

The State of Texas,
Howard Land District }

Field notes of a survey of the 103^d Meridian West
from Greenwich, from its intersection with the 32^d
parallel North Latitude to the N.W. corner of League
N^o 162, Presidio County School Land.

Beginning at the intersection of 103^d Meridian and the
32^d parallel, whence monument N^o 31, on 32^d parallel,
20 feet in diameter, bears West 3194 varas, and
monument N^o 1, on 103^d Meridian bears North 2674
varas, and a railroad tie (pine) 6" + 8" + 4 1/2" marked
103 M. on North side, T. on East side + S. E. Co. N. W.
on South side bears South 13° 4' E. 15⁷/₁₀₀ varas. Said point
of intersection is marked by a monument 5 varas
in diameter, with charred wood buried two feet East of
center. Thence North in very sandy land, at 2645 varas
enter firm land, at 2674 varas monument N^o 1, built
by John H. Clark U. S. Commissioner, (Determined true
Meridian by observation on Polaris at Eastern elongation,
azimuth 1° 30', magnetic variation 10° 30' E) at 3280
varas leave valley, at 4000 varas enter heavy sand, at
5494 varas top of sand ridge, at 5937 varas top of sand
knolls, at 6872 varas, top of sand knoll, at 8360 varas top
of sand ridge, at 8600 varas enter firm ground, at 10480
varas built earth monument and dug circular trench
16 ft in dia, at 10486 varas cross road from Cowdens
to Odessa, at 12912 varas top of firm ridge, at 14000 varas
Draw, course N 80° W, at 14280 Draw, course S. W. the two join
about 150 varas below, at 15960 varas pond 100 varas East,
at 17107 varas (9 miles) dug circular trench 16 ft in dia
and made earth monument in center.
Thence North at 840 varas enter sandy soil, at 2000 varas

enter firm land, at 2865 varas cross small rain water pond,
 at 3065 varas cross road from Cordens to Midland, at 3200
 varas rain water pond West, at 5600 varas enter sand,
 at 6320 enter firm ground, at 6440 varas pass East side
 of rain water pond, at 7840 varas, pond about 150 varas East,
 at 8400 varas two ponds West, at 9307 varas top of ridge,
 pond 100 varas West, at 9665 varas pond East, at 10840
 varas pond, at 11405 varas, earth monument and circular
 trench 16 ft in diameter (15 miles North) Determined meridian, no error.
 Thence North at 1280 varas enter heavy sand, at 6360 sand
 ridge, at 7960 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 the 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

1 at 10560 varas leave heavy sand, at 10960 varas cross
2 Draw course East, at 11900 cross wagon road leading
3 from Monument Springs to Midland, at 12094 varas
4 built monument of stone on bank near North side
5 of low ground. Size: Stone $2\frac{1}{2}$ ' base 2' high.
6 circular trench 12 ft in dia, stone covered with dirt.
7 at 13200 enter sand, at 13306 point (40 miles)
8 Thence North in sand 5720 varas top of sand ridge,
9 at 6974 varas, Windmill bears angle right $6^{\circ} 58'$, ($N 6^{\circ} 58'$
10 East,) at 9504 varas, set charred stake and buried charred
11 wood in heavy sand (40 miles North.)
12 Thence North at 2833 varas saw wind mill bears (angle right
13 $163^{\circ} 27'$) $S 16^{\circ} 33'$ East, at 3367 varas cross road course
14 $N 20^{\circ} W$, at 3720 varas, determined true meridian by ob-
15 servation of Polaris.
16 Angle of line with Polaris at Eastern elongation $1^{\circ} 32'$
17 Azimuth angle $1^{\circ} 30'$
18 Error in Line $0 02' W$
19 Magnetic variation at 6^{15} o'clock, Aug 9, 1900 $10^{\circ} 36' E$.
20 corrected line to true meridian.
21 at 6440 varas top of sand ridge, at 9400 varas enter firm
22 land, at 10280 varas top of firm ridge, at 10320 varas
23 Moor's house bears angle left ($72^{\circ} 32'$) $N 72^{\circ} 32'$ West, at
24 10452 varas cross road leading from Moor's to Midland,
25 at 11400 varas, built earth monument with 9 ft base, and
26 dug circular trench 16 ft in dia (51 miles North.)
27 Thence North at 1600 varas sandy soil, at 3395 varas top
28 of high sandy ridge, at 4880 varas point in Draw, firm
29 ground (Draw runs about $S 70^{\circ} E$, Moor's wind mill up
30 Draw West about $1\frac{1}{4}$ miles) at 5795 varas cross road
31 course $N. 70^{\circ} W$, at 6840 varas enter sand, at 10120 varas
32 enter firm ground, at 10800 varas enter and at 11040 varas
leave Draw running $S 70^{\circ} E$, 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° 32'
Azimuth Angle	1° 31'
Error in line	1' W

Correct line to true Meridian.

Magnetic variation, August 10/92 at 6¹⁰ am. 10° 58' E.

at 922 varas cross Drift fence, at 1446 varas (57⁷⁶/₁₀₀ miles) set charred stake 4 ft long, and buried charred wood, built mound and dug circular trench in heavy sand, at 3785 var top of sand ridge, at 5237 varas, wind mill bears angle left (33° 14') N 33° 14' W. at 5560 varas cross Draw course East,

at 6200 varas leave sand, at 6300 Draw course East, at 8861 var wind mill bears angle left (116° 46') S 63° 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° 42') S 85° 18' W. Rain water

pond bears West 200 varas, at 6900 varas top of high ridge, Mallett headquarters bears angle left (103° 24') S 76° 36' W. at 8180 varas

cross Draw course West. at 9190 varas firm land, Mallett headquarters bears angle left (111° 45') S 68° 15' W. at 11200 varas

enters 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. Dry 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 32^d 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° 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° 30' North. A preliminary line run by us, beginning at Monument No 11 on the 103^d Meridian, and running South through Monuments Nos 10-9-8-7-6 and 5, all of which were found and identified, as described in the above mentioned Report, and prolonged (checked by Polaris observations as herein before) intersects Latitude 33° 00' 58", 2132 varas East of the last described Monument.

Determined true Meridian at above described Monument. Thence Angle right 1° 08' 42", North 1° 08' 42" East (course computed to intercept Clark's terminus in Latitude 33° 49' 51", North) Magnetic variation Aug 12/92 at 6³⁰ a m, 11° 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 varas Brown's wind

X
 mill hrs angle left ($73^{\circ} 40'$) $N 72^{\circ} 31' W$. at 11405 vrs
 Brown's wind mill bears angle left ($129^{\circ} 35'$) $S 57^{\circ} 34' N$.
 (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 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, 6¹⁵ am. $10^{\circ} 50' E$.

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 17450 vrs wind mill
 hrs angle left ($36^{\circ} 56'$) $N 35^{\circ} 47' W$. at 19509 varas
 cross way in road, at 22480 varas O.H.O. wind mill
 hrs angle left ($88^{\circ} 22'$) $N 87^{\circ} 13' N$. at 22810 vrs (88 miles)
 made earth monument and dug circular trench 16 ft
 in diameter.

X
 Thence North $1^{\circ} 08' 42''$ East at 6000 varas gravel and
 sandy loam, at 6480 vrs top of ridge sand and gravel,
 62
 counter # 73638

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° 08' 42" East at 240 varas determined true meridian,

Angle of line with Polaris at Eastern elongation 0° 19' 51"
Azimuth angle 1° 31'

Error in line 2' 27"

Correct line to true course.
Magnetic variation, August 14/92 at 6⁰⁵ a.m. 10° 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 edge of basin, at 9000 varas edge 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° 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 varas enter firm land, at 7840 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° 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"
70 Counter # 73639

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 varas 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 varas
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 6³⁰ 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
820 Counter # 73640

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 103^d Meridian to latitude 33° 49' 51", this point being 126 miles + 274 varas North from 32^d Parallel and 184 miles South from parallel 36° 30'. Length of connection between termini of blanks lines 56 miles + 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 6504 1/2 varas large stone monument the North West corner of Presidio county School League No 162.

Notes
 See Sittels Not Lynn Co.
 for W. D. Twitchell's Connection from
 Double Lakes to New Mexico
 Connection with Surveys in N. D.
 Jno. Gibson Sans. 1892
 7/25/1902

The N. M. Co. of 1862
 referred to above
 at the place by the
 the N. M. Co. by the
 and the connection
 W. D. Twitchell
 7/23/1902

P. F. Jones
 John G. Cook
 E. D. Auld
 E. W. Smith } Chairmen

See W. S. Mabrey Report & SR in Capital
 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. Mitchell,
Special Deputy Surveyor Howard Land Dist.

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

I, R. B. Ginn 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, 16, 17, 18, in
Howard County Record on Oct 4th 5 A.D. 1892

R. B. Ginn - District Surveyor of Howard Land District.

General Land Office
Austin Texas, Jan'y 7th 1893

The above and foregoing Report and Field notes
as made by W. D. Mitchell Sp. Deputy Sur of
Howard Land Dist, 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. McLaughlin
Commissioner

Texas State Boundary Line 1

Report ^{and} Field's Texas and New Mexico. Boundary

File in
"Miscellaneous
In re Boundary Line
Texas & New Mexico
Letters, etc."

500

See Official Compendium
of State Records

Filed in General Land Office
December 29th 1892

112

Count # 73643

112

