

BOOK 2664

INDEX DIAGRAM

Fractional
Township 16 S, Range 32 E

6	5	4	3	
7	8	9	10	
18	17	16	15	
19	20	21	22	
30	29	28	27	
31	32	33	34	
<i>1</i>	<i>2</i>	<i>2</i>	<i>2</i>	

1A

Frac.
South Bdy. of Tp. 16 S. R. 32 E

Chains

Survey commenced May 20, 1913 and executed with a W. and L. E. Gurley transit, not numbered, with solar attachment. The horizontal limb is provided with one double vernier, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs. The instrument was approved by the Supervising Surveyor August 28, 1913.

I examine the adjustments of the transit and find them correct, then to test the solar apparatus, by comparing its indications, resulting from solar observations made during a.m. and p.m., hours, with a meridian determined by observations on Polaris, I proceed as follows: At my camp which is situated near the cor. of secs. 21, 22, 27 and 28 ^{16S. R. 32E} latitude 32°01'N., longitude 109°04'20"W. I set off 32°01'N on the lat. arc, 20°03'N. on the decl. arc; and at 5h.00m. p.m. l.m.t., determine with the solar a meridian, and mark a point thereof, on a stone firmly set in the ground 5 chs. N. of my station

May 20, 1913.

May 21: ¹⁹¹³ At 3h.39.4m. a.m. by my watch, which has correct l.m.t., I observe Polaris at eastern elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground, 5 chs. N. of my station.

At 6h.00m. a.m. ^{l.m.t.} I lay off the azimuth of Polaris, 1°22' to the west, and mark the meridian thus determined, by cutting a small groove on the stone set May 20 ¹⁹¹³ on which the meridian falls 0.4 ins. east of the mark determined by the solar.

At 7h.00m. a.m. l.m.t., I set off 32°01'N. on the lat. arc, 20°10'N. on the decl. arc and mark a point in the meridian determined with the solar, this mark falls 0.3 ins. east of the meridian established by the Polaris observation.

The solar apparatus by p.m. and a.m. observations, defines positions for meridians, respectively, about 0'21" W. and 0'16"E. of the Meridian established by the Polaris observations; therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian, at 7h.30m. a.m. ^{l.m.t.} is N. 13°-00' W. the angle thus determined gives the mag. decl. as 13°-00' E.

At 9h.00m. a.m. l.m.t., I set off 31°59'N. on the lat. arc, 20°09'N. on the decl. arc and determine with the solar a meridian at the cor. of Tps. 16 and 17 S. Rgs. 31 and 32 E., which is a granite stone 12x6x6 ins. ^{above ground} marked and witnessed as described by the Surveyor General.

Thence I run, as per instructions,

East bet. secs. 6 and 31
Over rolling land, through dense brush.

0.40
40.00

Wash, 6-lks. wide, course N.E.
Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for ¹⁹¹³ sec. cor., marked on brass cap ¹⁹¹³ S31 in N. and S6 in S. half; dig pits 18x18x12 ins. N. and W. of post 3 ft. dist., and raise a mound of earth 3½ ft. base, 1½ ft. high, N. of cor.

80.00

Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of secs. 5, 6, 31 and 32, marked on brass cap, 1913;
T16S in N.
T17S in S. and
R32E in W. half;
S31 in N.W.
S32 in N.E.
S5 in S.E. and
S6 in S.W. quadrant;
Dig pits 18x18x12 ins. in each sec. 5½ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor.
Land, rolling
Soil, rocky 4th rate.
No timber.
Undergrowth, dense greasewood.

2

Frac.
South Bdy. of Tn. 16 S. R. 32 E

Chains.	Post bet. sec.	East bet. sec.
		East bet. secs. 5 and 32. Over rolling land, through dense brush
40.00		Set an iron post 3 ft. long, 1 in. diam., 36 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap ¹⁹¹³ S32 in N. and S5 in S. half; dig pits 18x18x12 ins. E. and W. of post, 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
30.00		Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of secs. 4, 5, 32 and 33, marked on brass cap, 1913; T16S in N. T17S in S. and R32E in W. half; S32 in N.W. S33 in N.E. S4 in S.E. and S5 in S.W. quadrant; Dig pits 18x18x12 ins. in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land, rolling Soil, coarse gravel and rock, dry, coarse texture, 2nd rate. No timber. Undergrowth, dense greasewood, mesquite and catclaw. May 21 ¹⁹¹³ At this cor. I set off 20°11'N. on the decl. arc and observe the sun on the meridian at noon; the resulting latitude is 31°59'N.

		East, bet. secs. 4 and 33. Over gently rolling land, through dense brush, Road, bears N.E. and S.W.
3.76		
40.00		Set an iron post 3 ft. long, 1 in. diam., 36 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap ¹⁹¹³ S33 in N. and S4 in S. half; dig pits 18x18x12 ins. E. and W. of post 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
30.00		Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of secs. 33, 34, 33 and 34, marked on brass cap, 1913; T16S in N. T17S in S. and R32E in W. half; S33 in N.W. S34 in N.E. S3 in S.E. and S4 in S.W. quadrant; Dig pits 18x18x12 ins. in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor. Land, gently rolling. Soil, sandy loam mixed with coarse gravel 12 ins. deep, coarse texture, dry, 2 nd rate. No timber. Undergrowth, dense greasewood and mesquite.

		East, bet. secs. 3 and 34. Over level land, through dense brush. Road, bears N.E. and S.W.
14.50		
17.61		Road, bears N.E. and S.W. R.L. Herald's well bears N85°14'E " " " house bears N60°21'E. " " " barn bears N25°41'E.
21.10		Fence, bears N. and S.
21.83		Well, bears N. 20 lks.
24.80		Fence, bears N.E. and S.W.
25.25		Fence, bears N.W. and S.E.
29.03		R.L. Herald's well bears N88°57'W. " " " house bears N60°24'W. " " " barn bears N42°21'W.
40.00		Set an iron post 3 ft. long, 1 in. diam., 36 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap ¹⁹¹³ S34 in N.

Frac.
Survey of South Bdy. of Tp. 16 S. R. 32 E.

Chains.

49.80
60.07
61.61
80.00

and S3 in S. half; dig pits 18x18x12 ins. E. and W. of post, 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.
 Wash, 25 lks. wide, course N.E.
 Ethel Page's wells, bears N68°51'E.
 " " house, bears N65°08'E.
 Fence, bears N.E. and S.W.
 Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of secs. 2,3,34 and 35, marked on brass cap, 1913;
 T16S in N.
 T17S in S. and
 R32E in W. half;
 S34 in N.W.
 S35 in N.E.
 S2 in S.E. and
 S3 in S.W. quadrant;
 Dig pits 18x18x12 ins. in each sec. 5 1/2 ft. dist., and raise a mound of earth 4 ft. base, 3 ft. high, W. of cor. Land, level.
 Soil, sandy loam over 2 ft. deep, dry, medium texture, 1st rate.
 Undergrowth, dense greasewood.
 From this cor., Charlotte Page's house bears S77°09'W. 8.04 chs. dist.
 Ethel Page's well, bears N43°02'W.
 " " house, bears N34°33'W.
 M.F. Gilbert's house, bears N17°46'E.
 D. Banta's house, bears N50°30'E.

fractional

20.28
20.83

East, bet. secs. 2 and 35.
 Over level land, through dense brush.
 Fence, bears N. and S.
 Intersect Arizona and New Mexico Bdy. at a point from which the 345 Mile cor., which is a ^{Granite stone} 12x6x6 ins. above ground, marked and witnessed as described by the Surveyor General, bears N0°02'E. 37.18 chs. dist.
 At point of intersection set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for closing cor. of Tps 16 and 17 S. R. 32 E.; marked on brass cap, 1913;
 CC, E. of center.
 R32E in W. half;
 NM in E. half;
 T16S, S35 in N.W. and
 T17S, S2 in S.W. quadrant;
 Dig pits 24x24x12 ins., crosswise on each line, N. and S. 4 ft. and W. of cor. 8 ft. dist., and raise a mound of earth 5 ft. base, 3 1/2 ft. high, W. of cor. Land, level.
 Soil, sandy loam over 2 ft. deep, dry, medium texture, 1st rate.
 No timber.
 Undergrowth, dense greasewood and mesquite.

May 21, 1913.

Frac.
Boundaries of T. 16 S. R. 32 E.

Lines designated.	Bearings.	Dist.		Latitudes.		Departures.	
		Chs.	Fths.	N	S	E	W
		Chs.		Chs.	Chs.	Chs.	Chs.
South boundary	East.	340.83				340.83	
East boundary (Ariz. New Mex. State Line)	N 0°02'E	37.18		37.18		0.02	
	N 0°07'E	80.00		80.00		0.16	
North Boundary (3rd Standard Par. South)	North	80.00		80.00			
	N 0°09'E	80.00		80.00		0.21	
	N 0°02'E	80.00		80.00		0.05	
	N 0°10'E	80.00		80.00		0.23	
	N 0°04'E	62.54		62.54		0.07	
3rd Std. Par. S.	N 86°27'W	27.51		1.71			27.46
	N 87°28'W	40.20		1.77			40.16
West boundary	S 89°36'W	40.59			00.38		40.59
	S 89°23'W	40.87			00.43		40.87
	S 89°50'W	40.30			00.01		40.30
	West	40.30					40.30
	S 89°44'W	80.77			00.37		80.77
3rd Std. Par. S.	S 89°39'W	32.58			00.21		32.58
	S 0°01'W	55.85			55.85		00.02
	S 0°09'W	40.66			40.66		00.11
	S 0°46'E	40.69			40.69	0.54	
	S 0°09'E	80.64			80.64	0.21	
	S 0°16'E	40.59			40.59	0.19	
	S 0°07'E	40.46			40.46	0.08	
	S 0°09'E	40.57			40.57	0.11	
	S 0°10'E	40.40			40.40	0.12	
	S 0°04'W	81.04			81.04		0.09
	S 0°36'E	40.41			40.41	0.42	
Convergency							-0.32
Totals				503.20	502.61	343.24	343.57
				503.61			343.24
Error in lat.				0.59	Error in dep.		0.33

General Description.

This township is level. The drainage is to the northeast. Dense growth of mesquite, greasewood and catclaw covers the entire township. There is no water except in the northeast corner which falls in a swamp.

John P. Hesse
U.S. Surveyor.

FINAL OATH OF UNITED STATES SURVEYOR.

I, John F. Hesse, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for Arizona for Group 18 bearing date of the 5th day of September, 1912, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the South Boundary of Fractional Tp. 16 S. Rg. 32 E.

of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

John F. Hesse
U. S. Surveyor.

Subscribed by said John F. Hesse, and sworn to before me }
this 12th day of January, 1914



Frank S. Ingalls
Surveyor General of Arizona.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix Arizona, July 21, 1914

The foregoing field notes of the survey of the

South boundary of

Fractional Township No 16 South, Range No 32 East of the
Gila and Salt River Base and Meridian, Arizona

executed by John F. Hesse, U. S. Surveyor
under his special instructions dated September 5th, 1912, having been
critically examined, and the necessary corrections and explanations made, the said field notes, and the
surveys they describe, are hereby approved.

Frank S. Ingalls
Surveyor General of Arizona.

I certify that the foregoing transcript of the field notes of the above described surveys in
has been correctly copied from the original notes on file in this office.