

Book "B"
4-679

3918

BOOK 3918

FIELD NOTES

OF THE SURVEY OF THE

Part of the Boundary of

the Papago Indian Reservation

along the Summit of the Ajo Mountains

in

Township 15 South, Range 4 West

Township 16 South, Range 4 West

Township 17 South, Range 4 West

and

part (South two miles) of the West Boundary of

Township 17 South, Range 3 West

Of the Gila and Salt River Base and Meridian,

In the State of Arizona

EXECUTED BY

Dupree R. Averill

U. S. Surveyor

In the capacity of U. S. Surveyor, under Special Instructions dated September 23,
 UNITED STATES SURVEYOR GENERAL
 1919, issued by the ~~District Cadastral Engineer~~ to govern surveys included in Group
 No. 99 (Arizona), which were approved by the Commissioner of the General Land
 Office, October 22, 1919, and Assignment Instructions dated February 23, 1929
 and April 1, 1931.

Survey commenced March 19, 1929

Survey completed April 22, 1931

6-151

INDEX DIAGRAM.

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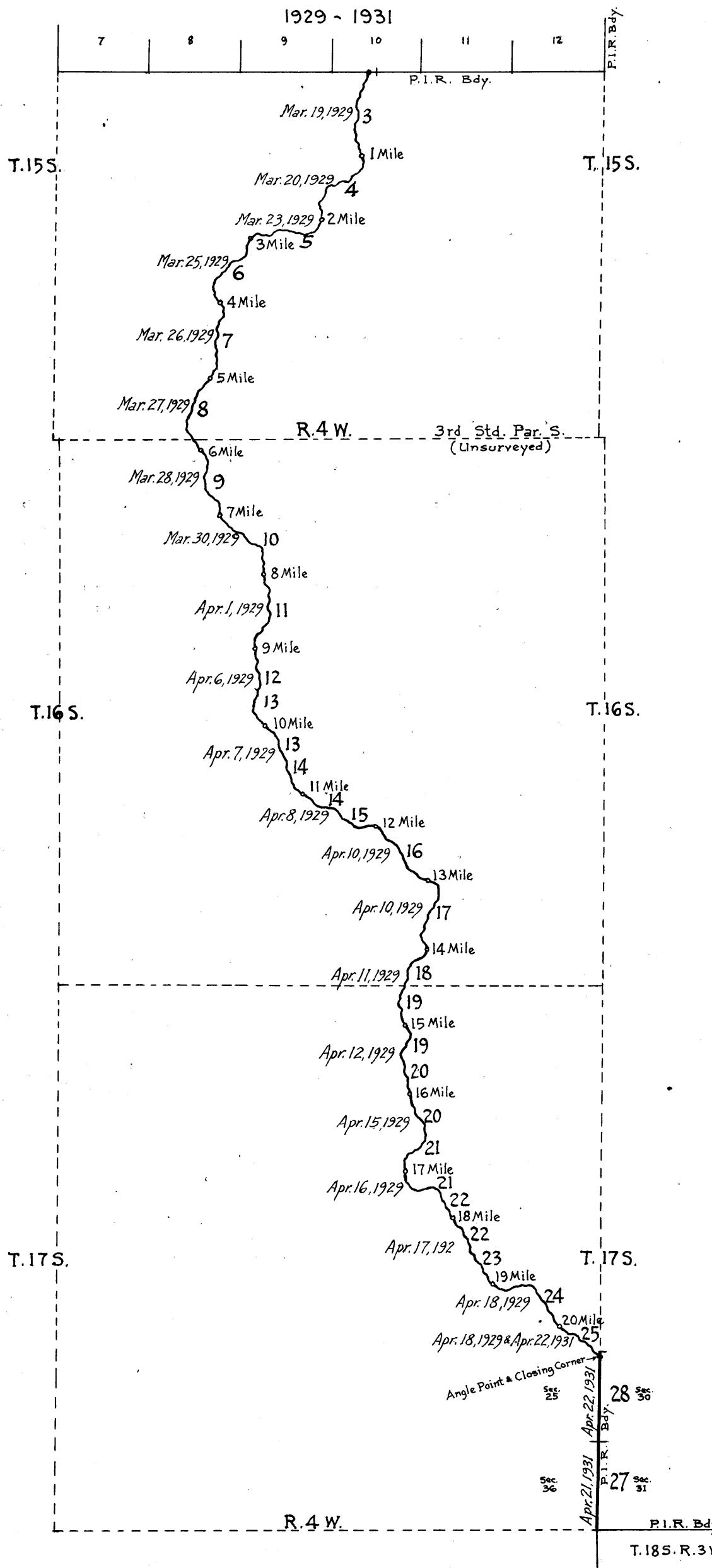
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GROUP No. 99
ARIZONA
DATE AND INDEX DIAGRAM

BOOK 3918

1

1929 ~ 1931



Survey commenced March 19, 1929, and executed by Dupree R. Averill, U. S. Surveyor, on dates shown on diagram on page 1 hereof, using Buff & Buff transit No. 17992. The instrument is equipped with full vertical circle, and Smith Solar attachment and was approved by the District Cadastral Engineer conditional upon satisfactory field tests. Unless otherwise specified all azimuth determinations are accomplished with the solar attachment.

All adjustments of the transit were examined and corrected, then, to test the solar apparatus by comparing its indications resulting from solar observations during the a. m., and p. m., hours with a meridian determined by stellar observation, proceed as follows:

March 16, 1929: At camp, in the NE $\frac{1}{4}$ of Sec. 10, T. 15 S., R. 4 W., Gila and Salt River Base and Meridian, Arizona, in latitude 32° 08' N., longitude 112° 40' W., of Greenwich, at 7 h. 15 m., p. m., l. m. t., observe 6B Ursae Minoris at eastern elongation deflecting an angle of 2° 15 $\frac{1}{2}$ ', equal to the azimuth of the star, to the west and mark the meridian thus determined upon a prominent natural object about half a mile to the north.

March 17, 1929: At 9 h. 0 m. a.m., app. t., set off 32° 08' N., on the latitude arc, 1° 20' S., on the declination arc, and observe that the solar meridian coincides with the true meridian.

At apparent noon, with the latitude arc unchanged observe the sun upon the meridian; the resulting declination is 1° 17 $\frac{1}{2}$ ' S., which agrees with the computed declination of the sun.

At 3 h. 0 m. p.m., app. t., with the latitude arc unchanged and a reading of 1° 14' S., upon the declination arc the solar meridian falls upon the true meridian.

As all solar observations taken during the usual hours of solar work define meridians which fall within 1' of arc of the true meridian the transit is considered to be in satisfactory adjustment.

Unless otherwise specified all measurements were made with a Lallie 5 chain steel tape, first compared with a Lufkin standard steel tape and found correct. The measurements were made on the slope, slope angles determined by clinometer readings and all measurements reduced to horizontal equivalents for entry in the field notes.

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Survey of part of the boundary of the Papago Indian Reservation

Along summit of the Ajo Mountains.

BOOK 3918

3
70

chains

Upon the summit of the Ajo Mountains, 7,05 chs., west of the $\frac{1}{2}$ sec.cor., on the S. bdy., of sec.10, T.15 S., R.4 W., G.& S.R. B.& M., set an iron post, 3 ft., long, 3 ins., diam., 2 ins. in the ground, to bedrock, supported in a mound of stone, 4 ft. base, 34 ins., high, for Initial Monument of the Papago Indian Reservation, Boundary, marked on brass cap

T15S R4W
 S 10
 S 15 / PIR
 PL 1 M
 1929

For the purpose of marking the boundary of the reservation so that it can be readily followed, monument all angle points thereon with mounds of stone, the minimum size thereof being 18 in., base, 12 in., high.

Survey follows the summit of the Ajo Mountains on the various courses described herein.

Along 1st. mile. Asc. 420 ft.,

S. 32° W.	3.80	chs.	to A.P. No. 1
S. 37 $\frac{1}{2}$ ° W.	12.70	" " "	2
S. 4° W.	17.50	" " "	3
S. 25° E.	2.30	" " "	4
S. 5° E.	3.70		

40.00 Set an iron post, 3 ft. long, 1 in., diam., over cross (X) on surface rock, supported in a mound of stone, 4 ft. base, 3 ft. high, for $\frac{1}{2}$ mile monument, marked on brass cap

PL } PIR
 } $\frac{1}{2}$ M
 1929

S. 8° W. 13.80 chs., to A.P. No. 1.

At 1.50 chs., desc., 100 ft., over broken ledges.

At 5.00 chs., asc., 250 ft.

South	2.00	chs.	to A.P. No. 2.	Desc. 280 ft.
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S. 50° E.	3.40	" " "	3.
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S. 20° E.	4.00	" " "	4.
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S. 25° W.	3.30	" " "	5.
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S. 25° E.	13.50	"	
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At 6.50 chs., asc., 80 ft. over broken ledge.

80.00 Set an iron post, 3 ft. long, 3 ins., diam., over cross (X) on surface rock, supported in a mound of stone, 6 ft. base, 3 ft. high, for 1 mile monument, marked on brass cap,

PL \ PIR
 \ 1 M
 1929

Land. precipitous and broken.

Soil, rock.

Timber. none.

Undergrowth. none.

Survey of part of the boundary of the Papago Indian Reservation

Along summit of the Ajo Mountains.

	Thence Along 2nd.mile of P.I.R. Bdy., T.15 S., R.4 W. Asc., 70 ft.,
	S. 35° E. 1.90 chs., to A.P. No.1. S. 25° E. 2.10 " " " " 2.10 ft. 2nd mile High spur extends SSE. 2.10 ft. 2nd mile Desc., SW. slope 230 ft.
	S. 26° W., 8.00 chs. to A.P. No.3. In saddle of mountain; draw course SE., precipitous gulch to W. Asc., 250 ft.
	S. 50°W., 5.40 chs., to A.P. No.4. S. 27° W. 2.50 " " " " 5. S. 60°W. 2.00 " " " " 6. Desc. 220 ft.
	N. 65°W. 1.00 " " " " 7. S. 70°W. 2.30 " " " " 8. N. 55° W. 5.50 " " " " 9. At 5.00 chs., saddle drains SE., Precipitous breaks N. Asc., 70 ft.,
40.00	West 5.60 chs. to A.P. No.10. South 3.00 " " " " 11. West 0.70 " " Set an iron post, 3 ft.long, 1 in., diam., on surface rock, supported in a mound of stone, 5 ft.base, 3 ft.high, for 1½ mile monument, marked on brass cap
	PL
	PIR $1\frac{1}{2}$ M
	1929
	Asc., 130 ft. West 2.80 chs. to A.P. No.1. Head of gulch, course NW. S. 37° W. 1.10 ch. to A.P. No.2. Top of small rocky peak. S. 83° W. 4.30 ch. to A.P. No.3. S. 17° W. 9.00 " " " " 4. S. 30° W. 3.30 " " " " 5. Asc., 100 ft. S. 14° W. 11.70 " " " " 6. S. 15° E. 2.50 " " " " 7. S. 15° W. 4.60 " " " " 8. S. 40° W. 0.70 " " " "
80.00	Set an iron post, 3 ft.long, 3 ins. diam., 4 ins., in the ground to rock, with marked (X) stone alongside, supported in a mound of stone 5 ft.base, 30 ins., high, for 2 mile monument, marked on brass cap
	PL / PIR 2 M
	1929
	Land. precipitous and broken. Soil. rock, 4th.rate. Timber. none. Undergrowth. scattered greasewood and cacti.

Survey of part of the boundary of the Papago Indian Reservation

Along summit of the Ajo Mountains

BOOK 3918

Along the 3rd mile of P. I. R. Bdy.

S. 40° W. 1.60 chs. to A.P. No.1., ascending 24 ft.
 South 2.00 " " " 2, gradual ascent.
 S. 6° E. 3.60 " " " 3, descending 25 ft.
 S. 22° W. 6.80 " " " 4, on top of prominent peak, 200 ft. above A.P.No.3.

At 3.67 chs. on this portion of the P.I.R. Bdy. set traverse flag "A"
 At 4.00 chs., foot of cliffs, bearing NE. and SW.

From A.P. No.4

S. 52° W. 2.70 chs. to A.P. No.5, at foot of peak and cliffs, 180 ft. below A.P.No.4. Cliffs prevent chaining of this portion of P.I.R. Bdy., therefore obtain bearing and measurement by a traverse along ledge around foot of cliffs as follows:
 From traverse point "A" (3.67 chs. S. 22° W. from A.P. No.3)
 S. 50° W., 4.00 chs., ascending 40 ft. to traverse point "B".
 S. 7° W., 2.00 chs. to A.P.No.5, which, by computation of the traverse is found to be 2.70 chs. S. 52° W. from A.P. No.4.

S. $86\frac{1}{2}$ W. 19.00 From A.P. No.5 chs. to A.P. No.6, at foot of a series of cliffs, facing W., 1090 ft. below A.P.No.5. Chaining is impracticable on this portion of the P.I.R. Bdy., therefore triangulate as follows:

Set flag "A" at A.P. No.5
 Set flag "B" at A.P. No.6, and bearing S. $86\frac{1}{2}$ W. from "A"
 Vertical angle from "A" to "B"- $38\frac{1}{4}$
 From "B" measure a base N. $3\frac{1}{2}$ W., 5.81 chs. to point "C"
 Bearing "C-A" is S. $76\frac{1}{2}$ E.
 Triang. dist. from "A" to "B" is 19.00 chs. S. $86\frac{1}{2}$ W.

N. 60° W. 4.30 chs., descending 70 ft. over NW.slope to

40.00 Low saddle in divide, draining N. and SW.
 Set an iron post, 3 ft. long, 1 in. in diam., 4 ins. in the ground to bedrock, with marked(X) stone alongside, supported in a mound of stone, 4 ft. base, 30 ins. High, for $2\frac{1}{2}$ mile monument, marked on brass cap

PIR PL

2 $\frac{1}{2}$ M

1929

N. 60° W. 2.00 chs. to A.P. No.1, ascending 30 ft.
 N. 35° W. 3.70 " " " 2, ascending 42 ft.
 S. 51° W. 8.20 " " " 3, ascending 91 ft.
 S. 75° W. 2.30 " " " 4, on top of narrow peak, bearing N. and S., 75 ft. above A. P. No.3
 S. 80° W. 3.30 chs. to A.P. No.5, descending 182 ft.
 S. 60° W. 5.50 " " " 6, descending. At 5.00 chs. saddle, 40 ft. below A.P. No.5. Ascend slightly to A.P.NO.6.
 N. 85° W. 10.70 chs. to A.P.No.7, ascending 445 ft. over cliffs.
 N. 50° W. 1.00 ch. to " " 8, ascending 15 ft.
 S. 57° W. 1.60 chs. to " " 9, at point of sandstone

Survey of part of the boundary of the Papago Indian Reservation

Along the summit of the Ajo Mountains

		cliff, 50 ft. high, facing SW. and SE., 21 ft. above A.P.No.8.
	S. 23° W. 1.70 chs.;	descending 12 ft. along edge of cliff to
80.00	Set an iron post, 3 ft. long, 3 ins. diam., on bedrock, with marked (X) stone alongside, supported in a mound of stone, 5 ft. base, 3 ft. high, for 3 mile monument, marked on brass cap	PL / PIR 3M
		1929
	Land, rough and broken. Soil, rock and gravel, 4th rate. Timber, none. Undergrowth, greasewood, catclaw and cacti.	
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	Along the 4th mile of P.I.R. Bdy.	
	S. 22° W. 11.00 chs. to A.P.No.1, descending gradually along sandstone dyke. Leave dyke at A.P.No.1.	
	S. 3° E. 4.20 " to A.P.No.2, descending gradually	
	S. 50° W., 3.80 " " " 3, descending 23 ft.	
	S. 32° W. 3.80 " " " 4, descending 74 ft.	
	At 3.00 chs. saddle drains NW. and SE. Asc. 44 ft. to A.P.No.4	
	West 2.20 " to A.P.No.5, ascending 65 ft.	
	S. 75° W. 1.50 " to " " 6, on sharp dyke, bearing N. and S., 26 ft. above A.P.No.5	
	S. 10° W. 1.30 " to A.P.No.7. along dyke.	
	S. 85° W. 7.70 " to A.P.No.8, descending 120 ft.	
	At 3.00 chs. saddle drains N. and SE. Asc. 300 ft. over broken ledges.	
	N. 85° W. 3.10 " to A.P.No.9, ascending 75 ft.	
	S. 50° W. 1.40 " ascending 28 ft. to	
40.00	Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the ground to bedrock, with a marked (X) stone alongside, supported in a mound of stone, 5 ft. base, 30 ins. high, for 3½ mile monument, marked on brass cap	PL / PIR 3M
	1929	
	S. 50° W. 0.60 chs. to A.P.No.1, ascending 12 ft.	
	South 1.00 " " " 2, at top of limestone cliff, 25 ft. high, facing N. and E., 60 ft. above A.P.No.1	
	S. 69° W. 7.00 " to A.P.No.3, on spur, sloping N., 200 ft. above A.P.No.2	
	S. 17° W. 9.50 " to A.P.No.4, descending 97 ft.	
	S. 50° E. 1.00 ch. to " " 5, gradual descent.	
	S. 15° W. 2.00 chs. to " " 6, " "	
	S. 18° E. 2.80 " to " " 7, ascending 47 ft.	
	S. 40° E. 1.50 " to " " 8, descending 12 ft.	
	S. 5° W. 1.10 " to " " 9, descending 10 ft.	
	S. 37° W. 1.70 " to " " 10, on small rocky peak, 30 ft. above A.P.No.9. Drainage N., NE. and S. Saddle W. of this point connects high ridge to main divide.	
	S. 15° E. 5.00 " to A.P.No.11, descending 40 ft.	
	S. 60° E. 3.00 " to " " 12, ascending 21 ft.	
	S. 50° E. 2.70 " to " " 13, gradual descent.	
80.00	S. 45° E. 1.10 " descending gradually to	
	Set an iron post, 3 ft. long, 3 ins. diam., on bedrock, with marked (X) stone alongside, supported in a mound of stone, 5 ft. base, 3 ft. high, for 4 mile monument, marked on brass cap	

Survey of part of the boundary of the Papago Indian Reservation

Along the summit of the Ajo Mountains

E.C.C.K. 3918

PIR
4M
PL
1929

Land, mountainous.
 Soil, rock, gravel, shale and sand, 4th rate.
 Timber, scattering cedar.
 Undergrowth, catclaw and cacti.

Along the 5th mile of P.I.R. Bdy.

S. 74° E. 3.30 chs. to A.P. No.1, at head of gulch,
 course NE., 43 ft. below 4 mile mon.
 S. 70° E. 2.50 " to A.P. No.2, descending 26 ft.
 S. 30° E. 5.20 " to A.P. No.3.
 At 4.95 chs. spur slopes E., 46 ft.
 below A.P. No.2.
 S. 25° W. 5.30 " to A.P. No.4, descending 55 ft.
 S. 5° W. 4.00 " to " " 5, descending 28 ft.
 S. 30° W. 2.60 " to " " 6, descending 36 ft.
 S. 20° W. 3.00 " to " " 7, descending slightly.
 S. 5° E. 1.00 ch. to " " 8, "
 S. 15° W. 1.00 " to " " 9, descending 10 ft.
 S. 60° W. 4.50 chs. to " " 10, descending.
 At 2.80 chs. top of cliff, 20 ft.
 high, bearing N. and S., facing W.,
 24 ft. below A.P. No.9. Desc. 34 ft.
 South 2.50 " to A.P. No.11, ascending 12 ft.
 S. 20° W. 2.20 " to " " 12, gradual ascent.
 S. 20° E. 2.90 " ascending 24 ft. to

40.00 Set an iron post, 3 ft. long, 1 in. diam., on surface rock,
 with marked (X) stone alongside, supported in a mound
 of stone, 5 ft. base, 30 ins. high, for $4\frac{1}{2}$ mile monument,
 marked on brass cap

PIR
4 $\frac{1}{2}$ M
PL
1929

This mon. is at N. end of cliff, 10 ft. high,
 bearing N. 12° W. and S. 12° E. facing W.

S. 12° E. 2.00 chs. to A.P. No.1, at S. end of cliff.
 S. 15° W. 4.30 " to " " 2, gradual ascent.
 S. 40° E. 2.00 " to " " 3, ascending 33 ft.
 A.P. No.3 is on small rocky peak.
 S. 15° W. 4.00 " to A.P. No.4, descending 60 ft.
 S. 35° E. 2.00 " to " " 5, " 27 ft.
 S. 10° E. 6.70 " to " " 6, descending 39 ft.
 At 3.04 chs. saddle, draining E.
 and W. Asc. 10 ft.
 S. 30° W. 2.50 " to A.P. No.7, ascending 15 ft.
 S. 40° W. 2.20 " to " " 8, gradual ascent.
 S. 3° W. 7.00 " to " " 9, ascending.
 At 5.00 chs. top of cliff 15 ft.
 high, bearing E. and W., facing N.
 Ascend 26 ft. to A.P. No.9.
 S. 11° W. 2.80 " to A.P. No.10, at top of peak from
 which spur slopes S., 53 ft. above
 A.P. No.9
 At 1.00 ch. top of cliff, 25 ft.
 high, facing N.
 S. 60° W. 4.50 " descending 185 ft. to

80.00 Set an iron post, 3 ft. long, 3 ins. diam., 6 ins. in the
 ground to bedrock, with marked (X) stone alongside,
 supported in a mound of stone, 7 ft. base, 30 ins. high,
 for 5 mile monument, marked on brass cap

Survey of part of the boundary of the Papago Indian Reservation

Along the summit of the Ajo Mountains

PL

PIR

5M

1929

Land, mountainous.

Soil, rocky and gravelly, 4th rate..

Timber, scattering cedar.

Undergrowth, catclaw and cacti.

Along the 6th mile of P.I.R. Bdy.

S. 50° W. 6.20 chs. to A.P. No.1, descending 145 ft.
 At 4.50 chs. saddle, drains N. and S. Ascend 27 ft. to A.P. No.1.

S. 55° W. 2.80 " to A.P. NO.2, gradual ascent.

S. 26° W. 9.90 " To " " 3, descending 51 ft.
 At 2.59 chs. saddle, drains NE. and SW. Asc. 270 ft. to A.P.No.3.

N. 60° W. 1.00 ch. to A.P. No.4, gradual ascent.

S. 65° W. 2.50 chs. to A.P. No.5, ascending 46 ft.

S. 35° W. 2.60 " to " " 6, ascending 50 ft.

S. 25° W. 2.70 " to " " 7, ascending 34 ft.

S. 75° W. 2.80 " to " " 8, on top of rocky peak.
 49 ft. above A.P.No.7. Spur slopes W. from peak.

At 1.97 chs. top of cliff, 25 ft. high, bearing N. and S., facing E.

S. 10° E. 1.50 " to A.P. No.9, descending 16 ft.

S. 20° W. 1.20 " to A.P. No.10, descending 47 ft.

S. 22° E. 2.50 " to " " 11, " 15 ft.

S. 30° E. 3.60 " to " " 12, " 21 ft.

S. 35° W. 0.70 " ascending slightly to
 Set an iron post, 3 ft. long, 1 in. diam., on surface rock, with marked stone alongside, supported in a mound of stone 5 ft. base, 3 ft. high, for $5\frac{1}{2}$ mile monument, marked on brass cap

PIR

PL

5 $\frac{1}{2}$ M

1929

S. 5° W. 2.10 chs. to A.P. No.1, ascending 17 ft.

S. 15° E. 2.60 " to " " 2, descending 45 ft.

S. 35° W. 3.00 " to " " 3, in saddle, draining E. and W., 68 ft. below A.P.No.2

S. 5° W. 6.00 " to A.P. No.4, ascending 67 ft.

S. 20° E. 1.70 " to " " 5, ascending 103 ft.

S. 15° W. 2.10 " to " " 6, on top of peak, 50 ft. above A.P.No.5. Spur, slopes W. Ranch house in deep canyon bears S. 70 $\frac{1}{2}$ °W. about 1 mile dist.

S. 25° E. 2.70 " to A.P. No.7, descending 34 ft.

S. 16° E. 5.00 " to " " 8, descending 160 ft. At 2.00 chs. cliff 60 ft. high, facing SE.

S. 25° E. 3.00 " to A.P. No.9, descending 24 ft.

S. 14° E. 7.00 " to " " 10, " 91 ft. At 4.90 saddle, drains E. and W. Ascend 25 ft. to A.P.No.10 on peak from which spur slopes SW.

S. 85° E. 4.20 " to A.P. No.11, descending 67 ft.

S. 40° E. 0.60 " descending slightly to
 Set an iron post, 3 ft. long, 3 ins. diam., on surface rock, with marked (X) stone alongside, supported in a mound of stone 6 ft. base, 3 ft. high, for 6 mile monument, marked on brass cap

Survey of part of the boundary of the Papago Indian Reservation

Along the summit of the Ajo Mountains

BOOK 3918

9

PIR
PL
6M
1929

Land, mountainous.
Soil, rocky, 4th rate.
Timber, scattering cedar.
Undergrowth, cacti.

Along the 7th mile of P.I.R. Bdy.

S. 45° E. 1.90 chs. to A.P. No.1, descending 12 ft.
 S. 30° E. 2.00 " " 2, ascending 12 ft.
 S. 70° E. 2.10 " " 3, ascending 34 ft.
 S. 50° E. 1.00 ch. to " " 4, ascending slightly.
 South 1.00 " to " " 5, " "
 S. 30° E. 2.00 chs. to " " 6, ascending 22 ft.
 along top of narrow dyke.
 S. 25° W. 4.00 " to A.P. No.7, descending 59 ft.
 S. 8° E. 3.00 " to " " 8, gradual descent.
 S. 6° W. 8.00 " to " " 9, descending 82 ft.
 At 3.80 saddle, drains E. and W.
 Ascend 102 ft. to A.P.No.9.
 S. 43° W. 4.10 " to A.P. No.10, ascending 95 ft.
 S. 40° E. 0.90 " to " " 11, ascending 25 ft.
 A.P.No.11 is at top of cliff, 30 ft.
 high, bearing N. and S., facing E.
 S. 25° W. 1.10 " to A.P. No.12, ascending 37 ft.
 S. 60° W. 2.00 " to " " 13, " 25 ft.
 S. 6° W. 2.50 " to " " 14, " 49 ft.
 S. 35° W. 1.70 " to " " 15, on top of peak, 24 ft.
 above A.P.No.14. Spur, slopes W.
 S. 17° E. 1.70 " to A.P. No.16, descending 24 ft.
 S. 35° E. 1.00 ch. descending 31 ft. to

40.00 Set an iron post, 3 ft.long, 1 in.diam., over a cross(X)
 marked on surface rock, supported in a mound of stone
 6 ft.base, 3 ft.high, for $6\frac{1}{2}$ mile monument, marked on
 brass cap,

PIR
PL
6M
1929

S. 60° E. 4.40 chs. to A.P. No.1, descending 62 ft.
 South 1.00 ch. to " " 2, " slightly.
 S. 55° E. 5.80 chs. to " " 3, descending 59 ft.
 At 3.90 saddle, drains N. and SW.
 Asc. 24 ft. to A.P.No.3.
 S. 85° E. 3.20 " to A.P. No.4, ascending 61 ft.
 S. 40° E. 1.50 " to " " 5, " 25 ft.
 S. 65° E. 2.20 " to " " 6, " 36 ft.
 S. 45° E. 8.00 " to " " 7, descending 18 ft.
 At 3.19 chs. ascend 32 ft.to A.P.
 No.7 from which spur slopes NE.
 South 2.00 " to A.P. No.8, ascending 12 ft.
 S. 55° W. 4.00 " to " " 9, " 32 ft.
 Spur slopes NW. from A.P.No.9.
 South 4.00 " to A.P. No.10, ascending 46 ft.
 S. 50° E. 2.00 " to " " 11, " 26 ft.
 Spur slopes NE. from A.P.No.11.
 South 1.90 " descending 14 ft. to

80.00 Set an iron post, 3 ft.long, 3ins. diam., 18 ins.in the
 ground to bedrock, with a marked (X) stone alongside,
 supported in a mound of stone 2 ft.base, $1\frac{1}{2}$ ft.high,
 for 7 mile monument, marked on brass cap,

PIR
PL
7M
1929

Survey of part of the boundary of the Papago Indian Reservation

Along the summit of the Ajo Mountains

Land, broken and rolling.
 Soil, gravelly and rocky, 3rd and 4th rate.
 Timber, scattering cedar.
 Undergrowth, ocotillo, catclaw and cacti.

Along the 8th mile of P.I.R. Bdy.

S. 7° W. 2.70 chs. to A.P. No.1, ascending 68 ft.
 S. 10° E. 1.00 " " 2, " 40 ft.
 S. 32° E. 3.80 " to " 3, on rocky peak, 84 ft. above A.P.No.2
 N. 80° E. 1.00 ch. to " " 4, descending 18 ft.
 S. 50° E. 1.90 chs. to " " 5, " 34 ft.
 N. 75° E. 1.40 " to " " 6, " slightly.
 S. 60° E. 2.80 " to " " 7, in saddle, draining N. and S., 60 ft. below A.P.No.6.
 N. 55° E. 0.80 " to " " 8, on small peak, 24 ft. above A.P.No.7.
 S. 35° E. 3.00 " to " " 9, descending 31 ft.
 S. 15° W. 2.40 " to " " 10, " 80 ft.
 S. 60° E. 5.00 " to " " 11, " 35 ft.
 S. 40° E. 4.00 " to " " 12, ascending 15 ft.
 S. 70° E. 1.00 ch. to " " 13, " 14 ft.
 S. 31° E. 5.00 chs. to " " 14, descending 52 ft.
 S. 45° E. 3.30 " to $7\frac{1}{2}$ mile mon., descending 23 ft. At 2.30 chs. saddle, drains N. and SW. Asc. slightly to

40.00 Set an iron post, 3 ft. long, 1 in. diam., 12 ins. in the ground to bedrock, with marked (X) stone alongside, supported in a mound of stone, 4 ft. base, 2 ft. high, for $7\frac{1}{2}$ mile monument, marked on brass cap

PIR

PL

 $7\frac{1}{2}M$

1929

S. 68° E. 8.00 chs. to A.P. No.1, ascending 180 ft. At 5.00 chs. top of cliff, 25 ft. high, bearing S. and E.
 S. 57° E. 3.30 " to A.P. No.2, ascending 99 ft.
 S. 85° E. 0.90 " to " " 3, " 12 ft.
 N. 70° E. 3.00 " to " " 4, " 75 ft.
 S. 61° E. 4.20 " to " " 5, " 76 ft.
 S. 42° E. 1.70 " to " " 6, on top of peak, 23 ft. above A.P. No.5: Spur, slopes NE.
 South 3.80 " to A.P. No.7, descending 37 ft.
 S. 30° W. 1.30 " to " " 8, " slightly.
 South 1.50 " to " " 9, " 13 ft.
 S. 18° W. 4.00 " to " " 10, " 32 ft.
 S. 34° W. 3.00 " to " " 11, ascending gradually.
 S. 18° W. 3.40 " to " " 12, " " " Small spur slopes W. from A.P.No.12.

80.00 S. 47° E. 1.90 " descending slightly to Set an iron post, 3 ft. long, 3 ins. diam., on surface rock against E. face of a yellow sandstone boulder 5 ft. high, and raise a mound of stone 5 ft. base, 3 ft. high around post, for 8 mile monument, marked on brass cap,

PIR

PL

8M

1929

Land, broken and rolling.
 Soil, rocky, 3rd rate.
 Timber, scattering cedar.
 Undergrowth, cacti, ocotillo and catclaw.

Survey of part of the boundary of the Papago Indian Reservation

Along the summit of the Ajo Mountains

BOOK 3918

	Along the 9th mile of P.I.R. Bdy.
	S. 21° E. 1.50 chs. to A.P. No.1, descending slightly. S. 65° E. 1.50 " " 2, ascending 10 ft. S. 25° E. 2.80 " " 3, " 17 ft. S. 60° W. 1.00 ch. to " " 4, descending 23 ft. S. 33° W. 2.20 chs. to " " 5, gradual descent. S. 50° W. 1.90 " " 6, descending 49 ft. S. 11° E. 4.50 " " 7, ascending 26 ft. S. 34° E. 10.00 " " 8, " 275 ft. S. 15° E. 5.00 " " 9, " 120 ft. S. 24° W. 2.50 " " 10, gradual ascent. S. 5° E. 2.60 " " 11, ascending 15 ft. S. 30° W. 1.90 " " 12, descending 30 ft. S. 15° W. 2.60 " descending 29 ft. to
40.00	Set an iron post, 3 ft. long, 1 in. diam., over a cross (X) marked on surface rock, and raise a mound of stone around post, 5 ft. base, 3 ft. high, for $8\frac{1}{2}$ mile monument marked on brass cap,
	PIR PL / 8M 1929
	S. 15° W. 1.30 chs. to A.P. No.1, ascending 20 ft. S. 17° E. 3.30 " to " 2, " 80 ft. South 3.00 " to " 3, " 60 ft. S. 45° W. 1.20 " to " 4, gradual ascent. S. 12° W. 3.70 " to " 5, ascending 52 ft. S. 55° W. 2.50 " to " 6, " 9 ft. At 1.30 chs. top of peak. Descend 12 ft. to A.P.No.6. S. 80° W. 2.00 " to A.P. No.7, descending 30 ft. N. 86° W. 2.90 " to " 8, " 73 ft. S. 17° W. 2.50 " to " 9, " 111 ft. S. 35° W. 3.40 " to " 10, " 64 ft. S. 60° W. 1.50 " to " 11, " 21 ft. S. 18° W. 2.20 " to " 12, " 20 ft. S. 38° W. 3.60 " to " 13, " 80 ft. At 2.50 chs. saddle, draining SE. and W. Asc. 25 ft. to A.P.No.13 S. 63° W. 1.00 ch. to A.P. No.14, ascending 32 ft. Spur slopes NW. from A.P.No.14. S. 20° E. 5.90 chs., along narrow dyke, ascending 201 ft. to
80.00	Set an iron post, 3 ft. long, 3 ins. diam., over a cross (X) marked on surface rock, and raise a mound of stone around post, for 9 mile monument, marked on brass cap,
	PIR PL \ 9M 1929
	This mile monument is on a narrow rocky peak. Land, broken mountainous. Soil, rocky, 4th rate. Timber, scattering cedar. Undergrowth, cacti, ocotillo and catclaw.

Survey of part of the boundary of the Papago Indian Reservation

Along the summit of the Ajo Mountains

Along the 10th mile of P.I.R. Bdy.

S. 47° E. 0.80 chs. to A.P. No.1, descending slightly, along narrow dyke.

S. 5° E. 15.50 " to " " 2, continuing gradual descent along dyke. Chaining on this portion of P.I.R.Bdy. is impracticable, therefore triangulate as follows:

Set flag "A" at A.P. No.1.

Set flag "C" beyond A.P.No.2 and on a bearing of $S.5^{\circ}E.$ from "A". From "C" measure a base $N.85^{\circ}E.$, 3.50 chs. to point "D" from which flag "A" bears $N.12^{\circ}23'W.$

Set flag "B" at A.P.No.2 on a bearing of $N.5^{\circ}W.$ from "C".

Flag "A" is invisible from "B"

Triang.dist."A-C" = 27.00 chs.

Chained dist."C-B" = 11.50 "

Computed " " "A-B" = 15.50 chs.

A.P.No.2 is at S. end of dyke in small sharp saddle, draining W. and NE.

S. 31° E. 2.00 chs. to A.P. No.3, ascending 50 ft.

S. 40° W. 3.40 " to " " 4, " 77 ft.

S. 35° E. 2.00 " to " " 5, descending 15 ft.

S. 5° W. 1.80 " to " " 6, " 23 ft.

S. 6° E. 4.30 " to " " 7, ascending 60 ft.

S. 12° W. 3.20 " to " " 8, " 110 ft.

S. 10° E. 1.10 " to " " 9, " 10 ft.

S. 25° W. 1.80 " to " " 10, " 20 ft.

S. 10° E. 4.10 " ascending 57 ft. to

40.00 Set an iron post, 3 ft.long, 1 in. diam., 4 ins. in the ground to bedrock, with marked (X) stone alongside, supported in a mound of stone 4 ft.base, 3 ft.high, for $9\frac{1}{2}$ mile monument, marked on brass cap;

PIR
PL
9 $\frac{1}{2}$ M

1929

S. 10° E. 0.50 chs. to A.P. No.1, ascending slightly. A broad spur slopes NE. from A.P.No.1

S. 70° W. 4.70 " to A.P. No.2, ascending 120 ft.

S. 15° E. 1.70 " to " " 3, gradual ascent.

S. 20° W. 1.50 " to " " 4, ascending 19 ft.

S. 15° E. 2.10 " to " " 5, " 24 ft.

S. 27° E. 4.10 " to " " 6, " 38 ft.

S. 9° W. 5.00 " to " " 7, " gradually along narrow limestone dyke.

S. 11° W. 1.75 " to A.P. No.8, gradual ascent.

At A.P.No.8 is a U.S.Coast and Geodetic Survey triangulation monument, which is a brass cap 3 ins. in diam., firmly set in surface rock and marked

U.S. COAST & GEODETIC
Sierra del Ajo
1920
SURVEY

13 180

Survey of Part of the Boundary of the Papago Indian Reservation

Along the Summit of the Ajo Mountains.

	Precipitous breaks to S., and W., Prominent spur bears West. Desc., E. slope 100 ft. S. 80° E. 7.50 chs. to A.P. No. 9.
	At 4.00 chs., shallow saddle drains NE. and SW. Continue descent along crest of divide, 80 ft.
	S. 56° E. 3.20 chs. to A.P. No. 10.
	S. 17° E. 1.80 chs. to A.P. No. 11.
	S. 12° W. 1.00 " " " 12.
	S. 5° W. 3.00 " " " 13.
80.00	S. 18° E. 2.15 " " "
	Set an iron post, 3 ft. long, 3 ins., diam., on surface rock, with marked (X) stone alongside, supported in a mound of stone 5 ft. base, 3 ft. high, for 10 mile monument, marked on brass cap

PL / PIR
10 M
1929

Land: broken, precipitous.
Soil: rock and gravel, 3rd. and 4th. rate.
Timber: scattered cedar.
Undergrowth: catclaw, mescal, cacti.

	Thence Along the 11th.mile of P.I.R. Bdy.
	S. 18° E. 1:10 chs. to A.P. No. 1.
	Asc. small rocky peak, 30 ft. high.
	S. 6° W. 1.00 chs. to A.P. No. 2. Desc., 100 ft.
	S. 51° E. 4.20 " " " 3.
	S. 20° E. 1.00 " " " 4.
	S. 45° E. 3.80 " " " 5.
	S. 20° E. 1.10 " " " 6.
	South 1.00 " " " 7. Asc. 70 ft.
	S. 15° E. 2.00 " " " 8.
	S. 3° W. 1.20 " " " 9.
	S. 5° E. 2.00 " " " 10.
	S. 10° W. 1.40 " " " 11. Top of peak. Spur, slopes N. 60° E. Desc., 350 ft.,
40.00	S. 25° E. 1.50 chs. to A.P. No. 12.
	S. 45° E. 0.60 " " " 13.
	S. 53° E. 3.10 " " " 14.
	S. 56° E. 2.30 " " " 15.
	S. 20° W. 0.70 " " " 16.
	S. 50° E. 1.00 " " " 17.
	S. 35° E. 1.60 " " " 18.
	N. 70° E. 0.70 " " " 19.
	S. 28° E. 3.10 " " " 20.
	S. 20° E. 1.40 " " " 21.
	S. 5° E. 1.00 " " " 22.
	S. 19° E. 3.20 " " "
	Set an iron post, 3 ft. long, 1 in., diam., on bedrock, with marked (X) stone alongside, supported in a mound of stone, 5 ft. base, 3 ft. high, marked on brass cap

PL / PIR
10½ M
1929

BOOK 3918

Survey of Part of the Boundary of the Papago Indian Reservation
Along the Summit of the Ajo Mountains.

		Desc., gradually.					
		S. 19° E.	0.50	chs., to A.P. No.	1.		
		South	2.30	" " "	"	2.	
		S. 23° E.	1.20	" " "	"	3.	
		S. 42° E.	1.80	" " "	"	4.	
		S. 37° E.	2.60	" " "	"	5.	
		S. 24° W.	0.50	" " "	"	6.	
		S. 48° E.	2.80	" " "	"	7.	
		S. 12° E.	1.20	" " "	"	8.	
		S. 25° W.	1.00	" " "	"	9.	Top of rocky
				ledge, 20 ft. high, bearing N. and S.			
		S. 43° E.	0.90	chs. to A.P. No.	10.		
		S. 75° E.	0.90	" " "	"	11.	
		S. 5° W.	0.70	" " "	"	12.	
		S. 40° E.	1.60	" " "	"	13.	
		S. 28° E.	1.00	" " "	"	14.	
		S. 75° E.	0.90	" " "	"	15.	Spur, slopes E.
		S. 17° W.	2.00	" " "	"	16.	
		S. 23° E.	1.70	" " "	"	17.	
		S. 55° W.	0.50	" " "	"	18.	
		S. 10° E.	1.60	" " "	"	19.	
		S. 10° W.	3.70	" " "	"	20.	Asc., 80 ft.
				over rocky ledges.			
		S. 7° E.	3.10	chs. to A.P. No.	21.	Rocky peak;	
				High spur extends SW., precipitous			
				breaks to the NW. and S.			
				Desc., 100 ft.			
		N. 74° E.	3.50	chs. to A.P. No.	22.	Small saddle,	
				drains S., and NE. Asc., 50 ft.			
		S. 80° E.	2.70	chs. to A.P. No.	23.		
		S. 46° E.	1.30	" " "	"		
80.00		Set an iron post, 3 ft. long, 3 ins. diam., on bedrock,					
		with marked (X) stone alongside, supported in a mound					
		of stone, 5 ft. base, 3 ft. high, marked on brass cap					

PL \ PIR
11 M

1929

Land: rough, broken.

Soil: rock.

Timber: scattered cedar.

Undergrowth: cacti.

Thence

Along the 12th. mile of P.I.R. Bdy.

S. 53° E.	1.10	chs. to A.P. No. 1.	Rocky shoulder of ridge; precipitous bluffs to the W., and S., Desc., 750 ft.
S. 59° E.	1.10	chs. to A.P. No. 2.	
S. 20° E.	1.20	" " "	3.
S. 32° E.	1.90	" " "	4.
N. 42° E.	1.30	" " "	5. Along ledge, 100 ft. high, facing SE.
S. 88° E.	2.00	chs. to A.P. No. 6.	At 0.50 chs., foot of bluff, bearing NE and SW.
N. 80° E.	2.20	chs. to A.P. No. 7.	
S. 75° E.	2.10	chs. to A.P. No. 8.	Top of small rock peak,- a 40 ft., bluff to the E.
S. 6° W.	0.90	chs. to A.P. No. 9.	
S. 67° E.	2.50	" " "	10.
S. 34° E.	1.40	" " "	11. Top of ledge, 20 ft. high, bears NE. and SW.
S. 47° E.	2.20	chs. to A.P. No. 12.	

Survey of Part of the Boundary of the Papago Indian Reservation

Along the Summit of the Ajo Mountains.

BOOK 2018

	S. 28° E.	1.80 chs. to A.P. No. 13. Top of sandstone ledge, 20 ft. high, bears E. and W.
	East	2.30 chs. to A.P. No. 14. At 1.60 chs., desc. over ledge, bears NE. and W.
	S. 78° E.	1.60 chs. to A.P. No. 15.
	N. 75° E.	1.50 " " " 16.
	S. 79° E.	3.40 " " " 17.
	S. 32° E.	2.50 " " " 18.
	S. 15° W.	2.00 " " " 19.
	S. 50° E.	1.30 " " " 20. Top of bluff, 225 ft. high, bears NW. and SE., Rocky spur slopes SE. Desc., 330 ft.,
40.00	S. 9½° E.	3.70 chs. to Set an iron post, 3 ft. long, 1 in. diam., on bedrock, with marked (X) stone alongside, supported in a mound of stone, 5 ft. base, 3 ft. high, for 11½ mile monument, marked on brass cap

PIR
PL
11½ M

1929

	S. 25° E.	1.70 chs. to A.P. No. 1. Rocky spur, slopes S. 25° E., Desc., E. slope, 450 ft.
	N. 73° E.	1.10 chs. to A.P. No. 2.
	East	2.60 " " " 3. Top of rock outcrop, 30 ft. high.
	S. 81° E.	9.40 chs. to A.P. No. 4. Along low rolling divide, draining NE. and SW.
	S. 62° E.	6.00 chs., to A.P. No. 5.
	S. 75° E.	2.00 " " " 6. Low spur, extends S. 75° E., Desc., NE. slope 30 ft.,
	N. 30° E.	4.20 chs. to A.P. No. 7. Head of small drain, course S. 70° E., South bank of gully, 30 lks., wide, 8 ft., deep, course N. 85° E. Leave mountains, descend gradually over desert land.
	N. 85° E.	2.40 chs. to A.P. No. 8.
	S. 82° E.	5.00 " " " 9.
	S. 70° E.	4.00 " " " 10.
	S. 44° E.	1.60 chs. At 1.00 chs., leave mesa, drains SW. into broken canyon, course S. and NE., into shallow desert wash. Asc., small rocky hill 10 ft.,
80.00	Set an iron post, 3 ft. long, 3 ins. diam., on bedrock, with marked (X) stone alongside, supported in a mound of stone 5 ft. base, 3 ft. high, for 12 mile monument, marked on brass cap	

PIR
PL
12 M

1929

Land: broken mountains and desert.
Soil: rock, gravel and sandy loam, 2nd. and 4th. rate.
Timber: none.
Undergrowth: greasewood, catclaw, cacti.

Survey of Part of the Boundary of the Papago Indian Reservation

Along the Summit of the Ajo Mountains.

	Thence Along the 13th. mile of P.I.R. Bdy.
	Asc., 60 ft., S. 44° E. 3.00 chs. to A.P. No. 1. S. 65° E. 2.20 " " " 2. Top of low hill, extends SE. S. 75° E. 1.10 chs. to A.P. No. 3. Desc., 50 ft., S. 22° E. 4.00 chs. to A.P. No. 4. S. 80° E. 4.50 " " " 5. At 1.50 chs., small swale, or saddle drains N. and S., Over low rocky hills. S. 35° E. 3.00 chs. to A.P. No. 6. S. 48° E. 1.50 chs., to A.P. No. 7. S. 24° E. 1.70 " " " 8. South 3.20 " " " 9. At 1.50 low saddle drains E. and W., S. 55° E. 1.50 chs. to A.P. No. 10. Desc., S. slope 30 ft., S. 6° E. 8.00 chs. to A.P. No. 11. At 6.00 chs., low swale drains E., the mesa breaks sharply into a deep canyon to the W., Asc. N. slope of spur 80 ft. S. 24° E. 5.20 chs. to A.P. No. 12. Top of spur, slopes NW., drains W. and NE. S. 67° E. 1.10 chs. to . Set an iron post, 3 ft. long, 1 in. diam., 6 ins., in the ground, to rock, with marked (X) stone alongside, supported in a mound of stone, 5 ft. base, 30 ins., high, for 12½ mile monument, marked on brass cap
	PL
	12½ M
40.00	1929

	PIR
	PL
	12½ M
	1929
	Asc., 470 ft. S. 67° E. 1.90 chs. to A.P. No. 1. S. 45° E. 4.80 " " " 2. S. 26° E. 3.00 " " " 3. S. 40° E. 1.40 " " " 4. S. 25° E. 1.50 " " " 5. S. 10° E. 2.60 " " " 6. S. 45° E. 2.70 " " " 7. S. 25° E. 5.00 " " " 8. S. 55° E. 1.20 " " " 9. S. 34° E. 1.80 " " " 10. Spur, slopes W. Desc., 50 ft. S. 55° E. 1.50 chs. to A.P. No. 11. N. 77° E. 1.60 " " " 12. S. 85° E. 1.50 " " " 13. S. 65° E. 1.30 " " " 14. S. 20° E. 1.00 " " " 15. S. 80° E. 1.50 " " " 16. Change of slope; Asc., 90 ft. S. 53° E. 1.50 chs. to A.P. No. 17. S. 78° E. 2.40 " " " 18. N. 86° E. 1.80 " " " 19. Set an iron post, 3 ft. long, 3 ins., diam., 12 ins., in the ground, to rock, with marked (X) stone alongside, supported in a mound of stone, 4 ft. base, 2 ft. high, for 13 mile monument, marked on brass cap

	PIR
	13 M
	PL
80.00	1929

the Boundary of the Papago Indian Reservation
ong the Summit of the Ajo Mountains.

PL 1929

ng mountains, and desert.

elly and sandy loam and rock, 2nd., and 4th.rate.

ver: Palo verde.

Undergrowth: catclaw, greasewood, cacti.

Thence

Along the 14th. mile of P.I.R. Bdy.

Asc., 190 ft..

N. 75° E. 1.50 chs. to A.P. No. 1.

South 0.80 " " 2. Top of small bluff,
facing S. and W..

East 5.00 chs. to A.P. No. 3. Top of mountain,
shoulder of peak extends SE.

S. 57° E. 3.60 chs. to A.P. No. 4.
Desc., over broken ledges 100 ft.

S. 10° E. 1.80 chs. to A.P. No. 5.

Continue descent 560 ft.,

S. 12° W. 2.60 chs. to A.P. No. 6.

S. 30° E. 0.80 " " 7.

S. 10° W. 2.70 " " 8.

S. 28° W. 1.90 " " 9.

S. 20° E. 1.00 " " 10.

S. 15° W. 1.90 " " 11.

S. 7° W. 1.90 " " 12.

S. 40° W. 1.40 " " 13.

N. 80° W. 1.60 " " 14.

S. 60° W. 1.40 " " 15.

S. 7° E. 2.10 " " 16. Small spur, slopes
South.

S. 60° E. 3.40 chs. to A.P. No. 17.

S. 77° W. 4.60 " " Low swale, drains
SE., to mesa; NW., to broken gulch.

40.00 Set an iron post, 3 ft. long, 1 in., diam., 12 ins., in the
ground, to rock, with marked (X) stone alongside,
supported in a mound of stone, 4 ft. base, $2\frac{1}{2}$ ft. high,
for $13\frac{1}{2}$ mile monument, marked on brass cap.

PL

P I R.

13 $\frac{1}{2}$. M

1929

Asc., 70 ft.

S. 77° W. 0.90 chs. to A.P. No. 1. Sharp rocky spur,
slopes NE.

S. 24° W. 1.90 chs. to A.P. No. 2.

S. 40° W. 1.20 " " 3. Top of rocky hill,
extending SE.

S. 23° E. 1.10 chs. to A.P. No. 4.

S. 6° E. 1.00 " " 5.

S. 50° E. 0.70 " " 6. Spur, slopes SE.
Desc., S. slope 150 ft.

S. 10° W. 2.50 chs. to A.P. No. 7.

S. 34° E. 6.70 " " 8. Over rolling land,
draining SE to mesa and W. to draw.

S. 6° W. 4.40 chs. to A.P. No. 9. Desc., 100 ft.

S. 15° W. 2.40 " " 10.

S. 32° W. 3.20 " " 11.

S. 72° W. 2.80 " " 12.

S. 49° E. 3.50 " " 13.

S. 60° E. 1.40 " " 14.

S. 5° W. 1.20 " " 15.

S. 17° E. 2.70 " " 16.

S. 20° W. 2.40 " " At 1.00 chs., old
trail bears E. and W.,

80.00 Set an iron post, 3 ft. long, 3 ins., diam., 27 ins., in the

Survey of Part of the Boundary of the Pa.

Along the Summit of the Ajo

ground, for 14 mile monument, mar.

PL
PIR
14 M

1929

Raise a mound of stone, 2 ft. base, 2 ft. high, W. of monument.

Land: rough mountains, and rolling mesa.

Soil: rock, gravel and sand, 2nd. and 4th. rate.

Timber: palo verde, mesquite.

Undergrowth: greasewood, catclaw, cacti.

Thence.

Along the 15th. mile of P.I.R. Bdy.

Over mesa land, draining E., and canyon breaks, draining W.

S. 20° W. 0.60 chs. to A.P. No. 1.

S. 62° E. 1.00 " " " " 2.

S. 15° W. 1.50 " " " " 3. Enter rolling hills,
Asc., 180 ft..

S. 54° W. 8.30 chs. to A.P. No. 4.

S. 83° W. 2.40 " " " " 5. Small saddle, drains
NW. into canyon, SE. to mesa.

Asc., along NE. slope.

S. 20° W. 6.70 chs. to A.P. No. 6. Top of spur,
sloping N.

South 2.90 chs. to A.P. No. 7.

S. 20° E. 1.20 " " " " 8.

S. 58° E. 1.70 " " " " 9.

S. 30° W. 2.30 " " " " 10.

S. 13° W. 3.30 " " " " 11.

S. 43° W. 3.30 " " " " 12. Small saddle,
drains NW. and SE.

S. 25° W. 3.20 chs. to A.P. No. 13.

S. 70° W. 1.60 " "

40.00 Set an iron post, 3 ft. long, 1 in. diam., 12 ins., in the
ground, to rock, with marked (X) stone alongside,
supported in a mound of stone 3 ft. base, 2 ft. high,
for 14½ mile monument, marked on brass cap

PL
PIR
14½ M

1929

Asc., NE. slope 300 ft.

S. 57° W. 3.80 chs. to A.P. No. 1. Broad spur, slopes
N. Continue ascent.S. 36° W. 6.90 chs. to A.P. No. 2. Top of high rolling
spur, extending NW.

Desc., along broken summit, 80 ft.

S. 38° E. 4.40 chs. to A.P. No. 3.

S. 12° W. 2.30 " " " " 4.

S. 20° E. 1.80 " " " " 5.

S. 15° W. 2.90 " " " " 6.

S. 5° W. 1.60 " " " " 7.

Asc., 150 ft.

S. 35° W. 1.00 " " " " 8.

S. 2° E. 1.60 " " " " 9.

S. 10° E. 4.00 " " " " 10.

S. 58° E. 1.00 " " " " 11.

Survey of Part of the Boundary of the Papago Indian Reservation

Along the Summit of the Ajo Mountains. BOOK 3918

80.00 S. 43° E. 4.00 chs. to A.P. No. 12.
 S. 17° E. 3.40 " " " " 13. Top of narrow rocky peak, extends SE.
 S. 11° E. 1.30 chs., to Set an iron post, 3 ft. long, 3 ins. diam., on bedrock, with marked (X) stone alongside, supported in a mound of stone 4 ft. base, $2\frac{1}{2}$ ft. high, for 15 mile monument, marked on brass cap

PL } PIR
15 M .

1929

Land: rolling and broken.
 Soil: rocky, 3rd. and 4th. rate.
 Timber: scattered palo verde.
 Undergrowth: greasewood, catclaw, cacti.

Thence
Along 16th. mile of P.I.R. Bdy.

Desc., 80 ft.,

S. 8° W. 1.70 chs. to A.P. No. 1.
 S. 8° E. 2.70 " " " " 2.
 S. 22° E. 2.50 " " " " 3.
 S. 10° E. 1.10 " " " " 4. Asc., 100 ft.
 S. 45° E. 5.90 " " " " 5.
 S. 39° E. 2.20 " " " " 6.
 S. 55° E. 1.30 " " " " 7.
 S. 40° E. 2.80 " " " " 8.
 S. 13° E. 1.50 " " " " 9.
 S. 20° E. 1.30 " " " " 10. Low flat peak, spur slopes NE.
 Desc., 20 ft.
 S. 80° W. 0.70 chs. to A.P. No. 11.
 S. 40° W. 1.50 " " " " 12. Small saddle, drains NW., and SE.
 Asc., broad NE. slope, 250 ft.
 S. 57° W. 5.30 chs. to A.P. No. 13.
 S. 36° W. 5.10 " " " " 14. Top of slope, small shoulder of mountain, spur slopes NW.
 S. 45° W. 1.40 chs. to A.P. No. 15.
 S. 42° E. 3.00 " "

40.00 Set an iron post, 3 ft. long, 1 in. diam., 8 ins., in the ground, to rock, with marked (X) stone alongside, supported in a mound of stone 4 ft. base, 30 ins., high, for $15\frac{1}{2}$ mile monument, marked on brass cap

PL } PIR
15 $\frac{1}{2}$ M .

1929

Asc., N. slope, 300 ft.

S. 15° E. 1.00 chs. to A.P. No. 1.
 South 5.00 " " " " 2. At 3.50 chs., top of bluff 40 ft. high, bearing NE. and SW.
 Continue ascent on sharp spur, precipitous bluffs to the N., 140 ft.
 S. 70° W. 2.40 chs. to A.P. No. 3.
 S. 60° W. 1.10 " " " " 4. Top of bluff, 100 ft. high, facing N. and W.
 Along sharp rocky ridge, Asc., 220 ft.
 S. 30° W. 2.20 chs. to A.P. No. 5.

Survey of Part of the Boundary of the Papago Indian Reservation

Along the Summit of the Ajo Mountains.

	South	0.80 chs. to A.P. No. 6.	
	S. 65° W.	0.70 " " " " 7.	
	S. 7° W.	1.20 " " " " 8. Sharp spur, slopes W.	
	S. 15° E.	0.80 " " " " 9.	
	S. 32° E.	1.40 " " " " 10.	
	S. 53° E.	1.80 " " X" " 11.	
	S. 37° E.	3.10 " " " " 12.	
	S. 6° E.	2.80 " " " " 13.	
	S. 37° W.	1.00 " " " " 14.	
	South	1.10 " " " " 15.	
	S. 60° E.	1.30 " " " " 16.	
	S. 16° E.	1.30 " " " " 17. Summit of mountain peak.	
	Desc., 200 ft. over rolling slope.		
	S. 15° W.	1.20 chs. to A.P. No. 18.	
	S. 10° E.	1.00 " " " " 19.	
	S. 62° E.	1.50 " " " " 20.	
	S. 17° E.	2.80 " " " " 21.	
	S. 17° W.	2.40 " " " " 22.	
	S. 20° E.	1.50 " " " " 23.	
	S. 30° E.	0.60 " " " "	
80.00	Set an iron post, 3 ft. long, 3 ins. diam., on bedrock, with marked (X) stone alongside, supported in a mound of stone 5 ft. base, 3 ft. high, for 16 mile monument, marked on brass cap		

PIR
PL \ 16 M
1929

Land: rough, broken and rolling.
 Soil: rock, 3rd. and 4th. rate.
 Timber: none.
 Undergrowth: greasewood and cacti.

	Thence	
	Along 17th. mile of P.I.R. Bdy.	
	Desc., broken and rocky ridge 380 ft.,	
	S. 30° E.	2.20 chs. to A.P. No. 1.
	South	1.40 " " " " 2.
	S. 17° W.	1.50 " " " " 3.
	S. 29° W.	1.00 " " " " 4.
	S. 25° E.	1.10 " " " " 5.
	S. 21° E.	5.50 " " " " 6.
	S. 11° E.	8.90 " " " " 7.
	S. 23° E.	2.30 " " " " 8.
	S. 28° E.	2.50 " " " " 9.
	S. 45° E.	1.50 " " " " 10.
	S. 30° E.	1.50 " " " " 11.
	S. 48° E.	1.90 " " " " 12.
	S. 33° E.	1.90 " " " " 13.
	S. 18° E.	3.00 " " " " 14.
	S. 45° E.	3.40 " " " " 15.
	S. 27° E.	0.40 " " " "
40.00	Set an iron post, 3 ft. long, 1 in. diam., on bedrock, with marked (X) stone alongside, supported in a mound of stone 4 ft. base, 3 ft. high, for 16½ mile monument, marked on brass cap	

PIR
PL \ 16½ M
1929

Survey of Part of the Boundary of the Papago Indian Reservation

Along the Summit of the Ajo Mountains.

BOOK 8918

Desc., 750 ft., over broken bluffs and ledges.

S. 27° E.	1.10 chs. to A.P. No. 1.
S. 30° W.	0.80 " " " " 2.
South	2.00 " " " " 3.
S. 11° W.	2.10 " " " " 4.
S. 2° E.	1.60 " " " " 5. Spur extends S., Desc., over SW. slope.
S. 44° W.	1.70 chs. to A.P. No. 6.
S. 75° W.	1.70 " " " " 7.
S. 51° W.	6.50 " " " " 8.
S. 72° W.	2.50 " " " " 9.
S. 32° W.	5.00 " " " " 10.
S. 53° W.	3.60 " " " " 11. Low saddle, drains NW. and SE. Asc., 70 ft.
S. 70° W.	2.50 chs. to A. P. No. 12. Small spur, slopes N.
S. 17° W.	1.00 chs. to A.P. No. 13. Top of hill; bluff 50 ft. high faces W.,
S. 27° E.	2.50 chs. to A.P. No. 14.
S. 35° E.	0.80 " " " " 15. Desc., 20 ft.
South	1.50 " " " " 16. Small saddle, drains E. and W., Asc., 20 ft.
S. 75° W.	0.90 chs. to A.P. No. 17.
S. 11° E.	1.60 " " " " 18. Top of hill, rolling slope to the E., precipitous breaks to the W.,
S. 29° W.	0.60 chs. to

80.00 Set an iron post, 3 ft. long, 3 ins., diam., 8 ins., in the ground, to rock, with marked (X) stone alongside, supported in a mound of stone 4 ft. base, $2\frac{1}{2}$ ft high, for 17 mile monument, marked on brass cap

PIR
PL / 17 M
1929

Land: rough, broken.

Soil: rock, 4th. rate.

Timber: scattered palo verde.

Undergrowth: greasewood, catclaw, cacti.

Thence

Along the 18th. mile P.I.R. Bdy.

Over broken hills.

S. 29° W.	0.40 chs. to A.P. No. 1.
South	2.20 " " " " 2.
S. 68° E.	2.90 " " " " 3. Desc., 40 ft. small saddle drains NE. and SW.
S. 15° E.	0.80 chs. to A.P. No. 4.
East	1.50 " " " " 5.
S. 7° E.	3.90 " " " " 6. Desc., 50 ft. Small saddle, drains E., and W. Asc., 180 ft.
S. 16° E.	7.20 chs. to A.P. No. 7.
S. 40° W.	0.40 " " " " 8. Top of rocky hill, precipitous breaks to the W.,
S. 15° E.	1.40 chs. to A.P. No. 9.
S. 30° E.	1.90 " " " " 10.
S. 20° W.	0.70 " " " " 11. Desc., SE. slope 200 ft.,
S. 75° E.	3.20 chs. to A.P. No. 12.

Survey of Part of the Boundary of the Papago Indian Reservation

Along the Summit of the Ajo Mountains.

40.00 S. 35° E. 0.70 chs. to A.P. No. 13.
 N. 67° E. 5.30 " " " " 14. Low saddle, drains
 N., and S.,
 Asc., W. slope 100 ft.
 N. 83° E. 3.60 chs. to A.P. No. 15.
 N. 54° E. 3.90 " "
 Set an iron post, 3 ft. long, 1 in. diam., on bedrock,
 with marked (X) stone alongside, supported in a mound
 of stone 5 ft. base, 3 ft. high, for $17\frac{1}{2}$ mile
 monument, marked on brass cap

PIR

 $17\frac{1}{2}$ M

PL

1929

Asc., W. slope 30 ft.,
 N. 70° E. 2.50 chs. to A.P. No. 1. Broad spur,
 slopes N.,
 Asc., 370 ft.
 S. 62° E. 1.30 chs. to A.P. No. 2.
 S. 50° E. 3.20 " " " " 3.
 S. 15° E. 7.30 " " " " 4. Top of broken bluff
 50 ft. high, extending S.,
 S. 45° E. 2.10 chs. to A.P. No. 5.
 S. 69° E. 1.60 " " " " 6. North shoulder of
 ridge; Spur slopes NE.,
 Desc., gradual slope 40 ft.
 South 2.60 chs. to A.P. No. 7.
 S. 25° E. 6.50 " " " " 8. Change of slope,
 asc., 70 ft. Precipitous bluffs to
 the W., gradual slope to the E.
 S. 40° E. 1.90 chs. to A.P. No. 9.
 S. 17° E. 7.10 " " " " 10.
 S. 8° W. 1.30 " " " " 11.
 S. 20° E. 2.60 " "
 Set an iron post, 3 ft. long, 3 ins. diam., 6 ins., in the
 ground, to rock, with marked stone (X) alongside,
 supported in a mound of stone 5 ft. base, $2\frac{1}{2}$ ft. high,
 marked on brass cap

PIR

PL

18 M

1929

Land: broken, rolling and mesa.

Soil: rocky, 4th. rate.

Timber: scattered palo verde.

Undergrowth: greasewood, catclaw, cacti.

Thence

Along 19th. mile P.I.R. Bdy.

Over bench land, along crest of divide; broken bluffs
 to the West.

S. 25° E. 2.50 chs. to A.P. No. 1.
 S. 17° W. 2.20 " " " " 2.
 S. 39° E. 2.20 " " " " 3. High spur extends
 S., Desc., E. slope 90 ft.
 S. 75° E. 5.80 chs. to A.P. No. 4.
 N. 70° E. 2.00 " " " " 5. Flat spur, slopes
 E., Desc., S. slope 180 ft.,
 S. 15° E. 10.50 chs. to A.P. No. 6. Top of bluff,
 50 ft. high, facing SW.,
 Along flat ridge, draining NE

Survey of Part of the Boundary of the Papago Indian Reservation
Along the Summit of the Ajo Mountains. BOOK 3918

	S. 50° E. 1.60 chs. to A.P. No. 7.
	S. 18° E. 2.80 " " " " 8.
	S. 65° E. 1.00 " " " X" 9.
	S. 36° E. 3.60 " " " " 10.
	S. 75° E. 0.70 " " " " 11.
	S. 40° E. 1.00 " " " " 12. End of bench, Desc., E. slope 80 ft..
40.00	S. 83° E. 1.30 chs. to A.P. No. 13.
	S. 77° E. 2.30 " " " " 14.
	S. 75° E. 0.50 " " " " 15.
	Set an iron post, 3 ft. long, 1 in. diam., on bedrock, with marked (X) stone alongside, supported in a mound of stone 5 ft. base, 3 ft. high, for 18½ mile monument, marked on brass cap
	PIR 18½ M
	PL 1929
	Desc., E. slope 75 ft..
	S. 75° E. 2.20 chs. to A.P. No. 1.
	N. 70° E. 1.00 " " " " 2. Saddle, drains N., and SW.,
	Asc., W. slope 90 ft..
	S. 65° W. 5.30 chs. to A.P. No. 3. Top of rocky spur, Asc., along narrow divide 60 ft.,
	S. 80° E. 1.20 chs. to A.P. No. 4.
	S. 60° E. 1.10 " " " " 5.
	S. 35° E. 1.50 " " " " 6. Top of flat ridge, gradual slope to the NE., broken bluffs to the West.
	Asc., gradual slope 40 ft.,
	S. 28° E. 2.20 chs. to A.P. No. 7.
	S. 53° E. 5.40 " " " " 8.
	S. 30° W. 1.50 " " " " 9.
	S. 5° E. 1.10 " " " " 10. Sharp rocky spur, slopes West.
	S. 65° E. 1.00 chs. to A.P. No. 11.
	S. 5° E. 1.00 " " " " 12.
	S. 35° E. 1.80 " " " " 13.
	S. 15° W. 1.00 " " " " 14.
	S. 40° E. 3.70 " " " " 15.
	South 0.70 " " " " 16.
	S. 52° E. 1.80 " " " " 17.
	S. 25° E. 2.70 " " " " 18.
	S. 50° E. 1.00 " " " " 19.
	S. 20° E. 2.00 " " " " 20.
80.00	S. 60° E. 0.80 " " " " 21.
	Set an iron post, 3 ft. long, 3 ins. diam., on bedrock, with marked stone (X) alongside, supported in a mound of stone 5 ft. base, 3 ft. high, for 19 mile monument, marked on brass cap

	PIR 19 M
	PL 1929

Land: broken bench.
Soil: rocky, 3rd. and 4th. rate.
Timber: palo verde.
Undergrowth: greasewood, catclaw, acati.

**Survey of Part of the Boundary of the Papago Indian Reservation
and along Along the Summit of the Ajo Mountains.**

-PER

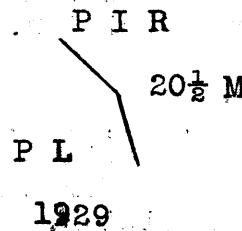
PT. 20 M

1929

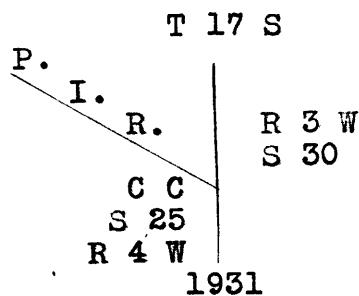
Survey of Part of the Boundary of the Papago Indian Reservation
along the Summit of the Ajo Mountains.

Chains Land: broken and level bench.
Soil: rocky, 3rd and 4th rate.
Timber: palo verde.
Undergrowth: greasewood, catclaw, cacti.

Thence
Along the 21st mile of P. I. R. Bdy.,
Desc., gradual slope 520 ft.,
S. 67° E., 0.50 chs. to A. P. No. 1.
S. 45° E., 2.10 " " " " 2.
S. 49° E., 4.80 " " " " 3. Spur, extends SE.
Desc., over broad E. slope.
S. 75° E., 1.90 chs. to A. P. No. 4.
N. 77° E., 7.40 " " " " 5.
S. 65° E., 4.00 " " " " 6.
S. 75° E., 3.40 " " " " 7. Small rocky point.
Desc. sharply, over SE. slope.
S. 35° E., 12.70 chs. to A. P. No. 8.
S. 58° E., 3.20 " "
40.00 Set an iron post, 3 ft. long, 1 in. diam., on bedrock,
with marked (X) stone alongside, supported in a mound
of stone 5 ft. base, 3 ft. high, for 20½ mile monu-
ment, marked on brass cap



Asc. along low rocky ridge 150 ft.,
S. 25° E., 2.20 chs. to A. P. No. 1.
S. 40° E., 2.30 " " " " 2.
S. 30° E., 2.10 " " " " 3.
S. 40° E., 1.20 " " " " 4.
S. 17° E., 2.09 " "
49.89 Intersect the west bdy. of T. 17 S., R. 3 W., at a point
1.49 chs. South from the cor. of secs. 19, 24, 25 and
30, T. 17 S., Rs. 3 and 4 W., hereinafter described
At this point of intersection
Set an iron post, 3 ft. long, 3 ins. in diam., 6 ins. in
the ground to bed rock, deposit a stone marked with
a cross (X) at base of post, for Angle Point in
P. I. R. Bdy., and closing cor. of T. 17 S., R. 4 W.,
and P. I. R., marked on brass cap



No bearing trees or objects available.
The P. I. R. Bdy. extends south from this cor. identical
with the range line, two miles of which are surveyed
under this group as hereinafter described.

Survey of Part of the Boundary of the Papago Indian Reservation
Along the summit of the Ajo Mountains.

Chains The Papago Indian Reservation embraces all of T. 17 S., R. 3 W.

Land, mountainous.
Soil, rocky, 4th rate.
Timber, none.
Undergrowth, greasewood, catclaw and cacti.

The continued satisfactory adjustment of Buff and Buff transit No. 17992 throughout the survey of the portion of the Papago Indian Reservation Boundary described in the foregoing field notes is indicated from solar tests, as follows:

April 13, 1929.

At camp in sec. 12, T. 17 S., R. 4 W., G. & S. R. B. & M., Arizona, at 6 h. 07 m., p. m., l. m. t., observe Polaris at western elongation; deflecting an angle of $1^{\circ} 16'$ to the east, and mark the meridian thus determined by a stake firmly driven in the ground 10.00 chs. distant.

April 20, 1929.

At 4 h. 00 m., p. m., app. t., with a reading of $31^{\circ} 56\frac{1}{2}'$ N., on the latitude arc, $11^{\circ} 37'$ N., on the declination arc, the solar meridian so determined coincides with the true meridian.

April 21, 1929.

At 9 h. 00 m., a. m., app. t., with the latitude arc unchanged and a setting of $11^{\circ} 51\frac{1}{2}'$ N., on the declination arc, the solar meridian lies $1\frac{1}{2}'$ to the E., of the true meridian.

Survey of Part (S. 2 miles) of
West Boundary of Township 17 South, Range 3 West.

BOOK 3918

Chains	The following notes describe the survey of the south two miles of the west boundary of T. 17 S., R. 3 W. The south 158.51 chs. of this part of the range line forms part of the bdy. of the Papago Indian Reservation, dividing the public land on the west from said reservation on the east.
	The reservation bdy. angles at the cor. of Ts. 17 and 18 S., Rs. 3 and 4 W., extending east and north therefore identical with the south and west bdrs. of T. 17 S., R. 3 W.
	The cor. of Ts. 17 and 18 S., Rs. 3 and 4 W., established in 1925, is an iron post, 3 ins. in diam., projecting 32 ins. above ground, firmly set in ground and mound of stone, on NW. slope about 4.00 chs. E. from bottom of deep ravine, course N. The brass cap on the iron post is marked as per record. No bearing trees or other accessories.
	Thence, North, on true line, bet. secs. 31 and 36, along bdy. of P. I. R.
	Over mountainous land, thru dense undergrowth.
	Desc. 90 ft. over NW. slope.
3.40	Side hill drain, course NW. Asc. 18 ft. over SW. slope.
6.20	Side hill, spur slopes W.
	Desc. 176 ft. over steep NW. slope to
15.66	Enter rolling land. Desc. 85 ft. over NW. slope to
31.40	Drain, 8 lks. wide, course NW.
	Asc. 15 ft. over SW. slope.
37.30	Spur, slopes NW. Low rock outcrop brs. SE. 1 ch. dist.
	Desc. 17 ft. over N. slope to.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in ground to bedrock, deposit a stone marked with a cross (X) at base of post, and raise a mound of stone around post, for $\frac{1}{4}$ sec. cor. of secs. 31 and 36, marked on brass cap

S 36 | S 31

1931.

	No bearing trees or objects available.
	Continue over rolling land.
	Desc. 35 ft. over N. slope.
54.40	Drain, 40 lks. wide, course W.
	Asc. 20 ft. over S. slope.
60.00	Low spur, slopes W. Desc. 17 ft. over N. slope.
65.70	Drain, 30 lks. wide, course W.
	Asc. 30 ft. over gradual S. slope to
78.50	Foot of steep S. slope, brs. E. and W.
	Leave rolling and enter mountainous land.
	Asc. 28 ft. over S. slope to
80.00	Set an iron post, 3 ft. long, 2 ins. in diam., 6 ins. in the ground to bed rock, deposit a stone marked with a cross (X) at base of post, and raise a mound of stone around post, for cor. of secs. 25, 30, 31 and 36, marked on brass cap

T 17 S	
R 4 W	R 3 W
S 25	S 30
S 36	S 31

1931.

Survey of Part (S. 2 miles) of
West boundary of Township 17 South, Range 3 West.

Chains	No bearing trees or objects available. Land, mountainous and rolling. Soil, rocky, 4th rate. Timber, none. Undergrowth, greasewood, catclaw and cacti.
	North, on true line, bet. secs. .25 & .30, along bdy. of P. I. R.
	Over mountainous land, thru dense undergrowth. Asc. 380 ft. over steep S. slope.
16.20	Ridge, bears E. and W. Desc. 255 ft. over NE. slope.
32.10	Drain, 10 lks. wide, course E. Asc. 70 ft. over steep S. slope to
35.00	Ascend 45 ft. over SE. slope to
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 10 ins. in the ground to bedrock, deposit a stone marked with a cross (x) at base of post, and raise a mound of stone around post, for $\frac{1}{4}$ sec. cor. of secs. 25 and 30, marked on brass cap

S 25 | S 30

1931

	No bearing trees or objects available. Ascend 20 ft. over SE. slope.
42.00	Point of spur, sloping E. Desc. 120 ft. over NE. slope.
54.40	Drain, 7 lks. wide, course SE. Asc. 115 ft. over steep S. slope to
60.00	Asc. 190 ft. over SW. slope to
78.51	Intersect the bdy. of Papago Indian Reservation, sur- veyed southeasterly thru T. 17 S., R. 4 W., along the crest of the Ajo Mountains as hereinbefore de- scribed. This point of intersection is an angle point in the Reservation Bdy., which extends north- westerly and south herefrom. Closing cor. of P. I. R. and T. 17 S., R. 4 W., estab- lished at this point as hereinbefore described Leave P. I. R. Bdy. and continue measurement of the range line within said reservation Ascend slightly to
78.60	Top of ridge, bearing NW. and SE. (Crest of Ajo Moun- tains). Desc. 4 ft. over N. slope to
80.00	Set an iron post, 3 ft. long, .2 ins. in diam., 6 ins. in the ground to bedrock, deposit a stone marked with a cross (X) at base of post, and raise a mound of stone around post, for cor. of secs. 19, 24, 25 and 30 marked on brass cap

T17S
R 4W
PIR 319
S30

1931

No bearing trees or objects available.

Land, mountainous (Ajo Mountains).

Soil, rocky, 4th rate.

Timber, none.

Undergrowth, greasewood, catclaw and cacti.

Survey of Part (S. 2 miles) of
West boundary of Township 17 South, Range 3 West.

Chains	In accordance with instructions discontinue survey of the west bdy. of T. 17 S., R. 3 W., at the above described sec. cor., for the reason that the remainder of said Tp. bdy. lies within the Papago Indian Reservation. -----
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BOOK 3918

4-680

FIELD ASSISTANTS.

to

Dupree R. Averill, U. S. Surveyor,

BOOK 3918

CERTIFICATE OF UNITED STATES SURVEYOR

I, Dupree R. Averill, U. S. Surveyor, hereby certify upon honor that, in pursuance of special instructions received from the U.S. Surveyor General, for Group 99, Arizona, bearing date of the 23rd day of September, 1919, I have well, faithfully, and truly in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the Boundary of the Papago Indian Reservation in Township 15 South, Range 4 West, and Townships 16 and 17 South, Range 4 West, and the West Boundary of Township 17 South, Range 3 West, of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in and by diagram on page 1 hereof the foregoing field notes as having been executed by me, and under my direction; and that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U.S. Surveyor General, for Group 99, Arizona, and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

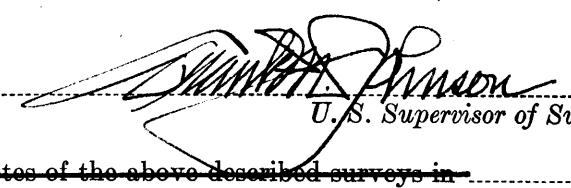
Place: San Francisco California Dupree R. Averill
U.S. Surveyor.
Date: November 29, 1919 APPROVAL

OFFICE OF U. S. SUPERVISOR OF SURVEYS,

Denver, Colorado, Dec. 7, 1931

The foregoing field notes of the survey of Part of the Boundary of the Papago Indian Reservation, along the summit of the Ajo Mountains in Township 15 South, Range 4 West, and Townships 16 and 17 South, Range 4 West, and part (South two miles) of the West Boundary of Township 17 South, Range 3 West, of the

GILA and SALT RIVER BASE and MERIDIAN, in the State of Arizona, executed by Dupree R. Averill, U. S. Surveyor, under his special instructions dated September 23, 1919, for Group 99, Ariz., having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.


W. M. Johnson

U. S. Supervisor of Surveys.

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

U. S. Supervisor of Surveys.