

*Young County
C. Line Sk. Files.*

*Presented March 1932
by Mr. W. J. Williams*

COURT SURVEYOR'S REPORT

To

W. R. CHAPMAN—JUDGE
104th Judicial District of Texas

In Case Between

LYNN AND GARZA COUNTIES

Made By

W. J. WILLIAMS
Court Surveyor

File in Lynn Co. boundary 9a

$$\begin{array}{r}
 846.3 \\
 846.3 \\
 \hline
 25389 \\
 50778 \\
 33852 \\
 67704 \\
 \hline
 716223.68
 \end{array}$$

$$\begin{array}{r}
 7584 \\
 758.4 \\
 \hline
 30326 \\
 60672 \\
 37920 \\
 53088 \\
 \hline
 575170.56 \\
 71622368 \\
 \hline
 1291394.24 \quad (1136.4)
 \end{array}$$

$$\begin{array}{r}
 29 \\
 21 \overline{) 21} \\
 \hline
 223 \overline{) 813} \\
 \hline
 2266 \overline{) 14494} \\
 \hline
 22724 \overline{) 13596} \\
 \hline
 \overline{) 89824} \\
 \overline{) 90896}
 \end{array}$$

$$\begin{array}{r}
 1136.4 \\
 1136.4 \\
 \hline
 45456 \\
 68184 \\
 34092 \\
 11364 \\
 11364 \\
 \hline
 1291404.96
 \end{array}$$

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Made By

W. J. WILLIAMS
Court Surveyor

To the Honorable W. R. Chapman,
Judge of the 104th Judicial District,
Abilene, Texas.

As your surveyor in the case between Lynn and Garza and other counties, affecting their boundaries, and now pending in your court, I have the following to report.

By an act approved February 6, 1854, the Legislature of Texas donated 8 leagues of land to be used as an Indian Reservation.

Captain R. B. Marcy of the United States Army made a survey of eight leagues of land for this purpose, the land lying across the Brazos River in what is now the southern part of Young County. I had access to a certified copy of his report which is now on file in the Office of Indian Affairs in the Department of the Interior at Washington. I hand you herewith a copy of same.

MARCY REPORT
DEPARTMENT OF THE INTERIOR
Office of Indian Affairs

Washington, Feb. 24, 1921.

I, E. B. Merritt, Assistant Commissioner of Indian Affairs, do hereby certify that the paper hereto attached is a true copy of the original as the same appear of record in this office.

In Testimony Whereof I have hereunto subscribed my name, and caused the seal of this office to be affixed on the day and year first above written.

(Signed) E. B. Merritt,
Assistant Commissioner.

(Seal)

J. T. L.

Field-notes of a survey made by Capt. R. B. Marcy under orders from the Departments of War and Interior for the benefit of Indians living within the limits of the State of Texas, in accordance with an Act of the Legislature of said state approved February 6, 1854.

This tract of land contains eight Spanish leagues or (35424) acres (English) is situated upon the Brazos River below the confluence of the Clear Fork, and is bounded as follows:

Beginning at high water mark upon a large rock situated directly at the junction of the Clear Fork with the main trunk of the Brazos River upon the lower or south side, the bearings and distances to the commencement of the line bounding the reservation are as follows:

Stations	Bearings	Distances
Mouth of Clear Fork.....	N 5°20'E.....	11.49 chains
2	N 68°40'E.....	2.00 chains
3	N 68°40'E.....	3.29 chains
4	N 83° E.....	8.37 chains
5	N 74°20'E.....	8.28 chains

To the intersection of the western boundary of the reservation with the Brazos River. Thence S 10°20'4" W to a mound

of rock 85 chains from the river.

Thence with the same bearing 78.16 chains to a mound of earth upon the southwest corner of the tract with a mesquite tree bearing S 20°20' E distant 1.52 chains and marked with the letters I. R.

Thence S 79°39'56" E for 80 chains to a mound of earth with a mesquite tree bearing S 31°40' E distant 50 links.

Thence in the same direction 61 chains where the line crosses Brazos River.

Thence in the same direction 19 chains to a mound of earth with a post oak tree bearing S 90°10' W distant 25 links.

Thence in the same direction 30 chains where the line recrosses the Brazos River. Thence in the same direction 50 chains to a mound of earth from which a post oak bears S 89° E distant 65 links.

Thence in the same direction 80 chains to a mound of earth with three post oak trees situated as follows: 1st—N 44° W distant 27 links; 2nd—N 63° E distant 59 links; 3rd—S 15°20'4" W distant 69 links.

Thence in the same direction 80 chains to a mound of earth from which a live oak tree bears S 89° W distant 91 links.

Thence with the same bearing 80 chains to a mound of rocks in a ravine from which three post oak trees are situated as follows: 1st—S 40°21' W distant 13 links; 2nd—S 72°40' E distant 30 links; 3rd—N 8° W distant 14 links.

Thence with the same bearing 80 chains to a mound of rocks from which three post oak trees are situated as follows: 1st—N 55° W distant 43 links; 2nd—N 84° E distant 22 links; 3rd—S 13° W distant 20 links.

Thence in same direction 68 chains a large mound of rocks with three post oak trees situated as follows: 1st—N 10°20'4" E distant 14 links; 2nd—S 10°20'4" W distant 10 links; 3rd—N 80° W distant 16 links, the last tree is marked with the letters I. R. upon the side facing the mound which stands upon the southeast corner of the reservation.

Thence the line runs N 10°39'56" E 61.60 chains to a mound of earth with three oak trees situated as follows: 1st—N 41°45' E distant 35 links; 2nd—N 96°20' E distant 73 links; 3rd—S 31°45' W distant 30 links.

Thence with the same bearing 80 chains to a mound of rocks with three post oak trees situated as follows: 1st—S 40°20' W distant 20 links; 2nd—S 10°20'4" W distant 15 links; 3rd—S 50° E distant 30 links.

Thence with same bearing 80 chains to a mound of earth upon the first bench above the Brazos River upon the right bank.

Thence in the same direction 25.83 chains to the opposite bank of the Brazos.

Thence with same bearing 20 chains when the line enters a grove of post oaks and continues in it for 60 chains to a mound of earth with an oak tree bearing N 14° W distant 55 links.

Thence with same bearing 25 chains when the line enters a mountainous region covered with post oak and black jack trees and continues in this for 55 chains to a mound of rocks with a large rock bearing S 10°20'4" W distant 15 links.

Thence with same bearing 80 chains through post oak woodland to a mound of rock with a post oak tree bearing N 32°40' E distant 38 links.

Thence with same bearing 76.66 chains over a level plateau upon the summit of the mountains to a mound of earth with an oak tree bearing N 68° E 12 links. This tree is marked with the letters I. R.

From thence the line runs N 79°39'56" W through oak timbered lands for 80 chains to a mound of rocks with three oak trees situated as follows: 1st—S 51°30' E distant 44 links; 2nd—N 20° E distant 19 links; 3rd—N 52° W distant 61 links.

Thence with same bearing 80 chains to a mound of earth with three oak trees situated as follows: 1st—N 98°45' E distant 54 links; 2nd—N 45°10' E distant 90 links; 3rd—S 80°20' W distant 150 links.

Thence with same bearing 80 chains to a mound of earth with a mesquite tree bearing S 41°40'6" W distant 60 links.

Thence with same bearings 45 chains where the line crosses a sandy creek, tributary of the Brazos, 20 feet wide.

Thence in the same direction 35 chains to a mound of earth with an oak tree bearing N 14°20' E distant 55 links and another bearing S 79° E distant 121 links.

Thence with same bearing 45.33 chains to "salt creek" crossing this and running 34.67 chains in the same direction to a mound of rocks with an oak tree bearing N 5°10' W distant 8 links.

Thence with same bearing 80 chains to a mound of earth with three post oak trees situated as follows: 1st—N 89° E distant 14 links; 2nd—S 54° W distant 20 links; 3rd—N 48°20' W distant 18 links.

Thence with same bearing 80 chains to a mound of rocks with three oak trees situated as follows: 1st—S 22°30' W distant 8 links; 2nd—N 24° E distant 31 links; 3rd—N 40° W distant 51 links.

Thence with same bearing 68 chains over a mountainous country covered with post oak timber to a mound of earth with an oak tree distant 20 links, and marked with letters I. R. This mound stands upon the northwest corner of the reservation.

From thence the line runs S 10°20'4" W 75.16 chains through wood lands and small prairies to a mound of earth with an oak tree bearing N 10° E distant 5 links.

Thence with same bearing 80 chains through scattering oak timber to a mound of earth in a small prairie.

Thence with same bearing 80 chains through a mesquite grove to a mound of earth with a mesquite tree bearing N 45°10' E distant 80 links.

Thence with same bearing 80 chains along the side of a mountain covered with small oaks, to a mound of earth on a small prairie, with a mesquite tree bearing N 51°10' E distant 104 links.

Thence with same bearing 85.77 chains to the river bank at the point of beginning, where there is a mound of small rocks.

The boundary lines of the tract herein designated runs for the most part through wood lands and all the trees found upon the lines are "blazed" or cut upon the two sides facing the lines. Where there are no trees directly upon the lines, those found nearest are "blazed" upon the side towards them, in such a manner that the lines can be traced at any point upon them.

As the act of the Legislature of Texas appropriating the "twelve leagues" of land for the use of the Indians does not specify the kind of leagues, or the number of acres donated, the undersigned has been (in the absence of any definite instructions upon the subject) at loss to determine what form of measurement to adopt, or whether to make the surveys in English or American Leagues or Spanish Leagues.

The undersigned was aware of the fact that much of the public domain of Texas had been surveyed into Spanish or Mexican leagues, yet the English or American leagues, (if it could be adopted consistently with the Act) would give the Indians a tract of land much more suitable to their wants it seemed desirable to adopt the latter form of measurement.

In making the surveys of the different tracts, the undersigned has run and distinctly marked the boundary lines, both in American and Spanish measurement, so that either form can be adopted.

The field notes which precede these remarks pertain to the tract of land which is surveyed in Spanish leagues, the corners of this tract are marked upon the accompanying plat as follows: "A", "B", "C" and "D".

An amount of land (10656) acres the difference between eight Spanish and eight American leagues has been added to the tract above described, upon the Brazos River below the confluence of the Clear Fork and is embraced with the following boundaries:

Commencing at the corner of the Spanish league tract marked "A" upon the plat, the line runs S 10°20'4" W through a grove of post oak trees for 84.84 chains to a mound of earth with a mesquite tree bearing N 20°20' E distant 2.11 chains and marked with the letters I. R.

Thence S 79°39'56" E through a post oak grove for 76.60 chains to a mound of earth.

Thence with the same bearing through a heavy growth of mesquite trees for 38 chains to the river bank where there is a stake driven firmly into the ground with three trees situated as follows: mesquite bearing S 89° W distant 48 links; oak bearing N 17°25' W distant 39 links; elm bearing S 18°30' E

distant 73 links.

Thence with the same bearing across the bend of the river 100 chains to the right bank where there is a mound of rocks with an oak tree bearing S $11^{\circ}20'$ W distant 52 links, another bearing S 79° E distant 103 links.

Thence with the same bearing 10.37 chains crossing a large running brook at the 8.87 chain to a mound of rocks in a small prairie with oak trees situated as follows: 1st—S $79^{\circ}20'$ E distant 56 links; 2nd—N $38^{\circ}30'$ E distant 40 links; 3rd—S $33^{\circ}10'$ W distant 43 links; 4th—N $35^{\circ}15'$ W distant 61 links.

Thence with same bearing 80 chains to a mound of rocks near a small brook with an abundance of good water. Two elm trees are situated as follows: 1st—S $14^{\circ}5'$ W distant 62 links; 2nd—N 67° W distant 73 links.

Thence with same bearing 80 chains to a mound of earth with three mesquite trees situated as follows: 1st—N $83^{\circ}20'$ E distant 27 links; 2nd—N $20^{\circ}10'$ W distant 125 links; 3rd—S 31° W distant 98 links.

Thence with the same bearing 80 chains to a mound of rocks in a deep ravine with three trees situated as follows: elm S $33^{\circ}30'$ E distant 45 links; do N 68° E distant 108 links; pecan S 70° W distant 8 links.

Thence with the same bearing 80 chains to a mound of rocks in a ravine with two oak trees situated as follows: 1st—N $55^{\circ}10'$ W distant 7 links; 2nd—S $6^{\circ}5'$ W distant 24 links.

Thence in the same direction 80 chains to a mound of earth, with an oak tree bearing N $73^{\circ}30'$ W distant 16 links; this tree is marked with the letters I. R.

From thence the line runs N $10^{\circ}20'4''$ E for 84.84 chains to a large mound of rocks marked "B" upon the plat.

Commencing again at the northwest corner of the survey in Spanish league survey at the point marked "C" upon the plat, the line runs N $10^{\circ}20'4''$ E for 84.84 chains to a mound of earth with an oak tree bearing N 14° W distant 19 links and marked with the letters I. R.

Thence S $79^{\circ}39'56''$ E 80 chains to a mound of earth with an oak tree bearing N $30^{\circ}10'$ E distant 8 links.

Thence with the same bearing 80 chains to a mound of earth, with an oak tree bearing N $18^{\circ}5'$ E distant 155 links.

Thence with the same bearing 80 chains to a mound of earth erected around two blazed oak trees.

Thence with the same bearing 12 chains where the line crosses a large sandy creek, with good running water. Thence in the same direction 68 chains to a mound of earth with mesquite tree bearing S $60^{\circ}10'$ E distant 70 links.

Thence with the same bearing 80 chains to a mound of earth in a grove of oak trees two of which bear N $40^{\circ}30'$ E distant 45 links.

Thence with the same bearing 35 chains where the line crosses Salt Creek.

Thence with the same bearing 45 chains to a mound of rocks

upon the side of a mountain with an oak tree bearing S 79°20' E distant 28 links.

Thence with the same bearing 80 chains over a very rugged mountainous country to a mound of rocks, with an oak tree bearing N 10° W distant 50 links.

Thence with the same bearing 68 chains to a mound of earth with a mesquite tree bearing S 79° E distant 10 links, and marked with the letters I. R.

Thence the line runs S 10°20'4" W for 84.84 chains to a mound of earth before described and marked "D" upon the plat.

FIELD NOTES

Meandering of the Brazos River from the confluence of the "Clear Fork" to the lower line of the Indian reserves as surveyed by Capt. R. B. Marcy.

(Here follows field notes of meanders, but describing no point.—W. J. Williams)

The variation of the magnetic needle was determined at the confluence of the Clear Fork with the main Brazos, by several observations upon "Polaris" when at its greatest Eastern elongation and was 10°20'4" (East), which has been allowed in platting the survey from that point.

(Signed) R. B. Marcy,
Capt. U. S. A.

An act approved August 19, 1856 amends the description of Young County so that it begins 6 miles east of the S E corner of the Brazos River Indian Reservation. It then runs North 30 miles, West 30 miles, South 30 miles and East (no distance given) to the place of beginning.

During the year 1858 the Counties of Archer, Baylor and Throckmorton were created, described as adjoining Young County on the west and north.

Up to the time of creation of these last mentioned counties, there seems to have been no surveys made of the county boundaries in that vicinity and the S E corner of the Indian Reservation is all the mark on the ground that I have been able to find any reference to which would tend to control the location of the counties.

In March, 1859, J. H. Swindells made a survey of the west line and part of the south line of Young County. His report was acted on, approved and entered on the Minutes of the County Court of Young County. I am giving you herewith a copy I made of the records at Graham.

SWINDELLS' REPORT

Received and Ordered to be Filed May 17, 1859

FIELD NOTES of a survey of the western Boundary Line and a portion of the southern Boundary line of Young County in accordance with an order of the County Court of said County passed at the February Term 1859—

Beginning at a point on the northwest bank of the Clear

*F/N. by R. H. Matthews, Special Survey
dated 11-30-56 - Filed in G.L.O. 1-12-57*

Fork of Brazos River designated as the termination of that portion of the southern boundary line of Young County surveyed by R. H. Matthew in November A. D. 1856 a stake from which the southern bearing tree of the S E Corner of Colony Half Section No. 1206 bears N 20 varas. Thence west at 560 varas foot of hill at 600 varas stake in hill side from which a post oak 12 inches in diam marked XX bears S $62^{\circ}15'$ W 11 varas and a post oak 8 inches in diam bears N $75^{\circ}15'$ E 3.5 varas; thence west at 860 varas cross branch course southeast at 1900.8 varas stake and mound in mesquite prairie for the 21st mile corner; from which a mesquite 4 inches in diam bears N $33^{\circ}45'$ W 49.5 varas said bearing tree blazed and marked with the letter Y C L. and XXI.; thence west at 1120 varas cross branch course southwest at 1502 varas south at 1900.8 varas rock mound for 22nd mile from which a live oak 10 inches in diam. marked Y C L. bears S 31 E 50.25 varas and a live oak 8 inches in diam. marked XXII bears S 41 E 47.25 varas thence west at 520 varas cross branch course southwest at 560 varas top of live oak hill at 915 varas cross creek course south at 1870 varas cross branch course southwest at 1900.8 varas stake in rock mound for 23rd mile from which a post oak 12 inches in diam. marked XXIII bears S 1° E 18 varas and a post oak marked Y C L. bears East 8 varas; thence west at 540 varas cross oak creek 4 varas wide course S 30° E at 980 varas foot of mountains at 1420 varas cross branch course north at 1560 varas top of mountain at 1900.8 varas rock mound and stake for the 24th mile post from which a post oak 14 inches in diam. marked Y C L bears S 6° E 12 varas and a post oak 6 inches in diam. marked XXIV bears N $61^{\circ}30'$ E 5 varas; thence west at 980 varas cross branch course Northeast at 1900.8 varas rock mound and stake for 25th mile post from which a post oak 6 inches in diam. bears N 16° E 2 varas and a post oak 14 inches in diam. bears S 4° E 8 varas; thence west at 260 varas cross branch course north at 1900.8 varas rock mound for 26 miles from which a black jack marked Y C L bears S $88^{\circ}45'$ E 3 varas and a post oak 8 inches in diam. bears S $53^{\circ}15'$ W 4 varas; thence west at 455 varas cross branch course north at 1900.8 varas a stake and mound for 27th mile post from which a post oak 4 inches in diam. marked Y C L bears N $16^{\circ}30'$ W 1.2 varas and a post oak 10 inches in diam. marked XXVII bears S 8° E 20.4 varas; thence west at 800 varas cross Millers creek course southwest at 860 varas cross Millers creek course northwest at 970 varas cross Clear Fork trail course N and S at 1060 varas cross Millers Creek course south at 1200 varas foot of hill at 1900.8 varas a stake and mound for 28th mile post from which a post oak 14 inches in diam. bears N $58^{\circ}45'$ E 2.8 varas and a post oak 8 inches in diam. bears N $22^{\circ}15'$ W 4.6 varas. Bearings marked Y C L. and XXVIII; thence west at 764 varas branch course S 20 E 936 varas cross head of branch course south 1201 varas top of hill 1240 varas foot of the same 1560

varas cross branch course S E and S W 1760 varas cross branch course south 1900.8 varas a stake and mound for the 29th mile post from which a mesquite 6 inches in diam. marked XXIX bears S 70°30' E 9.6 varas and a mesquite 8 inches in diam marked Y C L bears N 67°15' W 23.1 varas. Thence west at 340 varas top of Rocky Hill 357 varas cross the east line of a survey of 20 labors in the name of A. S. Johnson 217 varas S 30' W of its N E corner 400 varas foot of hill 480 varas cross Rust's creek course S E 4 varas wide 1900.8 varas southwest corner of Young County a rock mound in the valley of Clear Fork from which a forked leaning mesquite marked S W cor Y C bears N 56°30' E 17 varas and a mesquite 6 inches in diam. marked XXX bears south 1°30' E 94 varas also a hackberry on the north bank of Rust's Creek 14 inches in diam. marked Y C brs north 673.5 varas. This corner bears from the N W cor of the Half Section No. 1164 of the Texas Emigration and Land Company north 50° west 350.2 varas and from the N E corner of A. S. Johnson survey of 20.3 labors south 82° W 1558 varas variations on the south line 10°36' E from the 21st to the 29th mile and 10°50' E on the 30th mile Western boundary line. Beginning at the southwest corner of the county as above described; thence north at 222 varas cross Rust's Creek Road; course E and W 638 varas cross Rust's Creek course east 3 varas wide; 673 varas hackberry line and bearing tree marked YC 780 varas cross Hester's Creek course south 60° east 1220 varas enter post oak timber at foot of a low hill 1900.8 varas a rock mound for the 1st mile post on the western boundary line; from which a post oak 14 inches in diam. bears N 34° E 5 varas and a post oak 10 inches in diam. marked I bears N 58½° W 12 varas thence north through alternate prairie and P O Timber 1900.8 varas a stake in a rock mound from which a post oak 8 inches in diam marked II bears S 76 30 W 4.5 varas and a post oak 10 inches in diam. marked YCL bears N 32 E 18.5 varas; thence north through timber at 80 varas branch course southwest 1 vara wide—1040 varas enter prairie with scattering post oak and mesquite. 1400 varas cross branch course west 1900.8 varas a stake and mound of earth for the 3rd mile post from which a post oak marked III and 6 inches in diam. bears S 65°30' E 6.5 varas and another post oak marked Y C L 7 inches in diam. brs S 31° 30 W 6 varas; thence north through glady mesquite prairie at 527 varas cross the new blazed road from Belknap to Clear Fork 1160 varas cross creek course S W 1900.8 varas a stake and earth mound for the 4th mile post from which a post oak 14 inches in diam. marked Y C L brs N 55 W 24.2 varas and a post oak 6 inches in diam. marked IV brs S 84°30 W 19 varas; thence north at 940 varas cross branch course S E 1760 varas foot of hill 1900.8 varas a rock mound on the top of said hill for the 5th mile post from which a Double Post Oak marked Y C L bears S 4° W 40 varas a live oak marked V bears N 25° W 157½ varas; thence north over post oak and

mesquite prairie at 1900.8 varas rock mound for the 6th mile post from which a mesquite 10 inches in diam. marked Y C L bears S $56^{\circ}40'$ W 8.6 varas and a post oak 10 inches in diam. marked VI bears N 33° E 23 varas; thence north at 59 varas cross north line of Peters Colony Half Section No. 1650, 375 varas west of its northeast corner 380 varas cross branch course west 390 varas same branch course northeast 405 varas cross same branch course west and southwest 1484 varas cross Fish Creek and Agency Road; course N E and S W 1900.8 varas a stake and earth mound for the 7th mile post from which a mesquite 8 inches in diam. marked Y C L bears S 23° W 40.5 varas and a mesquite 10 inches in diam. marked VII bears N 6° E 26 varas; thence north through mesquite prairie 880 varas cross branch course S W 910 varas cross branch course S E 1880 varas cross and re-cross same Branch several times the general course of which is south 1900.8 varas a stake and rock mound for the 8th mile post from which a mesquite 4 inches in diam. marked VIII bears N 71° W 19 varas and another marked Y C L and 6 inches in diam. bears $30^{\circ} 50'$ W 35 varas; thence north at 260 varas 260 varas cross the Belknap and Camp Cooper Road course N 60° E and S 60° W at which point a large flat rock in the middle of the road is marked West Line Y. Co. and is likewise designated by a large rock mound on the north side of the road. 1005 varas cross north fork of Fish Creek course S E 1900.8 varas rock mound for the 9th mile post from which a muli pronged live oak marked IX bears N $81^{\circ} 15'$ E 487 varas; thence north through high rolling prairie 1900.8 varas rock mound for 10th mile post from which a mesquite 5 inches in diam. bears N $24^{\circ}15'$ E 9 varas and a mesquite 10 inches in diam. marked Y C L bears S $58^{\circ} 30'$ E 25 varas; thence north at 385 varas cross branch course N E 1620 varas cross branch course east 1900.8 varas stake in earth mound for the 11th mile post from which a mesquite 8 inches in diam. marked XI bears N 76° W 43.25 varas; thence north at 820 varas cross branch course east 1900.8 varas rock mound on hill side for the 12th mile post from which a mesquite 5 inches in diam. marked XII bears N $54^{\circ}45'$ E 9 varas and a post oak marked Y C L bears S $79^{\circ}30'$ E varas; thence north at 1780 varas cross branch course west 1900.8 varas rock mound for 13th mile post from which a post oak 12 inches in diam. marked XIII bears S 2° W 80 varas and a live oak 12 inches bears N 35° W 75.5 varas; thence north at 1840 varas cross creek (a branch of Elm) 4 varas wide course N E 1900.8 varas a stake and mound in bottom for the 14th mile post from which a Chittum 8 inches in diam. marked Y C L bears N 14° W 10.5 varas a Chittum 6 inches in diam. marked XIV bears N $30^{\circ}40'$ W $10\frac{1}{2}$ varas and a chittum 12 inches in diam. marked XIV bears S $11^{\circ}15'$ W 19.25 varas. Thence north at 160 varas cross Elm Creek (a bend of) 210 varas cross Elm Creek course east 4 varas 1900.8 varas a stake and mound for 15th mile post

from which a mesquite 12 inches in diam. marked XV bears north 5 varas and a leaning mesquite on the bank of a branch marked Y C L bears S 24° 50' E 21.4 varas; thence north at 180 varas cross branch course S W 800 varas cross branch course S E 840 varas cross branch course S W 1900.8 varas stake and mound for the 16th mile post from which a mesquite 6 inches in diam. marked Y C L bears N 13° W 42.3 varas and a mesquite 8 inches in diam. marked XVI bears S 55° 15' E 675 varas; thence north at 1000 varas cross California road course E and W 1900.8 varas a rock mound for the 17th mile post from which a mesquite 5 inches in diam. marked XVII S 9° 10' E 37 varas and a mesquite 8 inches in diam. marked Y C L bears N 29° 30' E 35.5 varas; thence north at 100 varas a mesquite on line marked for an old line running north and south, 1160 varas pass foot of rocky hill on the west 1900.8 varas a stake and mound for the 18th mile post from which a mesquite 6 inches in diam. marked Y C L bears S 36° 25' W 42 varas and a mesquite 6 inches in diam. marked XVIII bears N 2° E 24 varas; thence north at 420 varas cross a large branch course S E and N E 440 to 460 varas cross and re-cross bend of said branch 1900.8 varas a stake and mound for the 19th mile post from which a mesquite 8 inches in diam. marked XIX bears S 78° 20' W 7 varas and a mesquite 6 inches in diam. marked Y C L bears S 14° E 15½ varas; thence north at 1246 varas cross line of Survey No. of the Texas Emigration and Land Company 65 varas west of its corner 1900.8 varas a rock mound for the 20th mile post from which a mesquite 6 inches in diameter marked Y C L bears N 2° 15' E 44.5 varas and a mesquite 8 inches in diam. marked XX bears N 34° 45' W 16 varas; thence north at 684 varas corner of Survey No. of the Texas Emigration and Land Company bears east 100 varas 825 varas cross Boggy Creek course east and west 1000 varas. Cross Boggy Creek course northwest; 1090 varas cross Boggy Creek course northeast and 1440 varas a bend of Boggy Creek bears west 1900.8 varas a stake and mound for the 21st mile post from which a mesquite 10 inches in diam. marked XXI Y C L bears N 9° 30' W 119 varas and a mesquite 8 inches in diameter marked XXI bears N 2° 30' W 127 varas; thence north at 116 varas corner of Survey No. of the Texas Emigration and Land Company bears east 123 varas 1900.8 varas a stake and mound in Valley prairie for the 22nd mile post from which a mesquite 8 inches in diameter marked XXII bears S 89° 15' E 125 varas; thence north at 790 varas S W edge of Brazos River course N 69 W and S 61° E 980 varas north bank of Brazos River 1900.8 varas a stake and mound in prairie valley from which a Brushy Topped mesquite on the side of the Bluff marked XXIII bears N 1° 30' W 1000 varas; thence north at 1900.8 varas a rock mound on top of mountain for the 24th mile post from which a large flat rock marked XXIV bears N 31° W 20 varas; thence north at 255 varas cross creek near its mouth

course S W 340 varas Brazos River courses S 30° W 800 varas west side of Brazos River course S 5 W 1900.8 varas corner a stake in the bed of the river for the 25th mile post from which a cotton wood, blazed on west side standing on the bank of the river bears N 89°15' E 104 varas another cottonwood marked Y C L XXV bears N 88°30' E 104 varas and another bears N 87°45' E 104 varas; thence north at 420 varas. River bank course S 10 E 590 varas pass a cottonwood marked Y C L bearing west 800 varas cottonwood marked W L bears West 2 varas; 1900.8 varas a stake and mound in valley from which an elm 14 inches in diameter marked Y C L bears N 26° 45 E 192.5 varas and a Hackberry 4 inches in diameter marked XXVI bears N 66° E 176 varas; thence north at 1540 varas cross Spring Creek course south 1590 varas cross Spring Creek course S E 1655 varas cross Spring Creek course S W 1900.8 varas a stake and mound in prairie for the 27th mile post from which a forked mesquite marked Y C L bears S 74°30' W 194½ varas and a mesquite marked XXVII bears S 79° 30 W. Thence north at 1900.8 varas stake and mound for the 28th mile post from which a mesquite 6 inches in diameter marked XXVIII bears N 3°55' W 53 varas a mesquite 8 inches in diameter marked Y C L bears N 45°45' E 78.7 varas; thence north at 1760 varas cross creek course east 1900.8 varas a stake and mound in prairie for the 29th mile post from which a mesquite 6 inches in diameter marked XXIX bears S 64° 15 E 8 varas and a mesquite 10 inches in diameter marked Y C L bears N 74° 30 W 38 varas; thence north at 280 varas cross branch course west 575 varas cross creek course S W 595 varas cross creek course S E 1900.8 varas; the N W corner of Young County a stake marked N W C in a rock mound from which a double mesquite 8 and 10 inches in diameter marked N W and A bears N 3°45' 30 varas a mesquite 7 inches in diameter marked N W corner bears N 66°15' E 19.5 varas a mesquite 6 inches in diameter marked XXX bears N 87°45' E 12.5 varas a mesquite 8 inches in diameter marked C bears S 21° E 41.6 varas. A mesquite 12 inches in diameter marked "D" bears S 15° E 41.8 varas and a double mesquite the south prong marked N W corner bears N 39°40' W 4 varas and the north prong marked Y C bears N 32° W 4.6 varas; the variations on the west line is 10°55' E to the 20th mile and 11° E from thence to the N W corner at which place the true variation is 11°3' E the mile posts are marked with the number of the mile and the Bearing trees are marked Y C L and the number of the Mile post through the timber (Post Oak) the trees are hacked with 6 hacks on the side next the line and line trees are blazed on each side with the line.

Through the mesquite the trees are hacked to a distance of

10 feet from the line surveyed from 16th to 20th, March, 1859.
James H. Swindells, Surveyor.
M. Southerland

Chain Carriers

W. A. Brown
Henry Huffstuttle

Markers

J. W. Southerland

I, James H. Swindells, do hereby solemnly swear that the above and foregoing field notes represent that portion of the County line as surveyed by me and that said survey was made in accordance with law.

Jas. H. Swindells.

Sworn and subscribed before me this 28th day of March, 1859.

Alexander Dechman, Chief Justice Young County, Texas. There being no further business it is ordered that court adjourn until next Court in Course.

Alexander Dechman,
Chief Justice, Young Co., Texas.

Attest: William Burkett, Clerk

COUNTY COURT RECORD

(Book "E"—Pages 77 to 93 County Surveyor Records, Young County, Texas.)

Volume 1—Pages 53 to 61—Minutes County Court, Young County, Texas, May 17, 1859.

THE STATE OF TEXAS

County of Young

Field notes of a survey of 160 acres of land made for S. L. Ribble, it being the quantity to which he is entitled by virtue of an Act of the Legislature Approved April 24, 1879, situated in Young County on the waters of Cove Creek about 12½ miles S E from Graham.

Beginning on the S B line of B R I R where it is intersected by the E B line of the W. R. Hall Survey, a set rock for corner, wh an elm 30 inches in diameter S 64° E 8 varas and an elm 20 inches in diameter bears N 69 W 19 varas.

Thence S at 55 varas cross Cove Creek at 660 varas to a pile of stone on county line; the S E corner of said Hall Survey wh a post oak 12 inches in diameter bears N 30° E 6 varas and a post oak 8 inches in diameter bears S W 7 varas.

Thence east at 1770 varas cross a branch at 1796 varas a pile of stone wh a post oak 10 inches in diameter bears S 88° E 4 varas and a double post oak 43 inches in diameter bears N 28° W 11 3-4 varas.

Thence N 344 varas to S B line said B R I R a pile of stone

wh a post oak 8 inches in diameter bears S 81° E 1 3-4 varas and a post oak 10 inches in diameter bears N 38 W 2 3-4 varas.

Thence N 80° W on S B line of said B R I R 1824 varas to the place of beginning.

Bearings marked X.

Surveyed the 3rd day of May, 1886.

John A. Driver

Chain Carriers

J. H. Newby

I, A. J. Gibson, Surveyor of Young Land Dist., do hereby certify that the foregoing survey was made in the field according to law, and that the limits, boundaries and corners, with the marks, natural and artificial, are truly described in the foregoing field notes and that they are recorded in my office in Book P 2, Page 120.

A. J. Gibson, Surveyor Young Land Dist.

THE STATE OF TEXAS

County of Young

Field notes of 160 acres of land made for D. B. Tison, it being the quantity to which he is entitled by virtue of an Act of the Legislature of the State of Texas Approved May 26, 1873, situated in Young County on the waters of the Brazos River about 12 miles S 35° E from Graham.

Beginning at a stone mound in S B line of Young County the same being the S E corner of the Indian Reservation.

Thence N 10° E with the E B line of said Reservation 950 W 8 varas a stone mound wh a post oak bears N 52½° E 12 varas.

Thence East 950 varas a stone wh 2 post oaks bears S 2° E 9 varas and N 89° E 13 varas.

Thence South 10° W 950 varas a stone in S B line of Young County.

Thence West 950 varas to place of beginning.

Bearings marked X. Surveyed 10th day of December, 1878.

John M. Kirby

Chain Carriers

D. C. Newberry

I, J. H. Kimble, Surveyor of Young Land District, do hereby certify that the foregoing survey was made according to law, and that the limits, boundaries and corners, with the marks, natural and artificial, are truly described in the foregoing Plat and Field Notes and that they are recorded in my office in Book P., Page 135.

J. H. Kimble, Surveyor, Young Land Dist.

I had with me, Mr. W. D. Twichell of Austin as observer for Garza County, and Mr. R. E. Estes, of Midland as observer for Lynn County. Each of these men are capable surveyors and rendered me valuable assistance and materially reduced the time required in the field to get the necessary information.

To save time and remove any possibility for gross errors,

we used the methods employed by the United States Coast and Geodetic Survey which is the same in principle as is used by Cadastral engineers throughout the world.

It involves determining the Geographic position of each point affecting the survey. To determine the Geographic position of a point so many conditions have to be satisfied that the possibility for material error is infinitely small. We used a method called Third Class Triangulation which is suited to work which will connect other proven work and requires angles to be correct within 3 seconds of arc.

We began the work proper by investigating and assuring ourselves as to the Southeast corner of the Indian reservation, the two west corners of Young County made by Swindells, and a northwest corner made later by George Spiller, with the following results:

We found a large, old pile of large stones which old residents of the vicinity told us was the S E corner of the Indian reservation. Land surveys in the vicinity of the reservation called to join it and as it lies oblique, the surveys of Young County make a frame around a square which was afterward filled by surveys. In many cases the ownership stops at the oblique line so that fences and roads mark the line which the oldtimers took to be the reservation line.

After Captain Marcy's report I have included copies of some field notes from the Surveyors' Records of Young County which we used and which show the respect that was paid to the Reservation line.

We found no trees which I could conclude were marked by Captain Marcy but the evidences of land surveys calling for the reservation line were easy to identify and the lines pointed toward the pile of stones which we concluded was the Southeast corner of the BRIR as it is known locally.

At what we took to be Swindells' Southwest corner of Young County we found a sandstone 34x12x2 inches marked SWC (old and a retraced letter) Y, 2 stones about 12x10x2 inches and three smaller stones lying loose. An old forked mesquite (dead), the east prong broken with the bottom of the letters SWCor still plain, bears N 56°30' E 18 varas and an old mesquite with XXX almost overgrown bears S 1° E 95 varas. These bearings were read with a compass, using a variation of 10°55' E. We found no other signs of corner in the vicinity.

For the N W corner of Young County, an old corner which seems to have the reputation of being Swindells' N W corner of Young County is described as follows:

A concrete post 30 inches high, and 8x8 inches square marked Y on southeast side, A on northeast side, T on southwest side and B on northwest side set in an old pile of large sandstones, one 4x15x20 inches marked B A Y T and several other stones marked with letters, figures and characters. No old

trees in the vicinity. Brush cuts go north, south, east and west.

At a point 165.5 varas south and 107 varas east of this corner there is a standing sandstone, 30 inches high and 15x10 inches, marked on its southwest side T, on its southeast side Y, on its northeast side A and on its northwest side B. A small stone set in ground 5 varas west, marked B, another 5 varas north marked A, another 5 varas E marked Y and another 5 varas south marked Y. This last corner has the reputation of having been put in several years later by George Spiller. We found none of Swindells' line corners for several miles south. At about 6 miles south we found a stone with old marks, thrown out of a field which covers a ridge.

Whether these west corners of Young County have any bearing on the case depends on whether or not, the Legislature in creating the counties westward from Throckmorton and Baylor in 1876 contemplated that they would control the locations of Baylor and Throckmorton Counties.

At this place it is probably proper to discuss with you the mathematical difficulties encountered by surveyors in constructing the counties as described by the acts creating them.

Young County begins 6 miles east of the southeast corner of the Indian Reservation, a definite point, capable of being determined positively. It then runs North 30 miles, West 30 miles, South 30 miles, and East to beginning, giving no distance. The south line would have to be 30 miles 282.4 varas in the latitude involved. By running in the direction and distances called for there would be no question about the proper positions of the corners of Young County.

Throckmorton County begins at the southwest corner of Young County then runs West 30 miles, then North 30 miles, then East to the corner of Young County. For its North line to be 30 miles, it would be necessary for its South line to be 30 miles 282.4 varas long.

Haskell County begins at the Southwest corner of Throckmorton County, goes West 30 miles, then North 30 miles, then 30 miles East to the corner of Throckmorton (A mathematical impossibility). The South line of Haskell County would have to be 30 miles 282.4 varas long in order for a line north from its southwest corner to fall 30 miles west of the N W corner of Throckmorton County.

As described in the creating Act, the south line of Baylor County would be 30 miles 288.2 varas long.

Most of the square counties call for their lines to run north, south, east and west as the case might be, with each of the lines 30 miles long. This encounters the same difficulty that would show in a law which might recite that the circumference of a circle should be three times the diameter.

It seems to me as a surveyor that there is no uncertainty as to where the two north corners of Young County were placed by the creating Act. Archer County's south line is at the same

place. Its northwest corner 30 miles north of the northwest corner of Young County regardless of the position of its northeast corner. Its northwest corner is the southeast corner of Wilbarger County, and the northeast corner of Baylor County. There is nothing further to affect the southwest corner of Wilbarger County. Baylor County however encounters the difficulty of going south 30 miles to the northwest corner of Throckmorton County whose south line is called 30 miles long. A line south from the northwest corner of Baylor as placed 30 miles west of northwest corner of Archer County, would fall 572.1 varas west of a point 30 miles west from the southwest corner of Young County.

Hardeman County began at the southwest corner of Wilbarger County, then ran west 30 miles making its southwest corner independent of any difficulty that may be encountered in determining where the west line of Baylor County belongs. It then runs north to Red River. The west line of Hardeman County has no uncertainty other than the calls in the description of Knox County showing an intention for Baylor and Wilbarger and Knox to corner together and again bringing the difficulties encountered at the southwest corner of Baylor.

Childress County begins at the 12th Mile post one 100th Meridian. Then runs west 23 miles, then south 30 miles, then East "about 35 miles" to the line of Hardeman County. I have never determined the exact latitude of the 12th mile post if there was one, but the Boundary Commissioner, Mr. Samuel S. Gannett, appointed by the United States Supreme Court to determine where the 100th Meridian is, in the case between Texas and Oklahoma found the Initial Monument made by Brown & Jones when they ran the old line between Texas and Indian Territory, still standing and in Latitude $34^{\circ}34'39.77''$ Longitude $100^{\circ}00'48.29''$.

For the sake of uniformity, geographic positions and distances are measured at sea level. In order to use the results already obtained by the Geodetic and Geological Surveys, I was obliged to adopt their methods and tables, but the elevation of the southeast corner of the Indian Reservation is about 1200 feet, that of Post City about 2400 feet and I have adopted an average elevation of 1800 feet to measure all horizontal distances that will be given in this report. The difference between 30 miles measured at sea level and at 1800 feet elevation is about 5 varas.

Since Childress County begins 12 Miles North of the Initial Monument, its South line would be 18 miles South of the Monument and would intersect the West line of Hardeman County at that Latitude which is $34^{\circ}18'69.73''$.

We had the United States Coast and Geodetic Survey reports which gave the Geographic Positions of their Station on Kyle Mountain in Palo Pinto County and a Flag on Moochakooago Peak in Borden County, both of which were close enough to be joined in our work. We had the reports of the Geological Survey in the territory we were required to cross and the Geological Survey furnished us data on the work done by them which has not been published yet.

POSITIONS OF STATIONS GIVEN BY GEOLOGICAL SURVEY AND GEODETIC SURVEYS

BALDWIN

Geological Survey Marker on top prominent lone hill about 7 miles east of Aspermont, on south side of highway.

Latitude 33°07'10.8". Longitude 100°07'04.9".

BELKNAP

Geological Survey Tablet on top Belknap Mountain in Young County, about 7 miles west of Graham.

BRAZOS

Geological Survey marker on eastern end of Brazos Mountain.

Latitude 32°54'23.17". Longitude 98°30'13.01".

To Station—	°	'	"	°	'	"	Log. meters
Kyle	298	38	21.75	118	44	20.34	4.291895

CEMETERY

Geological Survey Tablet on ridge about 1-4 mile west of cemetery on north side of road and about three miles west of Aspermont in Stonewall County.

Latitude 33°08'09.9". Longitude 100°16'26.9".

To Station—	°	'	"	°	'	"	Log. meters
Lem	62	38	46.8	242	33	25.4	4.23524
Swinson	297	20	26.4	117	29	36.6	4.46925

KYLE

Highest Point of Kyle Mountain, in Palo Pinto County.

Latitude 32°49'18.01". Longitude 98°19'12.23".

Occupied by Coast and Geodetic Survey and Geological survey. Marked by Coast and Geodetic Survey tablet.

To Station—	°	'	"	°	'	"	Log. meters
Brazos Station	118	44	20.34	298	38	21.75	4.291895

LEM

Geological Survey Tablet on eastern part of east one of Double Mountains.

Latitude 33°03'53.08". Longitude 100°26'15.37".

To Station—	°	'	"	°	'	"	Log. meters
Cemetery	242	33	25.4	62	38	46.8	4.23524
Swinson	277	38	05.7	97	53	36.2	4.621348
Hamlin W. T.	305	14	04.3	125	24	15.9	4.55345
Rotan W. T.	5	30	36.7	185	29	49.4	4.37199

MOOCHAKOOAGO PEAK

Southeast of Gail, Borden County.

Latitude $32^{\circ}43'26.624''$. Longitude $101^{\circ}24'03.026''$.

Determined by Coast and Geodetic Survey.

SWINSON

Geological Survey Tablet on top Flat Top Mountain, in southeast part of Stonewall County.

Latitude $33^{\circ}00'49.50''$. Longitude $99^{\circ}59'38.60''$.

To Station—	Azimuth	Back Azimuth	Distance
	° ' "	° ' "	Log. meters
Lem	97 53 36.25	277 39 05.7	4.621348
Cemetery	117 29 36.6	297 20 26.4	4.46925
Hamlin W. T.	39 19 03.7	219 14 46.5	4.28794

TARANTULA

Latitude $32^{\circ}58'13.72''$. Longitude $99^{\circ}34'25.57''$.

Stone marked with cross and U S G S on southern one of two flat-topped hills in southeast part of Haskell County.

To Station—	Azimuth	Back Azimuth	Distance
	° ' "	° ' "	Log. meters
Swinson	97 04 46.70	276 51 02.78	4.597397

In the following list, the positions of stations given are those assumed or calculated by us, and the position of Moochakooago is obtained by reading on what appeared as the center of the peak which is about 60 feet wide, east and west and about 150 feet north and south. The results obtained in the court survey were from observing the center of the highest appearing part of the peak which was the east side, and caused by some chaparral brush on that side. I can find no point which can be definite as to where the Geodetic Survey signal stood, if there was one but the difference between our results and those of the Geodetic Survey, their position being about 23 varas west and 7 varas south, would if measured from the middle of the brush, still fall on top of the peak.

For that reason no attempt has been made to adjust the results in the western part of the Court Survey, to the Geodetic position of the Peak.

BALDWIN, STONEWALL COUNTY

U. S. Geological Survey Tablet on lone Peak about $\frac{1}{2}$ mile south of highway and about 3 miles west of Old Glory.

Latitude $33^{\circ}07'10.70''$. Longitude $100^{\circ}07'04.72''$.

To Station—	Azimuth	Back Azimuth	Distance
	° ' "	° ' "	Log. Meters
South Rule	260 44 25	80 52 08	4.3475075
Swinson	315 22 53	135 26 56	4.2171879
Cemetery	97 10 06	277 04 59	4.1667795

BELKNAP, YOUNG COUNTY

U. S. Geological Survey Tablet set in concrete base marked 2-8-24 on E side of S part of Belknap Mountain, just east of Brazos River and 1 mile north of Highway west from Graham.

Latitude 33°06'33.17". Longitude 98°41'53.54".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Cone	291	02	09	111	09	47	4.3675964
Brazos	320	59	09	141	05	31	4.4611927
Brushy Top.....	2	29	49	182	29	31	4.2909650
Black Jack	40	23	26	220	18	16	4.3580179
Allison Mesa	59	50	01	239	40	06	4.5157106
Steep	81	02	07	260	53	00	4.4205070
Boggy	116	54	50	296	46	58	4.3989225
Magnolia (calculated)	84	59	28	264	46	37	4.5657895
Graham	288	24	29	108	25	44	3.5754450

BLUFF, PALO PINTO COUNTY

+ in circle on fixed stone on S E part high ridge, about 10 miles north of Palo Pinto in vicinity of U. S. G. S. Bluff Station.

Latitude 32°55'28.79". Longitude 98°18'07.54".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Kyle	8	22	50	188	22	15	4.0623956
Brazos	83	56	12	263	49	38	4.2778044
Cone	128	24	22	308	19	03	4.2890311

BOGGY, YOUNG COUNTY

+ in circle on fixed stone on top small hill, about 1 mile north of Boggy Creek School House.

Latitude 33°12'40.50". Longitude 98°56'16.26".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Belknap	296	46	58	116	54	50	4.3989225
Magnolia	44	23	16	224	18	15	4.3098913
Six Mile.....	178	26	40	358	26	34	4.0471388
County Line Flag....	172	17	20	352	16	49	4.0405572
Bullock	238	25	10	58	27	37	3.9106546
Graham	295	40	30	115	49	36	4.4591331

BLACK JACK

Stone marked + U S G S lying loose on ground on hill several miles west from Elaville, known locally as Tower Hill.

Latitude 32°57'09.00". Longitude 98°51'22.46".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Allison Mesa.....	93	40	38	273	35	54	4.1335215
Belknap	220	18	16	40	23	26	4.3580179
Brushy Top.....	298	42	30	98	47	22	4.1489544

BULLOCK, YOUNG COUNTY

In northwest part of county + in circle on fixed stone, about 100 feet from point of hill in John Bullock's pasture.

Latitude 33°14'58.80". Longitude 98°51'48.37".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters

Six Mile.....	133	35	12	313	32	39	3.9993607
Graham	311	24	09	131	30	50	4.4035110
Boggy	58	27	37	238	25	10	3.9106546

BRAZOS, PALO PINTO COUNTY

Geological Survey Tablet on highest point of Mountain, across Brazos River, westward from Kyle Mountain.

Latitude 32°54'23.17". Longitude 98°30'13.01".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Brushy Top.....	98	53	49	278	47	10	4.2851779
Belknap	141	05	31	320	59	09	4.4611927
Cone	194	15	04	14	16	20	4.1626542
Bluff	263	49	38	83	56	12	4.2778044
Kyle	298	38	22	118	44	20	4.2918950
Indian	157	21	14	337	20	26	3.7780844

BRUSHY TOP, STEPHENS COUNTY

+ in circle on natural ledge on west end of Brushy Top Hill about 1/2 mile west of South Bend Breckenridge Road.

Latitude 32°55'59.42". Longitude 98°42'26.31".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Black Jack.....	98	47	22	298	42	30	4.1489544
Belknap	182	29	31	2	29	49	4.2909650
Brazos	278	47	10	98	53	49	4.2851779
Graham	193	33	06	13	34	39	4.2755580

CAT FISH BASE N.

North gate post in gate in most eastern west fence of field.

Latitude 33°23'42.21". Longitude 101°01'51.25".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Sand Hill	278	43	21	98	43	57	3.2383814
Cat Fish Base S.....	34	25	52	214	25	48	2.5859183
S. E. Crosby Stone...	97	25	54	277	25	30	3.0566417

CAT FISH BASE S.

North gate post in middle west fence of field.

Latitude 33°23'33.01". Longitude 101°01'58.76".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Sand Hill	269	22	28	89	23	08	3.2800334
Cat Fish Base N.	214	25	48	34	25	52	2.5359183
S. E. Crosby Stone...	114	43	03	294	42	43	3.0127946

CEMETERY, STONEWALL COUNTY

Geological Survey Tablet on ridge about 1-4 mile west of Aspermont Cemetery.

Latitude 33°08'09.82". Longitude 100°16'26.73".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Baldwin	277	04	59	97	10	06	4.1667795

Swinson	297	20	24	117	29	34	4.4692234
Lem	62	38	50	242	33	29	4.2352503
Ridge	89	25	38	269	20	28	4.1683043

CHIMNEY, GARZA COUNTY

+ in circle on natural stone on west one of "Chimneys", about 2 miles northwest of Post.

Latitude 33°13'02.46". Longitude 101°24'54.06".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
East Garza	273	14	59	93	23	49	4.4001802
Indian Ridge.....	183	44	57	3	45	24	4.2839613
N. W. Garza Station	150	50	54	330	46	52	4.7691167
South Post.....	341	01	57	161	03	00	3.9654741

S. E. CROSBY STONE

Stone lying in field, 36x24x6 inches marked N E G Co S E C Co, a stone 14x8x4 inches marked N W 72, 1 1-4 inch pipe and cedar post south 104.3 varas west 61 varas corner of fence south 104.3 varas west 55 varas.

Latitude 33°23'46.99". Longitude 101°02'34.96".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
N. Catfish Base.....	277	25	30	97	25	54	3.0566417
S. Catfish Base.....	294	42	43	114	43	03	3.0127946

S. W. YOUNG COUNTY

A sandstone 34x12x12 inches marked S W C (old) and Y (retraced) 2 stones about 12x10x2 inches, another small stone in ground, and 3 small stones, loose, from which an old forked mesquite (dead), east prong broken, bottom of S W cor still plain, bears N 56°30' E 18 varas, an old mesquite (nearly dead) with X X X (almost grown over) bears S 1° E 95 varas.

Latitude 32°57'27.00". Longitude 98°57'02.61".

N 414.3 varas and W 1470.7 varas to Railroad station.

CLAIRMONT, KENT COUNTY

Small pile of stones on N W point of hill about 1-4 mile southeast of Court House, in Clairmont (now destroyed).

Latitude 33°09'35.40". Longitude 100°44'53.39".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
West Kent	95	07	45	275	00	57	4.2875513
Ridge Road	275	19	30	95	29	52	4.4717668
Lem	289	54	20	110	04	31	4.4892285
Cooper	28	10	52	208	07	47	4.2706356

CONE, YOUNG COUNTY

Pile of stones on south side top of conical peak, about 10 miles southeast of Graham and 2 miles northwest of Henry Chapel.

Latitude 33°02'00.74". Longitude 98°27'55.03".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Bluff	308	19	03	128	24	22	4.2890311
Brazos	14	16	20	194	15	04	4.1626542
Indian	34	33	20	214	31	16	4.0166044
Belknap	111	09	47	291	02	09	4.3675964

COOPER, KENT COUNTY

+ in circle on natural stone and pile of stones on north end of Cooper Mountain about 15 miles south of Clairmont.

Latitude 33°00'41.69". Longitude 100°50'32.69".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Clairmont	208	07	47	28	10	52	4.2706356
Lem	261	01	44	81	14	59	4.5829125
Flat Top.....	76	27	41	256	20	23	4.3314759
West Kent	149	55	01	329	51	19	4.3219860

COUNTY LINE FLAG

Fourth post east from N W corner post of field fence over river bank, about 6 miles south of N W corner of Young County.

Latitude 33°18'33.64". Longitude 98°57'13.21".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Six Mile.....	257	19	29	77	19	54	3.0790840
Boggy	352	16	49	172	17	20	4.0405572
N. W. Cor. Young Co.	179	53	04	359	53	04	3.9898729

DOME, THROCKMORTON COUNTY

An old pile of stones in center of dome shaped hill on west side of new highway about 1/2 mile north of Fort Griffin Woodson Road.

Latitude 33°00'53.77". Longitude 99°10'45.59".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Hill	290	23	45	110	25	01	3.5879514
Magnolia	229	02	31	49	05	25	4.0393977
Throckmorton	165	26	09	345	25	28	3.8859245
Lambs Head	72	51	06	252	45	19	4.2379862

EAST GARZA, GARZA COUNTY

1 1-4 inch pipe in ground about 200 yards south of highway on sandy ridge about 7 miles from East line of Garza County.

Latitude 33°12'15.18". Longitude 101°08'45.37".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Indian Ridge.....	131	00	17	310	51	52	4.4984351
Sand Hill.....	210	41	47	30	46	11	4.3859270
West Kent.....	280	10	18	100	16	34	4.2570292
Flat Top	344	06	09	164	08	47	4.4386242
South Post	71	50	06	351	42	20	4.3667047
Chimney	93	23	49	273	14	59	4.4001802

E. S. E. LUBBOCK

Set stone marked S W C Co S E C L Co and stones set 6 feet north, south, east and west.

Latitude 33°23'41.95". Longitude 101°33'22.86".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
N. W. Garza Station	247	32	58	67	33	35	3.2778055
W. S. E. Lubbock....	101	48	20	281	48	04	2.9138129

EAST SLAUGHTER, GARZA COUNTY

Pile of stones on Plains N E of Slaughter Ranch Headquarters.

Latitude 33°04'07.54". Longitude 101°23'04.45".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
N. E. Slaughter.....	165	47	45	345	47	21	3.6618097
Middle Slaughter....	105	13	23	285	11	32	3.7343964
West Slaughter.....	70	52	08	250	47	23	4.1567585
Flat Top.....	290	48	52	110	59	18	4.5039688
Moochakooago Peak..	2	15	28	182	14	57	4.5826353

FLAT TOP, SCURRY COUNTY

Stake and pile of stones on N E part of Flat Top Mountain in N W part Scurry County about 2 miles East of Highway No. 7.

Latitude 32°57'57.95". Longitude 101°03'55.79".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
East Slaughter.....	110	59	18	290	48	52	4.5039688
N. E. Slaughter.....	117	11	54	297	01	04	4.5409671
South Post.....	122	55	30	302	45	07	4.5474986
East Garza.....	164	08	47	344	06	09	4.4386242
West Kent.....	203	54	22	23	57	59	4.4045446
Cooper.....	256	20	23	76	27	41	4.3314759
S. W. Corner Kent Co.	259	00	52	79	01	39	3.3610009

GRAHAM, YOUNG COUNTY

Pile of stones on south part top high peak about 3 miles west of Graham and 1/2 mile north of Highway.

Latitude 33°05'54.58". Longitude 98°39'35.88".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Brushy Top.....	13	34	39	193	33	06	4.2755580
Belknap.....	108	25	44	288	24	29	3.5754450
Boggy.....	115	49	36	295	40	30	4.4591331
Bullock.....	131	30	50	311	42	09	4.4035110

N. W. GARZA STATION

Near north line Garza County on east edge of Plains. Pile of stones on dome-shaped hill.

Latitude 33°24'05.44". Longitude 101°32'15.06".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters

Indian Ridge	275	32	40	95	37	09	4.5042953
Chimney	330	46	52	150	50	54	4.7691167
E. S. E. Lubbock.	67	33	35	247	32	58	3.2778055
W. S. E. Lubbock.	77	43	40	257	42	46	3.4174172

S. W. GARZA STATION

Hub on ridge near S W corner Garza County 172 varas from S W Garza Stone.

Latitude 32°57'56.94". Longitude 101°33'54.26".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Horse Shoe	215	12	04	35	12	50	3.5819067
Horse Shoe Base.	222	37	32	42	38	27	3.5887725
S. W. Garza Stone.	35	12	04	(172 varas)			2.1632417

S. W. GARZA STONE

Stone in lake, north of fence near southwest corner of Garza County.

Latitude 32°57'53.08". Longitude 101°33'57.49".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
S. W. Garza Station	215	12	04	35	12	04	2.1632417

HORSE SHOE BASE

Stake near Horse Shoe Station in southwestern part Garza County.

Latitude 32°59'29.59". Longitude 101°32'13.06".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
West Slaughter.	190	03	32	10	03	46	3.5923208
Horse Shoe	121	58	57	301	58	48	2.7007900
S. W. Garza Station	42	38	27	222	37	32	3.5887725

HASKELL COURT HOUSE

Spire of new court house that is built since Geological Survey bearings were taken in 1889.

Latitude 33°09'24.96". Longitude 99°43'58.90".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Reynolds	301	47	11	121	56	24	4.4902772
Tarantula	324	13	51	144	19	04	4.4060486
Swinson	56	58	54	236	50	21	4.4636879
South Rule.	87	39	45	267	34	51	4.1447813

HORSE SHOE, GARZA COUNTY

Pile of stones south of southwest corner Slaughter pasture. Latitude 32°59'38.22". Longitude 101°32'29.47".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
West Slaughter.	197	11	10	17	11	33	3.5743607
Horse Shoe Base.	301	58	48	121	58	57	2.7007900
S. W. Garza Station	35	12	50	215	12	04	3.5819067

S. W. HASKELL CORNER

2 stones, northeast, one 12x4x7 inches above ground marked S E cor S C; southwest stone 14x4x5 inches above ground marked S W cor H C May 27, 1890.

Latitude 32°57'38.64". Longitude 99°59'18.51".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
S. W. Haskell Base...	84	56	51	264	56	43	2.5751256
Swinson	174	57	01	354	56	50	3.7710293

S. W. HASKELL BASE

Stake.

Latitude 32°57'37.56". Longitude 99°59'32.93".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
S. W. Haskell corner	264	56	43	84	56	51	2.5751256
Swinson	178	35	33	358	35	30	3.7719098

S. E. HASKELL STATION

Stake.

Latitude 32°57'38.70". Longitude 99°28'21.50".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Reynolds	199	44	00	19	49	41	3.7613665
Lambs Head	265	16	10	85	19	58	4.0375971

S 18°31'E 532 varas to S E Haskell Corner.

S. E. HASKELL CORNER

Stone 6x8x14 inches above ground marked on E side S W T, on W side S E H.

Latitude 32°57'24.82". Longitude 99°29'15.99".

N 18°31' W 532 varas to S E Haskell Station.

HILL, THROCKMORTON COUNTY

On N E top of hill in wide place in lane from Woodson to Fort Griffin, a pile of stones—break of hill northeast 20 yards.

Latitude 33°00'09.94". Longitude 99°08'25.78".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Dome	110	25	01	290	23	45	3.5879514
Magnolia	208	34	20	28	35	58	3.9871073
Allison Mesa.....	289	52	48	109	57	21	4.1408142

INDIAN, YOUNG COUNTY

A stake in field about 1-4 mile northeast of Monument at S E corner of Indian Reservation.

Latitude 32°57'22.92". Longitude 98°31'41.93".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Cone	214	31	16	34	33	20	4.0166044
Brazos	337	20	26	157	21	14	3.7780844

INDIAN RIDGE

Near north line of Garza County, north of Post. + in circle

natural stone—pile of stones on south hill of Indian Ridge.

Latitude 33°23'25.30". Longitude 101°24'05.41".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
N. W. Garza Station	95	37	09	275	32	40	4.5042953
Chimney	3	45	24	183	44	57	4.2839613
East Garza	310	51	52	131	00	17	4.4984351

S. E. KENT BASE

Stake.

Latitude 32°57'48.94". Longitude 100°31'32.30".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Lem	216	14	21	36	17	14	4.1433766
S. E. Kent Station...	153	55	51	333	55	45	2.7834624

S 3°39'20" E 209.8 varas to S E Kent.

S. E. KENT

A cedar post marked S E Cor Kent Co., a large gyrocock on north side of post; all on south side of drain.

Latitude 32°57'43.04". Longitude 100°31'31.88".

N 3°39'20" W 209.8 varas to S E Kent Base.

S. W. KENT

Sandstone 3x14x40 inches marked S W Kent on east face.

Latitude 32°58'12.15". Longitude 101°02'28.99".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Flat Top	79	01	39	259	00	52	3.3610009
S. W. Kent Base.....	132	45	29	312	45	24	2.4865178

S. W. KENT BASE

Stake.

Latitude 32°58'18.90". Longitude 101°02'37.66".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
S. W. Kent.....	312	45	24	132	45	29	2.4865178
Flat Top	72	21	36	252	20	54	3.3282147

S. E. KENT STATION

Pile of stones on flat dome-shaped hill about 200 yards S W of Highway No. 84A, a concrete cistern westward 172 varas.

Latitude 32°58'06.65". Longitude 100°31'42.58".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
S. E. Kent Base.....	333	55	45	153	55	51	2.7834624
Lem	218	29	50	38	32	49	4.1348122
Cooper	99	19	49	279	09	34	4.4731507

LAMBS HEAD, SHACKELFORD COUNTY

Pile of stones on highest part of hill, an old pile of stones southwest 38.5 feet. Antelope Peaks, southwest about 1 mile.

Latitude 32°58'07.76". Longitude 99°21'22.07".

To Station—	Azimuth			Back Azimuth			Distance Log. Meters
	°	'	"	°	'	"	
X Ranch	167	17	39	347	16	23	4.2145586
Dome	252	45	19	72	51	06	4.2379862
Throckmorton	229	13	39	49	18	45	4.2842991
Reynolds	116	56	18	296	53	11	4.0011260
Tarantula	90	34	35	270	27	29	4.3085810

LEM, STONEWALL COUNTY

Geological Survey Tablet on east end of east one of Double Mountains.

Latitude 33°03'53.06". Longitude 100°26'15.27".

To Station—	Azimuth			Back Azimuth			Distance Log. Meters
	°	'	"	°	'	"	
Ridge Road	183	51	20	3	51	31	3.8903601
Cemetery	242	33	29	62	38	50	4.2352503
Swinson	277	39	04	97	53	35	4.6213512
Rotan Water Tower	5	30	39	185	29	52	4.3720987
Cooper	81	14	59	261	01	44	4.5829125
Clairmont	110	04	31	289	54	20	4.4892285

MAGNOLIA, THROCKMORTON COUNTY

Pile of stones around mesquite stump, on southeast edge of hill, power line northeast about 100 yards. Refinery about 3 miles east.

Latitude 33°04'46.65". Longitude 99°05'26.77".

To Station—	Azimuth			Back Azimuth			Distance Log. Meters
	°	'	"	°	'	"	
Steep	274	34	13	94	37	57	4.0285754
Allison Mesa.....	327	43	34	147	46	29	4.1945115
Hill	28	35	58	208	34	20	3.9871073
Dome	49	05	25	229	02	31	4.0393977
Throckmorton	91	32	17	271	28	42	4.0088648
Boggy	224	18	15	44	23	16	4.3098913

ALLISON MESA, THROCKMORTON COUNTY

+ in circle on fixed stone on N E part of Mesa, east of fence. About 1½ miles east of Breckenridge-Woodson Highway.

Latitude 32°57'37.00". Longitude 99°00'05.01".

To Station—	Azimuth			Back Azimuth			Distance Log. Meters
	°	'	"	°	'	"	
Magnolia	147	46	29	327	43	34	4.1945115
Steep	190	31	27	10	32	15	4.1000700
Belknap	239	40	06	57	50	01	4.5157106
Black Jack	273	35	54	93	40	38	4.1335215
Hill	109	57	21	289	52	48	4.1408142

MIDDLE SLAUGHTER, GARZA COUNTY

½ inch pipe and pile of stones on Plains northwest of Slaughter Ranch Headquarters.

Latitude 33°04'53.74". Longitude 101°26'26.27".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
East Slaughter	285	11	32	105	13	23	3.7343964
N. E. Slaughter.....	233	36	12	53	37	38	3.7077369
West Slaughter.....	53	36	11	233	33	16	4.0141926

MOOCHAKOOAGO PEAK, BORDEN COUNTY

Middle of Chaparral Clump on east side top of peak. South-east of Gail. (No signal erected.)

Latitude 32°43'26.81". Longitude 101°24'02.31".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
E. Slaughter	182	14	57	2	15	28	4.5826353
W. Slaughter.....	160	13	15	340	09	03	4.5516710

N. E. SLAUGHTER, GARZA COUNTY

1 1-4 inch pipe on east edge of Plains, about 1 mile south-east of where road from Post to Slaughter Headquarters enters ranch.

Latitude 33°06'31.98". Longitude 101°23'47.89".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Middle Slaughter	53	37	38	233	36	12	3.7077369
East Slaughter.....	345	47	21	165	47	45	3.6618097
South Post.....	201	19	52	21	20	19	3.5486973
Flat Top	297	01	04	171	11	54	4.5409671

RAILROAD STATION

+ in circle on natural ledge on hill inside railroad right-of-way, near west fence.

Latitude 32°57'38.39". Longitude 98°57'50.55".

1470.7 varas E 414.3 varas S to S W corner Young County.

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
N. Railroad	134	54	43	314	54	19	3.2112181
Allison Mesa.....	89	18	28	269	17	15	3.5431145

REYNOLDS

Stake and pile of stones on high hill in Reynolds Cattle Company pasture, about 2 miles southeast of Mr. Cobb's residence, large pile of stones on east end of hill S 66 E 55 feet.

Latitude 33°00'35.07". Longitude 99°27'06.41".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Haskell Court House	121	56	24	301	47	11	4.4902772
Tarantula	69	08	18	249	04	19	4.0866600
Lambs Head	296	53	11	116	56	18	4.0011260
X Ranch	204	55	54	24	57	46	4.1012154
S. E. Haskell Station	19	44	41	199	44	00	3.7613665

RIDGE, STONEWALL COUNTY

Galvanized pipe in ground 3 feet west of west fence of lane,

about 200 yards south of old Aspermont-Clairmont Road.
North of Double Mountain.

Latitude 33°08'04.68". Longitude 100°25'55.11".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Cemetery	269	20	28	89	25	38	4.1683043
Lem	3	51	31	183	51	20	3.8903601
Clairmont	95	29	52	275	19	30	4.4717668

SAND HILL, KENT COUNTY

Near N W corner; iron pipe in top highest sand hill in range of hills east of Cat Fish Creek.

Latitude 33°23'33.68". Longitude 101°00'45.03".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
West Kent.....	347	30	06	167	31	59	4.3925969
East Garza	30	46	11	210	41	47	4.3859270
N. Base	98	43	57	278	43	21	3.2383814
S. Base	89	23	09	269	22	28	3.2800334

SIX MILE, YOUNG COUNTY

Old telephone pole on flat topped hill about 6 miles from northwest corner of Young County, east of Brazos River.

Latitude 33°18'42.18". Longitude 98°56'27.97".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
N. W. Cor. Young Co.	172	52	14	352	51	49	3.9813864
Bullock	313	32	39	133	35	12	3.9993607
Boggy	358	26	34	178	26	40	4.0471388
County Line Flag....	77	19	54	257	19	29	3.0790840

SOUTH POST, GARZA COUNTY

+ in circle on natural stone and pile of stones on east spur of Plains, about 4 miles south of Post.

Latitude 33°08'18.94". Longitude 101°22'58.24".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Flat Top	302	45	07	122	55	30	4.5474986
N. E. Slaughter	21	20	19	201	19	52	3.5486973
Chimney	161	03	00	341	01	57	3.9654741
East Garza	251	42	20	71	50	06	4.3667047

SOUTH RULE, HASKELL COUNTY

1 1-4 inch iron rod about 7 feet north of south fence of lane across ridge south of Rule and about ½ mile east of Highway No. 51.

Latitude 33°09'06.15". Longitude 99°52'57.02".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Baldwin	80	52	08	260	44	25	4.3475075
Haskell Court House	267	34	51	87	39	45	4.1447813
Swinson	34	16	13	214	12	34	4.2673630

STEEP, THROCKMORTON COUNTY

Iron stake in pile of stones north of lane on east side top of Steep Hill about 5 miles north of Woodson.

Latitude 33°04'18.84". Longitude 98°58'36.35".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Magnolia	94	37	57	274	34	15	4.0285744
Belknap	260	53	00	81	02	07	4.4205070
Allison Mesa.....	10	32	15	190	31	27	4.1000700

SWINSON, STONEWALL COUNTY

Geological Survey Tablet set in concrete base marked Tri Sta SWINSON BM on S E part top of Flat Top Mountain.

Latitude 33°00'49.49". Longitude 99°59'38.53".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
South Rule	214	12	34	34	16	13	4.2673630
Haskell Court House	236	50	21	56	58	54	4.4636879
Tarantula	276	51	01	97	04	45	4.5973803
Lem	97	53	35	277	39	04	4.6213512
Cemetery	117	29	34	297	20	24	4.4692234
Baldwin	135	26	56	315	22	53	4.2171879

THROCKMORTON, THROCKMORTON COUNTY

+ on stone; pile of stones on south point of ridge; power line east about 250 yards; old highway east about 1/2 mile; Throckmorton about 6 miles north.

Latitude 33°04'55.37". Longitude 99°12'00.15".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Magnolia	271	28	42	91	32	17	4.0088648
Dome	345	25	28	165	26	09	3.8859245
Lambs Head	49	18	45	229	13	39	4.2842991
X Ranch	100	44	27	280	37	04	4.2671128

TARANTULA, HASKELL COUNTY

+ U S G S on set stone on top south one of two flat hills in S E part Haskell County.

Latitude 32°58'13.72". Longitude 99°34'25.57".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Haskell Court House	144	19	04	324	13	51	4.4060486
Reynolds	249	04	19	69	08	18	4.0866600
Lambs Head	270	27	29	90	34	35	4.3085810

WEST KENT, KENT COUNTY

A pile of stones on top of dome-shaped hill, about 1/2 mile north of highway, and 14 miles west of Clairmont.

Latitude 33°10'31.05". Longitude 100°57'18.76".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
East Garza	100	16	34	280	10	18	4.2570292

Sand Hill.....	167	31	59	347	30	06	4.3925969
Clairmont	275	00	57	95	07	45	4.2875513
Cooper	329	51	19	149	55	01	4.3219860
Flat Top	23	57	59	203	54	22	4.4045446

W. S. E. LUBBOCK

1½ inch pipe in concrete post marked N E L Co—N W G Co
S E L Co S W C Co.

Latitude 33°23'47.39". Longitude 101°33'53.92".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
N. W. Garza Station	257	42	46	77	43	40	3.4174172
E. S. E. Lubbock.....	281	48	04	101	48	20	2.9138129

WEST SLAUGHTER, GARZA COUNTY

Pipe and pile of stones on east edge of Plains, about 200 yards east of road running north, about 1 mile east of west fence of Slaughter Ranch.

Latitude 33°01'34.60". Longitude 101°31'46.74".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
East Slaughter	250	47	23	70	52	08	4.1567585
Middle Slaughter	233	33	16	53	36	11	4.0141926
Moochakooago Peak..	340	09	03	160	13	50	4.5516710
Horse Shoe	17	11	33	197	11	10	3.5743607
Horse Shoe Base.....	10	03	46	190	03	32	3.5923208

X RANCH, THROCKMORTON COUNTY

+ on natural stone and pile of stones on point of hill about ½ mile south of X Ranch division fence, and about 10 miles west and 4 miles south of Throckmorton.

Latitude 33°06'46.73". Longitude 99°23'41.10".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Throckmorton	280	37	04	100	44	27	4.2671128
Lambs Head	347	16	23	167	17	39	4.2145586
Reynolds	24	57	46	204	55	54	4.1012154

N. W. CORNER YOUNG COUNTY

A concrete post 30 inches high 8x8 inches square marked Y on S E side, A on N E side, T on S W side, B on N W side in old pile of large sand stones, one 4x5x20 inches, marked B A Y T, several other stones marked with letters, figures and characters.

South 165.5 varas and east 107 varas, there is a sandstone 30 inches high, and 15x10 inches, set in ground, marked on its S W side T, on its S E side Y, on its N E side A, and on its N W side B.

Latitude 33°23'50.75". Longitude 98°57'13.97".

To Station—	Azimuth			Back Azimuth			Distance
	°	'	"	°	'	"	Log. Meters
Six Mile	352	51	49	172	52	14	3.9813864
County Line Flag....	359	53	04	179	53	04	3.9898729

DETAILS OF COURT SURVEY

In making the court survey, I used the distance and direction between Kyle and Brazos Stations as base for length and course for the work up to Tarantula station in Haskell County, then the distance and direction between Tarantula and Swinson stations were used westward.

The distance between Tarantula and Reynolds Stations was measured by both systems and differed 4-10 meter in over 12000 or one part in about 30000. Courses were verified by observations on the North Star and bases measured and compared to the distances obtained as above indicated and checked with the same degree of accuracy.

The latitude of Tarantula Station brought from Kyle Station was exactly that given by the Geological Survey while the Longitude brought from Kyle showed Tarantula to be 13-100 second of Longitude or 11 feet further west than that given by the Geological Survey.

Swinson Station was occupied by the Geological Survey in 1889 when the station was marked by a stone set in the ground marked cross and letters U S G S. In 1925 the same station was occupied and new bearings and stations read on. The angles between these indicates that the instrument was over the old station again in 1925. A tablet erected in 1925 which was supposed to be placed where the stone was before, was used by us. Since there was a slight difference in angles found by us and those reported to us by the Geological Survey, we made an especial search at the place where the angles and bearings would fit from and found the old stone still in place about two inches below the surface and 1.9 meters west and slightly north. I used the distance and direction between the old station at Tarantula and the position of the new station at Swinson, corrected to conform with its position from the old station mark, still there. My conclusion was that the person who erected the new marker was mistaken as to where it should be placed.

Knowledge of the following values of Latitude and Longitude is essential to a thorough investigation of all questions involved in this case.

Distances measured at elevation of 1800 feet.

The southeast corner Indian Reservation is in Latitude $32^{\circ}57'14.04''$.

30 miles west equals 1858.68" of Longitude.

1 mile west equals 61.956" of Longitude.

1" of Longitude equals 25.973 Meters equals 30.677 Varas.

30 miles north of S E corner Indian Reservation is in Latitude $33^{\circ}23'21.11''$.

30 miles west equals 1867.89" of Longitude.

1 mile west equals 62.263" of Longitude.

1" of Longitude equals 25.845 Meters equals 30.5254 Varas.

60 miles North of S E corner of Indian Reservation is in Latitude $33^{\circ}49'28.07''$.

30 miles west equals 1877.33" of Longitude.
1 mile west equals 62.5778" of Longitude.
1" of Longitude equals 25.716 Meters equals 30.373 Varas.
18 miles south of Initial Monument on 100th Meridian is
in Latitude 34°18'59.73".

30 miles west equals 1888.2" of Longitude.
1 mile west equals 62.94" of Longitude.
1" of Longitude equals 25.567 Meters equals 30.197 Varas.
For purposes of close approximation 1" of Latitude may be
called 30.8 Meters or 36.39 Varas in any Latitude involved in
this survey.

Initial Monument on 100th Meridian is in Latitude 34°34'
39.77". Longitude 100°00'48.29". This makes it 2754.1 varas
west of S W corner Haskell County as marked.

Assuming the North line of Cottle County as 30 miles and
its East and West lines South, then its South line would be
30 miles 330 varas.

Assuming the North line of King County as 30 miles, then
its South line would be 30 miles 288.3 varas.

Assuming the North line of Stonewall County as 30 miles,
then its south line would be 30 miles 282.4 varas.

Assuming that the South line of Stonewall County is deter-
mined by projecting the East and West lines of Cottle South,
then the South line of Stonewall is 30 miles 905.5 varas. The
same theory would make its North line 30 miles 620 varas.

Assuming the North line of Baylor as 30 miles and project-
ing its East and West lines South 60 miles, then the South
line of Throckmorton would be 30 miles 572.1 varas.

These conclusions hold through all counties or like combina-
tions of Counties in same Latitudes.

× We found the southeast corner of the Indian Reservation is
in Latitude 32°57'14.04" and Longitude 98°31'55.18".

× Six miles east of this place would be in the same Latitude
and Longitude 98°25'43.44" and 30 miles north of the latter
place is in Latitude 33°23'21.11" Longitude 98°25'43.44", the
northeast corner of Young County and southeast corner of
Archer County.

Thirty Miles West and thirty miles north for the northwest
corner of Archer County would fall in Latitude 33°49'28.07"
Longitude 98°56'51.33". The southwest corner of Wilbarger
County calls to be west 30 miles which would fall in the same
Latitude and Longitude 99°28'08.66" and 30 miles further
west for the southwest corner of Hardeman County would fall
in Latitude 33°49'28.07" Longitude 99°59'25.99".

A line North from the southwest corner of Hardeman so

located would intersect the southeast corner of Childress which is the northeast corner of Cottle at Latitude $34^{\circ}18'59.73''$ Longitude $99^{\circ}59'25.99''$.

Assuming that the distance called for 30 miles West reaches the northwest corner of Cottle County, then it would be in Longitude $100^{\circ}30'54.19''$. Thirty miles west would be the Northwest corner of Motley County and would be in Longitude $101^{\circ}02'22.39''$ and 30 miles further the northwest corner of Floyd would be in Longitude $101^{\circ}33'50.59''$ and 30 miles further west, the northwest corner of Hale would be in Longitude $102^{\circ}05'18.79''$, and all in same Latitude as the southeast corner of Childress County.

The language of the descriptions of the tiers west of Cottle, King and Stonewall to New Mexico, seem to show an intention to make the counties corner together regardless of other calls unless possibly Terry County might not reach the southeast corner of Cochran County.

Should the counties be required to corner together and North and South mean just that, then would not the lines between the counties in the south tier of the counties above discussed be in the same meridian as the lines of the counties north of them?

The N. W. Young County as marked is 1078.5 varas north and 691.1 varas west of where it would fall from the S E corner of the Reservation.

The S W Young County as marked is 24 miles 628.5 varas west of the S E corner of the Reservation and 471.5 varas north.

The south line of Throckmorton County is 31 miles, 391 varas and its southwest corner as marked is 79.3 varas south of the southwest corner of Young and 392.2 varas north of the S E corner of the Reservation.

The south line of Haskell County as marked is 29 miles 177.82 varas and its southwest corner is 503.5 varas north of the S W corner of Throckmorton and 895.7 varas north of the S E corner of the Reservation.

The south line of Stonewall is 31 miles 390.6 varas and its southwest corner is 159.4 varas north of the S W corner of Stonewall and 1055 varas north of the S E corner of the Reservation.

The south line of Kent County is 29 miles 1852.5 varas and its southwest corner is 1059.3 varas north of the southwest corner of Stonewall and 2114.4 varas north of the S E corner of the Reservation, also it is 202.5 varas west of the N W corner of Motley County as heretofore discussed.

The N W corner of Kent County, a loose stone in the S W

part of the W. H. Stagner homestead survey, is 383.7 varas west of the N W corner of Motley County, 136.8 varas south of the N W corner of Young County as placed by Swindell's 941.7 varas north of the N W corner of Young County as located from the S E corner of the Reservation.

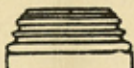
A large stone set in ground in north part of lake, north of fence, in the vicinity of the S W corner of Garza County is 30 miles 914.9 varas west of the S W corner of Kent County, 211.7 varas further west than the theoretical northwest corner of Floyd County, 695.8 varas south of the S W corner of Kent as marked and 1418.6 varas north of the Southeast corner of the Reservation.

The west Southeast corner of Lubbock County is 101.6 varas further west than the theoretical northwest corner of Floyd County, 956.3 varas north of where it would fall from the S E corner of the Reservation, 14.6 varas north of the N W corner of Kent County and 122.2 varas south of the N W corner of Young County, as marked by Swindells.

Respectfully Submitted,

W. J. Williams.

Plainview, Texas, March 24, 1930.



$$\begin{array}{r}
 846.3 = 2.9275243 \\
 758.4 = 2.8768983 \\
 \hline
 \tan 48^{\circ}19'55'' = 0.0506260
 \end{array}$$

$$\begin{array}{r}
 846.3 = 2.9275243 \\
 9.8227001 \\
 \hline
 \sin 3.1048242 = 1273.0
 \end{array}$$

At ESE Lubbock = Jones' Corner

NW Gorza Sta to Statutory corner

$$160^{\circ}47' - 1273.0 \text{ vs. } 1136.4$$

$$\begin{array}{r}
 244^{\circ}43'20'' \\
 \hline
 40\ 47\ 13'' \\
 \hline
 12 \\
 \hline
 160^{\circ}47'13''
 \end{array}$$

✓ 32° 23' 20.17"

 33 23 4.95

 20.84

36.39

 20.84

 145.55

 2911.2

 72.78

 758.3676

✓ 101° 33' 12.36"

 101 33 12.36

 17.73

30.55

 2.73

 9.4762

 2.31

 6.31

 3.92