

varas pass East end of drift fence, at 10400 varas enter firm ground, at 11405 varas, earth monument and circular trench 16 feet in diameter (21 miles).

Thence North at 2520 varas enter sand, at 4314 varas sandy ridge, at 7365 varas top of sand ridge, (Determined meridian by observation of Polaris, at Eastern elongation, angle of line with Polaris $1^{\circ} 32'$, azimuth angle $1^{\circ} 30'$, error in line $2'$ W. correct line to true Meridian, magnetic variation $10^{\circ} 30'$ East.) at 9650 varas sand ridge, at 11405 varas set charred stake 4 ft. long two feet in ground and buried charred wood on South side of stake (27 miles N.).

Thence North at 5200 varas enter firm ground, at 7000 varas top of limestone ridge, at 8880 varas enter sand, at 11405 varas point in sand. (33 miles.).

Thence North at 115 varas top of sand ridge, at 5042 varas cross Drift fence, at 5145 varas sand ridge, at 5920 varas sand dunes, at 6285 varas sharp sand ridge, at 7604 varas heavy sand (Determined true meridian by observation of Polaris, angle of line with Polaris at Eastern elongation $1^{\circ} 31'$, azimuth angle $1^{\circ} 30'$. error in line $1'$ West. Magnetic variation at 6 o'clock A. M. $10^{\circ} 30'$ East.) Correct line to true meridian. at 10560 varas leave heavy sand, at 10960 varas cross Draw course East, at 11900 cross wagon road leading from Monument Springs to Midland, at 12094 varas built monument of stone on bank near North side of low ground, Size: Stone $2\frac{2}{3}'$ base $2'$ high, circular trench 12 ft. in dia. stone covered with dirt, at 13200 enter sand, at 13306 point (40 miles).

Thence North in sand 5720 varas top of sand ridge, at 6974 varas, Windmill bears Angle right $6^{\circ} 58'$ -(N. $6^{\circ} 58'$ East.) at 9504 varas, set charred stake and buried charred wood in heavy sand (45 miles North.)

Thence North at 2833 varas same windmill bears (Angle right $163^{\circ} 27'$) S. $16^{\circ} 33'$ East, at 3367 varas cross road course N. 20 W. at 3720 varas, determined true meridian by observation of Polaris.

Angle of line with Polaris at Eastern elongation	$1^{\circ} 32'$
Azimuth Angle	$1^{\circ} 30'$
Error in Line	$0^{\circ} 02' W.$

Magnetic variation at 6:15 o'clock, Aug. 9/92. $10^{\circ} 36'$ E.
Corrected line to true meridian.

counter 90706

at 6440 varas top of sand ridge, at 9400 varas enter firm land, at 10280 varas top of firm ridge, at 10320 varas Moore's house bears Angle left ($72^{\circ} 32'$) N. $72^{\circ} 32'$ West, at 10452 varas cross road leading from Moore's to Midland, at 11405 varas, built earth monument with 9 ft. base, and dug circular trench 16 ft. in dia. (51 miles North).

Thence North at 1600 varas sandy soil, at 3395 varas top of ^{high} sandy ridge, at 4880 varas point in Draw, firm ground (Draw runs about S. 70° E. Moore's windmill up Draw West about $1\frac{1}{4}$ miles) at 5795 varas cross road course N. 70° W. at 6840 varas enter sand, at 10120 varas enter firm ground, at 10800 varas enter and at 11040 varas leave Draw running S. 70° E. at 11280 varas enter sand, at 11405 varas set charred stake and buried charred wood, and dug circular trench 15 ft. in dia. in heavy sand. (57 miles.)

Thence North at 440 varas, determined meridian by observation of Polaris.

Angle of line with Polaris at Eastern elongation	$1^{\circ} 32'$
Azimuth Angle	$1^{\circ} 31'$
Error in line	$1'$ W.

Correct line to true Meridian.

Magnetic variation, August 10/92. at 6:10 A. M. $10^{\circ} 58'$ E.

at 922 varas cross Drift fence, at 1446 varas ($57-76/100$ miles) set charred stake 4 ft. long, and buried charred wood, built mound and dug circular trench in heavy sand, at 3785 vrs. top of sand ridge, at 5237 varas, windmill bears Angle left ($33^{\circ} 14'$) N. $33^{\circ} 14'$ W. at 5560 varas cross Draw course East, at 6200 varas leave sand, at 6300 Draw course East, at 8861 vrs. windmill bears Angle left ($116^{\circ} 46'$) S. $63^{\circ} 14'$ W. light sand, at 9717 varas wagon road course N. 80° E. at 10100 varas enter firm land, at 11405 varas drove stake with two shoulders of wagon thimbles on it, built earth monument and dug circular trench 2 ft. wide and 16 ft. in diameter, (63 miles).

Thence North at 2102 varas cross wagon road course East, at 3505 varas cross road course S. 75° E. at 4699 varas Mallett Ranch headquarters bears Angle left ($94^{\circ} 42'$) S. $85^{\circ} 18'$ W. Rainwater pond bears West 200 varas, at 6900 varas top of high ridge, Mallett headquarters bears Angle left ($103^{\circ} 24'$) S. $76^{\circ} 36'$ W. at 8180 varas cross Draw course West at 9190 varas firm land, Mallett headquarters bears Angle left ($111^{\circ} 45'$) S. $68^{\circ} 15'$ W. at

11200 varas enter sandy soil, at 12025 varas top of sandy ridge, at 13306 varas (70 miles) set charred stake and built earth mound of sand, covered same with red clay, and crowned top and base of mound with small limestone rock fitted close together and hammered firmly into the clay. Dimensions of mound complete, 4 ft. high, base 10 ft. Dug circular trench 16 ft. dia. 2 ft. wide and 18 inches deep. This monument marks the point to which John H. Clark ran North from the 32d parallel as stated in his report on page 279 of the Commissioners Report upon The Survey of the United States and Texas Boundary (47th Congress 1st Session. Ex. Doc. No. 70.) the same being in Latitude $33^{\circ} 00' 58''$ North. In the above quoted Commissioners Report on page 280, Clark reports his line to have been located 184 miles South from Latitude $36^{\circ} 30'$ North. A preliminary line run by us, beginning at Monument No. 11 on the 103d Meridian, and running South through Monuments Nos. 10, 9, 8, 7, 6 and 5, all of which were found and indentified, as described in the above mentioned Report, and prolonged (checked by Polaris observations as hereinbefore) interesects Latitude $33^{\circ} 00' 58''$, 2132 varas East of the last described Monument. Determined true Meridian at above described Monument.

Thence Angle right $1^{\circ} 08' 42''$, North $1^{\circ} 08' 42''$ East (course computed to intersect Clark's terminus in Latitude $33^{\circ} 49' 51''$ North) Magnetic variation Aug. 12/92. at 6:30 A. M. $11^{\circ} 05'$ East, at 680 varas enter firm ground at 833 varas cross wagon road, at 930 varas enter sand, at 6680 varas enter firm land, at 6919 varas cross wagon road course N. 80° W. at 8110 varas cross wagon road course N. 20° W. at 8395 varas cross wagon road course N. W. at 9638 vrs. Brown's windmill brs. Angle left ($73^{\circ} 40'$) N. $72^{\circ} 31'$ W. at 11405 vrs. Brown's windmill bears Angle left ($129^{\circ} 35'$) S. $51^{\circ} 34'$ W. (76 miles) made earth monument 9 ft. base covered with small stones closely fitted together and hammered down, and dug circular trench 16 ft. in diameter.

Thence North $1^{\circ} 08' 42''$ East at 1240 varas enter sand, at 3257 varas top of sandy ridge, at 3700 varas cross Draw course East, at 4500 varas cross Draw course East, at 5880 varas top of low sandy ridge, at 7760 vrs. small basin, at 9000 varas enter firm land, at 10160 vrs. earth monument and
counter 40708

circular trench 16 ft. in dia. in very firm soil.

Determined Meridian by observation of Polaris.

Angle of line with Meridian Polaris at Eastern elongation	$0^{\circ} 21' 41''$
Azimuth Angle	$1^{\circ} 31'$
Error in line	$37''$ E.
Correct line to true course	
Magnetic variation Aug. 13/92. 6:15 A. M.	$10^{\circ} 50'$ E.

at 11240 varas enter sand, at 12760 vrs. enter firm land, at 13300 vrs. Draw runs West, at 13480 varas enter sand, at 16200 varas enter firm land, at 17455 vrs. windmill brs. Angle left ($36^{\circ} 56'$) N. $35^{\circ} 47'$ W. at 19509 varas cross wagon road, at 22480 varas O. H. O. windmill brs. Angle left ($88^{\circ} 22'$) N. $87^{\circ} 13'$ W. at 22810 vrs. (88 miles) made earth monument and dug circular trench 16 ft. in diameter.

Thence North $1^{\circ} 08' 42''$ East at 6000 varas gravel and sandy loam, at 6480 vrs. top of ridge sand and gravel, at 8480 wagon road course N. 70 E. at 9440 varas bottom of depression, at 11405 varas (94 miles) in heavy sand. Thence North $1^{\circ} 08' 42''$ East at 240 varas determined true meridian.

Angle of line with Polaris at Eastern elongation	$0^{\circ} 19' 51''$
Azimuth Angle	$1^{\circ} 31'$
Error in line	$2' 27''$
Correct line to true course.	
Magnetic variation, August 14/92. at 6:05 A. M.	$10^{\circ} 56'$ E.

at 3000 varas firm land, at 3500 varas edge of sand, at 5640 varas point on sandy ridge, at 6620 point on sandy ridge, at 8280 varas edge of firm ground, at 8620 varas E. edge of basin, at 9000 varas widge of sand, at 10320 varas edge of firm ground, at 10760 varas made earth Monument and dug circular trench 16 feet in diameter, at 10840 enter sand, at 11405 varas (100 miles) in heavy sand.

Thence North $1^{\circ} 08' 42''$ East at 640 varas sandy Knob, at 1600 varas sandy Knob, at 2860 varas edge of firm ground, at 3390 varas enter sand, at 3460 varas sand ridge, at 5100 varas top of same sand ridge, at 7680 vrs. enter firm land, at 7340 varas made monument and dug circular trench 16 feet in diameter, at 8060 varas enter sand, at 11405 varas (106 miles) in heavy sand.

Thence North $1^{\circ} 08' 42''$ East at 3960 varas sandy ridge, at 4914 varas top of sharp sand Dune, at 5988 varas top of sharp sand Dune, at 6000 varas determined meridian by observation of Polaris.

Azimuth Angle	1° 31'
Angle of line with Polaris at Eastern elongation	21' 30"
True line	22' 18"
Error in line	48" E.
Magnetic Variation August 15/92. 6. A. M.	11° East.
Correct line to true course.	

at 6027 varas sharp sand Dune, at 11405 varas (112 miles) in heavy sand.

Thence North 1° 08' 42" East at 1600 varas bottom of basin, at 2390 vrs top of sand ridge, at 3480 varas enter firm ground, at 3920 varas enter sand, at 4085 varas enter firm ground, at 5920 varas enter sand, at 9805 vrs. point in sand. (117 miles + 301 varas.)

Thence North 1° 08' 42" At 320 varas enter firm land, at 502 varas built earth monument and dug circular trench 16 ft. in diameter at 1280 varas enter sand, at 2189 varas determined true meridian by observation of Polaris.

Azimuth angle	1° 31'
Angle of line with Polaris at Eastern elongation	22' 41"
True bearing of line	22' 18"
Error in line	23" W.
Correct line to true bearing	
Magnetic variation August 16/92. at 6:30 A. M.	10° 40' E.

at 2618 varas sandy ridge, at 4000 varas top of sandy ridge, at 5165 varas top of sandy ridge, at 7300 varas enter light sand, at 7480 varas enter firm ground, at 10000 varas enter sand, at 10720 varas leave sand, at 11405 varas (123 miles + 301 varas).

Thence North 1° 08' 42" East at 1820 varas cross Draw running East, at 2880 varas cross Draw running East, at 4100 varas cross Draw leading East 600 varas to lake basin, at 5698 varas intersect preliminary extended South from Monument No. 11, on the 103d Meridian to latitude 33° 49' 51", this point being 126 miles plus 274 varas North from 32d Parallel and 184 miles South from parallel 36° 30'. Length of connection between termini of Clark's lines 56 miles plus 296 varas, or 0° 48' 53" of arc. Built earth monument and dug circular trench 16 ft. in dia. in very hard ground.

Thence North 705 varas built mound and dug four pits, at 2605 varas built mound and dug two pits, at 6405 varas built mound and dug two pits, at 6504½ varas large stone monument the North West corner of Presidio County School League No. 162.

B. F. Jones

John T. Cook

counter 40710

E. D. Auld) Chainmen.
)
E. W. Smith)

REPORT and Field's

Texas and New Mexico

Boundary.

(Memorandum in red ink) on margin).

Note.

See Sketch No. 1. Lynn Co.
for W. D. Twitchell's Connection from
Double Lakes to New Mexico line and
Connection with surveys in Bl. D.
Jno. Gibson Surs. Wise.
7/25/02.

(Pencil memorandum).

The N. W. Cor. of 162
referred to above
was placed by me
at the intersection of
the N. line of league 162
and the State line.

W. D. Twitchell,
7/23/1902.

*Report and Field's
Texas New Mexico,
Boundary.*

*Filed in General Land Office
December 29th 1892*

*W. Bramlette
Chief Clerk.*

Filed in General Land Office

December 29th, 1892.

Wm. Bramlette,

Chief Clerk.

Surveyed July 13th to August 17th 1892.

We W. D. Twitchell Special Dept. Surveyor of Howard Land Dist. and Mark
Howell, County Surveyor of Chaves County, New Mexico, do hereby certify
that the above and foregoing field notes are true and correct, and that
the marks, both natural and artificial are truly described, and that the
survey was actually made by us upon the ground.

Witness our hands, this August 24th A. D. 1892.

W. D. Twitchell,
Special Deputy Surveyor Howard Land Dist.

Mark Howell,
County Surveyor, Chaves Co., New Mexico.

I, R. B. Zinn, District Surveyor of Howard Land District, do hereby
certify that I have examined the above and foregoing field notes and find
them true and correct, and that they are recorded in my office in Book (1)
pages 15 to 22, in Howard County Record. on Oct. 4 to 5 A. D. 1892.

R. B. Zinn, District Surveyor of Howard Land District.

General Land Office,
Austin, Texas, Jan. 7th, 1893.

The above and foregoing Report and Fieldnotes as made by W. D. Twitchell,
Sp. Depty. Sur. of Howard Ld. Dis. and Mark Howell, Co. Sur. of Chaves Co.
New Mexico, has been examined and found correct and approved and adopted
by this office.

W. L. McGaughey,
Commissioner.

(Seal).

GENERAL LAND OFFICE, AUSTIN, TEXAS

counter 40711

counter 40711

Yobum co. st. #3

GENERAL LAND OFFICE, AUSTIN, TEXAS.

August 14th 1902

I, Charles Rogan, Commissioner of the General Land Office of the State of Texas, do hereby Certify that the above and foregoing is a true and correct copy of the original, together with all the endorsements thereon now on file in this office.

IN TESTIMONY WHEREOF, I hereunto set my hand, and affix the impress of the seal of said office the date last above written.

Charles Rogan
Commissioner General Land Office.

B. B. Smith, District Surveyor of Howard Land District.

Witness my hand and seal this 14th day of August, 1902.

Witness my hand and seal this 14th day of August, 1902.

Witness my hand and seal this 14th day of August, 1902.

County Surveyor, Graham Co., New Mexico.
Mark Howell

Special Deputy Surveyor Howard Land Dist.
W. D. Litchell

Witness my hand and seal this 14th day of August, 1902.

Witness my hand and seal this 14th day of August, 1902.

Witness my hand and seal this 14th day of August, 1902.

Witness my hand and seal this 14th day of August, 1902.

Witness my hand and seal this 14th day of August, 1902.

Witness my hand and seal this 14th day of August, 1902.

Chief Clerk.
Witness my hand and seal this 14th day of August, 1902.

Wm. Bramlette,

December 29th, 1892.

Filed in General Land Office

Wm. Bramlette
W. D. Litchell
Mark Howell
Charles Rogan
Wm. Bramlette
W. D. Litchell
Mark Howell
Charles Rogan

Boundary.

Texas and New Mexico

REPORT and Field's

() W. D. Litchell

() W. D. Litchell

W. D. Litchell
1902/25/17

W. D. Litchell
1902/25/17

counter 40712

Yuskum County
Sketch File

original in Box File, titled,
miscellaneous

more -
Boundary Line

Texas & New Mexico
Letters, etc.

See Twichell's Letter
of 1-14-1900 in
Lynn Co Sk Files

WDTwichells FN of the 103^d
Meridian between Texas &
New Mexico.
Dated Aug. 24, 1892



counter 40714



Yozkum Co Sk File No. 3

Clark monument No. 6 on 103"^M.
Looking N., Dec. 18", 1903.
Presented by W.D. Twichell.

103 meridian.
Clark monument No 9 looking S.E.
Dec. 20", 1903.
Presented by W.D. Twichell.

Clark monument No. 10 on 103"^M.
December 20", 1903.
Presented by W.D. Twichell.

Clark monument No. 5 on 103"^M.
Looking N.W., Dec. 18", 1903.
Presented by W.D. Twichell.

Clark monument No. 12 on 103"^M.
December 20", 1903.
Presented by W.D. Twichell.

Looking east from point about 1/2
mile S. of monument No. 9 on 103"^M
Dec. 19", 1903.
Presented by W.D. Twichell.

Yozkum Co. Sk. File 3

Looking north across breaks in the
plains, about 1/2 mile S. of Clark
monument No. 9, showing 103" merid.
fence. Dec. 19", 1903.

Presented by W.D. Twichell.

Clark monument No. 9 on 103"^{Meridian}
Looking N.E., Dec. 20", 1903.
Presented by W.D. Twichell.

counter 40715



counter 15716

Clark monument No. 11 on 103M,
Looking N. Dec. 20", 1903.
Presented by W. D. Twichell.

counter 40717