Birk D.

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2150 BOOK 2150

N.

FIELD NOTES

OF THE SURVEY OF THE

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of the Gila Ef Satt River Base Egs	Ieridian,
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AS SURVEYED BY	
Philips Contreu , United St.	ates Deputy Surveyor,
Inder his Contract No. 144, dated Geril	1907
Catalas 7th	100
Sorvey commenced Ceral Lac	ct. 19, 1907
	9. / 9, 190
2150	
	Algorita Transport Transport

NAMES AND DUTIES OF ASSISTANTS.

BOOK 2150	NAMES	AND DUTTE	S OF ASSIST	ANTS.	•
BOO! Walter	Perci	val	Cha	n man	.
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BOOK 2150

INDEX DIAGRAM.

Town	iship 2	01.	, Range	11 6	
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80 1	29	28	27	26	25
23 81	23	83	/ <i>5</i>	35	36

Meanders Page

6-151

Subdivisions of Tp. 20 S., R. 11 E.

Chains.

Survey commenced October 7th, 1907, and executed with a Young and Sons' transit, No. 7934, with Smith's solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

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

I examine the adjustments of the transmit, and correct the level and collination errors; then, to test the solar apparatus, by comparing its indications, resulting from solar observations made during A.M. and P.M. hours, with a meridian determined by observations on Polaris, I proceed as follows:

At the cor. of secs. 1, 2, 35 and 36, on the N. bdy. of Tp. 20 S., R. 11 E.; latitude 31°43'33"N.

Longitude 111° 11' W.,; I set off 31° 44' N. on the lat. arc; 5° 18½' / S. on the decl. arc, and at 3h 00m P.M. 1.m.t., determine with the solar a meridian and mark a point thereof, on a stone firmly set in the ground, 5 chs. N. of the cor.

At 6h 29.5m P.M. by my watch which is correct local mean time. I observe Polaris at eastern elegation

local mean time, I observe Polaris at eastern elongation in accordance with 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.

October 7th, 1907.

October 8th, 1907: At 7h00m A.M., 1.m.t. I lay off the azimuth of Polaris, 1° 23.8'to the West, and mark the meridian thus determined, by cutting a small groove in the stone set October 7th, 1907, on which the meridian fells 20 ing. West of the mark determined by the solar.

At 8h 30m A.M. l.m.t., I set off 31° 44'N.on the lat. arc; 5° 35' S. v on the decl. arc, and mark a point in the meridian determined with the golar by a cross

in the meridian determined with the solar, by a cross on the stone already set 5 chs. N. of my station; this mark falls 0.3 ins. West of the meridian established by the Polaris observation.

The solar apparatus, by P.M. and A.M. observations, defines positions for meridians, respectively about 10" W. and 16" East of the meridian established by the Polaris observations; therefore, I conclude that

the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 7h A.M. is N. 13° W. gives the mag. deci. ; the angle thus determined. 13° E.

Knowing from my surveys of the exteriors of this township that the south bdy. is out in both alignment and measurement and that it will be necessary to survey the township from the north to the south, and from east to the west, I therefore commence at the cor. above described, of secs. 1, 2, 35, and 36 on N. bdy of TP.;
Thence I run,
S. 0° 1' E. bet. secs. 1 and 2.

Becker Black Const.

Through dense mesquite and tesota timber. Ascending.

Top, brs. E. and W.

Set a malpais stone 18 x 8 x 8 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face, and raise a mound of stone 2 ft. hase, $1\frac{1}{2}$ ft. high, W. of cor. From which,

A mesquite 8 ins. dia. brs. N. 31° E., 137 1ks. dist., marked + S 1 BT.

A mesquite 8 ins. diam. brs. N. 46½° W., 44 lks. dist., marked 1 S 2 BT.

30.00 40.00

```
BOOK 2150
                   Subdivisions of Tp. 20 S., R. 11 E. (Continued)
      Chains.
         68.00
                   Descend bank.
         69.00
                   Foot.
                   Wash, 40 lks. wide, course SE.
Set a malpais stone 18 x 8 x 8 ins., 12 ins. in the ground, for cor. of secs. 1, 2, 11 and 12, marked with 1 notch on E. and 5 notches on S. edges, and raise a
         72.00
         80.00
                   mound of stone, 2 ft. base, 1\frac{1}{2} ft. high, W. of cor.
                   From which,
                   A tesota 5 ins. dia. brs. S. 5\frac{1}{2}^{\circ} W., 100 lks. dist marked T 20 S R 11 E S11 BT.
                           No other trees within limits; pits impracticable.
                   Land level and rolling.
                    Soil, gravelly 3 3rd rate.
                   Timber, mesquite and tesota.
                   Land heavily timbered, or covered with dense undergrowth, or exceptionally difficult to survey, 80.00 chs.
                   East on a random line bet. secs. 1 and 12
         40.00
                   Set temp. \(\frac{1}{4}\) sec. cor.
                    Intersect E. bdy. of TP. 7 lks. N. of cor. of secs. 1, 6,
          80.00
                    7 and 12, which is a stone, firmly set, marked and witnessed as described by the Surveyor General.
                    Thence I run,
                    N. 89° 57' W. on a true line het. secs. 1 and 12.
                    Ascending, through dense mesquite undergrowth. Top,, brs. NE and SW; descend. Foot; ascend.
          18.00
          20.00
                    Top, hrs. NE and SW.
         24.00
                    Set a malneis stone 18 x 8 x 8 ins., 12 ins. in the ground, for \frac{1}{4} sec. cor., marked \frac{1}{4} on N. face, and raise a mound of stone 2 ft. base, 1\frac{1}{2} ft. high, N. of
          40.90
                    cor., from which, A mesquite 5 ins. dia. brs. N. 26\frac{1}{2} W., 200 lks.
                    dist., marked 1 Sl BT.

No other trees within limits; pits impracticable.
          73.50
                    Descend.
                    Wash, 100 lks. wide, course S. Cor. of secs. 1, 2, 11 and 12.
          74.00
          80.00
                    Land, level and rolling.
                    Soil, gravelly and rocky; 3rd and 4th rate.
                    Timber, mesquite.
                    Land covered with dense undergrowth, or exceptionally
                    difficult to survey, 80.00 chs.
                    S. 0° 1' E. bet. secs. 11 and 12.
                    Over rolling land, through dense mesquite and tesota
                    undergrowth.
                    Wash, 20 lks. wide, course SE. Wash, 10 lks. wide, course SE. Asce Top, brs. NW and SE., and enter mesa.
           1,00
          10.50
          12.00
                    Descend gradually.
          20.00
                                                  Bustemente's ranch, brs. S. 4410 W
          25.00
                    Descend from mesa.
                                            House brs. S. 44° E., about 25.00 chs.
                    about 20 che.
                    Enter Sopori Valley.
          28.00
          32.20
                    Arivaca Road, Brs. E. and W.
                    Set a malpais stone 18 x 10 x 8 ins., 12 ins. in the ground for \frac{1}{2} sec. cer. marked \frac{1}{2} on W. face, and raise a mound of stone 2 ft. base, 1\frac{1}{2} ft. high, W. of cer.
          40.00
                    from which,
                           A mesquite 24 ins. dia. brs. N. 64\frac{1}{2}° W., 290 lks.
                    dist., marked 1 S 11 BT.
                           A mesquite 24 ins. dia. brs. S. 68° E., 118 lks.
                    dist., marked & S 12 BT.
Wire fence, brs. E. and W.
          43.16
                    Sopori Wash, 3.00 chs. wide, course E.
          54.00
          56.00
                    Ascend..
          65.00
                    Top, brs. E. and W., descend.
          67.00
                    Foot.
          74.00
                    Ascend.
                    Top of spur, brs. E. and W.
          77.00
                    Foot. Set a malpais stone 18 x 8 x 8 ins., 12 ins. in the ground, for cor. of secs. 11, 12, 13 and 14, mark-
```

80.00

```
Chains.
              ed with 1 notch on E. and 4 notches on S. edges, and raise a mound of stone 2 ft. base, 1\frac{1}{2} ft. high, W. of cor
              from which,
                      A mesquite 12 ins. dia. brs. N. 40° W., 106 lks.
              dist., marked T 20 S R 11 E S11 BT.
              A mesquite 10 ins. diam. brs. S. 25° W., 73 lks. dist., marked T 20 S R 11 E S 14 BT.
                      A mesquite 4 ins. diam. brs. S. 78° E., 61 1ks.
              dist., marked T 20 S R 11 E S 13 BT.

A tesota 4 ins. dia. brs. N. 65½° E., 33 lks.

dist., marked T 20 S R 11 E S 12 BT.
             Land, level, rolling and mountainous.
             Soil, gravelly, 3rd and 4th rate. Timber, mesquite and tesota.
             Land mountainous, covered with dense undergrowth, 80 chs.
             S. 89° 57' E. on a random line bet. secs. 12 and 13. Set temp. \frac{1}{2} sec. cor.
  40.00
             Intersect E. bdy. of T. 71ks. S. of cor. of secs. 7, 12, 13 and 18, which is a stone firmly set, marked and wit-
  80.10
             nessed as described by the Surveyor General,
             Thence I run,
             West on, a true line bet. secs. 12 and 13.
             Over mountainous land, ascending.
  21.00
             Top of ridge, brs. N. and S. Descend.
             Wash, 30 lks. wide, course NE. Top of ridge, brs. N. and S.
  26.50
                                                                  Ascend.
                                                             Descend.
  34.00
  37.00
             Foot of descent.
             Set a malpais stone 18 \times 10 \times 8 ins., 12 ins. in the
  40.05
             ground, for \frac{1}{2} sed. cor. marked \frac{1}{4} on N. face, and raise a mound of stone 2 ft. base, 1\frac{1}{2} ft. high, N. of cor.
             From which,
             A tesota 6 ins. dia. hrs. N. 13\frac{1}{4}° W., 131 lks. dist., marked \frac{1}{4} S 12 BT. A tesota 12 ins. dia. brs. S. 84° W., 63 lks.
             dist., marked $\frac{1}{4}$. S 13 BT.

Wash, 50 lks. wide, course NW.
  42,00
                                                                     Ascend.
             Top of spur, slopes. NW.Descend. Wire fence, brs. NE. and SW.
  43.50
  44.90
             Wash, 15 lks. wide, course N.
54.90
  59.00
             Ascend.
             Top, brs. N. and S. Descend. Foot and ascend.
  61.50
  64,00
             Top of ridge, brs. N. and S.
 66.00
                                                                  Descend.
  69.00
             Foot; ascend.
             Top of spur, brs. N. and S., Descend.
 70.00
  73.00
             Foot; ascend.
            Top, brs. N. and S. Descend.
Cor. of secs. 11, 12, 13 and 14.
Land, level, rolling and mountainous.
  77.00
 80.10
            Soil, gravelly and stony; 2nd and 3rd rate.
Timber scattering mesquite and tesota.
Land mountainous, covered with dense undergrowth, or exceptionally difficult to survey, 80.10 chs.
             S. 0° 1' E. bet. secs. 13 and 14.
           Descending over mountainous land.

Wash, 20 lks. wide, course N.W.

Same wash, 20 lks. wide, course NE.,

Toplof stur, bts. E. and W., Descen
   4.10
   9.00
 19.00
                                                            Descend.
 20,00
            Foot.
            Ascend over spur, E. slope of ridge.

Wire fence, brs. E. and W.

Set a malpais stone 24 x 12 x 10 ins., 18 ins. in the ground, for \( \frac{1}{2} \) sec. cor., marked \( \frac{1}{2} \) on \( \frac{1}{2} \) ft. high, W.
 23,00
29.74
 40.00
             of cor., from which,
                    A tesota 4 ins. dia. brs. N. 5540 W., 100 lks.
            dist., marked & S 14 ET.

A mesquite 8 ins. dia. brs. S. 86% E., 310 lks.
                       marked 1 S 14 ET.
```

dist., marked & S 13 BT.

The second second

October 9th, 1907: At 8h 20m A.M. 1.m.t. I set off 31° 41' N.on the lat. arc; 5° 58'5 on the decl. arc, and determine a true meridian with the solar at

Over mountainous land; ascending; through dense under

the cor. of secs. 13, 14, 23 and 24.

S. 0º 1' E. bet. secs. 23 and 24.

Top, brs. NE and Sw. Descend.

Net.

Thence I run,

Foot, and ascend.

· \$18

growth.

5.00

7.50

```
Chains.
  10.00
            Top of spur, brs. E and W.
           Foot; ascend.
Top, brs. E and W., 150 feet high; descend.
Foot.
  12,50
  14.00
  23.00
  32.00
            Gulch, 10 lks. wide, course E.
  37.00
            Ascend.
           Top of spur, 150 ft. high, brs. E and W. Descend. Set a malpsis 18 x 10 x 8 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face, and raise a mound of stone 2 ft. base, $\frac{1}{2}$ ft. high, W. of cor
  39.00
  40.00
           Pits impracticable.
  41.74
           Wash, 20 lks. wide, course E. Ascend.
  46.90
           Top of S. slope; descend.
  55.00
           Foot and ascend.
           Top, brs. E. and V. Descend.

Wash, 20 lks. wide, course E. Ascend.

Top, brs. E. and W., Descend.

Gulch, 10 lks. wide, course NW.

Set a porphyry stone 24 x 10 x 8 ins., 18 ins. in the ground, for cor. of secs. 23, 24, 25 and 26, marked with 1 notch on E. and 2 notches on S. edges. and
  57.00
  65.40
  78.50
  79.33
  80.00
           with 1 notch on E. and 2 notches on S. edges, and
           raise a mound of stone, 2 ft. base, 1\frac{1}{2} ft. high, W. of dr
           cor. Pits impracticable. Land, mountainous.
           Soil, gravelly and stony, 2nd and 3rd rate.
           No timber. Undergrowth mesquite and tesota.
           Land, mountainous, covered with dense undergrowth,
           or exceptionally difficult to survey, 80.00 chs.
           S. 89° 50' E. on a random line bet. secs. 24 and 25.
          Set temp. 1 sec. cor.
Intersect E. bdy. of Tp. 19 lks. S. of cor. of secs.
 40.00
 80/00
           19, 24, 25 and 30, which is a stone, firmly set, marked
           and witnessed as described by the Surveyor General.
           Thence I run,
           N. 89° 58' W. on a true line bet. secs. 24 and 25.
           Over mountainous land; ascending.
 30.00
           Top of ridge, brs. N. and S. Descend.
          Foot.
 34.00
 38,50
          Wash, 50 lks. wide, course N.
          Set a sandstone 20 x 10 x 10 ins., 15 ins. in the
 40.00
          ground for \frac{1}{2} sec. cor., marked \frac{1}{4} on N. face and raise mound of stone 2 ft. base, 1\frac{1}{2} ft. high, N. of cor.
          From which,
                 A hackberry 10 ins. dia. brs. N, 11\frac{1}{2}° E., 149
          lks. dist., marked \frac{1}{4} S 24 BT.
                 A hackberry 12 ins. dia. brs. S. 46\frac{1}{2}° E., 192 lks.
          dist., marked $\frac{1}{4}$ S 25 BT.

Wash, 20 lks. wide, course N. Ascend.

Top of ridge, brs. N. and S. Descend.
 41.70
 47.00
 48.50
          Draw, 2.00 wide, course N. Ascend.
          Top of ridge, brs. N. and S. Descend.
 53.00
 59.00
          Gulch, 10 lks. wide, course N. Ascend. Top of ridge, brs. N. and S. Descend.
 67.00
 75.00
          Foot.
 79.80
          Gulch, 20 lks. wide, course NW.
          Cor. of secs. 23, 24, 25, and 26.
 00,08
          Land, mountainous.
          Soil, gravelly and stony, 2nd and 3rd rate.
          No timber.
          Mountainous land, or land exceptionally difficult to
          survey, 80.00 chs.
          S. 0° 1' E. bet. secs. 25 and 26.
          Over mountainous land; ascending.
  1.50
          Top of spur, brs. NE and SW. Descend.
  7.00
          Wash, 15 lks. wide, course W.
10.00
          Ascend.
11.50
          Top and along W. slope of ridge, extending N. and S. Ascend, 600 feet high.
14.00
          Top, and along W. slope.
25.00
```

Gulch, 20 lks. wide, course NW. Ascend. Top, brs. E. and W. Descend. Wash, 100 lks. wide, course SW. Draw, 100 lks. wide, course SW. Ascend.

63.50 66.00 73.50 75.50

BOOK 2150 Subdivisions of Tp. 20 S., R. 11 E. (Continued) Chains. 82.50 Intersect 4th Standard Parallel South, at a point 8.63 chs. S. 89° 40' W. of Standard cor. of secs. 35 and 36, heretofore described by me.
Set a sandstone 18 x 12 x 6 ins., 12 ins. in the
ground, for closing cor. of secs. 35 and 36, marked CC on N., with 1 groove on E. and 5 grooves on W. faces, and raise a mound of stone 3 ft. base, 1 ft. high, N. of cor.
Land, mountainous. Soil, rocky and gravelly, 2nd amd 3rd rate. No timber; undergrowth, tesota and mesquite. Land, mountainous, covered with dense undergrowth, or exceptionally difficult to survey, 82.50 chs. October 9th, 1907. October 10, 1907: At 9h 00m A.M. 1.m.t. I set off 31° 44' N. on the lat. arc; 6° 21½ S. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 2, 3, 34 and 35, on the N. bdy. of Tp., heretofore described. Thence I run,
S. 0° 1' E. bet. secs. 2 and 3.
Over rolling hilly land, through dense mesquite, tesota and nolo words undergrowth. Set a porphyry stone 20 x 8 x 14 ins., set 15 ins. in the ground, for $\frac{1}{2}$ sec. cor., marked $\frac{1}{2}$ on W. face, and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, 40.00 W. of cor. Pits impracticable. 59.00 Dry, wash, 60 lks. wide, course E. 61.20 Ascend steep mesa. Top of mesa; leave undergrowth. 74.25 Set a porphyry stone 22 x 8 x 8 ins., 16 ins. in the ground, for cor. of secs. 2, 3, 10 and 11, marked with 2 notches on E. and 5 notches on S. edges, and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. 80.00 Pits impracticable. Land, hilly and rolling. Soil, sandy, gravelly and stony; 3rd and 4th rate. Timber, mesquite and tesota and palo verde; undergrowth mesquite, tesota, palo verde and cacti. Land covered with dense undergrowth, or exceptionally difficult to survey, 74.25 chs. East on a random line bet. secs. 2 and 11. Set temp. \(\frac{1}{4}\) sec. cor.

Intersect N. and S. line 12 lks. N. of cor. of secs. 40.00 79.90 1, 2, 11 and 12.
Thence I run,
N. 89° 55' W. on a true line bet. secs. 2 and 11. Over level and rolling land, through dense undergrowth. Wash, 20 lks. wide, course SE. Ascend. Top of bank, brs. NW and SE; thence over rolling land. .50 1.90 Set a malpais stone 18 x 6 x 6 ins., 12 ins. in the ground, for $\frac{1}{2}$ sec. cor., marked $\frac{1}{4}$ on N. face, and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. 39.95 Pits impracticable. Descend. Foot, ascend.
Top of ridge, brs. NW. and SE.
Cor. of secs. 2, 3, 10 and 11. 50.00 58.00 79.90

Land, level and rolling. gravelly; 2nd and 3rd rate.

No timber; undergrowth mesquite. Land, covered with dense undergrowth, or exceptionally difficult to survey, 79.90 chs.

S. 0° 1' E. bet. secs. 10 and 11. Over rolling land, through dense mesquite and tesota undergrowth.

Set a porphyry stone 22 x 10 x 10 ins., 16 ins. in the ground for t sec. cor., marked t on W. face, and raise a mount of stone 2 ft, base, 12 ft. high, W. of

40.00

```
Chains.
                   Pits impracticable.
           Dry wash, 25 lks. wide, course E. Set a porphyry stone 20 x 10 x 8 ins., 15 ins. in the
  78.20
  80.00
            ground, for cor. of secs. 10, 11, 14 and 15, marked
            with 2 notches on E. and 4 notches on S. edges, and
            raise a mound of stone, 2 ft. base, 12 ft. high, W.
            of cor. Pits impracticable.
            Land, rolling and hilly.
            Soil, gravelly and stony, 3rd and 4th rate.
No timber. Undergrowth mesquite and tesota.
            Land covered with dense undergrowth, 80.00 chs.
            S. 89° 55' E. on a random line bet. secs. 11 and 14.
            Set temp. + sec. cor.
  40.00
            Intersect N. and S. line 11 lks. N. of cor. of secs.
  79.80
            11, 12, 13 and 14.
Thence I run,
N. 89° 50' W. on a true line bet. secs. 11 and 14.
            Over rolling and mountainous land, through dense under-
            growth.
            Wash, 10 lks. wide, course NW. Ascend. Top, brs. N. and S. Descend. Foot and enter Sopori Valley.
    1.60
   15.00
   20.00
            Wash, 60 lks. wide, course NE. Wire fence, brs. NE and SW.
   21.10
  27.48
           .Set a malpais stone 18 x 12 x 10 ins., 12 ins. in the
  39.90
            ground, for \frac{1}{4} sec. cor., marked \frac{1}{4} on N. face,; from
            which,
                    Á tesota 8 ins. dia. brs. N. 56 W., 5 lks. dist.,
            marked 1 S 11 BT.
                   A mesquite 6 ins. dia. brs. S. 53° W., 95 1ks.
            dist., marked & S 14 BT.
            Wire fence, brs. NE and SW. Road, NE and SW. (Brena's)
   47.81
   48.55
            Sopori Wash, 5.00 chs. wide, course NE. Leave Sopori
   53,00
            Valley.
            Arivaca road, brs. NE and ascend.
   62.63
            Top of ridge, brs. N. and S. Descend.
   70.00
   75.00
            Foot.
            Cor. of secs. 10, 11, 14 and 15.-
   79.80
            Land, rolling and mountainous.
            Soil, gravelly and stony; 1st and 2nd rate.
            Timber, a few mesquite; undergrowth, tesota and mesquite.
Land covered with dense undergrowth, or exceptionally
             difficult to survey, 79.80 chs.
            S. 0° 1' E. bet. secs. 14 and 15.
            Over level and mountainous land, descending through
             dense undergrowth.
            Foot and enter Sopori Valley, brs. NE and SW.
    7.00
            Arivaca road, brs. E. and W. Sopori Wash, 80 lks. wide, course NE. Road, Brena Ranch, brs. NE and SW.
   11.58
   18.58
   33.74
            Set a malpais stone 18 x 10 x 10 and ins., 12 ins. in the ground, for \frac{1}{4} sec. nor., marked \frac{1}{4} on W. fare, and roise 2 mound of stone, 2 ft. base, 1\frac{1}{2} ft. high, W. of
   40.00
             cor., from which,
             A tesota 4 ins. dia. brs. N. 66%° V., 225 lks. dist., marked 1 S 15 BT.
A tesota 4 ins. dia. brs. N. 65%° E., 315 lks.
             dist., marked ½ S 14 BT.
Wash, 70 lks. wide, course NE.
   56.00
             Ascend and leave Soperi Valley.
   69,00
             Top of ridge, brs. R. and W.; descend.
   77.00
   79.00
             Foot.
             Set a malpais stone 18 x 12 x 10 ins., 12 ins. in the
   80.00
             ground, for cor. of secs. 14, 15, 22 and 23, marked with 2 notches on E, and 3 notches on S. edges, and raise a mound of stone 2 ft. base, 12 ft. high, W. of
                     From which,
             cor.
                    A tesota 6 ins. dia. brs. N. 4910 W., 100 lks. dis
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Subdivisions of Tp. 20 S., R. 11 E. (Continued) BOOK 2150
                   marked T 20 S R 11 E S 15 BT.
                              No other trees within limits. Pits impracticable.
                   Land, level and mountainous.
                   Soil, gravelly and stony; 2nd and 3rd rate.
                   Timber, a few mesquite; undergrowth, mesquite and
                   Land, mountainous, covered with dense undergrowth, or
                   exceptionally difficult to survey, 80.00 chs.
                                                                            October 10, 1907.
                   October 11, 1907: At 9h 30 M. A.M. l.m.t. I set off 31° 41' N. on the lat. arc; 6° 45' S. on the decl. arc,
                  and determine a meridian with the solar at the cor.
                  of secs. 14, 15, 22 and 23.
                  Thence I run, S. 89° 50' E. on a random line bet. secs. 14 and 23.
                  Set temp. \(\frac{1}{4}\) sec. cor.
  40.00
                  Intersect N. and S. line at cor. of secs. 13, 14, 23
  79.84
                  and 24.
                  Thence I run,
N. 89° 50' W. on a true line bet. secs. 14 and 25.
                  Ascending through dense tesota and mesquite undergrowth
                 Top of ridge, 300 ft. high, brs. N. and S. Descend. Foot, gulch, 10 lks. wide, course NW. Ascend. Top of ridge, 250 ft. high, brs. NW and SE; descend.
    7.50
  15.00
  20.50
  38,00
                  Foot and ascend.
                 Set a malpais stone 24 \times 12 \times 10 ins., 18 ins. in the
  39.92
                 ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face from which A mesquite 8 ins. dia. brs. $\frac{1}{15} \frac{1}{16} 
                 dist., marked \(\frac{1}{4}\) S \(\frac{23}{4}\)BT.

A mesquite 6 ins. dia. brs S. \(\frac{59}{59}\)E., \(\frac{135}{124}\) lks. dist., marked \(\frac{1}{4}\) S 23 BT.
                 Top, bears N. and S. Descend.
 41.50
                 Wash, 20 lks. wide, course N. Top, brs N. and S. Descend. Foot and ascend.
 44.00
                                                                                       Ascend.
 46.00
 47.00
 50.00
                 Top, brs. N. and S. Foot and ascend.
                                                                   Descend.
 56.00
 58.50
                 Top, brs. N. and S.
                                                                Descend.
 62.00
                 Wash, 50 lks. wide, course N.
                 Top of spur, brs. N. and S. Descend.
 70.50
                Foot and ascend.
Top, brs. N. and S.
Foot and ascend.
 72.00
 73.30
                                                               Descend.
 76.00
                Top of spur, brs. N.; descend.
79.00
 79.84
                 Cor. of secs. 14, 15, 22 and 23.
                Land, rolling and mountainous.
                 Soil, gravelly and stony; 2nd and 3rd rate.
                Timber, none; undergrowth, mesquite and tesota.

Land, mountainous, covered with dense undergrowth, or
                exceptionally difficult to survey, 79.84 chs.
                S. 0° 1' E. bet. secs. 22 and 23. Over mountainous land, through dense undergrowth.
                Ascending.
                Top, brs. NV.
  2.50
                                                  Descend.
10.50
               Foot; ascend.
18:00
                Top, brs. E. and W., descend.
19.50
                Foot.
20.50
               Wash, 60 lks. wide, course Westerly, and enter level
               land.
               Set a sandstone 18 x 6 x 6 ins., 12 ins. in the ground for \frac{1}{4} sec. cor., marked \frac{1}{4} on \mathbb{V}. face, and raise a mound
40.00
               of stone 2 ft. base, l^{\frac{1}{2}} ft. high, W. of cor.
               which,
                           A mesquite 8 ins. dia. brs. E. 15 lks. dist.,
               marked & S 23 BT.
                       A mesquite 4 ins. dia. bears W., 37 lks. dist.,
               marked 1 S 22 BT. Wash, 150 lks. wide, course NE.
```

Chs.

57.00 59.75

60.75

Ascend.

Top of spur, extending W.

```
-10-
BOOK 2150
                      Subdivisions of Tp. 20 S., R. 11 E. (Continued),
    Chains.
       62.00
                    Foot.
                    Wash, 50 lks. wide, course NW.
       64.00
                   Wash, 150 lks. wide, course NW.

Wash, 60 lks. wide, course NE.

Wash, 20 lks. wide, course NW.

Set a malpais stone 18 x 8 x 8 ins., set 12 ins. in the ground, for cor. of secs. 22, 23, 26 and 27, marked with 2 notches on E. and 2 notches on S. edges, and raise a mound of stone 2 ft. base, 12 ft. high, W. of cor.
       68.50
        74.00
        78.00
        80.00
                    Pits impracticable.
                    Land, mountainous.
                     Soil, gravelly and stony; 2nd and 3rd rate.
                    Timber, a few mesquite; undergrowth, mesquite and
                     tesota.
                    Land, mountainous, covered with dense undergrowth, or
                     exceptionally difficult to survey, 80.00 chs.
                     S. 89° 50' E. on a random line bet. secs. 23 and 26.
                     Set temp. \frac{1}{4} sec. cor. Intersect N. and S. line at cor. of secs. 23, 24, 25 and
        40.00
        80.20
                     26.
                     Thence I run,
N. 89° 50' W. on atrue line bet. secs. 23 and 26.
                     Over mountainous land, through dense undergrowth.
                     Ascending.
                     Top of spur, brs. NW.
          1.00
                     Wash, 30 lks. wide, course N.
          2.50
                     Ascend steep ridge.
          8.00
                    Top, brs. N. and S. Descend. Gulch, 10 lks. wide, course NE. Wash, 10 lks. wide, course NE.
        12.00
         14.00
        14.50
                     Gulch, 15 lks. wide, course NE.
        15.50
                     Draw, 2/00 chs. wide, course NE. Ascend.

Top of ridge, brs. N. and S. Descend.

Wash, 15 lks. wide, course N. Ascend.

Set a malpais stone 24 x 10 x 8 ins., 18 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face, and raise a mound of stone 2 ft. base, $\frac{1}{2}$ ft. high, N. of
         18.00
         24.00
        25.00
         40.10
                               Pits impracticable.
                     Top of ridge, brs. N. and S. Descend. Gulch, 10 lks. wide, course N. Ascend Top of ridge, brs. N. and S. Descend.
         47.00
                                                                             Ascend.
         54.00
         60.00
                     Wash, 50 lks. wide, course NE. and enter level land,
         64.00
                     through dense undergrowth.
Wash, 25 lks. wide, course NE.
Cor. of secs. 22, 23, 26 and 27.
         78.50
         80.20
                     Land, level and mountainous.
                      Soil, gravelly and stony, 2nd and 3rd rate.
                     No timber; undergrowth, tesota and mesquite.
                     Land, mountainous, covered with dense undergrowth, or exceptionally difficult to survey, 80.20 chs.
                      S. 00 1' E. bet. secs. 26 and 27.
                     Over rolling hills, and mountainous land.

Set a malpais stone 22 x 8 x 10 ins., 16 ins. in
the ground, for \(\frac{1}{4}\) sec. cor., marked \(\frac{1}{4}\) on \(\Vert_{\text{o}}\). face,
raise a mound of stone, 2 ft. base, \(\frac{1}{2}\) ft. high,
         40.00
                      cor. Pits impracticable.
                     Dry wash, 25 lks. wide, course NE.
Dry wash, 15 lks. wide, course NE.
Set a porphyry stone 21 x 8 x 12 ins. 15 ins. in the
         46.50
         56.50
         80.00
                      ground, for cor. of secs. 26, 27, 34 and 35, marked with 2 notches on E. and 1 notch on S. edges, and raise a mound of stone, 2 ft. base, 12 ft. high, W. of cor.
```

Pits impracticable.

80.00 chs.

Land, hilly and mountainous.

Soil, gravelly and stony, 3rd and 4th rate.
No timber; undergrowth, tesota, and mesquite.
Land, mountainous or covered with dense undergrowth,

```
2150
Chains.
            S. 89° 50' E. on a random line bet. secs. 26 and 35.
            Set temp. \frac{1}{4} sec. cor. Intersect N. and S. line 14 lks. S. of cor. of secs.
  40.00
  80.10
            25, 26, 35 and 36.
Thence I run,
            N. 89° 56' W. on a true line bet. secs. 26 and 35.
            Over hilly and mountainous land, through dense mesquite
            and tesota undergrowth.
            Descending.
            Gulch, 10 lks. wide, course N. Ascerspur, brs. N. Descend.
Gulch, 10 lks. wide, course NE. Ascertop of ridge, brs. N. and S. Descend.
    4.00
                                                              Ascend to
   5.20
    6.50
                                                               Ascend.
    9.00
            Enter draw.
  20.00
            Wash, 30 lks. wide, course N.
  21.50
            Wash, 30 lks. wide, course N. Ascend. Set a perphyry stone 20 x 8 x 8 ins., 15 ins. in the ground, for \frac{1}{4} sec. cor., marked \frac{1}{4} on N. face, and raise a mound of stone, 2 ft. base, 1\frac{1}{2} ft. high, N.
  30.35
  40.05
            of cor., from which,
                   A mesquite 8 ins. dia. brs. N. 20\frac{1}{2}° E., 33 lks.
            dist., marked \frac{1}{4} S 26 BT.
            No other trees within limits. Dry wash, 15 lks. wide, course NW. Dry wash, 60 lks. wide, course NW.
  51.10
  56.50
  80.10
            Cor. of secs. 26, 27, 34 and 35.
            Land, hill and mountainous.
            Soil, gravelly and stony; 3rd and 4th rate.
            No timber; undergrowth, mesquite and tesota.
            Mountainous land, or land covered with dense under-
            growth, or exceptionally difficult to survey, 80.10 chs
            S. 0° 1' E. bet. secs. 34 and 35.

Over mountainous land; ascending along W. slope of ridge.
  14.00
            Top of ridge, brs. NE.
                                                 Descend.
            Wash, 60 lks. wide, course NE. and ascend. Set a malpais stone 24 x 18 x 12 ins., 18 ins. in the ground, for \frac{1}{2} sec. cor., marked \frac{1}{2} on \mathbb{V}. face, and raise a mound of stone, 2 ft. hase, 1\frac{1}{2} ft. high, \mathbb{W}. of
  37.00
  40.00
                     Pits impracticable.
            Top of ridge, brs. NE. Descend.
  45.00
  55.66
            Wash, 100 lks. wide, course NE.
                                                             Ascend.
            Top of spur, sloping W. Descend.
  61.50
            Foot and ascend.
Top, brs. E. and W. Descend.
  66.00
  69.00
  70.00
            Wash, 90 lks. wide, course E. Ascend.
           Same wash, 80 lks. wide, course W.
Intersect 4th Standard Parallel South at a point 6.13 chs. West 10 W. of standard cor. of secs. 34 and 35,
  78.50
 83.47
            heretofore described by me.
            Set a malpais stone 18 x 10 x 7 ins., 12 ins. in the
            ground for closing cor. of secs. 34 and 35, marked
            CC on N., with 2 grooves on E. and 4 grooves on W.
           faces, and raise a mound of stone, 3 ft. base, 1 ft. high, N. of cor. Pits impracticable. Land, mountainous.
A 25 %
            Soilm gravelly and stony, 2nd and 3rd rate.
            No timber.
            Mountainous land, 83.47 chs.
                                         October 11, 1907.
           October 12, 1907. At 9.h 00m A.M. 1.m.t. I set off 31° 44' N. on the lat. arc; 7° 7' S. on the decl.
            arc, and determine a meridian with the solar at the
            cor. of secs. 3, 4, 33 and 34, on the N. bdy. of the Tp
            heretofore described.
            Thence I run,
            S. 0° 2' E. bet. secs. 3 and 4.
            Over mountainous land; descending.
           Dry wash, 100 lks. wide, course SE and over rolling land Point for 1 sec. cor. falls in dry wash, 35 lks. wide,
  10.00
  40.00
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BOOK 2150
                      Subdivisions of Tp. 20 S., R. 11 E. (Continued).
      Chains.
                   course SE. Ascend.
         41.00
                   Set a malpais stone 22 x 10 x 10 ins., 16 ins. in the
                   ground, for witness cor. to \(\frac{1}{2}\) sec. cor., marked \(\mathbb{WC}_2\) on \(\mathbb{V}\). face, and raise a mound of stone, 2 ft. base, \(\frac{1}{2}\)
                   ft. high, W. of cor. Pits impracticable.
Top of ridge, brs. NW and SE. Descend.
Dry wash, 15 lks. wide, course SE. Ascend.
Top of ridge, brs. NW. and SE. Descend.
         52.00
         62.00
         74.00
                   Set a malpais stone 20 x 6 x 10 ins., 15 ins. in the ground, for cor. of secs. 3, 4, 9 and 10, marked with 3 notches on E. and 5 notches on S. edges, and raise a mound of stone, 2 ft. base, 1\frac{1}{2} ft. high, W. of cor.
         80.00
                   Pits impracticable.
                   Land, mountainous.
                   Soil, stony; 3rd and 4th rate.
                   Timber, scattering mesquite.
                   Land, mountainous, or exceptionally difficult to survey 80.00 chs.
                   East on a random line bet. secs. 3 and 10.
                   Set temp. 1 sec. cor.
Intersect N. and S. line 2 lks. S. of cor. of secs.
2, 3, 10 and 11.
         40.00
         79.98
                   Thence I run, S. 89° 59' W. on a true line bet. secs. 3 and 10
                   Over mountainous land; ascending.
                   Set a granite stone 22 x 10 x 14 ins., 16 ins. in the ground, for \frac{1}{4} sec. cor., marked \frac{1}{4} on N. face, and raise a mound of stone 2 ft. base, 1\frac{1}{2} ft. high, N. of cor.
         39.99
                   Pits impracticable.
                   Dry wash, 20 lks. wide, course NE. ascend.
         52.70
         79.98
                   Cor. of secs. 3, 4, 9 and 10.
                   Land, mountainous.
                   Soil, gr avelly and rocky; 3rd and 4th rate.
                   No timber.
                   Land, mountainous, or exceptionally difficult to sur-
                   vey, 79.98 chs.
                   S. 0° 2' E. bet. secs. 9 and 10.
                   Over mountainous land, through dense undergrowth.
                   Descending.

Dry wash, 35 lks. wide, course E.

NW and SE. Descend.
          3.20
                   Top of ridge, brs. NW and SE. Descend. Dry wash, 10 lks. wide, course SE. Ascending.
         19.00
         30.40
                   Dry wash, 20 lks. wide, course E. Heads 10 chs. W.
         36.00
                   Set a malpais stone 24 x 12 x 5 ins., 18 ins. in the ground for \frac{1}{4} sec. cor., marked \frac{1}{4} on W. face, and raise a mound of stone 2 ft. base, 1\frac{1}{2} ft. high, W. of
         40.00
                   cor. Pits impracticable.
                   Top of ridge, brs. NW and SE. Descend.
Dry wash, 15 lks. wide, course SE. Head 1.00 ch.
         49.50
         62.90
                   NW.
                          Ascend.
                   Top of ridge, NW, and SE.
         70.00
                   Set a malpais stone 20 x 14 x 10 ins., 15 ins. in the ground, for cor. of secs. 9, 10, 15 and 16, marked
         80.00
                   with 3 notches on E. and 4 notches on S. edges, and
                   raise a mound of stone, 2 ft. hase, 12 ft. high, W.
                   of cor. Pits impracticable.
                   Land, mountainous,
                   Soil, gravelly and rocky; 3rd and 4th rate.
                   Timber, mesquite and tesota; undergrowth, ocotillo,
                   mesquite, tesota and cacti.
                   Land, mountainous, covered with dense undergrowth, and exceptionally difficult to survey, 80.00 chs.
                   N. 89° 59' E. on a random line bet. secs. 10 and 15.
                   Set temp. 1 sec. cor. Intersect N. and S. line 7 lks. N. of cor. of secs. 10,
         40.00
         80.04
                   11, 14 and 15.
                   Thence I run,
N. 89° 58' W. on a true line bet. secs. 10 and 15.
                   Over mountainous land; ascending.
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Arivaca road, brs. SW.
Dry wash, 25 lks. wide, course SE.
Dry wash, 15 lks. wide, course SE.
Cor. of secs. 15, 16, 21 and 22.

Trind, nountainous.

52.85 69.90 65.90 80.00

October 13, 1907.

October 14, 1907: At 9h 30m A.M. 1.m.t. I set off 31° 40' N. on the lat. arc; 7° 52½ S./ on the decl. arc; and determine a meridian with the solar at

the cor. of secs. 21, 22, 27 and 28.

Subdivisions of Tp. 20 S., R. 11 E. (Continued). Ro Chains, S. O^o 2' E. bet. secs. 27 and 28. Over rolling land. In bester, Tire fence, bre. Nr. 1,80 Wire fence, brs. As.
Leave basin and enter rolling hills.
Set a perphyry 22 x 12 x 10 ins., 16 ins. in the ground, for t sec. cor., marked t on W. face, and raise a mound of stone, 2 ft. base, 15 ft. high, W. of cor.
Dry wash, course W., 10 lks. wide.
Dry wash, 25 lks. wide, course NW.
Set a perphyry 20 x 8 x 6 ins., 15 ins. in the ground, for cor. of secs. 27, 28, 35 and 34, marked with 3 notches on K. and I notch on S. edges, and raise a mound of stone. 2 ft. base, 15 ft. high, W. of cor. 5.31 40.00 47,50 55,00 80,00 mound of stone, 2 ft. base, 1; ft. high, W. of cor. Pits impracticable. Tand, rolling and hilly. Soil, gravelly and stony; 2nd and 3rd rate. No timber; undergrowth mesquite and tesota. Mountainous land and dense undergrowth, 80.00 chs. S. 89° 59' E. on a random line het. secs. 27 and 34. Set temp. 2 sec. cor. Intersect N. and S. line 5 lks. S. of cor. of secs. 40,00 80,04 26, 27, 34 and 35.
Thence I run,
S. 89° 59' W. on a true line bet. secs. 27 and 34.
Over rolling land, through dense undergrowth. Descend-. Dry wash, 25 lks. wide, course northerly.
Dry wash, 10 lks. wide, course northerly.
Set a malpais stone 20 x 8 x 6 ins., 15 ins. in the ground, for \$\frac{1}{2}\$ sec. cor. marked \$\frac{1}{2}\$ on N. face, dig pits 18 x 18 x 12 ins. E. and V. of cor. 3 ft. dist., and raise a mound of stone and earth 2 ft. base, 1\$\frac{1}{2}\$ ft. 7,80 35,50 40,02 hara, it of core Dry wash, 15 lks. wide, course NW. Dry wash, 20 lks. wide, course NW. Cor. of secs. 27, 28, 33 and 34. 52.50 65.50 80,04 Land, rolling. Soil, sandy and gravelly, 3rd and 4th rate. No timber; undergrowth, mesquite and tesota and cacti. Mountainous land, or land covered with dense undergrowth, 80.04 cha. October 14, 1907: At the cor. of secs. 27, 28, 33 and 34 at 11h 47m A.K. 1.m.t. I set off 7° 55' S. on the declars, and observe the Sun on the meridian; the resulting latitude is 31° 39%' N., which is about correct. Thence I run, S. 0° 2' E. bet. secs. 33 and 34. Over mountainous land. Ascending over spur, extending Top of ridge, brs NW. Descend. 19.00 Foot. Ascend. Top of spur, brs. NW. 29.00 7000. 32,26 Descend. 37.00 40.00

Foot. and ascend.

Foot. and ascend.

Top of spur. brs E. and W.

Set a sandstone 18 x 10 x 8 ins., 12 ins. in the ground,

for \$\frac{1}{2}\$ sec. cor., marked \$\frac{1}{2}\$ on W. face, and raise a

mound of stone 2 ft. base, 1\frac{1}{2}\$ ft. high, V. of cor. Pits impracticable.

Descend.

46,00 Wash, 2/1 lks. wide, course NW.

52,00 Foot and ascend.

56,00

Top of spur, brs. SR. Top of high ridge, brs. NW and SR. 57.50 62.70

Doscondi

83,00 Foot and ascend,

Top, brs. N. and Y. Descend. 60,00

14,80 40.00

68,78

80.00

Pits impracticable.

Dry wash, 30 lks. wide, course Sc.

Bet a porphyry stone, $2_{0} \times 8 \times 6$ ins., 15 ins. in the

Chains. ground, for cor. of secs. 8, 9, 16 and 17, marked with 4 notches on K. and 4 notches on S. edges, and raise a mound of stone, 2 ft. base, 12 ft. high, V. of cor. Pits impracticable. Tand, mountainous. Soil, gravelly and rocky, 3rd and 4th rate. Timber, a few mesquite and tesota. Land, mountainous, and exceptionally difficult to sarre,, 20.00 c.s. October 15, 1907: At 11h,48m, 1.m.t., at the coror of secs. 8, 9, 16 and 17, I set off 8° 17' S./ on the decl. arc, and observe the Sun on the meridian, the resulting latitude is 31° 42' N, which is about correct. Thence I run,
S. 89° 58' %. on a random line bet. secs. 9 and 16.
Set temp. I sec. cor.
Intersec N. and S. line 7 lks. S. of cor. of secs. 40,00 80.00 9, 10, 1 and 16.
Thence I run,
S. 89° 59' V. on a true line het. secs. 9 and 16.
Over mountainous land; degreending.
Set a relpais stone 20 x 10 x 6 ins., lo ins. in the 40.02 ground, for 1 sec. cor., marked 2 on N. Face, and raise a mound of stone 2 ft. base, 1; ft. high, N. of cor. Pits impracticable. Cor. of sees. 8, 9, 16 and 17. Land, mountainous. 0.04 Soil, gravelly and stony, 2nd and 3rd rate. Timber, a few mesquive. Land, mountainous, and exceptionally difficult to survey, 80.0% chs. S. 0° 2' E. bøt, acca. 16 and 17. Over mountainous land, Ascending.
Set a malpais stone 22 x 8 x 8 ins., l6 ins. in the ground, for a sec. cor., marked a ch W. face, and raise a mound of stone, 2 ft. base, la ft. high, W. 40.00 of cor. Pits impracticable. Cor. stands 3.00 chs. from crest of high ridge. Descend high ridge brs. SE.

Dry wash, 20 lks. Wide, course E.

Dry wash, 10 lks. wide, course SE.

Set a porphyry 20 x 8 x 6 ins., 15 ins. in the ground, for cor. of secs. 16, 17, 20 and 21, marked with 4 notches on E. and 3 notches on S. edges, and raise a mound of stone, 2 ft. base, 17 ft. high, W. of cor. Pits impracticable. 51,60 80,00 Tand, nountainosa. Soil, rock, and stony; 3rd and 4th rate. Timber, a few mesquite. Rand, mountainous, and exceptionally difficult to survey, 80.00 chs. N. 89° 59' K. on a random line het. secs. 16 and 21. Set temp. } sec. cor. Intersect N. and S. line at cor. of secs. 15, 16, 21 and 40,00 70,98 Thence I run, S. 89° 59' W. on a true line bet. secs. 16 and 21. Over mountainous land; ascending. Dry wash, 10 lks. wide, course SV. Dry wash/ 20 lks. wide, course SR. 14,50 24.50 Same wash, 20 lks. wide, course WE. 28,60 Same wash, 20 lks. wide, course St.
Set a porphyry 20 x 8 x 6 ins., 15 ins. in the
ground, for 2 sec. cor., marked 2 on N. face, and raise
a mound of stone 2 ft. base, ly ft. high, N. of cor. 31.75 30.99 Pius impracticable. Dry wash, 10 lks. wide, course scucherly. Dry wash, 10 lks. wide, course Sk. Cor. of secs.16, 17, 20 and 21. 52400

79,90 79.98

39,50 40,00

1000

55.00 Dry wash, 1_0 lks, wide, course ${
m cP}$.

,40 1,00

0.00

9,00

18,00

27,00

30,00

33.85 35.00

Leave Sopori Wash, course NE. Brush, fence, brs NE and SW. Set a granite stone, 18 x 8 x 6 ins. 12 ins. in the 40,00 ground, for t sec. cor., marked t on W. face, and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, \mathbb{V}_{+} of cor. Pits impracticable.

BOOK 2150 Subdivisions of Tp. 20 S., R. 11 E. (Continued). 000108. Brush fence, brs. 88. 51,00 52,00 Ascend. Top of mesa, brs. k. and V. 53,00 Wash, 30 lks. wide, course NV. (Roport Vire fence, brs. W'ly and enter field. Vell, brs. X. 75 lks.
Brush fence, brs. X. and W. 63,00 65,90 83,85 Intersect 4th Standard Parallel South at a point 6.00 84,00 chs. West of the Standard cor. of secs. 32 and 33, heretofore described by me. Set a sandstone 18 x 6 x 6 ins., 12 ins. in the ground, for closing cor. of secs. 32 and 33, marked CC on N. with 4 grooves on R. and 2 grooves on W. faces, and raise a mound of stone 3 ft. base, ly ft. high, N. of cor. Pits impracticable. Land, rolling and mountainous. Soil, gravelly and rocks, lat, 2nd and 3rd rate. No timber; undergrowth, mesquite and tesota. Mountainous land, or land covered with dense undergrowth, and exceptionally difficult to survey, 84.00 chs. October 16, 1907. October 17, 1907. At 9h 00m., A.M. l.m.t. I set off 31° 41' $\rm H.$ / on the lat. arc; 8° 59' $\rm S.$ / on the declarc; and determine a meridian with the solar at the cor of secs. 16, 17, 20 and 21, heretofore described by me. Note: As the northwestern portion of this township is extremely rough and mountainous, and impracticable to survey, I therefore, commence at the above mentioned cor., and Induce I man, West on a true line bet. secs. 17 and 20. Over mountainous land, through dense undergrowth. Assess Contract Dry wash, 10 1ks. wide, course Southerly.
Set a porphyry stone 20 x 8 x 8 ins., 15 ins. in the ground, for 7 sec. cor., marked 2 on N. face, and raise a mound of stone 2 ft. hase, 12 ft. high, N. of 34.50 40,00 cor. Pits impracticable. Dry wash, 15 1ks. wide, course Southerly.
Dry wash, 10 1ks. wide, course Southerly.
Dry wash, 10 1ks. wide, course Southerly.
Set a porphyry stone 20 x 10 x 8 ins., 15 ins. in the ground, for cor. of secs. 17, 18, 19 and 20, marked with 5 notches on E. and 3 notches on S. edges, and raise a mound of stone, 2 ft. base, 1 ft. high, W. of cor. 61,50 67,75 79,75 80.00 A mesquite 6 ins. dia, brs. N. $41\frac{1}{7}$ ° R., 40 lks. dist., marked T 20 B P 11 B S 17 BT. A mesquite 8 ins. dis. brs. S. 40° W., 104 lks. dist., marked T 20 S R 11 E S 19 BT.
No other trees within limits, pits impracticable. Tend, mountainous. Soil, gravelly and stony; 3rd and 4th rate. Timber, a few mesquite; undergrowth, mesquite and tesota. Land, mountainous, covered with dense undergrowth, and exceptionally difficult to survey, 80.00 chs. North 0° 3' W. bet. secs. 17 and 18. Over mountainous land, through dense undergrowth. Ascending. Dry wash, 20 lks. wide, course Southerly. Dry wash, 20 lks. wide, course southerly. Commence steep ascent; leave mesquite and tesota undergrowth. 1.00 35,00 Figh bluff, ascend. lop of bluff. 31,60 Porphyry boulder in place, 20 x 20 x 20 ins. above ground, for witness cor. to \$ sec. cor/, marked WC \$ on W. face, and raise a mound of stone 2 ft. base, 1 ft. high, V. of contracts. 32,00 Pits impracticable. Note: I discontinue line north at this point as the land further is unsurveyable on account of its roughness,

Chains,

Jand, mountainous.

Soil, rocky and stony; 3rd and 4th rate. No timber; undergrowth, mesquite and tesota. Land, mountainous, covered with dense undergrowth, and exceptionally difficult to survey, \$2.00 chs.

At the cor. of secs. 17, 18, 19 and 20, At 11h 46m. A.W. 1.m.t. I set off 9° 02' S. / on the decl. arc, and observe the Sun on the meridian; the resulting latitude is 31° 41' N., which is about correct.

Thomas I run,

West on a true line bet. secs. 18 and 19, Over mountainous land, through dense undergrowth.

Ascentino.

16,25 29,10 32,40

Dry wash, 15 1ks. wide, course S.
Dry wash, 15 1ks. wide, course S.
Dry wash, 15 1ks. wide, course SE.
Set a limestone 20 x 8 x 6 ins., 16 ins. in the ground 40,00 for $\frac{1}{7}$ sec. cor., marked $\frac{1}{7}$ on N. face, and raise a mound of stone, 2 ft. base , $\frac{1}{7}$ ft. high, N. of cor. Pits impracticable., from which,
A mesquite 10 ins. dia. brs. N. 34° W., 89 lks.

dist., marked ? S 18 BT. No other trees within limits.

40,90

51,25

Dry wash, 10 lks. wide, course SE. Ascending over rough hills. Dry wash, 10 lks. wide, course SE. 55,80 73,70

Dry wash, 20 lks. wide, course S. Intersect W. bdy. of Tp. at a point 5.48 chs. N. of cor. of secs. 13 and 24, Tp. 20 S., R. 10 F., hereto-74.13

fore described by me.

Set a granite stone 18 x 12 x 6 ins., 12 ins. in the ground, for closing cor. of secs. 18 and 19, marked CC on E. with 3 grooves on N. and S. faces; from which,

A mesquite 4 ins. dia. brs. N. 50° E., 129 lks. dist., marked T 20 S R 11 E S 18 BT.

No other trees within limits; and raise a mound of stone, 2 ft. base, 1; ft. hlgh, E. of cor. Pits impracticable.

·Land, mountainous.

Soil, stony; 3rd and 4th rate. Timber, a few mesquite; undergrowth, mesquite, tesota, and cacti.

Land, mountainous, covered with dense undergrowth, and exceptionally difficult to survey, 74.13 chs.
October 17, 1907.

October 18, 1907: At 9h 15m., A.M. l.m.t. I set 31° 41' N. \checkmark on the lat arc; 9° 21' S. \checkmark on the decl. A.M. l.m.t. I set off arc; and determine a meridien with the solar at the cor. of mecs. 17, 18, 19 and 20. Dono I ru,

S. 0° 3' E. bet. secs. 19 and 20. Over mountainous land, through dense undergrowth.

22,00 40,00

Dry wash, 20 lks. wide, course SE.
Set a porphyry stone 20 x 8 x 6 ins., 15 ins. in
the ground, for t sec. cor., marked t on W. face, raise a mound of stone 2 ft. base, lo ft. high, W. of Pits impracticable. from which, A tesota 8 ins. diam. brs. S. 60° W., 252 lks.

dist., marked $\frac{1}{4}$ S 19 BT. No other trees within limits. 400,700 Dry wash, 10 1ks. wide, course SW.

Dry wash, 30 lks. wide, course SW.
Set a limestone 20 x 6 x 6 ins., 15 ins. in the ground, for cor. of secs. 19, 20, 29 and 30, marked with 5 notches on E. and 2 notches on S. edges, from 66,35 80,00

which,
A mesquite 6 ins. dia. brs. K. 55° W., 88 lks. dist.,
marked T 20 S R 11 E S 19 BT.

Chains. A mesquite 8 ins. dia. brs. 8. 7° W., 108 lks.

dist., marked T 20 S R 11 E S 30 BT.,

No other trees within limits; dig pits 18 x 18 x 12 ins., 5% ft. dist. in secs. 20 and 29; and raise a mound of earth and stone, 2 ft. base, 1% ft. high, W. of cor. Land, mountainous. Soil, gravelly and stony; 3rd and 4th rate. Timber, mesquite and tesota; undergrowth, mesquite and teecta. Land, mountainous, covered with dense undergrowth, and exceptionally difficult to survey, 80.00 chs. Mast on a random line bet, secs. 20 and 29. Set temp. & sec. cor. Intersect W. and S. line 5 lks. S. of cor. of secs, 20, 40,00 80,06 21, 28 and 29. Thence I run, S. 89° 58' W. on a true line bet. secs. 20 and 29. Over mountainous land, through dense mesquite, tesota undergrowth. Set a limestone 20 x 10 x 5 ins., 15 ins. in the ground, for $\frac{1}{2}$ sec. cor., marked $\frac{1}{2}$ on N. face, and raise a mound of stone, 2 ft. base, $\frac{1}{2}$ ft. high, N. of cor. 40.03 Pits impracticable. Dry wash, 15 lks. wide, course S. Dry wash, 15 lks. wide, course SE. Cor. of secs. 19, 20, 29 and 30. 41,50 51,00 80,00 Land, mountainous. Soil, gravelly and stony; 2nd, 3rd and 4th rate. No timber, undergrowth, mesquite and tesota. Land, mountainous, covered with dense mesquite and tesota undergrowth, and exceptionally difficult to survey, 80.06 chs. West on a true line bet, secs, 19 and 30. Over mountainous land, through dense mesquite and tesota undergrowth. Ascending. Dry wash, 30 lks. wide, course SB.
Dry wash, 10 lks. wide, course SB.
Set a porphyry stone 20 x 10 x 5 ins., 15 ins. in 27,40 37,80 40,00 the ground, for & sec. cor., marked i on W. face, dig pits 18 x 18 x 12 ins., E. and V. of stone, 3 ft. dist., and raise a mound of earth and stone 2 ft. base, 12 ft. high, N. of cor., from which.

A mesquite 6 ins. dia. brs. N. 73° E., 89 lks. dist., marked † S 19 BT. No other trees within limits. At this $\frac{1}{2}$ sec. cor. het. secs. 19 and 30, I set off 9° 24' 3. on the decl. erc; and at 11h $46\mathrm{m}_{\odot}$ 1.m.t. observe the Sun on the meridian; the resulting latitude is 31° 40' N., which is about correct. Dry wash, 10 lks. wide, course SE.

Dry wash, 10 lks. wide, course S.

Intersect W. bdy. of Ep. at 4.93 chs. N. of cor. of seds. 24 and 25, Tp. 20 S., R. 10 E., heretofore 54,90 73,40 described by mev Set a porphyry stone 18 x 10 x 10 ins., 12 ins. in the ground, for closing cor. of secs. 19 and 30, marked CC on R. with 4 grooves on N. and 2 grooves on S. faces, and raise a mound of stone, 2 ft. base, la ft. high, R. of cor. Pits impracticable. Soil, gravelly and stony; 3rd and 4th rate. Timber, scattering mesquite; undergrowth mesquite and tesota.

Land, mountainous, covered with dense undergrowth, and exceptionally difficult to survey, 73.40 chs.

October 18, 1907.

and raise a mound of earth and stone, 2 ft. base, ly

Chaire.

43.10 75,60

ft, him, in of cor,

Dry wash, 25 lks. wide, course SE. Intersect 7. bdy. of Tp. at a point 4.85 chs. N. of cor. of secs. 25 and 36, Tp. 20 S., R. 10 E., hereto-

fore described by me. Set a porphyry stone 18 x 8 x 6 ins., 12 ins. in the ground, for closing cor. of secs. 30 and 31, marked CC on E. with 5 grooves on N. and 1 groove on S. faces, and raise a mound of stone 2 ft. base, 1; ft. high, E. of eor. Pits impracticable.

Land, mountainous. Soil, gravelly and stony; 3rd and 4th rate.

No timber; undergrowth, tesota and mesquite. Land, mountainous, covered with dense undergrowth, and exceptionally difficult to survey, 73.60 chs.

 S_{\star} O° S^{\dagger} R_{\star} bet. sees. S_{\star} and S_{\star}

Over mountainous land, through dense undergrowth. Ascend steep N. slope of mesa. Top of mesa.

3,00

9,00

Dry wash, 20 1ks. wide, course SR. 29,00

Dry wash, 20 lks. wide, course K. Set a perphyry stone 18 x 10 x 6 ins., 12 ins. in the ground, for $\frac{1}{2}$ sec. cor., marked $\frac{1}{2}$ on $\frac{1}{2}$. face, and raise a mound of stones, 2 ft. base, $\frac{1}{2}$ it. high, $\frac{1}{2}$ 37,00

of cor., from which,

A mesquite 8 ins. dia. brs. S. 23° E., 185 lks. dist., marked $\frac{1}{2}$ S 32 BT. No other trees in limits. Road, brs SE.

Dry wash, 25 lks. wide, course SE.

Intersect 4th Standard Parallel South at a point 5.90

50,00

68,40 84,30

chs. W. of Standard cor. of secs. 31 and 32, heretofore described by me.

Set a porphyry 22 x 10 x 6 ins., 16 ins. in the ground, for closing cor. of sees. 31 and 32, marked CC on N. with 5 grooves on R. and 1 groove on W. faces, and raise a mound of stone, & ft. base, ly ft. high, N. of cor. Pits impracticable.

Land, mountainous. Soil, gravelly and stony; 3rd and 4th rate. Timber, a few mesquite; undergrowth, mesquite and

Land, mountainous, covered with dense mesquite and tesota undergrowth, and exceptionally difficult to survey, 84:10 cha.:

October 19, 1907.

GROWN DESCRIPTION

This township is principally mountainous, The Sopori Valley traverses the same in a northeatserly direction. There are a number of settlers living along thr Sopori Vash, and the same have substantial im-provements and lands under cultivation. The soil of the bottom land along the Sopori Valley is generally rich loam and produces good crops by artificial irri-

The nothwestern portion of the township is covered the Cerro Colorado ranke of mountains and is worthless for agricultural purposes, but valuable on account of some mineral that is within said range. The timber within this township is limited, and consists principally of scrub mesquite and tesota; also a few hackberry and cottonwood trees are found along the Sopori Wash.

Water is available at the various wells owned by the settlers within this township. The Sopori Wash care ries water only during the rainy, season,

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS:

LIST OF NAMES.	
A list of the names of the individuals employed by Chilips (Confee
United States Deputy Surveyor, to assist in running	
marking the lines and corners described in the foregoing field notes of the survey of	and any terminal and any area of particular terminal particular and
Lines, of J. 21 S. R. 11 & - J. 21 S. P.	a S
showing the respective capacities in which they acted:	10 = and
	1
Watter Pereiro	L, Chainman.
- Chris Olsen	, Chainman.
	, Moundman.
arthur M. Vogu	← Moundmon.
	, Axmon.
Flour GWills	
Feury G. Wille E.W. Whitaere	coce, 23.1 mais
	∠, Flagman,
We hereby certify that we assisted Philip Conf	/
We hereby certify that we assisted	lea
, United States Deputy Surveyor	
those parts or portions of the Substiniariona Chic	L
of J. 20 1. R. 11 & - J. 21 d. P. 10 E	
and J. 22 1. J. 96.	
	lie
Gilg & Satt River B. meridian, Jerritory of Chrizong, which	
in the foregoing field notes as having been surveyed by him and under his direction; and	
has been in all respects, to the best of our knowledge and belief, well and faithfully s	•
General for Grizana General for Grizana General for Grizana Grizana Grizana Grizana Grizana Grizana Grizana Grizana Grizana Grizana Grizana Grizana Grizana Grizana Grizana	
What Usee	
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	, Onasumen,
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Le. I Shitare - 2/2/1/1/2	
I Jo. Y. Whilacre "	. Flagman.
Subscribed and sworn to before me this 26 74	
Segge holy of	Lurreyor available
*6-151 /4. V. W. COLLET	y Ton
IN notare,	avaitable

0/2,	
01.1.60	
1. Chalif Jour	United States Deputy Surveyor, do
solemnly swear that, in pursuance of a contract	received from Frank 1. Lygall,
United States Surveyor General for	bearing date of the , 1907, I have well, faithfully, and truly, in my own
11th day of Cloric	, 190, I have well, faithfully, and truly, in my own
proper person, and in strict conformity with th	e instructions furnished by the United States Surveyor
General for Uniforma, th	e Manual of Surveying Instructions, and the laws of the
United States, surveyed all those parts or portio	ns of the suldenisional lines
J. 20 1. 11.11 5 - J. 21 1. P.	108-8.22 A. R.98
	of the Gila thatt
Ruce Break in a Talli	of the Cila Halt ory of Arizona, which are represented in the
Outer and I meridian, in the Venual	279 of Can 3249, which are represented in the
	y me, and under my direction; and I do further solemnly
	een established and perpetuated in strict accordance with
	pecial written instructions of the United States Surveyor
	the specific manner described in the field notes, and that
the foregoing are the original field notes of such	ı survey.
	19.1.1. (1)
	Milifo Coult Leg United States Deputy Surveyor.
	United States Deputy Surveyor.
M. lila (C.L.	
Subscribed by said Philips only this 26 day of Jesem	4, and sworn to before me
this 26 - day of Tecens	(seq. 190 Y)
	Var. S. PANALLA CONTRACTOR
00000	N S Commission
OSEAL O	Territory of Arizona.
API	PROVAL.
OFFICE OF THE UNITED	STATES SURVEYOR GENERAL,
	STATES SURVEYOR GENERAL, The Ruddivisional Line of La and Galf Cevin Base
	Morning Clany Ceng 6 , 1909
m	HO 11: 12: 0
The foregoing held notes of the survey of	The previous course of the second
59 14 0. Jg 11 6, J	us 4 50 sy min 10 ans
Mud Meridian Chr.	yele
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Patro	40 Det (2)
executed by	Upit Ourtyn Afril 11 (1907, having been
under his contract No, dated	Cersary / naving been
	one and explanations made, the said field notes, and the
surveys they describe, are hereby approved.	
	mank A Sigalle
	United States Surveyor General.
I cartify that the foregoing transcript of	the field notes of the above-described surveys in
	ectly copied from the original notes on file in this office.