

2279

Book F.

BOOK 2279

2279

# FIELD NOTES

OF THE SURVEY OF THE

*Subdivisional Lines Trac J. To P R 21 E*

2279

2279

Of the *Co. S. R. B. 27* Meridian,  
*Arizona*

AS SURVEYED BY

*Hugh J. Duval*, United States Deputy Surveyor,

Under his Contract No. *163*, dated *May 16*, 19*10*

Survey commenced *Dec. 3*, 19*10*

Survey completed *Dec. 14*, 19*10*

2279

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*In* NAMES AND DUTIES OF ASSISTANTS.

————— See Book B

Blank lined area for recording names and duties of assistants.

# INDEX DIAGRAM.

Township 70 2, Range 21 E

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Jean Jean de los Biquilles  
 & Nozales Louis Grant

Meanders Page \_\_\_\_\_

*Dee Bk B*

WE, \_\_\_\_\_ and \_\_\_\_\_

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 \_\_\_\_\_

\_\_\_\_\_, *Chainman.*

\_\_\_\_\_, *Chainman.*

Subscribed and sworn to before me this \_\_\_\_\_ }  
day of \_\_\_\_\_, 19 \_\_\_\_\_ }



WE, \_\_\_\_\_ and \_\_\_\_\_

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 \_\_\_\_\_

\_\_\_\_\_, *Moundman.*

\_\_\_\_\_, *Moundman.*

Subscribed and sworn to before me this \_\_\_\_\_ }  
day of \_\_\_\_\_, 19 \_\_\_\_\_ }



WE, \_\_\_\_\_ and \_\_\_\_\_

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 \_\_\_\_\_

\_\_\_\_\_, *Axman.*

\_\_\_\_\_, *Axman.*

Subscribed and sworn to before me this \_\_\_\_\_ }  
day of \_\_\_\_\_, 19 \_\_\_\_\_ }



I, \_\_\_\_\_, 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 \_\_\_\_\_

\_\_\_\_\_, *Flagman.*

Subscribed and sworn to before me this \_\_\_\_\_ }  
day of \_\_\_\_\_, 19 \_\_\_\_\_ }



## Subdivisional Lines of Fracl. T. 20 S., R. 21 E. 110

Survey commenced Dec. 3rd, 1910, and executed with a Blount & Co. Transit, No. 601, previously described, (See Exterior Lines, T. 9 S., R. 31 E.).

I examine the adjustments of the transit which I find to be in good condition.

Then to test the solar apparatus by a comparison of its indications with a meridian established by Polaris obs., I proceed as follows:-

At my camp, situated within a few hundred feet, East of the 18 mile corner on the W. bdy. of the San Juan de las Boquillas y Nogales Private Land Grant in lat.  $31^{\circ}41'46''$  N long.  $110^{\circ}13'24''$  W as near as I can determine; I set off  $22^{\circ}03'S.$  on the decl. arc,  $58^{\circ}18'$  on the co-lat. arc and at 4h. p. m., l. m. t., determine a meridian with the solar and mark a point thereof on a stone, firmly set in the ground, 5 chs. N. of my station.

Dec. 3rd, 1910

A.M.

Dec. 4th:- At 2h 35.0 m. by my watch, set to l. m. t., I obs. Polaris at Western Elongation, in accordance with the Manual of Instructions and mark a point in the line thus determined, on a peg driven in the ground, 5 chs. N. of my station.

At 8h. a. m., l. m. t., I set off the azimuth of Polaris,  $1^{\circ}23'$  to the East, and mark a point in the meridian thus determined by a small groove on the stone already set 5 chs. N. of my station. This point falls  $0.1$  in E. of the mark determined by the solar.

At 8h 10m. a. m., l. m. t., I set off  $22^{\circ}03\frac{1}{2}'S.$  on the decl. arc,  $58^{\circ}18'$  on the co-lat. arc, and determine a meridian with the solar and mark a point in the line thereof on the stone already set 5 chs. N. of my station. This point falls  $0.2$  in E. of the point determined by the Polaris obs.

The solar apparatus by p. m. and a. m. obs. defines the positions for meridians,  $5''$  W. and  $11''$  E. of the point as determined by the Polaris Obs, therefore I conclude that the adjustments of the instrument is satisfactory.

The magnetic variation of the true meridian at 8h20m a. m., is  $N.13^{\circ}11'W.$ ; the angle thus determined gives the mag. decl.  $13^{\circ}11'E.$

Dec. 4th, 1910.

Dec. 6th:

From the Standard corner of secs. 31 and 32, a red-wood post, properly marked and witnessed as described by the Surveyor General.

I run  $N.0^{\circ}1'E.$  bet. secs. 31 and 32 over rolling ground through greasewood brush.

40.00 Set a sandstone,  $12 \times 7 \times 6$  ins., 8 ins. in the ground for the  $\frac{1}{4}$  sec. cor., mkd.  $\frac{1}{4}$  on W. face, and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.

75.00 Arroyo, 50 lks. wide, course  $N.85^{\circ}E.$

80.00 Set a granite stone,  $15 \times 9 \times 5$  ins., 10 ins. in the ground for the cor. of secs. 29, 30, 31 and 32, mkd. with 1 notch on the S. and 5 notches on the E. edge, and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.

Land rolling. Soil 3rd rate. Greasewood brush.

West on a randomline bet. secs. 30 and 31.

## Subdivisional Lines of Fracl. T. 20 S., R. 21 E.

Chains.	
40.00	Set a temp. $\frac{1}{4}$ sec. cor.
80.22	Intersect the W. bdy. of the township at a point 27 lks. S. of the cor. of secs. 25, 30, 31 and 36, a sandy limestone, 9x8x5 ins. above ground, properly marked and witnessed as described by the Surveyor General.
	Thence I run, S. 89°48'E. on a true line bet. secs. 30 and 31 over rolling ground.
1.80	Arroyo, 50 lks. wide, course N. 65°E.
10.20	Same arroyo, S. 75°E.
14.22	Same arroyo, N. 80°E. Ascend
20.00	Point of little ridge, runs back South. Descend.
21.00	Above Arroyo, S. 65°E.
40.11	Set a porphyry stone, 15x10x8 ins., 10 ins. in the ground for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on N. face, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
	Noon, Dec. 6th: - Sky over-cast, solar obs. impossible.
58.25	Road bears N. 10°E. and S. 10°W.
80.22	The corner of secs. 29, 30, 31 and 32. Land rolling. Soil 3rd rate. Greasewood brush.
	-----
	N. 0°1'E. bet. secs. 29 and 30 over level ground.
22.50	Road bears NE. and SW.
40.00	Set a porphyry stone, 24x12x12 ins., 18 ins. in the ground for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on W. face, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
40.20	Little arroyo, 10 lks. wide, course E.
	Thence ascending over rough and rocky ground.
80.00	Set a porphyry stone, 14x6x6 ins., 10 ins. in the ground for the cor. of secs. 19, 20, 29 and 30, mkd. with 2 notches on the S. and 5 notches on the E. edge, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
	Land level first forty chs. and rough and rocky last forty chains. Soil 2nd, 3rd, and 4th rate. No timber.
	Dec. 6th: - At 3h, p. m., 1. m. t., I set off 22°27'S. on the decl. arc, 58°20' on the co-lat. arc and determine a mer. with the solar at this cor.
	-----
	N. 89°48'W. bet. secs. 19 and 30 on a random line.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.00	Intersect the W. bdy. of the township at a point 9 lks. N. of the cor. of secs. 25, 24, 19 and 30, a brownish stone, 10x10x6 ins. above ground, properly marked and witnessed as described by the Surveyor General.
	Thence I run S. 89°52'E. on a true line bet. secs. 19 and 30,
40.00	Set a porphyry stone, 12x10x6 ins., 8 ins. in the ground for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on N. face, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
	Ascend gradually.
71.50	Top of high rocky ridge bears N. and S., descend over rough and rocky ground.
80.00	The cor. of secs. 19, 20, 29 and 30. Land rolling, in places rough and rocky. Soil 3rd rate. No timber. Last $\frac{1}{4}$ mile or 40 chs. mountainous.
	----- Dec. 6th, 1910.
	-----
	N. 0°1'E. bet. secs. 19 and 20 over rough rocky ground.

## Subdivisional Lines of Fracl. T. 20 S., R. 21 E.

Chains.	Ascending.
4.00	Ridge bears NE. and SW. Descend.
40.00	Set a basaltic stone, 15x9x6 ins., 10 ins. in the ground for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on W. face, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Ascend.
46.00	Ridge bears E. and W. Descend.
60.00	Ascend
80.00	Set a basaltic stone, 15x9x6 ins., 10 ins. in the ground for the cor. of secs. 17, 18, 19 and 20, mkd. with 3 notches on the S. and 5 notches on the E. edge, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Land mountainous. Soil 3rd rate. No timber.
-----	
N.89°52'W. on a random line bet. secs. 18 and 19.	
40.00	Set a temp. $\frac{1}{4}$ sec. cor.
80.14	Intersect the W. bdy. of the township at a point 21 lks. S. of the cor. of secs. 13, 18, 19, and 24, a granite stone 8x6x4 ins. above ground, properly marked and witnessed as described by the Surveyor General. Thence I run, S.89°43'E. on a true line bet. secs. 18 and 19.
2.64	Road bears N. and S.
6.15	Arroyo, 50 lks. wide, course NE.
40.07	Set a porphyry stone, 17x6x6 ins., 11 ins. in the ground for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on N. face and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
70.15	Draw 50 lks. wide, course NELY. Thence over rocky ground.
77.65	Little ridge bears NE. and SW. Descend.
80.14	The corner of sections, 17, 18, 19 and 20.  Land rolling. Soil 3rd rate. NO Timber  Dec. 7th:- At this corner, I set off 22°34' S. on the decl. arc, and at 11h.51m a. m., l. m. t., obs. the sun on the mer., the resulting lat. is 31°41' N.
-----	
N.0°01'E. bt. secs. 17 and 18, ascending.	
4.00	Ridge bears NE. and SW. Descend.
20.00	Arroyo, 50 lks. wide, course NW. Ascend.
38.00	Top of ridge runs back NE.
40.00	Set a basaltic stone, 15x10x4 ins., 10 ins. in the ground for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on W. face, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
48.00	Descend.
63.41	Fence bears NE. and SW.
63.60	Telegraph line bears NE. and SW. Descend slope of 36° into little box cañon.
65.25	Single track, Southern Pacific bears NE. and SW.
65.45	Fence bears NE. and SW.
67.50	Babocemari Creek, 20 lks. wide, 6 ins. deep, clear water, Course NE. Ascend precipitous bluff, bears NE. and SW.
74.00	Top of same bears NE. and SW,
80.00	Set a granite stone, 12x10x8 ins., 8 ins. in the ground for the corner of sections 7, 8, 17 and 18, mks. with 4 grooves on the S. and 5 grooves on the E. faces and raise

Subdivisional Lines of T. 20 S., R. 21 E. <sup>Fracl.</sup>

Chains.

a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.  
Land mountainous. Soil 4th rate. No timber.

-----  
Dec. 7th:- At 3h, p. m., 1. m. t., I set off  
22°34½'S. on the decl. arc, 58°18' on the co-lat. arc  
and determine a mer. with the solar at this corner.,

-----  
N.89°43'W. on a random line bet. secs. 7 and 18.

40.00 Set a temp. ¼ sec. cor.  
80.00 Intersect the W. bdy. of the township at a point 3 lks.  
N. of the corner of secs. 7, 12, 13 and 18, a porphyry  
stone, 12x8x4 ins. above ground, properly marked and  
witnessed as described by the Surveyor General.

Thence I run S.89°44'E. on a true line bet. secs. 7 and  
18 over rolling ground, through mesquite brush.

40.00 Set a porphyry stone, 15x6x6 ins., 10 ins. in the ground,  
for the ¼ sec. cor., mkd. ¼ on N. face, and raise a  
mound of stone, 2 ft. base, 1½ ft. high, N. of cor.  
House of Ramon Jesus bears South about 10 chs. dist.  
and the Ranch of Ramon Escudero, S.47°W. about 40 chs.  
dist.

40.25 Leave mesquite brush, bears NE. and SW.  
Road bears NE. and SW. Telephone line bears NE. and SW.

41.00 Road bears NE. and SW.  
Ascend gradually.

76.00 Top of ascend, bears N. and S.

80.00 The corner of secs. 7, 8, 17 and 18.

Land rolling. Soil 2nd rate. Mesquite brush first  
half mile.

Dec. 7th, 1910.

-----  
N.0°1'E. bet. secs. 7 and 8 over rolling ground.

25.75 Road bears NE. and SW.

33.00 Telephone line bears NE. and SW.

40.00 Set a basaltic stone, 15x6x6 ins., 10 ins. in the ground  
for the ¼ sec. cor., mkd. ¼ on W. face, and raise a mound  
of stone, 2 ft. base, 1½ ft. high, W. of cor.

53.65 Road bears E. and W. Enter mesquite brush bears E. and W.

80.00 Set a granite stone, 12x9x6 ins., 8 ins. in the ground  
for the corner of secs. 5, 6, 7 and 8, mkd. with 5 notches  
on the S. and E. edges and raise a mound of stone, 2 ft.  
base, 1½ ft. high, W. of cor.

Land rolling. Soil 2nd rate. No timber.  
Mesquite brush on last half mile.

-----  
N.89°44'W. on a random line bet. secs. 6 and 7.

40.00 Set a temp. ¼ sec. cor.

79.90 Intersect the W. bdy. of the township at a point 3 lks. N.  
of the corner of secs. 1, 6, 7 and 12, which corner is  
a granite stone, 5x4x4 ins. above ground, properly marked  
and witnessed as described by the Surveyor General.

Thence I run, S.89°45'E. on a true line bet. secs.  
6 and 7 over rolling ground.

39.95 Set a granite stone, 15x7x6 ins., 10 ins. in the ground  
for the ¼ sec. cor., mkd. ¼ on N. face, and raise a mound of



CHAINS.

- stone, 2 ft. base, 1½ ft. high, N. of cor.
- 70.00 Enter mesquite brush bears N. and S.
- 79.90 The corner of secs. 5, 6, 7 and 8.  
Land rolling. Soil 2nd rate. Mesquite brush  
last 30 chs.
- Dec. 8th:- At this corner, I set off 22°40½'S. on the decl. arc and at 11h.52m. a.m., l. m. t. I obs. the sun on the mer., the resulting lat. is 31°42' N.
- 
- 40.00 Set a tamp. ¼ sec. cor.  
80.46 Intersect the N. bdy. of the township at a point 21 lks. E. of the corner of secs. 5, 6, 31 and 32, previously described.  
Thence I run S.0°8'E. on a true line bet. secs. 5 and 6 through mesquite brush.
- 40.46 Set a granite stone, 18x14x4 ins., 12 ins. in the ground for the ¼ sec. cor., mkd. ¼ on W. face, and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
- 80.46 The corner of secs. 5, 6, 7 and 8.  
Land rolling. Soil 2nd rate. Mesquite brush.
- Dec. 8th:- At 4h, p. m., l. m. t. I set off 22°40'S. on the decl. arc, 58°18' on the co-lat. arc and determine a mer. with the solar at this corner.
- Dec. 8th. 1910. -----
- From the Standard corner of secs. 32 and 33, a redwood post, 4 ins. sq., properly marked and witnessed as described by the Surveyor General, I run N.0°01'E, bet. secs. 32 and 33 over rolling ground.
- 40.00 Set a granite stone, 12x10x6 ins., 8 ins. in the ground for the ¼ sec. cor., mkd. ¼ on W. face, and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
- 70.00 Arroyo, 50 lks. wide, course NE.
- 80.00 Set a granite stone, 24x10x4 ins., 15 ins. in the ground for the corner of secs. 28, 29, 32 and 33, mkd. with 4 notches on the E. and 1 notch on the S. edge and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
- Land rolling. Soil 2nd rate. No timber.
- 
- West on a random line bet. secs. 29 and 32.
- 40.00 Set a temp. ¼ sec. cor.  
79.98 Intersect the N. and S. line at the corner of secs. 29, 30, 31 and 32.
- Thence I run East on a true line bet. secs. 29 and 32, over rolling ground, down valley of Arroyo or draw, Leave wide draw, about 7 chs. wide, course SE.
- 33.00 Set a granite stone, 12x10x5 ins., 8 ins. in the ground for the ¼ sec. cor., mkd. ¼ on N. face, and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of corner.  
39,99
- 79.98 The corner of secs. 28, 29, 32 and 33.
- Land rolling. Soil 2nd rate. No timber.  
Scattering mesquite brush.  
Noon. Dec. 9th:- Sun not visible, solar obs. impossible.
-

## Subdivisional Lines of Fracl. T. 20 S., R. 21 E.

Chains.	
	N. 0° 1' E bet. secs. 28 and 29 over rolling ground.
40.00	Set a granite stone, 12x8x6 ins., 8 ins. in the ground for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on W. face, dig pits, 18x18x12 ins. N. and W. of corner, 3 ft. dist. and raise a mound of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
80.00	Set a granite stone, 12x8x6 ins., 8 ins. in the ground for the corner of secs. 20, 21, 28 and 29, mkd. with 2 notches on the S. and 4 notches on the E. edge, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Land rolling. Soil 2nd rate. No timber.
	Dec. 9th:- At 3h. p. m., 1. m. t., I set off 22° 47' S. on the decl. arc, 58° 20' on the co-lat. arc and determine a mer. with the solar at this corner.
	----- West on a random line bet. secs. 20 and 29.
40.00	Set a temp. $\frac{1}{4}$ sec. cor.
79.92	Intersect the N. and S. line at a point 1 lk. S. of the corner of secs. 19, 20, 29 and 30. Thence I run East on a true line bet. secs. 20 and 29. Over badly broken ground.
34.00	Ascend rocky ridge along S. slope.
35.50	Top of ascent, ridge runs back N. Descend.
39.96	Set a granite stone, 16x14x6 ins., 10 ins. in the ground for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on N. face, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
41.00	Foot of ridge bears N. and S.
47.00	Road bears NE. and SW.
58.00	Road bears NE. and SW.
79.92	The corner of secs. 20, 21, 28 and 29. Land rough and broken. Soil 3rd rate. No timber.
	-----p----- Dec. 9th, 1910. oooooooooo
	East on a true line bet. <sup>Fracl.</sup> secs. 21 and 28, over rolling ground.
40.00	Set a granite stone, 12x9x5 ins., 8 ins. in the ground for the $\frac{1}{4}$ sec. cor. mkd. $\frac{1}{4}$ on N. face, and dig pits, 18x18x12 ins. E. and W. of cor, 3 ft. dist. and raise a mound of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
46.00	Arroyo, 50 lks. wide, course NE.
71.85	Intersect the W. bdy. of the San Juan de las Boguillas y Nogales Private Land Grant at a point N. 10° 02' W., 3.85 chs. from the 20 $\frac{1}{2}$ Mile corner, a granite stone, 9x8x6 ins. above ground, properly marked as described by the Surveyor General. Set a granite stone, 12x7x7 ins., 8 ins. in the ground for the closing corner of fracl. secs. 21 and 28, mkd. SJB on E; on W. with 2 grooves on S. face, dig pits, 24x24x12 ins., N. 10° 02' W. and S. 10° 02' E., 3 ft. dist. and W. of cor. 7 ft. dist. and raise a mound of earth, 4 ft. base, 2 ft. high W. of cor. Land rolling. Soil 2nd rate. Mesquite brush.
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Subdivisional Lines of Fracl. T. 20 S., R. 21 E.

Chains.	N.0°1'E. bet. secs. 20 and 21 over rolling ground.
28.00	Enter badly broken ground, bears NE. and SW. Ascend.
35.50	Little ridge bears NE. and SW. Descend.
40.00	Set a granite stone, 12x10x10 ins., 8 ins. in the ground for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on W. face, and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
50.00	Corner set on SE. side of wide draw, course NE.
60.00	Leave wide draw, course NE.
80.00	Set a sandstone, 12x8x6 ins., 8 ins. in the ground for the corner of secs. 16, 17, 20 and 21, mkd. with 3 notches on the S. and 4 notches on the E. edge, and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Land rolling and broken in places. Soil 2nd rate. No timber. Dec. 10th:- At this corner I set off 22°52' $\frac{1}{2}$ 'S. on the decl. arc, and at 11h.53m. a.m., l. m. t., obs. the sun on the mer., the resulting lat. is 31°41'N.
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	West on a random line bet. secs. 17 and 20.
40.00	Set a temp. $\frac{1}{4}$ sec. cor.
80.14	Intersect the N. and S. line at a point 5 lks. N. of the cor. of secs. 17, 18, 19 and 20. Thence I run
	N.89°58'E. bet. secs. 17 and 20 ascending angle 10°.
6.00	Ridge bears N. and S. descend.
40.07	Set a basaltic stone, 12x10x4 ins., 8 ins. in the ground for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on N. face, and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
80.14	The corner of sections, 16, 17, 20 and 21. Land rolling. Soil 2nd rate. No timber. Dec. 10th:- At 4h. p. m. l. m. t., I set off 22°52'S. on the decl. arc, 58°19' on the co-lat. arc, and determine a mer. with the solar at this corner. Dec. 10th, 1910.
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	East on a true line bet. <sup>Fracl</sup> secs: 16 and 21 over rolling ground. Through mesquite brush.
40.00	Set a granite stone, 12x6x6 ins., 8 ins. in the ground for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on N. face, and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
50.00	<i>Trsd. NE &amp; SW</i>
57.74	Intersect the W. bdy. of the San Juan de las Boquillas y Nogales Private Land grant at a point N.10°02'W., 5.10 chs. dist. from the 19 $\frac{1}{2}$ mile corner, a granite stone, 7x6x5 ins. above ground, properly marked and witnessed as described by the Surveyor General. Set a granite stone, 15x6x6 ins., 8 ins. in the ground for the closing corner of <sup>Fracl</sup> secs. 16 and 21, mkd. <sup>SUB</sup> on E; on the W. with 3 grooves on the S. face, dig pits, 24x18x12 ins. N.10°02'W. and S.10°02'E., 3 ft. dist. and W. of stone 7 ft. dist. and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land rolling. Soil 2nd rate. Mesquite brush. Dec. 12th:- Sky overcast at noon. Solar obs. impossible.
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	N.0°01'E. bet. secs. 16 and 17 over rolling ground.
40.00	Set a quartzite stone, 16x7x6 ins., 10 ins. in the ground for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on W. face, and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Subdivisional Lines of Fracl. T. 20 S., R. 21 E.

chains.

80.00 Set a quartzite stone, 18x6x6 ins., 12 ins. in the ground for the corner of secs. 8, 9, 16 and 17, mkd. with 4 notches on the S. and E. edges and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Land rolling. Soil 2nd rate. No timber.

S.89°58'W. on a random line bet. secs. 8 and 17.

40.00 Set a temp. ¼ sec. cor.

80.00 Intersect the N. and S. line at a point 5 lks. S. of the corner of secs. 7, 8, 17 and 18.

Thence I run East on a true line bet. secs. 8 and 17 over extremely rough and rocky ground, descending.

34.00 Canon, 10 lks. wide, course SE., ascend.

40.00 Set a basaltic stone 14x14x5 ins., 10 ins. in the ground for the ¼ sec. cor., mkd. ¼ on N. face and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of corner.

At this point I triangulate across box canon, Babocomri Creek. In bottom of canon, railroad, Southern Pacific, telegraph line and right of way fences of railroad. Canon is about 2 chs. wide on bottom and 150 to 200 feet deep.

Flag set on line on East side of canon. From the ¼ sec. cor. I measure North 20 chs. From this point the flag bears S.60°E.; which gives the dist. (by traverse table) 34.64 chs.

74.64 To SE. side of canon which bears NE. and SW.

80.00 The corner of secs. 8, 9, 16 and 17.

Dec. 12th:- At 4h. p. m., 1. m. t., I set off 23°2'S. on the decl. arc, and 58°18' on the co-lat. arc and determine a mer. with the solar at this cor.

Land mountainous. Soil 3rd rate. No timber.

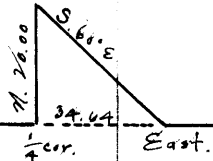
Dec. 12th, 1910.

40.00 East on a true line bet. Fracl. secs: 9 and 16. Set a granite stone, 12x7x6 ins., 8 ins. in the ground for the ¼ sec. cor., mkd. ¼ on N. face, and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of Cor.

43.44 Intersect the W. bdy. of the San Juan de las Boquillas y Nogales Private Land Grant at a point whence the 18½ mile cor. a granite stone, 12x10x10 ins., above ground, properly marked and witnessed as described by the Surveyor General bears S:10°02'E. 6.74 chs. dist.

66.00 Set a granite stone, 12x8x6 ins., 8 ins. in the ground for the closing corner of fracl. secs. 9 and 16, mkd. SJB on E. W. with 4 grooves on S. face, and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Land rolling. Soil 3rd rate. No timber. A few greasewood and mesquite bushes.



CHAINS.

- N.0°01'E. bet. secs. 8 and 9 over rough and rocky ground.
- 7.00 Edge of Mesa, bears NE. and SW. Commence steep and precipitous descent towards Babocomari Creek.
- 29.50 Running water, Babocomari Creek, 16 lks. wide, 6 ins. deep., Course NE.  
Ascend.
- 30.08 Fence bears NE. and SW.
- 30.59 Telegraph line bears NE. and SW.
- 31.00 Single track, Southern Pacific, bears NE. and SW.
- 31.62 Fence bears NE. and SW.
- 36.00 Top of Canon, bears E. and W., descend.
- 40.00 Set a granite stone, 18x7x5 ins. <sup>12 ins. in ground</sup> for  $\frac{1}{4}$  sec. cor., mkd.  $\frac{1}{4}$  on W. face, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high W. of corner. Corner is on E. side of deep arroyo. Course of Arroyo, S.10°W., 50 lks. wide.  
A mesquite tree 6 ins. in diam. bears S.10°W., 66 lks. dist., mkd.  $\frac{1}{4}$  SSBT. No other bearings available.  
Ascend.
- 45.00 Top of level mesa, bears E. and W.
- 80.00 Set a limestone, 18x9x5 ins., 12 ins. in the ground for the cor. of secs. 4, 5, 8 and 9, mkd. with 5 notches on the S. and 4 notches on the E. edge, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, W. of cor.  
Land mountainous. Soil 2nd and 3rd rate. No timber.
- 
- Dec. 13th:- At the corner of secs., 4, 5, 8 and 9, I set off 23°7'S on the decl. arc and at 11h.54m. a. m., 1. m. t. obs. the sun on the mer., the resulting lat. is 31°42'N.
- Thence I run, West on a random line bet. secs. 5 and 8.
- 40.00 Set a temp.  $\frac{1}{4}$  sec. cor.
- 79.99 Intersect the N. and S. line 3 lks. N. of the cor. of secs. 5, 6, 7 and 8.  
Thence I run N.89°59'E. on a true line bet. secs. 5 and 8 over rolling ground, through mesquite brush.
- 30.00 Leave mesquite brush which bears N. and S.
- 34.00 Telephone line bears NE. and SW. House bears N.32°15'E. about 10 chs. dist. Deserted.
- 36.17 Road bears NE. and SW.
- 39.99 $\frac{1}{4}$  Set a limestone, 15x7x5 ins., 10 ins. in the ground for the  $\frac{1}{4}$  sec. cor., mkd.  $\frac{1}{4}$  on N. face, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, N. of cor.
- 46.00 Road bears N.10°W. and S.10°E.
- 79.99 The cor. of secs. 4, 5, 8 and 9.  
Land rolling. Soil 2nd rate. mesquite brush first 30 chs.
- 
- East on a true line bet. fract. secs. 4 and 9 over rolling ground.
- 15.00 Descend into canon,
- 27.50 Wash, 50 lks. wide, course S.10°E.
- 28.15 Intersect the W. bdy. of the San Juan de las Boquillas y Nogales Private Land Grant at a point N.15°39'E, 8.52 chs. dist. from the 17 $\frac{1}{2}$  mile corner, a quartzite stone, 12x8x6 ins. above ground, properly marked and witnessed as described by the Surveyor General.  
Set a granite stone, 15x10x5 ins., 10 ins. in the ground

BOOK 2279  
Subdivisional Lines of T. 20 S., R. 21 E. <sup>Fracl.</sup>

Chains.

for the closing corner of fracl. secs. 4 and 9, mkd. CC on W., SJBN on E. and 5 grooves on S. face, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.  
Land broken. Soil 3rd rate. No timber.

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Dec. 13th:- At 4h, p. m., 1. m. t. I set off 23°6 1/2' S. on the decl. arc, 58°18' on the co-lat. arc and determine a mer. with the solar at the closing corner of fracl. secs 4 and 9.

Dec. 13th, 1910.

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Dec. 14th:- At 8h, a. m. 1. m. t., I set off 23°9' S. on the decl. arc, 58°18' on the co-lat. arc and determine a mer. with the solar at the corner of secs. 4, 5, 8 and 9,

Thence I run, N. 0°1' E. on a random line bet. secs. 4 and 5.

- 40.00 Set a temp. 1/4 sec. cor.
- 80.44 Intersect the N. bdy. of the township at a point 3 lks. east of the corner of secs. 4, 5, 32 and 33, previously set by me.
- 40.44 Set a porphyry stone, 12x7x6 ins., 8 ins. in the ground for the 1/4 sec. cor., mkd. 1/4 on W. face, and raise a mound of stone 2 ft. base, 1 1/2 ft. high, W. of cor.
- 50.44 Telephone line bears NE. and SW.
- 51.19 Road bears NE. and SW.
- 67.00 Foot of little conical hill. Ascend.
- 77.00 Top of little conical hill. Descend.
- 80.44 The corner of secs. 4, 5, 8 and 9.

Land rolling. Soil 2nd rate. No timber.

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From the Standard corner of secs. 33 and 34 on the south bdy. of the township, which cor. is a redwood post, 4 ins. sq., 18 ins. above ground, properly marked and witnessed as described by the Surveyor General, I run N. 0°2' E. bet. secs. 33 and 34 over rolling ground.

- 40.00 Set a sandstone, 20x8x6 ins., 15 ins. in the ground for the 1/4 sec. cor., mkd. 1/4 on W. face, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.
  - 80.00 Set a sandstone, 15x10x4 ins., 10 ins. in the ground for the corner of secs. 27, 28, 33 and 34, mkd. with 1 notch on the S. and 3 notches on the E. edge, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.
- Land rolling. Soil 2nd rate. No timber.

Dec. 14th:- At this corner, I set off 23°11' S. on the decl. arc, and at 11h.54m. a. m., 1. m. t., obs. the sun on the mer., the resulting lat. is 31°39' N.

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West on a random line bet. secs. 28 and 33.

- 40.00 Set a temp. 1/4 sec. cor.
- 79.96 The cor. of secs. 28, 29, 32 and 33.
- 6.00 Arroyo, 50 lks. wide, course NE.
- 59.98 Set a granite stone, 12x7x6 ins., 8 ins. in the ground for the 1/4 sec. cor., mkd. 1/4 on N. face, and raise a mound of

Chains.

stone, 2 ft. base, 1½ ft. high, N. of cor.

55.00  
79.96

Leave rolling ground, bears N. and S. and enter level ground  
The cor. of secs. 27, 28, 33 and 34.  
Land rolling 55.00 chs. and level 24.96 chs.  
Soil 2nd rate. Greasewood brush.

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SSSS

East on a true line bet. fract. secs. 27 and 34.

5.75

Intersect the W. bdy. of the San Juan de las Boquillas y Nogales Private Land Grant at a point 2.30 chs. N. 10° 02' W. of the 21½ mile cor., a granite stone, 6x8x6 ins., above ground, properly marked and witnessed as described by the Surveyor General.

Set a porphyry stone, 12x8x6 ins., 8 ins. in the ground for the closing corner of fract. secs. 27 and 34, mkd. CC on W. SJBN on E. with 1 groove on the S. face, and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.  
Land level. Soil 2nd rate. No timber.

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From the corner of secs. 27, 28, 33 and 34, N. 0° 2' E. bet fract. secs. 27 and 28 over rolling ground.

33.21

Intersect the W. bdy. of the San Juan de las Boquillas y Nogales Private Land Grant at a point S. 10° 02' E., 3.94 chs. Dist. of the 21 mile corner, a granite stone, 10x12x6 ins. above ground, properly marked and witnessed as described by the Surveyor General.

Set a granite stone, 12x7x6 ins., 8 ins. in the ground for the closing corner of fract. secs. 27 and 28, mkd. CC on S., SJBN on N. with 3 grooves on E. face, and dig pit, 30x24x12 ins., N. 10° 02' W. <sup>3 ft. dist.</sup> and a pit 24x18x12 ins. S. 7 ft. dist. of corner. and raise a mound of earth, 4 ft. base, 2 ft. high, S. of stone.

Land rolling. Soil 2nd rate. No timber.

Dec. 14th, 1910.

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GENERAL DESCRIPTION.

This township is rough and broken. A considerable number of cattle graze on it. The grass is good. Practically no cultivation is being carried on in it. The Southern Pacific traverses the Northern part.

*August F. DeLal*  
U. S. D. S.

*For* FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

*See Book 0*

LIST OF NAMES.

BOOK 2279

A list of the names of the individuals employed by \_\_\_\_\_

\_\_\_\_\_, 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 \_\_\_\_\_

showing the respective capacities in which they acted:

- \_\_\_\_\_, *Chainman.*
- \_\_\_\_\_, *Chainman.*
- \_\_\_\_\_, *Moundman.*
- \_\_\_\_\_, *Moundman.*
- \_\_\_\_\_, *Axman.*
- \_\_\_\_\_, *Axman.*
- \_\_\_\_\_, *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted \_\_\_\_\_

\_\_\_\_\_, United States Deputy Surveyor, in surveying all those parts or portions of the \_\_\_\_\_

\_\_\_\_\_ of the \_\_\_\_\_

\_\_\_\_\_ meridian, \_\_\_\_\_ of \_\_\_\_\_, 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 \_\_\_\_\_

- \_\_\_\_\_, *Chainman.*
- \_\_\_\_\_, *Chainman.*
- \_\_\_\_\_, *Moundman.*
- \_\_\_\_\_, *Moundman.*
- \_\_\_\_\_, *Axman.*
- \_\_\_\_\_, *Axman.*
- \_\_\_\_\_, *Flagman.*

Subscribed and sworn to before me this \_\_\_\_\_ }  
day of \_\_\_\_\_, 19 \_\_\_\_\_ }





130  
21

BOOK 2279

I, \_\_\_\_\_, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from \_\_\_\_\_ United States Surveyor General for \_\_\_\_\_, bearing date of the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, 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 \_\_\_\_\_, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of \_\_\_\_\_

\_\_\_\_\_ of the \_\_\_\_\_ meridian, in the \_\_\_\_\_ of \_\_\_\_\_, 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 \_\_\_\_\_ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

\_\_\_\_\_  
United States Deputy Surveyor.

Subscribed by said \_\_\_\_\_, and sworn to before me }  
this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

*Phoenix Ariz. July 13, 1912*

The foregoing field notes of the survey of *the Subdivision lines of Sec. 20 & 21 E. of the 5th and 6th R. of the Salt River Base and Meridians, Arizona*

executed by *Hugh J. Lavelle, W.D.S.* under his contract No. *163*, dated *May 16*, 19*10*, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

*Frank S. Galloway*  
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.