line south from Clark monument No. 5.

It was necessary either to shorten the mile between corners No. 126 and 127, or reset every mile corner after they had been permanently established, from No. 138 to the NW. corner of Texas, a distance of about 172 miles, and the plan followed was considered preferable.

The bearings of the offset lines usually were determined by making the proper angular deflections from the random line, but in several instances the bearings of offset lines of less than two chains were determined by means of the solar attachment. The bearings of the offset lines were laid off to the nearest half minute of the theoretical bearing, the closest reading

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practicable with an instrument reading to minutes. In all offset measurements exceeding two chains in length, a spring balance was used to insure uniformity in the pull on the tape and consequently increased accuracy.

All distances were based on the mean of independent measurements by two sets of chainmen. Practically all tape measurements were made with the tapes in a horizontal position; but occasionally it became necessary to measure on the slope, in which instances the inclination of the tape was determined by means of clinometers and the proper adjustment made to the horizontal distance. In the following notes of survey, the random line notes from Clark monument to Clark monument, contain only the dates on which the random was projected, the length of each day's run, reference only to the Polaris observations and the falling at the objective Clark corner. The true line notes contain the record of all topography, all observations at the points corresponding to the points on the random line at which the observations were made, with the proper dates of observation. The true line notes read running northerly from the SE. corner of New Mexico, while the adjustments of the corners from the random to the true line were made in a southerly direction. The date given to each section of the true line is the date upon which the mile corners of that section were adjusted from the random to the true line, that is, the date upon which the line was finally completed. The dates of the true line, necessarily are not in sequence, but in the reverse order.

The parallels of latitude, 33° and 34° north, were fixed at the proper proportionate distances between the SE. corner of New Mexico and the NW. corner of Texas, recognizing the former as being in latitude $32^{\circ} 00' 00''$ and the latter in $36^{\circ} 30' 00''$.

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Diagrams and data pertaining to the fixation of the boundary between the 33rd and 34th parallels, follow the true line notes.

The mile points of the survey were marked with hollow iron posts, 36 ins. long, 3 ins. in diameter, flanged at the bottom, filled with concrete and surmounted with an appropriately marked brass cap; the number of each mile post, counting from the SE. corner of New Mexico was stamped on the cap of each post. A detailed diagram of the caps, and a sectional view of the posts, showing all dimensions, follows the notes of the survey.

The Clark monuments accepted by the Boundary Commission, were perpetuated by concrete monuments of two sizes. The SE. corner of New Mexico and the NW. corner of Texas, and intervening monuments Nos. 3, 4, 5, 10, 17, 21 are the large size monuments, while monuments Nos. 1, 6, 9, 11, 15, 16 are small size monuments. The plan being to place the large monuments at approximately 50 mile intervals. The general plan of constructing the large monuments was as follows: An excavation was made of sufficient size to receive the wooden form of the sub-surface portion of the monument, which was cubical, 30 ins. on a side, and set 30 ins. into the ground. The wooden form, or box, was set with the corners to the cardinal directions, securely tamped in place on the proper line and with the top flush with the surface of the ground. The box was filled with concrete to its top on which was then placed the galvanized iron form of the super-surface part of the monument. This form is in the shape of a frustum of a cone, base 24 ins. dia., top 18 ins. dia. and 30 ins. high. The lower edge of the form is turned out to the extent of $\frac{1}{2}$ inch, forming a flange or collar. A galvanized plate, of proper size to cover the top of the above mentioned box, with a hole about 24 ins. in

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diameter cut in the center, was then placed over the top form and allowed to rest on the flange at the lower edge. The top form and plate were then placed on the top of the box, securely nailed to the same, and filled with concrete. The plate formed the top of the portion of the base lying without the limits of the top form and served to retain the top form in its proper position while being filled with concrete and while the same was setting. A brass plate 6 ins. in diameter, appropriately marked, was imbedded in the top of the monument by means of legs or flanges, extending 4 ins. into the concrete. A mound of earth or stone was then raised around the monument to afford additional support to the concrete in setting and to protect the monument as much as possible from range stock. Damp sand was placed on top of the concrete and retained in place by canvas or burlap; the sand preventing the too rapid evaporation of the water in the concrete and consequently the checking.

In the construction of the small monuments the galvanized iron top form only was used, it being set 20 ins. into the ground, allowing 10 ins. to project above, and having the brass plate imbedded, as above described for the large monuments.

Portland cement was used in the concrete, the usual amount for the large monuments was 550 to 600 lbs., and 150 to 200 lbs. for the small. Sand and broken stone were used where obtainable, but in one instance sand only was obtainable, and in several instances excellent grades of coarse sharp gravel were used. The usual proportion by measure, of the cement, sand and broken stone in the concrete was: 1 part cement to 3 parts of sand, to 3 parts of broken stone. The scarcity of stone made necessary the small proportion of this material in the mass. When gravel was used, the proportion was: 1 part cement to 6 parts of gravel.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY.

The weight of the large size monument is about 3300 lbs. and the small size about 900 lbs.

Plan and section views of both the large and small monuments, and also of the brass plates imbedded in the tops, are shown after the notes of the surveys.

With a few exceptions, no pits were dug as accessories to the mile corners, owing to the sandy nature of the soil in which the posts were set. The soil in many instances was very firm and apparently pits would remain in their proper form when dug, but experience demonstrated that when the natural vegetation is removed the soil loosens very rapidly and the almost constant wind soon blows the loosened soil from the pits until they become depressions without any definite form, and in a short time no doubt, the permanence of the corner post would be affected. The range cattle also were attracted by the newly constructed pits and mound and through their pawing and tramping around the corners, soon destroyed the mound of earth and the pits, and otherwise affected the corner.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY

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RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

RANDOM LINE.

East boundary of New Mexico, 103rd Meridian. SE. cor. of N. M. to Clark Mon. No. 1, April 19, 1911. I begin at the SE. cor. of New Mexico, now marked by an iron pipe, hereinafter described at the commencement of the true line notes northward from said corner. Thence I run

North.

On random line, Texas and New Mexico boundary, setting temporary mile corners at intervals of 80.00 chs. as determined by two sets of chainmen. The course of random line based on observation recorded at the commencement of true line notes from SE. cor.

Temporary mile cor. 1, plus

32.52

By two sets of chainmen, fall 4.4 lks. west of Clark Mon. No. 1, hereinafter described in true line notes.

TRUE LINE

SE. cor. N. M. to Clark Mon. No. 1, April 19, 1911.

At the SE. cor. of N. M. I determined a true meridian by observation of Polaris, on which the course of the above mentioned random line was based, as follows:
April 17, 1911.

Altitude observation of the sun for apparent time, to determine watch error, prior to Polaris observation.

Formula used. $\tan \frac{1}{2} t = \frac{\sin \frac{1}{2}(z+\phi-d) \sin \frac{1}{2}(z-\phi+d)}{\cos \frac{1}{2}(z+\phi+d) \cos \frac{1}{2}(z-\phi-d)}$

z = true zenith distance of the sun's center.

t = hour angle from app. noon in angular measure.

ϕ = latitude, $31^{\circ} 59' 58''$

h = true vertical angle to sun's center.

d = declination of sun, at time of observation $10^{\circ} 20' 40''$

	Watch time obs.	Vert. angle.
Telescope direct	4h 29m 59s	$22^{\circ} 33'$
" reversed	4 31 31	$22^{\circ} 42'$
Mean	4h 30m 45s	$22^{\circ} 37' 30''$
	refraction	$- 2' 20''$
	$h =$	$22^{\circ} 35' 10''$
	$z =$	$67^{\circ} 24' 50''$

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

Log $\cos. \frac{1}{2}(z+\phi+d) = 9.759897$ log sine $\frac{1}{2}(z+\phi-d) = 9.845929$ " $\cos. \frac{1}{2}(z-\phi-d) = 9.989522$ " " $\frac{1}{2}(z-\phi+d) = 9.589714$

	19.435643
	19.749419
2)	19.686224

Log tan $\frac{1}{2} t = 9.843112$ $\frac{1}{2} t = 34^{\circ} 52' 08''$ Hour angle $t = 69^{\circ} 44' 16''$ Corresponds to $= 4h 38m 57s$ Equation of time -20sLocal mean time of obs. 4h 38m 37sWatch time of obs. 4h 30m 45sWatch slow of L.M. T. 7m 52s

Time observation of Polaris for meridian.

Longitude of station $103^{\circ} 03' 56''$ Latitude of station $31^{\circ} 59' 58''$ Declination of Polaris $88^{\circ} 49' 53''$ Mean time, U.C. of Polaris, Greenwich, $11h 48.1m$ A. M.Correction for longitude, - 1.1mLocal mean time, U. C. of Polaris, $11h 47.0m$ A. M.

Watch time of observations.

	h	m	s	
Telescope direct	6	23	56	p.m.
" reversed	6	26	00	
" direct	6	27	40	
" reversed	6	29	12	

Mean watch time of observations $6h 26m 42.$ Watch slow of L. M. T. 7 52.Local mean time of observation $6h 34m 34.$ L. M. T. of obsn. $6h 34.6m$ p. m.L. M. T. of U. C. 11h 47.0m a. m.Hour angle, W. $6h 47.6m$

The azimuth of Polaris corresponding to this hour angle is $1^{\circ} 20.5'$ west of the meridian.

Sights on Polaris marked 16.26 chs. southward from station.

April 17, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

April 18, 1911:

Azimuth distance laid off, 38.09 links to the west.

The SE. corner of N. M. was marked by an iron pipe 6 ins. diam. (well casing) 52 ins. long, set 16 ins. in the ground, and marked,

S E C O R N M on the SW.,

T on the S. and SE., and

103 MERIDIAN on the N., sides.

This pipe is located under a wire fence, bearing E. & W., and in a depression in low shifting sand hills.

At the point occupied by said iron pipe I construct a concrete monument having a cubical base 30 ins. square, set 30 ins. into the ground, and a superstructure in the form of a frustum of a cone, incased in galvanized iron, with a lower diameter of 24 ins., and upper diameter of 18 ins., and projecting 30 ins. above ground; in the top of which there is embedded a brass plate, 6 ins. dia., marked,

"CLARK BOUNDARY 1859", in the north half,

"GENERAL LAND OFFICE REESTABLISHMENT 1911

UNITED STATES BOUNDARY COMMISSION", in the

south half, and in the center as follows:

NEW MEXICO		TEXAS
---------------	--	-------

A bottle was placed in the center of the monument, in which were placed the following papers:

A copy of the Act of Congress providing for the survey, and a paper signed by all members of the survey party, as follows:

"Reestablished Apr. 18, 1911, in accordance with the enclosed act:

Francis M. Cockrell, U. S. Boundary Commissioner.

Sam R. Scott, Commissioner for Texas.

Arthur D. Kidder, Supervisor of Surveys.

G. D. D. Kirkpatrick, U. S. Surveyor & Asst. Supervisor.

R. S. Hunnicutt, Surveyor for State of Texas.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

F. J. Ivie, asst.
 Earl B. Wilson, asst.
 Chas. W. Devendorf, asst.
 D. Richburg, asst.
 Lee V. Hunnicutt.
 J. R. Holman.
 S. H. Griffin.
 P. G. Lane.
 S. D. Mitchell.
 Jim Armstrong.
 Jeff Hutchinson.
 Gus Hines.
 Ross Mitchell."

I raise a mound of stone around this monument 7
 ft. base and $1\frac{1}{2}$ ft. high.

April 18, 1911.

 April 19, 1911.

The falling of the random line, 4.4 lks. W., at Clark
 Mon. No. 1 gives a true line course from SE. cor. to Mon.
 1 of N. $0^{\circ} 1' 20''$ E. No correction for accumulated
 error in alinement necessary.

 1st Mile.

N. $0^{\circ} 01' 20''$ E.

On true line, Texas and New Mexico boundary, over low
 rolling shifting sand hills, through short scattering
 scrub oak undergrowth, locally known as "shinnery!"

5.90 Wire fence, N.NW & S.SE.

75.90 Wire fence, E. & W.

Difference between measurements of 80.00 chs. by two
 sets of chainmen is 3 lks; position of middle point

By 1st set, 79.985 chs;

By 2nd set, 80.015 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
 filled with concrete, flanged at the bottom and sur-

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

mounted with a brass cap, 24 ins. into the ground for the 1 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 1 General Land Office Reestablishment 1911 United States Boundary Commission".

Land, gently rolling.

Soil, loose shifting sand, 4th rate.

Undergrowth, scrub oak.

No timber.

2nd Mile.

N. 0° 01' 20" E.

On true line, Texas and New Mexico Boundary, over rolling, loose sandy land, through scrub oak undergrowth.

- 5.50 Enter mesquite brush, bears E. & W.
- 24.00 Leave shifting sand hills, bears E. & W.; soil becomes firm.
- 29.00 Descend gradually into Monument Draw.
- 31.00 Leave mesquite brush, thence over open level bottom land of Monument Draw, 20 ft. below average elevation of surrounding country.
- 31.62 Road, bears E. & W. This road has the appearance of being very old.
- Mile cor. 1, plus
- 32.52 By two sets of chainmen intersect reestablished Clark Mon. No. 1, which is white gypsum stone, 10x12x8 ins. loosely set, marked,
- 103 M on the north,
- Mon No 1 N on the south faces.
- To perpetuate the location of this Clark monument, I construct at the point occupied by said stone, a concrete monument, incased in galvanized iron, in the form of a frustum of a cone, the lower base 24 ins. in dia.,

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

the upper base 18 ins. in dia., and 30 ins. high, set 20 ins. into the ground, in the top of which there is embedded a circular brass plate, 6 ins. in dia. The plate is marked in the center by a N. and S. division line $1\frac{1}{2}$ ins. long, with "Texas" on the E. and "New Mexico" on the W. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 1" in the N. half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

April 19, 1911.

RANDOM LINE.

East boundary of New Mexico, 103rd Meridian.

Clark Mon. 1 (Mile cor. 1 plus 32.52 chs.) to
Clark Mon. No. 5 (Mile cor. 161 plus 18.77 chs.).

April 19, 1911.

I offset my random line 4.4 lks. east at Clark Mon. No. 1, thence I run from Mon. No. 1

North

On random line, Texas and New Mexico boundary, setting temporary mile corners at intervals of 80.00 chs. counting from the SE. cor. of New Mexico.

Temporary mile cor. 8, plus

57.24

End of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes. No accumulated error in alinement in day's run.

April 19, 1911.

April 20, 1911.

Continue random line, North.

Temporary mile cor. 20, plus

37.63

End of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes. Accumulated error in alinement in day's

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

run, 15 seconds to the right, bearing of random line
therefore N. 0° 00' 15" E.

April 20, 1911.

April 21, 1911.

Adjust course of random line and continue North
Temporary mile cor. 31, plus

31.845

End of day's run. At this point I observe Polaris
for meridian, which observation is recorded in the true
line notes. Accumulated error in alinement in day's
run, 17 seconds to the right, bearing of random line
therefore N. 0° 00' 17" E., at end of day's run.

April 21, 1911.

April 22, 1911.

In camp, field work impracticable.

April 23, 1911.

Adjust course of random line and continue North.
Temporary mile cor. 42, plus

12.24

End of day's run. At this point I observe Polaris
for meridian, which observation is recorded in the true
line notes. Accumulated error in alinement in day's
run, 37 seconds to the right, bearing of random line
therefore, N. 0° 00' 37" E. at end of day's run.

April 23, 1911.

April 24, 1911.

Adjust course of random line and continue North.
Temporary mile cor. 51.

End of day's run. Sky overcast, no observation of
Polaris possible.

April 24, 1911.

April 25, 1911:

Continue random line North.
Temporary mile cor. 61.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS	<p>End of day's run. Sky overcast, no observation of Polaris possible.</p> <p style="text-align: right;">April 25, 1911.</p> <p style="text-align: center;">-----</p>
28.27	<p>April 26, 1911.</p> <p>Continue random line North.</p> <p>Temporary mile cor. 68 plus</p> <p>End of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes. Accumulated error in alinement in three days' run, 34" to the right, bearing of random line therefore, N. 0° 00' 34" E. at end of day's run. The points marking the sights on Polaris were marked 30.00 chs. N. of station.</p> <p style="text-align: right;">April 26, 1911.</p> <p style="text-align: center;">-----</p>
76.53	<p>April 27, 1911.</p> <p>Adjust course of random line and continue North.</p> <p>By two sets of chainmen, 33° 00' 00" N. lat., as determined by measurement from the SE. cor. of New Mexico.</p> <p>At this point, temp. mile 68 plus 28.27 chs. the total adjustment for accumulated error in alinement was 32 links, to the west. The north end of the true meridian determined by Polaris observation and marked on the ground on April 26, was at 68 miles plus 58.27 chs. and the point determined as the 33rd parallel, was 18.26 chains north of this point. The true meridian was extended this distance of 18.26 chs. to the 33rd parallel very carefully under favorable atmospheric conditions, and the same adjustment for alinement applied to the meridian at this point that was found necessary at 68 miles plus 28.27 chs. I offset the random line 32 links west at the 33rd. parallel and set a temporary corner to mark the intersection of a true meridian projected north from Clark Mon. No. 1, with said parallel. Thence I continue the random line from said temporary</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

corner on course

N. 1° 18' 00" E.

Continuing measurement from SE. cor. of N. M.

The course of random, N. 1° 18' E., was determined by continuing the true meridian north from the 33rd parallel a distance of 15.20 cha., by two sets of chainmen, and laying off to the east the distance, 34.49 links, through which point the random was projected, from the temporary corner on the 33rd parallel.

Temporary mile corner 78 plus

52.74

End of day's run. At this point I observe Polaris for Meridian, which observation is recorded in the true line notes. Error in alinement from 33rd. parallel due to accumulation and convergency of meridians, is 71 seconds to the right, the bearing of the random line therefore is N. 1° 19' 11" E. at the end of the day's run.

April 27, 1911.

April 28, 1911.

Adjust course of the random line and continue N. 1° 18' E.

Temporary mile cor. 87 plus

27.60

End of day's run. Sky overcast, no observation of Polaris possible.

April 28, 1911.

April 29, 1911.

Continue random line, N. 1° 18' E.

Temporary mile cor. 97. End of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes. Error in alinement in two days' run, due to accumulation and convergency of meridians is 173 seconds to the right, the bearing of the random therefore is N. 1° 20' 53" at the end of this day's run.

April 29, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

April 30, 1911.

Adjust random line and run N. $1^{\circ} 18'$ E.

Temporary mile corner 106 plus

21.82

End of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes. Error in alinement in day's run due to accumulation and convergency of meridians, 124 seconds to the right, the bearing of the random therefore is N. $1^{\circ} 20' 04''$ E. at the end of the day's run.

April 30, 1911.

May 1, 1911.

Adjust random line and run N. $1^{\circ} 18'$ E.

Temporary mile corner 118 plus

20.69

End of day's run. Sky overcast and observation of Polaris impossible.

May 1, 1911.

May 2, 1911.

Continue on random line, N. $1^{\circ} 18'$ E.

Temporary mile cor. 126 plus

17.08

Terminus of the portion of the random line used to determine the course of the true line from 33rd to 34th parallel.

Mile point 130.

End of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes. Error in alinement in two days' run, due to accumulation and convergency of meridians, 133 seconds to the right, bearing of the random line is therefore N. $1^{\circ} 20' 13''$ E. at the end of this day's run.

May 2, 1911.

The adjustment in alinement for accumulated error and convergency of meridians at temp. mile 126 plus 17.08

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

chs. therefore, is 1.402 lks. N. $89^{\circ} 21' W$. At the point, temp. mile 126 plus 17.08 chs., the random line from the south was connected with the random line subsequently projected south from temporary mile cor. 156. The random line northward from this point was not used in determining the course of the true line, but only to temporarily locate temporary mile cor. 156 for distance; and will not be reported in detail. The blank random was continued on a course N. $1^{\circ} 18' E$. to the point 137 miles plus 72.33 chs., where it became apparent that an additional random line from the north was necessary in order to keep the random line reasonably close to the true line. At this point the random was adjusted west 165 links to correct the accumulated error in alinement and to allow for the convergency of meridians, thence it was projected north to the temporary 156 mile point, at which an offset was made to the west, to a point assumed to be due south of Clark monument No. 5, the position of which could be located approximately by means of the boundary fence. Temporary mile cor. 156 was established at this offset point. The period, from May 3 to May 5 inclusive was consumed in projecting the blank random line from temporary mile point 126 mile plus 17.08 chs. to temporary mile cor. 156. From temporary mile cor. 156 the random line was continued, North

Temporary mile cor. 157 plus

36.61

End of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes. Based on this observation, the bearing of the random line from temp. mile cor. 156 to end of day's run at temp. mile cor. 157 plus 36.61 chs. was found to be N. $0^{\circ} 00' 15'' W$. Unusually favorable atmospheric conditions permitted a close setting of the line of sight on the flag at temp, mile cor. 156.

May 5, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

May 6, 1911.

Adjust random line and continue North.

Temporary mile cor. 161 plus

18.77

By two sets of chainmen, fall 74.7 lks. east of Clark Monument No. 5, hereinafter described in true line notes.

Based on an observation of Polaris, at temp, mile cor. 163 plus 75.15 chs. this day, and recorded in true line notes, the accumulated error in the random line from temp. mile cor. 157 plus 36.61 chs. to temp, mile cor. 163 plus 75.15 chs. was found to be 47 seconds to the right, the bearing of the random line being N. 0° 00' 47" E. The bearing, therefore, of the random line at Mon. 5 is N. 0° 00' 27" E.

Random line, temp. mile cor. 156, South.

May 13, 1911.

At temporary mile cor. 156 I offset west 73.6 links to a point due south of Clark Mon. 5 and project a random line south therefrom, setting temporary mile cors. at intervals of 80.00 chs. by two sets of chainmen, in reverse order. The course of this random was determined by making the proper offsets from the line, from temp. mile cor. 156 to temp. mile cor. 157 plus 36.61 chs. determined by Polaris observation on May 5 to have a bearing of N. 0° 00' 15" W.

Temporary mile cor. No. 150. End of day's run. Sky overcast and no observation of Polaris possible.

May 13, 1911.

May 14, 1911.

Continue on random line, South.

Temporary mile corner No. 146. End of day's run. Sky overcast and no observation of Polaris possible.

May 14, 1911.

May 15, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN,
CHAINS

Continue on random line, South.

temporary mile cor. No. 138. End of day's run.

Sky overcast and no observation possible.

May 15, 1911.

May 16, 1911.

At temporary mile cor. No. 138 I observe Polaris for meridian at sunrise, which observation is recorded in the true line notes. No error in alinement found from temp. mile cor. 156 to this point.

Continue random line, South.

temporary mile cor. No. 129.

End of day's run. Sky overcast, no observation of Polaris possible.

May 16, 1911.

May 17, 1911.

Continue random line, South.

To a point 62.84 chs. south of temporary mile cor. 127. At this point, at sunrise this day, I observed Polaris for meridian, which observation is recorded in the true line notes. No error in alinement was found from temp. mile cor. 138 to this point.

The random line from the north was discontinued at this point, and connected with the random line run N. $1^{\circ} 18'$ E. from the temporary fixation of the 33rd parallel, as follows:

I establish a point on the southern random line, on line between temporary mile cores. 126 and 127, and 17.08 chs. from temporary mile cor. 126. From this point the terminus of the random line from the North (62.84 chs S. of temp. mile cor. 127) bears N. $89^{\circ} 21'$ W. 7.962 chs. by two sets of chainmen.

This connection was made with the intention of connecting a point 70 miles northward from the southeast cor. of N. M. with a point 184 miles southward

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

from the northwest corner of Texas, and therefore the bearing on which the connection was made, viz: N. 89° 21' W., preserves the distances through from the SE. cor. of New Mexico. The connection indicates that all temporary mile cors. north of number 126 should be moved north 08 links in order to place them in their proper position with reference to the SE. cor. of New Mexico. The corrected distance to Mon. 5 therefore is 161 miles plus 18.69 chains. Mile corners from 127 to 137 were properly established on a true line due south from Clark Mon. No. 5, during the period of May 17 and 18, but subsequently were adjusted to an oblique arc extending from the 33rd to the 34th parallels as hereinafter recorded.

The record of the true establishment from a point 184 miles from the NW. cor. of Texas north to the 34th parallel, which was afterwards abandoned is not recorded in this report.

May 17, 1911.

TRUE LINE.

Clark Monument No. 1 to Clark Monument No. 5.

 July 18, 1911. Temporary mile corners from No. 6 to No. 2 inclusive adjusted to true line.

2nd Mile.

From reestablished Clark Monument No. 1 (1 M. plus 32.52 chs.) heretofore described.

North

On true line, Texas and New Mexico boundary, continuing measurement from the SE. cor. of New Mexico. Over level firm bottom land of Monument Draw, no undergrowth.

49.31

Road, bears NW. and SE.

51.50

Enter mesquite brush, bears E. and W.

58.00

Commence gradual ascent out of Monument Draw, bears NW. and SE. Soil becomes loose sand.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

Difference between measurements of 47.48 chs. by two sets of chainmen, is 2 links; position of middle point

By 1st set, 47.47 chs;

By 2nd set, 47.49 chs; the mean of which is 47.48 chs. from Mon. No. 1.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 2 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 2 General Land Office Reestablishment 1911 United States Boundary Commission".

This corner set in loose sandy soil, pits impracticable, no stone available for mound.

Land, rolling and level.

Soil, sandy, 4th rate.

Undergrowth, mesquite and short scrub oak.

3rd Mile.

North

On true line, Texas and New Mexico boundary, over rolling sandy land, scattered mesquite and scrub oak brush.

10.00

Opposite point of observation on random line.

Meridian observation of the sun for time at temporary mile corner No. 2, plus 10.00 chs., on random line April 19, 1911.

Equation of time used, - 45^s

Watch times of transit.

	h	m	s	
Sun's W. limb.	11	50	20	a. m.
Sun's center	11	51	26	
Sun's E. limb.	11	52	31	
Watch time of apparent noon	11	51	26	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

11 51 26

L. M. T. of apparent noon 11 59 15

Watch slow of L. M. T. 7m 49s

6.86

Wire fence, bears S. 74° 15' E. and N. 74° 15' W.

Land, low shifting sand hills.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of middle point

By 1st set, 79.99 chs;

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 3 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 3 General Land Office Reestablishment 1911 United States Boundary Commission".

This corner set in loose sandy soil, and pits impracticable, no stone available for a mound.

Land, low rolling and shifting sand hills.

Soil, sand, 4th rate.

Undergrowth, mesquite and short scrub oak.

4th Mile.

North

On true line, Texas and New Mexico boundary, over low shifting sand hills, scattered mesquite and scrub oak undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen, is 6 links; position of middle

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

point

By 1st set, 79.97 chs;

By 2nd set, 80.03 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 4 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 4 General Land Office Reestablishment 1911 United States Boundary Commission".

This corner set in loose shifting sand, pits impracticable, no stone available for a mound.

Land, low shifting sand hills and ridges.

Soil, sand, 4th rate.

Undergrowth, mesquite and short scrub oak.

5th Mile.

North

On true line, on Texas and New Mexico boundary, over low sand hills and ridges, through scattered mesquite and scrub oak undergrowth.

5.38

Wire fence, bears S. $88^{\circ} 35'$ E. and N. $88^{\circ} 35'$ W. The course of this fence changes about 1.50 chs. westward of line, to S. 60° W.

15.60

Wire fence, bears N. 58° E. and S. 58° W., irregular.

40.00

Leave shifting sand hills and scrub oak brush, bears E. and W, thence over gently rolling firm gravelly prairie, little or no mesquite undergrowth.

41.53

Road, bears E. and W.

Difference between measurements of 80.00 chs. by two sets of chainmen, is 3 links; position of middle point

By 1st set, 79.985 chs;

By 2nd set, 80.015 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS
80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 5 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 5 General Land Office Reestablishment 1911 United States Boundary Commission".

This corner set in soil containing considerable sand, pits impracticable, no stone available for a mound.

Land, rolling and level.

Soil, sandy, 4th rate and gravelly, 2nd rate.

Undergrowth, scrub oak and mesquite.

6th Mile

North

On true line, Texas and New Mexico boundary, over almost level land, gravelly and sandy soil, little or no mesquite undergrowth.

.69 Fall 27 links west of corner of wire fence. Fence extends N. and E. from cor. Thence along W. side of fence.

20.04 Wire fence, bears E. and W., 80 lks. E. to NE. cor. Terminus of fence E. of line.

23.85 Road, bears E. and W.

78.80 Wire fence, bears N. 32° E. and S. 32° W., this point is S. 32° W. 1.10 chs. of the SW. cor. of a wire fence, thence along W. side of boundary wire fence.

Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of middle point

By 1st set, 79.98 chs;

By 2nd set, 80.02 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS
80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 6 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 6 General Land Office Reestablishment 1911 United States Boundary Commission".

This corner set in firm soil, containing considerable sand, pits impracticable, no stone available for a mound.

Boundary fence is 58 lks. E. of corner.

Land, almost level.

Soil, gravelly and sandy, 2nd rate, firm.

Undergrowth, mesquite.

July 16, 1911.

July 17, 1911.

Adjust temporary mile corners from No. 7 to No. 21 from random to true line.

7th Mile.

North

On true line, Texas and New Mexico boundary, over almost level land, firm gravelly and sandy soil, little or no mesquite undergrowth.

19.00

Commence to ascend gradually, soil becomes more sandy.

31.70

Fall 11 lks. E. of the corner of Andrews and Winkler Counties, Texas, which is a limestone 10x14x3 ins. above ground, firmly set, marked

N M on the W.,

S W A on the NE.,

N W W Co. on the SE. faces.

64.50

Top of ascent of low prairie swell, bears E. and W., thence over gently rolling land.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of middle point

By 1st set, 79.98 chs;

By 2nd set, 80.02 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 7 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 7 General Land Office Reestablishment 1911 United States Boundary Commission".

This corner set in soil containing considerable sand, pits impracticable, no stone available for a mound.

The boundary fence is 64 lks. E. of the corner.

Land, almost level and gently rolling.

Soil, gravel and sandy, 2nd and 3rd rate.

Undergrowth, mesquite.

8th Mile.

North.

On true line, Texas and New Mexico boundary, over rolling land, gravelly loam soil, through scattered mesquite undergrowth.

31.00

Small prairie drain, course W.NW. ascend gradually;

35.00

Top of ascent, low prairie ridge, bears NE. and SW., descend.

42.70

Small prairie drain, 50 lks. wide, course SW., ascend

55.00

Top of ascent, thence over rolling land.

Difference between measurements of 80.00 chs. by two sets of chainmen is 6 links; position of middle point

By 1st set, 79.97 chs;

By 2nd set, 80.03 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS
80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 8 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 8 General Land Office Reestablishment 1911 United States Boundary Commission".

This corner set in soil containing considerable sand, pits impracticable, no stone available for a mound.

The boundary fence is 19 lks. E. of corner.

Land, rolling.

Soil, gravelly and sandy, 2nd rate.

Undergrowth, mesquite.

9th Mile.

North

On true line, Texas and New Mexico boundary, over rolling land, firm gravelly and sandy soil, through scattered mesquite undergrowth.

27.00 Cross to the E. side of the boundary fence.

31.00 Dry bed of rain water pond, extends 1 ch. west and 3 chs. east of line, 3 chs. wide N. and S.

57.24 Opposite point of observation on random line.

Time observation of Polaris for azimuth at temporary mile corner No. 8 plus 57.24 chs. on random line, April 19, 1911.

Sights on Polaris marked 16.43 chs. S. of station.

Latitude of station 32° 07' 30"

Declination of Polaris, 88° 49' 53"

Approximate longitude 103° 04' W.

Mean time, U.C. of Polaris, Greenwich, 11h 40.2m a.m.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS		11h 40.2m	a. m.
	Correction for longitude	<u>-1.1m</u>	
	Local mean time, U. C. of Polaris	11h 39.1m	a. m.
		Watch times of observations	
		h	m s
	Telescope direct	6	20 28 p. m.
	" reversed	6	22 04
	" direct	6	23 48
	" reversed	<u>6</u>	<u>26 18</u>
	Mean watch time of observations	6h.	23m 09s
	Watch slow of L. M. T.	<u>7m</u>	<u>49s</u>
	Local mean time of observation	6h	30m 58s
	L. M. T. of oben.	6h	31.0m p. m.
	L. M. T. of U. C.	<u>11</u>	<u>39.1 a. m.</u>
	Hour angle, W.	6h	51.9m

The azimuth of Polaris corresponding to this hour angle is $1^{\circ} 20.2'$ west of the meridian.

Right angle azimuth distance laid off to W. to mark true meridian, 38.35 links.

No error found in the bearing of the random line.

 Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of the middle point

By 1st set, 79.98 chs:

By 2nd set, 80.02 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 9 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 9 General Land Office Reestablishment 1911 United States Boundary Commission".

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

The soil in which this corner is set contains considerable sand, pits impracticable, no stone available for a mound.

The boundary fence is 35 links W. of the corner.

Land, rolling.

Soil, gravelly and sandy, firm.

Undergrowth, mesquite.

10th Mile.

North

On true line, Texas and New Mexico boundary, over rolling land, firm gravelly and sandy soil, scattered mesquite undergrowth.

- 3.23 Wire fence, runs E. from boundary fence.
- 22.00 Soil becomes less firm.
- 35.00 Leave firm land, thence over low irregular shifting sand hills, bears E. and W., mesquite and scrub oak undergrowth.
- 54.00 Leave sand hills, bears E. and W., thence over firm sandy land, almost level.
- 64.00 Soil becomes firm and gravelly.
- Difference between measurements of 80.00 chs. by two sets of chainmen is 5 links; position of middle point
- By 1st set, 79.975 chs;
- By 2nd set, 80.025 chs. the mean of which is
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 10 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 10 General Land Office Reestablishment 1911 United States Boundary Commission".

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS	<p>Pits impracticable, no stone available for a mound. Boundary fence 77 links west of corner. Land, rolling and almost level. Soil, sand, 4th rate, sandy and gravelly loam, 3rd rate. Undergrowth, mesquite and short scrub oak.</p>
<p>11th Mile North</p>	
	<p>On true line, Texas and New Mexico boundary, over rolling land, firm gravelly and sandy soil, scattered mesquite undergrowth.</p>
35.70	<p>South edge of dry bed of rain water pond, extends 2 chs. W. and 5 chs. E. of line.</p>
41.50	<p>North edge of pond.</p>
44.05	<p>Road, bears N. by W. and S. by E.</p>
56.50	<p>Middle of dry bed of rain water pond, 4 chs. in diameter.</p>
78.98	<p>Fall 105 lks. E. of the NE. cor. of wire fence. Terminus of fence W. of line. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of middle point</p> <p style="padding-left: 40px;">By 1st set, 79.98 chs; By 2nd set, 80.02 chs; the mean of which is</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 11 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 11 General Land Office Reestablishment 1911 United States Boundary Commission".</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

Pite impracticable, no stone available for a mound.
This cor. is 0.1 link W. of position of temporary
cor. on random line.

Land, rolling and almost level.

Soil, sandy and gravelly, 3rd rate, firm.

Undergrowth, mesquite.

12th Mile.

North

On true line, Texas and New Mexico boundary, over
gently rolling land, firm sandy soil.

20.70 Fall 108 links E. of the SE. cor. of wire fence,
thence along E. side of boundary fence.

50.00 Road, bears NE. and SW.

70.00 Leave firm land, bears NE. and SW., thence over loose
sandy soil, scrub oak brush.

Difference between measurements of 80.00 chs. by
two sets of chainmen is 4 links; position of middle
point

By 1st set, 79.98 chs;

By 2nd set, 80.02 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 28 ins. into the ground for
the 12 mile corner. The top of the cap is divided by
a north and south stamped line 1 inch in length, and
marked, "Texas" on the east, "New Mexico" on the west
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 12 General Land Office Reestablishment 1911
United States Boundary Commission".

Pite impracticable, no stone available for a mound.

Boundary fence is 112 lks. west of corner.

This corner is 0.2 links west of the position of the
temporary corner on the random line.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS	<p>Land, rolling.</p> <p>Soil, sandy, 3rd and 4th rate.</p> <p>Undergrowth, mesquite and short scrub oak.</p>
13th Mile.	
North	
<p>On true line, Texas and New Mexico boundary, over low shifting sand hills, through scattering mesquite and scrub oak undergrowth.</p>	
00.92	Wire fence, runs east from fence west of line.
19.51	Point opposite a wire fence extending west from boundary fence.
22.70	Windmill and house bears east 8.00 chs. dist.
27.00	Leave sand hills, bears E. and W., thence over firm sandy land.
49.16	Wire fence runs east from boundary fence.
79.98	<p>Wire fence runs east from boundary fence.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of middle point</p>
By 1st set, 79.98 chs;	
By 2nd set, 80.02 chs; the mean of which is	
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 13 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 13 General Land Office Reestablishment 1911 United States Boundary Commission".</p>
Pits impracticable, no stone available for a mound.	
Boundary fence 158 links west of corner.	
This corner is 0.4 links west of the position of the temporary corner on the random line.	
Land, rolling.	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

Soil, sandy, 3rd and 4th rate.

Undergrowth, mesquite and short scrub oak.

14th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, gravelly and sandy soil, through scattered mesquite undergrowth.

00.88

Fall 119 lks. west of a wooden stake, 2x1x15 ins. above ground, marked N W 15 B A 52 on the SE face. Pertains to Texas surveys.

19.40

Prairie draw, 1.50 chs. wide, course SE. 10.00 chs. to small basin.

31.30

Road, bears NW. and SE.

Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of middle point

By 1st set, 79.98 chs;

By 2nd set, 80.02 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 14 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 14 General Land Office Reestablishment 1911 United States Boundary Commission".

Pits impracticable, no stone available for a mound.

Boundary fence is 177 links west of corner.

This corner is 0.6 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy and gravelly, 4th rate.

Undergrowth, mesquite and scrub oak.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

15th Mile.

North

On true line, Texas and New Mexico boundary, over rolling land, gravelly and sandy soil, through scattered mesquite undergrowth.

40.00 Search made for evidence of Clark Mon. No. 2.

50.00 Descend into dry bed of rain water pond.

54.00 Dry bed of rain water pond, extends 5 chs. E. and 2 chs. W. of line, and is 4 chs. wide N. and S.

57.00 Top of ascent from bed of pond, thence over almost level land.

Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of middle point

By 1st set, 79.985 chs;

By 2nd set, 80.015 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 15 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 15 General Land office Reestablishment 1911 United States Boundary Commission".

Pits impracticable, no stone available for a mound.

Boundary fence is 218 links west of corner.

This corner is 0.9 links west of the position of the temporary corner on the random line.

Land, rolling and almost level.

Soil, sandy, 3rd rate.

Undergrowth, mesquite and scrub oak.

16th Mile.

North.

On true line, Texas and New Mexico boundary, over

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

gently rolling land, sandy and gravelly soil, scattered mesquite and scrub oak undergrowth.

1.15 Wire fence, runs east from boundary fence.

1.15 Fall 218 links east of an iron pipe, $1\frac{1}{2}$ ins. dia., 14 ins. above ground, marked

N W 5 B 52 on E.,

N 15 on S.,

S W 25 B 51 on N.,

N M. on W. sides. Pertains to

Texas surveys.

42.05 Road, bears NW. and SE.

52.50 Leave firm and gently rolling land, bears E. and W. thence over shifting sand hills averaging 5 ft. high.

72.00 Sand hills now average 10 ft. high.

Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of middle point

By 1st set, 79.985 chs;

By 2nd set, 80.015 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 16 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 16 General Land Office Reestablishment 1911 United States Boundary Commission".

Pits impracticable, no stone available for a mound.

The boundary fence is 218 links west of the corner.

This corner is 1.3 links west of the position of the temporary corner on the random line.

Land, rolling, and sand hills.

Soil, sandy and gravelly, 3rd and 4th rate.

Undergrowth, mesquite and scrub oak.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY,, 103RD MERIDIAN.

CHAINS

17th Mile.

North

On true line, Texas and New Mexico boundary, over rolling land, and sand hills, scrub oak and mesquite undergrowth.

1.15

NW. corner of wire fence, bears west 218 links dist.

Terminus of fence west of line. Boundary fence extends north from E. and W. fence at a distance of 106 links to the east of line.

Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of middle point

By 1st set, 79.98 chs;

By 2nd set, 80.02 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 17 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 17 General Land Office Reestablishment 1911 United States Boundary Commission".

Pits impracticable, no stone available for a mound.

The boundary fence is 312 links east of corner.

This corner is 1.7 links west of the position of the temporary corner on the random line.

Land, rolling and sand hills.

Soil, sandy, 4th rate.

Undergrowth, mesquite and scrub oak.

18th Mile.

North

On true line, Texas and New Mexico boundary, over rolling land and low shifting sand hills, scattered mesquite and scrub oak undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

1.35

Fall 86 links west of a wooden stake, 2 ins. dia., and 16 ins. above ground, marked S W 15 on the west face. Pertains to Texas surveys.

Difference between measurements of 80.00 cha. by two sets of chainmen is 3 links; position of the middle point

By 1st set, 79.985 cha;

By 2nd set, 80.015 cha; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 18 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 18 General Land Office Reestablishment 1911 United States Boundary Commission".

Pits impracticable, no stone available for a mound.

The boundary fence is 119 links east of the corner.

This corner is 2.2 links west of the position of the temporary corner on the random line.

Land, rolling and sand hills.

Soil, sand, 4th rate.

Undergrowth, mesquite and scrub oak.

At temporary mile cor. 18 on the random line I determined my watch error by an altitude observation of the sun for apparent time as follows:

April 20, 1911.

Latitude of station 32° 15' 40"

Longitude 103° 04' W.

Declination of sun at time of observation 11° 22' 50"

Formula used: $\tan \frac{1}{2}t = \sqrt{\frac{\sin \frac{1}{2}(z+\phi-d) \sin \frac{1}{2}(z-\phi+d)}{\cos \frac{1}{2}(z+\phi+d) \cos \frac{1}{2}(z-\phi-d)}}$

t = hour angle from app. noon in angular measure.

z = true zenith distance of sun's center.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

 ϕ = latitude of station.

d = declination of the sun.

h = true vertical angle to sun's center.

	Sun's alt.		Watch times of obsn.
Telescope direct	32° 03'	+	3h 46m 30s p. m.
" reversed	<u>32° 20'</u>	-	<u>3h 47m 38s</u>
Means	32° 11' 30"		3h 47m 04s
Refraction	- 1' 30"		
h =	<u>32° 10'</u>		
z =	57° 50'		
Log sin $\frac{1}{2} (z + \phi - d)$			9.802193
Log sin $\frac{1}{2} (z - \phi + d)$			<u>9.500941</u>
			9.303134
Log cos $\frac{1}{2} (z + \phi + d)$	9.801317		
Log cos $\frac{1}{2} (z - \phi - d)$	<u>9.996661</u>		
	9.797978		<u>9.797978</u>
			9.505156
		$\frac{1}{2} =$	9.752578
		Tan $\frac{1}{2} t =$	9.752578
		$\frac{1}{2} t =$	29° 29' 47"
		t =	58° 59' 34"
Apparent time of observation		=	3h 55m 58s p.m.
Equation of time			<u>- 1m 03s</u>
L. M. T. of obsn.			3h 54m 55s
Watch time of obsn.			<u>3h 47m 04s</u>
Watch slow of L. M. T.			7m 51s

19th Mile.

North

On true line, Texas and New Mexico boundary, over rolling land and shifting sand hills, scrub oak undergrowth.

1.42

Fall 88 lks. east of a wooden stake, $2\frac{1}{2}$ ins. dia., 18 ins. above ground, marked W 15 on the east side. Pertains to Texas surveys.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

At this point the boundary fence offsets west to a point 92 links east of line.

Difference between measurements of 80.00 chs. by two sets of chainmen is 5 links; position of middle point

By 1st set, 79.975 chs;

By 2nd set, 80.025 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 19 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 19 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 187 links east of corner.

This corner is 2.7 links west of the position of the temporary corner on the random line.

Land, rolling and sand hills.

Soil, sand, 4th rate.

Undergrowth, short scrub oak.

20th Mile.

North

On true line, Texas and New Mexico boundary, over low shifting sand hills, scrub oak undergrowth.

46.13

Wire fence, runs west from fence east of line.

Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of the middle point

By 1st set, 79.98 chs;

By 2nd set, 80.02 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 20 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 20 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 84 links east of the corner.

This corner is 3.3 links west of the position of the temporary corner on the random line.

Land, low shifting sand hills.

Soil, sand, 4th rate.

Undergrowth, short scrub oak.

21st Mile.

North

On true line, Texas and New Mexico boundary, over low shifting sand hills, through scrub oak undergrowth.

1.69 Wire fence E. and W. At this point the boundary fence offsets from a point 82 links east to a point 260 links west of line, thence along east side of fence.

1.69 Fall 2.60 chs. east of a wooden stake, 3 ins. dia., 30 ins. above ground, marked

N W 5 D 51 on the S.,

S W 25 B 40 on the NE.,

N.M. on the W. sides. Pertains to the Texas surveys.

20.00 Soil becomes firm sand.

37.63 Opposite point of observation on random line.

Time observation of polaris for azimuth at temporary mile corner No. 20 plus 37.63 chs. on random line, April 20, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

Latitude of station $32^{\circ} 17' 50''$ Declination of Polaris $88^{\circ} 49' 53''$

Sights on Polaris marked 20.84 chs. N. of station.

Mean time, U.C. of Polaris, Greenwich 11h 36.3m a. m.

Correction for longitude - 1.1mLocal mean time, U.C. of Polaris 11h 35.2m a. m.

Watch times of observations.

	h	m	s
Telescope direct	6	16	52 p. m.
" reversed	6	19	42
" direct	6	21	50
" reversed	6	22	50
Mean watch time of observations	6h	20m	18s
Watch slow of L. M. T.		7m	51s
Local mean time of observation	6h	28m	09s

L. M. T. of obsn. 6h 28.2m p. m.L. M. T. of U. C. 11 35.2 a. m.Hour angle, W. 6h 53.0m

The azimuth of Polaris corresponding to this hour angle is $1^{\circ} 20.3'$ west of the meridian.

Azimuth distance laid off to the east, to mark true meridian, 48.7 links.

At a point 20.80 chs. north of my station of observation the random line falls $1\frac{1}{4}$ ins. to the right of the true meridian, indicating an accumulated error of 15 seconds to the right in 11 miles and 60.39 chs. Bearing of random line, therefore, N. $0^{\circ} 00' 15''$ E.

39.00

Leave sandy soil and scrub oak undergrowth, thence over gently rolling land, gravelly and sandy soil, through scattered mesquite undergrowth.

73.00

Ranch house and wind mill 12.00 chs. east of line. Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of middle point

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

By 1st set, 79,985 chs;

By 2nd set, 80.015 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 21 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 21 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 277 links west of corner.

This corner is 3.6 links west of the position of the temporary corner on the random line.

Land, sand hills and rolling.

Soil, sand, sandy and gravelly loam, 4th and 3rd rate.

Undergrowth, mesquite and short scrub oak.

July 17, 1911.

July 16, 1911. Temporary mile corners No. 22 to No. 25 adjusted from random to true line.

22nd Mile.

North.

On true line, Texas and New Mexico boundary, over almost level prairie, firm gravelly and sandy soil, no undergrowth.

2.04

Wire fence, bears E. and W., at this point the boundary fence offsets from a point 275 links west to a point 96 links east of line. Thence along west side of fence.

2.04

Fall 2.69 chs. east of a wooden stake, 2 ins. square, 14 ins. above ground, marked

S W 16 B 4 on the S.,

T E X on the E.,

N M on the W.,

25 B 40 on the N. faces. Pertains to

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS	Texas surveys.
2.40	Windmill, 25.00 chs. east of line.
70.00	Enter scattered mesquite undergrowth, bears E. and W. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of middle point By 1st set, 79.99 chs; By 2nd set, 80.01 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 22 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 22 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound. The boundary fence is 146 links east of the corner. This corner is 3.7 links west of the position of the temporary corner on the random line. Land, almost level and gently rolling. Soil, gravel and sandy loam, 2nd rate. Undergrowth, mesquite.
	23rd Mile.
	North
	On true line, Texas and New Mexico boundary, over gently rolling land, scattered mesquite.
1.94	NE. cor. of wire fence 147 links east of line. Terminus of boundary fence east of line.
22.00	Leave scattered mesquite undergrowth, bears E. and W.
27.00	Leave firm soil, thence over shifting sand, ascending gradually.
39.00	Top of slope, bears E. and W., thence over rolling land.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of middle point

By 1st set, 79.995 chs;

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 23 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 23 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

This corner is 3.8 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, gravelly and sandy loam, 3rd rate, sand, 4th rate.

Undergrowth, mesquite.

24th Mile.

North

On true line, Texas and New Mexico boundary, ascending gradually over loose sand, scrub oak undergrowth.

1.96

Fall 101 links west of angle in wire fence. From angle the fence extends east and N. 30° W.

3.62

Wire fence, bears N. 30° W. and S. 30° E.

8.38

Fall 280 links east of angle in wire fence. From angle the fence extends S. 30° E. and N., thence along east side of fence.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of middle point

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

By 1st set, 79.995 chs;

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground, for the 24 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 24 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 283 links west of corner.

This corner is 4 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand, 4th rate.

Undergrowth, short scrub oak.

25th Mile.

North

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, short scrub oak undergrowth.

64.00

Opposite point of observation on random line.

Meridian observation of the sun for time at temporary mile corner No. 24, plus 64.00 chs. on random line, April 21, 1911.

Watch times of transit.

	h	m	s	
Sun's W. limb	11	49	53	a. m.
Sun's center (not used)	11	50	57	
Sun's E. limb.	11	52	04	
Watch time of apparent noon	11	50	58.5	
L. M. T. of apparent noon	11	58	48	
Watch slow of L. M. T.		7m	49.5s	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs;

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 25 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 25 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 289 links west of corner.

This corner is 4.2 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand, 4th rate.

Undergrowth, short scrub oak.

July 16, 1911.

July 15, 1911. Temporary mile cors. No. 26 to No. 41 adjusted from random to true line.

26th Mile.

North

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scrub oak undergrowth.

4.72

Road, bears N. of W. and S. of E.

30.00

Road, bears E. NE. and W. SW.

60.00

Thence over low shifting sand hills, bears E. by N., and W. by S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of middle point

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

By 1st set, 79.995 chs;

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 26 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 26 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 308 links west of the corner.

This corner is 4.5 links west of the position of the temporary corner on the random line.

Land, rolling and sand hills.

Soil, sand, 4th rate.

Undergrowth, short scrub oak.

27th Mile.

North

On true line, Texas and New Mexico boundary, over rolling low shifting sand hills, scrub oak undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 27 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 27 General Land Office Reestablishment 1911 United States Boundary Commission". pits impracticable, no stone available for a mound.

The boundary fence is 319 links west of the corner.

This corner is 4.9 links west of the position of the

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

temporary corner on the random line.

Land, shifting sand hills.

Soil, sand, 4th rate.

Undergrowth, scrub oak.

28th Mile.

North

On true line, Texas and New Mexico boundary, over rolling and shifting sand hills, scrub oak undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 79.99 chs;

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 28 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 28 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 335 links west of the corner.

This corner is 5.3 links west of the position of the temporary corner on the random line.

Land, low rolling and shifting sand hills.

Soil, sand, 4th rate.

Undergrowth, short scrub oak.

29th Mile.

North

On true line, Texas and New Mexico boundary, over low rolling and shifting sand hills, through short scrub oak undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

78.56 Road, bears E. by N. and W. by S., leave sand hills, thence over gently rolling land, sandy loam soil, scattered mesquite undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 29 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked, "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 29 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable no stone available for a mound.

The boundary fence is 359 links west of the corner.

This corner is 5.8 links west of the position of the temporary corner on the random line.

Land, rolling and sand hills.

Soil, sand, 4th rate and sandy loam, 3rd rate.

Undergrowth, short scrub oak and mesquite.

30th Mile

North

On true line, Texas and New Mexico boundary, over almost level land, firm soil, scattered mesquite undergrowth.

1.55 Road, bears E. and W.

1.82 Wire fence, runs east from boundary fence.

2.40 Vacant house 250 links west of line, thence over cultivated land, bears E. and W.

26.60 Leave cultivated land, bears E. and W.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

26.84	Wire fence, runs east from boundary fence, soil becomes sandy, Enter scrub oak undergrowth, bears E. and W.
38.00	Leave sandy soil, thence over firm sandy loam.
71.00	Leave scrub oak undergrowth, bears NE. and SW. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 30 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 30 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound. The boundary fence is 379 links west of corner. This corner is 6.3 links west of the position of the temporary corner on the random line. Land, almost level and rolling. Soil, sandy loam, 3rd rate. Undergrowth, mesquite and scrub oak.
	31st Mile. North
	On true line, Texas and New Mexico boundary, ascending gradually over rolling land, firm gravelly soil, scattered mesquite undergrowth.
30.00	Top of ascent, bears E. and W., thence over almost level land.
65.00	Leave undergrowth, bears E. and W.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

No difference between measurements of 80.00 cha. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 31 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 31 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 393 links west of corner.

This corner is 6.9 links west of the position of the temporary corner on the random line.

Land, almost level and rolling.

Soil, gravelly and sandy loam, 2nd rate.

Undergrowth, mesquite.

32nd Mile.

North

On true line, Texas and New Mexico boundary, over almost level land, firm gravelly soil, little or no undergrowth.

19.55

Road, bears E.NE. and W.SW.

31.84

Opposite point of observation on random line.

Time observation of Polaris for azimuth at temporary mile corner No. 31 plus 31.84 chs. on random line, April 21, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

Latitude of station $32^{\circ} 27' 15''$ Declination of Polaris $88^{\circ} 49' 52''$

Sights on Polaris marked 19.22 chs. S. of station.

Mean time U.C. of Polaris, Greenwich 11h 32.3m a. m.

Correction for longitude -1.1m

Local mean time, U.C. of Polaris 11h 31.2m

Watch times of observations

	h	m	s	
Telescope direct	6	24	04	p. m.
" reversed	6	25	42	
" direct	6	27	06	
" reversed	6	29	16	
Mean watch time of observations	6h	26m	32s	
Watch slow of L. M. T.		7m	49s	
Local mean time of observation	6h	34m	21s	

L. M. T. of obsn. 6h 34.3m p. m.

L. M. T. of U. C. 11 31.2 a. m.

Hour angle, W. 7h 03.1m

The azimuth of Polaris corresponding to this hour angle is $1^{\circ} 19.5'$ west of the meridian.

Azimuth distance laid off to the west, (points marked to the south) to mark true meridian, is 44.46 links. At a point 19.22 chs. south of my station of observation the random line falls $1\frac{1}{4}$ ins. to the west of the true meridian, indicating an accumulated error of 17 seconds to the right in 10 miles and 74.21 chs. The bearing of the random line, therefore, is N. $0^{\circ} 00' 17''$ E.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

32.00

Leave firm land, thence over low gently rolling and shifting sand hills, scattered mesquite and scrub oak undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of middle point

By 1st set, 79.985 chs;

By 2nd set, 80.015 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 32 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 32 General Land Office Reestablishment 1911 United States Boundary Commission". Pite impracticable, no stone available for a mound.

The boundary fence is 400 links west of corner.

This corner is 7.1 links west of the position of the temporary corner on the random line.

Land, almost level, and low rolling sand hills.

Soil, sandy loam, 3rd rate and sand, 4th rate.

Undergrowth, mesquite and short scrub oak.

33rd Mile.

North

On true line, Texas and New Mexico boundary, over rolling sandy land, through scattered mesquite and scrub oak undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

CHAINS

31.00

Thence over shifting sand hills, averaging 5 ft. high.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 33 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 33 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 408 links west of the corner.

This corner is 7.3 links west of the position of the temporary corner on the random line.

Land, rolling and sand hills.

Soil, sandy loam and sand, 3rd and 4th rate.

Undergrowth, scrub oak and mesquite.

34th Mile

North

On true line, Texas and New Mexico boundary, over low shifting sand hills, through scattered short scrub oak undergrowth.

7.00

Leave sand hills, bears E. and W., thence over rolling sandy land.

RE-SURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen 2 links; position of the middle point

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs. the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 34 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 34 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 419 links west of the corner.

This corner is 7.6 links west of the position of the temporary corner on the random line.

Land, sand hills and rolling.

Soil, sand 4th rate.

Undergrowth, short scrub oak.

35th Mile

North

On true line, Texas and New Mexico boundary over low shifting sand hills, through short scattered scrub oak undergrowth.

2.77

Wire fence, runs east from boundary fence.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 35 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 35 General Land Office reestablishment 1911, United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 419 links west of corner.

This corner is 8.0 links west of the position of the temporary corner on the random line.

Land, sand hills.

Soil, sand, 4th rate.

Undergrowth, short scrub oak.

36th Mile

North

On true line, Texas and New Mexico boundary, over gently rolling land, sandy soil, scattered scrub oak undergrowth.

51.00

Thence over shifting sand hills, averaging 10 ft. high.

65.00

Ascend gradually.

69.70

Sand ridge, bears E. and W., 20 ft. above the general elevation of the surrounding country; descend.

71.00

Bottom of descent, thence over low shifting sand hills.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

80.00

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

Set a hollow iron post 36 ins. long, 2 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 36 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 36, General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 407 links west of the corner.

This corner is 8.6 links west of the position of the temporary corner on the random line.

Land, rolling and sand hills.

Soil, sand, 4th rate.

Undergrowth, short scrub oak.

Meridian observation of the sun for time at temporary mile corner No. 36, on random line, April 23, 1911.

Equation of time, 1m36s

	Watch times of transit.			
	h	m	s	
Sun's W. limb	11	49	28	a.m.
Sun's center	11	50	33	
Sun's E. limb	11	51	38	
Watch time of apparent noon	11	50	33	
L.M.T. of apparent noon	11	58	24	
Watch slow of L.M.T.		7m	51s	

37th Mile

North

On a true line, Texas and New Mexico boundary, over

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

low shifting sand hills, through scattered scrub oak undergrowth.

43.00

Leave sand hills, bears E. and W., thence over gently rolling land.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks; position of middle point

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 37 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 37 General Land Office Reestablishment 1911 United States Boundary Commission.

Pits impracticable, no stone available for a mound.

The boundary fence is 400 links west of the corner.

This corner is 9.3 links west of the position of the temporary corner on the random line.

Land, sand hills and rolling.

Soil, sand 4th rate.

Undergrowth, short scrub oak.

38th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, through scattered scrub oak undergrowth.

3.23

Wire fence, runs east from boundary fence.

56.00

Search made for evidence of Clark Mon. No. 3.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

<u>Chains</u>	
80.00	<p>Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point</p> <p>By 1st set, 79.995 chs.</p> <p>By 2nd set, 80.005 chs; the mean of which is</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 38 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 38 General Land Office Reestablishment 1911 United States Boundary Commission."</p> <p>Pits impracticable, no stone available for a mound.</p> <p>The boundary fence is 416 links west of the corner.</p> <p>This corner is 10.1 links west of the position of the temporary corner on the random line.</p> <p>Land, rolling.</p> <p>Soil, sandy, 4th rate.</p> <p>Undergrowth, short scrub oak.</p>
	<p style="text-align: center;">39th Mile North</p> <p>On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, scattered scrub oak undergrowth.</p>
3.22	<p>Fall 416 links east of the N.W. Cor. of wire fence, terminus of boundary fence west of line.</p>
35.00	<p>Enter scattered mesquite undergrowth, bears E. and W.</p>
38.50	<p>Leave loose sandy soil, and scrub oak undergrowth, thence over almost level land, sandy and gravelly</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

	soil.
58.85	Road, bears E. and W.
59.00	Prairie draw, 2.00 chs. wide, course SE.
62.20	Road, bears NW. and SE.
63.00	House and windmill, 20.00 chs. west of line.
71.33	Road, bears W. of E. and S. of W.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 39 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 39 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound. This corner is 11.0 links west of the position of the temporary corner on the random line. Land, almost level and rolling. Soil, sandy, 4th rate. Undergrowth, mesquite and scrub oak.
	40th Mile North
	On true line, Texas and New Mexico boundary ascending gradually over gently rolling land, gravelly loam soil, through scattered mesquite undergrowth.
3.17	Wire fence, bears E. and W; 360 lks. west to corner from which a wire fence extends S. of W. and N., thence along east side of fence.
23.00	Top of ascent, bears E. and W., thence over level land.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

61.28	Opposite a wire fence extending west from boundary fence.
61.45	Road, bears E.NE and W.SW, turns W.75 links westward from line.
70.00	Enter short scrub oak undergrowth, bears NE. and SW soil becomes sandier.
75.00	Soil becomes loose shifting sand.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link, position of the middle point.
	By 1st set, 79.996 chs.
	By 2nd set, 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 40 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof and also marked "Clark Boundary 1859 Mile Corner No. 40 General Land Office Reestablishment 1911 United States Boundary Commission."
	Pits impracticable, no stone available for a mound.
	The boundary fence is 363 links west of the corner.
	This corner is 12.1 links west of the position of the temporary corner on the random line.
	Land, level and gently rolling.
	Soil, sandy and gravelly loam 3rd rate and sand 4th rate.
	Undergrowth, mesquite and scrub oak.

41st Mile

North

On true line, Texas and New Mexico boundary, over gently rolling land, shifting sandy soil, through scattered short scrub oak undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.	
3.23	Wire fence, runs east from boundary fence.
3.41	Fall 362 links east of an iron pipe pertaining to the Texas surveys, which is $1\frac{1}{2}$ ins. dia., 12 ins. above ground, marked S W 25 B 12' on N., N W 5 B 28 on S., N M. on the W sides.
17.80	Road, bears S. of N. and N. of W.
34.35-	Road bears N.W. and S.E.
37.75	Enter cultivated land, bears E. and W., extends to a point 20.00 chs. east of line, and west to boundary fence.
54.00	Leave cultivated land, bears E. and W. Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link, position of the middle point By 1st set, 79.995 chs., By 2nd set, 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 41 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 41 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound. The boundary fence is 248 links west of the corner. This corner is 13.4 links west of the position of the temporary corner on the random line. Land, rolling. Soil, sandy 3rd and 4th rate. Undergrowth, short scrub oak.

July 15, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

July 14, 1911: Adjust temporary mile corners from No. 42 to No. 53 from random to true line.

42nd Mile

North

On true line, Texas and New Mexico boundary, over gently rolling land, loose sandy soil, through scattering scrub oak undergrowth

3.52	Wire fence, runs east from boundary fence
68.30	Fall 340 links east of the NE. cor. of wire fence, terminus of boundary fence west of line.
70.00	House and windmill 30.00 chs. west of line.
71.37	Fall 340 links east of the SE cor. of wire fence, thence along east side of boundary fence.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 42 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 42 General Land Office Reestablishment 1911 United States Boundary Commission."
	Pits impracticable, no stone available for a mound. The boundary fence is 341 lks. west of the corner. This corner is 14.8 links west of the position of the temporary corner on the random line.
	Land, rolling.
	Soil, sand 4th rate.
	Undergrowth, scattered scrub oak.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

43rd Mile

North

On true line, Texas and New Mexico boundary, rolling land, sandy soil, through scattered mesquite and scrub oak undergrowth

4.00 Little or no scrub oak undergrowth, thence over firm gravelly and sandy loam.

12.00 Leave undergrowth, bears E. and W.

12.24 Opposite point of observation on random line.

Time observation of Polaris for azimuth at temporary mile corner No. 42 plus 12.24 chs. on random line, April 23, 1911.

Longitude of station $103^{\circ} 04'$

Latitude of station, $32^{\circ} 36' 40''$

Declination of Polaris, $88^{\circ} 49' 52''$

Sights on Polaris marked 12.79 chs. to the north.

Mean time, U. C. of Polaris, Greenwich, 11h 24.5m a.m.

Correction for longitude - 1.1m

Local mean time, U.C. of Polaris 11h 23.4m

Watch times of Observations.

	h.	m.	s.	
Telescope direct	6	15	28	p.m.
" reversed	6	17	26	
" direct	6	19	10	
" reversed	6	20	44	
Mean watch time of observations	6h	18m	12s	
Watch slow of L.M.T.			7m 51s	
Local mean time of observation	6h	26m	03s	
L.M.T. of obsn.	6h	26m		p.m.
L.M.T. of U.C.	11h	23.4m		a.m.
Hour angle, W.	7h	02.6m		

The azimuth of Polaris corresponding to this hour angle is $1^{\circ} 19.6'$ west of the meridian.

Azimuth offset laid off to the east to determine a true meridian, 29.62 links.

At a distance of 12.79 chs. north of the point of observation the random line falls $1 \frac{7}{8}$ ins. to the right of the true meridian, indicating an accumulated error of 37 seconds in 10 miles and 60.40 chs. the bearing of the random therefore is N. $0^{\circ} 00' 37''$ E.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.	
70.00	<p>Enter scrub oak undergrowth, bears E. and W.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point</p> <p>By 1st set, 79.995 chs.,</p> <p>By 2nd set, 80.005 chs; the mean of which is</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 43 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 43 General Land Office Reestablishment 1911 United States Boundary Commission."</p> <p>Pits impracticable, no stone available for a mound.</p> <p>The boundary fence is 335 links west of the corner.</p> <p>This corner is 15.00 links west of the position of the temporary corner on the random line.</p> <p>Land, rolling.</p> <p>Soil, sandy 4th rate and sandy and gravelly loam 2nd rate.</p> <p>Undergrowth, short scrub oak and mesquite.</p>
	<p style="text-align: center;">44th Mile</p> <p style="text-align: center;">North</p> <p>On true line, Texas and New Mexico boundary, over rolling land, sandy soil, scattered mesquite and scrub oak undergrowth.</p>
3.75	<p>Wire fence, runs east from boundary fence.</p>
25.00	<p>Soil becomes loose sand.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point</p> <p>By 1st set, 79.99 chs.,</p> <p>By 2nd set, 80.01 chs; the mean of which is</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 44 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 44 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound. The boundary fence is 330 links west of the corner. This corner is 15.1 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand 4th rate.

Undergrowth, short scrub oak and mesquite.

45th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through short scattered scrub oak and mesquite undergrowth.

38.00

House and windmill bears 20.00 chs. west.

39.85

Point opposite a fence running west from the boundary fence.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs;

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 45 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 45 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 333 links west of the corner.

This corner is 15.2 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 4th rate.

Undergrowth, mesquite and short scrub oak.

46th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite and short scrub oak undergrowth.

50.00 Road, N. of E. and S. of W.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link. Position of middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 46 mile corner. The top of cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 46 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 343 links west of the corner.

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Chains.

This corner is 15.4 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand 4th rate.

Undergrowth, short scrub oak and mesquite.

47th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite and scrub oak undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 47 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 47 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 367 links west of the corner.

This corner is 15.6 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 4th rate.

Undergrowth, mesquite and short scrub oak.

48th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite and short scrub oak undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD. MERIDIAN.

Chains.

- 4.02 Wire fence, runs east from the boundary fence.
No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia', filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 48 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 48 General Land Office Reestablishment 1911 United States Boundary Commission."
Pits impracticable, no stone available for a mound.
The boundary fence is 371 links west of the corner.
This corner is 15.9 links west of the position of the temporary corner on the random line.
Land, rolling.
Soil, sandy & thrate.
Undergrowth, mesquite and short scrub oak.

49th Mile

North

- On a true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite and scrub oak undergrowth.
- 4.10 The NW. corner of a wire fence 371 links west of line.
Terminus of the boundary fence west of line.
- 4.20 Road bears E. and W.
- 20.00 Prairie draw, 200 links wide, course S. of E.
No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete flanged at the bottom and

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Chains.

surmounted with a brass cap, 26 ins. into the ground for the 49 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 49 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 16.3 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand 4th rate.

Undergrowth, short scrub oak and mesquite.

50th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite and short scrub oak undergrowth.

47.30 Road, bears NE and SW.

56.70 Wire fence bears E. and W. Leave undergrowth.

59.50 Enter cultivated land, bears E. and W., thence over level land.

68.00 Windmill 12.00 chs. east of line.

72.00 House 7 chs. east of line. John Jones.

76.00 Leave cultivated land, bears E. and W., thence over gravelly loam soil, scattered mesquite undergrowth.

79.60 House, 6.00 chs. west of line.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 2 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground

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Chains.

for the 50 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 50 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound

This corner is 16.7 links west of the position of the temporary on the random line.

Land, rolling and level.

Soil, sand 4th rate and sandy loam 2nd rate.

Undergrowth, mesquite and short scrub oak.

51st Mile

North

On true line, Texas and New Mexico Boundary, over rolling land, ascending gradually, gravelly and sandy loam soil, through scattered mesquite undergrowth.

4.46 Fall 435 links east of an iron pipe, $1\frac{1}{2}$ ins. dia., 12 ins. above ground, marked

S W 25 B 9 on the N.,

N W 5 B 10 on the S.,

N M on the W., sides, pertains to the Texas surveys.

4.65 SW corner of wire fence 432 links west of line, thence along the east side of wire fence.

27.00 Top of ascent, prairie swell, bears E. and W., thence over rolling land.

38.96 Wire fence, bears E. and W. The fence west of line terminates at this fence. E. and W. fence extends east 135 links, thence north along line.

Land now almost level.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 80.005 chs.,

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Chains.

80.00	<p>By 2nd set, 79.995 chs; the mean of which is</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 51 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 51, General Land Office Reestablishment 1911 United States Boundary Commission."</p> <p>Pits impracticable, no stone available for a mound.</p> <p>The boundary fence is 127 links east of line.</p> <p>This corner is 17.1 links west of the position of the temporary corner on the random line.</p> <p>Land, rolling and almost level.</p> <p>Soil, gravelly and sandy 2nd rate.</p> <p>Undergrowth, mesquite.</p>
52nd Mile	
North	
	<p>On true line, Texas and New Mexico boundary, over almost level land, firm gravelly and sandy soil, through scattered mesquite undergrowth.</p>
2.54	Road, bears E. and W.
11.00	House and windmill, 14 chs. west.
18.77	Wire fence, extends west from boundary fence.
29.50	Enter dry bed of rain water pond, bears E. and W.
34.00	Leave dry bed, bears SW and E. This pond extends 1 chain west and 5 chains east of line.
46.00	Soil becomes sandy, enter short scrub oak undergrowth bears E. and W., land rolling.
49.75	Fall 127 links west of the NE cor. of wire fence Terminus of boundary fence east of line.

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Chains.

- 52.60 Fall 118 links west of the SE. cor. of wire fence, thence along the west side of boundary fence.
- 65.00 Soil, becomes shifting sand, land more rolling.
- 79.33 Fall 91 links west of the NE. cor. of wire fence, terminus of fence east of line. The boundary fence now extends north from E. and W. fence, at a distance of 456 links W. of line.
- Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point
- By 1st set, 79.995 chs.,
- By 2nd set, 80.005 chs; the mean of which is
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 52 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 52 General Land Office Reestablishment 1911 United States Boundary Commission."
- Pits impracticable, no stone available for a mound.
- The boundary fence is 456 links west of the corner.
- This corner is 17.6 links west of the position of the temporary corner on the random line.
- Land, almost level and rolling.
- Soil, gravelly and sandy loam 1st rate, and sand 4th rate.
- Undergrowth, mesquite and short scrub oak.

53rd Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered scrub oak and mesquite undergrowth.

20.00

Ascend gradually.

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Chains.

60.00

Top of ascent, sand ridge 15 ft. high, bears E. and W;
descend gradually over rolling land.

Difference between measurements of 80.00 chs. by
two sets of chainmen is 1 link; position of the middle
point

By 1st set, 80.005 chs.,

By 2nd set, 79.995 chs; the mean of which is

80.00

Set a hollow iron post 56 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 28 ins. into the ground for
the 53 mile corner. The top of the cap is divided by
a north and south stamped line 1 inch in length, and
marked "Texas" on the east, "New Mexico" on the west
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 53 General Land Office Reestablishment 1911
United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 474 links west of corner.

This corner is 18.1 links west of the position of
the temporary corner on the random line.

Land, rolling.

Soil, sand 4th rate.

Undergrowth, mesquite and short scrub oak.

July 14, 1911.

July 13, 1911: Adjust temporary corners No. 54 to
No. 68 inclusive, from random to true line.

54th Mile

North

On true line, Texas and New Mexico boundary, over
rolling land, sandy soil, through scattered mesquite
and scrub oak undergrowth.

4.79

Wire fence extends east from boundary fence.

38.00

Prairie draw, 4 chs. wide, course S. of E; ascend
gradually.

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<u>Chains.</u>		
40.00	Soil becomes firm gravelly loam, leave scrub oak undergrowth, bears E. and W.	
60.00	Top of ascent, prairie swell, bears E. and W; thence over gently rolling land.	
	<p>Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point</p> <p>By 1st set, 79.99 chs.,</p> <p>By 2nd set, 80.01 chs; the mean of which is</p>	
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 54 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 54 General Land Office Reestablishment 1911 United States Boundary Commission. "</p> <p>Pits impracticable, no stone available for a mound.</p> <p>The boundary fence is 491 links west of the corner.</p> <p>This corner is 18.7 links west of the position of the temporary corner on the random line.</p> <p>Land, rolling.</p> <p>Soil, sand 4th rate, and gravelly loam 1st rate.</p> <p>Undergrowth, mesquite and short scrub oak.</p>	
	<p>55th Mile</p> <p>North</p>	
	<p>On true line Texas and New Mexico boundary, over rolling land, firm gravelly and sandy soil, through scattered mesquite undergrowth</p>	
.43	Old road, bears E. and W.	
33.62	Wire fence extends east from boundary fence W. of line.	
34.00	Road, bears E. and W.	
44.00	Leave firm soil, thence over sandy soil; enter scatter-	

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<u>Chains.</u>	ed scrub oak undergrowth, bears E. and W.
46.80	Small house, 16.00 chs. west.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point
	By 1st set, 79.995 chs.,
	By 2nd set, 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 55 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 55 General Land Office Reestablishment 1911 United States Boundary Commission."
	Pits impracticable, no stone available for a mound.
	The boundary fence is 482 links west of the corner.
	This corner is 19.3 links west of the position of the temporary corner on the random line.
	Land, rolling.
	Soil, gravelly and sandy loam 2nd rate, sandy 4th rate.
	Undergrowth, mesquite and short scrub oak.
56th Mile North	
	On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered scrub oak undergrowth
4.98	Wire fence extends east from the boundary fence W. of line.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and sur-

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Chains.

mounted with a brass cap, 26 ins. into the ground for the 56 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 56 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound. The boundary fence is 554 links west of the corner. This corner is 20.00 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 4th rate.

Undergrowth, scattered scrub oak.

57th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through short scrub oak undergrowth.

- 5.17 Wire fence, runs east from boundary fence west of line.
- 5.18 Fall 532 links E. of a wooden stake, $1\frac{1}{2}$ ins. dia., 15 ins. above ground, marked
S W 5 B 8 on the N.,
N W 25 B 6 on the S. sides, pertains to the Texas surveys.
- 26.22 Telephone line, bears NW and SE; line turns and extends north along the boundary fence.
- 46.00 Soil becomes firm gravelly loam, leave oak and enter scattered mesquite undergrowth.
- 51.00 Commence descent of gradual NE slope into prairie draw.
- 52.00 Windmill, 350 links east of line.
- 56.00 Road, bears S. of E. and N. of W.
- 57.50 Prairie draw, 3.00 chs. wide, course S. of E; ascend gradually.

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Chains.

- 59.00 House 20.00 chs. west of line.
- 67.00 Top of ascent, thence over rolling land.
- 68.00 Soil becomes sandy, enter short scrub oak undergrowth bears E. and W.
- No difference between measurements of 80.00 chs by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 57 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 57 General Land Office Reestablishment 1911 United States Boundary Commission."
- Pits impracticable, no stone available for a mound.
- The boundary fence is 549 links west of the corner.
- This corner is 20.7 links west of the position of the temporary corner on the random line.
- Land, rolling.
- Soil, gravelly loam 1st rate, sandy 3rd rate.
- Undergrowth, mesquite and scrub oak.

58th Mile

North

- On true line, Texas and New Mexico boundary, over rolling land, sandy and gravelly soil, through scattered mesquite and scrub oak undergrowth.
- 9.00 The telephone line following along the boundary fence turns and extends west from said fence
- No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 58 mile corner. The top of the cap is divided by a

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Chains.

north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 58 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 549 links west of the corner.

This corner is 21.4 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, gravelly and sandy 3rd rate.

Undergrowth, mesquite and short scrub oak.

59th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite and scrub oak undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 26 ins. into the ground for the 59 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 59 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound

The boundary fence is 553 links west of the corner.

This corner is 22.2 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 3rd rate.

Undergrowth, scattered mesquite and scrub oak.

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Chains.

60th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, scattered mesquite and scrub oak undergrowth.

4.85 Road, bears N. of E. and S. of W.

40.00 Leave scrub oak undergrowth, bears E. and W., soil becomes firmer.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 80.005 chs.

By 2nd set, 79.995 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 60 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 60 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 543 links west of the corner.

This corner is 23.1 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 3rd rate.

Undergrowth, mesquite and short scrub oak.

61st Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite and scrub oak undergrowth.

15.00 Commence to descend gradually, into prairie draw.

19.77 Road, bears N. of E. and S. of W; soil firm sand

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Chains.

22.50 Prairie draw, course E., ascend gradually.

30.00 Top of ascent, bears E and W; thence over rolling land, sandy loam soil.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 61 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 61, General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 558 links west of the corner.

This corner is 24.00 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 3rd rate and sandy loam 1st and 2nd rate.

Undergrowth, mesquite and short scrub oak.

62nd Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy loam soil, scattered mesquite undergrowth.

7.28 Road, bears N. of E. and S. of W; house and windmill 12.00 chs. west of line.

7.50 Opposite this point the boundary fence offsets west 125 links.

28.00 Enter short scrub oak undergrowth, bears E. and W. Soil more sandy.

77.00 Leave scrub oak undergrowth, bears E. and W., soil firm and gravelly.

No difference between measurements of 80.00 chs. by two

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Chains.

sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 62 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 62 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound

The boundary fence is 572 links west of the corner.

This corner is 24.9 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy gravelly 2nd rate.

Undergrowth, scrub oak and mesquite.

63rd Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy loam soil, scattered mesquite undergrowth.

3.44

Road, bears E. and W.

3.50

Small house 12.00 chs. west of line.

5.82

Wire fence, extends east from boundary fence west of line.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 63 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 63

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Chains.

General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 591 links west of the corner.

This corner is 25.9 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy and gravelly loam 3rd rate.

Undergrowth, mesquite.

64th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy and gravelly loam soil, scattered mesquite undergrowth.

30.45 Road, bears NE and SW.

49.80 Fall 623 links east of the NW cor. of wire fence; terminus of boundary fence west of line.

54.00 House and windmill 8.00 chs. east of line.

70.00 Road, bears NW. and SE.

79.36 Fall 668 links east of the SE. cor. of wire fence; thence along the east side of boundary fence.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 64 mile corner. The top of the cap is divided by a north and south stamped line, 1 in. in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 64 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains

The boundary fence is 668 links west of corner.

This corner is 26.9 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy and gravelly loam, 3rd rate.

Undergrowth, mesquite.

65th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy loam soil, through scattered mesquite undergrowth.

6.09 Road, bears E. and W.

6.28 Wire fence, extends east from boundary fence W. of line.

40.41 Wire fence, extends east from boundary fence W. of line, enter scattered scrub oak undergrowth, bears E. and W.

48.00 House and windmill 15.00 chs. west of line, soil becomes sandy.

51.27 Wire fence, extends east from boundary fence W. of line.

62.00 Leave scrub oak undergrowth, bears E. and W., thence over gravelly loam soil.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 65 mile corner; The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 65 General Land Office Reestablishment 1911 United States Boundary Commission."

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Chains.

Pits impracticable, no stone available for a mound.

The boundary fence is 1020 links west of corner.

This corner is 28.00 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy and gravelly loam 2nd and 4th rate.

Undergrowth, mesquite and short scrub oak.

66th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy loam soil, through scattered mesquite undergrowth.

8.00 The boundary fence turns NW. at 10.22 chs. west of this point.

31.00 House and windmill, 10.00 chs. west of line. Soil now firm and gravelly.

79.54 Fell 636 chs. east of the SE. cor. of wire fence; thence along the east side of boundary fence.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 66 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 66 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 636 links west of corner.

This corner is 29.1 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy and gravelly loam, 3rd rate.

Chains.	Undergrowth, mesquite.
	67th Mile North
	On true line, Texas and New Mexico boundary ascending gradually over gently rolling land, firm sand and gravelly soil, through scattered mesquite undergrowth.
6.30	Wire fence, extends east from boundary fence W. of line.
17.25	Road, bears NW and SE
39.70	Wire fence, bears E. and W. At this point the boundary fence offsets from a point 621 links west to a point 52 links east of line. Leave undergrowth
50.00	Top of gradual ascent, bears E. and W; thence over gently rolling land.
55.00	House and windmill, 20.00 chs. west of line.
56.72	Fall 60 links west of the NE. corner of wire fence; terminus of boundary fence E. of line.
60.50	Fall 60 links west of the SE corner. of wire fence; thence along west side of boundary fence, over cultivated land, extending west from boundary fence.
72.35	Leave cultivated land, bears E. and W.
76.70	Enter cultivated land, bears E. and W. Extends west from boundary fence.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 67 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 67 General Land Office Reestablishment 1911 United States Boundary Commission."
	Pits impracticable, no stone available for a mound.

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Chains.

The boundary fence is 69 links east of the corner.

This corner is 30.3 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy and gravelly loam, 2nd rate.

Undergrowth, mesquite.

Meridian observation of the sun for time at temporary mile corner No. 67 on random line, April 26, 1911.

Equation of time: -2m09s

Watch times of transit

	h	m	s
Sun's W. limb	11	48	48 a.m.
Sun's center	11	49	53
Sun's E. limb	11	50	58
Watch time of apparent noon	11	49	53
L.M.T. of apparent noon	11	57	51
Watch slow of L.M.T.		7m	58s

68th Mile

North

On true line, Texas and New Mexico boundary, over almost level cultivated land, sandy loam soil.

8.00 Leave cultivated land, bears E. and W., thence through scattered mesquite undergrowth

21.00 Prairie draw, 6.00 chs. wide, course S. of E.

47.72 Wire fence extends west from boundary fence E. of line.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 68 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof,

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Chains.

and also marked "Clark Boundary 1859 Mile Corner No. 68 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound. The boundary fence is 105 links east of the corner. This corner is 31.6 links west of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy loam, 1st rate.

Undergrowth, mesquite.

July 13, 1911.

July 12, 1911.

Adjust temporary corners No. 69 to No. 79 from random to true line.

69th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite undergrowth.

28.27

Opposite point of observation on random line.

Time observation of Polaris for azimuth at temporary mile corner No. 68 plus 28.27 chs. on random line, April 26, 1911.

Longitude of station $103^{\circ} 04'$

Latitude of station $32^{\circ} 59'$

Declination of Polaris $88^{\circ} 49' 51''$

Sights on Polaris marked 30.00 chs. north of station.

Mean time, U.C. of Polaris, Greenwich 11h 12.7m a.m.

Correction for longitude 1.1m

Local mean time, U.C. of Polaris 11h 11.6m a.m.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

Watch times of observations.

	h	m	s
Telescope direct	6	32	43 p.m.
" reversed	6	34	25
" direct	6	36	49
" reversed	6	38	02
Mean watch time of observations	6 h	35 m	30 s
Watch slow of L.M.T.		7	58
Local mean time of observation	6 h	43 m	28 s
L.M.T. of observn.	6 h	43.5m	p.m.
L.M.T. of U.C.	11 h	11.6m	a.m.
Hour angle, W.	7 h	31.9m	

The azimuth of Polaris corresponding to this hour angle is $1^{\circ} 16.4'$ west of the meridian.

Azimuth distance laid off to the east to determine a true meridian 66.68 links.

At a point 30.00 chs. north of my station of observation the random line falls 3.9 ins. to the right of the true meridian, indicating an accumulated error of 34 seconds in 26 miles and 16.03 chs. Bearing of random therefore N. $0^{\circ} 00' 34''$ E.

Difference between measurements of 73.09 chs., by two sets of chainmen is 1 link; position of the middle point

By 1st set, 73.085 chs.,

By 2nd set, 73.095 chs; the mean of which is

73.09

To Clark's 33rd parallel of north latitude, at which point I construct a concrete monument having a cubical base, 30 ins. square, set 30 ins. into the ground, and a superstructure in the form of a frustum of a cone, encased in galvanized iron, having a lower diameter of 24 ins. an upper diameter of 18 ins., and projecting 30 ins. above the ground; in the top of which there is embedded a brass plate 6 ins. in diameter. The plate is marked in the center by a N. and S. division line $1\frac{1}{2}$

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

ins. long, with "TEXAS" on the east and "NEW MEXICO" on the west thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO. 3" in the north half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the south half. Monument built July 12, 1911.

This monument is 32 links west and 344 links south of the temporary position of the 33rd parallel on the random line. Thence from monument No. 3.

N. 1° 00' 42" E

Continuing the measurement.

No difference between measurements of 6.91 chs.

by two sets of chainmen from Monument No. 3.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia', filled with concrete flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 69 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 69 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stones available for a mound.

The boundary fence is 141 links east of the corner.

This corner is 4.3 links S. 88° 50' 30" E. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 3rd rate.

. Undergrowth, mesquite.

70th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite undergrowth.

43.17

Wire fence, extends west from boundary fence east of line.

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Chains.

45.50 Enter short scrub oak undergrowth, bears E. and W. thence over sandy soil.

74.00 House and windmill 30.00 chs. west of line.
Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point
By 1st set, 80.005 chs.,
By 2nd set, 79.995 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 70 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 70 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.
The boundary fence is 53 links east of the corner.
This corner is 36.2 links N. 88° 50' 30" W. of the position of the temporary corner on the random line.
Land, rolling.
Soil, sandy 2nd and 3rd rate.
Undergrowth, mesquite and short scrub oak.

Meridian observation of the sun for time at temporary mile corner No. 70 on random line April 27, 1911
Equation of time: - 2' 19s

	Watch times of transit.		
	h	m	s
Sun's W. limb	11	48	37 a.m.
Sun's center (not used)	11	49	42
Sun's E. limb	11	50	49
Watch time of apparent noon	11	49	43
L.M.T. of apparent noon	11	57	41
Watch slow of L.M.T.		7m	58s

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

71st Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite and short scrub oak undergrowth.

7.54 . Wire fence, extends west from the boundary fence E. of line.

25.00 Soil less sandy, less scrub oak undergrowth.

31.00 Small house, 15.00 east of line.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 26 ins. into the ground for the 71 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 71 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 85 links east of the corner.

This corner is 76.8 links N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling .

Soil, sandy 3rd rate.

Undergrowth, scattered mesquite and scrub oak.

72nd Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, sandy soil through scattered mesquite and scrub oak undergrowth

47.70 Wire fence extends west from boundary fence east of line; leave scrub oak undergrowth, bears E. and W., soil contains less sand and is more firm.

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Chains.

66.00

Windmill 25.00 chs. west of line.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 72 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 72 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 124 links east of the corner.

This corner is 1.179 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 2nd and 4th rate.

Undergrowth, mesquite and short scrub oak.

73rd Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered amole and cat claw undergrowth.

10.00

House and windmill 30 chs. west of line.

12.82

Wire fence, extends west from the boundary fence east of line.

36.60

Road, bears NE and SW.

37.76

Opposite a wire fence, extends east from boundary fence.

75.59

Wire fence, extends west from boundary fence.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.	
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 73 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof and also marked "Clark Boundary 1859 Mile Corner No. 73 General Land Office Reestablishment 1911 United States Boundary Commission."</p> <p>Pits impracticable, no stone available for a mound. The boundary fence is 139 links east of the corner. This corner is 1.592 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.</p> <p>Land, rolling.</p> <p>Soil, sandy 2nd rate.</p> <p>Undergrowth, smole and cat claw.</p>
	<p>74th Mile</p> <p>N. 1° 00' 42" E.</p>
	<p>On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered smole and cat claw undergrowth.</p>
2.00	Enter scrub oak undergrowth, bears E. and W.
25.75	Road bears S. 60° W and N. 60° E., turns north along east side of the boundary fence. Leave scrub oak undergrowth.
36.80	<p>House and windmill 8.00 chs. east of line</p> <p>No difference between measurements of 80.00 chs by two sets of chainmen</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 74 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile</p>

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Chains.	
	Corner No. 74 General Land Office Reestablishment 1911 United States Boundary Commission."
	Pits impracticable, no stone available for a mound. The boundary fence is 151 links east of the corner This corner is 2.007 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.
	Land, rolling.
	Soil, sandy 3rd rate.
	Undergrowth, scrub oak, smole and cat claw.
	75th Mile
	N. 1° 00' 42" E.
	On true line, Texas and New Mexico boundary, over almost level land, sandy soil, through scattered smole and ergrowth.
5.79	Wire fence, extends west from boundary fence, enter cultivated land extending west from boundary fence.
28.97	Leave cultivated land, bears E. and W.
32.00	House and windmill 20.00 chs. east of line.
36.50	Opposite a road extending east from road along boundary fence.
53.83	Road, extends west from road along the boundary fence.
56.00	Post Office and store of Midway, N.M. 224 links west of line.
77.23	Road, bears NE. and SW.
78.67	The boundary fence offsets 180 links to the east around the Midway school house.
79.50	Road, bears E. and NW.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 75 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and

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Chains.

marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 75 General Land Office Reestablishment 1911 United States Boundary Commission."

Pite impracticable, no stone available for a mound.

This corner is 2.426 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, almost level.

Soil, sandy 2nd rate.

Undergrowth, amole.

76th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over almost level land, sandy soil, scattered amole and mesquite undergrowth.

- .43 The west side of the Midway school house is 144 links east of line.
- 2.49 The boundary fence offsets west to a point 175 links east of line, thence it extends north.
- 2.81 House and windmill 8.00 chs. west of line.
- 3.20 Wire fence, extends west from boundary fence E. of line.
- 10.00 Enter cat claw undergrowth, bears E. and W.
- 20.00 Leave cat claw undergrowth, bears E. and W.
- 37.54 Opposite a wire fence, extends east from boundary fence.
- 38.00 Enter scattered scrub oak undergrowth, bears E. and W.
- 41.13 Enter cultivated land, bears E. and W., extending west from the boundary fence.
- 65.00 Leave cultivated land, bears E. and W.
- 67.20 Wire fence, extends west from the boundary fence.
- Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

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Chains

	By 1st set 79.99 chs.,
	By 2nd set, 80.01 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia.,
	filled with concrete, flanged at the bottom and sur-
	mounted with a brass cap 22 ins. into the ground for
	the 76 mile corner. The top of the cap is divided by
	a north and south stamped line 1 inch in length, and
	marked "Texas" on the east, "New Mexico" on the west
	thereof, and also marked, "Clerk Boundary 1859 Mile
	Corner No. 76 General Land Office Reestablishment 1911
	United States Boundary Commission". Raise a mound of
	small stone 2 ft. base 1 ft. high around corner.
	Pits impracticable, no stone available for a
	mound.
	The boundary fence is 200 links east of the corner.
	This corner is 2.848 chs. N. 88° 50' 30" W. of the
	position of the temporary corner on the random line.
	Land, almost level.
	Soil, sandy loam and sand.
	Undergrowth, amole, mesquite, cat-claw and scrub oak.
	77th Mile
	N. 1° 00' 42" E
	On true line, Texas and New Mexico boundary
	over almost level land, sandy soil, through scattered
	mesquite and amole undergrowth.
33.00	Enter scattered scrub oak undergrowth, bears E.
	and W., soil becomes more sandy.
38.00	Soil becomes loose sandy loam.
	No difference between measurements of 80.00chs.
	by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 77 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 77 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 221 links east of the corner.

This corner is 3.272 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, almost level.

Soil, sandy clay 2nd and 3rd rate.

Undergrowth, mesquite, scrub oak and amole.

78th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite and scrub oak undergrowth.

39.67

Opposite a wire fence, extends east from boundary fence. Soil now shifting sand.

74.50

Leave shifting sandy soil, thence over firm sandy soil.

75.00

Windmill 7.00 chs. west of line.

76.25

Leave scrub oak undergrowth, bears E. and W.

76.64

Adobe house 1.00 ch. west of line.

77.07

Fall 1.85 chs. west of the SE. cor. of wire fence. The boundary fence is 56 links east of this fence corner.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 78 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico", on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 78 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 2.40 chs. east of the corner.

This corner is 3.698 chs. N. $88^{\circ} 50' 30''$ W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 3rd rate.

Undergrowth, scrub oak, and mesquite.

79th Mile

N $1^{\circ} 00' 42''$ E.

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite undergrowth.

4.15 Windmill 4.72 chs. east of line.

5.00 Enter scattered scrub oak undergrowth, bears E. and W

10.00 Soil becomes more sandy.

13.96 Fall 2.00 chs. W. of N.E. cor of wire fence. Bdy. fence is .50 chs. E. of this corner.

52.74 Opposite point of observation on random line.

Time observation of Polaris for azimuth at temporary mile corner No. 78 plus 52.74 chs. on random line
April 27, 1911.

Longitude of station, $103^{\circ} 04'$

Latitude of station, $33^{\circ} 08'$

Declination of Polaris $88^{\circ} 49' 50''$

Sights on Polaris marked 13.13 chs. north of station.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Mean time, U.C. of Polaris Greenwich 11h 8.8m a.m.
 Correction for longitude - 1.1m
 Local mean time, U.C. of Polaris 11h 7.7m a.m.

Watch times of observations

	h	m	s	
Telescope direct	6	18	00	p.m.
" reversed	6	19	30	
Mean watch time of observations	6	h	18 m	45 s
Watch slow of L.M.T.			7 m	58 s
Local mean time of observation	6	h	26 m	43 s p.m.
L.M.T. of obsn.	6	h	26.7m	p.m.
L.M.T. of U.C.	11	h	07.7m	a.m.
Hour angle, W.	7	h	19.0m	

The azimuth of Polaris corresponding to this hour angle is 1° 18.3' west of the meridian, the angle therefore to the true random line is 2° 36.3'. Offset distance laid off to the east, to determine true random line, 59.74 links. At a point 12.29 chs. northward from my station the actual random fell 3 5/8 ins. to the right of the true random N. 1° 18' E., indicating an error due to accumulation and convergency of meridian of 71 seconds in 9 miles and 56.21 chs. The bearing of the random at M.C. 78 plus 52.74 chs. is therefore N. 1° 19' 11" E.

 Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 79.99 chs.,
 By 2nd set, 80.01 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 79 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof and also marked "Clark Boundary 1859 Mile Corner No. 79 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 2.59 chs. east of the corner.

This corner is 4.118 chs. N. $88^{\circ} 50' 30''$ W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 3rd rate.

Undergrowth, mesquite and short scrub oak.

July 12, 1911.

July 11, 1911. Adjust temporary corners No. 80 to No. 91 inc. from random to true line.

80th Mile

N. $1^{\circ} 00' 42''$ E.

On true line, Texas and New Mexico boundary over rolling land, sandy soil, through scattered mesquite and scrub oak undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 80 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 80 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

The boundary fence is 2.90 chs. east of the corner.
This corner is 4.524 chs. N. 88° 50' 30" W. of the
position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 3rd rate.

Undergrowth, scrub oak and mesquite.

81st Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary over
rolling land, sandy soil, through scattered mesquite
and scrub oak undergrowth.

38.40 Wire fence, extends north of east from boundary fence.

45.00 Leave scrub oak undergrowth, bears N. and W.

47.04 Wire fence, extends east from boundary fence.

47.50 House and windmill, 3.70 chs. east of line. Soil now
contains clay.

48.00 Opposite the south side of a small orchard,
east of boundary fence.

54.69 Wire fence, extends east from boundary fence, also
the north side of orchard. Hence over firm sandy soil
No difference between measurements of 80.00 chs. by
two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 24 ins. into the ground for
the 81 mile corner. The top of the cap is divided by
a north and south stamped line 1 inch in length, and
marked "Texas" on the east, "New Mexico" on the west
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 81 General Land Office Reestablishment 1911
United States Boundary Commission."

Pits impracticable, no stone available for a mound.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

The boundary fence is 3.05 chs. east of the corner
 This corner is 4.934 chs. N. $88^{\circ} 50' 30''$ W. of
 the position of the temporary corner on the random
 line.

Land, rolling.

Soil, sandy loam 3rd rate, and clay sand, 3rd rate
 Undergrowth, mesquite, scrub oak and amole.

82nd Mile

N. $1^{\circ} 00' 42''$ E.

On true line, Texas and New Mexico boundary, over
 almost level land, sandy clay soil, through scattered
 mesquite and scrub oak undergrowth.

38.00 Fence extends SSE from the boundary fence. Enter
 scattered mesquite, bears E. and W.

45.00 Soil becomes loose sand, enter scattered scrub
 oak undergrowth, bears E. and W.

No difference between measurements of 80.00 chs. by
 two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
 filled with concrete, flanged at the bottom and sur-
 mounted with a brass cap, 24 ins. into the ground
 for the 82 mile corner. The top of the cap is divided
 by a north and south stamped line 1 inch in length,
 and marked "Texas" on the east, "New Mexico" on the
 west thereof, and also marked, "Clark Boundary 1859
 Mile Corner No. 82 General Land Office Reestablishment
 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound

The boundary fence is 3.27 chs. east of the corner
 This corner is 5.346 chs. N. $88^{\circ} 50' 30''$ W. of the
 position of the temporary corner on the random line.

Land, almost level and rolling.

Soil, sandy loam 3rd rate and clay sand 3rd rate.
 Undergrowth, mesquite and scattered scrub oak.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

83rd Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over gently rolling land, clay sand soil, through scattered mesquite and scrub oak undergrowth.

37.00	Dugout, 6.50 chs. east of line.
41.00	Leave scrub oak undergrowth and loose sandy soil, bears E. and W., thence over firm sandy loam soil, ascending gradually.
67.17	Top of prairie swell, bears E. and W; road bears E. and W; descend.
67.29	Wire fence, extends east and west from the boundary fence.
67.50	R. S. Harris' house and windmill is 1.00 chs. east of line.
68.00	Enter cultivated land, extends west from boundary fence.
72.00	House and windmill 22.00 chs. east of line.
78.00	Soil becomes shifting sand.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 83 mile corner. The top of the cap is divided by a north and south tamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 82 General Land Office Reestablishment 1911 United States Boundary Commission."
	Pits impracticable, no stone available for a mound
	The boundary fence is 3.33 chs. east of the corner
	This corner is 5.763 chs. N: 88° 50' 30" W. of the position of the temporary corner on the random line.
	Land, rolling.
	Soil, sandy loam, 2nd rate, loose sand 4th rate,

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

and clay sand 3rd rate.

Undergrowth, mesquite and scrub oak.

84th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sand soil, cultivated.

35.00 Leave cultivated land, bears E. and W.

37.86 Wire fence, extends east and west from boundary fence .

At this fence the boundary fence offsets from a point 3.70 chs. east to a point 5.20 chs. east of line

Road extends N. along E. side of bdy. fence from E. and W. fence.

77.00 Little or no scrub oak undergrowth.

78.00 Opposite point of observation on random line.

Meridian observation of the sun for time at temporary mile corner . No. 83 plus 78.00 chs. on the random line, April 28, 1911.

Equation of time - 2m 28s

Watch times of transit.

	h	m	s	
Sun's W. limb	11	48	28	a.m.
Sun's center	11	49	33	
Sun's E. limb	11	50	38	
Watch time of apparent noon	11	49	33	
L.M.T. of apparent noon	11	57	32	
Watch slow of L.M.T.		7 m	59 s	

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 84 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 1⁰3rd MERIDIAN.Chains.

marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 84 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound

The boundary fence is 5.42 chs. east of the corner

This corner is 6.184 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 3rd rate.

Undergrowth, scattered mesquite and short scrub oak.

85th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over almost level land, sandy soil, little or no mesquite or scrub oak undergrowth.

8.00 Leave scrub oak undergrowth, bears E. and W.

20.00 Soil becomes firmer, and gravelly.

26.30 Old road, bears S. of E. and N. of W.

26.66 Fall 5.48 chs. west of the NE. cor. of wire fence, terminus of boundary fence east of line.

48.87 Fall 3.32 chs. west of the SE. cor. of wire fence thence along the west side of the boundary fence.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 85 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 85 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

The boundary fence is 3.38 chs. east of the corner.

This corner is 6.608 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, almost level.

Soil, sandy and gravelly loam, 2nd and 3rd rate.

Undergrowth, mesquite and scrub oak.

86th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over almost level land, sandy and gravelly loam soil, little or no small undergrowth.

- 21.80 House and windmill 10 chs. west of line.
- 22.49 Wire fence extends west from boundary fence.
- 27.76 Road, bears E. and W. turns NE at road east of boundary fence.
- 34.31 Telephone line, comes from the east, turns and runs north along the boundary fence.
- 47.72 Wire fence, extends west from the boundary fence.
- 47.95 Road, bears E. and W., connects with road east of boundary fence.
- 48.66 Telephone line, bears E. and W., connects with telephone along the boundary fence.
- 71.52 Road, bears NE and SW., connects with road east of boundary fence.
- 77.93 Wire fence, extends west from the boundary fence.
No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 86 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 86 General Land Office Reestablishment 1911

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 3.40 chs. east of corner.

This corner is 7.035 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, almost level.

Soil, sandy loam 3rd rate.

Undergrowth, smole.

87th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over almost level land, sandy soil, little or no smole undergrowth.

21.80	Small house on line.
24.68	Enter cultivated land, bears E. and W., extends west from boundary fence.
43.45	Leave cultivated land, bears E. and W.
50.00	Road, bears E. and W. Knowles, N.M. to Bronco, Texas.
52.00	The Post Office, and store, of Bronco, Texas, bears 12.00 chs. east of line.
52.10	The telephone line, following the boundary fence turns and extends east to Bronco, Texas.
56.53	Wire fence, extends east from boundary fence.
71.17	Enter cultivated land, extends west from boundary fence.
71.62	The house of H. B. Field, bears 4.00 chs. east of line.
72.00	The boundary fence offsets 2.60 chs. to the east.
74.75	Windmill and small reservoir, 8.00 chs. east of line.
77.89	Wire fence, extends east from boundary fence. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins., dia.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 87 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 87 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 6.05 chs. east of the corner.

This corner is 7.647 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, almost level.

Soil, sandy loam 1st rate.

Undergrowth, smole.

88th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over almost level land, cultivated.

5.00 Opposite an angle in the boundary fence deflects northwesterly.

12.00 Leave cultivated land, bears E. and W.

14.12 Opposite an angle in the boundary fence from which it extends west across line.

14.22 Road, bears E. and W., Ranger Lake, N.M. to Bronco Texas.

16.97 An abandoned dugout 50 links east of line.

23.07 Road, bears NW and SE, Ranger Lake, N.M. to Bronco, Texas.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
80.00	<p>By 1st set, 79.995 chs.,</p> <p>By 2nd set, 80.005 chs; the mean of which is</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete flanged at the bottom and surmounted with a brass cap, 2 1/4 ins. into the ground for the 88 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 88 General Land Office Reestablishment 1911 United States Boundary Commission."</p> <p>Pits impracticable, no stone available for a mound.</p> <p>This corner is 7.902 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.</p> <p>Land, almost level.</p> <p>Soil, sandy and gravelly loam, 2nd rate.</p> <p>No undergrowth.</p>
12.87	<p style="text-align: center;">89th Mile</p> <p style="text-align: center;">N. 1° 00' 42" E.</p> <p>On true line, Texas and New Mexico boundary, over almost level land, sandy gravelly soil, no undergrowth.</p> <p>Fall 2.00 chs. west of the SE. cor. of boundary wire fence; thence along the west side of same.</p>
44.30	<p>Windmill and small reservoir 6.00 chs. east of line.</p>
46.00	<p>T.M. Keeman's house bears 2.00 chs. east of line.</p>
48.90	<p>Enter cultivated land, bears E. and W.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 89 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 89 General Land Office Reestablishment 1911 United States Boundary Commission."</p> <p>Pits impracticable, no stone available for a mound.</p> <p>The boundary fence is 2.55 chs. east of line.</p> <p>This corner is 8.341 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.</p> <p>Land, almost level.</p> <p>Soil, gravelly and sandy loam 2nd rate.</p> <p>No undergrowth.</p>
	<p>90th Mile</p> <p>N. 1° 00' 42" E.</p>
.08	<p>On true line, Texas and New Mexico boundary, over gently rolling land, sandy soil, cultivated.</p> <p>Leave cultivated land, bears E. and W; ascend gradually.</p>
4.06	<p>Wire fence, bears E. and W., 2.00 chs. east to the N.E. corner, terminus of boundary fence east of line; enter scattered mesquite undergrowth, bears E. and W.</p>
49.28	<p>Wire fence, bears E. and W., 4.00 chs. east to the S.E. corner, thence along the west side of boundary fence.</p>
50.00	<p>Top of ascent, pre iris swell bears E. and W; thence over rolling land.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 90 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clerk Boundary 1859 Mile Corner No. 90 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 3.97 chs. east of the corner.

This corner is 8.782 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 2nd rate.

Undergrowth, mesquite.

91st Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite undergrowth.

38.00

Enter scattered scrub oak undergrowth, bears E. and W.

41.00

Enter cultivated land, extends west from the boundary fence.

47.77

Leave cultivated land, at fence bears west from boundary fence.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

for the 91 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 91 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 4.10 chs. east of the corner.

This corner is 9.228 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy and clay loam 3rd rate.

Undergrowth, mesquite and scrub oak.

July 11, 1911.

July 10, 1911; Adjust temporary mile corners from No. 92 to No. 103, inc., from random to true line.
92nd Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, sandy and gravelly soil, through scattered mesquite and short scrub oak undergrowth.

32.65

Opposite a wire fence, extends east from the boundary fence.

73.64

Road, bears NE and SW

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

80.00

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs.; the mean of which is

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 92 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked

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Chains

"Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 92 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 4.25 chs. east of the corner.

This corner is 9.678 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy and gravelly 3rd rate,

Undergrowth, mesquite and scrub oak.

93rd Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, shifting sand soil, through scattered mesquite and scrub oak undergrowth.

40.00

Opposite point of observation on random line.

Meridian observation of the sun for time at temporary mile corner No. 92 plus 40.00 chs. on random line April 29, 1911.

Equation of time: -2^m37^s

Watch times of transit.

	h	m	s	
Sun's W. limb	11	48	19	a.m.
Sun's center	11	49	24	
Sun's E. limb	<u>11</u>	<u>50</u>	<u>30</u>	
Watch time of apparent noon	11	49	24	
L.M.T. of apparent noon	<u>11</u>	<u>57</u>	<u>23</u>	
Watch slow of L.M.T.		7 m	59 s	

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

the 93 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 93 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 4.39 chs. east of the corner.

This corner is 10.131 chs. N. $88^{\circ} 50' 30''$ W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy loam 2nd rate and shifting sand 4th rate.

Undergrowth, scattered mesquite and short scrub oak.

94th Mile

N. $1^{\circ} 00' 42''$ E

On true line, Texas and New Mexico boundary, over gently rolling land, sandy soil, through scattered mesquite and scrub oak undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 94 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 94 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 4.55 chs. east of the corner.

The corner is 10.587 chs. N. $88^{\circ} 50' 30''$ W. of

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

position of the temporary corner on the random line.

Land, rolling.

Soil, sandy loam and sand 3rd rate.

Undergrowth, mesquite and scrub oak.

95th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite and scrub oak undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 95 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 95 General Land Office Reestablishment 1911 United States Boundary Commission."

Fits impracticable, no stone available for a mound.

The boundary fence is 5.30 chs. east of the corner.

This corner is 11.048 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand 3rd rate.

Undergrowth, mesquite and short scrub oak.

96th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico Boundary, over rolling land, loose sandy soil, scattered mesquite and scrub oak undergrowth.

10.00

Leave undergrowth, bears E. and W; soil becomes firm sandy loam.

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Chains.

- 18.52 Fall 5.50 chs. west of the NW. corner of boundary fence; terminus of boundary fence east of line, fence extends east into Texas.
- 29.00 Enter scrub oak undergrowth, bears E. and W., loose sandy soil.
- 38.00 Road, bears NE and SW.
- 40.00 Soil becomes shifting sand.
No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 96 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 96 General Land Office Reestablishment 1911 United States Boundary Commission."
Pits impracticable, no stone available for a mound.
This corner is 11.513 chs. N. $88^{\circ} 50' 30''$ W. of the position of the temporary corner on the random line.
Land, rolling.
Soil, sand 4th rate, and sandy loam 3rd rate.
Undergrowth, short scrub oak and mesquite.

97th Mile

N. $1^{\circ} 00' 42''$ E

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, through scattered mesquite and scrub oak undergrowth.

- 24:00 Thence over sand hills, averaging 10 ft. high, bears E. and W.
Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 97 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 97 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 11.981 chs. N. $88^{\circ} 50' 30''$ W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand 4th rate.

Undergrowth, mesquite and scrub oak.

Time observation of Polaris for azimuth at temporary mile corner No. 97 on the random line, April 29, 1911.

Sights on Polaris marked 15.45 chs. north of station.

Latitude of station $33^{\circ} 24' 20''$

Declination of Polaris $88^{\circ} 49' 50''$

Longitude of station $103^{\circ} 03'$

Mean time, U.C. of Polaris, Greenwich 11h 00.9m a.m.

Correction for longitude -1.1m

Local mean time, U.C. of Polaris 10h59.8m a.m.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.Watch times of observations
h m s

Telescope direct 6 15 45 p.m.

" reversed 6 17 43

" direct 6 19 07
" reversed 6 20 49

Mean Watch time of observations 6h 18m 21s

Watch slow of L.M.T. 7m 59s

Local mean time of observation 6h 26m 20s

L.M.T. of obsn. 6h 26.3m p.m.

L.M.T. of U.C. 10h 59.8m a.m.

Hour angle, W. 7h 26.5m

The azimuth of Polaris corresponding to this hour angle is $1^{\circ} 17.6'$ west of the meridian. The angle to the true random is, therefore, $2^{\circ} 35.6'$. Azimuth distance laid off to the east to determine the true random N. $1^{\circ} 18'$ E, is 69.98 links. At a point 15.43 chs. northward from my station the actual random falls .85 feet to the right of the true random, indicating an error due to convergency of the meridian and accumulation of $2'$ and $53''$ in 18 miles plus 27.26 chains. The bearing of the random at the point of observation therefore is N. $1^{\circ} 20' 53''$ E.

98th Mile

N. $1^{\circ} 00' 42''$ E.

On true line, Texas and New Mexico boundary, over low rolling sand hills, loose sandy soil, scattered short scrub oak undergrowth.

71.00

Road bears E. and W., soil becomes firm sand, land, rolling.

72.00

Leave scrub oak, undergrowth, bears E. and W., thence over firm sandy and clay loam soil.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2. links; position of the middle point

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<p><u>Chains.</u></p> <p>80.00</p>	<p>By 1st set, 79.99 chs.,</p> <p>By 2nd set, 80.01 chs; the mean of which is</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 98 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 98 General Land Office Reestablishment 1911 United States Boundary Commission."</p> <p>Pits impracticable, no stone available for a mound.</p> <p>This corner is 12.386 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.</p> <p>Land, sand hills and rolling.</p> <p>Soil, sand 4th rate, sandy and clay loam 3rd rate.</p>
<p>30.00</p> <p>76.50</p> <p>80.00</p>	<p style="text-align: center;">99th Mile</p> <p style="text-align: center;">N. 1° 00' 42" E</p> <p>On true line, Texas and New Mexico boundary, over rolling land, sandy and clay loam, through scattered mesquite undergrowth.</p> <p>Enter short scrub oak undergrowth, bears E. and W., thence over loose sandy soil.</p> <p>Leave scrub oak undergrowth, bears E. and W., thence over firm sandy loam soil, almost level land, through scattered mesquite undergrowth.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. in the ground for the 99 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 99</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 12.797 chs. N. $88^{\circ} 50' 30''$ W. of the position of the temporary corner on the random line.

Land, rolling and almost level.

Soil, sandy and clay loam 3rd rate and sand 4th rate.

Undergrowth, mesquite and short scrub oak.

100th Mile

N. $1^{\circ} 00' 42''$ E.

On true line, Texas and New Mexico boundary, over almost level land, firm sandy soil, through scattered mesquite undergrowth.

15.15

Enter short scrub oak undergrowth, bears E. and W. Soil becomes less firm.

65.00

Enter low shifting sand hills, bears E. and W.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 100 mile corner. The top of the cap is divided by a north and south tamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 100 General Land Office Reestablishment 1911 United States Boundary Commission. "

Pits impracticable, no stone available for a mound

This corner is 13.213 chs. N. $88^{\circ} 50' 30''$ W. of the position of the temporary corner on the random line.

Land, almost level and sand hills.

Soil, sandy loam 2nd rate and sand 4th rate.

Undergrowth, mesquite and short scrub oak.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY. 103RD MERIDIAN.

Chains.

101st Mile

N. $1^{\circ} 00' 42''$ E.

On true line, Texas and New Mexico boundary over low shifting sand hills, sandy soil, short scrub oak undergrowth.

11.12 Fall 7.70 west of the SW corner of the boundary fence; from corner wire fence extends east into Texas and north along boundary.

78.73 Wire fence E. and W. Ends 1.15 chs. east of line. No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 101 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 101 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 8.57 chs. east of the corner.

This corner is 15.633 chs. N. $88^{\circ} 50' 30''$ W. of the position of the temporary corner on the random line.

Land, sand hills and rolling.

Soil, sand 4th rate.

Undergrowth, short scrub oak.

Meridian observation of the sun for time at temporary mile corner No. 101 on the random line, April 30, 1911.

Equation of time :-2^m 46^s.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Watch times of transit

	h	m	s	
Sun's W. limb	11	48	06	a.m.
Sun's center	11	49	11	
Sun's E. limb	11	50	17	
Watch time of apparent noon	11	49	11	
L.M.T. of apparent noon	11	57	14	
Watch slow of L.M.T.		8m	03s	

102nd Mile

N. 1° 00' 42" E

On true line, Texas and New Mexico boundary, over rolling land ascending gradually, sandy soil, through scattered short scrub oak undergrowth.

6.00	Fall 8.60 chs. west of the NW corner of boundary fence; from corner fence extends east into Texas, terminus of boundary fence east of line.
7.00	Leave short scrub oak undergrowth, bears E. and W. thence over level prairie, firm sandy soil.
22.00	Enter scattered short scrub oak undergrowth, bears E. and W. soil becomes less firm.
25.50	Top of gradual ascent, prairie swell, bears E. and W. Descend.
30.00	Bottom of descent of 15 ft. bears E. and W. thence over rolling land.
33.00	Soil becomes shifting sand.
	No difference between measurements of 80.00 chs by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 102 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Mile Corner No. 102 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound

This corner is 14.059 chs. N. $88^{\circ} 50' 30''$ W of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy loam, 3rd rate, and sand 4th rate. Undergrowth, short scattered scrub oak.

103rd Mile

N. $1^{\circ} 00' 42''$ E

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, through scattered short scrub oak undergrowth.

No difference between measurements of 80.00 ch. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete. flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 103 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof and also marked "Clark Boundary 1859 Mile Corner No. 103 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 14.490 chs. N. $88^{\circ} 50' 30''$ W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy 4th rate.

Undergrowth, short scrub oak.

July 10, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

July 8, 1911. Adjust temporary mile corners from No. 104 to No. 110 from random to true line.

104th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sand soil, scattered short scrub oak undergrowth.

37.00

Enter scattered mesquite undergrowth.

43.00

Leave scrub oak undergrowth, continue through mesquite undergrowth, over firm gravelly and sandy loam.

58.00

Leave firm gravelly and sandy soil, thence over loose sandy soil.

60.00

Enter short scrub oak undergrowth, bears NW and SE leave mesquite undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 104 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 104 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 14.296 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, gravelly and sandy loam 2nd rate, sand 4th rate.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

Undergrowth, mesquite and scrub oak.

105th Mile

N 1° 00' 42" E

On true line, Texas and New Mexico boundary, over rolling land, shifting sand, through scattered short scrub oak undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 105 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 105 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 15.367 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand 4th rate.

Undergrowth, short scrub oak.

106th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, loose, sandy soil through short scrub oak undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 106 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 106 General Land Office Reestablishment 1911 United States Boundary Commission."

Fits impracticable, no stone available for a mound.

This corner is 15.814 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand 4th rate.

Undergrowth, short scrub oak.

107th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, through scattered mesquite and short scrub oak undergrowth.

15.00

Leave short scrub oak undergrowth, bears E. and W. continue through mesquite undergrowth.

20.00

Leave sandy soil, bears E. and W., thence over firm sandy loam soil.

21.82

Opposite point of observation on random line.
Time observation of Polaris for azimuth at temporary mile corner No. 106 plus 21.82 chs on the random line, April 30, 1911.

Longitude of station 103° 03'

Latitude of station 33° 32' 30"

Declination of Polaris 88° 49' 50"

Sights on Polaris marked 20.24 chs. north of station.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Mean time, U.C. of Polaris, Greenwich 10h 57.0m a.m.
 Correction for longitude -1.1m
 Local mean time, U.C. of Polaris 10h 55.9m a.m.

Watch times of observations.

	h	m	s
Telescope direct	6	26	22 p.m.
" reversed	6	28	12
" direct	6	29	46
" reversed	6	31	24

Mean watch time of observations 6 h 28 m 56 s

Watch slow of L.M.T. 8 m 03 s

Local mean time of observation 6 h 36 m 59 s

L.M.T. of obsn 6 h 37.0m p.m.

L.M.T. of U.C. 10 h 55.9 me.m.

Hour angle, W. 7 h 41.1 m

The azimuth of Polaris corresponding to this hour angle is $1^{\circ} 15.5'$ west of the meridian. The angle to the true random line is therefore, $2^{\circ} 33' 30''$. Azimuth distance laid off to the east to determine the true random line, N. $1^{\circ} 18' E.$, is 90.44 links. At a point 20.19 chs. northward from my station the actual random falls .8 ft. to the right of the true random, indicating an error due to accumulation and convergency of meridian of $2' 04''$ in 9 miles plus 21.82 chs. The bearing of the actual random at the point of observation is therefore N. $1^{\circ} 20' 04'' E.$

42.00

Enter short scrub undergrowth, bears E. and W., thence over loose sandy soil.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 107 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 107 General Land Office Reestablishment, 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 16.231 chs. N. 88° 50' 30" W of the position of the temporary corner on the random line.

Land, rolling .

Soil, sandy loam 3rd rate, and sand 4th rate.

Undergrowth, scattered mesquite and short scrub oak.

108th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over gently rolling land, clay sand soil, through scattered mesquite and short scrub oak undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 28 ins. into the ground for the 108 mile corner. The top of the cap is divided by a north and south tamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 108 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 16.637 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, gently rolling.

Soil, sand and clayey sand 3rd rate.

U

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

Undergrowth, mesquite and short scrub oak.

109th Mile

N. 1° 00' 42" E.

on true line, Texas and New Mexico boundary, over gently rolling land, sandy soil, through scattered mesquite and short scrub oak undergrowth.

2.00 Enter shifting sand hills, bears E. by N. and W. by S. Average height 5 ft.

64.30 Wire fence, bears N. 84° 15' W. and S. 84° 15' E., land now rolling.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 109 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clerk Boundary 1859 Mile Corner No. 109 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 17.044 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, gently rolling, and sand hills.

Soil, sandy & th. etc.

Undergrowth, mesquite and short scrub oak.

110th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sand soil, through short scattered scrub oak undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 110 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 110 General Land Office Reestablishment 1911 United States Boundary Commission."

Fits impracticable, no stone available for a mound.

This corner is 17.454 chs. N. 88° 50' 30" W of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand 4th rate.

Undergrowth, short scrub oak.

July 8, 1911.

July 7, 1911. Adjust temporary corners No. 111 to No. 118 inclusive, from random to true line.

111th Mile

N. 1° 00' 42" E

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, scattered short scrub oak undergrowth.

.50

Opposite point of observation on random line.

Meridian observation of the sun for time at temporary mile corner No. 110 plus 00.50 chs. on the random line May 1, 1911.

Equation of time-2m 54s

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

	Watch times of transit			
	h	m	s	
Sun's W. limb	11	47	57	a m
Sun's center (not used)	11	49	01	
Sun's E. limb	<u>11</u>	<u>50</u>	<u>07</u>	
Watch time of apparent noon	11	49	02	a.m.
L.M.T. of apparent noon	<u>11</u>	<u>57</u>	<u>06</u>	
Watch slow of L.M.T.			8 m 04 s	

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 28 ins. into the ground for the 111 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 111 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 17.866 chs N 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand 4th rate.

Undergrowth, short scrub oak.

112th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, short scattered scrub oak undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap 28 ins. into the ground for the 112 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof and also marked "Clark Boundary 1859 Mile Corner No. 112 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 18.28 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand 4th rate.

Undergrowth, short scrub oak.

112th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, scattered short scrub oak undergrowth.

No difference between measurements of 80.00 chs. by two sets of chains.

80.00

Set a hollow iron post 36 ins. long 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 113 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 113 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 18.696 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

Land, rolling.
Soil, sand 4th rate.
Undergrowth, short scrub oak.

114th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, through scattered short scrub oak and mesquite undergrowth.

26.00

Leave undergrowth, bears E. and W., thence over firm sandy loam soil.

40.50

Rein water pond, 15 chs. east, 3.5 chs. in diameter.

50.00

Land becomes level, soil gravel loam.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 114 mile corner. The top of the cap is divided by a north and south tapered line 1 inch in length, and marked "Texas" on the east and "New Mexico" on the west and also marked "Clark Boundary 1859 Mile Corner No. 114 General Land Office Reestablishment 1911 United States Boundary Commission.

Pits impracticable, no stone available for a mound.

This corner is 19.115 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, level and gently rolling.

Soil, sandy and sandy loam 4th rate, gravelly loam 2nd rate.

Undergrowth, mesquite and short scrub oak.

115th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over level prairie, sandy and gravelly loam soil, little or no mesquite undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains 40.00	Commence to ascend gradually.
47.00	Enter heavy mesquite undergrowth, bears E. and W.
80.00	Top of ascent, prairie swell bears E. and W., thence over rolling land. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 115 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 115 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound. This corner is 19.536 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line. Land, level and rolling. Soil, sandy and gravelly loam 1st and 2nd rate. Undergrowth, mesquite.

116th Mile

N. 1° 00' 42" E

	On true line, Texas and New Mexico boundary, over rolling land, sandy loam soil, scattered mesquite and cat claw undergrowth.
30.00	Enter short scrub oak undergrowth, bears E. and W. little or no mesquite and cat claw undergrowth, soil becoming sandier and loose. No difference between measurements of 80.00 chs by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 116 mile corner. The top of the cap is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 116 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 19.959 chs. N. $88^{\circ} 50' 30''$ W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy loam 2nd rate.

Undergrowth, mesquite, cat claw, and short scrub oak.

117th Mile

N. $1^{\circ} 00' 42''$ E

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, through short scattered scrub oak undergrowth.

67.00

Leave undergrowth, bears N. and W., thence over firm level sandy loam land.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 117 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof and also marked "Clark Boundary 1859 Mile Corner No. 117 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 20.383 chs. N. $88^{\circ} 50' 30''$ W. of the position of the temporary corner on the random line.

RESURVEY TEXAS AND NEW MEX CO BOUNDARY, 103RD MERIDIAN.

Chains.

Land, rolling and level.

Soil, sand 4th rate and sandy loam 3rd rate.

Undergrowth, short scrub oak.

118th Mile

N. 1° 00' 42" E

On true line, Texas and New Mexico boundary, over level prairie, firm sandy loam soil, no undergrowth.

20.00 Windmill and small reservoir 40.00 chs. east of line.

31.00 Enter short scrub oak undergrowth, bears NE. and SW soil becomes loose sand.

35.00 Land becomes rolling, soil shifting sand.

50.00 Commence to ascend very gradually.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 118 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 118 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

This corner is 20.81 chs. N. 88° 50' 50" W. of the position of the temporary corner on the random line.

Land, level and rolling.

Soil, sandy loam 2nd rate, sand 4th rate.

Undergrowth, short scrub oak.

July 7, 1911.

July 6, 1911. Adjust temporary corners No. 119 to No. 127 inclusive, from random to true line.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

119th Mile

N. 1° 00' 42" E

On true line, Texas and New Mexico boundary ascending over rolling land, loose sandy soil, through short scrub oak undergrowth.

2.50 Top of sand ridge, 15 ft. high, bears E. and W., thence over low rolling sand hills.

24.60 Wire fence, bears E. and W., 12.00 chs. west of the SE. corner; thence along the west side of boundary fence.

47.00 Point west of a wire fence extending east from boundary fence.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 119 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 119 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound. The boundary fence is 11.90 chs. east of the corner. This corner is 21.24 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, sand 4th rate.

Undergrowth, short scrub oak.

120th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, through short scattered scrub oak undergrowth.

RE-SURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 2 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap 28 ins. into the ground for the 120 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 120 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 12.27 chs. east of corner.

This corner is 21.672 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, rolling.

Soil, loose sand, 4th rate.

Undergrowth, short scrub oak..

121st Mile

N. 1° 00' 42" E

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, through scattered short scrub oak undergrowth.

30.00

Leave loose sandy soil, bears E. and W., thence over firm sandy soil, land level.

49.00

Little or no undergrowth, soil becomes sandy and gravelly loam.

57.00

Leave scrub oak undergrowth, bears E. and W.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 121 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, Clark Boundary 1859 Mile Corner No. 121 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 13.02 chs. east of the corner.

This corner is 22.105 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

A house 28.00 chs. west of the corner.

Land, level and rolling.

Soil, sandy 4th rate, and sandy and gravelly loam 2nd rate.

Undergrowth, short scrub oak.

122nd Mile

N. 1° 00' 42" E

On true line, Texas and New Mexico boundary, over level land, sandy and gravelly loam soil, through scattered mesquite and short scrub oak undergrowth.

10.00

Leave undergrowth, bears E. and W.

16.00

Point W. of wire fence, extends E. from boundary fence.

18.00

House and windmill 8.00 chs. west of line.

72.00

Enter scattered short scrub oak undergrowth, bears E. and W.

79.82

Wire fence, extends west from the boundary fence east of line.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

	By 1st set, 79.995 chs.,
	By 2nd set, 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 122 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 122 General Land Office Reestablishment 1911 United States Boundary Commission."
	Pits impracticable, no stone available for a mound.
	The boundary fence is 13.09 chs. east of the corner. This corner is 22.541 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line land, level.
	Soil, sandy and gravelly loam, 1st rate.
	Undergrowth, mesquite and short scrub oak.
	123rd Mile
	N. 1° 00' 42" E
	On true line, Texas and New Mexico boundary, over level land, firm sandy and clay loam soil, through scattered mesquite and short scrub oak undergrowth.
15.00	Commence to descend gradually
25.00	Leave short scrub oak undergrowth, bears NW. and SE; thence over level land.
47.00	House and windmill 7.00 chs. west of line.
55.00	House and windmill 37.00 chs. west of line.
65.00	House and windmill 17.00 chs. west of line.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

for the 123 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 123 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 13.30 chs. east of the corner.

This corner is 22.979 chs. N. 88° 50' 30" W.

of the position of the temporary corner on the random line.

Land, level and gently rolling.

Soil, sandy and clay loam, 3rd rate.

Undergrowth, mesquite and short scrub oak.

124th Mile

N. 1° 00' 42" E.

On true line, Texas and New Mexico boundary, over level prairie, firm sandy soil, little or no mesquite undergrowth.

7.31	Road, bears NW and SE.
50.00	Commence to descend gradually into prairie draw.
53.27	Prairie draw, 3.00 chs. wide, course east; ascend.
60.00	Top of ascent, bears E. and W., thence over level land.
65.00	Opposite point of observation on random line.

Meridian observation of the sun for time at temporary mile corner No. 123 plus 65.00 chs. on random line, May 2, 1911.

	Watch times of transit.			
	h	m	s	
Sun's W. limb	11	47	50	a.m.
Sun's center (not used)	11	48	54	
Sun's E. limb	11	50	00	
Watch time of apparent noon	11	48	55	
L.M.T. of apparent noon	11	56	58	
Watch slow of L.M.T.		8	03	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 124 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 124 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 14.12 ^{chs.} east of the corner.

This corner is 23.419 chs. N. $88^{\circ} 50' 30''$ W. of the position of the temporary corner on the random line. Land, level.

Soil, sandy loam 1st rate.

Undergrowth, little or no scattered mesquite.

125th Mile

N. $1^{\circ} 00' 42''$ E

On true line, Texas and New Mexico boundary, over gently rolling land, firm sandy soil, little or no scattered cat claw undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 125 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 125 General Land Office Reestablish-

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

ment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 12.48 chs. east of the corner.

This corner is 23.861 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

Land, gently rolling.

Soil, sandy loam 1st rate.

Undergrowth, cat claw.

126th Mile

N. 1° 00' 42" E

On true line, Texas and New Mexico boundary, over almost level land, firm sandy soil, no undergrowth.

40.25 Dugout 1.50 chs. west of line.

41.90 Road, bears E. and W.

42.00 Wire fence, extends west from boundary fence.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 126 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clerk Boundary 1859 Mile Corner No. 126 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 11.14 chs. east of the corner.

This corner is 24.306 chs. N. 88° 50' 30" W. of the position of the temporary corner on the random line.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

Land, almost level.
Soil, sandy loam 1st rate.
No undergrowth.

127th Mile

N. 1° 00' 42" E

On true line, Texas and New Mexico boundary, over almost level land, sandy loam soil, no undergrowth.

1.65

Wire fence, extends west from boundary fence.

50.00

Land becomes rolling.

No difference between measurements of 79.743 chs. by two sets of chainmen.

79.743

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 127 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 127 General Land Office Reestablishment 1911, United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 9.86 chs. east of the corner.

This corner is 15.328 chs. N. 89° 29' 30" W. of a point .08 chs. north of the position of the temporary corner on the random line projected south from Clark Monument No. 5.

Land, almost level.

Soil, sandy loam.

No undergrowth.

July 6, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

The random line projected N. 1° 18' E. from the 35rd parallel was connected at a point on line between temporary mile corners Nos. 126 and 127, 17.08 chs. from the former, with the random line projected south from Clerk Monument No. 5. The bearing of the random from the south, and the resulting adjustment for accumulated error and convergency of meridians, was based on an observation of Polaris made at temporary mile corner No. 130 as follows:

Time observation of Polaris for azimuth at temporary mile corner No. 130

Longitude of station 103° 02'

Latitude of station 33° 53' 06"

Declination of Polaris 88° 49' 49"

Sights on Polaris marked 21.59 chs. north of station

Mean time, U.C. of Polaris, Greenwich 10h 49.2m a.m.

Correction for longitude - 1.1m

Local mean time, U.C. of Polaris 10h 48.1m a.m.

Watch times of observations

	h	m	s
Telescope direct	6	30	50 p.m.
" reversed	6	32	10
" direct	6	34	26
" reversed	6	36	20
Mean watch time of observations	6h	33 m	26 s
Watch slow of L.M.T.		8 m	03 s
Local mean time of observation	6h	41 m	29 s p.m.
L.M.T. of obsn	6h	41.5m	p.m.
L.M.T. of U.C.	10h	48.1m	a.m.
Hour angle W.	7h	53.4m	

The azimuth of Polaris corresponding to this hour angle is 1° 13.6' west of the meridian. The angle therefore to the true random line is 2° 31' 36".

The azimuth distance laid off to the east

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

to determine the true random N. $1^{\circ} 18'$ E., 95.25 links. At a point 21.58 chs. northward of the point of observation the actual random falls .92 feet to the right of the true random, N. $1^{\circ} 18'$ E., indicating an error due to accumulation and convergency of meridians of $2' 14''$ to the right. The bearing of the actual random at the point of observation is, therefore N. $1^{\circ} 20' 14''$ E. The adjustment due to accumulated error in alignment and convergency of meridians is 1.402 chs. N. $89^{\circ} 21'$ W at the 17.08 chs. point from temporary mile corner No. 126.

The course of the random line projected south from Mon. No. 5, and connected with the random line from the south at the above mentioned 17.08 chs. point was based on an observation of Polaris at a point 62.84 chs. south of temporary mile cor. No. 127 on the northern random line, as follows:

May 17, 1911.

Longitude of station $103^{\circ} 02'$

Latitude of station $33^{\circ} 50'$

Declination of Polaris $88^{\circ} 49' 45'' 5$

Sights on Polaris marked 16.57 chains north of station.

Mean time, U.C. of Polaris, Greenwich 9h 50.3m a.m.

Correction for longitude -1.1m

Local mean time, U.C. of Polaris 9h 49.2m a.m.

Watch times of observations.

	h	m	s
Telescope direct	4	38	50 a.m.
" reversed	4	41	46
" direct	4	45	02
" reversed	4	47	39
Mean watch time of observations	4	h 43	m 19 s a.m.
Watch slow of L.M.T.		8	m 41 s
Local mean time of observation	4	h 52	m 00 s a.m.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

L.M.T. of obsn.	4 h 52 m a.m.
L.M.T. of U.C.	9 h 49.2m a.m.
Hour angle E.	4 h 57.2 m

The azimuth of Polaris corresponding to this hour angle is $1^{\circ} 21.8'$ east of the meridian.

The azimuth offset laid off to the west to determine the true meridian is 39.44 chs.

No accumulated error in alinement in the projection of the random line south from temporary mile cor. No. 138 to the point of the above observation.

As stated in the notes of the random line from the north, the connection of the random from the north with the one from the south indicates that all temporary mile corners from No. 127 to No. 166 inclusive, should be moved 00.08 chs. to the north, in order to preserve the correct mileage distances from the 32nd parallel, on a line connecting a point 70 miles northward from the 32nd parallel with a point 184 miles southward from the NW. corner of Texas. After the permanent establishment of the mile corners from No. 127 to the NW corner of Texas, the change in the decision as to the terminal limits of the Clark survey, made necessary the above mentioned shortening of the mile distance from the 126 to the 127 mile corner.

July 5, 1911. Adjust temporary corners from No. 128 to No. 137 inclusive from random to true line.

128th Mile

H. $1^{\circ} 00' 42''$ E

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

On true line, Texas and New Mexico boundary, over almost level land, firm sandy soil, little or no undergrowth.

1.90

Wire fence, extends west from the boundary fence.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap 22 ins. into the ground for the 128 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 128 General Land Office Reestablishment 1911 United States Boundary Commission." This corner could not be set deeper because of encountering solid rock.

Pits impracticable, no stone available for a mound.

The boundary fence is 8.54 chs. east of the corner.

This corner is 13.916 chs. N. $89^{\circ} 29' 30''$ W. of a point .08 chs. north of the position of the temporary corner on the random line from the north.

Land, almost level and rolling.

Soil, sandy and gravelly loam.

Undergrowth, mesquite.

129th Mile

N. $1^{\circ} 00' 42''$ E

On true line, Texas and New Mexico boundary, over almost level land, sandy and gravelly soil, little or no mesquite undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.

By 2nd set, 80.005 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 129 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 129 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 7.19 chs. east of the corner.

This corner is 12.503 chs. N. 89° 29' 30" W. of a point .08 chs. north of the position of the temporary corner on the random line, from the north.

Land, almost level.

Soil, sandy loam 1st rate.

Undergrowth, mesquite

130th Mile

N. 1° 00' 42" E

On true line, Texas and New Mexico boundary, over almost level land, firm gravelly and sandy soil, through scattered mesquite undergrowth.

2.05

Wire fence, extends west from the boundary fence.

6.00

Opposite a wire fence extending east from the boundary fence.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 130 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains

Mile Corner No. 130 General Land Office Reestablishment
1911 United States Boundary Commission."

Pits impracticable, no stone available for a
mound.

The boundary fence is 5.87 chs. east of the
corner.

This corner is 11.091 chs. N. $89^{\circ} 29' 30''$ W. of
a point .08 chs. north of the position of the tempor-
ary corner on the random line from the north.

Land, almost level.

Soil, sandy loam 2nd rate.

Undergrowth, mesquite.

131st Mile.

N. $1^{\circ} 00' 42''$ E.

On true line, Texas and New Mexico boundary, over
rolling land, coarse gravelly soil, through scattered
mesquite and cat claw undergrowth.

8.00 Road, bears E. and W., descend gradually.

15.00 Leave coarse gravelly soil bears E. and W., thence
over sandy loam soil.

40.00 Leave sandy loam soil.

Thence over coarse gravelly soil, bears E. and W.,
cat claw undergrowth becomes dense.

50.00 Leave cat claw undergrowth, bears E. and W.

62.00 Foot of gradual descent, bears NW. and SE., thence
over almost level land; sandy loam soil.

No difference between measurements of 80.00 chs.
by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 24 ins. into the ground for
the 131 mile corner. The top of the cap is divided
by a north and south stamped line 1 inch in length

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains

and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 131 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 4.56 chs. east of the corner.

This corner is 9.679 chs. N. $89^{\circ} 29' 30''$ W. of a point .08 chs. north of the position of the temporary corner on the random line from the north.

Land, level and rolling.

Soil, gravelly sandy loam 2nd rate.

Undergrowth, cat claw and mesquite.

132nd Mile

N. $1^{\circ} 00' 42''$ E.

On true line, Texas and New Mexico boundary, over almost level land, firm sandy loam soil, through scattered mesquite undergrowth.

1.96 Wire fence, extends west from the boundary fence, No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 132 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof and also marked, "Clark Boundary 1859 Mile Corner No. 132 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 3.27 chs. east of the corner.

This corner is 8.266 chs. N. $89^{\circ} 29' 30''$ W. of a point .08 chs. north of the position of the temporary corner on the random line from the north.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

Land, almost level.

Soil, sandy and gravelly loam 2nd rate.

Undergrowth, mesquite.

133rd Mile

N. $1^{\circ} 00' 42''$ E

On true line, Texas and New Mexico boundary, over gently rolling land, firm sandy loam soil, through scattered mesquite and cat claw undergrowth.

37.85

Road bears E. and W.

No difference between measurements of 80.00 chs by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. in dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 133 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof and also marked "Clark Boundary 1859 Mile Corner No. 133 General Land Office Reestablishment 1911 United States Boundary Commission."

Fit impracticable, no stone available for a mound.

The boundary fence is 1.97 chs. east of the corner.

This corner is 6.854 chs. N. $89^{\circ} 29' 30''$ W. of a point .08 chs. north of the position of the temporary corner on the random line from the north.

Land, gently rolling.

Soil, firm sandy loam 2nd rate.

Undergrowth, mesquite and cat claw.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

Meridian observation of the sun for time at temporary mile corner No. 133 on the random line from the north, May 16, 1911.

Equation of time: -3m 49s

Watch times of transit

	h	m	s	
Sun's W. limb	11	46	23	a.m.
Sun's center	11	47	30	
Sun's E. limb	<u>11</u>	<u>48</u>	<u>37</u>	
Watch time of apparent noon	11	47	30	a.m.
L.M.T. of apparent noon	<u>11</u>	<u>56</u>	<u>11</u>	a.m.
Watch slow of L.M.T.		8m	41 s	

134th Mile

N 1° 00' 42" E

On true line, Texas and New Mexico boundary, over rolling land, firm sandy loam soil, through scattered mesquite and cat claw undergrowth.

- 1.75 Wire fence, extends west from the boundary fence.
- 16.00 Leave mesquite undergrowth, bears E. and W.
- 37.00 Fall 8.00 chs. west of the center of a dry bed of rain water pond, 8.00 chs. in diameter.
- No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 134 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 134 General Land Office Reestablishment 1911 United States Boundary Commission."
- Site impracticable, no stone available for a mound.

The boundary fence is 0.65 chs. east of the corner.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains

This corner is 5.442 chs. N. 89° 29' 30" W. of a point .08 chs. north of the position of the temporary corner on the random line from the north.

Land, rolling.

Soil, sandy and gravelly loam 2nd rate.

Undergrowth, mesquite and cat claw.

135th Mile

N. 1° 00' 42" E

On true line, Texas and New Mexico boundary, rolling land, firm sandy soil, through short scattered mesquite undergrowth.

40.40

Cross to the east side of the boundary fence.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 135 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1889 Mile Corner No. 135 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is .63 chs. west of the corner.

This corner is 4.029 chs. N. 89° 29' 30" W. of a point .08 chs. north of the position of the temporary corner on the random line from the north.

Land, rolling.

Soil, sandy 2nd rate.

Undergrowth, mesquite.

136th Mile

N. 1° 00' 42" E

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 163rd MERIDIAN.

Chains.

On true line, Texas and New Mexico boundary, over rolling land, firm sandy soil, through short scattered mesquite undergrowth.

69.75

Small house, 5.25 chs. east of line.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 136 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 136 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 1.88 chs. west of the corner.

This corner is 2.617 chs. N. $89^{\circ} 29' 30''$ W. of a point .08 chs. north of the position of the temporary corner on the random line from the north.

Land, rolling.

Soil, firm sandy loam 2nd rate.

Undergrowth, short scattered mesquite.

137th Mile

N. $1^{\circ} 00' 42''$ E

On true line, Texas and New Mexico boundary, over gently rolling land, firm sandy soil, no undergrowth.

22.00

Road, bears E. and W.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains

By 1st set, 79.995 chs.

By 2nd set, 80.005 chs.; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 137 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 137 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 3.19 chs. west of the corner.

This corner is 1.204 chs. N. $89^{\circ} 29' 30''$ W. of a point .08 chs. north of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy loam 1st rate.

No undergrowth.

138th Mile

N. $1^{\circ} 00' 42''$ E.

On true line, Texas and New Mexico boundary, over rolling land, firm gravelly and sandy soil, no undergrowth.

46.00 Road, bears E. and W.

No difference in measurements of 68.22 chs. by two sets of chainmen.

68.22 To Clark's parallel of latitude $34^{\circ} 00' 00''$ north. The terminus of said Clark's projection of the 103rd meridian from the north.

To perpetuate the location of this point I construct thereat a concrete monument, having a cubical base 30 ins. square, set 30 ins. into the ground, and a superstructure in the form of a frustum of a cone

RESURVEY TEXAS AND NEW MEXICO BOUNDARY? 103rd MERIDIAN.

Chains

encased in galvanized iron, having a lower diameter of 24 ins., an upper diameter of 18 ins.; and projecting 30 ins. above ground; in the top of which there is imbedded a brass plate, 6 ins. diameter. The plate is marked in the center by a north and south division line $1\frac{1}{2}$ ins. long, with "TEXAS" on the east and "NEW MEXICO" on the west thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 4" in the north half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the south half.

July 5, 1911.

May 18, 1911. Adjust temporary corners from No. 138 to No. 150 from random to true line.

From above described Clark monument No. 4

North

On true line, continuing the measurement from the 137 mile corner.

79.92 Opposite point of observation on random line.

Time observation of Polaris for azimuth at temporary mile corner No. 138 on the random line from the north, May 16, 1911.

Longitude of station $103^{\circ}02'$

Latitude of station $34^{\circ}00'$

Declination of Polaris $88^{\circ}49'45.7''$

Sights on Polaris marked 26.642 chains to the north

Mean time, U.C. of Polaris, Greenwich 9h 54.2m a.m.

Correction for longitude - 1.1m

Local mean time, U. C. of Polaris 9h 53.1m a.m.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Watch times of observations.

	h	m	s
Telescope direct	4	52	56 a.m.
" reversed	4	54	53
" direct	4	56	58
" reversed	4	58	34
Mean watch time of observations	4 h	55 m	50 s
Watch slow of L.M.T.		8 m	36 s
Local mean time of observation	5 h	04 m	26 s
L.M.T. of obsn.	5 h	04.4m	a.m.
L.M.T. of U.C.	9 h	53.1m	a.m.
Hour angle, East	4 h	48.7m	

The azimuth of Polaris corresponding to this hour angle is $1^{\circ} 21.1'$ east of the meridian.

Azimuth distance laid off to the west to determine the true meridian, 62.88 links. The random line as projected coincides with the true meridian thus determined. No difference between measurements of 11.78 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 138 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 138 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post $5\frac{1}{2}$ ft. dist, and raise a mound of earth 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is 4.50 chs. west of the corner.

This corner is .08 chs. north of the position of the temporary corner on the random line from the north.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

139th Mile

North

On true line, Texas and New Mexico boundary over almost level land, firm sandy loam soil, no undergrowth.

55.00

Commence to descend gradually.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 139 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 139 Mile Corner No. 139 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits, 36x36x12 ins. E. and W. of post, 5½ ft. distant, and raise a mound of earth 6 ft. base, 3 ft. high, E. of corner.

The boundary fence is 4.12 chs. west of the corner.

This corner is .08 chs. north of the position of the temporary corner on the random line from the north.

Land, almost level.

Soil, firm sandy loam 1st rate.

No undergrowth.

140th Mile

North

On true line, Texas and New Mexico boundary, over gently rolling, firm sandy loam soil, no undergrowth; descending gradually.

5.00

Enter dry bed of circular rain water pond.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
17.00	Leave dry bed of pond; ascend gradually.
27.00	Top of gradual ascent, thence over level land.
57.80	Road, bears E. and W.
58.70	Fall 2.20 chs. west of an angle in a wire fence, the fence extends East and NW. A telephone line follows this fence.
60.88	Cross same wire fence, bears NW. and SE. Fence connects with the boundary fence west of line. Telephone line follows the boundary fence north.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point
	By 1st set, 79.99 chs.,
	By 2nd set, 80.01 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 5 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 140 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 140 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post, 5½ ft. dist., raise a mound of earth 6 ft. base, 2 ft. high, S. of corner.
	The boundary fence and telephone line is 5.98 chs. west of the corner.
	This corner is .08 chs. north of the position of the temporary corner on the random line from the north.
	Land, rolling.
	Soil, firm sandy loam; 1st rate.
	No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

141st Mile

North

On true line, Texas and New Mexico boundary, over gently rolling land, firm gravelly and sandy loam soil, no undergrowth.

9.00 Begin descent into salt lake basin, bears E. and W. irregular

22.00 Foot of descent, bears N. and E. NE, 60 ft. below commencement of descent; thence over rolling land, ascending gradually.

74.00 Top of low spur, falls west; descend gradually. Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 141 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 141 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist., and raise a mound of earth 6 ft. base, 2 ft. high, S. of corner.

The boundary fence and telephone line is 3.78 chs. west of the corner.

This corner is .08 chs. north of the position of the temporary corner on the random line from the north.

Land, rolling.

Soil, gravelly and sandy loam.

No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

142nd Mile

North

On true line, Texas and New Mexico boundary, over rolling land, firm gravelly and sand soil, no undergrowth. Descending gradually.

40.00

Commence to ascend gradually.

72.00

Top of ascent, low spur, falls west; descend gradually.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 142 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clerk Boundary 1859 Mile Corner No. 142 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post $5\frac{1}{2}$ ft dist; raise a mound of earth 6 ft base, 2 ft high S. of corner.

The boundary fence and telephone line is 3.61 chs. west of the corner.

This corner is .08 chs. north of the position of the temporary corner on the random line from the north.

Land, rolling.

Soil, gravelly and sandy 3rd rate.

No undergrowth.

143rd Mile

North

On true line, Texas and New Mexico boundary, over

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

rolling land, firm gravelly and sandy soil, through scattered short mesquite undergrowth; descending gradually.

6.00 Bottom of descent, bears E. and W; ascend gradually.

10.37 Road, bears NE. and SW.

40.00 Top of ascent, bears E. and W; thence over gently rolling land.

52.24 Road, bears NE and SW.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 143 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 143 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post, 5½ ft. dist; raise a mound of earth, 6 ft. base, 2 ft. high S. of corner.

The boundary fence and telephone line is 3.48 chs. west of the corner.

This corner is .08 chs. north of the position of the temporary corner on the random line from the north.

Land, rolling.

Soil, gravelly and sandy 3rd rate.

Undergrowth, scattered mesquite.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

144th Mile

North.

On true line, Texas and New Mexico boundary, over rolling land, firm sandy loam soil, through scattered mesquite undergrowth.

29.00

Begin gradual descent, bears E. and W., leave undergrowth.

45.00

Foot of descent, bears E. and W., thence over level land.

70.00

Leave level land, bears NE. and SW; ascend gradually
Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 144 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 144 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. distant; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence and telephone line is 3.35 chs. west of the corner.

This corner is .08 chs. north of the position of the temporary corner on the random line from the north.

Land, level and rolling.

Soil, sandy loam; 2nd and 3rd rate.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Undergrowth, short scattered mesquite.

145th Mile

North

On true line, Texas and New Mexico boundary, ascending over rolling land, firm sandy and clay soil little or no short mesquite undergrowth.

21.00

Leave scattered mesquite, bears N. and W.

28.00

Top of ascent, bears E. and W., 50 ft. above the last mentioned level land. This point is about 15 ft. below and 1.00 ch. west of the top of a pointed hill. Descend.

40.00

This point is about 20.00 chs. east of the middle point on the eastern shore line of a large salt lake.

41.00

Head of draw, course west into salt lake; ascend.

43.25

Top of ascent; thence along the west slope of hill, the top of which is 3.00 chs. east and about 5 ft. higher than line; top of hill bears N. and S.

64.80

Begin descent of north slope.

70.70

The telephone line along boundary fence turns and extends west into New Mexico.

Difference between measurements of 80.00 chs. by two sets of chainmen is 7 links; position of the middle point

By 1st set, 79.985 chs.,

By 2nd set, 80.015 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 7 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 145 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 145 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x 12 ins., N. and S. of post 5½ ft. dist; raise a mound

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

of earth, 6 ft. base, 2 ft. high S. of corner.

The boundary fence is 2.15 chs. west of the corner.

This corner is .08 chs. north of the position of the temporary on the random line from the north.

Land, rolling and hilly.

Soil, sandy clay 4th rate.

Undergrowth, mesquite.

Meridian observation of the sun for time at temporary mile corner No. 145 on the random line from the north, May 15, 1911.

Equation of time: -3m 49s

Watch times of transit

	h	m	s	
Sun's W. limb	11	46	29	a.m.
Sun's center	11	47	35	
Sun's E. limb	11	48	41	
Watch time of apparent noon	11	47	35	
L.M.T. of apparent noon	11	56	11	
Watch slow of L.M.T.		8	36	

146th Mile

North

On true line, Texas and New Mexico boundary, over rolling land, firm sandy clay loam. No undergrowth.

2.15 Wash, course N. of W.

14.00 Road, bears S. SE and N. NW.

47.54 Road, bears W. and S. of E. The road crossed at 14.00 chains intersects this road at a point 2.00 chs. west.

55.00 Leave firm soil, bears E. and W; thence over loose sandy soil.

58.00 Enter low shifting sand hills, bears E. and W.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 146 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 146 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound. The boundary fence is 2.77 chs. west of the corner. This corner is .08 chs. north of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy clay loam and loose sand, 2nd and 4th rate.

Little or no undergrowth.

147th Mile

North

On true line, Texas and New Mexico boundary, over land, loose sandy soil, through short scattered scrub oak and wild plum undergrowth.

63.50 Wire fence, extends east from the boundary fence. Land becomes low rolling shifting sand hills.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 28 ins. into the ground for the 147 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Corner No. 147 General Land Office Reestablishment
1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.
The boundary fence is 2.80 chs. west of the corner.
This corner is .08 chs. north of the position of
the temporary corner on the random line from the
north.

Land, rolling and sand hills.

Soil, loose sand 4th rate.

Undergrowth, scrub oak and wild plum.

148th Mile

North

On true line, Texas and New Mexico boundary.
Over low rolling shifting sand hills, short scattered
wild plum undergrowth.

60.00

Sand hills, becoming more broken.

78.00

Road, bears E. and W.

Difference between measurements of 80.00 chs. by
two sets of chainmen is 2 links; position of the
middle point

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 28 ins. into the ground
for the 148 mile corner. The top of the cap is divided
by a north and south stamped line 1 inch in length, and
marked "Texas" on the east, "New Mexico" on the west
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 148 General Land Office Reestablishment
1911 United States Boundary Commission."

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Pits impracticable, no stone available for a mound.
 The boundary fence is 2.65 chs. west of the corner.
 This corner is .08 chs. north of the position of
 the temporary corner on the random line from the north
 Land, rolling sand hills.
 Soil, sand 4th rate.
 Undergrowth, scattered wild plum.

149th Mile

North

On true line, Texas and New Mexico boundary, over
 broken shifting sand hills, average height about 10
 ft.

Through short scattered wild plum undergrowth.

Difference between measurements of 80.00 chs. by
 two sets of chainmen is 1 link; position of the middle
 point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,
 filled with concrete, flanged at the bottom and sur-
 mounted with a brass cap, 28 ins. into the ground for
 the 149 mile corner. The top of the cap is divided
 by a north and south stamped line 1 inch in length,
 and marked "Texas" on the east, "New Mexico" on the west
 thereof, and also marked, "Clark Boundary 1859 Mile
 Corner No. 149 General Land Office Reestablishment
 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.
 The boundary fence is 2.45 chs. west of the corner.
 This corner is .08 chs. north of the position of the
 temporary corner on the random line from the north.
 Land, shifting sand hills.
 Soil, sand 4th rate.
 Undergrowth, wild plum and green brush.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

150th Mile

North

On true line, Texas and New Mexico boundary, over broken shifting sand hills, averaging 30 ft. high, through short scattered wild plum and green brush undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of the middle point

By 1st set, 79.98 chs.,

By 2nd set, 80.02 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 28 ins. into the ground for the 150 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 150 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 2.24 chs. west of the corner.

This corner is .08 chs. north of the position of the temporary corner on the random line from the north.

Land, shifting sand hills.

Soil, loose sand, 4th rate.

Undergrowth, wild plum and green brush.

May 18, 1911.

May 19, 1911. Adjust temporary corners from No. 151 to No. 166 inclusive from random to true line.

151st Mile

North

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

On true line Texas and New Mexico boundary, over broken shifting sand hills, through scattered wild plum and green brush undergrowth; ascending.

10.00

Top of sand ridge, bears E. and W., 40 ft. high; descend.

20.00

Middle of draw in sand hills 6 chs. wide, course N. of E.; ascend.

35.00

Top of ascent of 30 ft., bears E. and W., thence over broken and irregular sand hills; descending.

60.00

Sand hills become less broken.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 151 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 151 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 2.04 chs. west of the corner.

This corner is .08 chs. north of the position of the temporary corner on the random line from the north.

Land, sand hills.

Soil, sand 4th rate.

Undergrowth, wild plum and scattered green brush.

152nd Mile

North

On true line Texas and New Mexico boundary, over low rolling, shifting sand hills descending gradually

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
20.00	<p>through short wild plum and green brush undergrowth Middle of draw in sand hills, 15.00 chs. wide, course east.</p>
26.00	Road, bears E. and W.
60.00	Sand hills become more broken.
80.00	<p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long 3 ins. dia. filled with concrete, flanged at the bottom and sur- mounted with a brass cap 28 ins. into the ground for the 152 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 152 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound. The boundary fence is 1.83 chs. west of the corner. This corner is .09 chs. north of the position of the temporary corner on the random line from the north. Land, sand hills. Soil, sand, 4th rate. Undergrowth, wild plum and green brush.</p>
80.00	<p style="text-align: center;">153rd Mile North</p> <p>On true line, Texas and New Mexico boundary, over broken shifting sand hills, average height 20 ft . Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point By 1st set, 79.995 chs., By 2nd set, 80.005 chs; the mean of which is Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and sur- mounted with a brass cap, 28 ins. into the ground for</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

the 153 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 153 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 1.60 chs. west of the corner.

This corner is .08 chs. north of the position of the temporary corner on the random line from the north.

Land, sand hills.

Soil, sand 4th rate.

Undergrowth, short wild plum and green brush.

154th Mile

North

On true line, Texas and New Mexico boundary, over shifting sand hills, avergaing 15 ft. high., through scattered green brush undergrowth.

57.04

Search made for evidences of Clark monument No. 4
Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 79.99 chs;

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 154 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 154 General Land Office Reestablishment 1911 United States Boundary Commission."

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Pits impracticable, no stone available for a mound.
The boundary fence is 1.39 chs. west of the corner.
This corner is .08 chs. north of the position of
the temporary corner on the random line.

Land, sand hills.

Soil, sand

Undergrowth, green brush.

155th Mile

North

On true line, Texas and New Mexico boundary, over
low shifting sand hills, scattered green brush under-
growth.

64.00 Leave undergrowth, bears E. and W.

76.00 Leave sand hills, bears E. and W., continue over
loose rolling sandy soil land.

Difference between measurements of 80.00 chs. by
two sets of chainmen is 1 link; position of the
middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete flanged at the bottom and sur-
mounted with a brass cap 28 ins. into the ground for
the 155 mile corner. The top of the cap is divided by
a north and south stamped line 1 inch in length, and
marked "Texas" on the east, "New Mexico" on the west
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 155 General Land Office Reestablishment 1911
United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 1.18 chs. west of the corner.

This corner is .08 chs. north of the position of
the temporary corner on the random line.

Land, sand hills, and rolling.

Soil, sand 4th rate.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
	Undergrowth, green brush.
	156th Mile North
	On true line, Texas and New Mexico boundary, over gently rolling land, loose sandy soil, little or no undergrowth of wild plum or short scrub oak.
19.75	Wire fence extends east from the boundary fence, land now almost level.
41.50	House 4.00 chs. west of line. Sand soil almost firm now.
61.00	House, 3.00 chs. west of line. A road extends north along east side of boundary fence from this house.
62.00	Soil becomes firm sandy loam.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point
	By 1st set, 79.995 chs;
	By 2nd set, 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 156 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 156 General Land Office Reestablishment 1911 United States Boundary Commission". Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base 2 ft high. S. of corner. The boundary fence is .96 chs. west of the corner. This corner is .736 chs. west and .08 chs. north of the position of the temporary corner on the random line.
	Land, rolling and almost level.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.	Soil, sand, 4th rate, and sandy loam, 2nd rate. Little or no undergrowth, wild plum and short scrub oak.
157th Mile North	
On true line, Texas and New Mexico boundary, over almost level land, firm sandy soil, no undergrowth. The road following along the east side of the boundary fence now follows line; on an irregular course.	
36.93	Old road, bears N. of E. and S. of W.
40.00	House and windmill 30.00 chs. west of line.
55.00	House and windmill 16.00 chs. west of line.
55.94	Road, bears E. and W.
58.62	Road, extends NE. from road along line.
No difference between measurements of 80.00 chs. by two sets of chainmen.	
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 157 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof and also marked, "Clark Boundary 1859 Mile Corner No. 157 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.</p> <p>The boundary fence is .76 chs. west of the corner. This corner is .73 chs. west and .08 chs. north of the position of the temporary corner on the random line:</p> <p>Land, almost level. Soil, firm sandy loam, 2nd rate.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains No undergrowth.

158th Mile

North

On true line, Texas and New Mexico boundary over almost level land, firm sandy soil, no undergrowth, along road, irregular.

29.50 House, 17.00 chs. west of line.

34.50 House and windmill of G.C. Lasswell bears west 7.00 chs.

At the point 157 miles plus 36.61 chs. on the random line Polaris was observed for meridian, the time used for this observation was determined the preceding noon at mile point 152 plus 30.00 chs. on the blank line projected to the north, to the east of the Texas and New Mexico line, used only to temporarily fix the location of mile corner 156 for distance. The observation is as follows:

Equation of time used, -3^m 20^s

Watch times of transit

	h	m	s
Sun's W. limb	11	47	18 a.m.
Sun's center (not used)	11	48	23
Sun's E. limb	11	49	30
Watch time of apparent noon	11	48	24
L.M.T. of apparent noon	11	56	40
Watch slow of L.M.T.		8m	16s

36.53 Opposite point of observation on random line.

Time observation of Polaris for azimuth at temporary mile corner No. 157 plus 36.61 chs. on random line, May 5, 1911.

Longitude, 103° 02'

Latitude of station 34° 17'

Declination of Polaris 88° 49' 48.5" .

Sights on Polaris marked 19.79 chs. north of station.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Mean time U.C. of Polaris, Greenwich 10h 37.4m a.m.

Correction for longitude -1.1m

Local mean time U.C. of Polaris 10h 36.3m a.m.

Watch times of observations

	h	m	s	
Telescope direct	6	16	40	p.m.
" reversed	6	19	17	
" direct	6	21	53	
" reversed	6	23	44	

Mean watch time of observations - 6 h 20m 24s p.m.

Watch slow of L.M.T. 8m 16s

Local mean time of observation - 6h 28m 40s p.m.

L.M.T. of obsn. 6h 28.7m p.m.

L.M.T. of U.C. 10h 36.3m a.m.

Hour angle W. 7h 52.4m

The azimuth of Polaris corresponding to this hour angle is $1^{\circ} 14.2'$ west of the meridian.

Azimuth distance laid off to the east to determine a true meridian 42.73 links. At a point 19.785 chs. north of the station of observation the random line falls .1 foot to the west of the true meridian. The bearing of the random therefore is N. $0^{\circ} 00' 15''$ W. The temporary mile corner (flag) No. 156 and all intermediate flags on random line are within sight from the point of observation and are exactly on line.

55.95 Road, extends east from road following line.

56.00 House and windmill about 30.00 chs. east of line.

68.22 Road, extends east from road following line.

69.38 Fence, extends east from boundary fence.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

	<p>By 1st set, 79.995 chs.,</p> <p>By 2nd set, 80.005 chs; the mean of which is</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 158 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 158 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base 2 ft. high S. of corner.</p> <p>The boundary fence is .56 chs. west of the corner.</p> <p>This corner is .728 chs. west and .08 chs. north of the position of the temporary corner on the random line.</p> <p>Land, almost level.</p> <p>Soil, firm sandy loam, 2nd rate.</p> <p>No undergrowth.</p>
	<p>159th Mile</p> <p>North</p>
	<p>On true line, Texas and New Mexico boundary, over almost level land, firm sandy soil, no undergrowth, ascending very gradually; an irregular road follows along line.</p>
20.00	<p>Top of ascent, bears E. and W. thence over gently rolling land.</p>
22.54	<p>Road, extends east from road following line.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

the 159 mile corner. The top of the cen is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 159 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits

36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is .37 chs. west of the corner.

This corner is .731 chs. west and .08 chs. north of the position of the temporary corner on the random line.

Land, almost level and rolling.

Soil, sandy loam 2nd rate.

No undergrowth.

160th Mile

North

On true line, Texas and New Mexico boundary, over gently rolling prairie, firm sandy soil, no undergrowth; along an irregular road.

10.00	Descend into prairie draw, bears NW. and SE.
23.50	Prairie draw, 2.00 chs. wide, 40 ft. below surrounding country, course SE. This draw leads into the headwaters of the Brazos River; ascend.
35.00	Top of ascent, bears NW. and SE., thence over almost level prairie.
60.00	Small house, 2.00 chs. west of line.
62.90	Wire fence, extends east from boundary fence. At this point the boundary fence offsets east 60. links; thence along west side of fence.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

<u>Chains.</u>	
	By 1st set, 79.995 chs.,
	By 2nd set, 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia.,
	filled with concrete, flanged at the bottom and
	surmounted with a brass cap, 24 ins. into the ground for
	the 160 mile corner. The top of the cap is divided by
	a north and south stamped line 1 inch in length, and
	marked "Texas" on the east, "New Mexico" on the west
	thereof, and also marked, "Clark Boundary 1859 Mile
	Corner No. 160 General Land Office Reestablishment
	1911 United States Boundary Commission." Dig pits
	36x36x12 ins. E. and W. of post 5½ ft. dist; raise a
	mound of earth 6 ft. base, 2 ft. high S. of corner.
	The boundary fence is .28 chs. east of the corner.
	This corner is .737 chs. west and .08 chs. north
	of the position of the temporary corner on the random
	line.
	Land, gently rolling.
	Soil, firm sandy loam 2nd rate.
	No undergrowth.
	161st Mile
	North
	On true line, Texas and New Mexico boundary, over
	rolling land, firm sandy loam soil, no undergrowth,
	along irregular road.
5.00	Descend gradually.
35.00	Prairie draw, bears S. of E; ascend gradually.
62.44	Wire fence, extends east from boundary fence. At
	this fence the boundary fence offsets west 35 links
	to a point 05 links west of the line, thence along
	east side of boundary fence.
62.45	Fall 07 links east of a concrete monument, 6x6x2 ins.
	above ground, marked "T" on the top, "16" on the NE
	face.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

80.00

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set 79.995 chs.

By 2nd set, 80.005 chs; the mean of which is

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 161 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 161 General Land Office Reestablishment 1911 United States Boundary Commission". Dig pite 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth, 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is .04 chs. west of the corner.

This corner is .745 chs. west and .08 chs. north of the position of the temporary corner on the random line.

Land, rolling.

Soil, firm sandy loam, 1st rate.

No un'ergrowth.

162nd Mile

North

On true line, Texas and New Mexico boundary, over almost level land, firm sandy loam soil, no undergrowth.

13.34

Road extends SE. from the road along boundary fence.

17.00

Small house, 3.50 chs. west of line.

Difference between measurements of 18.69 chs. by two sets of chainmen is 1 link; position of the middle point

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

18.69

By 1st set, 18.685 chs.,

By 2nd set, 18.695 chs; the mean of which is

To Clark's monument No. 5., which is a low mound of sand of indefinite outline. The soil surrounding this corner is firm and compact, and is of a character that would retain a mound for a considerable period. The land lying to the west of the monument has been ploughed at various times during the past few years, and the sand which has been blown from the ploughed land has covered the mound and become so compacted that it is impossible now to determine definitely the outlines of the old mound. Until recent years this mound was well defined. Said monument No. 5 is protected by a barb wire fence in the shape of a rectangle 53 links north and south and 30 links east and west; erected by the Syndicate Land and Cattle Company of Texas, to protect this monument. This monument is well known by old residents in the vicinity as one of the monuments marking the old survey of the Texas and New Mexico boundary, and its authenticity is unquestioned.

Mr. Arthur D. Kidder, Supervisor of Surveys, G.L.O. who was present verified the existing enclosure as occupying the same position as the monument and enclosure visited by him in 1903, at which time he was accompanied by W. D. Twitchell, who identified said monument in 1892 as an official surveyor for the State of Texas. The center of the enclosure was taken as the point marking the center of the former Clark monument. To perpetuate the location of this mound I construct at the center of the above enclosure a concrete monument having a cubical base 30 ins. square set 30 ins. into the ground, and a superstructure in the form of a frustum of a cone, encased in galvanized iron, having a lower diameter of 24 ins. an upper diameter of 18 ins. and projecting 30 ins. above the ground; in the

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

top of which there is embedded a brass plate 6 ins. in diameter. The plate is marked in the center by an N. and S. division line $1\frac{1}{2}$ ins. long with "TEXAS" on the east and "NEW MEXICO" on the west thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON. NO. 5" in the north half "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the south half. Monument built May 9th, 1911. May 19, 1911

RANDOM LINE

Clark monument No. 5 (mile corner No. 161 plus 18.69 chs) to Clark Monument No. 6 (mile corner No. 166 plus 49.92 chs).

May 6, 1911. On this date the random line from the south was run to Clark monument No. 5, the falling being 74.7 links to the east. I continue the random line north from monument No. 5 on an offset 74.7 links to the east, setting temporary mile corners at intervals of 80.00 chs. counting from the SE. corner of New Mexico. The random line distance to monument No. 5 was 161 miles plus 18.77 chs. and this distance was carried through in the random line to the north.

Temporary mile corner No. 163 plus 75.19 chs. I offset 15 links to the west to avoid buildings in Farwell, Texas.

Temporary mile corner No. 166 plus 49.50 chs. fall 9.6 links west of Clark monument No. 6, described in the true line notes.

The course of this random line was based on an observation made May 5 at temporary mile cor. No. 157 plus 36.61 chs. which is recorded in the true line notes south of monument No. 5; and on observations made May 6, 1911 at temporary mile cor. No. 163 plus 75.15 chs., and May 11, 1911, at Clark monument No. 6 at temporary mile corner No. 166 plus 49.50 chs. which are recorded in the notes of the true line.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

The true falling of the random line at monument No. 5 (corrected for adjustment of accumulated error and offsets) is 73.4 links west in 5 miles and 30.73 chs. The course of the true line from Clark monument No. 5 to No. 6, therefore, is N. $0^{\circ} 5' 52''$ E.

May 6, 1911

TRUE LINE

Clark monument No. 5 to No. 6.

May 19, 1911. Continue on true line.

Continue on the 162nd mile from Clark Monument No. 5 at 18.69 chs. distance counting from 161 mile corner N. $0^{\circ} 5' 52''$ E.

Along boundary fence.

- 55.00 Descend gradually into prairie sink, or basin.
- 63.84 The SW. corner of a cemetery bears east 46 links dist.
- 73.29 The NW. corner of cemetery bears east 45 links.
Cemetery extends 10 chains east of line.
- 74.00 Foot of descent, bears E. and W., thence over level land of bottom of basin, which extends to a point about 15.00 chs. east of line.
No difference between measurements of 61.31 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 162 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 162 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits

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Chains.

36x36x12 ins. E. and W. of post, 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is .01 chs. west of the corner.

This corner is .652 chs. west and .08 chs. north of the position of the temporary corner on the random line.

Land, rolling and almost level.

Soil, firm sandy loam, 1st rate.

No undergrowth.

163rd Mile

N. 0° 05' 52" E.

On true line, Texas and New Mexico boundary, over almost level land, firm sandy soil, no undergrowth.

An irregular road along E. side boundary fence.

Boundary fence practically on line.

5.00

Commence to ascend gradually.

6.00

Opposite point of observation on random line.

Meridian observation of the sun for time at temporary mile corner No. 162 plus 6.08 chs. on random line, May 6, 1911.

Equation of time used -3^m 26^s

Watch times of transit

	h	m	s
Sun's W. limb	11	47	13 a.m.
Sun's center	11	48	19
Sun's E. limb	11	49	24
Watch time of apparent noon	11	48	19 a.m.
L.M.T. of apparent noon	11	56	34 a.m.
Watch slow of L.M.T.		8	15

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
25.00	Top of ascent, bears E. and W; thence over level land.
28.50	House and windmill bears 5.00 chs. west of line.
31.50	Dugout, bears 5.50 chs. west of line.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point :
	By 1st set, 79.995 chs.,
	By 2nd set, 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 163 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 163 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post, 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner. The boundary fence is .03 chs. east of the corner. This corner is .53 chs. west and .08 chs. north of the position of the temporary corner on the random line.
	Land, almost level.
	Soil, firm sand loam 1st rate.
	No undergrowth.
	164th Mile
	N. 0° 5' 52" E
	On true line, Texas and New Mexico boundary, over level prairie land, firm sandy loam soil. No undergrowth.
	Along boundary fence, W. side, an irregular road along east side of boundary fence.
53.00	Windmill bears 3.00 chs. west of line.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

54.25 House bears 4.00 chs. west of line.

63.83 Fall .03 chs. west of a concrete monument 6x6x15 ins. above ground, marked "TS" on top, "16" on SE, and "9" on NE faces.

75.07 Opposite point of observation on random line.

Time observation of Polaris for azimuth at temporary mile corner No. 163 plus 75.15 chs. on random line, May 6, 1911.

Longitude of station $103^{\circ} 02'$

Latitude of station $34^{\circ} 23'$

Declination of Polaris $88^{\circ} 49' 48''$

Sights on Polaris marked 22.54 chs. south of station.

Mean time, U.C. of Polaris, Greenwich 10h33.5m a.m.

Correction for longitude - 1.1m

Local mean time, U.C. of Polaris 10h 32.4m a.m.

Watch times of observations

	h	m	s
Telescope direct	6	25	58 p.m.
" reversed	6	28	45
" direct	6	31	20
" reversed	6	33	00
Mean watch time of observations	6 h	29 m	46 s p.m.
Watch slow of L.M.T.		<u>8 m</u>	<u>15 s</u>
Local mean time of observation	6 h	38 m	01 s
L.M.T. of obsn	6 h	38.0m	p.m.
L.M.T. of U.C.	10 h	32.4m	a.m.
Hour angle, W.	8 h	05.6m	

The azimuth of Polaris corresponding to this hour angle is $1^{\circ} 11.7'$ west of the meridian. The azimuth distance laid off to the west to determine the true meridian is 47.02 links. At the point 22.54 chs. south of point of observation the random line falls .34 ft. west of the true meridian, thus indicating an accumulated error of 47 seconds in 6 miles and 38.54 chs. The bearing of the random line at the point of observation, therefore, is

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Chains.

N. 0° 00' 47" E.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 164 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 164 General Land Office Reestablishment 1911 United States Boundary Commission". Dig pits 36x36x12 ins. E. and W. of post, 5½ ft. dist; raise a mound of earth, 6 ft. base, 2 ft. high, S. of cor.

The boundary fence .03 chs. east of the corner.

This corner is .26 chs. west and .08 chs. north of the position of the temporary corner on the random line.

Land, level prairie.

Soil, firm sandy loam, 1st rate.

No undergrowth.

165th Mile

N. 0° 05' 52" E

On true line, Texas and New Mexico boundary, over level prairie land, firm sandy soil, no undergrowth. Along west side of boundary fence. An irregular road along east side of boundary fence.

10.00

Opposite the southern side of the Town of Farwell, Texas.

17.29

Fall 1 lk. west of a sandstone, 10x4x3 ins. above ground, marking the SE. corner of the town of Texico, New Mexico. This stone is marked, "TL" on the east; cross wire fence, bears west from the boundary fence, the terminus of which is at the above sandstone

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Chains.

- monument. Thence between the towns of Farwell and Texico, along irregular road.
- 44.00 Road, bears E. and W.
- 50.67 Railroad, A. T. & S. F. System, bears N. $49^{\circ} 23'$ E. and S. $49^{\circ} 23'$ W
 ^ The station of Texico, N.M., is located about 8.00 chs. southwesterly. This point also on the main street between Farwell and Texico. Farwell does not extend north of the above mentioned railroad.
- 51.25 Fall 01 link west of the state line sign post on the above railroad; a wooden post, 12x12 ins. at the base and 10 ft. high; marked "STATE LINE" on the SE; "NEW MEXICO" on the S. and "TEXAS" on the east faces. Thence along west side of road.
- 54.00 The SE. corner of a wire fence is 03 links west of line; thence along the east side of boundary fence.
 Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point
 By 1st set, 79.99 chs.,
 By 2nd set, 80.01 chs; the mean of which is
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 165 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 165 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36 x12 ins. E. and W. of post $5\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base 2 ft. high S. of corner.
 The boundary fence is .03 chs. west of the corner.
 This corner is .123 chs. west and .08 chs. north of the position of the temporary corner on the random line.

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Chains.

Land, level.

Soil, firm sandy loam, 1st rate.

No undergrowth.

166th Mile

N. 0° 05' 52" E

On true line, Texas and New Mexico boundary, over level prairie land, firm sandy soil, no undergrowth.

Along east side ^{of} boundary fence, an irregular road along east side of boundary fence.

10.00 Opposite the north side of Texico, N.M.

15.00 Begin gradual descent into dry rain water basin.

40.00 Bottom of slope, bears E. and W; thence over level land, skirting the east edge of a dry rain water pond; cross boundary fence at about this point.

55.00 Leave dry pond and ascend gradually out of basin.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 166 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 166 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is .03 chs. east of the corner.

This corner is .012 chs. east and .08 chs. north of the position of the temporary corner on the random line.

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Chains.

Land, level and rolling.
Soil, firm sandy loam 1st rate.
No undergrowth.

167th Mile

N. 0° 05' 52" E.

On true line, Texas and New Mexico boundary, ascending over rolling land, firm sandy soil, no undergrowth.

An irregular road along the east side of the boundary fence.

- .56 The boundary fence east of line now turns and extends NW. to a point .50 chs. west of line, thence north.
- 1.50 The SW. corner of a wire fence, bears east .50 chs. dist ; thence along irregular road, between wire fences
- 17.10 House, 2.25 chs. west of line.
- 29.50 House, 1.50 chs. west of line.
- No difference between measurements of 49.42 chs. by two sets of chainmen.
- 49.42 To Clark's monument No. 6, which is an irregular and indefinitely defined mound of earth, 8 ft. in diameter and .5 ft. high, in the center of which there is a limestone 17x12x3 ins. entirely buried and marked "MON NO 6 NM" on the west, "TEX" on the east faces.
- This stone was placed by Charles W. Devendorf, U.S. Deputy Surveyor. Until recently this mound was protected by a barb wire fence inclosure, but this has been partially destroyed. Mr. Arthur D. Kidder, Supervisor of Surveys, who was present, identified this mound as the one visited and identified by him in 1903 when accompanied by W. D. Twitchell, Texas Surveyor, who had identified this mound as Clark monument No. 6 and used the same in connection with his retracement of the Texas and New Mexico boundary in 1892. This mound has been adopted by U.S. Deputy Surveyors in closing the public surveys of New Mexico on the

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Chains.

Texas and New Mexico boundary.

To perpetuate the location of said Clark monument No 6, I construct a concrete monument at the center of the existing mound of earth, in the form of a frustum of a cone incased in galvanized iron, the lower base 24 ins. in diameter, the upper base 18 ins. in diameter, and 30 ins. high, set 20 ins. into the ground, in the top of which there is imbedded a circular brass plate 6 ins. in diameter.

The plate is marked in the center by a N. and S. division line $1\frac{1}{2}$ inches long, with "TEXAS" on the E., and "NEW MEXICO" on the W. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 6" in the north, half "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the south half. Monument built May 9, 1911.

On May 11, I determined the true meridian by time observation on Polaris at the above monument, for the purposes of determining the bearing of the random line from the south at said monument. The time on which this observation was based was determined by comparing my watch time with the time indicated by the Western Union Telegraph Co. telegraphic clock, at Clovis, New Mexico, a few hours before the observation was made. The above clock was reported correct within the nearest second, and formed the basis for the time used on the A.T. & S.F. R.R. in the vicinity.

Watch slow of clock keeping 105th-meridian
mean time 39 seconds

Clock slow of L.M.T. on meridian
103° 02' 14" 7m 51 "
Watch slow of L.M.T. 8 30 "

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Chains.

Longitude of station 103° 02'

Latitude of station 34° 25'

Declination of Polaris 88° 49' 47"

Sights on Polaris marked 16.25 chs. north of station.

Mean time, U.C. of Polaris, Greenwich 10h 13.8m a.m.

Correction for longitude -1.1m

Local mean time, U.C. of Polaris 10h 12.7m a.m.

Watch times of observations.

	h	m	s
Telescope direct	6	34	02 p.m.
" reversed	6	35	29
" direct	6	37	56
" reversed	6	39	14
Mean watch time of observations	6h	36m	40s
Watch slow of L.M.T.		8m	30
Local mean time of observation	6h	45m	10s
L.M.T. of obsn	6h	45.2m	p.m.
L.M.T. of U.C.	10h	12.7m	a.m.
Hour angle, W.	8h	32.5m	

The azimuth of Polaris corresponding to this hour angle is 1° 06' west of the meridian. The azimuth distance laid off to the east to determine the true meridian is 31.2 links. At a point 16.253 chains north of my station the random line falls .4 link to the right of the true meridian allowing for falling of random 9.6 links W. of Monument indicating the bearing of the random line at Clark monument No. 6 to be N. 0° 00' 51" E. The bearing of the random line at temporary mile corner No. 163 plus 75.15 chs. on random line was found to be N. 0° 00' 47" E., therefore the accumulated error in the random between said point and monument No. 6, a distance of 2 miles and 54.35 chs. was 4 seconds to the right. The distance to monument on the random line was 166 miles and 49.50 chs.

May 19, 1911.

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Chains.

RANDOM LINE

Clark monument No. 6 (M. 166 plus 49.42 chs.) to
Clark monument No. 9 (M 204 plus 6.89 chs.)

May 22, 1911. The points defining the true meridian
determined at monument ^{No. 6} / May 11, are still undisturbed and
I determine the course of my random line N. 0° 04'
E. from this true meridian by measuring north 16.25
chs. and then offsetting this point to the east 1.9 links
thus defining the course of the random. The bearing of
the random line was selected because of the apparent
course of the boundary fence, and knowledge obtained
from the U.S. public land surveys.

N. 0° 04' E.

On random line, Texas and New Mexico boundary,
setting temporary mile corners at intervals of 80.00
chs. by two sets of chainmen. Counting from the S.E. Cor. H.M.
Temporary mile corner No. 174 plus

68.83

End of day's run. At this point I observe Polaris for
meridian, which observation is recorded in the true line
notes at corresponding point. Accumulated error in
alignment, in day's run 111 seconds to the right,
the bearing of the random therefore is N. 0° 5' 51"
E. at end of day's run. A steady wind from the same
direction continued all this day.

May 22, 1911.

May 23, 1911. I adjust course of random line and
continue

N. 0° 04' E

Temporary mile corner No. 186 plus

46.29

End of day's run. At this point I observe Polaris
for meridian which observation is recorded in the true
line notes at corresponding point. Accumulated error in
day's run 98 seconds to the right, the bearing of the
random therefore is N. 0° 05' 38" E. at end of day's

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Chains.

run. A steady wind prevailed all day from same direction.
May 23, 1911

May 24, 1911. I adjust the course of random line and continue

N. 0° 04' E.

Temporary mile corner No. 197 plus

39.61

End of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes at corresponding point. Accumulated error in day's run 79 seconds to the right, the bearing of the random line, therefore is N. 0° 5' 19" E. at the end of the day's run. A steady wind prevailed all day from the same direction.

May 24, 1911.

May 25, 1911. I adjust the course of the random line and continue

N. 0° 04' E.

Temporary mile corner No. 204 plus

6.89

Fall 13.5 links west (left) of Clerk monument No. 9. This monument and the concrete monument established to perpetuate the location thereof is described in the true line notes. The true falling at this monument, allowing for the accumulated error in alinement, is 79.6 links west. The course of the random line at the said monument No. 9 was based on an observation of Polaris made at temporary mile corner 203 plus 66.22 chs. which is recorded in the true line notes. The topography in the immediate vicinity of monument No. 9 made this proceeding necessary. In computing the adjustment for accumulative error in alinement at mile corner No. 204 and at monument No. 9, it was considered that this observation was made at said monument No. 9 which was within sight of the station of observation. The course of the true

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Chains.

line from monument No. 6 to monument No. 9, therefore, is N. 0° 04' 55" E. The distance between these monuments is 37 miles plus 37.47 chs.

TRUE LINE

Clark monument No. 6 to monument No. 9

June 24, 1911: Adjust temporary mile corners from No. 167 to No. ²⁰⁴181 inc. from random to true line.

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, over level land, firm sandy loam soil, no undergrowth, along irregular road, between wire fences. Measurements from Mon. No. 6.

7.81 Intersect mile corner No. 143 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x14x3 ins. above ground, firmly set, marked "T E X" on E. "N M $\frac{1}{2}$ M" on W., and 10 on S. face; witnessed by traces of pits only to the E. and W.

No difference between measurements of 30.58 chs. by two sets of chainmen.

30.58 80.00 chs. from mile corner No. 166

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 167 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 167 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound

The boundary fence is 45 links east of the corner, and a N. and S. barb wire fence is 50 links west of the corner.

This corner is .8 links east of the position of the temporary corner on the random line.

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Chains.

Classification of mile from mile cor. No. 166
 Land, rolling and level.
 Soil, firm sandy loam, 1st rate.
 No undergrowth.

168th Mile

N. 0° 04' 55" E

On true line, Texas and New Mexico boundary, over level land, firm sandy soil, no undergrowth.

10.00

Along irregular road between wire fences.
 Opposite point of observation on random line.
 Meridian observation of the sun for time at

temporary mile corner No. 167 plus 10.00 chs. on random line, May 22, 1911.

Equation of time -3m 35s

Watch times of transit

	h	m	s
Sun's W. limb	11	46	35 a.m.
Sun's center	11	47	42
Sun's E. limb	11	48	50
Watch time of apparent noon	11	47	42
L.M.T. of apparent noon	11	56	25
Watch slow of L.M.T.		8m	43s

17.28

Fall 1 lk. W. of mile corner No. 143 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x5x3 ins. above ground, firmly set, marked T E X on E., N M 143 M on W and 10 on S face; witnessed by traces of pits E. and W.

43.50

House 2.50 chs. east

57.32

Fall 2 lks. W. of mile corner No. 142½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x4x4 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face; witnessed by pits 18x18x10 ins. E. and W. thereof.

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Chains

Difference between measurements of 80.00 chs. by two sets of chainmen 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 168 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 168 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 53 links east of the corner, and N. and S. fence west of line 50 links west.

This corner is 2.4 links east of the position of the temporary corner on the random line.

Land, level.

Soil, firm sandy loam 1st rate.

No undergrowth.

169th Mile

N. $0^{\circ} 04' 55''$ E.

On true line, Texas and New Mexico boundary, over level land, firm sandy loam soil, no undergrowth.

Along irregular road, between wire fences.

9.00

House 6.50 chs. west of line.

11.00

House, 6.00 chs. east of line.

17.35

Fall 01 lks W. of mile corner No. 142 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x8x7 ins. above ground, firmly set, marked T E X on E., N M 142 M on W., and 10 on S face; witnessed by traces of pits E. and W.

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Chains.

57.37

Fall 02 lks W. of mile corner No. 141 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 5x6x7 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; traces of pits E. and W.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 169 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 169 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 52 links east, and the N. and S. fence 50 links west of corner.

This corner is 3.6 links east of the position of the temporary corner on the random line.

Land, level.

Soil, firm sandy loam 1st rate.

No undergrowth.

170th Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, over level land, firm sandy loam soil, no undergrowth.

Along irregular road between wire fences.

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Chains.	
17.40	<p>Fall 1 lk. W. of mile corner No. 141 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 12x4x4 ins. above ground firmly set marked T E X on E., N.M.141 M.on W., and 10 on S. face; witnessed by traces of pits 18x18x6 ins. E. and W. thereof.</p>
18.00	<p>Commence to ascend very gradually.</p>
38.00	<p>Top of slope bears E. and W., thence over level land</p>
57.45	<p>Intersect mile corner No. 140½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x6x5 ins. above ground firmly set marked T E X on E, N M ½ M on W., and 10 on S. face; witnessed by traces of pits 18x18x6 ins. E. and W. thereof.</p>
	<p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 170 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 170 General Land Office Reestablishment 1911 United States Boundary Commission."</p> <p>Pits impracticable, no stone available for a mound.</p> <p>The boundary fence is 51 links east and the N. and S. fence is 50 links west of the corner.</p> <p>This corner is 4.2 links east of the position of the temporary corner on the random line.</p> <p>Land, level and slightly rolling.</p> <p>Soil, firm sandy loam, 1st rate.</p> <p>No undergrowth.</p>

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Chains.

171st Mile

N. 0° 04' 55" E

On true line, Texas and New Mexico boundary, over level land, firm sandy soil, no undergrowth, along irregular roadway between wire fences

17.49

Fall 01 lks. E. of mile corner No. 140, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x6x5 ins. above ground, firmly set, marked T E X on E., N M 140 M on W., and 10 on S. face; witnessed by traces of pits 18x18x6 ins. E. and W. thereof.

40.00

Land becomes slightly rolling; descend gradually.

57.49

Intersect mile corner No. 139½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x6x5 ins. above ground, firmly set marked T E X on E., N.M. ½ M on W., and 10 on S. face; witnessed by traces of pits 18x18x6 ins. E. and W. thereof.

58.50

Fall 34 links east of the NE. cor. of wire fence, end of fence west of line.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 171 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 171 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 54 links east of the corner.

This corner is 4.3 links east of the position of the temporary corner on the random line.

Land, level and rolling.

Soil, firm sandy loam 1st rate.

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Chains.

No undergrowth.

172nd Mile

N. $0^{\circ} 04' 55''$ E.

On true line, Texas and New Mexico boundary over level land, firm sandy soil, no undergrowth along irregular road along west side of wire fence.

16.69 Fall 04 links west of the SE corner of wire fence, thence along west side of N. and S. fence; the road following line now runs between said N. and S., and boundary fence.

17.53 Fall 5 links E. of mile corner No. 139 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 6x7x6 ins. above ground firmly set, marked T E X on E., N M 139 M on W., and 10 on S face, witnessed by traces of pits 24x24x10 ins. E. and W. thereof.

21.50 Vacant house 3.00 chs. west of line.

24.19 Wire fence, extends west from N. and S. fence E. of line.

45.00 Commence to descend gradually.

57.52 Fall 6 lks. E. of mile corner No. 138 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 10x8x8 ins. above ground, firmly set, marked T E X on E., N.M. $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits 24x24x10 ins. E. and W. thereof.

58.41 Fall 04 links west of the NE. cor. of N. and S. wire fence, and of fence east of line; thence along west side of boundary fence.

59.38 Fall 03 links west of the SE. cor. of wire fence, thence along west side of a N. and S. fence. Road between this and boundary fence.

67.75 Prairie draw, course east; ascend, gradually.

73.00 Top of ascent bears E. and W; descend gradually.
No difference between measurements of 80.00 chs.

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Chains.

by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 172 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 172 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound

The boundary fence is 52 links east and the N. and S. fence 05 links east of corner.

This corner is 3.9 links east of the position of the temporary corner on the random line.

Land, level and rolling.

Soil, firm sandy loam 1st rate.

No undergrowth.

173rd Mile

N. 0° 04' 55" E

On true line, Texas and New Mexico boundary, descending over gently rolling land, firm sandy soil, no undergrowth along the west side of a N. and S. fence.

.50 SE. corner of cultivated field, thence along E. side of same.

12.10 Middle of Running Water Draw, 30 links wide, course east; ascend. No running water in this draw. The road east of line crosses this draw on a bridge., 1.20 chs. long.

Ascend gradually over loose sandy soil.

17.54 Fall 07 links E. of mile corner No. 138 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 10x6x10 ins. above ground firmly set marked T E X on E, N M 138 M on W., and 10

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Chains.

- on S. face; witnessed by traces of pits 18x18x6 ins. E. and W. thereof.
- 41.22 Wire fence extends west from N. and S. fence east of line. Leave cultivated land.
- 57.55 Fall 05 lks. E. of mile corner No. 137 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x5x6 ins. above ground firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits 18x18x5 ins. E. and W. thereof.
- 58.63 Fall 06 links west of the NE. corner of the N. and S. fence, end of same.
- 62.70 House, 8.00 chs. east of line.
- 64.60 Road, bears NE. and SW.
- 65.25 Enter road that has been following along west side of boundary fence.
- 75.00 Leave road, which bears slightly to the east.
- 78.00 Top of ascent, bears E. and W; thence over level prairie.
- Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point.
- By 1st set, 79.995 chs;
- By 2nd set, 80.005 chs; the mean of which is
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 173 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 173 General Land Office Reestablishment 1911 United States Boundary Commission."

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Pits impracticable, no stone available for a mound.
 The boundary fence is 53 links east of the corner
 This corner is 3.1 links east of the position of
 the temporary corner on the random line.
 Land, gently rolling and level.
 Soil, firm and loose sandy loam, 1st rate.
 No undergrowth.

174th Mile

N. $0^{\circ} 04' 55''$ E.

On true line, Texas and New Mexico boundary, over
 level prairie land, firm sandy loam soil, no under-
 growth, along irregular road on west side of boundary
 fence.

- 17.56 Fell 04 lks. E. of mile corner No. 137 of the U.S.
 public land survey of the Texas and New Mexico bound-
 ary line, which is a limestone 9x5x4 ins. above ground
 firmly set, marked T E X on E., N M on W., and 10 on S
 face; witnessed by traces of pits 18x18x10 ins. E. and
 W. thereof.
- 17.85 Dugout, bears 3.00 chs. west of line.
- 57.51 Fell 04 lks. E. of mile corner No. 136 $\frac{1}{2}$ of the U. S.
 public land survey of the Texas and New Mexico boundary
 line, which is a limestone 18x9x4 ins. above ground,
 firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10
 on S. face; witnessed by traces of pits 18x18x12 ins.
 E. and W. thereof.
- 60.71 Road, bears E. and W.
- 61.22 Wire fence, fall 08 lks. west of the SE. cor; thence
 along west side of a N. and S. fence. The road along
 line now runs between this N. and S. fence and the
 boundary fence.
- 75.00 Begin gradual descent, bears E. and W.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 174 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 174 General Land Office Reestablishment 1911, United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 51 links east and the N. and S. fence 05 lks. east of the corner.

This corner is 1.6 links east of the position of the temporary corner on the random line.

Land, level and gently rolling.

Soil firm sandy loam 1st rate.

No undergrowth.

175th Mile

N. 0° 04' 55" E

On true line, Texas and New Mexico boundary, descending gradually over rolling prairie land, firm sandy loam soil, no undergrowth, along irregular road on west side of boundary fence. The N. and S. fence runs about 05 links east of line.

3.67

Fall 05 links west of the NE corner of N. and S. fence, which extends west into New Mexico from the angle. Thence along the east side of a wire fence which is about 13 links west of line.

6.70

House, bears 2.00 chs. west.

8.33

At this point the N. and S. fence west of line offsets to a point 5 links east of line; thence along west side of fence.

9.76

Wire fence extends west from N. and S. fence east

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
	of line.
12.50	Prairie draw, 20 links wide, course east 10.00 chs. to a dry rain water pond; ascend gradually.
17.52	Fall 5 lks. E. of mile corner No. 136, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x6x4 ins. above ground, firmly set, marked T E X on E., N M 136 M on W., and 10 on S. face; witnessed by traces of pits, E. and W. thereof.
19.96	Wire fence, extends west from N. and S. fence E. of line.
57.52	Fall 3 lks. E. of mile corner No. 135½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x3x5 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face; witnessed by traces of pits E. and W. thereof.
60.42	Fall 05 links west of the NE corner of the N. and S. fence, terminus of fence east of line, which extends west into New Mexico. The boundary fence continues north 50 links east of line.
60.60	Road bears E. and W.
68.83	Opposite point of Polaris observation on random line.
	----- Time observation of Polaris for azimuth at temporary mile corner No. 174 plus 68.83 chs. on random line, May 22, 1911.
	Longitude of station 103° 02'.
	Latitude of station 24° 32'
	Declination of Polaris 88° 49' 44.5"
	Sights on Polaris marked 17.26 chs. to the north
	Mean time, U.C. of Polaris, Greenwich 9 h 30.7m a.m.
	Correction for longitude <u> -1.1m</u>
	Local mean time, U.C. of Polaris 9 h 29.6m

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Watch times of observations

	h	m	s
Telescope direct	6	41	01 p.m.
" reversed	6	43	23
" direct	6	45	06
" reversed	6	46	51
Mean watch time of observations	6 h	44 m	05 s
Watch slow of L.M.T.		8 m	43 s
Local mean time of observation	6 h	52 m	48 s
L.M.T. of obsn.	6 h	52.8m	p.m.
L.M.T. of U.C.	9 h	29.6m	a.m.
Hour angle, \bar{H} .	9 h	23.8m	

The azimuth of Polaris corresponding to this hour angle is $0^{\circ} 52.85'$ west of the meridian, and adding $04'$; the course of the random line; the azimuth angle to the true random line is $0^{\circ} 56.85'$. The azimuth distance laid off to the east to determine the true random course is 28.55 links. At a point 17.265 chs. north of the station of observation the actual random line falls .61 ft. to the right (east) of the true random line, N. $0^{\circ} 04'$ E; the accumulated error in the day's run of 8 miles plus 19.41 chains is therefore 111 seconds to the right. The bearing of the actual random at the point of observation, therefore is N. $0^{\circ} 5' 51''$ E.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 175 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains. 1859 Mile Corner No. 175 General Land Office Reestablishment 1911 United States Boundary Commission."

Dig pits 36x36x12 ins. E. and W. of post, 5½ ft. dist; raise a mound of earth, 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is 51 links east of the corner.

This corner is .2 link east of the position of the temporary corner on the random line.

Land, rolling and almost level.

Soil, firm sandy loam, 1st rate.

No undergrowth.

176th Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary over level prairie land, firm sandy loam soil, no undergrowth along irregular road, on west side of boundary fence.

3.17 Road, bears E. and W.

17.53 Fall 7 links E. of mile corner No. 135 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x5x3 ins. above ground, firmly set, marked T E X on E., N M 135 M on W. and 10 on S. face; witnessed by traces of pits E. and W. thereof.

18.90 House, bears 3.00 chs. west.

20.33 Fall 41 links east of the SE. cor. of wire fence; thence along the east side of fence, west boundary fence; descend gradually.

32.49 Wire fence, bears NE and SW. At this point the N. and S. fence offsets on an angle from a point 41 links west of, to a point 3 links east of line. Bottom of descent, thence over level land.

50.00 Center of basin 10.00 chs. in diameter, bears west 18.00 chs.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

57.55 Fall 7 lks. E. of mile corner No. 154 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 11x5x3 ins. above ground firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits E. and W. thereof.

60.75 Fall 1 link west of the NE. corner of wire fence. End of fence east of line, which extends west into New Mexico from fence corner. Thence along west side of boundary fence only.

70.00 Commence to ascend.

No differnee between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 176 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 176 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post, 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is 45 links east of the corner.

This corner is 2.1 links east of the position of the temporary corner on the random line.

Land, level and rolling.

Soil, firm sandy loam, 1st rate.

No undergrowth*

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

177th Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, ascending over gently rolling land, firm sandy loam soil, no undergrowth, along irregular road, on west side of boundary fence.

15.00 Top of ascent, bears E. and W; thence over level land.

17.53 Fall 6 lks. E. of mile corner No. 134, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x5x4 ins. above ground, firmly set, marked T E X on E., N M 134 M on W., and 10 on S. face; witnessed by traces of pits E. and W. thereof.

48.00 Commence to ascend slightly, bears E. and W.

57.55 Fall 8 links E. of mile corner No. 133 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x3x4 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits E. and W. thereof.

77.88 Road, bears E. and W.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 177 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 177 General Land Office Reestablishment 1911 United States Boundary Commission."

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high, south of cor.

The boundary fence is 40 links east of the corner.

This corner is 5.8 links east of the position of the temporary corner on the random line.

Land, gently rolling and level.

Soil, firm sandy loam, 1st rate.

No undergrowth.

178th Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, ascending over almost level land, firm sandy loam soil, no undergrowth, along irregular road, on west side of boundary fence.

11.68 Fall 04 links east of the SE. corner of wire fence; thence along east side of fence, west side of boundary fence.

17.55 Fall 8 lks. E. of mile corner No. 133, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone, 6x4x6 ins. above ground, firmly set, marked T E X on E., N M 133 M on W., and 10 on S. face; witnessed by traces of pits, E. and W. thereof.

34.40 Fall 03 links east of the NE. cor. of wire fence, end of fence west of line, which extends west into New Mexico.

35.00 Top of ascent, bears E. and W; thence over level land.

57.55 Fall 8 lks. E. of mile corner No. 132½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 9x4x4 ins. above ground

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits E. and W. thereof.

57.83 Fall 55 links east of the SE. cor. of wire fence; thence between this fence and boundary fence.

70.00 Begin descent, bears E. and W.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 178 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 178 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is 47 links east of the corner.

This corner is 5.0 links east of the position of the temporary corner on the random line.

Land, almost level.

Soil, firm sandy loam, 1st rate.

No undergrowth.

179th Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico Boundary, descending over gently rolling land, firm sandy loam, soil, no undergrowth, along road, between the boundary fence, east of line, and a N. and S. wire fence west of line.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
4.60	House, and windmill, bears 6.00 chs. west of line.
16.86	Fall 49 links east of the NE. cor. of wire fence, which is the terminus of the fence west of line, which extends west into New Mexico.
17.57	Fall 8 lks. E. of mile corner No. 132 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x2x6 ins. above ground firmly set, marked T E X on E., N M 132 M on W. and 10 on S. face; witnessed by pits 24x24x8 ins. E. and W. thereof.
31.60	Road bears E. and W. At this road the road that has been following along line, turns and extends to the NW.
39.70	Prairie draw, 25 links wide, course east, to a dry pond 12.00 chs. east of line; ascend gradually.
57.57	Fall 5 links E. of mile corner No. 131 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 13x4x10 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by pits 24x24x8 ins. E. and W. thereof.
64.00	Top of ascent, bears E. and W; thence over level land.
68.04	Fall 9 lks. west of a sandstone 12x12x9 ins. above ground, marked "RBSW" Cor" on the NE face. This corner pertains to the Texas surveys.
80.00	<p>Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point</p> <p>By 1st set, 79.995 chs..</p> <p>By 2nd set, 80.005 chs; the mean of which is</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 179 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

marked "Texas on the east," "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 179 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is 54 links east of the corner.

This corner is 5.9 links east of the position of the temporary corner on the random line.

Land, gently rolling and level.

Soil, firm sandy loam, 1st rate.

No undergrowth..

180th Mile

N. 0° 04' 55" E

On true line, Texas and New Mexico Boundary, over level prairie land, firm sandy loam soil, no undergrowth, on west side of boundary fence.

4.89 Wire fence, extends west from boundary fence.

17.59 Fall 5 lks. E. of mile corner No. 131 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x4x6 ins. above ground firmly set, marked T E X on E., N M 131 M on W. and 10 on S. face; witnessed by traces of pits 24x24x6 ins. E. and W. thereof.

36.10 Fall 5 lks. E. of the C.C. 1st standard parallel north between T. 4 and 5 N., R. 37 E., N.M., on the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 10x4x5 ins. above ground firmly set, marked C C on W., with 6 grooves on S. and 6 grooves on N. face; and witnessed by pits 24x24x10 ins. N., S., and W. thereof.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

- 38.16 Wire fence, extends west from boundary fence.
- 57.59 Fall 6 lks. E. of mile corner No. 130 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 8x2x3 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ on W., and 10 on S. face; witnessed by pits 24x24x6 ins. E. and W. thereof.
- 78.10 Wire fence extends west from boundary fence.
79.00 Opposite point of observation on random line.
Meridian observation of the sun for time at temporary mile corner No. 179 plus 79.00 chs. on random line, May 23, 1911.
Equation of time: -3m 31s
- | Watch times of transit. | | | |
|-----------------------------|----|----|---------|
| | h | m | s |
| Sun's W. limb | 11 | 46 | 46 a.m. |
| Sun's center | 11 | 47 | 53 |
| Sun's E. limb | 11 | 49 | 00 |
| Watch time of apparent noon | 11 | 47 | 53 |
| L.M.T. of apparent noon | 11 | 56 | 29 |
| Watch slow of L.M.T. | | 8m | 36s |
-
- Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point
- By 1st set, 79.995 chs.,
- By 2nd set, 80.005 chs; the mean of which is
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 180 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 180 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post, 5 ft. dist; raise a mound of earth 6 ft. base, 2 ft. high, S. of corner.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Grains.

The boundary fence is 64 links east of the corner.

This corner is 6.5 links east of the position of the temporary corner on the random line.

Land, level.

Soil, firm sandy loam, 1st rate.

No undergrowth.

181st Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, ascending over gently rolling land, firm sandy loam soil, no undergrowth, on west side of boundary fence.

.50 The SE. corner of cultivated land; thence along the E. side of the same.

17.60 Fall 7 lks. E. of mile corner No. 130, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 11x4x5 ins. above ground, firmly set, marked T E X on E., N M 130 M on W., and 10 on S. face; witnessed by traces of pits 18x18x6 ins. E. and W. thereof.

36.19 Fall 7 lks. E. of the C.C. of secs. 29 and 32, T. 5 N. R., 37 E. N.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x5x6 ins. above ground, firmly set, marked C C on W., with 1 groove on S., and 5 grooves on N. face; and witnessed by pits 18x18x8 ins. N., S. and W. thereof.

37.00 Top of ascent, bears E. and W; thence over level land.

57.59 Fall 6 lks. E. of mile corner No. 129½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x3x4 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face; witnessed by traces of pits 18x18x6 ins. E. and W. thereof.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

64.00 The NE. cor. of the cultivated land.

79.39 Wire fence, extends west from the boundary fence.
No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 181 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 181 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is 73 links east of the corner.
This corner is 6.8 links east of the position of the temporary corner on the random line.

Land, gently rolling and level.
Soil, firm sandy loam, 1st rate.
No undergrowth.

June 24, 1911.

June 23, 1911. Adjust temporary corners from No. 182 to No. 199 inclusive, from random to true line.

182nd Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary descending gradually over gently rolling land, firm sandy loam soil, no undergrowth, on west side of boundary fence.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
9.65	Fall 29 links W. of a wooden post 4x4x15 ins. above ground, marked 7 on SE face.
17.60	Fall 7 lks. E. of mile corner No. 129 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x4x4 ins. above ground firmly set, marked T E X on E., H M 129 M on W. and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
28.50	Limestone bluff, bears E. and W., 10 ft. high; descend.
32.50	Bottom of descent of 30 ft.; thence across level bottom land of an arroyo, course NE.
33.40	The approximate location of Clark's monument No. 7; search made in the vicinity of this point for evidences of said monument.
36.22	Fall 4 lks. E. of the C.C. of secs. 20 and 29 T. 5 N., R. 37 E., N. M., on the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 14x5x8 ins. above ground, firmly set, marked C C on W., with 2 grooves on S., and 4 grooves on N. face; and witnessed by traces of pits 18x18x6 ins., N., S. and W. thereof. Commence ascent, bears E. and W.
43.60	Top of ascent of 35 ft., bears E. and W. thence over rolling land.
57.59	Fall 6 lks. E. of mile corner No. 128 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x4x6 ins. above ground, firmly set, marked T E X on E., H M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
59.54	Wire fence, extends west from boundary fence. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and sur-

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

mounted with a brass cap, 24 ins. into the ground for the 182nd mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 182 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base 2 ft. high S. of corner.

The boundary fence is 83 links east of the corner.

This corner is 6.9 links east of the position of the temporary corner on the random line.

Land, rolling.

Soil, firm sandy loam, 1st rate.

No undergrowth.

183rd Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, descending over rolling land, firm sandy soil, no undergrowth, on west side of boundary fence.

8.50 The SE. corner of a cultivated field, thence along the E. side of the same.

9.74 Fall 37 links W. of a wooden post 4x4x10 ins. above ground, marked 18 on SE. and 19 on NE. face.

17.63 Fall 5 lks. E. of mile corner No. 128 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x6x6 ins. above ground firmly set, marked T E X on E., N M 128 M on W. and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

22.00 The NE. corner of cultivated land.

30.00 Road, bears E. and W; thence over shifting sand.

32.73 Wire fence, extends west from the boundary fence.

36.37 Fall 07 links E. of the C.C. of secs. 17 and 20, T

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

5 N., R. 37 E., N.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x3x4 ins., above ground, firmly set marked C C on W., with 3 grooves on S., and 3 grooves on N. face; and witnessed by traces of pits 18x18x6 ins. N., S. and W. thereof.

57.64

Fall 11 lks. E. of mile corner No. 127 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x6x6 ins. above ground firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

59.50

Begin descent into draw, bears E. and W.

61.20

Frio Draw, 50 links wide, course S. of E. 50 ft. below the surrounding country; ascend.

62.50

The ascent becomes very gradual.

63.40

Fall 42 links west of an iron pipe, 3 ins. in dia., 15 ins. above ground, unmarked, but said to be monument of Texas surveys.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs. the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 183 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 183 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of stone, 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high, S. of corner

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Chains.

The boundary fence is 92 links east of the corner.

This corner is 6.5 links east of the position of the temporary corner on the random line.

Land, rolling.

Soil, firm sandy loam, 1st rate.

No undergrowth.

The slopes leading into and leading out of Eric Draw were searched for evidences of Clark monument No. 7 but none were found. Eric draw no doubt is one of the breaks of Red River mentioned by Clark.

184th Mile

N. 0° 04' 55" E

On true line, Texas and New Mexico boundary, ascending gradually over almost level land, firm sandy soil, no undergrowth, on west side of boundary fence.

9.60 Fall 48 links west of a wooden post, 4x4x10 ins. above ground, marked 11 on the SE., and 8 on the NE. face.

17.69 Fall 7 links E. of mile corner No. 127 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 9x3x5 ins. above ground, firmly set, marked T E X on E., N M 127 M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof,

24.00 Dugout, bears 2.00 chs. west of line.

36.23 Fall 8 links E. of the C.C. of secs. 8 and 17, T. 5 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 9x5x3 ins. above ground, firmly set marked C C on W., with 4 grooves on S., and 2 grooves on N. face; and witnessed by pits 18x18x6 ins. N. E., and W. thereof.

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Chains.

37.69 Wire fence, extends west from the boundary fence.

57.68 Fall 8 links E. of mile corner No. 126 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x5x4 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 184 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 184 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of stone 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is 98 links east of the corner.

This corner is 5.8 links east of the position of the temporary corner on the random line.

Land, rolling.

Soil, firm sandy loam, 1st rate.

No undergrowth.

185th Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, ascending gradually over almost level land, firm sandy loam soil, no undergrowth, along west side of boundary fence.

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Chains.	
9.59	Fall 52 links west of a wooden post 4x4x12 ins. above ground, marked 30 on SE., 31 on the NE. faces.
17.62	Fall 10 lks. E. of mile corner No. 126 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 9x6x6 ins. above ground, firmly set, marked T E X on E., N M 126 M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
36.25	Fall 10 lks. E. of the C.C. of secs. 5 and 8, T. 5 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x5x6 ins. above ground, firmly set, marked C C on W., with 5 grooves on S., and 1 groove on N. face; and witnessed by pits 18x18x6 ins. N., S. and W. thereof.
37.16	Wire fence, extends west from boundary fence.
55.90	Top of ascent, bears E. and W., also a road bears E. and W. Thence over level land.
57.71	Fall 8 lks. E. of mile corner No. 125½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 11x3x4 ins. above ground firmly set, marked T E X on E., N M ½ M on W. and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
79.65	Wire fence, extends west from the boundary fence. Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; the position of the middle point By 1st set, 79.995 chs., By 2nd set, 80.005 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 1⁰3rd MERIDIAN.

Chains	
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 185 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 185 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high, S. of corner.</p> <p>The boundary fence is 58 links east of the corner.</p> <p>This corner is 4.8 links east of the position of the temporary corner on the random line.</p> <p>Land, rolling and almost level.</p> <p>Soil, firm sandy loam 1st rate.</p> <p>No undergrowth.</p>
	186th Mile
	N. 0° 04' 55" E.
	<p>On true line, Texas and New Mexico boundary, over almost level land, sandy loam soil, no undergrowth on west side of boundary fence.</p>
9.46	Road, bears E. and W.
9.50	<p>Fall 59 links W. of a wooden post 4x4x12 ins. above ground marked 31 on the SE., 42 on the NE. face.</p>
17.75	<p>Fall 7 links E. of mile corner No. 125 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 14x3x7 ins. above ground, firmly set, marked T E X on E. N M 125 M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins E. and W. thereof.</p>

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Chains.

35.86

Fall 5 links E. of the C.C. of secs. 5 and 32 T. 5 and 6 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 8x3x5 ins. above ground, firmly set, marked C.C. 37 E. on W., with 6 grooves and 5 H on S., and 6 grooves and 6 H. on N. face; and witnessed by traces of pits 18x18x6 ins. N., S. and W. thereof.

57.77

Fall 5 links E. of mile corner No. 124 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 12x3x7 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

61.00

Center of a small circular marsh, 2.00 chs. in diameter.

74.31

Wire fence, extends west from the boundary fence.
No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 186 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 186 General Land Office Reestablishment 1911, United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post, 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is 62 links east of the corner.

This corner is 3.6 links east of the position of the temporary corner on the random line.

Land, level.

Soil, firm sandy loam, 1st rate.

No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.		
	<p style="text-align: center;">187th Mile N. 0° 04' 55" E.</p>	
	<p style="text-align: center;">On true line, Texas and New Mexico boundary, over level prairie land, firm sandy loam soil, no undergrowth, on west side of boundary fence.</p>	
9.54	<p>Fall 64 links west of a wooden post, 4x4x10 ins. above ground, marked 43 on the NE. face.</p>	
17.80	<p>Fall 7 links E. of mile corner No. 124 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 12x3x4 ins. above ground, firmly set, marked T E X on E., N M 124 M on W., and 10 on S. face; witnessed by pits 28x28x10 ins. E. and W. thereof.</p>	
28.66	<p>Wire fence, extends west from the boundary fence.</p>	
29.00	<p>The SE. corner of a cultivated field; thence along the east side of field.</p>	
34.07	<p>Wire fence, extends west from boundary fence.</p>	
36.88	<p>Fall 11 lks. E. of the C.C. of secs. 29 and 32 T. 6 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x6x5 ins. above ground, firmly set, marked C C on W., with 1 groove on S., and 5 grooves on N. face; and witnessed by pits 24x24x10 ins. N. S. and W. thereof.</p>	
36.35	<p>House and windmill, 8.00 chs. west of line.</p>	
43.00	<p>Fall 64 links west of a limestone 18x6x10 ins. above ground, marked R B N W on the south face. Pertains to Texas surveys.</p>	
46.29	<p>Opposite point of observation on random line. ----- Time observation of Polaris for azimuth at temporary mile corner No. 186 plus 46.29 chs. on random line May 23, 1911.</p>	
	<p style="text-align: center;">Longitude of station 103° 02'</p>	

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Chains.Latitude of station $34^{\circ} 42'$ Declination of Polaris $88^{\circ} 49' 44.3''$

Sights on Polaris marked 24. 105 chs. north of station.

Mean time, U.C. of Polaris, Greenwich, 9 h 26.8 m

Correction for longitude -1.1 m

Local mean time U.C. of Polaris 9 h 25.7m

Watch times of observations.

	h	m	s
Telescope direct	6	42	01 p.m.
" reversed	6	44	02
" direct	6	46	44
" reversed	6	48	16
Mean watch time of observations	6 h	45 m	16 s p.m.
Watch slow of L.M.T.		8 m	36 s
Local mean time of observation	6 h	53 m	52 s p.m.
L.M.T. of obsn	6 h	53.9 m	p.m.
L.M.T. of U.C.	9 h	25.7 m	a.m.
Hour angle, W.	9 h	28.2 m	

The azimuth of Polaris corresponding to this hour angle is $0^{\circ} 51.5'$ west of the meridian. The azimuth angle therefore, to the true random line, N. $0^{\circ} 04'$ E. is $0^{\circ} 55.5'$.

Azimuth offset laid off to the east to determine random N. $0^{\circ} 04'$ E. 38.92 links. At a point 24.105 chs. north of the station of observation, the actual random line falls .75 ft. to the right of the true random, indicating an accumulated error of 98 seconds to the right in the day's run of 11 miles and 57.46 chs. The course of the random at the point of observation is therefore N. $0^{\circ} 5' 38''$ E.

57.80

Fall 7 lks. E. of mile corner No. 123 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x4x6 ins. above ground,

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Chains.	firmly set, marked T E X on E., H M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits.
63.00	The NE. corner of the cultivated land. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground, for the 187 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 187 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post $5\frac{1}{2}$ ft. dist; raise a mound of earth, 6 ft. base, 2 ft. high, S. of corner. The boundary fence is 65 links east of the corner. This corner is 3.6 links east of the position of the temporary corner on the random line. Land, level. Soil, firm sandy loam, 1st rate. No undergrowth.
17.84	<p style="text-align: center;">188th Mile N. 0° 04' 55" E.</p> <p>On true line, Texas and New Mexico boundary, over level prairie land, sandy loam soil, no undergrowth, on west side of boundary fence.</p> <p>Fall 6 lks. E. of mile corner No. 123 of the U.S. public land survey of the Texas and New Mexico bdy. line which is a limestone 12x3x6 ins. above ground, firmly set, marked T E X on E., H M 123 M on W. and 10 on S. faces, witnessed by traces of pits 28x28x6 ins. E. and W. thereof.</p>

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Chains.	
30.65	The SE. corner of a cultivated field.
35.90	Fall 7 lks. E. of the C.C. of secs. 20 and 29, T. 6 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x4x6 ins. above ground, firmly set, marked C C on W., with 2 grooves on S., and 4 grooves on N. faces; and witnessed by traces of pits 18x18x6 ins. N., S. and W. thereof.
39.58	Wire fence, extends west from boundary fence. The NE. corner of cultivated field.
57.84	Fall 05 links E. of mile corner No. 122½ of the U. S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x3x3 ins. above ground, firmly set, marked T E X on E., N M ½ M. on W. and 10 on S. face, witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
67.90	Fall 64 links W. of an iron pipe 4 ins. dia., 12 ins. above ground, marked T 1 R 1 on the SE., and T 2 R. on the NW. sides.
68.33	Wire fence, extends west from the boundary fence. The SE. corner of a cultivated field.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 188 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 188 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

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Chains.

The boundary fence is 63 links east of the corner.

This corner is 5.4 links east of the position of the temporary corner on the random line.

Land, level.

Soil, firm, sandy loam, 1st rate.

No undergrowth.

189th Mile

N. 0° 4' 55" E.

On true line, Texas and New Mexico boundary, over level prairie land, sandy loam soil, no undergrowth, on west side of boundary fence.

10.00 The NE. corner of the cultivated land.

17.86 Fall 02 links E. of mile corner No. 122 of the U. S. public land survey of the Texas and New Mexico boundary line which is a limestone 7x4x6 ins. above ground, firmly set, marked T E X on E., N M 122 M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

35.92 Fall 04 links E. of the C.C. of secs. 17 and 20 T. 6 N., R 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 12x4x6 ins. above ground, firmly set, marked C C on W., with 3 grooves on S., and 3 grooves on N. face; and witnessed by traces of pits 18x18x6 ins. N., S. and W. thereof.

52.60 A dugout 1.50 chs. west of line.

57.92 Fall 3 lks. E. of mile corner No. 121½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x4x6 ins. above ground firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

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Chains. 67.88	Fall 59 links W. of an iron pipe $1\frac{1}{2}$ ins. diameter 12 ins. above ground, marked 31-30 T 2 R 1 on the west side.
73.36	Wire fence, extends west from the boundary fence. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 189 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 189 General Land Office Reestablishment 1911, United States Boundary Commission." Dig pits 36x36x13 ins. E. and W. of post, $5\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner. The boundary fence is 59 links east of the corner. This corner is 7.0 links east of the position of the temporary corner on the random line. Land, level. Soil, firm, sandy loam. No undergrowth.

190th Mile

N. $0^{\circ} 04' 55''$ E.

On true line, Texas and New Mexico boundary, over level prairie land, sandy loam soil, no undergrowth, on west side of boundary fence.

17.90	Fall 03 lks. E. of mile corner No. 121 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 11x5x6 ins. above ground, firmly set, marked T E X on E., H M 121 M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
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RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.	
30.41	Fall 57 links W. of a granite stone 10x7x11 ins. above ground, marked N M on the W., P. on the E., T. on the E., and D S on the N. face. This is the NW. cor. of Palmer County, and SW. corner of Deaf Smith County, Texas.
35.86	Fall 01 lks. E. of the C.C. of secs. 8 and 17, T. 6 N. R. 37 E., N.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x5x4 ins. above ground, firmly set, marked C C on W., with 4 grooves on S., and 2 grooves on N. face; and witnessed by traces of pits 18x18x6 ins. N., S. and W. thereof.
57.92	Fall 02 lks. E. of mile corner No. 120½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 6x5x6 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
68.27	Wire fence, extends west from boundary fence.
68.44	Road, bears E. and W.
69.35	Wire fence, extends west from the boundary fence. Begin gradual descent into Hollene Draw. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 190 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 190 General Land Office Reestablishment

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Chains	<p>1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth, 6 ft. base, 2 ft. high, S. of corner.</p> <p>The boundary fence is 57 links east of the corner.</p> <p>This corner is 8.4 links east of the position of the temporary corner on the random line.</p> <p>Land, level and gently rolling.</p> <p>Soil, firm sandy loam, 1st rate.</p> <p>No undergrowth.</p>
	<p style="text-align: center;">191st Mile</p> <p style="text-align: center;">N. 0° 04' 55" E.</p> <p>On true line, Texas and New Mexico boundary, descending over gently rolling land, sandy loam soil, no undergrowth, on west side of boundary fence.</p> <p>12.00 Descent becomes steeper.</p> <p>17.00 Limestone bluff 10 ft. high bears NE. and SW; descend into draw.</p> <p>17.91 Fall 3 lks. E. of mile corner No. 120 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x3x12 ins. above ground, firmly set in mound of stone, marked T E X on E., N M 120 M on W., and 10 on S. face.</p> <p>22.50 Middle of flat bottom of draw, 1.00 chn. wide, course NE; ascend.</p> <p>27.00 Top of ascent, limestone bluff 20 ft. high, bears NE. and SW; thence over stony land.</p> <p>29.00 Point of spur, falls east; descend gradually.</p> <p>34.00 Limestone bluff 20 ft. high, bears NW. and SE; descend into Hollene Draw.</p> <p>35.95 Fall 4 lks. E. of the C.C. of secs. 5 and 8, T. 6 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x3x7 ins. above ground, firmly set, marked C C on W., with 5 grooves on S., and 1 groove on N. face; and witnessed by traces of pits 18x18x6</p>

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Chains.	ins. N., S. and W. thereof.
40.00	Bottom of steep descent over stony land, 50 ft. below spur, continue to descend gradually.
45.35	Dry wash in bottom of Hollene Draw, 60 links wide, ascend gradually. Hollene Draw is about 100 ft. below the general elevation of the surrounding country.
51.95	Road, bears E. and W.
56.00	Search for evidences of Clark monument No. 8.
57.95	Fall 02 lks. W. of mile corner No. 119 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 11x2x4 ins. above ground firmly set, marked T E X on E., H M $\frac{1}{2}$ M. on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
67.84	Fall 61 lks. W. of an iron pipe, 1 $\frac{1}{2}$ ins. dia., 12 ins. above ground, marked 19-18 T 2 R 1 E on the E. side. Pertains to Texas surveys.
72.00	Begin steeper rocky ascent, bears E. and W.
78.00	Top of steeper ascent of 60 ft. bears E. and W. continue to ascend.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 12 ins. into the ground for the 191 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 191 General Land Office Reestablishment 1911 United States Boundary Commission." Raise a mound of stone 5 ft. base, 2 ft. high around post: This post could not be set deeper in the ground, because of encountering solid rock. Sufficient stones were not available for a mound. The boundary fence is 59 links east of the corner.

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Chains. This corner is 9.4 links east of the position of the

temporary corner on the random line.

Land, gently rolling and broken.

Soil, sandy loam, 1st rate, and gravelly and stony
4th rate.

No undergrowth.

Without doubt Hollene Draw is one of the breaks of
Red River mentioned by Clark; and the slopes into and
out of this draw were searched for evidences of
Clark monuments but without success.

192nd Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary,
ascending over almost level land, rocky soil, no
undergrowth, on west side of the boundary fence.

6.00 Leave rocky soil, bears E. and W., thence over
firm sandy loam.

17.97 Fall 03 links W. of mile corner No. 119 of the
U.S. public land survey of the Texas and New Mexico
boundary line, which is a limestone 12x3x4 ins. above
ground, firmly set, marked T E X on E., N M 119 M. on
W., and 10 on S. face; witnessed by traces of pits,
28x28x6 ins. E. and W. thereof.

35.50 Fall 05 links W. of the C.C. of secs. 5 and 32
T. 6&7 N., R. 37 E., N. M. on the U. S. public land
survey of the Texas and New Mexico boundary line which
is a limestone 10x3x6 ins. above ground, firmly set,
marked C.C. and 37 E., on W., with 6 grooves and 6 N.
on S., and 6 grooves and 7 N., on N. face; and witnessed
by pits 18x18x6 ins., N., S. and W. thereof..

40.00 Top of ascent, thence over level prairie.

50.63 Wire fence, extends west from the boundary fence.

57.97 Fall 02 lks. W. of mile corner No. 118 $\frac{1}{2}$ of the U.S.
public land survey of the Texas and New Mexico boundary
line which is a limestone 11x4x6 ins. above ground

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

67.87

Fall 64 links west of an iron pipe $1\frac{1}{2}$ ins. dia., 12 ins. above ground, marked 18-7 R 1 T 2 on the east side. Pertains to Texas surveys.

75.59

Wire fence, extends west from the boundary fence.

79.38

Road, bears E. and W.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 192 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 192 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post $5\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is 64 links east of the corner

This corner is 10.1 links east of the position of the temporary corner on the random line.

Land, almost level and level.

Soil, rocky 4th rate and sandy loam 1st rate, no undergrowth.

Meridian observation of the sun for time at temporary mile corner No. 192 on the random line May 24, 1911.

Equation of time used -3m 26s

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Chains.	Watch times of transit			
	h	m	s	
Sun's W. limb	11	46	51	a.m.
Sun's center	11	47	58	
Sun's E. limb	11	49	05	
Watch time of apparent noon	11	47	58	
L.M.T. of apparent noon	11	56	34	
Watch slow of L.M.T.		8	36	

193rd Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, over rolling prairie land, firm sandy soil, no undergrowth, on west side of boundary fence.

17.93

Fall 10 lks. W. of mile corner No. 118 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 11x2x5 ins. above ground, firmly set, marked T E X on E., N M 118 M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

24.00

A dry rain water pond bears 20.00 chs. west.

35.54

Fall 3 lks. W. of the C.C. of secs. 29 and 32, T. 7 N., R. 37 E., N.M. of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x5x9 ins., above ground, firmly set marked C C on W., with 1 groove on S., and 5 grooves on N. face; and witnessed by pits 18x18x6 ins. N., S., and W. thereof.

40.00

Begin ascending gradually, bears E. and W.

57.93

The location of mile corner No. 117½ of the U.S. public land survey of the Texas and New Mexico boundary line indicated by traces of pits 28x28x6 ins. E. and W. of each other 5 ft. apart.

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Chains.	
67.88	Fall 61 links W. of an iron pipe, $1\frac{1}{2}$ ins. dia., 12 ins. above ground, marked 7-6 R 1 T 2 on the E. side. Pertains to Texas surveys.
76.86	Wire fence, extends west from the boundary fence. No difference between measurements of 80 chs. by two sets of chainmen.
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 193 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 193 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post, 5 $\frac{1}{2}$ ft. dist; raise mound of earth 6 ft. base, 2 ft. high E. of corner.</p> <p>The boundary fence is 60 links east of the corner.</p> <p>This corner is 10.5 links east of the position of the temporary corner on the random line.</p> <p>Land, rolling prairie.</p> <p>Soil, firm sandy loam, 1st rate.</p> <p>No undergrowth.</p>
194th Mile	
N. $0^{\circ} 04' 55''$ E.	
On true line, Texas and New Mexico boundary, ascending gradually over gently rolling land, firm sandy soil, no undergrowth on west side boundary fence.	
17.93	Fall 02 lks. W. of mile corner No. 117, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x4x4 ins. above ground

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Chains.

- firmly set, marked T E X on E., H M 117 M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
- 35.50 Fall 01 lks. E. of the C. C. of secs. 20 and 29 T. 7 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 11x4x5 ins. above ground, firmly set, marked C C on W., with 2 grooves on S., and 4 grooves on N. face; and witnessed by traces of pits 18x18x6 ins. N., S. and W. thereof.
- 36.76 Wire fence, extends west from the boundary fence.
- 40.00 Top of ascent, bears E. and W., thence over level land.
- 58.03 Fall 5 lks. W. of mile corner No. 116 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x4x9 ins. above ground, firmly set, marked T E X on E., H. M. $\frac{1}{2}$ M on W. and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
- 67.90 Fall 55 lks. W. of an iron pipe, 4 ins. dia., 12 ins. above ground, marked H M on the W., R 1 T 1 on E., S 6 on the SE., S 31 on the NE sides. Pertains to the Texas surveys.
- Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point
- By 1st set, 79.995 chs;
- By 2nd set, 80.005 chs; the mean of which is
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 194 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 194 General Land Office Reestablish-

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

ment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post $5\frac{1}{2}$ ft. dist., raise a mound of earth 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is 54 links east of the corner.

This corner is 10.8 links east of the position of the temporary corner on the random line.

Land, gently rolling.

Soil, firm sandy loam, 1st rate.

No undergrowth.

195th Mile

N. $0^{\circ} 04' 55''$ E.

On true line, Texas and New Mexico boundary, over level prairie land, firm sandy soil, no undergrowth, on west side of boundary fence.

18.06 Fall 01 lk. W. of mile corner No. 116 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 6x3x6 ins. above ground, firmly set, marked T E X on E., N M 116 M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

35.48 Fall 01 lk. W. of the C.C. of secs. 17 and 20, T. 7 N., R. 37 E., N.M. on the public land survey of the Texas and New Mexico boundary line, which is a limestone 14x3x6 ins. above ground, firmly set, marked C C on W. with 3 grooves on S., and 3 grooves on N. face; and witnessed by traces of pits 18x18x6 ins. N., S. and W. thereof.

36.00 Wire fence, extends west from the boundary fence; begin gradual descent, bears E. and W. Soil becomes gravelly.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

- 58.08 Fall 01 lk. W. of mile corner No. 115 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x4x5 ins., above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
- 67.89 Fall 48 lks. west of an ironpipe 1 $\frac{1}{2}$ ins. dia., 12 ins. above ground, marked 31-30 T 3 R 1 on the E. side. Pertains to Texas surveys.
- 75.49 Wire fence, extends west from the boundary fence. No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 195 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 195 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high, S. of corner. The boundary fence is 48 links east of the corner. This corner is 10.7 links east of the position of the temporary corner on the random line.
- Land, level and rolling prairie.
- Soil, firm sandy and gravelly loam, 1st rate.
- No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

<u>Chains.</u>	
	<p style="text-align: center;">196th Mile N. 0° 04' 55" E.</p>
	<p>On true line, Texas and New Mexico boundary, descending over gently rolling NE. slope firm gravelly and sandy soil, no undergrowth, on west side of boundary fence.</p>
10.00	Foot of descent, bears E. and W., thence over almost level land.
18.13	<p>Fall 01 lk. W. of mile corner No. 115 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 10x6x6 ins. above ground, firmly set, marked T E X on E., N M 115 M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.</p>
33.46	Wire fence, extends west from the boundary fence.
33.70	Road, bears E. and W.
34.03	Wire fence, extends west from the boundary fence.
35.50	<p>Intersect the C.C. of secs. 8 and 17, T. 7 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x3x6 ins. above ground, firmly set, marked C C on W., with 4 grooves on S., and 2 grooves on N. face; and witnessed by pits 18x18x6 ins., N. S. and W. thereof.</p>
46.00	Begin gradual ascent, bears E. and W.
58.18	<p>Intersect mile corner No. 114$\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x3x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S., face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.</p>
67.92	<p>Fall 43 links west of an iron pipe 1$\frac{1}{2}$ ins. dia. 12 ins. above ground, marked 30 on the SE., 19 on the NE., T 3 R 1 on the E. side. Pertains to the Texas surveys.</p>
72.00	<p>Wire fence, extends west from the boundary fence. Difference between measurements of 80 chs. by two sets of chainmen is 1 link; position of middle</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 196 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 196 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is 45 links east of the corner.

This corner is 10.3 links east of the position of the temporary corner on the random line.

Land, rolling and almost level.

Soil, sandy and gravelly loam 1st rate.

No undergrowth.

197th Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, ascending gradually over gently rolling land, firm gravelly and sandy soil, no undergrowth, on west side of boundary fence.

18.18

Intersect mile corner No. 114 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x4x6 ins. above ground, firmly set, marked T E X on E., N M 114 M. on W and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

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CHAINS.	
32.78	Road, bears E. and W.
33.19	Wire fence, extends west from the boundary fence.
34.45	Fall 03 lks. W. of the C.C. of secs. 5 and 8, T.7. N. R. 37 E., N.M. of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 12x3x6 ins., above ground, firmly set marked C C on W., with 5 grooves on S., and 1 groove on N. face; and witnessed by traces of pits 18x18x6 ins. N., S. and W., thereof.
58.20	Fall 02 lks. W. of mile corner No. 113 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x6x6 ins. above ground firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins., E. and W. thereof.
67.93	Fall 40 links west of an iron pipe 1 $\frac{1}{2}$ ins. dia., 12 ins. above ground, marked 19 on the SE., 18 on the NE., R 1 T 3 on the east side. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 197 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 197 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner. The boundary fence is 39 links east of the corner. This corner is 9.6 links east of the position of the temporary corner on the random line. Land, gently rolling prairie. Soil, gravelly and sandy 1st rate. No. undergrowth.

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chains.

198th Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, ascending gradually, over gently rolling prairie, firm sandy and gravelly soil, no undergrowth, on west side of the boundary fence.

18.27

Fall 02 links W. of mile corner No. 113 of the U. S. public land survey of the Texas and New Mexico boundary line which is a limestone 6x4x6 ins. above ground, firmly set, marked T E X on E., N M 113 M on W., and 10 on S. face; witnessed by pits 30x30x6 ins. E. and W. thereof.

35.36

Fall 01 lk. E. of the C. C. of secs. 5 and 32, T. 7-8 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x4x6 ins. above ground, firmly set, marked C C 37 E. on W., with 6 grooves 7 N on S., and 6 grooves 8 N., on N. face; and witnessed by pits 24x24x6 ins., N., S. and W. thereof.

35.59

Road, bears E. and W.

37.00

Enter cultivated land, extends west from the boundary fence.

39.61

Opposite point of observation on the random line.

Time observation of Polaris for azimuth at temporary mile corner No. 197 plus 39.61 chs. on the random line May 24, 1911.

Longitude of station 103° 02'

Latitude of station 34° 52'

Declination of Polaris 88° 49' 44.1"

Sights on Polaris marked 18.98 chs. to the north.

Mean time, U.C. of Polaris, Greenwich, 9h 22.9m a.m.

Correction for longitude

-1.1m

Local mean time, U.C. of Polaris

9h 21.8m a.m.

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Chains.

Watch times of observations.

	h	m	s
Telescope direct	6	43	30 p.m.
" reversed	6	44	45
" direct	6	47	17
" reversed	6	48	57
Mean watch time of observations	6 h	46 m	07 s
Watch slow of L.M.T.		8 m	36 s
Local mean time of observation	6 h	54 m	43 s p.m.
L.M.T. of obsn.	6 h	54.7m	p.m.
L.M.T. of U.C.	9 h	21.8m	a.m.
Hour angle, W.	9 h	32.9m	

The azimuth of Polaris corresponding to this hour angle is $0^{\circ} 50.2'$ west of the meridian. The angle therefore from the azimuth line to the true line N. $0^{\circ} 04' E.$ is $54.2'$.

Azimuth distance laid off to the east to determine the true random, 29.93 links. At a point 18.97 chs. northward from the point of observation, the actual random line falls .48 ft. to the right of the true random line, N. $0^{\circ} 04' E.$, indicating an accumulated error of 79 seconds in a run of 10 miles and 73.32 chs. The course of the random line at the point of observation is therefore N. $0^{\circ} 5' 19'' E.$

A steady wind prevailed all day in the same direction.

47.50

Leave cultivated land, extends west from the boundary fence.

58.36

Fall 04 links. W. of mile corner No. 112 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 14x4x6 ins. above ground, firmly set, marked T E X on E., N. M. $\frac{1}{2}$ M on W. and 10 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.

60.00

Top of ascent, bears E. and W; descend very gradually
No difference between measurements of 80.00 chs.
by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 198 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 198 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base 2 ft. high S' of corner.

The boundary fence is 36 links east of the corner.

This corner is 10.2 links east of the position of the temporary corner on the random line.

Land, gently rolling.

Soil, firm sandy and gravelly loam 1st rate.

No undergrowth.

199th Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico bdy., descending gradually over gently rolling prairie land, firm sandy loam soil, no undergrowth, on west side of boundary fence.

18.38

Fall 1 lk. west of mile corner No. 112 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 9x4x4 ins. above ground firmly set, marked T E X on E., N M 112 M on W. and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

35.33

Fall 2 lks. W. of the C.C. of secs. 29 and 32, T. 8 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x4x6 ins. above ground, firmly set, marked C C on W., with 1 groove on S., and 5 grooves

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Chains.	on N. face; and witnessed by traces of pits 18x18x6 ins. N., S. and W. thereof.
35.50	Fall 14 lks. E. of the SE. corner of wire fence, thence along E. side of wire fence.
45.00	West edge of dry pond bed, extends 20.00 chs. E. of line 10.00 chs. wide, N. and S. ascend gradually.
58.40	Fall 4 links W. of mile corner No. 111 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 14x4x5 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
67.84	Fall 31 links W. of an iron pipe 1 $\frac{1}{2}$ ins. dia., 12 ins. above ground, marked 7 on the SE., T 3 R 1 on the E., 6 on the NE. sides. Pertains to the Texas surveys.
68.30	Wire fence west of line angles to the NE.
68.37	Same wire fence extends NE. to the boundary fence.
75.68	Wire fence, extends west from the boundary fence. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 199 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 199 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post, 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner. The boundary fence is 54 links east of the corner. This corner is 11.8 links east of the position of the temporary corner on the random line.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Land, rolling.

Soil, firm sandy loam 1st rate.

No undergrowth.

June 23, 1911.

June 22, 1911. Adjust temporary corners from No. 200 to 212 from the random to the true line.

200th Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, ascending gradually over gently rolling prairie land, firm sandy loam soil, no undergrowth, on west side of boundary fence.

18.30 Fall 01 lks. W. of mile corner No. 111 of the U. S. public land survey of the Texas and New Mexico boundary line, which is a limestone 11x4x4 ins. above ground, firmly set, marked T E X on E., N M 111 M on W. and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

19.00 Top of ascent, bears E. and W; thence over nearly level land.

35.40 Fall 3 lks. W. of the C.C. of secs. 20 and 29 T. 8 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x2x5 ins. above ground, firmly set, marked C C on W., with 2 grooves on S., and 4 grooves on N. face; and witnessed by traces of pits 18x18x6 ins. N. S. and W. thereof.

35.51 Wire fence extends west from the boundary fence, thence over cultivated land, extends west from the boundary fence.

41.14 Leave cultivated land.

58.41 Intersect mile corner No. 110½ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 10x6x3 ins. above ground, firmly set, marked T E X on E., N M ½ M. on W, and 10 on S. face; witnessed by traces of pits 28x28x6

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<u>Chains.</u>	ins. E. and W. thereof.
67.80	<p>Fall 26 links W. of an iron pipe, 3 ins. dia., 18 ins. above ground, marked T 3 on the S., R 1 on the E., and T 4 on the N. sides. Pertains to the Texas surveys.</p>
75.75	<p>Enter cultivated land, extends west from the boundary fence.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 200 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 200 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post, 5¹/₂ ft. dist; raise a mound of earth, 6 ft. base, 2 ft. high S. of corner.</p> <p>The boundary fence is 26 links east of the corner.</p> <p>This corner is 13 links east of the position of the temporary corner on the random line.</p> <p>Land, gently rolling.</p> <p>Soil, firm sandy loam.</p> <p>No undergrowth .</p>
201st Mile	
N. 0° 04' 55" E.	
<p>On true line, Texas and New Mexico boundary, over level prairie land, firm sandy loam soil, no undergrowth, on west side of boundary fence.</p>	
5.52	Leave cultivated land, bears E. and W.
12.10	Wire fence, extends west from the boundary fence.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

- Chains.
18.43 Fall 4 lks. W. of mile corner No. 110 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x4x8 ins. above ground, firmly set, marked T E X on E., N M 110 M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
- 35.38 Fall 3 lks. W. of the C.C. of secs. 17 and 20, T. 8 N. R. 37 E., N.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x3x4 ins. above ground, firmly set, marked C C on W., with 3 grooves on S., and 3 grooves on N. face; and witnessed by traces of pits 18x18x6 ins. N. S. and W. thereof.
- 35.46 Wire fence, extends west from the boundary fence.
- 58.09 Wire fence, extends west from the boundary fence.
- 58.48 Fall 3 lks. W. of mile corner No. 109½ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 10x4x4 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
- 67.85 Fall 22 links W. of an iron pipe 1½ ins. dia., 12 ins. above ground, marked 31 R 1 on the SE., 30 T 4 on the NE. sides. Pertains to the Texas surveys.
- 75.44 Fall 21 links W. of fence corner, which is the end of the boundary fence heretofore running east of line; fence extends west into New Mex. At the 63.00 ch. point the line is 65 lks. W. of the SW. corner of wire fence, from which a fence extends E. into Texas and N. along line, as the boundary fence.
- Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links. Position of the middle point is
- By 1st set, 80.01 chs.
- By 2nd set, 79.99 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 201 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 201 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth, 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is 63 links east of the corner.

This corner is 13.8 links east of the position of the temporary corner on the random line.

Land, level.

Soil, firm sandy loam 1st rate.

No undergrowth.

202nd Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, over level prairie land, firm sandy loam soil, no undergrowth, on west side of boundary fence.

18.53

Fall 6 lks. W. of mile corner No. 109 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x4x5 ins. above ground, firmly set, marked T E X on E., N M 109 M on W., and 10 on S. face; witnessed by traces of pits 28x28 x6 ins. E. and W. thereof.

19.00

Begin to descend gradually, bears E. and W.

33.50

Road, from west, turns and follows the boundary fence to the N.

33.90

Wire fence, extends west from the boundary fence, enter cultivated land.

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Chains.

- 35.39 Fall 03 lks. W. of the C.C. of secs. 8 and 17, T 8 N., R. 37 E., T.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 6x3x5 ins. above ground, firmly set, marked C C on W., with 4 grooves on E., and 2 grooves on N. face; and witnessed by traces of pits 18x18x6 ins. N., S. and W. thereof.
- 41.73 Leave cultivated land, bears E. and W.
- 58.57 Fall 5 lks. W. of mile corner No. 108 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 13x13x5 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
- 67.88 Fall 13 links W. of an iron pipe 1 $\frac{1}{2}$ ins. dia., 10 ins. above ground, marked 30 on the S., R 1 T 4 on the E. and 19 on the NE sides. Pertains to the Texas surveys.
- 67.88 At this point the boundary fence offsets from a point 57 links. E. to a point 13 lks. E. of line. A wire fence extends E. into Texas from this offset.
- 76.44 Wire fence, extends west from the boundary fence. No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 202 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 202 General Land Office Reestablishment 1911 United States Boundary Commission". Dig

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Chains.

pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is 13 links east of the corner.

This corner is 14.2 links east of the position of the temporary corner on the random line.

Land, level.

Soil, firm sandy loam 1st rate.

No undergrowth.

203rd Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, descending over rolling prairie land, firm sandy loam soil, no undergrowth, on west side of boundary fence.

- 18.61 Fall 1 lke. W. of mile corner No. 108 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 11x4x6 ins. above ground, firmly set, marked T E X on E., N M 108 Mon W. and 10 on S. face; witnessed by traces of pits 28x28 x6 ins. E. and W. thereof.
- 32.42 Prairie Draw, 40 links wide, course E; ascend.
- 35.00 Wire fence, extends west from the boundary fence.
- 35.49 Fall 6 lks. E. of the C.C. of secs. 5 and 8 T 8 N.R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 11x6x6 ins. above ground, firmly set, marked C C on W., with 5 grooves on S., and 1 groove on N. face; and witnessed by traces of pits 18x18x6 ins. N., S. and W. thereof.
- 35.94 Wire fence extends west from boundary fence.
- 58.67 Intersect mile corner No. 107½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 9x3x6 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

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Chains.

76.22 Wire fence, extends west from the boundary fence.
No difference between measurements of 80.00 chs.
by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 24 ins. into the ground for
the 203 mile corner. The top of the cap is divided by
a north and south stamped line 1 inch in length
and marked "Texas" on the east, "New Mexico" on the
west thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 203 General Land Office Reestablishment
1911 United States Boundary Commission." Dig pits 36x36
x12 ins. E. and W. of post 5½ ft. dist; raise a mound
of earth 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is 06 links east of the corner.

This corner is 14.1 links east of the position of
the temporary corner on the random line.

Land, rolling prairie.

Soil, firm sandy loam, 1st rate.

No undergrowth.

Meridian observation of the sun for time at temporary
mile corner No. 203 on the random line, May 25, 1911.

Equation of time: -3^m 21^s

Watch times of transit

	h	m	s
Sun's W. limb	11	46	52 a.m.
Sun's center	11	47	59
Sun's E. limb	11	49	07
Watch time of apparent noon	11	47	59
L.M.T. of apparent noon	11	56	39
Watch slow of L.M.T.		8m	40s

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.		
	204th Mile	
	N. 0° 04' 55" E.	
	On true line, Texas and New Mexico boundary, ascending gradually over rolling prairie land, firm gravelly and sandy soil, no undergrowth, on west side of boundary fence.	
12.28	Wire fence, extends west from the boundary fence.	
18.70	Fall 1 lks. W. of mile corner No. 107 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x3x5 ins. above ground, firmly set, marked T E X on E., N M 107 M on W., and 10 on S. face; witnessed by traces of pits, 28x28x6 ins E. and W. thereof.	
24.00	Top of ascent, bears E. and W; descend gradually.	
36.05	Road, bears E. and W.	
37.28	The cap rock on the edge of the Staked Plains, bears NE. and SW; descend abruptly into ravine.	
42.00	Foot of abrupt descent, thence descend gradually.	
45.10	Foot of descent bears NE. and SW., 110 ft. below cap rock, thence over level bottom of ravine.	
47.75	Begin ascent of precipitous slope, out of ravine bears NE. and SW. Scattering scrub cedar timber on slope.	
48.68	Fall 02 lks. W. of the C.C. of secs. 5 and 32 T 8-9 N., R. 37 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x3x5 ins. above ground, firmly set, marked C.C. and 37 E. on W., with 6 grooves and 8 N. on S. and 6 grooves and 9 N. on N. face; and witnessed by traces of pits 18x18x6 ins., N.S. and W. thereof.	
58.69	Fall 2 lks. W. of mile corner No. 106½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x3x6 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face; md. stone 3 ft. base 2 ft high. of cor.	
60.90	Top of ascent, the cap rock on the edge of the Staked	

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Chains.

Plains, bears NE. and SW., continue to ascend gradually over stony land, through scattering scrub cedar timber on E. side of boundary fence.

66.22

Opposite point of observation on the random line.

Time observation of Polaris for azimuth at temporary mile corner No. 203 plus 66.22 chs. on random line, May 25, 1911.

Longitude of station $103^{\circ} 02'$

Latitude of station $34^{\circ} 58'$

Declination of Polaris $88^{\circ} 49' 43.9''$

Sights on Polaris marked 17.29 chs. to the north.

Mean time, U.C. of Polaris, Greenwich 9 h 19.0m a.m.

Correction for longitude -1.1m

Local mean time, U.C. of Polaris 9 h 17.9m a.m.

Watch times of observations

	h	m	s
Telescope direct	6	59	30 p.m.
" reversed	7	00	55
" direct	7	02	56
" reversed	7	03	59

Mean watch time of observations 7 h 01 m 50 s

Watch slow of L.M.T. 8 m 40 s

Local mean time of observation 7 h 10 m 30 s

L.M.T. of obsn 7 h 10.5m p.m.

L.M.T. of U.C. 9 h 17.9m a.m.

Hour angle, γ . 9 h 52.6m

The azimuth of Polaris corresponding to this hour angle is $0^{\circ} 44.2'$ west of the meridian. The angle therefore from the azimuth line to the true random line N. $0^{\circ} 04'$ E., is $0^{\circ} 48.2'$

Azimuth distance laid off to the east to determine the true random line, 24.24 links.

At a point 17.27 chs. north of the station of observation the actual random falls .42 ft. to the right of the true random indicating an accumulated error of seventy six seconds to the right.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

The course of the random at the point of observation is N. $0^{\circ} 05' 16''$ E. In computing the position of the random line at monument No. 9 it was assumed that the random line had a bearing of N. $0^{\circ} 05' 16''$ E. at said monument. The length of the day's run to monument 9 6 miles and 47.28 chs.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point :

By 1st set, 80.01 chs.,

By 2nd set, 79.99 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 12 ins. into the ground for the 204 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 204 General Land Office Reestablishment 1911 United States Boundary Commission." Because of encountering solid rock, this post could not be set more than 12 ins. into the ground. Pits impracticable. I raise a mound of stone 4 ft. base, 2 ft. high around corner.

The boundary fence is 01 link west of the corner.

This corner is 13.6 links east of the position of the temporary corner on the random line.

Land, rolling and broken.

Soil, firm sandy loam, 1st rate, gravelly and stony 4th rate.

No undergrowth.

Timber scattering scrub cedar.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

205th Mile

N. 0° 04' 55" E.

On true line, Texas and New Mexico boundary, ascending gradually over rolling land, stony soil through scattering scrub cedar timber, on east side of the boundary fence.

No difference between measurements of 6.89 chs. by two sets of chainmen.

6.89

To Clark monument No. 9 which is a mound of limestone partially torn down, in the form of square, 10 ft. on a side, and 2 ft. high.

The exterior stones of this mound indicate that they have been in their present position for many years, but the interior stones have been moved and rearranged recently, probably by some person searching for a marked stone.

This mound stands about 30 ft. from the cap rock, which bears at this point, N. 60° W., and S. 21° E. The breaks of the plains at this point are exactly in accordance with the delineation of the same on Clark's map No. 7. This monument is known by many persons in the locality and recognized as one of the Clark monuments marking the Texas and New Mexico boundary, and has been adopted by both Texas and U.S. surveyors.

To perpetuate the location of this monument, I construct at the center of the existing mound of stone, a concrete monument in the form of a frustum of a cone, encased in galvanized iron, the lower base 24 ins. in diameter, the upper base 18 ins. in diameter, and 30 ins. high, set 12 ins. into the ground on solid rock, in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by an N. and S. division line $1\frac{1}{2}$ ins. long, with "TEXAS" on the E., and "NEW MEXICO" on the W. thereof, and also marked, "CLARK BOUNDARY 1859 CLARK MON NO 9" in the north half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

the south half. I rebuild the stone mound around the above concrete monument in the form of a square 11 ft. on a side and 3 ft. high, with the points to the N., S., E. and W. Monument built May 25, 1911. True line to Mon 9 completed June 22, 1911.

RANDOM LINE

Clark Mon. No. 9 (204 M., plus 6.89 chs.) to Clark Mon 11 (215 M. plus 13.45 chs.)

May 26, 1911. An observation of Polaris for meridian was made at temporary mile cor. 203 plus 66.22 chs. on May 25, on which was based the course of the random line from Mon. 9. At a point 17.29 chs. northward from said point of observation I lay off the distance 23.23 links on a right angle to the east from the line defining the azimuth of Polaris 44.2' west of the true meridian, thus determining the course N. 0° 02' E. through the point of observation. The boundary fence can be seen for about 15 miles northward from monument 9 and also the approximate locations of monuments Nos. 10 and 11. The course of the random line was selected to fall as close to monuments 10 and 11 as possible. I project the above mentioned line, N. 0° 02' E. to monument No. 9. Thence I run N. 0° 02' E. on a random line from said monument, on an offset 15.5 links west, setting temporary mile corners at intervals of 80.00 chs. (on offset line) continuing the distance from Mile corner No. 204.

Temporary mile corner No. 213. End of day's run.

At this point I observe Polaris for meridian, which observation is recorded in the true line notes at corresponding point. No accumulated error in day's run; the bearing of the random line at the point of observation is therefore N. 0° 02' E.

May 26, 1911.

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<u>Chains.</u>	May 27, 1911 . I continue on random line N. 0° 02' E. Temporary mile corner No. 215 plus
11.77	Fall 34 links west of Clark monument No. 10, hereinafter described. Temporary mile corner No. 215 plus
13.45	Fall 34 links west of Clark monument No. 11, hereinafter described. The observation on Polaris made on the evening of this day at temporary mile corner No. 219 plus 71.86 chs. indicated an accumulated error of 42 seconds to the left; the bearing of the random line at monuments Nos. 10 and 11 is therefore N. 0° 01' 47" E., and the true fallings, allowing for offset and adjustment in alinement for accumulative error, is 17.9 links west. The course of the true line from monument No. 9 to No. 10 is therefore, N. 0° 02' 42" E. The course of the true line from monument No. 10 to 11 was also made N. 0° 02' 42" E.
TRUE LINE	
Clark monument No. 9 to No. 10	
June 22, 1911. True line continued from monument No. 9 on 205th Mile	
N. 0° 02' 42" E.	
On true line, Texas and New Mexico boundary, from Clark monument No. 9, measurement counting from mile corner No. 204; along boundary fence	
7.50	The cap rock at the edge of the staked plains, bears N. 60° W. and S. 21° E; descend abruptly on north slope over rocks and coarse gravel. The cap rock at this point forms a bluff 15 ft. high.
14.30	Ravine, course ENE., 130 ft. below caprock; ascend steep broken SE. slope.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 10³rd MERIDIAN.

Chains.		
18.54	<p>Fall 6 lks. E. of mile corner No. 106 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x4x8 ins. above ground, firmly set, marked T E X on E., N M 106 M on W., and 10 on S. face; witnessed by a mound of stone 3 ft. base, 1½ ft. high N. of corner.</p>	
24.95	<p>Top of ascent, steep broken east slope from a mesa west of line, the top of which is on a level with the cap rock; descend over broken NE. slope.</p>	
46.30	<p>Road, bears E. and W. at foot of descent, bears E. and W. 250 ft. below the cap rock, leave scattering timber; thence over rolling land through scattering mesquite undergrowth.</p>	
58.35	<p>Fall 3 lks. E. of mile corner No. 105½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x4x8 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face; witnessed by a mound of stone 3 ft. base 1½ ft. high N. of corner.</p>	
67.73	<p>Fall 04 links E. of an iron pipe, 1½ ins. dia., 12 ins. above ground, marked 7 on the SE., 6 on the NE., R 1 T 4 on the E side. Pertains to the Texas surveys.</p>	
	<p>Difference between measurements of 73.11 chs. by two sets of chainmen is 2 links; position of the middle point</p>	
	<p>By 1st set, 73.10 chs.,</p>	
	<p>By 2nd set, 73.12 chs., the mean of which is 73.11 chs. from</p>	Mon. No. 9
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 205 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1869 Mile</p>	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Corner No. 205 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, raise a mound of stone, 3 ft. base $1\frac{1}{2}$ ft. high around corner.

The boundary fence is 03 links west of the corner.

This corner is 17. links east of the position of the temporary corner on the offset random line.

Land, rolling and broken.

Soil, stony and gravelly 4th rate.

Timber, scattering scrub cedar. Undergrowth mesquite.

206th Mile

N. $0^{\circ} 02' 42''$ E.

On true line, Texas and New Mexico boundary, over rolling and broken land, gravelly soil, mesquite undergrowth, along boundary fence.

10.00 Dry wash 10 links wide, from the SW. turns and runs NW.

18.34 Fall 3 lks. E. of mile corner No. 105 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone $11 \times 3 \times 5$ ins. above ground, firmly set, marked T E X on E., H M 105 M on W., and 10 on S. face; witnessed by traces of pits $28 \times 28 \times 6$ ins. E. and W. thereof.

21.10 Same dry wash 15 links wide, course NE.

32.25 Same dry wash, 15 links wide, course NW.

34.27 Same dry wash, 20 links wide, course NE; ascend

36.00 Top of low spur, slopes E. from higher land west of line; descend.

58.28 Fall 3 lks. E. of witness mile corner No. 104 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone $10 \times 6 \times 6$ ins. above ground, firmly set, marked T E X on E., H M $WC\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits $28 \times 28 \times 6$ ins. E. and W. thereof.

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<u>Chains.</u>	
58.43	Dry arroyo 50 links wide, course W.NW; ascend over rolling gravelly hills.
67.80	Fall 03 links E. of an iron pine, 4 ins. dia., 10 ins. above ground, marked T 4 on the S., T 5 on the N. and R1 on the E. side. Pertains to the Texas surveys.
74.14	Dry wash, 15 links wide, course SW. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of the middle point
80.00	<p>By 1st set, 80.02 chs.,</p> <p>By 2nd set, 79.98 chs., the mean of which is</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 206 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 206 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, raise a mound of stone 3 ft. base 1½ ft. high around corner.</p> <p>The boundary fence is 03 links west of the corner.</p> <p>This corner is 18.6 links east of the position of the temporary corner on the offset random line.</p> <p>Land, rolling and broken</p> <p>Soil, clay gravel 4th rate.</p> <p>Undergrowth, scattering mesquite.</p>
207th Mile	
N. 0° 02' 42" E.	
On true line, Texas and New Mexico boundary, ascend over broken and rolling land, gravelly soil, scattering mesquite undergrowth along E. side boundary fence.	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains. 18.40	Fall 4 lks. E. of mile corner No. 104 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 8x4x8 ins. above ground firmly set, marked T E X on E., N M 104 M on W., and 10 on S. face; witnessed by a mound of stone 3 ft. base and 2 ft. high N. of cor.
22.92	Dry wash, 30 links wide, course S. SW.
40.00	Dry wash, 1.00 ch. wide, course S.SW.
53.70	" " 1.00 ch. wide, course S.SW
58.35	Fall 5 lks. E. of mile corner No. 103 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x4x8 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by a mound of stone 3 ft. base and 2 ft. high N. of corner.
67.83	Fall 05 links E. of an iron pipe 1 $\frac{1}{2}$ ins. dia., 12 ins. above ground, marked 31R 2 on the SE., 30 T 5 on the N. side. Pertains to the Texas surveys. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 207 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 207 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, raise a mound of stone 3 ft. base, 1 $\frac{1}{2}$ ft. high around corner. The boundary fence is 04 links west of the corner. This corner is 20.2 links east of the position of the temporary corner on the offset random line. Land, rolling and broken. Soil, clay gravelly, 4th rate.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Undergrowth, scattering mesquite.

Meridian observation of the sun for time at temporary mile corner No. 207 on the random line, May 26, 1911.

Equation of time $-3^m 15^s$

Watch times of transit

	h	m	s
Sun's W. limb	11	46	54 a.m.
Sun's center	11	48	02
Sun's E. limb	<u>11</u>	<u>49</u>	<u>10</u>
Watch time of apparent noon	11	48	02
L.M.T. of apparent noon	<u>11</u>	<u>56</u>	<u>45</u>
Watch slow of L.M.T.		8	43

208th Mile

N. $0^{\circ} 02' 42''$ E

On true line, Texas and New Mexico boundary, over rolling and hilly land, gravelly soil, scattered mesquite undergrowth, along E. side of boundary fence.

18.31 Fall 5 lks. E. of mile corner No. 103 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 10x8x6 ins. above ground firmly set, marked T E X on E., H.M 103 M on W., and 10 on S. face; witnessed by a mound of stone 3 ft. base 2 ft. high N. of corner.

49.13 Wire fence, extends west from the boundary fence

58.31 Fall 5 lks. E. of mile corner No. 102½ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 10x4x9 ins. above ground, firmly set, marked T E X on E., H M ½ M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

63.00 Dry wash 16 links wide, course NW.

67.85 Fall 05 links E. of an iron pipe 1½ ins. dia., 12 ins above ground marked 9 T 5 on the NE., 30 R 2 on the SE

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

sides. Pertains to the Texas surveys.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 208 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 208 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 06 links west of the corner.

This corner is 21.8 links east of the position of the temporary corner on the offset random line.

Land, rolling and hilly.

Soil, gravelly 4th rate.

Undergrowth, scattering mesquite.

209th Mile

N. $0^{\circ} 02' 42''$ E.

On true line, Texas and New Mexico boundary, over rolling and hilly land, gravel clay soil, scattering mesquite undergrowth, on east side of the boundary fence.

5.70

Dry wash, 20 links wide, course, N. of W.

18.33

Fall 6 lks. E. of mile corner No. 102 of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 12x3x6 ins. above ground, firmly set, marked T E X on E., N M 102 M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

25.00

Dry wash, course, N. of W.

58.38

Intersect mile corner No. 101 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 10x5x6 ins. above ground, firmly set marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits E. and W. thereof.

67.00

Wire fence, extends west from the boundary fence.

67.87

Set 1 02 links E. of an iron pipe, 1 $\frac{1}{2}$ ins. dia., 12 ins. above ground, marked 19 R 1 on the SE., 18 T 5 on the NE sides. Pertains to the Texas surveys.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 209 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 209 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, raise a mound of stone around corner, 3 ft. base 1 ft. high.

The boundary fence is 05 links west of the corner.

This corner is 23.5 links east of the position of the temporary corner on the offset random line.

Land, rolling and hilly.

Soil, gravelly and clay 4th rate.

Undergrowth, scattering mesquite.

210th Mile

N. 0° 02' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, clay gravel soil, scattering mesquite undergrowth, on east side of the boundary fence.

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Chains. .80		
18.38	<p>Dry wash, 25 links wide, course N. of W.</p> <p>Fall 8 lks. E. of mile corner No. 101. of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 11x6x6 ins. above ground firmly set, marked T E X on E., N M 101 M on W., and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.</p>	
49.27	<p>Fall 7 links E. of the C.C. of secs. 5 and 32 T 9-10 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x8x4 ins. above ground, firmly set, marked C C and 37E on W., with 6 grooves and 9 N on S. and 6 grooves and 10 N on N. face; and witnessed by pits 24x24x10 ins. N.S. and W. thereof.</p>	
58.40	<p>Fall 6 lks. E. of mile corner No. 100$\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 6x4x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W and 10 on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.</p>	
67.90	<p>Fall 05 links E. of an iron pipe, 1$\frac{1}{2}$ ins. dia., 12 ins above ground, marked 18 R 2 on the SE., 7 T 5 on the N. side. Pertains to the Texas surveys.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>	
80.00	<p>Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 210 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 210 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.</p> <p>The boundary fence is 05 links west of the corner.</p>	

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Chains.

This corner is 25.1 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, clay gravel, 4th rate.

Undergrowth, scattering mesquite.

211th Mile

N. 0° 02' 42" E.

On true line, Texas and New Mexico boundary, over rolling land, gravel loam soil, scattered mesquite undergrowth on east side of the boundary fence.

- 7.00 Begin descent into arroyo, bears E. and W.
- 10.75 Sandy arroyo 2.00 chs. wide, course S. of W;
ascend
- 16.25 Top of ascent bears E. and W; thence over rolling
land.
- 18.43 Fall 5 links E. of mile corner No. 100 of the U.S.
public land survey of the Texas and New Mexico boundary
line which is a sandstone 11x4x6 ins. above ground
firmly set, marked T E X on E., N M 100 M. on W., and 10
on S. face; witnessed by traces of pits 28x38x6 ins.
E. and W. thereof.
- 29.50 Begin descent, bears E. and W.
- 33.00 Dry wash, 20 links wide, course W. Ascend.
- 49.30 Fall 7 lks. E. of the C.C. of secs. 29 and 32 T 10
N., R. 37 E. N.M., on the U.S. public land survey of the
Texas and New Mexico boundary line, which is a limestone
8x8x6 ins. above ground, firmly set, marked C C on W.,
with 1 groove on S., and 5 grooves on N. face; and
witnessed by pits 24x24x10 ins. N., S. and W. thereof.
- 54.00 Top of hill bears E. and W., 30 ft. above dry wash;
thence continue over rolling land.
- 58.44 Fall 4 lks. E. of mile corner No. 99½ of the U.S.
public land survey of the Texas and New Mexico boundary
line which is a sandstone 12x4x5 ins. above ground,
firmly set, marked T E X on E., N M ½ M on W., and 10

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<u>Chains.</u>	on S. face; witnessed by traces of pits 28x28x6 ins. E. and W. thereof.
67.91	Fall 04 links E. of an iron pipe $1\frac{1}{2}$ ins. dia., 12 ins. above ground, marked 7 R 2 on the SE, 6 T 5 on the NE sides. Pertains to the Texas surveys.
74.27	Wire fence, extends west from the boundary fence. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of the middle point
80.00	By 1st set, 80.02 chs; By 2nd set 79.98 chs; the mean of which is Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 211 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 211 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound. The boundary fence is 04 links west of the corner This corner is 26.7 links east of the position of the temporary corner on the offset random line. Land, rolling and hilly. Soil, gravel loam 3rd rate. Undergrowth, scattering mesquite.
212th Mile N. 0° 02' 42" E.	
18.48	On true line, Texas and New Mexico boundary over rolling land, gravel loam soil, scattering mesquite and cactus undergrowth, on east side of boundary fence. Fall 3 links. E. of mile corner No. 99 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 10x4x3 ins. above ground.

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<u>Chains.</u>	
	firmly set, marked T E X on E., N M 99 M on W., and 10 on S. face; witnessed by pits 28x28x10 ins. E. and W. thereof.
28.76	Wire fence, extends west from the boundary fence.
49.24	Fall 5 lks. E. of the C.C. of secs. 20 and 29, T. 10 N., R. 37 E., N.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x4x6 ins. above ground, firmly set, marked C C on W., with 2 grooves on S., and 4 grooves on N. face; witnessed by pits 24x24x 10 ins. N., S. and W., thereof.
58.51	Fall 5 lks. E. of mile corner No. 98 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 11x6x7 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by pits 28x28x6 ins. E. and W. thereof.
67.92	Fall 03 links E. of an iron pipe, 4 ins. dia., 12 ins. above ground, marked T 5 on the S., R 1 on the E., and T 6 on the N. sides. Pertains to the Texas surveys.
74.00	Begin to descend, bears E. and W. Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point By 1st set, 79.995 chs; By 2nd set, 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 212 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 212 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

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Chains.

The boundary fence is 02 links west of the corner.
This corner is 28.3 links east of the position of
the temporary corner on the offset random line.

Land, rolling.

Soil, gravel loam 2nd rate.

Undergrowth, scattered mesquite and cactus.

June 22, 1911.

June 21, 1911. Adjust temporary corners from No. 213
to No. 227 inclusive from random to true line.

213th Mile

N. 0° 02' 42" E.

On true line, Texas and New Mexico boundary, descend
over rolling land, gravel loam soil, scattered mes-
quite undergrowth, on east side of the boundary fence.

18.50

Fall 3 lks. E. of mile corner No. 98, of the U.S.
public land survey of the Texas and New Mexico
boundary line, which is a sandstone 10x4x4 ins.
above ground, firmly set, marked T E X on E., N M 98
M on W., and 10 on S. face; witnessed by pits 28x28x6
ins. E. and W. thereof.

26.35

Arroyo 15 links wide, course W; ascend gradually.

49.24

Fall 3 lks. E. of the C.C. of secs. 17 and 20, T.
10 N., R. 37 E., N.M. on the U.S. public land survey
of the Texas and New Mexico boundary line, which is
a limestone 10x6x6 ins. above ground, firmly set,
marked C C on W., with 3 grooves on S., and 3 grooves
on N. face; and witnessed by pits 24x24x10 ins., N.,
S., and W. thereof.

50.98

Wire fence, extends west from the boundary fence.

58.56

Fall 1 lks. E. of mile corner No. 97½ of the U.S.
public land survey of the Texas and New Mexico boundary
line, which is a sandstone 10x4x5 ins. above ground,
firmly set, marked T E X on E., N M ½ M on W., and
10 on S. face; witnessed by pits 28x28x6 ins. E. and
W. thereof.

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Chains.

67.80

Fall 01 link E. of an iron pipe $1\frac{1}{2}$ ins. dia., 15 ins. above ground, marked 31 T 6 on the SE., and 30 E 1 on the NE. sides. Pertains to the Texas surveys.

70.00

Top of ascent, bears E. and W; descend gradually. Soil becomes sandy.

No difference between measurements of 80.00 chs. by two sets of chainmen

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 213 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 213 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 03 links west of the corner.

This corner is 29.9 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, gravel loam soil.

Undergrowth, scattered mesquite.

Time observation of Polaris for azimuth at temporary mile corner No. 213 on the random line, May 26, 1911.

Longitude of station $103^{\circ} 02'$

Latitude of station $35^{\circ} 05'$

Declination of Polaris $88^{\circ} 49' 43.7''$

Sights on Polaris marked 24.52 chs. north of station

Mean time, U.C. of Polaris, Greenwich 9h 15.0m a.m.

Correction for longitude -1.0m

Local mean time, U.C. of Polaris 9h 13.9m a.m.

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Chains.

Watch times of observations.

	h	m	s
Telescope direct	6	56	20 p.m.
" reversed	6	58	22
" direct	7	00	31
" reversed	7	01	56
Mean watch time of observations	6 h	59 m	17 s
Watch slow of L.M.T.		8 m	43 s
Local mean time of observation	7 h	08 m	00 s
L.M.T. of obsn.	7 h	08.0m	a.m.
L.M.T. of U.C.	9 h	13.9m	p.m.
Hour angle, W.	9 h	54.1m	

The azimuth of Polaris corresponding to this hour angle is $0^{\circ} 43.7'$ west of the meridian. The angle between azimuth line of Polaris and the course of the true random N. $0^{\circ} 02'$ E, is therefore $45.7'$.

Azimuth distance laid off to the east to determine the true random, N. $0^{\circ} 02'$ E., is 32.59 links.

The actual random line as run coincides with the true random thus indicating no accumulative error in alinement in the day's run of 8 miles and 73.11 chs. from Mon. No. 9.

214th Mile

N. $0^{\circ} 02' 42''$ E.

On true line, Texas and New Mexico boundary, ascend. over rolling land, sandy and gravelly soil, no undergrowth, along boundary fence.

00.75

Road, bears N. of W. and S. of E.

14.00

Top of hill 20 ft. high, bears E. and W; descend.

18.59

Fall 1 lks. E. of mile corner No. 97 of the U.S.

public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x6x7 ins. above ground, firmly set, marked T E X on E., N M 97 M on W., and 10 on S. face; witnessed by pits 28x28x10 ins. E. and W. thereof.

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Chains.	
28.00	Bottom of descent, bears E. and W. 50 ft. below top of hill, thence over clay flat, subject to overflow during rains.
49.22	Fall 65 lks. E. of the witness C.C. of secs. 8 and 17 T. 10 N., R. 37 E., N.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x6x6 ins. above ground, firmly set, marked C C on W., with 4 grooves on S., and 2 grooves on N. face; and witnessed by pits 24x24x10 ins. N., S. and W. thereof.
50.30	Arroyo, 50 links wide, course NW; ascend over rolling gravelly hills.
67.80	Fall 01 link W. of an iron pipe, 1½ ins. dia., 14 ins. above ground, marked 30 on SE, T 6 on E., 19 R. 1 on NE. Pertains to the Texas surveys.
58.55	Fall 1 lk. W. of mile corner No. 96½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 7x4x7 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face; witnessed by pits 28x28x10 ins. E. and W. thereof.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point
	By 1st set, 79.99 chs.,
	By 2nd set, 80.01 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 214 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the

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Chains.

west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 214 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. Raise a mound of stone, 3 ft. base, 2 ft. high ground corner.

This corner is under the boundary fence.

This corner is 31.6 links east of the position of the temporary corner on the offset random line.

Land, rolling, hilly and level.

Soil, sandy, gravelly and clay 3rd and 4th rate.

No undergrowth.

215th Mile

N. 0° 02' 42" E.

On true line, Texas and New Mexico boundary, over rolling and hilly land, gravelly soil, scattered mesquite undergrowth, along the boundary fence.

18.60

Intersect mile corner No. 96 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 12x4x6 ins. above ground, firmly set, marked T E X on E., N M 96 M on W., and 10 on S. face; witnessed by traces of pits E. and W. thereof.

49.33

Fall 01 lk. W. of the C.C. of secs. 5 and 8, T 10 N. R. 37 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x5x4 ins. above ground, firmly set, marked C C on W., with 5 grooves on E., and 1 groove on N. face; and witnessed by traces of pits N., S., and W. thereof.

58.67

Fall 1 lk. W. of mile corner No. 95½ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 10x5x6 ins. above ground firmly set, marked T E X on E., N M ½ M on W. and 10 on S. face; witnessed by traces of pits E. and W. thereof.

67.80

Fall 01 link W. of an iron pipe 1½ ins. dia., 12

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Chains.

ins. above ground, marked 19 on the SE¹, T 6 on the E.,
18 R 1 on NE sides. Pertains to the Texas surveys.

68.00 Land becomes level.

No difference between measurements of 80.00 chs. by
two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete flange^d at the bottom and sur-
mounted with a brass cap 24 ins. into the ground for
the 215 mile corner. The top of the cap is divided by
a north and south stamped line 1 inch in length, and
marked "Texas" on the east, "New Mexico" on the west
thereof, and also marked "Clark Boundary 1859 Mile
Corner No. 215 General Land Office Reestablishment
1911, United States Boundary Commission."

Pits impracticable, no stone available for a
mound.

The boundary fence is 01 link E. of the corner.
This corner is 33.7 links E of the temporary
corner on the offset random line.

Land, rolling and level.

Soil, gravelly 2nd rate.

Undergrowth, scattering mesquite.

216th Mile

N. 0° 02' 42" E.

On true line, Texas and New Mexico boundary, over
level prairie land, firm sandy loam soil, no under-
growth, along boundary fence.

9.25 Wire fence, extends west from the boundary fence.

No difference in measurement of 11.77 chs. by two
sets of chainmen.

11.77 To Clark's monument No. 10, which is a mound of
earth, 15 ft. in diameter, .5 ft. high, inclosed by a
barb wire fence.

To perpetuate the location of this mound I construct
at its center a concrete monument having a cubical base

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Chains.

30 ins. square, set 30 ins. into the ground, and a superstructure in the form of a frustum of a cone, encased in galvanized iron, having a lower diameter of 24 ins. an upper diameter of 18 ins., and projecting 30 ins. above ground; in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by an N. and S. division line $1\frac{1}{2}$ ins. long, with "TEXAS" on the east and "NEW MEXICO" on the west thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 10" in the north half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the south half. This monument built May 27, 1911.

TRUE LINE

Clark monuments No. 10 to 11.

N. $0^{\circ} 02' 42''$ E.

From monument No. 10 heretofore described, continuing measurement from the 215 mile corner.

13.00

The old Ft. Smith and Albuquerque road, bears E. by N. and W.S.W. Captain Whipple's road.

13.45

To Clark's monument No. 11, which is an irregular and indefinitely defined mound of earth, 15 ft. in diameter and .5 ft. high, inclosed by a barb wire fence.

To perpetuate the location of this mound I construct at its center, a concrete monument in the form of a frustum of a cone, encased in galvanized iron, the lower base 24 ins. in diameter, the upper base, 18 ins. in diameter, and 30 ins. high, set 20 ins. into the ground, in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by a N. and S. division line, $1\frac{1}{2}$ ins. long, with "TEXAS" on the E., and "NEW MEXICO" on the W. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO. 11 in the north half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the south

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Chains.

half. This monument built May 27, 1911.

These two monuments are recognized by all persons living in the vicinity as old Clark mounds, marking the Texas and New Mexico boundary. The old Fort Smith-Albuquerque road passes just south of the old mound No. 11 and its course is well and definitely defined for a considerable distance on either side of the line.

True line completed to Monuments 10 and 11, June 21, 1911.

RANDOM LINE

Clark monument No. 11 (215 M. plus 13.45 chs) to monument No. 15 (233 M. plus 28.19 chs.)

May 27, 1911. On this date the random line was projected to Clark monument No. 11, on a course N. 0° 02' E., from the south; the falling being 34 links west.

I offset the random 34 links to the east and continue

N. 0° 02' E

On random line from monument No. 11, the distance counting from Mile corner No. 215, setting temporary mile corners at intervals of 80.00 chs. The U.S. public land survey plats indicated the bearing between Mons. 11 and 15 to be N. 0° 03' E.

Temporary mile corner No. 219 plus

71.86

End of day's run. At this point I observe Polaris for meridian which observation is recorded in the true line notes at corresponding point.

Accumulated error in day's run, 42 seconds to the left, the bearing of the random line, therefore, is N. 0° 01' 18" E. at the station of observation, and N. 0° 01' 47" E. at monuments 10 and 11.

May 27, 1911.

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Chains.

May 28, 1911. Field work impracticable.

May 29, 1911. Field work impracticable.

May 30, 1911. I adjust the course of the random, and continue

N. 0° 02' E.

Temporary mile corner 223 plus

60.00 Offset random line .45 chs. to the east.

Temporary mile corner No. 228. End of day's run, sky overcast and observation of Polaris impossible. The sky remained overcast all night and until sunrise next morning.

May 30, 1911.

May 31, 1911. Continue on random line.

Temporary mile corner No. 233 plus

28.19 Fall 63 links west of Clark monument No. 15, which is described in the true line notes. No observation of Polaris practicable during the night of this day. An observation of Polaris for meridian at temporary mile corner No. 241 plus 9.01 chs, on June 2, indicated an accumulative error in alinement of 7 seconds to the right, in 21 miles and 17.15 chs. (from 219 M. plus 71.86 chs). The bearing of the random at monument No. 15 is therefore N. 0° 02' 05" E. The true falling at monument No. 15, allowing for offset and accumulative error in alinement is 104.3 links west.

The course of the true line from Clark monument No. 11 to No. 15 is therefore, N. 0° 04' 28" E., the distance between said monuments being 18 miles and 14.74 chs.

May 31, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

June 21, 1911.

TRUE LINE

Clerk monument No. 11 to No. 15.

N. 0° 04' 28" E.

On true line, from monument No. 11, distance counting from mile corner No. 215, along boundary fence.

13.71

Road, bears SW. and E. From this road, a road extends north along the west side of the boundary fence.

18.73

Fall 2 lks. W. of mile corner No. 95 of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 10x5x6 ins. above ground, firmly set, marked T E X on E., N M 95 M on W., and 10 on S. face; witnessed by traces of pits E. and W. thereof.

49.84

Fall 1 lks. W. of the C.C. of secs. 5 and 32, T. 10-11 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x4x6 ins. above ground, firmly set, marked C C 37 E on W., with 6 grooves 10 N on S., and 6 grooves 11 N., on N. face; and witnessed by traces of pits N. S. and W. thereof.

58.79

Intersect mile corner No. 94½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 11x4x5 ins. above ground, firmly set, marked T E X on E., N M 94½ M on W., and 10 on S. face; witnessed by traces of pits E. and W. thereof.

67.83

Intersect an iron pipe 1½ ins. dia., 14 ins. above ground marked 18 T 6 on the E., and 7 R 1 on the N. sides.

Pertains to the Texas surveys.

69.45

Search for evidences of Clark's monument No. 12, but without success.

76.64

The location of Clark's monument No. 12, according to his plat; make search for evidences of the same. This location of Clark's monument determined from its indicated latitude, the former location at 69.45 obs. based on its position with reference to monument 11 as shown on plat.

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Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 80.01 chs;

By 2nd set, 79.99 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 216 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 216 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 01 link E. of the corner.

This corner is 5.3 links E. of the position of the temporary corner on the random line.

Land, level and rolling.

Soil, gravelly and sandy 3rd rate.

Undergrowth, scattering mesquite.

217th Mile

N. 0° 04' 28" E.

On true line, Texas and New Mexico boundary, over level land, gravelly loam soil, no undergrowth, along boundary fence, on east side of road.

6.00

Begin gradual descent, bears E. and W.

9.23

Wire fence, extends west from the boundary fence.

18.79

Fall 1 lk. W. of mile corner No. 94 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 9x6x5 ins. above ground, firmly set, marked T E X on E., N M 94 M on W. and 10 on S. face; witnessed by traces of pits E. and W. thereof.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
18.80	Head of shallow draw, course NE; ascend. gradually.
41.00	Top of ascent, bears E. and W; descend gradually.
49.81	Fall 1 lk. W. of the C.C. of secs. 29 and 32, T.11 N. R. 37 E. N.M. on the ^{U.S.} public land survey of the Texas and New Mexico boundary line, which is a sandstone 13x4x7 ins. above ground, firmly set, marked C C on W., with 1 groove on S. and 5 grooves on N. face; and witnessed by traces of pits N., S. and W. thereof.
51.66	Wire fence, extends west from the boundary fence.
52.80	Shallow draw, 50 links wide, course NW. Same draw crossed at 18.80 chs. Thence over rolling land.
58.82	Fall 1 lk. W. of mile corner No. 93 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 10x5x7 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 10 on S. face; witnessed by traces of pits E. and W. thereof.
60.00	The same draw, 50 links wide, course from the SW to the NW.
67.84	Fall 04 links W. of an iron pipe 1 $\frac{1}{2}$ ins. dia. 14 ins. above ground marked 7 on the SE., 6 on the NE, T 6 R 1 on the E. sides. Pertains to the Texas surveys. Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of the middle point By 1st set, 79.985 chs., By 2nd set, 80.015 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 217 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 217 General Land Office Reestablishment 1911 United States Boundary Commission." Pits

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 1⁰3rd MERIDIAN.Chains.

impracticable, no stone available for a mound.

The boundary fence is 03 links E. of the corner.
This corner is 11.8 links east of the position of
the temporary corner on the random line.

Land, level and rolling.

Soil, gravelly loam 2nd rate

No undergrowth.

218th Mile

N. 0° 04' 28" E.

On true line, Texas and New Mexico boundary, over
rolling land, gravelly soil, no undergrowth, along
west side of the boundary fence, and east side of road.

8.00 To bend in the same draw noted in last mile, 1.00
ch. wide, course from S.SW to NW. An arroyo 50 links
wide from the SE., joins the draw at this point.
Ascend gradually.

18.83 Fall 3 lks. W. of mile corner No. 93 of the U.S.
public land survey of the Texas and New Mexico
boundary line, which is a limestone 8x7x8 ins. above
ground, firmly set, marked T E X on E., N M 93 M on W.
and 10 on S. face; witnessed by traces of pits E. and
W. thereof.

49.84 Fall 2 lks. W. of the C.C* of secs. 20 and 29, T
11 N., R. 37 E., N.M., on the U.S. public land survey
of the Texas and New Mexico boundary line, which is
a limestone 9x4x5 ins. above ground, firmly set,
marked C C on W., with 2 grooves on S. and 4 grooves
on N. face; and witnessed by traces of pits N., S.
and W. thereof.

56.00 Top of low hill bears E. and W; descend.

58.84 Fall 4 lks. W. of mile corner No. 92½ of the U.S.
public land survey of the Texas and New Mexico
boundary line, which is a sandstone 8x8x5 ins. above
ground, firmly set, marked T E X on E., N M ½ M on

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Chains.

W. and 10 on S. face; witnessed by traces of pits E. and W. thereof.

67.82 Fall 02 links W. of an iron pipe, 4 ins. dia., 12 ins. above ground, marked T 6 on the SE., R 1 on the E., T 7 on the N. sides.

67.90 Bottom of descent, bears E. and W; ascend.
No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 218 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 218 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 01 link east of the corner. This corner is 18.6 links east of the position of the temporary corner on the random line.

Land, rolling.

Soil, gravelly 2nd rate.

No undergrowth.

219th Mile

N. 0° 04' 28" E.

On true line, Texas and New Mexico boundary, ascend over rolling land, sandy and gravelly loam soil, no undergrowth, along boundary fence on east side of road.

18.85 Fall 4 lks. W. of mile corner No. 92 of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 11x5x6 ins. above ground, firmly set, marked T E X on E. N M 92 Mon W and 10 on S. face; witnessed by traces of pits E. and W. thereof.

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<u>Chains.</u>	
28.00	Top of hill; bears E. and W. 100 ft. above the surrounding country. Soil becomes loose sand.
31.00	Begin descent, bears E. and W.
49.38	Telephone line, from the W., turns N* along the boundary fence.
49.90	Fall 1 lk. W. of the C.C. of secs. 17 and 20 T 11 N. R. 37 E, N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sand stone 12x5x7 ins. above ground, firmly set, marked C C on W., with 3 grooves on S., and 3 grooves on N. face; and witnessed by traces of pits N. S. and W. thereof.
58.88	Fall 5 lks. W. of mile corner No. 91 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x6x8 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 10 on S. face; witnessed by traces of pits E. and W. thereof.
60.00	Sand soil becomes shifting; descent becomes very gradual.
67.83	Fall 04 links W. of an iron pipe, 2 ins. dia., 10 ins. above ground, marked 31 on the SE., 30 on the NE., T 7 R 1 on the E. sides. Pertains to the Texas surveys.
71.25	The post office of Rock Island, N.M. bears west 60 links dist.
76.35	Store, bears W. 65 links dist.
76.85	Store, bears E. 130 links dist.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 219 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile corner No. 219 General Land Office Reestablishment

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Chains.

1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 01 link west of the corner.

This corner is 25.7 links E. of the position of the temporary corner on the random line.

Land, rolling and hilly.

Soil, sandy and gravelly loam and sand 4th rate.

No undergrowth.

220th Mile

N. 0° 04' 28" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sand soil, no undergrowth, on east side of road, along the boundary fence.

- .50 House, bears 2.50 chs. E. of line.
- 2.60 Road, extends E. from road W. of line.
- 4.90 Glen Rio, Station, Texas, bears 15 links E. of line.
- 5.36 Single tract railroad of Chicago Rock Island and Gulf R.R., course N. 81° 55' E., S. 81° 55' W.
- 5.53 Fall 02 links E. of state line post, which is of wood 8 ins. square and 8 ft. high, marked New Mexico on the SW., and Texas on the SE. face. Ascend over shifting sand.
- 6.00 Telegraph line, bears N. 81° 55' E. and S. 81° 55' W.
- 9.00 Low sand ridge, bears E. and W; descend.
- 10.00 Wire fence, extends west from the boundary fence.
- 18.90 Fall 3 lks. W. of mile corner No. 91 of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 8x2x7 ins. above ground, firmly set, marked T E X on E. N M 91 M on W., and 10 on S. face.
- 49.83 Intersect the C.C. of secs. 8 and 17, T. 11 N.R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone

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Chains.

10x4x7 ins. above ground, firmly set, marked C C on W. with 4 grooves on S. and 2 grooves on N. face;

50.50 Bottom of descent of 50 ft. from sand ridge, bears E. and W. thence over level firm sandy land.

58.90 Fall 1 lk. E. of mile corner No. 90 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 10x4x4 ins. above ground firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by pits 30x30x6 ins., E. and W. thereof.

67.82 Fall 01 link W. of an iron pipe, 2 ins. dia., 8 ins. above ground, marked 30 T 7 on the SE., 19 R 1 on the NE. sides.

Pertains to the Texas surveys.

69.83 Road, extends east from road west of line.

71.86 Opposite the point of observation on the random line.

Time observation of Polaris for azimuth at temporary mile corner. No. 219 plus 71.86 chs. on random line, May 27, 1911.

Longitude of station 103° 02'

Latitude of station 35° 11'

Declination of Polaris 88° 49' 43.5"

Sights on Polaris marked 14.10 chs. north of station.

Mean time, U.C. of Polaris, Greenwich 9h 11.1m a.m.

Correction for longitude -1.1m

Local mean time, U.C. of Polaris 9h 10.0m

Watch times of observations.

	h	m	s
Telescope direct	6	52	19 p.m.
" reversed	6	54	08
" direct	6	55	54
" reversed	6	57	12

Mean watch time of observations 6 h 54 m 53 s

Watch slow of L.M.T. 8 m 43 s

Local mean time of observation 7 h 03 m 36 s

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Chains.

L.M.T. of obsn. 7 h 03.6m p.m.
 L.M.T. of U.C. 9 h 10.0m a.m.
 Hour angle, W. 9 h 53.6m

The azimuth of Polaris corresponding to this hour angle is $0^{\circ} 44.0'$ west of the meridian. The angle therefore between the azimuth line and the course of the true random line N. $0^{\circ} 02'$ E., is $0^{\circ} 46.0'$. Offset distance laid off to determine the true random line 18.87 links east. At a point 14.11 chs. north of the station of observation the actual random line falls .19 feet to the left of the true random, N. $0^{\circ} 02'$ E., indicating an accumulated error of 42 seconds to the left, in the day's run of 6 miles and 71.86 chs. The course of the random line at the point of observation is therefore N. $0^{\circ} 1' 18''$ E.

 No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 220 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 220 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 01 link west of the corner.

This corner is 32.7 links east of the position of the temporary corner on the random line.

Land, rolling and hilly.

Soil, sand 4th rate.

No undergrowth.

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Chains.

221st Mile

N. $0^{\circ} 04' 28''$ E.

On true line, Texas and New Mexico boundary, over level land, sandy soil, no undergrowth, along boundary fence, on east side of road.

10.28

Wire fence, extends west from the boundary fence. A wire fence extends north from E. and W. fence, at a distance of 90 links from line.

18.92

Fall 2 lks. E. of mile corner No. 90, of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone, 6x6x5 ins. above ground, firmly set, marked T E X on E., H M 90 M on W., and 10 on S. face; witnessed by pits 30x30x6 ins. E. and W. thereof.

37.80

Fall 94 links E. of the NE. corner of the N. and S. fence, west of the boundary fence, which extends west into New Mexico.

49.82

Fall 1 lk. W. of the C.C. of secs. 5 and 8, T. 11 N. R. 37 E., N.M., on the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 14x4x7 ins. above ground, firmly set, marked C C on W., with 5 grooves on S., and 1 groove on N. face; and witnessed by pits 24x24x10 ins., N., S. and W. thereof.

50.00

Begin to ascend gradually.

58.94

Fall 2 lks. E. of mile corner No. 89 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 13x3x7 ins. above ground, firmly set, marked T E X on E., H M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by pits 30x30x6 ins. E. and W. thereof.

60.00

Top of ascent, bears E. and W; thence over rolling land.

67.82

Fall 02 links E. of an iron pipe, 2 ins. dia., 8 ins. above ground, marked 19 on the SE., 18 on the NE., T 7 R 1 on the E. side. Pertains to the Texas surveys.

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Chains. No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 221 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 221 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 02 links west of the corner.

This corner is 38.5 links east of the position of the temporary corner on the random line.

Land, level and rolling

Soil, sandy 3rd rate.

No undergrowth.

222nd Mile

N. 0° 04' 28" E.

On true line, Texas and New Mexico boundary, over rolling land, sandy soil, no undergrowth, along boundary fence, on east side of road.

18.94 Fall 3 lks. E. of mile corner No. 89 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 12x4x8 ins. above ground, firmly set, marked T E X on E., N M 89 M on W., and 10 on S. face; witnessed by pits 30x30x6 ins. E. and W. thereof.

25.30 At this point the boundary fence deflects to the N.NE. from line.

26.00 Begin descent into Trujillo Arroyo, road W. of line crosses and extends to the N.NE.

50.14 Fall 5 lks. E. of the C.C. of secs. 5 and 32, T. 11-12 N., R. 37 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
51.00	<p>a sandstone 10x4x8 ins. above ground firmly set, marked C C and 37 E on W., with 6 grooves and 11 N on S., and 6 grooves and 12 N. on N. face; and witnessed by pits 24x24x8 ins. N., S. and W. thereof.</p> <p>Dry wash, 6 links wide, course from S. SE to N; thence along E. side of the same.</p>
57.00	<p>Junction of dry washes; one from S. 30 links wide, one from S. SE 10 links wide, course N. NW from junction.</p>
58.98	<p>Fall 3 links E. of mile corner No. 88$\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 11x4x10 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by a mound of stone 3 ft. base 2 ft. high N. of corner.</p>
66.00	<p>Right bank of Trujillo Arroyo, bears NE. and SW.</p>
66.50	<p>Trujillo Arroyo, course NE., flows water only during rains, or melting of snow. This is Cañada de Truxillo mentioned by Clark.</p>
67.00	<p>Left bank, bears NE. and SW; ascend.</p>
72.00	<p>Top of ascent, low hill, bears E. and W; descend.</p>
76.60	<p>Left bank of Trujillo Arroyo, bears W. of N. and E. of S.</p>
77.50	<p>Middle of arroyo, course W. of N.</p>
78.40	<p>Right bank of arroyo, bears W. of N. and E. of S. A sandstone bluff 20 ft. high extends along the right bank for a short distance on either side of line.</p>
80.00	<p>No difference between measurements of 80.00 chs. by two sets of chainmen</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 15 ins. into solid rock for the 222 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 222 General Land Office Reestablish-</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

ment 1911 United States Boundary Commission." This corner was cemented in place. A mound of stone 3 ft. base, $1\frac{1}{2}$ ft. high around corner.

From the corner the face of a sandstone ledge, marked X B C bears S. $23^{\circ} 39'$ E. 2.88 chs. dist.

This corner is 44.2 links east of the position of the temporary corner on the random line.

Land, rolling and broken.

Soil, sandy 4th rate.

No undergrowth.

The slope into Trujillo Arroyo was searched for evidences of Clark's monument No. 13, but without success.

223rd Mile

N. $0^{\circ} 04' 28''$ E.

On true line, Texas and New Mexico boundary, ascending over broken land, sandy soil, no undergrowth.

5.10 Road, bears NW. and SE. This road is the same that has been following boundary fence.

5.30 The boundary fence, from the SE., turns and extends N. at a point 29 links west of line, thence along east side of same.

6.00 Top of ascent, bears E. and W; descend NW. slope.

14.45 Right bank of Trujillo Arroyo, bears N. of E. and S. of W.

14.82 Middle of Trujillo Arroyo, course N. of E.

15.20 Left bank of arroyo bears N. of E. and S. of W; ascend sandstone bluff 20 ft. high, bears E. and W.

16.00 Top of bluff bears E. and W; ascend broken gravelly SE. slope.

18.97 Fall 6 lks. E. of mile corner No. 88 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a cross on a sandstone ledge, marked

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<u>Chains.</u>	T E X on E., N M 88 M on W., and 1910 on S. thereof, witnessed by a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high N. of corner.
19.00	Top of ascent; thence along broken rocky and gravelly E. slope forming the left bank of Trujillo Arroyo.
32.30	Fall 35 links E. of angle corner in boundary fence, from which it extends NE.
32.65	The boundary fence, bears NE. and SW.
41.00	Arroyo, 50 links wide, 50 ft. deep, course SE.
44.16	The location of Clark monument No. 13, according to his plat, make search for evidences of the same but without success.
48.06	The boundary fence, bears NW. and SE.
48.44	Fall 38 links E. of angle corner in boundary fence, from which it extends N.
50.28	Fall 7 links E. of the C.C. of secs. 29 and 32 T 12 N. R. 37 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x4x10 ins. above ground, firmly set, marked C C on W., with 1 groove on S., and 5 grooves on N. face; and witnessed by pits 24x24x6 ins. N., S. and W. thereof.
51.00	Thence over rolling land.
58.90	Fall 7 links E. of mile corner No. 87 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x4x5 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 10 on S. face; witnessed by pits 30x30x10 ins. E. and W. thereof.
67.79	Fall 41 links E. of an iron pipe, 2 ins. dia., 8 ins. above ground, marked 7 on the SE., 6 on the NE., and T 7 R 1 on the E. sides. Pertains to the Texas surveys.
79.00	Begin descent of NE. slope into Trujillo Arroyo. No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.		
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 223 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 223 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.</p> <p>The boundary fence is 43 links west of the corner. This corner is 49.9 links east of the position of the temporary corner on the random line.</p> <p>Land, broken and rolling.</p> <p>Soil, gravelly and sandy, 4th rate.</p> <p>No undergrowth.</p>	
224th Mile		
N. 0° 04' 28" E.		
	<p>On true line, Texas and New Mexico boundary, descending over NE. slope, gravelly soil, no undergrowth, along the east side of the boundary fence.</p>	
8.72	<p>Fd 1 43 links E. of angle corner of boundary fence from which it extends NW. around bend in Trujillo Arroyo.</p>	
13.00	<p>Left bank of Trujillo Arroyo, bears NW. and SE.</p>	
13.50	<p>Middle of Trujillo Arroyo, course NW.</p>	
14.00	<p>Right bank of arroyo, bears NW and SE ; ascend SW. slope</p>	
20.00	<p>Top of ascent, 40 ft. above arroyo, bears NE and SW; is NW slope from higher land east of line .Descend.</p>	
24.00	<p>At this point the arroyo is 12.00 chs. west of line and turns to an NE course..</p>	
32.20	<p>Right bank of Trujillo Arroyo, bears E, NE and</p>	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
	W.S.W.
32.41	Middle of arroyo, course E.NE.
32.62	Left bank of arroyo, a sandstone bluff bears E.NE and W.S.W., and extends to bend of arroyo west of line and several chains to the east. Ascend.
35.00	Top of bluff 40 ft. high, bears NE and S. of W.; ascend over rolling gravelly and sandy land, with a general slope to the E.
38.20	Fall 48 links E. of angle corner of boundary fence, from W., extends N.
40.00	Opposite point of observation on random line. ----- Meridian observation of the sun for time at temporary mile corner No. 223 plus 40.00 chs. on the random line, May 30, 1911. Equation of time - 3m 47s
	Watch times of transit
	h m s
	Sun's W. limb 11 47 22 a.m.
	Sun's center 11 48 29
	Sun's E. limb <u>11 49 36</u>
	Watch time of apparent noon 11 48 29
	L.M.T. of apparent noon <u>11 57 13</u>
	Watch slow of L.M.T. 8m 44s

50.20	Fall 10 lks. E. of the C.C. of secs. 20 and 29, T. 12 N., R. 37 E., N.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 6x4x6 ins. above ground, firmly set, marked C C on W., with 2 grooves on S., and 4 grooves on N. face; and witnessed by pits 24x24x10 ins. N. S., and W. thereof.
58.90	Fall 10 lks. E. of mile corner No. 86½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x8x4 ins. above ground firmly set, marked T E X on E., N M ½ M on W. and 10 on S. face; witnessed by pits 30x30x10 ins. E. and W.

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<u>Chains.</u>	thereof.
67.90	Fall 49 links E. of an iron pipe, 4 ins. dia., 20
	ins., above ground marked T 8 on W., T 7 on E., R. 1 on
	W. sides . Pertains to Texas surveys.
	Difference between measurements of 80.00 chs. by
	two sets of chainmen is 2 links; position of the middle
	point
	By 1st set, 79.99 chs;
	By 2nd set, 80.01 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia.,
	filled with concrete, flanged at the bottom and sur-
	mounted with a brass cap, 24 ins. into the ground for
	the 224 mile corner. The top of the cap is divided by
	a north and south stamped line 1 inch in length, and
	marked "Texas" on the east, "New Mexico" on the west
	thereof, and also marked, "Clark Boundary 1859 Mile
	Corner No. 224 General Land Office Reestablishment
	1911 United States Boundary Commission." Dig pits 36x36
	x12 ins. E. and W. of post 5½ ft. dist.; raise a mound
	of earth 6 ft. base, 2 ft. high S of corner.
	The boundary fence is 50 links west of the corner.
	This corner is 10.7 links east of the position of
	the temporary corner on the offset random line.
	Land, rolling and broken.
	Soil, gravelly 4th rate.
	No undergrowth.

225th Mile

N. 0° 04' 28" E.

On true line, Texas and New Mexico boundary, ascend over rolling land, gravelly and sandy loam soil, no undergrowth, on east side of the boundary fence.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
15.00	Top of rocky hill 50 ft. above the general elevation of the surrounding country, bears E. and W; descend.
18.95	Fall 12 lks. E. of mile corner No. 86, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x5x12 ins. above ground, firmly set, marked T E X on E., N M 86 M on W., and 10 on S. face; witnessed by traces of pits E. and W. thereof.
49.00	Head of draw, course E., 50 ft. below rocky hill, ascend.
50.20	Fall 13 lks. E. of the C.C. of secs. 17 and 20, T 12. N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 10x5x5 ins. above ground, firmly set, marked C C on W., with 3 grooves on S. and 3 grooves on N. face; and witnessed by pits 24x24x6 ins. N., E. and W. thereof.
50.40	Wire fence extends E. from the boundary fence.
58.93	Fall 14 links E. of mile corner No. 85 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x6x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by pits 24x24x10 ins. E. and W. thereof.
77.44	<p>The location of Clark monument No. 14, according to his plat, no evidence found of his monument.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of the middle point</p> <p>By 1st set 80.02 chs;</p> <p>By 2nd set, 79.98 chs; the mean of which is</p>

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Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 225 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 225 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 65 links west of the corner.

This corner is 16.3 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, gravelly and sandy loam 2nd rate.

No undergrowth.

226th Mile

N. 0° 04' 28" E.

On true line, Texas and New Mexico boundary, ascend over rolling land, sandy soil, no undergrowth on east side of boundary fence.

18.94

Fall 14 lls. E. of mile corner No 85 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 14x4x7 ins. above ground, firmly set, marked T E X on E., N M 85 M on W., and 10 on S. face; witnessed by pits 30x30x6 ins. E. and W. thereof.

19.00

Top of ascent 50 ft. above head of draw, bears E. and W. thence over rolling land. From this point northward, the line passes over what might be termed a broad ridge, bearing generally E. and W. and forming the water shed between the Trujillo Arroyo and the Canadian River. This ridge is about 250 ft. above the Trujillo Arroyo. Clark states that monument No. 14 was on a ridge north of Cañada de Trujillo; and

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Chains.

the above ridge, and all high points between it and the Trujillo Arroyo were searched for evidence of said monument, but without success.

32.00

Enter short scattering mesquite undergrowth, bears E. and W.

50.30

Fall 14 lks. E. of the C.C. of secs. 8 and 17, T 12 N. R. 37 E., N.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x3x5 ins. above ground, firmly set, marked C C on W., with 4 grooves on S. and 2 grooves on N. face; and witnessed by pits 24x24x6 ins. N., S. and W. thereof.

59.00

Fall 14 links E. of mile corner No. 84 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 8x5x6 ins. above ground, firmly set, marked T E X on E., H M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by pits 30x30x6 ins. E. and W. thereof.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 226 mile corner. The top of the cap is divided by a north and south stepped line, 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 226 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 65 links west of the corner.

This corner is 21.9 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, sandy 3rd rate.

No undergrowth.

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Chains.

227th Mile

N. 0° 04' 28" E.

On true line, Texas and New Mexico boundary, over gently rolling land, sandy soil, short scattering mesquite undergrowth, on east side of boundary fence.

18.98

Fall 15 lks. E. of mile corner No. 84 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 10x6x6 ins. above ground, firmly set marked T E X on E., N M 84 M on W., and 10 on S. face; witnessed by pits 30x30x6 ins. E. and W. thereof.

50.29

Fall 16 lks. E. of the C.C. of secs. 5 and 8 T 12 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x8x4 ins. above ground, firmly set, marked C C on W., with 5 grooves on S. and 1 groove on N. face; and witnessed by pits 24x24x10 ins. N.S. and W. thereof.

59.00

Fall 17 lks. E. of mile corner No. 85½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x4x7 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face; witnessed by pits 30x30x6 ins. E. and W. thereof.

64.00

Begin gradual ascent, bears E. and W.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs;

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 227 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof and also marked "Clerk Boundary 1859 Mile Corner No. 227 General Land Office Reestablishment 1911

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Chains.	United States Boundary Commission. "Fitsimpracticable, no stone available for a mound. The boundary fence is 27 links west of the corner. This corner is 27.6 links east of the position of the temporary corner on the offset random line. Land, rolling. Soil, sandy 3rd rate. Undergrowth, short scattering mesquite. June 21, 1911
June 20, 1911. Adjust temporary corners from No. 228 to No. 235 from random to true line.	
228th Mile N. 0° 04' 28" E.	
8.57	Wire fence extends west from the boundary fence.
10.00	Top of ascent, bears E. and W; thence over level land.
19.02	Fall 16 lks. E. of mile corner No. 83, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 10x5x7 ins. above ground, firmly set, marked T E X on E., H M 83 M on W. end 10 on S' face; witnessed by pits 30x30x6 ins. E. and W. thereof.
40.00	Cross to W. side of boundary fence.
46:31	Intersect sandstone 12x4x12 ins. above ground marked H LINE QUAY CO SD on the W. face.
46.54	Fall 14 lks. E. of the C.C. of 3rd Standard Parallel N. T. 12-13 N. R. 37 E., H.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x6x9 ins. above ground firmly set marked C C and 37 E on W., 12 N. on S. and 6 grooves S C 13 N on N. face; and witnessed by pits 24x24x10 ins. N., and W. thereof.

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Chains.

59.02 Fall 15 lks. E. of mile corner No. 82 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 12x4x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by pits 30x30x6 ins. E. and W. thereof.

64.00 Old road, bears E. and W; begin descent of about 500 ft. into Canadian river bears E. and W.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 228 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 228 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 20 links east of the corner.

This corner is 33.2 links east of the position of the temporary corner on the offset random line.

Land, almost level.

Soil, sandy 3rd rate.

Undergrowth, short scattering mesquite.

229th Mile

N. 0° 04' 28" E.

On true line, Texas and New Mexico boundary, descending gradually over almost level land, sandy soil, scattering mesquite undergrowth, on west side of boundary fence.

3.00 Begin steeper descent of rolling and broken north slope into the Canadian river, bears E. and W.

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Chains.
19.10

Fall 15 lks. E. of mile corner No. 82 of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 9x4x8 ins. above ground, firmly set, marked T E X on E., N M 82 M on W., and 10 on S. face; witnessed by pits 30x30x10 ins. E. and W. thereof.

46.88

Fall 144 links E. of the C.C. of secs. 29 and 32 T. 13 N. R. 37 E., N.M. on the Texas and New Mexico boundary line, which is a sandstone 8x5x12 ins. above ground firmly set, marked with 1 groove on S. and 5 grooves on N. face.

49.00

Dry sandy arroyo, 30 links wide, from SE., turns and extends north on west side of line.

57.65

Same arroyo turns to the NW. from line; ascend over gravelly and rocky land.

70.00

Top of ascent, low spur sloping west from higher land east of line; descend.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs;

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 229 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 229 General Land Office Reestablishment 1911 United States Boundary Commission". Raise a mound of stone 2 ft. base, 1½ ft. high around corner. Pits impracticable, no stone available for a mound.

The boundary fence is 05 links east of the corner.

This corner is 38.8 links east of the position of the temporary corner on the offset random line.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
	<p>Land, rolling and hilly.</p> <p>Soil, sandy and gravelly, 3rd rate.</p> <p>Undergrowth, scattering mesquite.</p>
	<p>230th Mile</p> <p>N. 0° 04' 28" E.</p> <p>On true line, Texas and New Mexico boundary, descend over NW. slope, gravelly and rocky soil, scattering mesquite undergrowth, on W. side bdy. fence.</p>
8.40	<p>Same sandy arroyo noted in last mile, 30 links wide, course NE; ascend.</p>
19.20	<p>Fall 14 lks. E. of mile corner No. 81 of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 6x6x5 ins. above ground, firmly set, marked T E X on E., N M 8 1/2 M on W., and 10 on S. face; witnessed by pits 30x30x6 ins. E. and W. thereof.</p>
20.00	<p>Top of ascent, a low spur sloping E. from higher land west of line; descend NE. slope, leave rocky soil.</p>
40.00	<p>Cross to the east side of the boundary fence, descent becomes very gradual.</p>
46.80	<p>Fall 139 lks. E. of the C.C. of secs. 20 and 29 T. 13 N.R. 37 E. N.M., on the Texas and New Mexico boundary line, which is a sandstone 14x4x9 ins. above ground, firmly set, marked C C on W., with 2 grooves on S., and 4 grooves on N. face; The "breaks" of the Canadian river commence 2.00 chs. west of this point, and extend in westerly and northwesterly direction.</p>
50.20	<p>Fall 04 lks. W. of witness mile corner No. 80 1/2 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x6x8 ins. above ground, firmly set, marked W. C. on N., T E X on E., N M 8 1/2 M on W., and 10 on S. face; witnessed by a mound of stone 3 ft. base, 2 ft. high N. of corner.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

- 51.40 Fall 11 links E. of fence corner, boundary fence deflects to the NE.
- 51.50 Boundary fence, bears NE and SW.
- 52.00 Thence across the heads of a series of washes, averaging 8 ft. deep, general course W., extend about 1.00 chn. E. of line. These washes are in clay soil, and form the commencement of the breaks of the Canadian river and west of line develop into a "bad land" formation. Heads of washes on a line NE. and SW.
- 53.50 Fall 2.00 chs. W. of fence corner, boundary fence, deflects to the N.
- 59.60 Leave washes, bears E. and W; thence over level land.
- 60.21 Fall 15 lks. E. of witness mile corner No. 80 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x5x7 ins. above ground, firmly set, marked W. on N., T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.
- 71.00 Thence across the heads of a series of washes, 8 ft. deep, general course W., extend 20 links E. of line.
- 72.00 Fall 60 links W. of fence corner, from which a fence extends E. into Texas; at this fence the boundary fence offsets to the E. 1.50 chs.
- 73.40 Leave washes, bears E. and W; ascend gradually over almost level land.
- No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 230 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 230 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

The boundary fence is 1.88 chs. east of the corner.

This corner is 44.5 links E. of the position of the temporary corner on the offset random line.

Land, rolling, level and broken.

Soil, rocky and gravelly 2nd and 4th rate.

Undergrowth, scattering mesquite.

231st Mile

N. 0° 04' 28" E.

On true line, Texas and New Mexico boundary, ascend gradually over almost level land, gravelly soil, mesquite undergrowth, on west side of boundary fence.

2.00 Top of ascent, bears NE and SW; descend gradually.

19.24 Fall 15 lks. E. of mile corner No. 80 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 12x4x11 ins. above ground, firmly set, marked T E X on E., N M 80 M on W., and 10 on S. face; witnessed by pits 30x30x10 ins. E. and W. thereof.

20.00 Bottom of descent, thence over level land, scattering entraña cactus.

47.07 Fall 135 lks. E. of the C.C. of secs. 17 and 20, T. 13 N.R. 37 E. N.M., on the Texas and New Mexico boundary line, which is a sandstone 6x2x6 ins. above ground, firmly set, marked C C N M on W., with 3 grooves on S., and 3 grooves on N. face;

59.20 Fall 13 lks. E. of mile corner No. 79½ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 9x9x5 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face, witnessed by pits 30x30x10 ins. E. and W. thereof.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 231 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 231 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 1.79 chs. east of the corner.

This corner is 50.0 links east of the position of the temporary corner on the offset random line.

Land, almost level and level.

Soil, gravelly, 3rd rate.

Undergrowth, scattering mesquite and entraña cactus.

232nd Mile

N. 0° 04' 28" E.

On true line, Texas and New Mexico boundary, over level land, gravelly loam soil, scattering mesquite and entraña cactus undergrowth, on west side of the boundary fence.

13.50

Dry wash, 50 links wide, course NE; ascend.

19.23

Fall 10 lks. E. of mile corner No. 79 of the U.S. public land survey of the Texas and New Mexico boundary, line which is a sandstone 12x4x6 ins. above ground, firmly set, marked T E X on E., N M 79 M on W., and 10 on S. face; witnessed by pits 30x30x10 ins. E. and W. thereof.

40.00

Top of low ridge, bears E. and W; descend.

47.13

Fall 130 lks. E. of the C. C. of secs. 8 and 17, T 13 N., R. 37 E., N.M. on the Texas and New Mexico boundary line, which is a sandstone 10x3x6 ins., above ground, firmly set, marked C C N M on W., with 4 grooves

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Chains.

on S., and 4 grooves on N. and T on E. face.
 59.37 Fall 6 lks. E. of mile corner No. 79 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 12x5x4 ins. above ground, firmly set marked T E X on E., N M $\frac{1}{2}$ M on W., and 10 on S. face; witnessed by pits 30x30x12 ins. E. and W. thereof.

65.00 Descent becomes steeper, into arroyo.

Difference between measurements of 80.00 chs. by two setsof chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs;

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 232 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 232 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 79 links east of the corner.

This corner is 55.5 links east of the position of the temporary corner on the offset random line.

Land, level and rolling.

Soil, gravelly loam, 2nd rate.

Undergrowth, scattering mesquite and entraña cactus.

233rd Mile

N. 0° 04' 28" E.

On true line, Texas and New Mexico boundary, descending; over rolling land, sandy soil, scattering mesquite undergrowth, on west side of the boundary fence.

R SURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains

- 1.78 Wire fence, extends west from the boundary fence.
- 19.33 Fall 05 lks. E. of mile corner No. 78 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 7x6x7 ins. above ground, firmly set, marked T E X on E., N M 78 M on W., and 10 on S. face; witnessed by pits 30x30x10 ins. E. and W. thereof.
- 24.00 Soil becomes firm gravel.
- 27.70 South bank of dry sandy arroyo, course W., 150 ft. below top of low ridge noted in last mile. This is the dry sandy arroyo noted in the 230th mile.
- 28.60 North bank of arroyo; ascend south slope.
- 45.60 Wire fence, extends west from the boundary fence.
- 46.00 -----
 Opposite point of observation on random line.
 Meridian observation of the sun for time at temporary mile corner No. 232 plus 46.00 chs. on the random line, May 31, 1911.
 Equation of time - 2^m 39^s
- | | Watch times of transit | | |
|-----------------------------|------------------------|----------------|-----------------|
| | h | m | s |
| Sun's W. limb | 11 | 47 | 22 a.m. |
| Sun's center | 11 | 48 | 30 |
| Sun's E. limb | 11 | 49 | 39 |
| Watch time of apparent noon | 11 | 48 | 30 |
| L.M.T. of apparent noon | 11 | 57 | 21 |
| Watch slow of L.M.T. | | 8 ^m | 51 ^s |
- 46.92 -----
 Fall 114 links E. of the C.C. of secs. 5 and 8 T 13 N. R. 37 E., N.M. on the Texas and New Mexico boundary line, which is a sandstone 14x8x7 ins. above ground, firmly set, marked C C N M on W., with 5 grooves on S. and 1 groove on N. face;
- 59.35 Fall 5 lks. E. of mile corner No. 77½ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 8x5x5 ins. above ground, firmly set, marked T E X on E., N M ½ M on W. and 10 on S. face; witnessed by pits 30x30x10 ins. E. and W. thereof.

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Chains.		
80.00	Top of ridge, bears E. and W., 150 ft. above dry sandy arroyo	
	Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point	
	By 1st set, 79.99 chs;	
	By 2nd set, 80.01 chs; the mean of which is	
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 233 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 233 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.	
	The boundary fence is 39 links east of the corner.	
	This corner is 61.1 links east of the position of the temporary corner on the offset random line.	
	Land, rolling and hilly.	
	Soil, sandy and gravelly 3rd rate.	
	Undergrowth, scattering mesquite.	
	234th Mile	
	N. 0° 04' 28" E.	
	On true line, Texas and New Mexico boundary, over rolling land, gravelly soil, no undergrowth, on west side of boundary fence.	
8.00	Begin descent, bears E. and W., into rocky ravine.	
14.10	Dry wash, 30 links wide, in bottom of ravine 80 ft. deep; course W; ascend, steep broken rocky slope.	
18.00	Top of ascent of 80 ft., bears NW. and SE., thence over rolling land.	

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Chains.

19.17

Fall 1 lk. E. of mile corner No. 77 of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 13x4x11 ins. above ground, firmly set, marked T E X on E., N M 77 M on W., and 10 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.

No difference in measurements of 28.19 chs. by two sets of chainmen.

28.19

To Clark's monument No. 15 which is an old mound of stone 5 ft. base, 1 ft. high on a slight elevation, apparently the remains of a mound of earth. In the center of this stone mound, is a sandstone 12x4x6 ins. above ground, marked N M on the W., TEX on the E., 1900 on the N., 1859 on the S. This stone was set by Levi S. Preston, U.S. Deputy Surveyor in 1900 to perpetuate the location of this monument. Beside this stone is set, an iron pipe 1½ ins. dia., 12 ins. above ground, marked CLARK 1859 on the E., and HOWREH 7/1/07. The marked stone pertains to the U.S. surveys and the iron pipe to the Texas surveys.

To perpetuate the location of this monument I construct at the point occupied by said marked stone, a concrete monument in the form of a frustum of a cone, encased in galvanized iron, the lower base 24 ins. in diameter, the upper base 18 ins. in diameter, and 30 ins. high, set 20 ins. into the ground, in the top of which there is imbedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by a N. and S. division line, 1½ ins. long, with "TEXAS" on the E., and "NEW MEXICO" on the W. thereof, and also marked CLARK BOUNDARY 1859 CLARK MON NO 15" in the N. half, GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

This monument built May 31, 1911.

The boundary fence is 30 links east of this monument

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and deflects to the N.NE from this point.

This monument is known to persons living in the vicinity and is recognized as one of the Clark monuments marking the Texas and New Mexico boundary and is located 7.00 chs. S. of the top of the sandstone bluff on the south side of the Canadian river.

True line completed to monument No. 15, June 20, 1911.

RANDOM LINE

Clark monument No. 15 (233 M. plus 28.19 chs.) to Clark monument No. 16 (234 M plus 64.70 chs.) and Clark monument No. 17 (235 M. plus 12.18 chs.) June 1, 1911. The random line, N. 0° 02' E., was extended to monument No. 15 on May 31, the falling being 63 links west. I offset the random line 63 links to the east and run on a random line N. 0° 02' E. from monument No. 15, the distance counting from temporary mile corner No. 233, setting temporary mile corners at intervals of 80.00 chs. by two sets of chainmen.

52.34

To flag on line, on south side of the Canadian river. End of day's run. Impracticable to observe Polaris for meridian during the night of this day.

June 1, 1911.

June 2, 1911. At a point on the random line on the north side of the Canadian river as defined by the flag set on the south side of said river (52.34 chs) on June 1, and a flag left at monument No. 15; I lay off a base of 8.00 chs. to the westward at a right angle to the random line, for the purpose of determining the distance from the flag on the south side of the Canadian river. The right angle after being laid off, was added by repetition on the plates of the transit eight times, the total sum being 720° 00' 30".

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Chains. The angle was assumed to be 90° . The angle at the west end of the base, between the flag at the east end of the base and the flag on the south side of the Canadian river (52.34 chs.) was added in the same manner eight times and the total angle found to be $534^\circ 01'$. This angle was assumed to be $66^\circ 45'$. The distance, therefore, from the flag on the south side of the river to the east end of the base is 8.00 chs. times the tangent of $66^\circ 45'$.

log. 8.00 chs.	0.903090
log. tan. $66^\circ 45'$	<u>10.366901</u>
log. 18.62 chs	11.269991

Distance to flag on south side of river	52.34 chs.
Distance triangulated	<u>18.62 chs.</u>
Total distance to east end of base	70.96 chs.

base on N. side)
of river)



flag on S. side)
of river)

I continue the random line N. $0^\circ 02'$ E. from the E. end of the base, continuing the distance from the 233 mile corner.

Temporary 234 mile corner plus

64.70 Fall 10 links west of Clark monument No. 16, hereinafter described in true line notes.

Temporary 235 mile corner plus

12.18 Fall 13 links west of Clark monument No. 17, hereinafter described in true line notes.

The observation on Polaris for meridian made this day at temporary mile corner No. 241 plus 9.01 chs.,

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indicated an accumulative error of 7 seconds to the right in 21 miles and 17.15 chs. (last observation at 219 M. plus 71.86 chs). The course of the random line, therefore, at monuments Nos. 15, 16 and 17 is N. $0^{\circ} 02' 05''$ E.

The fallings at monuments 16 and 17 indicate the following true line courses.

Mon. 15 to 16, N. $0^{\circ} 05' 03''$ E. distance 1 M plus 36.51 chs.

Mon. 16 to 17, N. $0^{\circ} 05' 51''$ E., distance 27.48 chs.

TRUE LINE

Clark monument No. 15 to 16 and 17

June 20, 1911.

N. $0^{\circ} 05' 03''$ E.

On true line, from monument No. 15, heretofore described, continuing the measurement from mile corner No. 233, descending gradually over gravelly soil.

- 35.00 Top of sandstone bluff, bears E. and W.
- 35.50 Base of bluff 50 ft. below top, bears E. and W; continue abrupt descent.
- 43.00 Ravine, 75 ft. below top of bluff, course W.NW; ascend.
- 46.40 Fall 90 lks. E. of the C.C. of secs. 5 and 32, T. 13-14 N., R. 37 E., N.M. on the Texas and New Mexico boundary line, which is a sandstone 10x6x10 ins. above ground firmly set, marked R. 37 E. on W., 14 on N., T on E.; 6 notches on the NE., SE., SW., and NW corners.
- 52.34 Spur, slopes W., from higher land E of line, 30 ft. above ravine. A flag set on this ridge on random line for the purpose of triangulation across the Canadian river, descend.
- 56.45 Sandstone bluff, 15 ft. high forming the right bank of the Canadian river, bears N. NE and S. SW. Course of the Canadian river, N.NE 100 ft. below monument No.

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	15. Enter water.
67.00	Leave water of Canadian river, bears N. NE. and S. SW; the average right angle width of the river at this point is about 5.00 chs. Thence over sandy river bed, subject to overflow.
70.96	Opposite flag on random line; used for purpose of triangulation across Canadian river. The distance from the point 52.34 chs. to this point (18.62 chs.) was based on a triangulation which is fully recorded in the notes of the random line. Base laid off to the west of 8.00 chs. at an angle of 90° with the random line. Angle between base line and flag left at 52.34 chs. point 66° 45' (angle at W. end of base line). No difference between measurements of 51.81 chs. by two sets of chainmen, from Mon. 15.
80.00	The point for the 234th Mile corner falls in the bed of the Canadian river, and a post was not set at this point. No suitable location for a corner exists between monuments Nos. 15 and 16, except close to said monuments and because of their proximity no witness 234 mile corner was set. Land, rolling and broken and river bed. Soil, gravelly and sandy 4th rate. No undergrowth.
	235th Mile N. 0° 05' 03" E.
	On true line, Texas and New Mexico boundary, over sandy river bed.
29.00	The left bank of the Canadian river, bears NE. and SW., enter short cottonwood undergrowth and weeds; thence over river bottom, subject to overflow during high water periods.
48.00	Leave river bottom, bears E. and W; ascend over rocky

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	broken land, clay soil. Scattering cottonwood timber along this ascent.
51.35	Fall 26 links E. of a sandstone 10x4x12 ins. above a mound of stone, marked with T on the E. and 1 groove on the S. face. The closing corner of secs. 29-32, T. 14 N., R. 37 E., on the Texas - New Mexico boundary. Surveys of 1883.
52.23	Fall 35 links W. of corner of boundary fence. The fence extends N. of W. to this corner, thence E. of N., irregular.
57.00	Begin abrupt ascent of broken sandstone bluff, bears E. and W. Leave timber.
59.45	Fall 02 links W. of mile corner No. 75½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 10x4x12 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 10 on S. face; witnessed by a mound of stone 3 ft. base 2 ft. high S. of corner.
61.29	Top of bluff bears E. and W., 100 ft. above Canadian river. Fall 01 link W. of corner of boundary fence. The fence extends NW. to this corner, thence N. 0° 06' E. Ascend gradually over rolling land, gravelly soil. Difference between measurements of 64.70 chs. by two sets of chainmen is 02 links; position of the middle point By 1st set, 64.69 chs., By 2nd set, 64.71 chs., the mean of which is
64.70	To Clark monument No. 16, which is a well defined mound of coarse gravel 15 ft. in diameter, 2 ft. high, surrounded by traces of a trench. In the center of the mound there is a sandstone 12x7x15 ins. above ground, marked N M on the W., T E X on the E., 1900 on the N., and 1859 on the S. face.

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Chains. Beside this stone there is set an iron pipe, $1\frac{1}{2}$ ins. in dia., 12 ins. above ground, marked

HOWREN 7/1/1907 on the W.,

CLARK 16- 1859 on the E. side.

The marked stone was set by Levi S. Preston, U.S. Deputy Surveyor, in 1900 and pertains to the U.S. public land surveys, the iron pipe pertains to the Texas surveys.

To perpetuate the location of this mound, I construct at the point occupied by the above mentioned marked stone, a concrete monument in the form of a frustum of a cone encased in galvanized iron, lower base 24 ins in diameter, the upper base 18 ins. in diameter, and 30 ins. high, set 20 ins. into the ground, in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by a N. and S. division line, $1\frac{1}{2}$ ins. long, with "TEXAS" on the E., and "NEW MEXICO" on the W. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 16" in the north half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the south half. Monument built June 20, 1911.

Thence from monument No. 16

N. $0^{\circ} 05' 51''$ E.

On true line, continuing the measurement from mile corner No. 234. Ascend over gravelly land, along the boundary fence, scattering mesquite undergrowth.

72.00 Arroyo, 20 lks wide, course S.E.

No difference between measurements of 15.30 chs. by two

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80.00	<p>sets of chainmen from Monument 16.</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 235 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 235 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable., no stone available for a mound.</p> <p>The boundary fence is 02 links east of the corner.</p> <p>On the random line this corner was located only for distance.</p> <p>Land, level river bed, and broken and rolling.</p> <p>Soil, sand and gravel, 4th rate.</p> <p>Timber, cottonwood.</p> <p>Undergrowth, cottonwood and mesquite.</p>
7.70	<p style="text-align: center;">236th Mile</p> <p style="text-align: center;">N. 0° 05' 51" E.</p> <p>On true line, Texas and New Mexico boundary, ascend over rolling land, sandy and gravelly soil, scattering mesquite undergrowth, along the boundary fence.</p>
12.00	<p>Road, bears S. of W. and N. of E.</p> <p>Top of ridge, bears E. and W., 150 ft. above the Canadian river.</p> <p>No difference between measurements of 12.18 chs. by two sets of chainmen.</p>
12.18	<p>To Clark monument No. 17, which is a well defined mound of earth 14 ft. in diameter, 1½ ft. high, overgrown with grass and amole plants with slight traces of a trench on the N., W. and E. sides. In the</p>

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center of this mound there is a sandstone 5x4x8 ins. above ground, and marked

H M on the W.,

1900 on the N.,

1859 on the S.,

T E X on the E. face.

Beside this stone there is set an iron pipe $1\frac{1}{2}$ ins. diameter 18 ins. above ground, marked

HOWREN 7/1/07 on the W.,

CLARK 17-1859 on the E. side.

To perpetuate the location of this mound, I construct at the point occupied by said marked stone, a concrete monument having a cubical base, 30 ins. square, set 30 ins. into the ground, and a superstructure in the form of a frustum of a cone, encased in galvanized iron, having a lower diameter of 24 ins. an upper diameter of 18 ins., and projecting 30 ins. above ground; in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by a N. and S. division line $1\frac{1}{2}$ ins. long, with "TEXAS" on the east, and "NEW MEXICO" on the west thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 17" in the north half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the south half. This monument built June 20, 1911.

True line completed to monument No. 17, June 20, 1911.

Monuments No. 16 and 17 are known to residents in the vicinity and are recognized as Clark's mounds, marking the Texas and New Mexico boundary. Monument No. 16 is at the top of the bluff bordering the north bank of the Canadian river, and monument No. 17 on the first ridge north of said river. The topography in the vicinity of Clark monuments Nos. 15, 16, and 17 is correctly shown on Clark's plat No. 8, and said monuments can be definitely identified by comparing

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this plat with the various natural objects in the vicinity.

June 20, 1911.

RANDOM LINE

Clark monument No. 17 (235 M. plus 12.18 chs.) to monument No. 21 (272 M. plus 22.25 chs.).

June 2, 1911. On this day the random line was run to monument No. 17 on a course N. 0° 02' E., the fallings being 13 links west. I offset the random to a point 5.2 links east of monument 17, and run N. 0° 05' E. to monument 21. The information furnished by the U.S. public land survey of the portion of the line north of monument No. 17 indicated that this course would closely approximate the bearing of the true line between monuments 17 and 21.

The deflection from a line N. 0° 02' E. to one N. 0° 05' E. was accomplished by measuring N. 0° 02' E. 42.43 chs. from the point 5.2 links E. of monument 17, and then laying off the right angle offset distance of 3.69 links to the E., thus determining the course, N. 0° 05' E.

Thence I run, N. 0° 05' E. on random line, setting temporary mile corners at intervals of 80.00 chs. by two sets of chainmen, distance counting from mile cor. No. 235.

Temporary mile corner No. 241 plus

9.01

End of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes at corresponding point. Accumulated error in alignment is 7 seconds to the right, in 21 M. 17.15 chs. The course of the random line at the point of observation therefore, is N. 0° 05' 07" E. and at monument No. 17, N. 0° 05' 05" E.

June 2, 1911.

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June 3, 1911. I adjust the course of the random line and continue N. $0^{\circ} 05'$ E.

Temporary mile corner No. 249. End of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes at corresponding point.

Accumulated error in alinement in day's run of 7 miles and 70.99 chs. is 21 seconds to the right, the bearing of the random at the point of observation is therefore N. $0^{\circ} 05' 21''$ E.

June 3, 1911.

June 4, and 5, no field work.

June 6, 1911. I adjust the course of the random line and continue N. $0^{\circ} 05'$ E.

Temporary mile corner No. 261. End of day's run. Impracticable to observe Polaris for meridian during the night of this day.

June 6, 1911.

June 7, 1911.

Continue on random line, N. $0^{\circ} 05'$ E.

Temporary mile corner No. 272 plus.

22.25

Fall 1.29 chs. west of Clark monument No. 21 hereinafter described. At this point I observe Polaris for meridian, which observation is recorded in the true line notes. Accumulated error in alinement in run of 23 miles and 22.25 chs. is 48 seconds to the left, the course of the random line at monument No. 21 is therefore N. $0^{\circ} 04' 12''$ E. The true falling of random line at monument No. 21, allowing for the initial offset .052 chs. E. at monument No. 17, and the accumulative error in alinement, is 1.173 chs. west. Distance from monument 17 to 21, 37 miles and 10.07 chs; the course of the true line is therefore N. $0^{\circ} 06' 21''$ E.

June 7, 1911.

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TRUE LINE

Clark monument No. 17 to monument No. 21.

June 19, 1911. Adjust temporary corners from No. 236 to No. 249 inclusive, from random to true line.

N. $0^{\circ} 06' 21''$ E.

On true line from monument No. 17, continuing the measurement from mile corner No. 235. Descend over gravelly N. slope, along boundary fence.

19.42

Intersect mile corner No. 75 of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe $2\frac{1}{2}$ ins. dia. 12" above ground, firmly set, marked T E X on E., N M 75 M on W., and 09 on S. face; witnessed by pits, 36x36x10 ins. E. and W. thereof.

27.45

Wire fence, extends west from the boundary fence.

39.55

Road, bears E. and W.

48.00

House 11.00 chs. west.
course nearly E.

55.00

Ravine, 60 ft. below monument No. 17, Windmill 11.00 chs. west of line. Ascend steep slope, over loose sand.

59.40

Intersect mile corner No. $74\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe $2\frac{1}{2}$ ins. dia., 12 ins. above ground, firmly set, marked T E X on E., N M $74\frac{1}{2}$ on W., and 09 on S. face.

60.00

Top of ascent of 50 ft. bears E. and W. Thence over rolling sand hills.

Difference between measurements of 67.82 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 67.81 chs.,

By 2nd set, 67.83 chs. the mean of which is 67.82 chs.
From Monument No. 17

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 28 ins. into the ground for the 236 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the

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west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 236 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 69 links west of the corner. This corner is 2.7 links west of the position of the temporary corner on the offset random line.

Land, rolling and hilly.

Soil, gravel and sand, 4th rate.

Undergrowth, scattering mesquite.

237th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over rolling sand hills, loose sandy soil, no undergrowth, on east side of boundary fence.

19.44

Fall 01 lk. W. of mile corner No. 74 of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe 2½ ins. dia., 18 ins. above ground, firmly set, marked T E X on E., N M 74 N on W., and 09 on S. face.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 237 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 237 General Land Office Reestablishment, 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 75 links west of the corner.

This corner is 0.2 links east of the position of the temporary corner on the offset random line.

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Chains.	
	<p>Land, sand hills.</p> <p>Soil, loose sand, 4th rate.</p> <p>No undergrowth.</p>
	<p>238th Mile</p> <p>N. $0^{\circ} 06' 21''$ E.</p> <p>On true line, Texas and New Mexico boundary, over rolling sand hills, loose sandy soil, no undergrowth, on east side of the boundary fence.</p>
19.38	<p>Fall 1 lk. W. of mile corner No. 73 of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe $2\frac{1}{2}$ ins. dia., 18 ins. above ground, firmly set, marked T E X on E., N M 73 M on W., and 09 on S. face.</p>
59.38	<p>Fall 3 lks. W. of mile corner No. $72\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe $2\frac{1}{2}$ ins. dia., 18 ins. above ground, firmly set, marked T E X on E., N. M. $72\frac{1}{2}$ M. on W., and 09 on S. face.</p>
68.05	<p>Fall 09 links east of an iron pipe, 2 ins. dia. 10 ins. above ground, unmarked. Pertains to the Texas surveys.</p>
68.06	<p>Wire fence, extends E. and W. from the boundary fence.</p>
70.00	<p>Land becomes rolling.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point</p> <p>By 1st set, 79.99 chs;</p> <p>By 2nd set, 80.01 chs; the mean of which is</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom end surmounted with a brass cap, 26 ins. into the ground for the 238 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and</p>

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marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 238 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 83 links west of the corner. This corner is 3.2 links E. of the position of the temporary corner on the offset random line.

Land, rolling sand hills and rolling.

Soil, loose sand 4th rate.

No undergrowth.

239th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, no undergrowth, on east side of the boundary fence.

19.39 Fall 4 lks. W. of mile corner No. 72 of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe $2\frac{1}{2}$ ins. dia., 18 ins. above ground, firmly set, marked T E X on E., N M 72 M on W., and 09 on S. face.

59.40 Fall 4 lks. W. of mile corner No. $71\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe $2\frac{1}{2}$ ins. dia., 18 ins. above ground, firmly set, marked T E X on E. N M $71\frac{1}{2}$ M on W. and 09 on S face.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 239 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile

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corner No. 239 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 93 links west of the corner.

This corner is 6.2 links E. of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, loose sand 4th rate.

No undergrowth.

240th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, no undergrowth, on east side of the boundary fence.

19.39

Fall 4 lks. W. of mile corner No. 71 of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe 2½ ins. dia., 18 ins. above ground, firmly set, marked T E X on E., N.M. 71 M. on W., and 09 on S. face.

45.82

Fall 4 lks. W. of the C.C. of secs. 5 and 32, T. 14-15 N.R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 9x7x12 ins. above ground, firmly set, marked C C 37 E. on W., with 6 grooves 14 N on S. and 6 grooves 15 N on N. face.

59.39

Fall 5 lks. W. of mile corner No. 70½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe 2½ ins. dia., 18 ins. above ground, firmly set, marked T E X on E., N M 70½ Mon W., and 09 on S. face.

66.59

Wire fence, extends east from the boundary fence. No difference between measurements of 80.00 chs. by two sets of chainmen.

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80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 240 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 240 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 1.12 chs. west of the corner.

This corner is 9.0 links E. of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, loose sand, 4th rate.

No undergrowth.

241st Mile

N. $0^{\circ} 06' 21''$ E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, no undergrowth, on east side of the boundary fence.

19.41

Fall 4 lks. W. of mile corner No. 70 of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe $2\frac{1}{2}$ ins. dia. 24 ins. above ground, loosely set, marked T E X on E., N M 70 M on W., and 09 on S. face.

45.82

Fall 4 lks. W. of the C.C. of secs. 29 and 32 T 15 N. R. 37 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x9x6 ins. above ground firmly set marked C C on W., with 1 groove on S. and 5 grooves on N. face.

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59.39

Fall 4 lks. W. of mile corner No. 69 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe 2 $\frac{1}{2}$ ins. dia., 18 ins. above ground, loosely set, marked T E X on E., N M 69 $\frac{1}{2}$ M on W. and 09 on S. face.

63.00

Soil becomes firmer; descend.

76.00

Hara Visa Arroyo, 2.00 chs. wide, course east, turns SE. 8.00 chs. east of line. Ascend.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 241 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 241 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 1.14 chs. west of the corner.

This corner is 11.9 links E. of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, loose and firm sand, 4th rate.

No undergrowth.

242nd Mile.

N.0° 06' 21" E.

On true line, Texas and New Mexico boundary, ascend over rolling land, firm sandy soil, no undergrowth, on east side of the boundary fence.

9.01

Opposite point of observation on the random line.

Time observation of Polaris for azimuth at temporary mile corner No. 241 plus 9.01 chs. on the random line.

June 2, 1911.

Longitude of station 103° 02' W

Latitude of station 35° 30'

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Chains. Declination of Polaris $88^{\circ} 49' 42.7''$
 Sights on Polaris marked 17.27 chs. to the north.
 Mean time, U.C. of Polaris, Greenwich 8h 47.6m a.m.

Correction for longitude	-1.1m
Local mean time, U.C. of Polaris	8h 46.5m

	Watch times of observations.		
	h	m	s
Telescope direct	7	10	01 p.m.
" reversed	7	11	08
" direct	7	13	15
" reversed	7	15	22
Mean watch time of observation	7h	12m	26.5s
Watch slow of L.M.T.		8m	51.0s
Local mean time of observation	7h	21m	17.5s
L.M.T. of obsn.	7h	21.3m	p.m.
L.M.T. of U.C.	8h	46.5m	a.m.
Hour angle, W.	10h	34.8m	

The azimuth of Polaris corresponding to this hour angle is $0^{\circ} 30'.3$ west of the meridian. The angle therefore between the azimuth line and the course of the true random line, N. $0^{\circ} 05'E.$, is $0^{\circ} 35.3'$. Offset distance laid off to the east to determine the true random line N. $0^{\circ} 05'E.$, is 17.73 links. The actual random line as run falls .04 ft. to the right of the true random line, at a point 17.27 chs. north of the station of observation, indicating an accumulated error in alinement of 7 seconds to the right, in 21 miles 17.15 chs. The course of the random at the point of observation is therefore N. $0^{\circ} 05' 107'' E.$

45.81 Fall 7 lks. W. of the C.C. of secs. 20 and 29, T. 15 N. R. 37 E., N.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a granite stone, 10x8x6 ins. above ground, firmly set, marked C.C. on W., with 2 grooves on S., and 4 grooves on N. face; and witnessed by traces of pits, N., S. and W. thereof.

59.37 Fall 07 lks. W. of mile corner No. 68½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe 2½ ins. dia., 12 ins. above ground, firmly set, marked T E X on E., N M 68½ M on W., and 09 on S. face.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.
80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 242 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 242 General Land Office Reestablishment 1911 United States Boundary Commission."

The boundary fence is 1.22 chs. west of the corner.

This corner is 15.0 links E. of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, firm sand 3rd rate.

No undergrowth.

243rd Mile

N. 0° 06' 21" E.

On true line Texas and New Mexico boundary, ascend, over rolling land, firm sandy soil, no undergrowth, on east side of the boundary fence.

1.20 Road, bears E. and W.

2.20 Road bears NE. and SW.

19.38 Fall 8 lks. W. of mile corner No. 68 of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe 2½ ins. dia., 16 ins. above ground, firmly set, marked T E X on E., N M 68 M on W., and 09 on S. face; witnessed by pits E. and W. thereof.

20.18 The location of Clark's monument No. 18, according to his plat, search for evidences of the same but without success.

45.84 Fall 7 lks. W. of the C.C. of secs. 17 and 20, T.15 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary, line which is a sandstone

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<u>Chains.</u>	8x8x5 ins. above ground, firmly set, marked C C on W., with 3 grooves on S., and 3 grooves on N. face;
59.38	<p>Fall 8 lks. W. of mile corner No. 67$\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe 2$\frac{1}{2}$ ins. dia., 12 ins. above ground, firmly set, marked T E X on E. N M 67$\frac{1}{2}$ M on W., and 09 on S. face.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point</p> <p>By 1st set, 80.01 chs;</p> <p>By 2nd set, 79.99 chs; the mean of which is</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 243 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 243 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.</p> <p>The boundary fence is 1.35 chs. west of the corner.</p> <p>This corner is 18.1 links E. of the position of the temporary corner on the offset random line.</p> <p>Land, rolling.</p> <p>Soil, firm sand, 3rd rate.</p> <p>No undergrowth.</p>
244th Mile	
N. 0° 06' 21" E.	
<p>On true line, Texas and New Mexico boundary, over rolling land, medium firm sandy soil, no undergrowth, on east side of the boundary fence.</p>	

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Chains:

19.35

Fall 9 lks. W. of mile corner No. 67 of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe $2\frac{1}{2}$ ins. dia., 12 ins. above ground, firmly set, marked "T E X" on E., N.M. 67 M. on W. and 09 on S. face; witnessed by traces of pits $36 \times 36 \times 5$ ins. E. and W. thereof.

45.83

Fall 08 lks. W. of the C.C. of secs. 8 and 17 T. 15 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a quartz stone $8 \times 6 \times 5$ ins. above ground, firmly set, marked C C on W., with 4 grooves on S. and 2 grooves on N. face; and witnessed by pits $24 \times 24 \times 6$ ins. N., S. and W. thereof.

59.33

Fall 09 lks. W. of mile corner No. $66\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe $2\frac{1}{2}$ ins. dia., 12 ins. above ground, firmly set, marked T E X on E., N M $66\frac{1}{2}$ M on W. and 09 on S. face; witnessed by traces of pits $36 \times 36 \times 6$ ins. E. and W. thereof.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 244 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 244 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 1.37 chs. west of the corner.

This corner is 21.0 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, sandy, 3rd rate.

No undergrowth.

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Chains.	245th Mile
	N. 0° 06' 21" E.
	On true line, Texas and New Mexico boundary, over rolling land, medium firm sandy soil, no undergrowth, on east side of the boundary fence.
19.30	Fall 10 lks. W. of mile corner No. 66 of the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe 2½ ins. dia., 12 ins. above ground, firmly set, marked T E X on E., N M 66 M. on W. and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.
45.81	Fall 10 lks. W. of the C.C. of secs. 5 and 8, T. 15 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a quartz stone 11x6x9 ins. above ground firmly set, marked C C on W., with 5 grooves on S., and 1 groove on N. face; and witnessed by traces of pits 36x36 ins. N., S. and W. thereof.
59.30	Fall 12 lks. W. of mile corner No. 65½ of the U.S. public land survey of the Texas and New Mexico boundary line which is an iron pipe 2½ ins. dia., 12 ins. above ground, firmly set, marked T E X on E., N M 65½ M on W. and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.
	No difference between measurements of 80.00 chs., by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 245th mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 245 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.
	The boundary fence is 1.44 chs. west of the corner

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

<u>Chains.</u>	<p>This corner is 23.8 links east of the position of the temporary corner on the offset random line.</p> <p>Land, rolling.</p> <p>Soil, sandy 3rd rate.</p> <p>No undergrowth.</p>
	<p style="text-align: center;">246th Mile</p> <p style="text-align: center;">N. 0° 06' 21" E.</p> <p>On true line Texas and New Mexico boundary, over rolling land, medium firm sandy soil, no undergrowth, on east side of the boundary fence.</p> <p>19.24 Fall 12 lks. W. of mile corner No. 65 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x7x6 ins. above ground, firmly set, marked T E X on E., N M 65 M on W., and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.</p> <p>47.36 Fall 13 lks. W. of the C. C. of secs. 5 and 32 T. 15-16 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico Boundary line which is a limestone 8x6x8 ins. above ground, firmly set, marked C C and 37 E. on W., with 6 grooves and 15 N. on S., and 6 grooves and 16 N. on N. face; and witnessed by traces of pits 24x24 ins N., S. and W. thereof.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point</p>
80.00	<p>By 1st set, 79.995 chs;</p> <p>By 2nd set, 80.005 chs; the mean of which is</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 246 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 246 General Land Office Reestablishment 1911</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	<p>United States Boundary Commission." Pits impracticable. No stone available for a mound.</p> <p>The boundary fence is 1.32 chs. west of the corner. This corner is 26.5 links east of the position of the temporary corner on the offset random line.</p> <p>Land, rolling.</p> <p>Soil, sandy 3rd rate.</p> <p>No undergrowth.</p>
	<p style="text-align: center;">247th Mile</p> <p style="text-align: center;">N. 0° 06' 21" E.</p> <p>On true line, Texas and New Mexico boundary, over rolling land, medium firm sandy soil, no undergrowth, on east side of the boundary fence.</p>
19.25	<p>Fall 12 lks. W. of mile corner No. 64, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 18x9x8 ins. above ground, firmly set, marked T E X on E., N. M 64 M on W., and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.</p>
20.00	<p>Soil becomes loose sandy loam.</p>
47.34	<p>Fall 15 lks. W. of the C.C. of secs. 29 and 32 T 16 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line which is a quartz stone 7x4x5 ins. above ground, firmly set, marked C C on W., with 1 groove on S. and 5 grooves on N. face; and witnessed by traces of pits 24x24 ins., N., S. and W. thereof.</p>
53.00	<p>Bugout and windmill 12.00 chs. west of line.</p>
59.21	<p>Fall 15 lks. W. of mile corner No. 63½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 16x12x8 ins. above ground, firmly set, marked T E X on E., N M ½ M on W. and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.</p>
60.00	<p>Head of draw, course SE.</p>
70.00	<p>Opposite point of observation on random line.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

 Meridian observation of the sun for time at temporary mile corner No. 246 plus 70.00 chs. on the random line, June 3, 1911.

Equation of time $-2^m 11^s$

	Watch times of transit		
	h	m	s
Sun's W. limb	11	47	40 a.m.
Sun's center			
Sun's E. limb	<u>11</u>	<u>49</u>	<u>56</u>
Watch time of apparent noon	11	48	48
L.M.T. of apparent noon	<u>11</u>	<u>57</u>	<u>49</u>
Watch slow of L.M.T.		9m	01s

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 247 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 247 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 1.16 chs. west of the corner.

This corner is 29.0 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, sandy and sandy loam, 3rd rate.

No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	248th Mile
	N. 0° 06' 21" E.
	On true line, Texas and New Mexico boundary, over rolling land, loose sandy loam soil, no undergrowth, on west side of boundary fence.
16.00	Shallow draw, course east; ascend, gradually. Soil becomes firm sandy loam.
19.21	Fall 13 lks. W. of mile corner No. 63 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 15x15x10 ins. above ground, firmly set, marked T E X on E., N. M. 63 M on W., and 09 on S. face; witnessed by traces of pits E. and W. thereof.
47.37	Fall 14 lks. W. of the C.C. of secs. 20 and 29, T. 16 N. R. 37 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a quartz stone 5x6x6 ins. above ground, firmly set, marked C C on W., with 2 grooves on S., and 4 grooves on N. face; and witnessed by traces of pits N. S. and W. thereof.
59.21	Fall 14 lks. W. of mile corner No. 62½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 17x12x8 ins. above ground, firmly set, marked T E X on E., N M ½ M on W and 09 on S. face; witnessed by traces of pits.
66.05	Wire fence, extends east from the boundary fence.
79.00	Ridge 75 ft. high, bears E. and W; descend.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point
	By 1st set, 79.995 chs;
	By 2nd set 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 248 mile corner. The top of the cap is divided

Chains.

by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 248 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 92 links west of the corner.

This corner is 31.5 links east of the position of the temporary corner on the offset random line

Land, rolling.

Soil, loose and firm sandy loam, 3rd rate.

No undergrowth.

249th Mile

N. $0^{\circ} 06' 21''$ E.

On true line, Texas and New Mexico boundary, descend over rolling land, firm sandy loam soil, no undergrowth, on east side of the boundary fence.

14.02

Wire fence extends east from the boundary fence, thence along the west side of cultivated land, extends east from the boundary fence.

45.70

Fall 62 links E. of angle corner of telephone line, extends from the west to boundary fence, thence north.

46.45

Road, bears E. and W.

47.37

Fall 12 lks. W. of the C.C. of secs. 17 and 20, T.16 N.R.37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 6x6x6 ins. above ground, firmly set, marked C C on W., with 3 grooves on S., and 3 grooves on N. face.

59.16

Fall 12 lks. W. of mile corner No. 61 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 16x18x8 ins. above ground, firmly set, marked F E E on E., N M $\frac{1}{2}$ M on W., and 09 on S. face.

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Chains.

65.59	Wire fence, extends east from the boundary fence. The telephone line along the boundary fence, turns and follows this fence to the east. End of cultivation.
66.14	Road, bears E. and W. Mara Vise N.M. to Channing, Texas.
66.50	Wire fence, extends east from the boundary fence.
75.00	South fork Agua Caballo, or Flag Creek; a stream of clear pure water 10 links wide, course east; source 10 chs. to 20 chs. W. of line; stream bordered by cottonwood timber west of line. Ascend.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point
	By 1st set, 79.995 chs;
	By 2nd set, 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 249 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 249 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. The SE. corner of W.A. Bell's house bears S. 86° 61' W. 6.31 chs. dist.
	A cottonwood tree 12 ins. dia. bears S. 16° 25' W. 3.16 chs. dist. marked N M 249 M B T
	A cottonwood tree 17 ins. dia. bears S. 16° 40' W. 4.18 chs. dist. marked N M 249 M B T
	The boundary fence is 51 links west of the corner. This corner is 33.9 links east of the position of the temporary corner on the offset random line.
	Land, rolling.
	Soil, sandy loam 1st and 2nd rate.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

No undergrowth.

Time observation of Polaris for azimuth at temporary mile corner No. 249 on the random line, June 3, 1911.

Longitude of station, $103^{\circ} 02' W.$

Latitude of station $35^{\circ} 37'$

Declination of Polaris $88^{\circ} 49' 42.6''$

Sights on Polaris marked 20.42 chs. north of station.

Mean time, U.C. of Polaris, Greenwich 8h 43.7m a.m.

Correction for longitude -1.1m

Local mean time, U.C. of Polaris 8h 42.6m

Watch times of observations

	h	m	s
Telescope direct	6	45	42 p.m.
" reversed	6	47	25
" direct	6	49	46
" reversed	6	50	59
Mean watch time of observations	6 h	48 m	28 s
Watch slow of L.M.T.		<u>9 m</u>	<u>01 s</u>
Local mean time of observation	6 h	57 m	29 s
L.M.T. of obsn	6 h	57.5m	p.m.
L.M.T. of U.C.	<u>8 h</u>	<u>42.6m</u>	a.m.
Hour angle, W.	10 h	14.9 m	

The azimuth of Polaris corresponding to this hour angle is $0^{\circ} 37.2'$ west of the meridian. The angle between this azimuth line and the true random line, N. $0^{\circ} 05'$ E. is $42.2'$. Azimuth offset distance laid off to the east to determine true random line, N. $0^{\circ} 05'$ E., is 25.08 links. At a point 20.42 chs. northward from the point of observation, the actual random line falls .14 ft. to the right of the true random line, indicating an accumulated error in alinement of 21 seconds to the right, in the day's run of 7 miles and 70.99 chs. The course of the random line at the point of observation is therefore N. $0^{\circ} 05' 21''$ E.

June 19, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

June 17 and 18, no field work.

June 16, 1911. Adjust temporary corners from Nos. 250 to 269 inclusive, from random to true line.

250th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, ascend over rolling land, firm sandy loam soil, no undergrowth, on east side of the boundary fence.

- 5.05 Wire fence, extends east from the boundary fence.
- 7.03 Wire fence, extends east from the boundary fence, thence over gravelly and rocky land.
- 19.16 Fall 13 lks. W. of mile corner No. 61 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 24x8x10 ins. above ground, firmly set, marked T E X on E., N M 61 M on W., and 09 on S. face.
- 27.16 Wire fence, extends west from the boundary fence.
- 32.00 Top of ridge, between forks of Agua Caballo, bears E. and W., with slope to the east; 75 ft. above Agua Caballo. Descend.
- 40.00 Cross to the west side of boundary fence, soil becomes sandy.
- 47.39 Fall 13 lks. W. of the C.C. of secs. 8 and 17, T. 16 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x9x7 ins. above ground, firmly set, marked C C on W., with 4 grooves on E., and 2 grooves on N. face.
- 47.82 Wire fence, extends west from the boundary fence.
- 50.40 Stone house, bears west 10.00 chs. distant. Jay Coots.
- 52.17 Wire fence, extends west from the boundary fence.
- 53.70 North fork of Agua Caballo or Flag Creek 75 ft. below ridge, a stream of clear water 08 links wide, course east; source 15 chs. W. of line. Ascend.

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Chains.

54.60 Fall 51 links E. of a sandstone, 16x10x3 ins. above ground, marked with paint, N W on the S., S W on the N. face. This stone marks the SW corner of Hartley County, and the NW. corner of Oldham County, Texas.

59.07 Fall 13 lks. W. of mile corner No. 60 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 14x6x10 ins. above ground, firmly set, marked T H X on E., N H $\frac{1}{2}$ M on W., and O9 on S. face.

59.28 Wire fence, extends west from the boundary fence.
No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 250 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 250 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 66 links east of the corner.
This corner is 37.0 links east of the position of the temporary corner on the offset random line.

Land, rolling and hilly.

Soil, sandy loam, gravelly, rocky and sandy,
1st and 4th rate.

No undergrowth.

251st Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, ascending over rolling land, sandy soil, no undergrowth, on west side of the boundary fence.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

19.07	<p>Fall 13 lks. W. of mile corner No. 60 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 20x10x8 ins. above ground, firmly set, marked T E X on E., N M 60 M on W., and 09 on S. face.</p>
47.50	<p>Wire fence, extends west from the boundary fence.</p>
59.02	<p>Fall 10 lks. W. of mile corner No. 59½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x12x8 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 09 on S. face.</p>
60.00	<p>Top of ridge, bears E. and W., 140 ft. above Flag Creek, descend gradually.</p>
	<p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 251 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 251 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.</p>
	<p>The boundary fence is 01 link east of the corner.</p>
	<p>This corner is 40.3 links east of the position of the temporary corner on the offset random line.</p>
	<p>Land, rolling.</p>
	<p>Soil, sandy 3rd rate.</p>
	<p>No undergrowth.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

252nd Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, no undergrowth, on west side of boundary fence.

- 6.25 Wire fence, extends east from the boundary fence.
- 19.00 Fall 08 lks. W. of mile corner No. 59 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 14x6x10 ins. above ground, firmly set, marked T E X on E., N M 59 M on W., and 09 on S. face.
- 24.00 Enter green brush and shifting sand hills, bears E. and W.
- 43.57 Road, bears E. NE and W. SW
- 48.00 Middle of dry sandy arroyo, 5.00 chs. wide in Minioso draw, course S. 64° E. 100 feet below top of ridge; ascend.
- 54.00 Railroad right of way fence, bears N. 48° 30' E. and S. 48° 30' W.
- 56.10 Single track railroad, Chicago Rock Island and El Paso, bears N. 48° 34' E. and S. 48° 34' W.
- 57.05 Telegraph line, bears same as railroad. Fall 12 links W. of the state line sign post, which is a wooden post 10x10 ins. square and 10 ft. high, marked STATE LINE on the S., NEW MEXICO on the SW., and TEXAS on the SE. faces.
- 58.30 Railroad right of way fence, bears same as railroad.
- 58.98 Fall 07 lks. W. of mile corner No. 59½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 16x6x10 ins. above ground, firmly set, marked T E X on E., N M ½ M on W. and 09 on S. face.

Chains.

59.00 Top of ascent, low ridge, bears E. and W., 40 ft. above dry sandy arroyo; thence over gently rolling land.

79.55 Wire fence, extends west from the boundary fence, leave green brush, bears E. and W.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 79.99 chs;

By 2nd set, 80.01 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 252 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 252 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 03 links east of the corner.

This corner is 43.6 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, loose sand, 4th rate.

Undergrowth, green brush.

253rd Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, no undergrowth, on west side of the boundary fence.

18.96 Fall 5 lks. W. of mile corner No. 58 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 12x10x8 ins. above ground.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

firmly set, marked T E X on E., N M 58 M on W., and 09 on S. face.

29.80 Wire fence, extends west from the boundary fence.

58.94 Fall 5 lks. W. of mile corner No. 57 1/2 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 14x6x10 ins. above ground, firmly set, marked T E X on E., N M 1/2 M on W and 09 on S face.

59.00 Soil becomes firm sandy loam.

59.02 Fall 5 lks. W. of the C.C. of secs. 29 and 32 T 17 N R 37 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a quartz stone 7x10x6 ins. above ground, firmly set, marked C C on W., with 1 groove on S., and 5 grooves on N. face.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 80.01 chs;

By 2nd set, 79.99 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 253 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 253 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 06 links east of the corner.

This corner is 47.1 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, loose sand and sandy loam 4th and 3rd rate.

No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

254th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, ascend gradually over rolling land, sandy loam soil, no undergrowth, on west side of the boundary fence.

18.90

Fall 3 lks. W. of mile corner No. 57 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 14x8x10 ins. above ground, firmly set, marked T E X on E., N M 57 M on W., and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.

38.00

Top of ascent, bears E. and W., continue over rolling land.

58.87

Fall 1 lk. W. of mile corner No. 56½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 18x5x7 ins. above ground, firmly set, marked T E X on E., N M ½ M on W. and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.

59.17

Fall 01 lk. W. of the C.C. of secs. 20 and 29 T. 17 N. R. 37 E. H.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 6x10x6 ins. above ground, firmly set, marked C C on W., with 2 grooves on S., and 4 grooves on N. face.

59.34

Wire fence, extends west from the boundary fence.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 254 mile corner. The top of the cap is divided by a north and south stamped line 1 inch

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	<p>in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 254 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.</p> <p>The boundary fence is 05 links east of the corner.</p> <p>This corner is 50.7 links east of the position of the temporary corner on the offset random line.</p> <p>Land, rolling.</p> <p>Soil, sandy loam 3rd rate.</p> <p>No undergrowth.</p>
	<p style="text-align: center;">255th Mile</p> <p style="text-align: center;">N. 0° 06' 21" E.</p> <p>On true line, Texas and New Mexico boundary, over rolling land, sandy loam soil, no undergrowth, on west side of the boundary fence.</p>
18.89	<p>Fall 1 lk. E. of mile corner No. 56 of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 16x6x15 ins. above ground, firmly set, marked T E X on E., N M 56 M on W., and 09 on S. face; witnessed by traces of pits 24x24 ins. E. and W. thereof. A mound of stone around corner.</p>
58.81	<p>Fall 2 lks. E. of mile corner No. 55½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 14x6x8 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 09 on S. face; witnessed by traces of pits E. and W. thereof.</p>
59.35	<p>Fall 02 links E. of the C.C. of secs. 17 and 20, T.17 N.R.37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 6x10x6 ins. above ground, firmly set, marked C C on W., with 3 grooves on S. and 3 grooves on N. face.</p>
60.00	<p>Enter shifting sand and green brush, bears E. and W.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 255 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 255 General Land Office Reestablishment, 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 13 links east of the corner.

This corner is 54.2 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, sandy loam and loose sand 3rd and 4th rate.

No undergrowth.

256th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, no undergrowth, on west side of the boundary fence.

18.80

Wire fence, extends west from the boundary fence.

18.80

Fall 04 lks. E. of mile corner No. 55, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 18x14x10 ins. above ground, firmly set, marked T E X on E., N M 55 M on W., and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.

58.76

Fall 07 lks. E. of mile corner No. 54½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x22x12 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.

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Chains.

59.59

Fall 07 lks. E. of the C.C. of secs. 8 and 17, T. 17 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 6x12x6 ins. above ground, firmly set, marked C C on W. with 4 grooves on S., and 2 grooves on N. face: and witnessed by traces of pits 24x24 ins. N.S. and W. thereof.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 256 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 256 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 22 links east of the corner.

This corner is 57.9 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, loose sand, 4th rate.

No undergrowth.

257th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, no undergrowth, on west side of the boundary fence.

18.72

Fall 9 links E. of mile corner No. 54 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 16x12x8 ins. above ground

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Chains.

firmly set marked T E X on E., N M 54 M on W. and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.

58.76

Fall 11 lks. E. of mile corner No. 53 $\frac{1}{2}$, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 16x8x8 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.

59.85

Fall 11 lks. E. of the C.C. of secs 5 and 8, T 17, N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 7x12x7 ins. above ground, firmly set, marked C C on W. with 5 grooves on S. and 1 groove on N. face; and witnessed by traces of pits 24x24 ins. N., S., and W. thereof.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point.

By 1st set, 80.01 chs.,

By 2nd set, 79.99 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 257 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 257 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, no stone available for a mound.

The boundary fence is 39 links east of the corner.

This corner is 61.6 links east of the position of the temporary corner on the offset random line.

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Chains.

Land, rolling.

Soil, loose sand, 3rd and 4th rate.

No undergrowth.

258th Mile

N. $0^{\circ} 06' 21''$ E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, no undergrowth, on west side of the boundary fence.

35.00 Leave loose sand, bears E. and W; thence over medium firm sandy loam.

42.28 Road, bears NE. and SW.

58.77 Fall 16 lks. E. of mile corner No. 52 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x6x8 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and O 9 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.

60.04 Fall 16 lks. E. of the C.C. of secs. 5 and 32 T. 17-18 N., R. 37 E. N.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a quartzite stone 5x8x6 ins. above ground, firmly set, marked C C 37 E. on W., with 6 grooves 17 N. on S., and 6 grooves 18 N., on N. face; and witnessed by traces of pits 24x24 ins. N., S. and W. thereof.

60.05 Road, bears E. and W.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 258 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859

Chains.

Mile Corner No. 258 General Land Office Reestablishment 1911 United States Boundary Commission. "Pits impracticable, raise a mound of stone, 3½ ft. base, 2 ft. high, around corner.

The boundary fence is 67 links east of the corner.

This corner is 65.5 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, loose sand and sandy loam, 4th and 3rd rate.

No undergrowth.

259th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over rolling land, medium firm sandy loam soil, no undergrowth, on west side of the boundary fence.

18.74

Fall 18 lks. E. of mile corner No. 52 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x7x8 ins. above ground, firmly set, marked T H X on E., N M 52 M on W., and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.

40.00

Soil becomes loose sand, bears E. and W.

58.75

Fall 19 lks. E. of mile corner No. 51½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x8x10 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.

59.97

Fall 19 lks. E. of the C.C. of secs. 29 and 32, T. 19 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 5x12x6 ins. above ground, firmly set, marked C C on W., with 1 groove on S., and 5 grooves on N. face; and witnessed by pits 24x24 ins. N. S. and W. thereof.

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Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 259 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 259 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 94 links east of the corner.

This corner is 69.5 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, sandy loam and loose sand, 3rd and 4th rate.

No undergrowth.

260th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, no undergrowth, on west side of the boundary fence.

18.65

Fall 22 lks. E. of mile corner No. 51 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 17x9x10 ins. above ground, firmly set, marked T E X on E., N M 51 M on W. and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.

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Chains.

- 52.00 Soil becomes firm.
- 58.71 Fall 24 lks. E. of mile corner No. 50 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x8x10 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.
- 59.99 Fall 24 lks. E. of the C C of secs. 20 and 29, T. 18 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x4x6 ins. above ground, firmly set, marked C C on W., with 2 grooves on S. and 4 grooves on N. face; and witnessed by traces of pits 24x24 ins. N., S. and W. thereof.
- Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point
- By 1st set, 79.995 chs.,
- By 2nd set, 80.005 chs; the mean of which is
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 260 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 260 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.
- The boundary fence is 1.21 chs. east of the corner.
- This corner is 73.5 links east of the position of the temporary corner on the offset random line.
- Land, rolling.
- Soil, loose and firm sand 4th rate.
- No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

261st Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, descending gradually over rolling land, firm sandy soil, no undergrowth, on west side of the boundary fence.

- 7.50 Head of draw, course NW; ascend gradually.
- 14.00 Top of spur 50 ft. above head of draw, slopes west from higher land east of line; descend into draw.
- 18.70 Fall 26 lks. E. of mile corner No. 50 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 21x6x10 ins. above ground, firmly set, marked T E X on E., N M 50 M on W. and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.
- 31.55 Same draw crossed at 7.50 chs., dry wash in same, 50 links wide, course E., 150 feet below last top of spur; ascend.
- 48.00 Top of spur, slopes east from higher land west of line, 50 ft. above draw; descend.
- 57.10 Top of limestone bluff, 50 ft. high, bears E. and W.
- 58.00 Bottom of bluff, bears E. and W.
- 58.60 Dry wash 50 links wide, course E., in Cramer Draw, 90 ft. below top of spur; ascend gradually.
- 59.64 Fall 26 lks. E. of mile corner No. 49½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 18x8x10 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 09 on S. face; witnessed by traces of pits 36x36x6 ins. E. and W. thereof.
- 59.82 Fall 26 lks. E. of the C.C. of secs. 17 and 20, T. 18 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x5x5 ins. above ground, firmly set, marked C C on W., with 3 grooves on S., and 3 grooves on N. face; and witnessed by traces of pits 24x24 ins.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

N. S. and W. thereof.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 261 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 261 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 1.35 chs. east of the corner.

This corner is 77.6 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, sandy 3rd rate.

No undergrowth.

262nd Mile

N. $0^{\circ} 06' 21''$ E.

On true line, Texas and New Mexico boundary, ascend over rolling land, sandy loam soil, no undergrowth, on west side of boundary fence.

10.00

Top of ascent, bears E. and W; thence over almost level land, ascend very gradually.

13.30

Wire fence, 1.12 chs. W. of SE. corner; enter cultivated land, extends west from N. and S. fence E. of line. The boundary fence is 1.37 chs. E. of line at this point. A road extends from the east and follows the boundary fence north, on the west side

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

- thereof, Romero, Tex. to Amistad, N.M.
- 22.00 Wire fence E. and W., the N. and S. fence offsets from a point 1.10 chs. E. to point 18 lks. W. of line; leave cultivated land.
- 24.96 The location of Clark's monument No. 20, according to his plat, no evidence of the same found.
- 23.50 N. side of cultivated land, extends W. from N. and S. fence W of line. Line now passing over firm prairie land.
- 53.00 House and windmill 16.00 chs. W. of line. A. Skinner.
- 58.64 Fall 28 lks. E. of mile corner No. 48 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 18x7x10 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.
- 59.45 The NE. corner of wire fence, bears 32 links W. The road following the west side of the boundary fence turns and extends west on north side of wire fence running west from this fence corner.
- 60.20 Wire fence, extends west from the boundary fence. Land becomes level.
- Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point
- By 1st set, 80.01 chs.,
- By 2nd set, 79.99 chs; the mean of which is
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 262 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 262 General Land Office Reestablish-

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

ment, 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post, 5 $\frac{1}{2}$ ft. dist; raise a mound of earth, 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is 1.39 chs. east of the corner.

This corner is 81.7 links east of the position of the temporary corner on the offset random line.

Land, rolling and level prairie.

Soil, sandy loam, 1st rate.

No undergrowth.

263rd Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over level prairie land, sandy loam soil, no undergrowth, on west side of the boundary fence.

18.62 Fall 28 lks. E. of mile corner No. 48 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 26x8x11 ins. above ground, firmly set, marked T E X on E., N M 48 M on W., and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.

20.12 Wire fence, extends west from the boundary fence.

58.66 Fall 28 lks. E. of mile corner No. 47 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 16x6x8 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.

59.83 Fall 28 lks. E. of the C.C. of secs. 5 and 8, T. 18 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x5x6 ins. above ground, firmly set, marked C C on W., with 5 grooves on S. and 1 groove on N. face; and witnessed by pits 24x24x6 ins., N., S., and W. thereof.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 263 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 263 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth, 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is 1.33 chs. east of the corner.

This corner is 86.0 links east of the position of the temporary corner on the offset random line.

Land, level prairie.

Soil, sandy loam, 1st rate.

No undergrowth.

264th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over level prairie, sandy loam soil, no undergrowth, on west side of the boundary fence.

18.63

Fall 30 lks. E. of mile corner No. 47, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 16x6x8 ins. above ground, firmly set, marked T E X on E., N M 47 M on W., and OS on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.

45.95

Road extends E. to the boundary fence, thence N. on the W. side of the same.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	
46.06	Fall 33 lks. E. of the SE. corner of wire fence, thence between wire fences.
58.58	Fall 31 lks. E. of mile corner No. 46 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 13x6x10 ins. above ground, firmly set, marked T E X on E., N M 46 $\frac{1}{2}$ M on W., and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.
59.75	Fall 31 lks. E. of the C.C. of secs. 5 and 32, T. 18-19 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 11x5x6 ins. above ground, firmly set, marked C C 37 E on W., with 6 grooves 18 N., on S., and 6 grooves 19 N on N. face; and witnessed by pits 24x24x6 ins. N., S. and W. thereof.
59.75	Fall 41 lks. E. of the NE. corner of wire fence.
60.10	Road, runs W. from the road along W. side of boundary fence. Begin to descend gradually into Monia draw.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 264 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 264 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post, 5 $\frac{1}{2}$ ft. dist; raise a mound of earth, 6 ft. base, 2 ft. high, S. of corner. The boundary fence is 1.20 chs. east of the corner. This corner is 90.4 links east of the position of the temporary corner on the offset random line.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.	land, level and sloping prairie.
	Soil, sandy loam, 1st rate.
	No undergrowth.
	265th Mile N. 0° 06' 21" E.
	On true line, Texas and New Mexico boundary, descend gradually, sandy loam soil, no undergrowth, on west side of boundary fence.
11.00	Descent becomes steeper, bears E. and W.
18.60	Fall 32 links E. of mile corner No. 46 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 20x5x8 ins. above ground, firmly set, marked T E X on E., N M 46 M on W., and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.
24.24	Road, bears NW. and SE. This is the road that has been following boundary fence.
43.60	Dry wash, 50 links wide, in Monia draw, course S. of E., 60 ft. below the general elevation of the surrounding country. Ascend steep bank 25 ft. high, out of wash.
44.50	Top of bank, bears E. and W; thence ascend over rolling land, loose sandy soil.
47.76	Wire fence, extends west from the boundary fence.
56.00	Soil becomes firm sandy loam.
58.57	Fall 32 lks. E. of mile corner No. 45½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 19x5x6 ins. above ground, firmly set, marked T E X on E., N M ½ M on W. and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.
59.04

Fall 38 lks. E. of the C.C. of secs. 29 and 32, T.19 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x6x6 ins. above ground, firmly set, marked C C on W. with 1 groove on S. and 5 grooves on N. face; and witnessed by pits 24x24x6 ins. N. S. and W. thereof.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of middle point

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs., the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 265 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 265 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 1.03 chs. east of the corner.

This corner is 94.7 links east of the position of the temporary corner on the offset random line.

Land, sloping prairie and rolling.

Soil, sandy loam and loose sand, 1st and 3rd rate.

No undergrowth.

266th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, ascend gradually over rolling land, sandy soil, no undergrowth, on west side of the boundary fence.

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Chains.	
18.37	Wire fence, extends west from the boundary fence.
18.46	Road, extends east to the boundary fence, thence north.
18.60	Fall 34 lks. E. of mile corner No. 45, of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 12x10x10 ins. above ground, firmly set, marked T E X on E., N M 45 M on W., and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.
18.61	Wire fence, extends west from the boundary fence.
21.50	Road, E.SE and W.NW. Amistad, N.M. to Romero, Tex.
28.00	Top of ascent, bears E. and W; thence over almost level prairie, firm sandy loam soil.
58.62	Fall 34 lks. E. of mile corner No. 44 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 16x6x10 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.
60.15	Fall 34 lks. E. of the C.C. of secs. 20 and 29, T. 19 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x10x6 ins. above ground, firmly set, marked C C on W., with 2 grooves on S. and 4 grooves on N. face; and witnessed by pits 24x24x6 ins. N., S., and W. thereof.
60.62	Wire fence, extends west from the boundary fence.
60.72	Road, bears E. and W.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point
	By 1st set, 79.99 chs.,
	By 2nd set, 80.01 chs., the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 266 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 266 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits, 36x36x12 ins. E. and W. of post, 5½ ft. dist; raise a mound of earth, 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is 93 links east of the corner.

This corner is 99.2 links east of the position of the temporary corner on the offset random line.

Land, rolling and almost level.

Soil, sandy, 3rd rate, sandy loam, 1st rate.

No undergrowth.

267th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over level prairie land, firm sandy loam soil, no undergrowth, along west side of road, on west side of the boundary fence.

18.56

Fall 32 lks . E. of mile corner No. 44 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 20x8x10 ins. above ground, firmly set, marked T E X on E., N M 44 M on W. and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.

22.00

Land becomes slightly rolling.

58.58

Fall 31 lks. E. of mile corner No. 43½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 22x7x8 ins. above ground,

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- Chains. firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.
- 59.81 Wire fence, extends west from the boundary fence.
- 60.23 Fall 31 lks. E. of the C.C. of secs. 17 and 20, T. 19 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 5x10x6 ins. above ground, firmly set, marked C C on W. with 3 grooves on E., and 3 grooves on N. face; and witnessed by pits 24x24x6 ins. N., S. and W. thereof.
- No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 267 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 267 General Land Office Reestablishment 1911 United States Boundary Commission ". Dig pits 36x36x12 ins. E. and W. of post 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.
- The boundary fence is 78 links east of the corner.
- This corner is 103.7 links east of the position of the temporary corner on the offset random line.
- Land, level and slightly rolling.
- Soil, firm sandy loam, 1st rate.
- No undergrowth.

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Chains.

268th Mile

N. 0° 06' 21" E

On true line, Texas and New Mexico boundary, over gently rolling prairie land, firm sandy loam soil, no undergrowth, along west side of road, on west side of boundary fence.

18.53

Fall 29 lks. E. of mile corner No. 43 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 15x6x11 ins. above ground, firmly set, marked T E X on E., N M 43 M on W., and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.

48.00

Opposite point of observation on random line.

Meridian observation of the sun for time at temporary mile corner No. 267 plus 48.00 chs. on the random line, June 7, 1911.

Equation of time $-1^m 30^s$

Watch times of transit.

	h	m	s
Sun's W. limb	11	48	02 a.m.
Sun's center	11	49	12
Sun's E. limb	11	50	22
Watch time of apparent noon	11	49	12
L.M.T. of apparent noon	11	58	30
Watch slow of L.M.T.		9m	18s

58.50

Fall 28 lks. E. of mile corner No. 42½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 16x6x8 ins. above ground, firmly set, marked T E X on E., N M ½ M on W. and 09 on S. face; witnessed by traces of pits 36x36 ins. E. and W. thereof.

60.46

Fall 28 lks. E. of the C.C. of secs. 8 and 17, T. 19 N., R. 37 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x12x6 ins. above ground, firmly set

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Chains.

marked C C on W., with 4 grooves on S., and 5 grooves on N. face; and witnessed by traces of pits 24x24 ins. N., S. and W. thereof.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 268 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 268 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post $5\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high, S. of corner.

The boundary fence is 63 links east of the corner.

This corner is 108.4 links east of the position of the temporary corner on the offset random line.

Land, gently rolling.

Soil, firm sandy loam, 1st rate.

No undergrowth.

269th Mile

N. $0^{\circ} 06' 21''$ E.

On true line, Texas and New Mexico boundary, over level prairie, firm sandy loam soil, no undergrowth, along west side of road, on west side of boundary fence.

18.50

Fall 26 lks. E. of mile corner No. 42 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 15x10x10 ins. above ground, firmly set, marked T M K on E., H M 42 M on W., and O9 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.

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Chains.	
21.85	Wire fence, extends west from the boundary fence.
29.00	Enter cultivated land, extends west from the boundary fence.
58.49	Fall 24 lks. E. of mile corner No. 41 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x6x8 ins. above ground, firmly set, marked T B X on E., N M $\frac{1}{2}$ M on W., and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.
60.15	Leave cultivated land, bears E. and W; wire fence extends west from the boundary fence.
60.60	Fall 24 lks. E. of the C.C. of secs. 5 and 8, T. 19 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 6x10x6 ins. above ground, firmly set, marked CC on W., with 5 grooves on S., and 1 groove on N. face; and witnessed by pits 24x24x6 ins., N., S. and W. thereof.
73.80	Road, bears E. and W.
74.97	Road, bears NW and SE. to E. and W. road.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 269 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 269 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner. The boundary fence is 47 links east of the corner. This corner is 113.1 links east of the position of the temporary corner on the offset random line.

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Chains.

Land, level.

Soil, firm sandy loam, 1st rate.

No undergrowth.

June 16, 1911.

June 15, 1911. Adjust temporary corners from No. 270 to No. 287 from random to true line.

270th Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over level prairie land, firm sandy loam soil, no undergrowth, along west side of road, on west side of boundary fence.

18.51 Fall 22 lks. E. of mile corner No. 41, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 16x8x11 ins. above ground, firmly set, marked T E X on E., N M 41 M on W., and O9 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.

30.66 Wire fence, extends west from the boundary fence.

58.44 Fall 19 lks. E. of mile corner No. 40 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x6x8 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and O9 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.

60.68 Fall 19 lks. E. of the C.C. of secs. 5 and 32, T. 19-20 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 7x11x6 ins. above ground, firmly set, marked C C 37 E on W., with 6 grooves 19 N on S., and 6 grooves 20 N on N. face; and witnessed by pits 24x24x6 ins. N., S. and W. thereof.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

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Chains.

By 1st set, 79.995 chs.,
 By 2nd set, 80.005 chs; the mean of which is
 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
 filled with concrete, flanged at the bottom and sur-
 mounted with a brass cap, 24 ins. into the ground for
 the 270 mile corner. The top of the cap is divided
 by a north and south stamped line 1 inch in length,
 and marked "Texas" on the east, "New Mexico" on the
 west thereof, and also marked, "Clark Boundary 1859
 Mile Corner No. 270 General Land Office Reestablish-
 ment 1911, United States Boundary Commission." Pits
 impracticable, no stone available for a mound.
 The boundary fence is 39 links east of the corner.
 This corner is 117.8 links east of the position of
 the temporary corner on the offset random line.
 Land, level.
 Soil, firm sandy loam, 1st rate.
 No undergrowth.

271st Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over
 level prairie land, medium firm sandy soil, no
 undergrowth, along west side of road, on west side
 of boundary fence.
 18.60 Fell 15 lks. E. of mile corner No. 40 of the U.S.
 public land survey of the Texas and New Mexico boundary
 line, which is a sandstone 13x10x6 ins. above ground,
 firmly set, marked T E X on E., N M 40 M on W., and 09
 on S. face; witnessed by traces of pits E. and W.
 thereof.
 20.75 Wire fence, extends west from the boundary fence.

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Chains.

- 58.53 Fall 11 lks. E. of mile corner No. 39 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a quartzite stone 9x6x8 ins. above ground, firmly set, marked T E X on E., H M $\frac{1}{2}$ M on W. and 09 on S. face; witnessed by traces of pits E. and W. thereof.
- 60.93 Fall 11 lks. E. of the CC of secs. 29 and 32, T. 20 N. R. 27 E., N.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x11x8 ins. above ground, firmly set marked C C on W., with 1 groove on S., and 5 grooves on N. face; and witnessed by traces of pits N., S. and W. thereof.
- No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 271 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 271 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.
- The boundary fence is 24 links east of the corner. This corner is 122.7 links east of the position of the temporary corner on the offset random line. Land, level.
- Soil, medium firm sandy, 3rd rate.
- No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

272nd Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, over rolling prairie land, medium firm sandy soil, no undergrowth, along west side of road, on west side of boundary fence.

18.51 Fall 6 lks. E. of mile corner No. 39 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 14x12x8 ins. above ground, firmly set, marked T E X on E., N M 39 M on W., and 09 on S. face; witnessed by traces of pits.

47.10 Wire fence, extends west from the boundary fence.

48.22 Road along boundary fence turns and extends to the NW.

58.53 Fall 3 lks. E. of mile corner No. 38½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a quartzite stone 7x7x7 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 09 on S. face; witnessed by traces of pits E. and W. thereof.

61.13 Fall 3 lks. E. of the C.C. of secs. 20 and 29, T. 20 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is an iron pipe 4 ins. dia., 6 ins. above ground, firmly set, marked C C on W., with 2 grooves on S., and 4 grooves on N. face; and witnessed by traces of pits N., S. and W. thereof.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 272 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clerk Boundary 1859

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Chains.

Mile Corner No. 272 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for mound.

The boundary fence is 08 links east of the corner.

This corner is 127.6 links east of the position of the temporary corner on the offset random line.

Land, rolling.

Soil, medium firm sandy, 3rd rate.

No undergrowth.

273rd Mile

N. 0° 06' 21" E.

On true line, Texas and New Mexico boundary, descend over rolling land, medium firm sandy soil, no undergrowth, on west side of boundary fence.

18.54

Fell 01 lk. W. of mile corner No. 38 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 20x12x10 ins. above ground, firmly set, marked T E X on E., N M 38 M on W., and 09 on S. face; witnessed by pits 36x36x6 ins. E. and W. thereof.

18.55

Wire fence, extends west from the boundary fence.

No difference between measurements of 22.25 chs. by two sets of chainmen.

22.25

To reestablished Clark monument No. 21 which is now marked with a sandstone, 5x5x7 ins. above ground and marked

N M on the W.,

1859 on the S.,

1900 on the N. face.

This stone was set by Levi S. Preston, U.S. Deputy Surveyor in 1900 beside a sandstone which he found and which was marked

X I T on the E.,

N M on the W. face and

1885 on the top.

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Chains.

No evidence of a mound was found at this point, nor of the sandstone which Preston found and describes. This old sandstone was in position beside the Preston stone in 1909, when this monument was visited by me in connection with the U.S. public land surveys, closing on the Tex.-New Mexico boundary. This monument is 56.68 chs. east and 1.11 chs. north of the $\frac{1}{2}$ sec. corner between secs. 19 and 24 on the west boundary of fractional T. 20 N., R. 37 E., N.M.P.M. of the U.S. public land surveys in New Mexico, practically agreeing with the tie furnished Levi S. Preston, by W. S. Mabry, Texas Surveyor, who found and identified this monument prior to 1885.

To perpetuate the location of monument No. 21 I construct a concrete monument at the point occupied by said marked stone, having a cubical base 30 ins. square, set 30 ins. into the ground, and a superstructure in the form of a frustum of a cone, encased in galvanized iron, having a lower diameter of 24 ins., an upper diameter of 18 ins., and projecting 30 ins. above the ground; in the top of which there is embedded a circular brass plate, 6 ins. in diameter, marked in the center by a N. and S. division line, $1\frac{1}{2}$ ins. long, with "TEXAS" on the E., and "NEW MEXICO" on the W. thereof, and also marked, "CLARK BOUNDARY 1859 CLARK MON NO. 21" in the N. half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half. This monument erected on the line of the boundary fence. Built June 7, 1911.
True line completed to monument No. 21, June 15, 1911.

At this monument on the random line, an observation of Polaris for meridian was made as follows:

Date, June 7, 1911.

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Chains.

Longitude of station 103° 02'
 Latitude of station 35° 57'
 Declination of Polaris 88° 49' 41.9"
 Sights on Polaris marked 23.75 chs. N. of station.
 Mean time U.C. of Polaris, Greenwich, 8h 28.0m a.m.
 Correction for longitude -1.1m

Local mean time U.C. of Polaris 8h 26.9m

	Watch times of observations		
	h	m	s
Telescope direct	7	07	00 p.m.
" reversed	7	08	13
" direct	7	09	45
" reversed	7	10	58
Mean watch time of observations	7h	08m	59s
Watch slow of L.M.T.		9m	18s
Local mean time of observation	7h	18m	17s
L.M.T. of obsn.	7h	18.3m	p.m.
L.M.T. of U.C.	8h	26.9m	a.m.
Hour angle, W.	10h	51.4m	

The azimuth of Polaris corresponding to this hour angle is 0° 24.7' west of the meridian. The angle between the azimuth line and the true random line N. 0° 05' E. is therefore 29.7'. Azimuth offset distance laid off to the east to determine the true random line, N. 0° 05' E. is 20.53 lks. At a point 23.75 chs. north of the point of observation, the actual random line falls .36 ft. to the left of the true random N. 0° 05' E. indicating an accumulated error of 48 seconds to the left, in 23 miles and 22.25 chs. from mile corner No. 249. The bearing of the random st monument No. 21, therefore is N. 0° 04' 12" E.

RANDOM LINE

Clark monument No. 21 (272 M. plus 22.25 chs) to the N.W. corner of Texas (310 M. plus 17.04 chs).

June 8, 1911. On June 7, the observation of Polaris for meridian at a point 1.29 chs. west of monument No. 21, indicated the azimuth of Polaris to be 24.7 minutes west of the true meridian. The angle between this azimuth line and a line having a bearing of N. 0° 05' W. is 19.7' and the azimuth offset distance to determine this line, 13.62 links. I make

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Chains. this offset from the azimuth line at its north end, thus determining a line N. $0^{\circ} 05' W.$ through the point of observation. I then offset this line 1.29 chs. to the east to monument 21.

The U. S. public land surveys indicated that the course of the boundary line from monument No. 21 to the N.W. corner of Texas was N. $0^{\circ} 05' W.$ and this course was selected as the course of the random line.

Thence I run

N. $0^{\circ} 05' W$

On a random line from monument No. 21, setting temporary mile corners at intervals of 80.00 chs. by two sets of chainmen, continuing measurement from mile corner no. 272

Temporary mile corner no. 280 plus

24.14

and of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes at corresponding point. Accumulated error in day's run of 8 miles and 1.89 chs., 22 seconds to the right. The course of the random line at the point of observation is therefore, N. $0^{\circ} 04' 38'' W.$

June 8, 1911.

June 9, 1911. I adjust the course of the random line and continue

N. $0^{\circ} 05' W$

Temporary mile corner No. 292 plus

52.00

End of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes at corresponding point. Accumulated error in day's run of 12 miles and 27.86 chs. is 8 seconds to the right. The bearing of the random line at the point of observation therefore is N. $0^{\circ} 04' 42'' W.$

June 9, 1911.

June 10, 1911.

I adjust the course of the random line and continue,

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Chains.

N. 0° 05' W

Temporary mile corner No. 302 plus.

41.84

End of day's run. At this point I observe Polaris for meridian, which observation is recorded in the true line notes at corresponding point. Accumulated error in day's run of 9 miles and 69.84 chs., is 106 seconds to the right. The bearing of the random line at the point of observation therefore is N. 0° 03' 14" W. A steady wind from the same direction prevailed all this day.

June 10, 1911.

 June 11, 1911. No field work.

June 12, 1911. I adjust the course of the random line and continue.

N. 0° 05' W.

Temporary mile corner No. 310 plus

17.04

Fall 0.78 chs. west of the northwest corner of Texas, also the northwest corner of the boundary fence and the X I T pasture, hereinafter described in the true line notes.

At this point I observe Polaris for meridian which observation is recorded in the true line notes. Accumulated error in day's run of 7 miles and 55.20 chs., 33 seconds to the right. The bearing of the random line at the point of observation therefore is N. 0° 04' 27" W.

The true falling of the random line N. 0° 04' 27" W. adjusted for accumulative error in alignment is 1.096 chs. west. Distance from monument No. 21 to the northwest corner of Texas, 37 miles and 74.79 chs. The course of the true line therefore is N. 0° 3' 45" W.

June 12, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

TRUE LINE

Clark monument No. 21 to the northwest corner of Texas.

June 15, 1911. True line continued from monument No. 21 on 273rd mile.

N. 0° 3' 46" W.

On true line from monument No. 21, continuing the distance from mile corner No. 272; descend over rolling land, sandy and gravelly soil, along the boundary fence.

40.00

Land becomes broken.

61.19

Fall 01 lk. E. of the C.C. of secs. 17 and 20 T. 20 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 18x6x10 ins. above ground firmly set, marked C C on W., with 3 grooves on S. and 3 grooves on N. face.

67.03

Wire fence, extends W. from the boundary fence.

No difference between measurements of 57.75 chs. by two sets of chainmen, from Mon. No. 21.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 273 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 273 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable, no stone available for a mound.

The boundary fence is 04 links west of the corner.

This corner is 2.1 links east of the position of the temporary corner on the random line.

Land, rolling and broken.

Soil, sandy and gravelly, 3rd and 4th rate.

No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	274th Mile	
	N. 0° 03' 46" W.	
	On true line, Texas and New Mexico boundary, descend over shifting sand hills, no undergrowth, on east side of boundary fence.	
14.90	Bottom of descent 125 ft. below 272nd mile corner, bears E. and W; thence over dry sandy arroyo in Tramparas Draw, course E. Major Long's creek of Clark survey and on the Texas side of the line called Middlewater creek.	
18.56	Leave arroyo and ascend over rolling sand hills.	
58.32	Fall 1 lk. W. of mile corner No. 36 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 9x10x12 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 08 on S. face.	
61.28	Fall 1 lk. W. of the C.C. of secs. 8 and 17, T 20 N.R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 15x11x6 ins. above ground, firmly set, marked C C on W., with 4 grooves on S. face.	
	No difference between measurements of 80.00 chs. by two sets of chainmen.	
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 274 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 274 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.	
	The boundary fence is 13 links west of the corner.	
	This corner is 4.9 links east of the position of the temporary corner on the random line.	
	Land, rolling and sand hills.	
	Soil, sand 4th rate.	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

No undergrowth.

275th Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary, ascend over rolling land, loose sandy soil, no undergrowth, on east side of boundary fence.

17.00

Top of ascent, bears E. and W; continue over rolling land.

18.38

Fall 4 lks. W. of mile corner No. 36, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x7x6 ins. above ground, firmly set, marked T E X on E., N M 36 M on W., and OS on S. face.

58.22

Fall 4 lks. W. of mile corner No. 35½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 7x6x6 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and OS on S. face.

61.37

Fall 4 lks. W. of the C.C. of secs. 5 and 8, T. 20 N., R. 37 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x13x6 ins. above ground firmly set, marked C C on W., with 5 grooves on S. face.

78.09

Five links west of this point the boundary fence deflects to the NE.

78.14

Boundary fence, NE. and SW.

78.50

Opposite wire fence extends east from boundary fence.

79.13

Boundary fence, NW. and SE.

79.17

Four links west of this point the boundary fence deflects and again extends N.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 275 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length, and marked "Texas" on the east, "New Mexico on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 275 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 05 links west of the corner.

This corner is 7.6 links east of the position of the temporary corner on the random line.

Land, rolling.

Soil, loose sand 4th rate.

No undergrowth.

276th Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary, over rolling land, loose soil, no undergrowth, on east side of the boundary fence.

18.20

Fall 2 lks. W. of mile corner No. 35 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x8x6 ins. above ground, firmly set, marked T E X on E., N M 35 M on W., and 08 on S. face.

50.02

Fall 3 lks. W. of the C.C. of secs. 6 and 31, T. 20-21 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 12x5x8 ins. above ground, firmly set, marked C C on W., with 6 grooves and 30 on N. face.

58.14

Fall 3 lks. W. of mile corner No. 34½ of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 12x5x5 ins. above ground firmly set, marked T E X on E., N M ½ M on W., and 08 on S. face.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 26 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for the 276 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clerk Boundary 1859 Mile Corner No. 276 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 35 links west of the corner.

This corner is 10.2 links east of the position of the temporary corner on the random line.

Land, rolling.

Soil, loose sand, 4th rate.

No undergrowth.

277th Mile

N. $0^{\circ} 03' 46''$ W.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, no undergrowth, on east side of the boundary fence.

18.11

Fall 3 lks. W. of mile corner No. 24 of the U.S. public land survey of the Texas and New Mexico boundary which is a limestone 10x4x6 ins. above ground, firmly set, marked T M X on E., N M 24 M on W., and 08 on S. face.

58.08

Fall 3 lks. W. of mile corner No. 23 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x6x6 ins. above ground, firmly set, marked T M X on E., N M $\frac{1}{2}$ M on W. and 08 on S. face.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

No difference between measurements of 80.00 cha. by two sets of chainmen.

80.00

Set a hollow iron post 56 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 277 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 277 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 58 links west of the corner.

This corner is 12.6 links east of the position of the temporary corner on the random line.

Land, rolling.

Soil, loose sand, 4th rate.

No undergrowth.

278th Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary, over almost level land, loose sandy soil, no undergrowth, on east side of the boundary fence.

18.06

Fall 2 lks. W. of mile corner No. 33 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x10x6 ins. above ground, firmly set, marked T E X on E., N M 33 M on W., and 08 on S. face.

58.03

Fall 2 lks. W. of mile corner No. 32½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 12x4x5 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 08 on S. face.

Difference between measurements of 80.00 cha. by two sets of chainmen is 2 links; position of the middle point

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

80.00	<p>By 1st set, 80.01 chs; By 2nd set, 79.99 chs; the mean of which is</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 278 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 278 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.</p> <p>The boundary fence is 75 links west of the corner. This corner is 14.8 links east of the position of the temporary corner on the random line.</p> <p>Land, almost level. Soil, loose sand, 4th rate. No undergrowth.</p>
18.01	<p style="text-align: center;">279th Mile N. 0° 03' 46" W.</p> <p>On true line, Texas and New Mexico boundary, over almost level land, loose sandy soil, no undergrowth, on east side of the boundary fence.</p> <p>Fall 4 lks. W. of mile corner No. 32 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x12x6 ins. above ground, firmly set, marked T E X on E., N M 32 M on W., and 08 on S. face.</p>
40.00	<p>Land becomes rolling, bears E. and W.</p>
51.12	<p>Fall 5 lks. W. of the C.C. of secs. 18 and 19, T. 21 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x7x6 ins. above ground, firmly set, marked C C on W., with 3 grooves on E., and 3 grooves on N. face.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

58.02 Fall 5 lks. W. of mile corner No. 31 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x10x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 08 on S. face.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 279 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof and also marked, "Clark Boundary 1859 Mile Corner No. 279 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 85 links west of the corner.

This corner is 17.0 links east of the position of the temporary corner on the random line.

Land, almost level and rolling.

Soil, loose, sand, 4th rate.

No undergrowth.

280th Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary, over rolling land, loose sandy soil, no undergrowth, on east side of the boundary fence.
and west.

1.73 Wire fence, extends east from the boundary fence.

17.99 Fall 7 lks. W. of mile corner No. 31 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x15x6 ins. above ground, firmly set, marked T E X on E., N M 31 M on W., and 08 on S. face.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

51.46

Fall 8 lks. W. of the C.C. of secs. 7 and 18, T. 21 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x6x6 ins. above ground, firmly set, marked C C on W., with 4 grooves on S., and 2 grooves on N. face.

57.94

Fall 9 lks. W. of mile corner No. 30 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x12x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and O B on S. face.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 80.01 chs;

By 2nd set, 79.99 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 280 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas " on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 280 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 96 links west of the corner.

This corner is 19.1 links east of the position of the temporary corner on the random line.

Land, rolling

Soil, loose, 4th rate.

No undergrowth.

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Chains.

The azimuth of Polaris corresponding to this hour angle is $0^{\circ} 31.2'$ west of the meridian. The angle therefore, between this azimuth and the true random line, N. $0^{\circ} 05' W.$ is $26.2'$. The azimuth offset distance laid off to the east to determine the true random is 16.13 links. At a point 21.18 chs. north of the point of observation, the actual random line falls .15 ft. to the right of the true random line, indicating an accumulated error of 22 seconds to the right in 8 miles and 1.69 chs. The course of the actual random line at the point of observation, therefore, is N. $0^{\circ} 04' 38'' W.$
 On June 8th the sky was overcast, and no observation of the sun for time was possible.

32.98

 The location of Clark's monument No. 22 according to his plat, no indications of said monument found.

51.80

Fall 10 lks. W. of the C.C. of secs. 6 and 7, T 21. N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x4x4 ins. above ground firmly set, marked C C on W., with 5 grooves on S., and 1 groove on N. face.

57.92

Fall 10 lks. W. of mile corner No. 29 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 10x4x5 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and OS on S. face.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 281 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 281 General Land Office Reestablishment

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 78 links west of the corner.

This corner is 21.7 links east of the position of the temporary corner on the random line.

Land, rolling.

Soil, loose sand, 4th rate.

No undergrowth.

282nd Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary, over almost level land, medium firm sandy soil, scattering small undergrowth, on east side of the boundary fence.

17.91

Fall 11 lks. W. of mile corner No. 29 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 12x5x6 ins. above ground, firmly set, marked T E X on E., N M 29 M on W., and 08 on S. face.

57.87

Fall 12 lks. W. of mile corner No. 28½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x3x6 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 08 on S. face.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 282 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 282 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

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Chains.

The boundary fence is 77 links west of the corner.
This corner is 24.6 links east of the position of the temporary corner on the random line.

Land, almost level.

Soil, medium firm sandy, 4th rate.

Undergrowth, amole.

283rd Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary, over almost level land, sandy loam soil, scattering amole undergrowth, on east side of the boundary fence.

17.86

Fall 13 lks. W. of mile corner No. 28 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x7x6 ins. above ground, firmly set, marked T E X on E., N M 28 M on W., and OS on S. face; witnessed by pits E. and W. thereof.

23.80

Wire fence, extends east from the boundary fence.

52.76

Fall 10 lks. W. of the C.C. of secs. 30 and 31, T. 22 N. R. 37 E., N.M., on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 10x5x5 ins. above ground, firmly set, marked C C on W., with 1 groove on S. and 5 grooves on N. face.

57.82

Fall 10 lks. W. of mile corner No. 27½ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 12x4x6 ins. above ground, firmly set marked T E X on E., N M ½ M on W., and OS on S. face.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 283 mile corner. The top of the cap is divided

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Chains.

by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 283 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 84 links west of the corner.

This corner is 27.4 links east of the position of the temporary corner on the random line.

Land, almost level.

Soil, sandy loam 4th rate.

Undergrowth, amole.

284th Mile

N. $0^{\circ} 03' 46''$ W.

On true line, Texas and New Mexico boundary, over gently rolling land, sandy loam soil, scattering amole undergrowth, on east side of the boundary fence.

36.88 Fall 28 links E. of an iron pipe $1\frac{1}{2}$ ins. dia., 15 ins. above ground, marked B 5 on the S., 49 on SE., 68 on NE sides. Pertains to the Texas surveys.

57.76 Fall 08 lks. W. of mile corner No. 26 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x7x6 ins. above ground, firmly set, marked T E X on E., H M $\frac{1}{2}$ M on W., and 08 on S. face.

No difference between measurements of 80.00 chs. by two sets of chainmen:

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 284 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 284 General Land Office Reestablishment

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Chains.

1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 93 links west of the corner.

This corner is 30.2 links east of the position of the temporary corner, on random line.

Land, gently rolling.

Soil, light sandy loam, 4th rate.

Undergrowth, smole.

285th Mile

H. $0^{\circ} 03' 46''$ W.

On true line, Texas and New Mexico boundary, over gently rolling land, light sandy loam soil, scattering smole undergrowth, on east side of the boundary fence.

36.80

Fall 31 links east of an iron pipe $1\frac{1}{2}$ ins. dia., 18 ins. above ground, marked B 5 on N., 68 on NE, 69 on W. sides; pertains to the Texas surveys.

57.68

Fall 8 lks. W. of mile corner No. 25 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x6x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 08 on S. face.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 79.99 chs;

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 285 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 285 General Land Office Reestablishment 1911 United States Boundary Commission." Pits

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Chains.	
	<p>impracticable, no stone available for a mound.</p> <p>The boundary fence is 1.04 chs. west of the corner.</p> <p>This corner is 23.0 links east of the position of the temporary corner on the random line.</p> <p>Land gently rolling.</p> <p>Soil, light sandy loam 3rd rate.</p> <p>Undergrowth, amole.</p>
	<p>286th Mile</p> <p>N. 0° 03' 46" W.</p> <p>On true line, Texas and New Mexico boundary, over level land, light sandy soil, no undergrowth, on east side of the boundary fence.</p>
17.68	<p>Fall 10 lks. W. of mile corner No. 25 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x10x8 ins. above ground, firmly set, marked T E X on E., N M 25 M on W., and 08 on S. face.</p>
36.78	<p>Road, bears E. and W.</p>
36.80	<p>Fall 96 links E. of angle corner in boundary fence from which the fence deflects N. 18° E.</p>
38.70	<p>The boundary fence bears N. 18° E. and S. 18° W.</p>
39.00	<p>House, bears 12 chs. west.</p>
44.60	<p>Fall 1.90 chs. W. of angle corner in boundary fence, from which it extends N. and S. 18° W.</p>
54.14	<p>Fall 10 lks. W. of the C.C. of secs. 7 and 18, T. 22 N.R. 37 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 7x4x6 ins. above ground, firmly set, marked C C on W., with 4 grooves on S., and 2 grooves on N. face.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap 24 ins. into the ground for</p>

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Chains. the 286 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 286 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 2.76 chs. east of the corner.

This corner is 35.8 links east of the position of the temporary corner on the random line.

Land, level.

Soil, light sandy loam, 4th rate.

No undergrowth.

287th Mile

N. $0^{\circ} 03' 46''$ W.

On true line, Texas and New Mexico boundary, over rolling prairie land, sandy loam soil, no undergrowth, on west side of the boundary fence.

12.15 Road, bears SW. and NE. to forks of road at boundary fence.

15.50 Road, bears E. and W.

17.70 Fall 9 lks. W. of mile corner No. 24 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x10x8 ins. above ground, firmly set, marked T E X on E., N M 24 M on W., and 08 on S. face.

54.00 Opposite point of observation on random line.
Meridian observation of the sun for time at temporary mile corner No. 286 plus 54.00 chs. on the random line, June 9, 1911.

Equation of time -1' 08"

	Watch times of transit		
	h	m	s
Sun's W. limb	11	48	19 a.m.
Sun's center	11	49	28
Sun's E. limb	11	50	37
Watch time of apparent noon	11	49	28
L.M.T. of apparent noon	11	58	52
Watch slow of L.M.T.		9m	24s

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Chains.

54.63

Fall 8 lks. W. of the C.C. of secs. 6 and 7, T. 22 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x6x7 ins. above ground, firmly set, marked C C on W., with 5 grooves on S. and 1 groove on N. face.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 80.01 chs;

By 2nd set, 79.99 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 287 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 287 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 3.66 chs. east of the corner.

This corner is 38.6 links east of the position of the temporary corner on the random line.

Land, rolling prairie.

Soil, sandy loam, 2nd rate.

No undergrowth.

June 15, 1911.

June 14, 1911. Adjust temporary corners from No. 288 to No. 303 inclusive from random to true line.

288th Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary over level prairie land, sandy loam soil, no undergrowth, on west side of the boundary fence.

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Chains.

- 17.66 Fall 10 lks. W. of mile corner No. 23, of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x7x6 ins. above ground, firmly set, marked T E X on E., N. M. 23 M on W., and OS on S. face.
- 55.03 Fall 11 lks. W. of the C.C. of secs. 6 and 31, T. 22-23 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x8x6 ins. above ground, firmly set, marked C C 37 E on W., with 6 grooves 22 N on S., and 6 grooves 23 N. on N. face.
- 57.59 Fall 12 lks. W. of mile corner No. 22½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x8x8 ins. above ground firmly set, marked T E X on E., N M ½ M on W., and OS on S. face.
- 63.00 Land becomes rolling, bears E. and W.
No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 288 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 288 General Land Office Reestablishment 1911 United States Boundary Commission." Pite impracticable, no stone available for a mound.
The boundary fence is 4.15 chs. east of the corner.
This corner is 41.2 links east of the position of the temporary corner on the random line.
Land, level and rolling prairie.
Soil, sandy loam, and rat e.
No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

289th Mile

N. $0^{\circ} 03' 46''$ W

On true line, Texas and New Mexico boundary, over rolling prairie land, sandy loam soil, no undergrowth, on west side of the boundary fence.

17.65

Fall 11 lks. W. of mile corner No. 22 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone $8 \times 7 \times 8$ ins. above ground firmly set, marked T E X on E., N M 22 M on W., and 08 on S. face.

36.80

Fall 17 links E. of an iron pipe $1\frac{1}{2}$ ins. dia., 18 ins. above ground, marked 30 on S., 31 on NE. sides.

55.30

Fall 10 lks. W. of the C.C. of secs. 30 and 31, T. 23 N. ... 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone $6 \times 5 \times 6$ ins. above ground, firmly set, marked C C on W., with 1 groove on S., and 5 grooves on N. face.

57.60

Fall 10 lks. W. of mile corner No. $21\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone $6 \times 10 \times 6$ ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 08 on S. face.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 289 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 289 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

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Chains.	<p>The boundary fence is 4.06 chs. east of the corner.</p> <p>This corner is 43.9 links east of the position of the temporary corner on the random line.</p> <p>Land, rolling prairie.</p> <p>Soil, sandy loam, 2nd rate.</p> <p>No undergrowth.</p>
	<p>290th Mile</p> <p>N. 0° 03' 46" W</p> <p>On true line, Texas and New Mexico boundary, over rolling prairie land, sandy loam soil, no undergrowth, on west side of the boundary fence.</p>
20.00	Soil becomes loose sand, bears E. and W.
27.38	Wire fence, extends west from the boundary fence.
28.50	Dugout 10.00 chs. west of line
36.88	Fall 16 links E. of an iron pipe 1½ ins. dia., 18 ins. above ground, marked B 6 on SW., 50 on S., 31 on N. sides. Pertains to the Texas surveys.
55.70	Fall 9 lks. W. of the C.C. of secs. 19 and 30, T. 23 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x6x6 ins. above ground, firmly set, marked C C on W., with 3 grooves on S. and 4 grooves on N. face.
56.56	Wire fence, extends west from the boundary fence.
57.56	Fall 9 lks. W. of mile corner No. 20½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x14x8 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 08 on S. face.
75.48	Road, bears E. and W.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and sur-

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

mounted with a brass cap, 24 ins. into the ground for the 290 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 290 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 3.73 chs. east of the corner.

This corner is 46.5 links east of the position of the temporary corner on the random line.

Land, rolling prairie.

Soil, sandy loam and loose sand, 2nd and 4th rate.

No undergrowth.

291st Mile

N. $0^{\circ} 03' 46''$ W.

On true line, Texas and New Mexico boundary, over rolling prairie land, sandy loam soil, scattering smole undergrowth, on west side of the boundary fence.

17.65 Fall 10 lks. W. of mile corner No. 20 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x11x5 ins. above ground, firmly set, marked T E X on E., N M 20 M on W. and OS on S. face.

55.86 Fall 12 lks. W. of the C.C. of secs. 18 and 19, T. 23 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 7x6x6 ins. above ground, firmly set, marked C C on W., with 3 grooves on S. and 3 grooves on N. face.

57.57 Fall 12 lks. W. of mile corner No. 19½ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 6x10x6 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and OS on S. face.

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Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 79.99 chs.

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 291 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 291 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 3.38 chs. east of the corner.

This corner is 49.1 links east of the position of the temporary corner on the random line.

Land, rolling prairie.

Soil, sandy loam, 3rd rate.

Undergrowth, scattering amole.

292nd Mile

N. $0^{\circ} 03' 46''$ W.

On true line, Texas and New Mexico boundary, descend gradually over rolling prairie land, sandy loam soil, scattered amole undergrowth, on west side of the boundary fence.

17.58

Fall 8 lks. W. of mile corner No. 19 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x12x6 ins. above ground, firmly set, marked T E X on E., N M 19 M on W., and 08 on S. face.

40.10

Arroyo 60 links wide, course S. of E., 50 ft. below the elevation of the surrounding country; ascend.

42.00

Top of bank 30 ft. high, bears S. of E. and N. of E.

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Chains.

- continue to ascend very gradually.
- 46.73 Fall 07 links W. of an iron pipe $1\frac{1}{2}$ ins. dia. 18 ins. above ground, marked B 7 on W., 11 on SW., and 10 on NW sides. Pertains to the Texas surveys.
- 56.14 Fall 7 lks. W. of the C.C. of secs. 7 and 18, T. 23 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 8x4x5 ins. above ground, firmly set, marked C C on W., with 4 grooves on S., and 2 grooves on N. face;
- 57.56 Fall 7 lks. W. of mile corner No. 18 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 10x6x5 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 08 on S. face.
- 59.10 Road, bears N. of W., and S. of E.
- 72.00 Ascent becomes steeper, bears E. and W.
Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point
By 1st set, 80.01 chs;
By 2nd set, 79.99 chs; the mean of which is
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 292 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 292 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.
The boundary fence is 3.08 chs. east of the corner.
This corner is 51.7 links east of the position of the temporary corner on the random line.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

Land, rolling.
Soil, sandy loam, 2nd and 3rd rate.
Undergrowth, scattering amole.

293rd Mile

N. $0^{\circ} 03' 46''$ W.

On true line, Texas and New Mexico boundary, ascend gradually over rolling land, sandy loam soil, scattering amole undergrowth, on west side of the boundary fence.

17.49

Fall 06 links W. of mile corner No. 18 of the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 6x10x6 ins. above ground, firmly set, marked T E X on E., N M 18 M on W., and 08 on S. face.

37.60

Road, bears NE. and SW.

45.00

Top of ascent, bears E. and W; continue over rolling land.

52.00

Opposite point of observation on the random line.

Time observation of Polaris for azimuth at temporary mile corner No. 292 plus 52.00 chs. on the random line, June 9, 1911.

Longitude of station $103^{\circ} 02'$ Latitude of station $36^{\circ} 15'$ Declination of Polaris $88^{\circ} 49' 41.6''$

Sights on Polaris marked 16.45 chs. north of station.

Mean time, U.C. of Polaris, Greenwich 8 h 20.2m a.m.

Correction for longitude

-1.1m

Local mean time, U.C. of Polaris

8 h 19.1m a.m.

Watch times of observations

	h	m	s
Telescope direct	7	01	37 p.m.
" reversed	7	02	57
" direct	7	04	42
" reversed	7	06	07

Mean watch time of observations

7h 03m 51s

Watch slow of L.M.T.

9m 24s

Local mean time of observation

7h 13m 15s

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains

1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 2.81 chs. east of the corner.

This corner is 54.4 links east of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy loam, 3rd rate.

Undergrowth, scattering amole.

294th Mile

N. $0^{\circ} 03' 46''$ W.

On true line, Texas and New Mexico boundary over rolling land, sandy loam soil, amole undergrowth, on west side of boundary fence.

17.49

Fall 06 links W. of mile corner No. 17 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x10x6 ins. above ground, firmly set, marked T E X on E., N M 17 M on W., and 08 on S. face.

22.00

Road, bears E. and W.

56.66

Fall 05 lks. W. of the C C of secs. 6 and 31, T. 23-24 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico Boundary line, which is a limestone 8x4x6 ins. above ground, firmly set, marked C C 37 E on W., with 6 grooves 33 N. on S., and 6 grooves 24 N. on N. face.

57.10

Wire fence, bears E. and W; fall 05 links W. of corner from which the fence extends W. and N. by W.

57.50

Fall 5 lks. W. of mile corner No. 16 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x3x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 08 on S. face.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

62.00

Wire fence, bears N. by W., irregular.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 80.005 chs;

By 2nd set, 79.995 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 294 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 294 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 2.53 chs. east of the corner.

This corner is 56.9 links east of the position of the temporary corner on the random line.

Land, rolling.

Soil, sandy loam, 2nd rate.

Undergrowth, amole.

295th Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary, over rolling land, sandy loam soil, amole undergrowth, on west side of the boundary fence:

17.46

Fall 5 lks. W. of mile corner No. 16 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x10x6 ins. above ground, firmly set, marked T E X on E., N M 16 M on W., and 08 on S face; witnessed by pits E. and W. thereof.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

- 20.64 The location of Clark's monument No. 23, according to his plat. No evidence of the same found.
- 56.00 The NE. corner of wire fence, bears W. 6.00 chs. This is the NE corner of the fence mentioned in the last mile as bearing N. by W., irregular
- 56.04 Fall 4 lks. W. of the C.C. of secs. 30 and 31, T. 24 N., R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 18x8x6 ins. lying on top of the ground, marked C C on W., with 1 groove on S. and 5 grooves on N. face.
- 57.44 Fall 4 lks. W. of mile corner No. 15 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x10x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 08 on S. face.
- Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point
- By 1st set, 79.995 chs;
- By 2nd set, 80.005 chs; the mean of which is
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 295 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 295 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.
- The boundary fence is 2.18 chs east of the corner.
- This corner is 59.0 links east of the position of the temporary corner on the random line.
- Land, rolling.
- Soil, sandy loam.

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Chains.

Undergrowth, scattering amole.

296th Mile

N. $0^{\circ} 03' 46''$ W.

On true line, Texas and New Mexico boundary, over rolling prairie land, sandy loam soil, no undergrowth, on west side of the boundary fence.

17.47

Fall 2 lks. W. of mile corner No. 15 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 7x8x6 ins. above ground firmly set, marked T E X on E., N M 15 M on W., and 08 on S. face.

55.48

Fall 3 lks. W. of the C.C. of secs. 19 and 30, T. 24 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x4x6 ins. above ground, firmly set, marked C C on W. with 2 grooves on S. and 4 grooves on N. face.

57.40

Fall 3 lks. W. of mile corner No. 14 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 5x8x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 08 on S. face.

69.70

Arroyo 30 links wide, S. of E.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 296 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 296 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 1.78 chs. east of the corner.

This corner is 60.7 links east of the position

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains	of the temporary corner on the random line.
	Land, rolling prairie. Soil, sandy loam, 3rd rate. No undergrowth.
	297th Mile N.0°03' 46" W .
	On true line, Texas and New Mexico boundary, over rolling prairie land, sandy loam soil, no undergrowth, on west side of the boundary fence.
12.20	Road, bears N.NW and S.SE.
17.41	Fall 4 lks. W. of mile corner No. 14 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 6x11x6 ins. above ground, firmly set, marked T E X on E., N M 14 M on W., and OS on S. face.
28.12	Road, E. and W.
54.79	Fall 5 lks. W. of the C.C. of secs. 18 and 19, T. 24 N. R. 37 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x8x8 ins. above ground, firmly set, marked C C on W., with 3 grooves on S. and 3 grooves on N. face.
57.35	Fall 5 lks. W. of mile corner No. 13½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 7x7x6 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and OS on S. face.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 297 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 297 General Land Office Reestablishment

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Chains. 1911 United States Boundary Commission." Pits
 impracticable, no stone available for a mound.
 The boundary fence is 1.39 chs. east of the corner.
 This corner is 61.9 links east of the position of the temporary corner on the random line.
 Land, rolling prairie.
 Soil, sandy loam, 3rd rate.
 No undergrowth.

298th Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary over rolling prairie land, sandy loam soil, no undergrowth, on west side of the boundary fence.

3.43 Road, extends from the SW. to a point 30 links west of line, thence north along west side of line.
 27.95 Fall 45 links E. of the SE. corner of wire fence, thence between fences.
 51.32 Fall 50 links E. of the NE. corner of fence.
 58.00 Opposite point of observation on random line.

Meridian observation of the sun for time at temporary mile corner No. 297 plus 58.00 chs. on the random line, June 10, 1911.

Equation of time -0m57s

	Watch times of transit.		
	h	m	s
Sun's W. limb	11	48	25 a.m.
Sun's center	11	49	35
Sun's E. limb	11	50	45
Watch time of apparent noon	11	49	35
L.M.T. of apparent noon	11	59	03
Watch slow of L.M.T.		9m	28s

57.33 Fall 5 lks. W. of mile corner No. 12 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 5x10x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and OS on S. face.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.
80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 298 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 298 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 1.14 chs. east of the corner.

This corner is 62.8 links east of the position of the temporary corner on the random line.

Land, rolling prairie.

Soil, sandy loam 2nd rate.

No undergrowth.

299th Mile

N. $0^{\circ} 03' 46''$ W.

On true line, Texas and New Mexico boundary, over rolling prairie land, sandy loam soil, no undergrowth, on west side of the boundary fence, along irregular road.

17.36 Fall 4 lks. W. of mile corner No. 12 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 14x6x6 ins. above ground firmly set marked T E X on E., N M 12 M on W. and 08 on S. face.

54.14 Fall 01 lks. W. of the C.C. of secs. 1 and 12, T. 24 N. R. 36 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 12x2x4 ins. above ground, firmly set, marked C C on W., with 5 grooves on S. and 1 groove on N. face.

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Chains.

57.34

Fall 01 lks. W. of mile corner No. 11 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 10x4x5 ins. above ground firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 08 on S. face.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 299 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 299 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

The boundary fence is 1.11 chs east of the corner.

This corner is 63.3 links east of the position of the temporary corner on the random line.

Land, rolling prairie.

Soil, sandy loam, 2nd and 3rd rate.

No undergrowth.

300th Mile

N. 0° 03' 46" W.

On true line Texas and New Mexico boundary, over rolling prairie land, sandy loam soil, no undergrowth, on west side of boundary fence, along irregular road.

5.52

The location of Clark monument No. 24 according to his plat, no evidences of monument found.

17.38

Fall 3 lks. W. of mile corner No. 11 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 7x6x5 ins. above ground firmly set marked T E X on E., N M 11 M on W. and 08 on S. face.

29.55

Road from the SW. to irregular road along line.

57.18

Fall 6 lks. W. of mile corner No. 10 $\frac{1}{2}$ of the U.S.

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<u>Chains.</u>	public land survey of the Texas and New Mexico boundary line, which is a sandstone 7x6x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 08 on S. face.
71.00	Begin descent into draw, bears E. and W.
73.13	Fall 6 lks. W. of the C.C. of secs. 1 and 36, T. 24-25 N. R. 36 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line which is a limestone 12x4x5 ins. above ground firmly set, marked C C on W. with 6 grooves SC on N. face. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 300 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 300 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base 2 ft high S. of corner. The boundary fence is 1.25 chs. east of the corner. This corner is 63.4 links east of the position of temporary corner on the random line. Land, rolling. Soil, sandy loam 2nd and 3rd rate. No undergrowth.
	301st Mile N. 0° 03' 46" W. On true line, Texas and New Mexico boundary, descend over rolling prairie land, loose sandy loam soil, no undergrowth, on west side of the boundary fence along irregular road.
17.36	Fall 4 lks. W. of mile corner No. 10 of the U.S. public land survey of the Texas and New Mexico boundary

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

<u>Chains.</u>	line which is a sandstone 7x5x6 ins. above ground, firmly set marked T E X on E. N M 10 M on W. and 08 on S. face.
52.00	Arroyo 60 links wide, in Perico Draw, course from SW to SE., 50 ft. below the general elevation of the surrounding country. Ascend over rolling land.
56.00	Soil becomes tight sandy loam.
73.00	Top of ascent bears E. and W. 50 ft. above arroyo, thence over almost level land.
73.23	Fell 1 lk. E. of the C.C. of secs. 25 and 36, T. 25 N. R. 36 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 10x6x6 ins. above ground firmly set, marked C C on W., with 1 groove on S. and 5 grooves on N. face.
77.20	Road bears SW. and NE. to Texline Texas. The road along the boundary fence ends at this road.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 301 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 301 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound. The west side of a vacant house is 10 links E., and the east side of a corral 15 lks. W. of the corner.
	The boundary fence is 1.27 chs. east of the corner.
	This corner is 63.1 links east of the position of the temporary corner on the random line.
	Land, rolling and almost level.
	Soil, loose and tight sandy loam 3rd rate.
	No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	302nd Mile
	N. 0° 03' 46" W.
	On true line Texas and New Mexico boundary, over almost level prairie land, firm sandy loam soil, no undergrowth, on west side of the boundary fence.
17.28	Fall 02 lks. W. of mile corner No. 9 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 13x5x8 ins. above ground, firmly set marked T E X on E., N M 9 M on W. and 08 on S. face.
19.05	Wire fence, extends west from the boundary fence.
57.25	Fall 04 links W. of mile corner No. 8 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x10x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 08 on S. face.
64.00	Begin to descend into draw, bears W. NW and E. SE
71.90	Arroyo 50 links wide in Blanco Draw, course SE. 60 ft. below the general elevation of the surrounding country. Ascend over rolling land.
73.40	Wire fence, bears E. and W., 1.10 chs. E. to NE cor. at which the boundary fence ends.
74.50	Road bears W. and E. to Texline, Texas.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point
	By 1st set, 80.01 chs;
	By 2nd set 79.99 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 302 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 302 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.

36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high, S. of corner.

This corner is 62.3 links east of the position of the temporary corner on the random line.

Land, almost level and rolling.

Soil, sandy loam, 1st and 2nd rate.

No undergrowth.

303rd Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary, ascending gradually over sloping land, sandy loam soil, no undergrowth.

- 17.30 Fall 04 lks. W. of mile corner No. 8 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 12x6x6 ins. above ground, firmly set, marked T E X on E., N M 8 M on W., and 08 on S. face; witnessed by traces of pits E. and W. thereof.
- 18.00 Top of ascent, bears E. and W. Thence over level land.
- 33.40 Road, bears N. 50° W. and S. 50° E. to Texline, Texas.
- 33.78 Right of way fence, bears N. 49° 18' W. and S. 49° 18' E.
- 33.95 Telegraph line, bears same as fence.
- 34.80 Single track of Colorado and Souther Ry. bears same as fence.
- 35.87 Right of way fence, bears same as railway track.
- 36.66 Road, bears N. 49° W. and S. 49° E. Clayton, N.M. to Texline, Texas.
- 36.95 Telephone line bears same as railway track.
- 38.00 Fall 90 links west of fence corner from which a

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.	wire fence extends S. 49° E. (on north side of road) and N. along boundary fence. An irregular road extends northward, on west side of boundary fence, from last noted road.																																												
41.84	<p>----- Opposite point of observation on random line. ----- Time observation of Polaris for azimuth at temporary mile corner No. 302 plus 41.84 chs. on the random line June 10, 1911.</p> <p>Longitude of station, 103° 02' Latitude of station 36° 23' Declination of Polaris 88° 49' 41.5" Sights on Polaris marked 22.65 chs. N. of station. Mean time U.C. of Polaris, Greenwich 8h 16.3m a.m. Correction for longitude <u>-1.1m</u> Local mean time, U.C. of Polaris 8h 15.2m</p> <p style="text-align: right;">Watch times of observations</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;">h</th> <th style="text-align: center;">m</th> <th style="text-align: center;">s</th> </tr> </thead> <tbody> <tr> <td>Telescope direct</td> <td style="text-align: center;">6</td> <td style="text-align: center;">59</td> <td style="text-align: center;">56 p.m.</td> </tr> <tr> <td style="padding-left: 2em;">" reversed</td> <td style="text-align: center;">7</td> <td style="text-align: center;">01</td> <td style="text-align: center;">26</td> </tr> <tr> <td style="padding-left: 2em;">" direct</td> <td style="text-align: center;">7</td> <td style="text-align: center;">03</td> <td style="text-align: center;">16</td> </tr> <tr> <td style="padding-left: 2em;">" reversed</td> <td style="text-align: center;">7</td> <td style="text-align: center;">04</td> <td style="text-align: center;">53</td> </tr> <tr> <td>Mean watch time of observations</td> <td style="text-align: center;">7h</td> <td style="text-align: center;">02m</td> <td style="text-align: center;">23s</td> </tr> <tr> <td>Watch slow of L.M.T.</td> <td></td> <td style="text-align: center;"><u>9m</u></td> <td style="text-align: center;"><u>28s</u></td> </tr> <tr> <td>Local mean time of observation</td> <td style="text-align: center;">7h</td> <td style="text-align: center;">11m</td> <td style="text-align: center;">51s</td> </tr> <tr> <td>L.M.T. of obsn.</td> <td style="text-align: center;">7h</td> <td style="text-align: center;">11.8m</td> <td style="text-align: center;">p.m.</td> </tr> <tr> <td>L.M.T. of U.C.</td> <td style="text-align: center;">8h</td> <td style="text-align: center;">15.2m</td> <td style="text-align: center;">a.m.</td> </tr> <tr> <td>Hour angle, W.</td> <td style="text-align: center;">10h</td> <td style="text-align: center;">56.6m</td> <td></td> </tr> </tbody> </table> <p>The azimuth of Polaris corresponding to this hour angle is 0° 22.9' west of the meridian. The angle between the azimuth line and the true random line, N. 0° 05' W. is therefore, 17.9'. The azimuth offset distance laid off to the east to determine the true random line is 11.8 links. At a point 22.65 chains north of the point of observation the actual random line falls .77 feet to the right of the true random line indicating an accumulative error of 106 seconds to</p>		h	m	s	Telescope direct	6	59	56 p.m.	" reversed	7	01	26	" direct	7	03	16	" reversed	7	04	53	Mean watch time of observations	7h	02m	23s	Watch slow of L.M.T.		<u>9m</u>	<u>28s</u>	Local mean time of observation	7h	11m	51s	L.M.T. of obsn.	7h	11.8m	p.m.	L.M.T. of U.C.	8h	15.2m	a.m.	Hour angle, W.	10h	56.6m	
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RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains. the right in 9 miles and 69.84 chs.

The course of the random line at the point of observation therefore, is N. $0^{\circ}03'14''$ W.

A steady wind blew from the same direction all this day.

56.00

House bears W. 5.00 chs. dist.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs;

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 303 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 303 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post $5\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is 41 links east of the corner.

This corner is 63.1 links east of the position of the temporary corner on the random line.

Land, sloping and level.

Soil, firm sandy loam, 1st rate.

No undergrowth.

June 14, 1911.

June 13, 1911. Adjust temporary corners No. 304 to No. 310 inclusive, from random to true line.

304th Mile

N. $0^{\circ}03'46''$ W

On true line, Texas and New Mexico boundary, over level prairie land, firm sandy loam soil, no undergrowth, on west side of the boundary fence, along irregular road.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.	Fall 6 lks. W. of mile corner No. 7 of the U.S.
17.20	public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x8x6 ins. above ground, firmly set, marked T E X on E., N M 7 M on W., and 08 on S. face; witnessed by traces of pits.
50.00	Cross boundary fence to the east side.
54.00	Begin to descend, bears E. and W.
57.20	Fall 6 lks. W. of mile corner No. 6 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 10x5x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 08 on S. face; witnessed by traces of pits E. and W. thereof.
67.50	Arroyo, 40 links wide in shallow prairie draw, course E; rain water lying in pools in this draw. Ascend gradually.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 304 mile corner. The top of the cap is divided by a north and south stamped line, 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1899 Mile Corner No. 304 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.
	The boundary fence is 15 links west of the corner.
	This corner is 65.9 links east of the position of the temporary corner on the random line.
	Land, level and sloping.
	Soil, firm sandy loam, 1st rate.
	No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

305th Mile

N. $0^{\circ} 03' 46''$ W.

On true line, Texas and New Mexico boundary, ascending gradually over prairie land, firm sandy loam soil no undergrowth, on east side of boundary fence. A road along west side of fence.

- .25 Fall 2.19 chs. E. of a sandstone 10x4x10 ins. above ground, marked X I T on the S. face. Pertains to the Texas surveys.
- 17.14 Fall 7 lks. W. of mile corner No. 6 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x6x6 ins. above ground, firmly set, marked T E X on E., N M 6 M on W. and 08 on S. face; witnessed by traces of pits E. and W. thereof.
- 36.00 Top of ascent, bears E. and W; thence over gently rolling land.
- 57.14 Fall 6 lks. W. of mile corner No. 5 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x6x6 ins. above ground, firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 08 on S. face; witnessed by traces of pits E. and W. thereof.
- 66.34 Arroyo 25 links wide, course E.
- 72.32 Fall 7 lks. W. of the C.C. of secs. 1 and 12, T. 25 N., R. 36 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x4x6 ins. above ground, firmly set, marked C C on W., with 5 grooves on S. and 1 groove on N. face; and witnessed by traces of pits N. S. and W. thereof.
- No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for

Chains. the 305 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 305 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is 48 links west of the corner.

This corner is 68.5 links east of the position of the temporary corner on the random line.

Land, sloping and gently rolling.

Soil, firm sandy loam, 1st rate.

No undergrowth.

306th Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary over gently rolling prairie land, sandy loam soil, no undergrowth, on east side of the boundary fence. An irregular road along west side of boundary fence.

17.20 Fall 06 links W. of mile corner No. 5 of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 8x6x6 ins. above ground, firmly set, marked T E X on E., N M 5 M on W., and 08 on S. face; witnessed by traces of pits E. and W. thereof.

18.27 Road, bears E. and W.

18.90 House and windmill E. 9.50 chs. dist.

57.17 Fall 07 lks. W. of mile corner No. 4½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x7x5 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 08 on S. face; witnessed by traces of pits E. and W. thereof.

74.50 Fall 06 lks. W. of the C.C. of secs. 1 and 36, T. 25-26 N.R.36 E., N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x6x6 ins. above ground

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains. firmly set, marked C C on W., with 6 grooves on E., and 6 grooves on N. face; and witnessed by traces of pits N., S. and W. thereof.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 306 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 306 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is 57 links west of the corner.

This corner is 70.9 links east of the position of the temporary corner on the random line.

Land, gently rolling prairie.

Soil, firm sandy loam, 1st rate.

No undergrowth.

307th Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary, over gently rolling prairie land, sandy loam soil, no undergrowth, on east side of the boundary fence. An irregular road along west side of boundary fence.

17.13

Fall 07 lks. W. of mile corner No. 4 of the U. S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 10x6x5 ins. above ground, firmly set, marked T E A on E., H M 4 M on W., and 08 on S. face; witnessed by traces of pits E. and W. thereof.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains.	
17.58	Road, bears E. and W.
29.68	Fall 1.3 chs. E. of a sandstone 11x4x15 ins. above ground, marked T. on S. face. Pertains to the Texas surveys.
32.00	Begin descent into prairie draw, bears E. and W.
57.08	Fall 06 links W. of mile corner No. 3½ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x5x5 ins. above ground, firmly set, marked T E X on E., N M ½ M on W., and 08 on S. face; witnessed by traces of pits E. and W. thereof.
74.46	Fall 03 lks. W. of the C.C. of secs. 25 and 36, T. 26 N. R. 36 E. N.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x5x6 ins. above ground, firmly set, marked CC on W. with 1 groove on S. and 5 grooves on N. face; and witnessed by traces of pits N., S. and W. thereof. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 307 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked "Clark Boundary 1859 Mile Corner No. 307 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S of the corner. The boundary fence is 45 links west of the corner. This corner is 73 links east of the position of the temporary corner on the random line. Land, gently rolling. Soil, firm sandy loam, 1st rate. No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

308th Mile

N. $0^{\circ} 03' 40''$ W.

On true line, Texas and New Mexico boundary descend gradually over gently rolling prairie land, sandy and gravelly soil, no undergrowth, on east side of the boundary fence. An irregular road along the west side of the boundary fence.

17.09

Fall 05 lks. W. of mile corner No. 3 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 5x9x6 ins. above ground, firmly set, marked T E X on E., N M 3 M on W. and 08 on S. face; witnessed by traces of pits 36x36 ins E. and W. thereof.

25.47

Fall 1.00 ch. E. of a sandstone 8x5x18 ins. above ground, marked X on S. face; pertains to the Texas surveys.

50.40

Arroyo 50 links wide, in prairie draw, course E; ascend, gradually.

57.13

Fall 03 lks. W. of mile corner No. 2 $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which is a sandstone 6x6x5 ins. above ground firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W., and 08 on S. face; witnessed by traces of pits E. and W. thereof.

69.40

Dugout bears W. 3.00 chs. dist.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 308 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 308 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base 2 ft high S. of corner.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	<p>The boundary fence is 26 links west of the corner.</p> <p>This corner is 75.1 links east of the position of the temporary corner on the random line.</p> <p>Land, gently rolling prairie.</p> <p>Soil, firm sandy loam, 1st rate.</p> <p>No undergrowth.</p>																												
9.00	<p style="text-align: center;">309th Mile N. 0° 03' 46" W.</p> <p>On true line, Texas and New Mexico boundary, descend gradually over gently rolling prairie land, sandy loam soil, no undergrowth, on east side of the boundary fence. An irregular road along the west side of the boundary fence.</p> <p>Opposite point of observation on random line.</p> <p>Meridian observation of the sun for time at temporary mile corner No. 308 plus 9.00 chs. on the random line June 12, 1911.</p> <p>Equation of time -0^m 33^s</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;">h</th> <th style="text-align: center;">m</th> <th style="text-align: center;">s</th> </tr> </thead> <tbody> <tr> <td>Sun's W. limb</td> <td style="text-align: center;">11</td> <td style="text-align: center;">48</td> <td style="text-align: center;">48 a.m.</td> </tr> <tr> <td>Sun's center</td> <td style="text-align: center;">11</td> <td style="text-align: center;">49</td> <td style="text-align: center;">58</td> </tr> <tr> <td>Sun's E. limb</td> <td style="text-align: center;">11</td> <td style="text-align: center;">51</td> <td style="text-align: center;">09</td> </tr> <tr> <td>Watch time of apparent noon</td> <td style="text-align: center;">11</td> <td style="text-align: center;">49</td> <td style="text-align: center;">58</td> </tr> <tr> <td>L.M.T. of apparent noon</td> <td style="text-align: center;">11</td> <td style="text-align: center;">59</td> <td style="text-align: center;">27</td> </tr> <tr> <td>Watch slow of L.M.T.</td> <td></td> <td style="text-align: center;">9m</td> <td style="text-align: center;">29s</td> </tr> </tbody> </table>		h	m	s	Sun's W. limb	11	48	48 a.m.	Sun's center	11	49	58	Sun's E. limb	11	51	09	Watch time of apparent noon	11	49	58	L.M.T. of apparent noon	11	59	27	Watch slow of L.M.T.		9m	29s
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17.04	<p>Fall 01 lk. E. of mile corner No. 2 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x6x5 ins. above ground firmly set, marked T E X on E., N M 2 M on W., and 08 on S. face; witnessed by traces of pits E. and W. thereof.</p>																												
32.00	<p>Top of ascent bears E. and W; descend gradually.</p>																												
55.30	<p>Arroyo 40 links wide in Rabbit Ear draw, course S. of E. Ascend gradually.</p>																												
57.08	<p>Intersect mile corner No. 1$\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line which</p>																												

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

is a sandstone 7x6x5 ins. above ground, firmly set, marked T E X on E., H M $\frac{1}{2}$ M on W., and 08 on S. face; witnessed by traces of pits E. and W. thereof.

74.85

Fall 02 lks. W. of the C.C. of secs. 13 and 24, T. 26 N. R. 36 E., H.M. on the U.S. public land survey of the Texas and New Mexico boundary line, which is a limestone 10x6x6 ins. above ground, firmly set, marked C C on W. with 3 grooves on S., and 3 grooves on N. face; and witnessed by traces of pits N., S. and W. thereof.

Difference between measurements of 80.00 chs. by two sets of chainment is 1 link; position of the middle point

By 1st set, 80.005 chs;

By 2nd set, 79.995 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 309 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 309 General Land Office Reestablishment 1911 United States Boundary Commission." Dig pits 36x36x12 ins. E. and W. of post 5 $\frac{1}{2}$ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is 15 links west of the corner.

This corner is 77.0 links east of the position of the temporary corner on the random line.

Land, gently rolling prairie.

Soil, firm sandy loam, 1st rate.

No undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.	310th Mile
	N. 0° 03' 46" W.
	On true line, Texas and New Mexico boundary, ascend gradually over gently rolling prairie land, sandy loam soil, no undergrowth, on east side of the boundary fence.
	An irregular road along the west side of the boundary fence.
17.05	Fall 01 lk. E. of mile corner No. 1 of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x4x6 ins. above ground, firmly set marked T E X on E., N M 1 M on W., and 08 on S. face; witnessed by traces of pits E. and W. thereof.
20.00	Top of ascent, bears E. and W; thence over almost level land;
57.06	Fall 01 lk. W. of mile corner No. $\frac{1}{2}$ of the U.S. public land survey of the Texas and New Mexico boundary line, which is a sandstone 6x5x5 ins. above ground firmly set, marked T E X on E., N M $\frac{1}{2}$ M on W. and 08 on S. face; witnessed by traces of pits E. and W. thereof.
71.74	The location of Clark's monument No. 25, no evidences of his mound found.
75.70	Intersect the C.C. of secs. 12 and 13, T. 26 N. R. 36 E., 36 E., N.M. on the U.S public land survey of the Texas and New Mexico boundary line, which is a sandstone 8x4x6 ins. above ground, firmly set, marked C C on W., with 4 grooves on S., and 2 grooves on N. face; and witnessed by traces of pits N.S. and W. thereof.
	No difference between measurements of 80.00 chs. by two set of chainmen.
80.00	Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 310 mile corner. The top of the cap is divided by a north and south stamped line 1 inch in length, and marked "Texas" on the east, "New Mexico" on the west thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 310 General Land Office Reestablish-

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains. ment 1911 United States Boundary Commission." Digits 36x36x12 ins. E. and W. of post 5½ ft. dist; raise a mound of earth 6 ft. base, 2 ft. high S. of corner.

The boundary fence is 02 links west of the corner.

This corner is 78.7 links east of the position of the temporary corner on the random line.

Land, gently rolling prairie.

Soil, firm sandy loam 1st rate.

No undergrowth.

311th Mile

N. 0° 03' 46" W.

On true line, Texas and New Mexico boundary, over almost level prairie land, firm sandy loam soil, no undergrowth, along boundary fence. An irregular road along the west side of the boundary fence.

No difference between measurements of 17.04 chs. by two sets of chainmen.

17.04 To the NW. corner of Texas, the NW. corner of the boundary fence and X I T pasture, marked by a sandstone 10x12x20 ins. above ground marked

1859 on the S.,

H.M. on the W.,

N.W. COR TEXAS on the E.

1900 on the N. face.

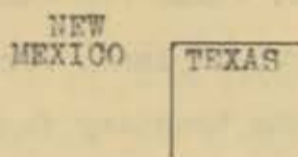
This stone was set by Levi S. Preston, U.S. Deputy Surveyor in 1900 and marks the location of Clark's mound marking the intersection of the one hundred and ^{parallel} third meridian west from Greenwich with the/thirty six degrees, thirty minutes of north latitude, as reestablished by W.S. Mabry, Texas surveyor, during or prior to 1885.

The position of this corner with reference to the monument marking the south end of the Cimarron meridian and the Johnston and McComb monuments on the thirty seventh parallel, has been stated heretofore.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains.

To perpetuate the location of Clark's northwest corner of Texas, I construct at the point occupied by the above mentioned marked stone set by Preston, a concrete monument having a cubical base 30 ins. square, set 30 ins. into the ground and a superstructure in the form of a frustum of a cone, encased in galvanized iron, having a lower diameter of 24 ins. an upper diameter of 18 ins., and projecting 30 ins. above the ground; in the top of which there is embedded a circular brass plate, 6 ins. in diameter, marked in the center in accordance with the following diagram:



The brass plate is also marked "CLARK BOUNDARY 1859 N W COR TEXAS" in the north half "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the south half. Monument built June 12 1911.

According to the astronomical determinations by Arthur D. Kidder, Examiner of Surveys in 1903, heretofore mentioned, the latitude of the above corner is $36^{\circ} 29' 58''$ N., and the longitude $103^{\circ} 02' 13.8''$ west from Greenwich; or said corner is 2 miles and 5.57 chs., west of the true one hundred and third meridian, and 3.18 chs., south of the true parallel $36^{\circ} 30' 00''$ north latitude.

On June 12, on the random line, I determined the true meridian by observation of Polaris as follows, at the northwest corner of Texas:

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103rd MERIDIAN.

Chains. Sights marked 21.03 chs. north of station.
 Latitude of station $36^{\circ} 29' 58''$
 Declination of Polaris $88^{\circ} 49' 41.4''$
 Longitude of station $103^{\circ} 02'$
 Mean time, U.C. of Polaris, Greenwich 8h 08.5m a.m.
 Correction for longitude -1.1m
 Local mean time U.C. of Polaris 8h 07.4m

Watch times of observations.

	h	m	s
Telescope direct	7	00	43 p.m.
" reversed	7	01	51
" direct	7	03	20
" reversed	7	04	24
Mean watch time of observations	7 h	02 m	34.5s
Watch slow of L.M.T.		<u>9 m</u>	<u>29.0s</u>
Local mean time of observation	7 h	12 m	03.5 s

L.M.T. of obsn 7 h 12.1m p.m.
 L.M.T. of U.C. 8 h 07.4m a.m.
 Hour angle, W. 11 h 04.7m

The azimuth of Polaris corresponding to this hour angle is $0^{\circ} 19.9'$ west of the meridian.

The angle between the azimuth line and the true random N. $0^{\circ} 05' W.$ is therefore $14.9'$. The azimuth offset distance laid off to the east to determine the true random line is 9.1 links. At a point 21.03 chs. north of the point of observation the actual random line falls .22 ft. to the right of the true random N. $0^{\circ} 05' W.$, indicating an accumulated error of 33 seconds to the right, in 7 miles and 55.20 chs. The bearing of the random line at the point of observation therefore, is N. $0^{\circ} 04' 27'' W.$

True line completed to the N.W. corner of Texas,
 June 13, 1911.

TABLE OF ADJUSTMENTS, 103rd MERIDIAN.

In the following table of adjustments from random to true line the recorded courses of the random line are the means of the courses at the mile points, or stations, recorded in the 1st and 2nd columns.

The adjustments apply to the mile points, or stations, recorded in the 2nd. column, and are total adjustments for each point with reference to the initial point of the random line, and not with reference to the preceding station only.

The courses of the total adjustment offset distances between the 33rd parallel and mile corner 126 plus 17.08 chs., are not theoretically correct, but the courses tabulated produce results consistent with the limits of error of the work. The differences occurring as a result of the courses adopted for the total adjustments affect only the distances between mile corners, and in amounts that are negligible.

From	To	Course of random	Adjustment for alinement		Adjustment for felling		Total Adjustment	
			E. Links	W Links	E Links	W Links	E Links	W Links
		0°						
SE. Cor.	M.C.1	N.			3.1		3.1	
M.C.1	Mon.1	N.			4.4		4.4.	
Mon.1	M.C.2	N.						
M.C.2	M.C.3	N.						
M.C.3	M.C.4	N.						
M.C.4	M.C.5	N.						
M.C.5	M.C.6	N.						
M.C.6	M.C.7	N.						
M.C.7	M.C.8	N.						
M.C.8	(M.C.8 & 57.24)	N.						
M.C.8) & (57.24)	M.C.9	N.						

TABLE OF ADJUSTMENTS, 103rd MERIDIAN.

From	To	Course of random °	Adjustment for align- ment		Adjustment for falling		Total Adjust- ment	
			E. Links	W Links	E Links	W Links	E Links	W Links
M.C.9	M.C.10	N.0'01"E						
M.C.10	M.C.11	N.0'02"E		.1				.1
M.C.11	M.C.12	N.0'04"E		.2				.2
M.C.12	M.C.13	N.0'05"E		.4				.4
M.C.13	M.C.14	N.0'06"E		.6				.6
M.C.14	M.C.15	N.0'08"E		.9				.9
M.C.15	M.C.16	N.0'09"E		1.3				1.3
M.C.16	M.C.17	N.0'10"E.		1.7				1.7
M.C.17	M.C.18	N.0'12"E		2.2				2.2
M.C.18	M.C.19	N.0'13"E		2.7				2.7
M.C.19	M.C.20	N.0'15"E		3.3				3.3
M.C.20	(M.C.20) & (37.63	N.0'15"E		3.6				3.6
M.C.20) & (37.63)	M.C.21	North		3.6				3.6
M.C.21	M.C.22	N.0'02"E		3.7				3.7
M.C.22	M.C.23	N.0'03"E		3.8				3.8
M.C.23	M.C.24	N.0'05"E		4.0				4.0
M.C.24	M.C.25	N.0'06"E		4.2				4.2
M.C.25	M.C.26	N.0'08"E		4.5				4.5
M.C.26	M.C.27	N.0'10"E		4.9				4.9
M.C.27	M.C.28	N.0'11"E		5.3				5.3
M.C.28	M.C.29	N.0'13"E		5.8				5.8
M.C.29	M.C.30	N.0'14"E		6.3				6.3
M.C.30	M.C.31	N.0'16"E		6.9				6.9
M.C.31	(M.C.31) & (31.84	N.0'17"E		7.1				7.1
M.C.31) & (31.84)	M.C.32	North		7.1				7.1
M.C.32	M.C.33	N.0'04"E		7.3				7.3

TABLE OF ADJUSTMENTS, 103rd MERIDIAN.

From	To	Course of random	Adjustment for alinement		Adjustment for fall- ing		Total Adjust- ment	
			E Links	W Links	E Links	W Links	E Links	W Links
M.C.33	M.C.34	N.0'07"E		7.6				7.6
M.C.34	M.C.35	N.0'10"E		8.0				8.0
M.C.35	M.C.36	N.0'14"E		8.6				8.6
M.C.36	M.C.37	N.0'18"E		9.3				9.3
M.C.37	M.C.38	N.0'21"E		10.1				10.1
M.C.38	M.C.39	N.0'24"E		11.0				11.0
M.C.39	M.C.40	N.0'28"E		12.1				12.1
M.C.40	M.C.41	N.0'32"E		13.4				13.4
M.C.41	M.C.42	N.0'35"E		14.8				14.8
M.C.42	(M.C.42) & (12.24	N.0'37"E		15.0				15.0
M.C.42) & (12.24)	M.C.43	North		15.0				15.0
M.C.43	M.C.44	N.0'02"E		15.1				15.1
M.C.44	M.C.45	N.0'03"E		15.2				15.2
M.C.45	M.C.46	N.0'05"E		15.4				15.4
M.C.46	M.C.47	N.0'06"E		15.6				15.6
M.C.47	M.C.48	N.0'07"E		15.9				15.9
M.C.48	M.C.49	N.0'09"E		16.3				16.3
M.C.49	M.C.50	N.0'10"E		16.7				16.7
M.C.50	M.C.51	N.0'11"E		17.1				17.1
M.C.51	M.C.52	N.0'12"E		17.6				17.6
M.C.52	M.C.53	N.0'13"E		18.1				18.1
M.C.53	M.C.54	N.0'15"E		18.7				18.7
M.C.54	M.C.55	N.0'16"E		19.3				19.3
M.C.55	M.C.56	N.0'17"E		20.0				20.0
M.C.56	M.C.57	N.0'18"E		20.7				20.7
M.C.57	M.C.58	N.0'19"E		21.4				21.4
M.C.58	M.C.59	N.0'21"E		22.2				22.2
M.C.59	M.C.60	N.0'22"E		23.1				23.1
M.C.60	M.C.61	N.0'23"E		24.0				24.0
M.C.61	M.C.62	N.0'24"E		24.9				24.9

TABLE OF ADJUSTMENTS, 103rd MERIDIAN.

From	To	Course of random	Adjustment for alinement		Adjustment for falling		Total Adjustment.	
			E Links	W Links	E Links	W Links	E Links	W Links
		0°						
M.C.62	M.C.63	N.0'25"E		25.9				25.9
M.C.63	M.C.64	N.0'27"E		26.9				26.9
M.C.64	M.C.65	N.0'28"E		28.0				28.0
M.C.65	M.C.66	N.0'29"E		29.1				29.1
M.C.66	M.C.67	N.0'31"E		30.3				30.3
M.C.67	M.C.68	N.0'33"E		31.6				31.6
M.C.68	(M.C.68 & 28.27)	N.0'34"E		32.0				32.0
M.C.68 & 28.27	(M.C.68 & 73.09)	North		32.0				32.0
(Thirty third parallel)								
M.C.68 & 73.09	(M.C.68 & 76.53)	North						
		N.1° and	S.89° 21'E. Chs. Constant.	N.89° 21'W Chs.		N.88° 50' 39"W Chs.	S.88° 50' 39"E Chs.	N.88° 50' 39" W. Chs.
M.C.68 & 76.53	M.C.69	18'00"E	.078			.035		.043
M.C.69	M.C.70	18'04"E.	.078	.002		.438		.362
M.C.70	M.C.71	18'11"E	.078	.006		.840		.768
M.C.71	M.C.72	18'19"E	.078	.014		1.243		1.179
M.C.72	M.C.73	18'26"E	.078	.024		1.646		1.592
M.C.73	M.C.74	18'33"E	.078	.037		2.048		2.007
M.C.74	M.C.75	18'40"E	.078	.053		2.451		2.426
M.C.75	M.C.76	18'48"E	.078	.072		2.854		2.848
M.C.76	M.C.77	18'55"E	.078	.093		3.257		3.272
M.C.77	M.C.78	19'02"E	.078	.117		3.659		3.698
M.C.78	(M.C.78 & 52.74)	19'09"E						
M.C.78 & 52.74	M.C.79	18'00"E	.078	.134		4.062		4.118

TABLE OF ADJUSTMENTS, 103rd MERIDIAN.

From	To	Course of random	Adjustment for alignment		Adjustment for falling	Total Adjust- ment
			S.89°21'E. Constant Chs.	N.89°21'W Chs.	N. 88° 50' 39" W. Chs.	Chs.
M.C.79	M.C.80	18'08"E	.078	.137	4.465	4.524
M.C.80	M.C.81	18'17"E	.078	.144	4.868	4.934
M.C.81	M.C.82	18'27"E	.078	.154	5.270	5.346
M.C.82	M.C.83	18'36"E	.078	.168	5.673	5.763
M.C.83	M.C.84	18'46"E	.078	.186	6.076	6.184
M.C.84	M.C.85	18'55"E	.078	.207	6.479	6.608
M.C.85	M.C.86	19'04"E	.078	.232	6.881	7.035
M.C.86	M.C.87	19'14"E	.078	.261	7.284	7.467
M.C.87	M.C.88	19'23"E	.078	.293	7.687	7.902
M.C.88	M.C.89	19'33"E	.078	.329	8.090	8.341
M.C.89	M.C.90	19'42"E	.078	.368	8.492	8.782
M.C.90	M.C.91	19'51"E	.078	.411	8.895	9.228
M.C.91	M.C.92	20'01"E	.078	.458	9.298	9.678
M.C.92	M.C.93	20'10"E	.078	.508	9.701	10.131
M.C.93	M.C.94	20'20"E	.078	.562	10.103	10.587
M.C.94	M.C.95	20'29"E	.078	.620	10.506	11.048
M.C.95	M.C.96	20'39"E	.078	.682	10.909	11.513
M.C.96	M.C.97	20'48"E	.078	.747	11.312	11.981
M.C.97	M.C.98	18'07"E	.078	.750	11.714	12.386
M.C.98	M.C.99	18'20"E	.078	.758	12.117	12.797
M.C.99	M.C.100	18'34"E	.078	.771	12.520	13.213
M.C.100	M.C.101	18'47"E	.078	.789	12.922	13.633
M.C.101	M.C.102	19'00"E	.078	.812	13.325	14.059
M.C.102	M.C.103	19'14"E	.078	.840	13.728	14.490
M.C.103	M.C.104	19'27"E	.078	.873	14.131	14.926
M.C.104	M.C.105	19'40"E	.078	.912	14.533	15.367
M.C.105	M.C.106	19'54"E	.078	.956	14.936	15.814
M.C.106	(M.C.106 & 21.82	20'02"E				
M.C.106	(M.C.107 & 21.82	18'02"E	.078	.970	15.339	16.231
M.C.107	M.C.108	18'07"E	.078	.973	15.742	16.637

TABLE OF ADJUSTMENTS, 103RD MERIDIAN.

From	To	Course of random	Adjustment for Alinement		Adjustment for Felling	Total Adjust- ment.
			$\frac{1.89^{\circ}21'0''}{\text{Constant}}$ chs.	N.89°21' W. chs.		
		N.1° and			N.88°50'39" W. chs.	chs.
M.C.108	M.C.109	18'13"E	.078	.978	16.144	17.044
M.C.109	M.C.110	18'18"E	.078	.985	16.547	17.454
M.C.110	M.C.111	18'24"E	.078	.994	16.950	17.866
M.C.111	M.C.112	18'30"E	.078	1.005	17.353	18.280
M.C.112	M.C.113	18'35"E	.078	1.019	17.755	18.696
M.C.113	M.C.114	18'41"E	.078	1.035	18.158	19.115
M.C.114	M.C.115	18'46"E	.078	1.053	18.561	19.536
M.C.115	M.C.116	18'52"E	.078	1.073	18.964	19.959
M.C.116	M.C.117	18'58"E	.078	1.095	19.366	20.383
M.C.117	M.C.118	19'03"E	.078	1.119	19.769	20.810
M.C.118	M.C.119	19'09"E	.078	1.146	20.172	21.240
M.C.119	M.C.120	19'15"E	.078	1.175	20.575	21.672
M.C.120	M.C.121	19'20"E	.078	1.206	20.977	22.105
M.C.121	M.C.122	19'26"E	.078	1.239	21.380	22.541
M.C.122	M.C.123	19'32"E	.078	1.274	21.783	22.979
M.C.123	M.C.124	19'37"E	.078	1.311	22.186	23.419
M.C.124	M.C.125	19'43"E	.078	1.351	22.588	23.861
M.C.125	M.C.126	19'48"E	.078	1.393	22.991	24.306
M.C.126	(M.C.126 & 17.08	19'52"E	.078	1.402	23.077	24.401
(Connecting dist. between randoms					N.89°21' W:7.962)	
(Random line from north					N.89°29'39" W)	
(Adjustments based on random from north					16.439	16.439
M.C.126) & (17.08)	M.C.127	North			15.328	15.328
M.C.127	M.C.128	"			13.916	13.916
M.C.128	M.C.129	"			12.503	12.503
M.C.129	M.C.130	"			11.091	11.091
M.C.130	M.C.131	"			9.679	9.679
M.C.131	M.C.132	"			8.266	8.266
M.C.132	M.C.133	"			6.854	6.854
M.C.133	M.C.134	"			5.442	5.442
M.C.134	M.C.135	"			4.029	4.029
M.C.135	M.C.136	"			2.617	2.617

TABLE OF ADJUSTMENTS, 103RD MERIDIAN.

From	To	Course of random line	Adjustment for Alinement		Adjustment for Falling		Total Adjust- ment.	
			E Links	W Links	E	W	E	W
					N. 89° 29' 39" W			
M.C. 136	M.C. 137	North			Chs. 1.204		Chs. 1.204	
M.C. 137	(M.C. 137 & 68.22				0.000		0.000	
(The thirty fourth parallel)					E	W	E	W
M.C. 137) & 68.22)	(M.C. 138	North			Lks	Lks	Lks	Lks
M.C. 138	M.C. 139	"						
M.C. 139	M.C. 140	"						
M.C. 140	M.C. 141	"						
M.C. 141	M.C. 142	"						
M.C. 142	M.C. 143	"						
M.C. 143	M.C. 144	"						
M.C. 144	M.C. 145	"						
M.C. 145	M.C. 146	"						
M.C. 146	M.C. 147	"						
M.C. 147	M.C. 148	"						
M.C. 148	M.C. 149	"						
M.C. 149	M.C. 150	"						
M.C. 150	M.C. 151	"						
M.C. 151	M.C. 152	"						
M.C. 152	M.C. 153	"						
M.C. 153	M.C. 154	"						
M.C. 154	M.C. 155	"						
M.C. 155	M.C. 156	"						
(Offset of 73.6 lks. made in) (the random line at the 156) (mile point.)					73.6			73.6
M.C. 156	M.C. 157	N. 0° 15' W			73.0			73.0
M.C. 157	(M.C. 157 & 36.60	N. 0° 15' W			72.7			72.7

TABLE OF ADJUSTMENTS, 102rd MERIDIAN.

From	To	Course of random	Adjustment for alinement		Adjustment for falling		Total Ad- justment	
			E Links	W Links	E. Links	W Links	E Links	W Links
M.C.157) & 36.60	(M.C.158	N.0'02"E		72.8				72.8
M.C.158	M.C.159	N.0'08"E.		73.1				73.1
M.C.159	M.C.160	N.0'15"E		73.7				73.7
M.C.160	M.C.161	N.0'22"E		74.5				74.5
M.C.161) (18.77 (Mon.5.	(M.C.161 & (18.77 (Mon.5.	N.0'26"E		74.7		(To Mon.5)		74.7
M.C.161) & 18.77	(M.C.162	N.0'30"E		75.6	10.4			65.2
M.C.162	M.C.163	N.0'37"E		77.0	24.0			53.0
M.C.163) (75.15	(M.C.163 & (75.15	N.0'44"E		78.6				
M.C.163) & 75.15	(M.C.163 & (75.15	(Offset W. 15 lks)	15 lks	63.6				
M.C.163) & 75.15	(M.C.164	N.0'47"E		63.6	37.6			26.0
M.C.164	M.C.165	N.0'48"E		63.6	51.3			12.3
M.C.165	M.C.166	N.0'49"E		63.7	64.9		1.2	
M.C.166) (49.42 (Mon.6	(M.C.166 & (49.42 (Mon.6	N.0'50"E		63.8		73.4 (To Mon.6)		9.6
M.C.166) & 49.42	(M.C.167	N.4'03"E			.8			.8
M.C.167	M.C.168	N.4'12"E		.5	2.9			2.4
M.C.168	M.C.169	N.4'25"E		1.5	5.1			3.6
M.C.169	M.C.170	N.4'39"E		3.0	7.2			4.2
M.C.170	M.C.171	N.4'52"E		5.0	9.3			4.3
M.C.171	M.C.172	N.5'06"E		7.5	11.4			3.9
M.C.172	M.C.173	N.5'19"E		10.5	13.6			3.1
M.C.173	M.C.174	N.5'33"E		14.1	15.7			1.6

TABLE OF ADJUSTMENTS, 103rd MERIDIAN.

From	To	Course of random	Adjustment for alinement		Adjustment for falling		Total Ad- justment.	
			E Links	W Links	E Links	W Links	E Links	W Links
M.C.174	(M.C.174 & (68.83	N.5'45"E		17.6				
M.C.174 & 68.83	M.C.175	N.4'01"E		17.6	17.8		.2	
M.C.175	M.C.176	N.4'05"E		17.8	19.9		2.1	
M.C.176	M.C.177	N.4'14"E		18.3	22.1		3.8	
M.C.177	M.C.178	N.4'22"E		19.2	24.2		5.0	
M.C.178	M.C.179	N.4'30"E		20.4	26.3		5.9	
M.C.179	M.C.180	N.4'39"E		21.9	28.4		6.5	
M.C.180	M.C.181	N.4'47"E		23.7	30.5		6.8	
M.C.181	M.C.182	N.4'55"E		25.8	32.7		6.9	
M.C.182	M.C.183	N.5'04"E		28.3	34.8		6.5	
M.C.183	M.C.184	N.5'12"E		31.1	36.9		5.8	
M.C.184	M.C.185	N.5'20"E		34.2	39.0		4.8	
M.C.185	M.C.186	N.5'29"E		37.6	41.2		3.6	
M.C.186	(M.C.186 & (46.29	N.5'35"E		39.7				
M.C.186 & 46.29	M.C.187	N.4'02"E		39.7	43.3		3.6	
M.C.187	M.C.188	N.4'07"E		40.0	45.4		5.4	
M.C.188	M.C.189	N.4'14"E		40.5	47.5		7.0	
M.C.189	M.C.190	N.4'21"E		41.3	49.7		8.4	
M.C.190	M.C.191	N.4'28"E		42.4	51.8		9.4	
M.C.191	M.C.192	N.4'36"E		43.8	53.9		10.1	
M.C.192	M.C.193	N.4'43"E		45.5	56.0		10.5	
M.C.193	M.C.194	N.4'50"E		47.4	58.2		10.8	
M.C.194	M.C.195	N.4'58"E		49.6	60.3		10.7	
M.C.195	M.C.196	N.5'05"E		52.1	62.4		10.3	
M.C.196	M.C.197	N.5'12"E		54.9	64.5		9.6	
M.C.197	(M.C.197 & (39.61	N.5'17"E		56.4				

TABLE OF ADJUSTMENTS, 103rd MERIDIAN.

From	To	Course of random	Adjustment for alinement		Adjustment for falling		Total Adjust- ment	
			E Links	W Links	E Links	W Links	E Links	W Links
M.C.197 & (39.61)	M.C.198	N.4'03"E		56.5	66.7		10.2	
M.C.198	M.C.199	N.4'12"E		57.0	68.8		11.8	
M.C.199	M.C.200	N.4'23"E		57.9	70.9		13.0	
M.C.200	M.C.201	N.4'35"E		59.2	73.0		13.8	
M.C.201	M.C.202	N.4'46"E		61.0	75.2		14.2	
M.C.202	M.C.203	N.4'58"E		63.2	77.3		14.1	
M.C.203	M.C.204	N.5'09"E		65.8	79.4		13.6	
M.C.204	(M.C.204 & 6.89 (Mon.9	N.5'16"E		66.1	79.6		13.5	
(Offset 15.5 W. from Mon.9)								
M.C.204 & (6.89)	M.C.205	N.2'00"E	15.5		1.5		17.0	
M.C.205	M.C.206	N.2'00"E	15.5		3.1		18.6	
M.C.206	M.C.207	N.2'00"E	15.5		4.7		20.2	
M.C.207	M.C.208	N.2'00"E	15.5		6.3		21.8	
M.C.208	M.C.209	N.2'00"E	15.5		8.0		23.5	
M.C.209	M.C.210	N.2'00"E	15.5		9.6		25.1	
M.C.210	M.C.211	N.2'00"E	15.5		11.2		26.7	
M.C.211	M.C.212	N.2'00"E	15.5		12.8		28.3	
M.C.212	M.C.213	N.2'00"E	15.5		14.4		29.9	
M.C.213	M.C.214	N.1'57"E	15.6		16.0		31.6	
M.C.214	M.C.215	N.1'51"E	16.0		17.7		33.7	
M.C.215	(M.C.215 & 11.77 (Mon.10	N.1'47"E	16.1		17.9		34.0	
M.C.215 & 11.77	(M.C.215 & 13.45 (Mon.11	N.1'47"E	16.1		17.9		34.0	
M.C.215 & 13.45	M.C.216	N.1'44"E	.5		4.8		5.3	
M.C.216	M.C.217	N.1'39"E	1.3		10.5		11.8	
M.C.217	M.C.218	N.1'32"E	2.4		16.2		18.6	
M.C.218	M.C.219	N.1'26"E	3.7		22.0		25.7	
M.C.219	(M.C.219 & 71.86	N.1'21"E	5.0					

TABLE OF ADJUSTMENTS, 103rd MERIDIAN.

From	To	Course of random	Adjustment for alignment		Adjustment for falling		Total Adjust- ment.	
			E Links	W Links	E Links	W Links	E Links	W Links
M.C.219 & 71.86	(M.C.220	N.2'00"E	5.0		27.7		32.7	
M.C.220	M.C.221	N.2'00"E	5.0		33.5		38.5	
M.C.221	M.C.222	N.2'00"E	5.0		39.2		44.2	
M.C.222	M.C.223	N.2'01"E	5.0		44.9		49.9	
M.C.223	M.C.224	N.2'01"E		40.0	50.7		10.7	
(Random line offset 45 lks.) (E. at M.C.224.)								
M.C.224	M.C.225	N.2'02"E		40.1	56.4		16.3	
M.C.225	M.C.226	N.2'02"E		40.2	62.1		21.9	
M.C.226	M.C.227	N.2'02"E		40.3	67.9		27.6	
M.C.227	M.C.228	N.2'03"E		40.4	73.6		33.2	
M.C.228	M.C.229	N.2'03"E		40.5	79.3		38.8	
M.C.229	M.C.230	N.2'03"E		40.6	85.1		44.5	
M.C.230	M.C.231	N.2'04"E		40.8	90.8		50.0	
M.C.231	M.C.232	N.2'04"E		41.0	96.5		55.5	
M.C.232	M.C.233	N.2'04"E		41.2	102.3		61.1	
M.C.233	(M.C.233 & 28.19 (Mon.15	N.2'05"E		41.3	104.3		63.0	
(Offset random line 63.0) (lks.E. at Mon.15.)								
(M.C.233 & 28.19	M.C.234	N.2'05"E						(mile cor. 234 not set)
M.C.234	(M.C.234 & 64.70 (Mon.16	N.2'05"E						(Course of true line from Mon. 15 (to 16 determined by assuming (random of constant bearing (between monuments, as recorded.
M.C.234 & 64.70	(M.C.235	N.2'05"E						(Cor.235 set on line between Mons. (16 & 17 without reference to temp. (cor. on random line.
M.C.235	(M.C.235 & 12.18 (Mon.17	N.2'05"E						
(Offset to 5.2 lks.E.of Mon. 17)								
M.C.235 & 12.18	M.C.236	N.5'05"E		5.4	2.7		2.7	

TABLE OF ADJUSTMENTS, 103rd MERIDIAN.

From	To	Course of random	Adjustment for alignment		Adjustment for falling		Total Adjust- ment.	
			E Links	W Links	E Links	W Links	E Links	W Links
M.C.236	M.C.237	N.5'06"E		5.6	5.85		.25	
M.C.237	M.C.238	N.5'06"E		5.8	9.0		3.2	
M.C.238	M.C.239	N.5'06"E		6.0	12.2		6.2	
M.C.239	M.C.240	N.5'07"E		6.3	15.3		9.0	
M.C.240	M.C.241	N.5'07"E		6.6	18.5		11.9	
M.C.241	(M.C.241 & 9.01	N.5'07"E		6.6				
M.C.241 & 9.01	(M.C.242	N.5'01"E		6.6	21.6		15.0	
M.C.242	M.C.243	N.5'04"E		6.7	24.8		18.1	
M.C.243	M.C.244	N.5'07"E		7.0	28.0		21.0	
M.C.244	M.C.245	N.5'09"E		7.3	31.1		23.8	
M.C.245	M.C.246	N.5'12"E		7.8	34.3		26.5	
M.C.246	M.C.247	N.5'15"E		8.4	37.4		29.0	
M.C.247	M.C.248	N.5'17"E		9.1	40.6		31.5	
M.C.248	M.C.249	N.5'20"E		9.9	43.8		33.9	
M.C.249	M.C.250	N.4'59"E		9.9	46.9		37.0	
M.C.250	M.C.251	N.4'57"E		9.8	50.1		40.3	
M.C.251	M.C.252	N.4'55"E		9.6	53.2		43.6	
M.C.252	M.C.253	N.4'53"E		9.3	56.4		47.1	
M.C.253	M.C.254	N.4'51"E		8.9	59.6		50.7	
M.C.254	M.C.255	N.4'49"E		8.5	62.7		54.2	
M.C.255	M.C.256	N.4'47"E		8.0	65.9		57.9	
M.C.256	M.C.257	N.4'45"E		7.4	69.0		61.6	
M.C.257	M.C.258	N.4'42"E		6.7	72.2		65.5	
M.C.258	M.C.259	N.4'40"E		5.9	75.4		69.5	
M.C.259	M.C.260	N.4'38"E		5.0	78.5		73.5	
M.C.260	M.C.261	N.4'36"E		4.1	81.7		77.6	
M.C.261	M.C.262	N.4'34"E		3.1	84.8		81.7	
M.C.262	M.C.263	N.4'32"E		2.0	88.0		86.0	
M.C.263	M.C.264	N.4'30"E		.8	91.2		90.4	

TABLE OF ADJUSTMENTS, 103rd MERIDIAN.

From	To	Course of random 0°	Adjustment for alinement		Adjustment for fall- ing		Total Adjust- ment.	
			E Links	W Links	E Links	W Links	E Links	W Links
M.C.264	M.C.265	N.4'28"E	.4		94.3		94.7	
M.C.265	M.C.266	N.4'26"E	1.7		97.5		99.2	
M.C.266	M.C.267	N.4'24"E	3.1		100.6		103.7	
M.C.267	M.C.268	N.4'22"E	4.6		103.8		108.4	
M.C.268	M.C.269	N.4'20"E	6.1		107.0		113.1	
M.C.269	M.C.270	N.4'18"E	7.7		110.1		117.8	
M.C.270	M.C.271	N.4'16"E	9.4		113.3		122.7	
M.C.271	M.C.272	N.4'14"E	11.2		116.4		127.6	
M.C.272	(M.C.272 & 22.25 (Mon. 21	N.4'12"E	11.7		117.3		129.0	
M.C.272 & 22.25	(M.C.273	N.4'59"W		.0	2.1		2.1	
M.C.273	M.C.274	N.4'57" W		.1	5.0		4.9	
M.C.274	M.C.275	N.4'54"W		.3	7.9		7.6	
M.C.275	M.C.276	N.4'51"W		.6	10.8		10.2	
M.C.276	M.C.277	N.4'48"W		1.1	13.7		12.6	
M.C.277	M.C.278	N.4'45"W		1.7	16.5		14.8	
M.C.278	M.C.279	N.4'43"W		2.4	19.4		17.0	
M.C.279	M.C.280	N.4'40"W		3.2	22.3		19.1	
M.C.280	(M.C.280 & (24.14	N.4'38"W		3.5				
M.C.280 & 24.14	(M.C.281	N.5'00"W		3.5	25.2		21.7	
M.C.281	M.C.282	N.4'59"W		3.5	28.1		24.6	
M.C.282	M.C.283	N.4'59"W		3.6	31.0		27.4	
M.C.283	M.C.284	N.4'58"W		3.7	33.9		30.2	
M.C.284	M.C.285	N.4'57"W		3.8	36.8		33.0	
M.C.285	M.C.286	N.4'57"W		3.9	39.7		35.8	
M.C.286	M.C.287	N.4'56"W		4.0	42.6		38.6	
M.C.287	M.C.288	N.4'55"W		4.2	45.4		41.2	
M.C.288	M.C.289	N.4'55"W		4.4	48.3		43.9	
M.C.289	M.C.290	N.4'54"W		4.7	51.2		46.5	

TABLE OF ADJUSTMENTS, 103RD MERIDIAN.

From	To	Course of random 0°	Adjustment for alignment		Adjustment for falling		Total Adjust- ment	
			E Links	W Links	E Links	W Links	E Links	W Links
M.C.290	M.C.291	N.4'53"W		5.0	54.1		49.1	
M.C.291	M.C.292	N.4'53"W		5.3	57.0		51.7	
M.C.292	(M.C.292) & (52.00	N.4'52"W		5.5				
M.C.292 & 52.00	(M.C.293)	N.4'58"W		5.5	59.9		54.4	
M.C.292	M.C.294	N.4'51"W		5.9	62.8		56.9	
M.C.294	M.C.295	N.4'40"W		6.7	65.7		59.0	
M.C.295	M.C.296	N.4'29"W		7.9	68.6		60.7	
M.C.296	M.C.297	N.4'19"W		9.5	71.4		61.9	
M.C.297	M.C.298	N.4'08"W		11.5	74.3		62.8	
M.C.298	M.C.299	N.3'57"W		13.9	77.2		63.3	
M.C.299	M.C.300	N.3'46"W		16.7	80.1		63.4	
M.C.300	M.C.301	N.3'36"W		19.9	83.0		63.1	
M.C.301	M.C.302	N.3'25"W		23.6	85.9		62.3	
M.C.302	(M.C.302) & (41.84	N.3'17"W		25.7				
M.C.302 & 41.84	(M.C.303)	N.4'59"W		25.7	88.8		63.1	
M.C.303	M.C.304	N.4'56"W		25.8	91.7		65.9	
M.C.304	M.C.305	N.4'52"W		26.1	94.6		68.5	
M.C.305	M.C.306	N.4'47"W		26.6	97.5		70.9	
M.C.306	M.C.307	N.4'43"W		27.3	100.3		73.0	
M.C.307	M.C.308	N.4'39"W		28.1	103.2		75.1	
M.C.308	M.C.309	N.4'35"W		29.1	106.1		77.0	
M.C.309	M.C.310	N.4'30"W		30.3	109.0		78.7	
M.C.310	(M.C.310 & 17.04 (H.V. Cor. Texas	N.4'28"W		30.6	109.6		79.0	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

GENERAL DESCRIPTION.

The SE. corner of New Mexico, according to the astronomical determinations of Arthur D. Kidder, U. S. Examiner of Surveys, in 1903, is in longitude $103^{\circ} 03' 55.52''$, or 3 miles 67.3 chs. west of the true one hundred and third meridian; and in latitude $31^{\circ} 59' 58.02''$ or 3.03 chains south of the true thirty-second parallel.

No surface evidence of Clark's Monument was found at the SE. corner of New Mexico, representing the intersection of the 32d parallel north latitude, with the 103rd meridian west from Greenwich; but in excavating around the iron pipe marking the SE. corner of New Mexico, small pieces of charcoal, and a piece of a bottle were found. The charcoal no doubt was the remains of the deposit made at this point by W. D. Twitchell, State Surveyor, Texas, in 1892, and it is probable that the glass found was a piece of the bottle left at this corner by Clark in 1859. There is no record of any other surveyor burying a bottle at said corner.

Map No. 4 attached to the Clark report (ex. doc. 70. 47th Congress) indicates very clearly the position of said SE. corner with reference to monument No. 1 on the 103rd meridian and monument No. 31 on the 32nd parallel and also its position with reference to the principal topographic features in the vicinity, viz: the White Sandhills and Monument Draw, which are definitely located on said map. The White Sandhills lie to the SE. of the existing SE. corner of New Mexico, their northern limit being just south of a point due east and their western limit being about two miles east of the said SE. corner; the sand hills extending in a southeasterly direction.

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Monument Draw, in which are located both Monuments 31 on 32d parallel and monument No. 1 on the 103d meridian, extends from New Mexico in a southeasterly direction to the 103rd meridian, which it strikes at the location of monument No. 1, thence it turns sharply and extends in a general southwesterly direction to the 32d parallel, thence along said parallel for one half or three fourths of a mile, thence in a southwesterly direction into Texas.

Clark's map indicates monument No. 31 to be about one and seven tenths miles from the SE. corner, which practically agrees with the distance on the ground between said monuments.

By reason of the irregular, indefinite and careless arrangement of the Clark report, it is impossible to determine therefrom, definitely the measured distance from monument No. 31 to the SE. corner.

Clark's map indicates monument No. 1 to be located about two miles north of the SE. corner of New Mexico. This distance is further verified by a statement on page 57 of the above mentioned Clark report in connection with the projection of the 103rd meridian north. In said report is found a statement "St. Mon. to road Mon. St. 1 ---2 miles". Evidently this means, starting (or station) monument to road monument, station one, is two miles. In stating this distance Clark has made an error, as the distance on the ground is one mile 32.52 chs. Clark states that monument No. 1 was established on the road leading to and from the water in the White Sand-hills. Within 60 feet of monument No. 1 is a very old road which is without doubt the road referred to by Clark. The soil in the bottom of Monument Draw is firm and is the only suitable location for a road in the vicinity, the surrounding soil being mostly loose shifting sand, and it is improbable that any other road existed at the time of the Clark survey. A point two

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

miles north of the SE. corner falls in the sandhills E. of Monument Draw, and at a point where it is improbable that a road ever existed, or that a monument would be established to mark the line of a survey. The reported distance of two miles is clearly an error on the part of Clark and it is certain that monument No. 1 was established in Monument Draw as shown on the plat, and on the old road as stated in the notes.

In addition to the evidence furnished by the existing Clark Monuments on the 103rd meridian, the position of said line is further identified and fixed by a number of topographic features other than those mentioned above as determining the location of the SE. corner of New Mexico. The breaks of the Staked Plains are correctly delineated on Clark's Map No. 7, and the relative position of monument No. 9 is shown also. These facts, together with the distance between monument 9 and 10 on the Albuquerque Ft. Smith Road, as shown on said plat and as existing on the ground, fixes beyond question the longitudinal position of the Clark line in this locality.

At no other point east or west of line will the configuration of the topography or the distance from the breaks of the plains to the Fort Smith and Albuquerque Road agree with Clark's map along the line of the Texas-New Mexico Boundary.

The location of the Clark line can be identified very closely by topographical features from the breaks of the plains to monument 19, between the two branches of Flag Creek, but northward from said monument the topography as shown on Clark's map aids little in verifying the position of the present line. Clark describes monument 19 as being on a ridge between two branches of Flag Creek. Flag Creek today is known as Agua Caballo, and the line crosses two branches thereof flowing easterly between which there is a very prominent ridge. The con-

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

fluence of the two branches is a short distance east of the existing line. The sources of both branches of said creek are within distances of 15.00 chains west of the present line. This condition will not permit the consideration of a line west of the present one; nor one to the east, because of the junction of said streams lying only a short distance to the east of line.

The monuments not found are listed below, with their positions in latitude as indicated on the various Clark maps, together with the distances along line from the 32nd parallel at which searches were made for evidences of said monuments.

Monument	Latitude	Distances at which searched for
2	32° 12' 36"	14.5 miles
3	32° 32' 50"	37.7 "
4	34° 13' 50"	153.0 " and 57.04 chs.
7	34° 37' 55"	181.0 " " 33.44 "
8	34° 46' 00"	190.0 " " 56.00 "
12	35° 07' 58" This monument searched for 56.00 chs. north of Mon. No. 11 and at	215.0 " " 76.64 "
13	35° 15' 49" This monument searched for on the south bank of the Cañada de Truxillo, now and at the Arroyo Trujillo	222.0 " " 44.16 "
14	35° 13' 43"	224.0 " " 77.44 "
18	This monument was searched for at a point 7 miles and 8.00 chs. north of monument No. 17, or at the point 242 miles and 20.18 chs. on line. Location of trail on Clark map.	
19	This monument was searched for on the ridge between the two branches of Flag Creek, now known as Agua Caballo.	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Monument	Latitude	Distance at which searched for.
20	35° 47' 26"	261 miles and 24.96 chs.
22	36° 04' 04"	280 " " 32.88 "
23	36° 16' 07"	294 " " 20.64 "
24	36° 20' 18"	299 " " 5.52 "
25	36° 29' 44"	309 " " 71.44 "

All the monuments adopted for the purposes of this resurvey, and in addition thereto, a number of other now obliterated, had been found and accepted as authentic Clark monuments by official surveyors of the United States and the State of Texas.

Monuments Nos. 9, 10, 11, 13, 15 and 17 were identified in 1872, thirteen years after their establishment by John H. Clark, and tied to the U.S. Public Land Surveys in New Mexico, by R. B. Willison, U. S. Deputy Surveyor. During the period from 1882 to 1885 monuments Nos. 5, 6, 7, 9, 10, 11, 12, 13, 15, 16, 17, 21 and the northwest corner of Texas were identified by W. S. Mabry, an official Texas surveyor. In 1883 monuments Nos. 15 and 17 were connected with the U.S. Public land surveys by Taylor and Fuss, U. S. Deputy Surveyors. In about 1880 monument No. 21 was connected with the U. S. Public Land Surveys by an official U. S. Deputy Surveyor, Unruh. In 1891 monuments Nos. 1, 5, 6, 7, 8, 9, 10 and 11, the southeast corner of New Mexico, and monument No. 31 on the 32nd parallel were found and adopted as a basis of survey by official surveyors of the State of Texas and the Territory of New Mexico, W.D. Twitchell and Mark Howell. In 1899 monuments Nos. 15, 16, 17, 21 and the northwest corner of Texas were identified and their connections with the U. S. Public Land Surveys verified, by Levi S. Preston, U. S. Deputy Surveyor. In 1903, monuments Nos. 1, 5, 6, 9, 10 and 12, the northwest corner of Texas, the southeast corner of New Mexico, and monument No. 31 on the 32nd parallel, were identified

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

by Arthur D. Kidder, U. S. Examiner of Surveys.

The one hundred and third meridian passes over what is generally known as the Staked Plains, and the North Plains. The SE. corner of New Mexico lies in a stretch of sand hills, and proceeding north from said corner you pass over alternate tracts of loose sandy land, sand hills and tracts of firm, or "tight" land. The surface of the land is generally level or rolling, and the elevation gradually increases as you go north, the drainage is invariably toward the east. The longest stretch of firm land is found extending northward from about the 156 mile corner to the breaks of the plains at monument No. 9, a distance of about 48 miles. At monument No. 9 the meridian leaves the plains, and descends over broken land to a rolling plateau with a general elevation several hundred feet lower than the plains. The line passes over this rolling plateau which becomes more rolling, and broken, as the Canadian River is approached. After the Canadian River is crossed the general elevation of the surface of the land increases gradually, and the land is more or less rolling for a distance of about 26 miles and then is comparatively level to the NW. corner of Texas.

Almost the entire area of the plains is underlain with a limestone formation, which outcrops to the surface in many places. Limestone is the only form of rock material to be found on the surface, with the exception of the cliffs along the Canadian River and the outcrops north of the 249 mile corner, which are of sandstone.

Salt Lake, lying west of the line, in the vicinity of the 144th and 145th mile corners, is a basin of approximately 1000 acres area, which receives in the rainy season the drainage of the surrounding country, forming a lake. There is no outlet to this basin and the water disappears through evaporation and seepage.

The only running water crossing the line is the Canadian River and the two branches of Flag Creek. The Canadian flows in a bed of quick sand, and during flood stages carries a large volume of water, at which times it presents considerable difficulty in crossing. In ordinary stages the river contains a comparatively small quantity of water, and at times is entirely dry. The two branches of Flag Creek rise in small springs just west of the line and in them is found the only natural surface water, excepting the Canadian River, that is found on the entire course of the meridian. Well water is found at depths varying from 20 to 200 feet, and generally is of good quality.

The undergrowth, encountered was principally scrub oak, mesquite, cat-claw and amole. The scrub oak locally known as shinnery, is always found in the sandy soil; and is usually from one to three feet in height. It usually occurs in patches, and offers no obstruction to surveying. The mesquite along the line generally was scattering, the usual height being about three feet. The cat-claw and amole encountered was of little or no importance, the former averaging about three feet in height, averaging occurring only in very small tracts; and the latter, ^{averaging} 1½ feet in height, occurring for the most part in the northern part of the line. Under average conditions a fair growth of grazing grass is to be found along the entire one hundred and third meridian, but the drouths of the past few years and the overstocking of the range with cattle have almost exhausted the growth of natural grasses. A form of grama is the predominating grass

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

found along the line.

On the New Mexico side of the line practically all the land has been taken up by settlers under the U.S. land laws, and a very considerable portion of the land is under cultivation. On the Texas side of the line the major portion of the land is being used for cattle pasture purposes, although there is considerable settlement for farming purposes on this side of the line also.

The reestablished line south of the 33rd parallel is practically in the position of the line formerly recognized as the proper Texas and New Mexico boundary. Between the 33rd and 34th parallels there has been a slight change, the reestablished line being west of the Twitchell-Howell line, heretofore recognized. No vested rights have been disturbed by this change, and the only improvements of consequence placed in Texas, which heretofore were considered in New Mexico are houses of T. M. Keenan about $1\frac{7}{8}$ miles north of Bronco, Texas, H. A. Field, $\frac{1}{2}$ mile north of Bronco, and R. S. Harris, about $3\frac{1}{2}$ miles south of Bronco. These improvements, however, are not of any great value, and probably their aggregate value is not over \$1500.00. The land values affected are not considered in this estimate for the reason that said land was considered public domain of the United States.

The following data pertains to the fixation of the monuments marking the thirty-third and thirty-fourth parallels of north latitude:

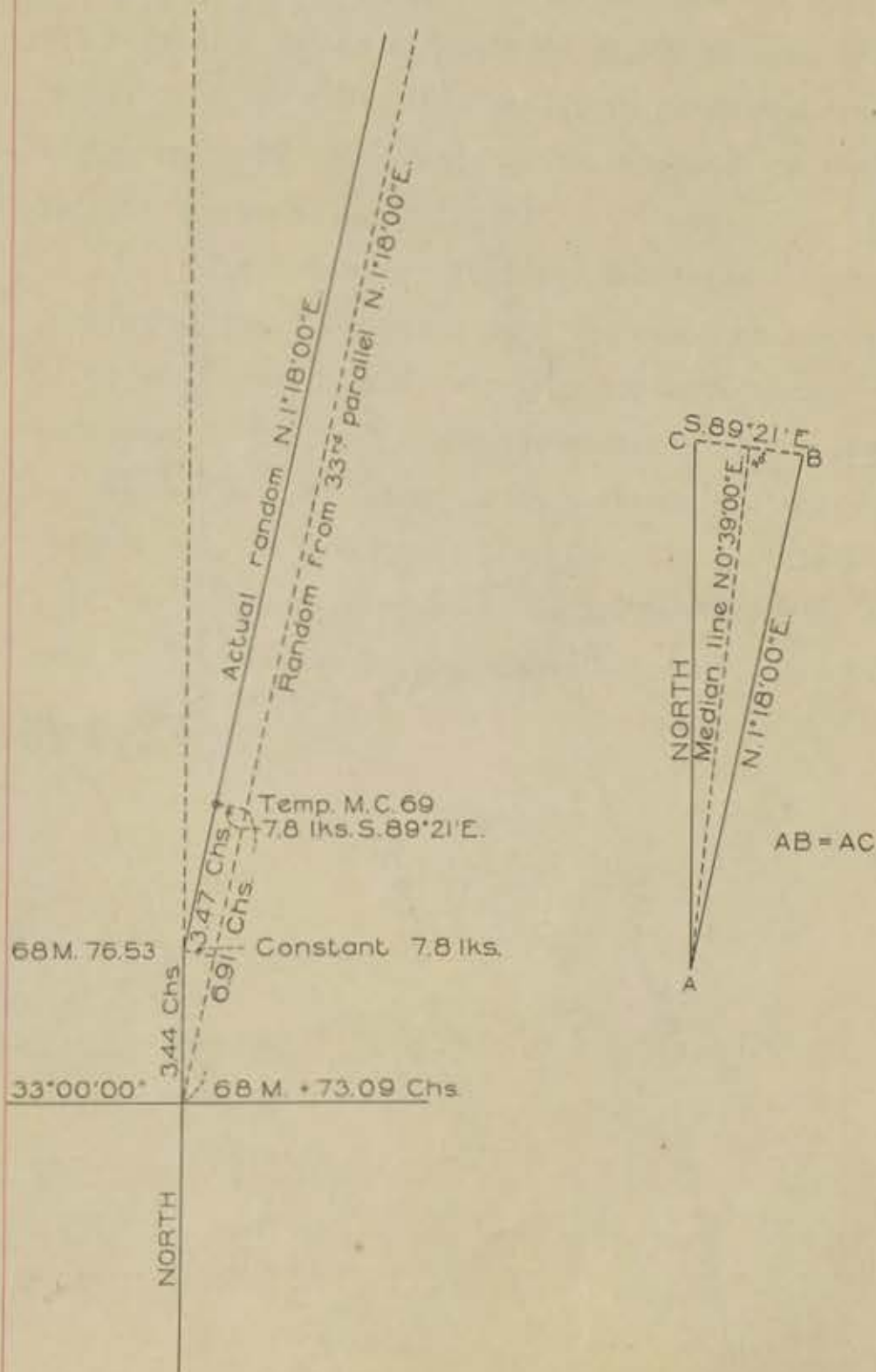
RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Measured distance, lat. 32°00'00" to 36°30'00"	310 Mi. 17.04 chs.
Correction to meridian length, of oblique random 57 M.20.55 chs.	<u>-1.18 chs.</u>
Meridional length of arc from lat. 32°00'00" to 36°30'00" by meas.	(310 Mi. 15.86 chs. (310.19825 miles)
From standard field tables, U. S. General Land Office lat. 32°00' to 32°30'	34.4505 Mi.
" 32°30' " 33°00'	<u>34.4560 "</u>
" 32°00' " 33°00'	68.9065 " 68.9065 Mi.
" 33°00' " 33°30'	34.4560 " 34.4560 "
" 33°30' " 34°00'	34.4615 " 34.4615 "
Add for oblique random	<u>.0147 "</u>
lat. 32°00' to 34°00'	137.8387 " 137.8240 "
" 34°00' " 34°30'	34.4615 " 34.4615 "
" 34°30' " 35°30'	68.9350 " 68.9350 "
" 35°30' " 36°30'	68.9460 " 68.9460 "
Theoretical distance on line from lat. 32°00' to 36°30'	<u>310.1812 "</u>
Measured distance lat. 32°00' to 36°30'	<u>310.2130 "</u>
Difference	.0318 "
Theoretical meridional distance from lat. 32°00' to 36°30'	<u>310.1665 "</u>
Meridional distance, from measurement lat. 32°00' to 36°30'	<u>310.19825 "</u>
Difference	.03175 "
Difference due to elevation above sea level, station error, and measurement	.0318 "
Of the difference, .0318 miles between the theoretical and measured distance between latitude 32°00'00" and 36°30'00", 2/9 or .0071 was applied to the theoretical position of the 33rd parallel, and 4/9 to the theoretical position of the 34th parallel.	
Position of 33°00' by tables	68.9065 Mi.
Correction	<u>.0071 "</u>
Measured distance on line to 33°00'	68.9136 "
	68.M 73.09 chs.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

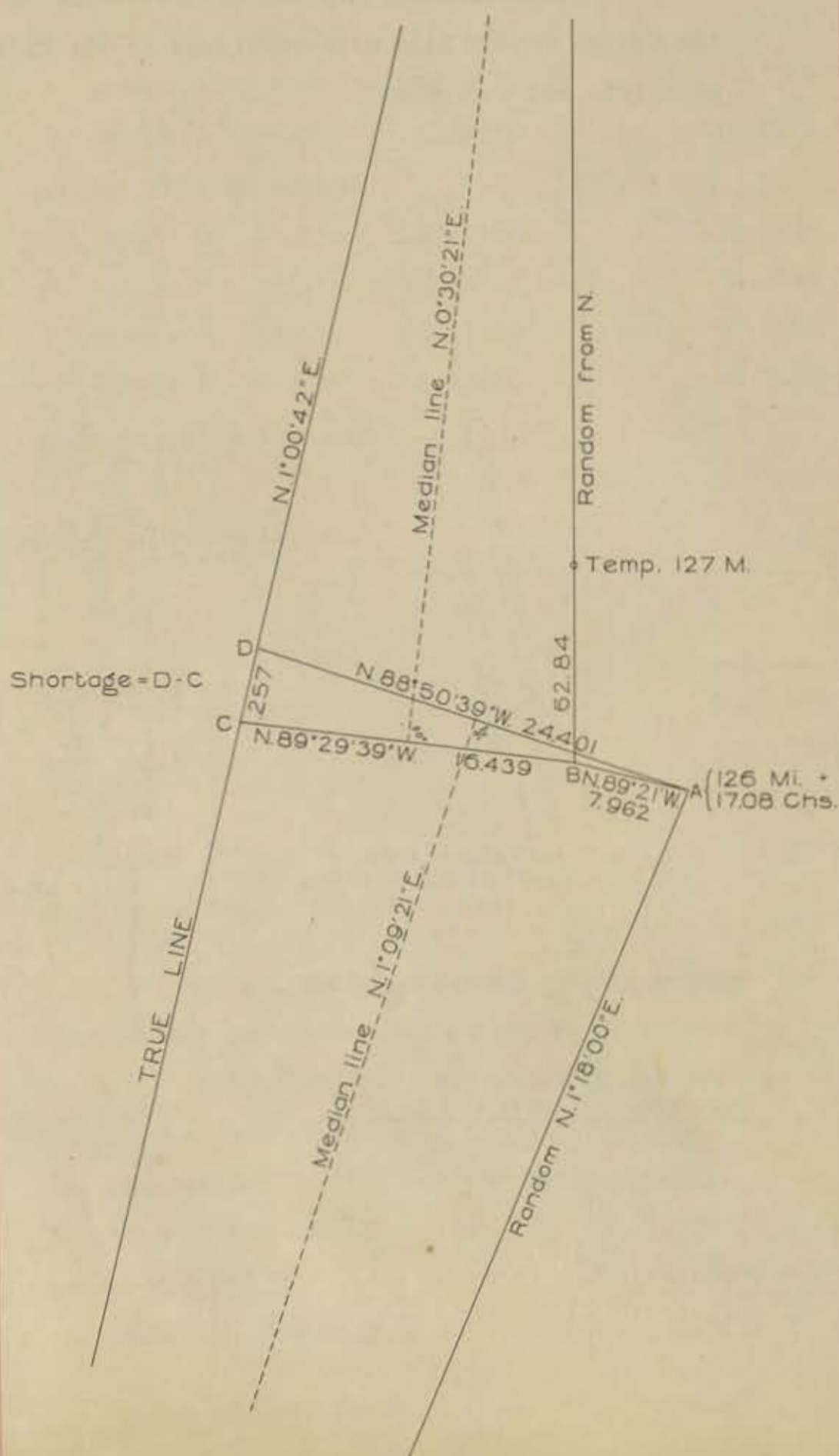
Position of 34° 00' by tables	137.8387 Mi.
Correction	<u>.0141 "</u>
Measured distance on line to 34°00'	137.8528 "
	137 M. 68.22 chs.

The following diagram indicates the position of the actual random line with reference to the thirty-third parallel. Not to scale.



RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

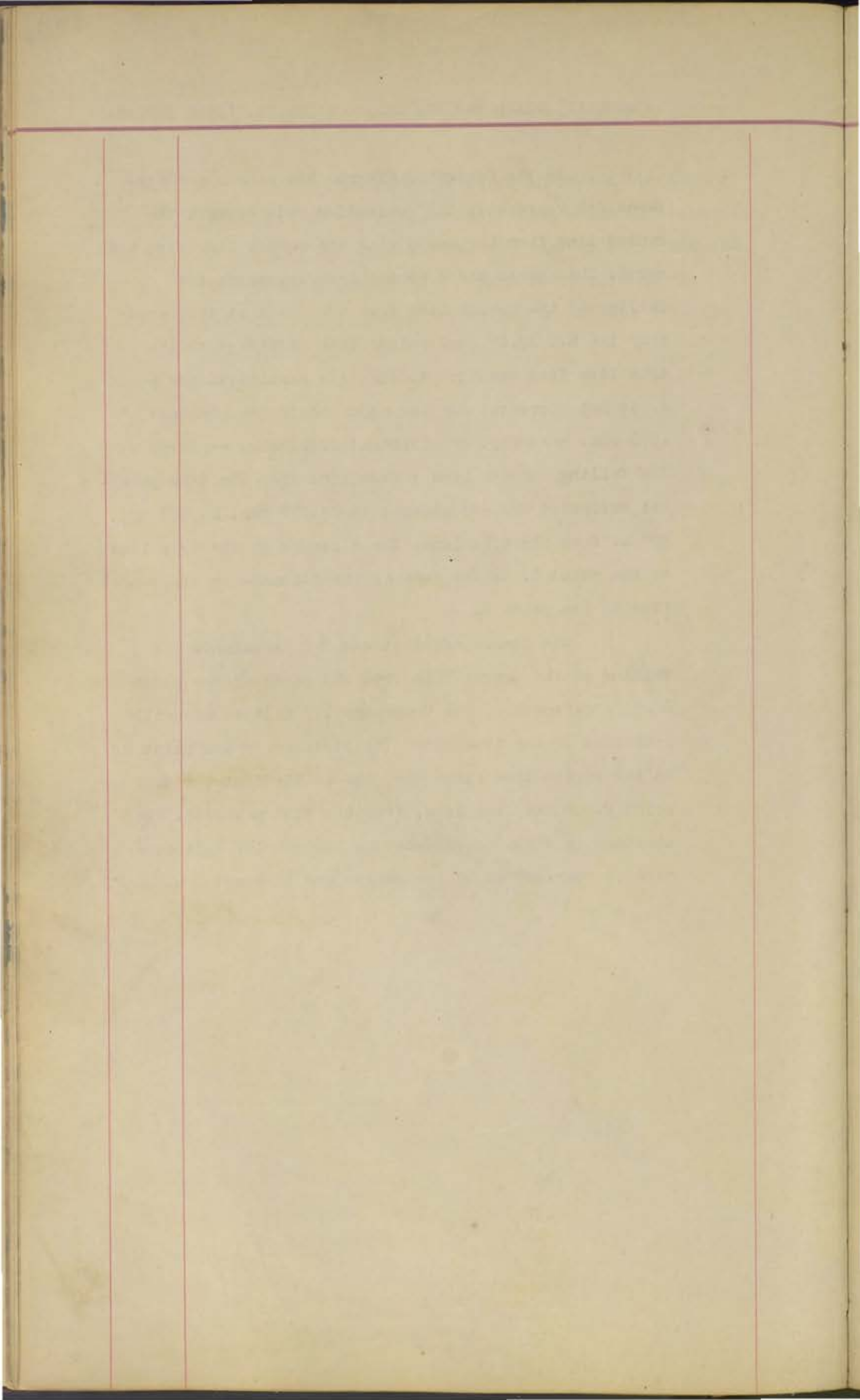
The following diagram indicates the manner of connecting the random lines, upon which was based the position of the true line between the thirty-third and thirty-fourth parallels of north latitude; and the shortage in the distance between the 126 and 127 mile corners. Diagram not to scale.



RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

In the foregoing diagram the course and distance A-B represents the connection made between the random line from the south with the random line from the north. The course and distance A-D represents the falling of the random line from the south at the temporary 126 M., 17.08 chn. point, with reference to the true line from the 33rd to the 34th parallels. The point A. is not corrected for the adjustments for constant, .078 chs. easterly, or alinement 1.402 chs. westerly. The falling of the true random line from the 33rd parallel corrected for adjustments is 23.077 chs. S. $88^{\circ} 50' 39''$ E. from the true line. The distance on the true line to the point D. is the same as the distance on the random line to the point A.

The course and distance B-C represents the falling of the random line from the north at the point 62.84 chs. south of the temporary 127 mile corner with reference to the true line. The distance to the point B. on the random line being the same as the distance to the point C. on the true line, from the 34th parallel. The shortage in distance between the 126 and 127 mile corners is represented by the course and distance D-C.



PART TWO.

THE THIRTY SECOND PARALLEL.

RESURVEYED BY G. D. D. KIRKPATRICK, U. S. SURVEYOR



LEE S. MILLER, U. S. SURVEYOR.

Robert S. Hummell,
Surveyor for Texas.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY.

For organization of the line party, description of instrument and method, pertaining to the survey of the random and true lines from the SE. corner of New Mexico to monument No. 31, and the survey of the true line from monument No. 31 to No. 24, by G. D. D. Kirkpatrick, see statements preceding the notes of the one hundred and third meridian.

ORGANIZATION OF LINE PARTY.

(Lee S. Miller)

Lee S. Miller, U. S. Surveyor, Chief of Party, and Instrumentman.

J. P. Adams, Flagman, June 11 to 20, incl.

Ralph Fleck, Flagman after June 20.

George Marsh, Chainman.

Holmes Mitchiner, Chainman.

Sam Mitchiner, Chainman.

Ralph Fleck, Chainman, June 11 to 20 incl.

Ellis Crozier, Chainman, after June 20.

F. M. Reeves, Cornerman and Horse Wrangler.

T. J. Farmer, Teamster.

J. P. Selman, Teamster.

Orvil W. Beals, Cook, June 5 to July 5, incl.

Rupert T. Ezzell, Cook, July 5 to July 14, incl.

Richard Johns, Cook, July 7 to August 27, incl.

The transportation equipment consisted of the following:

Two four-mule freight wagons.

Two pack mules, for line use.

Nine saddle horses, for line use.

One two-horse spring line wagon, Aug. 28 to Sept.

27.

Ten pack mules, July 17 to July 26.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY.

The assistants to the Commissioner on the part of Texas, Mr. H. S. Hunnicutt, Texas Surveyor, and Mr. Lee V. Hunnicutt, Assistant Texas Surveyor, were present with ~~the party~~ ^{and participated in} the survey of the portion of the line lying west of monument No. 24. X

DESCRIPTION OF INSTRUMENT.

In projecting the random line from Mon. 31 to Mon. 24, a Buff & Buff model F. solar transit No. 7732 was used; equipped with a Smith solar attachment.

Power of telescope, 18 diameters.

Plate graduated to thirty minutes; reading by two double verniers to single minutes.

Graduations $4\frac{1}{2}$ ins.; numbered 0° to 360° .

Full vertical circle, reading to single minutes.

The verniers of the solar attachment read to single minutes of arc.

On the line west of monument No. 24, a Young and Son's light mountain transit No. 8293, with Smith solar attachment, was used.

Power of telescope, 22 diameters.

Plate graduated to thirty minutes, reading to single minutes by two double verniers.

Graduations $4\frac{1}{2}$ ins.; numbered from 0° to 180° .

Full vertical circle, reading to single minutes.

The verniers of the solar attachment read to single minutes.

Fixed stadia wires, interval 1:130.3.

Watch, Waltham, 17 jewels.

One nine foot wooden sight rod, steel shoe.

One Keuffel and Esser stadia rod, 7 ft. long, extending to 12 ft.

One 66 ft. Lufkin steel tape standard.

One five-chain Lufkin steel tape, width $1/8$ ".

RESURVEY TEXAS AND NEW MEXICO BOUNDARY.

One eight-chain Lufkin steel tape, width 1/8".
 Two W. and L. E. Gurley clinometers.
 1 set 1/2 in. dies.

METHOD OF SURVEY

The general method of survey was similar to the plan followed on the one hundred and third meridian, heretofore described. A modified form of the secant method was followed in projecting the random line, the course of which was referred to meridians determined by direct observations on the sun at intervals varying usually from six to ten miles.

Deflections in the random secant line were made at irregular intervals, as often as necessary, to keep the random line in close proximity to the position of the parallel. The following formula from the U.S. General Land Office standard field tables, was used in computing the azimuth of the sun from the observations.

$$\cos. A. = \frac{\sin. decl.}{(\cos. lat. \cos. h.)} - (\tan. lat. \tan. h.)$$

in which:

A is angle from sun's center to the true meridian.

decl. is the declination of the sun, corrected to longitude and time.

lat. is the latitude.

h. is the true vertical angle to the sun's center, after correction for refraction.

The local mean time of the observations was determined by my watch, compared daily with the time arc of the solar attachment, small time errors not affecting the observation. The proper allowance was made for equation of time and difference of time due to longitude.

When the sun was east of the meridian the angles were turned from a flag on the random secant line east of the station to the sun; with the telescope

RESURVEY TEXAS AND NEW MEXICO BOUNDARY.

direct, observing the limbs of the sun, with the sun in the lower left hand quadrant. The telescope was then reversed, sighted to the flag and the angles to the sun's limbs determined with the sun in the upper right hand quadrant. Each pair of observations was treated as a separate set and computed accordingly. The mean of the azimuths indicated by the various observations was taken as the azimuth of the line at the point of observation.

From the azimuths of the secant determined by observation on the sun at various points, the azimuths of the line at each mile point, or fractional mile point, were computed, on the assumption that the change in bearing was at a uniform rate per mile between observations. From the bearings at the mile points, or fractional parts of miles, the mean courses of the lines between successive mile points, or fractional parts thereof, were determined, and from the mean courses the change in latitude of each successive mile point or fractional part was determined; and from the latitude changes the positions of the various points on the secant line with reference to the true parallel through any Clark monument were determined. These differences were termed adjustments to the parallel. The true falling at any Clark monument is the falling of the random secant line corrected for the adjustment from the random line to the true parallel.

The adjustment from the random line to the parallel at any particular mile point, or fractional mile point, is the adjustment to the parallel at the preceding point, plus or minus the latitude^{change} of the mile point considered, with reference to the preceding mile point. The total adjustment of each mile point is the adjustment to the parallel corrected for the adjustment for falling, dependent upon the falling of the parallel at the Clark monuments.

The courses of the true lines are reported to

RESURVEY TEXAS AND NEW MEXICO BOUNDARY.

the nearest fifteen seconds.

The courses of the offset lines were referred to the random line, points on the same having been preserved near the temporary corners for the purpose. All offsets were made to the north or to the south. The system of measurement was in accordance with the plan outline for the one hundred and third meridian.

The general plan of preparing the notes of the survey of the thirty-second parallel was similar to the plan described for the one hundred and third meridian. The true line notes read running westerly from the southeast corner of New Mexico. The dates of the establishment of the true line from the SE. cor. of New Mexico to Monument No. 24, follow in regular order; but the dates of the establishment from monument No. 24 to the Rio Grande are in the reverse order, due to the fact that the adjustments of the corners from the random to the true line was made in an easterly direction.

The mile points were marked, and the Clark monuments perpetuated in the same manner as described for the one hundred and third meridian. ^{Concrete} Large/Monuments were established at Clark monuments Nos. 4, 16, 22, 24 and 26; and small concrete monuments at Clark Monuments Nos. 8, 11, 12, 14, 15, 25 and 31.

Pits were omitted as accessories to the mile corners on the thirty-second parallel for the reason that the soil in localities where apparently pits were desirable, was either of too sandy a nature, or of a gypsum character. The soil of the latter nature is porous and contains many small sub-surface cracks or fissures. The construction of pits necessitated a breaking of the firmly packed surface, exposed and allowed the rain water to come in contact with the porous and cracked/^{sub-}surface, and experience demonstrated

RESURVEY TEXAS AND NEW MEXICO BOUNDARY.

that it caused the sub-surface soil to settle, disintegrate and wash away, and it was apparent that the permanence of the corners would be affected in a short time.

TEST OF STADIA WIRE INTERVAL.

Prior to making the stadia measurements mentioned in the true line notes, the stadia wire interval was tested as follows:

July 15: Near 100 mile corner.

Zero point of measurement 1.3 links in front of transit.

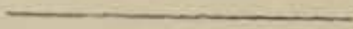
Chains from zero point	Rod Readings		Mean Reading ft.
	1st. ft.	2nd. ft.	
1.00	0.506	0.507	.5065
2.00	1.013	1.013	1.0130
3.00	1.519	1.520	1.5195
4.00	2.025	2.027	2.0260

Mean reading on the rod for distance of one chain, .5065 ft.

Ratio of stadia wires, 1 to 130.3.

1 ft. reading on rod = 1.9742 chs .in distance.

log. of 1.9742 - .295391.



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RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

RANDOM LINE.

S.E. Corner New Mexico to Clark Mon. No. 31 (1 M. plus 54.785 chs.) by G.D.D.Kirkpatrick, U.S.Surveyor.

April 18: On April 17, an observation on Polaris for true meridian was made at the southeast corner of New Mexico, which observation is recorded in the true line notes of the 103rd Meridian, projected from said southeast corner. From this true meridian I lay off 90° to the west, and run west on a tangent to the parallel, on the south boundary of New Mexico, 32nd parallel, setting temporary mile corners at intervals of 80.00 chs. by two sets of chainmen. After laying off the angle of 90° as indicated by the plates of the transit, said angle was added consecutively on the plates eight times, the total angle being 720°.

Temporary mile corner No. 1, plus.

54.785

Fall .045 chs. north of Clark monument No. 31, described in the true line notes.

TRUE LINE

S. E. Corner of New Mexico to Clark Monument No. 31.

The felling of the tangent random .045 chs. N. of Monument No. 31, gives a true felling of the parallel of .062 chs. N. of said monument, which in a distance of 1 M. and 54.785 chs. gives a true line course of S. 89° 58' 25" W. from said S.E.cor. to Mon. 31. The course of this line was based only on the Polaris observation made at the SE. corner of New Mexico; the line was projected under favorable atmospheric conditions and it is improbable that there was any accumulated error in the 1 M and 54.785 chs. that the tangent was projected.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

1st Mile

S. 89° 58' 25" W.

On true line, Texas and New Mexico boundary, over loose shifting sand hills, short scattered scrub oak undergrowth.

72.00

Commence descent into Monument Draw, bears NE. and SW.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 1 mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "Texas" on the south, "New Mexico" on the north thereof, and also marked, "Clerk Boundary 1859 Mile Corner. No. 1 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner is .025 chs. S. of the position of the temporary corner on the random tangent line. Temporary corner set on tangent and not on true parallel.

Land, rolling sand hills.

Soil, loose sand, 4th rate.

Undergrowth, short scattered scrub oak.

2nd Mile

S. 89° 58' 25" W.

On true line, Texas and New Mexico boundary, descend over rolling sand hills into Monument Draw, loose sand soil.

5.00

Leave sand hills and scrub oak undergrowth, thence over firmer sandy land, bears NE. and SW.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.
12.50

Bottom of descent of 60 ft. bears NE. and SW., thence over almost level land across Monument Draw, through scattered mesquite undergrowth.

No difference between measurements of 54.785 chs. by two sets of chainmen.

54.785

To reestablished Clark Monument No. 31 which is an iron pipe $1\frac{1}{2}$ ins. in diameter, 22 ins. above ground, marked

TEX N L S B C 22 on the NE.

32 P MON NO 1 W on the W. sides.

The position of this monument is in exact accordance with its position with reference to Monument Draw, as shown on Clark's plat No. 4. Arthur D. Kidder, Supervisor of Surveys, G. L. O., was present and identified this monument as occupying the position of the reestablished monument visited by him in 1903, at which time he was accompanied by W. D. Twitchell, state surveyor, Texas, who identified the existing reestablished monument as occupying the position of the Clark monument found and identified by him in 1892.

To perpetuate the location of this monument, I construct at the point occupied by the above described iron pipe, a concrete monument in the form of a frustum of a cone, encased in galvanized iron, the lower base 24 ins. in diameter, the upper base, 18 ins. in diameter and 30 ins. high, set 20 ins. into the ground, in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by an E. and W. division line, 2 ins. long, with "TEXAS" on the S., and "NEW MEXICO" on the N. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 31" in the N. half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

Land, rolling and almost level.

Soil, loose and medium firm sand, 4th rate.

Undergrowth, mesquite.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. For use in projecting the random line westward from Monument No. 31, I mark on the ground by means of stakes a line having a bearing of N. $89^{\circ} 59' .3$ W.

April 18, 1911.

The random and true lines from the S. E. corner of New Mexico to monument No. 31 were surveyed by G. D. D. Kirkpatrick, U. S. Surveyor.

The random line westward from monument No. 31 was projected by Lee S. Miller, U. S. Surveyor.

The true line from Monument 31 to Monument 24 was fixed by G. D. D. Kirkpatrick, U. S. Surveyor.

RANDOM LINE

Clark Monument No. 31 (1 M 54.785 chs.) to Clark Monument No. 26 (45 M. 1656 chs).

June 11, 1911: I commence at a point on the secant to the parallel 4 links N. of Clark Monument No. 31, which is at 1 mile and 54.785 chs. from S.E. corner of New Mexico, identified and reestablished by G.D.D. Kirkpatrick on April 18, 1911, and heretofore described.

The bearing of the secant at this point is N. $89^{\circ} 59.3'$ W., determined by Mr. Kirkpatrick by Polaris observation and fixed on the ground, April 18, 1911.

Thence I run, N. $89^{\circ} 59.3'$ W. projecting random secant, and setting temporary points at intervals of 80.00 chs. by two sets of chainmen, from S.E. corner of New Mexico.

Temporary mile point No. 4. End of day's run.

June 11, 1911.

June 12: An altitude observation on the sun for azimuth made at temporary mile corner No. 4 and recorded in the true line notes at corresponding point.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. Accumulated error in azimuth for day's run on June 11th was 0.9' to the right.

Continue on secant line, N. 89° 59' 46" W.

Temporary Mile Corner No. 6.

Deflect line 3.25' to right.

Temporary mile point No. 10. End of day's run.

June 12, 1911.

June 13: An altitude observation on the sun for azimuth made at temporary mile corner No. 10, and recorded in true line notes at corresponding point.

Accumulated error in azimuth between temporary mile corners Nos. 4 and 10 was 2' to right.

Continue on secant line, N. 89° 57' 48" W.

Temporary mile corner No. 12.

Deflect line 3.25' to right.

Temporary mile point No. 15. End of day's run.

June 13, 1911.

June 14: Continue on secant from temporary mile corner No. 15.

Temporary mile point No. 20. End of day's run.

An altitude observation on the sun for azimuth was made at this point, and is recorded in true line notes at corresponding point.

There was no accumulative error in alignment between temporary mile points Nos. 10 and 20.

June 14, 1911.

June 15, 1911: Continue on secant from temporary mile corner No. 20, N. 89° 59' 57" W.

Temporary mile point No. 26, at end of day's run.

An altitude observation on the Sun for azimuth was made at this point, and is recorded in true line notes at a corresponding point.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Accumulated error in azimuth between temporary mile corners Nos. 20 and 26 was 0.5' to right.

June 15, 1911.

June 16: Continue on secant from temporary mile corner No. 26, S. $89^{\circ} 57' 19''$ W.

Temporary mile corner No. 32.

Temporary mile point No. 33, at end of day's run.

An altitude observation of the sun for azimuth was made at this point, and is recorded in true line notes at a corresponding point.

Accumulated error in azimuth between temporary mile corners Nos. 26 and 33 was 1.1' to right.

June 16, 1911.

June 17; Continue on secant from temporary mile corner No. 33, N. $89^{\circ} 57' 40''$ W.

Temporary mile point No. 41, at end of day's run.

An altitude observation on the Sun for azimuth was made at this point, and is recorded in true line notes at a corresponding point.

Accumulated error in azimuth between temporary mile corners Nos. 33 and 41 was 3'.0 to the right.

June 17, 1911.

June 18; Continue on secant from temporary mile corner No. 41, N. $89^{\circ} 59' 02''$ W.

Temporary mile corner No. 45, plus

00.656

Fall 1.707 chs. N. of Clark Monument No. 26, hereinafter described in true line notes.

The azimuth of secant at this point is based on a direct observation on the sun at 50th mile point.

Accumulated error in azimuth between temporary mile corner No. 41 and Clark Monument No. 26 was 0.2' to right.

June 18, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

TRUE LINE

Clark Monument No. 31 to Clark Monument No. 26.

The falling of the random line, 1.707 chs. N. of Clark Monument No. 26, adjusted for accumulated difference in alinement between the secant and the parallel, gives a true falling of the parallel of 129.4 links N., or a true line course between Clark Monument No. 31 and Clark Monument No. 26 of S. 89° 58' 45" W.

2nd Mile

July 18, 1911; S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary from Mon. No. 1, measurement counting from SE. corner of New Mexico.

Over rolling land, through scattered mesquite undergrowth.

No difference between measurements of 25.215 chs. by two sets of chainmen from Mon. 31.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 2 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 2, General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 2.7 lks. S. of the position of temporary corner.

Land, rolling.

Soil, loose sand, 4th rate.

No timber. Scattered mesquite undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

3rd Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary, over rolling land, through scattered mesquite and shinnery undergrowth.

- 8.00 Wagon road, bears NE. and SW. in Monument Draw.
- 30.00 Middle of Monument Draw, drains SW.
- 36.00 Commence gradual ascent of SE. slope, from draw.
- 43.00 Top of ascent. Continue over undulating land.
- Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point
- By 1st set, 79.99 chs.,
- By 2nd set, 80.01 chs; the mean of which is
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 3 mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clerk Boundary 1859 Mile Corner No. 3 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.
- This corner 6.9 links S. of the position of temp. corner.
- Land, rolling.
- Soil, loose sand, 2nd rate.
- No timber; mesquite and shinnery undergrowth.

4th Mile

S. 89° 58' 45" W.

Over rolling land, through scattered mesquite undergrowth.

- 44.75 Wagon road, bears N. and S.

RE-SURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 80.005 chs.,

By 2nd set, 79.995 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 4 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 4, General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner is 10.6 links S. of the position of temporary corner.

Land, rolling.

Soil, loose sand, 2nd rate.

No timber; mesquite undergrowth.

On June 12, 1911, I determine the true meridian at a point on the random secant 10.6 lks. N. of this corner by a direct observation on the sun as follows:

Horizontal angles read from flag on secant to E. to Sun.

Latitude - N. 32° 00' 00". Declination -N 23° 6' 54"

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Sun L.M.Time Hor. Angle Vert. Angle
A.M.

D. 8h 29m 1 s. N. 2° 8' 00" 44° 00' 30"
R. 8h 30m 58s N. 2° 36' 00" 43° 48' 30"
Means N. 2° 22' 00" 43° 54' 30"

Par. + 6"
Ref. - 1' 00"
h. 43° 53' 36"

Sun's azimuth N. 87° 38' 19" E
Bearing of secant N. 90° 00' 19" E
N. 89° 59' 41" W.

cos. lat. 9.928420 sin. dec. 9.593925 tan. lat. 9.795789
" h. 9.857713 9.786133 " h. 9.893219
9.786133 9.807792 9.779008

.64239 .60119
.60119

cos. azimuth .04120

Sun L.M.Time Hor. Angle Vert. Angle.

A.M.
D. 8 h 35 m 12 s N. 1° 21' 00" 45° 18' 30"
R. 8 h 37 m 40 s N. 1° 46' 00" 45° 13' 30"
Means N. 1° 33' 30" 45° 16' 00"

Par. + 6"
Ref. - 0' 57"
h. 45° 15' 9"

Sun's azimuth N. 88° 26' 35" E
Bearing of secant N. 90° 00' 5" E
N. 89° 59' 55" W.

cos. lat. 9.928420 sin. dec. 9.593925 tan. lat. 9.795789
" h. 9.847563 9.775983 " h. 10.003828
9.775983 9.817942 9.799617

.65757 .63040
.63040
.02717

cos. azimuth

Sun L.M.Time Hor. Angle Vert. Angle

A.M.
D. 8h 41m 28s N. 0° 31' 30" 46° 33' 00"
R. 8h 43m 5s N. 1° 6' 00" 46° 28' 00"
Means N. 0° 48' 45" 46° 30' 30"

Par. + 6"
Ref. - 0' 55"
h. 46° 29' 41"

Sun's azimuth N. 89° 11' 33" E
Bearing of secant N. 90° 00' 18" E
N. 89° 59' 42" W.

cos. lat. 9.928420 sin. dec. 9.593925 tan. lat. 9.795789
" h. 9.837854 9.766274 " h. 10.022670
9.766274 9.827651 9.818459

.67244 .65835
.65835
.01409

cos. azimuth

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

90° 00' 19"
 90° 00' 5"
 90° 00' 18' N. 90° 00' 14" E = N. 89° 59' 46" W. Bearing
 of secant at point of observation.

Chains.

5th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered shinnery undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 5 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof and also marked "Clark Boundary 1859 Mile Corner No. 5, General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 13.8 links S. of the position of temp. corner.

Land, rolling.

Soil, loose sand, 2nd rate.

No timber; shinnery undergrowth.

6th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary, over undulating land, through scattered shinnery undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 6 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 6, General Land Office Reestablishment, 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 16.6 links S. of the position of temporary corner.

Land, undulating.

Soil, loose sand, 2nd rate.

No timber; shinnery undergrowth.

7th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered mesquite and shinnery undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point.

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 7 mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 7 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

This corner 26.4 links S. of the position of the temporary corner.

Land, undulating.

Soil, loose sand, 2nd rate.

No timber; mesquite and shinnery undergrowth.

July 18, 1911.

July 19, 1911:

8th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered shinnery and mesquite undergrowth.

60.80

Wire fence, bears N. and S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 8 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof and also marked, "Clark Boundary 1859 Mile Corner No. 8 General Land Office Reestablishment, 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 35.7 links S. of the position of temporary corner.

Land, undulating.

Soil, loose sand, 2nd rate.

No timber; mesquite and shinnery undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

9th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico Boundary.

Over undulating land, through scattered mesquite and shinnery undergrowth.

40.00

Leave scattered and continue in heavy undergrowth.

68.70

Wire fence, bears N. and S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of the middle point

By 1st set, 79.985 chs.

By 2nd set, 80.015 chs., the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 9 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof and also marked, "Clark Boundary 1859 Mile Corner No. 9 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 44.5 lks. S. of the position of temporary corner.

Land, undulating.

Soil, loose sand, 2nd rate.

No timber; mesquite and shinnery undergrowth.

10th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered mesquite and shinnery undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs.; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 10 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 10 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner is 52.9 links S. of the position of temporary corner.

Land, rolling.

Soil, sandy loam, 2nd rate.

No timber; mesquite and shinnery undergrowth.

At a point 52.9 links N. of this corner on the random secant line on June 13th I determine the azimuth of the secant as follows:

Horizontal angles read from flag on secant to E. to Sun.

Latitude $-32^{\circ} 00' 00''$ N. Declination $-23^{\circ} 10' 45''$ N.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
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D. 8h 48m 10s	S. 0° 11' 30"	48° 2' 00"
R. 8h 51m 35s	N. 0° 7' 00"	48° 9' 30"
Means	<u>S. 0° 2' 15"</u>	<u>48° 5' 45"</u>

Par. +	6"
Ref. -	<u>52"</u>
	48° 05' 00"

Sun's azimuth S. 89° 55' 38" E
 Bearing of secant S. 89° 57' 53" E
 N. 89° 57' 53" W

cos. lat. 9.928420	sin. dec. 9.595063	tan. lat. 9.795789
" h. 9.824808	9.753228	" h. 10.046833
<u>9.753228</u>	<u>9.841835</u>	<u>9.842622</u>

	.69476	.69602
cos. azimuth		<u>.69476</u>
		<u>.00126</u>

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
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D. 8h 54m 45s	S. 1° 5' 00"	49° 26' 00"
R. 8h 57m 10s	S. 0° 37' 30"	49° 20' 30"
Means	<u>S. 0° 51' 15"</u>	<u>49° 23' 15"</u>

Par. +	6"
Ref. -	<u>50"</u>
	49° 22' 31"

Sun's azimuth S. 89° 6' 29" E.
S. 89° 57' 44" E.

Bearing of secant N. 89° 57' 44" W.

cos. lat. 9.928420	sin. dec. 9.595063	tan. lat. 9.795789
" h. 9.813649	9.742069	" h. 10.066587
<u>9.742069</u>	<u>9.852994</u>	<u>9.862376</u>

	.71284	.72841
cos. azimuth		<u>.71284</u>
		<u>.01557</u>

89° 57' 53"
 89° 57' 44" 89° 57' 50" Mean bearing of secant at
 point of observation
 N. 89° 57' 48" W.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

<u>Chains.</u>	<p style="text-align: center;">11th Mile</p> <p style="text-align: center;">S. 89° 58' 45" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over gently rolling land, through scattered mesquite undergrowth.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point</p> <p>By 1st set, 79.995 chs.,</p> <p>By 2nd set, 80.005 chs; the mean of which is</p> <p>80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 11 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 11 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.</p> <p>This corner 60.5 links S. of the position of temporary corner.</p> <p>Land, rolling.</p> <p>Soil, loose sand, 2nd rate.</p> <p>No timber; mesquite undergrowth.</p>
10.00	<p style="text-align: center;">12th Mile</p> <p style="text-align: center;">S. 89° 58' 45" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over gently rolling land, through scattered mesquite undergrowth.</p> <p>Wagon road, bears N.NE and S.SW.</p> <p>22.70 Wire fence, bears N. and S.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links. Position of the middle point</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. By 1st set, 79.99 chs.,
 By 2nd set, 80.01 chs., the mean of which is
 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
 filled with concrete, flanged at the bottom and sur-
 mounted with a brass cap, 26 ins. into the ground for
 the 12 mile corner. The top of the cap is divided by
 an east and west stamped line 1 inch in length, and
 marked "New Mexico" on the north, "Texas" on the south
 thereof, and also marked, "Clark Boundary 1859 Mile
 Corner No. 12 General Land Office Reestablishment 1911
 United States Boundary Commission." Pits impracticable,
 no stone available for a mound.

This corner 66.8 links S. of the position of the
 temporary corner.

Land, rolling.

Soil, hard sand.

No timber; scattered mesquite undergrowth.

13th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite under-
 growth.No difference between measurements of 80.00 chs. by
 two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
 filled with concrete, flanged at the bottom and sur-
 mounted with a brass cap, 26 ins. into the ground for the
 13 mile corner. The top of the cap is divided by an
 east and west stamped line 1 inch in length, and marked
 "New Mexico" on the north, "Texas" on the south thereof,
 and also marked "Clark Boundary 1859 Mile Corner No. 13
 General Land Office Reestablishment 1911, United States
 Boundary Commission." Pits impracticable, no stone
 available for a mound.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

This corner 79.1 links S. of the position of temporary corner.

Rolling land.

Soil, hard, sandy loam.

No timber; mesquite undergrowth.

14th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite undergrowth.

20.00 Enter scattered shinnery undergrowth; continue in mesquite and shinnery.

64.00 Enter scattered cat-claw undergrowth; continue in mesquite, shinnery and cat claw undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 14 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No.14 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 90.3 links S. of the position of temporary corner.

Land, rolling.

Soil, firm sandy loam, 2nd rate.

No timber; mesquite, shinnery and cat claw undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

15th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through heavy mesquite and scattered shinnery and cat claw undergrowth.

76.40

Wire fence, bears N. and S.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 15 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 15 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 100.3 lks. S. of the position of temp. corner.

Land, gently rolling.

Soil, loose sand, 2nd rate.

No timber; mesquite, shinnery and cat claw undergrowth.

16th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and cat claw undergrowth, and heavy shinnery undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 16 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 16 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 108.9 links S. of the position of temporary corner.

Land, rolling.

Soil, loose sand, 2nd rate.

No timber. Mesquite, shinnery and cat claw undergrowth.

17th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and cat claw undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 17 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 17, General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

This corner 116.6 lks. S. of the position of temporary corner.

Land, rolling.

Soil, loose sand, 2nd rate.

No timber; mesquite and cat claw undergrowth.

18th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and cat claw undergrowth.

23.00 Wire fence, bears N.NE and S.SW.

65.00 Enter scattered shinnery undergrowth, and continue through scattered mesquite, cat claw and shinnery undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 18 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 18, General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 122.9 links S. of the position of temporary corner.

Land, rolling.

Soil, loose sand, 2nd rate.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. No timber; mesquite, shinnery and cat-claw undergrowth.

19th Mile

S. $89^{\circ} 58' 45''$ W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and cat-claw undergrowth.

9.70 Wagon road, bears NW and SE.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 77.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 19 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 19, General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 127.8 links S. of the position of temporary corner.

land, rolling.

Soil, hard sand, 2nd rate.

No timber. Mesquite and cat-claw undergrowth.

20th Mile

S. $89^{\circ} 58' 45''$ W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite, shinnery and cat-claw undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle

Chains.

point is

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 20 mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 20 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable; no stone available for a mound.

This corner 131.5 links S. of the position of temporary corner.

Land, rolling.

Soil, firm sandy loam, 2nd rate.

No timber; mesquite, shinners and cat-claw undergrowth.

At a point 131.5 links N. of this corner, on June 14 I determined the azimuth of the random secant line as follows:

Horizontal angles read from flag on secant to W. to Sun.

Latitude $-32^{\circ} 00' 00''$ N. Declination $-23^{\circ} 15' 24''$ N.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle.
+	D. 4h 57m 30s	N. 13° 38' 30"	23° 50' 30"
+	R. 4h 59m 12s	N. 13° 15' 30"	23° 58' 30"
	Means	N. 13° 27' 00"	23° 54' 30"
			Par. + 8"
			Ref. - 2' 10"
			23° 52' 28"
	Sun's azimuth	N. 76° 33' 00" W	
	Bearing of secant	90° 00' 00"	
	cos. lat. 9.928420	sin. dec. 9.596433	tan. lat. 9.795789
	cos. h. 9.961152	9.889572	" h. 9.646017
		9.706861	9.441806
		.50917	.27657
		.27657	
	Cos. azimuth	.23260	

Sun	L.M. T.p.m.	Hor. Angle	Vert. Angle
+	D. 5 h 5 m 3 s	N. 14° 29' 00"	22° 15' 00"
+	R. 5 h 6 m 38 s	N. 14° 4' 30"	23° 30' 00"
	Means	N. 14° 16' 45"	22° 22' 30"
			Par. + 8"
			Ref. - 2' 20"
			h. 22° 20' 18"
	Sun's azimuth	N. 75° 43' 23" W	
	Bearing of secant	N. 90° 00' 8" W	
		S. 89° 59' 52" W	
	cos. lat. 9.928420	sin. dec. 9.596433	tan. lat. 9.795789
	cos. h. 9.96121	9.894541	" h. 9.613748
		9.701892	9.409537
		.50338	.25677
		.25677	
	cos. azimuth	.24661	

Sun	L.M. Time p.m.	Hor. Angle	Vert. Angle
+	D. 5h 10m 50s	N. 15° 6' 00"	21° 6' 30"
+	R. 5h 13m 20s	N. 14° 50' 00"	21° 5' 00"
	Means	N. 14° 58' 00"	21° 5' 45"
			Par. + 8"
			Ref. - 2' 28"
			h. 21° 3' 25"
	Sun's azimuth	N. 75° 1' 43" W	
	Bearing of secant	N. 89° 59' 43" W	
	cos. lat. 9.928420	sin. dec. 9.596433	tan. lat. 9.795789
	" h. 9.969986	9.898406	" h. 9.585466
		9.698027	9.381255
		.49892	.24058
		.24058	
	cos. azimuth	.25834	
	West.		
	S. 89° 59' 52" W		
	N. 89° 59' 43" W.		
	Mean bearing of secant at point of observation,		
	N. 89° 59' 57" W.		

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

21st Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and cat claw undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 21 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof and also marked, "Clark Boundary 1859 Mile Corner No. 21 General Land Office Establishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 133.9 links S. of the position of temp. cor.

Land, rolling.

Soil, firm sandy loam, 2nd rate.

No timber; mesquite and cat claw undergrowth.

July 19, 1911.

July 20, 1911.

22nd Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and cat claw undergrowth.

39.70

Wire fence, bears N. and S.

53.00

Enter scattered shinny undergrowth, bears N. and S.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 22 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 22 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 135.5 links S. of the position of temporary corner.

Land, rolling.

Soil, firm sand, 2nd rate.

No timber; mesquite, shinners and cat claw undergrowth.

23rd Mile

S. $89^{\circ} 58' 45''$ W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and cat claw undergrowth.

19.90

Wire fence, E.NE and W.SW.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 80.005 chs;

By 2nd set, 79.995 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 23 mile corner. The top of the cap is divided by an

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 103RD MERIDIAN.

Chains

east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 23 General Land Office Reestablishment 1911, United States Boundary Commission. Pits impracticable, no stone available for a mound.

This corner 135.9 links S. of the position of temporary corner.

Land, rolling.

Soil, hard sand, 2nd rate.

No timber. Mesquite and cat claw undergrowth.

24th Mile

S. $89^{\circ}58'45''$ W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and cat claw undergrowth.

26.00 Enter heavy shinnery and cat claw undergrowth, bears N. and S.

64.90 Wire fence, bears N. and S.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 24 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof and also marked "Clark Boundary 1859 Mile Corner No. 24 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 135.2 links S. of the position of temporary corner.

Land, rolling.

Soil, loose sand, 2nd rate.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32 ND PARALLEL.

Chains.

No timber; mesquite shinnery and cat claw undergrowth.

25th Mile

S. 89° 58' 45" W.

74.35

On true line, Texas and New Mexico Boundary.
Through scattered cat-claw and mesquite undergrowth.
Wire fence, bears N. and S.

No difference between measurement of 80.00 chs. by
two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 26 ins. into the ground for
the 25 mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the
south thereof and also marked, "Clark Boundary 1859 Mile
corner No. 25 General Land Office Reestablishment 1911
United States Boundary Commission." Pits impracticable,
no stone available for a mound.
This corner 133.5 links S. of the position of the temp-
orary corner.

Land, rolling.

Soil, hard, sandy loam, 2nd rate.

No timber; mesquite and cat claw undergrowth.

26th Mile

S. 89° 58' 45" W

On true line, Texas and New Mexico boundary.

Over gently rolling land through scattered mesquite and
cat claw undergrowth.

Difference between measurements of 80.00 chs. by
two sets of chainmen is 1 link; position of the middle
point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 26 mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 26 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 130.9 links S. of the position of temp. cor.

Land, rolling.

Soil, hard, red sandy loam, 2nd rate.

No timber; mesquite and cat claw undergrowth.

At a point 130.9 lks. S. of mile corner No. 26 on the random secant line, on June 15th, I determined the azimuth of the secant as follows:

Horizontal angles read from flag on secant to W. to Sun.

Latitude $-32^{\circ} 00' 00''$ N. Declination $-23^{\circ} 18' 25''$ N.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Sun	L.M. Time p.m.	Hor. Angle	Vert. Angle
+	D. 5h 38m 00s	N. 18° 50' 30"	14° 4' 30"
+	A. 5h 39m 40s	N. 18° 29' 30"	14° 44' 00"
	Means	<u>N. 18° 40' 00"</u>	<u>14° 24' 15"</u>
			Par. + 8"
			Ref. - 3' 41"
			h. 14° 20' 42"
	Sun's azimuth	N. 71° 13' 49" W.	
	Bearing of secant	<u>N. 89° 53' 49" W.</u>	
	cos. lat.	9.928420	sin. dec. 9.597318
	" h.	9.986243	9.914663
		<u>9.914663</u>	<u>9.682655</u>
		.48156	.15980
		<u>.15980</u>	
	cos. azimuth	<u>.32176</u>	
	Note:- This observation does not check with others of series, and in place an observation, based on the reversed reading only is calculated below.		
	Vertical angle, upper limb		14° 44' 00"
	semi-diameter		<u>15' 46"</u>
			<u>14° 28' 14"</u>
		Par. +	8"
		Ref. -	3' 40"
		h.	<u>14° 24' 42"</u>
	Hor. Angle to left limb		
		N. 18° 29' 30"	
	semi-diameter	16' 40"	
	azimuth	<u>N. 71° 16' 5" W.</u>	
		N. 90° 2' 15" W.	
		<u>S. 89° 57' 45" W.</u>	Azimuth of secant.
	cos. lat.	9.928420	sin. dec. 9.597318
	" h.	9.986114	9.914534
		<u>9.914534</u>	<u>9.682784</u>
		.48171	.16057
		<u>.16057</u>	
	cos. azimuth	<u>.32114</u>	
Sun	L.M. Time p.m.	Hor. Angle	Vert. Angle
+	D. 5h 43m 8s	N. 19° 27' 00"	13° 33' 00"
+	A. 5h 44m 45s	N. 19° 5' 30"	13° 43' 00"
	Means	<u>N. 19° 16' 15"</u>	<u>13° 38' 00"</u>
			Par. + 8"
			Ref. - 3' 54"
			h. 13° 34' 14"
	Sun's azimuth	N. 70° 47' 05" W.	
	Bearing of secant	<u>N. 90° 3' 20" W.</u>	
		S. 89° 56' 40" W.	
	cos. lat.	9.928420	sin. dec. 9.597318
	" h.	9.987703	9.916123
		<u>9.916123</u>	<u>9.681195</u>
		.47995	.15083
		<u>.15083</u>	
	cos. azimuth	<u>.32912</u>	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Sun	L.M. Time p.m.	Hor. Angle	Vert. Angle
+	D. 5h 47m 40s	N. 19° 57' 30"	12° 38' 30"
+	R. 5h 49m 43s	N. 19° 40' 00"	12° 43' 00"
	Means	N. 19° 48' 45"	12° 40' 45"

Par.+ 8"
 Ref.- 4' 12"
 h. 12° 36' 41"

Sun's azimuth N. 70° 13' 42" W.
 Bearing of secant N. 90° 2' 27" W.
 S. 89° 57' 33" W.

cos.lat. 9.928420	sin.dec. 9.597318	tan.lat. 9.795789
" h. 9.989393	9.917813	" h. 9.349734
9.917813	9.679505	9.145523
	.47808	
	.13981	
	.33827	

cos.azimuth
 S. 89° 57' 45" W.
 S. 89° 56' 40" W.
 S. 89° 57' 33" W.

Mean bearing of secant at point of observation
 S. 89° 57' 19" W.

27th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and cat claw undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 80.005 chs.,

By 2nd set, 79.995 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 27 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 27 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. This cor. 127.1 lks. S. of the position of temp. cor.
Land, rolling.
Soil, sandy loam, 2nd rate.
No timber; mesquite and cat claw undergrowth.

28th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite
and cat claw undergrowth.No difference between measurements of 80.00 chs. by
two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 26 ins. into the ground for
the 28 mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 28 General Land Office Reestablishment 1911
United States Boundary Commission." Pits impracticable,
no stone available for a mound.

This cor. 122.4 links S. of the position of temp.
cor.

Land, rolling.

Soil, firm, red sandy loam, 2nd rate.

No timber; mesquite and cat claw undergrowth.

29th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite
and cat claw undergrowth.

33.90

Wagon road, bears N. and S.

No difference between measurements of 80.00 chs. by
two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 29 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 29 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 117.0 links S. of the position of temp. cor.

Land, rolling.

Soil, firm red sandy loam, 2nd rate.

No timber; mesquite and shinney undergrowth.

July 20, 1911.

July 21, 1911.

30th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and cat claw undergrowth.

4.10

Wire fence, bears N. and S.

55.10

Wire fence, bears N. and S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 30 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 30 General Land Office Reestablishment 1911 United States

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	<p>Boundary Commission." Pits impracticable, no stone available for a mound.</p> <p>This cor. 110.7 links S. of the position of temp. cor. Land, rolling.</p> <p>Soil, firm, red sandy loam, 2nd rate.</p> <p>No timber. Mesquite and cat claw undergrowth.</p>
47.50	<p style="text-align: center;">31st Mile</p> <p style="text-align: center;">S. 89° 58' 45" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over gently rolling land, through scattered mesquite and cat claw undergrowth.</p> <p>Wagon road, bears N. and S.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 31 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 31 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.</p> <p>This corner 103.4 links S. of the position of temporary corner.</p> <p>Land, rolling.</p> <p>Soil, red sandy loam, 2nd rate.</p> <p>No timber; mesquite and cat claw undergrowth.</p>
	<p style="text-align: center;">32nd Mile</p> <p style="text-align: center;">S. 89° 58' 45" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over gently rolling land, through scattered mesquite and cat claw undergrowth.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 32 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 32 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 95.3 links S. of the position of temporary corner.

Land, rolling.

Soil, firm red sand, 2nd rate.

No timber, mesquite and cat claw undergrowth.

33rd Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and cat claw undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 33 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 33 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 104.1 links S. of the position of temp.
cor.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. Land, rolling.
Soil, firm, red sandy loam, 2nd rate.
No timber; mesquite and shinnery undergrowth.

At a point 104.1 links N. of mile corner No. 33 on June 16th I determined the azimuth of the random secant line as follows:

Horizontal angles read from flag on secant to W. to Sun.

Latitude $-32^{\circ} 00' 00''$ N. Declination $-23^{\circ} 30' 40''$ N.

Sun	L.M. Time p.m.	Hor. Angle	Vert. Angle.
+	D. 5 h 12m 38s	N. $16^{\circ} 16' 30''$	$19^{\circ} 5' 30''$
+	R. 5 h 14m 18s	N. $15^{\circ} 54' 30''$	$19^{\circ} 15' 00''$
	Means	N. $16^{\circ} 5' 30''$	$19^{\circ} 10' 15''$
			Par. + 8"
			Ref. - 2' 45"
			n. $19^{\circ} 7' 38''$
	Sun's azimuth	N. $73^{\circ} 52' 4''$ W	
	Bearing of secant	N. $89^{\circ} 57' 34''$ W	
	cos. lat. 9.928420	sin. dec. 9.597978	tan. lat. 9.795789
	" h. 9.975337	9.903757	" h. 9.540095
	9.903757	9.694221	9.335884
		.49456	.21671
		.21671	
	Cos. Azimuth	.27785	

Sun	L.M. Time p.m.	Hor. Angle	Vert. Angle
+	D. 5h 17m 17s	N. $16^{\circ} 47' 30''$	$18^{\circ} 8' 30''$
+	R. 5h 19m 40s	N. $16^{\circ} 26' 30''$	$18^{\circ} 10' 00''$

This observation does not check with the others of this series and the observation calculated below is based on the direct reading only.

Vertical angle, lower limb	$18^{\circ} 8' 30''$
semi diameter	$15' 46''$
	$18^{\circ} 24' 16''$
	Par. + 8"
	Ref. - 2' 55"
	$18^{\circ} 21' 29''$

Horizontal angle to right limb	N. $16^{\circ} 47' 30''$
semi-diameter	$16' 24''$
	N. $16^{\circ} 31' 6''$
azimuth	N. $73^{\circ} 26' 35''$
	N. $89^{\circ} 57' 41''$ W. Azimuth of secant.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

cos. lat	9.928420	sin. dec.	9.597978	tan. lat.	9.795789
" h.	9.977314		9.905734	" h	9.520940
	9.905734		9.692244		9.316729

	.49232	.20736
	.20736	
	.28496	

cos. azimuth

Sun

L. Time p.m.

Hor. Angle

Vert. Angle

+
+

D. 5h 22m 35s

N. 17° 23' 30"

17° 05' 00"

R. 5h 24m 4s

N. 17° 01' 00"

17° 16' 00"

Means

N. 17° 12' 15"

17° 10' 30"

Par. + 8"

Ref. - 3' 5"

h. 17° 7' 33"

Sun's azimuth

N. 72° 45' 30" W

Bearing of secant

N. 89° 57' 45" W

cos. lat.	9.928420	sin. dec.	9.597978	tan. lat.	9.795789
" h.	9.980303		9.908723	" h.	9.488739
	9.908723		9.689255		9.284528
			.48894		.19254
			.19254		
			.29640		

cos. lat.

sin. dec.

tan. lat.

" h.

" h.

" h.

9.908723

9.689255

9.284528

cos. azimuth

.29640

N. 89° 57' 34" W

Mean bearing of secant at

N. 89° 57' 41" W

point of observation

N. 89° 57' 45" W

N. 89° 57' 40" W.

34th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over undulating prairie land, through scattered mesquite undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 34 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 34 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable. No stone available for a mound.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

This cor. 112.2 lks. S. of the position of temp corner.

Land, undulating prairie.

Soil, firm, red sandy loam, 2nd rate.

No timber. Mesquite undergrowth.

35th Mile
S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over undulating prairie land, through scattered mesquite undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 35 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof and also marked, "Clark Boundary 1859 Mile Corner No. 35 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner is 119.9 links S. of the temporary corner.

Land, undulating.

Soil, firm, red sandy loam, 2nd rate.

No timber, mesquite undergrowth.

36th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over undulating prairie land through scattered mesquite and cat claw undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. 70.30	<p>Wire fence, bears N. and S.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 36 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 36 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.</p> <p>This corner is 127.3 links S. of the position of the temporary corner.</p> <p>Land, undulating.</p> <p>Soil, firm, red sandy loam, 2nd rate.</p> <p>No timber. Mesquite and cat claw undergrowth. July 21, 1911.</p>
53.00	<p>July 22, 1911.</p> <p style="text-align: center;">37th Mile</p> <p style="text-align: center;">S. 89° 58' 45" W</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over undulating prairie land, through scattered mesquite and cat claw undergrowth.</p> <p>Wagon road, bears N. and S.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 37 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 37 General Land Office Reestablishment 1911, United States Boundary Commission."</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Pits impracticable, no stone available for a mound.

This cor. 134.5 links S. of the position of temp.
cor.

Soil, firm, red sandy loam, 2nd rate.

No timber; mesquite and cat-claw undergrowth.

38th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered mesquite
and cat-claw undergrowth.

25.00

Wagon road, bears E.NE and W.SW.

Difference between measurements of 80.00 chs. by two
sets of chainmen is 2 links; position of the middle
point by 1st set, 80.01 chs.,

By 2nd set, 79.99 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 24 ins. into the ground
for the 38 mile corner. The top of the cap is divided
by an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked, "Clark Boundary 1859 Mile Corner
No. 38 General Land Office Reestablishment 1911 United
States Boundary Commission." Pits impracticable. No
stone available for a mound.

This corner 141.2 links S. of the position of temp.
cor. Land, undulating.

Soil, firm, red sand and gypsum gravel, 3rd rate.

No timber; mesquite and cat claw undergrowth.

39th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered mesquite

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

undergrowth.

No difference between measurements of 80.00 chs.
by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 24 ins. into the ground for
the 39 mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 39 General Land Office Reestablishment 1911
United States Boundary Commission." Pits impracticable,
no stone available for a mound.

This cor. 147.5 lks. S. of the position of temp. cor.
Land, undulating.

Soil, firm, red sand and limestone gravel, 3rd rate.
No timber; mesquite undergrowth.

40th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered mesquite
undergrowth.

60.00

Center of wide shallow draw, drains S. SW.

No difference between measurements of 80.00 chs. by
two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 24 ins. into the ground for
the 40 mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked "Clark Boundary 1859 Mile Corner

No. 40

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

General Land Office Reestablishment 1911
 United States Boundary Commission." Pits impracticable,
 no stone available for a mound.
 This cor. 153.3 links S. of the position of temp.cor.
 Land, undulating.
 Soil, firm, red sand and limestone gravel.
 No timber; mesquite undergrowth.

41st Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered mesquite
undergrowth .

43.25

Center of wide, shallow draw, S.SE.

77.80

Wagon road, bears NW. and S. E.

Descend on gradual W. slope.

No difference between measurements of 80.00 chs.
by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,
 filled with concrete, flanged at the bottom and sur-
 mounted with a brass cap, 18 ins. into the ground for
 the 41 mile corner. The top of the cap is divided
 by an east and west stamped line 1 inch in length, and
 marked "New Mexico" on the north, "Texas" on the south
 thereof, and also marked, "Clark Boundary 1859 Mile
 Corner No. 41 General Land Office Reestablishment 1911
 United States Boundary Commission." Pits impracticable,
 raise a mound of stone 3 ft. base, 1½ ft. high around
 post.

This cor. 158.8 lks. S. of the position of temp.cor.
 Land, undulating.

Soil, firm, red sandy loam and limestone gravel, 3rd
 rate.

No timber; mesquite undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

At a point 158.8 lks. N. of mile corner No. 41 on the random line on June 17th, I determined the azimuth of the secant as follows:

Horizontal angles read from flag on secant to W. to Sun.

Latitude - $32^{\circ} 00' 00''$ N. Declination - $23^{\circ} 22' 53''$ N.

Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 4h 51m 10s	N. $13^{\circ} 53' 30''$	$23^{\circ} 37' 00''$
+	R. 4h 53m 30s	N. $13^{\circ} 34' 30''$	$23^{\circ} 37' 30''$
	Means	N. $13^{\circ} 44' 00''$	$23^{\circ} 37' 15''$
		Par. +	8"
		Ref. -	2' 12"
		h.	$23^{\circ} 35' 11''$

Sun's azimuth N. $76^{\circ} 14' 36''$ W
Bearing of secant N. $89^{\circ} 58' 36''$ W

cos. lat.	9.928420	sin. dec.	9.598626	tan. lat.	9.795789
" h	9.962112	"	9.890532	" h.	9.640090
	9.890532		9.708094		9.435879

.51062 .27282

cos. azimuth $\frac{.27282}{.23780}$

Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 4h 56m 35s	N. $14^{\circ} 30' 30''$	$22^{\circ} 30' 30''$
+	R. 4h 58m 20s	N. $14^{\circ} 8' 00''$	$22^{\circ} 51' 30''$

This observation does not check with the others of the series, and the observation calculated below is based on the direct reading only.

Vertical angle, lower limb	$22^{\circ} 30' 30''$
semi-diameter	$15' 46''$
	$22^{\circ} 46' 16''$

Par. + 8"
Ref. - 2' 17"
h. $22^{\circ} 44' 7''$

Horizontal angle to right limb

N. $14^{\circ} 29'$	
semi diameter	$17' 05''$
	N. $14^{\circ} 11' 55''$
	N. $75^{\circ} 47' 21''$
	N. $89^{\circ} 59' 16''$

Sun's azimuth
Azimuth of secant

cos. lat.	9.928420	sin. dec.	9.598626	tan. lat.	9.795789
" h	9.964872	"	9.893292	" h.	9.622248
	9.893292		9.705334		9.418037

.50738 .26184

cos. azimuth $\frac{.26184}{.24554}$

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32nd PARALLEL.

Chains

Sun



L.M. Time p.m.	Hor. Angle	Vert. Angle
D. 5h 1m 58s	N. 15° 05' 00"	21° 24' 00"
R. 5h 3m 48s	N. 14° 43' 30"	21° 32' 30"
Means	N. 14° 54' 15"	21° 28' 15"

Par. + 8"
 Ref. - 2' 25"
 h. 21° 25' 58"

Sun's azimuth N. 75° 04' 58" W
 Bearing of secant N. 89° 59' 13" W

cos. lat. 9.928420 sin. dec. 9.598626 tan. lat. 9.795789
 " h. 9.968878 " h. 9.593902
 9.897298 9.897298 9.701328 9.389691

.50272 .24530
 .24530
 .25742

cos. azimuth
 N. 89° 58' 36" W. Mean bearing of secant at point
 N. 89° 59' 16" W of observation
 N. 89° 59' 13" W N. 89° 59' 2" W

42nd Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over rolling ground, through scattered mesquite, cat-claw and greasewood undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 16 ins. into the ground for the 42 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 42 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, raise a mound of stone 3 ft. base, 1½ ft. high around corner.

This corner 163.7 links S. of the position of temp. cor.

Land, rolling.

Soil, firm sandy loam and limestone gravel on surface.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. With limestone bed-rock 1 foot below surface.
No timber; mesquite, cat claw and greasewood undergrowth.

43rd Mile

S. $89^{\circ} 58' 45''$ W.

On true line Texas and New Mexico boundary.

Over rolling land, through scattered mesquite and cat claw undergrowth.

35.00 Leave rolling land, and commence descent of broken SW. slope, over rough rolling land.

59.00 Draw, drains SE. asc* on E. slope.

64.00 Top of ascent; continue descent of SW. slope.

70.00 Foot of descent, bears NW. and SE; continue over undulating land.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 80.01 chs.,

By 2nd set, 79.99 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 43 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 43 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 167.2 lks. S. of the position of temp. cor.

Land, rolling and rough.

Soil, hard sandy loam and limestone gravel on surface, with limestone bed rock 1 foot below surface.

No timber; mesquite and cat claw undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

44th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered mesquite and cat claw undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 44 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 44 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This corner 169.7 links S. of the position of the temp. cor.

Land, undulating.

Soil, firm gray sand and gypsum, 4th rate.

No timber ; mesquite and cat claw undergrowth.

45th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land through scattered mesquite and cat claw undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 80.005 chs.,

By 2nd set, 79.995 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

80.00

Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 45 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 45 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This cor. 170.7 links S. of the position of temp. cor.

Land, gently rolling.

Soil, firm red sand, 2nd rate.

No timber; mesquite and cat claw undergrowth.

July 22, 1911.

July 23, 1911.

46th Mile

S. 89° 58' 45" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and cat claw undergrowth.

C. 1126 00.656

Clerk Monument No. 26

An old mound of stone 10 ft. base, 15 ins. high with broken fragments of pine post in center.

This monument is about $\frac{3}{4}$ mile S.W. of Pope's Well. Until recently this monument contained a marked pine post and is generally recognized by residents of the vicinity as a Clark monument marking the Texas-New Mexico boundary line.

To perpetuate the location of this mound I construct at its center a concrete monument having a cubical base, 30 ins. square, set 30 ins. into the ground, and a superstructure in the form of a frustum

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

of a cone, encased in galvanized iron having a lower diameter of 24 ins. an upper diameter of 18 ins. and projecting 30 ins. above ground; in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by an E. and W. division line 2 ins. long, with "TEXAS" on the S. and "NEW MEXICO" on the N. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 26" in the N. half "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half. Raise a mound of stone 6 ft. base, 2 ft. high around monument.

Monument built July 23, 1911 by G. D. D. Kirkpatrick.

Calculation of azimuth of random secant line at this point was based on a direct observation on the sun at 50th mile point on secant, and the observation is recorded in the true line notes at 50th mile corner.

RANDOM LINE.

Clark monument No. 26 (M.C. 45 and 0.656 chs.) to Clark Monument No. 25 (M.C. 53 and 65.81 chs).

June 18, 1911:

Continue on secant random line from point 1.707 chs. N. of Mon. No. 26 at 45 mile, .656 ch. point, setting temporary mile corners at intervals of 80.00 chs. by two sets of chainmen counting from the S.E. cor. of New Mexico. The random line projected to Mon. 26 on June 18 was continued.

Temporary mile corner No. 50. End of day's run.

An altitude observation on the Sun was made at this point and is recorded in true line notes at a corresponding point.

Accumulated error in azimuth between temporary mile corner No. 41 and temporary mile corner No. 50 is 0.3' to the right.

June 18, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. June 19, 1911:
 Continue on secant from temporary mile corner No. 50
 S. $89^{\circ} 56' 30''$ W.
 Temporary mile corner No. 53 plus
 65.81 Fall 1.424 chs. N. of Clark Monument No. 25, hereinafter
 described in true line notes.
 Calculation of azimuth of secant at this point is
 based on a direct observation on the Sun at Clark's Mon-
 ument No. 24 on June 20th.
 Accumulated error in azimuth between temporary mile
 corner No. 50 and Monument No. 25 is 1.2' to the right.
 June 29, 1911.

July 23, 1911:

TRUE LINE.

Clark Monuments Nos. 26 to 25.

The falling of the random line 1.424 chs. N. of Clark
 Mon. No. 25, adjusted for accumulated difference in
 alinement between the secant and the parallel gives
 a true falling of the parallel of 32.4 links N. which
 in a distance of 8 miles 65.154 chs. gives a true line
 course of S. $89^{\circ} 58' 30''$ W., between Clark Monument No.
 26 and Clark Monument No. 25.

Thence from Clark Monument No. 26 heretofore de-
 scribed.

S. $89^{\circ} 58' 30''$ W.

On true line, on 46th mile of Texas and New Mexico
 boundary, measurement counting from mile corner No. 45.
 Over gently rolling land, through scattered mesquite and
 cat-claw undergrowth.

4.65

Arroyo 10 lks. wide, drains SE.

No difference between measurements of 79.344 chs.
 by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 46 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 46 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This cor. 171.5 lks. S. of the position of temp. cor.

Land, undulating.

Soil, hard gypsum.

No timber, scattered mesquite and greasewood undergrowth.

47th Mile

S. 89° 58' 30" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered mesquite and greasewood undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 80.005 chs.,

By 2nd set, 79.995 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 47 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 47 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

<u>Chains.</u>	<p>no stone available for a mound.</p> <p>This cor. 171.0 lks. S. of the position of temp. cor.</p> <p>Land, undulating.</p> <p>Soil, firm sandy loam and gypsum.</p> <p>No timber; scattered mesquite and greasewood undergrowth.</p>
.60	<p style="text-align: center;">48th Mile</p> <p style="text-align: center;">S. 89° 58' 30" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over undulating land, through scattered mesquite, greasewood and cat-claw undergrowth.</p> <p>Wire fence, bears N. and S.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 48 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 48 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.</p> <p>This cor. 169.5 lks. S. of the position of temp. cor.</p> <p>Land, undulating.</p> <p>Soil, firm red sand, 2nd rate.</p> <p>No timber; mesquite, greasewood and cat-claw undergrowth.</p>
	<p style="text-align: center;">49th Mile</p> <p style="text-align: center;">S. 89° 58' 30" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over gently rolling land, through scattered mesquite and greasewood undergrowth.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

68.50

Draw, 10 lks. wide, drains SW.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 80.005 chs.,

By 2nd set, 79.995 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 49 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 49 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This cor. 166.7 lks. S. of the position of temp. cor.

Land, rolling.

Soil, firm red sand, 2nd rate.

No timber; mesquite and greasewood undergrowth.

50th Mile

S. $89^{\circ} 58' 30''$ W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and greasewood undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 50 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas"

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 50 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This cor. 162.9 links S. of the position of temp. cor.

Land, rolling.

Soil, firm red sand, 2nd rate.

No timber; mesquite and greasewood undergrowth.

At a point 162.9 lks. N. of mile corner No. 50, on June 19th, I determined the azimuth of the secant as follows:

Horizontal angles read from flag on secant to E. to Sun.

Latitude - $32^{\circ} 00' 00''$ N. Declination - $23^{\circ} 25' 22''$ N.

Sun



L.M. Time A.M.	Hor. Angle	Vert. Angle
D. 7h 49m 8s	N. $6^{\circ} 27' 00''$	$37^{\circ} 2' 30''$
R. 7h 51m 34s	N. $6^{\circ} 47' 00''$	$36^{\circ} 57' 00''$
Means	N. $6^{\circ} 37' 00''$	$36^{\circ} 59' 45''$

Par. + 7"
Ref. - 1' 16"
h. $36^{\circ} 58' 36''$

Sun's azimuth N. $83^{\circ} 19' 23''$ E.
Bearing of secant N. $89^{\circ} 56' 23''$ E.

cos. lat. 9.928420 sin. dec. 9.599351 tan. lat. 9.795789
" h. 9.902482 9.830902 " h. 9.876747
9.830902 9.768449 9.672536

.58674 .47047

cos. azimuth

.47047
.11627

Sun



L.M. Time A.M.	Hor. Angle	Vert. Angle
D. 7h 55m 4s	N. $5^{\circ} 45' 30''$	$38^{\circ} 16' 30''$
R. 7h 57m 10s	N. $6^{\circ} 9' 30''$	$38^{\circ} 8' 30''$
Means	N. $5^{\circ} 57' 30''$	$38^{\circ} 12' 30''$

Par. + 7"
Ref. - 1' 13"
h. $38^{\circ} 11' 24''$

Sun's azimuth N. $83^{\circ} 59' 25''$ E.
Bearing of secant N. $89^{\circ} 56' 55''$ E.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

cos. lat. 9.928420 sin. dec. 9.599351 tan. lat. 9.795789
 " h. 9.895403 9.823823 " h. 9.895776
 9.823823 9.775428 9.691565

.59625 .49155

cos. azimuth .49155
 .10470

Sun

L.M. Time A.M. Hor. Angle Vert. Angle

D. 8h 1m 6s H. 5° 3' 00" 39° 34' 00"
 R. 8h 3m 00s H. 5° 29' 00" 39° 21' 30"
 Means H. 5° 16' 00" 39° 27' 45"

Par. + 7"
 Ref. - 1' 10"
 h. 39° 26' 42"

Sun's azimuth H. 84° 40' 12" E
 Bearing of secant H. 89° 56' 12" E

cos. lat. 9.928420 sin. dec. 9.599351 tan. lat. 9.795789
 " h. 9.887749 9.816169 " h. 9.915255
 9.816169 9.783182 9.711044

.60699 .51410

cos. azimuth .51410
 .09289

H. 89° 56' 23" E. Mean bearing of secant at point
 H. 89° 56' 55" E. of observation
 H. 89° 56' 12" E. H. 89° 56' 30" E. S. 89° 56' 30" W

51st Mile

S. 89° 58' 30" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and greasewood undergrowth.

64.10

Wire fence, bears N. and S.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 51 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 51 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	<p>This cor. 158.1 lks. S. of the position of temp. cor. Land, undulating. Soil, firm red sand. No timber; mesquite and greasewood undergrowth.</p>
<p>52nd Mile S. 89° 58' 30" W.</p>	
40.00	<p>On true line, Texas and New Mexico boundary. Ascending gradually. Over rolling land, through scattered mesquite and greasewood undergrowth. Low ridge, bears N. and S; desc. on gradual W. slope over rough rolling land.</p>
58.00	<p>Wire fence, bears N. and S; continue on broken S. slope from ridge north of line.</p>
69.50	<p>Draw, drains SW. No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and sur- mounted with a brass cap, 28 ins. into the ground for the 52 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 52 General Land Office Reestablishment 1911 United States Boundary Commission." Pits imprac- ticable, no stone available for a mound. This cor. 152.9 links S. of the position of temp. cor. Corner is on W. side of S. point of low spur from ridge N. of line. Land, rolling and rough. Soil, firm red sand and limestone gravel on surface, with gypsum bed rock from 1 to 2 ft. below surface. No timber; mesquite, greasewood and cat-claw under- growth.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.		
	53rd Mile	
	S. 89° 58' 30" W.	
	On true line, Texas and New Mexico boundary.	
	Over very rough, rolling land, through heavy mesquite, greasewood and cat-claw undergrowth.	
11.50	Low spur from ridge N. of line slopes SW; desc. on W. slope.	
15.00	Small draw, SW; asc. on SE. slope.	
23.50	Spur from ridge, slopes SW; desc. on W. slope.	
26.00	Head of small draw, drains S; asc. on E. slope.	
29.00	Spur from ridge, slopes S.; descend on W. slope.	
36.00	Spur from ridge, slopes S.SE; desc. on SW. slope	
44.00	Head of draw, drains S; asc. on E. slope.	
51.00	Spur from ridge, slopes S., desc. on SW. slope.	
54.00	Draw, drains SE; asc. on steep NE. slope.	
72.00	Top of ascent; thence on top of ridge, bears N. and S. over undulating land.	
	Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is	
	By 1st set, 79.99 chs.,	
	By 2nd set, 80.01 chs; the mean of which is	
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 53 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 53 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.	
	This cor. 147.3 links S. of the position of temp. cor.	
	Land, rough rolling.	
	Soil, hard red sand and limestone gravel and	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

broken rock on surface, with limestone bed rock from 1 to 2 ft. below surface.

No timber; mesquite, greasewood and cat claw undergrowth.

54th Mile

S. $89^{\circ} 58' 30''$ W.

On true line, Texas and New Mexico boundary.

On top of ridge, bears N. and S., over undulating land, through scattered mesquite and greasewood undergrowth.

10.00 Commence gradual descent of W. slope, over rolling land, to Pecos River.

53.80 Steep earth bluff, 50 ft. high, at E. bank of Pecos river; descend.

54.80 Foot of bluff and E. bank of Pecos river, course S., continue across river.

58.40 W. bank of Pecos river; ascend gradually.

65.50 Bluff, 20 ft. high bears N. and S; asc.

No difference between measurements of 65.81 chs. by two sets of chainmen.

65.81 Clark Monument No. 25.

A mound of river boulders, 10 ft. base, 3 ft. high, with a limestone rock 5x15x24 ins. lying on top, marked N M Apr 1859 on top. A limestone 3x8x18 ins. lying on top of mound, and marked T on one face, probably was originally a part of larger marked stone.

To perpetuate the location of this mound, I construct at its center, a concrete monument in the form of a frustum of a cone, encased in galvanized iron, the lower base 24 ins. in diameter, the upper base 18 ins. in diameter, and 30 ins. high, set 20 ins. into the ground, in the top of which there is imbedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by an E. and W. division line, 2 ins. long, with "TEXAS" on the S.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

and "NEW MEXICO" on the N. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 25" in the N. half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

RANDOM LINE

Clark Monument No. 25 (Mile Cor. 53 plus 65.81 chs.) to Clark Monument No. 24 (Mile Cor. 55, plus .465 chs.)
June 19, 1911:

Continue on random secant from a point 1.424 chs. N. of Mon. No. 25, continuing the random line projected to Mon. 25 on June 19. Setting temporary mile corners at intervals of 80.00 chs. by two sets of chainmen, counting from SE. cor. of New Mexico.

Temporary mile corner No. 54 . End of day's run.

June 20, 1911:

Continue on secant from temporary mile corner No. 54.

00.465

Fall 1.153 chs. N. of Clark Monument No. 24 hereinafter described in true line notes.

An altitude observation on the Sun for azimuth was made at this point, and is recorded in the true line notes at a corresponding point.

Accumulated error in azimuth between Monument No. 25 and Monument No. 24 was 0.4' to the right.

June 20, 1911.

True line between Clark Monuments Nos. 25 and 24.

The falling of the random line 1.153 chs N. of Clark Monument No. 24 adjusted for accumulated difference in alinement between the secant and the parallel, gives a true falling of the parallel of 00.151 chs. S. which in a distance of 1 mile 14.65 chs., gives a true course of N. 89° 54' 30" W. between Clark monuments Nos. 25 and 24.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. Thence N. $89^{\circ} 54' 30''$ W. On true line from Mon. 25, heretofore described, continuing measurement from mile cor. No. 54.

No difference between measurements of 14.19 chs. by two sets of chainmen, from Mon. No. 25.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 54 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 54 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable, no stone available for a mound. This cor. 138.3 lks. S. of the position of temp. cor.

Land, rolling.

Soil, loose red sand and limestone gravel.

No timber; mesquite and greasewood undergrowth.

July 23, 1911.

July 24, 1911:

55th Mile

N. $89^{\circ} 54' 30''$ W.

On true line, Texas and New Mexico boundary.

Over rough, rolling land, through scattered mesquite, greasewood and cat claw undergrowth.

15.00 Low ridge, bears N. and S; descend on gradual W. slope.

38.40 Wire fence, bears N.E. and SW.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 55 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 55 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, no stone available for a mound.

This cor. 115.4 lks. S. of the position of temp. cor.

Land, rough, rolling.

Soil, firm red sand and limestone gravel, 3rd rate.

No timber; mesquite, greasewood and cat-claw undergrowth.

56th Mile

N. 89° 54' 30" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered greasewood and cat claw undergrowth.

.465

Clark monument No. 24.

A limestone slab, 2x18x32 ins. loosely set in small mound of stone, marked H M on one face and T on opposite face. This monument is recognized by residents of the vicinity as a Clark mound marking the Texas and N.M. bdy. line.

To perpetuate the location of this monument I construct at its center a concrete monument having a cubical base, 30 ins. square, set 30 ins. into the ground, and a superstructure in the form of a frustum of a cone, encased in galvanized iron, having a lower diameter of 24 ins., an upper diameter of 18 ins., and projecting 30 ins. above ground; in the top

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

of which there is imbedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by an E. and W. division line 2 ins. long, with "TEXAS" on the S. and "NEW MEXICO" on the N. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO. 24" in the N. half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

July 24, 1911.

At a point 115.3 lks. N. of this point, on June 20th, determined the azimuth of the secant as follows:

Horizontal angles read from flag on secant to E. to Sun.

Latitude - $32^{\circ} 00' 00''$ N. Declination $-23^{\circ} 26' 27''$ N.

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 9h 36m 00s	S. $8^{\circ} 10' 00''$	$59^{\circ} 32' 00''$
+	R. 9h 39m 35s	S. $7^{\circ} 51' 00''$	$59^{\circ} 40' 30''$
	Means	S. $8^{\circ} 00' 30''$	$59^{\circ} 36' 15''$
		Par. +	4"
		Ref. -	34"
		h.	$59^{\circ} 35' 45''$

Sun's azimuth $S. 82^{\circ} 4' 00''$ E.
 Azimuth of secant $S. 90^{\circ} 4' 30''$ E.
 $S. 89^{\circ} 55' 30''$ W.

cos. lat.	9.928420	sin. dec.	9.599667	tan. lat.	9.795789
" h.	9.704233		9.632653	" h.	10.231514
	9.632653		9.967014		10.027303
			.92686		1.06488
					.92686
cos. azimuth					.13802

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 9h 44m 8s	S. $9^{\circ} 42' 00''$	$61^{\circ} 14' 00''$
+	R. 9h 46m 22s	S. $9^{\circ} 8' 00''$	$61^{\circ} 6' 30''$
	Means	S. $9^{\circ} 25' 00''$	$61^{\circ} 10' 15''$
		Par. +	4"
		Ref. -	32"
		h.	$61^{\circ} 9' 47''$

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL

Chains.

Sun's azimuth S. 9° 25' 00" E
 Azimuth of secant S. 90° 4' 23" E
 S. 89° 55' 37" E

cos. lat. 9.928420 sin. dec. 9.599667 tan. lat. 9.795789
 " h. 9.683334 9.611754 " h. 10.259168
 9.611754 9.987913 10.054957

.97255 1.13490
 .97255
.16235

Cos. Azimuth

Sun L.M. Time A.M. Hor. Angle Vert. Angle

D. 9h 49m 32s S. 10° 48' 00" 62° 21' 30"
 R. 9h 51m 38s S. 10° 9' 30" 62° 11' 30"
 Means S. 10° 28' 45" 62° 16' 30"

Par. + 4"
 Ref. - 31"
 h. 62° 16' 3"

Sun's azimuth S. 79° 35' 58" E
 Azimuth of secant S. 90° 4' 43" E
 S. 89° 55' 17" W.

cos. lat. 9.928420 sin. dec. 9.599667 tan. lat. 9.795789
 " h. 9.667774 9.596194 " h. 10.279232
 9.596194 0.003473 10.075021
 1.00803 1.18856
 1.00803
.18053

cos. azimuth

Sun L.M. Time A.M. Hor. Angle Vert. Angle

D. 9h 58m 53s S. 12° 49' 00" 64° 18' 00"
 R. 10h 2m 45s S. 12° 35' 00" 64° 30' 00"
 Means S. 12° 42' 00" 64° 24' 00"

Par. + 4"
 Ref. - 28"
 h. 64° 23' 36"

Sun's azimuth S. 77° 22' 54" E
 Azimuth of secant S. 90° 4' 54" E
 S. 89° 55' 6" W.

cos. lat. 9.928420 sin. dec. 9.599667 tan. lat. 9.795789
 " h. 9.635676 9.564096 " h. 10.319426
 9.564096 0.035571 10.115215

1.08535 1.30381

1.08535
.21846

Cos. Azimuth

Sun L.M. Time A.M. Hor. Angle Vert. Angle

D. 10h 19m 11s S. 18° 5' 00" 68° 28' 30"
 R. 10h 22m 5s S. 17° 37' 00" 68° 27' 00"
 Means S. 17° 51' 00" 68° 27' 45"

Par. + 4"
 Ref. - 23"
 h. 68° 27' 26"

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

	17° 51' 00"	
Sun's azimuth	S. 72° 13' 08" E.	
Bearing of secant	S. 90° 4' 08" E	
	S. 89° 55' 52" W	
cos. lat.	9.928420	sin. dec.
" h.	9.564897	tan. lat.
	9.493317	" h.
		10.106350
		10.199441
	1.27747	1.58285
		1.27747
		.30538
	cos. azimuth	
S. 89° 55' 30" W.		
S. 89° 55' 37" W.		Mean bearing of secant at point
S. 89° 55' 17" W.		of observation
S. 89° 55' 6" W.		S. 89° 55' 28" W.
S. 89° 55' 52" W.		

RANDOM LINE

Clark Monument No. 24 (mile corner 55 plus .465 chs.) to Clark Monument No. 22 (Mile Cor. 60 plus 58.045 chs.).

July 4, 1911 : Commencing on this day I use in this survey a Young & Son's light mountain transit No. 8295 heretofore described.

I continue on random secant from a point 1.153 chs. N. of Mon. No. 24 at 55 mile, 00.465 ch. point setting temporary mile corners at intervals of 80.00 chs. by two sets of chainmen, distance counting from S.E. cor. of New Mexico.

S. 89° 55' 28" W.

Temporary mile corner No. 59 . End of day's run.

An altitude observation of the Sun for azimuth was made at this point, and is recorded in the true line notes at a corresponding point.

Accumulated error in azimuth for day's run was 1.1' to the left.

July 4, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

July 5, 1911:

Continue on random secant from 59th Mile point.

Temporary mile corner No. 60 plus

58.045

Fall 1.112 chs. N. of Clark Monument No. 22 hereinafter described in true line notes.

Calculation of azimuth of secant at this point is based on a direct observation on the sun made at 62nd mile corner.

Accumulated error in azimuth between mile corner No. 59 and Monument No. 22 was 0.1' to the right.

September 26, 1911.

TRUE LINE

True line between Clark Monuments Nos. 24 and 22.

The falling of the random line, 1.112 chs. N. of Clark Monument No. 22, adjusted for accumulated difference in alignment between the secant and the parallel, gives a true falling of the parallel of 00.858 chs. N. which in a distance of 5 miles 57.58 chs., gives a true course of S. 89° 53' 30" W. Thence from Mon. No. 24 at 55 M. 00.465 chs.
S. 89° 53' 30" W.

On true line, on 56th mile of Texas and New Mexico boundary, continuing measurement from mile corner No. 55

Over rolling land, through scattered mesquite, greasewood and cat claw undergrowth.

- | | |
|-------|--|
| 1.87 | Wagon road, bears N. and S. |
| 3.77 | Wagon road, bears N. and S. |
| 4.47 | P. V. A. R. track, bears N. 3° 57' E. and S. 3° 57' W. |
| 4.97 | Telegraph line, bears N. 3° 57' E. and S. 3° 57' W. |
| 5.87 | Wire fence, bears N. and S. |
| 18.57 | Wire fence, bears N. and S. |
| 49.47 | Wagon road, bears N. and S. |
| 50.47 | Enter rough rolling land, bears N. and S. |
| 59.47 | Low spur from ridge, slopes S. |

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

63.47	Rock ledge, 10 ft. high bears NW and SE; commence gradual ascent over E. slope.
78.50	S. point of low spur from ridge. Difference between measurements of 79.535 chs. by two sets of chainmen is 1 link ; position of the middle point is By 1st set, 79.53 chs., By 2nd set, 79.54 chs; the mean of which is 79.535 chs. from Mon. No. 24
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 22 ins. into the ground for the 56 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 56 General Land Office Reestablishment, 1911, United States Boundary Commission. Pits impracticable. This cor. 118.8 lks. S. of the position of temp. cor. Land, rolling. Soil, firm gray sand and gypsum and limestone gravel. No timber; mesquite, greasewood and cat claw undergrowth.
	57th Mile S. 89° 53' 30" W. On true line, Texas and New Mexico boundary. Over rolling land, through scattered mesquite, greasewood and cat claw undergrowth.
13.00	Wagon road, bears E. SE and W. NW.
50.70	Wagon road, bears N. E and SW.
61.90	Wire fence bears N. and S. thence along irregular fence.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of the middle point is

By 1st set, 79.985 chs.,

By 2nd set, 80.015 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 57th Mile Corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 57 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 120.7 lks S. of the position of temp. cor.

Land, rolling.

Soil, firm gray sand and gypsum, 3rd rate.

No timber; mesquite, greasewood and cat-claw undergrowth.

58th Mile

S. 89° 53' 30" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and greasewood undergrowth, along irregular fence.

.75

Wagon road, bears W.NW and SE.

32.00

Commence gradual ascent to plateau, bears N. and S.

45.00

Top of ascent; continue over rolling land.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 58 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 58 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 120.3 links S. of the position of temp.cor.

Land, rolling.

Soil, firm gray adobe and gypsum, 3rd rate.

No timber; mesquite and greasewood undergrowth.

59 th Mile

S. $89^{\circ} 53' 30''$ W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered greasewood and mesquite undergrowth, along irregular fence.

63.90

Wire fence, bears N. and S.; end of fence along line.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 59th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 59 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32nd PARALLEL.

Chains.

This cor. 118.2 lks. S. of the position of temp.
cor.

Land, rolling.

Soil, firm, gray adobe and gypsum, 3rd rate.

No timber; mesquite and greasewood undergrowth.

At a point 118.2 lks. S. of this point, on July 4th
I determined the azimuth of the secant random line as
follows:

Horizontal angles read from flag on secant to W.
to Sun.

Latitude $32^{\circ} 00'$

Declination $22^{\circ} 55' 24''$ N.

Sun.

L.M. Time P.M.

Hor. Angle

Vert. Angle

+

+

D. 5h 7m 20s

N. $14^{\circ} 21' 30''$

21° 52' 00"

R. 5h 10m 12s

N. $14^{\circ} 8' 30''$

21° 57' 00"

Means

N. $14^{\circ} 15' 00''$

21° 54' 30"

Par. + 8"

Ref. - 2' 22"

h. $21^{\circ} 52' 16''$

Sun's azimuth
Bearing of secant

N. $75^{\circ} 52' 22''$ WN. $90^{\circ} 7' 22''$ WS. $89^{\circ} 52' 38''$ W

cos. lat. 9.928420

sin. dec. 9.590504

tan. lat. 9.795789

" h. 9.967559

9.895979

" h. 9.603590

9.895979

9.694525

9.399379

.49491

.25083

.25083

cos. azimuth

.24408

Sun

L.M. Time P.M.

Hor. Angle

Vert. Angle

+

+

D. 5h 13m 17s

N. $15^{\circ} 1' 30''$

20° 39' 00"

R. 5h 15m 54s

N. $14^{\circ} 47' 00''$

20° 47' 30"

Means

N. $14^{\circ} 54' 15''$

20° 43' 15"

Par. + 8"

Ref. - 2' 29"

h. $20^{\circ} 40' 54''$

Sun's azimuth
Bearing of secant

N. $75^{\circ} 13' 28''$ W.N. $90^{\circ} 7' 43''$ W.S. $89^{\circ} 52' 17''$ W.

cos. lat. 9.928420

sin. dec. 9.590504

tan. lat. 9.795789

" h. 9.971071

9.899491

" h. 9.576921

9.899491

9.691013

9.372710

.49092

.23589

.23589

cos. azimuth

.25503

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Sun.	L. Time P.M.	Hor. Angle	Vert. Angle
+	D. 5h 19m 12s	N. 15° 41' 00"	19° 26' 30"
+	R. 5h 21m 53s	N. 15° 29' 00"	19° 34' 00"
	Means	N. 15° 35' 00"	19° 30' 15"
			Par. + 8"
			Ref. - 2' 42"
			h. 19° 27' 41"
	Sun's azimuth	N. 74° 33' 17" W	
	Bearing of secant	N. 90° 8' 17" W	
		S. 89° 51' 43" W	
	cos. lat. 9.928420	sin. dec. 9.590504	tan. lat. 9.795789
	" h. 9.974450	9.902870	" h. 9.548218
	9.902870	9.687634	9.344007
		.48712	.22080
		.22080	
	cos. azimuth	.26632	
	S. 89° 52' 38" W.	Mean bearing of secant at point of observation	
	S. 89° 52' 17" W.		
	S. 89° 51' 43" W.	S. 89° 52' 13" W.	

60th Mile

S. 89° 53' 30" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite and greasewood undergrowth.

67.30 Low ridge, bears N. and S; descend gradually into Delaware river valley.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 60th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary

1859 Mile

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. Corner No. 60 General Land Office Reestablishment 1911

United States Boundary Commission". Pits impracticable.

This cor. 114.6 lks. S. of the position of temp. cor.
Land, rolling.

Soil, firm gray adobe and gypsum.

No timber; mesquite and greasewood undergrowth.

Sept. 26, 1911.

Sept. 25, 1911:

61st Mile
S. $89^{\circ}53'30''$ W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite,
greasewood and cat-claw undergrowth.

7.00

S. point of low ridge, bears N. and S.

12.50

Spur from low ridge, slopes NW; desc. on W. slope
to Delaware River.

28.50

Wire fence, bears NW. and SE.

37.20

Wagon road, bears N. and S.

39.70

E. bank of Delaware River, course N.W.

42.40

W. bank of Delaware River, N.W. and S. SE; asc. on
E. slope.

45.00

Wire fence, bears NE. and SW.

48.50

Draw, 20 links wide, drains NE.

58.00

Low ridge, bears N. and S.

No difference between measurements of 58.045 chs.

by two sets of chainmen.

58.045

Clark Monument No. 22 which is a circular mound of
earth 12 ft. in diameter, nearly leveled.

A trench, 6 ins. deep and 2 ft. wide, surrounds the
mound, is well defined, and the earth in the mound
contains a larger proportion of gravel than is in the sur-
face of the ground in the vicinity.

To perpetuate the location of this monument I con-
struct at its center a concrete monument having a cubical
base, 30 ins. square, set 30 ins. into the ground and a
superstructure in the form of a frustum of a cone encased
in galvanized iron, having a lower diameter of 24 ins.

an upper diameter of 18 ins. and projecting 30 ins. above
ground; in the top of which there is embedded a circular

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. brass plate 6 ins. in diameter. The plate is marked in the center by an E. and W. division line 2 ins. long, with "TEXAS" on the S. and "NEW MEXICO" on the N. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 22" in the N. half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

Sept. 25, 1911.

RANDOM LINE

Clark Monument No. 22 (Mile cor. 60 plus 58.045 chs) to Clark Monument No. 16 (Mile Cor. 118 plus 9.20 chs).

July 5, 1911:

Continue on secant random line from point 1.112 chs. N. of Monument No. 22 at 60 mile, 58.045 ch. point, continuing the secant projected to Mon. 22 this day, setting temporary mile corners at intervals of 80.00 chs. by two sets of chainmen, distance counting from SE. cor. of New Mexico.

Temporary mile point No. 62. End of day's run.

An altitude observation of the sun for azimuth was made at this point, and is recorded in the true line notes at a corresponding point.

Accumulated error in azimuth between Clark Monument No. 22 and temporary mile corner No. 62 was 0.1' to the right.

July 5, 1911.

July 6, 1911: Continue on secant from temporary mile corner No. 62, S. 89° 50' 49" W.

Temporary mile corner No. 66.

Deflect line 13' to the right.

Temporary mile corner No. 68. End of day's run.

An altitude observation of the sun for azimuth was made at this point, and is recorded in the true line notes at a corresponding point.

Accumulated error in azimuth between temporary mile corners Nos. 62 and 68 was 0.2' to the right. July 6, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

July 7, 1911:

Continue on secant from temporary mile corner No. 68
N. $89^{\circ} 59' 12''$ W.

Temporary mile corner No. 74. End of day's run.

July 7, 1911.

July 8, 1911:

Continue on secant from temporary mile corner No. 74.

Temporary mile cor. No. 76.

Deflect line 5.1' to the right.

Temporary mile corner No. 80. End of day's run.

July 8, 1911.

July 10, 1911:

Continue on secant from temporary mile corner No.
80.

Temporary mile corner No. 83. End of day's run.

An altitude observation of the Sun for azimuth was
made at this point, and is recorded in the true line
notes at a corresponding point.

Accumulated error in azimuth between temporary mile
cors. Nos. 68 and 83 is 1.8' to the left.

July 10, 1911.

July 11, 1911:

At temporary mile corner No. 83 deflect line 3.7' to
the right and continue on secant random line S. 89°
 $59' 49''$ W.

Temporary mile corner No. 85. End of day's run.

July 11, 1911.

July 12, 1911:

At temporary mile corner No. 85, deflect line 5.9'
to the right.

Continue on secant from temporary mile corner No.
85.

Chains.

Temporary mile corner No. 90. End of day's run.
An altitude observation of the Sun for azimuth was made at this point and is recorded in the true line notes at a corresponding point.

Accumulated error in azimuth between temporary mile cors. Nos. 83 and 90 is 0.9' to the right.

July 12, 1911.

July 13, 1911:

Continue on secant from temporary mile corner No. 90, N. $89^{\circ} 57' 03''$ W.

Temporary mile corner No. 95. End of day's run.

July 13, 1911

July 14, 1911:

Continue on secant from temporary mile corner No. 95.

Temporary mile corner No. 98. End of day's run.

July 14, 1911

July 16, ^{1911:} Continue on secant from mile corner No. 98. Temporary mile corner No. 98 and 68.14 chs. on spur from Guadalupe Mountains. End of day's run.

July 16, 1911.

July 17, 1911:

I triangulate from 98 M plus 68.14 chs. point on secant line to 99M plus 27.752 chs. point, across impassable canyon, records in true line notes.

Continue on secant from mile point 99 and 27.752 chs.

Temporary mile corner No. 100, deflect secant 9.2' to to the right. An altitude observation of the sun for azimuth made at this point on June 18, and recorded in the true line notes at corresponding point. Bearing of secant line after deflecting 9.2' to the right, N. $89^{\circ} 54' 41''$ W.

Temporary mile point 100 plus

34.886

End of day's run, at top of steep cliff on E. side of McKittrick Canyon. The distance 34.886 chs. was

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

determined by stadia, records in the true line notes.

July 17, 1911.

July 18: Continue on secant random line by triangulation from temporary mile point 100 and 34.886 chs. From 100 M. and 34.886 chs. to point 101 M. and 33.195 chs., 78.309 chs. Completed July 19.

From 100 M. and 34.886 chs. to point 102 M. and 44.25 chs., 169.362 chs. Latter triangulation completed July 21.

July 18, 1911.

July 19: Complete triangulation to temporary mile 101 plus 33.195 ch. point.

July 19, 1911.

July 20: From temporary mile point 101 plus 33.195 chs. on secant random line I return eastward on secant by stadia, and set temporary mile corner 101.01, which was fixed on the true line as mile corner 101.08. Records in the true line notes.

July 20, 1911.

July 21: Triangulations. The triangulation from temporary mile point 100 plus 34.886 chs. to 102 plus 44.25 chs. on secant line, completed. Check triangulations. From temporary mile point 102 plus 44.25 chs. to 100 M. plus 34.886 chs. and 101 M. plus 33.195 chs.

July 21, 1911.

July 22: Continue on secant random line from temporary mile point 102 plus 44.25 chs.

Temporary mile corner No. 103 plus

67.257

End of day's run. 24.227 chains of this day's run measured by stadia, which is recorded in the true line notes.

July 22, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

July 23: Continue on the random secant line from temporary mile 103 plus 67.257 chs.

Temporary mile corner No. 106. End of day's run. An altitude observation of the sun for azimuth made at this point, recorded in true line notes.

July 23, 1911.

July 24: Continue on secant random line from temporary mile corner No. 106, N. $89^{\circ} 56' 48''$ W.

Temporary mile corner No. 110 plus 44.40 chs. End of day's run.

July 24, 1911.

July 25: Continue on secant from 110 mile 44.40 ch. point.

Temporary mile corner No. 112. End of day's run.

July 25, 1911.

July 26: At 112th mile corner I observe the Sun for azimuth, and the observation is recorded in the true line notes at a corresponding point.

Accumulated error in azimuth between temporary mile corner No. 106 and temporary mile corner No. 112 is 3.3' to the left.

Continue on secant from temporary mile corner No. 112, N. $89^{\circ} 56' 42''$ W.

Temporary mile cor. 118.

9.20

Fall 5.87 chs. S. of Clark Monument No. 16, hereinafter described in true line notes.

Azimuth of secant at this point is calculated from observation on the Sun at mile corner No. 120, on this day.

July 26, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

TRUE LINE

Clark Monuments Nos. 22 to 16. The falling of the random line, 5.87 chs. S. of Clark Mon. No. 16, adjusted for accumulated difference in alinement between the secant and the parallel, gives a true falling of the parallel of 5.371 chs. S. which in a distance of 57 miles 31.155 chs., gives a true line course of N. 89° 56' W., between Clark Monuments Nos. 22 and 16.

Sept. 25, 1911: From Clark Monument No. 22, heretofore described:

N. 89° 56' W.

On true line continuing on 61st mile of Texas and New Mexico boundary from 60 mile 58.045 chs. point.

Over rolling land, through scattered mesquite, greasewood and cat-claw undergrowth. Measurement from Mon. No. 22.

No difference between measurements of 21.955 chs., by two sets of chainmen.

21.955

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 61st mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 61 General Land Office Reestablishment 1911 United States Boundary Commission." Raise a mound of stones 3 ft. base, 2½ ft. high, E. of cor. This cor. 103.1 lks. S. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone gravel, 3rd rate.

No timber; mesquite, greasewood and cat-claw undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

62nd Mile

N. $89^{\circ} 56'$ W.

On 62nd mile of Texas and New Mexico boundary.

Over rough rolling land, through scattered mesquite, greasewood and cat-claw undergrowth.

27.80 Low spur from ridge, slopes N.

44.00 N. point of a low spur, from S.

55.00 Low spur from ridge, slopes N.

Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links ; position of the middle point is

By 1st set, 80.015 chs.,

By 2nd set, 79.985 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 62nd mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length and marked, "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 62 General Land Office Reestablishment 1911 United States Boundary Commission." Raise a mound of stone 3 ft. base, 2 ft. high E. of cor.

Corner is set in hard red sandy soil, in land to a small extent subject to wash. A low natural mound of stone, $1\frac{1}{2}$ chs. in diameter, is $1\frac{1}{2}$ chs. SW. of corner. This cor. 73.7 lks. S. of the position of temp. cor. land, rolling.

Soil, firm red sand and limestone gravel, 2nd rate.

No timber; mesquite, greasewood and cat-claw undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. At a point 73.7 lks. N. of this point on July 5th,
I determined the azimuth of the secant as follows:
Horizontal angles read from flag on secant to W. to
Sun.

Sun. Latitude $-32^{\circ} 00' 00''$ N. Declination $-22^{\circ} 50' 06''$ N.

L.M. Time P.M.	Hor. Angle	Vert. Angle
D. 5h 11m 27 s	N. $45^{\circ} 45' 30''$	$20^{\circ} 58' 00''$
R. 5h 13m 46s	N. $14^{\circ} 29' 30''$	$21^{\circ} 10' 30''$
Means	N. $14^{\circ} 37' 30''$	$21^{\circ} 4' 15''$
	Par. +	8"
	Ref. -	2' 29"
	h	$21^{\circ} 1' 54''$

Sun's azimuth N. $75^{\circ} 31' 17''$ W.
Azimuth of secant N. $90^{\circ} 8' 47''$ W.
S. $89^{\circ} 51' 13''$ W.

cos. lat. 9.928420	sin. dec. 9.588919	tan. lat. 9.795789
" h. 9.970059	9.898479	" h. 9.584894
9.898479	9.690440	9.380683
	.49028	.24026
	.24026	
cos. azimuth	.25002	

Sun

L.M. Time P.M.	Hor. Angle	Vert. Angle
D. 5h 17m 00s	N. $15^{\circ} 23' 00''$	$19^{\circ} 50' 30''$
R. 5h 18m 53s	N. $15^{\circ} 4' 00''$	$20^{\circ} 9' 30''$
Means	N. $15^{\circ} 13' 30''$	$20^{\circ} 00' 00''$
	Par. +	8"
	Ref. -	2' 37"
	h	$19^{\circ} 57' 31''$

Sun's azimuth N. $74^{\circ} 56' 2''$ W.
Bearing of secant N. $90^{\circ} 9' 32''$ W.
S. $89^{\circ} 50' 28''$ W.

cos. lat. 9.928420	sin. dec. 9.588919	tan. lat. 9.795789
" h. 9.973100	9.901520	" h. 9.580089
9.901520	9.687399	9.355878
	.48685	.22692
	.22692	
Cos. azimuth	.25993	

Sun

L.M. Time P.M.	Hor. Angle	Vert. Angle
D. 5h 21m 45s	N. $15^{\circ} 54' 00''$	$18^{\circ} 52' 30''$
R. 5h 25m 14s	N. $15^{\circ} 48' 00''$	$18^{\circ} 50' 30''$
Means	N. $15^{\circ} 51'$	$18^{\circ} 51' 30''$
	Par. +	8"
	Ref. -	2' 46"
		$18^{\circ} 48' 52''$

Sun's azimuth N. $74^{\circ} 18' 13''$ W.
Bearing of secant N. $90^{\circ} 9' 13''$ W.
S. $89^{\circ} 50' 47''$ W.

Cos. lat. 9.928420	sin. dec. 9.588919	tan. lat. 9.795789
" h. 9.976152	9.904572	" h. 9.532384
9.904572	9.684347	9.328173

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

	.48344	.21290
	.21290	
cos. azimuth	<u>.27054</u>	
S. 89° 51' 13" W.		
S. 89° 50' 28" W.		Mean bearing of secant at
S. 89° 50' 47" W.		point of observation
		S. 89° 50' 49" W.

63rd Mile

N. 89° 56' W

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered mesquite and greasewood undergrowth.

16.00	N. foot of small, round hill, is 1.00 ch. S.
21.30	N. slope of small, round hill, S. of line.
22.00	NW. foot of hill.
48.00	Commence ascent of gradual E. slope.
54.00	Low ridge, bears NW. and SE; descend on broken W. slope.
65.00	Foot of descent; continue on undulating land. Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of the middle point is By 1st set, 80.015 chs., By 2nd set, 79.985 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground, for the 63rd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 63 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. Corner is set in red sandy loam; pure gypsum sub-soil 15 ins. below the surface. This cor. 42.6 lks S. of the position of temp. cor. Land, rolling. Soil, firm gray sand and gypsum and limestone gravel. No timber; mesquite and greasewood undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

64th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered greasewood undergrowth.

49.60

Wire fence, bears N. and S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 64th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 64 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

Post is set on level ground, subject to a slight degree to overflow.

This cor. 9.9 lks. S. of the position of temp. cor.
Land, rolling.

Soil, firm gray sand and gypsum soil, and limestone gravel.

No timber; mesquite undergrowth.

65th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through heavy mesquite, greasewood and cat claw undergrowth.

50.00

Low ridge, bears N.NW and S.SE; descend on gradual W. slope over rough rolling land.

53.80

Shallow draw, drains NW.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. 58.30	Low spur from ridge, slopes NW.
63.30	Small draw, drains N.NW.
70.40	Small spur from ridge slopes N.NW
75.20	Low spur from ridge, slopes N; descent on W. slope. No difference between measurement of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 21 ins. into the ground for the 65th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 65 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable. Post is set on bed rock; raise a mound of stone, 4 ft. base, 3 ft. high E. of corner. This cor. 23.7 lks. N. of the position of temp. cor. land, rolling. Soil, firm gray sand and gypsum and limestone gravel. No timber; mesquite, greasewood and cat claw undergrowth.
66th Mile	
N. 89° 56' 00" W.	
On true line, Texas and New Mexico boundary. Over rolling land, through heavy cat claw and greasewood undergrowth.	
3.00	Commence ascent of steep E. slope, over mountainous land.
8.70	Low ridge, bears N. and S; descend on W. slope.
12.00	Foot of descent, bears N. and S; leave mountainous land and heavy cat claw undergrowth; continue over rolling land, through scattered mesquite, greasewood and cat claw undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. No difference between measurements of 80.00 chs.
by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 24 ins. into the ground for
the 66th mile corner. The top of the cap is divided
by an east and west stamped line 1 inch in length
and marked "New Mexico" on the north, "Texas" on the
south thereof, and also marked "Clark Boundary 1859
Mile Corner No. 66 General Land Office Reestablishment
1911 United States Boundary Commission." Pits imprac-
ticable.

This cor. 58.6 lks. N. of the position of temp.cor.
Land, rolling and mountainous.
Soil, firm gray sand and gypsum and limestone
gravel on rolling land, and broken limestone rock in
mountainous land.
No timber; mesquite greasewood and cat-claw under-
growth.

67th Mile

N. 89°56' 00" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered mesquite and
greasewood undergrowth.

61.00 Shallow draw, drains N.

Difference between measurements of 80.00 chs. by
two sets of chainmen is 2 links; position of the
middle point is

By 1st set, 80.01 chs.,

By 2nd set, 79.99 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 23 ins. into the ground for
the 67th mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked "Clark Boundary 1859 Mile

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains

corner No. 67 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. This cor. 64.2 lks. N. of the position of temp.cor. Land, undulating.

Soil, firm gray sand and gypsum and limestone gravel. No timber; mesquite and greasewood undergrowth.

68th Mile

N. 89°56' 00" W.

On true line, Texas and New Mexico boundary, over undulating land, through scattered mesquite, greasewood and ironwood undergrowth.

23.00 Shallow draw, drains N.

71.20 E. bank of Owl Creek draw, 6 ft. high, descend and continue across draw.

72.70 Owl Creek, 10 lks. wide, flows N.NE; ascend gradually on SE. slope from draw.

79.10 Wire fence, bears NE. and SW.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00 Set a hollow iron post, 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 68th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 68 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.

This corner 71.3 lks. N. of the position of temp.cor. Land, undulating.

Soil, firm gray sand and gypsum and limestone gravel.

No timber; mesquite, greasewood and iron-wood undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. At a point on secant, 71.3 lks. S. of this corner on July 6th, I determined the azimuth of the secant as follows:

Horizontal angles read from flag on secant to W. to Sun.

Latitude $32^{\circ} 00' 00''$ N. Declination $22^{\circ} 44' 24''$ N.

Sun	L. M. Time P.M.	Hor. Angle	Vert. Angle.
+	D. 5h 16m 10s	N. $15^{\circ} 1' 00''$	$20^{\circ} 00' 00''$
+	R. 5h 18m 57s	N. $14^{\circ} 48' 30''$	$20^{\circ} 6' 00''$
	Means	N. $14^{\circ} 54' 45''$	$20^{\circ} 3' 00''$
			Par. + 8"
			Ref. - 2' 37"
			h. $20^{\circ} 0' 31''$

Sun's azimuth $N. 75^{\circ} 4' 30'' W.$
Bearing of secant $N. 89^{\circ} 59' 15'' W.$

cos. lat. 9.928420 sin. dec. 9.587205 tan. lat. 9.795789
" h. 9.972962 " h. 9.561269
9.901382 9.685823 9.357058

.48509 .22754

.22754

cos. azimuth

.25755

Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 5h 23m 5s	$15^{\circ} 48' 30''$	$18^{\circ} 35' 00''$
+	R. 5h 25m 1s	$15^{\circ} 29' 30''$	$18^{\circ} 51' 30''$
	Means	N. $15^{\circ} 39' 00''$	$18^{\circ} 43' 15''$
			Par. + 8"
			Ref. - 2' 49"
			h. $18^{\circ} 40' 34''$

Sun's azimuth $N. 74^{\circ} 20' 24'' W.$
Bearing of secant $N. 89^{\circ} 59' 24'' W.$

cos. lat. 9.928420 sin. dec. 9.587205 tan. lat. 9.795789
" h. 9.976508 " h. 9.528938
9.904928 9.682277 9.324727

.48115 .21122

.21122

cos. azimuth

.26993

Sun	L.M. Time F.M.	Hor. Angle	Vert. Angle
+	D. 5h 29m 43s	N. $16^{\circ} 26' 30''$	$17^{\circ} 25' 30''$
+	R. 5h 30m 39s	N. $16^{\circ} 7' 00''$	$17^{\circ} 44' 00''$
	Means	N. $16^{\circ} 16' 45''$	$17^{\circ} 34' 45''$
			Par. + 8"
			Ref. - 3' 1"
			h. $17^{\circ} 31' 52''$

Sun's azimuth $N. 73^{\circ} 42' 11'' W.$
Azimuth of secant $N. 89^{\circ} 58' 56'' W.$

cos. lat. 9.928420 sin. dec. 9.587205 tan. lat. 9.795789
" h. 9.979345 " h. 9.499544
9.907765 9.679440 9.295333

.47801 .19739

.19739

cos. azimuth

.28062

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

<u>Chains.</u>	N. 89° 59' 15" W.	Mean bearing of secant at point of observation N. 89° 59' 12" W.
	N. 89° 59' 24" W.	
	N. 89° 58' 56" W.	

Sept. 25, 1911.

Sept. 24, 1911: 69th Mile
 N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite undergrowth.

10.00 Top of ascent; leave Owl Creek Draw, and continue over rolling land.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 80.005 chs;

By 2nd set, 79.995 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 69th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 69 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. This cor. 79.4 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and gypsum and limestone gravel.

No timber; mesquite undergrowth.

70th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and greasewood undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

By 1st set, 80.005 chs.,
 By 2nd set, 79.995 chs; the mean of which is
 80.00 Set a hollow iron post 36 ins., long 3 ins. dia.,
 filled with concrete, flanged at the bottom and sur-
 mounted with a brass cap, 23 ins. into the ground for
 the 70th mile corner. The top of the cap is divided by
 an east and west stamped line 1 inch in length, and
 marked "New Mexico" on the north, "Texas" on the south
 thereof, and also marked, "Clark Boundary 1859 Mile
 Corner No. 70 General Land Office Reestablishment 1911
 United States Boundary Commission." Pits impracticable.
 This cor. 89.3 lks. N. of the position of temp.cor.
 Land, gently rolling.
 Soil, firm grey adobe and gypsum and limestone gravel,
 3rd rate.

No timber; mesquite and greasewood undergrowth.

71st Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite
 and greasewood undergrowth.

No difference between measurements of 80.00 chs. by
 two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
 filled with concrete, flanged at the bottom and sur-
 mounted with a brass cap, 23 ins. into the ground for
 the 71st mile corner. The top of the cap is divided
 by an east and west stamped line, 1 inch in length,
 and marked "New Mexico" on the north, "Texas" on the
 south thereof, and also marked, "Clark Boundary 1859
 Mile Corner No. 71 General Land Office Reestablishment
 1911 United States Boundary Commission." Pits impracticable,

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. This cor. 100.6 lks. N. of the position of the temp.cor.
Land, rolling.
Soil, firm gray adobe and gypsum and limestone gravel.
No timber; mesquite and greasewood undergrowth.

72nd Mile

N. $89^{\circ} 56' 00''$ W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite and greasewood undergrowth.

4.00 N. edge of bank of Owl Creek draw; continue along bank.

16.00 Enter draw, drains E.SE

20.00 Leave draw, bears W.NW and E.SE.

74.00 Wagon road, bears E.NE and S.SW.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 22 ins. into the ground for the 72nd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 72 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This corner 113.3 lks. N. of the position of temp.cor.
Land, rolling.

Soil, firm red sandy loam and limestone gravel.

No timber; mesquite and greasewood undergrowth.

73rd Mile

N. $89^{\circ} 56' 00''$ W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite and

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

greasewood undergrowth.

28.10

Wagon road, bears NW. and SE.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 73rd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 73 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.

Corner is at W. edge of head of small draw, draining NE. to Owl Creek Draw.

This cor. 127.6 lks. N. of the position of temp. cor.

Land, firm gray adobe and gypsum and limestone gravel.

No timber; mesquite and greasewood undergrowth.

74th Mile
N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite undergrowth.

11.30

Draw, drains N.

20.60

Draw, drains NE.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,
By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 74th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 74

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

<u>Chains.</u>	General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.
	This cor. 143.3 lks. N. of the position of temp.cor. Land, rolling.
	Soil, firm gray adobe and gypsum on surface.
	No timber; mesquite and hack-berry undergrowth.
	75th Mile
	N. 89°56'00" W.
	On true line, Texas and New Mexico boundary.
	Over rolling land, through scattered mesquite and greasewood undergrowth.
17.70	Wagon road, bears NE. and SW.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is
	By 1st set, 79.995 chs;
	By 2nd set, 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and sur- mounted with a brass cap 23 ins. into the ground for the 75th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 75 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.
	This cor. 160.6 lks. N. of the position of temp.cor. Land, rolling.
	Soil, firm gray adobe and gypsum, 3rd rate.
	No timber; mesquite and greasewood undergrowth.
	76th Mile
	N. 89°56' 00" W
	On true line, Texas and New Mexico boundary.
	Over undulating land through scattered scrub cedar.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	timber.
2.80	Small sink hole 1.00 ch. S.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 76 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 76 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable. This cor. 179.3 lks. N. of position of temp. cor. Land, rolling.</p> <p>Soil, firm gray adobe and gypsum and limestone gravel, 3rd rate.</p> <p>Scrub cedar timber; no undergrowth.</p>
80.00	<p style="text-align: center;">77th Mile</p> <p style="text-align: center;">N. 89° 56' 00" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over undulating land, through scattered scrub cedar timber, and mesquite and cat-claw undergrowth.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 77th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 77 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. This cor. 187.7 lks. N. of the position of temp. cor. Land, undulating.</p> <p>Soil, firm gray adobe and gypsum and limestone gravel, 3rd rate.</p> <p>Scrub cedar timber; mesquite and cat-claw undergrowth.</p> <p style="text-align: right;">Sept. 24, 1911.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. growth. Sept. 24, 1911.

Sept. 23, 1911:

78th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered scrub cedar timber, and cat claw undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 78th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 78 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. This cor. 198.0 lks. N. of the position of temp. cor. Land, undulating.

Soil, firm gray adobe and gypsum.

Scrub cedar timber; cat claw undergrowth.

79th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered scrub cedar timber, and greasewood undergrowth.

48.00

Middle of shallow draw, drains N.

52.40

N. side of sink hole, 1½ chs. in diameter.

No difference between measurements of 80.00 chs by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	<p>filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 79th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 79 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. This cor. 207.7 lks. N. of the position of temp. cor. land, undulating.</p> <p>Soil, firm gray adobe and gypsum, and gypsum gravel, 3rd rate.</p> <p>Scrub cedar timber; greasewood undergrowth.</p>
80th Mile	
N. 89° 56' 00" W.	
On true line, Texas and New Mexico boundary.	
Over rough rolling land, through scattered scrub cedar timber and greasewood and mesquite undergrowth.	
20.30	Draw, drains SW; sink hole, 1 ch. in diameter 1.00 ch. SW.
33.00	SE. bank of wide draw, bears NE. and SW; desc. on broken NW. slope.
43.00	Low spur, slopes N. NE.
55.30	Cut bank of draw, 10 ft. high bears NE. and SW; continue across draw.
59.00	Middle of draw, course NE.
72.00	Leave draw, bears NE. and SW; ascend on steep SE. slope.
73.50	Top of steep ascent; ascend gradually on rolling top of spur.
80.00	Point for mile corner No. 80 falls in center of shallow draw draining S. on unsafe ground.
	Difference between measurements of 82.00 chs. by two sets of chainmen is 2 links; position of the middle point is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. By 1st set, 82.01 chs.,
 By 2nd set, 81.99 chs; the mean of which is
 82.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
 filled with concrete, flanged at the bottom and sur-
 mounted with a brass cap, 24 ins. into the ground for
 the 80.025th mile corner. The top of the cap is divided
 by an east and west stamped line 1 inch in length, and
 marked "New Mexico" on the north, "Texas" on the south
 thereof, and also marked, "Clark Boundary 1859 Mile
 Corner No. 80.025 General Land Office Reestablishment
 1911 United States Boundary Commission." Pits impracti-
 cable.
 This cor. 222.7 lks. N. of the position of temp. cor.
 Land, rough rolling.
 Soil, firm gray adobe and gypsum and gypsum gravel.
 Scrub cedar timber; greasewood and mesquite under-
 growth.

81st Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary, from 80.025 cor.

Over rolling land, on top of long, low spur through
 scattered scrub cedar timber and scattered mesquite and
 greasewood undergrowth.

Difference between measurements of 78.00 chs. by
 two sets of chainmen is 2 links; position of the
 middle point is

By 1st set, 78.01 chs.,

By 2nd set, 77.99 chs; the mean of which is

78.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
 filled with concrete, flanged at the bottom and sur-
 mounted with a brass cap, 23 ins. into the ground for
 the 81st mile corner. The top of the cap is divided by
 an east and west stamped line 1 inch in length, and marked
 "New Mexico" on the north, "Texas" on the south thereof,
 and also marked, "Clark Boundary 1859 Mile Corner No. 81
 General Land Office Reestablishment 1911 United States

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Boundary Commission." Pits impracticable.
This cor. 237.4 lks. N. of the position of temp.cor.
Land, rolling.

Soil, firm gray adobe and gypsum, and gypsum gravel,
3rd rate.

Cedar timber; mesquite and greasewood undergrowth.

Sept. 23, 1911.

Sept. 22, 1911:

82nd Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rough rolling land, through scattered scrub
cedar timber, and greasewood undergrowth.

2.20 Wire fence, bears N. and S.

33.00 Leave cedar timber, and commence descent of steep
W. slope into draw.

35.00 Foot of descent, bears N. and S. Thence over almost
level land.

75.00 Middle of draw. Drains S.SW; ascend gradually.

No difference between measurements of 80.00 chs. by
two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 24 ins. into the ground for
the 82nd mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 82 General Land Office Reestablishment 1911

United States Boundary Commission." Pits impracticable.
This cor. 253.8 lks. N. of the position of temp.cor.
Land, rolling.

Soil, loose gray adobe and gypsum and gypsum gravel,
3rd rate.

Cedar timber; greasewood undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

<u>Chains.</u>	83rd Mile
	N. 89° 56' 00" W.
	On true line, Texas and New Mexico boundary.
	Over rolling land through heavy mesquite and greasewood undergrowth.
17.60	Commenced ascent of E. slope.
18.50	Top of ascent, and N. foot of low hill; descend on gradual W. slope.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 83rd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the north "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 83 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.
	Corner is set on S. edge of a shallow draw, draining W.
	This cor. 271.6 lks. N. of the position of temp. cor. Land, rolling.
	Soil, firm red sand and limestone gravel, 2nd rate.
	No timber; mesquite and greasewood undergrowth.
	At a point 2.716 chs. S. of this corner on July 11th I determined the azimuth of the secant as follows. Horizontal angles read from flag on secant to E. to Sun.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	Latitude 32° 00' 00" Declination 22° 12' 20" N.		
Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle.
+	D. 9h 36m 18s	S. 5° 38' 30"	53° 24' 00"
+	R. 9h 38m 26s	S. 5° 16' 00"	53° 26' 00"
	Means	S. 5° 27' 15"	53° 25' 00"
		Par. +	5"
		Ref. -	42"
		h.	53° 24' 23"
Sun's azimuth	S. 84° 36' 21" E.		
Bearing of secant	S. 90° 3' 36" E.		
	S. 89° 56' 24" W.		
cos. lat.	9.928420	sin. dec.	9.577413
" h.	9.775345	"	9.795789
	9.703765	"	9.10.129308
			9.925097
			.84158
			.74757
cos. azimuth			.09401
Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 9h 41m 3s	S. 6° 24' 30"	54° 23' 00"
+	R. 9h 43m 35s	S. 6° 6' 30"	54° 31' 00"
	Means	S. 6° 15' 30"	54° 27' 00"
		Par. +	5"
		Ref. -	41"
		h.	54° 26' 24"
Sun's azimuth	S. 83° 48' 43" E.		
Bearing of secant	S. 90° 4' 13" E.		
	S. 89° 55' 47" W.		
cos. lat.	9.928420	sin. dec.	9.577413
" h.	9.764591	"	9.795789
	9.693011	"	9.10.145771
			9.941560
			.87410
			.76631
cos. azimuth			.10779
Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 9h 46m 53s	S. 7° 22' 00"	55° 36' 30"
+	R. 9h 49m 44s	S. 7° 7' 30"	55° 47' 00"
	Means	S. 7° 14' 45"	55° 41' 45"
		Par. +	5"
		Ref. -	39"
		h.	55° 41' 11"
sun's azimuth	S. 82° 49' 06" E.		
Bearing of secant	S. 90° 3' 51" E.		
	S. 89° 56' 09" W.		
cos. lat.	9.928420	sin. dec.	9.577413
" h.	9.751065	"	9.795789
	9.679485	"	9.10.165896
			9.961685
			.91556
			.79055
cos. azimuth			.12501

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

S. 89° 56' 24" W.	Mean bearing of secant to the point of observation
S. 89° 55' 47" W.	
S. 89° 56' 09" W.	

84th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite and greasewood undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 84th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 84 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. This cor. 281.9 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm red sandy loam and limestone gravel.

No timber; mesquite and greasewood undergrowth.

85th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rough rolling land, through scattered mesquite and cat-claw undergrowth.

Ascend on steep NE. slope from draw.

18.30 Top of steep ascent; ridge bears N. and S; descend on steep W. slope.

20.90 Foot of steep descent; descend gradually.

52.80 Wire fence, bears N. and S.

64.60 Wagon road, bears N. and S.

70.50 Wagon road, bears N. and S.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 85th mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 85 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable.</p> <p>This cor. 293.1 lks. N. of the position of temp. cor. Land, rolling.</p> <p>Soil, firm red sand and limestone gravel and broken rock, 3rd rate.</p> <p>No timber; mesquite and cat claw undergrowth.</p>
86th Mile	
N. 89° 56' 00" W.	
On true line, Texas and New Mexico boundary.	
Over rough, rolling land, through scattered mesquite, greasewood and cat-claw undergrowth.	
24.00	NE. corner of large sink hole is 1.00 ch. S.
29.40	NW. corner of sink hole is 1.00 ch. S; asc. on gradual SE. slope.
38.00	Top of ascent, bears NE. and SW; continue on top of low ridge.
64.00	Head of draw, drains E. SE
Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of the middle point is	
By 1st set, 79.985 chs.,	
By 2nd set, 80.015 chs; the mean of which is	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.
80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 86th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 86 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. This cor. 291.6 lks N. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone gravel, and broken limestone rock.

No timber; mesquite, greasewood and cat claw under growth.

87th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through heavy mesquite, greasewood and cat-claw undergrowth.

74.00 Right bank of Black River Draw, bears N.NE and SW; continue across rocky bed of draw.

80.00 Point for corner falls in channel of draw, on unsafe ground.

Difference between measurements of 82.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 81.99 chs.,

By 2nd set, 82.01 chs; the mean of which is

82.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 87.025 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 87.025 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This corner is set 2 ft. in limestone boulders and gravel and surrounded by a mound of stone 5 ft. base, 1 ft. high. Corner is at left side of channel of Black River Draw.

This cor. 291.0 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone gravel and broken limestone on surface; limestone bed rock 1 ft. below surface.

No timber; mesquite, greasewood and cat claw undergrowth.

Sept. 22, 1911.

Sept. 21, 1911: 88th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary, measurement from point for 87 mile corner.

Over rolling land, in bed of Black River Draw, flows N.E.

18.00 Leave Black River Draw, bears NE. and SW; ascend gradually on SE. slope over rolling land through heavy greasewood and cat claw undergrowth.

60.00 Top of ascent; continue on top of mesa.

69.00 Commence descent on gradual NW. slope.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set 79.99 chs.,

By 2nd set 80.01 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.
80.00

Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 10 ins. into the ground for the 88th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof and also marked "Clark Boundary 1859 Mile Corner No. 88 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. Post set on bed rock.

Raise a mound of stone 5 ft. base, 2 ft. high around post.

This cor. 291.3 lks. W. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone gravel and stone on surface; limestone bed rock 8 ins. below surface.

No timber; greasewood and cat claw undergrowth.

89th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over broken rolling land through scattered mesquite, greasewood and cat-claw undergrowth.

Ascend on gradual E. slope.

10.00 Low spur from mesa, slopes NW; descend on W. slope.

15.50 Shallow draw, drains N.NE; ascend on E. slope.

28.50 Spur from mesa, slopes N.

62.10 Draw, drains NE.

70.00 Draw, drains NE.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 80.01 chs.,

By 2nd set, 79.99 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.
80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 89th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 89 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. This cor. 292.3 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone gravel on surface with limestone bed rock from 1 to 2 ft. below surface.

No timber; mesquite, greasewood and cat-claw undergrowth.

90th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rough rolling land, through scattered scrub cedar timber, and mesquite and cat claw undergrowth.

- .80 Wire fence, bears N. and S.
- 15.50 Draw, drains NE; ascend gradually on SE. slope of spur.
- 41.00 Spur from ridge, slopes E.NE; continue on top of spur.
- 51.00 Head of draw, drains NE; ascend on gradual SE. slope.
- 65.00 Top of ascent; ridge bears N.NE and S.SW; desc. on gradual W. slope.
- 69.00 Foot of descent; continue across narrow valley.
- 79.90 Wire fence, bears N. and S.
- Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is
- By 1st set, 80.01 chs.,
- By 2nd set, 79.99 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.
80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 90th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 90 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 294.5 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone gravel on surface, limestone bed rock from 1 to 2 ft. below surface.

Scrub cedar timber; mesquite and catclaw undergrowth.

At a point on secant 2.945 chs. S. of this corner on July 12th, I determined the azimuth of the secant as follows:

Horizontal angles read from flag on secant to W. to Sun.

Latitude - 32° 00' 00" N. Declination -22° 2' 34" N.

Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 3h 47m 25s	N. 3° 38' 00"	39° 7' 00"
+	R. 3h 49m 58s	N. 3° 22' 30"	39° 12' 30"
	Means	N. 3° 30' 15"	39° 9' 45"
			Per.+ 7"
			Ref.- 1' 11"
			h. 39° 8' 41"

Sun's azimuth N. 86° 26' 46" W.
Bearing of secant N. 89° 57' 1" W

cos. lat.	9.928420	sin. dec.	9.574377	tan. lat.	9.795789
" h.	9.889612		9.818032	" h	9.910611
	<u>9.818032</u>		<u>9.756345</u>		<u>9.706400</u>

.57062 .50863

.50863

cos. azimuth .06199

Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 3h 55m 45s	N. 4° 38' 30"	37° 21' 00"
+	R. 3h 59m 1s	N. 4° 28' 30"	37° 17' 00"
	Means	N. 4° 33' 30"	37° 19' 00"

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL,

Chains. N. 4° 33' 30" 37° 19' 00"
 Par. + 7"
 Ref. - 1' 16"
 h. 37° 17' 51"

Sun's azimuth N. 85° 23' 33" W.
 Bearing of secant N. 89° 57' 3" W.

cos. lat.	9.928420	sin. dec.	9.574377	tan. lat.	9.795789
"	h. 9.900640		9.829060	"	h. 9.881800
	<u>9.829060</u>		<u>9.745317</u>		<u>9.677589</u>
			.55631		.47598
cos. azimuth			<u>.47598</u>		
			<u>.08033</u>		

Sun.	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 4h 3m 11s	N. 5° 31' 30"	35° 46' 00"
+	R. 4h 5m 45s	N. 5° 16' 30"	35° 52' 30"
	Means	<u>N. 5° 24' 00"</u>	<u>35° 49' 15"</u>

Par. + 7"
 Ref. - 1' 19"
 h. 35° 48' 3"

Sun's azimuth N. 84° 33' 4" W.
 Bearing of secant N. 89° 57' 4" W.

cos. lat.	9.928420	sin. dec.	9.574377	tan. lat.	9.795789
"	h. 9.909050		9.837470	"	h. 9.858082
	<u>9.837470</u>		<u>9.736907</u>		<u>9.653871</u>
			.54564		.45068
cos. azimuth			<u>.45068</u>		
			<u>.09496</u>		

N. 89° 57' 1" W Mean bearing of secant at point of observation
 N. 89° 57' 3" W. observation
 N. 89° 57' 4" W. N. 89° 57' 3" W.

91st Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling and hilly land, through scattered scrub cedar timber, and ocotillo and cat-claw undergrowth.

Ascend on gradual E. slope.

4.00 Low ridge, bears N. and S; desc. on gradual W. slope.

8.00 Draw drains N; asc. on E. slope.

12.00 Low ridge, bears N. and S; descend on gradual W. slope.

17.00 Shallow draw, drains N; asc. on E. slope.

25.00 Low ridge, bears N.NE and S.SW; desc. on W. slope.

32.00 Shallow draw, drains N.NW; asc. on E. slope.

40.00 Shallow draw drains NE; asc. on SE. slope.

45.00 Wire fence, bears N. and S.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	
51.00	E. edge of broad spur, slopes N; continue across spur.
66.10	W. edge of spur; desc. on W. slope to draw.
73.00	Shallow draw, drains N.NE; continue on N. slope from ridge.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 12 ins. into the ground for the 91st mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 91 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.
	Post set on limestone bed rock.
	Build a mound of stone 5 ft. base, 20 ins. high around post.
	This cor. 297.8 lks. N. of the position of temp. cor.
	Land, rolling and hilly.
	Soil, firm gray sand and limestone gravel and broken stone on surface; limestone bed rock 1 ft. below surface.
	Scrub cedar timber; ocotillo and cat-claw undergrowth.

92nd Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Along N. foot of low ridge, over rolling land, through scattered scrub cedar timber, and mesquite, cat claw and ocotillo undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

10.70

Wire fence, bears N. and S.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 92nd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 92 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. This cor. 302.9 lks, N. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone rock and gravel on surface; limestone bed rock 15 ins. below surface.

Scrub cedar timber; mesquite, cat claw and ocotillo undergrowth.

93rd Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, at N. foot of low ridge, through scattered scrub cedar timber and cat-claw undergrowth.

66.10

Descend on gradual SW. slope into draw.

67.60

Draw, drains SE; ascend 10 ft. and continue on rolling top of mesa.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 22 ins. into the ground for the 93rd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 93 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

Post set on bed rock.

This cor. 309.5 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone rock and gravel on surface; limestone bed rock 1 ft. below surface and cropping to surface on sloping ground.

Scrub cedar timber; cat-claw undergrowth. Sept. 21, 1911.

Sept. 20, 1911:

94th Mile

N. $89^{\circ} 56' 00''$ W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered scrub cedar timber and cat-claw and ocotillo undergrowth.

45.20 Wire fence, bears N. and S.

48.60 Shallow draw, drains SE.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 18 ins. into the ground for the 94th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 94 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. Post is set 18 ins. in the ground on limestone bed rock, a mound of stone 4 ft. base, 1½ ins. high around corner. This cor. 317.5 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone gravel, broken rock and boulders on surface; limestone bed rock from 1 to 2 ft. below surface.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. Scrub cedar; cat-claw and ocotillo undergrowth.

95th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered scrub cedar timber and cat-claw and ocotillo undergrowth.

21.00 Short draw, drains SE.

Head of short draw, drains SE.

43.00 No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 10 ins. into the ground for the 95th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 95 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

Set post 10 ins. in the ground on limestone bed rock and raise a mound of stone 5 ft. base, 20 ins. high around post.

This cor. 327.4 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone gravel, rock and boulders on surface.

Scrub cedar timber; cat claw and ocotillo undergrowth.

96th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rough, rolling land, through scattered scrub cedar timber and cat claw and shinnery undergrowth.

25.50 Wire fence, bears N. and S.

Descend on gradual SW. slope to draw.

37.00 Draw, drains SE; continue across low spur.

56.00 Head of small draw, drains SE; asc. on NE. slope

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	
65.00	Spur from ridge, slopes SE; desc. on gradual SW. slope.
73.00	Head of small draw, drains SE. Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is By 1st set, 79.995 chs., By 2nd set, 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 18 ins. into the ground for the 96th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 96 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. Post is set 18 ins. in the ground on limestone bed rock; raise a mound of stone 3 ft. base, 18 ins. high around post. This cor. 338.5 lks. N. of the position of temp. cor. Land, rolling. Soil, firm red sand and limestone gravel and broken stone on surface; limestone bed rock 1 ft. below surface. Scrub cedar timber; cat claw and shinnery undergrowth. Sept. 20, 1911.

97th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rough, rolling land, through scattered scrub cedar timber and cat-claw undergrowth.

7.50	Draw, drains SE; continue across N. end of spur.
21.00	Draw, drains NE; asc. on gradual SE. slope.
46.00	Spur from ridge, slopes NE; desc. on NW. slope.
56.00	Foot of steep descent; draw, drains NE; ascend on SE

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	slope.
64.50	Spur from ridge, slopes NE. dec. on NW. slope.
67.50	Deep draw, drains NE; ascend on steep SE. slope. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 97th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 97 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable. This cor. 351.6 lks. N. of the position of temp. cor. Land, rolling. Soil, rich, black loam and limestone and granite gravel on surface; limestone bed rock 2 ft. below surface with limestone ledges cropping to surface on sloping ground. Scrub cedar timber; cat claw and shinners undergrowth.
98th Mile	
N. 89° 56' 00" W.	
On true line, Texas and New Mexico boundary. Over rough rolling land, through heavy cat claw undergrowth.	
45.00	Commence gradual ascent of E. slope; enter scrub cedar timber, and scrub oak undergrowth, bears N. and S.
63.50	Top of ascent; descend on gradual W. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. By 1st set, 80.01 chs;
 By 2nd set, 79.99 chs; the mean of which is
 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
 filled with concrete, flanged at the bottom and sur-
 mounted with a brass cap, 23 ins. into the ground for
 the 98th mile corner. The top of the cap is divided by
 an east and west stamped line, 1 inch in length, and
 marked "New Mexico" on the north, "Texas" on the south
 thereof, and also marked, "Clark Boundary 1859 Mile
 Corner No. 98 General Land Office Reestablishment 1911
 United States Boundary Commission". Pits impracticable.
 This cor. 366.1 lks. N. of the position of temp. cor.
 Land, rolling.
 Soil, firm black loam and limestone rock and gravel
 on surface, with limestone bed rock 2 ft. below surface.
 Scrub cedar timber; cat claw and scrub oak under-
 growth.

99th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered scrub cedar
 timber and cat-claw and beech nut undergrowth.

Asc. on gradual E. slope.

10.00 Commence descent of steep NW. slope to draw; leave
 rolling and continue over mountainous land through
 heavy scrub oak and beech nut undergrowth.

10.75 Draw, 20 lks. wide, drains NE; ascend on steep SE.
 slope.

11.50 Top of steep ascent from draw; ascend gradually.

25.00 Low spur from ridge, slopes SE; descend on SW.
 slope.

29.00 Draw, drains SE; ascend on steep NE. slope.

36.00 Commence descent of steep SW. slope to draw.

37.50 Draw, drains SE; ascend on NE. slope.

39.00 W. bank of draw; commence ascent on steep NE. slope.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	
	over land exceptionally difficult to survey.
52.50	High rocky spur, slopes SE; descend on steep SW. slope.
59.00	Deep draw, 20 lks. wide, drains SE; ascend on steep
	NE. slope.
68.14	Opposite triangulation station on random line, record
	of triangulation follows.
72.00	High spur from Guadalupe Mountains, 1200 ft. above
	98th mile corner, slopes SE. The 99th mile point will
	fall on steep SW. slope in inaccessible point in place
	of which the following corner was established.
	Difference between measurements of 72.00 chs. by
	two sets of chainmen is 1 link; position of the middle
	point is
	By 1st set, 71.99 chs.,
	By 2nd set, 72.01 chs., the mean of which is
72.00	Set a hollow iron post 36 ins. long, 3 ins. dia.,
	filled with concrete, flanged at the bottom and sur-
	mounted with a brass cap, on top of the ground for the
	98.9th mile corner. The top of the cap is divided by
	an east and west stamped line 1 inch in length, and
	marked "New Mexico" on the north, "Texas" on the south
	thereof, and also marked, "Clark Boundary 1859 Mile
	Corner No. 98.9 General Land Office Reestablishment
	1911, United States Boundary Commission."
	This post is set on limestone bed rock on surface .
	Mark a X at point and erect a mound of stone 7 ft. base
	30 ins. high around post.
	This cor. 380.4 lks. N. of the position of temp. cor.
	Line descends steep SW. slope, impracticable for chaining.
80.00	Point for 99th mile corner falls on steep SW. slope in
	inaccessible position.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. Land, E. 10.00 chs. rolling; W. 70.00 chs. mountainous.

Soil, rich black loam and limestone gravel on surface, with limestone bed rock 18 ins. below surface, on rolling land. Rich black loam and broken limestone rock on surface, with limestone bed rock cropping to surface on steep slopes on mountainous land.

Scrub cedar timber; cat claw, beech nut and scrub oak undergrowth.

100th Mile

N. $89^{\circ} 56' 00''$ W.

On true line, Texas and New Mexico boundary.

Over mountainous land, exceptionally difficult to survey.

Descend on steep SW. slope through heavy scrub oak undergrowth.

Deep draw, drains SE; ascend on steep E. slope.

Measurement to this draw not recorded for reason that it is inaccessible for chaining and the portion of the line crossing this draw was measured by triangulation.

27.752 Opposite triangulation station on random line.

The distance on the true line to this point from the point for mile corner 99 was based on the following triangulation on the random line, on July 17.

From a point N. $8^{\circ} 12'$ E. 1.335 chs. of the 27.752 ch. point on the random line I lay off a base of 15.706 chs. N. $30^{\circ} 8' 17''$ E. and triangulate back to the 98 M. 68.14 ch. point on random line.

All bearings referred to secant as an E. and W. line.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Angles at A.

3 A. = 70° 07' 30"

A. = 23° 22' 30"

Adjustment 03"
A. = 23° 22' 33"

Angles at B.

3 B. = 185° 20' 00"

B. = 61° 46' 40"

Adjustment 03"
B. = 61° 46' 43"

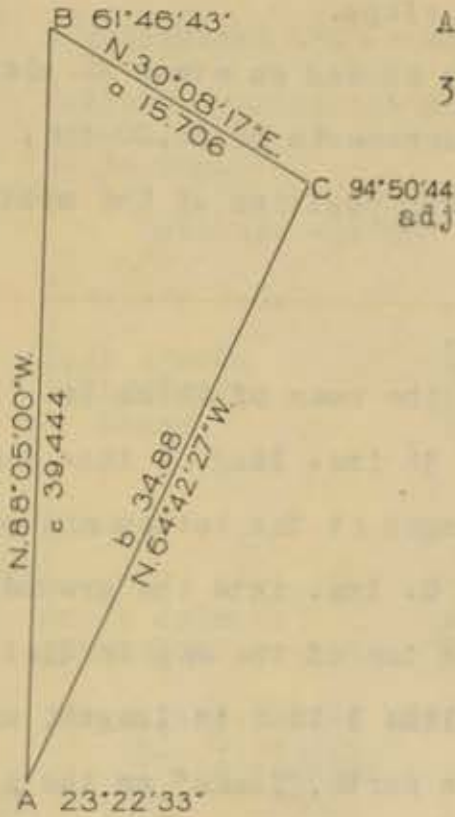
Angles at C.

3 C. = 248° 32' 00"

C. = 94° 50' 40"

adjustment 04"

C. = 94° 50' 44"



$$\sin A : 15.706 :: \sin C : c$$

$$\log \sin C. \quad 9.998445$$

$$\log a. \quad 1.196066$$

$$\text{colog. sin. A.} \quad \underline{0.401471}$$

$$\log c. \quad 1.595982$$

$$A. \text{ to } B. = c. \quad 39.444 \text{ chs.}$$

Traverse to point on secant.

	N.	S.	E.	W
N. 88° 05' W. 39.444 chs.	1.319			39.422
S. 8° 12' W. 1.335 chs.		1.321		.190
	1.319	1.321		39.612

Distance on line to flag A. 98 M. 68.14 chs.

Triangulated distance 39.612 "

Distance to point on line near B. 99 M 27.752 chs.

28.00 Top of steep ascent, bears N. and S; ascend gradually through heavy cedar and pinon timber.

30.50 Top of ascent; ridge bears N. and S; descend on W. slope. This ridge 280 ft. above spur at 72.00 chs. in 99th mile.

37.75 Rim rock, 10 ft. high, bears N. and S; continue descent.

39.00 Deep draw, drains N.NE; ascend E. slope.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

48.00 High spur from ridge, slopes N.NE; 25 ft. above last spur; descend on steep W. slope.

54.00 Deep draw, drains N.NE; ascend on steep E. slope.

64.50 High spur from ridge, slopes N.NE; 25 ft. above last spur; descend on steep W. slope.

76.00 Deep draw, drains N.NE; ascend on steep NE. slope.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 0. ins. into the ground for the 100th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 100 General Land Office Reestablishment 1911 United States Boundary Commission."

Post is set on bed rock on surface; raise a mound of stone 6 ft. base, 3 ft. high around post from which

A pine, 10 ins. in diam., bears N. $20^{\circ} 45'$ W., 21 lks. dist., marked $\begin{matrix} N & M \\ 100 & M \\ B & T \end{matrix}$

A pine, 6 ins. in diam., bears S. $28^{\circ} 15'$ W., 1.10 chs. dist. marked $\begin{matrix} T \\ 100 & M \\ BT \end{matrix}$

This cor. 399.3 lks. N. of the position of temp. cor. Land, mountainous.

Soil, rich black loam and broken limestone rock on surface, with limestone bed rock 1 ft. below surface on tops of ridges, and cropping to surface on sides.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains: Cedar and pinon timber; scrub oak undergrowth.

Distances to topographic features falling within triangulations determined by measurements from triangulation stations, for topography only.

At a point on secant, 3.993 chs. S. of this corner, I determined the azimuth of the secant, on July 18th, as follows. Horizontal angles read from flag on secant to W. to Sun.

Latitude $-32^{\circ}00'00''$ W N. Declination $-21^{\circ}6'24.5''$ N.

Sun + +	L.M. Time P.M. D. 4h 43m 20s R. 4h 45m 37s Means	Hor. Angle N. $8^{\circ}30'00''$ N. $8^{\circ}15'00''$ <hr/> N. $8^{\circ}22'30''$	Vert. Angle $28^{\circ}6'30''$ $28^{\circ}16'30''$ <hr/> $28^{\circ}11'30''$
		Par.+ Ref.- h.	$8''$ $1'47''$ <hr/> $28^{\circ}9'51''$

Sun's azimuth $N. 81^{\circ}32'25'' W$
Azimuth of secant $N. 89^{\circ}54'55'' W$


cos. lat.	9.928420	sin. dec.	9.556433	tan. lat.	9.795789
" h.	9.945270		9.873690	" h	9.728671
	<u>9.873690</u>		<u>9.682743</u>		<u>9.524460</u>
			.48166		.33455
			<u>.33455</u>		
cos. azimuth			<u>.14711</u>		

Sun + +	L.M. Time P.M. D. 4h 52m 43s R. 4h 57m 6s Means	Hor. Angle N. $9^{\circ}35'30''$ N. $9^{\circ}34'00''$ <hr/> N. $9^{\circ}34'45''$	Vert. Angle $26^{\circ}8'00''$ $25^{\circ}51'30''$ <hr/> $25^{\circ}59'45''$
		Par.+ Ref.- h.	$8''$ $1'58''$ <hr/> $25^{\circ}57'55''$

Sun's azimuth $N. 80^{\circ}19'41'' W$
Azimuth of secant $N. 89^{\circ}54'26'' W$

cos. lat.	9.928420	sin. dec.	9.556433	tan. lat.	9.795789
" h.	9.953789		9.882209	" h	9.687513
	<u>9.882209</u>		<u>9.674224</u>		<u>9.483302</u>
			.47231		.30430
			<u>.30430</u>		
cos. azimuth			<u>.16801</u>		

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
	D. 5h 00m 34s	N. 10° 29' 30"	24° 30' 00"
	R. 5h 2m 43s	N. 10° 12' 30"	24° 42' 30"
	Means	N. 10° 21' 00"	24° 36' 15"
		Par. +	8"
		Ref. -	2' 5"
		h.	24° 34' 18"
Sun's azimuth		N. 79° 33' 41" W.	
Bearing of secant		N. 89° 54' 41" W	
cos. lat.	9.928420	sin. dec.	9.556433
" h.	9.958775	" h.	9.660142
	<u>9.887195</u>		<u>9.455931</u>
			.46691
			.28572
cos. azimuth			<u>.18119</u>
N. 89° 54' 55" W.		Mean bearing of secant at point of	
N. 89° 54' 26" W		observation after deflecting	
N. 89° 54' 41" W.		9.2' to right	
		N. 89° 54' 41" W	

Sept. 19, 1911.

Sept. 18, 1911:

101st Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over mountainous land, exceptionally difficult to survey through heavy cedar, spruce and pine timber and scrub oak undergrowth:

Descend on W. slope.

- 7.00 Draw, drains N.NE; ascend on gradual NE. slope.
- 10.00 Spur from ridge, slopes N; descend on W. slope.
- 15.40 Draw, drains N; ascend on E. slope.
- 19.00 Spur from ridge, slopes N; descend on W. slope.
- 23.00 Deep draw, 10 lks. wide, drains N.NE; ascend on E. slope.
- 28.50 Spur from ridge, slopes N; desc. on NW. slope.
- 34.886 Opposite triangulation station on random line.

The distance to this point, on the true line from mile corner 100 was determined by stadia on the random line as follows:

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. July 18:

Rod readings	Vertical angle $0^{\circ} 00' 30''$
9.915 ft.	reduction coefficient .9999
9.907	
9.920	
<u>9.917</u>	
9.915	mean of readings
log. of 9.915	0.996293
Log. of stadia interval	<u>0.295391</u>
Natural corresponding	<u>1.291684</u>
19.574 X .9999 =	19.572
constant	<u>.013 chs.</u>
horizontal distance	19.585 chs.

Thence again by stadia.

Rod readings	No vertical angle
7.732 ft.	
7.756	
7.742	
<u>7.747</u>	
7.744	mean of readings
log. of 7.744	0.888965
log. of stadia interval	<u>0.295391</u>
corresponding natural	<u>1.184356</u>
constant	<u>.013 chs.</u>
horizontal distance	<u>15.301 chs.</u>
previous distance by stadia	19.585 chs.
distance from temp. 100 M. cor	<u>34.886 chs.</u>

Random line continued by triangulation from this point

37.00 Draw, drains NE; asc. on E. slope.

41.00 High bluff at E. side of McKittrick Canyon; 100 ft.

high, bears NW and SE; line descends on steep impassable broken W. slope to McKittrick Creek. All succeeding distances based on triangulations from

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	34.886 chs. point on random line, hereinafter recorded.
80.00	Point for 101st mile corner falls on steep rough face of rock ledge in inaccessible position. Continue on 102nd mile.
86.40	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 6 ins. into the ground for the 101.08th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 101.08 General Land Office Reestablishment 1911 United States Boundary Commission."
	Post is set 6 ins. in the ground, on limestone bed-rock; raise a mound of stone, 4 ft. base, 27 ins. high around corner, from which
	A pine, 27 ins. in diam., bears N. 81° 45" W. 1.30 chs., dist., marked $\begin{matrix} N & M \\ & B & T \end{matrix}$ 101.08 M
	A pine, 15 ins. in diam. bears S. 34° 45' E., 2.70 chs. dist., marked $\begin{matrix} T \\ & B & T \end{matrix}$ 101.08 M. This cor. 397.7 lks. N. of position of temp. cor.
	Both trees are on W. side of McKittrick Creek.
	Steep rock cliffs on both sides of creek at this point.
	Land, mountainous.
	Soil, black loam, 1st rate, with limestone bed rock, cropping to the surface on tops and steep sides of spurs and ridges.
	Timber, cedar, spruce and pine. Scrub oak undergrowth.
	The distances to topographic features falling within triangulations and stadia sights determined by measurements from triangulation and stadia stations for topography only.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.
CHAINS.

The position of the 101.08 mile corner, was based on the following triangulations on the random secant line.

July 18 and 19, 1911: At temporary 100 mile plus 34.886 chs. point.

For convenience, the secant was assumed to have a bearing E. and W.

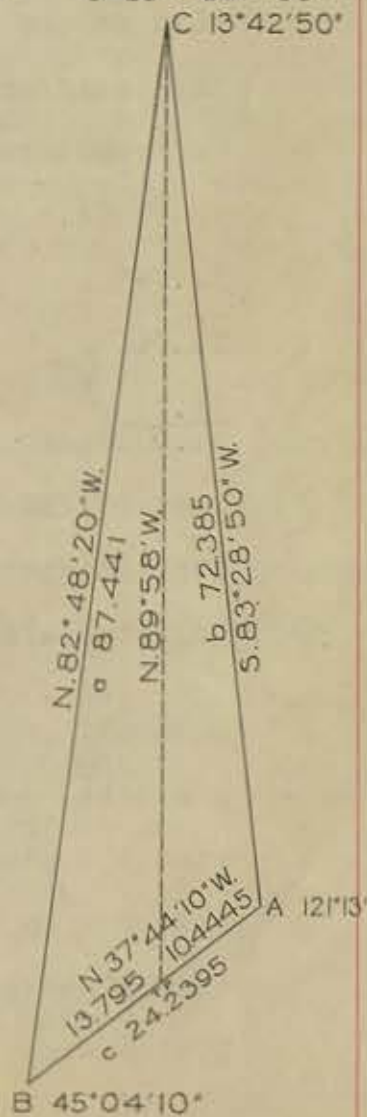
Base measured across line, and triangulation made to a flag bearing 2' to the right of line, or N. 89° 58' W. from T. P.

N. 37° 44' 10" W. 10.4445 chs. from line.

S. 37° 44' 10" E. 13.795 chs. from line.
24.2395 chs. total base.

No longer base obtainable owing to topography.

Angles at A.	Angles at B.	Angles at C.
3 A = 363° 39'	3 B = 135° 12' 30"	3 C = 41° 08' 30"
A = 121° 13'	B = 45° 04' 10"	C = 13° 42' 50"
Sin. C : c :: sin. B : b		
log. sin. B.	9.850010	
colog. sin. C.	0.625116	
log. c.	<u>1.384524</u>	
log. b. =	11.859650	
b. =	72.385 chs.	
Sin. C : c :: sin. A : a		
log. sin. A.	9.932075	
colog. sin. C.	0.625116	
log. c.	<u>1.384524</u>	
log. a. =	11.941715	
a. =	87.441 chs.	



RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

Traverse of Triangle

	N.	S	E	W
S.37°44'10"E. 13.795 chs.		10.909	8.443	
N.82°48'20"W 87.441 "	10.951			86.752
N.83°28'50"E 72.385 "	8.219		71.917	
S.37°44'10"E 10.4445 "		8.260	6.392	
	19.170	19.169	86.752	86.752
	19.169			
	.001			

E. 71.917 chs.

W. 86.752 chs.

$$\frac{\text{E. } 6.392 \text{ "}}{\text{T.P. to C. } 78.309 \text{ "}}$$

T. P. to C.

$$\frac{\text{E. } 8.443 \text{ "}}{78.309 \text{ "}}$$

100 M. and 34.886 chs. dist. to T. P.

78.309 " " triangulated.

101 M. and 33.195 " distance on secant line to the west end of the triangulation C.

July 18, and 19, 1911.

July 20: At 101 M. plus 33.195 chs. point I offset south .045 chs. to the secant random line and return eastward on the secant, by stadia, for the purpose of setting the temporary 101 mile corner.

Rod readings

Vertical angle

11.75 ft.

3° 55'

11.745

stadia coefficient .99535

11.745

11.77

11.752 mean reading.

log. 11.752 = 1.070112

log. stadia interval 0.295391

$$\begin{array}{r} \text{log. stadia coeff. } 9.997976 \\ 11.363479 \end{array}$$

natural 23.093

constant .013 chs.

stadia distance 23.106 chs.

Distance on line to transit station 101 M. 33.195 chs.

stadia distance 23.106 chs.

Distance on line to point 101 M. 10.089 chs.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32nd PARALLEL.
CHAINS

Continue east by stadia.

Red readings	vertical angle
6.567	21° 27'
6.571	Stadia coefficient .8663
6.574	
<u>6.577</u>	
6.57225 mean reading.	
log. 6.5722	0.817711
log. stadia interval	0.295391
log. stadia coeff.	<u>9.937668</u>
	11.050770
natural	11.24
constant	<u>.013</u> chs.
stadia distance	11.253 chs.
Distance on line to transit station 101 M.	10.089 chs.
stadia distance	<u>11.253</u> "
Distance on line to point	100 M. 78.836 "

From the 100 M. and 78.836 chn. point on the random line I chain westward on the secant 1.164 chs. to the point for temporary 101 mile corner, which falls on a perpendicular cliff 40 ft. high, I continue on the secant to 1.964 chs. to temporary point 101.01 M. and establish a temporary corner.

July 20, 1911.

On true line, because of the topography it was found necessary to move the temporary corner N. 89° 55' 58" W. 5.60 chs. from its corresponding position, the corner on the true line was marked, therefore, for the 101.08 mile.

Sept. 18, 1911.

Sept. 16, 1911: 102nd Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary, from 101 M., 6.40 chs. point, measurement from true point for 101 M. corner.

Over mountainous land, exceptionally difficult to

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 33RD PARALLEL.

CHAINS	survey.
7.10	Descend on steep W. slope to McKittrick Creek. McKittrick Creek, 20 lks. wide flows SE; ascend on steep NE. slope, through heavy pine, cedar and spruce timber, and scrub oak undergrowth.
16.40	High, rocky, spur from ridge, slopes N; descend on very steep NW. slope. McKittrick Creek 20 lks. wide, drains NE; ascend on steep SE. slope. Portion of line crossing this creek measured by stadia, and measurement to creek not recorded.
36.40	S. edge of point of high spur from ridge, sloping SW. descend on steep W. slope.
40.90	McKittrick Creek 20 lks. wide, flows S. ascend on steep E. slope.
56.40	High spur from ridge, slopes N: descend on steep NW. slope. McKittrick Creek, 15 lks. wide flows NE; ascend on steep SE. slope. Distance to this creek not recorded. This portion of line measured by triangulation.
80.00	Point for 103rd mile corner falls on steep SE. slope at inaccessible point. No corner set. Land, mountainous, Soil, hard black loam and broken limestone rock on tops of ridges and spurs and limestone bed-rock cropping to surface on slopes. Pine, cedar and spruce timber; scrub oak undergrowth. Distance to topographic features falling within triangulations and stadia sights determined by measurements from triangulation and stadia station, for topography only.

103rd Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

Over mountainous land, through heavy cedar, pine and spruce timber, and scrub oak undergrowth.

Ascend on steep SE. slope.

40.00 Highest ridge of Guadalupe Mountain system bears NE. and SW. This ridge is 250 ft. above the ridge at 99 M 64.50 chs.

Set a limestone 9x13x24 ins. 12 ins. in the ground on limestone bed rock for 102.5 mile corner, marked N.M. 102.5 M. on N. face and T. on S. face; raise a mound of stone 4 ft. base, 1 ft. high around cor., and another mound, 4 ft. base, 2 ft. high E. of cor.

From the corner.

A pine 9 ins. in diam., bears N. 25° 15' E., 96 lks.
 $\begin{matrix} N & M \\ \text{dist. marked } & 102.5 & M \\ & B & T \end{matrix}$

A pine 11 ins. in diam., bears S. 45° 30' W., 1.00
 $\begin{matrix} T \\ \text{ch. dist., also marked } & 102.5 & M \\ & B & T \end{matrix}$

This cor. 395.2 lks. N. of the position of temp. cor.

This corner fixed from triangulation station at 102 M. plus 44.25 chs. on random line.

Descend on steep NW. slope.

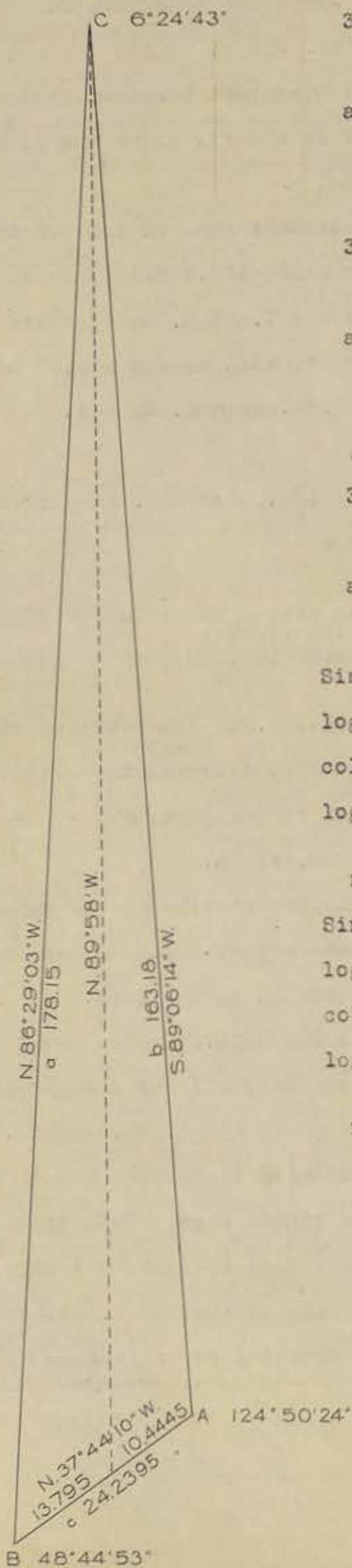
44.25 Opposite triangulation station on the random line.

The position of the corner 102.5 M. was based on the following triangulation on random line.

On July 18 at the 100 M 34.886 chs. point on the random line a base was laid off for the purpose of triangulating to the point 101 M. 33.195 chs. point.

This base was used also to triangulate to the point 102 M. 44.25 chs. on random line. This triangulation was completed July 31. Base bears N. 37° 44' 10" W. 24.2395 chs. across line at the 100 M. 34.886 chs. point. For convenience the secant line was assumed to have a bearing of E. and W.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.



Angles at A.

3 A. = 374° 31'
 A. = 124° 50' 20"
 adjustment 4"
 A. = 124° 50' 24"

Angles at B.

3 B. = 146° 14' 30"
 B. = 48° 44' 50"
 adjustment 3"
 B. = 48° 44' 53"

Angles at C.

3 C. = 19° 14' 00"
 C. = 6° 24' 40"
 adjustment 3"
 C. = 6° 24' 43"

Sin C:c::sin.A:a

log.sin.A. 9.914211
 colog.sin.C. 0.952040
 log.c(24.2395) 1.384524
 12.250775
 natural 178.15

Sin.C;c::sin.B:b

log.sin.B. 9.876112
 colog.sin.C. 0.952040
 log.c. 1.384524
 12.212676
 natural 163.18

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

natural 34.214

constant .013 chs.

stadia distance 34.237 chs.

103 M. 44.704 "

stadia distance 68.931 "

From this point the tape measurements were continued.

70.00 Low point of spur, slopes N.NE. Descend on steep NW. slope.

77.40 Canyon, course NE., ascend steep SE., slope.
Fork McKittrick Canyon, NE., ascend steep SE. slope.
Distance to canyon not noted.

80.00 Point for 103rd mile corner falls on slope at inaccessible point. Corner not set at this point.

Land, mountainous.

Soil, rich, black loam and broken limestone rock with limestone bed rock cropping to surface on tops and steep sides of spurs and ridges.

Cedar, pine and spruce timber; scrub oak undergrowth.

Distance to topographic features falling within triangulations determined by measurements from triangulation stations for topography only.

104th Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over mountainous land, exceptionally difficult to survey.

Ascend on steep SE. slope, through scattered pine, cedar and spruce timber.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS.

22.80

High ridge at E. side of Dog Canyon, bears N. and S. 100 ft below crest of Guadalupe mountains.

Difference between measurements of 33.869 chs. from stadia point by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 33.859 chs;

By 2nd set, 33.879 chs; the mean of which is 33.869 chs. or 22.80 chs. from point for 103 M. cor.

22.80

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 2 ins. into the ground for the 103.285 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 103.285 General Land Office Reestablishment 1911 United States Boundary Commission".

Post is set 2 ins. in the ground, on limestone bedrock; raise a mound of stone, 4 ft. base, 18 ins. high around corner.

This corner 394.8 lks. N. of the position of temp. corner.

Corner is at S. end of low saddle in ridge.

September 16, 1911.

Sept. 15: N. 89° 56' 00" W., continuing on 104th mile of Texas and New Mexico boundary line, from 22.80 ch. point.

Measurement counting from point for 103 M. cor.

Descend on steep W. slope of ridge, over mountainous land, exceptionally difficult to survey through heavy scrub oak undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS 38.80	Foot of steep descent, bears N. and S; descend gradually. Enter heavy pine timber and scrub oak undergrowth.
54.90	E. side of Dog Canyon Draw, bears N. and S; descend 40 ft. to draw.
56.10	Dog Canyon Draw, 30 lks. wide, drains N; ascend on steep bank of draw.
58.70	W. bank of draw, bears N. and S; ascend gradually.
67.00	Wagon road, bears N. and S; commence ascent of gradual E. slope.
72.50	Low spur from ridge, slopes N: continue on N. slope Difference between measurements of 57.20 chs. by two sets of chainmen is 2 links; position of the middle point is By 1st set, 57.21 chs; By 2nd set, 57.19 chs; the mean of which is 57.20 chs. or 80.00 chs. from point for 103 M. cor.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 104th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 104 General Land Office Reestablishment 1911 United States Boundary Commission". This cor. 394.8 lks. N. of the position of temp. cor. Land, firm, black loam and broken limestone rock on surface; limestone bed-rock 1 ft. below surface. Pine timber; scrub oak undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

105th Mile.

N. 89° 56' 00" W.

On true line of Texas and New Mexico boundary.

Over mountainous land, exceptionally difficult to survey.

Over broken N. slope from spur, through heavy cedar, pine and oak timber, and scrub oak undergrowth.

12.00 Spur from ridge, slopes N: descend on W. slope.

13.80 Draw, drains NE; commence ascent of steep SE. slope; leave heavy and continue in scattering timber.

22.30 High spur from ridge, slopes NE; descend gradually on W. slope of spur.

38.00 Draw, drains E.NE; continue on rolling ground, across draw.

40.00 Commence ascent on SE. slope, over mountainous land.

66.00 Top of ridge, bears N. and S: descend on steep SW. slope.

Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of the middle point is

By 1st set, 79.99 chs;

By 2nd set, 80.01 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 105th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 105 General Land Office Reestablishment 1911 United States Boundary Commission".

Raise a mound of stone, 3 ft. base, 2½ ft. high E. of corner.

Corner is on steep SW. slope, 60 lks. N. of draw, draining NW. and about 3.50 chs. E. of forks of draw.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

This cor. 395.6 lks. N. of the position of temp. cor.

Land, mountainous.

Soil, rich black loam, and limestone boulders on surface, limestone bed rock 1 ft. below surface.

Cedar, pine and oak timber; scrub oak undergrowth.

106th Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over mountainous land, exceptionally difficult to survey.

Descend on steep SW. slope, through heavy scrub oak undergrowth, and scattered pine and cedar timber.

.60 Draw, drains NW; continue across N. point of spur.

3.20 Draw, drains N.NE; asc. on steep SE. slope.

30.50 Ridge, bears NE. and SW; desc. on NW. slope.

30.00 Draw, drains NE; ascend on SE. slope.

44.00 Ridge, bears N.NE. and S.SW.; dec. on W. slope.

48.00 Head of draw, drains SW; asc. on SE. slope.

56.00 Spur from ridge, slopes S.SW; descend on steep W. slope.

58.00 Rim rock, 10 ft. high, bears N. and S. Continue descent. Difference between measurements of 80.00 cha. by

two sets of chainmen is 6 links; position of the middle point is

By 1st set, 79.97 chs;

By 2nd set, 80.03 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 5 ins. into the ground for the 106th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

Corner No. 106 General Land Office Reestablishment 1911 United States Boundary Commission".

Post 5 ins. in the ground on limestone bed rock. build a mound of stone 5 ft. base, 27 ins. high around post.

Corner is on steep SW. slope 60 lks. N. of small draw, draining NW.

This cor. 397.1 lks. N. of the position of the position of temp. cor.

Land, mountainous.

Soil, rich, black loam and limestone boulders on surface in draws; limestone bed-rock 1 ft. below surface and cropping to surface on tops and sides of ridges and spurs.

At a point on secant, 3.971 chs. S. of this corner, on July 23rd, I determined the azimuth of the secant as follows: Horizontal angles read from flag on secant to W. to Sun.

Latitude -32° 00' 00" N. Declination-20° 10' 00"N.

Sun

L.M. Time P.M.	Hor. Angle	Vert. Angle
D. 4 H 44 m 30 s	N. 6° 48' 00"	29° 5' 00"
R. 4 h 46 m 55 s	N. 6° 37' 30"	29° 5' 30"
Means	N. 6° 42' 45"	29° 5' 15"

Par. +	8"
Ref. -	1' 44"
h.	29° 3' 39"

Sun's azimuth N. 83° 13' 58" W.
 Bearing of secant N. 89° 56' 43" W.

cos. lat.	9.928420	sin. dec.	9.537507	tan. lat.	9.795789
" h.	<u>9.941563</u>		<u>9.869983</u>	" h.	<u>9.744839</u>
	9.869983		9.667524		9.540628

.46508 .34724

.34724

cos. azimuth

.11784

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 4 h 50 m 30 s	N. 7° 37' 00"	27° 44' 30"
+	R. 4 h 53 m 3 s	N. 7° 24' 00"	27° 36' 00"
	Means	N. 7° 30' 30"	27° 40' 15"

Par + 8"
 Ref. - 1' 50"
 h. 27° 38' 33"

Sun's azimuth N. 82° 26' 8" W.
 Bearing of secant N. 89° 56' 38" W.

cos. lat. 9.928420 sin. dec. 9.537507 tan. lat. 9.795789
 " h. 9.947365 9.875785 " h. 9.719109
9.875785 9.661722 9.514898

.45890 .32726
.32726
 .13164

cos. azimuth

Sun	L.M. Time P.M.	Hor. Angle.	Vert. Angle
+	D. 4 h 56 m 45 s	N. 8° 17' 00"	26° 25' 30"
+	R. 5 h 00 m 3 s	N. 8° 14' 30"	26° 15' 00"
	Means	N. 8° 15' 45"	26° 20' 15"

Par. + 8"
 Ref. - 1' 56"
 h. 26° 18' 27"

Sun's azimuth N. 81° 41' 17" W.
 Bearing of secant N. 89° 57' 2" W.

cos. lat. 9.928420 sin. dec. 9.537507 tan. lat. 9.795789
 " h. 9.952516 9.880936 " h. 9.694073
9.880936 9.666571 9.489862

.45349 .30893
.30893
 .14456

cos. azimuth

N. 89° 56' 43" W. Mean bearing of secant at point
 N. 89° 56' 38" W. of observation
 N. 89° 57' 2" W. N. 89° 56' 48" W.

107th Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Descend on gradual W. slope, through scattered cedar and pine timber, and scrub oak undergrowth over mountainous land.

.60 Small draw, drains NW.

19.00 Foot of descent; draw, drains NW; ascend on NE. slope.

26.00 Low ridge, bears N.NW. and S.SE; descend on W. slope

36.00 Draw, drains N.NW; continue across W. Dog Canyon

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 33RD PARALLEL.

CHAINS	
37.70	Draw over rolling land.
40.60	N. point of low spur from S.
42.00	W. Dog Canyon Draw, 20 lks. wide, drains N.
51.50	Wagon road, bears NE. and SW. Leave W. DOg Canyon Draw, and rolling land, bears N. and S; commence ascent of steep E. slope.
59.00	Spur from ridge, slopes N.NE: descend on W. slope.
71.50	Draw, drains E: ascend on E. slope on point of spur. Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links ; position of the middle point is
80.00	<p style="padding-left: 40px;">By 1st set, 80.015 chs;</p> <p style="padding-left: 40px;">By 2nd set, 79.985 chs; the mean of which is</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 20 ins. into the ground for the 107th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 107 General Land Office Reestablishment 1911 United States Boundary Commission".</p> <p>Post set 20 ins. in ground, on limestone bed-rock, raise a mound of stone 4 ft. base, 1 ft. high around post.</p> <p>Corner is on top of a spur sloping NE.</p> <p>This cor. 400.3 lks. N. of the position of temp. cor.</p> <p>Land, mountainous and rolling.</p> <p>Soil, rich, black loam and broken limestone rock on surface, and limestone bed-rock on surface, and limestone bed-rock 1 ft. below surface on mountainous land; surface soil several feet deep in W. Dog Canyon Draw.</p> <p>Cedar and pine timber; scrub oak undergrowth.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

108th Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Ascend on top of spur, over mountainous land, through scattered cedar and pine timber, and heavy scrub oak undergrowth.

5.00 Top of spur slopes NE; continue on broken N. slope from spur.

13.40 Head of draw, drains NE; ascend on E. slope.

22.00 Spur from ridge, slopes N; descend on W. slope.

29.50 Draw, drains N.NW; asc. on E. slope.

48.00 Spur from ridge, slopes N.NW; desc. on SW. slope.

67.00 Draw, drains NW; ascend on NE. slope.

78.50 Spur from ridge, slopes N. descend on gradual W. slope.

Difference between measurements of 80.00 chs. by two sets of chainmen is 5 links; position of the middle point is

By 1st set, 79.075 chs;

By 2nd set, 80.025 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 8 ins. into the ground for the 108th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 108 General Land Office Reestablishment 1911 United States Boundary Commission".

Post is set 8 ins. in the ground on bed rock; raise a mound of stone 5 ft. base, 27 ins. high around post.

Corner is 1.50 chs. W. of top of spur.

This cor. 406.0 lks. N. of the position of the temp. cor.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

Land, mountainous.

Soil, rich black loam and broken limestone rock on surface with limestone bed rock 1 ft. below surface and cropping to surface on sloping land.

Pine and cedar timber; scrub oak undergrowth.

Sept. 15, 1911.

109th Mile.

Sept. 14, 1911: N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Descend on steep W. slope through scattered pine and cedar timber, and greasewood undergrowth.

5.50

Draw, drains N. ascend on steep E. slope.

13.00

Spur from ridge, slopes N; descend on W. slope.

15.30

Draw, drains NE; ascend on SE. slope.

22.80

Spur from ridge, slopes N; descend on W. slope.

30.80

Draw, drains N; ascend on very steep broken SE. slope, through dense oak undergrowth.

46.50

Head of draw, drains NE.

64.60

Top of steep ascent; ascend gradually on N. slope.

68.00

Top of high ridge at W. side of Guadalupe Mountains 750 ft. above ridge at 103 M. 22.80 chs.

The point for 109th mile corner will fall on very steep W. slope. I therefore set a corner at this point.

Difference between measurements of 68.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 67.99 chs;

By 2nd set, 68.01 chs; the mean of which is

68.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 10 ins. into the ground for the 108.85th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS thereof, and also marked "Clark Boundary 1859 Mile Corner No. 108.85 General Land Office Reestablishment 1911, United States Boundary Commission".

This corner is in a small, natural depression bearing N. and S. on the top of a ridge, 2.00 chs. S. of a saddle.

Post is 10 ins. in ground, on limestone bed-rock; raise a mound of stone, 5 ft. base, 15 ins. high around post.

This cor. 412.8 lks. N. of the position of temp. cor.

Continue on 109th mile of Texas and New Mexico boundary line.

Descend on steep, broken W. slope from Guadalupe mountains over rough cliffs and slide rock.

80.00 Point for corner falls on steep W. slope, at unsafe point.

Land, mountainous

Soil, firm gray sand and broken limestone rock and limestone bed-rock on surface; limestone bed-rock from 6 ins. to 1 ft. below surface, where not on surface.

Cedar and pine timber; scrub oak and greasewood undergrowth.

Sept. 14, 1911.

Sept. 13, 1911: 110th Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Descend on steep, rocky, broken W. slope, over mountainous land, exceptionally difficult to survey.

10.00 Head of draw, drains SW.

27.00 Draw, drains NW.

32.00 High spur from ridge, slopes N.NW.

48.00 Draw, drains NW.

68.20 Draw drains SW., from SE.

77.00 Spur from ridge, slopes W.SW; desc. on NW. slope.

Difference between measurements of 92.00 chs. by two sets of chainmen is 2 links; position of the middle

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

point is

By 1st set, 91.99 chs;

By 2nd set, 92.01 chs; the mean of which is 92.00 chs. or 80.00 chs. from the point for 109 M. cor.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 110th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 110 General Land Office Reestablishment 1911 United States Boundary Commission".

This cor. 424.5 lks. N. of the position of temp. cor. Land, mountainous.

Soil, firm gray sand and limestone gravel and rock from 6 ins. to 3 ft. deep, with limestone bed-rock cropping to surface.

No timber; no undergrowth.

111th mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over mountainous land.

Descend on NW. slope, through scattered ocotillo undergrowth.

7.00 Head of draw, drains N.NW: ascend on E. slope.

17.30 Hog back ridge, bears N.NW and S.SE; descend on steep W. slope. This ridge is 2375 feet below the ridge at 108 M. 68.00 chs.

20.80 Head of draw, drains W.SW.

40.40 Draw, drains NW.

44.80 Spur, slopes NW: descend on gradual W. slope.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

Difference between measurements of 80.00 chs. by two sets of chainmen is 6 links; position of the middle point is

By 1st set, 79.97 chs;

By 2nd set, 80.03 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 111th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 111 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.

This cor. 437.5 links N. of the position of temp. cor.

Land, mountainous.

Soil, firm gray sand and limestone rock and gravel on surface, and limestone bed-rock from 1 to 2 ft. below surface, and cropping to surface on sloping surface.

No timber; ocotillo undergrowth.

112th Mile.

N. 89° 58' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered ocotillo, greasewood and catclaw undergrowth.

24.00

Draw, drains SW.

35.00

Draw, drains SW.

52.80

Draw drains SW; descend very gradually.

70.00

Leave undergrowth, and continue across nearly level prairie land.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

Difference between measurements of 80,00 chs. by two sets of chainmen is 2 link; position of the middle point is

By 1st set, 79.99 chs.

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 112th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 112 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.

This cor. 453.4 lks. N. of the position of temp. cor.

Land, rolling.

Soil, firm gray adobe and limestone gravel and rock on surface, with limestone bed-rock from 6 to 18 ins. below surface.

No timber; greasewood, ocotillo and cat-claw undergrowth.

This corner is 780 feet below ridge at 110 M. 17.30 chs.

At a point on secant 453.4 lks. S. of this corner on July 26, I determined the azimuth of the secant as follows:

Horizontal angles read from flag on secant to E. to Sun.

Latitude - $32^{\circ} 00' 00''$ N. Declination $-19^{\circ} 36' 30''$ N.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 8 h 22 m 20 s	N. 1° 48' 30"	36° 10' 00"
+	R. 8 h 25 m 45 s	N. 1° 50' 00"	36° 28' 30"
	Means	N. 1° 46' 15"	36° 19' 15"
		Par. +	7"
		Ref. -	1' 18"
		h.	36° 18' 4"
	Sun's azimuth	N. 88° 10' 00" E.	
	Bearing of secant	N. 89° 56' 15" E.	
	cos. lat.	9.928420	sin. dec. 9.525807
	" h.	9.906290	9.834710
		9.834710	9.691097
		.49103	.45903
		.45903	
	cos. azimuth	.03199	

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 8 h 29 m 35 s	N. 0° 46' 30"	37° 43' 00"
+	R. 8 h 32 m 10 s	N. 1° 2' 30"	37° 49' 00"
	Means	N. 0° 54' 30"	37° 46' 00"
		Par. +	7"
		Ref. -	1' 14"
		h.	37° 44' 53"
	Sun's azimuth	N. 89° 2' 41" E.	
	Bearing of secant	N. 89° 57' 11" E.	
	cos. lat.	9.928420	sin. dec. 9.525807
	" h.	9.898018	9.826438
		9.826438	9.699369
		.50046	.48379
		.48379	
	cos. azimuth	.01667	

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 8 h 36 m 35 s	S. 0° 9' 00"	39° 12' 00"
+	R. 8 h 38 m 55 s	N. 0° 8' 30"	38° 15' 30"
	Means	S. 0° 00' 15"	39° 13' 45"
		Par. +	7"
		Ref. -	1' 11"
		h.	39° 12' 41"
	Sun's azimuth	N. 89° 56' 56" E.	
	Bearing of secant	N. 89° 56' 41" E.	
	cos. lat.	9.928420	sin. dec. 9.525807
	" h.	9.889200	9.817620
		9.817620	9.708187
		tan. lat. 9.795789	h. 9.911643
			9.707432

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32nd PARALLEL.

CHAINS

	.51073	.50984
	.50984	
cos. azimuth	<u>.00089</u>	
S. 89° 56' 15" W.	Mean bearing of secant at point of	
S. 89° 57' 11" W.	observation.	
S. 89° 56' 41" W.	S. 89° 56' 42" W.	

113th Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over undulating prairie land, through scattered chamiza undergrowth.

46.80

Wagon road, bears N.NW and S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 79.99 chs;

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 113th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 113 General Land Office Reestablishment 1911 United States Boundary Commission".

This cor. 471.2 lks. N. of the position of temp. cor. Land, undulating prairie.

Soil, white gypsum surface, about 6 ins. deep with subsoil of yellow gypsum sand, 4th rate.

No timber; chamiza undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

chains

114th Mile

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over undulating prairie land, through scattered cham-
iza and amole undergrowth.

3.00 Commence descent to lake bed.

9.00 E. edge of dry alkali lake bears N.NE. and S.SW;
continue across lake.21.50 W. edge of lake, bears N.NE and S.SW: ascend grad-
ually.26.00 Top of ascent, bears N. and S: continue on level
land.48.30 E. edge of dry lake bed, bears N.NE and S.SW:
continue across lake.61.10 W. edge of lake, bears N. and S: leave lake and
continue on prairie land.Difference between measurements of 80.00 chs. by
two sets of chainmen is 1 link; position of the middle
point is

By 1st set, 79.995 chs;

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 27 ins. into the ground for
the 114th mile corner. The top of the cap is divided
by an east and west stamped line 1 inch in length and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No 114 General Land Office Reestablishment 1911
United States Boundary Commission".

Pits impracticable.

This cor. 490.7 lks. N. of the position of temp. cor.
Land, level and undulating prairie.Soil, white gypsum surface, about 6 ins. deep, with
subsoil of yellow gypsum sand, 4th rate.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

No timber; chamiza and amole undergrowth.

115th Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over undulating prairie land, through scattered chamiza and amole undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs;

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 115th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 115 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.

This cor. 511.7 lks. N. of the position of temp. cor. Land, undulating prairie.

Soil, white gypsum surface, about 6 ins. deep, with sub-soil of yellow gypsum sand, 4th rate.

No timber; chamiza and amole undergrowth.

116th Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over undulating prairie land, through scattered chamiza and amole undergrowth.

52.00

E. edge of dry alkali lake, bears N.NE and S.SW: continue across lake.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

57.20

W. edge of dry lake, bears NE. and SW; continue on rolling prairie land.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 22 ins. into the ground for the 116th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 116 General Land Office Reestablishment 1911 United States Boundary Commission". Pite impracticable.

This cor. 554.1 lks. N. of the position of temp. cor.

Land, undulating and rolling.

Soil, white gypsum surface, about 6 ins. deep, with subsoil of yellow gypsum sand, 4th rate.

No timber; chamiza and amole undergrowth.

117th Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over undulating prairie land, through scattered saltsage undergrowth.

32.00

E. edge of narrow alkali lake, bears N.E. and SW; continue across lake.

37.50

W. edge of lake, bears NE. and SW; continue over prairie land.

71.00

Shallow draw, drains SW.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79,995 chs;

By 2nd set, 80.005 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS
80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 117th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 117 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable,

This corner 558.3 lks. N. of the position of temp. cor.

Land, rolling prairie.

Soil, white gypsum surface, about 6 ins. deep, with subsoil of yellow gypsum sand, 4th rate.

No timber; salt sage undergrowth.

118th Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over level prairie land, through scattered saltsage undergrowth.

12.00 Leave level land, descend on gradual SW slope over rolling land.

38.00 Middle of wide, shallow draw, drains SE; ascend on gradual E. slope.

44.80 Wagon road, bears N.W. and SE.

46.00 Leave draw, bears NW. and SE; continue on broken N. slope.

70.35 Old Butterfield stage road, bears NW. and SE.

78.00 E. side of alkali lake bed, bears NE. and SW.

78.90 W. side of lake bed bears NE. and SW.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32nd PARALLEL.

CHAINS
80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 33 ins. into the ground for the 118th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 118 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.

This cor. 583.9 lks. N. of the position of temp. cor.

Land, level and rolling.

Soil, white gypsum surface, from 6 to 12 ins. deep on surface, with subsoil of yellow gypsum sand, 4th rate.

No timber; salt sage undergrowth.

119th Mile.

N. 89° 56' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling prairie land, through scattered salt sage undergrowth.

No difference between measurements of 9.20 chs. by two sets of chainmen.

9.20

Clark monument No. 16 which is a mound of adobe earth 9 ft. base, 1 ft. high on the west side of the old Butterfield stage road. This monument is approximately in its proper position as witnessed by Crow Spring and the salt lakes; shown on Clark's map No. 2. This monument was adopted by B. A. Nymeyer, U. S. Deputy Surveyor, in closing the public land surveys of New Mexico on the Texas and New Mexico boundary and has been known to him for about twenty years. The monument is locally recognized as a mound marking the Texas and New Mexico boundary.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

To perpetuate the location of this mound, I construct at its center a concrete monument having a cubical base, 30 ins. square, set 30 ins. into the ground, and a superstructure in the form of a frustum of a cone, encased in galvanized iron, having a lower diameter of 24 ins. an upper diameter of 18 ins. and projecting 30 ins. above ground; in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by an E. and W. division line 2 ins. long, with "TEXAS" on the S., and "NEW MEXICO" on the N. thereof, and also marked "CLARK BOUNDARY 1859 ^{CLARK} MON NO 16" in the N. half "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

September 13, 1911.

RANDOM LINE.

Clark Mon. 16 (118 M. 9.20 chs.) to Clark Mon. 15 (122 M. 16.34 chs.)

July 26, 1911:

On this date, the secant was projected westward to Mon. 16, the falling being 5.87 chs. south

I continue on secant from point 5.87 chs. S. of Clark Monument No. 16, at 118. M. 9.20 chs. point setting temporary mile corners at intervals of 80.00 chs. by two sets of chainmen, distance counting from SE. cor. of New Mexico.

Temporary mile corner No. 120. End of day's work.

An altitude observation for azimuth was made at this point and is recorded in the true line notes at a corresponding point.

Accumulated error in azimuth between Monument No. 16 and temporary mile corner No. 120 is 0.2' to the left.

July 26, 1911.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

July 27, 1911:

Continue on secant from temporary mile corner No. 120
S. $89^{\circ} 51' 19''$ W.

Temporary mile corner No. 122 plus

16.34

Fall 5.424 chs. S. of Clark Monument No. 15 hereinafter described in true line notes.

Calculation of azimuth of secant at this point is based on an observation made at 126th mile corner, recorded in true line notes.

July 27, 1911.

The falling of the random line 5.424 chs. S. of Clark Mon. No. 15, adjusted for accumulated difference in alinement between the secant and the parallel gives a true falling of the parallel of 1.283 chs. N. which in a distance of 4 miles 7.14 chs. gives a true line course of S. $89^{\circ} 46' 30''$ W., between Clark Monuments Nos. 16 and 15.

TRUE LINE

Clark Monuments 16 to 15.

Sept. 12, 1911:

118th Mile.

S. $89^{\circ} 46' 30''$ W.

On true line, Texas and New Mexico boundary from Mon. 16 at 118 M. 9.20 chs. measurement counting from 118 M. cor.

Over rolling prairie land, through scattered salt sage undergrowth.

Difference between measurements of 70.80 chs. from Monument 16 by two sets of chainmen is 3 links; position of the middle point is

By 1st set, 70.79 chs;

By 2nd set, 70.81 chs; the mean of which is 70.80 chs. or 80.00 chs. from 118th mile corner.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and sur-

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

mounted with a brass cap, 25 ins. into the ground for the 119th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 119 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable, This cor. 574.5 lks. N. of the position of temp. cor. Land, rolling.

Soil, fine gray gypsum on surface with white gypsum subsoil 1 ft. below surface.

No timber; salt sage undergrowth.

120th Mile.

S. 89° 46' 30" W.

On true line, Texas and New Mexico boundary.

Over undulating prairie land, through scattered salt sage undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 120th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 120 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.

This corner 562.6 lks. N. of the position of temp. cor.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

From a point on secant 5.626 chs. S. of this corner, a windmill at Orange post office bears N. 14° 26' W.

A windmill near line, between 121st and 122nd mile corners bears N. 88° 15' W.

Land, undulating prairie.

Soil, fine red sand on surface, with white gypsum subsoil 10 ins. below surface.

Salt sage and greasewood undergrowth.

At a point on secant 5.626 chs. S. of this corner, on July 26th, I determined the azimuth of the secant as follows:

Horizontal angles read from flag on secant to W. to sun.

Latitude -32° 00' 00" N. Declination-19° 32' 15" N.

Sun	L.M.Time P.M.	Hor.Angle	Vert.Angle
+	D. 4 h 37 m 53 s	N. 5° 3' 00"	31° 8' 00"
+	R. 4 h 40 m 3 s	N. 4° 45' 00"	31° 18' 00"
	Means	N. 4° 53' 30"	31° 13' 00"
		Par.+	8"
		Ref.-	1' 35"
		h.	31° 11' 33"
	Sun's azimuth	N. 85° 15' 29" W.	
	Bearing of secant	N. 90° 8' 59" W.	
		S. 89° 51' 1" W.	
	cos.lat. 9.928420	sin.dec. 9.524297	tan.lat. 9.795789
	" h. 9.932186	9.860606	" h. 9.782073
		9.860606	9.577862
		.46099	.37832
		.37832	
	cos. azimuth	.08267	

Sun	L.M.Time P.M.	Hor.Angle.	Vert.Angle
+	D. 4 h 42 m 50 s.	N. 5° 38' 00"	30° 3' 30"
+	R. 4 h 46 m 30 s	N. 5° 32' 30"	29° 57' 00"
	Means	N. 5° 35' 15"	29° 59' 45"
		Par.+	8"
		Ref.-	1' 40"
		h.	29° 58' 13"
	Sun's azimuth	N. 84° 33' 21" W.	
	Bearing of secant	N. 90° 8' 36" W.	
		S. 89° 51' 24" W.	
	cos.lat. 9.928420	sin.dec. 9.524297	tan.lat. 9.795789
	" h. 9.937660	9.866080	" h. 9.760919
		9.866080	9.556708
		.45522	.36034
		.36034	
	cos. azimuth	.09488	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS
Sun

L.M. Time P.M.	Hor. Angle	Vert. Angle
D. 4 h 48 m 55 s	N. 6° 22' 00"	28° 46' 30"
R. 4 h 51 m 45 s	N. 6° 10' 00"	28° 50' 00"
Meane	N. 6° 16' 00"	28° 48' 15"
	Par.+	8"
	Ref.-	1' 44"
	h.	28° 46' 39"
Sun's azimuth	N. 83° 52' 29" W.	
	N. 90° 8' 29" W.	
Bearing of secant	S. 89° 51' 31" W.	
cos.lat. 9.928430	sin.dec. 9.524297	tan.lat. 9.795789
" h. 9.942750	9.871170	" h. 9.739765
	9.871170	9.535554
	.44991	.34321
	.34321	
cos. azimuth	.10670	
S. 89° 51' 1" W.	Mean bearing of secant at point	
S. 89° 51' 24" W.	of observation	
S. 89° 51' 31" W.	S. 89° 51' 19" W.	

121st mile.
S. 89° 46' 30" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered salt sage undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 121st mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 121 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.

From a point on secant 5.521 chs. S. of this corner Windmill at Orange bears N. 27° 8' E.

Windmill near line to W., bears N. 85° 40' W.

This cor. 552.1 lks. N. of the position of temp. cor.

Land, undulating prairie.

Soil, fine red sand on surface; subsoil of white gypsum 1 ft. below surface.

No timber; salt sage undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

122nd Mile.
S. 89° 46' 30" W.

On true line, Texas and New Mexico boundary.

Over rolling prairie, through scattered salt
sage undergrowth.

38.10

Wagon road, bears N.E and SW.

75.00

Enter scattered greasewood undergrowth, bears N. and S.
Difference between measurements of 80.00 chs. by
two sets of chainmen is 1 link; position of the middle
point is

By 1st set, 80.005 chs;

By 2nd set, 79.995 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 24 ins. into the ground for
the 122nd mile corner. The top of the cap is divided
by an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 122 General Land Office Reestablishment 1911
United States Boundary Commission". Pits impracticable.
This cor. 543.5 lks. N. of the position of temp. cor.
Land, rolling.
Soil, fine gray adobe on surface with white gypsum
subsoil 1 ft. below surface.
No timber; salt sage and greasewood undergrowth.

123rd Mile

S. 89° 46' 30" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered greasewood and
mesquite undergrowth.

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CHAINS

10.00

Commence ascent, gradual E. slope to mesa.

15.50

Top of ascent, bears N. and S; continue on rolling top of mesa.

No difference between measurements of 16.34 chs. by two sets of chainmen.

16.34

Clark Monument No. 15, which is a mound of limestone boulders $4\frac{1}{2}$ ft. base, $2\frac{1}{2}$ ft. high. This mound answers Clark's description and its topographic position is in accordance with Clark's map No. 2. This monument was adopted by E.A. Nymeyer, U.S. Deputy Surveyor, in closing the public land surveys of New Mexico on the Texas-New Mexico boundary; and is locally recognized as a Clark monument marking the Texas and New Mexico boundary.

To perpetuate the location of this monument, I construct at its center, a concrete monument in the form of a frustum of a cone, encased in galvanized iron, the lower base 34 ins. in diameter, the upper base 18 ins in diameter, and 30 ins. high, set 30 ins. into the ground, in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by an E. and W. division line 2 ins. long, with "TEXAS" on the S., and "NEW MEXICO" on the N. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 15" in the N. half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

Sept. 13, 1911.

RANDOM LINE.

Clark Monument No. 15 (123 M. 16.34 chs.) to Clark Monument No. 14 (127 M. 35.11 chn).

July 27, 1911:

At monument No. 15, I offset the secant 5.484 chs. S. to the monument and deflect secant 11.4' to the

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS

right.

Set a flag at Monument No. 15.

Project old secant to a point 24.15 chs. W. of monument No. 15; 5.504 chs. N. of this point set 2nd flag, and project the new secant through this point from flag at Monument No. 15.

Continue on new secant from Monument No. 15, at 122 M. 16.34 chs. point, setting temporary mile corners at intervals of 80.00 chs. by two sets of chainmen, distance counting from mile corner No. 123.

Temporary mile corner No. 126. at end of day's run.

July 27, 1911.

July 28, 1911:

An altitude observation of the Sun for azimuth was made at this temporary corner and is recorded in the true line notes, at a corresponding point.

Accumulated error in azimuth between Clark Monument No. 15 and temporary mile corner No. 126 is 0.8' to the left.

Continue on secant from temporary mile corner No. 126.

35.11 Temporary mile corner No. 127 plus
Fall 13.1 lks N. of Clark Monument No. 14 herein-
after described.

Calculation of azimuth of secant at this point is based on observation at 126th mile point.

Accumulated error in azimuth between temporary mile cor. No. 126 and monument No. 14 is 0.5' to the left.

July 28, 1911.

True line between Clark Monuments Nos. 15 and 14.

The falling of the random line, 13.1 lks. N. of Clark Mon. No. 14, adjusted for accumulated difference in alinement between the secant and the parallel gives a true falling of the parallel of 22.6 lks. N. which in a distance of 5 miles 18.77 chs. gives a true line

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

CHAINS.

course of S. 89° 58' 15" W. between Clark Monuments Nos. 15 and 14.

Sept. 11, 1911: 123rd Mile.

S. 89° 58' 15" W.

On true line, Texas and New Mexico boundary from 122 M. 16.34 ch. point, Clark Mon. No. 15.

Measurement counting from 122 mile point.

26.00

Draw, drains SE.

No difference between measurements of 63.66 chs. by two sets of chainmen from Mon. No. 15

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 123rd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 123 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.

This cor. 5.1 lks. S. of the position of temp. cor. Land, rolling.

Soil, E. 15 chs. fine gray sand, sand on surface with white gypsum subsoil 1 ft. below surface, W. 65 chs. firm gray sand and limestone gravel on surface, with limestone bed rock from 1 to 2 ft. below surface.

No timber; greasewood undergrowth.

124th Mile.

S. 89° 58' 15" W.

On true line, Texas and New Mexico boundary,

Over rolling prairie land, through scattered greasewood and mesquite undergrowth.

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CHAINS

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 79.99 chs;

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 28 ins. into the ground for the 124th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 124 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable,

This cor. 9.9 lks. S. of the position of temp. cor.

Land, rolling.

Soil, firm gray sand and limestone gravel on surface with limestone bed rock from 1 to 2 ft. below surface.

No timber; mesquite and greasewood undergrowth.

125th Mile.

S. 89° 58' 15" W.

On true line, Texas and New Mexico boundary.

Over gently rolling land, through scattered mesquite and greasewood undergrowth.

23.35

Wagon road, bears N. and S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs;

By 2nd set, 80.005 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLE.

CHAINS
80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 125th mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 125 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.

This cor. 12.8 lks. S. of the position of temp. cor. Land, rolling prairie.

Soil, firm gray sand and limestone gravel on surface with limestone bed rock from 1 to 2 ft. below surface.

No timber; mesquite, greasewood and oak undergrowth.

126th Mile.

S. 89° 58' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite and greasewood undergrowth.

3.60 Wire fence, bears N. and S.

34.80 Wagon road, bears NW. and SE.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 126th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 126 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.

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CHAINS

This cor. 14.3 lks. S. of the position of temp. cor.
Land, rolling.

Soil, firm gray sand and limestone gravel on sur-
face with limestone bed rock from 1 to 2 ft. below
surface.

No timber; mesquite and greasewood undergrowth.

At a point on secant 14.3 lks. N. of the mile
corner No. 126 on July 28 I determined the azimuth of
the secant as follows:

Horizontal angles read from flag on secant to E. to
Sun.

Latitude $32^{\circ} 00' 00''$ N. Declination $19^{\circ} 9' 19''$ N.

Sun

L.M. Time A.M.	Hor. Angle	Vert. Angle
D. 9 h 41 m 15 s	S. $90^{\circ} 53' 00''$	$51^{\circ} 48' 00''$
R. 9 h 44 m 7 s	<u>S. $90^{\circ} 40' 30''$</u>	<u>$51^{\circ} 59' 00''$</u>
means	S. $90^{\circ} 46' 45''$	$51^{\circ} 53' 30''$
	Par. +	5"
	Ref. -	45"
	h.	$51^{\circ} 53' 50''$
Sun's azimuth	<u>S. $89^{\circ} 14' 15''$ E.</u>	
Bearing of secant	S. $89^{\circ} 59' 00''$ W.	
cos. lat. 9.928430	sin. dec. 9.516045	tan. lat. 9.795789
" h. <u>9.790498</u>	<u>9.718918</u>	" h. <u>10.105324</u>
	9.718918	9.901113
	.62680	.79637
cos. azimuth		<u>.62680</u>
		.16957

Sun

L.M. Time A.M.	Hor. Angle	Vert. Angle
D. 9 h 47 m 10 s	S. $10^{\circ} 57' 30''$	$53^{\circ} 2' 30''$
R. 9 h 49 m 45 s	<u>S. $10^{\circ} 40' 30''$</u>	<u>$53^{\circ} 4' 30''$</u>
Means	S. $10^{\circ} 49' 00''$	$53^{\circ} 3' 30''$
	Par. +	5"
	Ref. -	43"
	h.	$53^{\circ} 3' 52''$
Sun's azimuth	<u>S. $79^{\circ} 13' 15''$ E.</u>	
Bearing of secant	S. $89^{\circ} 57' 45''$ W.	

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Chains.	cos.lat.9.928420	sin.dec.9.516045	tan.lat.9.795789
	" h. 9.778983	9.707403	" h.10.123639
	9.707403	9.808642	9.919428
		.64364	.83067
			.64364
	cos.azimuth		.18703

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 9h 53m 10s	S. 12° 5' 30"	54° 16' 30"
+	R. 9h 55m 58s	S. 11° 53' 30"	54° 26' 30"
	Means	S. 11° 59' 30"	54° 21' 30"
			Per.+ 5"
			Ref.- 41"
			h. 54° 20' 54"

Sun's azimuth S. 78° 2' 6" E.
 S. 90° 1' 36" E.
 Bearing of secant S. 89° 58' 24" W.

cos. lat.9.928420	sin.dec.9.516045	tan.lat.9.795789
" h. 9.765561	9.693981	" h.10.144302
9.693981	9.822064	9.940091
	.66384	.87115
		.66384
	cos.azimuth	.20731

S. 89° 59' W. Mean bearing of secant at point of observation
 S. 89° 57' 45" W. S. 89° 58' 23" W.
 S. 89° 58' 24" W.

127th Mile

S. 89° 58' 15" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through heavy mesquite and scattered greasewood undergrowth.

45.00 Wire fence, bears NW. and SE.

64.00 Commence gradual ascent of E. slope over rolling land.
 Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 18 ins. into the ground for the 127th mile corner. The top of the cap is divided by

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 127 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

Post set 18 ins. in the ground on limestone bed rock; a mound of stone around post, 3 ft. base, 15 ins. high.

This cor. 14.0 lks. S. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone gravel on surface with limestone bed rock 1 ft. below surface.

No timber; mesquite and greasewood undergrowth.

128th Mile

S. 89° 58' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through heavy mesquite and greasewood undergrowth.

34.50 Top of ascent, bears N. and SW; continue on top of low round mountain.

No difference between measurements of 35.11 chs. by two sets of chainmen.

35.11 To Clark Monument No. 14

A mound of limestone boulders, 4 ft. base, 2½ ft. high.

This mound is approximately in its proper position for Mon. No. 14, as indicated by the distance from Mon. 15 and topography on Clark's map. It has been recognized locally for at least twentyfive years as a monument of the Clark boundary survey.

To perpetuate the location of this monument I construct at its center, a concrete monument in the form of a frustum of a cone, encased in galvanized iron, the lower base 24 ins. in diameter, the upper base 18 ins. in diameter, and 30 ins. high, set 18 ins. into the ground, in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by an E. and W. division line, 2 ins. long, with

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

"TEXAS" on the S., and "NEW MEXICO" on the N. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 14" in the N. half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

September 11, 1911.

RANDOM LINE

Clark Monument No. 14 (127 M. 35.11 chs.), to Clark Monument No. 12 (158 M. 37.13 chs.).

July 28: 1911:

Continue on secant from a point 13.1 lks. N. of Clark Monument No. 14, at 127 mile 35.11 ch. point, setting temporary mile cors. at intervals of 80.00 chs. by two sets of chainmen, distance counting from mile corner No. 127.

Temporary mile corner No. 131, at end of day's run.

July 28, 1911.

July 29: At 131st mile corner I observed the sun for azimuth. Observation is recorded in true line notes at a corresponding point.

Accumulated error in azimuth between Monument No. 14 and mile corner No. 131 is 1.4' to the left.

Deflect secant 6.5' to the right.

Continue on secant from 131st mile corner N. $89^{\circ}57'$ 20" W.

Temporary mile corner No. 140, at end of day's run

July 29, 1911.

July 30: A direct observation on the sun for azimuth was made at this point, and is recorded at a corresponding point in the true line notes.

Accumulated error in azimuth between temporary mile cors. Nos. 131 and 140 was 2' to the left.

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Chains. Deflect line 9.6' to the right.
 Continue on secant from 140th mile corner N. $89^{\circ} 56' 57''$ W.
 Temporary mile corner No. 144, at end of day's run.
 July 30, 1911.

July 31, 1911:

Continue on secant from 144th mile corner.
 Temporary mile corner No. 146, at end of day's run.
 July 31, 1911.

Aug. 1, 1911:

Deflect line 10' to the right and continue on secant from 146th mile corner.

Temporary mile corner No. 153, at end of day's run.

An altitude observation on the Sun for azimuth was made at this point, and is recorded in the true line notes at a corresponding point.

Accumulated error in azimuth between temporary mile cors. Nos. 140 and 153 is 3' to the right.

August 1, 1911.

Aug. 2:

Continue on secant from 153rd mile corner, N. $89^{\circ} 50' 48''$ W. Temp. mile cor. No. 158 plus

37.13 Fall 6.133 chs. S. of Clark Monument No. 12, hereinafter described in true line notes.

Aug. 2, 1911.

TRUE LINE

True line between Clark Monuments Nos. 14 and 12.

The falling of the random line, 6.133 chs. S. of Clark Monument No. 12 adjusted for accumulated difference in alinement between the secant and the parallel, gives a true falling of the parallel of 8.024 chs. S. which in a distance of 31 miles 2.02 chs. gives a true line course of N. $89^{\circ} 49' 00''$ W. between Clark Monuments Nos. 14 and 12.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. Sept. 11, 1911:

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary from Clark Monument No. 14 at 127 M. 35.11 ch. point, measurement counting from 127 M. point.

Over rolling land, on top of low round mountain through greasewood and ocotillo undergrowth.

51.50 Commence descent on W. slope from hill.

64.10 Leave Ocotillo undergrowth, bears N. and S.

76.10 Foot of descent, bears N. and SE; continue on rolling prairie land.

No difference between measurements of 44.89 chs. by two sets of chainmen, from Mon. 14.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 21 ins. into the ground for the 128th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 128 General Land Office Reestablishment 1911 United States Boundary Commission." Post set on bed rock.

Cornudas Peak bears N. 67° 53' W. from this corner. This corner 5.6 lks. N. of the position of temp. cor.

Land, rolling.

Soil, limestone bed rock on surface with thin layer of gray sand lodged on uneven surfaces.

No timber; mesquite, greasewood and ocotillo undergrowth.

129th Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over undulating prairie land, through scattered greasewood and rubber brush undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

<u>Chains.</u>	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 18 ins. into the ground for the 129th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, marked "New Mexico" on the north, "Texas" on the south thereof and also marked "Clark Boundary 1859 Mile Corner No. 129 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.</p> <p>Post set 18 ins. in the ground on limestone bed rock; raise a mound of stone, 3 ft. base, 1 ft. high, around post.</p> <p>From this corner the S. edge of high cliff at S. point of Guadalupe Mountains bears S. 70° 10' E.</p> <p>This cor. 40.6 lks. N. of the position of temp. cor. Land, undulating prairie.</p> <p>Soil, firm gray sand and limestone gravel and broken limestone rock on surface; limestone bed-rock from 1 to 2 ft. below surface.</p> <p>No timber; greasewood and rubber brush undergrowth.</p>
130th Mile.	
N. 89° 49' 00" W.	
On true line, Texas and New Mexico boundary.	
Over rolling land, through scattered mesquite and greasewood undergrowth.	
Ascend on gradual SE. slope of hill.	
11.00	Top of ascent; descend on SW. slope.
22.00	Head of draw, drains SE; ascend on E. slope.
35.60	Ridge, bears N.NE and S.SW; descend on W. slope.
58.00	Foot of descent, bears N. and S; continue over prairie land.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 130th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 130 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable.

This cor. 77.6 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone gravel on surface with limestone bed rock from 1 to 2 ft. below surface and cropping to surface on hills.

No timber; mesquite and greasewood undergrowth.

131st Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling prairie land, through scattered mesquite and greasewood undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia. filled with concrete, flanged at the bottom and surmounted with a brass cap, 22 ins. into the ground for the 131st mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Corner No. 131 General Land Office Reestablishment, 1911
United States Boundary Commission."

This corner 117.1 lks. N. of the position of temp.cor.

Post set on bed rock.

land, rolling prairie.

Soil, firm gray sand and limestone gravel on surface,
with limestone bed rock from 1 to 2 ft. below surface.

No timber; mesquite and greasewood undergrowth.

At a point on secant 1.171 chs. S. of this corner,
on July 29th, I determined the azimuth of the secant as
follows:

Horizontal angles read from flag on secant to E., to Sun:

Latitude $-32^{\circ} 00' 00''$ Declination $-18^{\circ} 56' 40''$ N.

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 7h 18m 10s	N. $9^{\circ} 26' 30''$	$21^{\circ} 13' 00''$
+	R. 7h 20m 40s	N. $9^{\circ} 39' 30''$	$21^{\circ} 20' 30''$
	Means	N. $9^{\circ} 33' 00''$	$21^{\circ} 16' 45''$

Par.+ 8"
Ref.- 2' 27"
h. $21^{\circ} 14' 26''$

Sun's azimuth
N. $80^{\circ} 20' 17''$ E.
N. $89^{\circ} 53' 17''$ E.

Bearing of secant S. $89^{\circ} 53' 17''$ W.

cos. lat. 9.928420 sin. dec. 9.511417 tan. lat. 9.795789
" h. 9.969448 9.897868 " h. 9.589602
9.897868 9.613549 9.385391

.41072 .24288
.24288
.16784

cos. azimuth

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 7h 23m 58s	N. $8^{\circ} 45' 30''$	$22^{\circ} 26' 30''$
+	R. 7h 26m 54s	N. $8^{\circ} 56' 00''$	$22^{\circ} 32' 30''$
	Means	N. $8^{\circ} 50' 45''$	$22^{\circ} 32' 30''$

Par.+ 8"
Ref.- 2' 18"
h. $22^{\circ} 30' 20''$

Sun's azimuth N. $81^{\circ} 03' 19''$ E.

Bearing of secant S. $89^{\circ} 54' 4''$ W.

cos. lat. 9.928420 sin. dec. 9.511417 tan. lat. 9.795789
" h. 9.965598 9.894018 " h. 9.617343
9.894018 9.617399 9.413132

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

		.41438		.25890
		.25890		
	cos.azimuth	.15548		
Sun	L.M. Time A.M.		Hor. Angle	Vert. Angle
+	D. 7h 30m 20s		N. 7° 59' 30"	23° 46' 30"
+	R. 7h 33m 8s		N. 8° 11' 30"	23° 58' 00"
	Means		N. 8° 5' 30"	23° 52' 15"
			Par. +	8"
			Ref. -	2' 10"
			h.	23° 50' 13"
	Sun's azimuth	N. 81° 48' 40" E.		
		N. 89° 54' 10" E.		
	Bearing of secant	S. 89° 54' 10" W.		
	cos. lat.	9.928420	sin. dec.	9.511417
	" h.	9.961278	" h.	9.645248
		9.889698		9.441037
			.41852	.27608
			.27608	
	cos.azimuth	.14244		
	S. 89° 53' 17" W.		Mean bearing of secant at point	
			of observation	
	S. 89° 54' 4" W.		S. 89° 53' 50" W.	
	S. 89° 54' 10" W.		Sept. 11, 1911.	

Sept. 10, 1911:

132nd Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling prairie land, through scattered mesquite and greasewood undergrowth.

69.00 Commence ascent of gradual E. slope.

72.00 Low ridge, bears N. and S: descend gradually.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 17 ins. into the ground for the 132nd mile corner. The top of the cap is divided by

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Chains.

an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clerk Boundary 1859 Mile Corner No. 132 General Land Office Reestablishment 1911 United States Boundary Commission."

Post is set 17 ins. in the ground on limestone bed-rock; raise a mound of stone 3 ft. base, 17 ins. high, around post.

This cor. 143.2 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone gravel on surface, with limestone bed-rock from 1 to 2 ft. below surface.

No timber; mesquite and greasewood undergrowth.

133rd Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite and greasewood undergrowth.

6.00	Draw, drains N; ascend on gradual E. slope.
40.00	Low spur from ridge, slopes N; descend gradually.
47.00	Shallow draw, drains NE; ascend gradually.
58.00	Low ridge, bears N. and S; descend gradually.
67.50	Shallow draw, drains N; ascend gradually.
76.10	Low ridge, bears N. and S; descend gradually.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is,
	By 1st set, 80.01 chs;
	By 2nd set, 79.99 chs., the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 19 ins. into the ground for the 133rd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 133 General Land Office Reestablishment 1911 United States Boundary Commission."

Post is 19 ins. in the ground; raise a mound of stone 4 ft. base, 1 ft. high, around post.

This cor. 170.9 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm gray sand and limestone gravel on surface. No timber; mesquite and greasewood undergrowth.

134th Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite, greasewood and rubber-bush undergrowth.

24.00

Draw, drains S; ascend on gradual E. slope.

37.30

Low ridge, bears N. and S; descend gradually.

52.00

Center of wide, shallow draw, drains S. SE; continue across valley.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 134th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

<u>Chains</u>	<p>south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 134 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.</p> <p>This cor. 200.5 lks. N. of the position of temp. cor. Land, rolling.</p> <p>Soil, firm gray adobe with small proportion of limestone gravel.</p> <p>No timber; mesquite, greasewood and rubber brush undergrowth.</p>
29.00	<p style="text-align: center;">135th Mile</p> <p style="text-align: center;">N. 89° 49' 00" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over rolling land, through scattered mesquite, greasewood, rubber brush and ocotillo undergrowth.</p> <p>Commence ascent of E. slope to mesa.</p>
37.00	<p>Top of ascent, bears N. and S; continue across mesa.</p>
40.20	<p>Draw, drains NE.</p>
48.00	<p>Leave ocotillo undergrowth.</p> <p>No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 27 ins. into the ground for the 135th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 135 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.</p> <p>This cor. 232.0 lks. N. of the position of temp. cor. Land, rolling.</p> <p>Soil, firm gray adobe and limestone gravel on surface with limestone bed rock from 1 to 2 ft. below surface in E. 29.00 chs; firm gray sand, limestone gravel and</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.
 broken limestone rock on surface in W. 51.00 chs.
 No timber; mesquite, greasewood, rubber brush and
 ocotillo undergrowth.

136th Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite, greasewood and rubber brush undergrowth.

22.50 Wagon road, bears NW. and SE.

40.00 Enter heavy greasewood undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 136th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 136 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 265.0 lks. N. of the position of temp. cor. land, rolling prairie.

Soil, firm gray adobe and limestone gravel on surface with limestone bed rock 2 ft. below surface.

No timber; mesquite, greasewood and rubber brush undergrowth.

137th Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through heavy greasewood undergrowth.

7.00 Commence descent, of gradual W. slope; leave greasewood and continue in ocotillo undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY. 32ND PARALLEL.

Chains.

15.00 Foot of descent, bears N. and S; continue across wide valley; leave ocotillo and continue in scattered rubber brush undergrowth.

42.60 Wagon road, bears NW. and SE.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 137th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 137 General Land Office Reestablishment 1911 United States Boundary Commission."

This cor. 299.8 lks. N. of the position of temp. cor.

Land, rolling.

Soil, firm gray adobe and limestone gravel on surface with limestone bed rock 2 ft. below surface.

No timber; ocotillo, rubber brush and greasewood undergrowth.

138th Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered greasewood and rubber brush undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 138th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked

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Chains. "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 138 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 336.4 lks. N. of the position of temp. cor.
Land, rolling.

Soil, firm gray adobe and limestone gravel on surface with limestone bed rock 2 ft. below surface.

No timber; greasewood and rubber brush undergrowth.

139th Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered greasewood and rubber brush undergrowth.

21.90 Wagon road, bears N. and S.

56.00 Low spur from ridge, slopes NE; enter ocotillo undergrowth, and leave greasewood and rubber brush.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 139th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 139 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. Corner is at NE. foot of first low hill of Cornudas Mountains.

This cor. 374.7 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm gray adobe and limestone gravel on surface with limestone bed rock 2 ft. below surface in E. 50.00 chs; limestone bed rock cropping to surface in W. 30.00 chs.

No timber; greasewood, rubber brush and ocotillo undergrowth.

140th Mile

N. $89^{\circ} 49' 00''$ W.

On true line, Texas and New Mexico boundary.

Over mountainous land, through scattered greasewood and ocotillo undergrowth.

At N. foot of low, round mountain.

8.00	N. point of hill .
9.00	Draw, drains NE; ascend on E. slope.
24.00	Top of ascent; spur from ridge, slopes N; desc. on W. slope
31.90	Foot of descent; continue across valley.
40.00	Commence ascent on E. slope.
50.00	Top of ascent; spur from ridge, slopes N; descend on W. slope.
55.00	Draw, drains N; ascend on E. slope.
64.00	Top of low, round hill; descend on W. slope.
74.50	Draw, drains N; ascend on gradual E. slope.
80.00	Spur from ridge, slopes N.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is
	By 1st set, 79.995 chs.,
	By 2nd set, 80.005 chs; the mean of which is
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and sur-

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Chains.

mounted with a brass cap, 6 ins. into the ground for the 140th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 140 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

Post is set 6 inches in the ground, on bed rock; raise a mound of stone 6 ft. base, 2 ft. high around post.

This cor. 414.8 lks. N. of the position of temp. cor. Land, mountainous.

Soil, loose red sand and limestone gravel on surface with limestone bed rock cropping to surface on tops and sides of ridges and spurs.

No timber; greasewood and ocotillo undergrowth.

At a point on the secant 414.8 lks. S. of this corner on July 30th, I determined the azimuth of the secant as follows:

Horizontal angles read from flag on secant to E. to Sun.

Latitude $-32^{\circ} 00' 00''$ N. Declination $-18^{\circ} 42' 00''$ N.

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 8h 36m 40s	S. $0^{\circ} 17' 00''$	$37^{\circ} 16' 00''$
+	E. 8h 40m 55s	S. $0^{\circ} 7' 30''$	$37^{\circ} 32' 00''$
	Means	S. $0^{\circ} 12' 15''$	$37^{\circ} 24' 00''$
			Per. + 7"
			Ref. - 1' 17"
			h. $37^{\circ} 22' 50''$

Sun's azimuth
 S. $89^{\circ} 54' 22''$ E.
 S. $90^{\circ} 6' 37''$ E.

Bearing of secant S. $89^{\circ} 53' 23''$ W.

cos. lat.	9.928420	sin. dec.	9.505981	tan. lat.	9.795789
" h.	9.900160		9.828580	" h.	9.883105
	<u>9.828580</u>		9.677401		<u>9.678894</u>
			.47577		.47741
					<u>.47577</u>
cos. azimuth					.00164

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Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 8h 41m 26s	S. 0° 55' 00"	38° 15' 30"
+	R. 8h 44m 55s	S. 0° 47' 00"	38° 34' 30"
	Means	S. 0° 51' 00"	38° 25' 00"
		Par.+	7"
		Ref.-	1' 13"
		h.	<u>38° 23' 54"</u>
Sun's azimuth		S. 89° 15' 52" E.	
		S. 90° 6' 52" E.	
Bearing of secant		S. 89° 53' 8" W.	
cos. lat.	9.928420	sin. dec.	9.505981
tan. lat.	9.795789		
" h.	<u>9.894156</u>	<u>9.822576</u>	" h. <u>9.899023</u>
	9.822576	9.683405	9.694812
		.48240	.49524
			<u>.48240</u>
cos. azimuth			<u>.01284</u>

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 8h 48m 57s	S. 1° 47' 30"	39° 39' 30"
+	R. 8h 51m 15s	S. 1° 39' 00"	39° 55' 30"
	Means	S. 1° 43' 15"	39° 47' 30"
		Par.+	7"
		Ref.-	1' 10"
		h.	<u>39° 46' 27"</u>
Sun's azimuth		S. 88° 22' 54" E.	
		S. 90° 6' 9" E.	
Bearing of secant		S. 89° 53' 51" W.	
cos. lat.	9.928420	sin. dec.	9.505981
tan. lat.	9.795789		
" h.	<u>9.885685</u>	<u>9.814105</u>	" h. <u>9.920335</u>
	9.814105	9.691876	9.716124
		.49190	.52014
			<u>.49190</u>
cos. azimuth			<u>.02824</u>
S. 89° 53' 23" W.			
S. 89° 53' 8" W.		Mean bearing of secant at point of observation	
S. 89° 53' 51" W.		S. 89° 53' 27" W.	

141st Mile
 B. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.
 Over mountainous land, through scattered greasewood and ocotillo undergrowth.

Descend on steep W. slope.
 Draw, drains NE; ascend on E. slope.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

12.40 Top of ridge, bears N. and S; descend on W. slope.

15.40 Short draw, drains N; ascend on E. slope.

21.50 Ridge, bears N. and S; descend on W. slope.

43.00 Draw, drains NW; ascend on E. slope.

56.00 Spur from ridge, slopes N.NE; descend on W. slope.

60.00 Draw, drains NE; ascend on NE. slope.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 15 ins. into the ground for the 141st mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 141 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

Post is set 15 ins. in the ground, on bed-rock; raise a mound of stone, 5 ft. base, 15 ins. high, around corner.

This corner 433.6 lks. N. of the position of temp. cor.

Land, mountainous.

Soil, fine grey adobe and limestone gravel, with limestone bed rock 1 ft. below surface, and cropping to surface on tops and steepest slopes of spurs and ridges.

No timber; greasewood and ocotillo undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

142nd Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over mountainous land, through scattered greasewood and ocotillo undergrowth.

Ascend on N.E. slope to spur.

4.00 Spur from ridge, slopes N.

13.00 Head of draw, drains NW; ascend on gradual NE. slope.

14.90 N. point of low spur from ridge, slopes N.

18.90 Draw, drains NE.

25.50 Ridge, bears N. and S; descend on W. slope.

30.00 Draw, drains N.

36.00 Low ridge, bears N. and S; descend on NW. slope.

40.00 Draw, drains NE; ascend on E. slope.

48.00 Spur from ridge, slopes N.

50.00 Draw, drains NE; ascend on NE. slope.

70.00 Spur from ridge, bears NW and SE; descend on SW. slope.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 5 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 142nd mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 142 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

This cor. 453.4 lks. N. of the position of temp. cor.
Land, mountainous.

Soil, firm gray adobe and limestone gravel on surface
with limestone bed rock 1 ft. below surface, and crop-
ping to surface on tops and steep slopes of spurs and
ridges.

No timber, greasewood and ocotillo undergrowth.

Sept. 10, 1911.

Sept. 8; 1911: 143rd Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over mountainous land, through heavy greasewood,
cat-claw and ocotillo undergrowth.

Descend gradually to draw.

12.00 Wagon road, bears NE. and SW.

17.50 Draw, drains NE; ascend on steep E. slope.

27.00 Top of steep ascent, bears N. and S; ascend gradually.

44.00 Deep draw, 1.00 ch. wide, drains SE; commence ascent
of steep NE. slope.

73.50 High, rocky spur from ridge, slopes SE; continue on
S. slope from spur.

Difference between measurements of 80.00 chs. by
two sets of chainmen is 4 links; position of the middle
point is

By 1st set, 80.02 chs.,

By 2nd set, 79.98 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 00 ins. into the ground for
the 143rd mile corner. The top of the cap is divided
by an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 143 General Land Office Reestablishment

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	<p>1911 United States Boundary Commission." Pits impracticable.</p> <p>Post is set on bed-rock, in a mound of stone, 4 ft. base, 2½ ft. high. Point is 1.00 ch. S. of a high spur, at NE. side of Chatfield mountain and at S. foot of a rocky cliff, 12 ft. high. Point is almost inaccessible.</p> <p>This cor. 473.7 lks. N. of the position of temp.cor. land, mountainous.</p> <p>Soil, limestone bed-rock on surface, with loose gray sand lodged on uneven surfaces.</p> <p>No timber; greasewood, cat-claw and ocotillo undergrowth.</p>
	<p style="text-align: center;">144th Mile N. 89° 49' 00" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over mountainous land, through heavy greasewood and ocotillo undergrowth, on S. slope from high spur.</p> <p>19.00 Leave S. slope of spur, and ascend on gradual E. slope, leave ocotillo undergrowth.</p> <p>45.00 High ridge, bears N. and S.; the top of Chatfield mountain; descend on W. slope from ridge.</p> <p>53.00 Commence descent of steep W. slope.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of the middle point is</p> <p>By 1st set, 80.015 chs.,</p> <p>By 2nd set, 79.985 chs; the mean of which is</p> <p>80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 144th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 144 General Land Office Reestablishment 1911</p>

RESURVEY. TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. United States Boundary Commission." Pits impracticable.
Corner is at W. foot of Chatfield mountain 900 feet
below the top of same.

This cor. 494.8 lks. N. of the position of temp. cor.
land, mountainous.

Soil, granite bed rock and broken granite rock on
surface; loose soil of decomposed granite lodged on
uneven surfaces.

No timber; ocotillo and greasewood undergrowth.

145th Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered greasewood under-
growth.

75.50 Wagon road, bears N. and S.

Difference between measurements of 80.00 chs. by two
sets of chainmen is 3 links; position of the middle
point is

By 1st set, 79.985 chs.,

By 2nd set, 80.015 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 25 ins. into the ground for
the 145th mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length and marked
"New Mexico" on the north, "Texas" on the south thereof
and also marked "Clark Boundary 1859 Mile Corner No. 145
General Land Office Reestablishment 1911 United States
Boundary Commission." Pits impracticable.

Corner is 25 ft. N. of N. point of low, natural rock
mound.

This cor. 516.5 lks. N. of the position of temp. cor.
Land, rolling prairie.

Soil, firm brown loam of decomposed granite and lime-
stone gravel.

No timber; greasewood undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

146th Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered greasewood undergrowth.

21.00

Leave rolling land, and greasewood undergrowth, bears NW. and SE; commence ascent of NE. slope of San Antonio mountain, through heavy scrub oak and ironwood undergrowth, over mountainous land, exceptionally difficult to survey.

25.00

Spur, slopes N; descend on W. slope to draw.

47.00

Deep draw, 20 lks. wide, drains N.NE; ascend on steep E. slope.

52.00

Spur, slopes N; descend on steep W. slope.

57.20

Deep draw, drains N; ascend on E. slope.

65.00

Spur slopes N; descend on W. slope.

68.00

Deep draw, drains N; ascend on E. slope.

70.00

Spur slopes N; descend on steep W. slope.

78.00

Deep draw, drains N; ascend on steep E. slope.

Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of the middle point is

By 1st set, 80.02 chs.,

By 2nd set, 79.98 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 6 ins. into the ground for the 146th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 146 General Land Office Reestablishment 1911 United States Boundary Commission."

Post is set on narrow ledge on NE. slope from a high spur, 6 ins. in the ground; raise a mound of stone 3 ft. base, 2 ft. high around post.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

This cor. 539.0 lks. N. of the position of temp. cor.
land, rolling and mountainous.

Soil, firm gray loam of decomposed granite in E. 20.00
chs; granite bed rock and boulders on surface in W.
60.00 chs. with thin layer of loam on uneven surfaces.

No timber; greasewood, scrub oak and ironwood under-
growth.

Sept. 8, 1911.

Sept. 7, 1911:

147th Mile

N. $89^{\circ}49'00''$ W.

On true line, Texas and New Mexico boundary.

Ascend on NE. slope of spur through scattered cedar
and pinon timber and scrub oak and ironwood undergrowth,
over mountainous land, exceptionally difficult to survey.

4.50

High spur, slopes N.W.; descend on steep NW. slope.

55.00

NW. foot of San Antonio Mountain, bears NE. and S.W.;
leave mountainous land and cedar and pinon timber and
scrub oak and ironwood undergrowth; continue over
rolling land, through scattered cat-claw and ocotillo
undergrowth.

Difference between measurements of 80.00 chs. by two
sets of chainmen is 3 links; position of the middle
point is

By 1st set, 79.985 chs.,

By 2nd set, 80.015 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 23 ins. into the ground for the
147th mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked "Clark Boundary 1859 Mile
Corner No. 147 General Land Office Reestablishment
1911 United States Boundary Commission." Pits impracticable.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	<p>This cor. 537.9 lks. N. of the position of temp. cor. Land, mountainous and rolling.</p> <p>Soil, granite bed rock and boulders on surface, with loose, gray loam of decomposed granite lodged on uneven surfaces, in E. 55.00 chs; firm gray loam and limestone gravel on surface, with limestone bed rock from 1 to 2 ft. below surface in W. 25.00 chs.</p> <p>Cedar and pinon timber; scrub oak, ironwood, ocotillo and cat claw undergrowth.</p>
20.00	<p style="text-align: center;">148th Mile N. 89° 49' 00" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over rolling prairie land, through scattered saltsage and ocotillo undergrowth.</p> <p>Ascend gradually.</p> <p>Low ridge, bears N. and S; descend on gradual W. slope. No difference between measurements of 80.00 chs. by two sets of chainmen.</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 22 ins. into the ground for the 148th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark boundary 1859 Mile Corner No. 148 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.</p> <p>This cor. 538.7 lks. N. of the position of temp. cor. Land, rolling.</p> <p>Soil, firm gray sandy loam and limestone gravel on surface, with limestone bed rock 2 ft. below surface. No timber; salt sage and ocotillo undergrowth.</p>

149th Mile

N. 89° 49' 00" W.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	On true line, Texas and New Mexico boundary.
	Over rolling prairie land, through scattered ironwood undergrowth.
	Descend on gradual W. slope.
47.00	Foot of descent; continue across wide, shallow draw, drains SW.
51.00	Old wagon road, bears N.NE and S.SW.
	No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 149th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 149 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.
	This cor. 539.9 links N. of the position of temp. cor. Land, rolling.
	Soil, loose gray sand and lime stone gravel on surface with limestone bed rock 2 ft. below surface.
	No timber; ironwood undergrowth.

150th Mile

N. 89° 49' 00" W.

	On true line, Texas and New Mexico boundary.
	Over rolling land, through scattered ironwood and tree-cactus undergrowth.
14.00	N. point of low spur, slopes N.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is
	By 1st set, 79.995 chs.,
	By 2nd set, 80.005 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 21 ins. into the ground for the 150th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 150 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 542.0 lks. N. of the position of temp. cor. land, rolling prairie.

Soil, loose gray adobe and sand on surface, with caliche subsoil, 15 ins. below surface.

No timber; ironwood and tree-cactus undergrowth.

151st Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling prairie land, through scattered greasewood, rubber brush and ironwood undergrowth.

68.00

Center of wide shallow draw, drains S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 80.01 chs.

By 2nd set, 79.99 chs., the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 151st mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No 151 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

This cor. 544.8 lks. N. of the position of temp. cor.
Land, rolling.

Soil, loose gray adobe and limestone gravel on surface
with limestone bed rock 1 ft. below surface.

No timber; greasewood, rubber brush and iron wood
undergrowth.

152nd Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered iron wood under-
growth.

68.00

Draw, drains SW.

76.00

Old Butterfield stage road, bears W.NW. and SE.

Difference between measurements of 80.00 chs. by
two sets of chainmen is 3 links; position of the middle
point is

By 1st set, 79.985 chs.,

By 2nd set, 80.015 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 25 ins. into the ground for
the 152nd mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked "Clark Boundary 1859 Mile
Corner No. 152 General Land Office Reestablishment 1911
United States Boundary Commission." Pits impracticable.

This cor. 548.6 lks. N. of the position of temp. cor.
Land, rolling.

Soil, loose gray sand and limestone gravel on surface,
with limestone bed rock from 1 to 2 ft. below surface.

No timber; ironwood undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

153rd Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered ironwood and ocotillo undergrowth.

61.80

Head of draw, drains S.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 153rd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 153 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 552.5 lks. N. of the position of temp. cor. Land, rolling prairie.

Soil, firm grey sand on surface, with caliche subsoil 1 ft. below surface.

No timber; ironwood and ocotillo undergrowth.

At a point on secant 552.5 lks. S. of this corner on August 1st, I determined the azimuth of the secant as follows:

Horizontal angles read from flag on secant to W. to Sun.

Latitude $-32^{\circ} 00' 00''$ N. Declination $-18^{\circ} 7' 30''$ N.

Sun

L.M. Time P.M.

Hori. Angle

Vert. Angle

+

D. 5h 1m 20s

N. $5^{\circ} 5' 30''$ $27^{\circ} 20' 30''$

+

R. 5h 4m 30s

N. $4^{\circ} 56' 30''$ $27^{\circ} 21' 30''$

Means

N. $55^{\circ} 1' 00''$ $27^{\circ} 21' 00''$

Par. + 8"

Ref. - 1' 51"

h. $27^{\circ} 19' 17''$

Sun's azimuth

N. $84^{\circ} 49' 54''$ W.

Bearing of secant

N. $89^{\circ} 50' 54''$ W.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

	cos. lat. 9.928420	sin. dec. 9.492888	tan. lat. 9.795789
	" h. 9.948631	9.877051	" h. 9.713164
	9.877051	9.615837	9.508953
		.41289	.32281
		.32281	
	cos. azimuth	<u>.09008</u>	
Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 5h 7m 40s	N. 5° 50' 30"	26° 4' 00"
+	R. 5h 10m 25s	N. 5° 38' 30"	26° 9' 00"
	Means	<u>N. 5° 44' 30"</u>	<u>26° 6' 30"</u>
			Par.+ 8"
			Ref.- 1' 58"
			<u>h. 26° 4' 40"</u>
	Sun's azimuth	N. 84° 6' 41" W.	
	Bearing of secant	<u>N. 89° 51' 11" W.</u>	
	cos. lat. 9.928420	sin. dec. 9.492888	tan. lat. 9.795789
	" h. 9.953372	9.881792	" h. 9.689677
	9.881792	9.611096	9.485466
		.40841	.30582
		.30582	
	cos. azimuth	<u>.10259</u>	
Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 5h 14m 00s	N. 6° 38' 00"	24° 42' 30"
+	R. 5h 16m 5s	N. 6° 20' 30"	24° 54' 00"
	Means	<u>N. 6° 29' 15"</u>	<u>24° 48' 15"</u>
			Par.+ 8"
			Ref.- 2' 5"
			<u>h. 24° 46' 18"</u>
	Sun's azimuth	N. 83° 21' 30" W.	
	Bearing of secant	<u>N. 89° 50' 45" W.</u>	
	cos. lat. 9.928420	sin. dec. 9.492888	tan. lat. 9.795789
	" h. 9.958079	9.886499	" h. 9.664138
	9.886499	9.606389	9.459927
		.40401	.28835
		.28835	
	cos. azimuth	<u>.11566</u>	
Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 5h 18m 50s	N. 7° 11' 00"	23° 44' 00"
+	R. 5h 20m 55s	N. 6° 53' 30"	23° 56' 30"
	Means	<u>N. 7° 2' 15"</u>	<u>23° 50' 15"</u>
			Par.+ 8"
			Ref.- 2' 10"
			<u>h. 23° 48' 13"</u>
	Sun's azimuth	N. 82° 48' 8" W.	
	Bearing of secant	<u>N. 89° 50' 23" W.</u>	
	cos. lat. 9.928420	sin. dec. 9.492888	tan. lat. 9.795789
	" h. 9.961390	9.89810	" h. 9.644564
	9.889810	9.603078	9.440353
		.40094	.27565
		.27565	
	cos. azimuth	<u>.12529</u>	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

N. 89° 50' 54" W.

N. 89° 51' 11" W.

Mean bearing of secant at point
of observation

N. 89° 50' 45" W.

N. 89° 50' 48" W.

N. 89° 50' 23" W.

154th Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered ocotillo under-
growth.13.00 Low spur from ridge slopes SW; descend gradually
to draw.

15.00 Leave undergrowth, bears N. and S.

32.00 Draw, drains S; ascend on gradual E. slope.

52.00 Top of ascent; continue on nearly level land.

Difference between measurements of 80.00 chs. by
two sets of chainmen is 3 links; position of the middle
point is

By 1st set, 79.985 chs.,

By 2nd set, 80.015 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 19 ins. into the ground for
the 154th mile corner. The top of the cap is divided
by an east and west stamped line 1 inch in length,
and marked "New Mexico" on the north, "Texas" on the
south thereof, and also marked "Clark Boundary 1859
Mile Corner No. 154 General Land Office Reestablishment
1911 United States Boundary Commission." Pits imprac-
ticable.Post set on limestone bed rock; raise a mound of
earth 4 ft. base, 1 ft. high around post.This cor. 558.2 lks. N. of the position of temp. cor.
Land, rolling.Soil, loose gray sand and limestone gravel on sur-
face, with limestone bed rock from 1 to 2 ft. below sur-

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

face.

No timber; ocotillo undergrowth.

155th Mile

N. $89^{\circ} 49' 00''$ W.

On true line, Texas and New Mexico boundary.

Over rolling ground, through scattered salt sage undergrowth.

73.00

Commence gradual descent on W. slope.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 22 ins. into the ground for the 155th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 155 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. Raise a mound of stone $2\frac{1}{2}$ ft. base 1 ft. high around cor.

Sierra Blanca peak bears S. $76^{\circ} 10'$ W.N. end of rim rock on Alamo Mountain bears N. $61^{\circ} 28'$ E.S. end of rim rock on Alamo Mountain bears N. $68^{\circ} 50'$ E.Small peak on S. point of Alamo Mountain bears N. $69^{\circ} 55'$ E.Top of Wind Mountain bears N. $81^{\circ} 30'$ E.San Antonio Mountain bears S. $87^{\circ} 20'$ E.Small sharp peak in Texas bears S. $56^{\circ} 35'$ E.

This cor. 566.4 lks. N. of the position of temp. cor.

Land, rolling.

Soil, fine gray adobe and limestone gravel, with limestone bed rock from 1 to 2 ft. below surface.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

No timber; salt sage undergrowth.

156th Mile

N. $89^{\circ} 49' 00''$ W.

On true line, Texas and New Mexico boundary.

Over rolling land.

23.00 Draw, drains SE.

61.50 Draw, drains S.SE.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 156th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 156 General Land Office Reestablishment 1911 United States Boundary Commission."

Pits impracticable.

This corner 576.9 lks. N. of position of temp. cor. Land, rolling.

Soil, firm gray sand and adobe and limestone gravel on surface with caliche subsoil 9 ins. below surface.

No timber; no undergrowth.

157th Mile

N. $89^{\circ} 49' 00''$ W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered saltsage undergrowth.

32.50 Center of wide shallow draw, drains SE.

35.00 Ascend on gradual E. slope.

71.00 Head of draw, drains NE.

No difference between measurements of 80.00 chs. by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 30 ins. into the ground for the 157th mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 157 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 590.2 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm red sand and limestone gravel on surface with limestone bed rock 2 ft. below surface.

No timber; no undergrowth.

158th Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 13 ins. into the ground for the 158th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 158 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. Post 18 set 15 ins. in the ground on limestone bed rock; raise a mound of earth 6 ft. base, 15 ins. high around post.

This cor. 605.4 lks. N. of the position of temp. cor.
Land, rolling.

Soil, firm gray adobe and sand and limestone gravel on surface, with limestone bed rock from 1 to 2 ft. below surface.

No timber; no undergrowth.

Sept. 7, 1911.

Sept. 6, 1911:

159th Mile

N. 89° 49' 00" W.

On true line, Texas and New Mexico boundary.

Over rolling land.

No difference between measurements of 37.13 chs. by two sets of chainmen.

37.13

Clark Monument No. 12

A mound of granite stone 10 ft. base, 2 ft. high.

This monument is 2.80 chs. E. of the old Butterfield stage road. It shows evidence of having been in place for a number of years as all of the base stones are sunk on several inches in the ground. The stones probably were brought from Alamo Mountain about 10 miles NE. of this monument.

To perpetuate the location of this monument, I construct at its center a concrete monument in the form of a frustum of a cone, encased in galvanized iron, the lower base 24 ins. in diameter, the upper base 18 ins. in diameter, and 30 ins. high, set 20 ins. into the ground, in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by an E. and W. division line, 2 ins. long, with "TEXAS" on the S. and "NEW MEXICO" on the N. thereof and also marked "CLARK BOUNDARY 1859 CLARK MON NO. 12"

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

in the N. half, "GENERAL LAND OFFICE REESTABLISHMENT
1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

Sept. 6, 1911.

RANDOM LINE

Clark Monument No. 12 (158 M. 37.13 chs.) to Clark
Monument No. 11 (158 M. 52.81 chs.)

Aug. 2, 1911:

At Monument No. 12 I offset the secant 6.133 chs. S.
to Monument No. 11. I preserve alinement of original
secant by making equal offsets.

Thence I run on secant in a westerly direction from
Mon. 12, distance counting from SE. cor. of N.M. (Mile
Cor. 158)

52.81

Fall 18.6 lks. N. of Clark Monument No. 11 hereinafter
described in true line notes.

Calculation of azimuth of the secant between monuments
Nos. 12 and 11 depends upon observations taken at 153rd
and 165th mile corners respectively which are
described in true line notes at corresponding points.

Accumulated error in azimuth between Clark Monuments
Nos. 12 and 11 is 0.1' to the left.

August 2, 1911.

TRUE LINE

Sept. 6, 1911.

True line between Clark Monuments Nos. 12 and 11.

The felling of the random line 18.6 lks. to the N.
of Monument No. 11 adjusted for accumulated difference
in alinement between the secant and the parallel gives
a true felling of the parallel of 17.1 lks. to the N.
which in a distance of 15.68 chs. gives a true line
course of S. 89° 22' 30" W. between Clark Monuments
Nos. 12 and 11.

From Clark Monument No. 12:

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Highest point of Sierra Alto Mountain bears S. 72°
21' W.

Cornudas Mountain bears N. 66° 35' E.

N. end of rim rock on Alamo Mountain bears N. 73°
55' E.; S. end of rim rock on Alamo mountain bears
N. 77° 57' E.

Highest point on Wind Mountain bears N. 83° 30' E.

Highest point on San Antonio Mountain bears S. 87°
57' E.

High cliff at S. point of Guadalupe Mountains bears
S. 81° 2' E.

Small sharp mountain in Texas bears S. 64° 18' E.

159th Mile

S. 89° 22' 30" W.

On true line, Texas and New Mexico boundary.

Monument No. 12 (158 M. 37.13 chs.) measurement
from 158 M. cor.

40.00 Old Butterfield stage road, bears E.NE and W.SW.

No difference between measurements of 15.68 chs. by
two sets of chainmen, from Mon. 12.

52.81 To Clark Monument No. 11

A mound of earth 18 ft. base 1 ft. high.

This, apparently is a very old mound and has been
nearly leveled through the action of the elements and
having been tramped by cattle. It has been recognized
locally as a monument of the Clark survey for a long
time and its proximity to the Butterfield stage road
is evidence of its authenticity.

To perpetuate the location of this monument I con-
struct at its center a concrete monument in the form of
a frustum of a cone, encased in galvanized iron, the
lower base 24 ins. in diameter, the upper base 18 ins.
in diameter and 30 ins. high, set 20 ins. into the ground,
in the top of which there is embedded a circular brass
plate 6 ins. in diameter. The plate is marked in the

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. center by an E. and W. division line, 2 ins. long with "TEXAS" on the S. and "NEW MEXICO" on the N. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 11" in the N. half" GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

Sept. 6, 1911.

RANDOM LINE

Clark Monument No. 11 (158 M. 52.81 chs) to Clark Monument No. 8 (178 M. 5.59 chs).

Aug. 2, 1911:

Continue on secant from a point 18.6 lks. N. of Clark Monument No. 11 at 158 Mile 52.81 ch. point.

Temporary mile corner No. 165, at end of day's run.

August 2, 1911.

August 3: A direct observation on the Sun for azimuth of the secant was made at this point and is recorded at a corresponding point in the true line notes.

Accumulated error in azimuth between Clark Monument No. 11 and temporary mile corner No. 165 is 3.1' to the left.

Continue on secant from temporary mile corner No. 165 S. $89^{\circ} 56' 48''$ W.

Temporary mile corner No. 171 at end of day's run .

August 3, 1911.

Aug. 4: Continue on secant from temporary mile corner No. 171.

Temporary mile corner No. 175 at end of day's run.

August 4, 1911.

Aug. 5, 1911:

Continue on secant from temporary mile corner No. 175.

Temporary mile corner No. 177 at end of day's run.

A direct observation on the Sun for azimuth of the secant was made at this point and is recorded at a

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. corresponding point in the true line notes.
 Accumulated error in azimuth between temporary mile corners Nos. 165 and 177 was 1.6' to the left.
 August 5, 1911.

Aug. 6, 1911:

At 177th mile corner I deflect secant 10' to the right and continue on secant S. $89^{\circ} 58' 46''$ W.

Temporary mile corner 178 plus.

5-59 Fall 7.641 chs. S. of Clark Monument No. 8 hereinafter described.

Calculation of azimuth of secant at this point is based on a direct observation on the sun made at 192nd mile corner.

Accumulated error in azimuth between temporary mile corner No. 177 and Monument No. 8 is 0.4' to the left.

August 6, 1911.

TRUE LINE

Clark Monument No. 11 to Clark Monument No. 8.

The felling of the random line, 7.641 chs. S. of Clark monument No. 8 adjusted for accumulated difference in alinement between the secant and the parallel gives a true felling of the parallel of 5.786 chs. to the S., which in a distance of 19 miles 32.78 chs. gives a true line course of N. $89^{\circ} 47' 15''$ W. between Clark Monument No. 11 and Clark Monument No. 8.

Sept. 6, 1911: 159th Mile

N. $89^{\circ} 47' 15''$ W.

On true line, Texas and New Mexico boundary from Clark Monument No. 11 at 52.81 ch. point, distance counting from 158 mile point.

Over rolling land.

No difference between measurements of 27.19 chs. from Mon. 11 by two sets of chainmen.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 159th mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 159 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 11.1 lks. S. of the position of temp. cor. Land, rolling.

Soil, firm red sand on surface, with caliche subsoil 14 ins. below surface.

No timber; no undergrowth.

160th Mile

N. $89^{\circ} 47' 15''$ W.

On true line, Texas and New Mexico boundary.

Over rolling land.

74.50

Center of wide shallow draw, drains SE.

Difference between measurement of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 160th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 160 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

This cor. 13.0 lks. N. of the position of temp. cor.
Post set on bed rock.

Land, rolling.

Soil, firm red sand and limestone gravel on surface
with caliche subsoil 1 ft. below, and limestone bed
rock 20 ins. below surface.

No timber; no undergrowth.

161st Mile

N. 89° 47' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling land; through scattered salt sage under-
growth.

57.00 Low ridge, bears N.NW and S.SE.

74.00 Draw, drains S.SE.

Difference between measurements of 80.00 chs. by
two sets of chainmen is 1 link; position of the middle
point is

By 1st set, 80.005 chs.,

By 2nd set, 79.995 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 20 ins. into the ground for
the 161st mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 161 General Land Office Reestablishment 1911
United States Boundary Commission." Pits impracticable.

Post set on limestone bed rock.

This cor. 39.4 lks. N. of the position of temp. cor.
Land, rolling.

Soil, firm red sand on surface, with caliche subsoil
18 ins. and limestone bed rock 24 ins. below surface.

No timber; salt sage undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

162nd Mile

N. $89^{\circ} 47' 15''$ W.

On true line, Texas and New Mexico boundary.

Over rolling land.

22.50

Highest ridge between Cornudas and Hueco Mountains, bears N. and S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 162nd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 162 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 68.3 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm red sand on surface with α liche subsoil 18 ins. below surface.

No timber; no undergrowth.

163rd Mile

N. $89^{\circ} 47' 15''$ W.

On true line, Texas and New Mexico boundary.

Over rolling land.

4.00

draw, drains S. SE.

55.00

Top of ridge, bears N. and S; descend on gradual W. slope.

75.50

Short draw, drains S. SE; continue across wide valley.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 80.005 chs.,

By 2nd set, 79.995 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap; 23 ins. into the ground for the 163rd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 163 General Land Office Reestablishment 1911.

United States Boundary Commission." Fits impracticable.

This cor. 99.5 lks. N. of the position of temp.cor.

Land, rolling.

Soil, firm red sand.

No timber; no undergrowth.

164th Mile

B. $89^{\circ} 47' 15''$ W.

On true line, Texas and New Mexico boundary.

Over rolling land.

Ascend on gradual E. slope.

40.00

Ridge bears N. and S; descend on W. slope.

60.10

Shallow draw, drains S.SE; continue on nearly level land.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 80.005 chs.,

By 2nd set, 79.995 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

the 164th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 164 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 133.0 lks. N. of the position of temp. cor. Land, rolling.

Soil, loose red sand on surface, with caliche subsoil 15 ins. below surface.

No timber; no undergrowth.

165th mile

N. 89° 47' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling land.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 26 ins. into the ground for the 165th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north; "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 165 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 169.2 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm red sand 2nd rate.

No timber; no undergrowth.

At point on the secant 1.692 chs. S. of this corner on August 3rd I determined the azimuth of the secant as follows.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Horizontal angles read from flag on secant to E. to Sun.

Latitude $-32^{\circ} 00' 00''$ N. Declination $-17^{\circ} 41' 26''$ N.

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 9h 55m 40s	S. $15^{\circ} 36' 30''$	$54^{\circ} 53' 00''$
+	R. 9h 57m 25s	S. $15^{\circ} 14' 00''$	$54^{\circ} 49' 30''$
	Means	S. $15^{\circ} 25' 15''$	$54^{\circ} 51' 15''$

Par.+ 5"

Ref.- 40"

h. $54^{\circ} 50' 40''$ Sun's azimuth S. $74^{\circ} 38' 08''$ E.S. $90^{\circ} 3' 23''$ E.Bearing of secant S. $89^{\circ} 56' 37''$ W.

cos. lat. 9.928420 sin. dec. 9.482697 tan. lat. 9.795789

" h 9.760271 9.688691 " h 10.152266

9.688691 9.794006 9.948055

.62231

.88727

.62231

.26496

cos. azimuth

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 10h 1m 21s	S. $16^{\circ} 50' 00''$	$56^{\circ} 4' 00''$
+	R. 10h 3m 57s	S. $16^{\circ} 36' 30''$	$56^{\circ} 9' 00''$
	Means	S. $16^{\circ} 45' 15''$	$56^{\circ} 6' 30''$

Par.+ 5"

Ref.- 39"

h. $56^{\circ} 5' 56''$ Sun's azimuth S. $73^{\circ} 17' 46''$ E.S. $90^{\circ} 3' 1''$ E.Bearing of secant S. $89^{\circ} 56' 59''$ W.

cos. lat. 9.928420 sin. dec. 9.482697 tan. lat. 9.795789

" h. 9.746449 9.674869 " h. 10.172631

9.674869 9.807828 9.968420

.64243

.92986

.64243

.28743

cos. azimuth

S. $89^{\circ} 56' 37''$ W. Mean bearing of secant at point of observationS. $89^{\circ} 56' 59''$ W. S. $89^{\circ} 56' 48''$ W. Sept. 6, 1911

Sept. 5, 1911: 166th Mile

N. $89^{\circ} 47' 15''$ W.

On true line, Texas and New Mexico boundary.

Over rolling land.

58.00 Old wagon road, bears N. and S.

77.20 Wire fence, bears N. and S.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs., the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 166th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 166 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 207.2 lks. N. of the position of temp. cor.

Land, rolling.

Soil, firm red sand, 2nd rate.

No timber; no undergrowth.

167th Mile

N. 89° 47' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered ocotillo undergrowth.

Ascend gradually.

13.90

Old wagon road, bears NW. and SE.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 167th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	<p>Corner No. 167 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.</p> <p>This cor. 246.8 lks. N. of the position of temp.cor.</p> <p>Land, rolling.</p> <p>Soil, firm red sand and limestone gravel, and broken limestone rock in W. 20.00 chs.</p> <p>No timber; ocotillo undergrowth.</p>
	<p style="text-align: center;">168th Mile</p> <p style="text-align: center;">N. 89° 47' 15" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over rolling land, through scattered ocotillo undergrowth.</p> <p>1.60 Wagon road, bears N. and S.</p> <p>21.00 Low spur from ridge, slopes N; descend on W. slope from spur.</p> <p>64.00 Center of wide, shallow draw, drains E.NE; ascend on gradual SE. slope.</p> <p>Difference between measurements of 80.00 chs. by two sets of chain man is 1 link; position of the middle point is</p> <p>By 1st set, 79.995 chs.,</p> <p>By 2nd set, 80.005 chs; the mean of which is</p> <p>80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 168th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile</p> <p>Corner No. 168 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.</p> <p>This cor. 287.7 lks. N. of the position of temp.cor.</p> <p>Land, rolling.</p> <p>Soil, firm gray sand and limestone gravel and broken rock on surface, with limestone bed rock 2 ft. below</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	surface. No timber; ocotillo undergrowth.
72.80	<p style="text-align: center;">169th Mile N. 89° 47' 15" W.</p> <p>On true line, Texas and New Mexico boundary. Ascend on gradual SE. slope over rolling land through scattered ocotillo and ironwood undergrowth. Wagon road, bears NE. and SW. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is</p> <p>By 1st set, 79.99 chs., By 2nd set, 80.01 chs; the mean of which is</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 169th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 169 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. This cor. 330.5 lks. N. of the position of temp. cor. Land, rolling. Soil, firm red sand, 2nd rate. No timber; ocotillo and ironwood undergrowth.</p>
33.00	<p style="text-align: center;">170th Mile N. 89° 47' 15" W.</p> <p>On true line, Texas and New Mexico boundary. Over rolling land, through scattered ocotillo undergrowth. Draw, drains N.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

64.00 Draw, drains N; ascend on gradual E. slope.

80.00 Low ridge, bears N. and S.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 9 ins. into the ground for the 170th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clerk Boundary 1859 Mile Corner No. 170 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

Post is set 9 ins. in the ground, in limestone bedrock; raise a mound of stone, 4 ft. base, 20 ins. high, around post.

This corner is 3.00 chs. S. of highest point of ridge.

Mr. Jesse Walbridge's earth tank bears NW., about 20.00 chs. dist.

This cor. 374.8 lks. N. of the position of temp. cor. land, rolling.

Soil, loose red sand, 2nd rate, in E. 64.00 chs; limestone bed rock cropping to surface in W. 16 chs.

No timber; ocotillo undergrowth.

171st Mile

N. 89° 47' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered ocotillo undergrowth.

Descend on W. slope from ridge.

14.00 Foot of descent; wagon road, bears N. and S; continue across narrow valley.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

20.00 Commence ascent of SE. slope, over mountainous land.
 45.00 Spur from ridge, slopes S; descend on W. slope.
 53.50 Draw, drains N.NW; ascend on E. slope.
 56.80 Spur from ridge, slopes N; descend on W. slope.
 59.60 Draw, drains N; ascend on E. slope.
 63.50 Spur from ridge, slopes N; descend on W. slope.
 66.50 Draw, drains N; ascend on E. slope.
 71.10 Spur from ridge, slopes N; descend on W. slope.
 72.20 Draw, drains N.
 76.10 Spur from ridge, slopes N; descend on SW. slope.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 171st mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 171 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

Post is at SW foot of a spur and about 90 lks. N. of a shallow draw, drains NW; and is about 30 chs N. of a low round peak of the Hueco Mountains.

This cor. 420.5 lks. N. of the position of temp. cor.

Land, rolling and mountainous.

Soil, firm gray sand and limestone gravel in E. 20.00 chs.; limestone bed rock on surface, with loose gray sand and gravel lodged on uneven surfaces in W. 60.00 chs.

No timber; ocotillo undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

172nd Mile

N. 89° 47' 15" W.

On true line, Texas and New Mexico boundary.

Over mountainous land, through scattered ocotillo and cat claw undergrowth.

- 1.10 Draw, drains NW; ascend on E. slope.
- 5.00 Low spur, slopes N.NW; descend on W. slope.
- 13.00 Draw, drains N; ascend on E. slope.
- 16.00 Low spur from ridge, slopes N; descend on NW. slope.
Draw, drains NE; ascend on SE. slope. Dist. to draw not recorded.
- 26.00 Low spur from ridge, slopes N; descend on W. slope.
- 44.50 Draw, drains NW; continue across N. point of low spur.
- 47.50 Top of spur, slopes N; descend on W. slope.
- 50.00 Draw, drains N; ascend on E. slope.
- 52.41 Spur from ridge, slopes N; descend on W. slope.
- 56.00 Draw, drains NE; ascend on E. slope.
- 66.00 Ridge, bears N.NW and S; descend on SW. slope.
Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is
By 1st set, 79.995 chs.,
By 2nd set, 80.005 chs; the mean of which is
- 80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 22 ins. into the ground for the 172nd mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 172 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.
Post is set 22 ins. in the ground, on limestone bed rock; raise a mound of stone 3 ft. base, 1 ft. high around post.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains This cor. 46.80 lks. N. of the position of temp. cor. Land, mountainous.

Soil, loose gray sand and limestone gravel, 6 ins. deep on surface, with limestone bed rock cropping to surface on steepest slopes, and on tops of ridges and spurs.

No timber; ocotillo and cat-claw undergrowth.

Sept. 5, 1911.

Sept. 4, 1911:

173rd Mile

N. 89° 47' 15" W.

On true line, Texas and New Mexico boundary.

Over mountainous land, through scattered ocotillo undergrowth.

Descend on W. slope.

.50 Draw, drains S.SW; ascend on E. slope.

6.50 Top of ascent; spur from ridge, slopes SE; continue on S. slope from spur.

25.40 Draw, drains NW; ascend on broken E. slope to highest ridge of Hueco Mountains.

71.00 High spur from ridge, slopes NE; continue on N. slope from spur.

Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of the middle point is

By 1st set, 79.98 chs.,

By 2nd set, 80.02 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 173rd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 173 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable.

Post is set on bed-rock. Raise a mound of stone

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. 3 ft. base $2\frac{1}{2}$ ft. high, 6 ft. E. of corner, on rock ledge.

Point is on top of spur, sloping NE. and about 300 ft. below top of ridge.

This cor. 516.9 lks. N. of the position of temp.cor. Land, mountainous.

Soil, firm gray sand and limestone gravel on surface, with limestone bed rock from 6 to 24 ins. below the surface, and cropping to surface on tops of ridges and spurs and on steepest slopes.

No timber; ocotillo undergrowth.

174th Mile

N. $89^{\circ} 47' 15''$ W.

On true line, Texas and New Mexico boundary.

Ascend on broken NE. slope to ridge, through scattered greasewood and ocotillo undergrowth.

4.50 Ridge, bears N.NW and S.SE; continue on top of ridge.

26.70 High ridge, bears N. and S; descend on gradual W. slope.

50.00 Leave gradual descent, bears N. and S; descend on steep W. slope.

67.00 Spur from ridge, slopes W.SW; descend on SW. slope.

Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of the middle point is

By 1st set, 79.98 chs.,

By 2nd set, 80.02 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 14 ins. into the ground for the 174th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 174 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	<p>Post is set 14 ins. in the ground on limestone bed-rock; raise a mound of stone, 5 ft. base 21 ins. high around corner.</p> <p>This corner 567.1 lks. N. of the position of temp. cor.</p> <p>Land, mountainous.</p> <p>Soil, firm gray sand and limestone gravel on surface, with limestone bed rock from 6 to 24 ins. below the surface and cropping to the surface on tops of ridges and spurs and on steepest slopes.</p> <p>No timber; greasewood and ocotillo undergrowth.</p>
6.00 10.00 24.00 40.00 70.00 80.00	<p style="text-align: center;">175th Mile N. 89° 47' 15" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Descend gradually on S. slope from spur, through scattered ocotillo, greasewood and cat claw undergrowth.</p> <p>Draw, drains NW; continue across N. point of spur.</p> <p>Draw, drains S.SW; ascend on SE. slope to spur.</p> <p>Spur from ridge, slopes S.SE; ascend gradually on broken S. slope.</p> <p>High spur from ridge, slopes S.SE; continue on SE. slope.</p> <p>Spur from ridge, slopes S; descend on W. slope.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 5 links; position of the middle point is</p> <p>By 1st set, 79.975 chs.,</p> <p>By 2nd set, 80.025 chs; the mean of which is</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 9 ins. into the ground for the 175th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. Corner No. 175 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

Post is set 9 ins. in the ground on bed rock; raise a mound of stone, 3 ft. base, 20 ins. high around corner.

This cor. 619.2 lks. N. of the position of temp. cor. Land, mountainous.

Soil, loose red sand and limestone gravel and broken stone on surface, and cropping to surface on tops and steepest slopes of ridges and spurs.

No timber; greasewood, cat claw and ocotillo undergrowth.

176th Mile

N. 89° 47' 15" W.

On true line, Texas and New Mexico boundary.

Descend on steep W. slope from spur, through scattered cat claw, ocotillo and lichigi undergrowth, over mountainous land, exceptionally difficult to survey.

6.00 Head of draw, drains SW; descend on S. slope from long spur.

48.00 Foot of steep descent, bears N.W. and SE: leave mountainous and continue on rolling land; descend gradually.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 176th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 176 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

This cor. 672.9 lks. N. of the position of temp. cor.
Post is set on bed rock .

Land, E. 48.00 chs., mountainous; W. 32.00 chs.,
rolling.

Soil, loose red sand and limestone gravel and broken
rock on surface, with limestone bed rock 6 ins. below
surface, and cropping to surface on tops and steepest
slopes of ridges and spurs.

Undergrowth, cat-claw, ocotillo and lichigi.

177th Mile

N. 89° 47' 15" W.

On true line, Texas and New Mexico boundary.

Descend on gradual W. slope, through scattered ocotillo
and heavy lichigi undergrowth, over rolling land.

Difference between measurements of 80.00 chs. by
two sets of chainmen is 1 link; position of the middle
point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs ; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 20 ins. into the ground for
the 177th mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 177 General Land Office Reestablishment 1911
United States Boundary Commission. " Pits impracticable .

This cor. 728.1 lks. N. of the position of temp. cor.

Post is set in bed rock.

Land, rolling.

Soil, fine gray sand and limestone gravel and broken
rock on surface, with limestone bed rock 10 ins. below
surface.

No timber; ocotillo and lichigi undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

At a point on the secant, 7.281 chs. S. of this corner, on Aug. 7, 1911, I determined the azimuth of the secant as follows:

Horizontal Angles read from flag on secant to W. to Sun.

Latitude $-32^{\circ} 00' 00''$ N. Declination $16^{\circ} 31' 45''$ N.

Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 5h 50m 20s	N. $11^{\circ} 52' 00''$	$12^{\circ} 50' 30''$
+	R. 5h 52m 50s	N. $11^{\circ} 33' 00''$	$12^{\circ} 46' 00''$
	Means	N. $11^{\circ} 42' 30''$	$12^{\circ} 48' 15''$
		Par. +	8"
		Ref. -	<u>4' 9"</u>
		h.	$12^{\circ} 44' 14''$

Sun's azimuth $\frac{N. 78^{\circ} 18' 21'' W.}{N. 90^{\circ} 0' 51'' W.}$

Bearing of secant S. $89^{\circ} 59' 9''$ W.

cos. lat. 9.928420 sin. dec. 9.454087 tan. lat. 9.795789
 " h. $\frac{9.989179}{9.917599}$ $\frac{9.917599}{9.536488}$ " h. $\frac{9.354190}{9.149979}$
 .34394 .14125

cos. azimuth $\frac{.14125}{.20269}$

Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 5h 54m 55s	N. $12^{\circ} 23' 00''$	$11^{\circ} 47' 00''$
+	R. 5h 57m 10s	N. $12^{\circ} 9' 00''$	$11^{\circ} 58' 30''$
	Means	N. $12^{\circ} 16' 00''$	$11^{\circ} 52' 45''$
		Par. +	8"
		Ref. -	<u>4' 27"</u>
		h.	$11^{\circ} 48' 26''$

Sun's azimuth $\frac{N. 77^{\circ} 45' 17'' W.}{N. 90^{\circ} 1' 17'' W.}$

Bearing of secant S. $89^{\circ} 58' 43''$ W.

cos. lat. 9.928420 sin. dec. 9.454087 tan. lat. 9.795789
 " h. $\frac{9.990713}{9.919133}$ $\frac{9.919133}{9.534954}$ " h. $\frac{9.320235}{9.116024}$
 .34273 .13063

cos. azimuth $\frac{.13063}{.21210}$

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Sun	L.M. Time P.M.	Hor. Angle	Vert. Angle
+	D. 5h 59m 25s	N. 12° 55' 30"	10° 52' 30"
+	R. 6h 1m 15s	N. 12° 39' 30"	11° 9' 00"
	Means	N. 12° 47' 30"	11° 0' 45"
		Par. +	8"
		Ref. -	4' 48"
		h.	10° 56' 5"
	Sun's azimuth	N. 77° 14' 4" W.	
		N. 90° 1' 34" W.	
	Bearing of secant	S. 89° 58' 26" W.	
	cos. lat. 9.928420	sin. dec. 9.454087	tan. lat. 9.795789
"	h $\frac{9.992042}{9.920462}$	$\frac{9.920462}{9.533625}$	" h $\frac{9.286003}{9.081792}$
		.34168	.12072
		<u>.12072</u>	
	cos. azimuth	.22096	
	S. 89° 59' 9" W.		
	S. 89° 58' 43" W.	Mean bearing of secant at point of observation	
	S. 89° 58' 26" W.	S. 89° 58' 46" W.	
		Sept. 4, 1911.	

Sept. 3, 1911: 178th Mile
N. 89° 47' 15" W.

On true line, Texas and New Mexico boundary.
Over rolling land, through scattered greasewood and rubberbrush undergrowth.

- 70.00 Leave rolling land, bears N. and S; ascend on E. slope to spur, over mountainous land.
- 73.00 Top of ascent, spur from ridge, slopes SE; descend on SW. slope.
- 76.50 Draw, drains SE; ascend on NE. slope.
Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is
By 1st set, 79.995 chs.,
By 2nd set, 80.005 chs; the mean of which is

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 9 ins. into the ground for the 178th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 178 General Land Office Reestablishment, 1911 United States Boundary Commission." Pits impracticable.

Post is set 9 ins. into the ground, on limestone bed-rock; raise a mound of stone 4 ft. base, 20 ins. high around post.

This cor. 761.6 lks. N. of the position of temp. cor. Point is at NE. foot of a small rim-rock, 3 ft. high. Land, rolling and mountainous.

Soil, firm red sand and limestone gravel on surface in E. 65.00 ch; loose gray sand and limestone gravel and broken rock on surface, with limestone bed-rock 6 ins. below surface, and cropping to surface on steepest slopes.

No timber; greasewood and rubber-brush undergrowth.

179 th Mile

N. 89° 47' 15" W.

On true line, Texas and New Mexico boundary.

Ascend on steep NE. slope over mountainous land, through scattered greasewood and ocotillo undergrowth.

No difference between measurements of 5.59 chs. by two sets of chainmen.

5.59

To Clark Monument No. 8.

A mound of earth, with large limestone boulders in center, 18 ft. in diam., 12 ins. high.

This mound has become almost obliterated and had not been identified by surveyors who recently have made retracements of the Texas and New Mexico boundary.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

It is, however, in the proper position for Monument No. 8, according to Clark's topographic sketch. The spur on which this monument is located, has solid limestone rock on surface and the mound contains the only loose rock or earth on the spur.

To perpetuate the location of this mound, I construct at its center, a concrete monument in the form of a frustum of a cone encased in galvanized iron, the lower base 24 ins. in diameter, the upper base 18 ins. in diameter, and 30 ins. high, set 15 ins. into the ground on solid rock, in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by an E. and W. division line, 2 ins. long with "TEXAS" on the S. and "NEW MEXICO" on the N. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON NO 8" in the N. half, "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

Sept. 3, 1911.

RANDOM LINE

Clark Monument No. 8 (178 M. 5.59 chs.) to Clark Monument No. 4 (204 M. 42.44 chs.)

Aug. 8:

Continue on secant from a point 7.641 chs. S. of Clark Monument No. 8, at 178 mile, 5.59 ch. point.

Temporary mile corner No. 182, at end of day's run.

August 8, 1911.

Aug. 9:

Continue on secant from temporary 182nd mile corner.

Temporary mile corner No. 191, at end of day's run.

August 9, 1911.

Aug. 10:

Continue on secant from 191st mile corner.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Temporary mile corner No. 192.

At this point a direct observation on the Sun was made and is recorded in the true line notes, at a corresponding point.

Accumulated error in azimuth between Monument No. 8 and temporary 192nd mile corner is 4.7' to the left.

Continue on secant S. $89^{\circ} 45' 38''$ W.

Temporary mile corner No. 199 at end of day's run

August 10, 1911.

Aug. 11:

At temporary mile corner No. 199 a direct observation on the sun was made, and is recorded at a corresponding point in the true line notes.

At this point I deflect secant line 19.8' to the right.

Continue on secant from temporary 199th mile corner, N. $89^{\circ} 59' 54''$ W.

Temporary mile corner No. 202 at end of day's run.

August 11, 1911.

Aug. 12:

Continue on secant from mile corner No. 202.

Temporary mile corner No. 203.

A direct observation on the sun for azimuth was made at this corner and is recorded at a corresponding point in the true line notes.

Accumulated error in azimuth between temporary mile corner No. 199 and temporary mile corner No. 203 is 0.5' to the right. Continue on secant

S. $89^{\circ} 58' 24''$ W. from temp. corner 203.

42.33

Fall 2.875 chs. S. of Clark Monument No. 4, hereinafter described in true line notes.

August 12, 1911.

TRUE LINE

True line between Clark Monuments Nos. 8 and 4.

The falling of the random line, 2.875 chs. S. of Clark

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. Monument No. 4, adjusted for accumulated error in alinement between the secant and the parallel, gives a true falling of the parallel of 10.375 chs. N. which in a distance of 26 miles 36.74 chs., gives a true line course of S. 89° 43' 15" W. between Clark Monuments Nos. 8 and 4.

Sept. 2, 1911:
 179th Mile
 S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary from Mon. 8 at 178 M. and 5.59 chn. point, measurement counting from 178 M. corner.

Descend on steep W. slope from spur, through scattered greasewood and ocotillo undergrowth, over mountainous land.

17.60 Foot of descent, bears N. and S; leave mountainous land and ocotillo undergrowth; continue over rolling land, through scattered cat claw and greasewood undergrowth.

27.60 Leave cat-claw undergrowth, bears N. and S.
 Difference between measurements of 74.41 chs. from Mon. 8 by two sets of chainmen is 2 links; position of the middle point is
 By 1st set, 74.40 chs.,
 By 2nd set, 74.42 chs; the mean of which is 74.41 chs.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 179th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 179 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. This cor. 733.3 lks. N. of the position of temp.cor.
Land, mountainous and rolling.

Soil, limestone bed rock on surface with fine gray sand lodged on uneven surfaces in E. 12.00 chs; loose red sand in W. 62.40 chs.

No timber; ocotillo, greasewood and cat claw undergrowth.

180th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered greasewood, rubber brush and cat-claw undergrowth.

25.00 Enter rolling sand hills, bear N. and S; leave greasewood and enter mesquite undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 180th mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clerk Boundary 1859 Mile Corner No. 180 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 702.1 lks. N. of the position of temp.cor.
Land, rolling.

Soil, adobe flat, E. 25.00 chs; loose red sand with caliche subsoil from 2 to 3 ft. below surface in W. 55.00 chs.

No timber; greasewood, rubber brush, cat claw and mesquite undergrowth.

181st Mile

S. 89° 43' 15" W.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. On true line, Texas and New Mexico boundary.

Over rolling sand hills, through scattered mesquite and sage brush undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 181st mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas " on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 181 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 672.7 lks. W. of the position of temp.cor. land, rolling sand hills.

Soil, loose red sand on surface with caliche subsoil from 1 to 3 ft. below surface.

No timber; mesquite and sage brush undergrowth.

182nd Mile

S. 89° 43'15 " W.

On true line, Texas and New Mexico boundary.

Over rolling sand hills, through scattered mesquite and sage brush undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of the middle point

By 1st set, 79.985 chs.,

By 2nd set, 80.015 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 182nd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 182 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. This cor. 645.6 lks. N. of the position of temp.cor. Land, rolling sand hills. Soil, loose red sand on surface, with caliche subsoil 2 ft. below surface. No timber; mesquite and sage brush undergrowth. Sept. 2, 1911.

Sept. 1, 1911: 183rd Mile
S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling sand hills, through scattered mesquite and sage brush undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 183rd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 183 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 620.4 lks. N. of the position of temp.cor. Land, rolling sand hills.

Soil, loose red sand on surface, with caliche subsoil from 2 to 3 ft. below surface.

No timber; mesquite and sage brush undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

184th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling sand hills through scattered mesquite and sage brush undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 6 links; position of the middle point is

By 1st set, 79.97 chs.,

By 2nd set, 80.03 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground, for the 184th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No 184 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable. This cor. 597.6 lks. N. of the position of temp. cor.

Land, rolling sand hills

Soil, loose red sand on surface with caliche subsoil from 2 to 3 ft. below surface.

No timber; mesquite and sage brush undergrowth.

185th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling sand hills, through scattered mesquite and sage brush undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

Chains.
80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 185th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 185 General Land Office Reestablishment 1911 United States Boundary Commission". Pits impracticable.

This corner 576.5 lks. N. of the position of temp. cor. Land, rolling sand hills.

Soil, loose red sand on surface, with caliche subsoil from 2 to 3 ft. below surface.

No timber; mesquite and sage brush undergrowth.

186th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling sand hills, through scattered sage brush and mesquite undergrowth.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 79.99 chs.,

By 2nd set, 80.01 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 186th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 186 General Land Office Reestablishment 1911 United States Boundary Commission." Pits imprac-

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains

ticable.

This cor. 557.3 lks. N. of the position of temp.cor.

Land, rolling sand hills.

Soil, loose red sand on surface, with caliche subsoil from 2 to 3 ft. below surface.

No timber; mesquite and sage brush undergrowth.

187th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite and sage brush undergrowth.

No difference between measurements of 80.00 chs. by two setsof chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 187th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 187 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 540.4 lks. N. of the position of the temp. cor.

Land, rolling sand hills.

Soil, loose red sand on surface, with caliche subsoil from 2 to 3 ft. below the surface.

No timber; mesquite and sage brush undergrowth.

188th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling sand hills, through scattered mesquite undergrowth.

Difference between measurements of 80.00 chs. by

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. two sets of chainmen is 4 links; the position of the middle point is

By 1st set, 79.98 chs.,

By 2nd set, 80.02 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 188th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 188 General Land Office Reestablishment 1911 United States Boundary Commission. " Pits impracticable.

This cor. 525.5 lks. N. of the position of temp. cor. land, rolling sand hills.

Soil, loose red sand on surface, with caliche subsoil 2 ft. below surface.

No timber; mesquite undergrowth.

Sept. 1, 1911.

Aug. 31, 1911:

189th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling sand hills, through scattered mesquite undergrowth.

46.20

Wagon road, bears NW. and SE.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 189th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and

RESURVEY TEXAS AND NEW MEXICO BOUNDARY. 32ND PARALLEL.

Chains	<p>marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 189 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.</p> <p>This cor. 512.8 lks. N. of the position of temp.cor. Land, rolling sand hills.</p> <p>Soil, loose red sand on surface with caliche subsoil from 1 to 2 ft. below surface.</p> <p>No timber; mesquite undergrowth.</p>
80.00	<p>190th Mile</p> <p>S. 89° 43' 15" W.</p> <p>On true line of Texas and New Mexico boundary.</p> <p>Over rolling land, through scattered mesquite undergrowth.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is</p> <p>By 1st set, 79.99 chs.,</p> <p>By 2nd set, 80.01 chs; the mean of which is</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 190th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 190 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.</p> <p>This cor. 502.0 lks. N. of the position of temp.cor. Land, rolling.</p> <p>Soil, loose red sand on surface with caliche subsoil 2 ft. below surface.</p> <p>No timber; mesquite undergrowth.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

191st Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite and heavy bear grass undergrowth.

25.00

Wagon road, bears NE. and SW.

43.00

Wagon road, bears N. and S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 4 links; position of the middle point is

By 1st set, 79.98 chs.,

By 2nd set, 80.02 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 191st mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 191 General Land Office Reestablishment 1911 United States Boundary Commission." Fits impracticable.

This corner 493.1 lks. N. of the position of temp. cor.

Land, rolling.

Soil, loose red sand on surface with caliche subsoil 2 ft. below surface.

No timber; mesquite and bear grass undergrowth.

192nd Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite and heavy bear grass undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains. 21.59	E.P. & S. W. R. R. track bears N. 28° 20' E. and S. 28° 20' W.
22.50	Wire fence, bears N. NE and S. SW.
23.00	Wagon road, bears N. NE and S. SW
80.00	<p>Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of the middle point is</p> <p>By 1st set, 79.985 chs.,</p> <p>By 2nd set, 80.015 chs; the mean of which is</p> <p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 192nd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 192 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.</p> <p>This cor. 486.6 lks. N. of the position of the temp. cor.</p> <p>Land, rolling.</p> <p>Soil, loose red sand and limestone gravel on surface, with caliche subsoil 1 ft. below surface.</p> <p>No timber; mesquite and bear grass undergrowth.</p> <p>At a point on the secant 4.866 chs. S. of this corner on Aug. 10th I determined the azimuth of the secant as follows:</p> <p>Horizontal angles read from flag on secant to E. to Sun. Latitude -32° 00' 00" Declination 15° 46' 48" N.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle.
+	D. 9h 5m 55s	S. 9° 54' 30"	44° 36' 30"
+	R. 9h 8m 20s	S. 9° 44' 00"	44° 42' 00"
	Means	S. 9° 49' 15"	44° 39' 15"
			Par. + 6"
			Ref. - 59"
			h. 44° 38' 22"
	Sun's azimuth	S. 80° 25' 21" E.	
		S. 90° 14' 36" E.	
	Bearing of secant	S. 89° 45' 24" W.	
	cos. lat. 9.928420	sin. dec. 9.434480	tan. lat. 9.795789
	" h <u>9.852201</u>	<u>9.780621</u>	" h <u>9.994534</u>
	9.780621	9.653859	9.790323
			.61705
		cos. azimuth .45067	.45067
			<u>.16638</u>

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 9h 11m 43s	S. 10° 51' 00"	45° 49' 00"
+	R. 9h 13m 50s	S. 10° 38' 30"	46° 4' 30"
	Means	S. 10° 44' 45"	45° 56' 45"

Note.- This observation does not check with the others of the series, and has not been considered in this calculation.

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 9h 15m 58s	S. 11° 39' 00"	46° 43' 00"
+	R. 9h 18m 36s	S. 11° 31' 00"	46° 52' 00"
	Means	S. 11° 35' 00"	46° 47' 30"
			Par. + 6"
			Ref. - 6.55"
			h. 46° 46' 41"
	Sun's azimuth	S. 78° 39' 08" E.	
		S. 90° 14' 08" E.	
	Bearing of secant	S. 89° 45' 52" W.	
	cos. lat. 9.928420	sin. dec. 9.434480	tan. lat. 9.795789
	" h <u>9.835580</u>	<u>9.764000</u>	" h <u>10.026972</u>
	9.764000	9.670480	9.822761
		.46815	.66491
			.46815
	cos. azimuth		<u>.19676</u>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

S. 89° 45' 57" W.	Mean bearing of secent at point of observation
S. 89° 45' 11" W.	S. 89° 45' 38" W.

193rd Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over undulating prairie land, through scattered mesquite and bear grass undergrowth.

2.40 Wire fence, bears N. and S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 80.005 chs.,

By 2nd set, 79.995 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 193rd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 193 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 481.9 lks. N. of the position of temp.cor. Land, undulating prairie.

Soil, loose red sand on surface with caliche subsoil 1 ft. below surface.

No timber; mesquite and bear grass undergrowth.

194th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over undulating prairie land, through mesquite and bear grass undergrowth.

10.00 Leave sandy land, and enter gravel.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 80.01 chs.,

By 2nd set, 79.99 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 194th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 194 General Land Office Reestablishment 1911 United States Boundary Commission." Pit impracticable.

This cor. 488.9 lks. N. of the position of temp. cor. Land, undulating.

Soil, loose red sand on surface with caliche subsoil 18 ins. below the surface, in E. 10.00 chs; caliche gravel and sand on surface with caliche subsoil from 6 to 18 ins. below the surface, in W. 70.00 chs.

No timber; mesquite and bear grass undergrowth.

Aug. 31, 1911.

Aug. 30, 1911: 195th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over undulating land, through scattered bear grass undergrowth.

3.10

Wire fence, bears N. and S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 195th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 195 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 477.6 lks. N. of the position of temp.cor.
Land, undulating prairie.

Soil, firm red sand and caliche gravel on surface,
with caliche subsoil 2 ft. below surface.

No timber; bear grass undergrowth.

196th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling prairie land, through scattered bear
grass undergrowth.

37.40

Old railroad grade, bears N. and S.

Difference between measurements of 80.00 chs. by two
sets of chainmen is 1 link; position of the middle point
is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 23 ins. into the ground for the 196th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 196 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.	<p>This cor. 478.1 lks. N. of the position of temp.cor. Land, rolling.</p> <p>Soil, firm red sandy loam and caliche gravel on surface, with caliche subsoil 2 ft. below surface.</p> <p>No timber; bear grass undergrowth.</p>
5.50	<p style="text-align: center;">197th Mile S. 89° 43' 15" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Over rolling land, through scattered bear grass undergrowth.</p> <p>Draw, drains NE.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is</p> <p>By 1st set, 79.99 chs.,</p> <p>By 2nd set, 80.01 chs; the mean of which is</p>
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 197th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 197 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.</p> <p>This cor. 480.3 lks. N. of the position of temp.cor. Land, rolling.</p> <p>Soil, firm red sand and caliche gravel on surface with caliche subsoil 1 ft. below surface.</p> <p>No timber; bear grass undergrowth.</p>

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

198th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered mesquite and bear grass undergrowth.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 198th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 198 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 484.4 lks. N. of the position of temp. cor. Land, rolling.

Soil, firm red sand and limestone gravel on surface with limestone bed rock 2 ft. below surface.

No timber; mesquite and bear grass undergrowth.

199th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over rolling land, through scattered greasewood, rubberbrush and mesquite undergrowth.

64.00

Leave rolling land, and mesquite and greasewood undergrowth, bears N. and S; ascend on E. slope to spur, over mountainous land, through heavy lichigi and scattered ocotillo undergrowth.

77.00

Spur from ridge, slopes NE; descend on NW. slope.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 80.01 chs.,

By 2nd set, 79.99 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 199th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 199 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable, raise a mound of stone 4 ft. base, 1 ft. high around post.

This cor. 490.1 lks. N. of the position of temp.cor. Land, rolling and mountainous.

Soil, firm red sandy loam and limestone gravel on surface, with limestone bed rock 2 ft. below surface on E. 64 chs; limestone bed rock on surface, with fine, loose sand lodged on uneven surfaces in W. 16.00 chs.

No timber; greasewood, rubberbrush, mesquite, ocotillo and lichigi undergrowth.

At a point on the secant 4.901 chs. S. of this corner on August 11, 1911, I observed the sun as follows: Horizontal angles read from flag on secant to E. to Sun. Latitude $-32^{\circ} 00' 00''$ N. Declination $-15^{\circ} 29' 44''$ N.

Sun

L.M. Time A.M.	Hor. Angle	Vert. Angle
D. 8h 29m 55s	S. $4^{\circ} 35' 00''$	$36^{\circ} 38' 00''$
R. 8h 32m 32s	S. $4^{\circ} 24' 00''$	$36^{\circ} 45' 30''$
Means	S. $4^{\circ} 29' 30''$	$36^{\circ} 41' 45''$

Per.+	7"
Ref.-	1' 17"
h.	$36^{\circ} 40' 35''$

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

	Sun's azimuth	S. 4° 29' 30" E.		
	Bearing of secant	S. 90° 19' 51" E.		
		S. 89° 40' 9" W.		
	cos. lat.	9.928420	sin. dec.	9.426777
	" h	9.904186		tan. lat.
		9.832606		" h
				9.872002
				9.667791
			.39280	.46536
	cos. azimuth			.39280
				.07256
Sun	L.M. Time	A.M.	Hor. Angle	Vert. Angle
+	D.	8h 35m 28s	S. 5° 22' 30"	37° 48' 00"
+	R.	8h 37m 47s	S. 5° 9' 00"	37° 51' 00"
	Means		S. 5° 15' 45"	37° 49' 30"
			Par.+	7"
			Ref.-	1' 14"
			h.	37° 48' 23"
	Sun's azimuth	S. 85° 3' 45" E.		
	Bearing of secant	S. 90° 19' 30" E.		
		S. 89° 40' 30" W.		
	cos. lat.	9.928420	sin. dec.	9.426777
	" h	9.897675		tan. lat.
		9.826095		" h
				9.889782
				9.685571
			.39873	.48481
	cos. azimuth			.39873
				.08608
Sun	L.M. Time	A.M.	Hor. Angle	Vert. Angle
+	D.	8h 40m 51s	S. 6° 11' 30"	38° 57' 00"
+	R.	8h 43m 27s	S. 6° 00' 30"	39° 3' 30"
	Means		S. 6° 6' 00"	39° 00' 15"
			Par.+	7"
			Ref.-	1' 11"
			h.	38° 59' 11"
	Sun's azimuth	S. 84° 14' 2" E.		
	Bearing of secant	S. 90° 20' 2" E.		
		S. 89° 39' 58" W.		
	cos. lat.	9.928420	sin. dec.	9.426777
	" h	9.890586		tan. lat.
		9.819006		" h
				9.908158
				9.703947
			.40529	.50576
	cos. azimuth			.40529
				.10047

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Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 8h 46m 39s	S. 7° 4' 00"	40° 10' 00"
+	R. 8h 49m 40s	S. 6° 56' 30"	40° 23' 00"
	Means	<u>S. 7° 00' 15"</u>	<u>40° 16' 30"</u>
		Par.+	7"
		Ref.-	1' 9"
		h.	<u>40° 15' 28"</u>
	Sun's azimuth	<u>S. 83° 19' 10" E.</u>	
		S. 90° 19' 25" E.	
	Bearing of secant	S. 89° 40' 35" W.	
	cos. lat.	9.928420	sin. dec.
	" h	<u>9.882607</u>	9.426777
		9.811027	9.811027
			9.615750
			tan. lat.
			9.795789
			9.927779
			<u>9.723568</u>
		.41281	.52914
			<u>.41281</u>
	cos. azimuth		.11633
	S. 89° 40' 9" W.		
	S. 89° 40' 30" W.		
	S. 89° 39' 58" W.		
	S. 89° 40' 35" W.		
		Mean bearing of secant at point of observation	S. 89° 40' 18" W.

200th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over mountainous land, through scattered mesquite, greasewood, rubber brush and bear grass undergrowth.

.20	Draw, drains NE; ascend on SE. slope to spur.
42.00	Top of ascent, spur from ridge, slopes NE; descend on NW. slope.
57.00	Draw, drains NE; ascend on SE. slope.
65.00	Spur from ridge, slopes NE; descend on NW. slope.
76.00	Draw, drains NE; ascend on gradual E. slope.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 2 links; position of the middle point is
	By 1st set, 80.01 chs.,
	By 2nd set, 79.99 chs; the mean of which is.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.		
80.00	<p>Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 200th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 200 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.</p> <p>Raise a mound of stone, 4 ft. base, 1 ft. high around corner.</p> <p>This corner 451.2 lks. N. of the position of temp. cor. Point is on E. point of low spur.</p> <p>Land, mountainous.</p> <p>Soil, loose gray sand and limestone gravel on surface with limestone bed rock 6 ins. below surface, and cropping to surface on tops and steepest slopes of ridges and spurs.</p> <p>No timber; mesquite, greasewood, rubber brush and bear grass undergrowth.</p>	
	<p>201st Mile</p> <p>S. 89° 43' 15" W.</p> <p>On true line, Texas and New Mexico boundary.</p> <p>Ascend on SE. slope to spur, over mountainous land, through scattered mesquite, greasewood, rubber brush and bear grass undergrowth.</p>	
7.50	Spur from ridge, slopes SE; descend on W. slope.	
14.80	Draw, drains N.NE; ascend on SE. slope	
23.50	Low spur from ridge, slopes NE; desc. on NW. slope.	
32.50	Draw, drains NE; ascend on broken E. slope at foot	
	of Franklin Mountains.	
69.00	Commence ascent of steep E. slope, over mountainous	
	land.	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Difference between measurements of 80.00 chs. by two sets of chainmen is 3 links; position of the middle point is

By 1st set, 79.985 chs.,

By 2nd set, 80.015 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 201st mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 201 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

Point is on steep NE. slope, 10.00 chs. below middle of a saddle in ridge.

This cor. 413.2 lks. N. of the position of temp. cor. Land, mountainous.

Soil, loose gray sand and limestone gravel and broken rock on surface with limestone bed rock 6 ins. below surface, and cropping to surface on tops and steepest slopes of ridges and spurs.

No timber; mesquite, greasewood, rubber brush and bear grass undergrowth.

202nd Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Ascend on steep E. slope through scattered greasewood, cat claw and ocotillo undergrowth, over mountainous land.

10.00

Eastern ridge of Franklin mountains, bears N. and S; descend on steep broken NW. slope.

24.00

Foot of steep descent, bears N. and SW; continue on N. foot of ridge.

31.00

N. point of low spur from ridge.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

45.00 Commence ascent on steep NE. slope.

63.50 Ridge, bears NW. and SE; descend on broken SW. slope.

80.00 Point for corner falls on solid rock, at foot of cliff, slopes SE., on insecure ground.

Difference between measurements of 80.80 chs. by two sets of chainmen is 2 links; position of the middle point is

By 1st set, 80.79 chs.,

By 2nd set, 80.81 chs; the mean of which is

80.80 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 16 ins. into the ground for the 202.01 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 202.01 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

Post is set 16 ins. in the ground on limestone bed rock.

I raise a mound of stone 4 ft. base, 20 ins. high, around corner.

Point is about one half way down a S. slope from ridge.

This cor. 376.3 lks. N. of the position of temp. cor. land, mountainous.

Soil, limestone bed rock near surface, with loose gray sand and gravel lodged on uneven surfaces.

No timber; greasewood, cat claw and ocotillo undergrowth.

August 30, 1911.

August 29, 1911: 203rd Mile
S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary, distance counting from the point for the 202nd mile corner.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Over mountainous land, through scattered greasewood and ocotillo undergrowth.

Along S. slope from ridge.

- 1.50 Spur from ridge, slopes S; descend on steep W. slope.
 13.40 Draw, drains SE; ascend on steep NE. slope.
 18.20 Spur from ridge, slopes N; descend on W. slope.
 21.00 Draw, drains N; ascend on NE slope.
 28.00 High rocky spur from ridge, slopes NW; descend on steep W. slope.
 36.00 Draw, drains NW; ascend on NE slope.
 45.00 High rocky spur from ridge, slopes N.NW; descend on steep broken W. slope.
 55.50 Draw, drains N; ascend on E. slope.
 60.50 Spur from ridge, slopes N; descend on W. slope.
 76.00 Foot of steep descent; descend gradually.

Difference between measurements of 79.20 chs by two sets of chainmen is 4 links; position of the middle point is

By 1st set, 79.22 chs.,

By 2nd set, 79.18 chs; the mean of which is 79.20 chs. from 202.01 mile corner.

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,

filled with concrete, flanged at the bottom and surmounted with a brass cap, 17 ins. into the ground for the 203rd mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 203 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

Post is set 17 ins. in the ground, on limestone bedrock; raise a mound of stone 6 ft. base, 1 ft. high around post.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

Point is on top of a low spur from ridge, slopes N.
This cor. 341.8 lks. N. of the position of temp.cor.
Land, mountainous.

Soil, firm gray sand and limestone gravel and broken
rock on surface, with limestone bed rock 6 ins. below
surface, and cropping to surface on tops and steepest
slopes from ridges and spurs.

No timber; greasewood and ocotillo undergrowth.

At a point on the secant 3.418 chs. S. of mile corner
No. 203, on August 12th, I observed the sun, to determine
the azimuth of the secant, as follows:

Horizontal angles read from flag on secant to E. to
Sun.

Latitude $-32^{\circ} 00' 00''$ N. Declination $-15^{\circ} 11' 20''$ N.

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 9h 18m 39s	S. $12^{\circ} 21' 00''$	$46^{\circ} 37' 30''$
+	R. 9h 21m 38s	S. $12^{\circ} 16' 00''$	$46^{\circ} 49' 30''$
	Means	S. $12^{\circ} 18' 30''$	$46^{\circ} 43' 30''$

Par.+ 6"

Ref.- 55"

h. $46^{\circ} 42' 41''$

Sun's azimuth S. $77^{\circ} 42' 52''$ E.

S. $90^{\circ} 1' 22''$ E.

Bearing of secant S. $89^{\circ} 58' 38''$ W.

cos.lat. 9.928420 sin.dec. 9.418305 tan.lat. 9.795789

" h. 9.836118 " h. 9.764538 " h. 10.025960

9.764538 9.653767 9.821749

.66336

.45057

.45057

cos.azimuth

.21279

Sun	L.M. Time A.M.	Hor. Angle	Vert. Angle
+	D. 9h 24m 19s	S. $13^{\circ} 23' 00''$	$47^{\circ} 47' 30''$
+	R. 9h 27m 28s	S. $13^{\circ} 20' 00''$	$48^{\circ} 00' 30''$
	Means	S. $13^{\circ} 21' 30''$	$47^{\circ} 54' 00''$

Par.+ 6"

Ref.- 52"

h. $47^{\circ} 53' 14''$

Sun's azimuth S. $76^{\circ} 40' 19''$ E.

S. $90^{\circ} 1' 49''$ W.

Bearing of secant S. $89^{\circ} 58' 11''$ W.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

cos.lat.	9.928420	sin.dec.	9.418305	tan.lat.	9.795789
" h.	9.826456		9.754876	" h	10.043844
	<u>9.754876</u>		<u>9.663429</u>		<u>9.839631</u>

	.46071		.69124
--	--------	--	--------

	.46071
--	--------

	<u>.23053</u>
--	---------------

cos.azimuth

Sun

L.M. Time A.M.

Hor. Angle

Vert. Angle

+

D. 9h 30m 4s

S. 14° 29' 00"

48° 59' 00"

+

R. 9h 33m 7s

S. 14° 25' 30"

49° 12' 00"

Means

S. 14° 27' 15"49° 5' 30"

Par.+ 6"

Ref.- 50"

h. 49° 4' 46"

Sun's azimuth

S. 75° 34' 15" E.

S. 90° 1' 30" E.

Bearing of secant

S. 89° 58' 30" W.

cos.lat.	9.928420	sin.dec.	9.418305	tan.lat.	9.795789
" h	9.816249		9.744669	" h	10.062033
	<u>9.744669</u>		<u>9.673636</u>		<u>9.857842</u>

	.47167		.72085
--	--------	--	--------

	.72085
--	--------

	<u>.47167</u>
--	---------------

	<u>.24918</u>
--	---------------

cos. azimuth

Sun

L.M. Time A.M.

Hor. Angle

Vert. Angle

+

D. 9h 36m 13s

S. 15° 42' 00"

50° 15' 00"

+

R. 9h 39m 47s

S. 15° 45' 00"

50° 33' 30"

Means

S. 15° 43' 30"50° 24' 15"

Par.+ 6"

Ref.- 47"

h. 50° 23' 34"

Sun's azimuth

S. 74° 18' 15" E.

S. 90° 1' 45" E.

Bearing of secant

S. 89° 58' 15" W.

cos.lat.	9.928420	sin.dec.	9.418305	tan.lat.	9.795789
" h	9.804494		9.732914	" h	10.082240
	<u>9.732914</u>		<u>9.685391</u>		<u>9.878029</u>

	.48461		.75514
--	--------	--	--------

	.75514
--	--------

	<u>.48461</u>
--	---------------

cos.azimuth

.27053

S. 89° 58' 38" W.

S. 89° 58' 11" W.

S. 89° 58' 30" W.

S. 89° 58' 15" W.

Mean bearing of secant at point
of observation

S. 89° 58' 24" W.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

204th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over mountainous land, through scattered greasewood, catclaw and bear grass undergrowth.

- 7.00 Draw, drains N.NW; continue across spur.
- 10.30 Spur from ridge, slopes N.
- 35.30 Draw, drains NW.
- 38.00 Spur from ridge, slopes N.
- 44.80 Spur from ridge, slopes N.
- 64.00 Draw, drains S; asc. on E. slope.
- 68.30 Spur from ridge, slopes S.
- 76.00 Draw, drains S.
- No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long, 3 in. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 20 ins. into the ground for the 204th mile corner. The top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 204 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.
- Post is set 20 ins. in the ground on bed rock; raise a mound of stone 3 ft. base, 15 ins. high around post.
- This cor. 309.2 lks. N. of the position of temp. cor. Land, mountainous.
- Soil, loose gray sand and limestone gravel and broken limestone rock on surface, with limestone bed rock 6 ins. below surface, and cropping to surface on steepest slopes.
- No timber; greasewood, cat claw and bear grass undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

205th Mile

S. 89° 43' 15" W.

On true line, Texas and New Mexico boundary.

Over mountainous land through scattered greasewood and ocotillo undergrowth.

- 5.00 Draw, drains SW; ascend on SE. slope.
- 13.00 Spur from ridge, slopes S; descend on W. slope.
- 15.00 Draw, drains S; ascend on gradual E. slope.
- 23.00 Low ridge, bears NW and SE; desc. on SW. slope.
- 25.00 Draw, drains SE; ascend on NE slope.
- 32.00 Spur from ridge, slopes SE; descend on SW slope.
- 37.00 Draw, drains SE; ascend on steep E. slope.
- 42.20 Western ridge of Franklin Mountains, bears N. and S.
No difference between measurements of 42.33 chs.
by two sets of chainmen.
- 42.33 Clark Monument No. 4.
A mound of stone 6 ft. base, 2 ft. high.
This mound is in proper position for monument No. 4 according to topographical sketch of Clark's. It has always been recognized locally as a monument on the Clark line and has been adopted in closing the U.S. public land surveys on the Texas and New Mexico boundary.
To perpetuate the location of this mound I construct at its center a concrete monument, having a cubical base 30 ins. square, set 30 ins. into the ground, and a superstructure in the form of a frustum of a cone encased in galvanized iron, having a lower diameter of 24 ins. an upper diameter of 18 ins. and projecting 30 ins. above ground; in the top of which there is embedded a circular brass plate 6 ins. in diameter. The plate is marked in the center by an E. and W. division line 2 ins. long with "TEXAS" on the S. and "NEW MEXICO" on the N. thereof, and also marked "CLARK BOUNDARY 1859 CLARK MON. NO. 4 IN THE NORTH HALF "GENERAL LAND OFFICE REESTABLISHMENT 1911 UNITED STATES BOUNDARY COMMISSION" in the S. half.

Aug. 29, 1911

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

RANDOM LINE

Clark Monument No. 4 at 204th M. 42.33 chs. to Rio Grande.

Aug. 12: I offset from point on the secant 2.875 chs. S. of Monument No. 4, to Monument No. 4 and deflect 4.5' to the right.

I set a flag at Monument No. 4 and

At a point on old secant 41.22 chs. W. of Monument No. 4, I offset to a point 2.929 chs. N; project new secant from Monument No. 4 through this point.

Continue on secant from Monument No. 4, at 204 mile 42.33 ch. point setting temporary mile corners at intervals of 80.00 chs. by two sets of chainmen. Distance counting from 204 M. cor.

Temporary mile corner No. 205, at end of day's run.

Aug. 12, 1911.

Aug. 13:

Continue on secant from temporary mile corner No. 205.

Temporary mile corner No. 208, at end of day's run.

Aug. 13, 1911.

Aug. 24:

Continue on secant from mile corner No. 208

Temporary mile corner No. 209 at end of day's run.

Aug. 24, 1911.

Aug. 25:

Continue on secant from mile corner No. 209.

Temporary mile corner No. 209 plus

Set temporary mile corner No. 209.8312 at intersection of secant with the Rio Grande.

Aug. 25, 1911.

66.30

TRUE LINE

True line, Clark Monument No. 4 to Rio Grande.

The position of the parallel west from Mon. No. 4 with reference to the random secant westward from said monument is based on direct solar observations for azimuth at the temporary 203 and 209 mile corners, recorded in true line notes.

August 29, 1911: 205th Mile
West

On true line, Texas and New Mexico boundary, from Clark Monument No. 4, at 204 M 42.33 ch. point, measurement counting from mile corner No. 204.

Descend on steep broken W. slope through scattered greasewood and cat claw undergrowth, over mountainous land.

55.30 Spur from ridge, slopes NW.

60.00 Spur from ridge, slopes N.NW

63.30 Draw, drains NW; leave mountainous land, bears N. and S, continue out over rolling land.

Difference between measurements of 37.67 chs. from Mon. 4 by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 37.665 chs.,

By 2nd set, 37.675 chs; the mean of which is 37.67 chs.

84.00 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 22 ins. into the ground for the 205th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked "Clark Boundary 1859 Mile Corner No. 205 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This post is 22 ins. in the ground on bed rock; raise

Handwritten calculations in the left margin:

$$\begin{array}{r} 37.67 \\ 24.60 \\ \hline 13.07 \\ 24.60 \\ \hline 37.67 \\ 24.60 \\ \hline 13.07 \\ 24.60 \\ \hline 37.67 \end{array}$$

$$\begin{array}{r} 37.67 \\ 24.60 \\ \hline 13.07 \\ 24.60 \\ \hline 37.67 \\ 24.60 \\ \hline 13.07 \\ 24.60 \\ \hline 37.67 \end{array}$$

$$\begin{array}{r} 37.67 \\ 24.60 \\ \hline 13.07 \\ 24.60 \\ \hline 37.67 \\ 24.60 \\ \hline 13.07 \\ 24.60 \\ \hline 37.67 \end{array}$$

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

a mound of stone, 3 ft. base, 1 ft. high around post.
 This corner is 100 ft. above W. foot of Franklin Mountains.
 This corner 1.6 lks. S. of the position of temp.cor. Land, mountainous.
 Soil, limestone bed rock on surface, with loose gray sand and limestone gravel lodged on uneven surfaces.
 No timber; greasewood and cat-claw undergrowth.

206th Mile
 West
 On true line, Texas and New Mexico boundary over rolling land.

Descend on gradual W. slope, through scattered mesquite greasewood and cat-claw undergrowth.

- 17.50 Draw, drains S; continue across narrow valley.
- 21.90 Draw, drains S.
- 55.60 Draw, drains S.
- 66.00 Draw, drains S.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 Set a hollow iron post 36 ins. long, 3 ins. in dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 206th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 206 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 3.5 lks. S. of the position of temp.cor. Land, rolling.

Soil, loose gray sand and limestone gravel on surface with limestone bed rock from 6 to 24 ins. below surface in E. 50.00 chs; loose red sand in W. 30.00 chs.

No timber; mesquite, greasewood and cat claw undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

207th Mile

West

On true line, Texas and New Mexico boundary,
Over rolling land, through scattered mesquite,
greasewood, cat-claw and tornillo undergrowth.

45.00

Draw, drains SW.

64.00

Draw, 20 lks. wide, drains SW.

Difference between measurements of 80.00 chs. by two
sets of chainmen is 1 link; position of the middle point
is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00

Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 24 ins. into the ground for
the 207th mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked, "Clark Boundary 1859 Mile
Corner No. 207 General Land Office Reestablishment
1911 United States Boundary Commission." Pits im-
practicable.

Corner is about 1.00 ch. S. of point of low sand hill
bears N. and S.

This cor. 3.5 lks. S. of the position of temp.cor.

Land, rolling.

Soil, loose red sand on surface in E. 53.00 chs;
firm gray sand and limestone gravel on surface, with
limestone bed rock 2 ft. below surface in W. 27.00 chs.

No timber; mesquite, greasewood, cat claw and tornillo
undergrowth.

Handwritten calculations:

$$\begin{array}{r} 79.995 \\ + 80.005 \\ \hline 160.000 \\ \div 2 \\ \hline 80.000 \end{array}$$

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

208th Mile

West

On true line, Texas and New Mexico boundary, over rolling land, through mesquite and greasewood undergrowth.

- 32.00 Telephone line, bears N. and S.
- 42.50 Draw, 20 lks. wide, drains NW.
- 54.30 Draw, 20 lks. wide, drains W.SW; enter town of Anthony.
- 61.587 53 lks. S. of this point is the monument marking a point on the true 32nd parallel of N. latitude, established by Mr. A. D. Kidder, U. S. Examiner of Surveys, in 1903.
- A concrete monument, encased in galvanized iron.
- 66.00 Adobe store building on line.
- 71.60 A. T. and S. F. R. R. track, bears N. 13° W. and S. 13° E.
- 73.00 Valley Mercantile Company's store on line.
- 74.50 Leave store, and continue over cultivated land.
- No difference between measurements of 80.00 chs. by two sets of chainmen.
- 80.00 Set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 208th mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 208 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.
- This cor. 1.6 lks. S. of the position of temp. cor. land, undulating.
- Soil, loose red sand on surface in E. 54.00 chs; firm grey adobe on surface, with river sand 2 ft. below surface in W. 26.00 chs.
- No timber; mesquite and greasewood undergrowth

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Chains.

209th Mile

West

On true line, Texas and New Mexico boundary.

Over level land, through cultivated field.

1.05 Wire fence, bears N. and S.

49.00 E. bank of irrigation ditch, bears N.NW and S.SE

49.25 Center of irrigation ditch flows S.SE

49.50 W. bank of irrigation ditch, and wire fence, bears
N.NW and S.SE.

50.00 Wagon road, bears N.NW and S.SE; continue across
cultivated field.

Difference between measurements of 80.00 chs. by
two sets of chainmen is 1 link; position of the middle
point is

By 1st set, 79.995 chs.,

By 2nd set, 80.005 chs; the mean of which is

80.00 Set a hollow iron post 36 ins. long, 3 ins. dia.,
filled with concrete, flanged at the bottom and sur-
mounted with a brass cap, 25 ins. into the ground for
the 209th mile corner. The top of the cap is divided by
an east and west stamped line 1 inch in length, and
marked "New Mexico" on the north, "Texas" on the south
thereof, and also marked, "Clark Boundary 1859 Mile Cor-
ner No. 209 General Land Office Reestablishment 1911,
United States Boundary Commission." Pits impracticable.

This corner is 4 chs. N. and 9 chs. E. of a turn in
the road from Anthony to the ford of the Rio Grande.

This cor. 2.1 lks. N. of the position of temp.cor.

Land, undulating.

Soil, fine gray adobe on surface, with river sand 2
ft. below surface.

No timber; no undergrowth.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

	At a point on the secant .022 chs. S. of mile corner No. 209 on August 29, I observe the sun to determine the azimuth of the secant as follows:		
	Horizontal angles read from flag on secant to E. to the sun.		
Sun	L.M. Time of Observations 9h 40m a.m.		
	Latitude $-32^{\circ} 00' 00''$	Declination $9^{\circ} 36' 19''$ N.	
		Hor. Angle	Vert. Angle
+	D.	S. $23^{\circ} 58' 30''$	$48^{\circ} 13' 30''$
+	R.	S. $23^{\circ} 39' 30''$	$48^{\circ} 9' 00''$
	Means	S. $23^{\circ} 49' 00''$	$48^{\circ} 11' 15''$
		Par.+	6"
		Ref.-	52"
	Sun's azimuth	h. $4^{\circ} 10' 29''$	
		S. $66^{\circ} 13' 16''$ E.	
		S. $90^{\circ} 2' 16''$ E.	
	Bearing of secant	S. $89^{\circ} 57' 44''$ W.	
	cos. lat.	9.928420	sin. dec. 9.222351
	tan. lat.	9.795789	
	cos. h.	$\frac{9.824036}{9.752456}$	$\frac{9.752456}{9.469895}$
	" h	$\frac{10.048227}{9.844016}$	
		.29505	.69826
	cos. azimuth	$\frac{.29505}{.40321}$	
Sun		Hor. Angle	Vert. Angle
+	D.	S. $24^{\circ} 53' 00''$	$48^{\circ} 59' 30''$
+	R.	S. $24^{\circ} 49' 00''$	$49^{\circ} 8' 00''$
	Means	S. $24^{\circ} 51' 00''$	$49^{\circ} 3' 45''$
		Par.+	6"
		Ref.-	50"
		h. $49^{\circ} 3' 1''$	
	Sun's azimuth	$\frac{S. 65^{\circ} 10' 18'' E.}{S. 90^{\circ} 1' 18'' E.}$	
	Bearing of secant	S. $89^{\circ} 58' 42''$ W.	
	cos. lat	9.928420	sin. dec. 9.222351
	tan. lat.	9.795789	
	" h.	$\frac{9.816504}{9.744924}$	$\frac{9.744924}{9.477427}$
	" h.	$\frac{10.061607}{9.857396}$	
		.30021	.72011
	cos. azimuth	$\frac{.30021}{.41990}$	

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Sun		Hor. Angle	Vert. Angle
+	D.	S. 26° 3' 30"	49° 55' 30"
+	R.	S. 25° 48' 00"	49° 54' 30"
	Means	S. 25° 55' 45"	49° 55' 00"
		Par. +	6"
		Ref. -	48"
		h.	49° 54' 18"
	Sun's azimuth	S. 64° 6' 25" E. S. 90° 2' 10" E.	
	Bearing of secant	S. 89° 57' 50" W.	
	cos. lat.	9.928420	sin. dec. 9.222351
	tan. lat.	9.795789	
	" h	$\frac{9.808924}{9.737344}$	$\frac{9.737344}{9.485007}$
		.30550	h. $\frac{10.074725}{9.870514}$
			.74219
			.30550
	cos. azimuth		.43669

Sun		Hor. Angle	Vert. Angle
+	D.	S. 28° 6' 30"	51° 29' 30"
+	R.	S. 27° 41' 00"	51° 19' 00"
	Means	S. 27° 53' 45"	51° 24' 15"
		Par. +	6"
		Ref. -	46"
		h.	51° 23' 35"
	Sun's azimuth	S. 62° 8' 44" E. S. 90° 2' 29" E.	
	Bearing of secant	S. 89° 57' 31" W.	
	cos. lat.	9.928420	sin. dec. 9.222351
	tan. lat.	9.795789	
	" h	$\frac{9.795167}{9.723587}$	$\frac{9.723589}{9.498762}$
		.31533	h. $\frac{10.097731}{9.893520}$
			.78256
			.31533
	cos. azimuth		.46723
	S. 89° 57' 44" W.		
	S. 89° 58' 42" W.	Mean bearing of secant	at point
	S. 89° 57' 50" W.	of observation	
	S. 89° 57' 31" W.	S. 89° 57' 57" W.	

The times of the several sights on the sun, of this observation are not reported for the reason that the records of the same have been lost, the mean only of the

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Chains. times of the various sights used in determining the sun's declination being of record and is herein reported.

210th Mile

West

On true line, Texas and New Mexico boundary.

Over undulating land, through cultivated land.

8.60 Irrigation ditch, 5 lks. wide, flows S.

8.80 Wire fence, bears N. and S.; leave cultivated land.

9.10 Wagon road, bears N. and S.

9.40 Wire fence, bears N. and S; enter cultivated land.

27.10 Irrigation ditch, flows E. SE.

44.00 Leave cultivated land, bears NW. and E. SE; continue through heavy growth of young cottonwood timber.

Difference between measurements of 52.80 chs. by two sets of chainmen is 1 link; position of the middle point is

By 1st set, 52.79 chs.

By 2nd set, 52.81 chs; the mean of which is

52.80 Set a hollow iron post 36 ins. long, 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 25 ins. into the ground for the 209.66 mile corner. The top of the cap is divided by an east and west stamped line 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof, and also marked, "Clark Boundary 1859 Mile Corner No. 209.66 General Land Office Reestablishment 1911 United States Boundary Commission." Pits impracticable.

This cor. 5.5 lks. N. of the position of temp. cor.

This point is on high land, at edge of timber and at top of gradual descent to Rio Grande, where it will be entirely safe from wash at times of high water. The river at this point is cutting out a channel to the W. and filling in on the E. side.

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Chains.

Descend on gradual SW. slope; leave timber; continue through willow undergrowth.

66.30

East bank of Rio Grande, bears N. $43^{\circ} 45'$ W. and S. $43^{\circ} 45'$ E.

At this point I set a hollow iron post 36 ins. long 3 ins. dia., filled with concrete, flanged at the bottom and surmounted with a brass cap, 24 ins. into the ground for the 209.8312 mile corner; the top of the cap is divided by an east and west stamped line, 1 inch in length, and marked "New Mexico" on the north, "Texas" on the south thereof and also marked "Clark Boundary 1859 Mile Corner No. 209.8312 General Land Office Reestablishment 1911, United States Boundary Commission." Pits impracticable.

This cor. 5.6 lks. N. of the position of temp. cor.

This point is on the present bank of the Rio Grande, on land formed by the deposit from the river, as its bed has receded to the W. The land at this point, as well as that between here and the 209.66 mile point is not over two years old.

The present E. side of the channel of the Rio Grande is 14.50 chs. W. of this point, and bears N. 20° E. and S. 10° E.

Land, undulating.

Soil, loose, red sand.

Cottonwood timber; willow undergrowth.

August 29, 1911.

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In the following table of adjustments the bearings stated in the second column are the bearings at the stations listed in the first column. The bearings listed in the third column are the mean bearings between the mile corners or monuments listed in the first column, and were used in determining the latitudes listed in the fourth column of the various courses between stations. The adjustments in the fifth column are the adjustments of the various stations, to the parallel through the previous Clark monument. The adjustments for falling in the sixth column are the adjustments for the falling of the true parallel at the stations listed in the first column. The adjustments listed in the seventh column are the adjustments made at each station from the temporary point to the true line.

Station	Bearing at cor. or mon.	Mean Bearing bet. mi. cors.	Lat. Lks.	Adj. to Par. Lks.	Adj. for Falling Lks.	Total Adj. Lks.
Mon. No. 31	N. 89° 59' .3 W			S. 1.4	0.0	S. 1.4
		N. 89° 59' .4 W	N. 0.4			
Mi. Cor. No. 2	N. 89° 59' .4 W			S. 1.8	S. 0.9	S. 2.7
		N. 89° 59' .5 W	N. 1.2			
No. 3	N. 89° 59' .6 W			S. 3.0	S. 3.9	S. 6.9
		N. 89° 59' .7 W	N. 0.7			
No. 4	N. 89° 59' .8 W			S. 3.7	S. 6.9	S. 10.6
		N. 89° 59' .9 W	N. 0.2			
No. 5	West			S. 3.9	S. 9.9	S. 13.8
		S. 89° 59' .9 W	S. 0.2			
No. 6	(S. 89° 59' .8 W N. 89° 57' .0 W			S. 3.7	S. 12.9	S. 16.6
		S. 89° 57' .1 W	N. 6.8			
No. 7	N. 89° 57' .2 W			S. 10.5	S. 15.9	S. 26.4
		N. 89° 57' .3 W	N. 6.3			
No. 8	N. 89° 57' .4 W			S. 16.8	S. 18.9	S. 35.7
		N. 89° 57' .5 W	N. 5.8			
No. 9	N. 89° 57' .6 W			S. 22.6	S. 21.9	S. 44.5
		N. 89° 57' .7 W	N. 5.4			
No. 10	N. 89° 57' .8 W			S. 28.0	S. 24.9	S. 52.9
		N. 89° 58' .0 W	N. 4.7			
No. 11	N. 89° 58' .3 W			S. 32.7	S. 27.8	S. 60.5
		N. 89° 58' .6 W	N. 3.3			
No. 12	N. 89° 58' .9 W			S. 36.0	S. 30.8	S. 66.3
No. 12	N. 89° 55' .7 W					

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Station	Bearing at cor. or mon.	Mean Bearing bet. mi. cors.	Lat. Lks.	Adj. to Par. Lks.	Adj. for Falling Lks.	Total Adj. Lks.
No. 13	N. 89° 56' .2 W	N. 89° 56' .0 W	N. 9.3	S. 45.3	S. 33.8	S. 79.1
No. 14	N. 89° 56' .8 W	N. 89° 56' .5 W	N. 8.2	S. 53.5	S. 36.8	S. 90.3
No. 15	N. 89° 57' .3 W	N. 89° 57' .0 W	N. 7.0	S. 60.5	S. 39.8	S. 100.3
No. 16	N. 89° 57' .8 W	N. 89° 57' .6 W	N. 5.6	S. 66.1	S. 42.8	S. 108.9
No. 17	N. 89° 58' .3 W	N. 89° 58' .0 W	N. 4.7	S. 70.8	S. 45.8	S. 116.6
No. 18	N. 89° 58' .9 W	N. 89° 58' .6 W	N. 3.3	S. 74.1	S. 48.8	S. 122.9
No. 19	N. 89° 59' .4 W	N. 89° 59' .2 W	N. 1.9	S. 76.0	S. 51.8	S. 127.8
No. 20	West	N. 89° 59' .7 W	N. 0.7	S. 76.7	S. 54.8	S. 131.5
No. 21	S. 89° 59' .6 W	S. 89° 59' .8 W	S. 0.5	S. 76.2	S. 57.7	S. 133.9
No. 22	S. 89° 59' .1 W	S. 89° 59' .4 W	S. 1.4	S. 74.8	S. 60.7	S. 135.5
No. 23	S. 89° 58' .7 W	S. 89° 58' .9 W	S. 2.6	S. 72.2	S. 63.7	S. 135.9
No. 24	S. 89° 58' .2 W	S. 89° 58' .4 W	S. 3.7	S. 68.5	S. 66.7	S. 135.2
No. 25	S. 89° 57' .8 W	S. 89° 58' .0 W	S. 4.7	S. 63.8	S. 69.7	S. 133.5
No. 26	S. 89° 57' .3 W	S. 89° 57' .6 W	S. 5.6	S. 58.2	S. 72.7	S. 130.9
No. 27	S. 89° 56' .9 W	S. 89° 57' .1 W	S. 6.8	S. 51.4	S. 75.7	S. 127.1
No. 28	S. 89° 56' .5 W	S. 89° 56' .7 W	S. 7.7	S. 43.7	S. 78.7	S. 122.4
No. 29	S. 89° 56' .2 W	S. 89° 56' .4 W	S. 8.4	S. 35.3	S. 81.7	S. 117.0
No. 30	S. 89° 55' .8 W	S. 89° 56' .0 W	S. 9.3	S. 26.0	S. 84.7	S. 110.7
No. 31	S. 89° 55' .4 W	S. 89° 55' .6 W	S. 10.2	S. 15.8	S. 87.6	S. 103.4
No. 32	S. 89° 55' .1 W	S. 89° 55' .2 W	S. 11.1	S. 4.7	S. 90.6	S. 95.3
No. 33	N. 89° 57' .7 W	S. 89° 57' .5 W	N. 5.8	S. 10.5	S. 93.6	S. 104.1
No. 34	N. 89° 57' .9 W	N. 89° 57' .8 W	N. 5.1	S. 15.6	S. 96.6	S. 112.2
No. 35	N. 89° 58' .0 W	N. 89° 58' .0 W	N. 4.7	S. 20.3	S. 99.6	S. 119.9
No. 36	N. 89° 58' .2 W	N. 89° 58' .1 W	N. 4.4	S. 24.7	S. 102.6	S. 127.3
No. 37	N. 89° 58' .3 W	N. 89° 58' .2 W	N. 4.2	S. 28.9	S. 105.6	S. 134.5
No. 38	N. 89° 58' .5 W	N. 89° 58' .4 W	N. 3.7	S. 32.6	S. 108.6	S. 141.2
No. 39	N. 89° 58' .7 W	N. 89° 58' .6 W	N. 3.3	S. 35.9	S. 111.6	S. 147.5
No. 40	N. 89° 58' .8 W	N. 89° 58' .8 W	N. 2.8	S. 38.7	S. 114.6	S. 153.3
No. 41	N. 89° 59' .0 W	N. 89° 58' .9 W	N. 2.6	S. 41.3	S. 117.5	S. 158.8
No. 42	N. 89° 59' .5 W	N. 89° 59' .2 W	N. 1.9	S. 43.2	S. 120.5	S. 163.7
		N. 89° 59' .8 W	N. 0.5			

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Station	Bearing at cor. or mon.	Mean Bearing bet. mi. corse.	Lat.	Adj. to Par.	Adj. for Selling	Total Adj.
			Lks.	Lks.	Lks.	Lks.
Mi. cor. No. 43	West	N. 89° 59' .8 W	N. 0.5	S. 43.7	S. 123.5	S. 167.
No. 44	S. 89° 59' .5 W	S. 89° 59' .8 W	S. 0.5	S. 43.2	S. 126.5	S. 169.
No. 45	S. 89° 59' .0 W	S. 89° 59' .2 W	S. 1.9	S. 41.3	S. 129.4	S. 170.
Mon. No. 26	S. 89° 59' .0 W	S. 89° 59' .0 W		S. 41.3	S. 129.4	S. 170.
Mi. Cor. No. 46	S. 89° 58' .5 W	S. 89° 58' .8 W	S. 2.8	S. 170.7		
No. 47	S. 89° 58' .0 W	S. 89° 58' .2 W	S. 4.2	S. 167.9	S. 3.6	S. 171.
No. 48	S. 89° 57' .5 W	S. 89° 57' .8 W	S. 5.1	S. 163.7	S. 7.3	S. 171.
No. 49	S. 89° 57' .0 W	S. 89° 57' .2 W	S. 6.5	S. 158.6	S. 10.9	S. 169.
No. 50	S. 89° 56' .5 W	S. 89° 56' .8 W	S. 7.5	S. 152.1	S. 14.6	S. 166.
No. 51	S. 89° 56' .3 W	S. 89° 56' .4 W	S. 8.4	S. 144.6	S. 18.3	S. 162.
No. 52	S. 89° 56' .1 W	S. 89° 56' .2 W	S. 8.9	S. 136.2	S. 21.9	S. 158.
No. 53	S. 89° 55' .9 W	S. 89° 56' .0 W	S. 9.3	S. 127.3	S. 25.6	S. 152.
Mon. No. 25	S. 89° 55' .7 W	S. 89° 55' .8 W	S. 8.0	S. 118.0	S. 29.3	S. 147.
Mi. cor. No. 54	S. 89° 55' .7 W	S. 89° 55' .7 W	S. 1.8	S. 110.0	S. 32.4	S. 142.
No. 55	S. 89° 55' .5 W	S. 89° 55' .6 W	S. 10.2	S. 142.4		
Mon. No. 24	S. 89° 55' .5 W	S. 89° 55' .5 W	S. 0.0	S. 140.6	N. 2.3	S. 138.
Mi. cor. No. 56	S. 89° 54' .7 W	S. 89° 55' .1 W	S. 11.4	S. 130.4	N. 15.0	S. 115.
No. 57	S. 89° 53' .9 W	S. 89° 54' .3 W	S. 13.2	S. 130.4	N. 15.1	S. 115.
No. 58	S. 89° 53' .0 W	S. 89° 53' .4 W	S. 15.4	S. 115.3		
No. 59	S. 89° 52' .2 W	S. 89° 52' .6 W	S. 17.2	S. 103.9	S. 14.9	S. 118.
No. 60	S. 89° 51' .7 W	S. 89° 52' .0 W	S. 18.6	S. 90.7	S. 30.0	S. 120.
Mon. No. 22	S. 89° 51' .4 W	S. 89° 51' .6 W	S. 14.1	S. 85.3	S. 45.0	S. 120.
Mi. cor. No. 61	S. 89° 51' .3 W	S. 89° 51' .4 W	S. 5.5	S. 75.3	S. 60.1	S. 118.
No. 62	S. 89° 50' .8 W	S. 89° 51' .0 W	S. 20.0	S. 58.1	S. 60.1	S. 118.
No. 63	S. 89° 50' .3 W	S. 89° 50' .6 W	S. 21.8	S. 39.5	S. 75.1	S. 114.
No. 64	S. 89° 49' .8 W	S. 89° 50' .0 W	S. 23.3	S. 25.4	S. 85.8	S. 111.
No. 65	S. 89° 49' .3 W	S. 89° 49' .6 W	S. 24.2	S. 111.2		
No. 66	S. 89° 48' .8 W	S. 89° 49' .0 W	S. 25.6	S. 105.7	N. 2.6	S. 103.
No. 66	N. 89° 58' .2 W	S. 89° 51' .0 W	S. 20.0	S. 85.7	N. 12.0	S. 73.
No. 67	N. 89° 58' .7 W	S. 89° 50' .6 W	S. 21.8	S. 63.9	N. 21.3	S. 42.
No. 68	N. 89° 59' .2 W	S. 89° 50' .0 W	S. 23.3	S. 40.6	N. 30.7	S. 9.
No. 69	N. 89° 59' .8 W	S. 89° 49' .6 W	S. 24.2	S. 16.4	N. 40.1	N. 23.
No. 70	N. 89° 59' .5 W	S. 89° 49' .0 W	S. 25.6	N. 9.2	N. 49.4	N. 58.
		N. 89° 58' .4 W	S. 3.7	N. 5.5	N. 58.7	N. 64.
		N. 89° 59' .0 W	N. 2.3	N. 3.2	N. 68.1	N. 71.
		N. 89° 59' .5 W	N. 1.2	N. 2.0	N. 77.4	N. 79.
		S. 89° 59' .8 W	S. 0.5	N. 2.5	N. 86.8	N. 89.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Station	Bearing at Mean Bearing		Lat.	Adj. to Par.	Adj. for Falling	Total Adj.
	Cor. or Mon.	Dist. mi. or S.				
Mi. Cor.						
No. 71	S. 89° 58' 1.9 W	S. 89° 59' 1.2 W	S. 1.9	N. 4.4	N. 96.2	N. 100.6
No. 72	S. 89° 58' 1.2 W	S. 89° 58' 1.6 W	S. 3.3	N. 7.7	N. 105.6	N. 113.3
No. 73	S. 89° 57' 1.6 W	S. 89° 57' 1.9 W	S. 4.9	N. 12.6	N. 115.0	N. 127.6
No. 74	S. 89° 56' 1.9 W	S. 89° 57' 1.2 W	S. 6.5	N. 19.1	N. 124.2	N. 143.3
No. 75	S. 89° 56' 1.3 W	S. 89° 56' 1.6 W	S. 7.9	N. 27.0	N. 133.6	N. 160.6
No. 76	S. 89° 55' 1.6 W	S. 89° 56' 1.0 W	S. 9.3	N. 36.3	N. 143.0	N. 179.3
No. 76	N. 89° 59' 1.3 W	N. 89° 59' 1.6 W	N. 0.9	N. 35.4	N. 152.3	N. 187.7
No. 77	West	S. 89° 59' 1.6 W	S. 0.9	N. 36.3	N. 161.7	N. 198.0
No. 78	S. 89° 59' 1.3 W	S. 89° 59' 1.0 W	S. 2.3	N. 38.6	N. 171.1	N. 209.7
No. 79	S. 89° 58' 1.7 W	S. 89° 58' 1.4 W	S. 3.7	N. 42.3	N. 180.4	N. 222.7
80.025	S. 89° 58' 1.0 W	S. 89° 57' 1.7 W	S. 5.4	N. 47.7	N. 189.7	N. 237.4
No. 81	S. 89° 57' 1.4 W	S. 89° 57' 1.0 W	S. 7.0	N. 54.7	N. 199.1	N. 253.8
No. 82	S. 89° 56' 1.7 W	S. 89° 56' 1.4 W	S. 8.4	N. 63.1	N. 208.5	N. 271.6
No. 83	S. 89° 56' 1.1 W	S. 89° 59' 1.8 W	S. 0.9	N. 64.0	N. 217.9	N. 281.9
No. 84	S. 89° 59' 1.4 W	S. 89° 59' 1.2 W	S. 1.9	N. 65.9	N. 227.2	N. 293.1
No. 85	S. 89° 59' 1.0 W	N. 89° 55' 1.1 W	N. 10.9	N. 55.0	N. 236.6	N. 291.6
No. 86	N. 89° 55' 1.5 W	N. 89° 55' 1.3 W	N. 10.0	N. 45.0	N. 246.0	N. 291.0
No. 87	N. 89° 55' 1.9 W	N. 89° 55' 1.7 W	N. 9.1	N. 35.9	N. 255.4	N. 291.3
No. 88	N. 89° 56' 1.3 W	N. 89° 56' 1.5 W	N. 8.2	N. 27.7	N. 264.6	N. 292.3
No. 89	N. 89° 56' 1.7 W	N. 89° 56' 1.9 W	N. 7.2	N. 20.5	N. 274.0	N. 294.5
No. 90	N. 89° 57' 1.1 W	N. 89° 57' 1.4 W	N. 6.1	N. 14.4	N. 283.4	N. 297.8
No. 91	N. 89° 57' 1.8 W	N. 89° 58' 1.2 W	N. 4.2	N. 10.2	N. 292.7	N. 302.9
No. 92	N. 89° 58' 1.5 W	N. 89° 58' 1.8 W	N. 2.8	N. 7.4	N. 302.1	N. 309.5
No. 93	N. 89° 59' 1.1 W	N. 89° 59' 1.4 W	N. 1.4	N. 6.0	N. 311.5	N. 317.5
No. 94	N. 89° 59' 1.8 W	S. 89° 59' 1.8 W	S. 0.5	N. 6.5	N. 320.9	N. 327.4
No. 95	S. 89° 59' 1.5 W	S. 89° 59' 1.2 W	S. 1.9	N. 8.4	N. 330.1	N. 338.5
No. 96	S. 89° 58' 1.8 W	S. 89° 58' 1.4 W	S. 3.7	N. 12.1	N. 339.5	N. 351.6
No. 97	S. 89° 58' 1.1 W	S. 89° 57' 1.8 W	S. 5.1	N. 17.2	N. 348.9	N. 366.1
No. 98	S. 89° 57' 1.5 W	S. 89° 57' 1.2 W	S. 5.9	N. 23.1	N. 357.3	N. 380.4
No. 98.9	S. 89° 56' 1.8 W	S. 89° 56' 1.4 W	S. 9.0	N. 31.7	N. 367.6	N. 399.3
No. 100	S. 89° 56' 1.1 W					
No. 100	N. 89° 54' 1.7 W					

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Station	Bearing at cor. or mon.	Mean Bearing bet. mi. cors.	Lat. Lks.	Adj. to Par. Lks.	Adj. for Falling Lks.	Total Adj. Lks.
Mi. cor. 101.08	N. 89° 55' .1 W	N. 89° 54' .9 W	N. 11.8	H. 20.3	N. 377.4	N. 397.7
102.5	N. 89° 55' .6 W	N. 89° 55' .4 W	N. 16.1	N. 4.2	N. 391.0	N. 395.2
103.285	N. 89° 55' .9 W	N. 89° 55' .8 W	N. 7.7	S. 3.5	N. 398.3	N. 394.8
104.	N. 89° 56' .1 W	N. 89° 56' .0 W	N. 6.7	S. 10.2	N. 405.0	N. 394.8
105.	N. 89° 56' .5 W	N. 89° 56' .3 W	N. 8.6	S. 18.8	N. 414.4	N. 395.6
106.	N. 89° 56' .8 W	N. 89° 56' .6 W	N. 7.9	S. 26.7	N. 423.8	N. 397.1
107.	N. 89° 57' .9 W	N. 89° 57' .4 W	N. 6.1	S. 32.8	N. 433.1	N. 400.3
108.	N. 89° 59' .0 W	N. 89° 58' .4 W	N. 3.7	S. 36.5	N. 442.5	N. 406.0
108.85	N. 89° 59' .9 W	N. 89° 59' .4 W	N. 1.4	S. 37.7	N. 450.5	N. 412.8
110.	S. 89° 58' .9 W	S. 89° 59' .5 W	S. 1.2	S. 36.7	N. 461.2	N. 424.5
111.	S. 89° 57' .8 W	S. 89° 58' .4 W	S. 3.7	S. 33.0	N. 470.5	N. 437.5
112.	S. 89° 56' .7 W	S. 89° 57' .2 W	S. 6.5	S. 26.5	N. 479.9	N. 453.4
113.	S. 89° 56' .0 W	S. 89° 56' .4 W	S. 8.4	S. 18.1	N. 489.3	N. 471.2
114.	S. 89° 55' .3 W	S. 89° 55' .6 W	S. 10.2	S. 7.9	N. 498.6	N. 490.7
115.	S. 89° 54' .7 W	S. 89° 55' .0 W	S. 11.6	N. 3.7	N. 508.0	N. 511.7
116.	S. 89° 54' .0 W	S. 89° 54' .4 W	S. 13.0	N. 16.7	N. 517.4	N. 534.1
117.	S. 89° 53' .3 W	S. 89° 53' .6 W	S. 14.9	N. 31.6	N. 526.7	N. 558.3
118.	S. 89° 52' .7 W	S. 89° 53' .0 W	S. 16.3	N. 47.9	N. 536.0	N. 583.9
Mon. No 16	S. 89° 52' .6 W	S. 89° 52' .6 W	S. 2.0	N. 49.9	N. 537.1	N. 587.0
Mi. Cor. No. 119	S. 89° 52' .0 W	S. 89° 52' .3 W	S. 15.2	N. 602.2	S. 27.7	N. 574.5
No. 120	S. 89° 51' .3 W	S. 89° 51' .6 W	S. 19.5	N. 621.7	S. 59.1	N. 562.6
No. 121	S. 89° 50' .6 W	S. 89° 51' .0 W	S. 20.9	N. 642.6	S. 90.5	N. 552.1
No. 122 Mon. No. 15.	S. 89° 49' .9 W	S. 89° 50' .2 W	S. 22.8	N. 665.4	S. 121.9	N. 543.5
Mon. No. 15	S. 89° 49' .8 W	S. 89° 49' .8 W	S. 5.3	N. 670.7	S. 128.3	N. 542.4
	N. 89° 58' .8 W			00.0	00.0	00.0
Mi. Cor. No. 123	N. 89° 59' .4 W	N. 89° 59' .1 W	N. 1.7	S. 1.7	S. 3.4	S. 5.1
No. 124	S. 89° 59' .8 W	N. 89° 59' .8 W	N. 0.5	S. 2.2	S. 7.7	S. 9.9
No. 125	S. 89° 59' .1 W	S. 89° 59' .4 W	S. 1.4	S. 0.8	S. 12.0	S. 12.8
No. 126	S. 89° 58' .4 W	S. 89° 58' .8 W	S. 2.8	N. 2.0	S. 16.3	S. 14.3
No. 127 Mon. No 14	S. 89° 57' .5 W	S. 89° 58' .0 W	S. 4.7	N. 6.7	S. 20.7	S. 14.0
	S. 89° 57' .1 W	S. 89° 57' .3 W	S. 2.8	N. 9.5	S. 22.6	S. 13.1
No. 128	S. 89° 56' .6 W	S. 89° 56' .8 W	S. 4.2	S. 13.1		
No. 129	S. 89° 55' .6 W	S. 89° 56' .1 W	S. 9.1	S. 8.9	N. 14.5	N. 5.6
No. 130	S. 89° 54' .7 W	S. 89° 55' .2 W	S. 11.2	N. 0.2	N. 40.4	N. 40.6
				N. 11.4	N. 66.2	N. 77.6

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Station	Bearing at cor. or mon.	Mean Bearing bet. mi. cor.	Lat. Lks.	Adj. to Par. Lks.	Adj. for Falling Lks.	Total Adj. Lks.
Mi. Cor		S. 89° 54' .2 W.	S. 13.6			
No. 131	S. 89° 53' .8 W			N. 25.0	N. 92.1	N. 117.1
No. 131	N. 89° 59' .7 W	S. 89° 59' .9 W	S. 0.2			
No. 132	S. 89° 59' .5 W	S. 89° 59' .2 W	S. 1.9	N. 25.2	N. 118.0	N. 143.2
No. 133	S. 89° 58' .8 W	S. 89° 58' .4 W	S. 3.7	N. 27.1	N. 143.8	N. 170.9
No. 134	S. 89° 58' .0 W	S. 89° 57' .6 W	S. 5.6	N. 30.8	N. 169.7	N. 200.5
No. 135	S. 89° 57' .3 W	S. 89° 56' .9 W	S. 7.2	N. 36.4	N. 195.6	N. 232.0
No. 136	S. 89° 56' .5 W	S. 89° 56' .2 W	S. 8.9	N. 43.6	N. 221.4	N. 265.0
No. 137	S. 89° 55' .8 W	S. 89° 55' .4 W	S. 10.8	N. 52.5	N. 247.3	N. 299.8
No. 138	S. 89° 55' .0 W	S. 89° 54' .7 W	S. 12.4	N. 63.3	N. 273.1	N. 336.4
No. 139	S. 89° 54' .3 W	S. 89° 53' .9 W	S. 14.2	N. 75.7	N. 299.0	N. 374.7
No. 140	S. 89° 53' .5 W			N. 89.9	N. 324.9	N. 414.8
No. 140	N. 89° 56' .9 W	N. 89° 57' .0 W	N. 7.0			
No. 141	N. 89° 57' .2 W	N. 89° 57' .4 W	N. 6.1	N. 82.9	N. 350.7	N. 433.6
No. 142	N. 89° 57' .5 W	N. 89° 57' .6 W	N. 5.6	N. 76.8	N. 376.6	N. 453.4
No. 143	N. 89° 57' .8 W	N. 89° 58' .0 W	N. 4.7	N. 71.2	N. 402.5	N. 473.7
No. 144	N. 89° 58' .1 W	N. 89° 58' .2 W	N. 4.2	N. 66.5	N. 428.3	N. 494.8
No. 145	N. 89° 58' .4 W	N. 89° 58' .6 W	N. 3.3	N. 62.3	N. 454.2	N. 516.5
No. 146	N. 89° 58' .7 W			N. 59.0	N. 480.0	N. 539.0
No. 146	N. 89° 48' .7 W	N. 89° 48' .8 W	N. 27.0			
No. 147	N. 89° 49' .0 W	N. 89° 49' .2 W	N. 25.1	N. 32.0	N. 505.9	N. 537.9
No. 148	N. 89° 49' .3 W	N. 89° 49' .4 W	N. 24.6	N. 6.9	N. 531.8	N. 538.7
No. 149	N. 89° 49' .6 W	N. 89° 49' .8 W	N. 23.8	S. 17.7	N. 557.6	N. 539.9
No. 150	N. 89° 49' .9 W	N. 89° 50' .0 W	N. 23.1	S. 41.5	N. 583.5	N. 542.0
No. 151	N. 89° 50' .2 W	N. 89° 50' .4 W	N. 22.2	S. 64.6	N. 609.4	N. 544.8
No. 152	N. 89° 50' .5 W	N. 89° 50' .6 W	N. 21.8	S. 86.8	N. 635.2	N. 548.6
No. 153	N. 89° 50' .8 W	N. 89° 51' .3 W	N. 20.1	S. 108.6	N. 661.1	N. 552.5
No. 154	N. 89° 51' .8 W	N. 89° 52' .4 W	N. 17.7	S. 128.7	N. 686.9	N. 558.2
No. 155	N. 89° 52' .9 W	N. 89° 53' .4 W	N. 15.4	S. 146.4	N. 712.8	N. 566.4
No. 156	N. 89° 53' .9 W	N. 89° 54' .4 W	N. 12.5	S. 161.8	N. 738.7	N. 576.9
No. 157	N. 89° 54' .9 W	N. 89° 55' .4 W	N. 10.7	S. 174.3	N. 764.5	N. 590.2
No. 158	N. 89° 56' .0 W	N. 89° 56' .2 W	N. 4.1	S. 185.0	N. 790.4	N. 605.4
Mon. 12	N. 89° 56' .5 W	N. 89° 56' .6 W	N. 1.5	S. 189.1	N. 802.4	N. 613.3
Mon. 11	N. 89° 56' .7 W	N. 89° 56' .8 W	N. 2.6	S. 1.5	S. 17.1	S. 18.6
Mi. Cor.				S. 18.6		
159	N. 89° 57' .0 W			S. 21.2	N. 10.1	S. 11.1
160	N. 89° 58' .0 W			S. 27.0	N. 40.0	N. 13.0

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Station	Bearing at cor. or mon.	Mean Bearing bet. mi. cors.	Lat.	Adj. to Par.	Adj. for Falling	Total Adj.
			Lks.	Lks.	Lks.	Lks.
Mi. Cor. No. 161	N. 89° 59' .1 W	N. 89° 58' .6 W	N. 3.3	S. 30.3	N. 69.7	N. 39.4
No. 162	S. 89° 59' .9 W	N. 89° 59' .6 W	N. 0.9	S. 31.2	N. 99.5	N. 68.3
No. 163	S. 89° 58' .9 W	S. 89° 59' .4 W	S. 1.4	S. 29.8	N. 129.3	N. 99.5
No. 164	S. 89° 57' .8 W	S. 89° 58' .4 W	S. 3.7	S. 26.1	N. 159.1	N. 133.0
No. 165	S. 89° 56' .8 W	S. 89° 57' .3 W	S. 6.3	S. 19.8	N. 189.0	N. 169.2
No. 166	S. 89° 56' .2 W	S. 89° 56' .5 W	S. 8.2	S. 11.6	N. 218.8	N. 207.2
No. 167	S. 89° 55' .5 W	S. 89° 55' .8 W	S. 9.8	S. 1.8	N. 248.6	N. 246.8
No. 168	S. 89° 54' .8 W	S. 89° 55' .2 W	S. 11.1	N. 9.3	N. 278.4	N. 287.7
No. 169	S. 89° 54' .1 W	S. 89° 54' .4 W	S. 13.0	N. 22.3	N. 308.2	N. 330.5
No. 170	S. 89° 53' .5 W	S. 89° 53' .8 W	S. 14.5	N. 36.8	N. 338.0	N. 374.8
No. 171	S. 89° 52' .8 W	S. 89° 53' .2 W	S. 15.9	N. 52.7	N. 367.8	N. 420.5
No. 172	S. 89° 52' .1 W	S. 89° 52' .4 W	S. 17.7	N. 70.4	N. 397.6	N. 468.0
No. 173	S. 89° 51' .5 W	S. 89° 51' .8 W	S. 19.1	N. 89.5	N. 427.4	N. 516.9
No. 174	S. 89° 50' .8 W	S. 89° 51' .2 W	S. 20.4	N. 109.9	N. 457.2	N. 567.1
No. 175	S. 89° 50' .1 W	S. 89° 50' .4 W	S. 22.3	N. 132.2	N. 487.0	N. 619.2
No. 176	S. 89° 49' .4 W	S. 89° 49' .8 W	S. 23.8	N. 156.0	N. 516.9	N. 672.9
No. 177	S. 89° 48' .8 W	S. 89° 49' .1 W	S. 25.4	N. 181.4	N. 546.7	N. 728.1
No. 177	S. 89° 58' .8 W	S. 89° 58' .4 W	S. 3.7	N. 185.1	N. 576.5	N. 761.6
No. 178	S. 89° 57' .9 W	S. 89° 57' .8 W	S. 0.4	N. 185.5	N. 578.6	N. 764.1
Mon. No. 8	S. 89° 57' .8 W			N. 764.1		
Mi. Cor 179	S. 89° 57' .0 W	S. 89° 57' .4 W	S. 5.7	N. 769.8	S. 36.5	N. 733.3
No. 180	S. 89° 56' .2 W	S. 89° 56' .6 W	S. 7.9	N. 777.7	S. 75.6	N. 702.1
No. 181	S. 89° 55' .3 W	S. 89° 55' .8 W	S. 9.8	N. 787.5	S. 114.8	N. 672.7
No. 182	S. 89° 54' .4 W	S. 89° 54' .8 W	S. 12.1	N. 799.6	S. 154.0	N. 645.6
No. 183	S. 89° 53' .5 W	S. 89° 54' .0 W	S. 14.0	N. 813.6	S. 193.2	N. 620.4
No. 184	S. 89° 52' .6 W	S. 89° 53' .0 W	S. 16.3	N. 829.9	S. 232.3	N. 597.6
No. 185	S. 89° 51' .8 W	S. 89° 52' .2 W	S. 18.1	N. 848.0	S. 271.5	N. 576.5
No. 186	S. 89° 50' .9 W	S. 89° 51' .4 W	S. 20.0	N. 868.0	S. 310.7	N. 557.3
No. 187	S. 89° 50' .0 W	S. 89° 50' .4 W	S. 22.3	N. 890.3	S. 349.9	N. 540.4
No. 188	S. 89° 49' .1 W	S. 89° 49' .6 W	S. 24.2	N. 914.5	S. 389.0	N. 525.5
No. 189	S. 89° 48' .2 W	S. 89° 48' .6 W	S. 26.5	N. 941.0	S. 428.2	N. 512.8
No. 190	S. 89° 47' .4 W	S. 89° 47' .8 W	S. 28.4	N. 969.4	S. 467.4	N. 502.0
		S. 89° 47' .0 W	S. 30.3			

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Station	Bearing at cor. or mon.	Mean Bearing bet. mi. cers.	Lat. Lks.	Adj. to Per. Lks.	Adj. for Falling Lks.	Total Adj. Lks.
Mi. Cor. No. 191	S. 89° 46' .5 W	S. 89° 46' .0 W	S. 32.6	N. 999.7	S. 506.6	N. 493.1
No. 192	S. 89° 45' .6 W	S. 89° 45' .2 W	S. 34.4	N. 1032.3	S. 545.7	N. 486.6
No. 193	S. 89° 44' .8 W	S. 89° 44' .4 W	S. 36.3	N. 1066.7	S. 584.9	N. 481.8
No. 194	S. 89° 44' .1 W	S. 89° 43' .7 W	S. 37.9	N. 1113.0	S. 624.1	N. 488.9
No. 195	S. 89° 43' .3 W	S. 89° 43' .0 W	S. 39.6	N. 1140.9	S. 663.3	N. 477.6
No. 196	S. 89° 42' .6 W	S. 89° 42' .2 W	S. 41.4	N. 1180.5	S. 702.4	N. 478.1
No. 197	S. 89° 41' .8 W	S. 89° 41' .4 W	S. 43.3	N. 1221.9	S. 741.6	N. 480.3
No. 198	S. 89° 41' .1 W	S. 89° 40' .7 W	S. 44.9	N. 1265.2	S. 780.8	N. 484.4
No. 199	S. 89° 40' .3 W			N. 1310.1	S. 820.0	N. 490.1
No. 199	N. 89° 59' .9 W	S. 89° 59' .9 W	S. 0.2			
No. 200	S. 89° 59' .7 W	S. 89° 59' .5 W	S. 1.2	N. 1310.3	S. 859.1	N. 451.2
No. 201	S. 89° 59' .3 W	S. 89° 59' .0 W	S. 2.3	N. 1311.5	S. 898.3	N. 413.2
No. 202. 01	S. 89° 58' .8 W	S. 89° 58' .6 W	S. 3.3	N. 1313.8	S. 937.5	N. 376.3
No. 203	S. 89° 58' .4 W	S. 89° 58' .0 W	S. 4.7	N. 1317.1	S. 976.6	N. 341.8
No. 204	S. 89° 57' .6 W	S. 89° 57' .4 W	S. 3.2	N. 1321.8	S. 1015.8	N. 309.2
Mon. No. 4	S. 89° 57' .2 W			N. 1325.0	S. 1037.5	N. 287.5
Mon. No. 4	N. 89° 58' .3 W	N. 89° 58' .5 W	N. 1.6			
Mi. Cor. No. 205	N. 89° 58' .7 W	N. 89° 59' .2 W	N. 1.9	S. 1.6		S. 1.6
No. 206	N. 89° 59' .6 W	West		S. 3.5		S. 3.5
No. 207	S. 89° 59' .6 W	S. 89° 59' .2 W	S. 1.9	S. 3.5		S. 3.5
No. 208	S. 89° 58' .8 W	S. 89° 58' .4 W	S. 3.7	S. 1.6		S. 1.6
No. 209	S. 89° 57' .9 W	S. 89° 57' .8 W	S. 3.4	N. 2.1		N. 2.1
No. 209. 66	S. 89° 57' .6 W	S. 89° 57' .6 W	S. 0.1	N. 5.5		N. 5.5
No. 209. 8312	S. 89° 57' .5 W			N. 5.6		N. 5.6

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

GENERAL DESCRIPTION

This portion of the thirty-second parallel traverses what is known as the "Staked Plains" from the SE. corner of New Mexico to mile corner No. 45. These plains are nearly level over their whole area. Approximately half of the surface soil is firm, red sand, with a small proportion of limestone gravel. The other half is a loose red sand and gravel. The surface soil is from one to three feet deep, and has a bed-rock of unconsolidated limestone. The plains have a heavy growth of mesquite, shinners and greasewood undergrowth. The growth of black gramma and bunch grass is also heavy. There is no surface water on the plains and the only available supply is that from the various wells of from one to three hundred feet in depth. There is no agricultural development of any consequence on this section of the line.

Near the 45th mile corner the plains "break" into the Pecos River Valley. From this point on, to about the 83rd mile corner the character of the country changes very little. The surface is rolling and rough, and very much cut up by deep drains and arroyos. The Pecos River is crossed near the 54th mile corner; the Delaware River near the 61st mile, and Soda or Owl Creek near the 69th mile corner. The soil is very loose, and has a large proportion of gypsum. Large sink holes have been formed through the action of water on this gypsum, and most of the rainfall is carried underground through the sinks. The undergrowth is greasewood and cat-claw, with a small amount of mesquite. There is some scattered scrub cedar and pinon timber between the 69th and 83rd mile corners. There are

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

a few wells of about one hundred feet in depth near the line between the 69th and 83rd mile cors., but the water is of little value on account of the large amount of gypsum carried. The Pecos Valley line of the A. T. & S. F. R. R. is crossed near the 55 mile corner. On this section the grass is very tough, and is of little use for stock, and there is no agriculture; but a private irrigation project is being constructed for the purpose of reclaiming land in the Delaware River Valley. The dam is being constructed across the river about four hundred yards north of the boundary line.

The foot hills of the Guadalupe Mountains begin at the 83rd mile corner. From this point on, the surface is very rough. The line passes over a series of low spurs and ridges, with deep draws between. The soil is loose, loam, of decomposed limestone, and is from 10 to 20 ins. deep, with limestone bed-rock below. This bed-rock is on the surface on tops and steep slopes from spurs and ridges. There is a heavy growth of mesquite cat-claw, greasewood and bear grass undergrowth wherever the soil is of sufficient depth to permit their growth. There is also a good growth of black gramma grass on the foot hills. One or two wells near this portion of the line are about one hundred feet deep. Grapevine spring is about 400 yds. north of line, near the 89th mile corner, and from this spring several hundred acres of land are being cultivated near line.

The Guadalupe Mountains proper begin at the 98th mile corner, and the line continues across them as far as the 112th mile corner. The ridges of these mountains are about 2000 feet higher than the low land adjoining on the east. The only wagon roads and trails in the S. end of these mountains where the line crosses, come in from the north, and in this portion the mountains can be ascended only on foot. McKittrick Creek crosses

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

the line several times between the 101st and 102nd mile points, and leaves the mountains entirely about 1 mile south of line, on the east side of the mountains. The rock in the canyon is a conglomerate formation, and the water flows underground in a good many places, finally disappearing for the last time just where the creek leaves the mountains. Dog Canyon and West Dog Canyon are the two dry canyons crossed by the line. The valley of Dog Canyon is nearly a mile wide, and is inaccessible except on foot from all directions except the north. The mountains between Dog Canyon and West Dog Canyon are not so rough as the others of the system, except the descent to West Dog Canyon from the east. The W. slope from the highest W. ridge of the mountains is nearly three miles long, and is very steep. The soil in the mountains is a fine soft, decomposed limestone and is from 6 ins. to 2 ft. deep. The limestone bed rock crops to the surface on the tops and steep slopes of ridges and spurs, where the soil has been washed away. The slopes of the mountains are covered with a heavy growth of scrub oak undergrowth, except where they are so steep as to hold little soil. Where the soil is very shallow, the undergrowth is ocotillo, bear-grass and catclaw. There is considerable large spruce, pine and cedar timber on the tops of the high ridges. The growth of gramma grass is very heavy except on the steepest slopes, but the country is so rough except between Dog Canyon and West Dog Canyon, as to make it inaccessible for stock.

Crow flat lies west of the Guadalupe Mountains, and between them and mile corner No. 121. This is a level flat about 9 miles wide, E. and W. and extending several miles N. and S. The surface is lower than that of any of the adjoining country, and the flat receives the drainage from every direction. Several lakes, varying in surface area from twenty-five acres to four or five

hundred acres, are formed in different localities. These lakes have no water on the surface, except immediately after rains, but there is always water several inches below, and the surface is always moist. The soil in the flat is almost pure gypsum, and is loose on the surface. There is no foliage except a small amount of salt sage brush. There are several wells drilled near the edges of the flat, but the water contains so much gypsum that it can be used only for stock.

From the 121st mile corner the land slopes gradually up to the base of the Cornudas Mountains, at about the 142nd mile corner. The surface in all except the west three miles of this distance is rolling. The foot-hills in the west three miles are very rough. The soil is of decomposed limestone and limestone gravel, with limestone bed-rock from one to two feet below the surface. In the rougher, hilly portions the surface is largely limestone bed-rock. There is a heavy growth of mesquite and greasewood undergrowth, except in the hilly portions where the growth is mostly ocotillo and cat-claw. The growth of gramma grass is good all along the line, and many cattle are grazed in this locality. The only water is that obtained from wells, which are about two hundred feet deep, and that held in earth tanks constructed by stock men. The water from the wells contains a high percentage of gypsum.

The Cornudas Mountains consist of several separate peaks, varying in height from four hundred to about fifteen hundred feet above the surrounding country. Each of these peaks is isolated from the others, their distances apart being from one-half mile to three or four miles. These mountains are all of a gray granite

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

formation, their surfaces being mostly solid granite rock and boulders. A small amount of decomposed granite soil is lodged on the uneven surfaces, where the rain cannot wash it away. The soil of the level land lying between the mountains is also decomposed granite. This soil is probably very deep. There is a heavy growth of ocotillo and scrub oak undergrowth on the mountain slopes, with some scrub cedar and pinon timber. The level land is covered with a heavy growth of gramma grass. There is a very weak spring at the W. base of Wind Mountain, and a similar one at the W. base of Alamo Mountain. There is no other water in this vicinity, except that held in earth tanks. The rain fall is not heavy and these tanks hold water for only about three months of the year. Efforts to obtain water by drilling have not brought success. The depth to water in adjoining localities indicates that the water here is not less than six hundred feet from the surface.

West of the Cornudas Mountains, between them and the Hueco Mountains, is a rolling plateau, about twenty miles wide, and extending from north to south at least fifty miles. This plateau is only slightly lower than the tops of the Hueco and Cornudas Mountains, the W. and E. bases of these mountains respectively, being several hundred feet lower than the bases toward said plateau. The surface of the plateau is rolling, and the drainage is generally south, but the land adjoining the mountains is drained through draws which pass through them. The soil is decomposed granite loam on the surface, with caliche subsoil from 10 ins. to three feet below the surface. There is a scattered growth of greasewood and mesquite undergrowth, and a very heavy growth of gramma grass. There is no water supply of any kind on this plateau.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

The Hueco Mountains have a general N. and S. bearing and are crossed by the boundary line between the 170th and 176th mile corners. These mountains also have a granite formation, the surface being almost solid rock. They are very rugged and rough, being cut up by deep drains and canyons. There is a very small amount of decomposed granite soil lodged on the uneven surfaces. The ocotillo and cat-claw undergrowth is very heavy. There is a very good growth of gramma grass on the few gradual slopes where any amount of soil is lodged. The only water supply is that held by earth tanks in the foot hills. The highest point of these mountains on line is about one thousand feet above the land to the west.

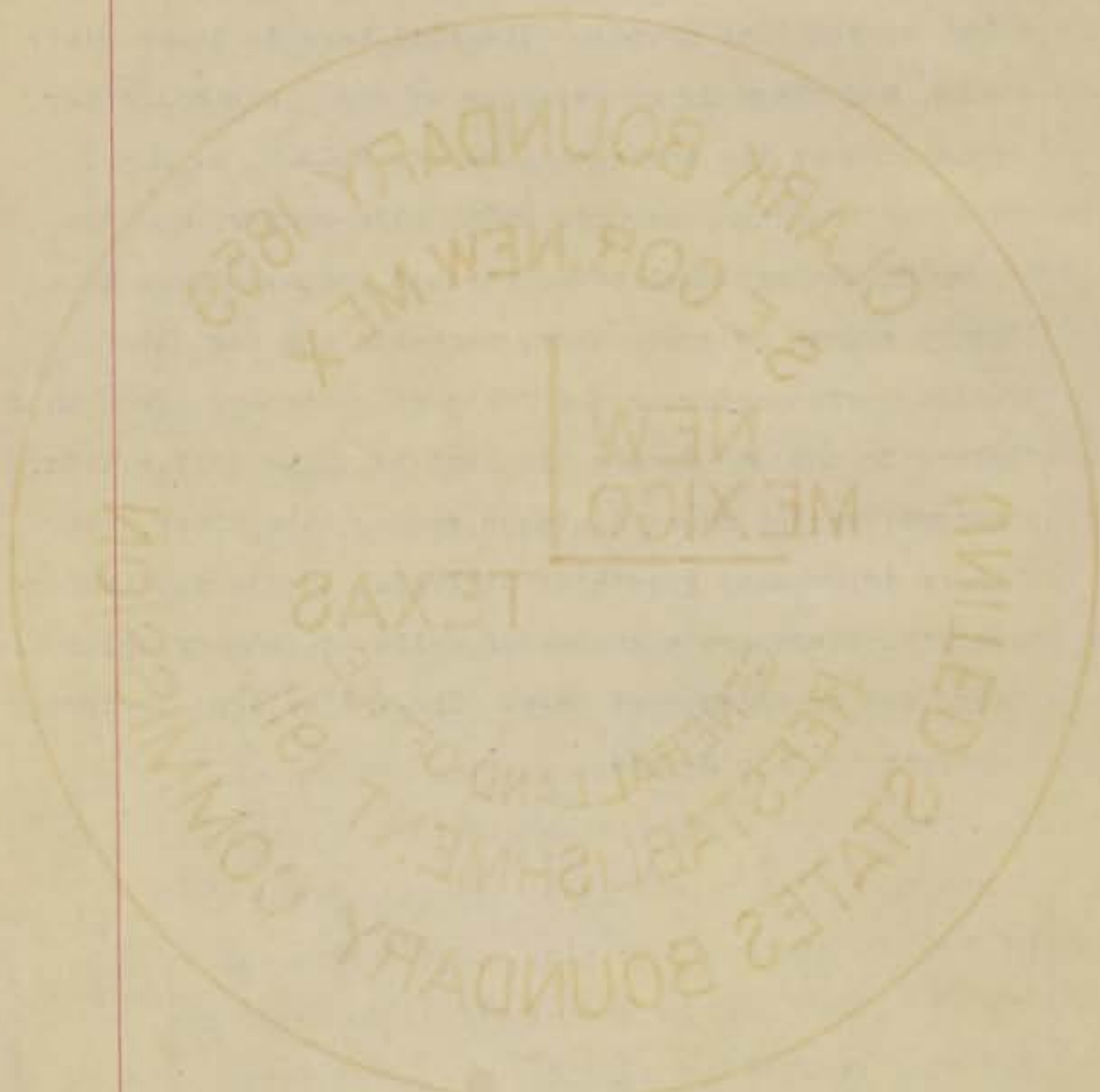
To the west of the Hueco Mountains and between the 176th and 199th mile corners is rolling prairie land. The surface is mostly loose, red sand with caliche subsoil about two feet below surface. There are a few small areas where the sand on the surface is very firm, but the loose sand is only a few inches down. The drainage is generally NW., toward the valley of the Rio Grande. A large draw between the Franklin and Organ Mountains, draining into the Rio Grande, finally receives all surface water. There is a scattered growth of mesquite, cat-claw and bear grass undergrowth all along this portion of the line. The growth of gramma and bunch grass is light. The only water supply is that in wells which are about three hundred feet deep, and that held in earth tanks. The El Paso and Southwestern Railway crosses the line near the 191 mile corner.

The Franklin Mountains have a general north and south bearing, and the line crosses them between the 199th and 205th mile corners. They are of a blue limestone formation, the surface being almost solid rock, and are very rough where the line crosses them.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY, 32ND PARALLEL.

Their east base is about 200 ft. higher than the W. base and all drainage from the east slope reaches the Rio Grande through a draw from the east, at the N. end of the mountains. There is a heavy growth of ocotillo and cat-claw undergrowth, and a fair growth of gramma grass. No timber grows on the portion of the mountains crossed by the line, and there is no water to be found.

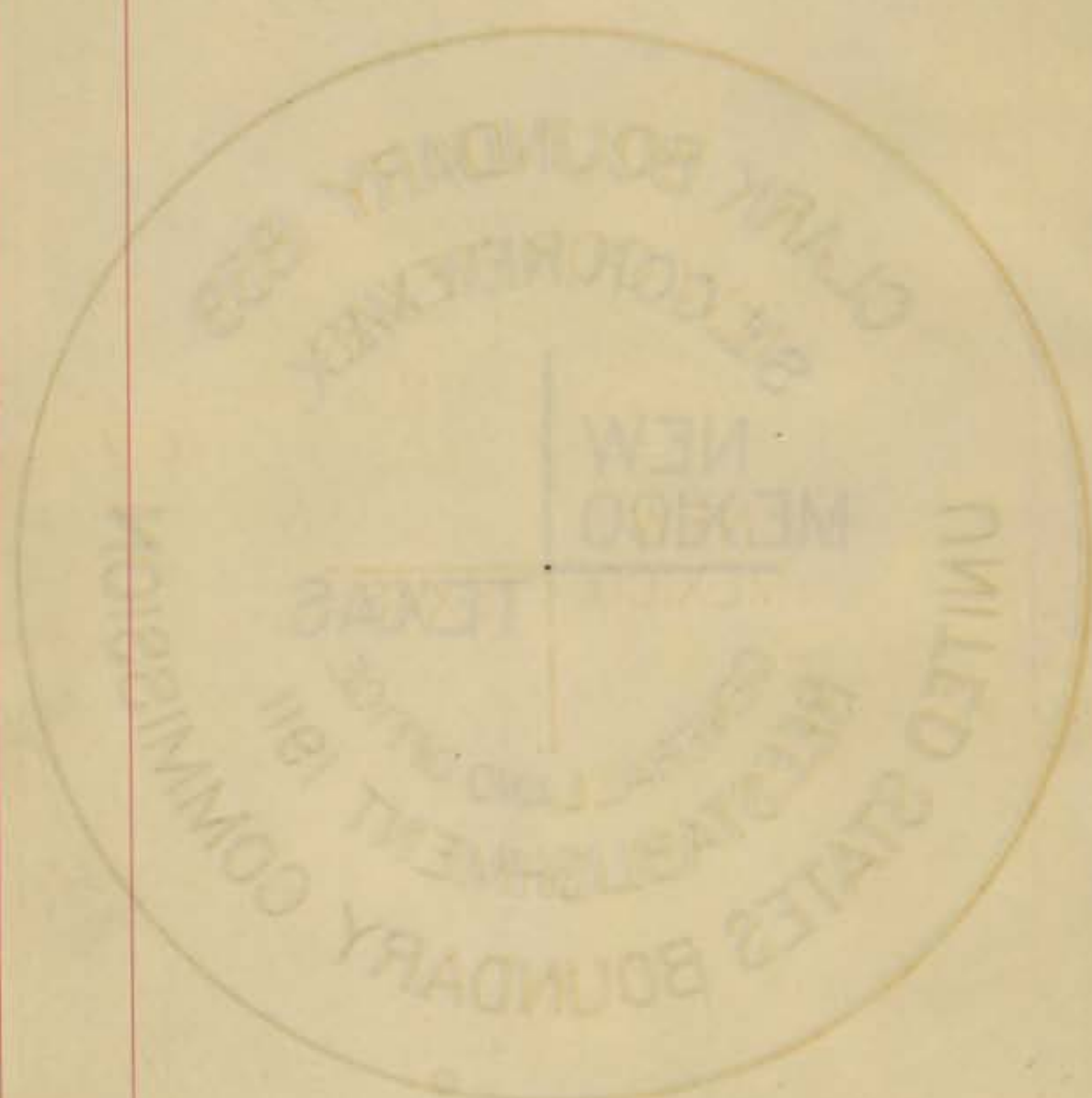
From the west base of the Franklin Mountains at about the 205th mile corner the land slopes rapidly down to the Rio Grande. The soil here is loose river sand, and there is no evidence of any subsoil other than that on the surface. The A. T. & S. F. R. R. crosses the line near the 208th mile corner, and the town of Anthony is located at this point. There is a heavy growth of greasewood, mesquite and tornillo undergrowth as far as the 208th mile corner. From this point to the Rio Grande the land is under cultivation, except for the short distance east of the river, where there is a heavy growth of willow and cottonwood undergrowth. There are a number of wells at Anthony which are from ten to fifty feet deep. The valley land is irrigated from the Rio Grande.



RESURVEY TEXAS AND NEW MEXICO BOUNDARY.



Diagram of plate imbedded in concrete monument at
S.E. corner of New Mexico, actual size.



RESURVEY TEXAS AND NEW MEXICO BOUNDARY.

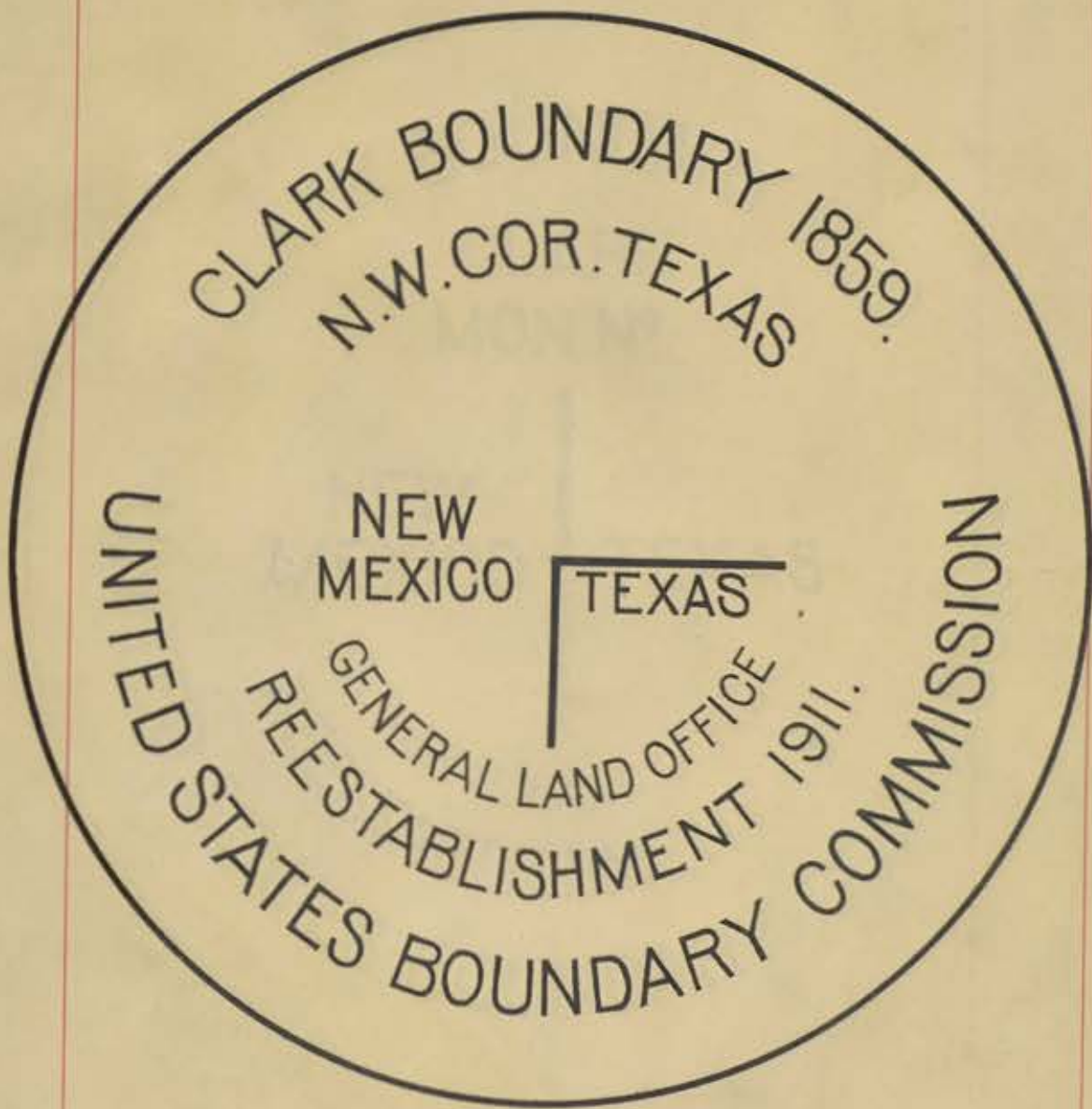
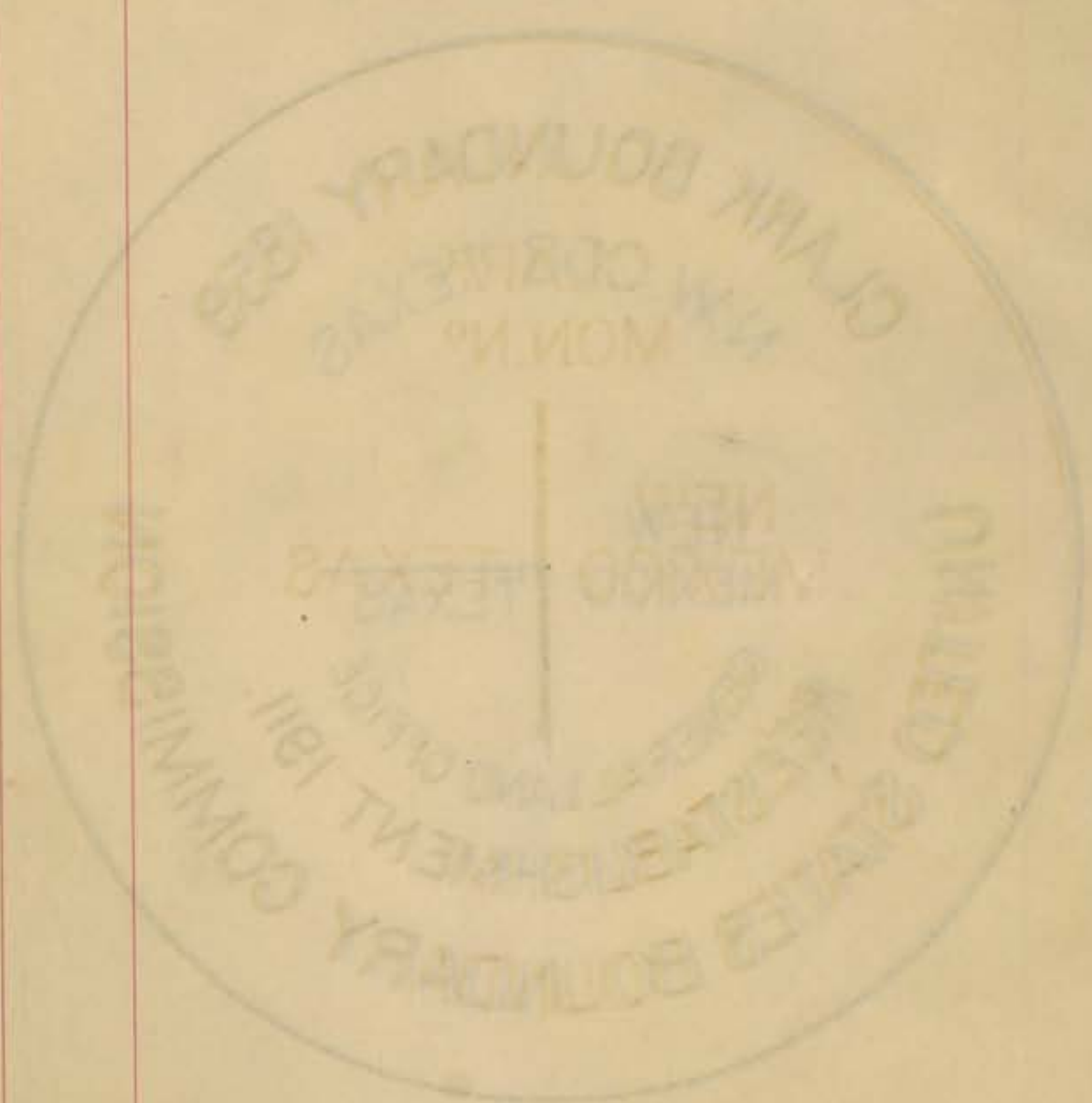


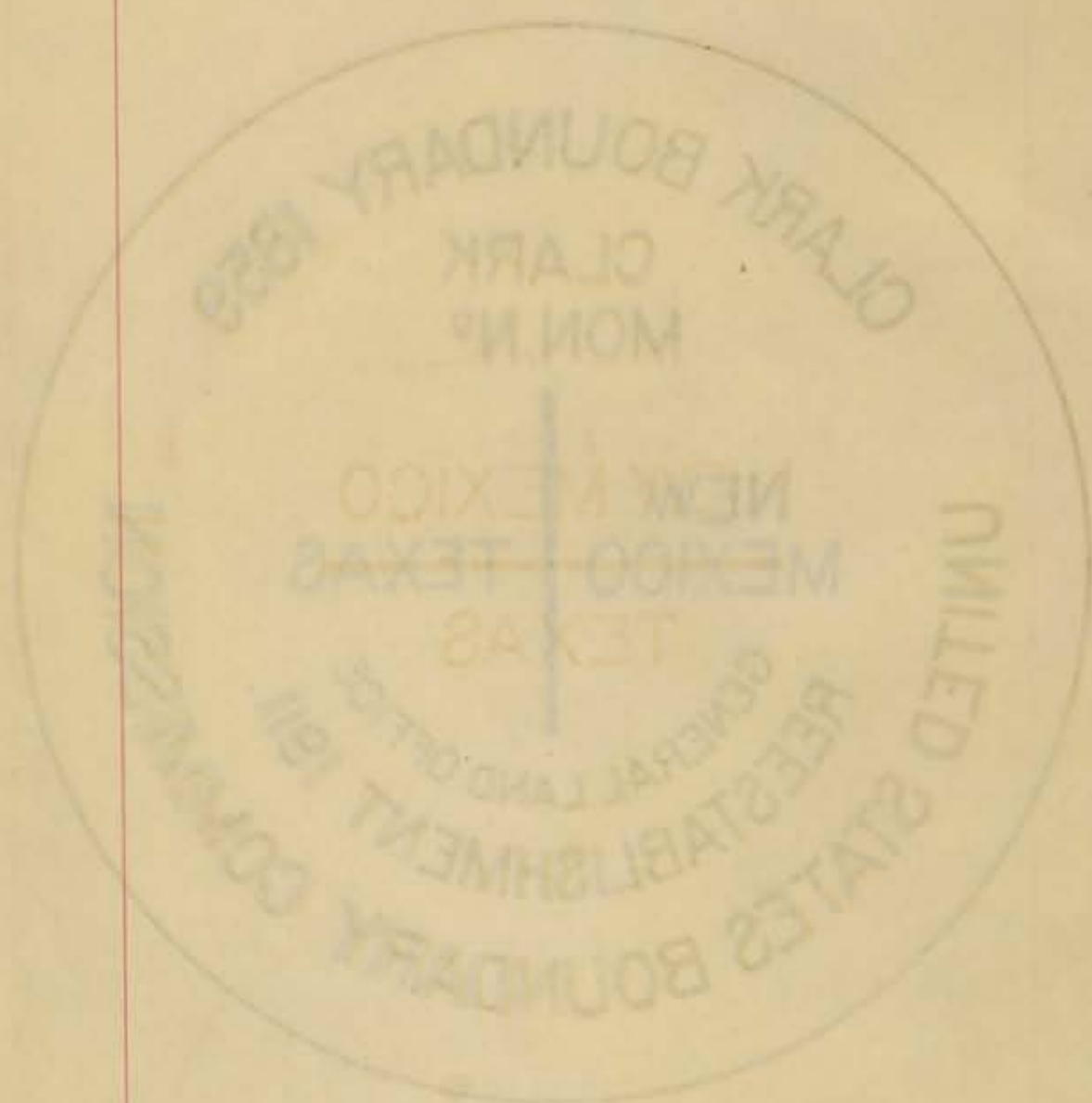
Diagram of plate imbedded in concrete monument
at N.W. corner of Texas, actual size



RESURVEY TEXAS AND NEW MEXICO BOUNDARY.



Diagram of plate imbedded in concrete monuments on 103rd Meridian, actual size.



RESURVEY TEXAS AND NEW MEXICO BOUNDARY.

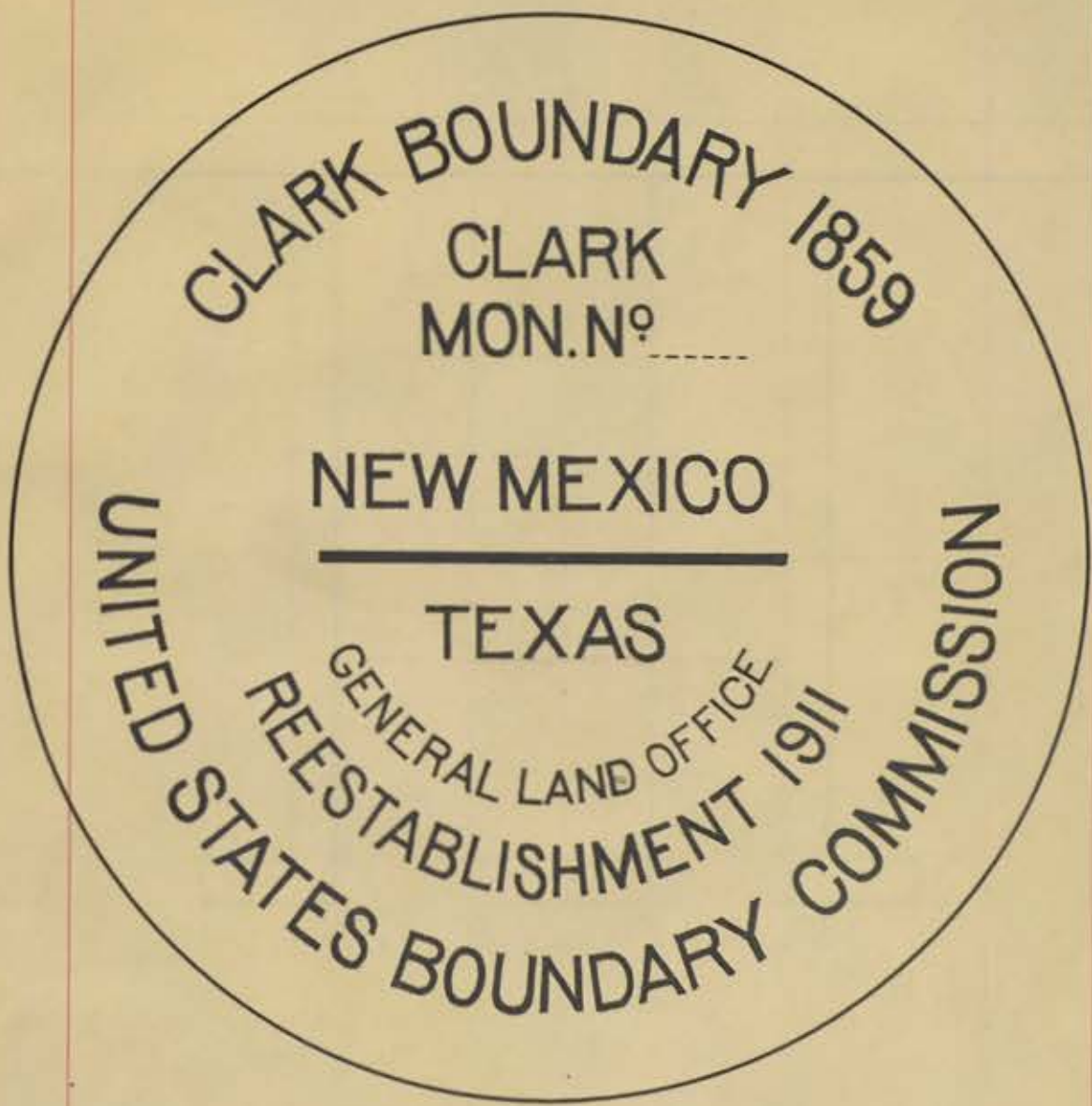
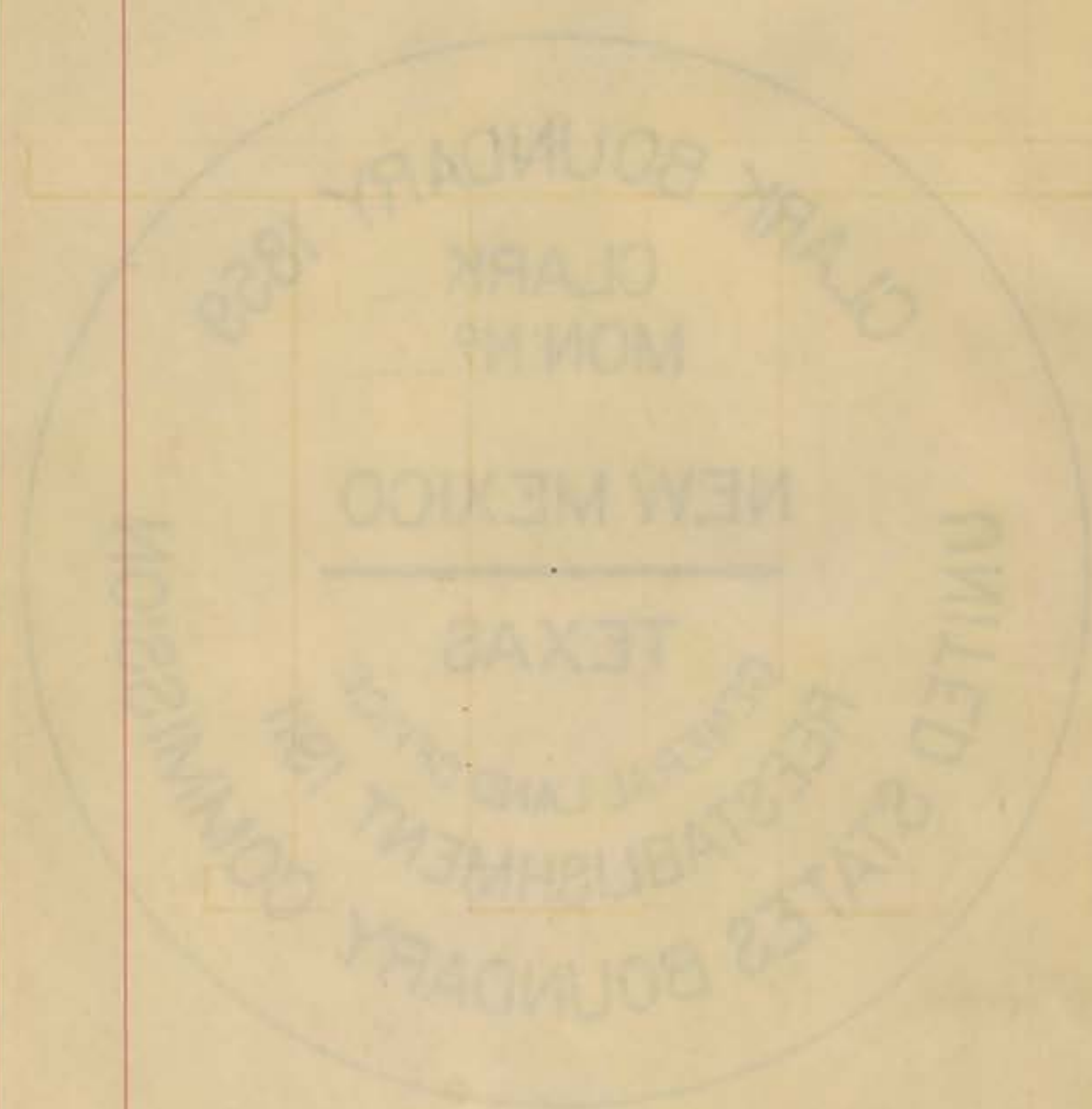
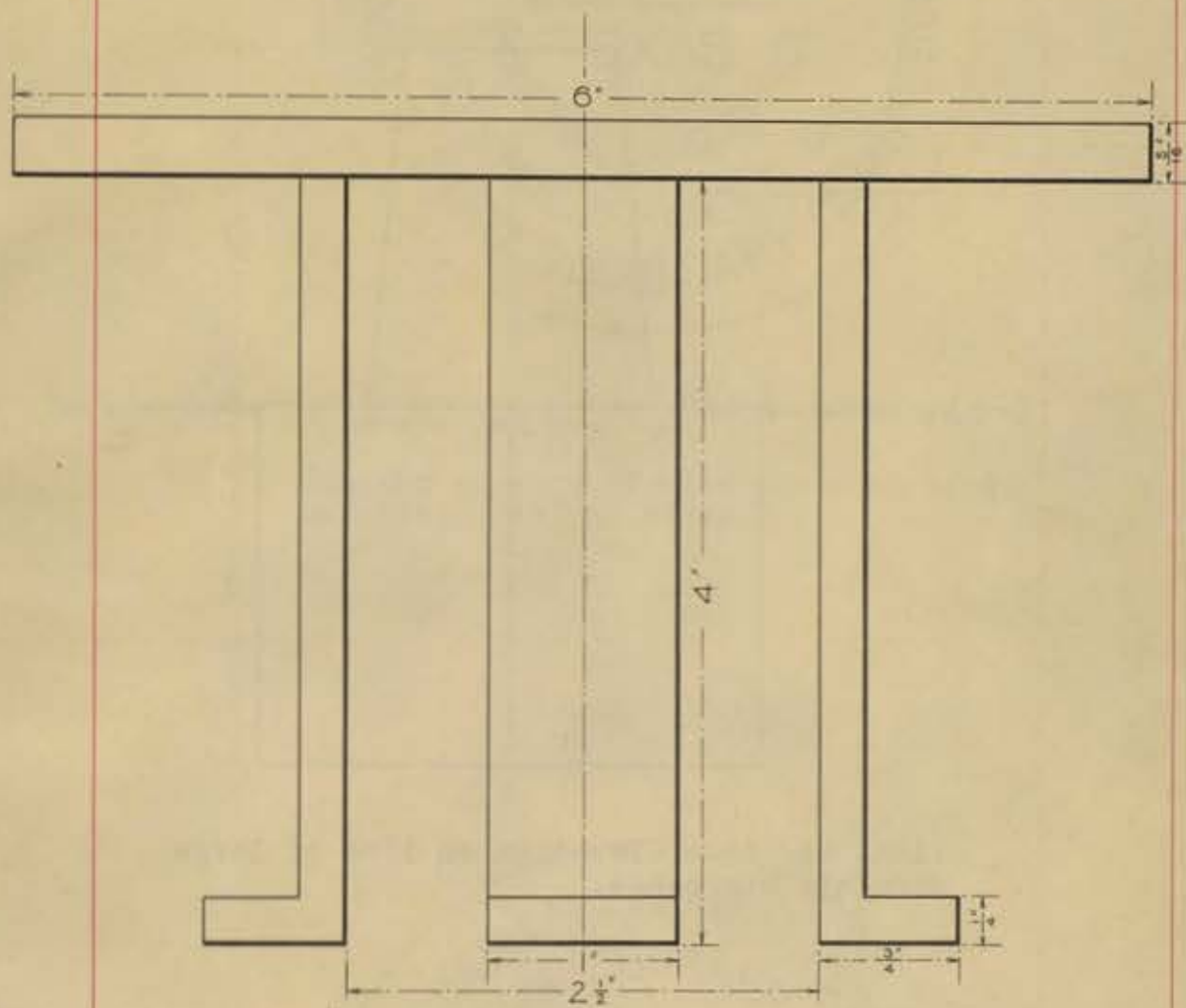


Diagram of plate imbedded in concrete monuments on 32nd Parallel, actual size.



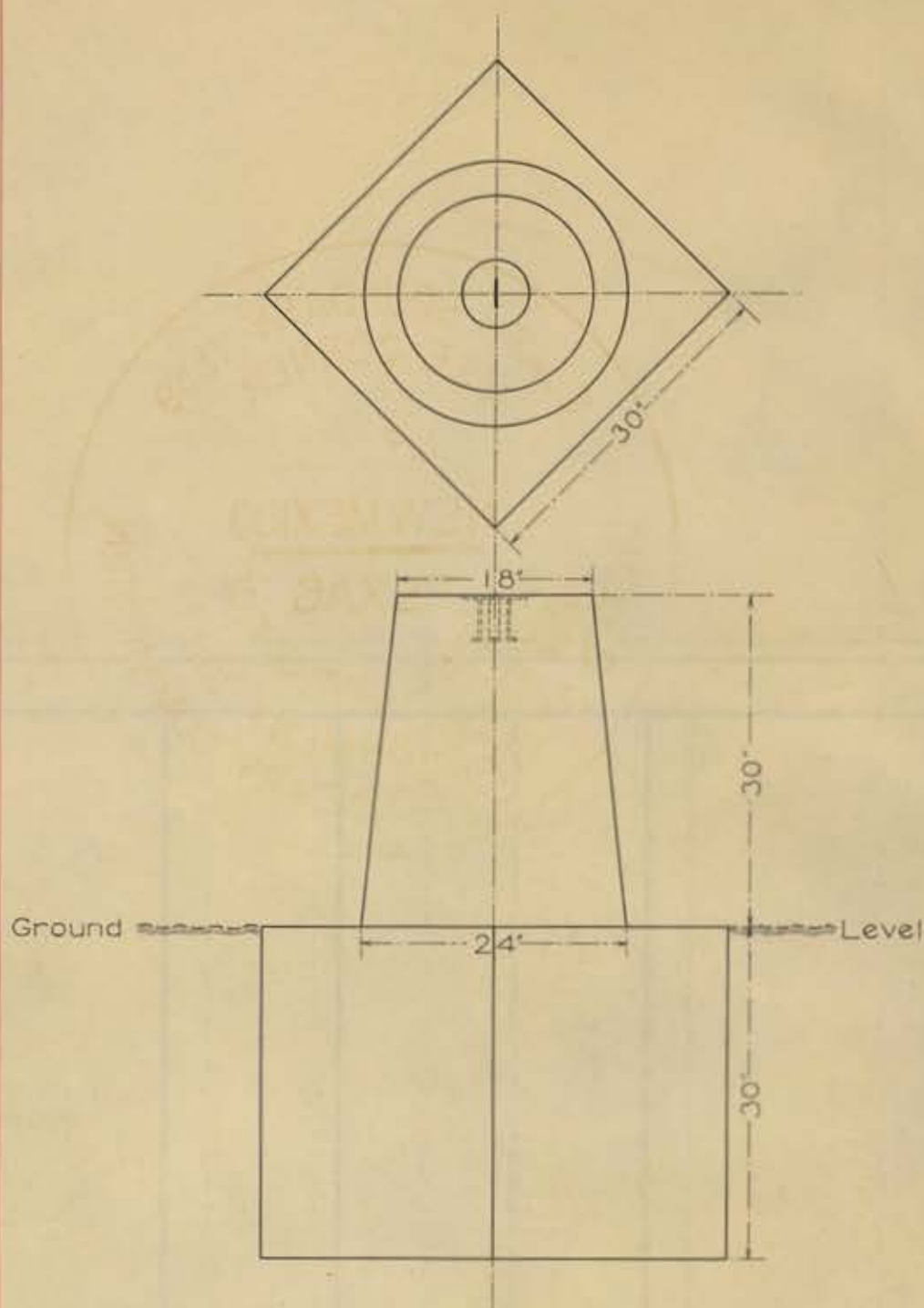
Division of Public Lands, Department of the Interior
Washington, D. C.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY.

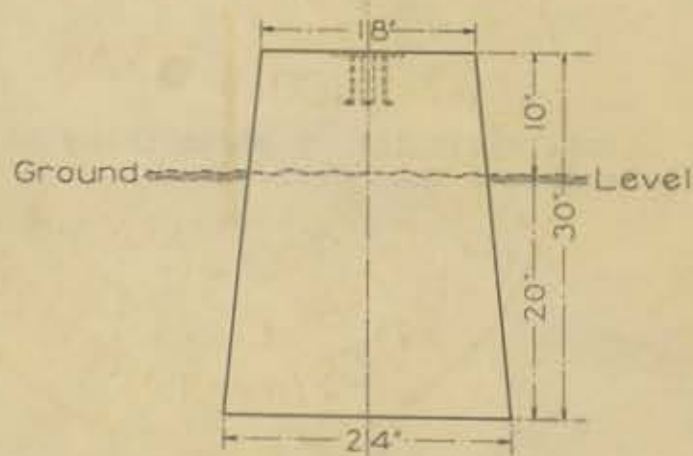


Side elevation of plate imbedded in
concrete monuments.

RESURVEY TEXAS AND NEW MEXICO BOUNDARY.



Plan, and side elevation on line of large concrete monuments.



Side elevation of small concrete monuments.

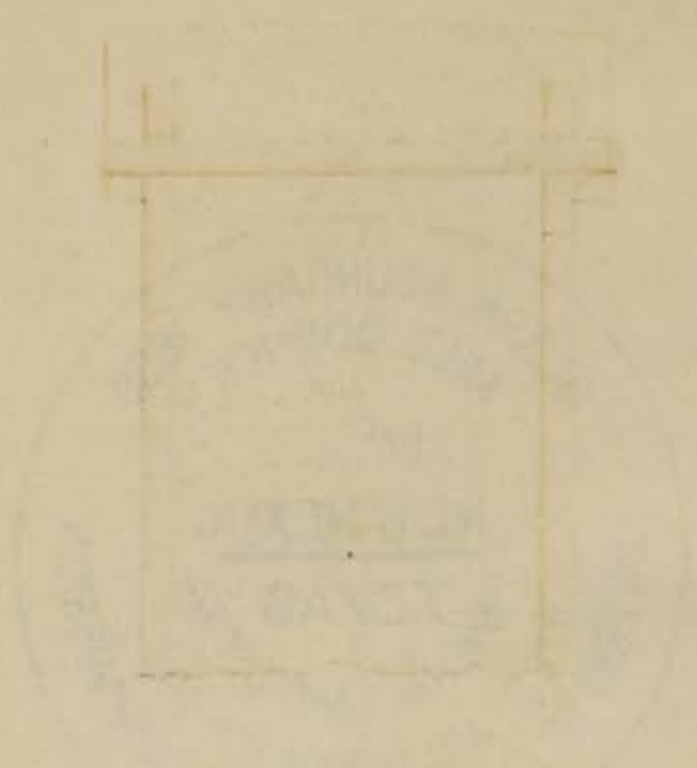
RESURVEY TEXAS AND NEW MEXICO BOUNDARY.



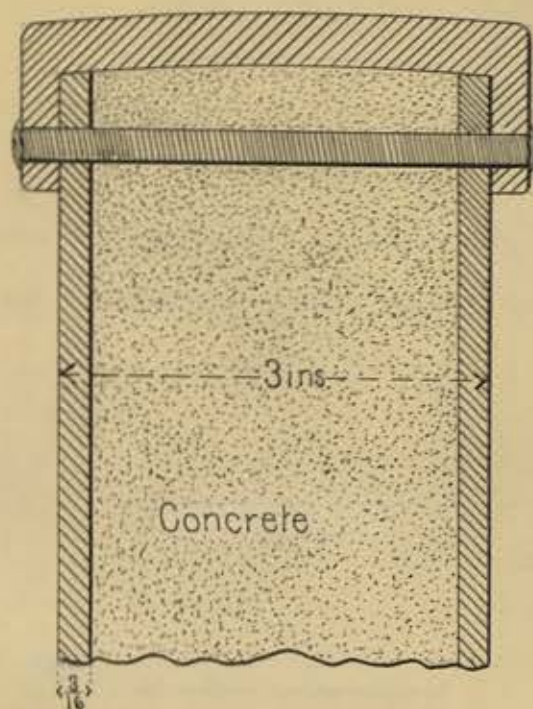
Diagram of caps of mile posts on 32nd Parallel, actual size.



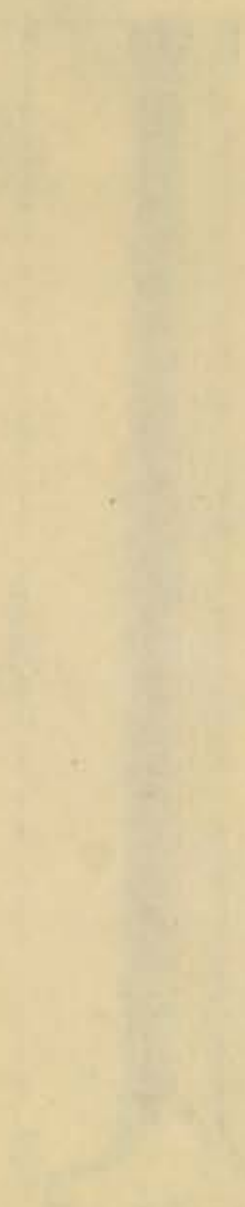
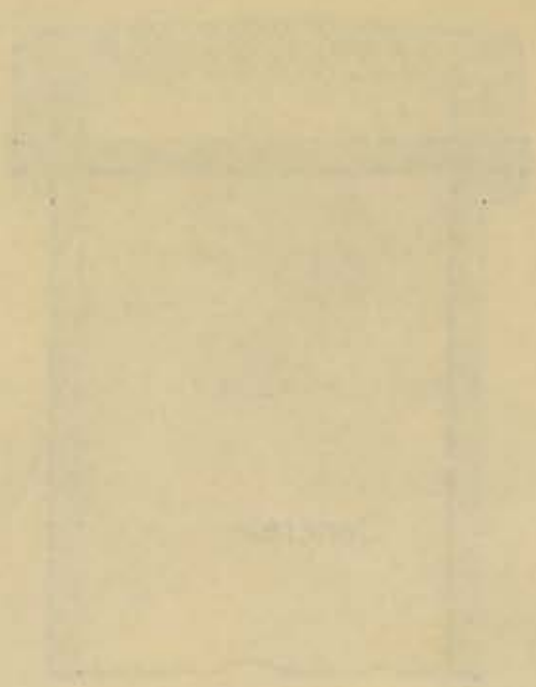
Diagram of caps of mile posts on 103rd Meridian, actual size.



RESURVEY TEXAS AND NEW MEXICO BOUNDARY.



Sectional view of cap and side elevation of mile posts.



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CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability, Lee S. Miller, U. S. Surveyor, during the periods and in the capacities stated opposite our several signatures, in surveying all those parts or portions of the resurvey of the Texas and New Mexico boundary; Clark's thirty-second parallel of north latitude.

~~of the~~ Meridian, in the State of which are represented in the foregoing field notes as having been executed by him, and under his direction; and that said survey has been, in all respects, to the best of our knowledge and belief, well and faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGAN.	ENDED.	
<u>W. H. Lane</u>	<u>June 10, 1911.</u>	<u>June 30, 1911.</u>	<u>Flagman.</u>
<u>Ralph Fleck</u>	<u>June 10, 1911.</u>	<u>July 3, 1911.</u>	<u>Chainman.</u>
<u>George Marsh</u>	<u>June 10, 1911.</u>	<u>Sept. 27, 1911.</u>	<u>Chainman.</u>
<u>Sam Mitchell</u>	<u>June 10, 1911.</u>	<u>Sept. 27, 1911.</u>	<u>Chainman.</u>
<u>Volney Mitchell</u>	<u>June 10, 1911.</u>	<u>Sept. 27, 1911.</u>	<u>Chainman.</u>
<u>Ellis W. Crozier</u>	<u>July 6, 1911.</u>	<u>Sept. 27, 1911.</u>	<u>Chainman.</u>
<u>Ralph Fleck</u>	<u>July 4, 1911.</u>	<u>Oct. 8, 1911.</u>	<u>Flagman.</u>
<u>H. M. Reeves</u>	<u>June 10, 1911.</u>	<u>Oct. 8, 1911.</u>	<u>Cornerman.</u>
<u>J. J. Farmer</u>	<u>Oct. 1, 1911.</u>	<u>Oct. 8, 1911.</u>	<u>Chainman.</u>

Subscribed and certified to before me on the dates of the final service as shown above.

Lee S. Miller

U. S. Surveyor.

FINAL OATH OF UNITED STATES SURVEYOR.

I, _____, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for _____ bearing date of the _____ day of _____, 191____, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____

_____ of the _____ Meridian, in the State of _____, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

U. S. Surveyor.

Subscribed by said _____, and sworn to before me }
this _____ day of _____, 191____ }



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

_____, 191____

The foregoing field notes of the survey of _____

executed by _____ under his special instructions dated _____, 191____, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in _____, has been correctly copied from the original notes on file in this office.

U. S. Surveyor General.

FINAL OATH OF UNITED STATES SURVEYOR.

I, Lee S. Miller, U. S. Surveyor, do solemnly swear that, in pursuance of instructions received from the Commissioner of the General Land Office, bearing date of the 23rd day of May, 1911, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, and under the supervision of the United States Boundary Commissioners, resurveyed all those parts or portions of the thirty-second parallel of north latitude, forming a portion of the boundary between the States of Texas and New Mexico and originally surveyed by John B. Clark in 1859, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the monuments of said resurvey have been established and perpetuated in strict accordance with the instructions of the Commissioner of the General Land Office, and the said Boundary Commissioners and in the specific manner described in the field notes, and that the foregoing are the field notes of such survey.

Lee S. Miller

U. S. Surveyor.

Subscribed by said Lee S. Miller, and sworn to before me this 5 day of April 1912.

W. H. Curtis
By *Edward S. Soper*
Sop

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CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability, G. D. D. Kirkpatrick, U. S. Surveyor, during the periods and in the capacities stated opposite our several signatures, in surveying all those parts or portions of the resurvey of the Texas and New Mexico boundary; Clark's thirty-second parallel of north latitude, and the one hundred and third meridian west from Greenwich

of the Meridian, in the State of which are represented in the foregoing field notes as having been executed by him, and under his direction; and that said survey has been, in all respects, to the best of our knowledge and belief, well and faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
Frank J. Irie	April 3, 1911	August 24, 1911	Flagman
Carl B. Wilson	April 3, 1911	August 6, 1911	Chainman
Chas. W. Scendorf	April 3, 1911	July 30, 1911	Chainman
Louis H. Kirk	April 8, 1911	July 30, 1911	Chainman
Walter Richburg	April 15, 1911	July 28, 1911	Chainman

The above assistants also acted in the capacity of cornermen.

Subscribed and certified to before me on the dates of the final service as shown above.

G. D. D. Kirkpatrick U. S. Surveyor.

~~FINAL OATH OF UNITED STATES SURVEYOR.~~

I, _____, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for _____ bearing date of the _____ day of _____, 191____, I have well, faithfully and truly in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____

_____ of the _____ Meridian, in the State of _____, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

U. S. Surveyor

Subscribed by said _____, and sworn to before me }
this _____ day of _____, 191____



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

_____, 191____

The foregoing field notes of the survey of _____

executed by _____ under his special instructions dated _____, 191____, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in _____, has been correctly copied from the original notes on file in this office.

U. S. Surveyor General.

FINAL OATH OF UNITED STATES SURVEYOR.

I, G. D. Kirkpatrick, U.S. Surveyor, do solemnly swear that, in pursuance of instructions received from the Commissioner of the General Land Office bearing date of the 29th day of March, 1911, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, and under the Supervision of the United States Boundary Commissioners, resurveyed all those parts or portions of the one hundred third meridian west from Greenwich and the thirty second parallel of north latitude, forming a portion of the boundary between the States of Texas and New Mexico and originally surveyed by John H. Clark in 1859-60, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the monuments of said resurvey have been established and perpetuated in strict accordance with the instructions of the Commissioner of the General Land Office and the said Boundary Commissioners, and in the specific manner described in the field notes, and that the foregoing are the field notes of such survey.

G. D. Kirkpatrick

U. S. Surveyor.

Subscribed by said G. D. D. Kirkpatrick, and sworn to before me this 19 day of Mar, 1912

W. H. C. [unclear] [unclear]
By E. W. [unclear]



A P P R O V A L.

-0-

The foregoing field notes of the resurvey of the one hundred third meridian west from Greenwich, from latitude 32° N. to latitude 36°30' N., and the thirty second parallel of north latitude from said one hundred third meridian to the Rio Grande, ^{River} originally surveyed by John H. Clark in 1859-60, executed by G. D. D. Kirkpatrick, U. S. Surveyor and Lee S. Miller, U. S. Surveyor, under instructions from the Commissioner of the General Land Office, dated March 29, ~~1911~~, 1911, having been

made under our supervision, the said field notes and the surveys they describe, ^{and the lines established} are hereby approved, ^{as the boundary line between the State of Texas, and New Mexico}

Francis M. Lockrell

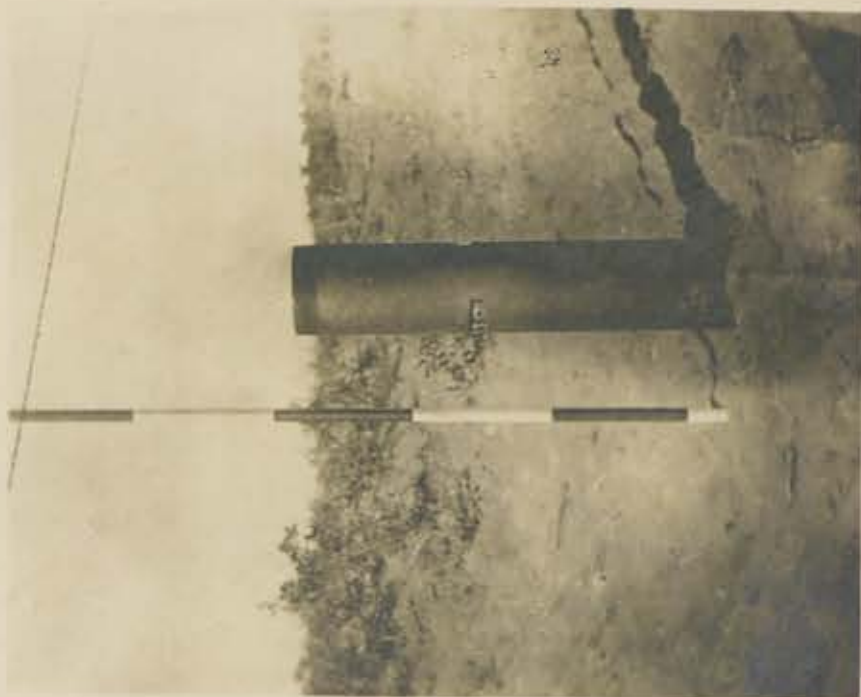
Commissioner on the part of
the United States.

Sam R. Scott

Commissioner on the part of
Texas.

Pursuant to Senate Joint Resolution of February 16, 1911, (36 Stat., 1454), I, in conjunction with the State of Texas, have caused the reestablishment and remarking of the boundary lines heretofore established and marked by John H. Clark, between New Mexico and the State of Texas, and the foregoing field notes, in triplicate, and accompanying plats of resurvey and location of the boundary line, together with the survey as made, are hereby approved. One copy of the field notes and the accompanying plats of said survey will be filed as a permanent record in the General Land Office, and one copy each of the field notes, with photolithographic copies of the plats, will be forwarded to the Governors of the States of New Mexico and Texas, respectively.

The White House,
June 1912.



Iron Pipe Marking Southeast Corner of New
Mexico. Replaced by Concrete Monument.



Clark Monument No. 3 at Thirty-third Parallel
One Hundred and Third Meridian.



Clark Monument No. 4 at Thirty-fourth Parallel
One Hundred and Third Meridian.



Reestablished Clark Monument No. 5.
One Hundred and Third Meridian.

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Original Clark Monument No. 9, as found.
One Hundred and Third Meridian.



Clark Monument No. 9 in Course of Reconstruction.
One Hundred and Third Meridian.



Reestablished Clark Monument No. 9.
One Hundred and Third Meridian.



Original Clark Monument No. 16, looking
Southwest toward Canadian River.
One Hundred and Third Meridian.



Original Clark Monument No. 16, looking
Southeast. One Hundred and Third Meridian.



Original Clark Monument No. 17.
One Hundred and Third Meridian.



Preston's Monument marking North-West Corner
of Texas, looking South-East.



Reestablished North-West Corner of Texas.

105



Reestablished Clark Monument No. 4, looking
South-East.
Thirty-Second Parallel.



Looking East from Clark Monument No. 4.
Thirty-Second Parallel.



Reestablished Clark Monument No. 8.
Thirty-Second Parallel.



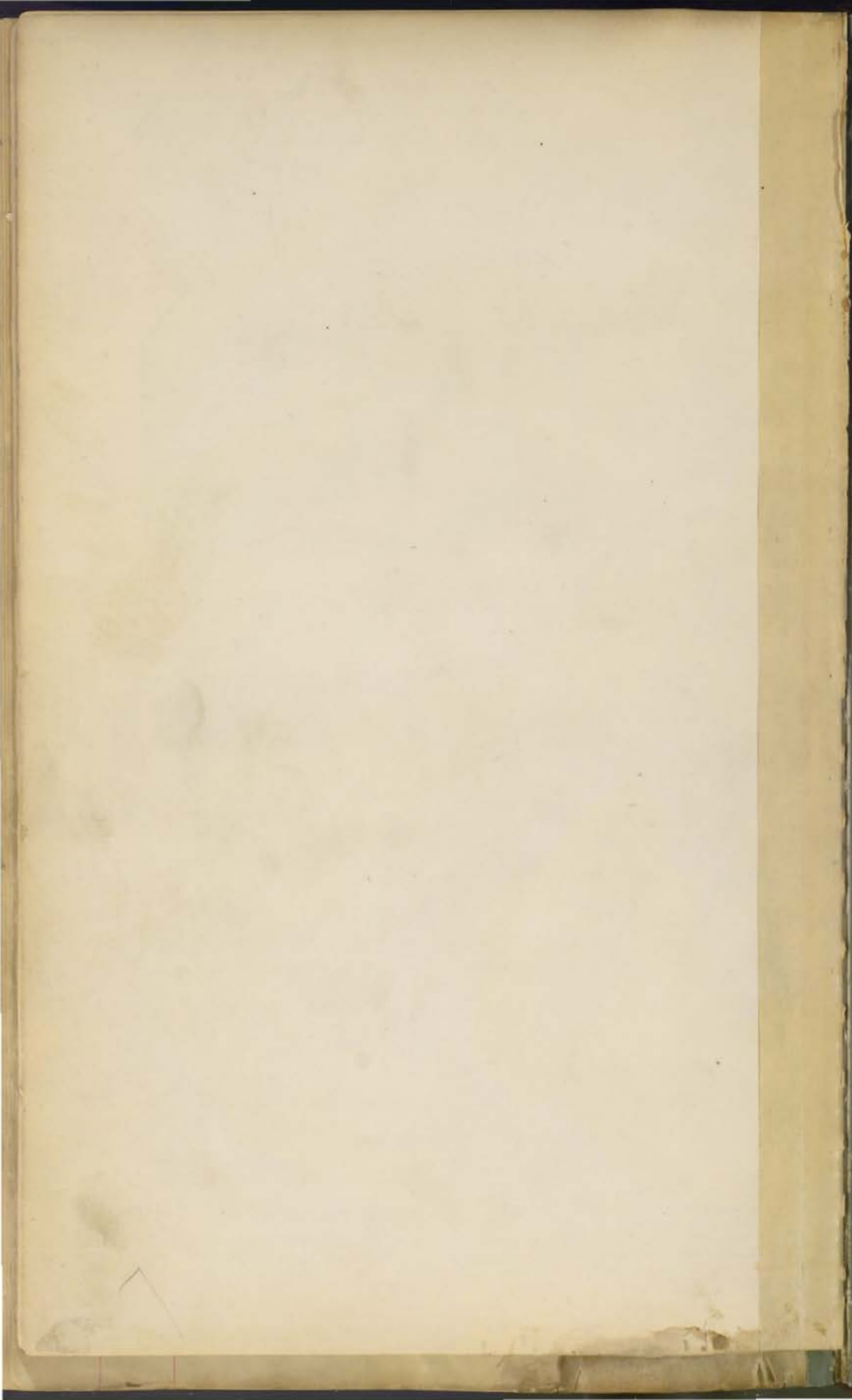
Reestablished Clark Monument No. 23.
Thirty-Second Parallel.



Looking East from Monument No. 22.
Thirty-Second Parallel.



Reestablished Clark Monument No. 26.
Thirty-Second Parallel.



General

Washington, D.C.
February 20, 1913.

Supplementary report of the Commission composed of the Hon. Francis M. Coskrell, Commissioner upon the part of the United States, and the Hon. Sam R. Scott, Commissioner upon the part of the STATE of Texas, forming the Boundary Commission to locate and remark the Boundary Line between New Mexico and Texas.

To the President of the United States,
and The Governor of the State of Texas.

In our report of the work performed by the Boundary Commission on the 32nd parallel north latitude near its intersection with the Rio Grande River, we stated that we were unable to locate and identify upon the ground, or from any other source, the true location of the original "Clark Monument No. 1, 32nd Parallel."

After finishing our field work on September 26th, 1911, we returned to the intersection of the 32nd Parallel with the Rio Grande River and made a second effort to locate said monument No. 1, and being unable to do so from any physical facts found upon the ground, or from any oral testimony procurable, we then took the topographical map made by Commissioner Clark and which accompanied his report of the location of said 32nd parallel in 1859 and from that map we determined the approximate scale upon which said map was made and taking monument No. 4 on said 32nd Parallel upon the peak of the Franklin Mountains as a base from which to operate and measuring the distance on the ground westward along and on said 32nd parallel from said Monument No. 4, the distance indicated between said two points on the Clark map, said scale being 201.4234 chains per inch. At this point (which

Washington, D.C.
February 20, 1913.

Supplementary report of the Commission composed of the
Hon. Francis M. Cockrell, Commissioner upon the part
of the United States, and the Hon. Sam H. Beall, Com-
missioner upon the part of the STATE of Texas, forming
the Boundary Commission to locate and remark the
Boundary Line between New Mexico and Texas.

To the President of the United States,
and the Governor of the State of Texas.

In our report of the work performed by
the Boundary Commission on the 32nd parallel north
latitude near its intersection with the Rio Grande
River, we stated that we were unable to locate and
identify upon the ground, or from any other source,
the true location of the original "Clark Monument No.
1, 32nd Parallel."

After finishing our field work on September
23rd, 1911, we returned to the intersection of the
32nd Parallel with the Rio Grande River and made a
second effort to locate said monument No. 1, and
being unable to do so from any physical means found
upon the ground, or from any other satisfactory
source, we then took the topographical map made by Commission-
er Clark and which accompanied his report of the lo-
cation of said 32nd parallel in 1859 and from that map
we determined the approximate scale upon which said
map was made and taking monument No. 4 on said 32nd
Parallel upon the peak of the Franklin Mountains as
a base from which to operate and measuring the distance
on the ground westward along and on said 32nd parallel
from said Monument No. 4, the distance indicated be-
tween said two points on the Clark map, said scale
being 101.4354 chains per inch. At this point (which

#2.

is between mile posts 208 and 209) we re-established Clark's Monument No. 1, 32nd Parallel, this point being three miles plus 73.884 chains from Monument No. 4. The monument so re-established being as follows: a concrete monument having a cubical base 28 inches square, with corners to the cardinal points, set 30 inches into the ground, with a superstructure in the form of the frustrum of a cone encased in galvanized iron 24 inches in diameter at the base, 18 inches at the top, and 30 inches high. In the top of the concrete monument there is embedded a circular brass plate, 6 inches in diameter, marked with an east and west division line 2-1/2 inches long, "New Mexico" on the north and "Texas" on the south thereof. The cap is also marked "Clark Boundary 1859 Clark Monument No. 1, General Land Office re-established 1911 United States Boundary Commission."

The field work in connection with the re-establishment of Monument No. 1, as herein mentioned, was performed by Lee S. Miller under our supervision.

Respectfully submitted,

Francis M. Lockwell

Commissioner for the United States.

Amos R. Scott
Commissioner for the State of Texas.

Hon. Wm. H. Taft

The White House.

and

Hon. O. B. Colquit,

Austin, Texas.

to between mile posts 208 and 209) we re-established
 Clark's Monument No. 1, 52nd Parallel, this point
 being three miles plus 75.884 chains from Monument
 No. 4. The monument so re-established being as fol-
 lows: a concrete monument having a circular base 36
 inches square, with corners to the cardinal points,
 set 30 inches into the ground, with a superstructure
 in the form of the frustrum of a cone capped in
 galvanized iron 24 inches in diameter at the base, 18
 inches at the top, and 30 inches high. In the top of
 the concrete monument there is embedded a circular
 brass plate, 6 inches in diameter, marked with an east
 and west division line 3-1/2 inches long, "New Mexico"
 on the north and "Texas" on the south thereof. The
 cap is also marked "Clark Boundary 1859 Clark Monument
 No. 1, General Land Office re-established 1911 United
 States Boundary Commission."

The field work in connection with the re-
 establishment of Monument No. 1, as herein mentioned,
 was performed by Lee B. Miller under our supervision.

Respectfully submitted,

Frank M. Beckwith
 Commissioner for the United States
Charles A. Galt
 Commissioner for the State of Texas

Hon. Wm. H. Taft
 The White House
 and
 Hon. G. B. Colquhoun,
 Austin, Texas.

EXECUTIVE ORDER.

Whereas, by Congressional joint resolution approved February 16, 1911 (36 Stat., 1454), it was resolved and directed that the President of the United States, acting in conjunction with the properly constituted and duly empowered authorities of the State of Texas, should have authority to re-establish and re-mark the boundary line between the Territory of New Mexico and the State of Texas, as that line had been surveyed, located and monumented by John H. Clark, and where said line had not been actually surveyed by said Clark, then by means of straight lines drawn and run between the nearest termini of the lines so surveyed by said Clark, and, for that purpose, to appoint a Commissioner, who, in co-operation with a Commissioner to be appointed by the State of Texas, would be authorized to inspect, survey, re-locate and establish the said boundary line, re-marking such of the monuments upon and along the same as might be found still existing and replacing and restoring such monuments as might have been destroyed or obliterated, all in the manner prescribed and defined in and by said resolution; and,

Whereas, in accordance with the authority so conferred upon and vested in him, the President did nominate, constitute and appoint Francis M. Cockrell, of Missouri, to be the Commissioner for and on the part of the United States in the matter of re-locating and re-establishing said boundary line, and the State of Texas did duly constitute and fully empower **Sam. R. Scott** to be and to act as a Commissioner for and on the part of

said State in the same behalf; and,

Whereas, the said Commissioners did thereafter proceed to the performance of their duties, pursuant to their said appointments and the instructions communicated to them in that behalf, and did go upon, along and over the ground traversed by said boundary line, ascertaining, identifying and establishing the same, as was by said Congressional resolution directed, and did thereafter, to wit, on the fifth day of April, nineteen hundred and twelve, submit a full and detailed report of their proceedings and of the acts and things done and accomplished by them in the execution of their duties as such Commissioners, which said report was amended and supplemented by an additional report submitted by said Commissioners on the twentieth day of February, nineteen hundred and thirteen, for the purpose of supplying matter omitted from their original report; and,

Whereas, by said original and supplemental reports it is made to appear that the boundary line between the Territory of New Mexico, since become the State of New Mexico, and the State of Texas has been by said Commissioners carefully and accurately relocated and re-established, as enjoined and directed by the resolution of Congress hereinbefore cited, and that the boundary line as re-established has been by them properly marked and re-marked, all of which will more fully and at length appear upon an inspection of their said reports, to which reference is made for further and more detailed information:

Now, Therefore, I, William H. Taft, President of

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the United States, having been satisfied by an inspection of the reports made and submitted by said Commissioners, Francis M. Cockrell and Sam. R. Scott, that they have well and faithfully performed and discharged the duties devolved upon them by the Congressional resolution aforesaid, their several appointments made pursuant thereto and the instructions received by them in that behalf, as aforesaid, have approved said reports and do hereby approve, confirm and establish the findings, conclusions and acts of said Commissioners in and about and for the establishment anew and further demarcation of the boundary line between New Mexico and Texas, all as shown and disclosed in and by said reports. And I do further direct that one copy of said report, including a plat of the surveyed boundary line and field notes of said survey be lodged and deposited in and as a part of the permanent records and archives of the United States General Land Office, there to be and remain a perpetual memorial of and concerning the existence and location of said boundary line, as now ascertained and re-located; that one other copy of said report and included map and field notes be transmitted to the Governor of each of the States of Texas and New Mexico.

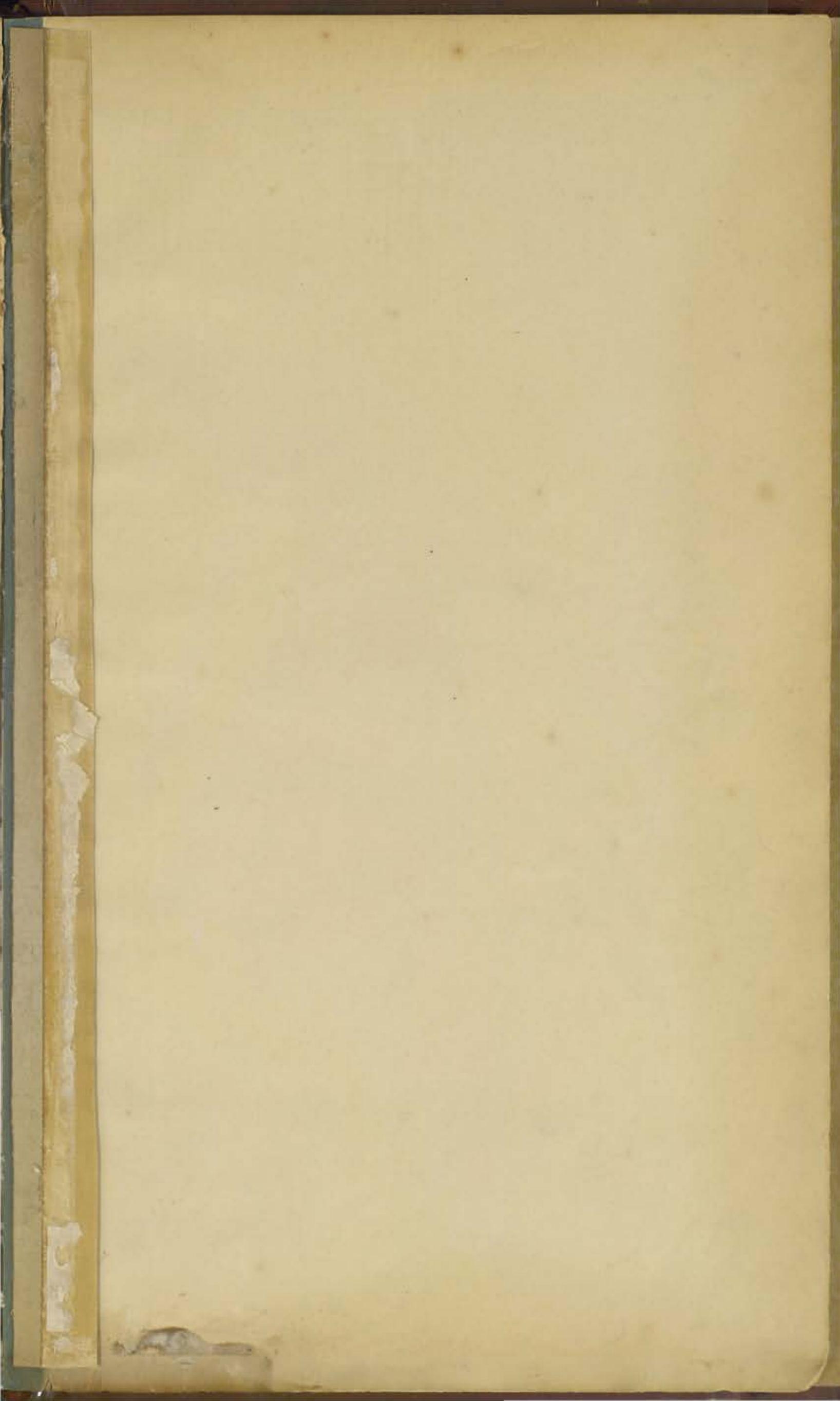


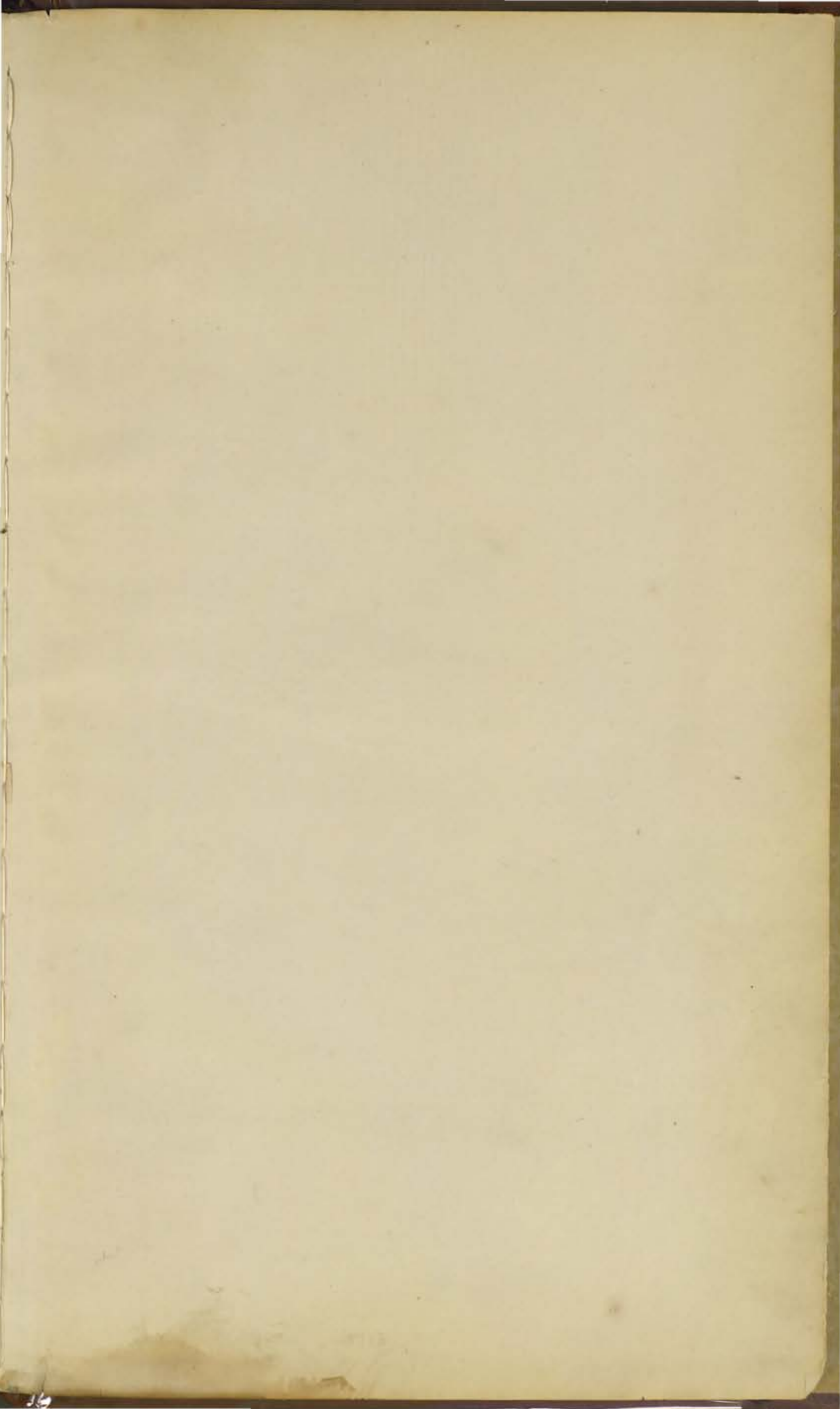
The White House,

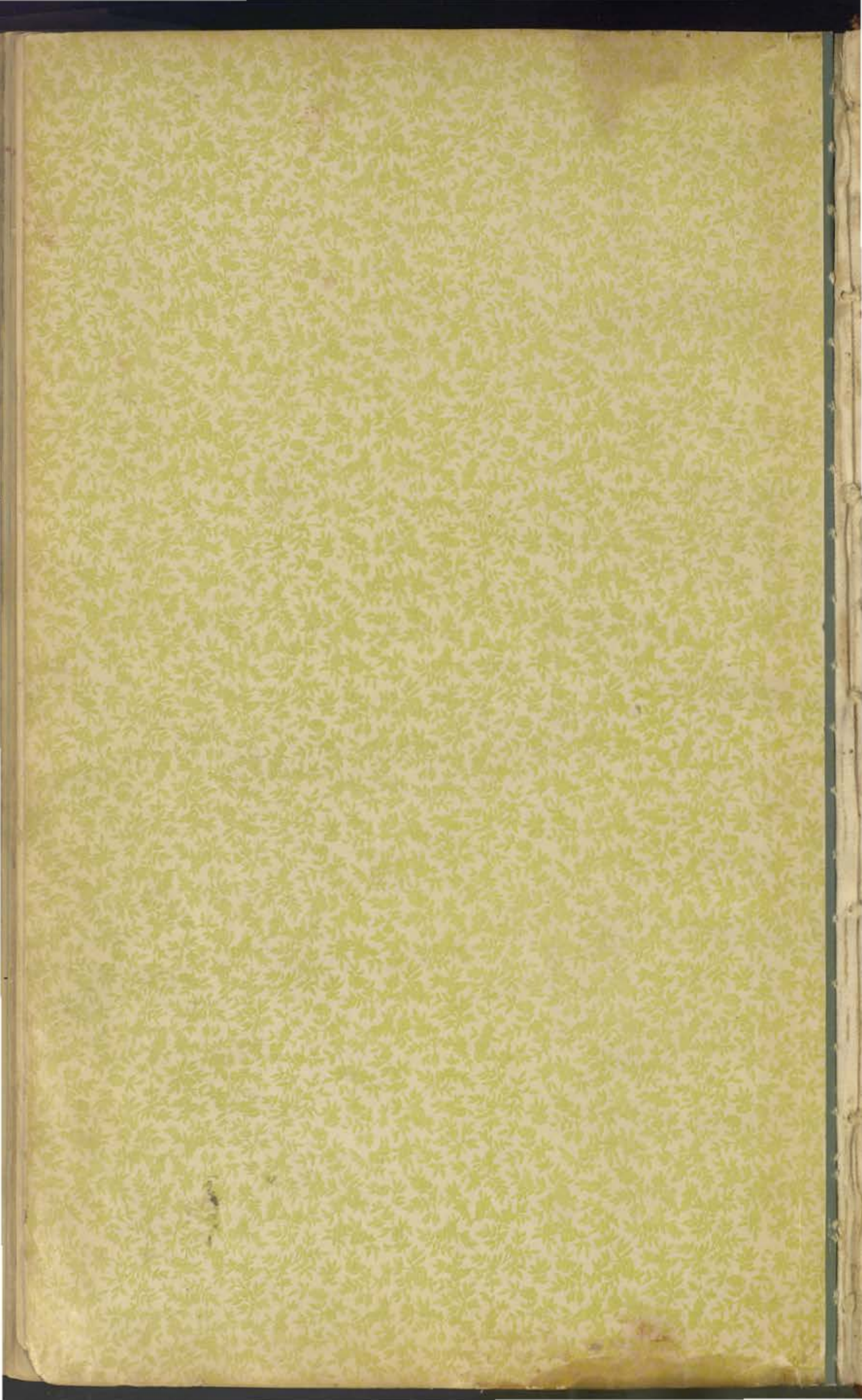
February 26, 1913.

The first thing I noticed when I stepped
out of the car was the smell of
fresh air. It was a relief after
being stuck in traffic for hours.
The sun was shining brightly, and
the birds were singing. I took a
deep breath and felt a sense of
freedom. The world was so beautiful,
and I was finally free to enjoy it.
I walked towards the park, and
the children were playing happily.
The flowers were in full bloom,
and the grass was so green. I
felt like I was in a different
world. The air was so fresh, and
the sun was so warm. I was
so happy to be here. I was
finally free to enjoy the world
as it is. I was so lucky to
be here. I was so happy to be
free.

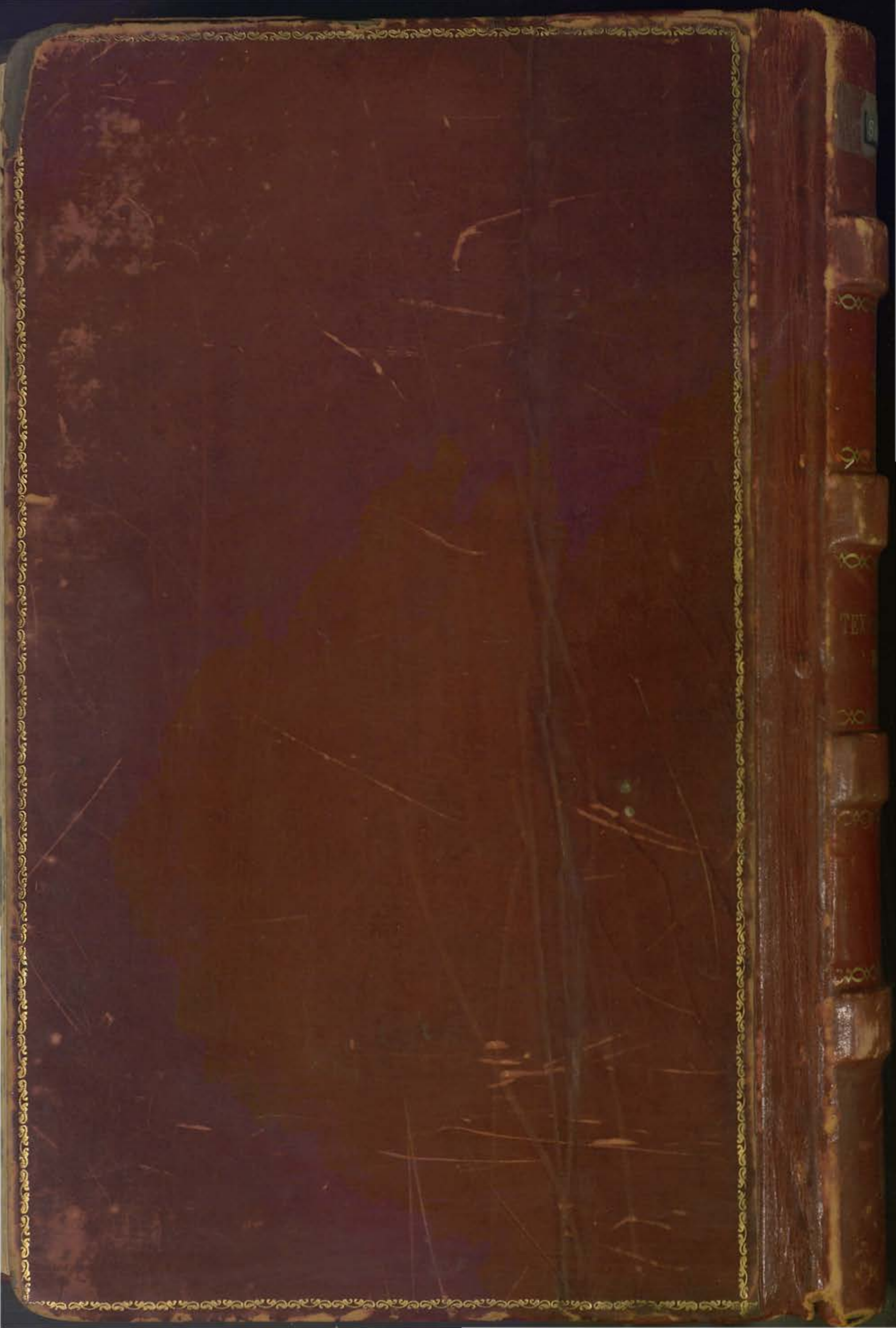
The first thing I noticed when I stepped
out of the car was the smell of
fresh air. It was a relief after
being stuck in traffic for hours.













" Mile Corner's description, specifications
 P. 5
 P. 498 - LIST OF CLARK MONUMENTS AT WHICH LARGE & SMALL CONC. MON. WERE SET
 ON 3rd Parallel