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R.10W.					
6	225	204	183	172	141
22	22	20	18	16	14
7	218	199	1810	1611	1412
21	21	19	18	16	13
18	2117	1916	1815	1614	1313
20	20	19		16	12
19	2020	1921	1822	1523	1324
5	4	17	17	15	12
30	729	228	1727	1526	1225
7	6	3	15	14	12
31	832	633	334	1435	1236
10	10	11	3		
R.10W.					

T.5N. T.5N.

Survey commenced February 6, 1915, and executed with a Young and Sons light mountain transit, No. 8534, with Smith's solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, and reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

All measurements were made with an eight chain tape, graduated to links, the angle of the slope measured with a clinometer and the distance reduced to the horizontal.

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

At my camp near the $\frac{1}{2}$ sec. cor. bet. secs. 28 and 29, T. 5 N., R. 10 W latitude $34^{\circ} 30'$ N., longitude $117^{\circ} 56'$ W., I set off $34^{\circ} 30'$ on the lat. arc; $15^{\circ} 40'$ S. on the decl. arc, and at 4h p.m., l.m.t., determine with the solar a meridian and mark a point thereof by a tack in a wooden stake, set firmly in the ground, 5 chs. N. of my station.

At 10 h 20 m p.m., l.m.t., I observe Polaris at western elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined, on a peg driven firmly in the ground, 5 chs. N. of my station.

February 6, 1915

February 7: At 7h 15m a.m., I lay off the azimuth of Polaris, $1^{\circ} 23'$ to the east, and mark the meridian thus determined by a tack in the wooden stake set last evening, on which the meridian falls 0.2 ins. east of the mark determined by the solar.

At 8h a.m., l.m.t., I set off $34^{\circ} 30'$ on the lat. arc; $15^{\circ} 28'$ S. on the decl. arc; and mark a point in the meridian with the solar, by a tack in the wooden stake already set 5 chs. N. of my station; this mark falls 0.6 ins. east of the meridian established by the Polaris observation.

The solar apparatus, by p.m. and a.m. observations, define positions for meridians, respectively about $0^{\circ} 10'$ West and $0^{\circ} 32'$ east of the meridians established by the Polaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 8h 40m a.m., is N. $15^{\circ} 32'$ W.; the angle thus determined gives the mag. decl. $15^{\circ} 32'$ E.

Resurvey of the Subdivision of T. 5 N., R. 10 W.

February 7, 1915: At 9h a.m., l.m.t. I set off $34^{\circ} 30'$ on the lat. arc; $15^{\circ} 28'$ S. on the decl. arc; and determine a meridian with the solar at the witness cor. of secs. 20, 21, 28 and 29, 50 lks. S. of the true point for cor., which is a juniper post, 3 ins. square, 20 ins. above ground, firmly set and marked as described by the Surveyor General. This is not the original post, the cor. having been reestablished by the Forest Service. I remove the post and in the same place,

chains. set an iron post, 3 ft. long, 2 ins. dia., 24 ins. in the ground, for witness cor. of secs. 20, 21, 28 and 29, with brass cap marked

T. 5 N., R. 10 W.

S. 20 S. 21

S. 29 S. 28

W. C.

I do not dig pits at this cor. as the cor. is alongside of public road.

From the true point for cor. I run

South on a random line bet. secs. 28 and 29

40.00 No evidence of $\frac{1}{4}$ sec. cor. Set temp. cor.

80.10 Fall 11 lks. E. of the true point for cor. of secs. 28, 29, 32, 33, which I determine from a yucca palm recently fallen down, plainly notched on two sides. It is probable that this yucca palm was meant instead of the Spanish Bayonet, as called for in the original field notes, as being 27 lks. N. of cor. Therefore at 27 lks. S. of the stump of this tree I set an iron post, 3 ft. long 2 ins. dia., 24 ins. in the ground, for cor. of secs. 28, 29, 32 and 33, with brass cap marked

T. 5 N. R. 10 W.

S. 29 S. 28

S. 32 S. 33

dig pits, 18 x 18 x 12 ins. in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

thence

N. $0^{\circ}5'$ E. on a true line bet. secs. 28 and 29

Over level land, through scattering greasewood.

9.20 Enter cleared land, bears E. and W.

14.00 Gabriel's house, bears E. about 2.20 chs. dist.

19.80 Gabriel's wire fence bears E. and W., leave cleared land.

30.00 Road, bears E. and W.

40.05 Set an iron post, 3 ft. long, 1 in. dia., 24 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap marked

S. 29 $\frac{1}{4}$ S. 28

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.

40.50 Leave level land, enter rolling hills

42.10 Dry wash, 20 lks. wide, course N. 70° W.

46.35 Top of spur, bears E. and W. descend

60.00 Foot of descent; enter level land.

78.00 Dry wash, 15 lks. wide, 4 ft. deep course N.W.

80.10 The cor. of secs. 20, 21, 28 and 29

Land, level and rolling; drains NW.

Soil, sandy; 2nd. and 3rd rate

Some scrub juniper on hills. Yucca palms on entire line

Undergrowth, scattering greasewood

Chains.

Resurvey of the Subdivision of T. 5 N., R. 10 W.

From the cor. of secs. 28, 29, 32 and 33, I run
East on a random line bet. secs. 28 and 33

40.00
80.34

No evidence of $\frac{1}{4}$ sec. cor. Set temp. cor.
Fall 40 lks. N. of the cor. of secs. 27, 28, 33 and 34, which cor. is
an iron post, 4 ins. square, 22 ins. above ground, filled with cement
and marked

T. 5 N. S. 27 on N.E.
R. 10 W. S. 34 on S.E.
S. 33 on S. W. and
S. 28 on N. W. face

This cor. has been reestablished by the Forest Service and the
above described post is the kind used by them for sec. cors. The
markings on the post are cast at the time the posts are made.

Thence

N. 89°43' W. on a true line bet. secs. 28 and 33
Over low, rolling hills, through small juniper.

9.85
14.55
15.85
31.50
40.17

Leave hills, enter rolling mesa
Road, bears N. 30° W. and S. 30° E.
Dry wash, 50 lks. wide, course N. W.
Road, bears N. and S. This road in dry wash, 60 lks. wide, course N.
Set an iron post, 3 ft. long, 1 in. dia. 24 ins. in the ground for $\frac{1}{4}$
sec. cor., with brass cap marked

S. 28 $\frac{1}{4}$

S. 33

dig pits 18 x 18 x 12 ins. E. and W. of post, 3 ft. dist. and raise
a mound of stone, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.

49.50
80.34

Wire fence, bears N. and S.
The cor. of secs. 28, 29, 32 and 33
Land slightly rolling; W. 70 chs. E. 10 chs. hilly
Soil, sandy, 2nd and 3rd rate
Some juniper on E. 10 chs. W. 70 chs. scattering yucca palm
Scattering greasewood.

From the cor. of secs. 27, 28, 33 and 34, I run

South on a random line bet. secs. 33 and 34.

40.00
80.16

No evidence of $\frac{1}{4}$ sec. cor. Set temp. cor.
Fall 35 lks. E. of the cor. of secs. 33 and 34, which is a granite
stone 12 x 12 x 8 ins. above ground firmly set and marked with 3
notches on the E. and W. edges

I destroy the old cor. and in the same place set an iron post,
3 ft. long, 3 ins. dia., 24 ins. in the ground, for cor. of secs. 33
and 34, with brass cap marked

T. 5 N. R. 10 W.
S. 33 S. 34

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

Thence

Chains.

Resurvey of the Subdivision of T. 5 N., R. 10 W.

N. 0° 15' E. on a true line bet. secs. 33 and 34
Over rolling land, through scrub juniper

3.60 Dry wash, 10 lks. wide, course E.
29.00 Leave juniper, bears N. 75° W. and S. 75° E.

40.08 Set an iron post, 3 ft. long, 1 in. dia., 24 ins. in ground, for $\frac{1}{4}$ sec. cor., with brass cap marked

S. 33 $\frac{1}{4}$ S 34

dig pits 18 x 18 x 12 ins. N. and S. of line, 3 ft. dist., and raise a mound of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.

70.00 Enter juniper, bears N. W. and S. E.
74.65 Road, bears E. and W.
80.16 The cor. of secs. 27, 28, 33 and 34.
Land rolling, drains E.
Soil, sandy; 2nd and 3rd rate
Timber, juniper
Undergrowth, greasewood

Feb. 7: At this cor. I set off 15° 26' S. on the decl. arc; and at 12 h 14m l.m.t., observe the sun on the meridian; the resulting lat. is 34°30'

February 7, 1915.

Feb. 8, 1915: At 7h 30m a. m., l.m.t., I set off 34°30' on the lat. arc; 15°5' S. on the decl. arc; and determine a meridian with the solar at the point for cor. of secs. 20, 21, 28 and 29, previously described, which is 50 lks. N. of the W. C.

Thence

40.00 West on a random line bet. secs. 20 and 29.
No evidence of witness $\frac{1}{4}$ sec. cor. at 25 lks. S.

Set temp. cor.

80.00 Fall 58 lks. S. of the cor. of secs. 19, 20, 29 and 30, which cor. is a sand stone, 11 x 7 x 4 ins. above mound of stone, marked S. G. F. R. on S. and 5 grooves on E. face

A Spanish Bayonet, 10 ins. dia. bears N. 76° E., 67 lks. dist.

A portion of the markings are visible on this tree

I remove the stone cor. and in the same place, set an iron post, 3 ft. long, 2 ins. dia., 24 ins. in the ground, for cor. of secs. 19, 20, 29 and 30, with brass cap marked

T. 5 N. R. 10 W.

S. 19 S. 20

S. 30 S. 29

and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.

Thence

S. 89° 35' E. on a true line bet. secs. 20 and 29.
Over sandy mesa; through medium growth of greasewood

13.00 Dry wash, 15 lks. wide, course N.

20.00 Along wire fence on S. side County Road, E. And W.

40.00 Set an iron post, 3 ft. long, 1 in. dia., 36 ins. in the ground, in middle of County Road, with brass cap marked

s. 20 $\frac{1}{4}$

s. 29

I do not dig pits at this cor. on account of the cor. falling in road.

56.50 Water cistern, 1 $\frac{1}{2}$ x 1 ch. on line. Leave road

61.30 Dry wash, 50 lks. wide, course N.

79.10 Dry wash, 10 lks. wide, course N.

80.00 The point for cor. of secs. 20, 21, 28 and 29.

Land level, drains N.

Soil, sandy, 2nd rate. Some improved land on each side of line

Timber, yucca palms, W. 20 chs.

Undergrowth, greasewood

From the cor. of secs. 19, 20, 29 and 30.

West on a random line bet. secs. 19 and 30

40.00 No evidence of old $\frac{1}{4}$ sec. cor. Set temp. cor.

77.53 Intersect W. bdy. of Tp. 36 lks. N. of the cor. of secs. 19, 24, 25 and 30, which cor. is an iron post, $\frac{1}{4}$ ins. square, 24 ins. above ground, filled with cement, marked

T. 5 N. S. 19 on N. E.

S. G. F. R. 47 R. 10 W. S. 30 on S. E.

R. 11 W. S. 25 on S. W. and

S. 24 on N. W. face; and witnessed as described by the Surveyor General

Thence

N. 89° 44' E. on a true line bet. secs. 19 and 30

Descend over rolling hills; through scattering juniper

13.15 Dry wash, 20 lks. wide, course N.

30.15 Leave juniper, bears N. W. and S. E.

37.53 Set an iron post 3 ft. long, 1 in. dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor. with brass cap marked

s. 19 $\frac{1}{4}$

s. 30

dig pits, 18 x 18 x 12 ins. E. and W. of post, 3 ft. dist., and raise a mound of earth, 3 $\frac{1}{2}$ ft., 1 $\frac{1}{2}$ ft. high N. of cor.

45.50 Leave rolling hills; enter sandy mesa

51.10 Road, bears N. and S.

59.00 Dry wash, 40 lks. wide, course N.

72.30 Dry wash, 20 lks. wide, course N. E.

77.00 Road, bears N. and S.

77.53 The cor. of secs. 19, 20, 29 and 30

Land, level and rolling; drains N.
Soil, sandy; 2nd and 3rd rate
Timber, W. 30 chs. juniper and yucca palms, E. 47 chs. yucca palms
Undergrowth, greasewood. February 8, 1915

Subdivision of T. 5 N., R. 10 W.

Feb. 10, 1915: At 8h 10m. a. m., l.m.t., I set off 34°29' on the lat. arc; 14°31' S. on the decl. arc; and determine a meridian at the cor. of secs. 28, 29, 32 and 33.

Thence

South on a random line bet. secs. 32 and 33

40.00

Set temp. $\frac{1}{4}$ sec. cor.

80.59

Intersect S. bdy. of Tp. 14 lks. W. of the cor. of secs. 32 and 33, which cor. is an iron post, 3 ins. diam, 12 ins. above the ground & marked and witnessed as described as by the Surveyor General. Griffin's house bears N. 45° W. 5 chs. dist.

Thence

N. 0°6' W. on a true line bet. secs. 32 and 33

Along dry wash

4.70

Road to Griffin's in wash. Road bears N. E. W.

14.00

Leave wash, bears S. and N. E. Enter rolling hills

27.50

Dry wash, 30 lks. wide, course E.

34.25

Descend over broken hills

40.59

Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap marked

S. 32 $\frac{1}{4}$ S. 33

dig pits 18 x 18 x 12 ins. N. and S. of post, 3 ft. dist. and raise a mound of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.

68.35

Foot of descent; enter mesa

79.90

Cross wire fence bears E. and W.

80.59

The cor. of secs. 28, 29, 32 and 33.

Land, hilly and level. Soil, sandy, 2nd and 3rd rate.

Timber, juniper and yucca palms. Scattering greasewood.

West on a blank line bet. secs. 29 and 32

40.00

Set temp. $\frac{1}{4}$ sec. cor.

79.92

Intersect N. and S. line, 80.78 chs. S. 0°4' W. of cor. of secs. 19, 20, 29, and 30, previously described. At the point of intersection, set an iron post, 3ft. long, 2 ins. dia., 24 ins. in the ground, for cor. of secs. 29, 30, 31 and 32, with brass cap marked

T. 5 N. R. 10 W.

S. 30 S. 29

S. 31 S. 32

and raise a mound, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.

Thence

East on a true line bet. secs. 29 and 32

39.96

Over rolling hills; through juniper
Set an iron post, 3 ft. long, 1 in. dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked

S. 29 $\frac{1}{4}$

S. 32

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

56.70

Leave rolling hills; enter sandy mesa

62.50

Dry wash, 50 lks. wide, course N.

74.90

Dry wash, 30 lks. wide, course N.

79.50

Wire fence, bears N. and S.