Book "A" 4—679.

Ordered filed Sept. ... accepted April 2 - 1907 221

2128

BOOK 2128

FIELD NOTES

2128

2128

OF THE SURVEY OF THE

Bdys Tps. 15. 16. 17 & 18 N. R 21 W and

Bdys Tps. 17. 18 & 19 N. R 22 W

2128

Of the Gila & Salt River Meridian,

AS SURVEYED BY

John J. Fisher, United States Deputy Surveyor,

Under his Contract No. 128, dated March 14th, 1905

Survey commenced April 13th, 1905

Survey completed Jan 14th, 1906

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BOOK 2128

NAMES AND DUTIES OF ASSISTANTS.

Henry R. O'Connor Chainman & Rodman

Geo. W. Leesley Chainman & Rodman

J. J. Murphy Axman

J. H. Rickells Axman

William Rodgers Axman

Jonny Angus Flagman

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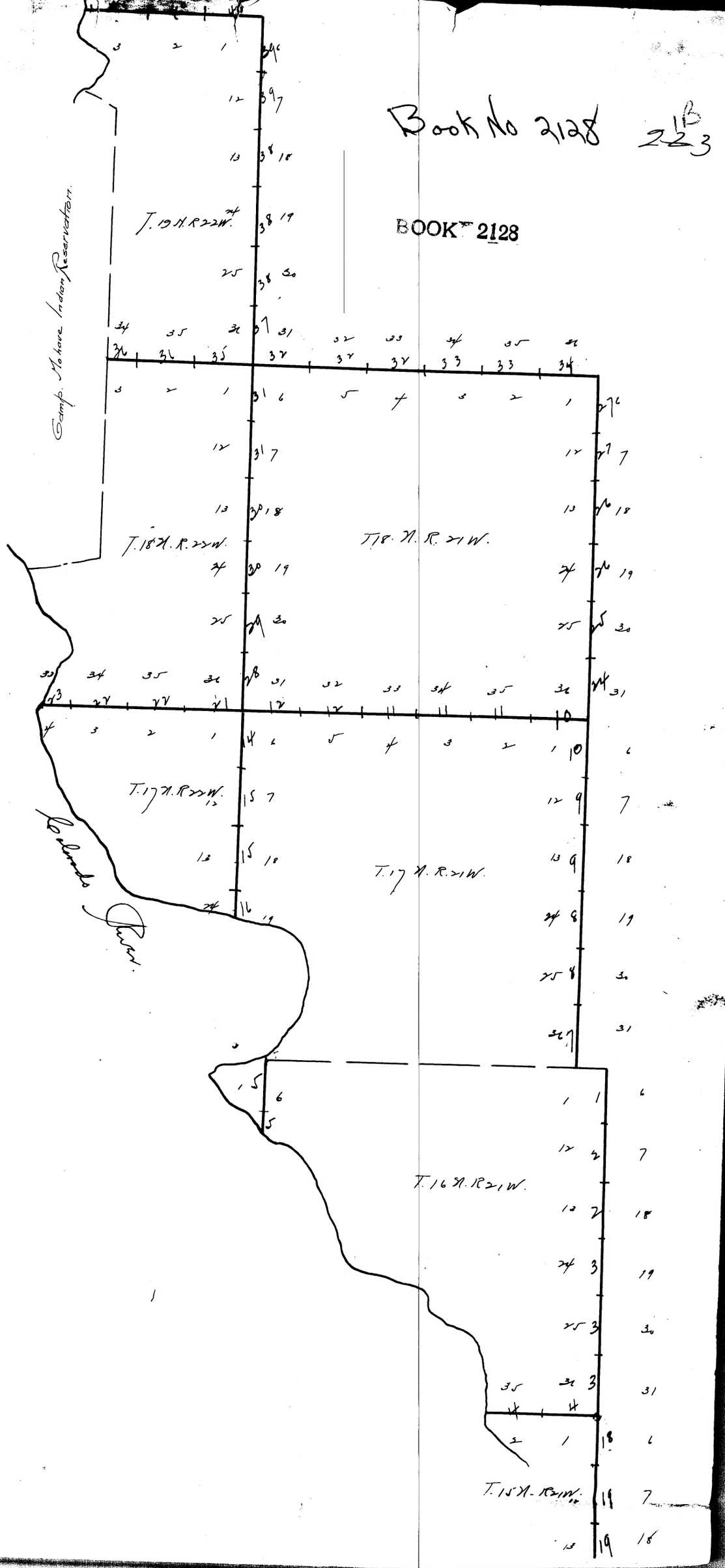
Book No 2128
BOOK 2128
Camp Mohave Indian Reservation
T. 19 N. R. 22 W.
T. 18 N. R. 22 W.
T. 18 N. R. 21 W.
T. 17 N. R. 22 W.
T. 17 N. R. 21 W.
T. 16 N. R. 21 W.
T. 15 N. R. 21 W.
Colorado River

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BOOK 2128

PRELIMINARY OATHS OF ASSISTANTS.

WE, Henry R O'Connor and Geo W Cassidy do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of Bdys Tps 15.16.17 & 18 N R 21 W and Tps 17.18 & 19 N R 22 W

Henry R O'Connor, Chainman.

Geo. W. Cassidy, Chainman.

Subscribed and sworn to before me this 13th day of April, 1905

SEAL

My commission expires ... 9 1908

J. J. Fisher
Notary Public

WE, Henry R O'Connor and Geo W Cassidy do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of Bdys Tps 15.16.17 & 18 N R 21 W and Tps. 17.18.19 N R 22 W

Henry R O'Connor, Moundman.

Geo. W. Cassidy, Moundman.

Subscribed and sworn to before me this 13th day of April, 1905

SEAL

My commission expires ... 9 1908

J. J. Fisher
Notary Public

WE, J. J. Murphy and J. W. Ricketts & William Rodgers do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of Bdys Tps 15.16.17 & 18 N R 21 W and Tps 17.18 & 19 N R 22 W

J. J. Murphy, Axman.

J. W. Ricketts, Axman.

Subscribed and sworn to before me this 13th day of April, 1905

William Rodgers axman

SEAL

My commission expires ... 9 1908

J. J. Fisher
Notary Public

I, Irving V. Angur, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of Bdys. Tps. 15.16.17 & 18 N R 21 W & Tps. 17.18 & 19 N R 22 W

Irving V. Angur, Flagman.

Subscribed and sworn to before me this 13th day of April, 1905

SEAL

My commission expires ... 9 1908

J. J. Fisher
Notary Public

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Chains.

April 13, 1905.

I begin at a point 72 lks. E. of Standard 1/4 Sec.Cor. on S. bdy. Sec.31, Tp.17 N.R.20W. where I set a lava stone 24x18x14 ins. 20 ins.in ground for closing cor. T16N.Rs.20 & 21 W. marked C.C.16 N.on S. 20 W.on E. and 21 W. on W.faces, with 6 grooves on E.W.& S.faces, raised a mound of stones 2 ft.base 1-1/2 ft.high S.of cor. No trees, pits impracticable.

Survey commenced April 13, 1905, and executed with a W.& L.E.Gurley Light Mountain Transit, not numbered, with a Smith Solar Attachment, The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, whih is also the least count of the verniers of the latitude and declination arc.

The instrument was examined, tested on the true meridian at Phoenix, found correct, and was approved by the Surveyor General for Arizona, March 15, 1905.

I examined the adjustments of the transit, and correct the level and collimation errors; then to test the solar apparatus by comparing its indication, resulting from solar observation made during a. m. and p. m. hours,with a true meridian determined by observations on Polaris, I proceed as follows:- 114° 26' 17"

At 4 h.p.m.l.m.t. lat.34°44'31-2/10"N., long.~~114°25'41"~~ W., I set off 34°44-5/10'N on the lat.arc, 9°6'N.on the decl.arc and determine with the solar a true meridian and mark a point thereof on a stone set firmly in the ground 5 chs.N.of the cor.

At ~~5h.59.6~~ 5h. 55m. m.p.m.l.m.t. by my watch which has correct time, I observe Polaris at Western elongation in accordance with Manual of Instructions, and mark a point on the line thus determined on a plug driven into the ground 5 chs.N.of my station.

April 13, 1905.

April 14. at 7 h. 14 m. a.m.l.m.t. I lay off the azimuth of Polaris 1°28'W to the E. and mark the true meridian thus determined by cutting a groove in the stone set April 13, on which the true meridian falls 0.2 ins. W.of the mark determined by the solar.

At 7h.30m.a.m.l.m.t. I set off 34°44.5'N on the lat.arc; 9°20'N.on the decl.arc; and mark a point on the true meridian determined by the solar, by a cross on the stone already set 5 chs.N. of cor., this mark falls 0.15 ins. W. of the true meridian established by Poparis observation.

The solar apparatus by p.m. and a.m. observation defines position of the true meridian respectively about 0'11" ~~xxx~~. E. and 0'8" W.of the true meridian established by Polaris observation; therefore I conclude the adjustments of the instrument are satisfactory.

The magnetic bearing of the said true meridian is 15° 5'W. which gives the mag.decl.15°5'E.

Thence I run,
S.between Secs.1 and 6,
Descend over rocky mountaineous country,

17.50 Cross dry creek, 17 lks.wide, course S.W.
Ascend

23.50 Summit of ridge, N.E. and S.W. ~~course~~,
Descend

29.50 Cross dry creek, 10 lks.wide, course S.W.
Ascend

40.00 Set a lava stone 18x10x7 ins. ~~14~~ 12 ins.in ground for 1/4 Sec.cor. marked 1/4 on W. face, raised a mound of stones 2 ft. base 1.5 ft.high W.of cor.
No trees, pits impracticable.

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East Boundary Township 16 North, Range 21 West.

Chains	
41.00	Top of Ridge, course N.E. and S.W.
	Descend,
46.00	Cross dry creek, 75 lks.wide, course S.W.
	Ascend
80.00	Set a lava stone 20x8x8 ins. ~~16~~ 15 ins.in ground for cor. Secs. 1,6,7, and 12, marked with 1 notch on N. and 5 notches on S. faces, raised a mound of stones 2 ft. base, 1.5 ft. high W. of cor.
√	No trees, pits impracticable.
	Soil rocky, fourth rate.
	Land rough, rolling, mountaineous.
	Mountaineous land 80.00 chs.

	South between Secs. 7 and 12.
	Descend over rolling broken country,
6.50	Cross gulch 20 lks.wide, course S.W.
8.75	Cross gulch 15 lks.wide, course S.W.
13.50	Cross gulch 20 lks.wide, course S.W.
19.00	Cross gulch 30 lks.wide, course S.W.
24.50	Cross gulch 20 lks.wide, course S.W.
28.00	Cross gulch 50 lks.wide, course S.W.
37.25	Cross gulch 40 lks.wide, course S.W.
40.00	Set a lava stone 18x13x7 ins ~~14~~ 12 ins.in ground for 1/4 Sec.cor. marked 1/4 on W. face, raised a mound of stones 2 ft. base, 1.5 ft. high, W. of cor.
√	No trees, pits impracticable.
41.00	Cross gulch 10 lks.wide, course W.
47.50	Cross dry creek, 75 lks.wide, course N.W.
	Ascend
65.00	Summit of ridge, course E. and W.
	Descend
72.50	Cross dry creek 30 lks.wide, course S.W. Ascend
80.00	Set a lava stone 20x10x10 ins. ~~16~~ 15 ins.in ground for cor. Secs.7, 12, 13 and 18, marked 2 notches on N. and 4 notches on S. faces, raised a mound of stones 2 ft. base, 1.5 ft. high W. of cor.
√	No trees, pits impracticable.
	Formation volcanic.
	Soil rocky, fourth rate.
	Land rough, broken, rolling, mountaineous.
	Mountaineous land 80.00 chs.

	South bet. secs. 13 and 18. Descend
3.00	Cross gulch 30 lks.wide, course S.W.
6.50	Cross gulch 30 lks.wide, course S.W.
12.50	Cross canon 40 lks.wide, course S.W.
18.75	N. edge of canon, course S.W.
25.00	Bottom of canon, course S.W.
	Ascend
31.75	S. edge of canon, course S.W.
40.00	Set a lava stone 16x10x8 ins. ~~12~~ 11 ins.in ground for 1/4 Sec.cor. marked 1/4 on W. face, raised a mound of stones 2 ft. base, 1.5 ft. high, W. of cor.
√	No trees, pits impracticable.
80.00	Top of ridge, course E. and S.W.
	Set a lava stone 24x14x12 ins. ~~20~~ 18 ins.in ground for cor. Secs.13, 18, 19 and 24 marked 3 grooves on N. and 3 grooves on S. faces, dig pits 18x18x12 ins. in each sec. 5.5 ft.dist. and raised a mound of earth 4 ft. base 2 ft. high W. of cor.
√	No trees
	Soil gravelly, third rate
	Land rolling mountaineous
	Mountaineous land 80.00 chs.

April 14. 1905

East Boundary Township 16 North, Range 21 West.

Chains.	
	April 15. at 7h.a.m.l.m.t. I set off 34° 42' N on the lat. arc and 9° 41' N on the decl.arc and determine a true meridian with the solar at cor.Secs.13,18,19 and 24.
	Thence I run
	S.bet. Secs. 19 and 24 ~~over level land, slopping to W.~~ Descending
40.00	Set a lava stone 20x10x10 ins. ~~16~~ 15 ins.in ground for 1/4 Sec.cor. marked 1/4 on W. face, dug pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., raised a mound of earth 3.5 ft. base, 1.5 ft. high W. of cor.
	No trees
	Descend
56.50	Cross canon, 50 lks.wide, course S.E.
62.25	Cross canon 50 lks.wide, course S.W.
69.00	Cross canon 50 lks.wide, course S.W.
78.00	Bottom of Canon, 50 lks.wide, course W.
	Ascend
80.00	The point for cor.Secs. 19,24,25 and 30 falls on steep N. side of canon not suitable to establish a permanant corner, therefore at
81.00	Set a lava stone 20x10x8 ins. ~~16~~ 15 ins.in ground for W.C. cor. Secs.19,24,25 and 30, marked 4 grooves on N. and 2 grooves on S. faces and W.C. on W. face, raised a mound of stones 2 ft. base, 1.5 ft. high W. of cor.
	No trees, pits impracticable.
	Soil sandy loam and rocky; second and fourth rates
	Land level and mountaineous
	Mountaineous land 40.00 chs.

	April 15 at the above cor. I set off 9° 44½ N. on the decl.arc and at 12h.m.l.m.t. observed the sun on the meridian, the resulting lat. is 34°41' N which is about 32.6" less than the proper latitude.
	Thence I run from true corner point South between secs. 25-30
	Ascend
10.00	Top of ridge, course E. and W.
	Descend
19.00	Enter Sacramento Wash, course S.W.
33.00	Center of water-way, dry
39.00	Leave wash,
	Ascend
40.00	Set a lava stone 18x14x10 ins. ~~14~~ 12 ins.in ground for 1/4 Sec.cor. marked 1/4 on W. face, raised a mound of stones 2 ft. base 1.5 ft. high, W. of cor.
	Steel Rail-road bridge across Sacramento Wash bears E. 10 chs.
43.55	Cross S.F.P.Rail-road, course N.E. and S.W.
44.17	Cross telegraph line, course N.E. and S.W.
44.63	Cross telegraph line, course N.E. and S.W.
80.00	Set a lava stone 24x10x8 ins. ~~20~~ 18 ins.in ground for cor. Secs.25,30,31 and 36, marked 1 groove on S. and 5 grooves on N. faces, raises a mound of stones 2 ft. base, 1.5 ft. high, W. of cor.
	No trees, pits impracticable
	Soil gravelly, third rate
	Land mountaineous
	Mountaineous land 80 chs.

	South between Secs. 31 and 36 Ascending
40.00	Top of Ridge, course E. and W.
	Set a lava stone 18x12x10 ins. ~~14~~ 12 ins.in ground for 1/4 Sec.cor. marked 1/4 on W. face, raised a mound of stones 2 ft. base, 1.5 ft. high, W. of cor.
	No trees, pits impracticable.
	Descend
80.00	Set a granite stone 18x12x12 ins. ~~14~~ 12 ins.in ground for cor. Twps. 15 and 16 N. Rs. 20 and 21 W. marked 16 N. on N., 15 N. on S., 20 W. on E., and 21 W. on W. faces and 6 grooves on N.S,E.and W. faces, raised a mound of

East Boundary Township 16 North, Range 21 West.

Chains	
	stones 3 ft. base 2.5 ft. high, S. of cor.
	No trees, pits impracticable.
	Soil, granite formation, third class.
	Land rolling mountaineous
	Mountaineous land 80.00 chs.

South Boundary Township 16 North, Range 21 West

	April 16. At 7h.a.m.l.m.t. I set off 34° 39' on the lat. arc, 10°03' N.on the decl.arc and determine a true meridian with the solar at the cor.Tps.15 and 16 N. Rs.20 and 21 W.
	Thence I run
	West between Sec.1 and 36
	Descend
40.00	Set a lava stone 16x10x10 ins. 12 ins.in ground for 1/4 Sec.cor. marked 1/4 on N, face, raised a mound of stones 2.5'base, 1.5 ft. high N. of cor.
	No trees, pits impracticable.
51.00	Cross gulch 50 lks.wide, course S.W.
65.55	Cross gulch 20 lks.wide, course S.W., ascend,
78.00	Top of Ridge, course N.E. and S.W.
80.00	Set a lava stone 18x10x6 ins. 14 ins.in ground for cor. Secs.1,2,35 and 36, marked 1 groove on E. and 5 grooves on W. faces, raised mound of stones 2 ft. base, 1.5 ft.high W. of cor.
	No trees, pits impracticable.
	Soil rocky, third rate,
	Land rolling mountaineous, cut up by deep canons.
	Mountaineous land 80.00 chs.

	Thence I run
	West between Secs.2 and 35.
	Descend
11.00	Cross canon 150 lks.wide, course S.W.
	Ascend
14.50	Top of Ridge, course N.E. and S.W.
	Descend
17.50	Cross canon 20 lks.wide, course S.W.
	Ascend
27.00	Top of Ridge, course N.E. and S.W.
	Descend
33.50	Cross canon 50 lks.wide, course S.W.
	Ascend
40.00	Set a lava stone 18x8x8 ins. 12 ins.in ground for 1/4 Sec.cor. marked 1/4 on N. face, raised a mound of stones 2 ft. base, 1.5 ft. high, N. of cor.
	No trees, pits impracticable.
52.24	Top of ridge, course N.E. and S.W.
	Whence water tank at Mellen Station on S.F.P.Rail-road bears S.61°15'W. The E. end of bridge across Colorado River bears S.64°50'W. Descend.
56.90	Cross telegraph line, course N.E. and S.W.
57.63	Cross telegraph line, course N.E. and S.W.
58.35	Edge of mountains, drops rapidly into Mohave Valley.
58.68	Cross S.F.P.Railway, course N.E. and S.W.
61.35	Enter Mohave Valley, through dense undergrowth.
70.00	Cross wagon road, course N. and S.
71.25	Cross fence, course N. and S.
74.81	Whence pump station bears N.77°30'E. 7 chs.distant, house bears N.70°30'E. 6.50 chs.distant, house occupied by Indians bears N.66°E. 4 chs.distant, house occupied by Indians bears N.18°E. 8 chs.dist.
78.63	Set a pine post 6x6 ins.square 4 ft.long, 3 ft.in ground for meander cor.on bank of Colorado River, bank about 4 feet above water, post marked M.C.on W., T.16 N.S.35 on N. and T.15 N.S.2 on S.faces and

Chains	
	2 grooves and R.21 W.on E.face; dug pit 36x36x12 ins. 8 ft.E.of cor. and raised mound of earth 4 ft.base 2 ft.high E. of cor.
	No trees,
	Soil sandy loam and rocky, first and third rates,
	Land Mountaineous and level.
	Mountaineous land and land covered with dense undergrowth 78.63 chs.
	April 16. 1905
	West Fractional Boundary of Tp. 16 N., R. 21 West.
	May 1, 1905.
	At 6h.30m.a.m.l.m.t. I set off 34°44.5'N.on lat.arc and 15°1'N.on the decl.arc.and determine a true meridian at the meander cor.on Fourth Standard Parallel, S. boundary of Sec.31, T.17 N.R.21 W.
	Thence I run
	East on Fourth Standard Parallel
0.85	Where I set a Mesquite post 6 ins.sq. 4 ft.long, 3 ft. in ground for closing cor.of Tp.16 N.R.21 and 22 W. marked C.C.T.16 N.on S., R.22 W.S.1 on W. and R21 W. S.6 on E., with 6 grooves on E.S.& W.faces; dug pits 30x24x12 ins. across E.W. and S.lines 4 ft.E.& W. and 8 ft.S.of cor., raised mound of earth 5 ft.base, 2.5 ft.high S.of cor.
	No trees available.
	Thence I run
	South on Range line between Secs. 1 and 6, TP.16 N., Rs. 21 and 22 W. through Mesquite timber and dense undergrowth of Arrow-wood,
3.34	Cross road, course NW. and SE.
36.00	Cross road, course E. and W.
40.00	Set a Mesquite post 6 ins.sq.4 ft.long 3 ft.in ground for 1/4 Sec.cor. marked 1/4 S.6 on W.face, and 1 on E face
	Whence a Mesquite 10 ins.diam.bears N.35°E. 73 lks. dist. marked 1/4 S.6 B.T.
	A Mesquite 6 ins.diam.bears S.60°W. 197 lks.dist. marked 1/4 S.1 B.T.
80.00	Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for cor.Secs.1,6,7,12, marked T.16 N.S.6 on NE., R.21 W.S.7 on SE., S.12 on SW. and R.22 W.S.1 on NW. faces, with 1 groove on N. and 5 grooves on S. edges
	Whence a Mesquite 4 ins.diam.bears S.84°15'W. 11 lks. dist. marked T.16 N.R.22 W. S.12 B.T.
	A Mesquite 4 ins.diam.bears N.32°W.15 lks.dist.marked T.16 N.R.22 W.S.1 B.T.
	A Mesquite 4 ins.diam.bears N.70°45'E.26 lks.dist. marked T.16 N.R.21 W.S.6 B.T.
	A Mesquite 4 ins.diam.bears S.53°15'E. 11 lks.dist. marked T.16 N.R.21 W.S.7 B.T.
	Soil sandy loam, first rate,
	Land level, subject to overflow, covered with dense undergrowth of Arrow-wood and scattering Mesquite timber, 80.00 chs.
	Thence I run
	South between Secs.7 and 12 through dense undergrowth of Arrow-wood
9.02	Cross Indian fence, there being a small patch of cultivated land to E.of line, course of fence E. and W.
14.52	Cross Indian fence, course E. and W.
25.30	Intersect left bank of Colorado River, bank about 4 ft. high, where I set a pine post 8 x 10 ins.sq. 4 ft. long, 3 ft.in ground for meander cor.of Frac.Secs. 7 and 12, marked M.C.on S., R.22 W.S.12 on W., and

Chains

R.21 W.S.7 on E. and T.16 N.on N.faces, dig pit 36x36x12 ins. 8 ft.N., and raise a mound of earth 4 ft.base, 2 ft.high N.of cor.
No trees available.
Soil sandy loam, first rate,
Land level, subject to overflow, covered with scattering Mesquite timber and dense undergrowth of Arrowwood, 25.30 chs.

May 1, 1905.

Boundaries of T. 16 N., R. 21 W.,

Latitudes, departures and closing errors.

Line designated.	True brs.	Dist.	Latitudes. N.	Latitudes. S.	Departures. E.	Departures. W.
		Chs.	Chs.	Chs.	Chs.	Chs.
E.Bdy.	South	480.00		480.00		
S.Bdy.	West	158.63	374.70 375.03			158.63 320.80
Meanders River, W.Bdy.	North	105.30	105.30			320.44
4th.St.Par.N.	East	477.96			477.96	
Convergency			479.40		8.04	
Totals,			480.33 480.00		480.00 479.43	
			480.00	479.40	479.43	479.07 479.47
Errors in lat.			.33	Dep.60	.57	1.60

GENERAL DESCRIPTION.

This Township is rough and mountaineous in the Eastern half, the Western portion being bottom land of the Colorado River.

There is no water or timber in the mountaineous portion; the valley portion is well watered and covered with heavy Mesquite Timber and dense undergrowth.

John J Fisher
U.S.Deputy Surveyor.

East boundary of Tp.17 N., R. 21 West.

Chains	
	Survey commenced May 4, 1905 and executed with a W.& L. E.Gurley Light Mountain Transit, not numbered, with a Smith Solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arc.
	The instrument was examined and tested on the true meridian at Phoenix, found correct and was approved by the Surveyor General of Arizona March 15, 1905.
	I examined the adjustments of the transit and correct the level and collimation errors, then to test the solar apparatus by comparing its indication resulting from solar observations made during a.m. and p.m.hours with a true meridian by observations on Polaris, I proceed as follows:-
	May 4. At the Standard cor.of Tps. 17 N. Rs.20 and 21 W., lat.34°44'31.2"N., long. 114°26'47"W., at 5h.30m. p.m.l.m.t. I set off 34°45' N. on the lat.arc and 16°2'N.on the decl.arc and determine with the solar a true meridian and mark a point thereof on a stone set firmly in the ground 5 chs.N.of cor.
	May 4, 1905.

	May 5, 1905.
	At 4h.30m.a.m.by my watch which has correct l.m.t. I observed Polaris at Eastern elongation, in accordance with the Manual of instruction and mark a point on the line thus determined on a plug driven into the ground 5 chs.N.of my station.
	At 7h.a.m.l.m.t. I lay off the azimuth of Polaris 1° 28' to the W. and mark the true meridian thus determined by cutting a small groove in the stone set May 4 on which the true meridian falls 0.20 ins.W. of the mark determined by the solar.
	At 7h.30m.a.m.l.m.t. I set off 34°45'N.on the lat. arc and 16°11'N. on the decl.arc and mark a point in the true meridian determined with the solar by a cross on the stone already set 5 chs.N.of my station, this mark falls 0.25 ins.W.of the true meridian established by Polaris observation.
	The solar apparatus by p.m. and a.m. observations defines position for true meridians respectively about 0'11"E. and 0'13"W. of the true meridian established by Polaris observation; therefore I conclude thet the adjustments of the instrument are satisfactory.
	The magnetic bearing of the said true meridian is W 15° 5'W. which gives the mag.decl.15°5'E.

	Thence I run,
	North between Secs. 31 and 36, on E. boundary T.17.N. R.21 W., over rolling mountaineous country.
	Descend,
1.00	Cross gulch 75 lks.wide, course SW.
	Ascend,
15.00	Cross top of ridge, course E. and W.
	Descend,
28.00	Cross canon, 3 chs.wide, course NW.
	Ascend,
32.00	Cross top of ridge, course E. and W.
	Descend,
36.50	Cross canon, 50 lks.wide, course SW.
	Ascend,
40.00	Set a lava stone 18x12x10 ins. 12 ins.in ground for 1/4 Sec.cor.marked 1/4 on W.face, raised a mound of stones 2 ft.base, 1.5 ft.high W.of cor.
	No trees, pits impracticable.

Chains	
	Ascend,
50.00	Cross summit of ridge, course NE. and SW.
	Descend,
62.33	Cross canon, 30 lks.wide, course SW.
	Ascend,
75.00	Cross summit of ridge, course NE. and SW.
	Descend,
80.00	Set a lava stone 20x10x10 ins. ~~10~~ 15 ins.in ground, for cor. Secs.25,30,31,36, stone marked 1 groove on S. and 5 grooves on N.edges, raised a mound of stones 2 ft. base, 1.5 ft.high W. of cor.
	No trees, pits impracticable.
	Soil rocky, lava formation, fourth rate.
	Land rolling mountaineous,
	Mountaineous land 80.00 chs.

	Thence I run,
	North between Secs. 25 and 30, over rolling mountaineous country.
	Descend,
15.20	Cross canon 75 lks.wide, course SW.
	Ascend,
24.00	Cross summit of ridge, course NE. and SW.
	Descend,
33.70	Cross canon, 50 lks.wide, course SW.
	Ascend,
40.00	Set a lava stone 18x12x10 ins. ~~14~~ 12 ins.in ground for 1/4 Sec.cor. marked 1/4 on W. face, raised mound of stones 2 ft. base, 1.5 ft.high W. of cor.
	No trees, pits impracticable.
54.00	Cross summit of ridge, course NE. and SW.
	Descend,
63.64	Cross canon 40 lks.wide, course SW.
	Ascend,
80.00	Cross summit of ridge, course NE. and SW., set a lava stone 24x12x8 ins. 18 ins.in ground for cor.Secs.19,24,25,30, stone marked 2 grooves on S., 4 grooves on N.edges, raised a mound of stones 2 ft. base, 1.5 ft.high W. of cor.
	No trees, pits impracticable.
	Soil rocky, lava formation, fourth rate.
	Land rolling mountaineous,
	Mountaineous land 80.00 chs.

	At 12h.m.l.m.t. I set off 16°14'N.on the decl.arc and observed the sun on the meridian, the resulting lat. being 34°46'N. which is 0'15.6" less than the true lat.
	Thence I run,
	North between Secs. 19 and 24, over rolling mountaineous country.
	Descend,
10.10	Cross gulch 20 lks.wide, course SW.
	Ascend,
15.00	Cross summit of ridge, course NE. and SW.
	Descend,
22.00	Cross wash, 4 chs.wide, course SW.
	Ascend,
30.00	Cross summit of ridge, course E. and W.
	Descend,
40.00	Set a lava stone 18x10x8 ins. set 12 ins.in ground for 1/4 Sec.cor. marked 1/4 on W.face, raised a mound of stones 2 ft.high, 1.5 ft.high W. of cor.
	No trees, pits impracticable.
44.00	Cross canon 2 chs.wide, course SW.
	Ascend,

East boundary of T. 17 N., R. 21 W., continued.

Chains	
80.00	Top of ridge, course NE. and SW., 12 set a lava stone 18x10x8 ins. ~~14~~ ins.in ground for cor.Secs.13,18,19,24, stone marked 3 frooves on N. and S.edges, raised a mound of stones 2 ft.base, 1.5 ft.high W.of cor.
	No trees, pits impracticable.
	Soil rocky, lava formation, fourth rate.
	Land rolling mountaineous,
	Mountaineous land 80.00 chs.
	May 5, 1905.

	May 6, 1905.
	At 6h.30m.a.m.l.m.t. I set off 34°47'N.on the lat. arc and 16°29'N.on the decl.arc and determined a true meridian with the solar at the cor.Secs.13,18, 19,24,
	Thence I run,
	North between Secs.13 and 18, over rolling mountaineous country.
	Descend,
30.00	Cross canon 30 lks.wide, course W.
	Ascend,
34.00	Cross summit of ridge, course E. and W.
	Descend,
40.00	Set a lava stone 24x12x8 ins. 18 ins.in ground for 1/4 sec.cor. marked 1/4 on W.face, raised a mound of stones 2 ft.base, 1.5 ft.high W.of cor.
	No trees, pits impracticable.
42.50	Cross canon 2 chs.wide, course W.
	Ascend,
60.00	Cross summit of ridge, course NE. and SW.
	Descend,
80.00	Set a lava stone 18x12x10 ins. 12 ~~14~~ ins.in ground for cor.secs.7,12,13,18, stone marked 4 grooves on S. and 2 grooves on N. edges, raised a mound of stones 2 ft.base, 1.5 ft.high W. of cor.
	No trees, pits impracticable.
	Soil rocky, lava formation, fourth rate,
	Land rolling mountaineous,
	Mountaineous land 80.00 chs.

	Thence I run,
	North between Secs. 7 and 12, over rolling mountaineous country,
	Descend,
3.75	Cross canon, 40 lks.wide, course SW.
	Ascend,
14.50	Cross summit of ridge, course NE. and SW.
	Descend,
23.50	Cross canon, 100 lks.wide, course SW.
	Ascend,
34.00	Cross top of ridge, course NE. and SW.
	Descend,
40.00	Set a lava stone 18x12x6 ins. 12 ~~14~~ ins.in ground for 1/4 Sec.cor. marked 1/4 on W.face, raised a mound of stone 2 ft.base, 1.5 ft.high W. of cor.
	No trees, pits impracticable.
45.00	Cross dry wash, 3 chs.wide, course SW.
	Ascend,
80.00	Summit of ridge, course NE. and SW. Set a lava stone 18x12x8 ins. 12 ~~14~~ ins.in ground for cor.Secs. 1,6,7,12, stone marked 5 grooves on S. and 1 groove in N. edges, raised a mound of stones 2 ft. base, 1.5 ft.high W.of cor.
	No trees, pits impracticable.
	Soil rocky, fourth rate,
	Land rolling mountaineous,
	Mountaineous land 80.00 chs.

Chains	
	Thence I run,
	North between Secs. 1 and 6, over rolling mountainous country.
	Descend,
35.86	Enter dry wash, course SW.
40.00	Set a lava stone 18x12x6 ins. ~~14~~ 12 ins.in ground for 1/4 Sec.cor. marked 1/4 on W.face, raised a mound of stones 2 ft.base, 1.5 ft.high W.of cor.
	No trees, pits impracticable.
50.00	Leave wash,
	Ascend,
51.00	Summit of ridge, course SW. and NE.
	Descend,
52.34	Cross gulch, 30 lks.wide, course SW.
	Ascend,
57.00	Cross summit of ridge, course NE. and SW.
	Descend,
66.00	Cross canon, 2 chs.wide, course SW.
	Ascend,
80.00	Set a lava stone 20x10x8 ins. ~~16~~ 15 ins.in ground for cor. Tps.17 and 18 N., Rs.20 and 21 W., stone marked 18 N. on NE., 20 W. on SE., 17 N.on SW., and 21 W.on NW. faces, with 6 grooves on N.,E.,S. and W.faces, raised a mound of stones 4 ft.base, 3.5 ft.high S.of cor.
	No trees, pits impracticable.
	Soil rocky, fourth rate,
	Land rolling mountaineous,
	Mountaineous land 80.00 chs.
	May 6, 1905.

North Boundary of T. 17 N., R. 21 W.

	May 7, 1905.
	At 6h.30m.a.m.l.m.t. I set off 34°50'N.on the lat. arc and 16°45½'N.on the decl.arc and determine a true meridian with the solar at the cor.Tps.17 and 18 N., Rs. 20 and 21 W.
	Thence I run,
	West between Secs. 1 and 36, over rolling mountainous country,
	Ascend,
5.00	Top of ridge, course NE. and SW.
	Descend,
9.65	Cross gulch, 100 lks.wide, course SW.
	Ascend,
20.00	Summit of ridge, course NE. and SW.
	Descend,
28.00	Cross gulch 30 lks.wide, course SW.
	Ascend,
34.00	Cross ridge, course NE. and SW.
	Descend,
39.34	Cross gulch, 50 lks.wide, course SW.
	Ascend,
40.00	Set a lava stone 18x12x8 ins. ~~14~~ 12 ins.in ground, for 1/4 Sec.cor.marked 1/4 on N.face, raised a mound of stones 2 ft.base, 1.5 ft.high N.of cor.
	No trees, pits impracticable,
44.00	Cross summit of ridge, course NE. and SW.
	Descend,
48.00	Cross gulch, 40 lks.wide, course SW.
	Ascend,
65.00	Cross summit of ridge, course NE. and SW.
	Descend,
80.00	Set a lava stone 18x12x10 ins. ~~14~~ 12 ins.in ground for cor. Secs. 1,2,35,36, stone marked 1 groove on E. and 5 grooves on W. edges, raised a mound of stones 2 ft.

Chains	
	base, 1.5 ft.high W. of cor.
	No trees, pits impracticable,
	Soil rocky, lava formation, fourth rate,
	Land rolling mountaineous,
	Mountaineous land 80.00 chs.

	Thence I run,
	West between Secs. 2 and 35, over rolling mountaineous country,
	Descend,
40.00	Set a lava stone 24x12x12 ins. ~~30~~ 18 ins.in ground for 1/4 Sec.cor. marked 1/4 on N.face, raised a mound of stone 2 ft.base, 1.5 ft.high N.of cor.
	No trees, pits impracticable.
48.00	Cross canon 50 lks.wide, course SW.
	Ascend,
75.00	Cross summit of ridge, course NE. and SW.
	Descend,
80.00	Set a lava stone 18x10x6 ins. ~~14~~ 12 ins.in ground for cor. Secs. 2,3,~~34~~,35, marked 2 grooves on E. and 4 grooves on W. edges, raised mound of stones 2 ft.base, 1.5 ft.high W.of cor.
	No trees, pits impracticable.
	Soil rocky, lava formation, fourth rate,
	Land rolling mountaineous; the general slope of which is to the S. and W.
	Mountaineous land 80.00 chs.

	At 12h.m.l.m.t. I set off 16°48'N.on the decl.arc and observe the sun on the meridian, the resulting lat. is 34°50'N.
	Thence I run,
	West between Secs. 3 and 34, over rolling mountaineous country.
	Descend,
10.65	Cross canon 75 lks.wide, course SW.
	Ascend,
30.00	Cross summit of ridge, course NE. and SW.
	Descend,
40.00	Set a lava stone 24x8x8 ins. ~~20~~ 18 ins.in ground for 1/4 sec.cor. marked 1/4 on N.face, raised a mound of stones 2 ft.base, 1.5 ft.high N.of cor.
	No trees, pits impracticable.
42.00	Descend abruptly into canon, course SW.
~~48.00~~	~~Bottom of canon~~
50.00	Leave canon, ascend abruptly,
57.00	Cross ridge, course NE. and SW.,
	Descend,
65.00	Cross dry creek 40 lks.wide, course SW.
	Ascend,
80.00	Set a lava stone 20x12x8 ins. ~~16~~ 15 ins.in ground for cor. Secs. 3,4,33,34, stone marked 3 grooves on E. and W. edges, raised a mound of stones 2 ft.base 1.5 ft.W. of cor.
	No trees, pits impracticable.
	Soil rocky, lava formation fourth rate,
	Land rolling mountaineous,
	Mountaineous land 80.00 chs.
	May 7, 1905.

	May 8, 1905.
	At 6h.30m.a.m.l.m.t.I set off 34°50'N.on the lat.arc and 17°2'N.on the decl.arc and determine a true meridian with the solar at the cor.Secs.3,4,33,34,
	Thence I run,
	West between Secs.4 and 33, over rolling mountaineous country.

Chains	
	Ascend,
1.00	Cross top of ridge, course NE. and SW.
	Descend,
8.49	Cross gulch, 50 lks.wide, course SW.
	Ascend,
18.00	Cross summit of ridge, course NE. and SW.
	Descend,
25.51	Cross gulch, 50 lks.wide, course SW.
	Ascend,
32.00	Cross summit of ridge, course NE. and SW.
	Descend,
38.00	Cross canon, 2 chs.wide, course SW.
	Ascend,
40.00	Set a lava stone 20x8x6 ins. ~~16~~ 15 ins.in ground for 1/4 Sec.cor. marked 1/4 on N.face, raised a mound of stones 2 ft.base, 1.5 ft.high N.of cor.
	No trees, pits impracticable.
46.00	Cross summit of ridge, course NE. and SW.
	Descend,
53.00	Cross canon 30 lks.wide, course SW.
	Ascend,
60.00	Cross summit of ridge, course N. and S.
	Descend,
68.24	Cross canon 50 lks.wide, course S.
	Ascend,
72.00	Cross ridge, course N.and S.
	Descend,
76.33	Cross canon 40 lks.wide, course SW.
	Ascend,
80.00	Set a lava stone 18x12x12 ins. ~~14~~ 12 ins.in ground for cor.Secs.4,5,32,33, marked 4 grooves on E. and 2 grooves on W. edges, raised a mound of stones 2 ft. base, 1.5 ft.high W. of cor.
	No trees, pits impracticable,
	Soil rocky, lava formation, fourth rate,
	Land rolling mountaineous, badly cut up by gulches and canons.
	Mountaineous land 80.00 chs.

	Thence I run,
	West between Secs. 5 and 32,
	Ascend,
10.00	Top of ridge, course N. and S.
	Descend,
17.00	Cross gulch 50 lks.wide, course NW.
	Ascend,
20.00	Top of mesa, comparatively level, sloping to W.
40.00	Set a lava stone 18x8x6 ins. ~~14~~ 12 ins.in ground for 1/4 Sec.cor. marked 1/4 on N.face, dig pits 18x18x12 ins 3 ft. E. and W.of cor., raised mound of earth 3.5 ft.base 1.5 ft.high N.of cor.
	No trees available.
80.00	Set a lava stone 18x10x8 ins. ~~14~~ 12 ins.in ground for cor. Secs.5,6,31,32, marked 5 grooves on E. and 1 groove on W.edges, raised mound of stones 2 ft.base, 1.5 ft high W. of cor.
	No trees available, pits impracticable.
	Soil gravelly and sandy loam, first and third rates.
	Land mostly level, sloping to W.

	Thence I run,
	West between Secs.6 and 31,
11.00	Descend abruptly and enter Mohave Valley,
13.00	Enter dense undergrowth and scattering Mesquite Timber,
21.30	Cross road, course N.and S.
39.33	Cross Mohave and Milltown R.R., 3 ft.ga., course NE. and SW.

Chains

40.00 Set a Mesquite post 4 ins.sq. 4 ft.long, 3 ft.in ground for 1/4 Sec.cor.marked 1/4 S. on N.face, and 6 on S.face, dug pits 18x 18x12 ins. 3 ft. E. and W. of cor. and raised mound of earth 3.5 base, 1.5 ft.high N.of cor.
No trees available,

48.70 Cross center of Brockman and Plummer's house,

62.95 To E.bank Spear's Lake, water from 2 ft. to 8 ft.deep, set a Mesquite post 4 ins.sq. 4 ft.long, 3 ft.in ground for meander cor. on Tp.line between frac.secs. 6 and 31, marked M.C.on W.face, R.21 W.on E.face, T.17 N.S.6 on S.face and T.18 N.S.31 on N.face,
Whence a Mesquite 15 ins.diam.bears N.48°30'E. 46 lks. dist, marked T.18 N.R.21 W.S.31 M.C.B.T.
A Mesquite 6 ins.diam.bears S.69°E. 70 lks.dist. marked T.17 N.R.21 W.S.6 M.C.B.T.

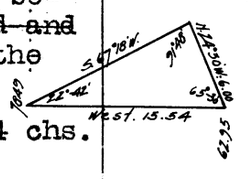
May 8, 1905.

Owing to unprecedented rainfall in Northern Arizona especially along the head waters of the Little Colorado River, the Colorado River was at this time out of its banks and the greater part of the valley was under water, and with the annual rise of the river from melting snow near its source due at this time, I could not ~~not~~ further continue the survey and was forced to suspend work and retire from the field.

John J. Fisher
U. S. Deputy Surveyor.

October 6, 1905.
At 7h.a.m.l.m.t. I set off 34°50'N.on the lat.arc and 4°57'S.on the decl.arc and determine a true meridian with the solar at meander cor.on Tp.line between frac.Secs. 6 and 31, Tps. 17 and 18 N., R. 21 W. on E. bank of Spear's Lake.
Thence I run
West
To determine the distance across Spear's Lake, I set a flag on line on W.bank of lake, then measured a base line N.24°30'W. 6 chs. to a point, whence flag bears ~~S.76°8'W.~~ S.67°-18'W.
From the flag the N.end of base bears N.~~76°8~~ 67°-18'E., therefore the angles taken in order of measurement are respectively ~~24°30'~~ 22°-42', ~~141°39'~~ 91°48' and ~~13°53'~~ 65°-30', their sum being 180°~~0'~~ ~~or 2' too great, I diminish the second and third angles by one-half the excess~~ and compute the distance across the lake as follows:-

$$\frac{\text{sine } \cancel{68°22'}}{\text{sine } \cancel{13°52'}} \text{ X base or } \frac{0.62069}{0.23966} \text{ X 6 chs. = 15.54 chs.}$$



62.95 + 15.54 = 78.49 chs. W bank Spear's Lake,

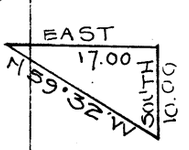
78.49 Set a Mesquite post 4 ins.sq.4 ft.long 3 ft.in ground for meander cor.of frac.Secs. 6 and 31, Tps. 17 and 18 N., R.21 W., marked M.C.on E.face, T.18 N.S.31 on N.face, R.21 W.on E.face, T.17 N.S.6 on S.face,
Whence a Mesquite 10 ins.diam.bears S.81°W. 33 lks. dist.marked T.17 N.R.21 W.S.6 M.C.B.T.
A Willow 6 ins.diam.bears N.37°30'E. 67 lks.dist. marked T.18 N.R.21 W.S.31 M.C.B.T.

79.49 Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for cor.Tps. 17 and 18 N.,Rs.21 and 22 W., marked T.18 N.S.31 on NE., R.21 W.S.6 on SE., T.17 N.S.1 on SW. and R.22 W.S.36 on NW.faces, with 6 grooves on N.E.S. and W. edges,
Whence a Mesquite 5 ins.diam.bears N.69°30'W. 27 lks. dist.marked T.18 N.R.22 W.S.36 B.T.

Chains	
	A Willow 4 ins.diam.bears N.59°E. 144 lks.dist.marked T.18 N.R.21 W.S.31 B.T.
	A Willow 15 ins.diam.bears S.76°15'E. 62 lks.dist. marked T.17 N.R.21 W.S.6 B.T.
	A Mesquite 4 ins.diam.bears S.40°15'W. 32 lks.dist. marked T.17 N.R.22 W.S.1 B.T.
	Soil sandy loam 66.49 chs. first rate; 13 chs.gravelly, third rate,
	Land 66.49 level, covered with heavy Mesquite, Willow and Cottonwood timber and dense undergrowth of Arrowwood and water; 13 chs. mountaineous.
	Mountaineous land and land covered with heavy timber, dense undergrowth and water, 79.49 chs.

	West Boundary of T. 17 N., R. 21 W.

	The land lying South of above cor.being marshy and miry from the late overflow of the Colorado River, and it being impracticable to run South from above cor.
	I run West 6 chs.to a point,
	Thence I run, South on an offset, through Mesquite timber and dense undergrowth,
40.00	To a point,
	Thence I run East, 6.00 chs. where I set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for 1/4 Sec.cor. marked 1/4 S on W.face, and bon E. face
	Whence a Willow 12 ins.diam.bears S.47°15'W. 188 lks. dist.Marked 1/4S.1 B.T.
	A Willow 12 ins.diam.bears S.71°E. 105 lks.dist.marked 1/4 S.6 B.T.
	Thence I run South between Secs. 1 and 6,
40.70	N.bank Spear's Lake, Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for mean.cor.frac.Secs. 1 and 6, Tp. 17 N.,Rs.21 and 22 W., marked M.C. on S., T.17 on N.,R.21 W.S.6 on E., R.22 W.S.1 on W.faces,
	Whence a Willow 5 ins.diam.bears S.57°15'W. 79 lks. dist.marked T.17 N.R.22 W.S.1 M.C.B.T.
	A Willow 6 ins.diam.bears S.85°45'E. 322 lks.dist. marked T.17 N.R.22 W.S.6 M.C.B.T.
	I then return to point at 40.00 chs,
	Thence I run South on offset,
45.00	Enter cultivated ground,
50.00	House of Harry Wheeler bears East 1.00 ch. dist.
56.00	Leave cultivated ground,
80.00	to a point
	Thence I run, East 3.55 chs. to W.bank Spear's Lake, At 6.00 chs., the true point for cor.Secs.1,6,7,12, falls in lake, water about 4 ft.deep, unsuitable to establish permanent corner.
	Set Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for meander cor. marked M.C.on E.face, T.17 N.S.1 on N.face, S.12 on S.face and R.22 W.on W.face,
	Whence a Willow 6 ins.diam.bears S.19°45'E.10 lks.dist. marked T.17 N.R.22 W.S.12 M.C.B.T.
	A Mesquite 4 ins.diam.bears N.17°30'W.67 lks.dist.marked T.17 N.R.22 W.S.1 M.C.B.T.
	Soil sandy loam, first rate,
	Land level, subject to overflow, covered with Mesquite, Willow and Cottonwood timber, dense undergrowth and water.
	Land covered with heavy timber and dense undergrowth 40.70 chs., 39.30 chs. covered with water, ~~80.00 chs.~~

Chains	
	Owing to the course of Spear's Lake from this mean.cor. I offset to E. side of lake, where I set a flag E.on line. To determine the distance across I set a flag at above meander cor. and cross lake to E.bank and from flag on E.bank I set off base 10.00 chs.S. whence flag on mean.cor.at W.bank bears N.59°32'W. which gives angles respectively, 90°, 59°32' and 30° 28', I compute distance as follows:- tang.59°32' x base, or 1.69992 x 10.00 chs. = 17.00 chs. which makes 17.00 chs. - 2.45 chs. = 14.55 chs. East of cor.Secs.1,6,7,12, (point to)
	
	Thence I run, South on offset, along E.bank Spear's Lake, through scattering Willow timber,
51.00	A point,
	Thence I run, West 14.55 chs. to Range line between Secs. 7 and 12 on S.bank Spear's Lake,
	Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for meander cor.of frac.Secs. 7 and 12, marked M.C. on N.face, R.21 W.S.7 on E.face, T.17 N.on S.face R.22 W.S.12 on W.face,
	Whence a Willow 8 ins.diam.bears N.56°30'W.40 lks.dist. marked T.17 N.R.22 W.S.12 M.C.B.T.
	A Mesquite 10 ins.diam.bears N.89°30'E. 115 lks.dist. marked T.17N.R.21W.S.7 M.C.B.T.
	Thence I run from meander cor. South between Secs. 7 and 12, enter heavy timber and dense undergrowth,
59.86	Whence School House bears E. 6.00 chs.dist.
64.36	Cross road, course NE. and SW.
65.00	Cross Mohave & Milltown R.R., course NE. and SW.
80.00	Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for cor.Secs. 7,12,13,18, marked T.17 N.S.7 on NE., R.21 W.S.18 on SE., S.13 on SW. and R.22 W.S.12 on NW.faces, 2 grooves on N. and 4 grooves S.edges,
	Whence a Willow 18 ins.diam.bears S.71°45'W. 113 lks. dist.marked T.17 N.R.22 W.S.13 B.T.
	A Mesquite 6 ins.diam.bears N.13°30'W. 32 lks.dist. marked T.17 N.R.22 W.S.12 B.T.
	A Mesquite 5 ins.diam.bears N.37°30'E.95 lks.dist. marked T.17 N.R.21 W.S.7 B.T.
	A Mesquite 8 ins.diam.bears S.84°30'E.58 lks.dist. marked T.17 N.R.21 W.S.18 B.T.
	Soil sandy loam, first rate,
	Land level, subject to overflow, 51.00 chs.covered with water.
	Land covered with heavy timber and dense undergrowth 29.00 chs. covered with water 51.00 chs, ~~80.00 chs.~~
	October 6, 1905.
	October 7, 1905. At 7h.a.m.l.m.t. I set off 34°48'N.on the lat.arc and 5°20'S.on the decl.arc and determine a true meridian with the solar at cor.Secs. 7,12,13,18,
	Thence I run, South between Secs. 13 and 18, through heavy timber and dense undergrowth,
19.30	Cross road, course NE. and SW.
40.00	Set a Mesquite post 4 ins.sq. 4 ft.long, 3 ft.in ground for 1/4 Sec.cor. marked 1/4 S.13 on W.face, and 18 on E.face
	Whence a Mesquite 5 ins.diam.bears S.37°30'E. 77 lks. dist.marked 1/4 S.18 B.T.
	A Mesquite 4 ins.diam.bears S.77°30'W.44 lks.dist. marked 1/4 S.13 B.T.
54.45	Cross road, course E. and W.
	Whence Rosenberger's ranch house bears S.85°W.30 chs. dist.
54.60	Cross brush fence, enter Indian pasture,
72.62	Cross brush fence, leave Indian pasture,
80.00	Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground

Chains

cor cor.Secs. 13,18,19,24, marked T.17 N.S.18 on NE., R.21 W.S.19 on SE., S.24 on SW. and R.22 W.S.13 on NW.faces, with 3 grooves on N. and S. edges,
Whence a Cottonwood 12 ins.diam.bears N.2°E. 46 lks. dist.marked T.17 N.R.21 W.S.18 B.T.
A Mesquite 4 ins.diam.bears S.63°30'E. 32 lks.dist. marked T.17 N.R.21 W.S.19 B.T.
A Willow 6 ins.diam.bears S.49°30'W. 65 lks.dist.marked T.17 N.R.22 W.S.24 B.T.
A Mesquite 6 ins.diam.bears N.39°W. 31 lks.dist.marked T.17 N.R.22 W.S.13 B.T.
Soil sandy loam, first rate,
Land level, subject to overflow, covered with heavy Mesquite, Willow and Cottonwood timber and dense undergrowth of Arrow-wood, 80.00 chs.

Thence I run,
South between Secs. 19 and 24, through heavy timber and dense undergrowth,

33.10 Cross Indian fence, course E. and W., enter cultivated land,

34.00 Whence Indian House bears E. 5.00 chs.dist.

36.00 Leave cultivated land,

40.00 Set a Willow post 4 ins.sq. 4 ft.long 3 ft.in ground for 1/4 Sec.cor.marked 1/4 S.on 24 W.face, and 19 on E. face
Whence a Willow 4 ins.diam.bears N.45°W.6 lks.dist. marked 1/4 S.24 B.T.
A Willow 4 ins.diam.bears N.60° E. 14 lks.dist.marked 1/4 S. 19 B.T.

43.48 Intersect left bank Colorado River, bank about 4 ft. high, set a Willow post 4 ins.sq. 4 ft.long 3 ft.in ground, for meander cor.Secs. 19 and 24, marked M.C. on S., T.17 N.on N., R.21 W.S.19 on E., R.22 W.S. 24 on W.faces,
Whence a Willow 4 ins.diam.bears N.4°45'E. 63 lks.dist. marked T.17 N.R.21 W.S.19 M.C.B.T.
A Willow 4 ins.diam.bears N.42°W. 90 lks.dist.marked T.17 N.R.22 W.S.24 M.C.B.T.
Soil sandy loam, first rate,
Land level, subject to overflow, covered with heavy Mesquite, Cottonwood and Willow timber and dense undergrowth, 43.48 chs.

October 7, 1905.

Boundaries of T. 17 N., R. 21 W.

Latitudes, departures and closing errors.

Line Designated.	True brs.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
		Chs.	Chs.	Chs.	Chs.	Chs.
E.Bdy.	South	480.00		480.00		438.09
4th.St.Par.N.	West	~~438.11~~ 438.09	196.59			~~438.11~~
Meanders River,			~~196.59~~			~~42.11~~ 41.68
W. Bdy.	North	283.48	283.48			
N. Bdy.	East	479.49			479.49	
Convergency					.51	
Totals,			~~480.07~~ 480.00	480.00	480.00	~~480.20~~ 479.77
			~~480.00~~			~~480.00~~
Errors in lat.			~~.07~~ .01		Dept. .23	~~.20~~ .23

GENERAL DESCRIPTION.

This Township is rough and mountaineous in the Northern and Eastern portions, the Western portion being river bottom land.

There is no water in the mountaineous portion; and an abundance in lakes and sloughs in the valley portion.

There is no timber in the mountaineous portion, the valley being covered with heavy timber of Mesquite, Willow and Cottonwood and dense undergrowth of Arrowwood.

Soil in valley is sandy loam formed by deposits from overflow of the Colorado river.

October 7, 1905.

John J. Fisher
U. S. Deputy Surveyor.

Chains

Survey commenced October 3, 1905 and executed with a W.& L.E.Gurley Light Mountain Transit, not numbered, with a Smith Solar Attachment.
The horizontal limb is provided with two double verniers placed opposite to each other reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.
The instrument was examined, tested on the true meridian at Phoenix, found correct and was approved by the Surveyor General September 25, 1905.
I examined the adjustments of the transit and corrected the level and collimation 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 true meridian determined by observation on Polaris, I proceed as follows:- At the corner of Sections 1, 2, 35 and 36, Townships 15 and 16 North, range 21 West, in lat. 34°39'18"N., in long. ~~114°26'44"W.~~, I set off 34°39'N. on the lat.arc and 3°58'S. on the decl.arc and at 4h.30m.p.m.l.m.t. determined with the solar a true meridian and mark a point thereof on the stone set April 17, 1905, 5 chs. North of my corner, this point falls 0.25 inches W. of the true meridian established by Polaris observation April 18, 1905.

October 3, 1905.

October 4, 1905. At 7h.30m.a.m.l.m.t. I set off 34°39'N.on the lat.arc and 4°12'S.on the decl.arc and determine a true meridian with the solar and mark a point thereof by a cross on the stone set April 17, 1905, 5 chains North of cor. Sections 1,2, 35 and 36, this point falls 0.30 inches East of the true meridian determined by Polaris observation on April 18, 1905.
The solar apparatus by p.m. and a.m.observations defines position for true meridians respectively 0'13"West and 0'16"East of the meridian established by Polaris observation; therefore, I conclude that the adjustments of the instrument are satisfactory.
The magnetic bearing of the said true meridian is N. 15° W. which gives the mag.decl. 15°East.

October 4, 1905. At 8h.a.m.l.m.t. I set off 34°39' N. on the lat.arc, 4°13'S.on the decl.arc and determine a true meridian with the solar at cor.Tps. 15 and 16 North, Rs. 20 and 21 West,
Thence I run,
South on E. boundary Tp.15 N., R.21 W. between Secs. 1 and 6, over rough mountaineous country,
Descend,

Chains	
10.75	Enter canon,
13.00	Cross dry bed of canon 50 lks.wide, course W.
	Ascend,
15.00	Leave canon,
17.00	Cross summit of ridge, course E. and W.
	Descend,
22.50	Cross canon, 100 lks.wide, course W.
	Ascend,
40.00	Set a granite stone 20x10x8 ins. ~~16~~ 13 ins.in ground for 1/4 Sec.cor.marked 1/4 on W.face, raised mound of stones 2 ft.base 1.5 ft.high W.of cor.
	No trees, pits impracticable,
48.00	Cross ridge, course E. and W.
	Descend,
54.50	Enter canon,
56.00	Cross dry bed of canon, 50 lks.wide, course W.
	Ascend,

Chains	
57.00	Leave canon,
64.00	Cross ridge, course E. and W.
	Descend,
69.00	Cross gulch, 100 lks.wide, course W.
	Ascend,
74.00	Cross ridge, course E. and W.
	Descend,
79.50	Cross gulch 10 lks.wide, course W.,
	Ascend,
80.00	Set a granite stone 20x12x6 ins. in monument of stones, for cor.Secs. 1,6,7,12, marked 1 groove on N. and 5 grooves on S. edges, raised mound of stones 2 ft. base, 1.5 ft.high W.of cor.
	No trees, pits impracticable,
	Soil rocky, granite formation, fourth rate,
	Land mountaineous, rough and broken,
	Mountaineous land 80.00 chs.

	Thence I run,
	South between Secs. 7 and 12,
	Ascend,
14.00	Cross ridge, course E. and W.
	Descend,
24.50	Cross dry wash, 100 lks.wide, course W.
	Ascend,
30.00	Cross ridge, course E. and W.,
	Descend,
35.00	Cross dry wash 75 lks.wide, course W.
	Ascend,
40.00	Set a granite stone 18x10x7 ins. in monument of stones for 1/4 Sec.cor.marked 1/4 on W.face, raised mound of stones 2 ft.base 1.5 ft.high W.of cor.
	No trees, pits impracticable,
43.00	Cross ridge, course E. and W.
	Descend,
49.75	Cross gulch 15 lks.wide, course W.
	Ascend,
80.00	Set a porphyry stone 18x10x8 ins. in mound of stones for cor.Secs. 7,12,13,18, marked 2 grooves on N. and 4 grooves on S. edged, raised mound of stones 2 ft. base 1.5 ft.high W.of cor.
	No trees, pits impracticable,
	Soil rocky, granite formation, fourth rate,
	Land rough mountaineous,
	Mountaineous land 80.00 chs.

	Thence I run,
	South between Secs. 13 and 18, over broken mountaineous country, ascending N. slope of Needle Mountains.
2.00	Cross ridge, course E. and W.
	Descend,
17.50	Cross dry gulch 100 lks.wide, course W.
	Ascend,
21.50	Cross ridge, course E. and W.
	Descend,
25.50	Enter canon,
26.75	Cross dry bed of canon 50 lks.wide, course W.
	Ascend,
28.00	Leave canon,
30.00	Cross ridge, course E. and W.
	Descend,
34.00	Cross dry gulch 75 lks.wide, course W.
	Ascend,
40.00	Set a lava stone 18x15x10 ins. ~~14~~ 12 ins.in ground for 1/4 Sec.cor.marked 1/4 on W.face, raised mound of stones

Chains

2 ft.base 1.5 ft.high W.of cor.
No trees, pits impracticable,

At this point I discontinued the survey of East Boundary owing to the fact that the country South of this point is a succession on sharp pointed peaks forming the Needle Mountains and being unsurveyable.

October 4, 1905.

Boundaries of T. 15 N., R. 21 W.

Latitudes, departures and closing errors.

Line designated.	True brs.	Dist.	Latitudes		Departures	
			N.	S.	E.	W.
		Chs.	Chs.	Chs.	Chs.	Chs.
East bdy.	South	80.00		80.00		
S.Bdy.Sec.1	N.89°50'W.	79.97	.23			79.97
S.Bdy.Sec.2	West	9.15				9.15
Meander lines			79.74			69.55
N.Bdy.T.15 N.R.21 W	East	158.63			158.63	
			79.97	80.00	158.63	158.67
				79.97		158.63
Error in lat. -				.03	Error in dep.	.04

GENERAL DESCRIPTION.

This Township is rough and mountaineous; there is no timber except a few scattering Mesquite trees along the river bank.

There is no water except in Colorado River.

There is very little vegetation, principally Arrow-wood and Grease-wood brush.

John J. Fisher
U.S.Deputy Surveyor.

NORTH BOUNDARY of TOWNSHIP 17 NORTH, RANGE 22 WEST

Chains

Survey commenced Oct. 31st, 1905, and executed with a W. and L. E. Gurley Light Mountain Transit, not numbered, with a Smith Solar attachment. The horizontal limb is provided with two double verniers, placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the lat and decl arcs.

The instrument was examined, tested on the true meridian at Phoenix, found correct, and was approved by the Surveyor General for Arizona, September 25, 1905.

I examined the adjustments of the Transit and correct the level and collimation errors; then to test the Solar Apparatus by comparing its indications resulting from Solar observation, made during a.m. and p.m. hours with a true meridian determined by observations on Polaris, I proceed as follows:

October 31st. At a point 6 chs W of the cor of Tps 17 and 18 North, Rs 21 and 22 West, previously established by me, lat 34° 49' 44.4" N, long 114° 32' 55" W at 4h p.m.l.m.t., I set off 34° 50' N on the lat arc 14° 6' S on the decl arc and determined with the Solar the true meridian and marked the point thereof on a stone set firmly in the ground, 5 chs N of my point. I select this point in order to get from under the dense timber surrounding Tp cor.

October 31st, 1905.

November 1st, 1905.

At 4h. 44m. a.m.l.m.t., I observe Polaris at Western elongation in accordance with Manual instructions and mark a point on the line thus determined on a plug driven in the ground, 5 chs N of my point.

At 7h. 45m. a.m. l.m.t., I lay off the azimuth of Polaris 1° 28' to the E and mark a groove in the stone set Oct. 31st, on which the true meridian falls 0.25 ins W of the mark determined by the Solar.

At 8h. a.m. l.m.t., I set off 34° 50' N on the lat arc, 14° 19' S on the decl arc and determined a true meridian with the Solar and mark a point thereof by a cross on the stone already set 5 chs N of my point. This mark falls 0.2 ins W of the true meridian established by Polaris observation.

The Solar Apparatus by p.m. and a.m. observations define positions for true meridian respectively about 0' 13" E and 0' 11" W of the true meridian established by Polaris observation. Therefore, I conclude the adjustments of the instruments are satisfactory.

The magnetic bearing of the true meridian is N 15° 5' W, which gives a magnetic decl 15° 5' E.

I begin at the cor of Tps 17 and 18 N, Rs 21 and 22 W.

Thence I run

West between Secs 1 and 36, through a heavy mesquite timber and dense undergrowth

40.00 Set a mesquite post, 4 ins sq. 4 ft long, 3 ft in ground for ¼ Sec cor, marked ¼S, on N face, whence and I on S. face.

A mesquite post, 6 ins diam. bears N 11° W, 35 lks dist., marked ¼ S, 36 B.T.

A mesquite, 5 ins diam. bears S 32° W, 137 lks dist., marked ¼ S, 1 B. T.

61.60 Cross road, course N and S

68.75 Cross fence, course N and S, enter cultivated land.

80.00 Set a mesquite, 4 ins sq. 4 ft long, 3 ft in ground for cor of Secs 1, 2, 35 and 36, post marked, T 18 N, S 36 on N. E.

R 22 W S1 on S. E.

T. 17 N, S 2, on S.W.

S 35 on N. W. Faces, with 1 notch on E. and 5 notches on W. edges. Dig pits in 4 Secs. 18 x 18 x 12 ins., 5½ ft. dist. from cor. Raise a mound of earth 4 ft base, 2 ft high, W. of cor.

Soil, sandy loam, first rate.

Land, mostly, level, covered with heavy timber and dense undergrowth, 80.00 chs.

NORTH BOUNDARY, of TOWNSHIP 17 NORTH, RANGE 22 WEST.

chains	
	Thence I run West between Secs. 2 and 35, over cultivated land
4.00	whence Wm. Robert's house bears N. 51° W.
6.00	Cross fence, course N. and S.
10.20	Cross fence, course N. and S. leave cultivated land.
13.55	Whence Wm. Robert's house, bears N. 16½° E.
16.50	Cross fence, course N. and S.
16.65	Cross road, course N. and S. Enter dense undergrowth of arrow wood.
30.00	Cross road, course N. E., S. W.
33.30	To edge of slough, course N. E.
40.00	Point for ¼ Sec. cor. falls in slough, which at ordinary high water is covered with water and unfit place to establish permanent cor.
42.90	West edge of slough
43.00	Set a mesquite, 4 ins sq. 4 ft. long, 3 ft. in ground for Witness ¼ sec cor., marked ¼ S, W.C. on N. face, ~~whence~~ and 2 on S. face.
	A willow 6 ins. in diam., bears S. 87½° W., 44 lks distant, marked ¼ S 2, W. C. B. T.
	A mesquite, 8 ins. diam. bears N 16½° W., 31 lks dist., marked ¼ s. 35, W.C., B. T.
61.00	Cross road, ~~Mrs.~~ leading from Camp Mohave to Needles, Calif.
80.00	Set a mesquite 4 ins. sq., 4 ft. long, 3 ft. in ground for cor. of Secs. 2, 3, 34 and 35, marked T 18 N, S 35, on N.E.
	R 22W., S 2, on S.E.
	T. 17N. S 3, on S.W.
	S. 34 on N. W. faces, with ~~2~~ grooves E. and 4 grooves on W edges, whence
	A mesquite 10 ins. diam. bears S. 74½°W, 135 lks. dist. marked T 17 N, R 22 W, S 3, B.T.
	A mesquite, 10 ins. diam. bears N. 34½°W, 260 lks dist. mraked T 18 N, R 22 W, S 34, B.T.
	A mesquite, 6 ins in diam bears N 21½° E, 297 lks dist, marked T 18 N, R 22 W, S 35, B.T.
	A mesquite, 6 ins diam, bears S 68½° E, 110 lks dist, marked T 17 N, R 22 W, S 2, B. T.
	Soil, sandy loam, first rate.
	Land, level, 63.35 chs covered with dense under-growth willow and mesquite timber. November 1,1905.

November 2nd, 1905

At 8h.a.m.l.m.t., I set off 34° 50' N on the lat arc arc, 14° 38' S on the decl arc and determine the true meridian at the cor of secs 2, 3, 34 and 35.

Thence I run West between secs. 3 and 34, through heavy mesquite and willow timber and dense undergrowth.

19.26	To E edge of slough, about 6 ins of water, course NE
22.34	W side of slough
22.40	Cross road, course N and S
40.00	Set a mesquite post, 4 ins sq 4 ft long, 3 ft in ground for ¼ sec cors, marked ¼ S on N face, ~~whence~~ and 3 on S. face.
	A mesquite, 4 ins. diam bears N 1½° E, 23 lks dist marked ¼ s, 34, B.T.
	A willow 4 ins diam, bears S 2½° E, 27 lks dist, marked ¼ S, 3 B. T.
64.90	Cross road, course N and S
69.50	Cross fence, enter cultivated land, cultivated by Indians, course N and S.
75.25	Cross fence, course N and S, leave cultivated land, enter dense undergrowth of arrow wood.
80.00	Set a mesquite, 4 ins sq, 4 ft long, 3 ft in ground for cor of secs 33, 34, 3 and 4, post marked
	T 18 N, S 34, on NE
	R 22 W, S 3, on SE
	T 17 N, S 4 on SW
	S 33, on NW faces, with 3 notches on E and W edges
	A mesquite 4 ins in diam bears N 65½° W, 42 lks dist, marked T 18 N, R 22 W, S 33, B. T.
	A mesquite, 4 ins diam, bears N 39½° E, 39 lks dist, mraked T 18 N, R 22 W, S 34, B.T.

chains

A mesquite, 4 ins diam bears S 86½° E, 39,1lks dist marked T. 17 N, R 22 W, S 3, B.T.

A mesquite, 4 ins in diam, bears S 48½° W, 18 lks dist, marked T 17 N, R 22 W, S 4, B.T.

Soil, sandy loam, first rate.

Land, level, subject to overflow, covered with mesquite and willow timber and dense undergrowth of arrow wood,

78.25 ~~74.25~~ chs covered with heavy timber and dense undergrowth.

Thence I run

West between secs 4 and 33, over level land through scattering timber and dense undergrowth of arrow wood.

40.00 Set a willow post, 5 ins sq., 4 ft long, 3 ft in ground for ¼ Sec cor, marked ¼ S on N face, ~~whence~~ and 4 on S face.

A mesquite 4 ins in diam bears N 56-3/4° E, 52 lks dist, marked ¼ S, 33 B. T.

A cottonwood, 4 ins diam bears S 58-3/4° E, 31 lks dist, marked ¼ S, 4 B.T.

43.00 To intersect left bank of Colorado River, bank about 4 ft high.

Set a mesquite post 4 ins sq, 4 ft long 3 ft in ground for Meander cor of fractional secs 4 and 33, marked M.C. on W, T 17 N, S 4 on S, T 18 N S 33 on N, R 22 W on E faces, whence,

A cottonwood 4 ins diam bears N 74½°E, 35 lks dist, marked T 18 N, R 22 W, S 33, MC.B.T.

A cottonwood, 4 ins diam bears S 54-3/4° E, 48 lks dist, marked T 17 N, R 22 W, S 4, M.C.B.T.

Soil, sandy loam, first rate.

Land, level, subject to overflow, covered with scattering mesquite, cottonwood and willow timber and dense undergrowth of arrow wood. 43.00 chs

November 2nd, 1905.

BOUNDARIES T. 17 N., R. 22 W.
Latitudes, departures and closing errors.

Line designated	True Bearings	Distance	Latitudes		Departures	
			N.	S.	E.	W.
		chs.	chs.	chs.	chs.	chs.
Mean. Col. River N. bdy.	East	283.00	~~283.84~~ 283.58		283.00	~~283.44~~ 283.85
E.bdy.	South	283.48		283.48		
Convergency			283.58		.30	283.85
Totals			~~283.84~~ 283.48	283.48	283.30	~~283.44~~ 283.30
Errors in lat			~~.36~~ .10	Error	Dept	~~.14~~ .15

General Description

This Township is all level valley land. The soil is a sandy loam, first rate, containing some alkali and most of the Twonship is subject to overflow from the Colorado River. It is well watered by sloughs and lakes, and covered with mesquite, willow and cottonwood timber and dense undergrowth of arrow wood.

John J. Fisher
U. S. Deputy Surveyor.

Chains

Survey commenced November 15, 1905 and executed with a W.& L.E.Gurley Light Mountain Transit, not numbered, with a Smith Solar Attachment. The horizontal limb is provided with two double verniers placed opposite to each other reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arc.

The instrument was examined and tested on the true meridian at Phoenix, found correct and was approved by the Surveyor General of Arizona September 25, 1905.

I examined the adjustments of the transit and correct the level and collimation errors; then to test the solar apparatus by comparing its indication resulting from solar observations made during a.m. and p.m. hours with a true meridian by observations on Polaris, I proceed as follows:-

November 15. At the corner of Townships 17 and 18 N., Ranges 20 and 21 West, lat. 34°49'44.4" N., long. 114°24'35"W., previously established by me, at 4h. p.m.l.m.t. I set off 34°50'N.on the lat.arc, 18°28' S.on the decl.arc and determine with the solar a true meridian and mark a point thereof on a stone firmly set in the ground 5 chs.N.of my corner.

November 15, 1905.

November 16.

At 3h. 45m. a.m.l.m.t. by my watch which has correct local time, I observed Polaris at Western elongation in accordance with the Manual of instructions and mark a point on the line thus determined on a plug driven into the ground 5 chs.N. of my station.

At 7h. 45m. a.m.l.m.t. I lay off the Azimuth of Polaris 1°28' to the E. and mark the true meridian thus determined by cutting a small groove in the stone set November 15, on which the true meridian falls 0.35 inches W. of the mark determined by the solar.

At 8h.a.m.l.m.t. I set off 34°50'N. on the lat.arc and 18°38'S.on the decl.arc and mark a point in the true meridian determined with the solar by a cross on the stone already set 5 chs. N. of my station, this point falls 0.30 inches W. of the true meridian established by Polaris observation.

The solar apparatus by p.m. and a.m. observation defines positions for true meridians respectively about 0' 18" East and 0' 16" West of the true meridian established by Polaris observation; therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the said true meridian is N.15° 15'W. which gives the mag.decl. 15°15'E.

Thence I run,
North between Secs. 36 and 31, over rolling mountainous country,

Ascend,

8.00 Summit of ridge, course NE. and SW.

Descend,

17.25 Cross dry wash, 25 lks.wide, course SW.

Ascend,

23.00 Cross summit of ridge, course NE. and SW.

Descend,

28.00 Enter canon,

29.50 Cross dry bed of canon, 50 lks.wide, course SW.

Ascend,

31.00 Leave canon,

40.00 A lava stone in place, 2x1.5x1.5 ft.above ground, on which I cut a cross for 1/4 sec.cor.point, marked

Chains	
	1/4 on W., raised a mound of stones 2 ft.base 1.5 ft. high W. of cor.
	No trees, pits impracticable.
	Descend,
41.00	Cross dry wash, 25 lks.wide, course SW.
	Ascend,
41.75	Cross ridge, course NE. and SW.
	Descend,
42.50	Cross dry wash, 50 lks.wide, course SW.
	Ascend,
50.00	Cross summit od rifge, course NE. and SW.
	Descend,
57.25	Cross dry wash 25 lks.wide, course SW.
	Ascend,
58.50	Cross summit of ridge, course NE. and SW.
	Descend,
60.50	Cross dry wash, 100 lks.wide, course SW.
	Ascend,
80.00	Set a lava stone 20x12x5 ins. ~~16~~ 15 ins.in ground for cor. Secs. 25,30,31,36, marked 1 groove on S. and 5 grooves on N. edges, raised mound of stones 2 ft. base 1.5 ft.high W. of cor.
	No trees, pits impracticable.
	Soil rocky, lava formation, fourth rate,
	Land rolling mountaineous, very little vegetation,
	Mountaineous land 80.00 chs.

Thence I run,
North between Secs. 25 and 30, over rolling mountaineous country,

	Descend,
7.75	Cross dry wash, 30 lks.wide, course W.
	Ascend,
9.00	Cross summit of ridge, course E. and W.
	Descend,
11.00	Cross dry wash, 100 lks.wide, course NW.
	Ascend,
18.00	Cross summit of ridge, course E. and W.
	Descend,
23.25	Enter canon,
28.00	Cross dry bed of canon, 50 lks.wide, course SW.
	Ascend,
32.00	Leave canon,
40.00	Set a lava stone 20x10x6 ins. ~~16~~ 15 ins.in ground for 1/4 Sec.cor. marked 1/4 on W.face, raised a mound of stone 2 ft.base 1.5 ft.high W.of cor.
	No trees, pits impracticable.
52.00	Cross ridge, course E. and W.
	Descend,
63.50	Cross dry wash, 50 lks.wide, course NW.
	Ascend,
71.50	Cross summit of ridge, course E. and W.
	Descend,
79.75	Cross dry wash, 50 lks.wide, course SW.
	Ascend,
80.00	Set a lava stone 18x10x8 ins. ~~14~~ 12 ins.in ground for cor. Secs. 19,24,25,30, marked 2 grooves on S. and 4 grooveson N. edges, raised a mound of stones 2 ft. base, 1.5 ft.high W.of cor.
	No trees, pits impracticable,
	Soil rocky, lava formation, fourth rate,
	Land rolling mountaineous, very little vegetation,
	Mountaineous land 80.00 chs.

November 16.
At 12h.m.l.m.t. I set off 18°42'S.on the decl.arc and observed the sun on the meridian, the resulting

Chains	
	lat.being 34°51'N., at cor.Secs.19,24,25,30,
	Thence I run,
	North between Secs. 19 and 24, over rolling mountain-eous country,
	Ascend,
6.00	Cross summit of ridge, course NE. and SW.
	Descend,
11.00	Cross dry wash 30 lks.wide, course W.
	Ascend,
22.00	Cross summit of ridge, course E. and W.
	Descend,
28.00	Cross dry wash, 20 lks.wide, course SW.
	Ascend,
38.00	Top of ridge, course NE. and SW.
	Descend,
40.00	Set a lava stone 24x10x10 ins. ~~20~~ 18 ins.in ground for 1/4 Sec.cor.marked 1/4 on W.face, raised mound of stones 2 ft.base, 1.5 ft.high W.of cor.
	No trees, pits impracticable.
40.50	Enter canon,
47.00	Cross dry bed of canon, 50 lks.wide, course SW.
	Ascend,
52.00	Leave canon, ascend
55.00	Cross ridge, course NE. and SW.
	Descend,
62.50	Cross dry wash, 50 lks.wide, course SW.
	Ascend,
80.00	Top of ridge, course NE. and SW. 15
	Set a lava stone 20x12x8 ins. ~~16~~ ins.in ground for cor.Secs.13,18,19,24, marked 3 grooves on N. and S. edges, raised mound of stones 2 ft.base 1.5 ft. high W. of cor.
	No trees pits impracticable,
	Soil rocky, lava formation, fourth rate,
	Land rolling mountaineous, very little vegetation,
	Mountaineous land 80.00 chs.
	November 16, 1905.
	November 17, 1905.
	At 8h.a.m.l.m.t. I set off 18°53'S. on the decl.arc
	34°52'N.on the lat.arc and determine a true meridian at cor.Secs. 13,18,19,24,
	Thence I run,
	North between Secs. 13 and 18 over rolling mountain-eous country,
	Descend,
23.25	Cross dry wash 20 lks.wide, course SW.
	Ascend,
25.75	Cross summit of ridge, course NE. and SW.
	Descend,
28.25	Cross dry wash, 50 lks.wide, course SW.
	Ascend,
34.25	Cross ridge, course NE. and SW.
	Descend,
39.75	Cross dry wash 20 lks.wide, course SW.
	Ascend,
40.00	Set a lava stone 18x12x10 ins. ~~14~~ 12 ins.in ground for 1/4 Sec.cor Marked 1/4 on W.face, raised mound of stones 2 ft.base 1.5 ft.high W.of cor.
	No trees, pits impracticable.
43.00	Cross summit of ridge, course NE. and SW.
	Descend,
46.50	Cross dry wash, 25 lks.wide, course SW.
	Ascend,
50.00	Cross ridge, course NE. and SW.
	Descend,
52.50	Enter canon,
55.50	Cross dry bed of canon, 50 lks.wide, course SW.
	Ascend,
58.00	Leave canon,

Chains	
62.00	Cross summit of ridge, course NE. and SW.
	Descend,
66.00	Cross dry wash, 25 lks.wide, course SW.
	Ascend,
80.00	Set a lava stone 16x12x10 ins. 12 ins.in ground for cor. Secs. 7,12,13,18, marked 4 grooves on S. and 2 grooves on N. edges, raised mound of stones 2 ft.base 1.5 ft high W. of cor.
	No trees, pits impracticable.
	Soil rocky, lava formation, fourth rate,
	Land rolling mountaineous, very little vegetation,
	Mountaineous land 80.00 chs.

	Thence I run,
	North between Secs. 7 and 12 over rolling mountaineous country,
	Ascend,
10.00	Top of ridge, course NE. and SW.
	Descend,
24.25	Enter canon,
27.00	Cross dry bed of canon, 50 lks.wide, course SW.
	Ascend,
30.00	Leave canon,
35.75	Summit of ridge, course NE. and SW.
	Cross wagon road, course NE. and SW.
36.00	Cross telephone line course NE. and SW.
	Descend,
39.00	Cross dry wash 25 lks.wide, course SW.
	Ascend,
40.00	Set a lava stone 18x8x6 ins. 14 ins.in ground for 1/4 Sec.cor.marked 1/4 on W., raised mound of stones 2 ft.base 1.5 ft.high W.of cor.
	No trees, pits impracticable,
48.00	Cross ridge, course NE. and SW.
	Descend,
55.00	Cross canon, 75 lks.wide, course SW.
	Ascend,
68.00	Summit of ridge, course NE. and SW.
	Whence Boundary Cone bears N.62°15'E.
	Descend,
71.75	Cross gulch 25 lks.wide, course W.
	Ascend,
75.00	Cross ridge, course E. and W.
	Descend,
79.25	Cross gulch 15 lks.wide, course SW.
	Ascend,
80.00	Set a lava stone 24x10x6 ins.18 ins.in ground for cor. Secs.1,6,7,12, marked 5 grooves on S. and 1 groove on N.edges, raised mound of stones 2 ft.base, 1.5 ft high W. of cor.
	No trees pits impracticable,
	Soil rocky, lava formation, fourth rate,
	Land rolling mountaineous, very little vegetation,
	Mountaineous land 80.00 chs.

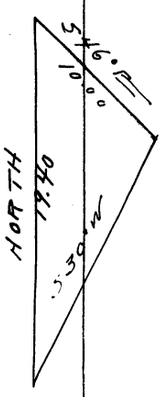
	Thence I run,
	North between Secs. 1 and 6, over rolling mountaineous country,
5.[illegible]	Cross summit of ridge, course NE. and SW.
	Descend,
9.75	Cross dry wash, 30 lks.wide, course SW.
	Ascend,
15.00	Cross summit of ridge, course NE. and SW.
	Descend,
21.25	Cross dry wash, 50 lks.wide, course SW.
	Ascend,
27.50	Cross ridge, course NE. and SW.

Chains	
	Descend,
33.00	Cross dry wash 50 lks.wide, course SW.
	Ascend,
40.00	Set a lava stone 18x10x10 ins. ~~14~~ 12 ins.in ground for 1/4 Sec.cor. marked 1/4 on W.face, raised mound of stones 2 ft.base 1.5 ft.high W.of cor.
	No trees, pits impracticable.
55.00	Cross ridge, course E. and W.
	Descend,
64.50	Cross gulch 100 lks.wide, course W.
	Ascend,
69.25	Cross telephone line, course NE. and SW.
69.75	Cross Mohave & Milltown R.R., course NE. and SW. 3 ft.gauge.
	Descend,
72.00	Cross dry wash, 200 lks.wide, course W.
	Ascend,
80.00	Set a lava stone 20x10x8 ins. ~~16~~ 15 ins.in ground for cor. Tps. 18 and 19 N., Rs. 20 and 21 W., marked T.19 with 6 grooves on N., R.20 W. with 6 grooves on E., T.18 N. with 6 grooves on S. and R.21 W. with 6 grooves on W., raised mound of stones 4 ft.base, 3.5 ft.high S. of cor.,whence Boundary Cone bears N.87°40'E.
	No trees, pits impracticable,
	Soil rocky, lava formation, fourth rate,
	Land rolling mountaineous, very little vegetation,
	Mountaineous land 80.00 chs.
	November 17, 1905.

West Boundary T. 18 N., R. 21 W.

	November 18, 1905.
	At 8h.a.m.l.m.t. I set off 34°50'N.on the lat.arc and 19°7'S.on the decl.arc and determine a true meridian with the solar at cor.Tps. 17 and 18 N., Rs.21 and 22 West,
	Thence I run,
	North on a random line between Tps.18 N.,Rs.21,and 22W.
480.00	Setting temporary 1/4 Sec. and Sec.cors. at intervals of 40.00 chs. to cor.Tps. 18 and 19 N., Rs. 21 and 22 W.
	I made diligent search for the established cor. of Tps. 18 and 19 N., Rs. 21 and 22 W. as described by the Surveyor General but could find no trace thereof;
	Therefore, I return to cor.Tps. 17 and 18 N., Rs.21 and 22 W.
	November 19, 1905.

	November 20, 1905.
	At 8h.a.m.l.m.t. I set off 34°50'N.on the lat.arc and 19°35'S.on the decl.arc and determine a true meridian with the solar at cor.Tps. 17 and 18 N.,Rs. 21 and 22 W.,
	Thence I run,
	North between Secs. 31 and 36, over level country, covered with Mesquite, Willow and Cottonwood timber, dense undergrowth of Arrow-wood, and water.
1.60	To S.W.bank Spear's Lake, where I set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for meander cor. frac.Secs.36 and 31, marked M.C.on N.,T.18 N.on S., R.21 W.S.31 on E. and R.22 W.S.36 on W.faces,
	Whence a Willow 12 ins.diam.bears N.21°15'E.125 lks. dist.marked T.18 N.R.21 W.S.31 M.C.B.T.
	A Willow 6 ins.diam.bears N.29°15'W. 125 lks.dist. marked T.18 N.R.22 W.S.36 M.C.B.T.
	To determine the distance across the lake, I set a flag on line on NE. bank and it being impracticable to



Chains

measure a base from meander cor., I set a flag at meander cor., crossed the lake to the flag on NE. bank then measured a base S.46°E. 10.00 chs.to a point from which the flag on S.side of lake bears S. 30°W., flag at NW.end of base bears N.46°W., the angles taken in the order of their measurement are 46°, 104° and 30°, the sum of which is 180°; which gives the distance from M.C.on S.side of lake to M.C.on N. side of lake

$\frac{\text{Sine } 76°}{\text{Sine } 30°}$ x base, or $\frac{.97030}{.50000}$ x 10.00 chs.= 19.40 chs.

1.60 chs. + 19.40 chs. = 21.00 chs., the required dist.

21.00 Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for meander cor.of frac.Secs. 31 and 36, marked M.C. on S.face, T.18 N.on N., R.21 W.S.31 on E., R.22W. S.36 on W.faces,
Whence a Mesquite 6 ins.diam.bears S.37°45'E. 47 lks. dist. marked T.18 N.R.21 W.S.31 M.C.B.T.
A Mesquite 8 ins.diam.bears N.5°45'W. 47 lks.dist. marked T.18 N.R.22 W.S.36 M.C.B.T.
Bank of Lake at this point is about 2 ft. above water.

40.00 Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for 1/4 Sec.cor.marked 1/4 S.on W.face, and 31 on E face
Whence a Mesquite 12 ins.diam.bears S.14°30'E. 34 lks. dist.marked 1/4 S.31 B.T.
A Mesquite 4 ins.diam.bears N.65°45'W. 113 lks.dist. marked 1/4 S.36 B.T.
F. Leonard's ranch house bears N.78°W. 5 chs.dist.

65.75 Cross fence, course NE. and SW.

80.00 Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for cor.Secs. 25,30,31 and 36, marked T.18 N.S.30 on NE., R.21 W.S.31 on SE., S.36 on SW. and R.22 W. S.25 on NW.faces, 1 groove on S. and 5 grooves on N, faces,
Whence a Mesquite 6 ins.diam.bears N.44°W. 89 lks.dist. marked T.18 N.R.22 W.S.25 B.T.
A Mesquite 6 ins.diam.bears N.37°30'E. 118 lks.dist. marked T.18 N.R.21 W.S.30 B.T.
A Mesquite 5 ins.diam.bears S.28°15'E. 39 lks.dist. marked T.18 N.R.21 W.S.31 B.T.
A Mesquite 4 ins.diam.bears S.14°45'W. 9 lks.dist. marked T.18 N.R.22 W.S.36 B.T.
Soil sandy loam, first rate,
Land level, subject to overflow, covered with Mesquite, Willow and Cottonwood timber, dense undergrowth of Arrow-wood and water, 80.00 chs.

Thence I run,
North between Secs. 25 and 30, through heavt Mesquite timber and dense undergrowth,

7.30 Cross fence, course SE. and NW.

7.50 Cross road, course SE. and NW.

8.50 Enter slough, water 6 ins.deep,

11.50 Leave slough, course SE.

40.00 Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for 1/4 Sec.cor. marked 1/4 S. on W.face, and 25 on E. face.
Whence a Mesquite 6 ins.diam.bears S.69°30'E. 76 lks. dist.marked 1/4 S.30 B.T.
A Mesquite 6 ins.diam.bears N.64°45'W. 145 lks.dist. marked 1/4 S.25 B.T.

42.00 Cross road, course E. and W.

80.00 Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for cor.Secs. 19,24,25,30, marked T.18 N.S.19 on NE., R.21 W.S.30 on SE., S.25 on SW. and R.22 W.S.24 on NW faces with 2 grooves on S. and 4 grooves on N.edges.

Chains	
	Whence a Mesquite 4 ins.diam.bears N.24°30'E. 68 lks. dist.marked T.18 N.R.21 W.S.19 B.T.
	A Mesquite 6 ins.diam.bears S.67°E. 9 lks.dist. marked T.18 N.R.21 W.S.30 B.T.
	A Mesquite 6 ins.diam.bears S.13°W. 67 lks.dist. marked T.18 N.R.22 W.S.25 B.T.
	A Mesquite 4 ins.diam.bears N.64°15'W. 79 lks.dist. marked T.18 N.R.22 W.S.24 B.T.
	Soil sandy loam, first rate,
	Land level, subject to overflow, covered with Mesquite, Willow and Cottonwood timber and dense undergrowth of Arrow-wood, 80.00 chs.

	Thence I run,
	North between Secs. 19 and 24, through heavy timber and dense undergrowth,
40.00	Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for 1/4 Sec.cor.marked 1/4 S.24 on W.face, and 19 on E. face
	Whence a Mesquite 4 ins.diam.bears S.24°45'W. 132 lks. dist, marked 1/4 S.24 B.T.
	A Mesquite 5 ins.diam.bears S.28°15'E. 187 lks.dist. marked 1/4 S.19 B.T.
66.75	Cross road, course NW. and SE.
80.00	Set a Mesquite post 4 ins.sq. 4 ft.long 3 ft.in ground for cor.Secs. 13,18,19,24, marked T.18 N.S.18 on NE., R.21 W.S.19 on SE., S.24 on SW. and R.22 W.S.13 on NW. faces, with 3 grooves on N. and S.edges.
	Whence a Mesquite 6 ins.diam.bears N.6°30'E. 195 lks. dist, marked T.18 N.R.21 W.S.18 B.T.
	A Mesquite 5 ins.diam.bears S.7°30'E. 228 lks.dist. marked T.18 N.R.21 W.S.19 B.T.
	A Mesquite 4 ins.diam.bears S.14°W. 152 lks.dist. marked T.18 N.R.22 W.S.24 B.T.
	A Mesquite 5 ins.diam.bears N.27°30'W. 239 lks.dist. marked T.18 N.R.22 W.S.13 B.T.
	Soil sandy loam, first rate,
	Land level, covered with scattering Mesquite timber and dense undergrowth of Arrow-wood, 80.00 chs.
	November 20, 1905.

	November 21, 1905.
	At 8h.a.m.l.m.t. I set off 34°52'N.on the lat.arc and 19°49'S.on the decl.arc and determine a true meridian with the solar at the cor.Secs. 13,18,19,24,
	Thence I run,
	North between Secs.13 and 18, through heavy Mesquite timber and dense undergrowth,
39.90	Cross road, course NW. and SE.
40.00	Set a Mesquite post 4 ins.sq. 4 ft.long, 3 ft.in ground for 1/4 Sec.cor.marked 1/4 S.13 on W.face, and 18 on E face.
	Whence a Mesquite 5 ins.diam.bears N.86°E. 85 lks.dist. marked 1/4 S.18 B.T.
	A Mesquite 10 ins.diam.bears S.27°30'W. 67 lks.dist. marked 1/4 S.~~14~~ 13 B.T.
74.00	Leave timber,
79.00	Leave valley, enter hills, ascend abruptly,
80.00	Set a lava stone 16x10x8 ins // ~~12~~ ins.in ground for cor. Secs. 7,12,13,18, marked 4 grooves on S. and 2 grooves on N.edges, raised mound stones 2 ft.base, 1.5 ft.high W.of cor.
	No trees available, pits impracticable,
	Soil, 79 chs.sandy loam, first rate, 1 ch. gravelly and rocky, third rate,
	Land 79 chs. level, covered with heavy Mesquite timber or dense undergrowth; 1 ch. hilly,
	Land covered with heavy timber or dense undergrowth 79.00 chs.

Chains	
	Thence I run,
	North between Secs. 7 and 12, over mesa country,
	Ascend,
15.00	Cross summit of ridge, course E. and W.
	Descend,
26.00	Enter canon,
28.00	Cross dry bed of canon 50 lks.wide, course SW.
	Ascend,
30.00	Leave canon, enter level mesa country,
40.00	Set a lava stone 20x10x8 ins. ~~15~~ 16 ins.in ground for 1/4 Sec.cor. marked 1/4 on W.face, raised mound of stones 2 ft.base 1.5 ft.high W.of cor.
	No trees, pits impracticable,
80.00	Set a lava stone ~~16~~ 16x8x8 ins. ~~12~~ 12 ins.in ground for cor. Secs. 1,6,7,12, raised mound of stones 2 ft.base, 1.5 ft.high W.of cor.
	No trees, pits impracticable,
	Soil gravelly and sandy, second rate,
	Land 40.00 chs. level mesa, 40.00 chs. broken mountaineous.
	Mountaineous land 40.00 chs.

	At 12 h.m.l.m.t. I set off 19°53'S.on the decl.arc and observed the sun on the meridian, at cor.Secs. 1,6,7,12, the resulting lat.being 34°54'N.,
	Thence I run,
	North between Secs. 1 and 6, over level mesa country, gently ascending to N. and E.
18.10	Cross road, course NE. and SW.
40.00	Set a lava stone 16x8x6 ins. ~~18~~ 15 ins.in ground for 1/4 Sec.cor.marked 1/4 on W.face, raised mound of stones 2 ft.base, 1.5 ft.high W.of cor.
	No trees, pits impracticable.
80.00	Set a granite stone 20x12x12 ins. ~~16~~ 15 ins.in ground for cor.Tps.18 and 19 N., Rs.21 and 22 W., marked T.19 N. with 6 grooves on N., R.21 W. with 6 grooves on E., T.18 N.with 6 grooves on S. and R.22 W.with 6 grooves on W.faces, raised mound of stones 4 ft.base 2.5 ft. high S.of cor.
	No trees, pits impracticable,
	Soil gravelly, second rate,
	Land level mesa, scant growth of grass and greasewiid brush,

November 21, 1905.

North Boundary T. 18 N., R. 21 W.

	November 22, 1905.
	At 8h.a.m.l.m.t. I set off 34°55'N.on the lat.arc, 20°2'S. on the decl.arc and determine a true meridian with the solar at cor.Tps. 18 and 19 N., Rs. 20 and 21 W.,
	Thence I run,
	West on a random line,
478.70	Setting temporary 1/4 Sec. and Sec.cors. at intervals of 40.00 chs., to intersection of West boundary of T. 18 N.,Rs.21 and 22 W., at S.36 lks.from Tp.cor.

November 23, 1905.

	November 24, 1905.
	At 8h.a.m.l.m.t. I set off 34°55'N.on the lat.arc 20°27½'S.on the decl.arc and determine a true meridian with the solar at cor.Tps.18 and 19 N., Rs. 21 and 22 W.,

Chains.	
	Thence I run, S.89°57'E. on a true line between Tps. 18 and 19 N., R.21 W. gently ascending over mesa country,
20.00	Foot of hills, course NW. and SE.
	Ascend,
38.70	Set a lava stone 24x8x5 ins. ~~20~~ 18 ins.in ground for 1/4 Sec.cor.marked 1/4 on N.face, raised a mound of stones 2 ft.base 1.5 ft.high N.of cor.
	No trees, pits impracticable, descend,
45.00	Cross dry wash, 30 lks,wide, course NW.
	Aspend,
78.70	Set a lava stone 20x10x8 ins. ~~16~~ 15 ins.in ground for cor. Secs.5,6,31,32, marked 5 grooves on E. and 1 groove on W. edges, raised mound of stones 2 ft.base, 1.5 ft. high W.of cor.
	No trees, pits impracticable,
	Soil gravelly, second rate,
	Land level and hilly, very little vegetation.

	Thence I run, S.89°57'E. between Secs. 5 and 32,
	Descend,
7.00	Cross dry wash, 20 lks.wide, course SW.
	Ascend,
25.00	Summit of ridge, course NE. and SW.
	Descend,
40.00	Set a lava stone 24x15x12 ins. 18 ins.in ground for 1/4 Sec.cor. marked 1/4 on N.face, raised mound of stones 2 ft.base 1.5 ft.high N.of cor.
	No trees, pits impracticable,
45.50	Cross dry wash, 30 lks.wide, course SW.
	Ascend,
65.00	Cross summit of ridge, course NE. and SW. Descend
80.00	Set a lava stone 24x15x12 ins. ~~20~~ 18 ins.in ground for cor. Secs. 4,5,32,33, marked 4 grooves on E. and 2 grooves on W. faces, raised mound of stones 2 ft.base, 1.5 ft. high W.of cor.
	No trees, pits impracticable,
	Soil, rocky, fourth rate,
	Land rolling mountaineous,
	Mountaineous land, 80.00 chs.

	Thence I run, S. 89°57'E. between Secs. 4 and 33,
	Descend,
7.50	Cross dry wash, 100 lks.wide, course SW.
	Ascend,
40.00	Summit of ridge, course NE. and SW. Set a lava stone 16x12x8 ins. ~~12~~ 10 ins.in ground for 1/4 Sec.cor., marked 1/4 on N.face, raised mound of stones 2 ft.base, 1.5 ft.nigh N.of cor.
	No trees, pits impracticable,
	Descend,
55.00	Cross dry wash 200 lks.wide, course SW.
	Ascend,
80.00	Set a lava stone 24x12x8 ins. ~~20~~ 18 ins.in ground for cor. Secs. 3,4,33,34, marked 3 grooves on E. and W. edges, raised mound of stones 2 ft.base 1.5 ft.high W. of cor.
	No trees, pits impracticable,
	Soil rocky, lava formation, fourth rate,
	Land rolling mountaineous,
	Mountaineous land 80.00 chs.

November 24, 1905.

Chains	
	November 25, 1905.
	At 8h.a.m.l.m.t. I set off 34°55'N.on the lat.arc and 20°39'S.on the decl.arc and determine a true meridian with the solar at cor.Secs.3,4,33,34,
	Thence I run,
	S.89°57'E. between Secs. 3 and 34,
	Ascend,
40.00	Set a lava stone 18x14x7 ins. ~~14~~ 12 ins.in ground for 1/4 Sec.cor.marked 1/4 on N.face, raised mound of stones 2 ft.base 1.5 ft.high N.of cor.
	No trees, pits impracticable,
	Summit of ridge, course NE. and SW.
	Descend,
52.00	Cross gulch, 30 lks.wide, course SW.
	Ascend,
72.25	Cross road, course NE. and SW.
80.00	Set a lava stone 20x10x8 ins. ~~16~~ 15 ins.in ground for cor Secs. 2,3,34,35, marked 2 grooves on E. and 4 grooves on W. edges, raised mound of stones 2 ft. base 1.5 ft.high W.of cor.
	No trees, pits impracticable.
	Soil rocky, lava formation, fourth rate,
	Land rough, mountaineous,
	Mountaineous land 80.00 chs.

	Thence I run,
	S. 89°57'E. between Secs.2 and 35 over rough mountaineous country,
	Descend,
6.00	Cross dry wash 100 lks.wide, course SW.
	Ascend,
11.50	Cross summit of ridge, course NE. and SW.
	Descend,
17.50	Cross dry wash 100 lks.wide, course SW.
	Ascend,
21.00	Summit of ridge, course NE. and SW.
	Descend,
24.00	Cross dry wash 75 lks.wide, course SW.
	Ascend,
40.00	Set a lava stone 20x10x5 ins. 15 ins.in ground for 1/4 Sec.cor.marked 1/4 on N.face, raised mound of stones 2 ft.base 1.5 ft.high N.of cor.
	No trees, pits impracticable.
48.00	Summit of ridge, course NE. and SW.
	Descend,
59.00	Cross dry wash 150 lks.wide, course SW.
	Ascend,
62.00	Cross summit of ridge, course NE. and SW.
	Descend,
65.00	Cross dry wash 100 lks.wide, course SW.
	Ascend,
69.00	Cross ridge, course NE. and SW.
	Descend,
73.00	Cross dry wash 75 lks.wide, course SW.
	Ascend,
80.00	Set a lava stone 24x12x6 ins. ~~20~~ 15 ins.in ground for cor. Secs. 1,2,35,36, marked 1 groove on E. and 5 grooves on W. edges, raised mound of stones 2 ft.base, 1.5 ft. high W.of cor.
	No trees, pits impracticable,
	Soil rocky, lava formation, fourth rate,
	Land rolling mountaineous, very little vegetation,
	Mountaineous land 80.00 chs.

Chains

November 25.
At 12h.m.l.m.t. I set off 20°43'S.on the decl.arc and observed the sun on the meridian at the cor.Secs. 1,2,35,36, the resulting lat.being 34°55'N.
Thence I run,
S.89°57'E. between Secs. 1 and 36, over level country,
40.00 Set a lava stone 20x15x10 ins. ~~16~~ ins.in ground for 1/4 Sec.cor. marked 1/4 on N.face, raised mound of stones 2 ft.base 1.5 ft.high N.of cor.
No trees, pits impracticable,
80.00 Cor.Tps. 18 and 19 N. Rs. 20 and 21 W.
Soil rocky, lava formation, fourth rate,
Land level,

November 25, 1905.

Boundaries of T. 18 N., R. 21 W.

Latitudes, departures and closing errors.

Line designated.	True brs.	Dist	Latitudes.		Departures.	
			N.	S.	E.	W.
		Chs.	Chs.	Chs.	Chs.	Chs.
E. Bdy.	North	480.00	480.00			
N. Bdy.	N.89°57'W	478.70	~~.42~~ .56			478.70
W. Bdy.	South	480.00		480.00		
S. Bdy.	East	479.49			479.49	
Convergency,						.51
Totals			~~480.42~~ ~~480.56~~ 480.00		479.49	479.21
			480.00		479.21	
Errors in lat.			~~.56~~ .42 Dep.		.28	

GENERAL DESCRIPTION.

This Township is nearly all rough mountaineous country, there being a little valley land in the South West portion of Township and a little smooth mesa land in the North West portion.

There is no timber or water except in the South West portion of the Township.

John J. Fenlon
U.S.Deputy Surveyor.

chains

December 24th, 1905.

Survey commenced December 24th, 1905 and executed with a W. and L. E. Gurley Light Mountain Transit not numbered with a Smith Solar Attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the lat and decl arcs.

The instrument was examined, tested on the true meridian at Phoenix, found correct, was approved by the Surveyor Genral for Arizona, September 25th, 1905.

I examine the adjustments of the Transit and correct the level and collimation errors, then to test the Solar Apparatus by comparing its indications resulting from its solar observations, made during a.m. and p.m. hours with a true meridian, determined by observations on Polaris, I proceed as follows:

December 24th. At the cor of Tps 18 and 19 N, Rs 21 and 22 W, which I set November 21st, I set off 34°55' N on the lat arc and 23° 21' S on the decl arc and determine a true meridian with the Solar and mark a point thereof on a stone set firmly in the ground, 5 chs N of my corner. at 4h. 15m. P.M.

December 24th, 1905.

December 25th.

At 1h.10m. a.m.l.m.t., I observed Polaris at Western elongation in accordance with the Manual of Instructions and mark a point on the line thus determined on a plug driven in the ground, 5 chs N of my station.

At 7h. 45m. a.m.l.m.t., I lay off the azimuth of Polaris 1° 28' to the E and mark the true meridian thus determined by cutting a small groove in the stone set December 24th on which the true meridian falls 0.30 ins W of the mark determined by the Solar.

At 8h.a.m.l.m.t., I set off 34° 55' N on the lat arc, 23° 21' S on the decl arc and mark a point on the true meridian determined with the Solar by a cross already set 5 chs N of my station. This mark falls 0.25 ins W of the true meridian established by Polaris observations.

The Solar Apparatus by p.m. and a.m observations defines positions for true meridian respectively about 0' 16" E and 0' 13" W of the true meridian, established by Polaris observations. Therefore, I conclude the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 8h. a.m. is N 15° 15' W, which gives a magnetic decl of 15° 15' E.

Thence I run

West bet Secs 1 and 36.

~~Descend~~ over level mesa land //

40.00 Set a lava stone, 16 x 8 x 8 ins, ~~12~~ ins in ground for ¼ Sec cor, marked ¼ on N face. Dig pits 18 x 18 x 12 ins, 3 ft E and W of cor. Raised mound of earth 3½ ft base, 1½ ft high, N of cor. No trees.

80.00 Set a lava stone, 18 x 12 x 6 ins, ~~12~~ 14 ins in ground for cor of Secs 1, 2, 35 and 36, marked 1 groove on E and 5 grooves on W faces. Raised mound of stones 2 ft base, 1½ ft high W of cor. No trees, pits impracticable.

Soil, sandy loam, first rate.

Land, level, sloping to the W and S, covered with scant growth of grease wood brush. Very little other vegetation.

---

chains

Thence I run
West bet Secs 2 and 35, over level mesa country.

28.25 Cross road, course NW-SE

40.00 Set a lava stone, 16 x 10 x 5 ins, ~~18~~ 11 ins in ground for ¼ Sec cor, marked ¼ on N face. Raised mound of stone 2 ft base, 1½ ft high N of cor. No trees, pits impracticable.

41.00 Cross gulch, 20 lks wide, course S

80.00 Set a lava stone, 18 x 8 x 6 ins, ~~14~~ ins in ground for the cor of Secs 2, 3, 34 and 35, marked 2 grooves on E and 4 grooves on W edges. Raised mound of stones 2 ft base, 1½ ft high, W of cor. No trees, pits impracticable.

Soil, sandy loam, first rate.

Land, level, sloping to the S and W, covered with scanty growth of grease wood brush. Very little other vegetation.

Thence I run
West bet Secs 3 and 34, over mesa land.

34.50 Leave mesa, enter Colorado River valley, through scattering timber and dense undergrowth of arrow wood.

40.00 Set a mesquite post, 4 ins sq., 4 ft long, 3 ft in ground for ¼ Sec cor, marked ¼ S on N face, ~~whence~~ and S on E face

A mesquite, 8 ins in diam, bears N 14° W, 71 lks dist, marked ¼ S 34 B.T.

A mesquite, 7 ins in diam, bears S 84° W, 68 lks dist, marked ¼ S 3 B.T.

42.71 Intersect E bdy of Camp Mohave Indian Reservation at S 0° 38' 6" W, 2.07 chs from the 5 Mile Post.

Set a mesquite post, 4 ins sq., 4 ft long, 3 ft in ground for Closing Cor on Tp line, marked C.C. R 22 W on E face, T 18 N, S 3 on S, T 19 N, S 34 on N, C.M.I.R. on W, and 6 grooves on N and S faces, whence

A mesquite, 8 ins in diam, bears S 70° E, 92 lks dist, marked T 18 N, R 22 W, S 3 C.C.B.T.

A mesquite, 12 ins in diam, bears N 35¼° E, 22 lks dist, marked T 19 N, R 22 W, S 34 C.C.B.T.

Soil, sandy loam, first rate.

Land, 34.50 chs mesa land, 8.21 chs river bottom land, covered with mesquite timber and dense undergrowth of arrow wood, 8.21 chs

I could find no trace of the South bdy of Tp 19 N, R 22 W.

December 25th, 1905.

BOUNDARIES T. 18 N., R 22 W.

Latitudes, departures, and closing errors.

Line designated.	True Bearings	Distance	Latitudes. N.	Latitudes. S.	Departures. E.	Departures. W.
		Chs.	Chs.	Chs.	Chs.	Chs.
Mean. Col. River			178.80			29.77
S. bdy. Res.line	N.76°17'E.	108.26	25.71		105.17	
E. bdy. Res.line	N. 1° 4'E.	272.50	272.45		5.11	
" " " "	N. 0°38'E.	3.17	3.17		.03	
N. bdy.	East	202.71			202.71	
E. bdy.	South	480.00		480.00		
S. bdy.	West	283.00				283.00
Convergency					.22	
Totals			480.13	480.00	313.24	312.77
			480.00		312.77	
Error in lat			.13	Dept	.47	

John J. Fisher
U. S. Deputy Surveyor.

chains

After diligent search, I was unable to find any trace of the South or East Boundary of the original survey of Township 19 North, Range 22 West. Therefore, I re-established the South, East and North Boundaries of said Township.

Survey commenced January 1st, 1906, executed with a W. and L. E. Gurley Light Mountain Transit, not numbered, with a Smith Solar Attachment. The horizontal limb is provided with two double verniers, placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the lat and decl arcs.

The instrument was examined, tested on the true meridian at Phoenix, found correct and was approved by the Surveyor General for Arizona, September 25th, 1905.

I examine the adjustments of the Transit and correct the level and collimations 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 true meridian determined by observations on Polaris, I proceed as follows:

January 1st: At the cor of Tps 18 and 19 N, Ranges 21 and 22 West, previously established by me, lat 34° 54' 57.6" N, long 114° 32~~'33~~" W, I set off 34° 55' N on the lat arc, 22° 57' S on the decl arc and at 4h. p.m. l.m.t., I determine a true meridian with the Solar and mark a point thereof on a stone set firmly in the ground 5 chs N of my cor.

January 1st, 1906.

January 2nd, 1906.

At 10h. 38m. a.m.l.m.t., I observed Polaris at Western elongation in accordance with Manual of Instructions and mark a point on the line thus determined on a plug driven in the ground, 5 chs N of my station.

At 7h. 45m. a.m.l.m.t., I set off the Azimuth of Polaris 1° 28' E and marked the true meridian thus determined by cutting a small groove in the stone set January 1st, on which the true meridian falls 0.3 ins W of the mark determined by the Solar.

At 8h. a.m.l.m.t., I set off 34° 55' N on the lat arc, 22° 54' S on the decl arc and mark a point in the true meridian determined with the Solar by a cross on the stone already set 5 chs N of my station. This mark falls 0.35 ins W of the true meridian established by Polaris observation.

The Solar Apparatus by p.m. and a.m. observations defines positions for true meridians respectively about 0' 16" E and 0' 18" W of the true meridians established by the polaris observation. Therefore, I conclude the adjustements of the instrument are satisfactory.

The magnetic bearing of the true meridian at 8h. a.m. is N 15° 15' W, which gives a magnetic decl of 15° 15' E.

I begin at the cor of Tps 18 and 19 N, Rs 21 and 22 W.

Thence I run
North bet Secs 31 and 36.

25.00 Foot of mesa

40.00 Set a lava stone, 16 x 8 x 6 ins, ~~18~~ 15 ins in ground for ¼ Sec cor, marked ¼ on W face, with mound of stones 2 ft base, 1½ ft high W of cor. No trees, pits impracticable.

Descend

46.50 Cross wash, 50 lks wide, course SW

Ascend

80.00 Top of mesa.

Set a lava stone, 20 x 6 x 6 ins, ~~16~~ 15 ins in ground for cor of Secs 25, 30, 31 and 36, stone marked 1 groove on S and 5 grooves on N edges. Raised a mound of stone 2 ft base, 1½ ft high, W of cor.

Chains	
	Soil, gravelly, 3rd rate. Land, broken, rough, very little vegetation.
	Thence I run North bet Secs 25 and 30, over level mesa country following to the N and W.
40.00	Set a lava stone, 16 x 8 x 6 ins, ~~12~~ 11 ins in ground for ¼ Sec cor, marked ¼ S on W face. Dig pits 18 x 18 x 12 ins, 3 ft N and S of cor. Raise mound of earth 3½ ft base, 1½ ft high, W of cor. No trees nor stones.
80.00	Set a lava stone, 20 x 8 x 6 ins, ~~16~~ 15 ins in ground for cor of Secs 19, 24, 25 and 30, stone marked 2 grooves on S and 4 grooves on N edges. Raised a mound of stone 2 ft base, 1½ ft high, N of cor. No trees, pits impracticable.
	Soil, sandy loam and gravel, first and secons rate. Land, level, covered with grease wood brush. Very little grass.
	At 12h.m.l.m.t., I set off 23° 55' S on the decl arc and observed the sun on the meridian, the resulting lat being 34° 57' N.
	Thence I run North bet Secs 19 and 24, over level mesa country.
40.00	Set a lava stone, 16 x 8 x 5 ins, ~~12~~ 11 ins in ground for ¼ Sec cor, marked ¼ on W face. Raised mound of stones 2 ft base, 1½ ft high, W of cor. No trees, pits impracticable.
	Descend
46.50	Cross gulch, 50 lks wide, course SW
	Ascend
80.00	Set a lava stone, 20 x 15 x 8 ins, ~~16~~ 13 ins in ground for cor of Secs 13, 18, 19 and 24, mraked 3 grooves on N and S edges. Raised mound of stones 2 ft base, 1½ ft high W of cor. No trees, pits impracticable.
	Soil, gravelly, 2nd rate. Land, level and broken, covered with grease wood brush. Very little grass.
	Thence I run North bet Secs 13 and 18, over rough, mountainous country. Leave mesa, enter mountains.
	Descend
9.00	Cross canon, 100 lks wide, course SW
	Ascend
30.00	Top of ridge, course NE-SW
	Descend
40.00	Set a lava stone, 18 x 12 x 10 ins, in monument of stones, marked ¼ on W face. Raised a mound of stones 2 ft base, 1½ ft high, W of cor. No trees, pits impracticable.
45.00	Enter canon
46.00	Cross dry bed of canon, 50 lks wide, course SW
	Ascend
47.50	Leave canon
60.00	Cross summit of ridge, course NE-SW
	Descend
75.00	Cross canon, 75 lks wide, course SW
	Ascend
80.00	Set a lava stone, 20 x 10 x 6 ins, ~~16~~ 15 ins in ground for cor of Secs 7, 12, 13 and 18, stone marked 2 grooves on N and 4 grooves on S edges. Raised mound of stone 2 ft base, 1½ ft high, W of cor.
	Soil, rocky, lava formation, 4th rate. Land, mountainous, cut up by deep canons, covered with grease wood brush. Very little other vegetation. Mountainous land, 80.00 chs. January 2nd, 1906.

chains	
	January 3rd, 1906.
	At 8h.a.m.l.m.t., I set off 34° 58' N on the lat arc, 22° 48' S on the decl arc, and determine a true meridian with the Solar at the cor of Secs 7, 12, 13 and 18.
	Thence I run
	North bet Secs 7 and 12, over rough, mountainous country.
	Descend
9.00	Cross canon, 100 lks wide, course SW
	Ascend
18.00	Cross ridge, course NE-SW
	Descend
30.00	Cross canon, 50 lks wide, course SW
	Ascend
40.00	Set lava stone, 20 x 10 x 8 Ins, in monument of stones for ¼ Sec cor, marked ¼ on W face. Raised monument of stones, 2 ft base, 1½ ft high, W of cor. No trees, pits impracticable.
41.00	Cross summit of ridge, course NE-SW
	Descend
48.25	Enter canon
52.00	Cross dry bed of canon, 50 lks wide, course ~~NW~~ SW. Ascend
56.00	Leave canon
62.00	Cross ridge, course NE-SW
	Descend
68.00	Cross canon, 100 lks wide, course SW
	Ascend
80.00	Summit of ridge, course E and W
	Set a lava stone, 18 x 10 x 8 ins, in monument of stones for cor of Secs 1, 6, 7 and 12, marked 5 grooves on S and 1 groove on N edges. Raised a mound of stone 2 ft base, 1½ ft high, W of cor. No trees, pits impracticable.
	Soil, rocky, lava formation, fourth rate.
	Land, mountainous, very rough, cut up by deep canons. Very little vegetation, principally grease wood brush.
	Mountainous land, 80.00 chs.

	Thence I run
	North bet Secs 1 and 6, over rough, broken, mountainous country.
	Descend
6.50	Cross canon, 150 lks wide, course NW
	Ascend
13.50	Cross ridge, course NW-SE
	Descend
21.50	Cross canon, 75 lks wide, course NW
	Ascend
31.25	Cross road, course NE-SW
32.00	Cross summit of ridge, course E and W
	Descend
40.00	Set a lava stone, 18 x 10 x 6 ins, ~~14~~ 12 ins in ground for ¼ Sec cor, marked ¼ on W face. Raised a mound of stones, 2 ft base, 1½ ft hihg, W of cor. No trees, pits impracticable.
43.25	Cross gulch, 50 lks wide, course W
	Ascend
52.00	Cross ridge, course E and W
	Descend
60.25	Cross canon, 150 lks wide, course SW
	Ascend
65.00	Cross ridge, course E and W
	Descend
72.00	Cross canon, 100 lks wide, course W
	Ascend

chains

80.00 Set a lava stone, 18 x 12 x 12ins, ~~14~~ 12 ins in ground for cor of Tps 19 and 20 N, Rs 21 and 22 W, marked
T 20 N on N
R 21 W on E
T 19 N on S
R 22 W on W faces, with 6 grooves on N, E, S and W faces. Raised a mound of stones, 4 ft base, 2½ ft high, S of cor, whence
Boundary Cone bears S 54° 20' E
Soil, rocky, lava formation, fourth rate.
Land, mountainous, very rough, cut up by deep canons.
Mountainout land 80.00 chs.

At 12h.m.l.m.t., I set off 22° 50' S on the decl arc and observed the sun on the meridian at the cor of Tps 19 and 20 N, Rs 21 and 22 W, the resulting lat being 35° 0' N, which is 10.8 " less than the true lat.

RESURVEY

NORTH BOUNDARY OF TOWNSHIP 19 NORTH, RANGE 22 WEST.

Thence I run
West bet Secs 1 and 36, over rough, mountainous country.
Ascend

15.00 Cross S rim of canon, course W
Descend on the S slope of canon

40.00 Set a lava stone, 18 x 8 x 5 ins, ~~14~~ 12 ins in ground for ¼ Sec cor, marked ¼ on N face. Raised mound of stones 2 ft base, 1½ ft high, N of cor. No trees, pits impracticable.

69.50 Cross bed of canon, 100 lks wide, course NW ascend

71.50 Cross ridge, course N and S
Descend

73.50 Cross same canon, 100 lks wide, course SW
Ascend

76.00 Cross ridge, course N and S
Descend

79.00 Cross gulch, 10 lks wide, course ~~N and~~ S
Ascend

80.00 Set a lava stone, 18 x 12 x 7 ins, in monument of stones for cor of Secs 1, 2, 35 and 36, stone marked 1 grooves on E and 5 grooves on W faces. Raised a mound of stones 2 ft base, 1½ ft high, W of cor. No trees, pits impracticable.
Soil, rocky, lava formation, fourth rate.
Land, mountainous, very rough, cut up by deep canons.
Mountainous land, 80.00 chs.
January 3rd, 1906.

January 4th, 1906.
At 8h.a.m.l.m.t., I set off 35° N on the lat arc, 22° 42' S on the decl arc and determine a true meridian with the Solar at the cor of Secs 1, 2, 35 and 36.
Thence I run
West bet Secs 2 and 35.
Ascend

20.00 Summit of ridge, course N and S
Descend,

30.00 Leave hills, descend abruptly into valley.

40.00 Set a lava stone 18 x 10 x 6 ins, ~~14~~ 12 ins in ground for ¼ Sec cor, marked ¼ on N face. Raised a mound of stone 2 ft base, 1½ ft high, N of cor. No trees, pits impracticable.

47.00 Enter Colorado River bottom, through scattering mesquite timber and dense undergrowth or arrow wood.

chains

80.00 Set a lava stone, 20 x 10 x 6 ins, 15 ins in ground for cor of Secs 2, 3, 34 and 35, stones marked 2 grooves on E and 4 grooves on W edges, whence

A mesquite 6 ins in diam, bears N 14¾° W, 85 lks dist, marked T 20 N, R 22 W, S 34 B.T.

A mesquite 4 ins in diam, bears S 28¼° W, 123 lks dist, marked T 19 N, R 22 W, S 3 B.T.

A mesquite 4 ins in diam, bears S 28¾° E, 158 lks dist, marked T 19 N, R 22 W, S 2 B.T.

A mesquite 4 ins in diam, bears N 78° E, 238 lks dist, marked T 20 N, R 22 W, S 35 B.T.

Soil, rocky, lava formation, and sandy loam, fourth and first rates.

Land, mountainous and level, covered with scattering mesquite timber and dense undergrowth of arrow wood.

Mountainous land or land covered with dense undergrowth, 80.00 chs.

Thence I run

West bet Secs 3 and 34, through scattering mesquite timber and dense undergrowth of arrow wood.

40.00 Set a lava stone, 16 x 8 x 6 ins, 12 ins in ground for ¼ Sec cor, marked ¼ on N face, whence a

A mesquite 8 ins in diam, bears N 64° E, 192 lks dist, marked ¼ S 34 B.T.

A mesquite 6 ins in diam bears S 46° E, 302 lks dist, marked ¼ S 3 B.T.

57.00 Enter overflow land, through dense undergrowth

80.00 Set a mesquite post, 6 ins sq., 4 ft long, 3 ft in ground for cor of Secs 3, 4, 33 and 34, marked

T 20 N, S 34 on NE
R 22 W, S 3 on SE
T 19 N, S 4 on SW
S 33 on NW faces, with 3 grooves on E and W edges, whence

A mesquite 4 ins in diam, bears N 26½° E, 133 lks dist, marked T 20 N, R 22 W, S 34 B.T.

A mesquite, 8 ins in diam, bears S 47° E, 274 lks dist, marked T 19 N, R 22 W, S 3 B.T.

A mesquite, 5 ins in diam, bears S 69° W, 426 lks dist, marked T 19 N, R 22 W, S 4 B.T.

A mesquite, 4 ins in diam, bears N 19¼° W, 89 lks dist, marked T 20 N, R 22 W, S 33 B.T.

Soil, sandy loam, first rate.

Land, level, 23.00 chs of which is subject to overflow, covered with scattering mesquite timber and dense undergrowth of arrow wood, 80.00 chs.

Thence I run

West bet Secs 4 and 33, through dense undergrowth of arrow wood and scattering mesquite timber.

7.60 Intersect left bank of Colorado River, bank about 10 ft high. Current close in to bank and cutting.

Set a mesquite post, 4 ins sq., 4 ft long, 3 ft in ground for Meander cor of fractional Secs 4 and 33, marked

M.C. on W face
T 20 N, S 33 on N face
R 22 W on E face
T 19 N, S 4 on S face, whence

A mesquite post, 10 ins in diam, bears S 2° W, 120 lks dist, marked T 19 N, R 22 W, S 4 M.C.B.T.

A mesquite, 5 ins in diam, bears N 28½° E, 95 lks dist, marked T 20 N, R 22 W, S 33 M.C.B.T.

Soil, sandy loam, first rate.

Land, level, subject to overflow, covered with dense undergrowth of arrow wood and scattering mesquite timber, 7.60 chs.

January 4th, 1906.

Latitudes, departures, and closing errors.

Line designated.	True Bearings	Distance.	Latitudes. N.	Latitudes. S.	Departures. E.	Departures. W.
E.bdy. Res.	N. 0°38'E	346.07	346.07		3.83	
N.bdy. Res.	N.56°52'W	56.00	30.60			46.89
" "	East	247.60			247.60	
E.bdy meanders	South	480.00	103.64	480.00		1.31
Convergency			.26			
Totals			480.35	480.00	251.69	48.20
S.bdy.	West	202.72				202.72
			480.35	480.00	251.69	250.92
			480.00		250.92	
Error in lat			.35	Dept	.77	

GENERAL DESCRIPTION

This Tp is rough and mountainous in the Eastern and Northern portion, level mesa country in the South and West and River bottom in the Northwestern part of the the Tp.

There is no water in the Tp excepting the Colorado River.

The soil inthe Eastern portion is rocky, lave formation, the Western and Southern portion being a sandy loam.

There is no timber excepting in the Northwestern portion, the Colorado River bottom, very little vegetation in other portion of Tp.

John J Fisher
U. S. Deputy Surveyor.

NAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS. 267

BG 2128 43

LIST OF NAMES.

A list of the names of the individuals employed by John J Feihe, United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of Bdyp Tps 15, 16 17 & 18 N R 21 W and Tps 17, 18 & 19 N R 22 W showing the respective capacities in which they acted:

Henry B O'Connor, *Chainman.*
Geo W Cassidy, *Chainman.*
Henry B O'Connor, *Moundman.*
Geo W Cassidy, *Moundman.*
J. J. Murphy, *Axman.*
J. W. Ricketts, *Axman.*
William Rodgers, *Axman.*
Irving V Angur, *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted John J Feihe, United States Deputy Surveyor, in surveying all those parts or portions of the Bdyp Tps 15, 16, 17 & 18 N R 21 W and Bdyp Tps. 17, 18 & 19 N R 22 W

of the Gila and Salt River meridian, Territory of Arizona, which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for Arizona

Henry B. O'Connor, Chainman. & Moundman
Geo. W. Cassidy, Chainman. Moundman
~~Moundman.~~
J. J. Murphy, Axman ~~Moundman.~~
William Rodgers, Axman.
J. W. Ricketts, Axman.
Irving V. Angur, Flagman.

Subscribed and sworn to before me this 19th day of January, 1905

SEAL

J. J. Feihe
Notary Public

6—151

9 1908

BOOK 2128

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, John J Fisher, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from Frank A Ingalls United States Surveyor General for Arizona, bearing date of the 14th day of March, 1905, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for Arizona, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the Exterior Tps 15, 16, 17 & 18 N R21W and Tps. 17, 18 & 19 N R 22 W

of the Gila and Salt River meridian, in the Territory of Arizona, which are represented in the foregoing field notes as having been surveyed 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 United States Surveyor General for Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

John J Fisher
United States Deputy Surveyor.

Subscribed by said John J Fisher, and sworn to before me this 1st day of March 1906, ~~189~~

Frank A Ingalls
U.S. Surveyor General for Arizona

SEAL

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona June 29th 1906 ~~189~~

The foregoing field notes of the survey of the Exterior boundaries of Tps. 15, 16, 17 and 18 N., R. 21 W., and Tps 17, 18, and 19 N., R 22 W. of the Gila and Salt River Base and Meridian, in the territory of Arizona.

executed by J. J. Fisher, U.S. deputy surveyor under his contract No. 128, dated March 14th, 1905, ~~189~~, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank A Ingalls
United States Surveyor General.

~~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.~~

~~United States Surveyor General.~~

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