

FIELD NOTES

OF THE SURVEY OF THE

Township Boundaries, Group No. 17,

- > South Bdy. fracl. Township 21 South, Range 32 East,
- > West boundary of Township 22 South, Range 31 East,
- > East boundary of Township 22 South, Range 31 East,
- > South boundary of Township 22 South, Range 31 East,
- > South boundary fracl. Township 22 South, Range 32 East,
- > West boundary of Township 23 South, Range 31 East,
- > East boundary of Township 23 South, Range 31 East,
- > South boundary of Township 23 South, Range 31 East,
- > East boundary fracl. Township 24 South, Range 31 East,
- > West boundary of fracl. Township 24 South, Range 31 East,
- > West boundary of fracl. Township 24 South, Range 30 East,
- > North boundary fracl. Township 24 South, Range 29 East,
- > East boundary of Township 20 South, Range 23 East,
- > Portion of South Boundary of Township 19 South, Range 24 East,
- > Portion of North boundary of Township 19 South, Range 24 East.

Of the Gila and Salt River Base and Meridian,

In the State of Arizona.

EXECUTED BY

Jesse B. Wright,

In the capacity of U. S. Surveyor, under Special and Supplemental instructions dated October 6, 1911, November 27, 1912, and Jan. 13, 1913, issued by the United States Surveyor General to govern surveys included in Group No. 17, which were approved by the Commissioner of the General Land Office, Oct. 14, 1911, Dec. 5, 1912, and Jan. 18, 1913, pursuant to authority contained in the Act of Congress, dated August 24, 1912.

Survey commenced	Oct. 26,	1912.
Survey completed	Feb. 20,	1913.

GROUP 17 INDEX - BOOK "D"

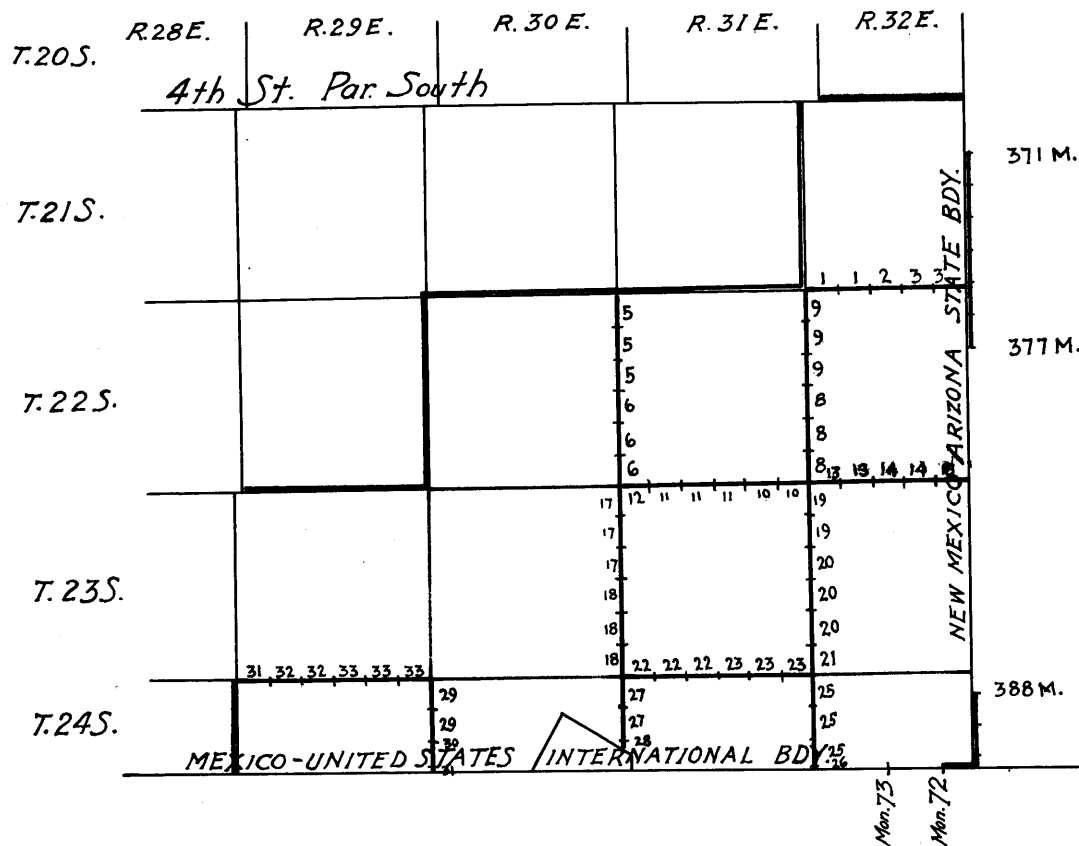
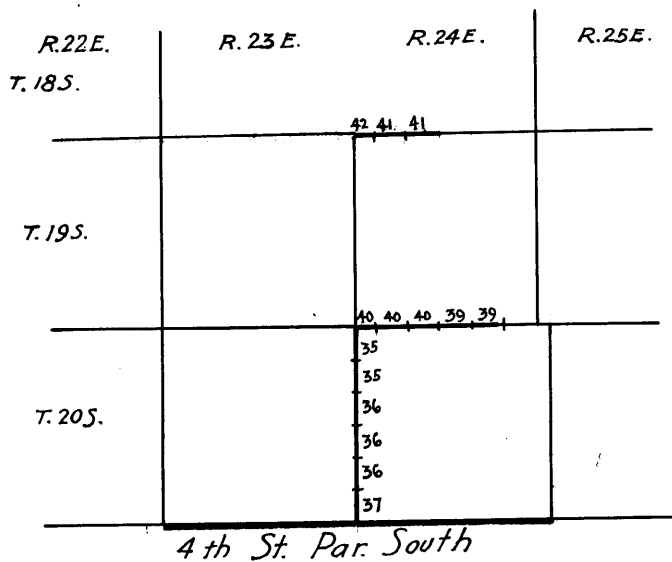
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— This Book
— Book "A"

— Accepted Surveys

— Book "G"
— Book "B"

BOOK 2478



Chains.

BOOK 2478

Oct. 26, 1912.
 Knowing from tests made on a true meridian on Oct. 21 & 22, (established from observation of Polaris on night of Oct. 21st, and heretofore described in Book "A") that my instrument is in correct adjustment,
 I proceed as follows :-

At 8h a.m., l.m.t., at the cor. of Tps. 21 & 22 S., Rs. 31 & 32 E., which is a lava stone 20x10x7 ins. above ground, marked and witnessed as described by the Surveyor-General, ^{re-set & remarked by W.H.E. & myself as described by us in Book "A".} lat. 31°33'03" N., long. 109°07'48" W.,

I set off 12°26' S. on the decl. arc, and 31°33' N. on the lat. arc, and determine a meridian with the solar. Thence I run, as per instructions, on S. bdy. of T. 21 S.-R. 32 E. East, on a true line, bet. secs. 6 & 31.

Var. 12°30' E.

Over mts. land, asc. W. slope, over loose lava stone, scattering cacti, and scrub oak.

7.50

Spur, brs. N. & S., desc. NE. slope.

18.10

Gulch, 50 lks. wide, course NW., asc. NW. slope.

40.00

Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 31 in N., and S 6 in S. half;

raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high N. of cor. No bearings available, pits impracticable.

58.50

Ridge, brs. N. & S., desc. NE. slope.

77.10

Gulch, 150 lks. wide, course NW., asc. grad.

80.00

Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 5, 6, 31 & 32, marked on brass cap, T 21 S in N.,

- T 22 S in S., and
- R 32 E., in W. half,
- S 31 in NW.,
- S 32 in NE.,
- S 5 in SE., and
- S 6 in SW. quad.;

raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor. No bearings available, pits impracticable.

Land, mts.

Soil, 3rd rate, stony, dry.

Cacti, scrub oak, fair grass.

on true line
 East, bet. secs. 5 & 32.

10.00

Over mts. land, asc. SW. slope. To point on line, whence the line to the east rises over precipitous bluffs, over which it is impracticable to chain. Therefore I measure a base line to the north, and set flags on this base line at 10 and 20 chs.

At this point at noon, I set off 12°30' S. on the decl. arc, and observe the sun on the meridian. The resulting lat. is 31°33' N.

I send a man ahead and place a flag on line, on top of bluff to the East, and proceed to this point, from which, the flag on my base line at 10 chs. brs.

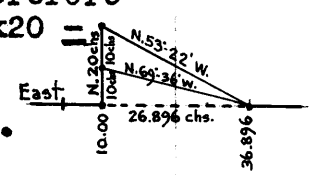
N. 69°36' W., the subtended angle is therefore 20°24'; distance to my point from 10 ch. pt. is Cot. 20°24', 2.689x10 = 26.89 Chs. As a check to my triangulation,

From my flag point, the flag left on base line at 20 chs. brs. N. 53°22' W., the included angle is therefore 36°38'. Dist. to my point is Cot. 36°38', 1.3448x20 = 26.896 chs., which I assume to be correct,

26.896 chs. added to 10 chs. gives

36.896

To my point on line, top of bluff, brs. NW. & SE. sharp ridge, brs. NW. & SE.



37.50

Desc. prec.

40.00

Set an iron post 3 ft. long, 1 in. in diam., 10 ins. in the ground, on bed-rock, in mound of stone for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 32 in N., and

- S 5 in S. half;

raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high N. of cor. No bearings available, pits impracticable.

BOOK 2478

Chains.

48.00
67.00
80.00

Drain, 10 lks. wide, course N.
 Gulch, 40 lks. wide, course NW., asc. prec.
 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 4,5,32 & 33, marked on brass cap, T 21 S, in N.,
 T 22 S, in S., and
 R 32 E., in W. half,
 S 32 in NW.,
 S 33 in NE.,
 S 4 in SE., and
 S 5 in SW. quad.;
 raise a mound of stone 2 ft. base, 1½ ft. high W. of cor. Land, mts., rough.
 Soil, 3rd & 4th rate, gravelly, stony, dry.
 Cacti, palonegro, scrub oak, fair grass.
 Oct. 26, 1912.

Oct. 28, 1912.

At 8h a.m., l.m.t., at the cor. of secs. 4,5,32 & 33, ^{above described}
 I set off 13°06½' S. on the decl. arc, and 31°33' N. on the lat. arc, and determine a meridian with the solar. Thence I run,
 East ^{on true line} bet. secs. 4 & 33.
 Over mts. land, asc.

4.91
20.00
26.00
35.00
40.00

44.00
50.00
55.00
65.00
80.00

Asc. prec.
 Top of high mountain ridge, brs. N. & S., desc. grad.
 Desc. prec.
 Gulch, 30 lks. wide, course N., asc.
 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for ¼ sec. cor., marked on brass cap,
 ¼ S 33 in N., and
 S 4 in S. half, from which,
 An oak tree 12 ins. diam. brs. N. 35° E. 8 lks. dist., marked ¼ S 33 B T.
 An oak tree 14 ins. diam. brs. S. 11° E. 34 lks. dist., marked ¼ S 4 B T.
 Spur, brs. N. & S., desc. grad.
 Desc. prec.
 Gulch, 40 lks. wide, course N., asc. prec.
 Ridge, brs. N. & S., desc. prec.
 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 3,4,33 & 34, marked on brass cap, T 21 S, in N.,
 S 22 S, in S., and
 R 32 E., in W. half,
 S 33 in NW.,
 S 34 in NE.,
 S 3 in SE., and
 S 4 in SW. quad.; from which,
 An oak tree 14 ins. diam. brs. N. 6° E. 96 lks. dist., Marked T 21 S R 32 E, S 34 B T.
 An oak tree 12 ins. diam. brs. S. 83° E. 125 lks. dist., Marked T 22 S R 32 E S 3 B T.
 An oak tree 14 ins. diam. brs. S. 27° W. 58 lks. dist., marked T 22 S R 32 E S 4 B T.
 An oak tree 8 ins. diam. brs. N. 79° W. 86 lks. dist., marked T 21 S R 32 E S 33 B T.
 Land, mts.,
 Soil, 3rd rate, stony.
 Scrub oak, cacti, few oak trees, fair grass.

Chains.

BOOK 2478

East, ^{on true line} bet. secs. 3 & 34.
 Over mts. land, along S. slope.

5.00 Desc. prec.
 13.00 Gulch, 50 lks. wide, course S., asc. prec.
 19.00 Ridge, brs. N. & S., desc.
 32.00 Gulch, 40 lks. wide, course N., asc. grad. through scattering oak trees.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 34 in N., and
 S 3 in S. half, from which,
 An oak tree 4 ins. diam. brs. N. 43° E. 93 lks. dist., marked $\frac{1}{4}$ S 34 B T.
 An oak tree 14 ins. diam. brs. S. 61° E. 35 lks. dist., marked $\frac{1}{4}$ S 3 B T.

Thence over rough, stony S. slope.

78.00 Rough granite ledge, brs. ENE. & WSW.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 10 ins. in the ground, in mound of stone for cor. of secs. 2, 3, 34 & 35, marked on brass cap,
 T 21 S, in N.,
 T 22 S, in S., and
 R 32 E., in W. half,
 S 34 in NW.,
 S 35 in NE.,
 S 2 in SE., and
 S 3 in SW. quad.; from which,
 An oak tree 16 ins. diam. brs. N. 85° W. 95 lks. dist., marked T 21 S R 32 E S 34 B T.

No other bearings available, pits impracticable.
 Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 At this cor., at noon, I set off $13^{\circ}11'$ S. on the decl. arc, and observe the sun on the meridian.
 The resulting lat. is $31^{\circ}33'$ N.
 Land, rough, broken, mts.
 Soil, 3rd rate, stony, gravelly, dry.
 Few oak trees, scrub oak, cacti, fair grass.

East, ^{on true line} bet. secs. 35 & 2.
 Over mts. land, along S. slope, desc. grad.

10.00 Granite ledge, 40 ft. high, brs. ESE. & WNW., asc. prec.
 12.00 Top of ledge, desc.
 18.00 Gulch, 30 lks. wide, course SSW., asc. over rough, broken land.

38.00 Asc. prec. W. slope.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 35 in N., and
 S 2 in S. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.

41.00 Granite cliff, 40 ft. high, brs. N. & S., asc. abrupt.
 43.00 Top of cliff, asc. prec.
 59.00 Top of divide, Peloncillo mountains, brs. N. & S., desc.
 69.00 Leave point on line, and search for East bdy. of Arizona.
 69.90 Intersect East Boundary of Arizona at a point whence the 375 mile cor., brs. North 30.60 chs., and 376 mile cor. brs. South 49.32 chs., both re-established by me & described by me in Book "A", notes of retracements of said bdy., brs. North, 30.60 chs. dist.

Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for closing cor. of frac. Tps. 21 & 22 S., R. 32 E. marked on brass cap,
 CC, E. of centre,
 N M, in E., and
 ARIZ, R 32 E., in W. half,
 T 21 S, S 35, in NW., and
 T 22 S, S 2, in SW. quad.;

Raise a mound of stone 3 ft. base, 2 ft. high W. of cor.
 No trees in limits.
 Land, mts., very rough; Soil, 3rd rate, stony.
 Oak, pinon, cedar, scrub oak, cacti, fair grass.
 Oct. 28, 1912.

BOOK 2478

General Description.

The South Boundary of ^{Frac.} T. 21 S., R. 32 E., as surveyed by me runs over a very rough, broken, mountainous country, drainage in general to the North and West. There is some little oak, pinon, and cedar timber near the line in places, but none of any commercial value.

There is no water on or near the line. No settlers are at present located near the line, nor any trace of any occupation of the land, which is only valuable for grazing purposes.

From the closing Boundaries of ^{Frac.} T. 21 S., R. 32 E., as above described, the following Latitudes, Departures and Closing Errors were re-established by me, and heretofore described.

Line Designated.	True bearing.	Distance	Latitudes.		Departures	
			N.	S.	E.	W.
			Chs.	Chs.	Chs.	Chs.
South Boundary, West Boundary,	West, -----	389.90				389.90
	N. 0° 15' E. -----	40.22	40.22		.18	
	N. 0° 3' E., -----	40.27	40.27		.03	
	N. 0° 9' E., -----	403.52	403.52		1.06	
4th Std. Par. S.	East, -----	4.10			4.10	
	N. 89° 43' E., -----	40.47	.20		40.47	
	N. 89° 52' E., -----	324.60	.76		324.60	
	N. 89° 42' E., -----	18.37	.10		18.37	
East bdy. Ariz. Convergency,	South, -----	485.87		485.87		0.36
Totals, ---			485.07	485.87	389.17	389.90
				485.07		389.17
Error in Lat., -----				0.80		
Error in Dep., -----						0.73

Jose B. Wright
U. S. Surveyor.

Chains.

Nov. 5, 1912

At 8h a.m., l.m.t., at the cor. of Tps. 21 & 22 S.,
Rs. 30 & 31 E., ^{BOOK} ~~an~~ ²⁴⁷⁸ ~~meridian~~ re-established by W.H.E. and
described, by him in Book "A"

I set off $15^{\circ}40'S$. on the decl. arc, and $31^{\circ}33'N$. on the
lat. arc, and determine a meridian with the solar.

Thence I run, as per instructions, on a true line
South, on range line, bet. secs. 1 & 6.

Var. $13^{\circ}E$.

Over gently undulating plain, good native grass.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 4 in W., and
S 6 in E. half;

80.00 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
the ground for cor. of secs. 1, 6, 7 & 12, marked on
brass cap, T 22 S, in N. half,
R 30 E S 1 in NW.,
R 31 E S 6 in NE.,
S 7 in SE., and
S 12 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

Land, gently rolling, level.

Soil, 3rd rate, sandy, gravelly, loose, dry.

Sparse sage brush, cacti, good grass.

on a true line

South, ^A bet. secs. 7 & 12.

Over gently rolling land, loose lava stone.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 12 in W., and
S 7 in E. half;

80.00 Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
the ground for cor. of secs. 7, 12, 13 & 18, marked on
brass cap, T 22 S, in N. half,
R 30 E S 12 in NW.,
R 31 E S 7 in NE.,
S 18 in SE., and
S 13 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

Land, rolling.

Soil, 3rd rate, gravelly, stony, dry, loose.

Sparse sage brush, cacti, good grass.

on a true line

South, ^A bet. secs. 13 & 18.

Over gently rolling land.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 13 in W., and
S 18 in E. half;

65.12 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
Old wire drift fence, brs. N. $83^{\circ}33'W$. & S. $83^{\circ}33'E$.

80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
the ground for cor. of secs. 13, 18, 19 & 24, marked on
brass cap, T 22 S, in N. half,
R 30 E S 13 in NW.,
R 31 E S 18 in NE.,
S 19 in SE., and
S 24 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

Land, rolling.

Soil, 3rd rate, gravelly, dry, loose.

Sage brush, cacti, good grass.

Chains.

on a true line

South, bet. secs. 19 & 24.

Over gently rolling land.

15.82 Road, brs. E. & W., Bernardino Sta. to Ranches to SE.

31.50 Wash, 50 lks. wide, course SE.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,

S 24 in W., and

S 19 in E. half;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Asc. grad. from cor.

75.00 Top of rise, brs. NW. & SE., desc. grad.

80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 19, 24, 25 & 30, marked on brass cap, T 22 S, in N. half,

R 30 E, S 24 in NW.,

R 31 E, S 19 in NE.,

S 30 in SE., and

S 25 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, rolling.

Soil, 3rd rate, gravelly, stony, dry.

Sage brush, cacti, fine grass.

At the above described cor., at noon, I set off $15^{\circ}44'$ S. on the decl. arc, and observe the sun on the meridian.The resulting lat. is $31^{\circ}29\frac{1}{2}'$ N.

South, on a true line bet. secs. 25 & 30.

Over rolling land, desc. grad.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,

S 25 in W., and

S 30 in E. half;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 25, 30, 31 & 36, marked on brass cap, T 22 S, in N. half,

R 30 E S 25, in NW.,

R 31 E S 30, in NE.,

S 31 in SE., and

S 36 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, rolling. Soil, 3rd rate, gravelly, stony, dry.

Sage brush, cacti, good grass.

on a true line

South, bet. secs. 31 & 36.

Over gently undulating land.

30.00 Wash, 40 lks. wide, course SE.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,

S 36 in W., and

S 31 in E. half;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of Tps. 22 & 23 S., Rs. 30 & 31 E., marked on brass cap,

T 22 S, in N., and T 23 S, in S.,

R 30 E, in W., and R 31 E, in E. half,

S 36 in NW.,

S 31 in NE.,

S 6 in SE., and

S 1 in SW. quad.;

raise a mound of stone 4 ft. base, 2 ft. high S. of cor., from which,

Bunk Robinson Peak brs. S. $77^{\circ}39'$ E.A prominent peak in Mexico, brs. S. $11^{\circ}42'$ E.

Land, rolling.

Soil, 3rd rate, gravelly, stony, dry, loose.

Sage brush, cacti, good grass.

Nov. 5, 1912.

BOOK 2478

Chains.

Nov. 5, 1912.

BOOK 2478

Since it is evident from my former retracement of the North bdy. of this Tp. that same is out of limits in alinement and measurement, I proceed to run a random line East, from the SW. cor. of the Tp., and also a random line South, from the NE. cor. of the Tp., in accordance with instructions covering the case. In order to verify my alinement at the cor. of Tps. 22 & 23 S., Rs. 30 & 31 E., as just established and described by me, from which the measurements and alinement of much work is based, I proceed as follows:—

At 4h p.m., l.m.t., I set off $15^{\circ}46'S.$ on the decl. arc, and $31^{\circ}28'N.$ on the lat. arc, and determine a meridian with the solar, which meridian agrees with the line of the West bdy. of the Tp. just run by me, and on which I have left several flags at prominent points, and corners.

Nov. 5, 1912.

Nov. 6, 1912.

At 4h 25m a.m., l.m.t., I observe Polaris at W. elongation in accordance with instructions in the "Manual", and mark the line thus determined by a tack in a stake driven firmly in the ground 5 chs. N. of my station.

At 7h 45m a.m., l.m.t., I set off the azimuth of Polaris, $1^{\circ}21'$ to the East, and mark the true meridian thus determined by a tack in a stake driven firmly in the ground 5 chs. N. of my station, which line falls about 15" W. of the line of the West bdy. of the Tp. The magnetic bearing of the true meridian at this point is N. $13^{\circ}10' W.$; the angle thus determined gives the magnetic declination as $13^{\circ}10' E.$

At 8h a.m., l.m.t., I set off $15^{\circ}58'S.$ on the decl. arc, and $31^{\circ}28'N.$ on the lat. arc, and determine a meridian with the solar, which meridian falls about 20" E. of the meridian as determined by observation of Polaris, and slightly East of the line of the West bdy. of Tp. These errors of alinement of the three meridians being no greater than the usual errors of observation, I conclude that the West bdy. of T. 22 S., R. 31 E. as already surveyed by me is practically correct.

From the cor. above described, I run, East, as per instructions, on a blank line, setting flags at prominent points on my line, and projecting the line due East for approximately six miles or more. Completing this random line, I proceed to the corner of Tps. 21 & 22 S., Rs. 31 & 32 E., heretofore described, and make temporary camp.

Nov. 6, 1912.

East Boundary, T. 22 S., R. 31 E.

Nov. 7, 1912.

At 8h a.m., l.m.t., at the cor. of Tps. 21 & 22 S., Rs. 31 & 32 E., heretofore described, in Book "A" I set off $16^{\circ}16'S.$ on the decl. arc, and $31^{\circ}33'N.$ on the lat. arc, and determine a meridian with the solar. Thence I run, as per instructions, South, on a random line, setting flags at intervals, at prominent points on my line, and projecting same due South, to an intersection with the line run due East from the SW. cor. of T. 22 S., R. 31 E.

At the intersection of these two lines, as per instructions, I

Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of Tps. 22 & 23 S., Rs. 31 & 32 E., marked on brass cap,

T 22 S, in N., and T 23 S, in S.,
R 31 E, in W., and R 32 E, in E. half,
S 36 in NW., S 31 in NE., S 6 in SE., and S 1 in SW. quad.;

raise a mound of stone 4 ft. base, 2 ft. high S. of cor. No bearings available, corner being in a small cove. From this corner, I run, as per instructions, on a true line

BOOK 2478

Chains.

North, bet. secs. 31 & 36,
 Var. 13° E.
 Over mts. land, desc. grad.
 6.80 Drain, 50 lks. wide, near head, course SE., asc. SE. slope.
 24.00 Ridge, brs. E. & W., desc.
 38.00 Head of wash, course E., asc.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 36 in W., and
 S 31 in E. half;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
 47.00 Ridge, brs. E. & W., desc. grad.
 71.60 Wash, 30 lks. wide, course NW., asc.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 10 ins. in the
 the ground, on bed-rock, in mound of stone for cor. of
 secs. 25, 30, 31 & 36, marked on brass cap,
 T 22 S, in N. half,
 R 31 E S 25 in NW.,
 R 32 E S 30 in NE.,
 S 31 in SE., and
 S 36 in SW. quad.;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
 Land, mts. Soil, 3rd rate, sandy, gravelly, stony, loose.
 Sparse scrub oak, cacti, greasewood, fair grass.
 At this cor., at noon, I set off 16°20' S. on the decl.
 arc, and observe the sun on the meridian.
 The resulting lat. is 31°29' N.

on a true line

North, bet. secs. 25 & 30.
 Over mts. land, asc. WSW. slope.
 5.00 Top of rise, on W. slope, desc. grad. NW. slope.
 39.20 Wash, 60 lks. wide, course W., asc.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 25 in W., and
 S 30 in E. half;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
 45.00 Desc.
 60.15 Road, brs. E. & W.
 60.50 Wash, 50 lks. wide, course W., asc.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 19, 24, 25 & 30, marked on
 brass cap, T 22 S, in N. half,
 R 31 E S 24, in NW.,
 R 32 E S 19, in NE.,
 S 30, in SE., and
 S 25, in SW. quad.;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
 Land, rolling, mts.
 Soil, 3rd rate, stony, gravelly, dry.
 Sparse scrub oak, cacti, sage brush, fair grass.

on a true line

North, bet. secs. 19 & 24.
 Over mts. land, asc.
 28.00 Ridge, brs. E. & W., desc.
 33.10 Wash, 40 lks. wide, course W., asc. grad.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 24 in W., and,
 S 19 in E. half;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 13, 18, 19 & 24, marked on
 brass cap, T 22 S, in N. half,
 R 31 E S 13, in NW., R 32 E S 18, in NE.,
 S 19, in SE., and S 24 in SW. quad.;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
 Land, mts., rolling.
 Soil, 3rd rate, stony, gravelly, loose, dry.
 Sparse scrub oak, greasewood, cacti, sage brush, fair grass.

Chains.	
	on a true line North, bet. secs. 13 & 18. Over rolling land.
20.00	Wash, 20 lks. wide, course WSW.
27.10	Wash, 30 lks. wide, course WSW.
29.30	Old wire drift fence, brs. S. 57°40' W. & N. 57°40' E.
40.00	Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 13 in W., and S 18 in E. half; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
62.80	Wash, 40 lks. wide, course SW.
80.00	Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 7, 12, 13 & 18, marked on brass cap, T 22 S, in N. half, R 31 E S 12, in NW., R 32 E S 7, in NE., S 18, in SE., and S 13, in SW. quad.; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, rolling. Soil, 3rd rate, gravelly, dry. Sage brush, cacti, good grass.
	on a true line North, bet. secs. 7 & 12. Over broken land, asc. grad.
36.00	Ridge, brs. E. & W., desc. grad.
40.00	Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 12 in W., and S 7 in E. half; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
80.00	Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 1, 6, 7 & 12, marked on brass cap, T 22 S, in N. half, R 31 E S 1, in NW., R 32 E S 6, in NE., S 7, in SE., and S 12, in SW. quad.; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, rolling, broken. Soil, 3rd rate, stony, gravelly, loose, sandy, dry. Sage brush, cacti, greasewood, good grass.
	on a true line North, bet. secs. 1 & 6. Over rolling, broken land.
11.00	Wash, 20 lks. wide, course SW.
33.00	Wash, 10 lks. wide, course W.,
40.00	Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 1 in W., and S 6 in E. half; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. An earth dam is 10 chs. to W. of line. A stone house 15x24 ft., unoccupied, brs. West, about 25 chs.
	Asc. from cor.
47.00	Ridge, brs. W. & E., desc. grad.
70.00	To cor. of Tps. 21 & 22 S., Rs. 31 & 32 E., as heretofore described. in Book "A". Land, rolling, hilly. Soil, 3rd rate, gravelly, stony, dry, loose. Scrub oak, cacti, sage brush, greasewood, good grass. Nov. 7, 1912.

BOOK 2478

Chains.

Nov. 8, 1912.
 At 8h a.m., l.m.t., at the cor. of Tps. 22 & 23 S., Rs. 31 & 32 E., recently established by me, & hereinbefore described I set off 16°37' S. on the decl. arc, and 31°28' N. on the lat. arc, and determine a meridian with the solar. Thence I run, as per instructions,
 West, on a true line, on S. bdy. of Tp., bet. secs. 1 & 36.
 Over mts. land, asc. grad.
 Var. 13° E.
 20.00 Spur, brs. S. & N., desc. along broken S. slope.
 33.50 Wash, 15 lks. wide, course S., asc.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 36 in N., and
 S 1 in S. half;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high N. of cor.
 65.00 Ridge, brs. S. & N., desc.
 79.00 Wash, 30 lks. wide, course S.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 1, 2, 35 & 36, marked on brass cap, T 22 S, in N.,
 T 23 S, in S., and
 R 31 E, in W. half,
 S 35 in NW.,
 S 36 in NE.,
 S 1 in SE., and
 S 2 in SW. quad.;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
 Land, mts., broken, drains to S., from hills to N.
 Soil, 3rd rate, stony, dry.
 Sage brush, cacti, fair grass.

on a true line
 West, bet. secs. 2 & 35.
 Over rolling, broken land, asc. grad.

25.00 Asc. prec.
 30.00 Desc. over rolling land.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 35 in N., and
 S 2 in S. half;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high N. of cor.
 52.00 Wash, 30 lks. wide, course S., asc.
 58.00 Spur from lava hill to N., brs. S. & N., desc.
 70.00 Foot of main slope, brs. NNW. & SSE., enter valley.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 2, 3, 34 & 35, marked on brass cap, T 22 S, in N.,
 T 23 S, in S., and
 R 31 E, in W. half,
 S 34, in NW.,
 S 35, in NE.,
 S 2 in SE., and
 S 3 in SW. quad.;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
 Land, mts., broken, rolling.
 Soil, 3rd rate, stony, gravelly, sandy, loose, dry.
 Sparse sage brush, cacti, good grass.

BOOK 2478

Chains.

BOOK 2478

on a true line
 West, [^] bet. secs. 3 & 34.
 Over gently rolling valley, desc. gently.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S34 in N., and
 S 3 in S. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 79.00 Wash, 15 lks. wide, course S.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 3, 4, 33 & 34, marked on
 brass cap, T 22 S, in N.,
 T 23 S, in S., and
 R 31 E, in W. half;
~~S 33~~ S 33 in NW.,
 S 34 in NE.,
 S 3 in SE., and
 S 4 in SW. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, rolling.
 Soil, 3rd rate, gravelly, sandy, dry.
 Sparse sage brush, cacti, fine grass.

on a true line
 West, [^] bet. secs. 4 & 33.
 Over gently rolling valley.
 2.50 Road, brs. ESE. & WNW.
 22.70 Wash, 35 lks. wide, course SSE.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 33 in N., and
 S 4 in S. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 79.50 Wash, 30 lks. wide, course SE.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. ~~4, 5, 32 & 33~~ 4, 5, 32 & 33, marked on
 brass cap, T 22 S, in N.,
 T 23 S, in S., and
 R 31 E, in W. half;
 S 32 in NW.,
 S ~~33~~ S 33 in NE.,
 S 4 in SE., and
 S 5 in SW. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, rolling.
 Soil, 3rd rate, stony, gravelly, dry, sandy.
 Sparse sage brush, cacti, good grass.
 At this cor., at noon, I set off $16^{\circ}38'$ S. on the decl.
 arc, and observe the sun on the meridian.
 The resulting lat. is $31^{\circ}28'$ N.

on a true line
 West, [^] bet. secs. 5 & 32.
 Over rolling land.
 5.00 Asc.
 8.00 Top of rise, brs. N. & S.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S32 in N., and
 S 5 in S. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 5, 6, 31 & 32, marked on
 brass cap, T 22 S, in N., T 23 S, in S., and R 31 E, in
 W. half, S 31 in NW.,
 S 32 in NE.,
 S 5 in SE., and
 S 6 in SW. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, rolling. Soil, 3rd rate, gravelly, stony, dry.
 Sparse sage brush, cacti, greasewood, good grass.

BOOK 2478

Chains. on a true line
 West, bet. secs. 6 & 31.
 Over rolling land.

8.00 Desc.
 12.70 Stony wash, 150 lks. wide, course S., asc. grad.
 18.50 Asc. steep.
 23.00 Top of mesa, brs. N. & S., thence over gently rolling
 land.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S. 31 in N., and
 S 6 in S. half;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high N. of cor.
 80.90 To cor. of Tps. 22 & 23 S., Rs. 30 & 31 E.,
 heretofore established by ~~measures~~ ~~and~~ ~~before~~ described
 Land, rolling.
 Soil, 3rd rate, gravelly, dry, stony, loose.
 Sparse sage brush, cacti, fine grass.

General Description.

The West, and South boundaries of T. 22 S., R. 31 E.
 run over a rolling valley, well covered with native grass.
 There is no water or timber on or near these lines.

The East Boundary of T. 22 S., R. 31 E. runs over a
 broken country along near the west foot of the
 Peloncillo mountains. The land is covered with a fair
 growth of native grass, but there is no water or
 timber on or near the line.

Boundaries of T. 22 S., R. 31 E.

Latitudes, departures, and closing errors.

Line designated.	True bearing.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
		Chs.	Chs.	Chs.	Chs.	Chs.
South Boundary,	West, -----	480.90				480.90
West Boundary,	North, -----	480.00	480.00			
North Boundary,	S. 88° 56' E. ---	39.47		.75	39.46	
	S. 89° 33' E. ---	40.47		.27	40.47	
	S. 88° 41' E. ---	400.50		9.20	400.40	
East Boundary,	South, -----	470.00		470.00		
Convergency,	-----				0.44	
Totals.		---	480.00	480.22	480.77	480.90
			---	480.00	480.90	480.77
Error in Latitude,				0.22		
Error in Departure,						0.13

Nov. 8, 1912.

Jesse B. Wright
 U. S. Surveyor.

Chains.

Nov. 8, 1912.
 At 2h p.m., l.m.t., at the cor. of Tps. 22 & 23 S.,
 Rs. 31 & 32 E., recently established by me & heretofore described,
 I set off $16^{\circ}39'S$. on the decl. arc, and $31^{\circ}28'N$. on the
 lat. arc, and determine a meridian with the solar.
 Thence I run, as per instructions, on a true line
 East, on S. bdy. of Tp., bet. secs. 6 & 31.
 Over rolling land, desc. grad.
 Var. $13^{\circ} E$.

9.10 Wash, 20 lks. wide, course S., asc. pt. of spur.
 24.00 Top of spur, brs. W. & E., thence on flat ridge, brs.
 S. & N.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4} S 31$ in N., and
 $S 6$ in S. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.

51.00 Desc.

62.00 Wash, 15 lks. wide, course S., asc.

80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 5, 6, 31 & 32, marked on
 brass cap, T 22 S, in N.,
 T 23 S, in S., and
 R 32 E, in W. half,
 S 31 in NW.,
 S 32 in NE.,
 S 5 in SE., and
 S 6 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Stove pipe of school house in draw of Cottonwood
 Creek brs. S. $34^{\circ}46' W$.

Land, rolling, mts. Soil, 3rd rate, gravelly, stony, dry.
 Scrub oak, sage brush, cacti, fair grass.

on a true line
 East, bet. secs. 5 & 32.
 Over mts. land,

5.00 Desc. steep, from mesa, brs. NE. & SW.
 15.00 Cottonwood Creek (dry), 100 lks. wide, course SW., and
 17.85 Road, brs. NNE. & SW.

18.00 Set a cedar post 3 ft. long, 3 ins. in diam. on line
 in mound of stone for witness point, marked W P, on
 W., and T L, on E. faces.
 House of W.M. McDonald brs. N. 3 chs. dist.
 Tank and windmill brs. North, about 15 chs. dist.

19.50 Asc. prec. W. slope.

28.00 Wire fence, brs. NW. & SE.

36.00 Top of steep ascent, continue to asc. grad.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4} S 32$ in N., and
 $S 5$ in S. half;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.

44.00 High rocky ridge, brs. SW. & NE., thence along broken,
 stony SSE. slope.

80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 4, 5, 32 & 33, marked on
 brass cap, T 22 S, in N.,
 T 23 S, in S., and
 R 32 E, in W. half,
 S 32 in NW.,
 S 33 in NE.,
 S 4 in SE., and
 S 5 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 No bearings available, pits impracticable.

Land, mts.

Soil, third rate, stony, gravelly, dry.
 Scrub oak, cacti, sparse grass.

Nov. 8, 1912.

BOOK 2478

Chains.

Nov. 20, 1912. just described
 At 8h a.m., l.m.t., at the cor. of secs. 4, 5, 32 & 33,
 I set off 19°40' S. on the decl. arc, and 31°28' N. on
 the lat. arc, and determine a meridian with the solar.
 Thence I run,
 East, ^{on a true line} bet. secs. 4 & 33.
 Over mts. land, asc. SSW. slope.
 25.00 Top of rocky ridge, brs. NW. & SE., desc. steep.
 36.50 Wire fence, brs. NW. & SE.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 33 in N., and
 S 4 in S. half; from which,
 An oak tree 12 ins. diam. brs. N. 33° E. 40 lks. dist.,
 marked $\frac{1}{4}$ S 33 B T.
 An oak tree 5 ins. diam. brs. S. 14° E. 9 lks. dist.,
 marked $\frac{1}{4}$ S 4 B T.
 Thence along steep N. slope.
 59.00 Desc. steep NE. slope.
 70.00 Gulch, 25 lks. wide, course N., asc.
 76.00 Spur, brs. N. & S., desc.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 3, 4, 33 & 34, marked on
 brass cap, T 22 S, in N.,
 T 23 S, in S., and
 R 32 E, in W. half,
 S 33 in NW.,
 S 34 in NE.,
 S 3 in SE., and
 S 4 in SW. quad.; from which,
 An oak tree 14 ins. diam. brs. N. 89° E. 237 lks. dist.,
 marked T 22 S R 32 E S 34 B T.
 An oak tree 14 ins. diam. brs. S. 85 $\frac{1}{2}$ ° E. 165 lks. dist.,
 marked T 23 S R 32 E S 3 B T.
 No other trees in limits.
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
 Land, mts., rough. Soil, 3rd rate, stony.
 Scattering oak trees, scrub oak, cacti, sparse grass.

East, ^{on a true line} bet. secs. 3 & 34.
 Over mts. land, desc. steep.
 5.00 S. fork of Cottonwood Canyon, 100 lks. wide, course NNW.
 Asc.
 11.00 Spur, brs. S. & N., desc.
 16.00 Gulch, 100 lks. wide, course SW., heads 20 chs. NE., asc.
 along prec. NW. slope.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 34 in N., and
 S 3 in S. half, from which,
 an oak tree 26 ins. diam. brs. N. 89° E. 160 lks. dist.,
 marked $\frac{1}{4}$ S 34 B T.
 An oak tree 10 ins. diam. brs. S. 85° E. 81 lks. dist.,
 marked $\frac{1}{4}$ S 3 B T.
 Thence along N. slope of rocky spur to W.
 60.00 Top of spur, brs. WSW. & ENE., ascend mountain ridge, on
 W. slope.
 79.00 Gulch, 50 lks. wide, course SW., asc. prec.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 2, 3, 34 & 35, marked on
 brass cap, T 22 S, in N., T 23 S, in S., and R 32 E, in W.
 half, S 34 in NW., S 35 in NE.,
 S 2 in SE., and S 3 in SW. quad.; from which,
 An oak tree 14 ins. diam. brs. N. 37° W. 78 lks. dist.,
 marked T 22 S R 32 E S 34 B T.
 No other trees available.
 Raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
 At this cor., at noon, I set off 19°44' S. on the decl.
 arc, and observe the sun on the meridian.
 The resulting lat. is 31°28' N.
 Land, mts., rough. Soil, 3rd rate, stony.
 Sparse oak, dense clumps of scrub oak, cacti, fair grass.

Chains.

on a true line
East, [^] bet. secs. 2 & 35.
Over mts. land, asc. steep W. slope.
10.00 Ridge, brs. N. & S., desc. steep E. slope.
20.00 Gulch, 30 lks. wide, course S., asc.
30.00 Spur, brs. N. & S., desc.
36.00 Head of drain, to S., asc.
40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 35 in N., and S 2 in S. half; from which,
An oak tree 6 ins. diam. brs. N. 23° W. 19 lks. dist., marked $\frac{1}{4}$ S 35 B T.
An oak tree 14 ins. diam. brs. S. 84° W. 78 lks. dist., marked $\frac{1}{4}$ S 2 B T.
45.00 Spur, brs. S. & N., desc.
50.00 Gulch, 50 lks. wide, course SE., asc. steep.
59.00 Spur, brs. S. & N., near S. end, desc. prec.
70.00 Gulch, 150 lks. wide, course SW., asc.
71.00 Intersect East Boundary of Arizona at a point, whence the 381 mile cor. on said bdy. brs. North, 39.50 chs. dist., which is a granite stone 17x8x7 ins., marked and witnessed as described by the Surveyor-General.
Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for closing cor. of frac. Tps. 22 & 23 S., R. 32 E., marked on brass cap, C C, and N M, on E., R 32 E, and ARIZ on W. half, T 22 S, S 35 in NW., and T 23 S, S 2 in SW. quad.; from which,
A juniper tree 15 ins. diam. brs. S. 41 $\frac{3}{4}$ ° W. 154 lks. dist., marked T 23 S R 32 E S 2 C C B T.
No other trees in limits.
Raise a mound of stone 3 ft. base, 2 ft. high W. of cor.
Land, mts., rough.
Soil, 3rd & 4th rate, stony, gravelly, dry.
Oak, juniper, pinon, scrub oak, pinon, cacti, fair grass.

General Description.

The South Boundary of [^] T. 22 S., R. 32 E., runs over a rough, broken, mountainous country, gradually ascending from the valley to the West, to near the top of the Peloncillo mountains to the East.

There is some oak and juniper timber along the line, but little of any commercial value.

The formation of the mountains is mostly granite, with intrusions of sandstone, and covered in places with with igneous, or volcanic stones, or tufa.

There is no water along the line.

BOOK 2478

Latitudes, departures, and closing errors.

Line Designated.	True bearing.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
		Chs.	Chs.	Chs.	Chs.	Chs.
South Boundary,	West, ----	391.00	----	----	----	391.00
West Boundary,	North, ----	470.00	470.00	----	----	----
North Boundary,	East, ----	389.90	----	----	389.90	----
E.Bdy. of Ariz.,	South, ----	469.24	----	469.24	----	----
Convergency,					-0.36	
	Totals, ----		470.00	469.24	390.26	391.00
			469.24	----	----	390.26
	Error in Lat. ----		-0.76	Error in Dep., ----	-0.74	

Nov. 20, 1912.

Jesse B. Wright

U. S. Surveyor.

Chains.

BOOK
2478

Dec. 2, 1912.

At 8h a.m., l.m.t., at the cor. of Tps. 22 & 23 S.,
Rs. 30 & 31 E., as recently established by me & hereinafter
described,

I set off $21^{\circ}56'$ S. on the decl. arc, and $31^{\circ}28'$ N. on
the lat. arc, and determine a meridian with the solar.
~~and test said~~ meridian by comparison with the meridian
of the West bdy. of T. 22 S., R. 31 E., as established
and tested by observation of Polaris, on Nov. 6, 1912.
Finding that my solar meridian agrees closely with the
meridian as established by Polaris, from the corner
above described, I run, as per instructions, on a true line
South, on range line, bet. secs. 1 & 6.

Var. $13^{\circ}10'$ E.Over rolling land, fine native grass, scattering cacti
and sage brush.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 1 in W., and
S 6 in E. half;

80.00 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
The ground for cor. of secs. 1, 6, 7 & 12, marked on
brass cap, T 23 S in N. half,
R 30 E S 1 in NW.,
R 31 E S 6 in NE.,
S 7 in SE., and
S 12 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
Land, rolling.Soil, 3rd rate, gravelly, sandy, loose, dry.
Sage brush, cacti, good grass.

on a true line

South, bet. secs. 7 & 12.

Over gently rolling land.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 12 in W., and
S 7 in E. half;

80.00 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
the ground for cor. of secs. 7, 12, 13 & 18, marked on
brass cap, T 23 S in N. half,
R 30 E S 12 in NW.,
R 31 E S 7 in NE.,
S 18 in SE., and
S 13 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
Land, rolling. Soil, 3rd rate, gravelly, loose, dry.
Sage brush, cacti, good grass.

on a true line

South, bet. secs. 13 & 18.

Over gently rolling land.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 13 in W., and
S 18 in E. half;

80.00 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
Well drilling outfit brs. S. 59° E., now sinking well.
Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
the ground for cor. of secs. 13, 18, 19 & 24, marked on
brass cap, T 23 S in N. half,
R 30 E S 13 in NW., R 31 E S 18 in NE.,
S 19 in SE., and S 24 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
Well drilling outfit brs. N. $74^{\circ}20'$ E.Land, rolling. Soil, 3rd rate, gravelly, loose, dry.
Sage brush, cacti, good grass.At this cor., at noon, I set off $21^{\circ}58\frac{1}{2}'$ S. on the decl.
arc, and observe the sun on the meridian.The resulting lat. is $31^{\circ}25'$ N.

Chains.	<p>on a true line South, [^] bet. secs. 19 & 24.</p>
	<p>Over gently rolling land.</p>
40.00	<p>Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,</p>
	<p>$\frac{1}{4}$ S 24 in W., and S 19 in E. half;</p>
50.00	<p>raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.</p>
76.20	<p>Wash, 40 lks. wide, course SW.</p>
80.00	<p>Road, brs. WSW. & ENE.</p>
	<p>Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 19, 24, 25 & 30, marked on brass cap,</p>
	<p>T 23 S in N. half, R 30 E S 24 in NW., R 31 E S 19 in NE., S 30 in SE., and S 25 in SW. quad.;</p>
	<p>raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.</p>
	<p>Land, rolling. Soil, 3rd rate, gravelly, loose, dry. Sage brush, cacti, good grass.</p>
	<hr/>
	<p>on a true line South, [^] bet. secs. 25 & 30.</p>
	<p>Over rolling, stony land, scrub mesquite and cacti"</p>
40.00	<p>Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,</p>
	<p>$\frac{1}{4}$ S 25 in W., and S 30 in E. half;</p>
	<p>raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.</p>
80.00	<p>Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 25, 30, 31 & 36, marked on brass cap,</p>
	<p>T 23 S, in N. half; R 30 E S 25 in NW., R 31 E S 30 in NE., S 31 in SE., and S 36 in SW. quad.;</p>
	<p>raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.</p>
	<p>Land, rolling. Soil, 3rd rate, stony, gravelly, dry Sage brush, cacti, good grass.</p>
	<hr/>
	<p>on a true line South, [^] bet. secs. 31 & 36.</p>
	<p>Over heavily rolling land, over loose volcanic stone, good grass, scrub mesquite and cacti.</p>
40.00	<p>Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,</p>
	<p>$\frac{1}{4}$ S 36 in W., and S 31 in E. half;</p>
	<p>raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.</p>
80.00	<p>Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of Tps. 23 & 24 S., Rs. 30 & 31 E., marked on brass cap,</p>
	<p>T 23 S in N., and T 24 S in S. half; R 30 E S 36 in NW., and R 31 E S 31 in NE., S 6 in SE., and S 1 in SW. quad.;</p>
	<p>raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor., from which,</p>
	<p>A prominent peak in Mexico brs. S. 14° 11' E. College peak brs. N. 62° 16' W. Niggerhead peak brs. S. 71° 08' W.</p>
	<p>Land, rolling. Soil, 3rd rate, gravelly, stony, dry. Mesquite, cacti, greasewood, sage brush, good grass.</p>
	<p>Dec. 2, 1912.</p>

JOK 2478

Chains	Notes
	<p>Dec. 3, 1912.</p> <p>At 8h a.m., l.m.t., at the cor. of Tps. 22 & 23 S., Rs. 31 & 32 E., recently established by me & hereinafter described, I set off $22^{\circ}04\frac{1}{2}'$ S. on the decl. arc, and $31^{\circ}28'$ N. on the lat. arc, and determine a meridian with the solar. Thence I run, as per instructions, on a true line, South, on range line, bet. secs. 1 & 6. Over rolling land, desc. grad.</p>
10.00	Wash, 20 lks. wide, course W., asc. grad.
40.00	Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 1 in W., and S 6 in E. half; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
60.00	Ridge, brs. E. & W., desc.
80.00	Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 1, 6, 7 & 12, marked on brass cap, T 23 S in N. half, R 31 E S 1 in NW., R 32 E S 6 in NE., S 7 in SE., and S 12 in SW. quad.; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
	<p>Land, rolling. Soil, 3rd rate, gravelly, dry. Mesquite brush, cacti, greasewood, sage brush, fair grass.</p> <hr/> <p>on a true line South, bet. secs. 7 & 12. Over rolling land, desc. grad.</p>
10.73	Road, brs. NE. & SW.
35.58	Road, brs. NE. & SW.
39.40	Road, brs. NE. & SW.
40.00	Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 12 in W., and S 7 in E. half; from which, A cottonwood tree 8 ins. diam. brs. S. 74° E. 72 lks. dist., marked $\frac{1}{4}$ S 7 B T. An oak tree 4 ins. diam. brs. S. 15° W. 78 lks. dist., marked $\frac{1}{4}$ S 12 B T.
40.99	Centre of cottonwood creek, (dry), 120 lks. wide, course W., joins Sycamore Creek 7 chs. to WSW.
47.00	Sycamore Creek, (dry) 90 lks. wide, course W., asc.
71.50	Ridge, brs. W. & E., desc.
79.25	Wash, 10 lks. wide, course W., asc.
80.00	Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 7, 12, 13 & 18, marked on brass cap, T 23 S in N. half, R 31 E S 12 in NW., R 32 E S 7 in NE., S 18 in SE., and S 13 in SW. quad.; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. No bearings available, pits impracticable. Land, rolling, hilly. Soil, 3rd rate, gravelly, stony, dry. Mesquite, cacti, catclaw, greasewood, sparse grass; few cottonwoods and sycamore trees in Creeks.

BOOK 2478

Chains.

on a true line
 South, ^A bet. secs. 13 & 18.
 Over rolling land, asc.
 7.00 Spur, brs. W. & E., desc. grad. along WSW. slope.
 30.00 Desc. S. slope through scattering mesquite.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 13 in W., and
 S 18 in E. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 50.00 Wash, 30 lks. wide, course W., asc. gently.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 13, 18, 19, & 24, marked on
 brass cap, T 23 S in N. half,
 R 31 E S 13 in NW.,
 R 32 E S 18 in NE.,
 S 19 in SE., and
 S 24 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, rolling, hilly.
 Soil, 3rd rate, gravelly, dry.
 Mesquite brush cacti, greasewood, sage brush, fair grass.
 At this cor., at noon, I set off $22^{\circ}7\frac{1}{2}'$ E. on the decl. arc,
 arc, and observe the sun on the meridian.
 The resulting lat. is $31^{\circ}25'$ N.

on a true line
 South, ^A bet. secs. 19 & 24.
 Over rolling land.
 15.00 Road, brs. NW. & SE.
 19.00 Wash, 90 lks. wide, course SW. ascend.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 24 in W., and
 S 19 in E. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Thence over stony, grassy flat, drains to W.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 19, 24, 25 & 30, marked on
 brass cap, T 23 S in N. half,
 R 31 E S 24 in NW.,
 R 32 E S 19 in NE.,
 S 30 in SE., and
 S 25 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, rolling. Soil, 3rd rate, gravelly, dry, stony.
 Sage brush, cacti, sparse mesquite, fair grass.

on a true line
 South, ^A bet. secs. 25 & 30.
 Over rolling land.
 19.00 Break in flat or mesa, brs. NE. & SW., desc.
 25.27 Wash, 15 lks. wide, course SW., enter mesquite brush.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 25 in W., and
 S 30 in E. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 57.22 Road, brs. ENE. & WSW.
 70.25 Wash, 30 lks. wide, course WSW.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 25, 30, 31 & 36, marked on
 brass cap, T 23 S in N. half,
 R 31 E S 25 in NW., R 32 E S 30 in NE.,
 S 31 in SE., and S 36 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, rolling.
 Soil, 3rd rate, gravelly, dry, stony.
 Mesquite, catclaw, cacti, good grass.

Chains.

on a true line

BOOK

2478

South, [^] bet. secs. 31 & 36.
 Over heavily rolling land, asc.
 5.00 Ridge, brs. W. & E., desc. grad.
 12.80 Road, brs. ENE. & WSW.,
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 36 in W., and
 $\frac{1}{4}$ S 31 in E. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 43.92 Road, brs. NE. & SW., in draw 8 chs. wide, course WSW., asc.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of Tps. 23 & 24 S., Rs. 31 & 32 E.,
 marked on brass cap,
 T 23 S in N., and
 T 24 S in S. half,
 R 31 E S 36 in NW.,
 R 32 E S 31 in NE.,
 S 6 in SE., and
 S 1 in SW. quad.;
 Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high S. of cor.
 No bearings available, pits impracticable.
 Corner is in small depression, draining to W.
 Land, rolling.
 Soil, 3rd rate, gravelly, dry.
 Sage brush, cacti, greasewood, mesquite, catclaw, fair
 grass.

Dec. 3, 1912.

South Boundary T. 23 S., R. 31 E.

Dec. 4, 1912.

At 8h a.m., l.m.t., at the cor. of Tps. 23 & 24 S., Rs. 31
 and 32 E., as above established and described,
 I set off $22^{\circ}13'S$ on the decl. arc, and $31^{\circ}22\frac{1}{2}'N$ on
 the lat. arc, and determine a meridian with the solar.
 Thence I run, as per instructions,
 West, on a random line, on S. bdy. of Tp., setting
 temp. $\frac{1}{4}$ and sec. cors. at intervals of 40 and 80 chs.
 At 6 miles, l. 44 chs., I intersect W. bdy. of Tp. 28 lks.
 N. of the cor. of Tps. 23 & 24 S., Rs. 30 & 31 E., as
 recently established by me & hereinafter described, whence I run,

BOOK 2478

Chains.

N. 89°58' E., on a true line, bet. secs. 6 & 31.
 Over broken, rolling land.
 1.50 S. point of small gravelly spur, from mesa, hrs. N. & S.
 Desc.
 20.00 Wash, 30 lks. wide, course SW., Cottonwood Creek.
 22.00 Road, hrs. NNE. & SSW.
 41.44 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 31 in N., and
 S 6 in S. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 45.00 Leave draw, asc.
 48.00 Top of broken mesa, hrs. ENE. & WSW., thence over same,
 near S. rim, through dense mesquite brush.
 81.44 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 5, 6, 31 & 32, marked on
 brass cap, T 23 S in N.,
 T 24 S in S., and
 R 31 E in W. half,
 S 31 in NW.,
 S 32 in NE.,
 S 5 in SE., and
 S 6 in SW. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, rolling, broken. Soil, 3rd rate, gravelly, dry.
 Mesquite, cacti, catclaw, greasewood, fair grass.
 At this cor., at noon, I set off 22°16' S. on the decl.
 arc, and observe the sun on the meridian.
 The resulting lat. is 31°22 $\frac{1}{2}$ ' N.

on a true line
 N. 89°58' E. bet. secs. 5 & 32.
 Over rolling broken mesa.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 32 in N., and
 S 5 in S. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 50.75 Wash, 20 lks. wide, course S.
 62.55 Wash, 10 lks. wide, course SW.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 4, 5, 32 & 33, marked on
 brass cap, T 23 S in N., T 24 S in S., and
 R 31 E in W. half;
 S 32 in NW., S 33 in NE.,
 S 4 in SE., and S 5 in SW. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, rolling. Soil, 3rd rate, gravelly, stony, dry, loose.
 Sage brush, mesquite, cacti, fair grass.

on a true line
 N. 89°58' E. bet. secs. 4 & 33.
 Over rolling, broken land., desc. grad.
 10.00 Enter draw, course WSW.
 22.50 Wash, 30 lks. wide, course WSW.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 33 in N., and
 S 4 in S. half;
 dig pits 18x18x12 ins. E. & W. of cor. 3 ft. dist., and
 raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 Thence over loose sandy bottom land, in wide draw.
 60.30 Road, hrs. NE. & SW.
 67.67 Road, hrs. WNW. & ESE.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 3, 4, 33 & 34, marked on
 brass cap, T 23 S in N., T 24 S in S., and
 R 31 E in W. half;
 S 33 in NW., S 34 in NE.,
 S 3 in SE., and S 4 in SW. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, rolling. Soil, 2nd & 3rd rate, gravelly, sandy.
 Mesquite, sage brush, greasewood, cacti, fair grass.

Chains.	<p>on a true line N. 89°58' E. bet. secs. 3 & 34. Over flat in draw.</p>
11.48	Road, brs. N. & S.
17.00	Leave draw, course WSW. from ENE., asc. grad., over rolling, broken S. edge of mesa.
22.00	House of W. S. McDonald, brs. S. 18 chs. dist.
40.00	Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 34 in N., and S 3 in S. half; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
42.00	Enter draw, course SW.
51.30	Road, brs. NE. & SW.
57.00	Leave draw, course SW., from ENE.,
59.00	Wash, 10 lks. wide, course NW.
70.00	Wash, 15 lks. wide, course N., asc. along N. side of hill to S.
80.00	Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 2, 3, 34 & 35, marked on brass cap, T 23 S in N., T 24 S in S., and R 31 E in W. half; S 34 in NW., S 35 in NE., S 2 in SE., and S 3 in SW. quad.; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, rolling, broken, level. Soil, 2nd & 3rd rate, sandy, gravelly, dry, loose. Mesquite, greasewood, sage brush, cacti, fair grass.
<hr/>	
	<p>on a true line N. 89°58' E. bet. secs. 2 & 35. Over broken land, along near N. foot of hill to S.</p>
40.00	Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 35 in N., and S 2 in S. half; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
51.70	Wash, 15 lks. wide, course N.
62.00	Wash, 20 lks. wide, course NW., enter draw, course WNW.
80.00	Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 1, 2, 35 & 36, marked on brass cap, T 23 S in N., T 24 S in S., and R 31 E in W. half, S 35 in NW., S 36 in NE., S 1 in SE., and S 2 in SW. quad.; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, broken, rolling. Soil, 3rd rate, gravelly, sandy, loose, dry. Sage brush, mesquite, greasewood, cacti, fair grass.
<hr/>	
	<p>on a true line N. 89°58' E. bet. secs. 1 & 36. Over gently rolling land.</p>
0.50	Road, brs. NW. & SE., leave draw, course WSW., from ENE. Asc. grad. through dense greasewood and mesquite.
40.00	Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 36 in N., and S 1 in S. half; dig pits 18x18x12 ins. E. & W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high N. of cor.
80.00	To cor. of Tps. 23 & 24 S., Rs. 31 & 32. E. hereinbefore described. Land, rolling. Soil, 3rd rate, gravelly, sandy, loose. Mesquite, greasewood, sage brush, cacti, good grass.

BOOK 2478

General Description.

The East, West, and South Boundaries of T. 23 S., R. 31 E. run over a rolling, or broken valley, draining to the south and West. The soil is in general a loose gravelly loam, sandy in places, covered in places with loose volcanic tufa. There is some agricultural land in the draws, but the land is valuable mostly for grazing purposes, being fairly well covered throughout with a growth of native grass. There is no water or timber along the boundaries, nor any trace of mineral.

Boundaries of T. 23 S., R. 31 E.
Latitudes, departures and closing errors.

Line Designated.	True bearing.	Dist.	Latitudes.		Departures.		
			N.	S.	E.	W.	
South Boundary,	S. 89° 58' W.	481.44	Chs.	Chs.	Chs.	Chs.	
West Boundary,	North, ---	480.00	480.00	---	0.28	481.44	
North Boundary,	East, ---	480.90	---	---	480.90	---	
East Boundary,	South, ---	480.00	---	480.00	---	---	
Convergency,	---	---	---	---	0.44	---	
Totals, -----			480.00	480.28	481.34	481.44	
			---	480.00	---	481.34	
Error in Lat., -----				0.28			
Error in Dep., -----						0.10	

Dec. 4, 1912.

Jose B. Wright
U. S. Surveyor.

Chains.

BOOK 2478

Dec. 17, 1912.

At 8h a.m., l.m.t., at the cor. of Tps. 23 & 24 S., Rs. 31 & 32 E., recently established by me & herebefore described, I set off $23^{\circ}19'S$ on the decl. arc, and $31^{\circ}22\frac{1}{2}'N$ on the lat. arc, and determine a meridian with the solar. Thence I run, as per instructions, on a true line South, on range line, bet. secs. 1 & 6.

Over slightly rolling land, asc. grad., through mesquite, dense sage brush, and greasewood.

20.00 Top of low flat divide, brs. E. & W., desc. grad.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 1 in W., and
 $\frac{1}{4}$ S 6 in E. half;

80.00 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 1, 6, 7 & 12, marked on brass cap, T 24 S in N. half,
 R 31 E S 1 in NW.,
 R 32 E S 6 in NE.,
 S 7 in SE., and
 S 12 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, rolling. Soil, 3rd rate, gravelly, sandy, loose. Greasewood, sage brush, mesquite, catclaw, fair grass.

on a true line

South, bet. secs. 7 & 12.

Over gently rolling land, through dense sage brush, greasewood, and cacti.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 12 in W., and
 $\frac{1}{4}$ S 7 in E. half;

80.00 dig pits 18x18x12 ins. N. & S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high W. of cor. Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 7, 12, 13 & 18, marked on brass cap, T 24 S in N. half,
 R 31 E S 12 in NW.,
 R 32 E S 7 in NE.,
 S 18 in SE., and
 S 13 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, rolling. Soil, 3rd rate, gravelly, dry. Mesquite, catclaw, greasewood, sage brush, cacti, fair grass.

on a true line

South, bet. secs. 13 & 18.

Over rolling land, through dense sage brush, greasewood, mesquite, catclaw, and cacti.

30.00 Desc. grad.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 13 in W., and
 $\frac{1}{4}$ S 18 in E. half;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

Desc. along flat ridge, to S.

74.70 S. point of flat ridge, brs. S. & N., desc. steep.

79.00 Gulch, 50 lks. wide, course SW., asc.

80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 13, 18, 19 & 24, marked on brass cap, T 24 S in N. half,
 R 31 E S 13 in NW.,
 R 32 E S 18 in NE.,
 S 19 in SE., and
 S 24 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, rolling. Soil, 3rd rate, gravelly, dry, loose. Greasewood, sage brush, mesquite, cacti, fair grass.

Chains.

on a true line
 South, bet. secs. 19 & 24.
 Over rolling land, asc.
 5.00 Top of rise, at W. foot of hill, desc. grad.
 8.60 Road, brs. ENE. & WSW.
 11.37 Intersect International Boundary Line bet. the United
 States and Mexico. at point
 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for Closing cor. of Frac. Tps. 24 S., Rs. 31 & 32 E.,
 marked on brass cap,
 CC, and MEX, in S., and
 U S, and T 24 S, in N. half,
 R 31 E S 24 in NW., and
 R 32 E S 19 in NE. quad.;
 raise a mound of stone 3 ft. base, 2 ft. high N. of cor.
 At this cor., at noon, set off $23^{\circ}21'S$. on the decl.
 arc, and observe the sun on the meridian.
 The resulting lat. is $31^{\circ}20' N$.

From the closing cor. above described,
 Mon. No. 74 on International Bdy. line brs. $S. 89^{\circ}25'E.$,
 20.60 chs. dist., which is an iron monument, on
 concrete base, as described by the Surveyor-General.
 Mon. No. 75 on International Bdy. line brs. $N. 89^{\circ}25'W.$,
 261.00 chs. dist., which is an iron monument, on
 concrete base, as described by the Surveyor-General.

Dec. 17, 1912.

In the afternoon of this date I retrace the International
 Boundary line West to the line of the San Bernardino
 Grant, and determine the true course and distance of
 this line.

COX 2478

Chains.

Dec. 18, 1912.

At 8h a.m., l.m.t., at the cor. of Tps. 23 & 24 S.,
Rs. 30 & 31 E., recently established by me & heretofore described.

BOOK 2478

I set off $23^{\circ}21'$ S. on the decl. arc, and $31^{\circ}22\frac{1}{2}'$ N. on
the lat. arc, and determine a meridian with the solar.
Thence I run, as per instructions, on a true line
South, on range line, bet. secs. 1 & 6,
Var. 13° E.

Over heavily rolling, broken, land, desc. grad.

18.00 Enter draw, course WSW.

21.02 Road, brs. NE. & SW.

30.00 Wash, 20 lks. wide, course W., from Cottonwood Creek.

35.00 Leave draw, asc. grad.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 1 in W., and
S 6 in E. half;52.00 Wash, 2 chs. wide, course WSW., enter mesquite brush, brs.
W. & E.80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
the ground for cor. of secs. 1, 6, 7 & 12, marked on
brass cap, T 24 S in N. half,
R 30 E S 1 in NW.,
R 31 E S 6 in NE.,
S 7 in SE., and
S 12 in SW. quad.;raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
Land, rolling, broken.

Soil, 3rd rate, gravelly, sandy, loose, dry.

Mesquite, greasewood, cacti, good grass.

on true line

South, bet. secs. 7 & 12.

Over rolling, broken land, through dense mesquite brush.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 12 in W., and
S 7 in E. half;raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

68.15 Road, brs. NE. & SW.

80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
the ground for cor. of secs. 7, 12, 13 & 18, marked on
brass cap, T 24 S in N. half,
R 30 E S 12 in NW., and
R 31 E S 7 in NE.,
S 18 in SE., and
S 13 in SW. quad.;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, 2nd & 3rd rate, sandy, gravelly, loose.

Mesquite brush, greasewood, cacti, good grass.

BOOK 2478

Chains. on true line
 South, bet. secs. 13 & 18.
 Over heavily rolling land.
 2.00 Road, brs. NW. & SW.
 11.72 Road, brs. NE. & SW.
 20.00 Hay Hollow Wash, 2 chs. wide, course SW.
 29.34 Intersect NE. Boundary Line of San Bernardino Grant
 at a point whence,
 the 2 $\frac{1}{2}$ mile cor. on said line brs. S.55°16'26" E. ,
 15.45 chs. dist., which is a volcanic stone 14x12x6 ins.
 above ground, marked and witnessed as described by the
 Surveyor-General.
 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for closing cor. of frac. T. 24 S., R. 30 & 31 E.,
 marked on brass cap,
 CC in W. of centre,
 T 24 S in NE., and
 S B G in SW. half,
 R 30 E S 13 in NW., and
 R 31 E S 18 in NE. sectors;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high N. of cor.,
 from which,
 College peak brs. N.53°40'W.
 Niggerhead, peak, crag on W. side, brs. S.82°34'W.
 Wooded peak near N. end of Peloncillo Mts. brs. N.32°41'E.

General Description.

The East and West Boundaries of frac. T. 24 S., R. 31 E.,
 run over a broken or rolling country, covered in general
 with mesquite brush, greasewood, sage brush, and cacti.
 Some of the land is suitable for farming purposes.
 There is no water or timber along the lines.

BOUNDARIES.

Frac. T. 24 S., R. 31 E.
 Latitudes, departures, and closing errors.

Line designated.	True bearing.	Dist., Chs.	Latitudes.		Departures.	
			N.	S.	E.	W.
International Boundary line,	N. 89°25' W.	261.00	2.65	-----	-----	260.99
	N. 89°26' W.	200.63	1.98	-----	-----	200.62
	N. 89°25 $\frac{1}{2}$ ' W.	0.80	0.01	-----	-----	0.80
E. Bdy. of San Bernardino Grant.	N. 0°11' E.	44.02	44.02	-----	0.14	-----
	N. 55°16'26" W.	23.45	13.36	-----	-----	19.27
West Boundary, North,	-----	189.34	189.34	-----	-----	-----
North Boundary, East,	N. 89°58' E.	481.44	0.28	-----	481.44	-----
East Boundary, Convergency,	South, -----	251.37	-----	251.37	-----	-----
					0.22	-----
	Totals,		251.64	251.37	481.80	481.68
			251.37	-----	481.68	-----
	Error in Lat.,		0.27	-----	-----	-----
	Error in Dep.,		-----	-----	0.12	-----

Dec. 18, 1912.

Jesse B. Wright
 U. S. Surveyor.

Chains.

BOOK 2478

Jan. 1, 1913.

At 9h a.m., l.m.t., at the cor. of Tps. 23 & 24 S.,
Rs. 29 & 30 E., recently established by description by
William H. Elliott, & described by him in Book "G"

I set off $22^{\circ}58'S$ on the decl. arc, and $31^{\circ}22\frac{1}{2}'N$ on
the lat. arc, and determine a meridian with the solar.
Thence I run, as per instructions, on a true line,

Var. $13^{\circ}10'E$,

South, bet. secs. 1 & 6, on range line.

Over heavily rolling land, through dense greasewood,
sage brush, catclaw, cacti, good grass.

17.51

Wire drift fence, brs. NE. & SW.

27.78

Wash, 30 lks. wide, course SE., asc. grad.

38.00

Top of rise, brs. E. & W., desc. grad.

40.00

Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 1 in W., and
S 6 in E. half;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

45.00

Draw, 2 chs. wide, course E., asc. grad.

52.00

Top of rise, brs. E. & W., desc. grad.

59.00

Enter draw, course E.

66.00

Leave draw, asc. grad.

71.00

Top of rise, brs. E. & W., desc. grad.

80.00

Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
the ground for cor. of secs. 1, 6, 7 & 12, marked on
brass cap, T 24 S in N. half,
R 29 E S 1 in NW.,
R 30 E S 6 in NE.,
S 7 in SE., and
S 12 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

Land, broken, rolling.

Soil, 2nd & 3rd rate, sandy, gravelly, loose, dry.

Greasewood, mesquite brush, sage brush, cacti, good grass.

on true line

South, bet. secs. 7 & 12.

Over rolling land.

2.50

Draw, 5 chs. wide, course ENE.

29.00

Enter draw, course ESE.

31.27

Road, brs. E. & W.

40.00

Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 12 in W., and
S 7 in E. half;

dig pits $18 \times 18 \times 12$ ins. N. & S. of cor. 3 ft. dist., and
raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high W. of cor.

41.81

Wash, 50 lks. wide, course E.

44.00

Leave draw,

68.94

Wash, 40 lks. wide, course ESE.

80.00

Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
the ground for cor. of secs. 7, 12, 13 & 18, marked on
brass cap, T 24 S in N. half,
R 29 E S 12 in NW.,
R 30 E S 7 in NE.,
S 18 in SE., and
S ~~12~~ in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

Land, rolling.

Soil, 3rd rate, gravelly, sandy, loose.

Sage brush, greasewood, cacti, mesquite, fair grass.

At this cor., at noon, I set off $22^{\circ}59\frac{1}{2}'S$ on the decl.
arc, and observe the sun on the meridian.

The resulting lat. is $31^{\circ}21'N$.

BOOK 2478

Chains.

on true line
 South, bet. secs. 13 & 18.
 Over rolling land.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 13 in W., and S 18 in E. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 50.85 Telephone line, brs. E. & W., Douglas to Slaughter Ranch.
 61.00 Draw, 4 chs. wide, course ESE.
 75.12 Road, brs. ESE. & WNW., main Road from Douglas to E.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 13, 18, 19 & 24, marked on brass cap, T 24 S in N. half,
 R 29 E S 13 in NW.,
 R 30 E S 18 in NE.,
 S 19 in SE., and
 S 24 in SW. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, rolling. Soil, 3rd rate, gravelly, dry.
 Greasewood, cacti, sage brush, mesquite, fair grass.

on true line
 South, bet. secs. 19 & 24.
 Over heavily rolling land, dense greasewood & catclaw.
 5.20 Intersect International Boundary Line between the United States and Mexico at a point whence,
 Mon. No. 79 on said line brs. West, 56.22 chs. dist., which is an iron monument, as described by the Surveyor-General, properly marked.
 Mon. No. 78 on said line brs. East, 241.23 chs. dist., which is an iron monument, as described by the Surveyor-General, properly marked.
 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for closing cor. of frac. T. 24 S., Rs. 29 & 30 E., marked on brass cap,
 CC, and MEX in S., and
 U S, and T 24 S, in N. half,
 R 29 E S 24 in NW., and
 R 30 E S 19 in NE. quad.;
 dig pits 30x24x12 ins. crosswise on each line, E. & W. 4 ft., and N. of cor. 8 ft. dist., and
 raise a mound of earth 5 ft. base, $2\frac{1}{2}$ ft. high N. of cor.
 No bearings available.
 Land, rolling. Soil, 3rd rate, gravelly, dry.

BOUNDARIES
 Frac. T. 24 S., R. 30 E.
 Latitudes, departures, and closing errors.

Line Designated.	True Bearing.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
		Chs.	Chs.	Chs.	Chs.	Chs.
San Bernardino Grant Line, ---	N. 55° 16' 26" W.	184.55	105.13	-----	-----	151.68
	S. 28° 07' W.	162.20	-----	145.64	-----	71.40
	S. 10° 45' W.	15.37	-----	15.10	-----	-2.86
Internat'l Bdy. West, ---	West, ---	266.13	-----	-----	-----	266.13
West Boundary, North, ---	North, ---	245.20	245.20	-----	-----	-----
North Boundary, South, ---	S. 89° 59' E.	492.00	-----	0.14	492.00	-----
East Boundary, Convergency, ---	South, ---	189.34	-----	189.34	-----	-----
				0.21	-----	-----
	Totals, ---	-----	350.33	350.22	492.21	492.07
			350.22	-----	492.07	-----
	Error in Lat., ---	-----	0.11	-----	-----	-----
	Error in Dep., ---	-----	-----	-----	0.04	-----

Jan. 1, 1913.

Jesse B. Wright
 U. S. Surveyor.

Chains. Jan. 2, 1913.
 At 8h a.m., l.m.t., at the cor. of Tps. 23 & 24 S.,
 Rs. 29 & 30 E., recently established by W.H. Elliott & described in Book 'G',
 I set off $22^{\circ}53'$ S. on the decl. arc, and $31^{\circ}22\frac{1}{2}'$ N. on
 the lat. arc, and determine a meridian with the solar.
 Thence I run, as per instructions,
 West, on a random line, setting temp. cors. at intervals
 of 40 and 80 chs.
 At 5 miles, 79.36 chs. I find a stone corner 239 lks.
 S. of line, properly marked, with mound of stone.
 I run N. & S. from this cor. for a distance of 40 chs.
 each way, and fail to find any trace of any other
 corners. There being evidently an error of closure
 which must be located, I find it necessary to retrace
 the true East bdy. of frac. T. 24 S., R. 28 E.
 (See Book 'A' retracements.) Jan. 2, 1913.

Jan. 3, 1913.
 On this date having located the true cor. of Tps.
 23 & 24 S., Rs. 28 & 29 E., and finding that the random
 line of the N. bdy. of frac. T. 24 S., R. 29 E., projected,
 falls 236 lks. S. of the true cor. of Tps. 23 & 24 S.,
 Rs. 28 & 29 E., at a distance of 6 miles, 17.54 chs.
 Therefore, at this true cor., which is a granite stone
~~16x10x6 ins.~~ above ground, marked and witnessed as
 described by the Surveyor-General, I run,
 as per instructions, on a true line,
 $S. 89^{\circ}44'$ E., bet. secs. 6 & 31.
 Over mts. land, asc. grad. W. slope, stony land.
 18.18 The old cor. heretofore noted brs. S. 4.43 chs. dist.,
 which is evidently an erroneous corner probably
 set by some local surveyor, which I destroy.
 32.40 Leave valley, brs. NNE. & SSW., asc. steep.
 57.54 Set an iron post 3 ft. long, 1 in. in diam. 8 ins. in
 the ground, on bed-rock, in mound of stone for $\frac{1}{4}$ sec.
 cor., marked on brass cap,
 $\frac{1}{4}$ S 31 in N., and
 S 6 in S. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 59.00 Asc. grad.
 80.00 Ridge, brs. NNW. & SSE.
 81.50 Granite bluff, 50 ft. high, desc. prec. over granite
 ledges.
 97.54 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 5, 6, 31 & 32, marked on
 brass cap, T 23 S in N.,
 T 24 S in S., and
 R 29 E in W. half,
 S 31 in NW.,
 S 32 in NE.,
 S 5 in SE., and
 S 6 in SW. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, mts., rough.
 Soil, 3rd rate, stony, gravelly, dry.
 Sparse mesquite, cacti, fair grass.
 At this cor., at noon, I set off $22^{\circ}48\frac{1}{2}'$ S. on the decl.
 arc, and observe the sun on the meridian.
 The resulting lat. is $31^{\circ}22\frac{1}{2}'$ N.

BOOK 248

Chains.

4.00 S. 89°44' ^{on true line} E. bet. secs. 5 & 32.
 Over mts. land, desc. prec.
 Desc. grad.

21.70 Gulch, 30 lks. wide, course SE., asc.

27.00 S. point of limestone ridge, brs. S. & N., desc. steep.

32.00 Over rough, broken land.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 32 in N., and
 S 5 in S. half;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high N. of cor.
 No bearings available, pits impracticable.

64.83 Gulch, 25 lks. wide, course S.,

78.75 Wash, 15 lks. wide, course S., asc.

80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 4, 5, 32 & 33, marked on
 brass cap, T 23 S in N.,
 T 24 S in S., and
 R 29 E in W. half,
 S 32 in NW.,
 S 33 in NE.,
 S 4 in SE., and
 S 5 in SW. quad.;

raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
 Land, mts., broken.
 Soil, 3rd rate, gravelly, stony, dry.
 Greasewood, cacti, fair grass.

28.00 S. 89°44' ^{on true line} E. bet. secs. 4 & 33.
 Over mts. land, asc. steep.

40.00 Spur, brs. S. & N., desc. steep.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 33 in N., and
 S 4 in S. half;
 raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high N. of cor.

42.00 Granite ledge, 40 ft. high, brs. N. & S., desc.

49.27 Wire fence, brs. N. & S.

54.00 Head of gulch, course S., asc.

58.00 Spur, brs. S. & N., desc. steep.

80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 3, 4, 33 & 34, marked on
 brass cap, T 23 S in N., T 24 S in S., and R 29 E, in
 W. half, S 33 in NW., S 34 in NE.,
 S 3 in SE., and S 4 in SW. quad.;

raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
 No bearings available, pits impracticable.
 Land, mts., broken.
 Soil, 3rd rate, gravelly, stony, dry.
 Sage brush, cacti, greasewood, scrub oak, fair grass.

BOOK 2478

Chains. S. 89°44' ^{on true line} E. bet. secs. 3 & 34.
 Over mts. land, desc. steep.
 6.00 Wash, 20 lks. wide, course NE., asc.
 22.00 Top of low hill, brs. NE. & SW.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 34 in N., and
 S 3 in S. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 Desc. steep from cor.
 43.80 Wash, 20 lks. wide, course SE., asc. steep.
 65.00 Ridge, brs. N. & S., desc. grad.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 10 ins. in the
 the ground, on bed-rock, in mound of stone for
 cor. of secs. 2, 3, 34 & 35, marked on brass cap,
 T 23 S in N.,
 T 24 S in S., and
 R 29 E in W. half,
 S 34 in NW.,
 S 35 in NE.,
 S 2 in SE., and
 S 3 in SW. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, mts., broken. Soil, 3rd rate, gravelly, stony.
 Scrub oak, cacti, fair grass.

S. 89°44' ^{on true line} E. bet. secs. 2 & 35.
 Over mts. land, desc. grad. through dense scrub oak,
 mesquite and greasewood, cacti.
 7.96 Dim road, brs. N. & S., foot of main slope, brs. N. & S.,
 thence desc. grad. over rolling land.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 35 in N., and
 S 2 in S. half,
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 1, 2, 35 & 36, marked on
 brass cap, T 23 S in N.,
 T 24 S in S., and
 R 29 E in W. half,
 S 35 in NW.,
 S 36 in NE.,
 S 1 in SE., and
 S 2 in SW. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 Land, mts., rolling.
 Soil, 3rd rate, gravelly, dry.
 Greasewood, mesquite brush, cacti, fair grass.

S. 89°44' ^{on true line} E. bet. secs. 1 & 36.
 Over rolling land, desc. grad., through dense brush.
 39.00 Enter draw, course SE.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 36 in N., and
 S 1 in S. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 51.05 Wash, 35 lks. wide, course ESE.
 62.00 Leave draw, asc.
 65.00 Top of rise, on mesa, brs. ESE. & WNW., desc. grad.
 80.00 To cor. of Tps. 23 & 24 S., Rs. 29 & 30 E., described in Book "G"
 Land, rolling.
 Soil, 3rd rate, gravelly, dry.
 Sage brush, greasewood, cacti, good grass, mesquite
 brush.

Jan. 3, 1913.

(For complete data, see Book "A" of retracements & Re-surveys.)

Latitudes, departures, and closing errors.

Line designated:	True bearing.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
		Chs.	Chs.	Chs.	Chs.	Chs.
South Boundary,	N. 89°44' W.	497.54	2.36	-----	-----	497.54
West Boundary,	North, ---	477.82	477.82	-----	-----	-----
North Boundary,	East, ---	16.14	-----	-----	-16.14	-----
"	"	S. 88°42' E.	80.24	-----	-1.82	80.22
		S. 89°57' E.	120.20	-----	-0.10	120.20
		S. 89°45' E.	40.00	-----	-0.18	40.00
		N. 89°51' E.	39.84	-----	-0.10	39.84
		East, ---	40.39	-----	-----	40.39
East Boundary,	N. 89°15' E.	160.08	-2.10	-----	160.07	-----
Convergency, --	South, ---	480.00	-----	480.00	-----	-----
		-----	-----	-----	-0.44	-----
		Totals, -----	482.38	482.10	497.30	497.54
			482.10	-----	-----	497.30
		Error in Lat., -----	-0.28	Error in Dep., -----	-0.24	-----

Boundaries of ^{Frac.} T. 24 S., R. 29 E.
 Latitudes, Departures, and closing errors.
 (Other data in Book "A" of retracements and re-surveys
 and Subdivision of ^{Frac.} T. 24 S., R. 29 E., Book "N")

Line designated.	True bearing.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
		Chs.	Chs.	Chs.	Chs.	Chs.
International Boundary Line.	West, -----	56.22	-----	-----	-----	56.22
	N. 89°57' W.	232.40	-0.20	-----	-----	232.40
	N. 89°55' W.	65.46	-0.09	-----	-----	65.46
	N. 89°45' W.	89.35	-0.39	-----	-----	89.35
	West, ---	54.28	-----	-----	-----	54.28
West Boundary,	N. 0° 2' W.	80.14	80.14	-----	-----	0.05
	North, ---	166.28	166.28	-----	-----	-----
North Boundary,	S. 89°44' E.	497.54	-----	-2.36	497.54	-----
East Boundary,	South, ---	245.20	-----	245.20	-----	-----
Convergency, --	-----	-----	-----	-----	-0.22	-----
		Totals, -----	247.10	247.56	497.76	497.76
			-----	247.10	497.76	-----
		Error in Latitude, -----	-----	-0.46	-----	-----
		Error in Departure, -----	-----	-----	-0.00	-----

Jan. 23, 1913.

James B. Wright
William H. Elliott

U. S. Surveyors.

Chains.

BOOK 2478

Jan. 30, 1913.

At 8h a.m., l.m.t., at the Std. cor. of Tps. 20 S., Rs. 23 & 24 E., as recently re-established by W. H. Elliott, and by him described, in Book "B"

I set off $17^{\circ}39\frac{1}{2}'$ S. on the decl. arc, and $31^{\circ}38\frac{1}{2}'$ N. on the lat. arc, and determine a meridian with the solar.

Thence I run, as per instructions,

North, on a random line, setting temp. $\frac{1}{4}$ and sec. cors. at intervals of 40 and 80 chs.

At 6 miles, 2.44 chs., I intersect the South bdy. of T. 19 S., R. 23 E. at a point 28 lks. West of the cor. of Tps. 19 & 20 S., Rs. 23 & 24 E., which is a granite stone 30x14x12 ins., set in mound of stone, marked and witnessed as described by the Surveyor-General, whence I run,

S. $0^{\circ}2'$ W., on a true line, bet. secs. 1 & 6.

Over mts. land, asc.

2.45 Ridge, brs. E. & W., desc.

3.85 Wire fence, brs. ESE. & WNW.

42.44 Set an iron post 3 ft. long, 1 in. in diam. 10 ins. in the ground, on bed-rock, in mound of stone for $\frac{1}{4}$ sec. cor., marked on brass cap,

$\frac{1}{4}$ S 1 in W., and

S 6 in E. half;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

No bearings available, pits impracticable.

43.35 Wash, 15 lks. wide, course WNW.

52.00 Telephone line, Tombstone to Gleeson, brs. N. 86° E., & S. 86° W.

54.85 Wash, 30 lks. wide, course W.

55.75 Road, brs. E. & W.

61.45 Asc. grad.

70.00 Asc. steep granite spur.

82.44 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 1, 6, 7 & 12, marked on brass cap, T 20 S in N. half,

R 23 E S 1 in NW.,

R 24 E S 6 in NE.,

S 7 in SE., and

S 12 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

No bearings available, pits impracticable.

Land, mts., broken.

Soil, 3rd rate, gravelly, stony, dry.

Scattering greasewood, scrub mesquite, fair grass.

At this cor., at noon, I set off $17^{\circ}38\frac{1}{2}'$ S. on the decl. arc, and observe the sun on the meridian.

The resulting lat. is $31^{\circ}43'$ N.

S. $0^{\circ}2'$ W., on a true line, bet. secs. 7 & 12.

Over mts. land, asc.

3.17 Top of W. side of high rocky granite hill, brs. W. & E., desc. SW. slope.

6.50 Head of gulch, course SW.

Thence along W. slope of hill.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,

$\frac{1}{4}$ S 12 in W., and

S 7 in E. half;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

41.45 Wash, 20 lks. wide, course SSW., heads 10 chs. NE.

50.55 Same wash, course SE., asc. grad.

57.50 Top of Ridge, brs. E. & W., near E. end, desc. grad.

74.00 Wash, 25 lks. wide, course SSW.

77.50 ~~77.50~~ Same wash course SE.
80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 7, 12, 13 & 18, marked on brass cap, T 20 S in N. half,

R 23 E S 12 in NW.,

R 24 E S 7 in NE.,

S 18 in SE., and S 13 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

Land mts. Soil, 3rd rate, stony. Scrub mesquite. Fair grass.

BOOK 2478

Chains.	S. 0° 2' W., on a true line, bet. secs. 13 & 18. Over rolling, broken land, desc. grad.
1.00	Wash, 50 lks. wide, course SW., thence in same.
6.00	Leave wash, runs SSW.
40.00	Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 13 in W., and S 18 in E. half; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
53.00	Wash, 10 lks. wide, course W., turns SW. 10 chs. to W., asc. grad.
65.00	Rocky ridge, brs. ESE. & NW., desc. grad.
80.00	Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 13, 18, 19 & 24, marked on brass cap, T 20 S in N. half, R 23 E S 13 in NW., R 24 E S 18 in NE., S 19 in SE., and S 24 in SW. quad.; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, rolling, broken, mts. Soil, 3rd rate, gravelly, stony, dry, loose. Scrub mesquite, cacti, fair grass.
	S. 0° 2' W., on a true line, bet. secs. 19 & 24. Over rolling land, desc. grad., through dense scrub mesquite, greasewood, cacti.
10.00	Wash, 20 lks. wide, course SW.
23.00	Leave dense brush, brs. NE. & SW.
40.00	Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 24 in W., and S 19 in E. half; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
80.00	Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 19, 24, 25 & 30, marked on brass cap, T 20 S in N. half, R 23 E S 24 in NW., R 24 E S 19 in NE., S 30 in SE., and S 25 in SW. quad.; dig pits 18x18x12 ins. in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, rolling, broken. Soil, 3rd rate, stony, gravelly. Scrub mesquite, greasewood, cacti, fair grass.
	S. 0° 2' W., on a true line, bet. secs. 25 & 30. Over gently rolling grassy land, desc. gently.
1.00	Old road, brs. NE. & SW.
40.00	Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 25 in W., and S 30 in E. half; dig pits 18x18x12 ins. N. & S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high W. of cor.
80.00	Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 25, 30, 31 & 36, marked on brass cap, T 20 S in N. half, R 23 E S 25 in NW., R 24 E S 30 in NE., S 31 in SE., and S 36 in SW. quad.; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, rolling. Soil, 3rd rate, gravelly, sandy, loose, dry. Sparse mesquite, greasewood, cacti, good grass.

Chains.

24.00 S. 0° 2' W., on a true line, bet. secs. 31 & 36.
 Over gently undulating land, good native grass.
 40.00 Road, brs. ESE. & WNW., Tombstone to Douglas.
 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{3}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 36 in W., and
 $\frac{1}{4}$ S 31 in E. half;
 dig pits 18x18x12 ins. N. & S. of cor. 3 ft. dist., and
 raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high W. of cor.
 80.00 To Cor. of Tps. 20 S., Rs. 23 & 24 E., as heretofore
 re-established by W. H. Elliott & described in Book "B"
 Land, gently rolling.
 Soil, 3rd rate, sandy, gravelly, loose, dry.
 Sparse sage brush and cacti, fine native grass.

General Description.

The East Boundary of T. 20 S., R. 23 E. runs over a gently rolling country in the south, ascending gradually to rough foothills and ridges in the north.

There is no water or timber along or near the line, nor any trace of settlement or occupation of the land.

* Note.

Having retraced the East Boundary of T. 20 S., R. 22 E., on the 27th of Jan. 1913, in order to locate the Std. cor. of Tps. 20 S., Rs. 22 & 23 E., and to test the alinement and measurement of the said East Bdy., and having found that the alinement and measurement thereof practically agrees with the field notes as furnished by the Surveyor-General, there being in no case an error of more than 3 lks. per half mile, I consider it unnecessary to submit any field notes of the retracement of this line.

Jan. 30, 1913.

BOUNDARIES.

T. 20 S., R. 23 E.

Latitudes, departures, and closing errors.

Line Designated.	True bearing.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
		Chs.	Chs.	Chs.	Chs.	Chs.
4th Std. Par. N.	N. 89° 44' W.	479.80	2.24	-----	-----	479.80
West Boundary,	North, -----	480.00	480.00	-----	-----	-----
North Boundary,	East, -----	479.56	-----	-----	479.56	-----
East Boundary,	S. 0° 2' W.	482.44	-----	482.44	-----	0.28
Convergency,	-----	-----	-----	-----	0.44	-----
	Totals, -----	-----	482.24	482.44	480.00	480.08
			-----	482.24	-----	480.00
	Error in Lat., -----			0.20		
	Error in Dep., -----					0.08

Jan. 31, 1913.

James B. Wright

U. S. Surveyor.

Chains.

BOOK 2478

Feb. 11, 1913.

At 8h a.m., l.m.t., at the cor. of secs. 35 & 36, on the S. bdy. of Tp., which is an iron post 3 ins. in diam., 1 ft. above ground, with brass cap, marked and witnessed as described by the Surveyor General,

I set off $14^{\circ}02\frac{1}{2}'$ S. on the decl. arc, and $31^{\circ}44'$ N. on the lat. arc, and determine a meridian with the solar, and knowing by calculation of surveyed lines, that this line projected west, will fall without limits in alinement at the cor. of Tps. 19 & 20 S., Rs. 23 & 24 E.; therefore, I run, from the above described cor., West, on a true line, on S. bdy. of sec. 35.

Over heavily rolling land.

- 6.00 Wash, 20 lks. wide, course S., asc.
 12.00 Low ridge, brs. S. & N., desc.
 19.00 Wash, 20 lks. wide, course S., asc.
 30.00 Low ridge, brs. S. & N., desc.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 35 in N. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 54.60 Wash, 25 lks. wide, course S., enter scrub mesquite.
 58.10 Wash, 20 lks. wide, course S.
 73.00 Wash, 20 lks. wide, course SW.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 34 & 35, marked on brass cap, T 19 S R 24 E, in N. half,
 S 34 in NW., and
 S 35 in NE. quad.;
 dig pits 24x24x12 ins. in each sec. 6 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high N. of cor.
 Land, rolling, broken.
 Soil, 3rd rate, gravelly, dry.
 Scrub mesquite, catclaw, cacti, good grass.

West, on a true line, on S. bdy. sec. 34.

Over heavily rolling, broken land.

- 15.70 Wash, 30 lks. wide, course S.
 17.76 Road, brs. NNW. & SSE., Tombstone to Gleeson.
 29.75 Wash, 40 lks. wide, course SW.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 34 in N., half,
 dig pits 18x18x12 ins. E. & W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 Asc. grad. from cor.
 50.00 Asc. steep.
 66.75 Ridge, brs. NE. & SW.,
 72.00 Desc. steep, stony slope.
 79.70 Gulch, 20 lks. wide, course N., asc.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 33 & 34, marked on brass cap, T 19 S R 24 E, in N. half,
 S 33 in NW., and
 S 34 in NE. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 Land, rolling, broken, mts.
 Soil, 3rd rate, gravelly, stony, dry.
 Scattering mesquite, catclaw, cacti, good grass.
 At this cor., at noon, I set off 14° S. on the decl. arc, and observe the sun on the meridian.
 The resulting lat. is $31^{\circ}44'$ N.

BOOK 2478

Chains.

West, on true line, on S. bdy. sec. 33.
 Over mts. land, asc. steep.
 15.10 Ridge, brs. N. & S.,
 16.00 Desc. steep.
 20.00 Desc. grad.
 29.75 Wash, 20 lks. wide, course NW.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 33 in N. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 51.00 Along S. bank of wash to W.
 70.00 Asc.
 79.00 Top of N. side of hill, brs. N. & S., desc.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 32 & 33, marked on
 brass cap, T 19 S R 24 E, in N. half,
 S 32 in NW., and
 S 33 in NE. quad;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 Land, rolling, mts. Soil, 3rd rate, gravelly, dry.
 Scrub mesquite, cacti, good grass.

West, on true line, on S. bdy. sec. 32.
 Over mts. land, desc. grad.
 11.15 Wash, 20 lks. wide, course SW.
 26.00 Wash, 60 lks. wide, course SW., asc.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 32 in N. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 54.00 Ridge, brs. NE. & SW., desc.
 67.70 Wash, 30 lks. wide, course SW., asc.
 73.00 Ridge, brs. NE. & SW., desc.
 79.30 Wash, 20 lks. wide, course S., asc. grad.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for cor. of secs. 31 & 32, marked on
 brass cap, T 19 S R 24 E, in N. half,
 S 31 in NW., and
 S 32 in NE. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 Land, mts., broken.
 Soil, 3rd rate, gravelly, stony, dry.
 Scrub oak, mesquite, greasewood, fair grass.

West, on true line, on S. bdy. sec. 31.
 Over heavily rolling, broken land, asc. grad.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., marked on brass cap,
 $\frac{1}{4}$ S 31 in N. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 46.10 Intersect East bdy. of T. 20 S., R. 23 E. at a point, whence,
 Cor. of Tps. 19 & 20 S., Rs. 23 & 24 E. brs. N. & 2 E, 3.36
 chs. dist., which is a granite stone ~~14x12x8~~ ins. above
 ground, in mound of stone, marked and witnessed as
 described by the Surveyor General.
 I change the markings thereon to Tps. 19 & 20 S., R. 23 E. only,
 by removing notches on E. of stone. At my intersection,
 set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in
 the ground for closing cor. of Tps. 19 & 20 S., R. 24 E.,
 marked on brass cap,
 C. C. W. of centre,
 R 24 E, in E., and
 T 19 S, S 36, R 23 E, S 1, T 20 S, in W. half,
 T 19 S, S 31 in NE., and
 S 6, T 20 S in SE. quad.;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high E. of cor.
 Land, mts., broken. Soil, 3rd rate, stony, gravelly.
 Scrub mesquite, catclaw, cacti, fair grass.

Feb. 11, 1913.

Chains.

BOOK

2478

Feb. 20, 1913.

At 8h a.m., l.m.t., at the cor. of secs. 3, 4, 33 & 34, on the N. bdy. of the Tp., which is a limestone 10x8x6 ins. above ground, marked and witnessed as described by the Surveyor General,

I set off $10^{\circ}56\frac{1}{2}'$ S. on the decl. arc, and $31^{\circ}48\frac{1}{2}'$ N. on the lat. arc, and determine a meridian with the solar. Thence I run, as per instruction,

West, on true line, bet. secs. 4 & 33.

Over mts. land, asc. along steep NE. slope, over limestone ledges.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 33 in N., and S 4 in S. half;

60.00 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor. Summit of Dragoon Mountains, brs. NW. & SE., desc. steep, through scattering pinon & oak.

80.00 Set an iron post 3 ft. long, 3 ins. in diam. 10 ins. in the ground, on bed-rock, in mound of stone for cor. of secs. 4, 5, 32 & 33, marked on brass cap,

T 18 S, in N.,
T 19 S, in S., and
R 24 E, in W. half;
S 32 in NW.,
S 33 in NE.,
S 4 in SE., and
S 5 in SW. quad.; from which,

A pinon tree 10 ins. diam. brs. N. 31° E. 162 lks. dist., marked T 18 S R 24 E S 33 B T.

A pinon tree 8 ins. diam. brs. S. 27° E. 27 lks. dist., marked T 19 S R 24 E S 4 B T.

A pinon tree 10 ins. diam. brs. S. 35° W. 47 lks. dist., marked T 19 S R 24 E S 5 B T.

A pinon tree 14 ins. diam. brs. N. $65\frac{1}{4}^{\circ}$ W. 37 lks. dist., marked T 18 S R 24 E S 32 B T.

Land, mts., rough. Soil, 3rd rate, stony, dry. Scrub oak, pinon, oak, cacti, fair grass.

At this cor., at noon, I set off $10^{\circ}54'$ S. on the decl. arc, and observe the sun on the meridian.

The resulting lat. is $31^{\circ}48\frac{1}{2}'$ N.

West, ^{on true line} bet. secs. 5 & 32.

Over mts. land, desc. prec.

8.75 Gulch, 20 lks. wide, course SW., near head, desc. steep.
23.00 Gulch, 50 lks. wide, course SE., asc. steep, rocky point.
26.00 Top of rocky spur, near S. end, brs. NNW. & SSE., desc. steep.

32.00 Foot of main slope of mts., brs. NW. & SE., desc. grad.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 32 in N., and S 5 in S. half;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.

46.00 House of Chas. Hoyt, and James Hamilton brs. S. $\frac{1}{2}$ mile.

48.00 Wash, 12 lks. wide, course S.

57.00 Wash, 20 lks. wide, course SSW.

59.00 Wash, 20 lks. wide, course SSE., asc.

65.00 Top of low ridge, brs. S. & N., desc. grad.

71.00 Wash, 15 lks. wide, course S.

80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground for cor. of secs. 5, 6, 31 & 32, marked on brass cap, T 18 S in N., T 19 S in S., and R 24 E, in W. half,

S 31 in NW., S 32 in NE.,
S 5 in SE., and S 6 in SW. quad.;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Land, mts., broken. Soil, 3rd rate, stony, gravelly, dry. Pinon, oak, scrub oak, cacti, fair grass.

BOOK 2478

Chains.
 on true line
 West, bet. secs. 6 & 31.
 Over heavily rolling, broken land, desc. grad.
 12.80 Wash, 20 lks. wide, course SSW., asc.
 16.00 Top of hill, brs. S. & N., desc.
 32.00 Wash, 20 lks. wide, course SW.
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 31 in N., and S 6 in S. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.
 45.44 Fall 3.30 chs. North of cor. of Tps. 18 & 19 S., Rs. 23 & 24 E., which is a limestone $14 \times 12 \times 12$ ins. above ground, marked and witnessed as described by the Surveyor General. I change the markings of this cor. to refer to Tps. 18 & 19 S., R. 23 E., only, and at my point 3.30 chs. to N.; I,
 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins. in the ground, for cor. of Tps. 18 & 19 S., R. 24 E., marked on brass cap,
 R 24 E, in E., and
 R 23 E, T 18 S, S 36, S 1, T 19 S, in W. half,
 T 18 S, S 31 in NE., and
 S 6, T 19 S, in SE. quad.;
 raise a mound of stone $\frac{3}{4}$ ft. base, 2 ft. high E. of cor.
 Land, rolling, broken. Soil, 3rd rate, stony, dry.
 Scrub oak, catclaw, cacti, sage brush, poor grass.

General Description.

The frac. N. & S. bdrs. of T. 19 S., R. 24 E. run over rough, broken, mts. land, covered with scattering oak and pinon trees in the higher portions. To the NNW of the Tp., the land is rough, and mts., rising to several thousand feet above the valleys, and covered with oak and pinon timber.

T. 19 S., R. 24 E.

Latitudes, departures, and closing errors.

Line designated.	True bearing	Dist.	Latitudes.		Departures	
			N.	S.	E.	W.
South Boundary	West, ----	446.10	Chs.	Chs.	Chs.	Chs.
West Boundary,	North, ----	486.66	486.66	-----	-----	446.10
North Boundary,	East, ----	445.44	-----	-----	445.44	-----
East Boundary,	South, ----	485.52	-----	485.52	-----	-----
Convergency,	-----	-----	-----	-----	0.41	-----
Totals,	-----	-----	486.66	485.52	445.85	446.10
			485.52	-----	-----	445.85
Error in Lat.,	-----	-----	1.14	Error in Dep.,	0.25	-----

T. 20 S., R. 24 E.

Latitudes, departures, and closing errors.

Line Designated.	True bearing.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
4th Std. Par. S.	N. 89° 44' W.	480.00	Chs.	Chs.	Chs.	Chs.
West Boundary,	N. 0° 2' E.	479.08	2.24	-----	-----	480.00
North Boundary,	East, ----	479.22	479.08	-----	479.22	-----
East Boundary,	South, ----	481.28	-----	481.28	-----	-----
Convergency,	-----	-----	-----	-----	0.44	-----
Totals,	-----	-----	481.32	481.28	479.94	480.00
			481.28	-----	-----	479.94
Error in Lat.,	-----	-----	0.04	Error in Dep.,	0.06	-----

Feb. 20, 1913.

James B. Wright
 U. S. Surveyor.

CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability,
 Jesse B. Wright, U. S. Surveyor, during the periods and in the capacities

stated opposite our several signatures, in surveying all those parts or portions of Township Bdrs. under Group 17 as follows: S. bdy. frac. T. 21 S., R. 32 E.; E., W. & S. bdrs. T. 22 S., R. 31 E.; S. bdy. frac. T. 22 S., R. 32 E.; E., W. & S. bdrs. T. 23 S., R. 31 E.; E. & W. bdrs. frac. T. 24 S., R. 31 E.; W. bdy. frac. T. 24 S., R. 30 E.; N. bdy. frac. T. 24 S., R. 29 E.; E. bdy. T. 20 S., R. 23 E. and the S. & N. bdrs. T. 19 S., R. 24 E.,

of the Gila Salt River Base & Meridian, in the State of Arizona,

which are represented in the foregoing field notes as having been executed by him, and under his direction; and that said surveys have been, in all respects, to the best of our knowledge and belief, well and faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
Frank M. Sherry	Oct 10, 1912	April 11, 1913	Chairman
Samuel Kennedy	Oct 13, 1912	Jan 27, 1913	Chairman
Edmond Simpson	Oct 15, 1912	Jan 25, 1913	Mandruon
William Bird	Oct 16, 1912	Jan 4, 1913	Assenon
Charles East	Oct 19, 1912	Nov 30, 1912	Flagman
Jesse W. Richardson	Nov 8, 1912	Jan 27, 1913 Mch 22, 1913	Assenon Chairman
John F. Turner	Jan 5, 1913	Jan 24, 1913	Assenon
Allen Thompson	Feb 1, 1913	Mch 20, 1913	Mandruon
Jesse Sunkle	Feb 1, 1913	Apr 10, 1913	Assenon
John Lyons	Mch 17, 1913	Apr 10, 1913	Flagman
William Leek	Mch 23, 1913	Mch 27, 1913	Mandruon
Sysidoro Morales	Apr 4, 1913	Apr 11, 1913	Assenon
James H. Miller	Apr 4, 1913	Apr 10, 1913	Mandruon

Subscribed and certified to before me on the dates of the final service as shown above.

Jesse B. Wright

U. S. Surveyor.

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BOOK 2478

FINAL OATH OF UNITED STATES SURVEYOR.

I, Jesse B. Wright, U. S. Surveyor, do solemnly swear that, in pursuance of special ^{and supplemental} instructions received from the U. S. Surveyor General for Group 17 Arizona bearing dates of the 6th day of Oct. 1911 the 27th day of Nov. 1912 and the 13th day of Jan. 1913, 1913, 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 Township Bdrs. as follows: S. bdy. fracl. T. 21 S. - R. 32 E., E., W. & S. bdrs. T. 22 S. - R. 31 E., S. bdy. frac. T. 22 S. - R. 32 E., E., W. & S. bdrs. T. 23 S. - R. 31 E., E. & W. bdrs. frac. T. 24 S. - R. 31 E., W. bdy. frac. T. 24 S. - R. 30 E., N. bdy. frac. T. 24 S. - R. 29 E., E. bdy. T. 20 S. - R. 23 E., and S. and N. bdrs. T. 19 S. - R. 24 E.

of the Gila & Salt River Base 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 surveys 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 surveys

Jesse B. Wright
U. S. Surveyor.

Subscribed by said Jesse B. Wright and sworn to before me }
this 7th day of June, 1913

Frank J. Ingalls
SURVEYOR-GENERAL OF ARIZONA



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Ariz., Jan. 26, 1914

The foregoing field notes of the survey of Township Bdrs. as follows:
S. bdy. fracl. T. 21 S., R. 32 E., E., W. and S. bdrs. T. 22 S., R. 31 E., Sbdy. fracl T. 22 S., R. 32 E.; E., W. and S. bdrs. T. 23 S., R. 31 E., E. and W. bdrs. fracl. T. 24 S., R. 31 E., W. bdy. fracl. T. 24 S., R. 30 E. N. bdy. fracl. T. 24 S., R. 29 E., E. bdy. T. 20 S., R. 23 E., and S. and N. bdrs. T. 19 S., R. 24 E., of the Gila and Salt River Base and Meridian, Arizona,

executed by Jesse B. Wright and William H. Elliott, U.S. Surveyor, under his special ^{and supplemental} instructions dated October 6, 1911, Nov. 27, 1912, and, Jan. 13, 1913, 1913, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank J. Ingalls
U. S. Surveyor General.

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