

2693

BOOK 2693
Resurveys & Retracements

2693

FIELD NOTES

RESURVEY
OF THE ~~SURVEY~~ OF THE

South bdy. & part of West bdy. of T. 23 N. - R. 5 W.

Part of East bdy. of ^{FRACTIONAL} T. 22 N. - R. 6 W.

First Guide Meridian West thru part of T. 27 N.

Second " " " " " T. 21 N.

Sixth Standard Parallel North thru R. 17 W.

and part of the North bdy. of T. 21 N. - R. 8 W.

and of the RETRACEMENT of

Part of East bdy. of ^{FRACTIONAL} T. 22 N. - R. 6 W.

First Guide Meridian West thru T. 25 N. and the

Fifth Standard Parallel North thru parts of Rs. 8 & 9 W.

of the Gila & Salt River Base & Meridian,

In the State of ARIZONA

EXECUTED BY

H. N. BRADSTREET, U.S. Transitman

&

WILLIAM B. KIMMEL, U.S. Surveyor

In the capacity of U. S. Surveyor, under instructions dated October 18, 1912,

issued by the United States Surveyor General to govern surveys included in

Group No. 24, which were approved by the Commissioner of the General Land

Office, November 5, 1912, pursuant to authority contained in the Act of

Congress dated June 25, 1910.

& Retracement
Re-Survey, commenced November 30, 1912

& Retracement
Re-Survey, completed May 22, 1913

INDEX DIAGRAM.

Township _____, Range _____

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

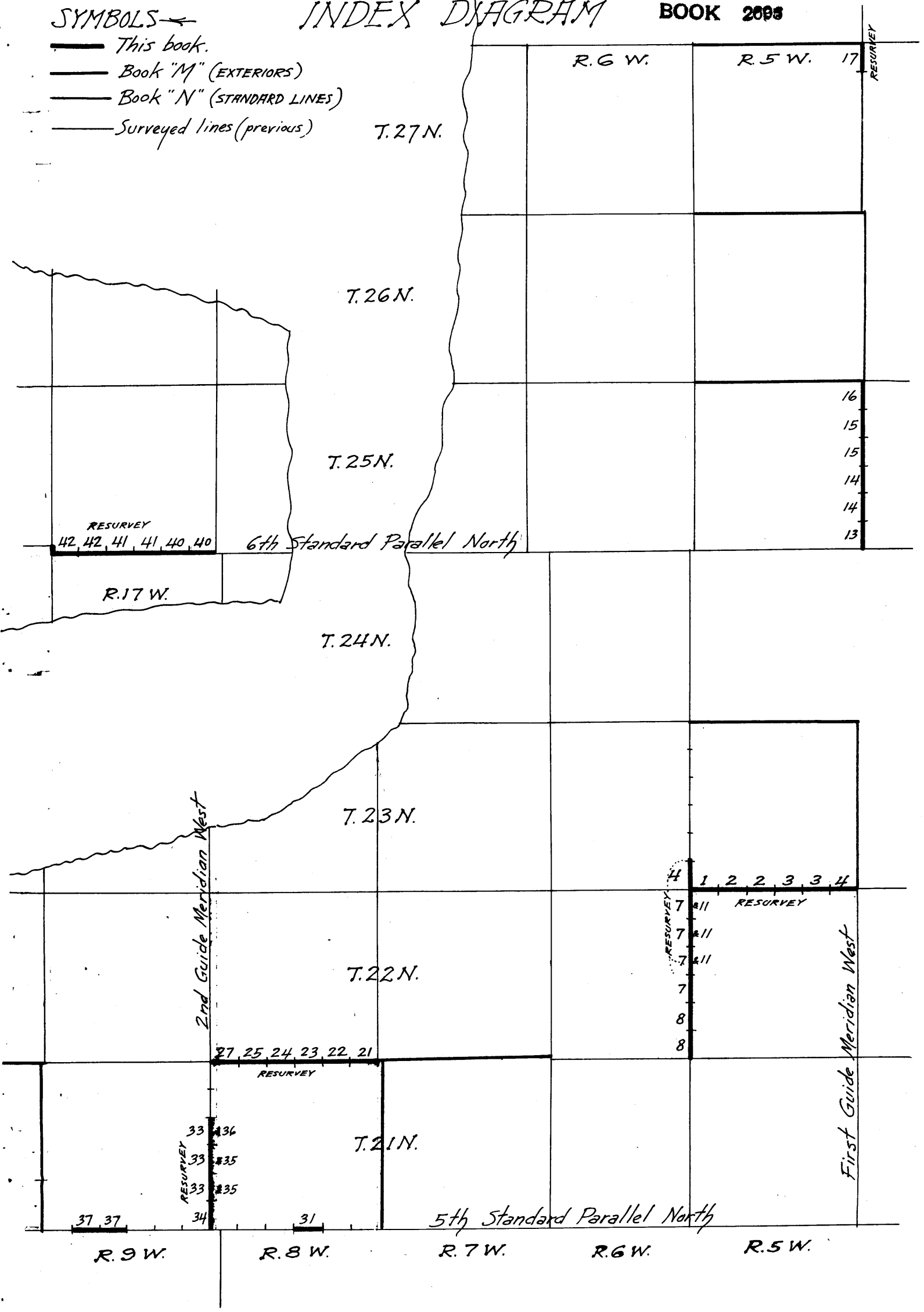
GROUP 24, ARIZONA RESURVEYS & RETRACEMENTS BOOK 2693

INDEX DIAGRAM

BOOK 2693

SYMBOLS →

- This book.
- Book "M" (EXTERIORS)
- Book "N" (STANDARD LINES)
- Surveyed lines (previous)



Resurvey of South Bdy. of T 23 N., R. 5 W.

Chains

NOTE: Initials "W.B.K." and "H.N.B." throughout the following notes indicate surveys by William B. Kimmel, U. S. Surveyor and H. N. Bradstreet, U. S. Transitman, respectively.

Resurvey commenced Nov. 30, 1912, and executed with Young and Sons Light Mountain Transits # 7695 & 8541, with Smith Solar Attachments. Their horizontal limbs are provided with two double verniers placed opposite to each other and reading by estimation to 30" of arc, which is also the least count of their vertical circles, and the verniers of their lat, and decl. arcs. All measurements on slopes, unless otherwise distinctly specified were made with two and five chain tapes, and corrected to the horizontal from clinometer angles.

The instruments were examined, tested on the true meridian at Phoenix, Ariz. by us, found correct and approved by the Surveyor General of Arizona, Nov. 27, 1912.

We examine the adjustments of the transits, and correct all errors; then to test the solar apparatus, by comparing its indications, resulting from solar observations made during a.m., and p.m. hours, with a meridian determined by observations on Polaris, we proceed as follows -

At our camp, in the NE $\frac{1}{4}$ of sec. 17, T23N R5W, in lat. 35° 23' N., long. 112° 44 $\frac{1}{2}$ ' W., we set off 35° 23' N on the lat. arc, 21° 39 $\frac{1}{2}$ ' S on the decl. arc, and at 4h 03m pm, l. m. t. we determine a meridian with solar #7695, and mark a point thereof by a tack driven in a hub, 5 chs. N. of our station.

At 4h 07m pm, l. m. t. we placed transit #8541 over the point previously occupied by #7695, and using the same settings for the lat. and decl. arcs determined a meridian with this solar, and found the line thus determined coincided with the one previously determined by transit #7695.

At 8h 19m p.m., l. m. t. by Mr. Kimmel's watch, which he had this day set to standard time in Seligman, and corrected to l. m. t., we observe Polaris in accordance with the Manual of Instructions, and mark a point in the line thus determined by a pencil point, on a hub, 5 chs. N. of our station. Nov. 30, 1912.

Dec. 1, 1912. At 7h 50m am, l. m. t., we lay off the azimuth of Polaris, 0° 11 $\frac{1}{2}$ ' to the west, and mark the line thus determined by a tack in the hub driven in ground 5 chs. N. of our station, on which the meridian coincides with the point set by the solar.

At 8h a.m., l. m. t., we set off 35° 23' N on the lat. arc, 21° 46 $\frac{1}{2}$ ' S on the decl. arc, and determine a meridian with transit #7695, which bears $\frac{1}{2}$ ' W of the meridian determined by Polaris observation.

At 8h 05m a.m., l. m. t., we placed transit #8541 over the point previously occupied by #7695, and using the same settings for the lat. and decl. arcs, found that the meridian thus resulting coincided with the meridian determined by Polaris observation. Therefore we concluded the adjustment of both transits satisfactory.

The magnetic bearing of the true meridian at 8h 10m a.m., l. m. t. is N13° 45' W; the angle thus determined gives the mag. decl. 13° 45' E. Dec. 1, 1912. W.B.K. and H.N.B.

H.N.B. Dec. 3, 1912. From the old cor. of Tps. 22 & 23N, Rs. 5 & 6 W., which is a malpais rock, 12 x 8 x 6 ins. above ground, marked and witnessed as described by the Surveyor General, I run, on random line, S 89° 47' E, on the South bdy of the Tp., bet. secs. 6 & 31. Over level land, no timber or undergrowth.

17. 40
37. 69

Railroad ditch, 20 lks. wide, 3 ft. deep, course SE
At this point, the old $\frac{1}{4}$ sec. cor. brs. south, 25 lks. dist. this old $\frac{1}{4}$ sec. cor. is a malpais stone, 12 X 10

Resurvey of South Bdy. of T. 23 N., R. 5 W.

Chains	<p>x 7 ins., marked $\frac{1}{4}$ on one face, lying on top of ground. There was no evidence of any pits or mound of earth. I reestablished this cor., as follows:- Set the original malpais stone, 12 x 10 x 7 ins., 8 ins. in the ground for $\frac{1}{4}$ sec. cor., sec. 6, marked $\frac{1}{4}$ on N. face; dig pits, 18 x 18 x 12 ins., E. & W. of stone, 3 ft. dist., and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor. No bearing trees within limits. The true length of this line is, therefore, 37.69 chs., and the true bearing is S.89°24'E. From the reestablished $\frac{1}{4}$ sec. cor. above described, I run, on random, S.89°47'E., bet. secs. 6 and 31, on E. $\frac{1}{2}$ mile. Over level land, no timber.</p>
40.13	<p>At this point the old cor. of secs. 5, 6, 31 & 32, brs. S 12 lks. dist. This old cor is a malpais stone, 16 x 13 x 5 ins., lying on top of the ground, marked with 5 notches on E. and 1 notch on W. edge. No evidence of any pits. I reestablish this old cor. in the same place as follows:- Set the original malpais stone, 16 x 10 x 5 ins., 11 ins. in the ground, for cor of secs. 5 & 6, T.22 N., R.5 W., marked with 5 notches on E. and 1 notch on W. edge; dig pits, 24 x 24 x 12 ins., in each sec., 6 ft. dist.; and raise a mound of earth, 4 ft base, 2 ft. high, W. of cor. The true length of this line is therefore 40.13 chs., and the true bearing is S.89°37' E. Land level and rolling. Soil, sandy loam, 3rd rate. Rocky in places. No timber. Undergrowth, scattering sagebrush.</p> <p>-----</p>
15.50	<p>NOTE: At 9h 05m. a. m., l. m. t., I set off 35°20'N on the lat. arc, 22°05$\frac{1}{2}$'S. on the decl. arc and determine a meridian with the solar at the reestablished cor. of secs. 5 & 6, above described. Thence I run S.89°47'E., bet. secs. 5 and 32, on random line. Over level land, no timber, through sage brush undergrowth.</p>
40.00	<p>Wash, 105 lks. wide, 2 ft. deep; course WNW. At this point the old $\frac{1}{4}$ sec. cor. bet. secs. 5 and 32 brs. S.32 lks. dist. This old $\frac{1}{4}$ sec. cor. is a malpais stone, 12 x 10 x 6 ins., lying on the ground beside a mound of stone, mostly fallen down. The markings on the stone being almost obliterated, I remark $\frac{1}{4}$ on N. face, and reestablish the cor. in the same place as follows:- Set the original malpais stone, 12 x 10 x 6 ins., 8 ins. in the ground, for $\frac{1}{4}$ sec. cor. sec. 5, marked $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable. No bearing trees within limits. The true length of this line is therefore 40.00 chs., and the true bearing is S.89°20'E. From the reestablished $\frac{1}{4}$ sec. cor. above described, I run S.89°47'E., bet. secs. 5 and 32, on random E $\frac{1}{2}$ mile.</p>
25.00	<p>Wash, 20 lks. wide, 4 ft. deep; course SW.</p>
40.12	<p>At this point the old cor. of secs. 4, 5, 32 & 33 brs. S. 9 lks. dist., which is a malpais stone, 12 x 10 x 6 ins. above ground, marked and witnessed as described by the Surveyor General. The true length of this line is therefore 40.12 chs., and the true bearing is S.89°39' E. Land level. Soil, 3rd rate sandy loam. Rocky in places. No timber. Undergrowth, sage brush and cacti. Some grass.</p> <p>-----</p>
19.00	<p>S. 89° 47' E., bet. secs. 4 and 33, on random line. Over rolling, rocky land. Asc. gradually.</p>
30.00	<p>Top of malpais ridge, extends 5 chs. N. and 3 chs. S. Desc. E. slope 40 ft. End of desc. Thence over level land.</p>

Resurvey of South Boundary of T. 23 N., R 5 W.

Chains 40.12	<p>At this point, the old $\frac{1}{4}$ sec. cor. bet. secs. 4 and 33, brs. N. 1 lk. dist. This cor. is a malpais stone 4 x 8 x 6 ins. above ground, marked and witnessed as described by the surveyor general.</p> <p>The true length of this line is therefore 40.12 chs., and the true bearing is S. 89° 48' E.</p> <p>From the old $\frac{1}{4}$ sec. cor. bet. secs. 4 and 33 above described, I run S. 89° 47' E., bet. secs. 4 and 33, on random line, $E\frac{1}{2}$ mile. Over level land, no timber.</p>
40.11	<p>At this point, the old cor. of secs. 3, 4, 33 & 34, brs. S. 4 lks. dist. This cor. is a malpais stone, 15 x 12 x 5 ins. above ground, the markings on the rock obliterated and the pits barely discernable. I reestablish the cor. in the same place as follows:</p> <p>Set the original malpais stone, 15 x 12 x 5 ins., 11 ins. in the ground, for cor. of secs. 3 & 4, T. 22 N., R. 5 W., marked with 3 notches on E. & W. edges; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.</p> <p>The true length of this line is therefore 40.11 chs, and the true bearing of the line is S. 89° 44' E.</p> <p>Land level and rolling. Soil, 3rd rate sandy loam; rocky. No timber. Undergrowth, sagebrush.</p> <p>NOTE: At this cor., I set off 22° 07$\frac{1}{2}$' S. on the decl. arc, at noon I observe the sun on the meridian; the resulting lat. is 35° 20$\frac{1}{2}$' N., which is slightly higher than the correct lat.</p> <p>-----</p>
40.08	<p>S. 89° 47' E., bet. secs. 3 and 34, on random line, Over level, rocky land, no timber.</p> <p>At this point the old $\frac{1}{4}$ sec. cor. bet. secs. 3 & 34 brs. S. 36 lks. dist., which is a malpais stone, 14 X 12 x 5 ins., lying on top of the ground, marked $\frac{1}{4}$ on one face. No evidence of any pits. I reestablish the cor. in the same place as follows:</p> <p>Set the original malpais stone, 14 x 12 x 5 ins., 10 ins. in the ground, for $\frac{1}{4}$ sec. cor. sec. 3 marked $\frac{1}{4}$ on N. face; dig pits, 18 x 18 x 12 ins., E. & W. of stone, 3 ft. dist., and raise a mound of stone, 3$\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor. No bearing trees within limits.</p> <p>The true length of this line is therefore 40.08 chs., and the bearing is S. 89° 16' E.</p>
7.00 21.00 30.00 40.21	<p>S. 89° 47' E., from the reestablished $\frac{1}{4}$ sec. cor., bet. secs. 3 & 34, on random line, $E\frac{1}{2}$ mile. Over level land.</p> <p>Asc. W slope, 40 ft. Top of hill, brs. 4 chs. N. and 3 chs. S. Desc. E. slope. Draw, course N.</p> <p>At this point the old cor. of secs. 2, 3, 34 & 35 brs. N. 33 lks. dist. which is a malpais rock in place, marked and witnessed as described by the surveyor general. Therefore, the true length of this line is 40.21 chs., and the true bearing is N. 89° 45' E.</p> <p>Land level and rolling. Soil, sandy loam, 3rd rate. Rocky. No timber. Undergrowth, sagebrush.</p> <p>-----</p>
12.50 14.00 27.00	<p>S. 89° 47' E., bet. secs. 2 and 35, on random line. Desc. E. slope, over rocky land.</p> <p>Draw, course N. Asc. slightly. Top of low hill. Desc. slight NE. slope. Wash, 25 lks. wide, 2 ft. deep; course NW. Thence across level land.</p>
40.41	<p>At this point, the old $\frac{1}{4}$ sec. cor. bet. secs. 2 and 35, brs. S. 46 lks. dist. which is a malpais stone, 3 x 12 x 8 ins. above ground, marked and witnessed as described by the surveyor general.</p> <p>The true length of this line is therefore 40.41 chs., and</p>

Resurvey of South Boundary of T. 23 N., R. 5 W.

Chains	<p>the true bearing is S. 89° 08' E. From this old $\frac{1}{4}$ sec. cor. bet. secs. 2 and 35, above described, S. 89° 47' E., bet. secs. 2 and 35, on random line, $\frac{1}{2}$ mile. Asc. over rocky land.</p>
1.00	Wash, 15 lks. wide, course SSE.
16.00	Top of hill, 60 ft. above cor. Descend.
40.23	<p>At this point the old cor. of secs. 1, 2, 35 and 36 brs. S. 67 lks. dist. which is a malpais stone, 5x11x8 ins. above ground, marked and witnessed as described by the surveyor general.</p> <p>The true length of this line is therefore 40.24 chs., and the true bearing is S. 88° 50' E. Land rolling and hilly. Soil rocky 4th rate, with big malpais boulders. No timber. Undergrowth, sagebrush.</p> <p>-----</p>
	<p>S. 89° 47' E., bet. secs. 1 and 36, on random line. Asc. over hilly, rocky land, 100 ft.</p>
14.00	Top of hill. Thence over level land.
40.11	<p>At this point the old $\frac{1}{4}$ sec. cor. bet. secs. 1 & 36 brs. N. 27 lks. dist., which is a malpais stone 5x14x9 ins. above ground, marked and witnessed as described by the Surveyor General.</p> <p>The true length of this line is therefore 40.11 chs., and the true bearing is N. 89° 50' E.</p>
	<p>From the above described $\frac{1}{4}$ sec. cor., I run S. 89° 47' E., bet. secs. 1 & 36, on random line, $\frac{1}{2}$ mile.</p>
	Asc. SW. slope, 150 ft.
25.00	Top of ridge, brs. N. & S. Desc. E. slope, 70 ft.
32.00	Gulch, course S. Asc. 30 ft.
40.97	<p>At this point, the old cor. of Tps. 22 & 23 N., Rs. 4 & 5W., brs. N. 33 lks. dist., which is a malpais stone 6x20x9 ins., above ground, marked and witnessed as described by the Surveyor General.</p> <p>The true length of this line is therefore 40.97 chs., and the true bearing is N. 89° 45' E. Land, rolling and mountainous. Soil, rocky 4th rate. No timber. Undergrowth, sagebrush. Dec. 3, 1912. H.N.B.</p> <p>-----</p>
	<p>H.N.B. Dec. 6, 1912. At 8h 04m, a.m., l.m.t., I set off 35° 20' N., on the lat. arc, 22° 27' S. on the decl. arc, and determine a meridian with the solar at the old cor. of Tps. 22 & 23 N., Rs. 5 & 6 W., hereinbefore described. Thence I run, on W. bdy. of T. 23 N., R. 5 W. North, bet. secs. 31 & 36, on random line.</p>
40.00	Finding no corner after diligent search, I set temp. $\frac{1}{4}$ sec. cor. and continue North to
79.88	<p>At this point the old cor. of secs. 25, 30, 31 & 36 brs. W. 4 lks. dist. which is a stone 6x8x6 ins. above ground, marked and witnessed as described by the Surveyor General. Therefore I return to the cor. of Tps. 22 & 23 N., Rs. 5 & 6 W. Thence I run N. 0° 02' W., on a true line, bet. secs. 31 & 36. Over level and rolling land, no timber, beside N. & S. fence.</p>
18.00	A small cabin brs. E. 1.41 chs. dist.
21.00	Cross fence, brs. NNE & SSW.
39.94	<p>Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for reestab. $\frac{1}{4}$ sec. cor., marked on brass cap 1912 — $\frac{1}{4}$ S 36 in W., and S 31 in E. half, and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. No bearing trees within limits.</p>
39.95	Fence, brs. E. & W. Intersects N. & S. fence 1.50 chs. E.
79.70	Fence, brs. N. & S.
79.88	The old cor. of secs. 25, 30, 31 & 36, hereinbefore described.

Return of part of W. bdy of T23N, R5W.

Chains.

Land, level and rolling.
Soil, sandy loam, 3rd rate. Subsoil hardpan, 1 1/2 ft. down.
No timber. Undergrowth, sagebrush.
Dec. 6, 1912. *H.N.B.*

Hubradt

U. S. Transitman

Retracement and Recovery of East bdy of fractional T. 22 N. - R. 6 W.

Chains	H.N.B.	
40.00 80.00	<p>Retracement ^{very} commenced Dec. 4, 1912, and executed with Young and Sons Light Mountain Transit No. 7695 with Smith Solar Attachment. For description of instrument, and certificate of approval, and tests of the adjustment of the solar apparatus, see page 1 of this book.</p> <p>At 8 hrs. 3 m., a.m., l.m.t., I set off 35° 20' N. on the lat. arc; 22° 12½' S. on the decl. arc; and determine a meridian with the solar at the ^{old} cor. of Tps. 22 and 23 N., Rs. 5 and 6 W., which is hereinbefore described. page, page .</p> <p>Thence I run, South, bet. secs. 1 and 6, on random line.</p> <p>After searching diligently and finding no trace of the old ¼ sec. cor., I set temp. ¼ sec. cor., and continue South.</p> <p>Unable to find the original cor. of secs. 1, 6, 7 and 12, I set temp. cor. for these secs.</p>	
40.00 80.00	<p>Thence I run, South, bet. secs. 7 and 12, on random line</p> <p>Diligent search revealing no trace of the original ¼ sec. cor., I set temp. ¼ sec. cor., and continue South</p> <p>Unable to find the original cor. of secs. 7, 12, 13 and 18, I set temp. cor. for these secs.</p>	
40.75 16.00 20.00 30.00 40.17	<p>Thence I run, the retracement South, bet. secs. 13 and 18, on random line</p> <p>At this point, the ^{old} ¼ sec. cor. bet. secs. 13 and 18, which is a malpais stone, 5 X 12 X 8 ins. above ground, marked and witnessed as described by the Surveyor General, brs. W. 92 lks. dist., therefore</p> <p>the ^{true} bearing of the line connecting this ^{old} cor. with the old corner of Tps. 22 and 23 N., Rs. 5 and 6 W., is N. 0° 16' E., and its length is 200.75 chs.</p> <p>From the ^{old} ¼ sec. cor. bet. secs. 13 and 18, I run South, bet. secs. 13 and 18, on random line, ½ mile</p> <p>Asc. slight NW. slope, 35 feet. Low ridge, brs. NE. and SW. Desc. SE. slope, 35 ft.</p> <p>Draw, 4 chs. wide, course W.. Asc. N. slope, 25 ft.</p> <p>At this point, the ^{old} cor. of secs. 13, 18, 19 and 24, which is a malpais stone, 4 X 8 X 3 ins. above ground, marked as described by the Surveyor General, brs. W. 15 lks. dist.</p> <p>The pits and mound of earth which should witness this corner being obliterated, I dig pits, 18 X 18 X 12 ins., in each sec., 5½ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. <i>No bearing trees within limits.</i></p> <p>Land, rolling. Soil, sandy, 2nd and 3rd rate. No timber or undergrowth.</p> <p>The true length of this line is therefore 40.17 chs., and the true bearing is S. 0° 13' W.</p>	
40.13	<p>South, from the ^{old} cor. of secs. 13, 18, 19 and 24, bet. secs. 19 and 24, on random line, Over rolling land.</p> <p>The ^{old} ¼ sec. cor. bet. secs. 19 and 24, which is a malpais stone, 10 X 5 X 8 ins. above ground, marked as described by the Surveyor General, brs. W. 31 lks. dist.</p> <p>There being no trace of pits or mound, I dig pits, 18 X 18 X 12 ins., N. and S. of stone, 3 ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high W. of cor. <i>No bearing trees.</i></p>	

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Retracement & Survey of East bdy of frac T. 22 N., R. 3 W.

Chains.

From the ^{old}₁/₄ sec. cor. bet. secs. 19 and 24, above described, I run South, bet. secs. 19 and 24, on random line, $S\frac{1}{2}$ mile, Asc. N. slope, 50 ft.
 22.00 Ridge, brs. E. and W. Desc. slight S. slope.
 26.00 Thence over level land.
 40.24 At this point, the ^{old}₁/₄ cor. of secs. 19, 24, 25 and 30, which is a malpais stone, 5 X 10 X 8 ins. above ground, marked and witnessed as described by the Surveyor General, brs. W. 48 lks. dist. *No bearing trees.*
 The true length of the north half mile is therefore 40.13 chs., and its true bearing is $S. 0^{\circ} 27' W.$, and the true length of the south half mile is 40.24 chs., and its true bearing is $S. 0^{\circ} 41' W.$
 Land, rolling.
 Soil, sandy loam and gumbo, 2nd and 3rd rate.
 No timber, or undergrowth.

From the ^{old}₁/₄ cor. of secs. 19, 24, 25 and 30, above described, I run South, bet. secs. 25 and 30, on random line, Over level land.
 14.00 Asc. NW. slope, 50 ft.
 25.00 Low ridge, brs. E. and W. Desc. S. slope, 50 ft.
 40.03 The ^{old}₁/₄ sec. cor. bet. secs. 25 and 30, which is a malpais stone, 5 X 11 X 9 ins. above ground, marked and witnessed as described by the Surveyor General, brs. W. 47 lks. dist. *No bearing trees.*
 From the ^{old}₁/₄ sec. cor. above described, I run South, bet. secs. 25 and 30, on random line, $S\frac{1}{2}$ mile, Over level land.
 10.00 Asc. N. slope, 40 ft.
 18.00 Ridge, brs. NW. and SE. Desc. SW. slope, 35 ft.
 32.00 Foot of desc.; thence over level land.
 40.07 The ^{old}₁/₄ cor. of secs. 25, 30, 31 and 36, which is a malpais stone, 5 X 12 X 8 ins. above ground, marked and witnessed as described by the Surveyor General, brs. W. 76 lks. dist. *No bearing trees.*
 The true length of the north half mile is therefore 40.03 chs., and its true bearing is $S. 0^{\circ} 40' W.$, and the true length of the south half mile is 40.08 chs., and its true bearing is $S. 1^{\circ} 5' W.$
 Land, level and rolling.
 Soil, gumbo, 2nd and 3rd rate.
 No timber or undergrowth.

From the ^{old}₁/₄ cor. of secs. 25, 30, 31 and 36, above described, I run South, bet. secs. 31 and 36, on random line, Over level land.
 12.00 Asc. N. slope, 80 ft.
 25.00 Ridge, brs. W. and SE.
 36.70 Road, brs. NE. and SW.
 40.24 At this point, the ^{old}₁/₄ sec. cor. bet. secs. 31 and 36, which is a malpais stone, 5 X 14 X 5 ins. above ground, marked as described by the Surveyor General, brs. E. 26 lks. dist. *No bearing trees.*
 The pits having been filled in, I dig pits, 18 X 18 X 12 ins., N. and S. of stone, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
 From the ^{old}₁/₄ sec. cor. above described, I run South, bet. secs. 31 and 36, on random line, $S\frac{1}{2}$ mile.
 Along W. slope of ridge.
 22.00 Desc. SW. slope, 40 ft.
 30.20 Gulch, 15 lks. wide, course W.
 33.00 Asc. NW. slope, 35 ft.

Retracement of the East bdy. of frac. T 22 N., R. 6 W.

Chains.

40.10

At this point, the ^{old} cor. of Tps. 21 and 22 N., R. 5 W., which is a lava stone, 14 X 12 X 12 ins. above ground, marked and witnessed as described by the Surveyor General, brs. E. 154 lks. dist. *No bearing trees.*

The ^{true} length of the north half mile is therefore 40.24 chs., and its ^{true} bearing is S. 0° 22' E., and the ^{true} length of the south half mile is 40.13 chs. and its ^{true} bearing is S. 2° 12' E.

Land, rolling and hilly.
Soil, gumbo, 3rd and 4th rate.
No timber or undergrowth.

4.43

From the ^{old} cor. of Tps. 21 and 22 N., R. 5 W., above described, I run, S. 0° 15' W., on random line, on E. bdy. of sec. 36

The ^{old} cor. of Tps. 21 and 22 N., R. 6 W., which is a lava stone, 4 X 8 X 8 ins. above ground, marked and witnessed as described by the Surveyor General, brs. E. 2 lks. dist. *No bearing trees.*

The ^{true} length of this line is therefore 4.43 chs. and its ^{true} bearing is South.

H.N.B.
Dec. 4, 1913.

H. N. B.
U. S. Transitman.

Resurvey of a Part of The East Bdy of ~~frac.~~ T. 22 N., R. 6 W.

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<p>Chains.</p> <p>21.25</p> <p>40.15</p>	<p><i>H.N.B.</i></p> <p>Resurvey executed Dec. 4, 1912, with Young and Sons Light Mountain Transit No. 7695, with Smith Solar Attachment. For description of Instrument, certificate of approval, and description of tests of the solar apparatus, see page 1 of this book.</p> <p>From the ¹/₄ sec. cor. bet. secs. 13 and 18, hereinbefore described, I run, as per result of retracement N. 0° 16' E., bet. secs. 13 and 18, on true line, N 1/2 mile Desc. NW. slope, 35 ft.</p> <p>Wash, 50 lks. wide, 3 ft. deep, course SW. Thence over rolling land.</p> <p>Set an iron post, 3 ft. long, 3 ins. in diam, 24 ins. in the ground, for ^{REESTAB.} cor. of secs. 7 and 18, ^{T22N. R. 5W.} marked on brass cap, 1912;</p> <p>T22N in N., and S12, S13, R6W, in W. half; S7 in NE., and S18, R5W in SE. quadrant;</p> <p>Dig pits, 24 X 24 X 12 ins., in each sec., 6 ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, E. of cor. <i>No bearing trees within limits.</i></p> <p>Land, rolling.</p> <p>Soil good sandy loam; no subsoil at 2 ft.</p> <p>No timber, or undergrowth.</p>	
<p>40.15</p> <p>72.60</p> <p>76.60</p> <p>80.10</p> <p>80.30</p>	<p>N. 0° 16' E., bet secs. 7 and 18, on true line, Over rolling land.</p> <p>Set an iron post, 3 ft. long, 1 in. in diam, 26 ins. in the ground, for ^{REESTAB.} ^{sec. 7} cor. marked on brass cap, 1912;</p> <p>¹/₄ S7 in E. half;</p> <p>Dig pits, 18 X 18 X 12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, E. of cor. <i>No bearing trees within limits.</i></p> <p>Old cabin brs. W. about 2 chs. dist.</p> <p>Enter sheep corral; fence brs. E. and W.</p> <p>Leave corral; fence brs. E. and W.</p> <p>Set an iron post, 3 ft. long, 3 ins. in diam, 24 ins. in the ground, for ^{REESTAB.} cor. of secs. 6 and 7, ^{T22N. R. 5W.} marked on brass cap, 1912;</p> <p>T22N in N.;</p> <p>S1, S12, R6W in W. half; S6 in NE., and S7, R5W in SE. quadrant;</p> <p>Dig pits, 24 X 24 X 12 ins., in each sec., 6 ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, E. of cor. <i>No bearing trees within limits.</i></p> <p>Land, level and rolling.</p> <p>Soil, sandy loam, 2nd rate; subsoil, gypsum at 1 ft.</p> <p>No timber.</p> <p>Undergrowth, short sagebrush.</p>	
<p>40.15</p> <p>69.55</p> <p>70.42</p> <p>80.30</p>	<p>N. 0° 16' E., bet. secs. 1 and 6, on true line Over gently rolling land.</p> <p>Set an iron post, 3 ft. long, 1 in. in diam, 26 ins. in the ground, for ^{REESTAB.} ^{sec. 6} cor. marked on brass cap, 1912;</p> <p>¹/₄ S6 in E. half;</p> <p>And raise a mound of stone, 2 ft. base, 1 1/2 ft. high, E. of cor. Pits impracticable. <i>No bearing trees within limits.</i></p> <p>Enter Yard of A. T. and S. F. R. R.</p> <p>Center of main line of A. T. & S. F. R. R., brs. S. 74° 43' E., and N. 74° 43' W.</p> <p>The cor. of Tps. 22 and 23 N., Rs. 5 and 6 W., hereinbefore described.</p>	

Resurvey of a Part of The East Bdy. of ^{FRAC.} T. 22 N., R. 6 W.

Chains.

Land, level and rolling.
Soil, 2nd rate, sandy loam.
No timber, or undergrowth.

H.N.B.
Dec. 4, 1912.

John Bradstreet
U. S. Transitman.

BOUNDARIES OF FRACTIONAL T. 22 N. - R. 6 W.

Latitudes, Departures and Closing Errors.						
Line designated	True Bearing	Distance	Latitudes		Departures	
			N.	S.	E.	W.
South boundary	S. 89° 58' W.	390.41		.23		390.41
West boundary	North	484.98	484.98			
North boundary	East	392.18			392.18	
<i>East boundary</i>	S. 0° 16' W.	200.75		200.75		.93
	S. 0° 13' W.	40.17		40.17		.15
	S. 0° 27' W.	40.13		40.13		.31
	S. 0° 41' W.	40.24		40.24		.48
	S. 0° 40' W.	40.03		40.03		.47
	S. 1° 5' W.	40.08		40.07		.76
	S. 0° 22' E.	40.24		40.24	.26	
	S. 2° 12' E.	40.13		40.10	1.54	
	South	4.43		4.43		
Convergency.					.42	
Totals.			484.98	486.39	394.40	393.51
			484.98		393.51	
Error in lat.				1.41	.89	Error in Dep

John Bradstreet
U. S. Transitman.

Retracement of the 1st Guide Mer. West, Through Tps. 25 North,

Chains H.N.B.
 Retracement commenced Dec. 17, 1912 and executed with a Young & Sons Light Mountain Transit, No. 7695 with Smith Solar Attachment. For description of instrument and certificate of approval see page 1 of this book.
 I examine the adjustments of the transit and correct all errors, then to test the solar apparatus by comparing its indications resulting from solar observations made during a.m. and p.m. hours with a mer. determined by observations on polaris, I proceed as follows:-
 At our camp in the NE. $\frac{1}{4}$ of sec. 4 T25N, R5W, in lat. $35^{\circ}35'N$, long. $112^{\circ}43\frac{1}{2}'W$, at 4 h. 10 m. p.m. l.m.t. by my watch, which is 1 m. fast., I set off $35^{\circ}35\frac{1}{2}'N$ on the lat. arc; $23^{\circ}16\frac{1}{2}'S$ on the decl. arc, and determine a meridian with my solar, and mark a point thereof by a tack driven in a hub, 5 chains N. of my station.
 At 6 h. $16\frac{1}{2}$ m. p.m. by my watch, which is 1 m. fast of l.m.t., I observed polaris in accordance with the Manual of Instructions and mark a point in the line thus determined, by a tack in a hub, 5 chains N. of my station.
 Dec. 17, 1912.

Dec. 18, 1912.
 At 7 h. 50 m. a.m. l.m.t. I lay off the azimuth of Polaris $32'$ to the W., and find that the line thus determined coincides with the line determined by solar observation yesterday.
 At 8 h. 03 m. a.m., l.m.t., I set off $35^{\circ}35\frac{1}{2}'N$ on the lat. arc $23^{\circ}20'S$ on the decl. arc and determine a meridian with the solar and find that the line thus determined coincides with the true meridian determined by Polaris observation.
 The solar apparatus, by p.m. and a. m. observations, defines positions for meridians which coincide with the true meridian, therefore I conclude that the adjustments of this instrument are satisfactory.

From the S.C. of Tps. 25N Rs 4 and 5 W. which is a malpais stone 5X14X12 ins. above ground., marked and witnessed as described by the Surveyor General, I run
 North, bet. secs. 31 and 36, on random line
 Desc. over rocky, mountainous land, through cedar timber
 23.00 End of desc. 50 ft. below cor.; thence over rolling land. Leave cedar timber, brs. E. and W.
 Difference bet. measurements of 40.01 chains by two sets of chainmen is 10 lks.; position of middle point
 By 1st set 40.06 chains
 40.01 By 2nd set 39.96 chains, the mean of which is
 The $\frac{1}{4}$ sec. cor. bet. secs. 31 and 36 brs. E. 46 lks. dist.
 which is a stone 6X16X12 ins. above ground, marked and witnessed as described by the Surveyor General.
 The true length of this line is therefore 40.01 chains and the true bearing is $N0^{\circ}39'E$.
 From the $\frac{1}{4}$ sec. cor. I run
 8.00 North, bet. secs. 31 and 36, on random line, $N\frac{1}{2}$ mile.
 12.00 Wash, course NW. 5 lks. wide, 2 ft. deep,
 Enter dense cedar timber, brs. E. and W.
 Difference bet. measurements of 36.73 chains by two sets of chainmen is 8 lks. Position of middle point
 By 1st set of chainmen 36.77 chains
 By 2nd set of chainmen 36.69 chains; the mean of which is
 36.73 The $\frac{1}{2}$ cor. of secs. 25, 30, 31 and 36, brs. W. 36 lks. dist.
 which is a malpais stone 8X20X14 in. above ground, marked and witnessed as described by the Surveyor General.
 The true length of this line is therefore 36.73 chains and the true bearing is $N0^{\circ}34'W$.
 Land, rolling and hilly.

Chains.	Soil, rocky, 4th rate, gumbo. Timber, scattering and heavy cedar.
12.00	North, bet. secs. 25 and 30, on random line, Asc. rocky, SE. slope through scattering cedar timber. Top of hill, thence over rolling land.
20.00	Asc. slight S. slope over rocky ledge; enter dense cedar timber, brs. E. and W.
NOTE	- At this point, I set off 23° 23' S. on the decl. arc and at noon I observed the sun on the meridian. The resulting lat. is 35° 31' N., which is slightly less than the correct lat. Difference bet. measurements of 40.46 chains by two sets of chainmen is 6 lks. Position of middle point By 1st set of chainmen 40.49 By 2nd set of chainmen 40.43, the mean of which is 40.46
40.46	From this point the $\frac{1}{4}$ cor. bet. secs. 25 and 30, which is a rock in place 4X3X2 ft. above ground, marked and witnessed as described by the Surveyor General, The true length of this line is therefore 40.49 chains and the true bearing is N2° 13' W. From the $\frac{1}{4}$ cor. bet. secs. 30 and 25, I run North, bet. secs. 25 and 30, on random line, on N½ mile.
10.00	Enter scattering cedar timber Difference bet. measurement of 36.63 chains by two sets of chainmen is 12 lks. Position of middle point By 1st set is 36.69 chains By 2nd set 36.57 chains, the mean of which is 36.63
36.63	From this point the $\frac{1}{4}$ cor. of secs. 19, 24, 25 and 30 brs. E. 84 lks. dist. which is a rock in place 3X3X2 ft. above ground marked with 4 notches on N. and 2 notches on S. edges, from which A cedar, 24 ins. in diam, brs. S45° E, 200 lks. dist., marked T25N. R4W. A cedar, 12 ins. in diam, brs. N. 40° W, 308 lks. dist., marked T25N. R5W. The true length of this line is therefore 36.64 chains and the true bearing is N1° 19' E. Land, level and rolling. Soil, rocky, 4th rate, gumbo. Timber, scattering and heavy cedar.
10.00	North, bet. sec. 19 and 24, on random line. Over rolling rocky land through cedar timber. Bottom of draw, course SE. Difference bet. measurements of 40.44 chains by two sets of chainmen is 6 lks. Position in middle point By 1st set is 40.47 By 2nd set is 40.41, the mean of which is 40.44
40.44	From this point the $\frac{1}{4}$ cor. bet. secs. 19 and 24 brs. E. 102 lks. dist. which is a stone 4X6X5 in. above ground, marked $\frac{1}{4}$ on W. face. from which A cedar, 18 ins. in diam, brs. S20° E, 8 lks. dist., marked $\frac{1}{4}$ S19 BT. A cedar, 25 ins. in diam, brs. S30° W, 10 lks. dist., marked $\frac{1}{4}$ S24 BT. At this cor. the magnetic decl. is 17° 15' E The true length of this line is therefore 40.45 chains and the true bearing is N1° 27' E. From the $\frac{1}{4}$ cor. bet. secs. 19 and 24, I run North, bet. secs. 19 and 24, on random line, N½ mile. Difference bet. measurements of 38.23 by two sets of chainmen is 8 lks. Position of middle point By 1st set is 38.27 chs., By 2nd set is 38.19 chs., the mean of which is 38.23
38.23	From this point the $\frac{1}{4}$ cor. of secs. 13, 18, 19 and 24 brs. W. 272 lks. dist. which is a malpais stone 5X12X10 in. above ground, marked and witnessed as described by the Surveyor General. The true length of this line is therefore 38.33 chains

Retracement of 1st Guide Mer. West Through Tp25N.

Chains

and the true bearing is N. 4°5'W.
Land, level and rolling.
Soil, rocky, 4th rate, gumbo.
Timber, scattering and heavy cedar.
Dec. 18, 1912.

Dec. 19, 1912. At 8 h. 03 m. a.m. l.m.t. I set off
35°33'N. on the lat. arc; 23°21½'S. on the decl. arc;
and determine a meridian at the cor. of secs. 13, 18,
19 and 24, above described.

Thence I run,
North, bet. secs. 13 and 18, on random line
Over rolling and rocky land, through cedar timber.
Desc. NE. slope 80 ft.

24.00
36.91

Gulch, course SE.
Asc. SW. slope 40 ft.
Difference bet. measurements of 39.76 chains by two
sets of chainmen, is 6 lks. Position of middle point
By 1st set is 39.79 chains
By 2nd set is 39.73 chains, the mean of which is
39.76
From this point the cor. bet. secs. 13 and 18 brs.
E. 193 lks. dist.

which is a malpais stone 4X10X9 ins. above
ground, marked ¼ on W. face from which
A cedar, 16 ins. diam, brs. S68¼°E, 23 lks. dist., marked
¼S18 BT.
A cedar, 14 ins. diam, brs. S17¼°W, 20 lks. dist., marked
¼S13 BT.

The true length of this line is therefore 39.81 chains
and the true bearing is N247'E.

From the above described old ¼ sec. cor. I run
North, bet. secs. 13 and 18, on random line, N½ mile.
Desc. NE. slope of rocky hill

9.00
28.85
34.85

Wash, course SSE, asc. SW. slope, 125 ft.
Top of hill; thence over rolling land.
Draw, course E. Leave timber, brs. NE. and SW.
Difference bet. measurements of 41.10 chains by two
sets of chainmen is 8 lks. Position of middle point
By 1st set 41.14 chs.
By 2nd set 41.06 chs. the mean of which is
41.10
From this point the cor. of secs. 7, 12, 13 and 18
brs. W. 200 lks. dist.

which is a malpais stone
5X9X8 ins. above ground, marked and witnessed as
described by the Surveyor General.
The true length of this line is therefore 41.15 chains
and the true bearing is N2°47'W.

Land, hilly.
Soil, rocky, 4th rate, gumbo.
Timber, scattering and heavy cedar.

North, bet. secs. 7, and 12, on random line,
Asc. gradually over rocky land.

0.75
2.00

Foot of perpendicular rock wall 70 ft. high
Top of asc., thence over rocky, rolling land.
Difference bet. measurements of 40.30 chains by two
sets of chainmen is 4 lks. Position of middle point
By 1st set is 40.32 chains
By 2nd set is 40.28 chains, the mean of which is

40.30

From this point the cor. bet. secs. 7 and 12,
which is a malpais rock in place 2X2X4 ft.
above ground, marked and witnessed as described by
the Surveyor General, brs. W. 36 lks. dist.
The true length of this line is therefore 40.30 chains
and the true bearing is N0°31'W.

From the old ¼ sec. cor. above described I run
North, bet. secs. 7 and 12, on random line, N½ mile,
Over rolling, rocky land.

Difference bet. measurements of 39.91 chains by two
sets of chainmen is 2 lks. Position of middle point
By 1st set is 39.92 chains
By 2nd set is 39.90 chains, the mean of which is

Retracement of 1st Guide Mer. West Through Tp25N.

Chains.

39.91 From this point the ^{old} cor. of secs. 1, 6, 7, and 12, which is a malpais stone, 6X10X8 ins. above ground, marked and witnessed as described by the Surveyor General, brs. E. 41 lks. dist.
The true length of this line is therefore 39.91 chains and the true bearing is N^o 35' E.
Land, level and rolling.
Soil, rocky, 4th rate, gumbo.
No timber.
Undergrowth, sagebrush.

20.00 North, bet. secs. 1 and 6, on random line,
35.70 Over rolling land, no timber.
Top of round hill, desc. NW. slope 160 ft.
Gulch, course E. Asc. S. slope.
Difference bet. measurements of 39.66 chains by two sets of chainmen is 6 lks. Position of middle point
By 1st set is 39.69 chains
By 2nd set is 39.63 chains, the mean of which is
39.66 From this point the ^{old} cor. bet. secs. 1 and 6, brs. W. 68 lks. dist., which
is a malpais stone 5X14X10 ins. above ground, marked and witnessed as described by the Surveyor General.
The true length of this line is therefore 39.67 chains and the true bearing is N^o 59' W.
From the old ^{old} 1/4 section above described, I run,
2.00 North, bet. secs. 1 and 6; on random line, N 1/2 mile.
13.95 Top asc. ridge brs. E. and W. Desc N. slope 35 ft.
Road, bottom of gulch, brs. NW. and SE. Gulch drains NW.
Asc. SW. slope 60 ft.
Difference bet. measurements 41.88 chains by two sets of chainmen is 8 lks. Position of middle point
By 1st set is 41.84 chains
By 2nd set is 41.92 chains, the mean of which is
41.88 From this point the ^{old} cor. of Tps. 25 and 26 N., Rs 4 and 5 W., which is a malpais stone 8X20X18 ins. above ground, marked and witnessed as described by the Surveyor General, brs. W. 51 lks. dist.
The true length of this line is therefore 41.88 chains and the true bearing is N^o 42' W.
Land rolling and hilly.
Soil, very rocky, 4th rate.
No timber.
Undergrowth, sagebrush.

H.N.B.
Dec. 19, 1912.

H.N.B.
U. S. Transitman

Resurvey of the First Guide Meridian W. thro part of T. 27 N. 5 W.

Chains.

W.B.K.

Resurvey commenced Jan. 24, 1913, and executed with Young and Sons' Light Mountain Transit, No. 85 41, with Smith Solar Attachment. For description of instrument, and Certificate of Approval, see page 1, this book. Knowing from recent and repeated tests of this instrument on a meridian established by observations on Polaris, that it is in adjustment, I proceed to the retracement of part of the E. bdy. of T. 27 N., R. 5 W. (1st Guide Meridian W.) At 3hrs. 3 m. p.m., l.m.t., I set off $35^{\circ}45\frac{1}{2}'N.$ on the lat arc; $19^{\circ}8\frac{1}{2}'S.$ on the decl. arc; and determine a meridian with the solar at the $\frac{1}{4}$ cor. of secs. 1, 6, 7 and 12, on the E. bdy. of T. 27 N. R. 5 W., which is a limestone, 10x7x9 ins. above ground, marked and witnessed as described by the Surveyor General.

Thence I run, on random line North, on the W. bdy. of sec. 6, T. 27 N. R. 4 W.

10.86 Set temp. point for cor. of secs. 1 and 12, T. 27 N. R. 5 W.

40.12 At this point, the $\frac{1}{4}$ sec. cor. bet. secs. 1 and 6, which is a stone, 8x6x9 ins. above ground, marked and witnessed as described, by the Surveyor General, brs. west 7 lks. dist.

The length of this line is therefore 40.12 chs. and the bearing is N. $0^{\circ}6'W.$

From above described $\frac{1}{4}$ sec. cor. I continue random line North, on the W. bdy. of sec. 6, T. 27 N. R. 4 W., $N\frac{1}{2}$ mile

50.86 Set temp. point for $\frac{1}{4}$ sec. cor. of sec. 1, T. 27 N. R. 5 W.

80.27 At this point, the $\frac{1}{4}$ cor. of Tps. 27 and 28 N., Rs. 4 and 5 W., which is a stone, 12x 10x8 ins. above ground, marked and witnessed as described by the Surveyor General, brs. W. 6 lks. dist. *No bearing trees.*

The $\frac{1}{4}$ length of this line is therefore 40.15 chs., and the $\frac{1}{4}$ bearing is N. $0^{\circ}5'W.$

Thence I run S. $0^{\circ}5'E.$, on a true line, bet. secs. 1 and 6.

29.41 Over gently rolling land, through scattering undergrowth. Set an iron post, 3 ft. long, 1 in. $\frac{1}{4}$ diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor. $\frac{1}{4}$ sec. marked on brass cap, 1913; $\frac{1}{4}$ S1 in W. half;

And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. *No bearing trees within limits.*

40.15 The $\frac{1}{4}$ sec. cor. of sec. 6, herein before described.

From this cor., I run

59.41 S. $0^{\circ}6'E.$, on a true line, bet. secs. 1 and 6, on $S\frac{1}{2}$ mile

Set an iron post, 3 ft. long, 3 ins. $\frac{1}{4}$ diam., 24 ins. in the ground, for cor. of secs. 1 and 12, $T27N.R.5W.$ marked on brass cap, T. 27 N in N. and 1913;

S6, S7, R4W in E. half;

S1 in NW. and

S12, R5W in SW. quadrant;

And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. *No bearing trees within limits.*

80.27 The $\frac{1}{4}$ cor. of secs. 1, 6, 7 and 12, herein before described, which I change to refer Land, level and rolling. to secs. 6 and 7, T. 27 N. R. 4 W. by moving Soil, sandy clay, 2nd rate. mound of stone from W. to E. of cor. No timber.

Undergrowth, greasewood.

W.B.K.
Jan. 24, 1913

William B. Kimmel,
U. S. Surveyor.

U. S. Department of the Interior

Boundaries of T.27 N., R. 5 W.
 Latitudes Departures, and Closing Errors.

Line Designated	True Bearing	Distance	Latitude		Departure	
			N. Chains	S.	E. Chains	W.
South boundary	West	464.16				464.16
West boundary	North	469.76	469.76			
North boundary	East	463.63			463.63	
East boundary (1st Guide Meridian W.)	S. 0° 5' E.	40.15		40.15	.06	
	S. 0° 6' E.	40.12		40.12	.07	
	South	389.14		389.14		
Convergency					.51	
Totals.			469.76	469.41	464.27	464.16
			469.41		464.16	
Error in lat.			.35	Error Dep. .11		

William B. Kimmel.

U. S. Surveyor

Hen. Brudtner

U. S. Transitman

part of the
Resurvey of North Bdy. of T.21N., R. 8 W.

Chains

W.B.K. and H.N.B.

Re Survey commenced Mar. 1, 1913, and executed with Young and Sons Light Mountain Transits, Nos. 7695 and 8541, with Smith Solar Attachments. For description of instruments, and certificate of approval, see page of this book.

Knowing from recent and repeated tests of these instruments on a meridian established by Polaris observations, that they are in adjustment, we proceed to the survey of the North Boundary of T.21 N., R. 8 W. *W.B.K. and H.N.B.*
At 8 hrs. 20 m., a.m., l.m.t., I set off 35° 15' N. on the lat. arc; 7° 30' S. on the decl. arc, and determine a mer. with the solar at the Closing Cor. of Tps. 21 N., Rs. 7 and 8 W. recently established by me, as described in book "M", page 29.
Thence I run,
West, on a random line, along the North Bdy. of T.21 N. R. 8 W.
The cor. of Tps. 22 N., Rs. 7 and 8 W., described in book "M" page 29
4.92
45.05 At this point, the $\frac{1}{4}$ sec. cor. bet. secs. 1 and 36, brs. S. 4 lks. dist. This which is an iron post, 1 in. diam, 10 ins. above ground, marked and witnessed as described by the Surveyor General.

The true length of the east half mile on the S. bdy. of sec. 36 is therefore 40.13 chs., and the true bearing is S. 89° 57' W.
From the above described $\frac{1}{4}$ sec. cor., I run,
West, on a random line, bet. secs. 1 and 36, on $\frac{1}{2}$ mile
40.05 The cor. of secs. 1, 2, 35 and 36, which is an iron post, 3 ins. diam, 12 ins. above ground, marked and witnessed as described by the Surveyor General, brs. S. 4 lks. dist.
The length of the west half mile, S. bdy. of sec. 36 is therefore 40.05 chs., and the bearing is S. 89° 57' W.
I return to the cor. of Tps. 22 N., Rs. 7 and 8 W.
Thence I run

S. 89° 57' W., on a true line, on S. bdy. of sec. 36 and 35.
Along S. slope of mountain, through heavy timber and dense undergrowth.
55.00 Desc. SW. slope, 170 ft.
25.85 Foot of descent, leave heavy, enter scattering timber.
35.08 Set an iron post, 3 ft. long, 1 in. diam, 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913; S1 in S. half; from which
A cedar, 6 ins. diam, brs. S. 3 $\frac{1}{2}$ E., 68 lks. dist., marked S1 BT.
A cedar, 22 ins. diam, brs. S. 52 $\frac{1}{4}$ W., 399 lks. dist., marked S1 BT.

40.13 The $\frac{1}{4}$ sec. cor. bet. secs. 1 and 36.
I alter this cor. to refer to sec. 36 only, by changing the markings on the brass cap to read as follows:-
 $\frac{1}{4}$ S36 in N. half.
I destroy the bearing tree, S. of line, and there being no trees within limits, N. of line, I
Raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.

From the above described $\frac{1}{4}$ sec. cor., I run
S 89° 57' W., on a true line, on S. bdy. of sec. 36, $\frac{1}{2}$ mile.
Over rolling land, through scattering timber.
2.00 Leave timber, brs. NE. and SW.
32.95 Road, Fort Rock to Seligman, brs. N. and S.
34.95 Set an iron post, 3 ft. long, 3 ins. diam, 24 ins. in the ground, for cor. of secs. 1 and 2, marked on brass cap, 1913;
T22N, S35, S36 in N.;
T21N in S. and
R8W in W. half;
S1 in SE. and
S2 in SW. quadrant;

Chains.

- Dig pits, 24 X 24 X 12 ins., in each sec., 6 ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, S. of cor. *No bearing trees within limits.*
- 40.05 The $\frac{1}{4}$ cor. of secs. 1, 2, 35 and 36, hereinbefore described. I alter this $\frac{1}{4}$ cor. to refer to secs. 35 and 36, T22N-R8W, only by destroying the markings on the bearing tree SW. of the cor., and filling in the pits S. of line. I alter the markings on the brass cap to read as follows:-
T22N in N.,
T21N, S1, S2, in S. and
R8W. in W. half;
S35 in NW. and
S36 in NE. quadrant.
Land, rolling, and hilly.
Soil, gumbo, 3rd rate in flat; rocky 4th rate on hill.
Timber, scrub cedar and pinion.
Undergrowth, scrub oak, chaparral and buck brush.
March 1, 1913.
- March 2, 1913. At 8 hrs. 30 m., a.m., l.m.t., I set off $35^{\circ}15'N.$ on the lat. arc; $7^{\circ}14'S.$ on the decl. arc; and determine a meridian with the solar at the cor. of secs. 35 and 36, T22N-R8W. above described, which is an iron post, 1 in. diam., 10 ins. above ground, marked and witnessed as described by the Surveyor General.
- 40.06 Thence I run West, on a random line, on S. bdy. of sec. 35 and 36. The $\frac{1}{4}$ sec. cor. bet. secs. 2 and 35 brs. N. 2 lks. dist. which is an iron post, 1 in. diam., 10 ins. above ground, marked and witnessed as described by the Surveyor General.
- 40.04 From this cor., I run West, on a random line, on S. bdy. of sec. 35, $\frac{1}{2}$ mile. At this point, the cor. of secs. 2, 3, 34 and 35, brs. N. $\frac{1}{2}$ lk. dist. which is an iron post, 3 ins. in diam., 12 ins. above ground, marked on brass cap and witnessed as described by the Surveyor General. By the retracement, the true length of the east half mile is 40.06 chs. and its true bearing is N. $89^{\circ}58'W.$ The true length of the west half mile is 40.04 chs. and its true bearing is West.
- I return to the cor. of secs. 35 and 36, T22N-R8W. Thence I run, N. $89^{\circ}58'W.$, on a true line, on S. bdy. of sec. 35, T22N-R8W. Over rolling land, through scattering timber and undergrowth.
- 9.00 Desc. rocky SW. slope, 35 ft.
15.00 Leave timber, brs. WNW. and ESE.
16.00 Foot of desc.; thence over level land.
31.00 Enter scattering timber, brs. NW. and SE.
34.90 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913; $\frac{1}{4}S2$ in S. half; from which
A cedar limb, 5 ins. diam., brs. S. $6^{\circ}E.$, 122 lks. dist., marked $\frac{1}{4}S2$ BT.
A cedar, 24 ins. diam., brs. S. $71^{\circ}W.$, 17 lks. dist., marked $\frac{1}{4}S2$ BT.
- 40.06 The $\frac{1}{4}$ sec. cor. bet. secs. 2 and 35, hereinbefore described. I alter this $\frac{1}{4}$ cor. to refer to sec. 35 only, by destroying the marking on the bearing tree S. of line, and mark the brass cap as follows:-
 $\frac{1}{4}S35$ in N. half;.
I mark a new bearing tree, N. of line, as follows:-
A cedar, 8 ins. diam., brs. N. $13^{\circ}W.$, 122 lks. dist., marked $\frac{1}{4}S35$ BT.
From the above described $\frac{1}{4}$ sec. cor. I run West, on a true line, on S. bdy. of sec. 35, $\frac{1}{2}$ mile.

Resurvey of part of North Bdy. of T.21 N., R. 8 W.

Chains.

Over rolling land, through scattering timber and undergrowth.

34.84 Set an iron post, 3 ft. long, 3 ins. in diam, 24 ins. in the ground, for ^{REESTAB} cor. of secs. 2 and 3, ^{T.21N. R.8W} marked on brass cap, 1913;

T22N, S34, S35, in N.,
 T21N in S. and
 R8W in W. half;
 S2 in SE. and
 S3 in SW. quadrant; from which

A cedar, 26 ins. in diam, brs. S. 47 3/4 E., 233 lks. dist., marked T21N R8W S2 BT.

A cedar, 18 ins. in diam, brs. S. 27 1/2 W., 154 lks. dist., marked T21N R8W S3 BT.

40.04 The cor. of secs. 2, 3, 34 and 35, hereinbefore described. I alter this cor. to refer to secs. 34 and 35 ^{T.22N. R.8W} only, by filling in the pits S. of line, and remarking the brass cap as follows:-

T22N in N.,
 T21N, S2, S3, in S/2 and
 R8W in W. half;
 S34 in NW. and
 S35 in NE. quadrant;.

Land, level and rolling.
 Soil, gumbo, 3rd rate.
 Timber, scrub cedar and pinion.
 Undergrowth, cacti, buck brush and scrub oak. *H.N.B.*
 March 2, 1913.

W.B.K.

March 3, 1913. At 8 hrs. 23 m.; a.m., l.m.t., I set off 35°15'N. on the lat. arc; 6°51'S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 34 and 35, T.22 N. R.8 W. above described.

Thence I run,
 West, on a random line, on S. bdy. sec. 34

40.02 The ^{1/4} sec. cor. bet. secs. 3 and 34, which is an iron post, 1 in. in diam, 10 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the Surveyor General.

Thence I continue
 West, on a random line, on S. bdy. sec. 34, W 1/2 mile.

39.80 ~~38.84~~ At this point, ^{INTERSECT} the cor. of secs. 3, 4, 33 and 34, ~~brs.~~ ^{ON BRASS CAP} 6.25 lks. dist. This which is an iron post, 3 ins. in diam, 12 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the Surveyor General.

The true length of the east half mile is therefore by the retracement 40.02 chs. and its true bearing is West. The true length of the ~~west~~ ^{west} half mile is ~~38.81~~ ^{39.80} chs. and its true bearing is ~~S. 89° 38' W.~~ ^{West.}

I return to the cor. of secs. 34 and 35.
 Thence I run
 West, on a true line, on S. bdy. of sec. 34, T.22 N. R.8 W.

Over rolling land, through scattering timber and undergrowth.

10.05 Draw, course NE. Asc. gradual NE. slope.
 15.00 Enter heavy timber, brs. N. and S.

34.80 Set an iron post, 3 ft. long, 1 in. in diam, 26 ins. in the ground, for ^{REESTAB} ~~1/4~~ sec. cor. ^{sec. 3} marked on brass cap, 1913;

1/4 S3 in S. half; from which

A cedar, 10 ins. in diam, brs. S. 58 1/2 E., 31 lks. dist., marked 1/4 S3 BT.

A cedar, 12 ins. in diam, brs. S. 36 1/4 W., 47 lks. dist., marked 1/4 S3 BT.

NOTE: For authority for red ink corrections see Surveyor General's Approval at end of this Book.

NOTE: For authority for red ink corrections see Surveyor General's Approval at end of this Book.

Chains.

40.02 The ^{old} $\frac{1}{4}$ sec. cor. bet. secs. 3 and 34, hereinbefore described. I alter this ^{old} cor. to refer to Sec. 34 only, by destroying the markings on the bearing tree S. of line, and remarking the brass cap as follows:-
 $\frac{1}{4}$ S34 in N. half.
 I mark a tree North of line as follows:-
 A cedar, 8 ins. in diam, brs. N.59° E., 17 lks. dist., marked $\frac{1}{4}$ S34 BT.

From the altered $\frac{1}{4}$ sec. cor. above described, I run,
~~WEST 5.89° 38' W.~~, on a true line, on S. bdy of sec. 34, W $\frac{1}{2}$ mile.
 Over rolling land, through scattering timber and undergrowth.

34.78 Set an iron post, 3 ft long, 3 ins. in diam, 24 ins. in the ground, for ^{REESTAB.} cor. of secs. 3 and 4, marked on brass cap, 1913;
 T22N, S33, S34, in N.,
 T21N in S. and
 R8W in W. half;
 S3 in SE. and
 S4 in SW. quadrant; from which
 A cedar, ~~20~~ ¹⁹ ins. in diam, brs. S. ~~31~~ ⁵⁰ E., ~~17~~ lks. dist., marked T21N R8W S3 BT.
 A pinion, 8 ins. in diam, brs. S. ~~32~~ ⁴⁶ W., ~~68~~ ⁸⁸ lks. dist., marked T21N R8W S4 BT.

39.80
~~38.61~~ The ^{old} cor. of secs. 3, 4, 33, and 34, hereinbefore described. I alter this ^{old} cor. to refer to secs. 33 and 34, T22N R8W only by destroying the markings on the bearing trees SE. and SW. of the post, and remarking the brass cap as follows:-
 T22N in N.,
 T21N, S3, S4, in S. and
 R8W in W. half;
 S33 in NW. and
 S34 in NE. quadrant;
 Land, level and rolling.
 Soil, rocky 4th rate.
 Timber, scrub cedar and pinion.
 Undergrowth, scrub oak and buck brush.

NOTE - At this corner, I set off 6°48'S. on the decl. arc; and at noon, I observe the sun on the meridian, the resulting lat. is 35°15'N., which is ~~only slightly higher~~ than the correct lat. W.B.K.
March 8, 1913.

H.N.B.
 March 8, 1913: At 8 hrs. 50. m., l.m.t., I set off 35°15'N. on the latl. arc; 4°55'S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 33 and 34, T.22N R.8W, above described.

Thence I run
 West, on a random line, on S. bdy of sec. 33 and 4.

39.91
~~40.50~~ The ^{old} $\frac{1}{4}$ sec. cor. bet. secs. 4 and 33, which is an iron post, 1 in. in diam, 10 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the Surveyor General, brs. N. $\frac{1}{2}$ lks. dist.

From this cor., I run
 West, on a random line, on S. bdy of sec. 33, W $\frac{1}{2}$ mile

39.91
~~39.59~~ The ^{old} cor. of secs. 4, 5, 32 and 33, which is an iron post, 3 ins. in diam, 12 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the Surveyor General, brs. N. $\frac{1}{2}$ lks. dist.

By the retracement, the true length of the east half mile is ~~40.50~~ chs. and its true bearing is West. The true length of the west half mile is ~~39.99~~ chs. and its true bearing is West. 39.91

I return to the cor. of secs. 33 and 34.
 Thence I run
 West, on a true line, on S. bdy of sec. 33, T.22N R.8W.

Resurvey of part of North Boundary of T.21 N., R.8 W.

Chains.

Over rolling land, through heavy timber, and dense under growth.

12.00 Desc. steep SW. slope, 570 ft.

16.00 Precipice, 60 ft. high, brs. N. and S.

~~35.97~~
35.14 Set an iron post, 3 ft. long, 1 in. indiam, 26 ins. in the ground, for ^{REESTAB} sec. cor. ^{sec. 4} marked on brass cap, 1913; $\frac{1}{4}$ S4 in S. half; from which

A cedar, 10 ins. indiam, brs. S. $16\frac{1}{2}^{\circ}$ E., 10 lks. dist., marked $\frac{1}{4}$ S4 BT.

A cedar, 8 ins. indiam, brs. S. 20° W., 53 lks. dist., marked $\frac{1}{4}$ S4 BT.

39.91
40.50 The ^{old} sec. cor. bet. secs. 33 and 4, hereinbefore described. I alter this ^{old} cor. to refer to secs. 33 only, by destroying the markings on the bearing tree, S. of line, and remarking the brass cap $\frac{1}{4}$ S33 in N. half.

Also marked a bearing tree as follows:-

A ^{Pinon} cedar, 10 ins. indiam, brs. N. $20\frac{1}{2}^{\circ}$ E., 108 lks. dist., marked $\frac{1}{4}$ S33 BT. A pinon 10 ins. indiam, brs. N. $55\frac{3}{4}^{\circ}$ W. 89 lks. dist. Thence I continue marked $\frac{1}{4}$ S33 BT.

West, on a true line, on S. bdy. of sec. 33, $W\frac{1}{2}$ mile

45.50 Leave heavy, enter scattering timber.

~~75.97~~
75.30 Set an iron post, 3 ft. long, 3 ins. indiam, 24 ins. in the ground, for ^{REESTAB} cor. of secs. 4 and 5, ^{T22N R8W} marked on brass cap, 1913; T22N, S32, S33, in N., T21N in S., and R8W in W. half; S4 in SE. and S5 in SW. quadrant; from which

A cedar, 8 ins. indiam, brs. S. $54\frac{1}{2}^{\circ}$ E., 246 lks. dist., marked T21N R8W S4 BT.

A cedar, 10 ins. indiam, brs. S. $25\frac{3}{4}^{\circ}$ W., 384 lks. dist., marked T21N R8W S5 BT.

~~80.49~~
79.82 The ^{old} cor. of secs. 4, 5, 32 and 33, hereinbefore described. I alter this ^{old} cor. to refer to secs. 32 and 33, T22N R8W only by destroying the markings on the bearing tree, S. of the cor., and filling in the pits S. of line. I remark the brass cap as follows:

T22N in N.,
T21N, S4, S5, in S. and
R8W in W. half;
S32 in NW. and
S33 in NE quadrant.

Land, mountainous and rolling .
Soil, gravelly, loam and gumbo, 2nd to 4th rate.
Timber scrub cedar and pinion.
Undergrowth, scrub oak and buck brush.

NOTE:- At this corner, I set off $4^{\circ}52'S$. on the decl. arc; and at noon, I observe the sun on the meridian, the resulting lat. is $35^{\circ}14\frac{1}{2}'N$., which is slightly less than the correct lat.

March 8, 1913.

March 11, 1913. At 9hrs. 5m. a.m., 1 m.t., I set off $35^{\circ}15'N$. on the lat. arc; $3^{\circ}44\frac{1}{2}'S$. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 32 and 33, T22N R8W above described.

Thence I run, West, on a random line, on S. bdy. of sec. 32.

40.00 The ^{old} sec. cor. bet. secs. 5 and 32, brs. N. 5 lks. dist. which is an iron post, 1 in. indiam, 10 ins. above ground, marked ^{IRON BRASS CAP} and witnessed as described by the Surveyor General.

BOOK 2893

26

Resurvey of part of North Bdy. of T.21N., R. 8 W.

Chains. 40.00	From the old $\frac{1}{4}$ sec. cor. above described, I run and 32, I continue, West, on a random line, on S. bdy. of sec. 32, $\frac{1}{2}$ mile
	The $\frac{1}{4}$ cor. of secs. 5, 6, 31 and 32, which is an iron post, 3 ins. in diam, 12 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the Surveyor General, brs. S. 1 lk. dist.
	The true length of the east half mile is therefore 40.00 chs. and the true bearing is N. 89° 56' W., and the true length of the west half mile is 40.00 chs. and its true bearing is S. 89° 59' W.
	I return to the cor. of secs. 32 and 33. Thence I run, N. 89° 56' W., on a true line, on S. bdy. of sec. 32, T. 22 N. R. 8 W.
35.48	Over rolling land, through scattering timber. Set an iron post, 3 ft. long, 1 in. in diam, 26 ins. in the ground, for ^{REESTAB.} $\frac{1}{4}$ sec. cor., marked on brass cap, 1913; $\frac{1}{4}$ S5 in S. half; from which
	A cedar, 21 ins. in diam, brs. S. 27 $\frac{3}{4}$ E., 392 lks. dist., marked $\frac{1}{4}$ S5 BT.
40.00	A cedar, 16 ins. in diam, brs. S. 50 $\frac{1}{4}$ W., 212 lks. dist., marked $\frac{1}{4}$ S5 BT.
	The $\frac{1}{4}$ sec. cor. bet. secs. 5 and 32, hereinbefore described. I alter this $\frac{1}{4}$ cor. to refer to sec. 32 only, by destroying the markings on the bearing tree S., of line, and remark the brass cap as follows:-
	$\frac{1}{4}$ S32 BT in N. half. I also mark a bearing tree as follows:- A cedar, 10 ins. in diam, brs. N. 48 $\frac{3}{4}$ W., 496 lks. dist., marked $\frac{1}{4}$ S32 BT.
49.50	From the old $\frac{1}{4}$ sec. cor. above described, I run S. 89° 59' W., on a true line, on S. bdy. of sec. 32, $\frac{1}{2}$ mile.
65.50	Over rolling land, through scattering timber. Enter heavy timber, brs. N. and S. Asc. slight NE. slope.
75.48	Low ridge, brs. NW. and SE. Desc. slight SW. slope. Set an iron post, 3 ft. long, 3 ins. in diam, 24 ins. in the ground, for ^{REESTAB.} $\frac{1}{4}$ cor. of secs. 5, and 6, ^{T. 21 N. R. 8 W.} marked on brass cap, 1913;
	T22N, S31, S32, in N.,
	T21N in S. and
	R8W in W. half;
	S5 in SE. and
	S6 in SW. quadrant; from which
	A cedar, 25 ins. in diam, brs. S. 57 $\frac{1}{2}$ E., 36 lks. dist., marked T21N R8W S5 BT.
	A cedar, 22 ins. in diam, brs. S. 21 $\frac{3}{4}$ W., 730 lks. dist., marked T21N R8W S6 BT.
80.00	The $\frac{1}{4}$ cor. of secs. 31, 32, 5 and 6, hereinbefore described. I alter this $\frac{1}{4}$ cor. to refer to secs. 31 and 32, T. 22 N. R. 8 W. only by filling in the pits SE. and SW. of the cor., and remarking the brass cap as follows:+
	T22N in N.,
	T21N, S5, S6, in S. and
	R8W in W. half;
	S31 in NW. and
	S32 in NE. quadrant.
	Land, level and rolling.
	Soil, sandy loam, 2nd rate.; rocky limestone formation, 4th rate in places.
	Timber, scrub cedar and pinion.
	Undergrowth, buck brush.
40.03	West, on a random line, from the cor. of secs. 31 and 32, T. 22 N. R. 8 W. above described, on S. bdy. of sec. 31. The $\frac{1}{4}$ sec. cor. bet. secs. 6 and 31, which is an iron post, 1 in. in diam, 20 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the Surveyor General, brs. S. 6 lks. dist.

Resurvey of part of North Bdy. of T. 21 N., R. 18 W.

Chains.

The true length of the east half mile is therefore 40.03 chs. and the true bearing is S. 89° 55' W.

I return to the cor. of secs. 31 and 32.

Thence I run,

S. 89° 55' W., on a true line, on S. bdy. of sec. 31, T. 22 N. R. 8 W.

Over level land.

27.50

Enter scattering timber, brs. N. and S. Asc. slight NE. slope.

35.48

Set an iron post, 3 ft. long, 1 in. diam, 26 ins. in the ground, for ^{REESTAB.} ~~1/4~~ sec. cor. ^{sec. 6} marked on brass cap, 1913;

1/4 S 6 in S. half; from which

A pinion, 6 ins. diam, brs. S. 16 3/4° E., 120 lks. dist., marked 1/4 S 6 BT.

A pinion, 14 ins. diam, brs. S. 62 1/2° W., 35 lks. dist., marked 1/4 S 6 BT.

40.03

The ^{old} 1/4 sec. cor. bet. secs. 6 and 31, herein before described.

I alter this ^{old} cor. to refer to sec. 31 ^{T. 22 N. R. 8 W.} only, by destroying the bearing tree S. of line, and remarking the brass cap as follows:-

1/4 S 31 in N. half.

I also mark a bearing tree as follows:-

A cedar limb, 12 ins. diam, brs. N. 18° W., 143 lks. dist., marked 1/4 S 31 BT.

Land, level and rolling.

Soil, sandy loam, 2nd rate, and rocky gumbo, 3rd rate.

Timber, scrub cedar and pinion.

Undergrowth, buck brush.

H.N.B.

March 11, 1913.

William B. Kimmel,

U. S. Surveyor

San Bradstreet

U. S. Transitman.

Boundaries of T. 21 N., R. 8 W.
 Latitudes, departures and Closing Errors.

Line designated	True Bearing	Distance	Latitudes		Departures	
			N.	S.	E.	W.
			Chains.		Chains.	
<i>South boundary</i> (5th Standard Parallel/N)	S. 89° 48' W.	40.55		.14		40.55
	S. 84° 22' W.	40.00		3.93		39.80
	N. 89° 54' W.	40.76	.07			40.76
	West:	40.18				40.18
	N. 89° 36' W.	40.19	.28			40.19
	S. 89° 15' W.	40.33		.52		40.33
	S. 89° 04' W.	40.27		.65		40.26
	S. 89° 50' W.	41.20		.12		41.20
	S. 88° 50' W.	40.04		.82		40.03
	S. 88° 48' W.	40.20		.84		40.19
	S. 89° 24' W.	40.22		.42		40.22
S. 89° 19' W.	40.30		.48		40.30	
<i>West boundary</i> (2nd Guide Meridian W.)	N. 0° 07' W.	321.44	321.44			.66
	North	160.00	160.00			
<i>North boundary</i>	East	244.09 204.96			244.09 204.96	
	N. 89° 55' E.	40.03	.06		40.03	
	N. 89° 59' E.	40.00	.01		40.00	
	S. 89° 56' E.	40.00		.05	40.00	
	N. 89° 38' E.	38.81	.25		38.81	
	S. 89° 58' E.	40.06		.02	40.06	
N. 89° 57' E.	30.18	.08		30.18		
East boundary	South	474.61		474.61		
Convergency					.51	
Totals.			482.10 481.94	482.60	484.55 484.87	484.68
Error in lat.			481.94	482.10	484.68	484.55

NOTE: For authority for readlink corrections see Surveyor Generals Approval at end of this book.

Error in Lat. .66 .19 Error in Dep.

William B. Kimmel,

U. S. Surveyor
Herbert
 U. S. Transitman.

Retracement of the 5th Standard Parallel N. on the S. bdy. of sec. 34, T. 21 N., R. 8 W.

Chains. H.N.B.

Retracement executed Mar. 9, 1913, with a Young and Sons Light Mountain Transit No. 8541 with Smith Solar Attachment. For description of instrument and certificate of approval, see book "G", page 1 of this book

Knowing from recent and repeated tests of this instrument on a true meridian established by observations on Polaris, that it is in adjustment, I proceed to the retracement of the S. bdy. of sec. 34, T. 21 N., R. 8 W.

NOTE - At 2 hrs. 5 m. p.m., l.m.t., I set off 35° 9' N. on the lat. arc; 4° 26 1/2' S. on the decl. arc; and determine a meridian with the solar at the standard cor. of secs. 33 and 34, which is a stone, 5 X 15 X 5 ins. above ground, marked and witnessed as described by the Surveyor General. NOTE: Marking on this cor. changed this day by W.B. Kimmel as described in book "G" page 20

Thence I run, East, on random line, on S. bdy. of sec. 34, T. 21 N. R. 8 W. Over rolling land, draining S.

5.90

Road, brs. NW. and SE.

18.90

Enter scattering timber, brs. N. and S.

21.78

At this point the closing cor. of secs. 3 and 4 ^{T. 20 N. R. 8 W.} which is a cedar post, marked and witnessed as described by the surveyor general, brs. N. 23 lks. dist.

40.33

At this point, the standard 1/4 sec. cor of sec. 34, which is a stone, 8 X 8 X 10 ins. above ground, marked and witnessed as described by the Surveyor General, brs. N. 52 lks. dist.

Thence I continue, from my point, on random line East, along the S. bdy. of sec. 34, E 1/2 mile.

47.90

Desc. E. slope, 25 ft.

54.75

Wash, 5 lks. wide, 3 ft. deep, course SW. Asc. W. slope, 130 ft. Enter heavy timber, and dense undergrowth, brs. N. and S.

68.70

Ridge, brs. NE. and SW. Desc. SE. slope, 25 ft.

80.52

At this point, the standard cor. of secs. 34 and 35, described in book "G", page 13, brs. N. 24 lks. dist.

Land, rolling and hilly. Soil, rocky 3rd and 4th rate. Timber, scrub cedar and pinion. Undergrowth, scrub oak.

The true length of the west half mile is therefore, 40.33chs. and its true bearing is S 89° 15' W. The true length of the east half mile is 40.19chs. and its true bearing is N. 89° 36' W.

Mar. 9, 1913.

H.N.B.

U. S. Transitman.
H. N. Broadstreet

Resurvey of 2nd Guide Meridian West through part of T. 21 N. bet. Rs. 8 & 9 W.

Chains.

W.B.K.

Resurvey commenced Mar. 13, 1913 and executed with Young and Sons Light Mountain Transit No. 8541 with Smith Solar Attachment. For description of instrument, and Certificate of approval, see page 1 of this book. Knowing from recent and repeated tests of my transit on a true meridian established by Polaris observations, that it is in adjustment, I proceed to the resurvey of 2nd Guide Meridian West thru part of T. 21 N.

NOTE - At 2 hrs. 10 m., p.m., 1.m.t., I set off 35° 13' N. on the lat. arc; 2° 52½' S. on the decl. arc; and determine a meridian with the solar at the ^{old} cor. of secs. 7, 12, 13 and 18, which is an iron post, 3 ins. in diam, 12 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the Surveyor General.

Thence I run, South, on a random line, ~~on 2nd Guide Meridian West~~ bet. secs. 13 and 18, T. 21 N. Rs. 8 and 9 W.

40.28 The ^{old} $\frac{1}{4}$ sec. cor., bet. secs. 13 and 18, which is an iron post, 1 in. in diam, 10 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the Surveyor General, brs. E. 15 lks. dist.

I destroy all trace of this ^{old} cor. by destroying the markings on the bearing trees, and removing the iron post.

Thence I continue, from my point, South, on a random line, bet. secs. 13 and 18, 5/2 mile.

81.38 The ^{old} cor. of secs. 13, 18, 19 and 24, which is an iron post, 3 ins. in diam, 12 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the Surveyor General, brs. E. 29 lks. dist.

I destroy all evidence of this ^{old} cor. by destroying the markings on the bearing trees, and removing the iron post.

Thence I continue, from my point, South, on a random line, bet. secs. 19 and 24.

121.38 The ^{old} $\frac{1}{4}$ sec. cor. bet. secs. 19 and 24, which is an iron post, 1 in. in diam, 10 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the surveyor general, brs. E. 32 lks. dist.

I destroy all trace of this ^{old} cor. by destroying the markings on the bearing trees and removing the iron post.

Thence I continue, from my point, South, on a random line, bet. secs. 19 and 24, 5/2 mile

161.43 The ^{old} cor. of secs. 19, 24, 25 and 30, which is an iron post, 3 ins. in diam, 12 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the surveyor General, brs. E. 56 lks. dist.

I destroy all traces of this ^{old} cor. and remove the iron post.

Thence I continue, from my point, South, on a random line, bet. secs. 25 and 30.

201.46 The ^{old} $\frac{1}{4}$ sec. cor. bet. secs. 25 and 30, which is an iron post, 1 in. in diam, 10 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the Surveyor General, brs. E. 44 lks. dist.

I destroy all trace of this ^{old} cor. by destroying the markings on the bearing trees, and removing the iron post.

Thence I continue, from my point, South, on a random line, bet. secs. 25 and 30, 5/2 mile.

241.44 The ^{old} cor. of secs. 25, 30, 31 and 36, which is an iron post, 3 ins. in diam, 12 ins. above ground, marked ^{ON BRASS CAP} and witnessed as described by the surveyor general, brs. E. 51 lks. dist.

Chains.	<p>I destroy all evidence of this ^{old} cor. by filling in the pits and removing the iron post.</p> <p>Thence I continue, from my point, South, on a random line, bet. secs. 31 and 36.</p> <p>281.36 The ^{old} $\frac{1}{4}$ sec. cor. bet. secs. 31 and 36, which is an iron post, 1 in. ⁱⁿ diam, 10 ins. above ground, marked ^{on} ^{BRASS} CAP and witnessed as described by the Surveyor General, brs. E. 54 lks. dist.</p> <p>I destroy all evidence of this ^{old} cor. by destroying the markings on the bearing trees, and removing the iron post.</p> <p>Thence I continue, from my point, South, on a random line, bet. secs. 31 and 36, $\frac{1}{2}$ mile.</p> <p>321.44 The ^{old} standard cor. of Tps. 21 N., Rs. 8 and 9 W., which is a stone, 9 X 6 X 14 ins. above ground, set in a mound of stone, marked and witnessed as described by the surveyor General, brs. E. 69 lks. dist.</p> <p>This falling answers to a correction of $0^{\circ} 7'$ or 17 lks. E. per mile, counting from the ^{old} cor. of secs. 7, 12, 13 and 18.</p>
	March 13, 1913.
	<p>March 14, 1913. At 7 hrs. 53 m., a.m., l.m.t., I set off $\sqrt{35^{\circ} 9\frac{1}{2}' N.}$ on the lat. arc; $2^{\circ} 33\frac{1}{2}' S.$ on the decl. arc; and determine a meridian with the solar at the ^{old} standard cor. of Tps. 21 N., Rs. 8 and 9 W. ^{ON 5TH STANDARD PARALLEL N.} which is a stone, ^{as described above.}</p>
	<p>Thence I run $N 0^{\circ} 7' W.$, on a true line, bet. secs. 31 and 36. Over rolling land, through scattering timber. Difference bet. measurements of 41.44 chs. by two sets of chainmen is 4 lks.; position of middle point, By 1st set 41.46 chs. By 2nd set, 41.42 chs.; the mean of which is</p>
41.44	<p>Set an iron post, 3 ft. long, 1 in. ⁱⁿ diam, 26 ins. in the ground, for ^{REESTAB.} $\frac{1}{4}$ sec. cor., marked on brass cap, 1913; $\frac{1}{4}$S36 in W. and $\frac{1}{4}$S31 in E. half; from which</p> <p>A cedar, 14 ins. ⁱⁿ diam, brs. N. $85\frac{1}{4}$ E., 258 lks. dist., marked $\frac{1}{4}$S31 BT.</p> <p>A cedar, 20 ins. ⁱⁿ diam, brs. N. $67\frac{1}{4}$ W., 259 lks. dist., marked $\frac{1}{4}$S36 BT.</p>
51.45	Asc. SE. slope, 90 ft.
65.50	<p>Top of asc.; thence over rolling land. Difference bet. measurements of 81.44 chs. by two sets of chainmen is 6 lks.; position of middle point, By 1st set, 81.47 chs. By 2nd set, 81.41 chs.; the mean of which is</p>
81.44	<p>Set an iron post, 3 ft. long, 3 ins. ⁱⁿ diam, 24 ins. in the ground, for ^{REESTAB.} cor. of secs. 25, 30, 31 and 36, marked on brass cap, 1913;</p> <p>T21N in N. half;</p> <p>R9W S25 in NW.,</p> <p>R8W S30 in NE.,</p> <p>S31 in SE. and</p> <p>S36 in SW. quadrant;</p> <p>And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. <i>No bearing trees within limits.</i></p> <p>Land, level and rolling.</p> <p>Soil, rocky 4th rate.</p> <p>Timber, scrub cedar and pinion.</p> <p>Undergrowth, scrub oak and buck brush.</p>

Resurvey of 2nd Guide Meridian through part of T. 21N. bet R. 8 & 9 W.

Chains.	
	<p>N.0° 7' W., on a true line, bet. secs. 25 and 30. Over rolling land, through scattering timber and undergrowth.</p>
15.55	<p>Road, brs. NW. and SE. Difference bet. measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point, By 1st set, 40.01 chs. By 2nd set, 39.99 chs.; the mean of which is</p>
40.00	<p>Set an iron post, 3 ft. long, 1 in. diam, 26 ins. in the ground, for ^{REESTAB.} sec. cor., marked on brass cap, 1913; $\frac{1}{4}$S25 in W. and S30 in E. half; from which A cedar, 12 ins. diam, brs. N.77$\frac{1}{2}$° E., 23 lks. dist., marked $\frac{1}{4}$S30 BT. A cedar limb, 14 ins. diam, brs. S84$\frac{1}{4}$° W., 160 lks. dist., marked $\frac{1}{4}$S25 BT. Difference bet. measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point, By 1st set, 80.02 chs. By 2nd set, 79.98 chs.; the mean of which is</p>
80.00	<p>Seth an iron post, 3 ft. long, 3 ins. diam, 24 ins. in the ground, for ^{REESTAB.} cor. of secs. 19, 24, 25 and 30, marked on brass cap, 1913; T21N in N. half; R9W S24 in NW., R8W S19 in NE., S30 in SE. and S25 in SW. quadrant; from which A cedar, 26 ins. diam, brs. S.59° W., 71 lks. dist., marked T21N R9W S25 BT. A cedar, 30 ins. diam, brs. N.78° W., 52 lks. dist., marked T.21N RW S24 BT. No other trees within limits. Raise a mound of stone, 2 ft. base, 1$\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Land, level and rolling. Soil, rocky 3rd rate. Timber, scrub cedar and pinion. Undergrowth, scrub oak and greasewood.</p> <p>NOTE: At this corner, I set off 2° 31' S. on the decl. arc; and at noon, I observe the sun on the meridian, the resulting lat. is 35° 11' N., which is only slightly less than the correct lat.</p>
40.00	<p>N.0° 7' W. ^{on true line} bet. secs. 19 and 24. Over rolling land, through scattering timber. Difference bet. measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 40.02 chs. By 2nd set, 39.98 chs.; the mean of which is</p>
80.00	<p>Set an iron post, 3 ft. long, 1 in. diam, 26 ins. in the ground, for ^{REESTAB.} sec. cor., marked on brass cap, 1913; $\frac{1}{4}$S24 in W. and S19 in E. half; from which A cedar, 16 ins. diam, brs. N.75$\frac{3}{4}$° E., 17 lks. dist., marked $\frac{1}{4}$S19 BT. A cedar, 24 ins. diam, brs. S.72$\frac{3}{4}$° W., 78 lks. dist., marked $\frac{1}{4}$S24 BT. Difference bet. measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point, By 1st set, 80.03 chs. By 2nd set, 79.97 chs.; the mean of which is</p>
80.00	<p>Set an iron post, 3 ft. long, 3 ins. diam, 24 ins. in the ground, for ^{REESTAB.} cor. of secs. 13, 18, 19 and 24, marked on brass cap, 1913;</p>

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Resurvey of ~~East~~ Guide Meridian W. thro part of T. 21 N. bet R. 8 & 9 W.

Chains.

T21N in N. half;
 R9W S13 in NW.,
 R8W S18 in NE.,
 S19 in SE. and
 S24 in SW. quadrant; from which
 A cedar, 30 ins. diam, brs. N. $59\frac{1}{2}^{\circ}$ E., 202 lks. dist.,
 marked T21N R8W S18 BT.
 A cedar, 36 ins. diam, brs. S. $41\frac{1}{4}^{\circ}$ E., 170 lks. dist.,
 marked T21N R8W S19 BT.
 A cedar, 14 ins. diam, brs. S. 21° W., 318 lks. dist.,
 marked T21N R9W S24 BT.
 A cedar, 16 ins. diam, brs. N. $77\frac{1}{2}^{\circ}$ W., 337 lks. dist.,
 marked T21N R9W S13 BT.
 Land, level and rolling.
 Soil, rocky 4th rate.
 Timber, scrub cedar and scattering pinion.
 Undergrowth, scrub oak and buck brush.

18.00 N. $0^{\circ} 7' W.$ ^{ON TRUE LINE} bet. secs. 13 and 18.
 29.00 Over rolling land, through scattering timber.
 Enter heavy timber, brs. E. and W.
 Asc. SW. slope, 485 ft.
 Difference bet. measurements of 40.00 chs. by two sets
 of chainmen is 8 lks.; position of middle point
 By 1st set, 40.04 chs.
 By 2nd set, 39.96 chs.; the mean of which is
 40.00 Set an iron post, 3 ft. long, 1 in. diam, 26 ins. in the
 ground, for ^{REESTAB} $\frac{1}{4}$ sec. cor., marked on brass cap, 1913;
 $\frac{1}{4}$ S13 in W. and
 $\frac{1}{4}$ S18 in E. half; from which
 A cedar, 20 ins. diam, brs. S. 20° E., 17 lks. dist.,
 marked $\frac{1}{4}$ S18 BT.
 A pinion, 6 ins. diam, brs. N. $65\frac{1}{2}^{\circ}$ W., 10 lks. dist.,
 marked $\frac{1}{4}$ S13 BT.
 75.00 Leave heavy, enter scattering timber.
 Difference bet. measurements of 80.00 chs. by
 two sets of chainmen is 4 lks.
 By 1st set 80.02 chs.
 By 2nd set, 79.98 chs. the mean of which is
 80.00 The ^{old} cor. of secs. 7, 12, 13 and 18, which is an iron
 post, hereinbefore described.
 Land, mountainous and rolling.
 Soil, rocky 4th rate.
 Timber scrub cedar and pinion.
 Undergrowth, scrub oak and buck brush.

W. B. K.
 Mar. 14, 1913.

William B. Kimmel,

U. S. Surveyor

U. S. Tax Assessor

Chains	<p><i>H. N. B.</i> Retracement commenced Mar. 27, 1913, and executed with Young and Sons' Light Mountain Transit No. 7695, with Smith Solar Attachment. For description of Instrument and certificate of approval, see page 1 of this book. Knowing from recent and repeated tests of my transit on a true meridian established by Polaris observations, that it is in adjustment, I proceed to the retracement of the South Bdy. of secs. 32 and 33, T29 N. R. 9 W.</p>
	<p><i>NOTE:</i> - At 9 hrs. 45 m. a.m., l.m.t., I set off $35^{\circ} 9\frac{1}{2}'$ N. on the lat. arc; $2^{\circ} 34\frac{1}{2}'$ N. on the decl. arc, and determine a meridian with the solar, at the old Standard Cor. of secs. 31 and 32, on the S. bdy. of T29 N. R. 9 W., which is a stone, described in book "H", page 31. Thence I run on random line, S. $88^{\circ} 16'$ E., along the S. bdy. of sec. 32. Desc. rocky SE. slope, through scattering timber and undergrowth.</p>
2.00	Gulch, 8 lks. wide, course SE. Asc. gentle SW. slope.
3.50	South point of ridge, brs. N. Desc. SE. slope, 30 ft.
5.00	Wash, 30 lks. wide, course S. Asc. SW. slope, 115 ft.
16.00	Top of asc.; desc. slight SE. slope.
21.15	Wash, 5 lks. wide, course SE. Asc. SW. slope, 58 ft.
32.00	Top of asc.; low ridge, brs. NE. and SW. Desc. SE. slope, 20 ft.
34.75	Gulch, 20 lks. wide, course SE.
40.00	Wash, 15 lks. wide, 5 ft. deep, course SE. Asc. SW. slope of Cross Mountain.
40.61	At this point, the Standard $\frac{1}{4}$ sec. cor. ^{sec 32} brs. N. 139 lks. dist. This which is a rock in place, 36X24X10 ins., marked and witnessed as described by the Surveyor General. The true length of this line is therefore 40.59 chs., and the true bearing is N. $89^{\circ} 46'$ E.
	<p><i>NOTE:</i> - At this corner, I set off $2^{\circ} 35\frac{1}{2}'$ N. on the decl. arc; and at noon, I observe the sun on the meridian, the resulting lat. is $35^{\circ} 9\frac{1}{2}'$ N., which is correct. From the Standard $\frac{1}{4}$ sec. cor, I run on random line S. $88^{\circ} 16'$ E., along the S. bdy. of sec. 32, $\frac{1}{2}$ mile Asc. SW. slope, 50 ft., through scattering timber and dense undergrowth.</p>
4.00	Desc. SE. slope, 15 ft.
4.70	Wash, 4 lks. wide, course SW. Asc. SW. slope, 160 ft.
22.00	Top of asc.; thence along S. slope of Cross Mountain.
28.30	Desc. SE. slope, 115 ft.
41.42	At this point, the old standard cor. of secs. 32 and 33, which I had previously changed to Angle Point, brs. S. 42 lks. dist. This cor. is a stone, 24 X 24 X 24 ins., described in book "H", page 22. Land, mountainous and rolling. Soil, very rocky 4th rate. Timber, scattering cedar and pinion. Undergrowth, buck brush and scrub oak. The true length of this line is therefore 41.42 chs., and the true bearing is S. $87^{\circ} 41'$ E.
	<p>From the old Standard cor. of secs. 32 and 33, I run N. $89^{\circ} 26'$ E. ^{ON RANDOM LINE} along the S. bdy. of sec. 33. Desc. SE. slope, 75 ft., through scattering timber and dense undergrowth.</p>
15.75	Leave timber, brs. NE. and SW. Enter draw, course SW.
24.00	Wash, 12 lks. wide, 4 ft. deep, course SW.
25.50	Leave draw, asc. gentle NW. slope, 50 ft.
28.95	At this point, the Closing cor. of secs. 4 and 5, brs. N. 14 lks. dist. Enter timber, brs. NE. and SW.
32.00	Gulch, 8 lks. wide, course NW. Asc. NW. slope, 120 ft.
41.17	At this point, the old standard $\frac{1}{4}$ sec. cor. brs. N. 30 lks. dist. This cor. is a cedar tree, 9 ins. in diam, marked and witnessed as described by the surveyor general. The length

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Retracement of 5th Standard Parallel North, thru part of, R. 9 W.

Chains.

The true length of this line is therefore 41.17 chs., and
 and the true bearing is N.89°1'E.
 From the Standard $\frac{1}{4}$ sec. cor., I run
 N.82°39'E. ^{ON RANDOM LINE} along the S. bdy. of sec. 33, E $\frac{1}{2}$ mile.
 Asc NW. slope, 165 ft. through scattering timber and
 dense undergrowth.
 7.60 Top of asc., desc. E. slope, 355 ft.
 29.55 Leave timber, brs. N. and S. Foot of desc.; thence across
 draw, course SE.
 33.00 Asc. slight SW. slope.
 34.00 Top of asc; thence over level land.
 39.84 At this point, the old Standard cor. ^{secs. 33 & 34} brs. S. 38 lks.
 dist.
 This cor. is a sandstone, 18 X 10 X 6 ins., marked
 A P on N. face as described in Book "H" page 16.
 Land, mountainous and rolling.
 Soil, very rocky 4th rate, gumbo .
 Timber, scrub cedar and pinion.
 Undergrowth, buck brush and scrub oak.
 The true length of this line is therefore 39.84 chs.,
 and the true bearing is N.83°13'E.
 H.N.B.
 March 27, 1913.

Note: When subdividing Townships 21 North, Ranges 8
 and 9 West, all old standard section and quarter section
 corners on the Fifth Standard Parallel North, in
 Ranges 8 and 9 West, were changed by me to Angle
 Points by obliterating all old markings and adding
 the letters "AP" to each corner.

H. N. B.

U. S. Transitman.

Resurvey of the 6th Standard Parallel North Through R. 17 W.

Chains

W.B.K.

Resurvey commenced May 18, 1913, and executed with Young and Sons Light Mountain Transit No 7695 with Smith Solar Attachment. For description of Instrument and certificate of approval, see Page 1 of this book.

In order to test the solar apparatuses of transits No. 7695 and 8541, by comparing the results of observations on the sun made during a.m., and p.m. hours, with a true meridian determined by observations on Polaris, I proceed as follows:-

At our camp, in the SE. $\frac{1}{4}$ of sec. 31, T. 26 N., R. 17 W., in lat. $35^{\circ} 36' N.$, long. $114^{\circ} 07' 38'' W.$ at 8 hrs. 41 m., p.m. by my watch, which is set to local mean time, I observe Polaris in accordance with instructions in the Manual, and mark a point in the line thus determined by a pin, stuck in the ground, 10 chs. N. of my station.

May 18, 1913.

May 19, 1913: At 7 hrs. 30 m., a.m., l.m.t. I lay off the azimuth of Polaris $0^{\circ} 22\frac{1}{2}'$ to the E., and mark the meridian thus determined by a tack driven in a hub, 10 chs. N. of my station.

At 8 hrs. 3 m., a.m., l.m.t., I set off $35^{\circ} 36' N.$ on the lat. arc; $19^{\circ} 44\frac{1}{2}' N.$ on the decl. arc; and determine a meridian with the solar, using transit No. 7695. The meridian thus determined brs. $0^{\circ} \frac{1}{2}' W.$ of the meridian determined by Polaris observation.

Using transit No. 8541, and the same settings on the lat. and decl. arcs as above described for transit No. 7695, I determine a meridian at the same station at 8 hrs. 10 m., a.m., l.m.t.; the meridian thus determined coincides with the meridian determined by Polaris observation.

NOTE:- At noon, ~~at noon~~, I set off $19^{\circ} 48\frac{1}{2}' N.$ on the decl. arcs of both transits, and observe the sun on the meridian, the resulting lats. with both transits is $35^{\circ} 35\frac{1}{2}' N.$, which is only $\frac{1}{2}'$ less than the correct lat.

At 3 hrs. 58 m., p.m., l.m.t., I set off $35^{\circ} 36' N.$ on the lat. arc; $19^{\circ} 49' N.$ on the decl. arc; and determine a meridian with transit No. 7695. The line thus determined brs. $\frac{1}{2}' E.$ of the meridian determined by Polaris observation.

Using the same setting for the Lat. and decl. arc, I determine a meridian with transit No. 8541 at the same station at 4 hrs. 5 m., p.m., l.m.t. The meridian thus determined coincides with the meridian given by observations on Polaris.

From these observations, I conclude that the adjustments of the solars are satisfactory.

May 19, 1913.

May 20, 1913: At 9 hrs. 30 m. a.m., l.m.t., I set off $35^{\circ} 30\frac{1}{2}' N.$ on the lat. arc; $19^{\circ} 58' N.$ on the decl. arc; and determine a meridian with the solar at the old standard cor. of Tps. 25 N., Rs. 16 and 17 W., which is an iron post, 3 ins. in diam., 12 ins. above ground, marked and witnessed as described by the Surveyor General.

Thence I run West on a random line, along the S. bdy. of sec. 36.

40.00 Set temp. $\frac{1}{4}$ sec. cor. Search for old cor., but find no traces of it.

80.00 Set temp. cor. to secs. 35 and 36. From this point, the old standard cor. of secs. 35 and 36, brs. N. $44^{\circ} 44' W.$, 38.68 chs. dist.

Resurvey of The 6th Standard Parallel North through R17W.

Chains.

	<p>This ^{OLD STD.} cor. is a stake, $1\frac{1}{2}$ ins. square, 2 ft. long, marked TXXVN RXVIIW SXXXVI SC on NE. and SXXXV on NW., set in a mound of stone, with a mound of stone SW. of the cor.</p> <p>I return to the ^{STD.} cor. of Tps. 25 N., Rs. 16 and 17 W.</p> <p>Thence I run West, ^{ON TRUE LINE} on S. bdy of sec. 36.</p> <p>Over level land.</p> <p>Difference bet. measurements, of 40.00 chs. by two sets of chainmen is 3 lks.; position of middle point</p> <p>By 1st set 39.98$\frac{1}{2}$ chs.</p> <p>By 2nd set 40.01$\frac{1}{2}$ chs.; the mean of which is</p>
40.00	<p>Set an iron post, 3 ft. long, 1 in. ^{INDIAN} diam, 26 ins. in the ground, for ^{REESTAB. STD.} a sec. cor., marked on brass cap, 1913; $\frac{1}{4}$S36 in N. half;</p> <p>Dig pits, 18 X 18 X 12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, 3$\frac{1}{2}$ ft. base, 1$\frac{1}{2}$ ft. high, N. of cor. <i>No bearing trees within limits.</i></p>
47.15	Trail, brs. NE. and SW.
50.55	Trail, brs. NE. and SW.
54.50	Road, Gold Basin to Kingman, brs. NW. and SE.
67.00	Wash, 60 lks. wide, course NE.
79.50	Wash, 40 lks. wide, course NE.
	<p>Differenece bet. measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point,</p> <p>By 1st set, 79.98 chs.</p> <p>By 2nd set, 80.02 chs.; the mean of which is</p>
80.00	<p>Set an iron post, 3 ft. long, 3 ins. ^{INDIAN} diam, 24 ins. in the ground, for ^{REESTAB.} a standard cor. of secs. 35 and 36, marked on brass cap</p> <p>T25N R17W in N. half;</p> <p>S35 in NW., and</p> <p>S36 in NE. quadrant;</p> <p>And raise a mound of stone, 2 ft. base, 1$\frac{1}{2}$ ft. high, N. of cor. Pits impracticable. <i>No bearing trees within limits.</i></p> <p>Land, level and rolling.</p> <p>Soil, sandy, 2nd and 3rd rate.</p> <p>No timber.</p> <p>Undergrowth, sage brush and cacti.</p>
	<p>West, ^{ON TRUE LINE} along S. bdy. of sec. 35.</p> <p>Over rolling land, through scattering undergrowth.</p>
22.00	Trail, brs. NE. and SW.
27.70	Road, brs. NE. and SW. Cane Springs to Thompson's Ranch.
	<p>Difference bet. measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point</p> <p>By 1st set, 39.98 chs.;</p> <p>By 2nd set, 40.02 chs.; the mean of which is</p>
40.00	<p>Set an iron post, 3 ft. long, 1 in. ^{INDIAN} diam, 26 ins. in the ground, for ^{REESTAB. STD.} a sec. cor., marked on brass cap, 1913; $\frac{1}{4}$S35 in N. half;</p> <p>And raise a mound of stone, 2 ft. base, 1$\frac{1}{2}$ ft. high, N. of cor. Pits impracticable. <i>No bearing trees within limits.</i></p> <p>Thence over rolling broken, land.</p> <p>Difference bet. measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point</p> <p>By 1st set, 79.97 chs.</p> <p>By 2nd set, 80.03 chs.; the mean of which is</p>
80.00	<p>Set an iron post, 3 ft. long, 3 ins. ^{INDIAN} diam, 24 ins. in the ground, for ^{REESTAB.} a standard cor. of secs. 34 and 35, marked on brass cap, 1913;</p> <p>T25N R17W in N. half;</p> <p>S34 in NW., and</p> <p>S35 in NE. quadrant;</p>

Resurvey of The 6th Standard Parallel N. through R. 17 W.

Chains.

And raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable. No bearing trees within limits. Land, rolling. Soil, sandy, 2nd and 3rd rate. No timber. Undergrowth, sagebrush, mesquite and cacti. W.B.K. May 20, 1913.

H.N.B.

May 21, 1913: At 9 hrs. a.m., l.m.t., I set off 35° 30 1/2' N on the lat. arc; 20° 10' N. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 34 and 35, above described

Thence I run

West, ^{ON TRUE LINE} on the S. bdy. of sec. 34.

Across low ridge, brs. N. and S.

1.00 Pass in ridge. Desc. slight W. slope.
5.00 Foot of desc. Enter wash, 2 ft. deep, course NE.
9.00 Leave wash, course NE. Thence across overflow land.
26.00 Leave overflow land, asc. SE. slope, 25 ft.
28.00 Top of asc.; thence over rolling land.
40.00 Difference bet. measurements, of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 39.99 chs. By 2nd set, 40.01 chs.; the mean of which is Set an iron post, 3 ft. long, 1 in. diam, 26 ins. in the ground, for ^{REESTAB. STD.} sec. cor., marked on brass cap, 1913; S34 in N. half;

And raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable. No bearing trees within limits.

Asc. rocky NE slope, 70 ft.

48.00 Low ridge, brs. NW. and SW. Desc. SW. slope, 50 ft.

56.00 Wash, 80 fks. wide, 2 ft. deep, course SE.

Thence over level land, through mesquite undergrowth.

78.00 Enter wash, course N. 80 E.

Difference bet. measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point, By 1st set, 79.98 chs.

By 2nd set, 80.02 chs.; the mean of which is

80.00 The point for standard cor. of secs. 33 and 34 falls in a wash. In order to set the corner in a safe place, I run

N. 0 2' W., 1.25 chs.

Set an iron post, 3 ft. long, 3 ins. diam, 24 ins. in the ground, for ^{WITNESS COR.} cor. of secs. 33 and 34, marked on brass cap, 1913;

WC; S. of centre;

T25N R17W. in N. half;

S33 in NW. and

S34 in NE. quadrant;

And raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable. No bearing trees within limits.

Land, rolling and hilly.

Soil, sandy, 2nd and 3rd rate; rocky on hill.

No timber.

Undergrowth, sagebrush, mesquite ~~and cacti~~, and catclaw.

West, ^{ON TRUE LINE} on the S. bdy. of sec. 33.

Over level land, through scattering undergrowth.

6.00 Leave wash, flows from NW.

10.00 Wash, 15 lks. wide, course NE. Leave cat claw undergrowth, brs. N. and S.

19.72 Thompson's Ranch House brs. S. 20° 15' E.

Difference bet. measurements of 40.00 chs. by two sets of chainmen is 3 lks.; position of middle point

By 1st Set 39.98 1/2 chs.

By 2nd Set 40.01 1/2 chs.; the mean of which is

Resurvey of the 6th Standard Parallel North through R. 17 W.

42

chains.

40.00 Set an iron post, 3 ft. long, 1 in. dia., 2 ins. in the ground for reestablishment of sec. cor., marked on brass cap, 1913; $\frac{1}{4}$ S 33 in N. half; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable. No bearing trees within limits.

42.10 Wood road, brs. SE. and NW.

55.70 Asc. NE. slope, 35 ft.

60.00 Granite boulders, br. NE. and SW. Thence along, ridge, brs. N. 75° W. and S. 75° E.

76.00 Asc. SE. slope, 30 ft.
Difference bet. measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point,
By 1st set, 80.02 chs.
By 2nd set, 79.98 chs.; the mean of which is

80.00 Set an iron post, 3 ft. long, 3 ins. diam, 24 ins. in the ground, for ^{REESTAB.} standard cor. of secs. 32 and 33, marked on brass cap, 1913;
T25N R17W in N. half;
S32 in NW. and
S33 in NE. quadrant;
And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor. Pits impracticable. No bearing trees within limits.
Land, level and rolling.
Soil, sandy, 2nd rate; and rocky, 4th rate.
No timber.
Undergrowth, catclaw, mesquite, and sagebrush.

NOTE: At this corner, I set off $20^{\circ} 11\frac{1}{2}'$ N. on the decl. arc; and at noon, I observe the sun on the meridian, the resulting lat. is $35^{\circ} 30\frac{1}{2}'$ N., which is slightly less than the correct lat.

19.00 West, ^{ON TRUE LINE} on S. bdy. sec. 32.
Over rolling land, through scattering undergrowth.
Thompson's Ranch House brs. S. $44^{\circ} 41'$ E.
Difference bet. measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point
By 1st set, 39.98 chs.
By 2nd set, 40.02 chs.; the mean of which is

40.00 Set an iron post, 3 ft. long, 1 in. diam, 26 ins. in the ground, for ^{REESTAB. STD.} sec. cor., marked on brass cap, 1913;
S32 in N. half;
And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable. No bearing trees within limits.

52.00 Wash, 40 lks. wide, 11 ft. deep, course SE. Asc. rolling SE. slope, 50 ft.

59.30 Wash, 60 lks. wide, 6 ft. deep, course SE.

63.30 Wash, 80 lks. wide, 8 ft. deep, course SE.

80.00 Difference bet. measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point
By 1st set, 79.97 chs.
By 2nd set, 80.03 chs.; the mean of which is

80.00 Set an iron post, 3 ft. long, 3 ins. diam, 24 ins. in the ground, for ^{REESTAB.} standard cor. of secs. 31 and 32, marked on brass cap, 1913;
T25N R17W in N. half;
S31 in NW. and
S32 in NE. quadrant;
And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable. No bearing trees within limits.
Land, rolling.
Soil, rocky 4th rate, granite formation.
No timber.
Undergrowth, scrub oak and sagebrush.

14.65 West, ^{ON TRUE LINE} on S. bdy. of sec. 31.
Asc. SE. slope, 225 ft., through scattering undergrowth.
Head of gulch, course NE. Enter scattering timber, brs. NW. and SE.

Resurvey of The 6th Standard Parallel North through R. 17 W.

Chains.

19.00 Solid rock gulch, 8 lks. wide, course NE.

33.00 Top of asc.; desc. NW. slope, 60 ft.

39.70 Gulch, 20 lks. wide, course NE. Asc. SE. slope, 120 ft. Difference bet. measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point
By 1st set, 39.98 chs.
By 2nd set, 40.02 chs.; the mean of which is

40.00 Set an iron post, 3 f. long, 1 in. diam, 26 ins. in the ground, for ^{REESTAB. STB.} $\frac{1}{4}$ sec. cor., marked on brass cap, 1913; $\frac{1}{4}$ S31 E. N. half;
And raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable. *No bearing trees within limits.*

48.00 Top of asc.; thence along S. slope.

50.50 Gulch, 3 lks. wide, course S. Spring in canyon brs. N. about 10 chs. dist.

52.00 Desc. W. slope, 60 ft.

56.00 Gulch, 5 lks. wide, course N.

60.00 Gulch, 8 lks. wide, course NE.

May 21, 1913.

May 22, 1913.

At this point, I set off 35° 30 1/2' N. on the plat. arc; 20° 22 1/2' N. on the decl. arc; and determine a meridian with the solar at 10 hrs. 5 m. a.m., l.m.t.

Thence I continue

West ^{along} ~~along~~ S. bdy. sec. 31.

Over rolling land, through scattering timber and dense undergrowth.

68.15 Gulch, 8 lks. wide, course NE.

68.50 Gulch, 10 lks. wide, course NE.

78.75 Gulch, 15 lks. wide, course NE.

Difference bet. measurements of 79.25 chs. by two sets of chainmen is 6 lks.; position of middle point
By 1st set, 79.22 chs.

By 2nd set, 79.28 chs.; the mean of which is

79.25 Intersect the E. bdy. of T24N, R. 18 W. 29.80 chs. S. of the ^{old} closing cor. of Tps. 24 N., Rs. 17 and 18 W., which is a mound of stone, without any marked stone. Not wishing to accept this as the closing cor. without further evidence, I run E. from this mound of stone, and at 7 chs. I find another mound of stone, which was the ^{old} standard $\frac{1}{4}$ sec. cor. of sec. 31. I could find no trace of any marks on any of the stones.

At the point of intersection, I set an iron post, 3 ft. long, 3 ins. diam, 24 ins. in the ground, for closing cor. to Tps. 24 N., R. 17 W., marked on brass cap, CC, W. of center; 1913;

R17W in E. and

T25N, S36, S1, T24N, R18W in W. half;

T25N S31 in NE., and

T24N, S6 in SE. quadrant; from which

A pinion limb, 8 ins. diam, brs. S. 25° E., 107 lks. dist., marked T24N R17W S6 BT.

Land, hilly.

Soil, rocky 4th rate.

Timber, pinion.

Undergrowth, scrub oak.

H.N.B.
May 22, 1913.

General Description.

For the first three miles, line runs along just south, and on South slope of granite mountains. A rolling plain stretches two or three miles to the south, terminating in a ridge of hills and mountains, which br. E. and W. The fourth mile extends across a valley, which slopes

toward the east. The fifth mile ascends a canyon between mountains on the north and south, and the last mile is on the north slope of hills, the country north and south being very mountainous. The soil on the plains is sandy, and covered with a profuse growth of cacti. Irrigation would be required to raise crops.

William B. Kimmel,
U. S. Surveyor.

Gen. Bradstreet
U. S. Lieutenant

BOUNDARIES E 1/2 OF T.25 N.-R.17 W.
 Latitudes, Departures and Closing Errors.

BOOK 2693
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LINE DESIGNATED	TRUE BEARING	DISTANCE	Latitude		Departure	
			N. CHAINS.	S.	E. CHAINS	W.
E 1/2 of South bdy (4th Standard Parallel)	West	240.00				240.00
W. bdy sec. 34	N. 0 2' W.	80.00	80.00			.05
W. bdy sec. 27	N. 0 2' W.	80.00	80.00			.05
W. bdy sec. 22	N. 0 2' W.	80.00	80.00			.05
W. bdy sec. 15	N. 0 2' W.	80.00	80.00			.05
W. bdy sec. 10	N. 0 2' W.	80.00	80.00			.05
W. bdy sec. 3	N. 0 6' E'	80.28	80.28		.14	
E 1/2 of North bdy	East	240.00			240.00	
East boundary	South	480.00		480.00		
Convergency						.25
Totals.			480.28	480.00	240.39	240.25
			480.00		240.25	
Error in Lat.			.28		.14	Error Dep.

William B. Kimmel,
 U. S. Surveyor
Gen. Bredt street
 U. S. Transitman.

CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability,
H. N. BRADSTREET, U. S. TRANSITMAN
 and *WILLIAM B. KIMMEL*, U. S. Surveyor, during the periods and in the capacities

stated opposite our several signatures, ~~in resurveying~~ ^{resurveying} all those parts or portions of *the South & West*
bdts. of T. 23 N.-R. 5 W., the East bdy. of ^{Fractional} T. 22 N.-R. 6 W., the North bdy. of
T. 21 N.-R. 8 W., the First Guide Meridian West through Tps 27 N. between
Ranges 4 & 5 W. and the Second Guide Meridian West thru T. 21 N. between
Ranges 8 and 9 W. ~~and the First Guide Meridian West thru T. 25 N. and the Fifth Standard Parallel thru Ranges 8 and 9 W.~~ and in
retracing all those parts or portions of the East bdy. of ^{Fractional} T. 22 N.-R. 6 W., and the First Guide
Meridian West thru T. 25 N. and the Fifth Standard Parallel thru Ranges 8 and 9 W.
 of the *Gila and Salt River Base* and Meridian, in the State of *Arizona*

which are represented in the foregoing field notes as having been executed by ~~them~~ ^{them}, and under ~~the~~ ^{their} direc-
 tion; and that said ~~surveys~~ ^{and retracements} have been, in all respects, to the best of our knowledge and belief, well and
 faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
<i>Gas. W. Le Gros</i>	Nov. 29, 1912.	Dec. 31, 1912.	Axman
<i>John T. Carmody</i>	Nov. 29, 1912.	Jan. 31, 1913.	Axman
<i>W. J. Tawesnes</i>	Nov. 29, 1912.	Jan. 31, 1913.	Chainman
<i>B. E. Gilpin</i>	Nov. 29, 1912.	Jan. 31, 1913.	Chainman
<i>Mary Nye</i>	Nov. 29, 1912.	Feb. 7, 1913.	Moundman
<i>Alonzo W. Whitlock</i>	Nov. 29, 1912.	Feb. 13, 1913.	Flagman
<i>William J. Clark</i>	Feb. 19, 1913.	March 15, 1913.	Axman
<i>Charles R. Smith</i>	Dec. 6, 1912.	March 16, 1913.	Flagman
<i>Joseph W. Fadden</i>	Feb. 11, 1913.	March 16, 1913.	Moundman
<i>Heath Sebern</i>	Nov. 27, 1912.	March 23, 1913.	Chainman
<i>Orvin R. Beckner</i>	Feb. 18, 1913.	March 28, 1913.	Axman, Flagman, Chainman
<i>Orvin M. Fife</i>	March 18, 1913.	March 28, 1913.	Moundman
<i>Orvin M. Fife</i>	Jan. 2, 1913.	March 28, 1913.	Axman
<i>Orvin M. Fife</i>	Jan. 2, 1913.	March 28, 1913.	Chainman
<i>Harvey J. Butler</i>	Feb. 2, 1913.	March 28, 1913.	Flagman, Moundman, Chainman
<i>Clifford Helms</i>	Feb. 6, 1913.	March 28, 1913.	Axman, Flagman, Chainman

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

William B. Kimmel
 U. S. Surveyor.

CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability,
H. N. BRADSTREET, U.S. Transitman
 and *WILLIAM B. KIMMEL*, U. S. Surveyor, during the periods and in the capacities
 stated opposite our several signatures, in ^{re} surveying all those parts or portions of *the*
Sixth Standard Parallel North Thru Range 17 West

of the *Gila and Salt River Base and* Meridian, in the State of *Arizona*
 which are represented in the foregoing field notes as having been executed by ~~him~~ ^{them}, and under ~~his~~ ^{their} direc-
 tion; and that said ^{re} survey has been, in all respects, to the best of our knowledge and belief, well and
 faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
<i>Clyde Stewart</i>	March 25, 1913.	March 31, 1913.	Moundman
<i>Joseph L. Baxter</i>	March 19, 1913.	April 29, 1913.	Axman, Chainman
<i>Ross D. Caybater</i>	April 11, 1913.	May 10, 1913.	Axman, Chainman
<i>Frank Pierce</i>	March 25, 1913.	May 12, 1913.	Axman, Chainman
<i>John Shorsman</i>	March 18, 1913.	May 16, 1913.	Flagman
<i>Ralph Otege</i>	May 21, 1913.	May 26, 1913.	Flagman
<i>Thomas West</i>	April 4, 1913.	May 18, 1913.	Moundman
<i>Hal Grimsman</i>	April 4, 1913.	May 26, 1913.	Chainman
<i>W. M. Tompkins</i>	April 4, 1913.	May 26, 1913.	Moundman Flagman
<i>Wesley Mullenax</i>	April 4, 1913.	May 26, 1913.	Chainman
<i>E. L. Mosher</i>	May 20, 1913.	May 26, 1913.	Chainman
<i>Samuel H. Palar</i>	Nov. 26, 1912.	May 26, 1913.	Chainman

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

William B. Kimmel.

U. S. Surveyor.

FINAL OATH OF UNITED STATES SURVEYOR AND TRANSITMAN

We H. N. BRADSTREET, U.S. Transitman and WILLIAM B. KIMMEL, U. S. Surveyor, do solemnly swear that, in pursuance

of special instructions received from the U. S. Surveyor General for Arizona for Group 24 bearing date of the 18 day of October, 1912, we have well, faithfully, and truly,

in ~~my own~~ ^{our own} proper persons and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, ^{RE} surveyed, ^{OR RETRACED} all those parts or portions of the South and West bdrs. of T. 23 N. R. 5 W., the East boundary of fractional T. 22 N., R. 6 W., the North bdy. of T. 21 N. R. 8 W., the First Guide Meridian West thru Tps. 2.5 and 2.7 North, the Second Guide Meridian West thru T. 21 N., the Fifth Standard Parallel North in Rs. 8 and 9 West and the Sixth Standard Parallel North in Range 17 West of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in

the foregoing field notes as having been executed by us, and under ~~my~~ ^{our} direction; and ~~we~~ ^{we} do further solemnly swear that all the corners of said ^{re} surveys, ^{and retracements} have been established, ^{or reestablished} and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for Arizona for Group 24 and in the specific manner described in the field notes, and that the foregoing are the original field notes of such ^{re} surveys ^{and retracements}.

William B. Kimmel

U. S. Surveyor.

Subscribed by said H. N. Bradstreet and sworn to before me }
this 18 day of October, 1912

H. N. Bradstreet

U. S. Transitman

Frank S. Ingalls

SURVEYOR-GENERAL OF ARIZONA



Subscribed by said William B. Kimmel U. S. Surveyor,
this 21 day of July, 1914.

APPROVAL.

Franklin J. Torrance

U. S. Commissioner District of Arizona.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix Arizona, 1914

The foregoing field notes of the ^{re} survey of the South boundary and part of West bdy. of T. 23 N. R. 5 W., part of East boundary of frac. T. 22 N. R. 6 W., part of the North bdy. of T. 21 N. R. 8 W., the 1st Guide Meridian West thru part of T. 27 N., the 2nd Guide Meridian West thru part of T. 21 N., and the 6th Standard Parallel North thru R. 17 W., and of the RETRACEMENT of part of East bdy. of frac. T. 22 N. R. 6 W., the 1st Guide Meridian West thru T. 25 N. and the 5th Standard Parallel North, thru parts of Rs. 8 and 9 W. of the Gila & Salt River Base & Meridian, Arizona executed by WILLIAM B. KIMMEL, U.S. Surveyor & H. N. BRADSTREET, U.S. Transitman under ~~his~~ special instructions dated October 18, 1912 For Group 24, ~~not~~ having been critically examined, and the necessary corrections and explanations made, the said field notes, and the ^{and retracements} resurveys, they describe, are hereby approved.

Frank S. Ingalls

U. S. Surveyor General.
of Arizona.

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

FOR FINAL OATH OF UNITED STATES SURVEYOR.
(A.C. HORTON, Jr. in the execution of corrections to the original
survey of the South boundary of T. 22 N. R. 8 W. see Book "U" Group 15)

I, _____, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for _____ bearing date of the _____ day of _____, 191____, 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 _____ of the _____ Meridian, in the State of _____, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

U. S. Surveyor.

Subscribed by said _____, and sworn to before me }
this _____ day of _____, 191____ }

SEAL

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix Arizona OCT 5 _____, 1914

The foregoing ~~field notes of the survey of~~ corrections in the field notes of the Resurvey of part of the North bdy. of Township No. 21 North, Range No. 8 West of the Gila and Salt River Base and Meridian, in the State of Arizona, as indicated by red ink letters and figures therein

executed by A. C. Horton, Jr., U.S. Surveyor under his special instructions dated February 11, 1914, 191____, having been critically examined, and the necessary corrections and explanations made, the said ~~field notes, and the~~ corrective surveys they describe, are hereby approved.

Frank S. Ingalls

U. S. Surveyor General.
of Arizona

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

U. S. Surveyor General.