

Standard  
BOOK "C"

FIELD NOTES

BOOK 2509

OF THE SURVEY OF THE

Seventh Standard Parallel North through parts of

Ranges 15, 17 and 19 East

AND RESURVEY OF SAME

through Ranges 16 and 18 East, and parts of

Ranges 15, 17 and 19 East

Of the Gila and Salt River Base and Meridian,

in the Territory of Arizona

EXECUTED  
AS SURVEYED BY

Sidney E. Blous

United States

Examiner of Surveys  
~~Deputy Surveyor~~

Special Instructions from the Commissioner of the General Land Office

Under ~~his Contract No. \_\_\_\_\_~~ dated Oct. 2<sup>nd</sup> 1907 and May 15<sup>th</sup> 1908

and Resurvey  
Survey commenced October 18, 1908

and Resurvey  
Survey completed April 24, 1909

NAMES AND DUTIES OF ASSISTANTS.

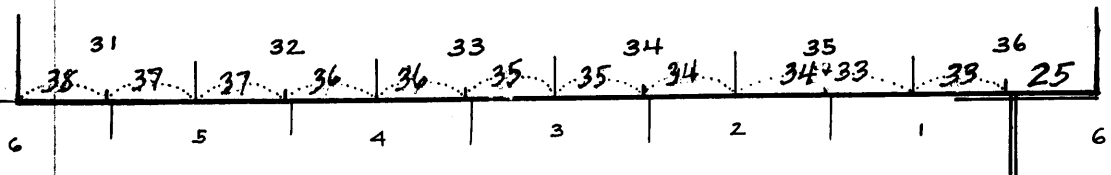
<u>Fred L. Warner</u>	<u>Chairman</u>
<u>Ralph J. White</u>	"
<u>Walter A. Swoffer</u>	"
<u>Van L. White</u>	"
<u>Jay E. Jellick</u>	"
<u>Charles L. Shumway</u>	<u>Moundman</u>
<u>Arthur A. Beard</u>	<u>Asman</u>
<u>Harvey Lake Nay</u>	<u>Flagman</u>
<u>Robert E. Clayborne</u>	"

# INDEX DIAGRAM

Numbers in red indicate Page Nos.  
Indicates Resurveyed Lines.

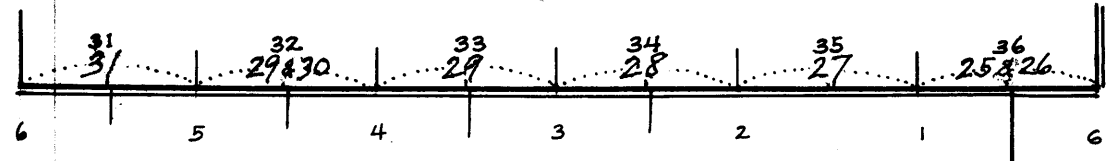
BOOK 2509

## T. 29 N. - R. 15 E.

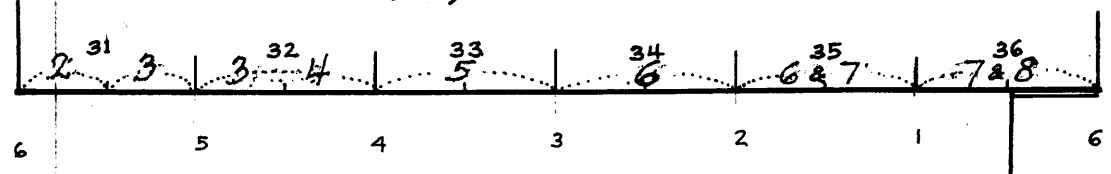


Seventh Standard Parallel North

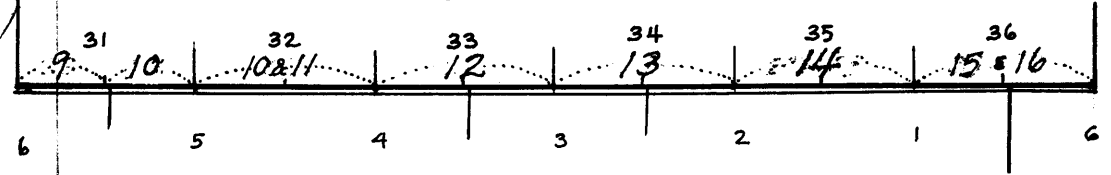
## T. 29 N. - R. 16 E.



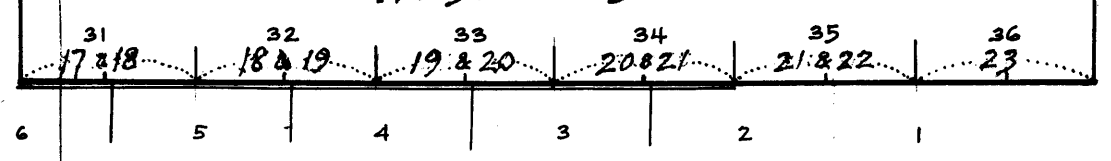
## T. 29 N. - R. 17 E.



## T. 29 N. - R. 18 E.



## T. 29 N. - R. 19 E.



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PRELIMINARY OATHS OF ASSISTANTS.

WE, Fred L. Warner, Ralph P. White and Walter A. Swoffer ~~and~~ Walter A. Swoffer, Ralph P. White and Jay E. Jellick, do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain upon 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

The Seventh Standard Parallel North thru parts of Rs. 15, 17 and 19 East, and resurvey of same thru Rs. 16 and 18 East, and parts of Rs. 15, 17 and 19 East of the G. & S. R. Meridian, Arizona.

Walter A. Swoffer, Fred L. Warner and Ralph P. White, Chainmen.  
Ralph P. White and Jay E. Jellick, Chainmen.

Subscribed and sworn to before me this 17<sup>th</sup> day of Oct., 1908

Sidney E. Blouh  
U.S. Examiner of Surveys



I, Charles L. Shumway

do solemnly swear that me will well and truly perform the duties of moundman in the establishment or reestablishment of corners, according to the instructions given me to the best of my skill and ability, in the survey of

The Seventh Standard Parallel North thru parts of Rs. 15, 17 and 19 East, and resurvey of same thru Rs. 16 and 18 East, and parts of Rs. 15, 17 and 19 East of the G. & S. R. Meridian, Arizona.

Charles L. Shumway Moundman.

Subscribed and sworn to before me this 17<sup>th</sup> day of October, 1908

Sidney E. Blouh  
U.S. Examiner of Surveys



I, J. Arthur A. Beard

do solemnly swear that me will well and truly perform the duties of axman in the establishment or reestablishment of corners and other duties, according to instructions given me to the best of my skill and ability, in the survey of

of the 7<sup>th</sup> Standard Parallel North thru parts of Rs. 15, 17 and 19 East, and resurvey of same thru Rs. 16 and 18 East, and parts of Rs. 15, 17 and 19 East of the G. & S. R. Meridian, Arizona.

Arthur A. Beard, Axman.

Subscribed and sworn to before me this 17<sup>th</sup> day of October, 1908

Sidney E. Blouh  
U.S. Examiner of Surveys



WE, Harvey Lake Nay and Robt. E. Clayborn, do solemnly swear that we will well and truly perform the duties of flagmen according to instructions given us to the best of our skill and ability, in the survey of

The Seventh Standard Parallel North thru parts of Rs. 15, 17 and 19 East, and resurvey of same thru Rs. 16 and 18 East, and parts of Rs. 15, 17, and 19 East of the G. & S. R. Meridian, Arizona.

Robt. E. Clayborn and Harvey Lake Nay, Flagmen.

Subscribed and sworn to before me this 17<sup>th</sup> day of October, 1908

Sidney E. Blouh  
U.S. Examiner of Surveys



Survey Commenced Oct 18<sup>th</sup> 1908. and executed with a Young and Sons light mountain transit No. 10 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.

Examine the adjustments of the transit and find them to be perfect, and knowing from recent tests of the solar by a.m. and p.m. observations on a meridian established by observations on Polaris, that it is in satisfactory adjustment.

Begin at the <sup>old</sup> Standard Cor. of Twp. 29 N. R's 17 and 18 E., which is a sand stone lying on the ground, marks nearly obliterated. Latitude  $35^{\circ} 51' 28''$  N. Longitude  $110^{\circ} 27' 58''$  W. Destroy all evidence of the old Twp. cor. and re-establish it in its original position as follows.

Set an iron post 3 ft. long 3 ins. in diam 24 ins. in the ground for Standard Cor. of Twp. 29 N. R's 17 and 18 E., marked on brass cap T 29 N. on N. half. R 17 E S. 36 in NW. and R 18 E S 31 in N.E. quadrant. —

Dig pits  $30 \times 24 \times 12$  ins. crosswise on line E and W. 4 ft. and N. of Post, 8 ft. dia and raise a mound of earth 5 ft. base  $2\frac{1}{2}$  ft. high N. of cor.

NOTE: Oct 18<sup>th</sup> 1908  
Oct. 7<sup>th</sup> 45<sup>m</sup> a.m. l.m. l. obs. of  $35^{\circ} 51\frac{1}{2}'$  N. on the lat. arc.  $9^{\circ} 34\frac{1}{2}'$  S. on the decl arc and determine a meridian with the solar at this cor.;

Thence run,

West; on a random line, on Seventh Standard Parallel north, through Range 17 E. setting temp. stand 4 sec. and sec. cor. at intervals of 40.00 chs., and at 480.16 chs., fall 15 chs. S. of the old. stand cor. of Twp. 29. N. R's 16 and 17 E., which is a sand stone  $10 \times 6 \times 6$  ins above ground. mhd. SE on N. face. with 6 grooves on N.E. and W faces

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No trace of pit and mound of Earth or other cor accessories. Destroy the old cor. and re establish it in the same position as follows.

Set an iron post. 3 ft. long. 3 in. in diam. 24 in. in the ground for Standard Cor. of Nps. 29 N. R. S. 16 and 17 E., marked on brass cap T 29 N. on N. half. R 16 E S 36 in N.W., R 17 E S 31 in N.E. quadrant.

Dig pits 30 x 24 x 12 in. course on each line E. and W. 4 ft. and N. of post. 8 ft. dia. and raise a mound of earth 5 ft. base 2 ft. high N. of cor. The falling answers to a correction of 0° 01' or 2" ltr. N. per. mile counting from the Stand. Cor. of Nps. 29 N. R. S. 17 and 18 E.,

October 18<sup>th</sup> 1908.

October 20<sup>th</sup> 1908. Oh. 7<sup>h</sup> 45<sup>m</sup> a.m. Emil set off 35° 51' N. on the lat arc. 10° 18' S on the decl arc and determined a meridian with the solar alt. the <sup>re-established</sup> Stand. Cor. of Nps 29 N. R. S. 16 and 17 E., above described,

Thence I run,

S 89° 59' E, on a true line, on S. bdy sec. 31, ascend N.W. slope of ridge over hilly sandy land.

- 06.20 Top of sand ridge bear N.W. and S.E. desc N.W. slope
- 11.20 Dry ravine course N.W. asc.
- 14.75 Top of sand ridge bear N.W. and S.E. desc steeply
- 18.70 Dry ravine course N. asc over low ridges and shallow ravines
- 24.16 Top of sand ridge bear N.E. and S.W. desc
- 26.26 Dry ravine course N.E. asc.
- 28.16 Top of sand ridge bear N.E. and S.W. desc.
- 30.90 Dry ravine course N.E. asc.
- 33.16 Top of sand ridge bear N.W. and S.E. desc
- 35.15 Dry ravine course N.W. asc.

Difference between measurements of 40.16 chs by 2 sets of chainmen is 10 chs; position of middle point By 1<sup>st</sup> set. 40.21 chs.

By 2<sup>nd</sup> set. 40.11 chs. the mean of which is

- 40.16 Set an iron post. 3 ft. long 1 in. in diam. 26 in. in the ground for Stand. Cor. marked on brass cap. R 17 E S 31 on N. half

- 44.15 Top of sand ridge bear NW. and SE. desc
- ~~45.75 Intersect the C.C. bet. 5 and 6 T 28 N R 17 E.~~
- 46.86 Dry ravine course NE. asc
- 51.85 Top of rocky ridge bear NW. and SE. desc
- 55.16 Dry ravine course NW. asc.
- 67.91 Top of sand ridge bear NW. and SE. desc
- 72.00 Foot of descent in ravine course NW.
- Cross Road, leads from Plover Ariz to Oraibi Ariz bear NW and SE. asc S.W. slope of ridge
- Difference bet measurements of 80.16 chs. by two sets of chainmen is 12 chs.; position of middle point
- B<sup>1st</sup> set. 80.22 chs
- B<sup>2nd</sup> set. 80.10 chs. the mean of which is
- 80.16 Set an iron post. 4 ft long. 3 in. in diam 36 ins. in the ground for stand cor. of sec 31 and 32 marked on base Cap T 29 N S 31 in NW. and R 17 E S 32 in N.E. quadrant.
- Dig pits 24x18x12 ins crosswise on line E and W 3 ft and N. of post. 7 ft. dia. and raise a mound of earth 4 ft. base 2 ft. high N of cor
- Land hilly.
- Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> rate
- No timber
- 
- S 89° 59' E, on S. side of sec 32,
- Ascend W. slope of sand ridge over hilly sandy land through scattering Sage brush and bunch grass.
- 00.75 Top of sand ridge bear NW. and SE. desc. over NE. slope
- 17.70 Dry ravine at foot of mesa course NW. asc S.W. slope of mesa over broken stony mountainous land
- 30.65 Top of sand stone cliffs along S. edge of mesa bear NW. and SE.
- 31.30 East edge of cliff. desc. abruptly over cliffs

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Difference between measurements of 40.00 chs by two sets of chainmen is 18 lbs.; position of middle point

By 1<sup>st</sup> Set. 39.91 chs.

By 2<sup>nd</sup> Set. 40.09 chs. the mean of which is

40.00 Set an iron fork 3 ft long, 1 in in diam, 26 ins. in the ground for Stand  $\frac{1}{4}$  sec. cor, mkd. on brass Cop. T 32 on N. half.

Raise a mound of stone 2 ft base 1 1/2 ft high in of cor. Pits impracticable

~~46.06 Enter the closing end of sec 4 and 5 928 m~~

~~R17E. at foot of cliffs bear NW and SE and~~

46.94 Top of bluff; Sec. bear NW and SE. desc over SE slope of cliff.

56.00 Foot of cliffs in ravine corner SW. asc. SW. slope of Mesa

59.50 Top of cliffs on W. edge of mesa bears NW and SE., leave mountainous land bears NW and SE. Enter rolling sandy mesa land covered with scrub cedar timber bears NW and SE.

Difference between measurements of 80.00 chs by two sets of chainmen is 20 lbs.; position of middle point

By 1<sup>st</sup> Set. 79.90 chs.

By 2<sup>nd</sup> Set. 80.10 chs, the mean of which is

80.00 Set an iron fork 3 ft long 3 ins. in diam. 24 ins. in the ground for Stand cor. of sec. 32 and 33. mkd. on brass Cop. T 29 NS 32 in NW. and R17E. S 33 in N.E. quadrant, from which

A cedar 8 ins. in diam. bears  $N74^{\circ}4'E$ . 76 lbs. dist marked T 29 N. R17E. S 33 B.T.

A cedar 7 ins. in diam bears  $N51^{\circ}W$  15 lbs. dist marked T 29 N. R17E S 32 B.T.

Land rolling hilly and mountainous Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> rate.

Timber prairie pine and cedar.

mountainous land 41.80 chs

$S89^{\circ}59'E$ , on S. side of sec. 33, <sup>cedar timber</sup> over rolling sandy mesa land through scrub.



part of

The Seventh Standard Parallel North through Range 17 East  
 Chains 5

Difference between measurements of 4000 chs. by two sets of chainmen is 12 lks. position of middle point By 1st set 39.94 chs By 2nd set 40.06 chs the mean of which is 229

40.00 Set an iron post 3 ft long, 1 in in diam, 26 ins in the ground for Stand 74 sec. cor. mkd on brass cap.  $\frac{1}{4}$  S 33 on N. half. from which  
 A cedar 8 ins in diam. bears  $N 73\frac{1}{2}^{\circ} E$  92 lks dist marked S.C.  $\frac{1}{4}$  S 33 B.T. No other trees suitable for bearing trees available  
 Dig pits 18x18x12 ins E and W. of post. 3 ft dist and 2 ins a mound of earth 3 $\frac{1}{2}$  ft base 1 $\frac{1}{2}$  ft high N. of cor

44.59 Wood road bears NW. and S.E.

~~45.65 Intersect the closing cor of rec 3 and 4 Np 25 m 179.~~

71.84 Old wood road bears N.E. and S.W.

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Difference between measurements of 80.00 chs by two sets of chainmen is 8 lks. position of middle point,  
 By 1st Set 80.04 chs.  
 By 2nd Set 79.96 chs. the mean of which is.

80.00 Set an iron post 3 ft long, 3 ins in diam 24 ins in the ground for Stand cor of rec. 33 and 34, marked on brass Cap T 29 N, S 33 in N.W. and R 17 E S 34 in N.E. quadrant from which.  
 A cedar 6 ins in diam. bears  $N 62\frac{1}{4}^{\circ} E$  211 lks dist marked T 29 N, R 17 E, S 34 B.T.  
 A cedar 8 ins in diam bears  $N 64\frac{3}{4}^{\circ} W$  90 lks dist marked T 29 N, R 17 E. S 33 B.T.  
 Land rolling.  
 Soil sandy 3rd rate.  
 Timber prairie pine and cedar

October 20<sup>th</sup> 1908

This 20<sup>th</sup> day of October 1908, I discharge Walter a Swaffer, Chairman, No officers authorized to administer oaths, other than myself, being available, without great inconvenience, delay and expense, I administer the required final oath

Sidney E. Blout  
 U.S. Examiner of Surveys

October 21<sup>st</sup> 1908. At 8<sup>h</sup> 30<sup>m</sup> a.m. l.m.t. &

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Set off.  $35^{\circ}51\frac{1}{2}'$  N, on the lat arc,  $10^{\circ}41'$  S on the decl arc and determine a meridian with the solar alt. the stand cor of sec 33 and 34, <sup>above described</sup>  
Thence D run,

$S 89^{\circ}59' E$ , on S. side of sec. 34,  
Over rolling sandy mesa land through scrub cedar timber

Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lbs., position of middle point,  
By 1<sup>st</sup> set: 40.04 chs.

By 2<sup>nd</sup> set: 39.96 chs. the mean of which is 40.00  
Set an iron post 3 ft. long 1 in in diam. 26 in in the ground for stand cor. mkd out brass cap.  $N 34^{\circ}$  on N. half-- from which.

A cedar 6 in in diam. bears  $N 30^{\circ} E$  154 lbs. dist. marked S. 34 B.T. No other trees suitable for bearing trees available.

Dug pits 18x18x12 in each, 10 ft apart, 3 ft dist and raise a mound of earth  $3\frac{1}{2}$  ft. base  $1\frac{1}{2}$  ft. high in each.

~~75.47~~ ~~Determine the closing cor. of sec 2 and 3 by  $N 17^{\circ} E$  170.~~

71.60 East edge of mesa bears  $N$  and  $S. E$ . Over rolling land bears  $N$  and  $S. E$ . desc. & slope over stony land.

Difference between measurements of 80.00 chs by 2 sets of chainmen is, 16 lbs.; position of middle point,  
By 1<sup>st</sup> set: 80.08 chs.

By 2<sup>nd</sup> set: 79.92 chs. the mean of which is 80.00  
Set an iron post 3 ft. long, 3 in in diam 24 in in the ground for stand cor. of sec. 34 and 35, mkd out brass cap. T 29 N. S. 34 in NW. and R 17 E S. 35 in NE quadrant.

Raised mound of stone 3 ft base  $1\frac{1}{2}$  ft high. N. of cor. Pits unpracticable

Land rolling  
Soil sandy 1<sup>st</sup> 3<sup>rd</sup> rate  
Timber pinon pine and cedar

$S 89^{\circ}59' E$ , on S. side of sec. 35,  
Over abrupt rocky E. slope of mesa through scrub cedar and pinon pine timber

00.50 East timber bears  $N E$  and  $S. W$ .

37.80 Wood road bears  $N 20^{\circ} W$  and  $S 20^{\circ} E$ .

Difference between measurements of 40.00 chs. by two sets of chainmen is 10 lbs.; position of middle point

By 1<sup>st</sup> Set. 40.05 Chs.  
 By 2<sup>nd</sup> Set. 39.95 Chs. the mean of which is.  
 40.00 Set an iron post. 3 ft. long. 1 in. in diam. 26 ins. in the ground.  
 for stand  $\frac{1}{4}$  sec. cor. mkd. on brass cap  $\frac{1}{2}$  S 35 on N. half.  
 Dig pits 18x18x12 in. East W. of post. 3 ft. dist and  
 raise a mound of earth  $3\frac{1}{2}$  ft. base  $1\frac{1}{2}$  ft. high. N. of cor.  
 41.25 Right bank of Sand Wash. bears NW and SE.  
 42.30 Road from Heann Canyon Ariz to Oraibi Ariz in dry  
 bed of Sand Wash. bears NW and SE.  
 45.45 Left bank of Sand wash bears NW and SE. arc. gradually  
~~45.70 Intersect the closing Cor. Sec 36 and T 29 N R 17 E.~~  
 Difference bet. measurements of 80.00 Chs. by two sets.  
 of chainmen is 14 lbs. position of middle point  
 By 1<sup>st</sup> Set. 80.07 Chs.  
 By 2<sup>nd</sup> Set. 79.93 Chs. the mean of which is.  
 80.00 Set an iron post. 3 ft. long. 3 ins. in diam. 24 ins.  
 in the ground for. Stand Cor. of sec. 35 and 36.  
 mkd on brass cap T 29 N. S 35 in NW. R 17 E S 36 in  
 N.E. quadrant.  
 Dig pits 24x18x12 ins. crosswise on line East  
 W. 3 ft. and N. of post. 7 ft. dist, and raise a  
 mound of earth 4 ft. base 2 ft. high. N. of cor.  
 Land lully.  
 Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> rate  
 Timber pinon pine and cedar.

S. 89° 59' E., on S. bdy. sec 36,  
 ascend W. slope mesa over sandy lully land through  
 sage brush and bunch grass  
 3.94 Dry ravine 30 lbs wide 10 ft. deep. Course SW.  
 8.95 Top Sand ridge bears NE and SW. desc  
 11.94 Dry ravine Course SW. asc  
 22.15 Leave lully land bears N. and S. ascend steep rocky  
 W. slope of mesa over mountainous land bears  
 N. and S.  
 25.45 Top cliffs 50 ft. high along W. edge of mesa bears  
 NW and SE. Leave mountainous land bears  
 NW and SE. Enter rolling stony mesa land.  
 covered with scattering scrub cedar timber  
 bears NW and SE  
 32.55 East edge of mesa. Leave rolling land bears N and S

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37.06 Descend broken stony & slope over mountainous land.  
 37.06 Note Cliff 30th high beam nands. desc abruptly  
 Difference between measurements of 40.00 chs by  
 two sets of chainmen is 8 chs. position of middle point  
 By 1<sup>st</sup> set. 40.04 chs.  
 By 2<sup>nd</sup> set. 39.96 chs. spanway of which is  
 40.00 Set an iron post 2 ft long, 1 in in diam & 6 in in  
 the ground for stand  $\frac{1}{4}$  sec. cor. mkd on beam cap.  
 #36 on n. half, from which  
 A cedar 6 in. in diam. beam N 26° E 73 lbs. dist. marked S.C.  $\frac{1}{4}$   
 S 36 B.T., no other trees available Dig pit 18x18x12 in E and W  
 of post 3 ft. dist. and raise a mound of earth 3  $\frac{1}{2}$  ft high 1  $\frac{1}{2}$  ft high N. of cor.  
 45.80 ~~Intersect the~~ <sup>old</sup> closing cor. of Twp 28 N, R 17 and 18 E.  
 Thence resurveying to the std. Tp. for.  
 50.35 Dry ravine in lead from S.W. to S.E. side.  
 51.25 High sand ridges from N.W. and S.E. dir.  
 60.00 No trace of old  $\frac{1}{4}$  sec. cor. can be found.  
 66.00 heavy scattering cedars from N.W. and S.E.  
 80.00 <sup>re-established</sup> New <sup>hereinbefore</sup> stand cor. of Twp. 29 N, R 17 and 18 E, described  
 Land rolling and mountainous  
 Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> rate.  
 Timber cedar  
 Mountainous land. 50.75 chs.

October 21<sup>st</sup> 1908

Survey Commenced October 22<sup>nd</sup> 1908 and executed with a Young and Sons light mountain transit No. 10 with a Smith Solar attachment, the horizontal limb being 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.

Examined the adjustments of the transit and found them as nearly perfect as I can make them and know from recent tests of the solar apparatus by comparing the results of observations made on the sun during a.m. and p.m. hours with a meridian established by observations on Polaris that the instrument is in satisfactory adjustment.

~~I found at the time of executing the survey of the subdivision lines in Twp. 28 N. R. 18 and 19 E. which close on the the 7<sup>th</sup> Standard Parallel North through these ranges. that the majority of the standard corners along this line, which are soft sand stones are of inferior size with the marks nearly effaced and, without corner accessories. therefore I re survey the Seventh Standard Parallel North through Ranges 18 and part of 19, as follows:~~

Begin at the Standard Cor of Twp. 29 N. R. 17 and 18 E. which I re established. October 20<sup>th</sup> 1908.

<sup>as hereinbefore described</sup> Latitude  $35^{\circ} 51' 28''$  N. Longitude  $110^{\circ} 27' 58''$  W.

At 8<sup>h</sup> 00<sup>m</sup> a.m. I set off  $35^{\circ} 51 \frac{1}{2}'$  N. on the lat. arc.

$11^{\circ} 01'$  S. on the decl. arc and determine a meridian with the solar., then I resurvey

East, on S. side of sec. 31, on true line,

Descend E. slope over rolling sandy land.

11.00 Dry sand wash. 100 lbs wide 2 ft deep course S.E.  
20.00 No trace of old 1/16 sec cor. can be found.  
37.10 Dry sand wash. 25 lbs wide 6 ft deep course S.W. and  
Difference between measurements of 40.00 chs by two sets of Chainmen is 8 lbs.; position of middle point  
By 1<sup>st</sup> set. 40.04 chs.

By 2<sup>nd</sup> set 39.96 chs. the mean of which is  
40.00 Intersect the old stand. 1/4 sec. cor. which is a 6 and  
stone 8x4x4 in above ground. loosely set; marks nearly  
effaced. no trace of pits or mound., Destructive.

1.0

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all evidence of the cor. and re establish it in the same place as follows.

Saw iron post 3 ft. long 1 in in diam. 26 in. in the ground for stand.  $\frac{1}{4}$  sec cor. marked on brass cap T 31 on N. half.

Dig pit 18x18x12 ins on line. East W of post 3 ft. dist. and raise a mound of earth 3  $\frac{1}{2}$  ft. base, 1  $\frac{1}{2}$  ft. high N. of cor.

44.01 Intersect the closing cor of sec. 5 and 6 T 28 N. R 18 E. which ~~is~~  
~~reestablished~~

48.25 Dry ravine in bend from N.E. to N.W.

60.00 No trace of old  $\frac{1}{16}$  sec. cor. can be found.

64.00 Leave rolling land head N.W. and S.E. enter stony mountainous land and cedar timber head N.W. and S.E. ascend abrupt W. slope of mesa

70.00 Top of cliff. on W. edge of mesa. Leave mountainous land head N and S. Enter rolling mesa land.

Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lbs. position of middle point by 1<sup>st</sup> set 80.05 chs

By 2<sup>nd</sup> set 79.95 chs. the mean of which is 80.00

Intersect the old stand cor. of sec 31 and 32. which is a rock in place 3 x 2 x 2 ft. above ground mark nearly obliterated. No cor accessories. Destroy all trace of this cor. and re-establish it in the same place as follows.

80.00 Saw iron post 3 ft. long 3 in in diam. 24 in. in a mound of stone <sup>reestablished</sup> for stand. cor. of sec 31 and 32. marked on brass cap T 29 N. S 31 in N.W. and R 18 E S 32 in N.E. quadrant.

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

No trees suitable for bearing trees available. Pls impracticable

Land rolling hilly and mountainous.

Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> rate.

Timber scattering cedar.

Mountainous land. 6.00 chs.

East, on S. side of sec. 32, over rolling stony mesa land through scattering scrub cedar timber

0.50 E. edge of mesa. Leave rolling land head N.W. and S.E. Enter mountainous land head N.W. and S.E.

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1.75 Dry ravine at foot of cliffs. Course N.E. as low timber bear N.W. and S.E.  
 11.75 N.W. of sand spur bear N.E. and S.W. desc. S.E. slope.  
 20.00 No trace of old 1/16 sec. cor. can be found.  
 30.95 Dry ravine course N.E. as above.

Difference between measurements of 40.00 Chs. by two sets of chainmen is 8 lbs. position of middle point.

By 1<sup>st</sup> set 39.96 Chs.  
 By 2<sup>nd</sup> set 40.04 Chs. the mean of which is

40.00 Intersect the old standard 1/4 sec cor. which is a sand stone loosely set. marked nearly effaced. No trace of pits or mounds. Destroy all trace of this corner and re establish it in its original position as follows  
 Set an iron post 3 ft. long, 3 in. in diam. 26 in. in the ground for Standard 1/4 sec. cor. marked on brass cap 45 32. on N. half.

Dig pits 18x18x12 in. E and W. of post 3 ft. dist. and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high. N. of cor.

~~43.96 Intersect the closing cor. of sec. 4 and 5, T 28 N. R 18 E. which I established~~

NOTE: At this cor. D. set off 11° 06 1/2' S on the decl. arc. and at noon observe the sun on the meridian and obtain on the lat. arc. a reading of 35° 51 1/2' N.

57.15 N.W. of spur bear N.E. and S.W. desc. S.E. slope.  
 60.00 No trace of old 1/16 sec. cor. can be found.  
 Difference between measurements of 80.00 Chs. by two sets of chainmen is 8 lbs., position of middle point  
 By 1<sup>st</sup> set 80.04 Chs.  
 By 2<sup>nd</sup> set 79.96 Chs. the mean of which is

80.00 Intersect the Standard Cor. of Secs. 32 and 33. which is a sand stone loosely set. marked and witnessed as described by the Surveyor General, Destroy all trace of this cor. and re establish it in its original position as follows.

Set an iron post 3 ft. long 3 in. in diam. 24 in. in the ground for Standard cor. of Secs. 32 and 33. marked on brass cap T 29 N. S 32 in N.W., and R 18 E. S 33 in N.E. quadrant.

Dig pits 24x18x12 in. crosswise on each line E and W. 3 ft. and N. of post 7 ft. dist. and raise a mound of earth 4 ft. base, 2 ft. high N. of cor.

Land rolling and mountainous,  
 Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> etc.  
 Timber Cedars.

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Mountainous land 79.50 Chs

Cash, on S. bdy. of Sec. 33,  
 Descend N.E. slope over mountainous land through  
 scattering Sage and greasewood brush undergrowth  
 and bunch grass.

8.40 Proof of descent in dry sand wash 150 lbs. wide Course  
 S.E. Leave mountainous land head N.W. and S.E., enter  
 rolling land.

20.00 No trace of old 1/16 sec. cor. can be found.  
 Difference between measurements of 40.00 Chs by two sets  
 of Chainmen is 4 Chs.; position of middle point  
 By 1<sup>st</sup> Set 39.98 Chs.

By 2<sup>nd</sup> Set 40.02 Chs. the mean of which is.  
 40.00 Intersect the old Standard 1/4 sec. cor. which is a sand  
 stone loosely set, with marks almost entirely effaced  
 No trace of pits and mound  
 Destroy this cor. and reestablish it in the same  
 place as follows.

Set an iron post 3 ft. long 1 in. in diam. 26 in. in  
 the ground for Stand. 1/4 sec. cor. marked on brass cap  
 74 S 33 on N. half

Dig pits 18x18x12 in. E and W. of post 3 ft. dia, and  
 raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high. N. of cor.

40.95 Road to Placea Arizona bears N 50° W and S 50° E.

44.02 Intersect the closing cor. of Secs. 3 and 4 T 28 N. R 18 E.

60.00 ~~which I established~~  
 No trace of old 1/16 sec. cor. can be found.  
 Difference between measurements of 80.00 Chs. by two  
 sets of Chainmen is 4 Chs.; position of middle point  
 By 1<sup>st</sup> Set 79.98 Chs.

By 2<sup>nd</sup> Set 80.02 Chs. the mean of which is  
 80.00 Intersect the <sup>old</sup> Standard Cor. of Secs. 33 and 34 which  
 is a sand stone 12x6x5 in. <sup>above ground</sup> marks nearly obliterated  
 No trace of pits and mound. Destroy all evidence  
 of the old cor. and reestablish it in the  
 same place as follows.

Set an iron post 3 ft. long 3 in. in diam. 24 in.  
 in the ground for Standard Cor. of Secs. 33 and  
 34, marked on brass cap T 29 N. S 33 in N.W. and R  
 18 E. S 34 in N.E. quadrant.

Dig pits 24x18x12 in. crosswise on each line. East  
 W. 3 ft. and N. of post 7 ft. dia and raise a mound of



earth 4 ft. base, 2 ft. high. No. of cor  
land rolling and mountainous.  
Soil sandy 3<sup>rd</sup> rate.

237.

No timber mountainous land 840 Chs.

October 22<sup>nd</sup> 1908

October 23<sup>rd</sup> 1908, ab. 7<sup>h</sup> 45<sup>m</sup> a.m. <sup>1 m. N</sup> 1<sup>st</sup> set off. 35° 51' 1/2" N.  
on the lat. arc 11° 21' 1/2" S. on the decl. arc and determine  
a meridian with the solar at the <sup>re-established</sup> Standard Cor. of  
sec. 33 and 34 <sup>above described</sup> Thence 1<sup>st</sup> run,

East; on S. try. of sec. 34,

Over rolling sandy land through scattering sage and  
greasewood brush undergrowth and bunch grass.

6.25 Dry sand wash 75 lbs. wide 5 ft. deep course S 60° E.  
20.00 No trace of old 1/16 sec. cor. can be found.  
29.75 Dry sand wash 250 lbs. wide 4 ft. deep course S 40° W.

Ascend W. slope.

Difference between measurements of 40.00 Chs. by  
two sets of chainmen is 4 lbs. position of middle point  
By 1<sup>st</sup> set 39.98 Chs.

By 2<sup>nd</sup> set 40.02 Chs. the mean of which is.

40.00 Intersect the old Standard 1/4 sec. cor. which is a  
soft sand stone 8x5x4 <sup>above ground</sup> marked too dim to read, with  
trace of pits and mound., I destroy all evidence of  
this cor and re establish it in the same place as  
follows; Set an iron post 3 ft. long 1 in. in diam  
26 ins. in the ground for Standard 1/4 sec. cor marked  
on brass Cop 1/4 S 34 on N. half.

Dig pits 18x18x12 ins. E and W. of post. 3 ft. dist. and  
raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high. No. of  
cor.

43.66 Intersect the closing cor. of sec. 2 and 3 T 28 N, R 18 E

60.00 ~~which I established~~  
No trace of old 1/16 sec. cor. can be found.  
Difference between measurements of 80.00 Chs by two  
sets of chainmen is 6 lbs., position of middle point  
By 1<sup>st</sup> set 79.97 Chs.

By 2<sup>nd</sup> set 80.03 Chs., the mean of which is

80.00 Intersect the <sup>old</sup> Standard Cor. of sec. 34 and 35; which  
is a sand stone 7x6x5 <sup>above ground</sup> marked nearly obliterated. No cor accessories.  
I destroy this cor. and re establish it in the same place  
as follows; Set an iron post 3 ft. long. 3 in. in diam.  
24 ins. in the ground for Standard Cor. of sec.  
34 and 35, marked on brass Cop, T 29 N S 34 in NW.  
and R 18 E S 35 in N.E. Quadrant.

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Dig pits 24 x 18 x 12 in. crosswise on each. line End W 3 ft. and N. of post 7 ft. dist. and raise a mound of earth 4 ft. base, 2 ft. high N. of cor.  
Land rolling.  
Soil sandy 3<sup>rd</sup> rate.  
No timber

Cont. on S. side of Sec. 35.

Ascend West slope of mesa. over hilly land. through scattering sage and greasewood brush undergrowth and bunch grass.

20.00 No trace of old 1/16 sec. cor. can be found

30.00 Leave hilly land bear N 20° E and S 30° W. Enter mountainous land bear N 20° E and S 30° W. asc. steeply

Difference between measurements of 40.00 Chs. by two sets of chainmen is 6 lks. position of middle point

By 1<sup>st</sup> set 40.03 Chs.

By 2<sup>nd</sup> set 39.97 Chs. the mean of which is

40.00 Find no trace of the old. Stand. 1/4 sec. cor., therefore

I set an iron post 3 ft. long 1 in. in diam. 26 in. in the ground for <sup>pre-established</sup> Standard 1/4 sec. cor. marked out bear Cap 4 S 35 on N. half

Raise a mound of stone 2 ft. base, 1 1/2 ft. high. N. of cor. Pits impracticable

~~43.88 Intersect the closing cor. of sec 1 and 2. 72871 N 18 E. which I established~~

49.20 Top of ascent on W. side edge of mesa bear N 20° E and S 30° W. Leave mountainous land bear N 20° E and S 30° W. Enter rolling sandy mesa land bear N. E. and S. W.

56.00 Road to Walpi Indian Village from Mom Pollaco's house bears N. W. and S. E.

60.00 No trace of old 1/16 sec. cor. can be found

77.10 East edge of mesa bear N. E. and S. W. Leave rolling mesa land. bear N. E. and S. W. Enter mountainous land bear N. E. and S. W., descend steep S. E. slope over loose drifting sand.

Difference between measurements of 80.00 Chs. by two sets of chainmen is 4 lks. position of middle point.

By 1<sup>st</sup> set 80.02 Chs.

By 2<sup>nd</sup> set 79.98 Chs. the mean of which is

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80.00 The point for the <sup>old</sup> Standard Cor. of sec. 35 and 36 falls on E. slope of sand drift, I make a diligent search for this cor. but am unable to find it, and since the point for the Standard Cor. of sec 35 and 36 falls in a place where prevailing conditions would cover it by shifting sands to a depth of several feet, therefore ok.

71.75 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins in the ground for witness Cor. to the Standard Cor. of sec. 35 and 36 marked on brass cap. 129 N. N 18 E. S 35. S 36 in N. half and W. C. in S half. Raise a mound of stone 2 ft. base 1 1/2 ft. high. No. of cor. Pils. impracticable

NOTE: At this W.C. I set off 11° 27 1/2' on the decl. arc, and at noon observe the sun on the meridian the resulting lat. being 35° 5 1/2' N.  
Land rolling hilly and mountainous.  
Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> rate.  
No timber

Mountainous land 27.90 Chs.

From true point for Stand. Cor of sec 35 and 36, <sup>above described</sup> I run East, on S. side of sec. 36.

20.00 Descend S.E. slope of mesa over mountainous land  
No trace of old 1/4 sec. cor. can be found  
27.75 Dry ravine course S.E. asc.

Difference between measurements of 40.00 Chs. by two sets of chainmen is 8 lks., position of middle point.

By 1<sup>st</sup> set. 40.04 Chs.

By 2<sup>nd</sup> set 39.96 Chs., the mean of which is

40.00 Intersect the <sup>old</sup> Stand. 1/4 sec. cor. which is a sand stone in place, marks nearly effaced, no trace of cor accessories visible.

I destroy this cor. and re establish it in the same place as follows;

Set an iron post 3 ft. long 1 in. in diam. 26 ins in the ground for Stand. 1/4 sec. cor marked on brass cap 1/4 S 36 on N. half.

Raise a mound of stone 2 ft. base 1 1/2 ft. high. No. of cor.

44.17 Intersect the closing cor. of Twp. No. 28 N. R. 18 and 19 E.

Resurvey of the 7<sup>th</sup> Standard Parallel North through R 18 E.  
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- 46.75 Dry ravine Course S. asc.
- 57.00 Top of spur head N.W. and S.E. desc.
- 58.25 Dry ravine Course S.E. asc.
- 60.00 No trace of old 1/16 sec. cor. can be found.
- 67.75 Top of spur head N.E. and S.W. desc.
- 70.75 Dry ravine Course S.E. asc.
- 72.50 Top of spur head N.W. and S.E. desc.
- 74.85 Dry ravine Course S.E.

Difference between measurements of 80.00 Chs. by two sets of chainmen is 8 lks., position of middle point  
By 1<sup>st</sup> set 80.04 Chs.

By 2<sup>nd</sup> set 79.96 Chs. the mean of which is

80.00 Intersect the <sup>old</sup> Standard Cor. of Twp. 29 N. R's 18 and 19 E. which is a sand stone loosely set. marked and witnessed as described by the Surveyor General. Destroy this cor. and re establish it in the same place as follows.

Set an iron post 3 ft. long 3 in. in diam. 24 in. in the ground for Stand. Cor. of Twp. 29 N. R's 18 and 19 E. marked out brass cap. T 29 N. in N. half.

R 18 E S 36 in N.W. and R 19 E S 31 in N.E. quadrants. Raise a mound of stone 2 ft. base, 1 1/2 ft. high. N. of Cor

Land mountainous.  
Soil sandy, adobe and stony 3<sup>rd</sup> and 4<sup>th</sup> rate.  
No timber

Mountainous land 80.00 Chs

October 23<sup>rd</sup> 1908

Resurvey commenced Oct. 24<sup>th</sup> 1908 and executed with  
 a Young & Sons light mountain transit No. 10 with  
 a Smith Sells 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 vernier  
 of the latitude and declination arcs. I examined  
 the adjustments of the transit and find them  
 to be perfect and know from recent tests of the  
 solar apparatus, made by comparing the results  
 of solar observations made during a.m. and p.m.  
 hours with a meridian established by observations  
 on Polaris that the instrument is in satisfactory  
 adjustment therefore I begin at the Standard  
 Cor. of Twp 29 N. R. 19 E. and <sup>heretofore described</sup> which I reestab-  
 lished Oct. 23<sup>rd</sup> 1908. Latitude  $35^{\circ} 51' \frac{1}{2}''$  N.  
 Longitude  $110^{\circ} 21' 33''$  W.

At 7<sup>h</sup> 30<sup>m</sup> a.m. <sup>l.m.t.</sup> set off  $35^{\circ} 51' \frac{1}{2}''$  N on the lat. arc  
 $11^{\circ} 41' \frac{1}{2}''$  S on the decl. arc and determine a meridian  
 with the solar at the above mentioned Std. Tp. Cor.

Thence I run, resurveying the N. 4 miles, and surveying the E. 2 miles  
 of R. 19 E.

Cash on S. Selby, of Sec. 31, resurveying,

Ascend W. slope of spur over stony mountainous land

280  
20.00  
380.00

Top of spur bears N.W. and S.E. desc.

No trace of old  $\frac{1}{16}$  sec. cor. can be found.  
 Dry ravine course S.E. asc.

Difference between measurements of 40.00 chs. by two  
 sets of chainmen is .8 chs. position of middle point  
 By 1<sup>st</sup> set 40.04 chs.

By 2<sup>nd</sup> set 39.96 chs., the mean of which is

40.00 Intersects the <sup>old</sup> Stand  $\frac{1}{4}$  sec. cor. which is a soft sand  
 stone marked as described by the Surveyor General  
 I destroy all evidence of this cor. and reestablish  
 it in the same place as follows.

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

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

41.10

Top of spur bears N.W. and S.E. desc.

42.96

Intersects the closing cor. of sec. 5 and 6 T 28 N.  
 R 19 E. which is

55.76

Dry ravine course S.E. asc.

Resurvey of the 7<sup>th</sup> Standard Parallel North through <sup>part of</sup> R19E.

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60.00 No trace of old 1/16 sec. cor. can be found.  
 Difference between measurements of 80.00 chs. by two sets of chainmen is 10. lvs. position of middle pt.  
 By 1<sup>st</sup> set 80.05 chs.  
 By 2<sup>nd</sup> set 79.95 chs. the mean of which is  
 80.00 Intersect the <sup>old</sup> Standard Cor. of secs. 31 and 32. which is a sand stone 2x10x4 ins <sup>above ground,</sup> loosely set. marked and witnessed as described by the Surveyor General.  
 Destroy all trace of the cor. and re establish it in the same place as follows:  
 Set an iron post 3 ft. long 3 ins. in diam. 24 ins. in the ground for Standard Cor. of secs. 31 and 32. marked on brass Cap T29N. S31 in N.W. and R19E. S32 in N.E. quadrant.  
 Raise a mound of stone 2 ft. base 1 1/2 ft. high N. of cor. it is impracticable.  
 Land mountainous.  
 Soil stony 3<sup>rd</sup> and 4<sup>th</sup> rate.  
 No timber

Cash, on S. ltry. of sec. 32, resurveying.  
 Over stony mountainous land through scattering sage brush undergrowth  
 8.55 Road to Place Arizona head N.E. and S.W.  
 20.00 No trace of old 1/16 sec. cor. can be found.  
 21.75 Mouth of gulch leave stony mountainous land head N.E. and S.W., enter rolling sandy land head N.E. and S.W.  
 Difference between measurements of 40.00 chs by two sets of chainmen is 4 lvs. position of middle point  
 By 1<sup>st</sup> set 40.02 chs.  
 By 2<sup>nd</sup> set 39.98 chs. the mean of which is  
 40.00 Intersect the <sup>old</sup> Standard 1/2 sec. cor. which is a sandstone 10x6x4 ins <sup>above ground</sup> marks nearly obliterated, No trace of pits and mound., Destroy all evidence of this cor. and re establish it in the same place as follows; Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for Stand 1/2 sec. cor. marked on brass Cap 1/4 S 32. on N. half.  
 Dig pits 18x18x12 ins. East W. of post 3 ft. dist and raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high. N. of cor  
 43.91 Intersect the Closing Cor. of sec 4 and 5 T28N.

60.00 R19E, ~~Reestablished by me~~  
No trace of old  $\frac{1}{16}$  sec. cor. can be found.  
71.75 Placea Wash 800 lks wide, Lauks 15 ft.  
high Course S.W.  
Difference between between measurements of  
80.00 Chs. by two sets of Chainew is 8 lks. position  
of middle points.  
By 1<sup>st</sup> Set 80.04 Chs.  
By 2<sup>nd</sup> Set 79.96 Chs. the mean of which is  
80.00 A point midway between two pits. No trace  
of <sup>old</sup> Standard Cor. of sec. 32 and 33...  
Set an iron post 3 ft. long 3 ins. in diam.  
24 ins. in the ground for <sup>re-established</sup> Standard Cor. of  
sec. 32 and 33, marked on brass Cop. T 29 N.  
S 32 in N.W. T 19 E S. 33 in N.E. quadrants.  
Dig pits 24 x 18 x 12 ins. Crosswise on each.  
line East W. 3 ft. and N. of post 7 ft. dist. and  
raise a mound of earth 4 ft. base. 2 ft. high  
N. of Cor.  
Land rolling and mountainous.  
Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> rate.  
No timber.  
mountainous land, 21.75 Chs.

NOTE: At this cor. alt. off.  $11^{\circ} 48' 3''$  on the decl. arc and  
at noon, observe the sun on the meridian  
the resulting latitude being  $35^{\circ} 51' 2''$  N.

East, on S. side of, sec. 33, resurveying.  
Over rolling sandy land. through sage and greasewood  
bush undergrowth and bunch grass.  
2.25 Road to Placea Arizona bears N.E. and S.W.  
20.00 No trace of old  $\frac{1}{16}$  sec. cor. can be found.  
31.10 Road to Steam Canyon Arizona bears N and S.  
Difference between measurements of 40.00 Chs. by two  
sets of Chainew is 2 lks. position of middle points  
By 1<sup>st</sup> Set 39.99 Chs.  
By 2<sup>nd</sup> Set 40.01 Chs. the mean of which is  
40.00 A point midway between two pits on the line. I make a  
diligent search for the Standard  $\frac{1}{4}$  sec. cor. but am  
unable to find it. therefor I re establish the  
Cor midway between the two pits. post found as  
follows. Set an iron post 3 ft. long 1 in. in diam  
24 ins. in the ground for Standard  $\frac{1}{4}$  sec Cor. marked

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on brass cap  $\frac{1}{4}$  S 33 on N. half.Dig pits 18 x 18 x 12 ins East W. of post 3 ft. dia, and raise a mound of earth 3  $\frac{1}{2}$  ft. base  $\frac{1}{2}$  ft. high.

No. of cor.

42.69 Intersect the Closing Cor. of sec. 3 and 4, T 28 N. R 19 E.

60.00 ~~which I established~~  
No. trace of old  $\frac{1}{16}$  sec. cor. can be found.

Reference between measurements of 80.00 Ch. by two sets of Chainmen is 6 lbs. portion of middle point.

By 1<sup>st</sup> Set. 79.97 Ch.By 2<sup>nd</sup> Set 80.03 Ch. the mean of which is.80.00 Intersect the <sup>old</sup> Standard Cor. of sec. 33 and 34, which is a Sand Stone 6 x 4 x 4 <sup>ins above ground</sup> marked as described by the Surveyor General, No trace of pits and mound. I destroy all evidence of this cor and reestablish it in the same place as follows.

Set an iron post 3 ft. long 3 ins. in diam. 24 ins. in the ground for Standard Cor. of sec. 33 and 34 marked on brass cap. T 29 N. S 33 in N.W. and R 19 E. S 34 in N.E. quadrant.

Dig pits 24 x 18 x 12 ins. Crosswise on each line East W. 3 ft. and N. of post, 7 ft. dia, and raise a mound of earth 4 ft. base 2 ft. high. No. of cor. Land rolling.

Soil sandy 3<sup>rd</sup> rate.

No timber

October 24<sup>th</sup> 1908.October 26<sup>th</sup> 1908, ab. 8<sup>th</sup> 00<sup>am</sup> <sup>l.m.t.</sup> ~~Set~~ off.  $35^{\circ} 51 \frac{1}{2}' 20$ . on the lab. arc.  $12^{\circ} 24' 20''$  on the decl. arc. and determine a meridian with the solar ab. the <sup>re-established</sup> Standard Cor. of sec. 33 and 34 <sup>above described</sup> thence I run

East, on S. bdy of sec 34, resurveying.

Over rolling sandy land through scattering sage and greasewood brush undergrowth and bunch grass.

20.00 No. trace of old  $\frac{1}{16}$  sec. cor. can be found.

30.95 Wood road bears N.E. and S.W.

35.13 Wire fence bears N and S.W. Leave undergrowth bears N and S. Enter cultivated land bears N and S.

Difference between measurements of 40.00 Ch. by two sets of Chainmen is 4 lbs. portion of middle point.

By 1<sup>st</sup> Set. 39.98 Ch.By 2<sup>nd</sup> Set 40.02 Ch. the mean of which is40.00 Intersect the <sup>old</sup> Standard  $\frac{1}{4}$  sec. cor. which is a sand stone



8x6x4 ins <sup>above ground</sup> loosely set, marks nearly effaced. No trace of pits and mound. I destroy this cor and reestablish it in the same place as follows.

Set an iron post 3 ft. long 1 in. in diam. 2 1/2 ins. in the ground for Standard 1/4 sec. cor. marked on brass cap 1/4 S 3/4 on N. half.

Dig pits 18x18x12 ins. E and W. of post. 3 ft. dia and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high N. of cor.

42.74 Intersect the closing cor. of sec. 2 and 3 T 28 N. R 19E. ~~which I established~~

43.75 Leave Cultivated land bear N.W. 5.00 Chs. ditch and S.E. 10 Chs. ditch. Enter sage brush undergrowth bear N.W. and S.E.

45.00 Leave rolling land bear N.W. and S.E. Enter hilly land bear N.W. and S.E. Ascend S.W. slope of mesa.

60.00 No trace of old 1/16 sec. cor. can be found.

71.75 Top of sand ridge bear N.E. and S.W. desc.

76.25 Dry ravine at foot of cliff course S.W. Leave hilly land bear N.W. and S.E. ascend cliffs over mountainous land.

Difference between measurements of 80.00 Chs by two sets of chainmen is .4 Chs; position of middle point by 1<sup>st</sup> set 80.02 Chs.

By 2<sup>nd</sup> set 79.98 Chs. the mean of which is.

80.00 I make a diligent search for the <sup>old</sup> Standard cor. of sec. 34 and 35 but am unable to find it. therefore I set an iron post 3 ft. long 3 ins. in diam. 2 1/2 ins. in the ground.

for <sup>re-established</sup> Standard cor. of sec. 34 and 35; marked on brass cap T 29 N. S 34 in N.W. and R 19E S 35 in N.E. quadrants.

No trees suitable for bearing trees within limits.

Raise a mound of stone 2 ft. base 1 1/2 ft. high N. of cor.

Pits impracticable.

Land rolling hilly and mountainous.

Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> rate.

Timber scattering cedars N. of the line

mountainous land. 376 Chs.

East, on S. side of sec. 35, over unsurveyed line ascend S.W. slope of mesa over sand stone cliffs and ledges over mountainous land through scattering cedar timber

15.25 Top of ascent on W. edge of mesa 140 ft. above cor

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- Leave mountainous land bears N.W. and S.E. Enter rolling mesa land bears N.W. and S.E.  
 Difference between measurements of 40.00 Ch. by two sets of Chainmen is 6 lks. position of middle point  
 By 1<sup>st</sup> set 39.97 Ch.  
 By 2<sup>nd</sup> set 40.03 Ch. the mean of which is.
- 40.00 Behan iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for Standard 4 sec. cor. marked on brass  $\frac{1}{4}$  S 35 on N half.  
 Raise a mound of Stone 2 ft. base  $1\frac{1}{2}$  ft. high N. of cor. Pile impracticable
- 66.75 Top of sand stone cliffs - E. edge of mesa bears N.E. and S.W. Leave mountainous land bears N.E. and S.W. Enter mountainous land bears N.E. and S.W. descend steep S.E. slope
- 69.00 Foot of Cliffs 40 ft. below top of mesa then ascend steep South face of Cliffs
- 73.50 Foot of Cliffs 50 ft. high bears N.W. and S.E. are abrupt.
- 74.75 Top of Cliffs on the edge of mesa. Leave mountainous land bears N.W. and S.E. Enter rolling sandy mesa land bears N.W. and S.E.  
 Difference between measurements of 80.00 Ch. by two sets of Chainmen is 10 lks. position of middle point  
 By 1<sup>st</sup> set 79.95 Ch.  
 By 2<sup>nd</sup> set 80.05 Ch. the mean of which is.
- 80.00 Behan iron post 3 ft. long 3 ins. in diam 24 ins. in the ground for Standard cor. of sec. 35 and 36, marked on brass Cop. T 29 N. S 35 in N.W. and T 19 E S 36 in N.E. quadrant from which.  
 A Cedar 5 ins. in diam. bears N 57° E  $51\frac{1}{2}$  lks. dist. marked T 29 N. T 19 E S 36 B.T. and  
 A Pinon pine 4 ins. in diam. bears N 65 $\frac{1}{2}$ ° W  $78\frac{1}{2}$  lks. dist. marked T 29 N. T 19 E S 35 B.T.  
 Land rolling and mountainous.  
 Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> rate.  
 Timber Pinon pine and cedar  
 Mountainous land. 23.25 Ch.
- NOTE: At this cor. Ditch off  $12^{\circ} 24\frac{1}{2}'$  S on the decl. arc and observe the sun on the meridian and obtain on the lab arc a reading of  $35^{\circ} 51\frac{1}{2}'$  N.

Each on S. side of Sec. 36, surveying,

Chains

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BOOK 2500

Over rolling sandy mesa land through scattering Cedar and fir or pine timber and Sage brush under growth and bunch grass.

17.75 Clear timber bears N and S.

Difference between measurements of 40.00 chs. by two sets of Chainmen is 2 chs. position of middle point.

By 1<sup>st</sup> set. 39.99. Chs.

By 2<sup>nd</sup> set 40.01 Chs. the mean of which is.

40.00 Behaw iron post. 3 ft. long 1 in. in diam. 26 ins. in the ground for Standard  $\frac{1}{4}$  sec. cor. marked on brass cap  $\frac{1}{4}$  S 36. on N. half.

Dig pits 18x18x12 ins East W. of post. 3 ft. dia. and raise a mound of earth  $3\frac{1}{2}$  ft. base.  $1\frac{1}{2}$  ft. high N. of cor.

76.50 Enter scattering Cedar timber bears N.E. and S.W.

Difference between measurements of 80.00 chs by two sets of Chainmen is 2 lbs., position of middle point.

By 1<sup>st</sup> set. 79.99 Chs.

By 2<sup>nd</sup> set 80.01 Chs. the mean of which is

80.00 Behaw iron post. 3 ft. long 3 ins. in diam. 24 ins in the ground for Standard Cor. of M.P. 29 N. R 19 and 20. E. marked on brass cap T 29 N. in W. half, R 19 S 36 in N.W. T 20 E. S 31 in N.E. quadrants. from which.

A fir or pine 12 ins in diam. bears N 46° E 160 lbs dist. marked T 29 N. T 20 E S 31 B.T. and

A Cedar 8 ins. in diam. bears N  $5\frac{1}{2}$ ° W 45 lbs. dist. marked T 29 N. T 19 E S 36 B.T.

Land rolling.

Soil sandy 3<sup>rd</sup> rate.

Timber fir or pine and cedar.

October 26<sup>th</sup> 1908.

Chains

Resurvey of the 7<sup>th</sup> Standard Parallel North through Range 16 E. 25

BOOK 2509

Resurvey commenced December 15<sup>th</sup> 1908. and executed with a Young & Sons light mountain transit No. 10 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. Before commencing the survey of this line I examined the adjustments of the transit and find them to be perfect. and know from recent tests of the solar apparatus, made by comparing its indications resulting from solar observations made during a.m. and p.m. hours with a meridian established by observations on Polaris that the instrument is in satisfactory adjustment.

(I begin at the S.E. 1/4 sec. cor. of the S. 1/4 of sec. 36, T. 29 N. R. 15 E. which I re-established Dec. 5, 1908 as described in Exterior Book "O" Latitude 35° 51' 28" N. Longitude 110° 34' 23" W. thence

Preliminary to commencing the subdivision of Tps 29 N. R. 16 E. I run East on a random line on S. 1/4 of sec. 36, abt 40.00 chs. the old stand cor. of Tps 29 N. R. 15 and 16 E. which is a sandstone 12x10x6 ins above ground marked and witnessed as described by the SurGen. there fore I continue my

line East and find the Parallel in almost perfect alignment and measurement bet. that many of the corners are obliterated. Abt 6 miles 00.06 chs. intersect N. and S. line 13 lks. 76. of the standard Cor. of Tps. 29 N. R. 16 and 17 E. which I re-established October 18<sup>th</sup> 1908, as hereinbefore described.

This falling answers to a correction of 0° 01' or 2 lks. S. per mile counting from the stand Cor. of Tps. 29 N. R. 15 and 16 E., and as the township on the north has not been surveyed, and no lands allotted in the north tier of secs. in the Tps. on the south I resurvey the 7<sup>th</sup> Standard Parallel through R. 16 E. as follows. -

I begin at the Standard Cor. of Tps 29 N. R. 16 and 17 E., hereinbefore described. Latitude 35° 51' 28" N. Longitude 110° 34' 23" W.

Dec. 15<sup>th</sup> 1908 At 1<sup>h</sup> 00<sup>m</sup> p.m. I set off 35° 51 1/2' N. on the lat arc, 23° 16 1/2' S. on the decl. arc and determine a meridian with the solar at the above mentioned Cor. Thence I run, resurveying,

S. 89° 59' W. on S. 1/4 of sec. 36, Descend W. slope on a hilly sandy land through scattering sage and greasewood trees and undergrowth and brush grass.

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BOOK 2509

- 20.00 No trace of old  $\frac{1}{16}$  sec. cor. can be found.
- 39.76 Intersect the closing cor. of Twp. 28 N. R. 16 and 17 E. which was established October 9<sup>th</sup> 1908.  
Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lbs. position of middle point.  
By 1<sup>st</sup> set 39.97 chs.  
By 2<sup>nd</sup> set 40.03 chs. the mean of which is.
- 40.00 Intersect the old standard  $\frac{1}{4}$  sec. cor. which is a sand stone  $12 \times 10 \times 2$  ins. <sup>above ground</sup> closely set marks nearly effaced, no trace of pits and mound., Destroy this cor and re establish it in the same place as follows.  
Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for stand  $\frac{1}{4}$  sec. cor. marked on brass cap  $\frac{1}{4}$  S 36 on N. half.  
Dig pits  $18 \times 18 \times 12$  ins. E and W. of post. 3 ft. dia and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high. 76. of cor
- 42.00 Dry ravine Course N. are.
- 44.00 Top ridge bears NE and SW. desc
- 49.00 Dry ravine Course N. are.
- 51.50 Top spur bears N and S. desc.
- 55.50 Dry ravine Course N. are.
- 60.00 Stone ridge bears N and S. desc. No trace of old  $\frac{1}{16}$  sec. cor. can be found.
- 64.00 Dry ravine Course N.W. are
- 64.40 Point of ridge bears NW. and SE. desc.  
Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lbs. position of middle point.  
By 1<sup>st</sup> set 79.78 chs.  
By 2<sup>nd</sup> set 80.02 chs. the mean of which is.
- 80.00 Intersect the <sup>old</sup> Standard Cor of sec 35 and 36. which is a sand stone  $16 \times 10 \times 2$  ins. <sup>above ground</sup> closely set marks nearly effaced. No. cor. accessories, Destroy all evidence of this cor and re establish it in the same place as follows:  
Set an iron post 3 ft. long, 3 ins in diam. 24 ins. in the ground for Standard Cor. of sec. 35 and 36. marked on brass cap T 29 N. S 35 in N.W. R 16 E S 36 in N.E. quadrant.  
Dig pits  $24 \times 18 \times 12$  ins. crosswise on each line E and W. 3 ft. and N. of post. 7 ft. dia and raise a mound of earth 4 ft. base, 2 ft. high. 76. of cor  
Land hilly.  
Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> rate.

No timber

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 BOOK 2509

N. 89° 59' W., on S. bdy. of Sec. 35,  
 Descend NW slope over hilly, sandy and adobe land  
 through scattering sage brush undergrowth and  
 bunch grass.

10.50 Dry ravine course NW.

14.80 The same ravine course S. and

20.00 No trace of old 1/16 sec. cor. can be found.

21.00 Top of ridge 10 ft. high. bear NW. and S.E. direction.

~~39.79 Intersect the closing cor. of sec. 1 and 2 T 28 N R~~

~~16E.~~

Difference between measurements of 40.00 Chs. by  
 two sets of chainmen is 2 lbs. position of middle post.

By 1<sup>st</sup> set 40.01 Chs.

By 2<sup>nd</sup> set 39.99 Chs. the mean of which is.

40.00 Intersect the <sup>old</sup> stand 1/4 sec. cor. which is a sand stone  
 8 x 4 x 2 in. <sup>above ground</sup> loosely set, marks nearly obliterated  
 No cor. accessories. I destroy all evidence of this  
 cor. and re establish it in the same place as follows.

Set an iron post 3 ft. long, 1 in. in diam. 2 in. in the  
 ground for stand 1/4 sec. cor. marked on base cap  
 T 14 S 35 on N. half.

Dig pits 18 x 18 x 12 in. East W. of post 3 ft. dist. and  
 raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high. N.

60.00 <sup>of cor.</sup> No trace of old 1/16 sec. cor. can be found.

Difference between measurements of 80.00 Chs. by two  
 sets of chainmen is 2 lbs. position of middle post.

By 1<sup>st</sup> set 80.01 Chs.

By 2<sup>nd</sup> set 79.99 Chs. the mean of which is.

80.00 Set an iron post 3 ft. long, 3 in. in diam. 24 in. in  
 the ground <sup>reestablished</sup> for Standard Cor. of sec 34 and 35  
 marked on base cap T 29 N S 34 in NW, R16E.  
 S 35 in NE. quadrant.

Dig pits 24 x 18 x 12 in. cross wire on each. line East  
 W. 3 ft. and N. of post 7 ft. dist. and raise a mound  
 of earth 4 ft. base, 2 ft. high. N. of cor.,

After diligent search I failed to find any trace of  
 the old cor.

Road rolling.

Soil sandy and adobe 3<sup>rd</sup> rate.

No timber

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BOOK 2509

N. 89° 59' W., on S. ldy. of sec 34,  
Descend n.w. slope over rolling sandy land through  
scattering sage and greasewood bush undergrowth  
and bunch grass.

20.00 No trace of old 1/16 sec. cor. can be found.

39.66 Intersect the closing cor. of secs. 2 and 3.

Difference between measurements of 40.00 Chs. by  
two sets of chainmen is 2 lks., position of middle  
points.

By 1<sup>st</sup> set 39.99 Chs.

By 2<sup>nd</sup> set 40.01 Chs., the mean of which is

40.00 Intersect remains of old stand 1/4 sec cor. and in  
set an iron post 3 ft. long 1 in. in diam. 26 ins  
in the ground for <sup>re-established</sup> standard 1/4 sec. cor. marked  
on brass cap 1/4 S 34 on N. half.

Dig pits 18x18x12 ins E and W of post. 3 ft. dist. and  
raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high  
N. of cor.

The old cor which was a sand stone, has disappeared  
Sub. indistinct remains of pits nearly in the  
proper place, still remain.

43.00 The Craib Wash (dry) 150 lks. wide Course S.W. begin  
quadrant ascend over S.E. slope.

47.00 A sink 20 lks. north of Well.

60.00 No trace of old 1/16 sec. cor. can be found.

Difference between measurements of 80.00 Chs. by two  
sets of chainmen is 2 lks. position of middle points

By 1<sup>st</sup> set 80.01 Chs.

By 2<sup>nd</sup> set 79.99 Chs. The mean of which is

80.00 Set an iron post 3 ft. long 3 ins. in diam. 24 ins. in  
the ground for <sup>re-established</sup> standard cor. of secs. 33 and 34.  
marked on brass cap T 29 N. S 33 in N.W. and  
R16E 334 in N.E. quadrant.

Dig pits 24x18x12 ins. crosswise on each line E  
and W. 3 ft. and N. of post. 7 ft. dist. and raise  
a mound of earth 4 ft. base. 2 ft. high. N. of cor.  
After diligent search. I fail to find any trace  
of the old cor.

Land rolling.

Soil sandy 3<sup>rd</sup> rate.

No timber

N. 89° 59' W., on S. ldy of sec. 33,

Ascend S.E. slope over rolling sandy land through scattering sage and greasewood brush and bunch grass.

12.60 Old road to Oraibi Ariz bears N and S.

14.90 Road to Oraibi Ariz bears N.W. and S.E.

20.00 No trace of old 1/16 sec. cor. can be found. No trace of old closing cor. of secs. 3 and 4 can be found. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lbs. position of middle point.

By 1<sup>st</sup> set 40.02 Chs.

By 2<sup>nd</sup> set 39.98 Chs. the mean of which is

40.00 Set an iron post 3 ft. long, 1 in. in diam, 26 ins in the ground for <sup>reestablished</sup> Standard 1/4 sec. cor. marked on brass cap 4 S 33, on N. half.

Dig pits 18x18x12 ins. E and W. of post 3 ft. dist. and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high N. of cor. I find no trace of the old Standard 1/4 sec. cor.

52.20 Road to Oraibi Ariz bears N and S.

60.00 No trace of old 1/16 sec. cor. can be found.

74.00 Top of accumb. on points of sand ridge bears N.E. and S.W.

77.00 Dry ravine 20 ft. below top of ridge courses S.E. asc. gradually

Difference bet. measurements of 80.00 chs. by two sets of chainmen is 2 lbs. position of middle point

By 1<sup>st</sup> set 80.01 Chs.

By 2<sup>nd</sup> set 79.99 Chs. the mean of which is

80.00 Set an iron post 3 ft. long 3 ins. in diam 24 ins. in the ground for <sup>reestablished</sup> Standard Cor. of secs. 32 and 33. marked on brass cap. T 29 N. S 32 in N.W. R 16 E S 33 in N.E. quadrant.

Dig pits 24x18x12 ins. Crosswise on each line E and W 3 ft. and N. of post 7 ft. dist. and raise a mound of earth 4 ft. base, 2 ft. high. N. of cor.

After diligent search. I failed to find any trace of the old cor.

Land rolling.

Soil sandy 3<sup>rd</sup> and 4<sup>th</sup> rate.

No timber

N. 89° 59' W., on S. dry. of. Sec. 32, Ascend gently over S.E. slope of sand ridge through.



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BOOK 2509

- Scattering Sage and greasewood brush undergrowth and bunch grass
- 2.00 Top of sand ridge 10 ft. above cor. bears N. and S.
- 20.00 No trace of old  $\frac{1}{16}$  sec. cor. can be found.
- 30.00 Top of descent in depression bears N. and S. are. No trace of old closing corner of secs. 4 and 5 can be found. Difference between measurements of 40.00 Chs. by two sets of chainmen is 2 lbs. position of middle point.
- By 1<sup>st</sup> Set. 39.99 Chs.
- By 2<sup>nd</sup> Set 40.01 Chs. the mean of which is.
- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for <sup>re-established</sup> stand.  $\frac{1}{4}$  sec. cor. marked on brass cap  $\frac{1}{4}$  S 32. on N. half
- Dig pits 18x18x12 ins. E and W. of post. 3 ft. dia. and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high N. of cor.
- After diligent search. I failed to find any trace of the old cor.
- 44.75 Wire fence bears N. and S. bears undergrowth bears N. and S. Enter Cultivated land bears N. 6 Chs and S. 5.00 Chs. dia.
- 47.00 bears cultivated land bears N. 7.00 Chs. and S 5.00 Chs. dia.
- 60.00 No trace of old  $\frac{1}{16}$  sec. cor. can be found. Difference between measurements of 80.00 Chs. by two sets of chainmen is 2 lbs. position of middle point.
- By 1<sup>st</sup> Set 79.99 Chs.
- By 2<sup>nd</sup> Set 80.01 Chs. the mean of which is.
- 80.00 Set an iron post 3 ft. long. 3 ins. in diam. 24 ins. in the ground for <sup>re-established</sup> Standard Cor. of secs. 31 and 32 marked on brass cap T 29 N. S 31 in N.W. and R16 E. S 32 in N.E. quadrants.
- Dig pits 24x18x12 ins. crosswise on each line E and W. 3 ft. and N of post. 7 ft. dia. and raise a mound of earth 4 ft. tall 2 ft. high. N. of cor. Land hilly and rolling. Soil sandy 3<sup>rd</sup> and 4<sup>th</sup> rate.
- No timber
- After making diligent search I failed to find any trace of the old. cor. at this place

N. 89° 59' W., on S. lby of sec. 31,  
 Over low rolling sand hills through scattering  
 sage and greasewood brush undergrowth and  
 bunch grass.

13.90 Clear undergrowth bear N and S. Enter cultivated  
 land bear N. 20 chs and S. 10 chs. dist.

15.50 Clear cultivated land bear N. 8 chs and S. 10 chs.  
 dist. Enter undergrowth and scattering bunch  
 grass bear N and S.

20.00 No trace of old 1/16 sec. cor. can be found.  
 No trace of old closing corner of secs. 5 and 6 can be found.  
 Difference between measurements of 40.00 chs.  
 by two sets of Chainmen is 2 lks. position of  
 middle point

By 1<sup>st</sup> set 40.01 chs.

By 2<sup>nd</sup> set 39.99 chs. the mean of which is

40.00 Intersect evident remains of old quarter sec.  
 Cor. A <sup>which I destroy and in the same place</sup> set an iron post 3 ft long 1 in. in  
 diam. 26 ins. in the ground <sup>reestablished</sup> for Standard 1/4  
 sec. cor. marked on brass cap 1/4 S 31 on N. half.  
 Dig pits 18x18x12 ins. East W. of post 3 ft.  
 dist. and raised mound of earth 3 1/2 ft. base  
 1 1/2 ft. high. N. of cor.

The old cor. which was a stake in pit has dis-  
 appeared but indistinct remains of the two  
 pits nearly in the proper position, still remained.

60.00 No trace of old 1/16 sec. cor. can be found.  
 79.00 Top of sand ridge bear N and S. desc.

Difference between measurements of 80.06 chs.  
 by two sets of Chainmen is 6 lks. position of  
 middle point

By 1<sup>st</sup> set 80.09 chs.

By 2<sup>nd</sup> set 80.03 chs. the mean of which is

80.06 Intersect the <sup>old</sup> Standard Cor. of Twp. 29 N. R. 15  
 and 16 E. which is a soft sand stone 12x10x6  
 ins. above ground firmly set marked with  
 6 grooves on N.E. and W. faces. with faint traces  
 of pits and mound. I destroy all evidences of this  
 cor and re establish it in its original  
 position as follows.

Set an iron post 3 ft long 8 ins. in diam. 2 1/2  
 ins. in the ground for Standard Cor. of Twp.  
 29 N. R. 15 and 16 E. marked on brass cap.  
 T 29 N. in N. half, R 15 E S 36 in N.W. and R 16  
 E S 31 in N.E. quadrants.

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BOOK 2509

Dug pits 30x24x12 ins crosswise on each line  
Eand W. 4 ft. and No. of post. 8 ft. dist. and raise  
a mound of earth 5 ft. base, 2 1/2 ft. high. No. of.

Cor

Land hilly.

Soil sandy 3<sup>rd</sup> and 4<sup>th</sup> rate.

No timber

December 15<sup>th</sup> 1908

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 BOOK 2509

Survey, <sup>and Resurvey</sup> Commenced April 24<sup>th</sup>, 1909 and executed with a W. and S. E. Gurley Engineers transit No. 76. with a Burt Star attachment. The horizontal limb is provided with one double vernier reading to single minutes of arc. The verniers of the latitude and declination arcs read to 0' 30" of arc.

Examined the adjustments of the transit and find them perfect and knowing from recent tests of the solar apparatus by comparing its indications resulting from solar observations made during a.m. and p.m. hours with a meridian established by observations on Polaris, that the instrument is in satisfactory adjustments. I begin at the standard  $\frac{1}{4}$  sec cor on S. dry. sec 36 T 29 N. R. 15 E. which I re-established December 5<sup>th</sup> 1908, <sup>as described in Exterior Book "O"</sup> latitude  $35^{\circ} 51' 28''$  N. Longitude  $110^{\circ} 41' 22''$  W.

At 7<sup>h</sup> 00<sup>m</sup> a.m. <sup>1. mt</sup> set off  $35^{\circ} 51 \frac{1}{2}'$  N. on the lat. arc  $12^{\circ} 48'$  N. on the decl. arc and determine a meridian with the solar. Thence I run, resurveying to 20.00

West, on S. dry of sec. 36. W. half mile., ascend.

20.00 S. E. slope over rolling sandy land through scattering sage and greasewood brush undergrowth and bunch grass. The place of old  $\frac{1}{4}$  sec. cor. can be found. Thence surveying completion of the difference between measurements of 40.00 Chs. by two sets of chainmen is 4 lks. position of middle pin

By 1<sup>st</sup> set. 40.02 Chs.

By 2<sup>nd</sup> set 39.98 Chs. the mean of which is.

40.00 Set an iron post 3 ft. long 3 in. in diam. 24 in. in the ground for Standard Cor. of sec. 35 and 36. marked as brass cap. T 29 N S 35 in N. 1/4 and T 15 E. S 36 in N. E. quadrant.

Dig pits 24 x 18 x 12 in. crosswise on each line. East W. 3 ft. and N. of post 7 ft. dia. and raise a mound of earth 4 ft. wide, 2 ft. high. N. of cor  
 Sand rolling sand hills.

Soil sandy 3<sup>rd</sup> rate.

No timber.

West, on S. dry of sec. 35.

Ascend gradually S. E. slope over rolling sandy land through scattering sage brush undergrowth and bunch grass.

7th Std. Par. N. thru. R. 15 E.

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BOOK 2509

- 18.00 Top of gradual ascent on S. slope, desc. gently over S.W. slope.
- 23.50 Dry ravine 60 lks. wide, 4 ft. deep course S. ascend N. slope  
Difference between measurements of 40.00 chs by two sets of  
Chainmen is 4 lks. Position of middle point.  
By 1<sup>st</sup> Seth. 39.98 chs.  
By 2<sup>nd</sup> Seth 40.02 chs. the mean of which is  
40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground  
for Standard  $\frac{1}{4}$  sec. cor. marked on brass Cap. 44535 on N. half.  
Dig pits 18x18x12 ins. East & W. of post 3 ft. dia. and raise  
a mound of earth 3 $\frac{1}{2}$  ft. base, 1 $\frac{1}{2}$  ft. high. N. of cor.
- 51.00 Road from Nuba Arizona to Oraibi Arizona bears N.E. and  
S.W.  
Difference between measurements of 80.00 chs. by two sets  
of chainmen is 6 lks. position of middle point  
By 1<sup>st</sup> Seth. 79.97 chs.  
By 2<sup>nd</sup> Seth 80.03 chs. the mean of which is  
80.00 Set an iron post 3 ft. long 3 in. in diam. 24 ins. in  
the ground for Standard cor. of sec 34 and 35  
marked on brass Cap. 7297. 334 in N.W. and N 15 E.  
335 in N.E. quadrant.  
Dig pits 24x18x12 ins. Crosswise on each line East & W.  
3 ft. and N. of post. 7 ft. dia. and raise a mound of earth  
4 ft. base, 2 ft. high. N. of cor.  
Sand rolling.  
Soil sandy 3<sup>rd</sup> rate.  
No timber.

West, on S. side of sec. 34,  
Ascend gradually E. slope over hilly sandy land  
through scattering sage and greasewood brush under-  
growth and bunch grass

- 4.00 Top of sand ridge bears N. and S. desc.
- 28.50 Dry ravine 50 lks wide 6 ft. deep course S.E. asc.
- 32.00 Top of adobe ridge bears N.W. and S.E. desc.
- 38.75 Dry ravine 30 lks. wide 2 ft. deep. Course S.E. asc.
- 39.00 Enter scattering cedar timber, bears N. and S.  
Difference between measurements of 40.00 chs. by two  
sets of chainmen is 2 lks., position of middle point  
By 1<sup>st</sup> Seth 39.99 chs.  
By 2<sup>nd</sup> Seth 40.01 chs. the mean of which is.

BOOK 2509  
 BOOK 2509

- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for Stand  $\frac{1}{4}$  sec. cor. marked on brass cap.  $\frac{1}{4}$  S 34 on N. half. from which  
 A cedar 5 ins. in diam. bears N  $5\frac{3}{4}^{\circ}$  E. 317 lbs. dist. marked S.E.  $\frac{1}{4}$  S 34 B.T. No other trees available.; Dig pits 18x18x12 ins. E and W. of post 3 ft. dist. and raise a mound of earth 3 ft. base,  $\frac{1}{2}$  ft. high N. of cor.  
 Top of sand ridge bears N and S. dese.
- 54.00
- 57.75 Dry ravine course S. asc
- 59.00 Road from Nuba Arizona to Oraibi Arizona bears N.W. and S.E. Leave timber bears N.W. and S.E.
- 64.00 Top of sand ridge bears N. and S. dese.
- 68.50 Dry ravine 60 lbs. wide, 6 ft. deep course S. asc.  
 Difference between measurements of 80.00 chs. by two sets of Chainmen is 4 lbs. position of middle point.  
 By 1<sup>st</sup> set 80.02 chs.  
 By 2<sup>nd</sup> set 79.98 chs., the mean of which is.
- 80.00 Set an iron post. 3 ft. long 3 ins. in diam. 24 ins. in the ground for Standard cor. of Secs. 33 and 34 marked on brass cap. T 29 N S 33 in N.W.  $\frac{1}{4}$  TR 15 E. S 34 in N.E. quadrants.  
 Dig pits 24x18x12 ins. crosswise on each line E and W. 3 ft. and N. of post 7 ft. dist. and raise a mound of earth 4 ft. base, 2 ft. high. N. of cor. sand hilly.  
 Soil sandy and adopt 3<sup>rd</sup> rate.  
 Timber Cedar.

NOTE: - At this cor. set off  $12^{\circ} 51'$  N. on the decl. arc, and as noon observe the sun on the meridian and obtain on the lab. arc a reading of  $35^{\circ} 51\frac{1}{2}'$  N.

- West, on S. bdy. of Sec. 33,  
 ascend E. slope on hilly sandy land through scattering sage brush undergrowth and bunch grass  
 Difference between measurements of 40.00 chs. by two sets of Chainmen is. 6 lbs., position of middle point  
 By 1<sup>st</sup> set 40.03 chs.  
 By 2<sup>nd</sup> set 39.97 chs. the mean of which is
- 40.00 Set an iron post. 3 ft. long 1 in in diam. 26 ins. in the ground for Standard  $\frac{1}{4}$  sec. cor. marked on brass cap.  $\frac{1}{4}$  S 33 on N. half. from which.  
 A low Cedar 6 ins. in diam. bears N 37 W. 71 lbs. dist.

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marked S.C.  $\frac{1}{4}$  S 33. B.T. No other trees available; Dig pits  
18x18x12, ins. E and W of post 3 ft. dia. and raise a mound of earth  
3 1/2 ft. base, 1 1/2 ft. high N. of cor.  
415.50 Dry ravine course S.W. asc.

68.50 Top of adobe ridge bears N and S. desc.

Difference between measurements of 80.00  
chs. by two sets of Chain men is 8 lks., position  
of middle point

By 1<sup>st</sup> set. 80.04 chs.

By 2<sup>nd</sup> set 79.96 chs. the mean of which is

80.00 The point for the Standard Cor. of secs. 32 and  
33 falls in the bottom of a dry ravine 30 lks  
wide 4 ft. deep course N.E. where natural  
causes would insure the destruction of the  
cor. therefore I continue my line and as.

81.00 Set an iron post 3 ft. long 3 ins. in diam. 24  
ins. in the ground for witness cor. to the  
Standard Cor. of secs. 32 and 33: marked on  
brass cap T 29 N 79 15 E. S 32. S 33 in N. half. and  
W.C. in S. half.

Dig pits 24x18x12, ins. crosswise on line E and W.  
of post 3 ft. and N. 7 ft. dia. and raise a mound  
of earth 4 ft. base 2 ft. high N. of cor.  
Raid hilly

Soil sandy and adobe 3<sup>rd</sup> and 4<sup>th</sup> rate.  
No timber

Thence, from true point for <sup>std.</sup> cor. of secs. 32 and 33 in ravine, I run,  
West, on S. bdy. of sec. 32.,

Ascend E. slope over hilly sandy and adobe land  
through scattering Sage brush undergrowth and  
bunch grass.

1.00 Intersect the witness cor. to Stand. Cor. of secs.  
32 and 33, above described

26.50 Top of adobe ridge bears N.E. and S.W. desc. N.W. slope  
Difference between measurements of 40.00 chs. by two  
sets of Chain men is 5 lks. position of middle point  
By 1<sup>st</sup> set. 39.97 1/2 chs.

By 2<sup>nd</sup> set 40.02 1/2 chs. the mean of which is

40.00 The point for the Standard  $\frac{1}{4}$  sec. cor. falls in the bottom  
of dry ravine course N.W. where natural causes would  
insure the destruction of the cor., therefore as.

38.00 Set an iron post. 3 ft. long, 1 in in diam. 26 ins. in

W.C. to  
 the ground for Standard  $\frac{1}{4}$  sec. cor. marked on brass 261  
 cap T29N. R15E S32. on N. half and WC.  $\frac{1}{4}$  in W. half. BOOK 2500  
 Raise a mound of stone 2 ft. base 1 1/2 ft. high N. of cor.  
 41.85 Top of adobe ridge bears N.W. and S.E. desc. steeply.  
 59.50 Dry ravine course N.W. asc.  
 68.00 Top of adobe ridge bears N.W. and S.E. desc.  
 76.00 Dry ravine course N.W. asc.  
 Difference between measurements of 80.00 chs.  
 by two sets of chainmen is 6 chs. position of middle  
 points  
 By 1<sup>st</sup> set. 79.97 chs.  
 By 2<sup>nd</sup> set 80.03 chs. the mean of which is  
 80.00 Set an iron post 3 ft. long, 3 ins. in diam. 24 ins.  
 in the ground for Standard Cor. of sec. 31 and  
 32. marked on brass cap T29N S31 in N.W. R15E  
 S32 in N.E. quadrant.  
 Dig pits 24 x 18 x 12 ins crosswise on each line East to  
 3 ft. and N of post. 7 ft. dia. and raise a mound  
 of earth 4 ft. base, 2 ft. high N. of cor.  
 Land hilly.  
 Soil sandy and adobe 3<sup>rd</sup> and 4<sup>th</sup> rate.  
 No timber

Up, on S. side of sec 31,  
 ascend N.E. slope over hilly adobe land through  
 scattering sage bush undergrowth and bunch grass  
 11.00 Top of adobe ridge bears N.W. and S.E. desc. steeply  
 20.50 Top of sandstone bluff 35 ft. high. bears N. and S.  
 desc. abruptly on stony land.  
 22.00 Foot of abrupt descent at foot of bluff. desc.  
 gradually, over adobe land.  
 37.50 Dry ravine course N.W. asc.  
 Difference between measurements of 40.00 chs. by  
 two sets of chainmen is 4 chs. position of middle  
 points.  
 By 1<sup>st</sup> set. 39.98 chs.  
 By 2<sup>nd</sup> set 40.02 chs. the mean of which is  
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins.  
 in the ground for Standard  $\frac{1}{4}$  sec. cor. marked  
 on brass cap.  $\frac{1}{4}$  S31 <sup>on N. half</sup> from which.  
 A low cedar 4 ins. in diam. bears N28  $\frac{1}{2}$  W 69 chs.



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chip, marked S.C.  $\frac{1}{4}$  S 31 B.T. No other trees available

Dig pits 18x18x12 ins. E and W. of post 3 ft. dish. and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high N. of cor.

This cor is situated on the top of sand ridge which bears N.W. and S.E. dec. gradually

Difference between measurements of 80.00 chs by two sets of Chain men is 6 chs., position of middle point.

By 1<sup>st</sup> Set. 79.97 chs.

By 2<sup>nd</sup> Set 80.03 chs. the mean of which is 80.00

Set an iron post 3 ft. long 3 ins. in diam 24

ins. in the ground for Standard Cor. of N. 14 29

N. R. 14 and 15 E., marked on brass cap T 29 N.

on N. half, T 14 E. S 36 in N.W. and T 15 E. S 31 in N.E.

quadrant.

Dig pits 30x24x12 ins crosswise on each line E and W 4 ft. and N. of post 8 ft. dish. and raise a mound of earth 3 ft. base  $2\frac{1}{2}$  ft. high. N. of cor. Sand hilly.

Soil sandy adobe and stony 3<sup>rd</sup> and 4<sup>th</sup> rate.

Timber sub low Cedar near stand  $\frac{1}{4}$  sec. cor

April 24<sup>th</sup> 1909

Sidney E. Blout  
U. S. Examiner of Surveys.

U.S. EXAMINER OF SURVEYS  
FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

BOOK 2506

A list of the names of the individuals employed by Sidney E. Blout  
Examiner of Surveys  
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 The Seventh  
Standard Parallel North thru parts of Rs. 15, 17 and 19 East, and resurvey of same thru  
Rs. 16 and 18 East, and parts of Rs. 15, 17 and 19 East of the G. & S. R. Meridian, Arizona.  
showing the respective capacities in which they acted:

- Alfred L. Warner, Ralph T. Westraud ..... Chainmen.
- Van L. White, Jay E. Jellieck, and Walter A. Swaffer ..... Chainmen.
- Charles L. Shumway ..... Moundman.
- Arthur A. Beard ..... Axman.
- Harvey Lake May and Robt. E. Claborne ..... Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Sidney E. Blout  
Examiner of Surveys  
United States ~~Deputy Surveyor~~, in surveying <sup>or resurveying</sup> all  
those parts or portions of the Seventh Standard Parallel North through  
Ranges 15, 16, 17, 18 and 19 East

of the Gila and Salt  
River Basal and ..... meridian, in the Territory of Arizona, which are represented  
in the foregoing field notes as having been surveyed <sup>or resurveyed</sup> by him and under his direction; and that said survey  
<sup>and resurvey</sup> has been/in all respects, to the best of our knowledge and belief, well and faithfully <sup>executed</sup> and the  
corner monuments established <sup>or re-established</sup> according to the instructions furnished by the Commissioner

- Jay E. Jellieck, Fred L. Warner and Van L. White ..... Chainmen.
- Ralph T. Westraud and Walter A. Swaffer ..... Chainmen.
- Chas. L. Shumway ..... Moundman.
- Arthur A. Beard ..... Axman.
- Harvey Lake May and Robt. E. Claborne ..... Flagman.

Subscribed and sworn to before me this 11<sup>th</sup>  
day of June, 1909

Sidney E. Blout  
U.S. Examiner of Surveys



EXAMINER OF SURVEYS  
FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Sidney E. Blout, Examiner of Surveys, United States Deputy Surveyor, do solemnly swear that, in pursuance of Special Instructions received from the Commissioner of the General Land Office, bearing date of the 2<sup>nd</sup> day of Oct. 1907 and the 15<sup>th</sup> day of May 1908, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the Commissioner of the General Land Office, the Manual of Surveying Instructions, and the laws of the United States, surveyed or resurveyed all those parts or portions of the 7<sup>th</sup> Standard Parallel North through Ranges 15, 17, 18, and 19 East

See of the Gila and Salt River Base and 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 Commissioner of the General Land Office and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey and resurvey.

United States Deputy Surveyor  
Examiner of Surveys

Subscribed by said \_\_\_\_\_, and sworn to before me }  
this \_\_\_\_\_ day of \_\_\_\_\_, 1908

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona. APR 25 1914

The foregoing field notes of the survey of the 7<sup>th</sup> Standard Parallel North thru parts of Ranges 15, 17 and 19 East and resurvey of same thru Ranges 16 and 18 East and parts of Ranges 15, 17 and 19 East of the Gila and Salt River Meridian, Arizona.

executed by Sidney E. Blout, U.S. Examiner of Surveys under Special Instructions from the Commissioner of the General Land Office, dated October 2, 1907 and May 15, 1908, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys and resurveys they describe, are hereby approved.

Frank S. Ingalls  
United States Surveyor General  
**SURVEYOR-GENERAL OF ARIZONA**

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

United States Surveyor General