Volume

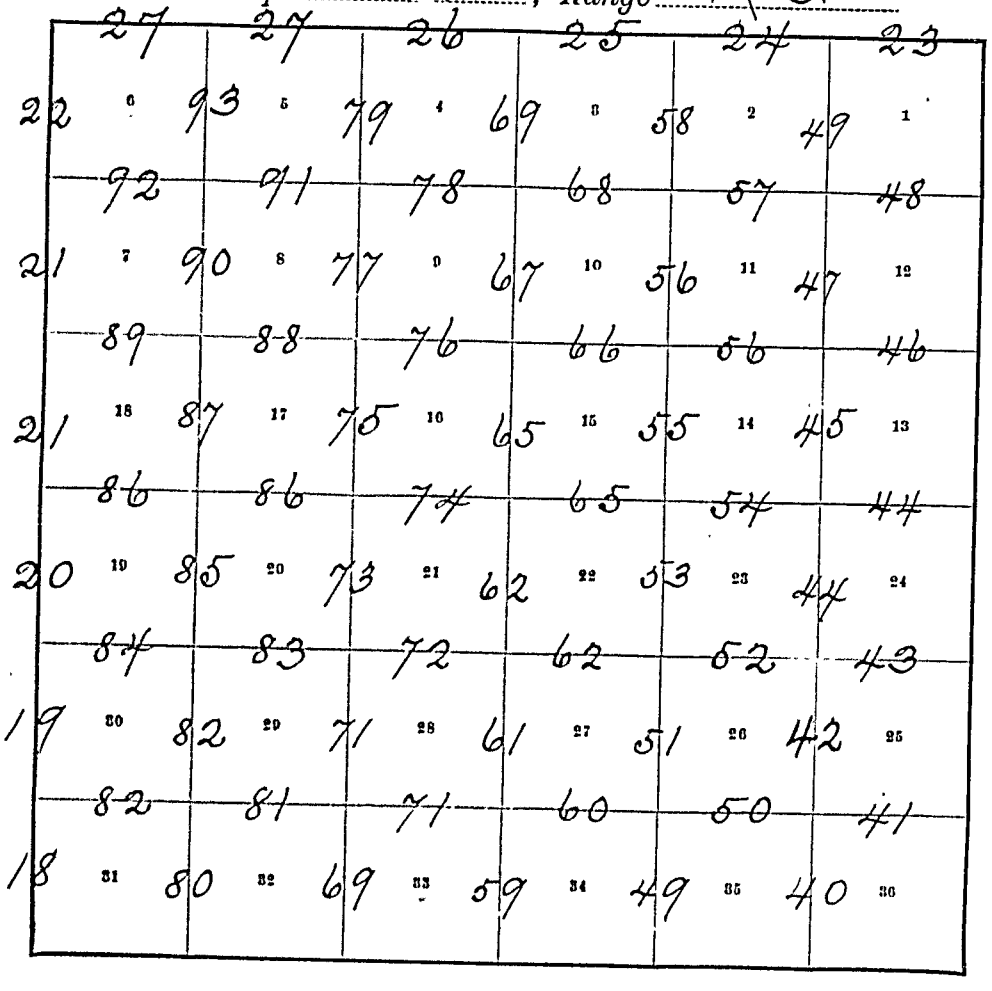
# #

R0289

BOOK A-289

INDEX DIAGRAM.

Township 15 S., *Range* 19 E.



Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

We, ... and .....
do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of

.....

....., *Chainman.*

....., *Chainman.*

Subscribed and sworn to before me this .....
day of ....., 189

SEAL.

We, ... and .....
do solemnly swear that we will well and truly perform the duties of monumen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of

.....

....., *Monudman.*

....., *Monudman.*

Subscribed and sworn to before me this .....
day of ....., 189

SEAL

We, ... and .....
do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of

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I, ..., do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of .....

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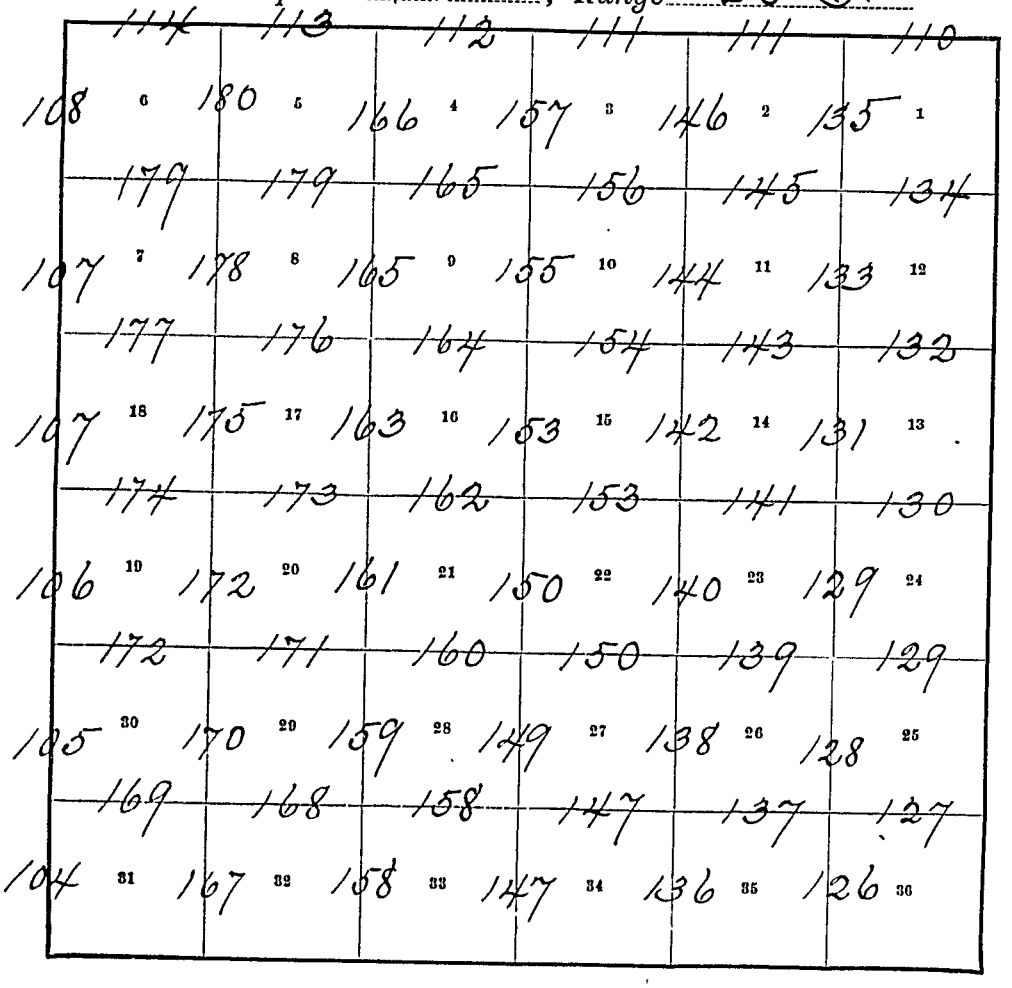
SEAL

6—151

BOOK A-289

INDEX DIAGRAM.

Township 14 S., *Range* 20 E.



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SEAL

BOOK A-289

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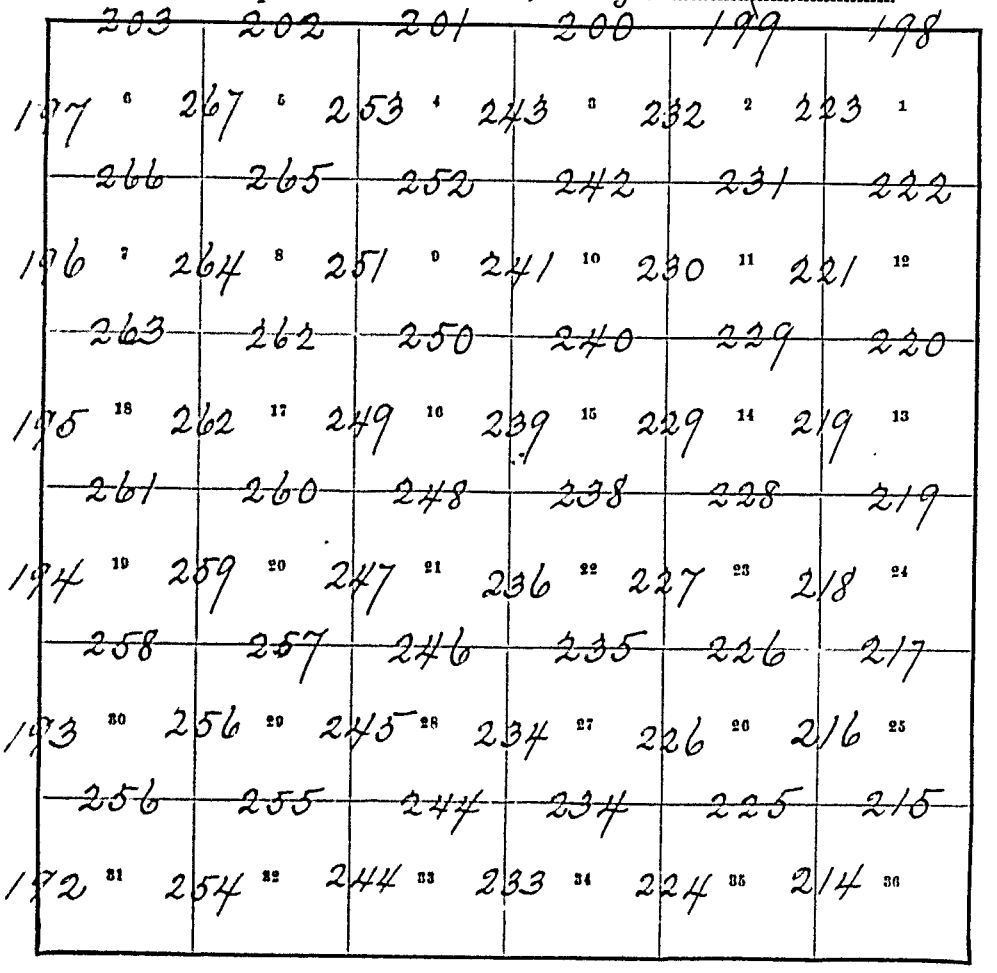
Township 14 S., *Range* 10 E.



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BOOK A-289

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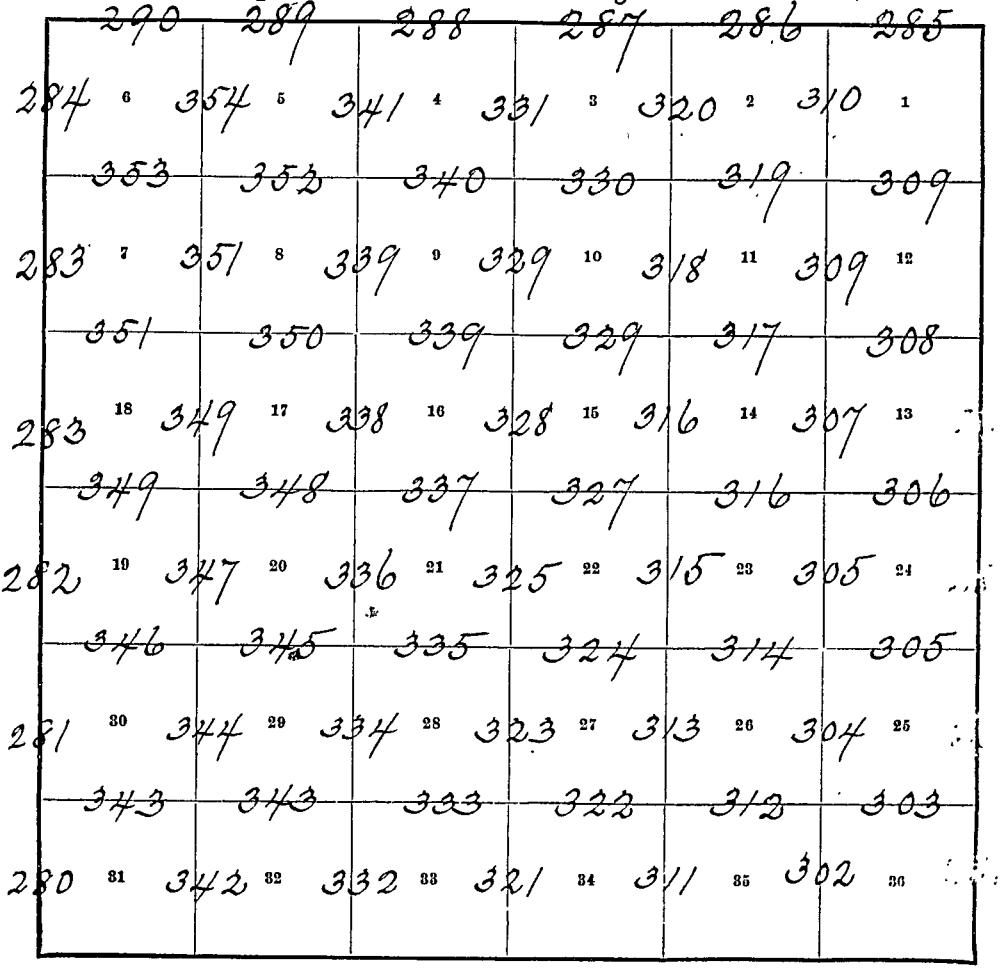
Township 13 S., *Range* 20 E.



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SEAL

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BOOK A-289

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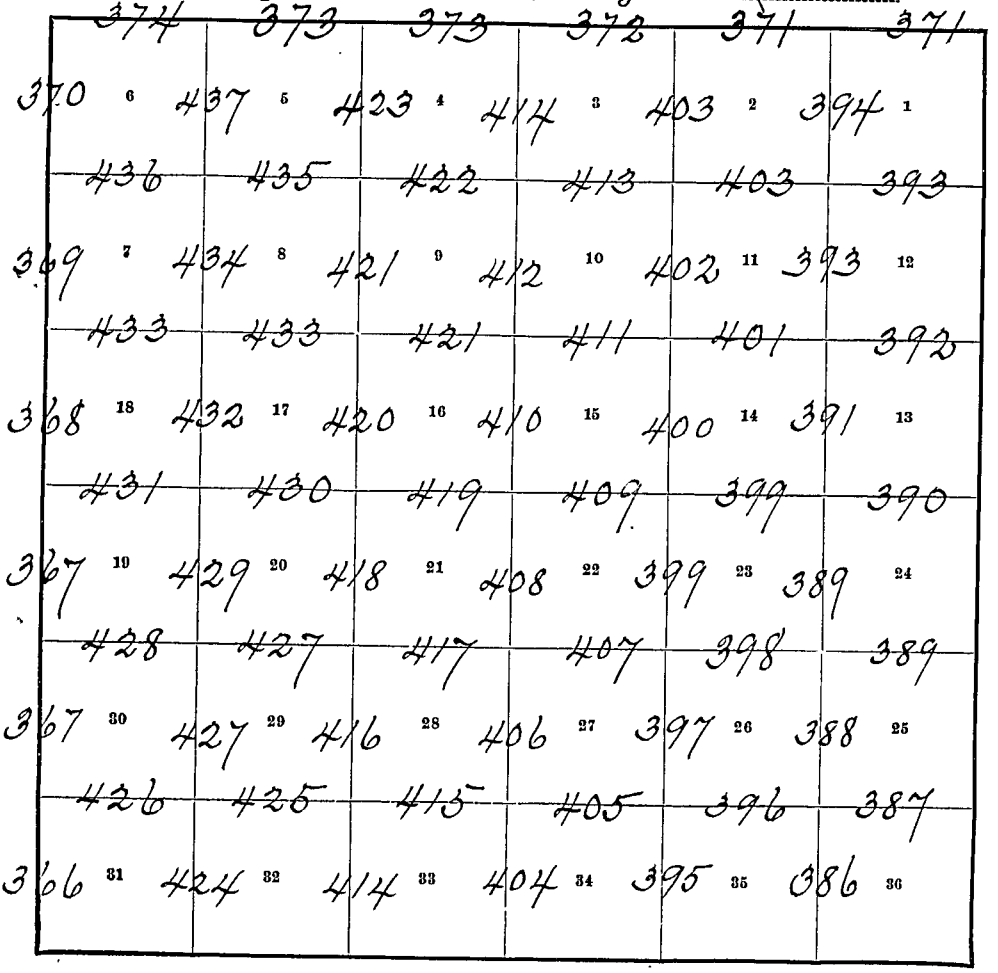

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SEAL

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BOOK A-28

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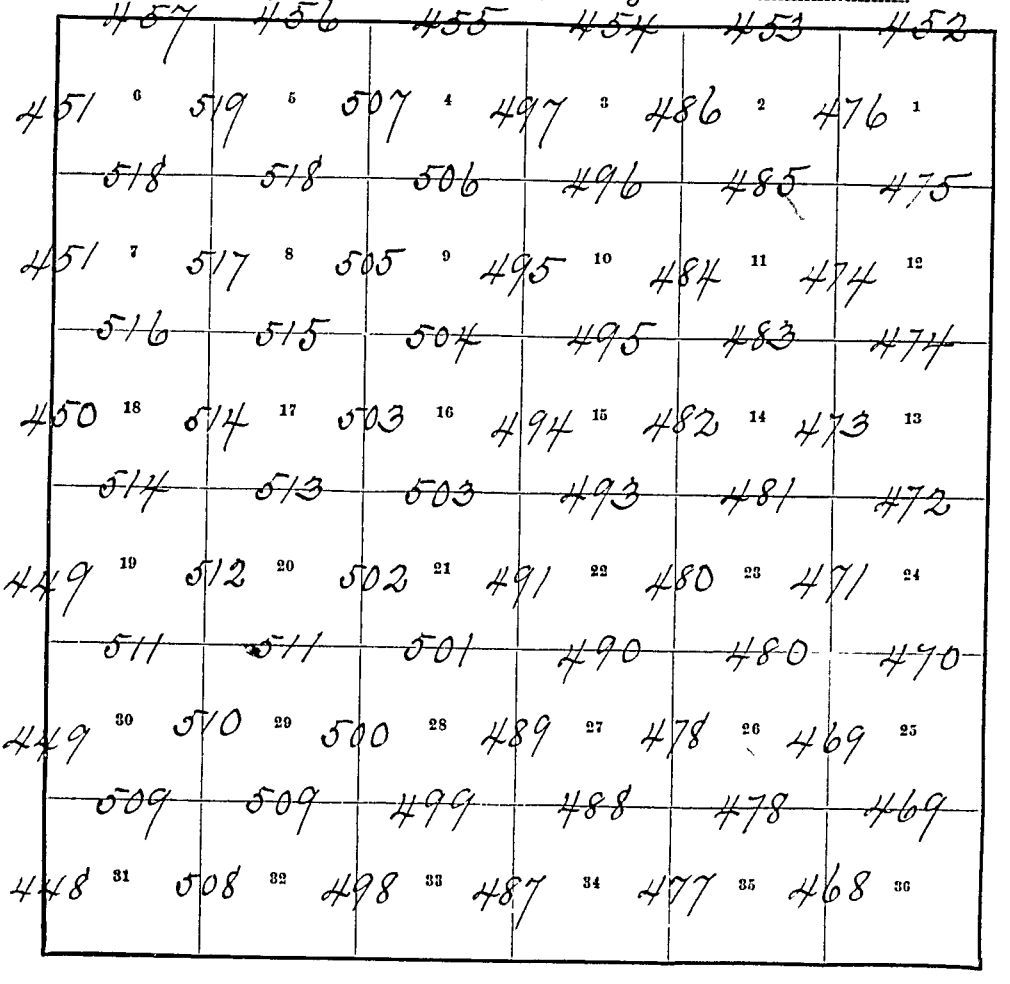
Township 12 S., *Range* 20 E.



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_____

4—679.

E.

BOOK A-289

FIELD NOTES

OF THE SURVEY OF THE

WEST AND NORTH BOUNDARIES

of

Township No. 15 South, Range No. 19 East,

Of the SALT LAKE BASE AND *Meridian,*

of the STATE OF UTAH

AS SURVEYED BY

Scott P. Stewart and John R. Stewart, *United States Deputy Surveyors*

Under ~~*his*~~ their *Contract No.* 242, *dated* April 12, 1901, ~~180~~

Survey commenced August 5, 1901, ~~180~~

Survey completed August 7, 1901, ~~180~~

6—151

W Bdy high 6.00 00'
N " " 5,79.20'

NAMES AND DUTIES OF ASSISTANTS.

Andy J. Stewart Chainman,
Edwin H. Peay Chainman,
Vosco Call Chainman,
Hugh Conover Chainman,
Clarence S. Jarvis Moundman,
John J. Harding, Moundman,
George W. Ekins Axman,
Harry Burton Axman.
Harvey R. Booth Flagman.
Gilbert Burr, Flagman

In preliminary affidavits see book C. Tp 155 R 20 E

6—151

BOOK A-289

INDEX DIAGRAM.

Township....., *Range*.....

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

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day of _____, 189

_____

SEAL

_____

West bou o South R.19 East.

Survey commenced August 5,1901,and executed with a W. and L.E.Gurley light mountain transit,No.3,with 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 latitude and declination arcs;and a W. and L.E.Gurley plain transit,No.2,of which the horizontal limb is provided with one double vernier, reading to single minutes of arc.

The instruments were examined,tested on the true meridian at Salt Lake City,found correct,and were approved by the surveyor general for Utah,the former on June 6,1901,and the latter on May 29,1901.

We examine the adjustments of the instruments,and correct the level and collimation errors,then ,to test the solar apparatus of the No.3 instrument,by comparing its indications,resulting from solar observations made during p.m.and a.m.hours,with a true meridian established by observation on Polaris,we proceed as follows:

Aug. 5,1901:At the standard cor.of Tps.15 S.,Rs.18 and 19 E.,herefofore described,latitude 39° 28'N., longitude 109° 53'W.,we set off 39° 28'N.,on the lat. arc;17° 0'N.,on the decl.arc;,and at 4 h 0 m a.m.,l. m.t.,determind a true meridian with the solar,and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N.of the cor.

At 10 h 37 m. p.m.,l.m.t.,we observe Polaris at eastern elongation,in accordance with the Manual of Instructions,and mark a point in the line thus determined ,on a plug driven in the ground,5.00 chs.N.of our station.

August 5,1901.

August 6,1901:At 6 h30 m a.m.,l.m.t., we lay off

Chains	
	the azimuth of Polaris 1° 35' to the west,and mark the true meridian thus determined by cutting a small groove in the stone alreadyset 5.00 chs.N.of the cor.; on which the true meridian falls 0.35 ins.east of the mark determined by the solar.
	At 7 h 3 m a.m.,l.m.t.,we set off 39° 28'N.,on the lat.arc;16° 50'N.,on the decl.arc;and mark a point in the true meridian determined with the solar ,by a cross on the stone,already set,5.00 chs. N.of our station ;this mark falls 0.25 ins.east of the true meridian established by Polaris observation.
	The solar apparatus by p.m.and a.m.observations,defines positions for true meridians respectively about 0'18"west and 0'13"east of the true meridian established by Polaris observation;therefore we conclude that the ajustments of the instruments are satisfactory.
	The magnetis bearing of the true meridian,at 7 h 30 m a.m.,is 16° 10.6'W.,which reduced by the table on page 100 of the Manual,gives the mean mag.decl.16° 05' E.
	From the Standard cor.of Tp.15 S.,Rs.18 and 19 E., we run
	North,bet.sec.31 and 36.
	Over mountainous land;through scattering timber and scattering undergrowth;descend.
3.00	Creek in canyon,50 ft.below cor.,course N.10°W.; ascend,Creek is 4 lks.wide and course N.10°W.
34.25	Top of ridge,250 ft.above canyon,bears N.50°W.and S.50°E.;descend.
40.00	Set a sandstone,18x10x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
51.50	Bottom of canyon,400 ft.below ridge,course S.80°W.; ascend.

Chains	
80.00	Set a sandstone,18x10x10 ins.,12 ins.in the ground, for cor.of secs.25,30,31,and 36,marked with 5 notches on N.and 1 notch on S.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.

North,bet.secs.25 and 30.

Over mountainous land;through dense undergrowth and scattering timber;ascend.

18.00 Top of ridge,800 ft.above sec.cor.,bears N.76° E.and S.76° W.;descend.

40.00 Set a sandstone,18x9x8 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

64.50 Bottom of hollow,300 ft.below ridge,course S.W.;ascend.

69.50 Top of ridge,300 ft.above hollow,bears N.E.and S.W.; descend.

80.00 Set a sandstone,20x10x8 ins.,15 ins.in the ground,for cor.of secs.19,24,25,and 30,marked with 4 notches on N.and 2 notches on S.edges;from which

A pinion pine,20 ins.diam.,bears N.32° E.,80 lks.dist.,marked T.15 S.,R.19 E.,S.19,B.T.

A pinion pine,20 ins.diam.,bears S.36° E.,64 lks.dist.,marked T.15 S.,R.19 E.,S.30,B.T.

A pinion pine,18 ins.diam.,bears S.68° W.,22 lks.dist.,marked T.15 S.,R.18 E.,S.25,B.T.

A pinion pine,20 ins.diam.,bears N.44° W.,33 lks.dist.,marked T.15 S.,R.18 E.,S.24,B.T.

Chains	
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush .
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	North,bet.secs.19 and 24.
	Over mountainous land;through scattering timber;descend.
8.00	Bottom of hollow,100 ft.below cor.,course S.20°W.; ascend.
21.00	Top of ridge,350 ft.above hollow,bears E.and W.; leave timber and enter dense undergrowth,bears with ridge;descend.
37.50	Bottom of hollow,360 ft.below ridge,course S.60°W.; ascend.
40.00	Set a sandstone,20x12x10 ins.,15 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,1½ ft.high,W.of cor.Pits impracticable.
78.00	Top of steep ascent,bears N.W.and S.E.;ascend more gradually.
80.00	Set a sandstone,20x10x6 ins.,15 ins.in the ground, for .cor.of secs.13,18,19,and 24,marked with 3 notches on S.and 3 notches on N.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-

Chains	
	growth,80.00 chs.
	August 6,1901:At the noon hour the sky is overcast and solar observations are impossible.
	North,bet.secs.13 and 18.
	Over mountainous land;through dense undergrowth;ascend.
7.00	Top of ridge,50 ft.above cor.,bears E.and W.;descend.
39.00	Bottom of hollow,200 ft.below ridge,course N.20° E.; ascend.
40.00	Set a sandstone,16x9x5 ins.,11 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,1½ ft.high,W.of cor.Pits impracticable.
69.00	Top of ridge,250 ft.above hollow,bears N.20° E.and S. 20° W.;descend.
79.00	Bottom of hollow,200 ft.below ridge,course N.E.ascend.
80.00	Set a sandstone,24x12x6 ins.,18 ins.in the ground, for cor.of secs.7,12,13,and 18,marked with 2 notches on N.and 4 notches on S.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	North,bet.secs.7 and 12.
	Over mountainous land;through dense undergrowth;ascend.
39.00	Top of ridge,350 ft.above sec.cor.,bears E.and W.;descend gradually along side of ridge.

Chains	
40.00	Set a sandstone,16x9x9 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
80.00	Set a limestone,18x12x10 ins.,12 ins.in the ground,for cor.of secs.1,6,7,and 12,marked with 1 notch on N.and 5 notches on S.edges;and raise a mound of stone,2 ft. base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous .
	Soil,gravelly loam;2nd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	North,bet.secs.1 and 6.
	Over mountainous land;through dense undergrowth;descend gradually.
5.00	Enter scattering timber,bears E.and W.
40.00	Set a sandstone,14x12x4 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
42.75	Bottom of hollow,200 ft.below ¼ sec.cor.,course W.; ascend.
49.00	Top of ridge,200 ft.above hollow,bears E.and W.;descend.
80.00	Set temp.cor.of Tps.14 and 15 S.,Rs.18 and 19.E.
	Note :This point was afterwards established as the cor.of Tps.14 and 15 S.,Rs.18 and 19 E.;for description of cor.see notes of the N.bdy.of this Tp.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.

Chains	
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	August 6,1901.

August 7,1901:At 7 h 0 m a.m.,l.m.t.,we set off 39° 33'N.,on the dat. arc;(16° 33'N.,on the decl.arc.;) and determine a true meridian with the solar,at the temp.cor.of Tps.14 and 15 S., Rs.18 and 19 E.

Thence we run

East,on a random line along N.bdy of Tp.setting temp. ¼ sec.and sec.cors.at intervals of 40.00 chs.,and at 479.20 chs.intersect E.bdy.of T.15 S.,R.19 E.,42 lks. S.of the cor.of Tps.14 and 15 S.,Rs.19 and 20 E., heretofore described,the falling answers to a correction of 3'or 7 lks.S.per mile,counting from the cor.of Tps.14 and 15 S.,Rs.19 and 20 E.

August 7,1901:At the noon hour the sky is overcast and solar observations are impossible.

Thence we run

S.89° 57'W.,on a true line along N.bdy.of Tp.15 S.,R. 19 E.,bet.secs.1 and 36.

Chains	
	Over mountainous land;through scattering timber and scattering undergrowth;descend .
39.60	Foot of descent,500 ft.below Tp.cor.,bears N.and S.; enter bottom of Hill Creek Canyon.
40.00	Set a sandstone,18x10x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
42.44	Hill creek,3 lks.wide,2 ins.deep,course N.
47.50	Leave canyon bottom,bears N.and S.;ascend abruptly.
51.50	Top of spur,200 ft.above canyon,bears N.E.and S.W.; descend.
80.00	Bottom of hollow,250 ft.below ridge,course N.E.

Chains	
	Set a sandstone,18x10x5 ins.,12 ins.in the ground, for cor.of secs.1,2,35,and 36,marked with 1 notch on E.and 5 notches on W.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.
	S.89° 57'W.,on a true line bet.secs.2 and 35.
	Over mountainous land;through dense undergrowth;ascend.
.60	Foot of perpendicular cliff,15 ft.high,bears N.E.and S.W.
22.50	Foot of perpendicular cliff,100 ft.high,bears N.E. and S.W.
30.00	Top of ridge,300 ft.above sec.cor.,bears N.E.and S.W.
	Enter scattering timber,bears with ridge;descend.
40.00	Set a sandstone,14x12x6 ins.,9 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,8 ins.diam.,bears N.39°W.,53 lks. dist.,marked ¼ S.35,B.T.
	A cedar,5 ins.diam.,bears S.63°E.,52 lks. dist.,marked ¼ S.2,B.T.
50.50	Bottom of hollow,50 ft.below ¼ sec.cor.,course N.20° E.;ascend.
57.50	Top of perpendicular cliff,75 ft.high,bears N.30°W. and S.30°E.;thence over rolling mesa.
65.00	Leave timber and enter dense undergrowth,bears N.and S.
80.00	Set a sandstone,16x8x6 ins.,11 ins.in the ground,for cor.of secs.2,3,34,and 35,marked with 2 notches on

North boundar of T.15 S. R.19 E.-Continued.

Chains

E.and 4 notches on W.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Land,mountainous.

Soil,gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

S.89° 57'W.,on a true line bet.secs.3 and 34.

Over rolling mesa;through scattering timber and dense undergrowth;

37.00 Trail,bears N.70° E.and S.70° W.

40.00 Set a limestone,20x8x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.

72.00 Trail,bears N.E.and S.W.

80.00 Set a limestone,20x12x4 ins.,15 ins.in the ground,for cor.of secs.3,4,33,and 34,marked with 3 notches on E.and 3 notches on W.edges;from which

A cedar,16 ins.diam.,bears N.57° E.,70 lks. dist.,marked T.14S.,R.19 E.,S.34,B.T.

A pinion pine,6 ins.diam.,bears S.8° E.,175 lks.dist.,marked T.15 S.,R.19 E.,S.3,B.T.

A pinion pine,12 ins.diam.,bears S.23° W.,275 lks.dist.,marked T.15 S.,R.19 E.,S.4,B.T.

A pinion pine,6 ins.diam.,bears N.57° W.,125 lks.dist.,marked T.14 S.,R.19 E.,S.33,B.T.

Land,rolling mesa.

Soil,sandy loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Chains Land covered with dense undergrowth,80.00 chs.

S.89° 57'W.,on a true line bet.secs.4 and 33.

Over rolling mesa;through dense undergrowth .

1.00 Enter heavy cedar and pinion pine timber,bears N. and S.

17.25 Trail,bears N.and S.

29.00 Trail,bears N.and S.

40.00 Set a limestone,20x12x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A pinion pine,18 ins.diam.,bears N.42°W.,94 lks.dist.,marked ¼ S.33,B.T.

A cedar ,15 ins.diam.,bears S.30°W.,33 lks. dist.,marked ¼ S.4,B.T.

44.50 Leave mesa,bears N.E.and S.W.;descend into hollow.

50.75 Bottom of hollow,60 ft.below mesa,course N.E.;ascend.

52.25 Trail,bears N.and S.

58.50 Top of accent,200 ft.above hollow,bears N.20°E.and S. 20°W.;thence over rolling mesa.

79.94 Trail,bears N.30°E.and S.30°W.

80.00 Set a limestone,34x12x4 ins.,26 ins.in the ground,for cor.of secs.4,5,32,and 33,marked with 4 notches on E.and 2 notches on W.edges;from which

A cedar,14,ins.diam.,bears N.53°E.,59 lks. dist.,marked T.14 S.,R.19 E.,S.33,B.T.

A cedar,9 ins.diam.,bears S.46°E.,65 lks. dist.,marked T.15 S.,R.19 E.,S.4,B.T.

A cedar,16 ins.diam.,bears S.36°W.,82 lks. dist.,marked T.15 S.,R.19 E.,S.5,B.T.

A cedar,10 ins.diam.,bears N.45°W.,89 lks. dist.,marked T.14 S.,R. 19 E.,S.32,B.T.

Land,mountainous and rolling mesa.

Soil,sandy and gravelly loam;2nd and 3rd rate.

Timber, cedar and pinion pine.

Undergrowth,sage brush.

Chains	
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	S.89° 57'W.,on a true line bet.secs.5 and 32.
	Over rolling mesa;through dense undergrowth and scattering timber.
7.00	Leave timber ,bears N.and S.
27.00	Leave mesa,bears N.50° E.and S.50° W.;ascend.
40.00	Set a conglomerate stone,24x12x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
53.00	Leave undergrowth and enter heavy timber,bears N.and S.
63.00	Top of ridge,150 ft.above ¼ sec.cor.,bears N.40° E. and S.40° W.;descend. Leave timber,bears with ridge.
80.00	Bottom of hollow,200 ft.below ridge,course N.30° E.; Set a sandstone,18x12x4 ins.,12 ins.in the ground,for cor.of secs.5,6,31,and 32,marked with 5 notches on E.and 1 notch on W.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and level.
	Soil,sandy and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	S.89° 57'W.,on a true line bet.secs.6 and 31.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
10.00	Top of ridge,300 ft.above sec.cor.,bears N.20° E.and

Chains	
	S.20° W.;descend.
28.00	Bottom of hollow,300 ft.below ridge,course N.E.;ascend.
40.00	Set a sandstone,16x8x5 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,8 ins.diam.,bears N.30° W.,40 lks. dist.,marked ¼ S.31,B.T. A cedar,8 ins.diam.,bears S.32° E.,50 lks. dist.,marked ¼ S.6,B.T.
55.00	Top of ridge,300 ft.above hollow,bears N.and S.;descend.
79.20	The temp.cor.of Tps.14 and 15 S.,Rs.18 and 19 E. Set a limestone,16x14x6 ins.,11 ins.in the ground,for cor.of Tps.14 and 15 S.,Rs.18 and 19 E.,marked 14 S. on N.E.,19 E.on S.E.,15 S.on S.W.,and 18 E.on N.W. faces;with 6 notches on each edge;and raise a mound of stone,2 ft.base,1½ ft.high S.of cor.Pits impracticable. Land,mountainous. Soil,gravelly;3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,79.20 chs.

August 7,1901.

This township is rough and mountainous along the eastern part ,but contains several level mesas in the central part.The township is well watered by Hill Creek and its branches ,and is well timbered. The township is very well adapted for grazing;it should be subdivided.

BOUNDARIES OF T.15 S.,R.19 E.

Latidudes,departures and closing errors.

Line designated	True bearing	dis-tance chs.	Latitudes N. chs.	Latitudes S. chs.	Departures E. chs.	Departures W. chs.	
W.bdy.T.15S.,R.19 E.	North.	480.00	480.00				✓
N.bdy.T.15 S.R.19 E.	N89° 57E.	479.20	.42		479.20		✓
E.bdy.T.15S.,R.19 E.	South.	480.00		480.00			✓
S.bdy.T.15 S.R.19 E.	West.	480.00				480.00	✓
Convergency					.60		✓
Totals			480.42	480.00	479.80	480.00	
Error in lat.			480.00 .42		Error in dep.	479.80 .20	✓

Scott D. Stewart
John R. Stewart
U.S.Deputy Surveyors.

August 7,1901.

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FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by .....

....., United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of .....

.....

showing the respective capacities in which they acted:

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted .....

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

.....

.....

..... of the .....

..... meridian, ... of ....., which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for .....

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

.....

Subscribed and sworn to before me this .....
day of ....., 189

.....

SEAL

.....

6–161

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, _____, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from _____, United States Surveyor General for _____, bearing date of the _____ day of _____, 189 , I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for _____, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____ _____ _____ _____ _____ of the _____ meridian, in the _____ of _____, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

_____

United States Deputy Surveyor.

Subscribed by said _____, and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah, February 5, 1902, 189

The foregoing field notes of the survey of the West & North Boundaries of Townships 15 South Range 19 East of the Salt Lake Base & Meridian, Utah

executed by Scott T. Stewart and John T. Stewart under his contract No. 242, dated April 2, 1901, 189 , having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

_____

United States Surveyor General.

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

_____

United States Surveyor General.

6—151

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BOOK A-289

FIELD NOTES

S.L.B.M.

OF THE SURVEY OF THE

SUBDIVISION

of

Township No.15 South, Range No.19 East,

Of the SALT LAKE BASE AND *Meridian,*

of the STATE OF UTAH

AS SURVEYED BY

Scott P.Stewart and John R.Stewart, *United States Deputy Surveyor,*s

Under ~~his~~ their *Contract No.* 242, *dated* April 12,1901, ~~xbxx~~

Survey commenced August 8,1901, ~~xxxx~~

Survey completed August 16,1901, ~~xbx~~

6—151

high 59.76.37.

NAMES AND DUTIES OF ASSISTANTS.

Andy J. Stewart Chainman.

Edwin A. Peay, Chainman.

Vosco Call, Chainman.

Hugh Conover, Chainman.

Clarence S. Jarvis Moundman,

John J. Harding, Moundman,

George W. Ekins Axman.

Harry Burton Axman

Harvey R. Booth Flagman.

Gilbert Burr Flagman

In preliminary affidavits see book "D" Pp 155 & 1 & 2 & E

BOOK A-289

INDEX DIAGRAM.

Township....., *Range*.....

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

WE, _____ and _____ do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of

_____

_____, *Chainman.*

_____, *Chainman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

WE, _____ and _____ do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Moundman.*

_____, *Moundman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

WE, _____ and _____ do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Axman.*

_____, *Axman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

I, _____, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of _____

_____, *Flagman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

Subdivision of T.15 S.,R.19 E.

Survey commenced August 8,1901,and executed with a W. and L.E.Gurley light mountain transit,No.3,with 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 latitude and declination arcs,and a W.and L.E.Gurley plain transit,No.2,of which the horizontal limb is provided with one double vernier reading to single minutes of arc.The instruments were examined,tested on the true meridian at Salt Lake City,found correct,and were approved by the surveyor general,the former on June 6,1901,and the latter on May 29,1901.

We examine the adjustments of the instruments and correct the level and collimation errors,then,to test the solar apparatus of the No.3 instrument,by comparing its indications,resulting from solar observatios made during p.m.and a.m.hours ,with a true meridian established by observation on Polaris,we proceed as follows;

August 8,1901:At the Standard cor.of secs.35 and 36, on S.bdy.of Tp.,heretofore described,latitude 39° 28' N.,109° 46'W.longitude,we set off 39° 28'N.,on the lat. arc;16° 10'N.,on the decl.arc; and at 3 h 2 m p.m.,l. m.t.,determine a true meridian with the solar and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N.of our station.

At 10h 17 m p.m.,l.m.t., we observe Polaris at eastern elongation,in accordance with the Manual of Instructions,and mark a point in the line thus deter - mined ,on a wooden plug driven in the ground,5.00 chs N.of our atation.

August 8,1901.

August 9,1901:At 6 h. 30 m a.m.,l.m.t.,we lay off the azimuth of Polaris 1° 35' to the west ,and mark the

Chains

true meridian thus determined by cutting a small groove in the stone already set,5.00 chs .N.of our station;on which the true meridian falls 0.22 ins. east of the mark determined by the solar.

At 7 h 0 m a.m.,l.m.t.,we set off 39° 28'N.,on the lat.arc; 16° 0'N.,on the decl.arc;and mark a point in the true meridian determined with the solar,by a cross on the stone,already set,5.00 chs.N.of the cor.;this mark falls 0.20 ins.east of the true meridian established by Polaris observation.

The solar apparatus by p.m. and a.m.observations ,defines positions for true meridians respectively about 0'13" west and 0'11" east of the true meridian established by Polaris observations;therefore we conclude that the adjustments of the instruments are satisfactory.

The magnetic bearing of the true meridian at 7 h 30 m a.m. is 16° 10.6'W.,which reduced by the table on page 100 of the Manual,gives the mean mag.decl.16° 05' E.

From the standard cor.of secs.35 and 36,we run N.0° 01'W.,bet.secs.35 and 36.

Over rolling mesa;through heavy timber .

40.00 Set a sandstone,18x9x8 ins.,12 ins .in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which

A cedar,12 ins.diam.,bears S.45°E.,50 lks. dist.,marked ¼ S.36,B.T.

A cedar,10 ins.diam.,bears N.W.,40 lks. dist.,marked ¼ S.35,B.T.

80.00 Set a sandstone,20x12x4 ins.,15 ins.in the ground, for cor.of secs.25,26,35,and 36,marked with 1 notch on S.and 1 notch on E.edges;from which

A cedar,6 ins.diam.,bears N.21°E.,65 lks. dist.,marked T.15 S.,R.19 E.,S.25,B.T.

A cedar,10 ins.diam.,bears S.55°E.,35 lks.

Chains	
	dist.,marked T.15 S.,R.19 E.,S.36,B.T.
	A cedar,8 ins.diam.,bears S.56° W.,70 lks.
	dist.,marked T.15 S.,R.19 E.,S.35,B.T.
	A cedar,24 ins.diam.,bears N.53° W.,73 lks.
	dist.,marked T.15 S.,R.19 E.,S.26,B.T.
	Land.rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Heavily timbered land,80.00 chs.
	East,on a random line bet.secs.25 and 36.
40.00	Set temp.¼ sec.cor.
80.02	Intersect E.bdy.of Tp.at the cor.of secs.25,30,31, and 36,heretofore described.
	Thence we run
	West,on a true line bet.secs.25 and 36.
	Over rolling mesa;through heavy timber.
4.00	Edge of mesa,bears N.and S.;descend abruptly into Hill Creek Canyon.
16.00	Foot of descent,enter Hill Creek Canon,bears N.and S.
19.00	Creek,7 lks.wide,5 ins.deep,in bottom of Hill Creek Canyon,600 ft.below mesa,course N.3° E.;ascend abruptly.
20.00	Trail bears N.and S.
23.00	Leave canon bottom,bears N.and S.;ascend.
40.01	Note :The point for ¼ sec.cor.falls on a steep mountain side where it would be impossible to perpetuate the cor.therefore at
48.80	Top of ascent,600 ft.above canyon,bears N.and S.
	Set a sandstone,22x10x8 ins.,16 ins.in the ground, for witness cor.to ¼ sec.cor.,marked W.C.on E.and ¼ on N.face;from which
	A pinion pine,10 ins.diam.,bears N.10° E.,30 lks.dist.,marked ¼ W.C.,S.25,B.T.
	A pinion pine,12 ins.diam.,bears S.,25 lks. dist.,marked W.C.¼ S.36,B.T.
	Thence over rolling mesa.

Chains

54.80 Leave timber and enter dense undergrowth,bears N.and S.

79.00 Leave undergrowth and enter heavy cedar and pinion pine timber,bears N.and S.

80.02 The cor.of secs.25,26,35,and 36.

Land,mountainous and rolling mesa.

Soil,sandy loam and rocky;2nd and 4th rate.

Timber,cedar and pinion pine.

Undergrowth sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,or land covered with dense undergrowth,80.02 chs.

N.0° 01'W. bet.secs.25 and 26.

Over rolling mesa;through heavy timber.

13.50 Edge of mesa,bears N.E.and S.W.Descend.

33.00 Bottom of Canyon,500 ft.below mesa,course N.E.; ascend.

40.00 Set a sandstone,16x8x4 ins.,11 ins.in the ground,for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face;from which

A pinion pine,12 ins.diam.,bears N.85° E.,13 lks.dist.,marked $\frac{1}{4}$ S.25,B.T.

A pinion pine,12 ins.diam.,bears N.60° W.,40 lks.dist.,marked $\frac{1}{4}$ S.26,B.T.

60.00 Top of ascent,300 ft.above canyon,bears N.E.and S.W.

Thence across rolling mesa.

80.00 Set a sandstone,16x8x6 ins.,11 ins.in the ground,for cor.of secs.23,24,25,and 26,marked with 2 notches on S.and 1 notch on E.edges ;from which

A cedar,24 ins.diam.,bears N.18° E.,63 lks. dist.,marked T.15 S.,R.19 E.,S.24,B.T.

A cedar,5 ins.,diam.,bears S.84° E.,146 lks. dist.,marked T.15 S.,R.19 E.,S.25,B.T.

A cedar,15 ins.diam.,bears S.55° W.,32 lks. dist.,marked T.15 S.,R.19 E.,S.26,B.T.

Chains	
	A cedar,15 ins. diam.,bears N.78° W.,35 lks. dist.,marked T.15 S.,R.19 E.,S.23,B.T.
	Land,mountainous and rolling mesa.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.,
	East,on a random line bet.secs.24 and 25.
40.00	Set temp. ¼ sec.cor.
79.92	Intersect E.bdy.of Tp.7 lks.N. of the cor.of secs. 19,24,25,and 30,heretofore described.
	thence we run
	N.89° 57'W.,on a true line bet.secs.24 and 25.
	Over mountainous land;through scattering timber and scattering undergrowth;ascend.
20.00	Top of ridge,200 ft.above cor.,bears N.W.and S.E.; descend.
24.00	Trail bears N.and S.
24.50	Creek,5 lks.wide,3 ins.deep,in bottom of Hill Creek, Canyon,200 ft.below ridge,course N.; ascend.
37.00	Top of ascent,300 ft.above canyon,bears N.10° E.and S.10° W.;thence over mesa.Enter dense sage brush.
39.96	Set a limestone,20x10x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone 2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
79.92	The cor.of secs.23,24,25,and 26.
	Land.level and mountainous.
	Soil,sandy and gravelly;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.92 chs.

Chains	
	N.0° 01'W.,bet.secs.23 and 24.
	Over rolling mesa;through scattering timber and dense undergrowth.
40.00	Set a sandstone,16x10x5 ins.,11 ins .in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,8 ins.diam.,bears S.55° E.,37 lks.dist.,marked ¼ S.,24,B.T.
	A pine,12 ins.diam.,bears S.35° W.,46 lks. dist.,marked ¼ S. 23, B.T.
80.00	Set a sandstone,16x10x5 ins.,11 ins.in the ground, for cor.of secs.13,14,23,and 24,marked with 3 notches on S.and 1 notch on E.edges;from which
	A pinion pine,9 ins.diam.,bears N.40° E.,30 lks.dist.,marked T.15 S.,R.19 E.,S.13,B.T.
	A pinion pine,9 ins.diam.,bears S.65° E.,40 lks.dist.,marked T.15 S.,R.19 E.,S.24,B.T.
	A pinion pine,16 ins.diam.,bears S.25° W.,60 lks.dist.,marked T.15 S.,R.19 E.,S.23,B.T.
	A pinion pine,12 ins.diam.,bears N.45° W.,40 lks.dist.,marked T.15 S.,R.19 E.,S.14,B.T.
	Land,rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Land covered with dense undergrowth,80.00 chs.
	August 9,1901:At the noon hour the sky is overcast and solar observations are impossible.
	S.89° 57'E.,on a random line bet.secs.13 and 24.
40.00	Set temp.¼ sec.cor.
79.98	Intersect E.bdy.of Tp.10 lks.S.of the cor.of secs.13, 18,19,and 24.Heretofore described
	Thence we run
	S.89° 59'W.,on a true line bet.secs.13 and 24.
	Over rolling mesa;through scattering timber and dense

Chains	
	undergrowth.
12.00	Top of perpendicular cliff ,50 ft.high,bears N.and S. Descend over ledges.
20.00	Foot of descent,660 ft.below mesa,bears N.and S.;enter bottom of Hill Creek Canyon.
23.50	Trail,bears N.and S.
25.80	A cabin belonging to R. Fullerton bears N.23° E.,about 18.00 chs.dist. There are two other cabins and a corral.
28.75	Hill Creek,3 lks.wide,2 ins.deep,in bottom of Hill Creek Canyon,course N.
30.00	Leave canyon bottom,bears N.and S.;ascend.
39.99	Set a sandstone, 20x14x6 ins.,15 ins.in the ground, for ¼ sec.cor.;marked ¼ on N.face;from which A cedar,12 ins.diam.,bears N.60° W.,47 lks. dist.,marked ¼ S.13,B.T. A pine,10 ins.diam.,bears S.30° W.,27 lks. dist.,marked ¼ S.24,B.T.
56.00	Top of ascent,600 ft.above canyon,bears N.20° W.and S.20° E.;Thence over rolling mesa.
79.98	The cor.of secs.13,14,23,and 24.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and rocky;2nd and 4th rate.
	Timber,cedar and pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.98 chs.

	N.0° 01 'W.,bet.secs.13 and 14.
	Over rolling mesa;through dense undergrowth and scattering timber.
19.50	Top of cliff,25 ft.high,bears E.and W.;descend into Big Dougy Canon.
40.00	Set a sandstone,20x16x4 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound

Chains	
	of stone,2 ft.base.1½ ft.high.W.of cor.Pits impracticable.
50.94	Creek,2 lks.wide,1 in.deep,in bottom of Big Dougy Canyon ,550 ft.below mesa,course N.25° E.;ascend.
58.50	Trail,bears N.25° E.and S.25° W.
60.00	Top of spur,100 ft.above canyon,bears E.and W.;descend.
75.85	Bottom of Little Dogy Canyon,125 ft.below spur,course E.;ascend.
76.50	Trail, bears E.and W.
77.60	Foot of perpendicular cliff,30 ft.high,bears E.and W.
80.00	Set a sandstone,20x10x8 ins.,15 ins.in the ground, for.cor.of secs.11,12,13,and 14,marked with 4 notches on S.and 1 notch on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and rolling mesa.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 59'E.,on a random line bet.secs.12 and 13.
40.00	Set temp. ¼ sec.cor.
80.14	Intersect E.bdy.of Tp.7 lks.N.of the cor.of secs.7, 12,13,and 18,herefofore described,
	Thence we run
	N.89° 58'W.,on a true line bet.secs.12 and 13.
	Over mountainous land;through scattering timber and scattering undergrowth;descend.
31.00	Foot of descent,500 ft.below sec.cor.,bears N.and S.
	Enter bottom of Hill Creek Canyon.Trail bears N.and S.
39.75	Hill Creek,10 lks.wide,3 ins.deep,course N.
40.07	Set a limestone,14x8x6 ins.,10 ins.in the ground,for

Chains	
	¼ sec.cor.,marked ¼ on N.face;and raïse a mound of stone,2 ft.base.1½ ft.hgih,N.of cor.Pits impracticable
42.00	Leave canyon bottom,bears N.and S.;ascend.
55.00	Top of ridge,600 ft.above canyon,bears N.18° E.and S.18° W.;descend over a series of ledges.
61.75	Leave ledges,bears N.18° E.and S.18° W.
66.50	Bottom of Big Dougy Canyon,500 ft.below ridge, course N.E.;ascend.
73.50	Foot of perpendicular cliff,75 ft.high,bears N.E.and S.W.
80.14	The cor.of secs.11, 12,13,and 14.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.14 chs.

N.0° 01'W. bet.secs.11 and 12.

Over mountainous land;through scattering timber;ascend.

2.00 Foot of perpendicular cliff,20 ft.high,bears E.and W.

40.00 Top of ridge,700 ft.above sec.cor.,bears E.and W.

Set a sandstone.18x10x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which

A cedar,5 ins.diam.,bears N.35° E.,40 lks. dist.,marked ¼ S.12,B.T.

A pinion pine,8 ins.diam.,bears N.20° W.,50 lks.dist.,marked ¼ S.11,B.T.

Descend over scattering sandstone boulders.

68.25 Bottom of hollow,400 ft.below ridge,course S.50° E.; leave boulders;ascend.

74.00 Top of ridge,200 ft.above hollow,bears N.W.and S.E.; descend.

80.00 Set a sandstone,24x14x4 ins.18 ins.in the ground,

Chains	
	for cor.of secs.1,2,11,and 12,marked with 5 notches on S.and 1 notch on E.edges ;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous .
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous land,80.00 chs.

	S.89° 58'E.,on a random line bet.secs.1 and 12.
40.00	Set temp.¼ sec.cor.
80.34	Intersect E.bdy.of Tp.18 lks.S.of the cor.of secs. 1,6,7,and 12,heretofore described,
	Thence we run
	S.89° 54'W.,on a true line bet.secs.1 and 12.
	Over mountainous land;through scattering timber.
	Descend.
19.00	Leave timber,bears N.and S.
26.00	Foot of descent,500 ft.below sec.cor.,bears N.and S.
	Enter bottom of Hill Creek Canyon.
30.00	Trail bears N.and S.
37.70	Hill Creek,10 lks.wide,6 ins.deep,course N.
40.17	Set a sandstone,16x10x4 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
40.50	Leave bottom of canyon,bears N.and S.;ascend.
59.80	Top of ridge,400 ft.above canyon,bears N.and S.;descend.
80.34	The cor.of secs.1,2,11,and 12.
	Land,mountainous.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous land,80.34 chs.

Chains	
	N.6° 01'W.,on a random line bet.secs.1 and 2.
40.00	Set temp .¼ sec.cor.,
79.94	Intersect N.bdy.of Tp.at the cor.of secs.1,2,35,and 36,heretofore described.
	Thence we run
	S.0° 01'E.,on a true line bet.secs.1 and 2.
	Over mountainous land;through scattering timber and scattering undergrowth;ascend.
32.50	Top of ridge,200 ft.above sec.cor.,bears N.60° E.and S.60° W.;descend.
39.45	Top of perpendicular cliff,25 ft.high,bears N.60° E. and S.60° W.;
39.94	Set a sandstone,14x10x6 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
55.00	Bottom of hollow,250 ft.below ridge,course E.;ascend.
73.50	Top of perpendicular cliff,100 ft.high,bears E.and W.
79.94	The cor.of secs.1,2,11,and 12.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,79.94 chs.

August 9,1901.

August 10,1901:At 7 h 2 m a.m.,l.m.t.,we set off 39° 28'N.,on the lat.arc;15° 42'N.,on the decl.arc;and determine a true meridian with the solar,at the standard cor.of secs.34 and 35,on S.bdy.of Tp.,heretofore described.

Thence we run

N.0° 01'W.,bet.secs.34 and 35.

Over mountainous land;through heavy cedar and pinion

Chains	
	pine timber;ascend.
23.50	Top of ridge,75 ft.above sec.cor.,bears N.20 °E.and S.20°W.;descend.
40.00	Set a sandstone,34x6x6 ins.,26 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,12 ins.diam.,bears N.40°E.,12 lks.dist.,marked ¼ S.35,B.T. A cedar,15 ins.diam.,bears S.40°W.,152 lks. dist.,marked ¼ S. 34, B.T.
71.00	Trail,bears N.E.and S.W.
72.65	Bottom of hollow,200 ft.below ridge,course N.E.;ascend.
79.50	Top of ledge,25 ft.high,bears N.E.and S.W.;thence over mesa.
80.00	Set a sandstone,16x12 x8 ins.,11 ins.in the ground, for cor.of secs.26,27,34and 35,marked with 1 notch on S.and 2 notches on E.edges;from which A pinion pine,12 ins.diam.,bears N.54°E.,65 lks.dist.,marked T.15 S.,R.19 E.,S.26,B.T. A cedar,8 ins.diam.,bears S.29°E.,32 lks. dist.,marked T.15 S.,R.19 E.,S.35,B.T. A pinion pine,12 ins.diam.bears S.25°W.,30 lks.dist.,marked T.15 S.,R.19 E.,S.34,B.T. A pinion pine,12 ins.diam.,bears N.59°W.,100 lks.dist.,marked T.15 S.,R.19 E., S.27,B.T.
	Land,mountainous. Soil,sandy and gravelly loam;2nd and 3rd rate. Timber,cedar and pinion pine. Good grass for grazing . Mountainous or heavily timbered land,80.00 chs.

	East,on a random line bet.secs.26 and 35.
40.00	Set temp.¼ sec.cor.
79.90	Intersect N.and S.line ,at the cor.of secs.25,26,35, and 36,

Subdivision of T.15 S.,R.19 E.-Continued.

Chains.	
	Thence we run
	West,on a true line bet.secs.26 and 35.
	Over rolling mesa;through heavy cedar and pinion pine timber.
10.50	Edge of mesa,bears N.30° E.and S.30° W.;descend.
21.25	Bottom of canyon,200 ft.below mesa,course N.E.ascend.
37.00	Top of ridge 250feet above hollow,bears N.E.and S.W.
39.95	Set a limestone,18x8x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,10 ins.diam,bears N.40° W.,150 lks.dist.,marked T.15 S.,R.19 E.,S.26,B.T.
	A pinion pine,8 ins.diam.,bearsS.45° W.,100 lks.dist.,marked T.15 S.,R.19 E.,S.35,B.T.
70.00	Trail,bears N.E.and S.W.
71.00	Bottom of hollow,300 ft.below ridge,course N.E.;ascend.
79.00	Top of ascent,300 ft.above hollow,bears N.E.and S.W.; thence over mesa.
79.90	The cor.of secs.26,27,34,and 35.
	Land,level and mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,79.90 chs.

	N.0° 01'W.,bet.secs.26 and 27.
	Over rolling mesa;through heavy timber.
40.00	Set a limestone,16x8x7 ins.,11 ins.in the ground,for ¼ sec.cor. ,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
54.00	Edge of mesa,bears N.E.and S.W.;descend.
67.00	Leave timber ,bears N.E.and S.W.
72.45	Creek,2 lks.wide,1 in.deep,in bottom of Big Dougy Canyon,500 ft.below mesa,course N.E.;ascend.

Chains	
79.50	Foot of perpendicular cliff,100 ft.high,bears N.E. and S.W.
80.00	Set a sandstone,30x12x4 ins.,24 ins.in the ground, for cor.of secs.22,23,26,and 27,marked with 2 notches on S.and 2 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.

	East,on a random line bet.secs.23 and 26.
40.00	Set temp ¼ sec.cor.
79.96	Intersect N.and S.line,11 lks.N.of the cor .of secs. 23,24,25,and 26.
	Thence we run
	N.89° 55'W.,on a true line bet.secs.23 and 26.
	Over rolling mesa;through scattering timber and dense undergrowth.
39.98	Set a limestone,16x8x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,12 ins.diam.,bears N.25°W.,30 lks.dist.,marked ¼ S.23,B.T.
	A cedar,15 ins.diam.,bears S.25°E.,40 lks. dist.,marked ¼ S.26,B.T.
50.00	Leave mesa,bears N.and S.;descend.
74.00	Creek,2 lks.wide,2 ins.deep,in bottom of Big Dougy Canyon,600 ft.below mesa,course N.E.;ascend.
79.60	Foot of perpendicular cliff,100 ft.high,bears N.E. and S.W.
79.96	The cor.of secs.22,23,26,and 27.
	Land,mountainous and rolling mesa.

Chains	
	Soil,sandy loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.96 chs.
	N.0° 01'W.,bet.secs.22 and 23.
	Over mountainous land;through scattering timber;ascend.
2.00	Foot of perpendicular cliff,100 ft.high,bears N.E. and S.W.
20.96	Foot of perpendicular cliff,80 ft.high.bears N.E. and S.W.
21.10	Top of ridge,500 ft.above sec.cor.,bears N.E.and S.W.;descend.
40.00	Set a limestone,16x12 x8 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,30 ins.diam.,bears S.70°E.,40 lks.dist.,marked ¼ S.23,B.T. A pinion pine,12 ins.diam.,bears S.65°W.,70 lks.dist.,marked ¼ S.22,B.T.
40.25	Bottom of hollow,250 ft.below ridge,course E.;ascend.
55.20	Top of perpendicular cliff,20 ft.high and top of ridge, 500 ft.above hollow,bears N.75°E.and S.75°W.;descend.
66.50	Creek,3 lks.wide,3 ins.deep,in bottom of canyon,600 ft.below ridge,course N.70°E.;ascend.
80.00	Set a limestone,20x12x4 ins.,15 ins.in the ground, for cor.of secs.14,15,22 ,and 23,marked with 3 notches on S.and 2 notches on E.edges;from which A pinion pine,10 ins.diam.,bears N.78°E.45 lks.dist.,marked T.15 S.,R.19 E.,S.14,B.T. A pinion pine,12 ins.diam.,bears S.40°E.,35 lks.dist.,marked T.15 S.,R.19 E.,S.23,B.T. A pinion pine,9 ins.diam.,bears S.25°W.,50

Chains	
	lks.dist.,marked T.15 S.,R.19 E.,S.22,B.T.
	A pinion pine,9 ins.diam.,bears N.30° W.,40 lks.dist.,marked T.15 S.,R.19 E.,S.15,B.T.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous land,80.00 chs.
	August 10,1901:At this cor.we set off 15° 37'N.,on the decl.arc;and at 0 h 3 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat. is 39° 30'N.,which is the proper lat.nearly.
	S.89° 55'E.,on a random line bet.secs.14 and 23.
40.00	Set temp.¼ sec.cor.
80.20	Intersect N.and S.line,11 lks.N.of the cor.of secs. 13,14,23,and 24.
	Thence we run
	N.89° 50'W.,on a true line bet.secs.14 and 23.
	Over rolling mesa;through scattering timber and dense undergrowth.
15.86	Top of perpemdicular cliff,40 ft.high,bears N.and S.
	Descend abruptly.
24.00	Enter a series of ledges,bears N.and S.
33.25	Creek,3 lks.wide,2 ins.deep,in bottom of Big Dougy Canyon,800 ft.below mesa,course N.40° E.;leave ledges.
	Ascend abruptly.
34.88	Foot of perpendicular cliff,75 ft.high,bears N.E.and S.W.
40.10	Set a sandstone,18x12x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
	Foot of perpendicular cliff,50 ft.high,bears N.E. and S.W.

Chains	
80.20	Cor .of secs.14,15,22,and 23.
	Land,rolling and mountainous.
	Soil,sandy loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.20 chs.
	N.0° 01'W.,bet.secs.14 and 15.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
10.00	Top of ascent,300 ft.above sec.cor.,bears N.80°E.and S.80°W.;thence over rolling mesa.
20.50	Trail,bears E.and W.
40.00	Set a sandstone,18x10x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face; from which
	A cedar,18 ins.diam.,bears N.18°E. 160 lks. dist.,marked ¼ S.,14,B.T.
	No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
67.00	Edge of mesa,bears N.80°E.,and S.80°W.;descend.
77.00	Bottom of Little Dougy Canyon,700 ft.below mesa,course N.65°E.;ascend.
80.00	Set a sandstone,20x9x6 ins.,15 ins.in the ground, for cor.of secs.10,11,14,and 15,marked with 4 notches on S.and 2 notches on E.edges;from which
	A cotton wood,10 ins.diam.,bears N.16°E.,85 lks.dist.,marked T.15 S.,R.19 E.,S.11,B.T.
	A cotton wood,10 ins.diam.,bears S.20°W.,75 lks.dist.,marked T.16 S.,R.19 E.,S.15,B.T.;
	No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W. of cor.Pits impracticable.
	Land,mountainous and rolling mesa.

Chains	
	Soil, sandy and gravelly loam; 2nd and 3rd rate.
	Timber, cedar, pinion pine and cotton wood.
	Undergrowth, sage brush.
	Good grass for grazing.
	Mountainous land, or land covered with dense undergrowth, 80.00 chs.
	S. 89° 50' E., on a random line bet. secs. 11 and 14.
40.00	Set temp. ¼ sec. cor.
80.04	Intersect N. and S. line, 18 lks. S. of the cor. of secs. 11, 12, 13, and 14.
	Thence we run
	N. 89° 58' W., on a true line bet. secs. 11 and 14.
	Over mountainous land; through scattering timber and scattering undergrowth; descend.
19.25	Bottom of Little Dougy Canyon, 250 ft. below sec. cor., course S. 65° E.; ascend along south side of canyon.
40.02	Set a sandstone, 16x12x5 ins., 11 ins. in the ground, for ¼ sec. cor., marked ¼ on N. face; and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Pits impracticable.
75.00	Bottom of Little Dougy Canyon, course N. 65° E.; ascend.
80.04	The cor. of secs. 10, 11, 14, and 15.
	Land, mountainous.
	Soil, gravelly; 3rd rate.
	Timber, cedar and pinion pine.
	Undergrowth, sage brush.
	Good grass for grazing.
	Mountainous land, 80.04 chs.
	N. 0° 01' W., bet. secs. 10 and 11.
	Over mountainous land; through scattering timber; ascend.
1.50	Foot of perpendicular cliff, 50 ft. high, bears E. and

Chains	
	W.
34.00	Top of ridge,400 ft.above cor.,bears N.75° E.and S.75° W.;descend.
40.00	Set a limestone,14x10x5 ins.,9 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,7 ins.diam.,bears S.25° E.,92 lks. dist.,marked ¼ S.11,B.T. A cedar,16 ins.diam.,bears S.30° W.,48 lks. dist.,marked ¼ S.10,B.T.
71.00	Trail,bears E.and W.
74.00	Begin abrupt descent,bears East and West.
80.00	Set a limestone,18x8x4 ins.,12 ins.in the ground,for cor.of secs.2,3,10,and 11,marked with 5 notches on S.and 2 notches on E.edges;from which A cedar,15 ins.diam.,bears N.35° E.,65 lks. dist.,marked T.15 S.,R.19 E.,S.2,B.T. A cedar,24 ins.diam.,bears N.40° W.,80 lks. dist.,marked T.15 S.,R.19 E.,S.3,B.T.;No other trees within limits;raise a mound of stone,2 ft.base, 1½ ft. high,W.of cor.Pits impracticable. Land,mountainous. Soil,sandy and gravelly loam;2nd and 3rd rate. Timber,cedar and pinion pine. Good grass for grazing. Mountainous land,80.00 chs.
	S.89° 58'E.,on a random line bet.secs.2 and 11.
40.00	Set temp.¼ sec.cor.
80.00	Intersect N.and S.line,2 lks.S.of the cor.of secs. 1,2,11,and 12.
	Thence we run
	N.89° 59'W.,on a true line bet. secs.2 and 11.
	Over mountainous land;through scattering timber;ascend.
6.50	Top of ridge,100 ft.above sec.cor.,bears N.W.and S. E.;descend.

Chains	
40.00	Set a sandstone,18x7x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
45.50	Bottom of hollow,350 ft.below ridge,course S.65° E.; ascend.
80.00	The cor.of secs.2,3,10,and 11.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,scattering cedar and pinion pine.
	Good grass for grazing.
	Mountainous land,80.00 chs.
	August 10,1901.

August 12,1901:At 7 h 2 m a.m.,l.m.t.,we set off 39° 32'N.,on the lat.arc;15° 07'N.,on the decl.arc;and determine a true meridian with the solar,at the cor.of secs.2,3,10,and 11.

Thence we run

N.0° 01'W.,on a random line bet.secs.2 and 3.

40.00 Set temp.¼ sec.cor.

79.70 Intersect N .bdy.of Tp.11 lks.E.of the cor.of secs. 2,3,34,and 35,heretofore described.

Thence we run

S.0° 06'E.,on a true line bet.secs.2 and 3.

Over rolling mesa;through dense undergrowth.

21.50 Enter scattering cedar and pinion pine timber,bears E.and W.

39.70 Set a sandstone,15x10x4 ins.,10 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

71.20 Top of perpendicular cliff,20 ft.high,at edge of mesa, bears E.and W.;descend.

Chains	
74.50	Bottom of hollow,200 ft.below mesa,course E.;ascend.
79.70	The cor.of secs.2,3,10,and 11.
	Land,rolling mesa and mountainous.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.70 chs.
	From the standard cor.of secs.33 and 34,on S.bdy.of Tp.,heretofore described,
	We run
	N.0° 02'W.,bet.secs.33 and 34.
	Over mountainous land;through scattering undergrowth; ascend.
23.50	Top of ridge,100 ft.above sec.cor.,bears N.20°E.and S.20°W.;descend.
40.00	falls on stationary boulder,10x4x3 ft.above ground, on which we cut a cross at the exact cor.point,for $\frac{1}{4}$ sec.cor.,mark $\frac{1}{4}$ on W.side;and raise a mound of stone,2 ft.base,$1\frac{1}{2}$ ft.high,W.of cor.Pits impracticable.
48.00	Creek,2 lks.wide,2 ins.deep,in bottom of Big Dougy Canyon,300 ft.below ridge,course N.33°E.;ascend.
50.60	Trail,bears N.33°E.and S.33°W.
72.00	Top of spur,200 ft.above canyon,bears E.and W.;descend.
76.00	Bottom of hollow,100 ft.below ridge,course E.;ascend.
80.00	Set a sandstone,24x12x4 ins.,18 ins.in the ground, for cor.of secs.27,28,33,and 34,marked with 1 notch on S.and 3 notches on E.edges;from which
	A pinion pine,10 ins.diam.,bears N.80°E.,50 lks.dist.,marked T.15 S.,R.19 E.,S.27,B.T.

Chains

A pinion pine,8 ins.diam.,bears S.20° E.,100 lks.dist.,marked T.15 S.,R.19 E.,S.34,B.T.

A pinion pine,9 ins.diam.,bears S.45° W.,130 lks.dist.,marked T.15 S.,R.19 E.,S.33,B.T.

A pinion pine,6 ins.diam.,bears N.80° W.,85 lks.dist.,marked T.15 S.,R.19 E.,S.28,B.T.

Land,mountainous.

Soil,gravelly;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,80.00 chs.

August 12,1901:At the noon hour the sky is overcast and solar observations are impossible.

East,on a random line bet.secs.27 and 34.

40.00 Set temp.¼ sec.cor.

80.04 Intersect N.and S.line,4 lks.S.of the cor.of secs. 26,27,34,and 35.

Thence we run

S.89° 58'W.,on a true line bet.secs.27 and 34.

Over mesa;through heavy cedar and pinion pine timber.

10.00 Edge of mesa,bears N.55° E.and S.55° W.; ascend.

15.00 Top of ridge,40 ft.above mesa,bears N.55° E.and S.55° W.;descend .

30.50 Bottom of hollow,60 ft.below ridge,course N.;ascend.

39.00 Top of ridge,100 ft.above hollow,bears N.25° E.and S. 25° W.;descend.

40.02 Set a sandstone,16x9x5 ins. ,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which

A pinion pine,10 ins.diam.,bears N.30° W., 18 lks.dist.,marked ¼ S 27,B.T.

A pinion pine,6 ins.diam.,bears S.20° W.,35 lks.dist.,marked ¼ S.34,B.T.

60.00 Creek,3 lks.wide,2 ins.deep,in bottom of Big Dougy

Subdivi[illegible] 9[illegible] -Continued

Chains	
	Canyon,400 ft.below ridge,course N.E.;ascend.
80.04	The cor.of secs.27,28,33,and 34.
	Land,mountainous and level.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.04 chs.

N.0°02'W.,bet.secs.27 and 28.

Over mountainous land;through heavy timber;ascend.

40.00 Set a sandstone,22x10x5 ins.,16 ins.in the ground, for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face;from which

A pinion pine,6 ins.diam.,bears N.45°E.,25 lks.dist.,marked $\frac{1}{4}$ S.27,B.T.

A pinion pine,8 ins.diam.,bears S.85°W.,8 lks.dist.,marked $\frac{1}{4}$ S.28,B.T.

51.00 Top of ridge,75 ft.above $\frac{1}{4}$ sec.cor.,bears N.30°E.and S.30°W.;descend.

75.00 Foot of descent,200 ft.below ridge,bears N.25°E.and S.25°W.;thence over mesa.

80.00 Set a sandstone,14x8x6 ins.,9 ins.in the ground,for cor.of secs.21,22,27,and 28,marked with 2 notches on on S.and 3 notches on E.edges;from which

A cedar,6 ins.diam.,bears N.22°E.,260 lks. dist.,marked T.15 S.,R.19 E.,S.22,B.T.

A cedar,10 ins.diam.,bears S.33°E.,90 lks. dist.,marked T.15 S.,R.19 E.,S.27,B.T.

A cedar,8 ins.diam.,bears S.30°W.,130 lks. dist.,marked T.15 S.,R.19 E.,S.28,B.T.

A cedar,10 ins.diam.,bears N.23°W.,275 lks. dist.,marked T.15 S.,R.19 E.,S.21,B.T.

Land,mountainous and mesa.

Soil,sandy and gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Chains

Good grass for grazing.

Mountainous or heavily timbered land,80.00 chs.

N.89° 58'E.,on a random line bet.secs.22 and 27.

40.00 Set temp.¼ sec.cor.

79.96 Intersect N.and S.line,7 lks.N.of the cor.of secs.22, 23,26,and 27.

Thence we run

N.89° 59'W.,on a true line bet.secs.22 and 27.Over Mountainous land ;through heavy timber and scattering undergrowth.Ascend.

21.00 Top of ridge ,bears N.45° E.and S.45° W.Descend.

39.98 Set a sandstone,20x8x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A cedar,24 ins.diam.,bears N.,10 lks.dist., marked ¼ S.22,B.T.

A pinion pine,14 ins.diam.,bears S.10° E.,60 lks.dist.,marked ¼ S.27,B.T.

50.00 Bottom of hollow,200 ft.below ridge,course N.35° E.; ascend.

63.50 Top of ridge,200 ft.above hollow,bears N.25° E.and S. 25° W.;descend.

76.00 Foot of descent,100 ft.below ridge,bears N.25° E.and S.25° W.;thence over mesa.

79.96 The cor.of secs.21,22,27,and 28.

Land,mountainous and rolling mesa.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,79.96 chs.

N.0° 02'W.,bet.secs.21 and 22.

Over rolling mesa;through scattering timber and dense undergrowth.

2.00 Leave undergrowth and enter heavy timber,bears E.and

Chains	
	W.
22.00	Edge of mesa,bears N.45° E.and S.45° W.;descend.
35.00	Bottom of canyon,200 ft.below mesa,course N.60° E.; ascend.
36.00	Top of spur,20 ft.above canyon,bears N.82° E.and S. 82° W.;descend.
37.75	Bottom of canyon,200 ft.below spur,course E.A spring of good water bears West about 5.00 chs.dist.Ascend.
40.00	Set a sandstone,30x10x10 ins.24 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,12 ins.diam.,bears S.80° E.,50 lks.dist.,marked ¼ S.22,B.T. A pinion pine,11 ins.diam.,bears N.80° W.,75 lks.dist.,marked ¼ S.21,B.T.
44.00	Top of ascent,350 ft.above canyon,bears E.and W.; thence over mesa.
80.00	Set a sandstone,16x9x9 ins.,11 ins.in the ground, for cor.of secs.15,16,21,and 22,marked 15 S.,S.15 on N.E.;19 E.,S.22 on S.E.;S.21 on S.W.;and S.16 on N. W.faces;with 3 notches on S.and 3 notches on E.edges; From which A pinion pine,20 ins.diam.,bears N.20° E.,25 lks.dist.,marked T.15 S.,R.19 E.,S.15,B.T. A cedar,36 ins.diam.,bears S.57° W.,50 lks. dist.,marked T.15 S.,R.19 E.,S.21,B.T. A cedar,6 ins.diam.,bears N.45° W.,60 lks. dist.,marked T.15 S.,R.19 E.,S.16,B.T. No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high ,W.of cor.Pits impracticable. Land,mountainous and rolling mesa. Soil,sandy and gravelly loam;2nd and 3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense under- growth,or heavily timbered Land,80.00 chs.

Chains

August 12,1901:At this cor.latitude 39° 30'N.,longitude 109° 49'W.,we set off 39° 30'N.on the lat.arc; 14° 58'N. on the decl.arc;and (at 5 h 0 m p.m.,l.m.t.,) mark a point in the true meridian determined with the solar,by a cross on stone firmly set in the ground ,5.00 chs.N.of the cor.

At 10 h 0 m p.m.,l.m.t.,we observe Polaris at eastern elongation ,and mark a point in the line thus determined on a wooden plug driven in the ground, 5.00 chs .N.of our station.

August 12,1901.

August 13,1901:At 6 h 30 m a.m.,l.m.t.,we lay off the azimuth of Polaris 1° 35' to the west,and mark the true meridian thus determined by cutting a small groove in the stone set August 12,on which the true meridian falls 0.25 ins.east of the mark determined by the solar.

At 7 h 3 m a.m.,l.m.t.,we set off 39° 30'N.,on the lat.arc;14° 49'N.,on the decl.arc;and mark a point in the true meridian determined with the solar,by a cross on the stone already set 5.00 chs.N.of the cor.; this mark falls 0.32 ins.east of the true meridian determined by the Polaris observation.

The solar apparatus by p.m.and a.m.observations,determines positions for true meridians,respectively about 0'13"west and 0'17"east of the true meridian established by Polaris observation;therefore we conclude that the adjustments of the instruments are satisfactory.

The magnetic bearing of the true meridian at 7 h 30 m a.m. is 15° 37.6'W.,the angle thus determined,reduced by the table,page 100 of the Manual,gives the mean mag.decl.15° 32'E.

Chains	
	S.89° 59'E.,on a random line bet.secs.15 and 22.
40.00	Set temp.¼ sec.cor.
79.90	Intersect N.and S.line,7 lks.N.of the cor.of secs.14, 15,22,and 23.
	Thence we run
	N.89° 56'W.,on a true line bet.secs.15 and 22.
	Over mountainous land;through scattering timber and dense undergrowth ;ascend over ledges.
17.00	Top of ascent,bears N.40°E.and S.40°W.;leave ledges.
	Thence over rolling mesa.
39.95	Set a sandstone,18x6x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,14 ins.diam.,bears N.15°E.,10 lks.dist.,marked ¼ S.15,B.T.
	A cedar,12 ins.diam.,bears S.15°W.,75 lks. dist.,marked ¼ S.22,B.T.
79.90	The cor.of secs.15,16,21,and 22.
	Land ,mountainous and rolling mesa.
	Soil,sandy loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.90 chs.
	N.0° 02'W.,bet.secs.15 and 16.
	Over rolling mesa;through dense undergrowth and scattering timber.
40.00	Set a sandstone,30x16x5 ins.,24 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,36 ins.diam.,bears N.36°E.,60 lks. dist.,marked ¼ S.15,B.T.
	A cedar,9 ins.diam.,bears S.18°W.,70 lks. dist.,marked ¼ S.16,B.T.
58.00	Edge of mesa,bears N.E.and S.W.;descend.

Chains
77.00 Bottom of Little Dougy Canyon,350 ft.below mesa,course N.85° E.;ascend.

80.00 Set a sandstone,18x10x5 ins.,12 ins.in the ground, for cor.of secs.9,10,15,and 16,marked with 4 notches on S.and 3 notches on E.edges;from which

A pinion pine,6 ins.diam.,bears S.60° E.,35 lks.dist.,marked T.15 S.,R.19 E.,S.15,B.T.

A pinion pine,4 ins.diam.,bears S.70° W.,61 lks.dist.,marked T.15 S.,R.19 E.,S.16,B.T.

No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Land,mountainous and rolling mesa.

Soil,sandy and gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

S.89° 56'E.,on a random line bet.secs.10 and 15.

40.00 Set temp.¼ sec.cor.

79.98 Intersect N.and S.line,7 lks.N.of the cor.of secs.10, 11,14,and 15.

Thence we run

N.89° 59'W.,on a true line bet.secs.10 and 15.

Over mountainous land;through scattering cedar,pinion pine and cotton wood timber;descend.

3.00 Bottom of Little Dougy Canyon,100 ft.below cor.,course S.35° E.;ascend.

20.00 Top of spur,100 ft.above canyon,bears N.and S.;descend.

32.25 Bottom of hollow,200 ft.below spur,course N.;ascend gradually along south side of canyon.

39.99 Set a sandstone,16x8x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

Chains	
	A pinion pine,10 ins.diam.,bears N.5° W.,62 lks.dist.,marked ¼ S.10,B.T.
	A pinion pine,8 ins.dism.,bears S.46° W.,80 lks.dist.,marked ¼ S.15,B.T.
59.50	Spring in bottom of Little Dougy Canyon,course N.80° E.;thence along bottom of canyon.
63.00	Leave canyon,course E.;ascend.
79.98	The cor.of secs.9,10,15,and 16.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar ,pinion pine and cottonwood.
	Good grass for grazing.
	Mountainous land,79.98 chs.
	N.0° 02'W.,bet.secs.9 and 10.
	Over mountainous land;through heavy timber;ascend over ledges.
5.00	Top of ascent,200 ft.above sec.cor.,bears N.80° E.and S.80° W.;thence over mesa.
13.00	Leave timber and enter dense undergrowth,bears E.andW.
40.00	Enter scattering timber,bears E.and W.
	Set a limestone,20x10x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar, 12 ins.diam.,bears N.39° E.,265 lks. dist.,marked ¼ S.10,B.T.
	A cedar,6 ins.diam.,bears N.6° W.,300 lks. dist.,marked ¼ S.9,B.T.
72.50	Edge of mesa,bears N.80° E.and S.80° W.;begin abrupt descent.
78.50	Bottom of hollow,75 ft.below mesa,course N.80° E.; ascend.
80.00	Set a limestone,30x12x5 ins.,24 ins. in the ground, for cor.of secs.3,4,9,and 10,marked with 5 notches on S.and 3 notches on E.edges;from which
	A pinion pine,12 ins.diam.,bears N.53° E.,70

Chains	
	lks.dist.,marked T.15 S.,R.19 E.,S.3,B.T.
	A pinion pine,12 ins.diam.,bears S.40° E.,43 lks.dist.,marked T.15 S.,R.19 E.,S.10,B.T.
	A pinion pine,36 ins.diam.,bears S.40° W.,53 lks.dist.,marked T.15 S.,R.19 E.,S.9,B.T.
	A pinion pine,30 ins.diam.,bears N.48° W.,21 lks.dist.,marked T.15 S.,R.19 E.,S.4,B.T.
	Land,mountainous and rolling mesa.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	S.89° 59'E.,on a random line bet.secs.3 and 10.
40.00	Set temp.¼ sec.cor.
80.04	Intersect N.and S.line,7 lks.S. of the cor.of secs.2, 3,10,and 11.
	Thence we run
	S.89° 58'W.,on a true line bet.secs.3 and 10.
	Over mountainous land;through heavy timber;descend gradually.
40.02	Set a limestone,16x12x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,6 ins.diam.,bears N.10° W.,25 lks. dist.,marked ¼ S.3,B.T.
	A cedar,8 ins.diam.,bears S.25° W.35 lks. dist.,marked ¼ S.10,B.T.
73.25	Bottom of hollow,200 ft.below ¼ sec.cor.,course N. 80° E.;ascend.
80.04	The cor.of secs.3,4,9,and 10.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.

Sub ivision of T 15 S R.19 E -Continued

Chains	
	Good grass for grazing.
	Mountainous or heavily timbered land,80.04 chs.
	August 13,1901:At the noon hour the sky is overcast and solar observations are impossible.

	N.0° 02'W.,on a random line bet.secs.3 and 4.
40.00	Set temp.¼ sec.cor.
79.90	IntersectN.bdy.of Tp.4 lks.East of the cor.of secs. 3,4,33,and 34,heretofore described.
	Thence we run
	S.0° 04'E.,on a true line bet.secs. 3 and 4.
	Over rolling mesa;through dense undergrowth and scattering timber.
8.00	Trail,bears N.E.and S.W.
39.90	Set a sandstone,20x12x4 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,4 ins.diam.,bears N.80° E.,48 lks. dist.,marked ¼ S.3,B.T.
	A cedar,4 ins.diam.,bears S.53° W.,60 lks. dist.,marked ¼ S.4,B.T.
78.50	Edge of mesa,bears N.E.and S.W.;descend.
79.90	The cor.of secs.3,4,9,and 10.
	Land,mountaious and rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.90 chs.

	From the standard cor.of secs.32 and 33,on S.bdy .of Tp.,heretofore described.
	Thence we run
	N.0° 03'W.,bet.secs.32 and 33.
	Over mountainous land;through scattering timber and

Chains	
	dense undergrowth;descend.
18.30	Bottom of Hollow,100 ft.below sec.cor.,course N.25° E. Ascend.
36.50	Top of ridge,50 ft.above hollow,bears N.40° E.and S. 40° W.;descend.
40.00	Set a limestone,24x18x5 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
41.00	Bottom of hollow,50 ft.below ridge,course N.E.;ascend.
74.00	Top of ridge,100 ft.above hollow,bears N.E.and S.W.; descend.
80.00	Set a sandstone,15x10x10 ins.,10 ins.in the ground, for cor.of secs.28,29,32,and 33,marked with 1 notch on S.and 4 notches on E.edges;from which

A pinion pine,6 ins.diam.,bears N.53° E.,75 lks.dist.,marked T.15 S.,R.19 E.,S.28,B.T.

A pinion pine,3 ins.diam.,bears S.27° W.,60 lks.dist.,marked T.15 S.,R.19 E.,S.32,B.T.

No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Land,mountainous.

Soil,sandy loam and rocky;2nd and 4th rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

August 13,1901.

August 14,1901:At 7 h 30 m a.m.,l.m.t.,we set off 39° 29'N.,on the lat.arc;14° 30'N.,on the decl.arc;and determine a true meridian with the solar,at the cor.of secs.28,29,32,and 33.

Thence we run

Chains	
	East,on a random line bet.secs.28 ans 33.
40.00	Set temp.¼ sec.cor.
80.00	Intersect N.and S.line ,7 lks.N.of the cor.of secs. 27,28,33,and 34.
	Thence we run
	N.89° 57'W.,on a true line,bet.secs.28 and 33.
	Over mountainous land ;through scattering timber;ascend.
40.00	Set a sandstone,18x6x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,6 ins.diam.,bears N.80°W.,150 lks.dist.,marked ¼ S.28,B.T.
	A pinion pine,6 ins.diam.,bears S.20°E.,50 lks.dist.,marked ¼ S.33,B.T.
42.00	Top of ridge,250 ft.above sec.cor.,bears N.20°E.,and S.20°W.;descend.
46.50	Leave timber,bears N.E.and S.W.
59.30	Bottom of hollow,250 ft.below ridge,course N.25°W.; ascend.
62.50	Enter scattering timber,bears N.E.and S.W.
70.00	Leave timber,bears N.E.and S.W.
76.60	Top of ridge,200 ft.above hollow,bears N.30°E.and S.30°W.;descend.
80.00	The cor.of secs.28,29,32,and 33.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous land, 80.00 chs.

	N.0°03'W.,bet.secs.28 and 29.
	Over mountainous land;through dense undergrowth;descend.
14.70	Bottom of canyon,80 ft.below sec.cor.,course N.28°E.
	Ascend.

Chains	
18.00	Enter scattering timber,bears N.E.and S.W.
34.00	Top of ridge,80 ft.above sec.cor.,bears N.E.and S.W.; descend.
39.80	Bottom of hollow,200 ft.below ridge,course N.E.;ascend.
40.00	Set a sandstone,14x12x6 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
45.00	Top of ridge,50 ft.above hollow,bears N.E.and S.W.; descend.
50.00	Bottom of hollow,60 ft.below ridge,course N.E.;ascend.
65.00	Top of ridge,100 ft.above hollow,bears N.E.and S.W.; descend.
80.00	Set a sandstone,24x12x5 ins.,18 ins.in the ground, for cor.of secs.20,21,28,and 29,marked with 2 notches on S.and 4 notches on E.edges;from which A pinion pine,8 ins.diam.,bears N.50° E.,120 lks.dist.,marked T.15 S.,R.19 E.,S.21,B.T. No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable. Land,mountainous. Soil,gravelly;3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,80.00 chs.

S.89° 57'E.,on a random line bet.secs.21 and 28.

40.00	Set temp. ¼ sec.cor.
80.00	Intersect N.and S.line ,2 lks.N.of the cor.of secs. 21,22,27,and 28.
	Thence we run
	N.89° 56'W.,on a true line bet.secs.21 and 28.

Chains	
	Over rolling mesa;through scattering timber;and dense undergrowth.
8.00	Leave mesa,bears N.and S.;descend.
21.25	Bottom of Canyon,150 ft.below mesa,course N.30° E.; ascend.
40.00	Set a sandstone,18x6x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A pinion pine,8 ins.diam.,bears N.45° W.,12 lks.dist.,marked ¼ S.21 ,B.T. A pinion pine,30 ins.diam.,bears S.30° E.,75 lks.dist.,marked ¼ S.28,B.T.
66.00	Top of ridge,250 ft.above canyon,bears N.and S. Leave timber,bears N.and S. Descend.
80.00	The cor.of secs.20,21,28,and 29. Land,mountainous and level. Soil,gravelly;3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,80.00 chs.

N.0° 03' W.,bet.secs.20 and 21.
Over mountainous land;through dense undergrowth;descend.

13.00	Bottom of hollow,50 ft.below sec.cor.,course N.E.;ascend.
17.00	Leave undergrowth and enter heavy timber,bears N.E. and S.W.
30.00	Top of ridge,150 ft.above hollow,bears N.E.and S.W.; descend.
40.00	Set a sanstone,19x14x5 ins.,14 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,10 ins.diam.,bears S.80° E.,100 lks.dist.,marked ¼ S.21,B.T.

Chains	
	A pinion pine,6 ins.diam.,bears S.70° W.,125 lks.dist.,marked ¼ S.20,B .T.
	Leave timber,bears E.and W.
80.00	Set a sandstone,18x14x5 ins.,12 ins.in the ground, for cor.of secs.16,17,20,and 21,marked with 3 notches on S.and 4 notches on E.edges;and raise a mound of stone,2 ft. base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.

	S.89° 56'E.,on a random line bet.secs.16 and 21.
40.00	Set temp.¼ sec.cor.
79.80	Intersect N.and S.line,14 lks.N.of the cor of secs. 15,16,21,and 22.
	Thence we run
	N.89° 50'W.,on a true line bet.secs.16 and 21.
	Over rolling mesa;through dense undergrowth and scattering timber.
11.00	Leave mesa,bears N.and S.;descend.
22.00	Bottom of hollow,200 ft.below mesa,course N.50° E.; ascend.
33.00	Top of ridge,200 ft.above hollow,bears N.30° E.and S. 30° W.;descend.
39.90	Set a sandstone,20x10x5 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,16 ins.diam.,bears N.30° E.,40 lks.dist.,marked ¼ S.16,B.T.
	A cedar,10 ins.diam.,bears S.20° E.,60 lks. dist.,marked ¼ S.21,B.T.

Chains	
48.00	Leave timber,bears N.and S.
53.00	Bottom of hollow,300 ft.below ridge,course N.;ascend.
58.00	Enter heavy timber,bears N.and S.
61.00	Top of ridge,75 ft.above hollow,bears N.20° W.,and S.20° E.;descend.
66.00	Leave timber,bears N.and S.
79.80	The cor .of secs.16,17,20,and 21.
	Land,mountainous and rolling mesa.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,79.80 chs.
	August 14,1901:At this cor.we set off 14° 25' N.,on the decl.arc;and at 11 h 58 m a.m.,l.m.t.,observe the sun on the meridian,the resulting lat;is 39° 30' N.,

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	N.0° 05' W.,bet.secs.16 and 17.
	Over mountainous land;through scattering timber and dense undergrowth;descend.
4.00	Bottom of hollow,100 ft.below cor.,course N.30° E.;ascend.
12.00	Top of ridge,50 ft.above hollow,bears N.45° E.and S. 45° W.;descend.
20.90	Bottom of Little Dougy Canyon,100 ft.below ridge,course N.E.;ascend.
40.00	Set a sandstone,14x12x4 ins.,9 ins.in the ground,for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face;from which
	A cedar,5 ins.diam.,bears N.5° E.,18 lks. dist.,marked $\frac{1}{4}$ S.16,B.T.
	A pinion pine,12 ins.diam.,bears S.45° W.,30 lks.dist.,marked $\frac{1}{4}$ S.17,B.T.
66.00	Top of ridge,300 ft.above canyon,bears N.40° E.,and S. 40° W.;descend.

Chains	
80.00	Set a limestone,18x10x5 ins.,12 ins.in the ground, for cor.of secs.8,9,16,and 17,marked with 4 notches on S.and 4 notches on E,edges;from which A pinion pine,6 ins.diam.,bears N.50° E.,300 lks.dist.,marked T.15 S.,R.19 E.,S.9,B.T. A pinion pine.12 ins.diam.,bears S.63° E.,125 lks.dist.,marked T.15 S.,R.19 E.,S.16,B.T. No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable. Land,mountainous. Soil,gravelly;3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth, 80.00 chs.

S.89° 50'E.,on a random line bet.secs.9 and 16.

40.00 Set temp.¼ sec.cor.

79.68 Intersect N.and S.line,10 lks.S.of the cor.of secs. 9,10,15,and 16.

Thence we run

N.89° 54'W.,on a true line bet.secs.9 and 16.

Over mountainous land;through dense undergrowth and scattering timber. Ascend abruptly over ledges.

25.00 Leave ledges,bears N.E.and S.W.;ascend gradually.

39.84 Set a limestone,24x16x5 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A cedar,6 ins.diam.,bears N.16° W.,200 lks. dist.,marked ¼ S.9 ,B.T.

A cedar,5 ins.diam.,bears S.3° E.,75 lks. dist.,marked ¼ S.16,B.T.

79.68 The cor.of secs.8,9,16,and 17.

Land,mountainous.

Chains	
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush .
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.68 chs.
	N.0° 03 'W.,bet.secs.8 and 9.
	Over mountainous land;through dense undergrowth;descend.
3.60	Bottom of hollow,100 ft.below sec.cor.,course N.80° E. Ascend.
6.00	Leave undergrowth and enter heavy timber,bears N.E. and S.W.
24.00	Leave timber and enter dense undergrowth,bears N.E. and S.W.
27.00	Top of ridge,350 ft.above hollow,bears N.E.and S.W.; descend.
39.00	Enter scattering timber,bears N.E.and S.W.
40.00	Set a sandstone,18x8x7 ins.,12 ins.in the ground,for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face;from which
	A cedar,8 ins.diam.,bears S.45° E.,10 lks. dist.,marked $\frac{1}{4}$ S.9,B.T.
	A pinion pine,12 ins.diam.,bears S.28° W.,59 lks.dist.,marked $\frac{1}{4}$ S.8,B.T.
80.00	Set a limestone,16x10x4 ins.,11 ins.in the ground, for cor.of secs.4,5,8,and 9,marked with 5 notches on S.and 4 notches on E.edges;from which
	A cedar,4 ins.diam.,bears N.41° E.,37 lks. dist.,marked T.15 S.,R.19 E.,S.4,B.T.
	A cedar,4 ins.diam.,bears S.20° E.,12 lks. dist.,marked T.15 S.,R.19 E.,S.9,B.T.
	A cedar,12 ins.diam.,bears S.22° W.,50 lks. dist.,marked T.15 S.,R.19 E.,S.8,B.T.
	A pinion pine,5 ins.diam.,bears N.43° W.,84

Chains	
	lks.dist.,marked T.15 S.,R.19 E.,S.5,B.T.
	Land,mountainous.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	S.89° 54'E.,on a random line bet.secs.4 and 9.
40.00	Set temp.¼ sec.cor.
79.82	Intersect N.and S.line,11 lks.S.of the cor.of secs. 3,4,9,and 10.
	Thence we run
	N.89° 59'W.,om a true line bet.secs.4 and 9.
	Over mountainous land;through heavy cedar and pinion pine timber;ascend.
3.70	Top of ascent,100 ft.above sec.cor.,bears N.80°E.and S.80°W.;thence over rolling mesa.
18.00	Trail,bears N.and S.
25.20	Trail,bears N.and S.
26.80	Leave timber and enter dense undergrowth,bears N.and S.
36.00	Leave undergrowth and enter heavy timber,bears N.and S.
39.91	Set a limestone,18x14x8 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,18 ins.diam.,bears N.50°E.,66 lks.dist.,marked ¼ S.4,B.T.
	A pinion pine,12 ins.diam.,bears S.49°E.,33 lks.dist.,marked ¼ S.9,B.T.
43.00	Leave mesa,bears N.20°E.and S.20°W.;ascend.
50.00	Top of ridge,100 ft.above mesa,bears N.30°E.and S.30° W.;descend.
79.82	The cor.of secs.4,5,8,and 9.

Chains	
	Land,mountainous and rolling mesa.
	Soil,sandy loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,79.82 chs.
	N.0° 03 'W.,on a random line bet.secs.4 and 5.
40.00	Set temp.¼ sec.cor.
79.92	Intersect N.bdy.of Tp.5 lks.East of the cor.of secs. 4,5,32,and 33,heretofore described.
	Thence we run
	S.0° 05'E.,on a true line bet.secs.4 and 5.
	Over rolling mesa;through heavy timber and scattering undergrowth.
.10	Trail,bears N.E.and S.W.
3.00	Leave mesa,bears E.and W.;descend.
6.30	Bottom of hollow,30 ft.below mesa,course N.80° E.;a small spring bears N.80° E.,about 3.00 chs.dist.Ascend.
10.00	Top of ascent;bears N.80° E.and S.80° W.;thence over mesa.
39.92	Set a limestone,16x9x5 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,5 ins.diam.,bears N.78° E.,35 lks. dist.,marked ¼ S.4,B.T.
	A cedar,6 ins.diam.,bears N.48° W.,18 lks. dist.,marked ¼ S.5,B.T.
42.65	Trail,bears N.10° E.and S.10° W.
55.00	Edge of mesa,bears N.10° E. and S.10° W.;descend.
59.50	Bottom of hollow,60 ft.below mesa,course N.10° E.;ascend.
70.00	Trail,bears N.E.and S.W.
79.92	The cor.of secs. 4,5,8,and 9,
	Land,mountainous and rolling mesa.
	Soil,sandy loam;2nd rate.

Chains	
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,79.92 chs.
	August 14,1901.
	August 15,1901:At 7 h 30 m a.m.,l.m.t.,we set off 39° 28'N.,on the lat.arc;14° 11'N.,on the decl.arc; and determine a true meridian with the solar,at the standard cor.of secs.31 and 32,on S.bdy.of Tp.,heretofore described.
	Thence we run
	N.0° 03'W.,bet.secs.31 and 32.
	Over mountainous land;through scattering timber and scattering undergrowth;ascend.
4.00	Top of ridge,50 ft.above cor.,bears N.20°W.and S.20° E.;descend.
34.00	Trail,bears N.W.and S.E.
35.25	Bottom of hollow,500 ft.below ridge,course N.W.;
40.00	Set a sandstone,16x9x5 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,24 ins.diam.,bears N.80°E.,82 lks.dist.,marked ¼ S.32,B.T.
	No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high.W.of cor.Pits impracticable.
71.25	Top of ridge,600 ft.above hollow,bears E.and W.;descend.
80.00	Set a limestone,30x12x4 ins.,24 ins.in the ground, for cor.of secs.29,30,31,and 32,marked with 1 notch on S.and 5 notches on E.edges;from which
	A pinion pine,28 ins.diam.,bears N.35°E.,51 lks.dist.,marked T.15 S.,R.19 E.S.29,B.T.
	A pinion pine,26 ins.diam.,bears S.88°E.,63 lks.dist.,marked T.15 S.,R.19 E.,S.32,B.T.
	A cedar,10 ins.diam.,bears S.14°W.,46 lks. dist.,marked T.15 S.,R.19 E.,S.31,B.T.

Chains	
	A pinion pine,20 ins.diam.,bears N.30°W.,37 lks.dist.,marked T.15 S.,R.19 E.,S.30,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.
	East ,on a random line bet.secs.29 and 32.
40.00	Set temp.¼ sec.cor.
80.10	Intersect N.and S'line,2 lks.S.of the cor.of secs. 28,29,32,and 33.
	Thence we run
	S.89°59'W.,on a true line bet.secs.29 and 32.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
7.90	Trail,bears N.28°E.and S.28°W.
8.00	Bottom of hollow,100 ft.below sec.cor.,course N.28°E. Ascend.
25.00	Top of ridge,150 ft.above hollow,bears N.30°E. and S.30°W.;descend.
40.05	Set a sandstone,18x10x6 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.In bottom of hollow,course N.E.;ascend.
52.50	Top of divide ridge,350 ft.above hollow,bears N.5°W. and S.5°E.;descend.
80.10	The cor.of secs.29,30,31,and 32.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth, sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.10 chs.

Chains	
	West,on a random line bet.secs.30 and 31.
40.00	Set temp.¼ sec.cor.
79.84	Intersect W.bdy.of Tp.at the cor.of secs.25,30,31,and 36,heretofore described.
	Thence we run
	East,on a true line bet.secs.30 and 31.
	Over mountainous land;through heavy timber;descend.
39.84	Set a sandstone,18x12x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,8 ins.diam.,bears N.28° E.,85 lks.dist.,marked ¼ S.30,B.T.
	A pinion pine,12 ins.diam.,bears S.65° W.,35 lks.dist.,marked ¼ S.31,B.T.
65.00	Bottom of hollow,400 ft.below sec.cor.,course S.65° W.; ascend.
79.84	The cor.of secs.29,30,31,and 32.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,79.84 chs.
	N.0° 03'W.,bet.secs.29 and 30.
	Over mountainous land;through scattering timber;descend.
9.00	Bottom of hollow,100 ft.below sec.cor.,course S.W.; ascend.
29.00	Top of divide ridge,450 ft.above hollow,bears E.and W.Leave timber and enter dense undergrowth,bears with ridge.
40.00	Bottom of hollow,70 ft.below ridge,course N.E.
	Set a limestone,18x10x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of

Chains	
	stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable. Ascend.
60.00	Top of ridge,10 ft.above hollow,bears N.E.and S.W.; descend.
80.00	Bottom of hollow,150 ft.below ridge,course N.E.
	Set a sandstone,18x10x6 ins.,12 ins.in the ground, for cor.of secs.19,20,29, and 30,marked with 2 notches on S.and 5 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,sandy and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous land,80.00 chs.
	August 15,1901:At this cor.we set off 14° 7'N.,on the decl.arc;and at 0h4 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39° 30'N.

	N89° 59'E.,on a random line bet.secs.20 and 29.
40.00	Set temp.¼ sec.cor.
80.06	Intersect N.and S.line ,20 lks.S.of the cor.of secs. 20,21,28,and 29.
	Thence we run
	S.89° 50'W.,on a true line bet.secs.20 and 29.
	Over mountainous land;through dense undergrowth;descend.
13.00	Bottom of hollow,50 ft.below sec.cor.,course N.E.; ascend.
17.50	Enter heavy cedar and pinion pine timber,bears N.E. and S.W.
21.00	Leave timber,bears N.E.and S.W.
22.00	Top of ridge,125 ft.above hollow,bears N.22° E.and S. 22° W.;descend.
34.75	Bottom of hollow,75 ft.below ridge,course N.22 °E.;

Chains	
	Ascend.
40.03	Set a sandstone,18x16x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor .Pits impracticable.
44.75	Top of ridge,300 ft.above hollow,bears N.20° E.and S. 20° W.;descend.
60.25	Bottom of hollow,200 ft.below ridge,course N.20° E.; ascend.
69.00	Top of ridge,200 ft.above hollow,bears N.20° E.and S. 20° W.;descend.
80.06	The cor.of secs.19,20,29,and 30.
	Land,mountainous.
	Soil,gravelly;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and service berry.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.06 chs.
	West,on a random line bet.secs.19 and 30.
40.00	Set temp.¼ sec.cor.
79.71	Intersect W.bdy.of Tp.5 lks.S.of the cor.of secs.19, 24,25,and 30,heretofore described.
	Thence we run
	S.89° 58'E.,on a true line bet.secs.19 and 30.
	Over mountainous land;through scattering timber and scattering undergrowth;ascend.
7.00	Top of ridge,100 ft.above sec.cor.,bears N.and S.; descend.
17.50	Bottom of hollow,250 ft.below ridge,course S.50° W.; ascend.
39.71	Set a sandstone,22x10x6 ins.,16 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base, 1½ ft.high,N.of cor.Pits impracticable.
61.50	Top of divide ridge,350 ft.above hollow,bears N.20° E.

Chains	
	and S.20°W.;descend.
79.71	The cor.of secs.19,20,29,and 30.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,79.71 chs.

	N.0°03'W.,bet.secs.19 and 20.
	Over mountainous land;through scattering timber; ascend.
22.00	Top of ridge,250 ft.above sec.cor.,bears N.E.and S.W.;descend.
40.00	Set a limestone,16x9x5 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
54.00	Bottom of hollow,150 ft.below ridge,course N.20°E.; ascend.
62.00	Top of ridge,70 ft.above hollow,bears N.60°E.and S. 60°W.;descend.
67.50	Bottom of hollow,75 ft.below ridge,course E.;ascend.
77.50	Top of ridge,300 ft.above hollow,bears E.and W.;descend.
80.00	Set a sandstone,24x12x4 ins.,18 ins.in the ground, for cor.of secs.17,18,19,and 20,marked with 3 notches on S.and 5 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous land,80.00 chs.

Chains	
	N.89° 50'E.,on a random line bet.secs.17 and 20.
40.00	Set temp. ¼ sec.cor.
79.82	Intersect N.and S.line,18 lks.S.of the cor.of secs. 16,17,20,and 21.
	Thence we run
	S.89° 42'W.,on a true line bet.secs.17 and 20.
	Over mountainous land;through scattering undergrowth.
	Descend.
4.40	Bottom of hollow,25 ft.below sec.cor.,course N.40°E.; ascend.
9.00	Enter heavy cedar and pinion pine timber,bears N.and S.
14.00	Top of ridge,100 ft.above hollow,bears N.35°E.and S. 35°W. Leave timber and enter dense undergrowth,bears with ridge;descend.
39.91	Set a sandstone,24x12x5 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
51.25	Bottom of hollow,100 ft.below ridge,course N.45°E.; ascend.
79.82	The cor.of secs.17,18,19,and 20.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,79.82 chs.
	N.89° 58'W.,on a random line bet.secs.18 and 19.
40.00	Set temp.,¼ sec.cor.
79.60	Intersect W.bdy.of TP.10 lks.S.of the cor.of secs. 13,18,19,and 24,heretofore described.

Subdivision of T.15 S.,R.19 E.-Continued.

Chains	
	Thence we run
	S.89° 54'E.,on a true line bet.secs.18 and 19.
	Over mountainous land;through dense undergrowth;ascend.
5.00	Top of ridge,15 ft.above sec.cor.,bears N.W.and S. E.;descend.
21.00	Bottom of hollow,100 ft.below ridge,course N.20° E.; ascend.
30.00	Top of ridge,100 ft.above hollow,bears N.and S.;descend.
37.50	Bottom of hollow,100 ft.below ridge,course N.;ascend
39.60	Set a limestone,28x12x6 ins.,21 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.Pits impracticable.
52.00	Top of ridge,150 ft.above hollow,bears N.and S.;descend.Enter scattering timber,bears N.and S.
79.60	The cor.of secs.17,18,19,and 20.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.60 chs.

August 15,1901.

August 16,1901:At 7 h 2 m a.m.,l.m.t.,we set off 39° 30'N.,(on the lat.arc;13° 53'N.,) on the decl..arc;and determine a true meridian with the solar,at the cor.of secs.17,18,19,and 20.

	Thence we run
	N.0° 03'W.,bet.secs.17 and 18.
	Over mountainous land;through dense undergrowth;descend.
4.90	Bottom of hollow,100 ft.below cor.,course N.80° E.; ascend.
9.00	Enter scattering timber,bears E.and W.

chains	
17.70	Top of ridge,200 ft.above hollow,bears N.75° E.and S.75° W.;descend.Leave timber,bears with ridge.
33.60	Bottom of hollow,50 ft.below ridge,course N.60° E.; ascend.
40.00	Set a sandstone,14x12x6 ins.,9 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1 ½ ft.high,W.of cor.Pits impracticable.
46.50	Top of ridge,50 ft.above hollow,bears N.20° E.and S. 20° W.;descend.
69.00	Bottom of hollow,200 ft.below ridge,course N.E.;ascend.
70.00	Leave undergrowth and enter scattering timber,bears N.20° E.and S.20° W.
79.00	Top of ridge,100 ft.above hollow,bears N.20° E.and S. 20° W.;descend.
80.00	Set a sandstone,20x12x5 ins.,15 ins,in the ground, for cor.of secs.7,8,17,and 18,marked with 4 notches on S.and 5 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,sandy and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and service berry.
	Good grass for grazing.
	Mountainousland,or land covered with dense undergrowth,80.00 chs.

N.89° 42'E.,on a random line bet.secs.8 and 17.

40.00 Set temp. ¼ sec.cor.

78.60 Intersect N.and S.line,5 lks.S.of the cor.of secs. 8,9,16,and 17.

Thence we run

S.89° 40'W.,on a true line bet.secs.8 and 17.

Subdivision of T 15 S., R.19 E.-COntinued

Chains	
	Over mountainous land;through scattering undergrowth. Descend.
5.50	Bottom of hollow,250 ft.below ridge,course N.30° E.; ascend.
15.00	Leave undergrowth and enter scattering timber,bears N.E.and S.W.
32.00	Top of ridge,250 ft.above hollow,bears N.20° E.and S. 20° W.;descend.
39.80	Set a sandstone,20x8x4 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,8 ins.diam.,bears N.80° W.,60 lks. dist.,marked ¼ S.8,B.T. A pinion pine.12 ins.diam.,bears S.10° E.,30 lks.dist.,marked ¼ S.17,B.T.
45.00	Leave timber and enter dense undergrowth,bears N.and S.
54.00	Bottom of hollow,250 ft.below ridge,course N.30° E.; ascend.
60.00	Top of ridge ,50 ft above hollow,bears N.30° E.and S. 30° W.;descend.
67.00	Bottom of hollow,60 ft.below ridge,course N.E.;ascend.
72.00	Leave undergrowth and enter scattering timber,bears N.40° E.and S.40° W.
79.00	Top of ridge,200 ft.above hollow,bears N.E.and S.W.; descend.
79.60	The cor.of secs.7,8,17,and 18.

Land,mountainous.

Soil,gravelly;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush and service berry.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,79.60 chs.

N.89° 54'W.,on a random line bet.secs.7 and 18.

Chains	
40.00	Set temp.¼ sec.cor.
79.46	Intersect W.bdy.of Tp.14 lks.N.of the cor .of secs. 7,12,13,and 18,heretofore described,.
	Thence we run
	East,on a true line bet.secs.7 and 18.
	Over mountainous land;through scattering timber and dense undergrowth;Descend.
1.00	Bottom of hollow,10 ft.below cor.,course N.40° E.;ascend.
10.50	Top of spur,100 ft.above hollow,bears N.20° E.and S. 20° W.;descend.
22.50	Bottom of canyon ,250 ft.below spur,course N.40° E.; ascend.
38.50	Top of ridge,250 ft.above canyon,bears N.30° E.and S. 30° W.;descend.
39.46	Set a sandstone,16x10x4 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,14 ins.diam.,bears N.20° E.,75 lks. dist.,marked ¼ S.7,B.T.
	A cedar,8 ins.diam.,bears S.25° E.,60 lks. dist.,marked ¼ S.18,B.T.
48.00	Bottom of hollow,200 ft.below ridge,course N.25° E.; ascend.
79.46	The cor.of secs.7,8,17,and 18.
	Land,mountainous;
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,dense sage brush and scattering service berry.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.46 chs.

N.0° 03'W.,bet.secs.7 and 8.

Over mountainous land;through scattering timber;des-

Chains	
	cend.
38.75	Bottom of hollow,250 ft.below sec.cor.,bears N.50° E. and S.50° W.;ascend.
40.00	Set a sandstone,16x10x4 ins.,11 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 cor.Pits impracticable.
55.00	Top of ridge,200 ft.above hollow,bears N.60° E.and S. 60° W.;descend.
65.00	Leave timber and enter dense undergrowth,bears E.and W.
78.50	Bottom of hollow,250 ft.below ridge,course N.80° E.; ascend.
80.00	Set a sandstone,28x12x10 ins.,21 ins.in the ground, for cor.of secs.5,6,7,and 8,marked with 5 notches on S.and 5 notches on E.edges;and raise a mound of stone,2 ft.base,$1\frac{1}{2}$ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;3rd,rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	August 16,1901:At the noon hour the sky is overcast and solar observations are impossible.

	N.89° 40'E.,on a random line bet.secs.5 and 8.
40.00	Set temp.$\frac{1}{4}$ sec.cor.
79.74	Intersect N.and S.line,18 lks.N.of the cor.of secs. 4,5,8,and 9.
	Thence werun
	S.89° 48'W.,on a true line bet.secs.5 and 8.
	Over mountainous land;through scattering timber;des-

Chains	
	cend.
20.00	Bottom of hollow,200.ft.below sec.cor.,course N.20° E. Leave timber and enter dense undergrowth,bears with hollow;ascend.
25.00	Top of ridge,100 ft.above hollow,bears N.20° E.and S. 20° W.;descend.
39.87	Set a limestone,16x12x10 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
55.00	Bottom of hollow,15 ft.below ridge,course N.85° E.; ascend.
79.74	The cor.of secs.5,6,7,and 8. Land,mountainous. Soil,gravelly;3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,79.74 chs.

	West,on a random line bet.secs.6 and 7.
40.00	Set temp.¼ sec.cor.
79.34	Intersect W.,bdy.of Tp.,5 lks.N.of the cor.of secs. 1,6,7,and 12,heretofore described. Thence we run N.89° 58' E.,on a true line bet.secs. 6 and 7. Over mountainous land;through dense undergrowth and scattering timber.Ascend.
15.00	Top of broad ridge,200 ft.above sec.cor.,bears N.and S.;descend.
39.34	Set a sandstone,30x10x6 ins.24 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,6 ins.diam.,bears N.75° E.,85 lks. dist.,marked ¼ S.6,B.T.

Chains	
	A cedar,6 ins.diam.,bears S.,12 lks.dist., marked ¼ S.7,B.T.
79.34	The cor.of secs.5,6,7,and 8.
	Land,mountainous.
	Soil,sandy and gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.34 chs.
	N.0° 03'W.,on a random line bet.secs.5 and 6 .
40.00	Set temp.¼ sec.cor.
79.92	Intersect N.bdy.of Tp. at the cor.of secs.5,6,31,and 32,heretofore described.
	Thence we run
	S.0° 03'E.,on a true line bet.secs.5 and 6.
	Over mountainous land;through scattering undergrowth. Ascend.
17.00	Leave undergrowth and enter heavy timber,bears N.50° E. and S.50° W.
21.00	Top of ridge,200 ft.above cor.,bears N.50° E.and S.50° W.;descend.
27.00	Leave timber and enter dense undergrowth,bears N.E. and S.W.
32.00	Bottom of hollow,250 ft.below ridge,course N.E.;ascend.
39.92	Set a sandstone,16x10x4 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1 ½ ft.high,W.of cor.Pits impracticable.
55.00	Leave undergrowth and enter scattering timber,bears N.E.and S.W.
60.00	Top of ridge,250ft.above hollow,bears N.55° E.and S. 55° W.;descend.

Chains

79.92 The cor.of secs.5,6,7,and 8.

Land,mountainous.

Soil,gravelly;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,or land covered with dense undergrowth,79.92 chs.

August 16,1901.

GENERAL DESCRIPTION.

This township contains several varieties of land, from high rough mountains to level mesas,and the soil ranges from rocks to rich sandy loam.The soil of the mesas and bottoms of hollow and on the low ridges is generally rich sandy or gravelly loam,capable of producing excellent crops without irrigation.

The soil of the remaining portion of the township except on the rocky ridges and ledges is generally gravelly ,can be classed as 3rd rate,and produces a good growth of grass.

Cedar and pinion pine timber are found in large quantities all over the township ,

The township is fairly well watered by Hill Creek and its tributaries.

Robert Fullerton has three cabins corrals and fencing valued at about $750.00 in sec.13.

Elston F.King has a house and improvements valued at about $200.00 in sec.25. Not seen from line.

We find no trace of mineral in the township.

The township is very well adapted for grazing.

Scott R. Stewart
John R. Stewart
U.S.Deputy Surveyors.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by .....

....., United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of .....

.....

showing the respective capacities in which they acted:

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted .....

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

.....

.....

..... of the .....

..... meridian, ... of ....., which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for .....

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

.....

Subscribed and sworn to before me this .....
day of ....., 189

.....

.....

SEAL

6—151

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, _____, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from _____ United States Surveyor General for _____, bearing date of the _____ day of _____, 189 , I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for _____, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____ of the _____ meridian, in the _____ of _____, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

Original affidavits see book X. Tp 11 S R 19 E

_____
United States Deputy Surveyor.

Subscribed by said _____, and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City Utah, February 5th 1903, 189

The foregoing field notes of the survey of the subdivisional lines of Township 15 South Range 19 East of the Salt Lake Base & Meridian, Utah

executed by Scott P. Stewart and John K. Stewart under ~~his~~ their contract No. 242, dated April 12, 1901, 189 , having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Edward H. Anderson
United States Surveyor General.

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

_____
United States Surveyor General.

6—131

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BOOK A-289

FIELD NOTES

OF THE SURVEY OF THE

H.S.B.

WEST AND NORTH BOUNDARIES

of

Township No. 14 South, Range No. 20 East,

Of the SALT LAKE BASE AND *Meridian,*

in the STATE OF UTAH,

AS SURVEYED BY

Scott P. Stewart and John R. Stewart, *United States Deputy Surveyors*

Under ~~his~~ their *Contract No.* 242, *dated* April 12, 1901, ~~189~~

Survey commenced August 17, 1901, ~~189~~

Survey completed August 20, 1901, ~~189~~

6—151

Wbde high 6.00.00
N " " 5.78.80

NAMES AND DUTIES OF ASSISTANTS.

Andy J. Stewart Chainman

~~Vosco~~ Edwin H. Peay, Chainman.

Vosco Call Chainman.

Hugh Conover Chainman.

Clarence S. Jarvis Moundman

John J. Harding Moundman

George W. Ekins Axman

Harry Burton Axman

Harvey R. Booth Flagman

Gilbert Burr Flagman

For preliminary affidavits see Cook "C" Tp 15 S R 20 E

—151

BOOK A-289

INDEX DIAGRAM.

Township....., *Range*.....

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

WE, _____ and _____
do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of

_____

_____, *Chainman.*

_____, *Chainman.*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

WE, _____ and _____
do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Moundman.*

_____, *Moundman.*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

WE, _____ and _____
do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Axman.*

_____, *Axman.*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

I, _____, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of _____

_____, *Flagman.*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

West boundar of T.14 S ,R 20 E.

Survey commenced August 17,1901,and executed with a W.and L.E.Gurley light mountain transit,No.3,with 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 latitude and declination arcs, and a W.and L.E.Gurley plain transit,No.2,of which the horizontal limb is provided with one double vernier reading to single minutes of arc.The instruments were examined,tested on the true meridian at Salt Lake City,found correct,and were approved by the surveyor general,for Utah,the former on June 6,1901, and the latter on May 29,1901.

We examine the adjustments of the instruments and correct the level and collimation errors,then,to test the solar apparatus of the No.3 instrument ,by comparing its indications,resulting from solar observations made durin p.m. and a.m.hours,with a true meridian established by observation on Polaris,we proceed as follows:

August 17;1901:At the cor.of Tps.14 and 15 S.,Rs.19 and 20 E.,heretofore described,latitude 39° 33'N.,on longitude 109° 46'W.,we set off 39° 33'N.,on the lat. arc;13° 27'N.,on the decl.arc;and at 6 h 2 m p.m.,l. m.t.,determine a true meridian with the solar and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N.of our station.

At 9 h 45 m p.m.,l.m.t.,we observe Polaris at eastern elongation,in accordance with the Manual of Instructions,and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N.of our station.

August 17,1901.

August 18,1901:At 6 h 30 m a.m.,l.m.t.,we lay off the azimuth of Polaris 1° 35'to the west,and mark the true meridian thus determined by cutting a small groove

Chains	
	in the stone already set 5.00 chs.N. of our station; on which the true meridian falls 0.31 ins.east of the mark determined by the solar.
	At 7 h o m a.m.,l.m.t.,we set off 39° 33'N.,on the lat.arc;13° 15'N.,on the decl.arc;and mark a point in the true meridian determined with the solar ,by a cross on the stone already set 5.00 chs.N.of our station;this mark falls 0.27 ins.east of the true meridian established by Polaris observation.
	The solar apparatus by p.m.and a.m.observations defines positions for true meridians respectively about 0'16"west and 0'14"east of the true meridian established by Polaris observation;therefore we conclude that the adjustments of the instruments are satisfactory.
	The magnetic bearing of the true meridian at 7 h 30 m a.m. is 16° 14.5'W.,the angle thus determined reduced by the table page 100 of the Manual,gives the mean mag.decl.16° 9'E.
	From the above described cor.we run
	North,bet.secs.31 and 36.
	Over mountainous land;through heavy timber;ascend.
10.00	Top of ascent,200 ft.above Tp.cor.,edge of mesa, bears E.and W.Thence over mesa.
33.50	Edge of mesa,bears E.and W.;descend abruptly.
40.00	Set a sandstone,30x6x6 ins.,24 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,8 ins.diam.,bears S.80° E.,20 lks.dist.,marked ¼ S.31,B.T.
	A pinion pine,14 ins.diam.,bears W.,70 lks. dist.,marked ¼ S.36,B.T.
54.00	Bottom of hollow,500 ft.below mesa,course W.;ascend abruptly over ledges.
71.00	Top of sharp ridge,500 ft.above hollow,bears E.and W.; descend abruptly. Leave ledges.

Chains	
80.00	Set a limestone,14x14x4 ins.,9 ins.in the ground,for cor.of secs.25,30,31,and 36,marked with 1 notch on S.and 5 notches on N.edges;from which A red pine,11 ins.diam.,bears N.60° E.,50 lks.dist.,marked T.14 S.,R.20 E.,S.30,B.T. A red pine,10 ins.diam.,bears S.55° E.,50 lks.dist.,marked T.14 S.,R.20 E.,S.31,B.T. A pinion pin,6 ins.diam.,bears S.40° W.,75 lks.dist.,marked T.14 S.,R.19 E.,S.36,B.T. A red pine,7 ins.diam.,bears N.45° W.,35 lks.dist.,marked T.14 S.,R.19 E.,S.25,B.T. Land,mountainous. Soil,gravelly and stony;3rd and 4th rate. Timber,pine and cedar. Mountainous or heavily timbered land,80.00 chs.
	North,bet.secs.25 and 30. Over mountainous land;through heavy pine and cedar timber;descend.
30.00	Bottom of hollow ,250 ft.below sec.cor.,course N.50° W.,ascend abruptly over ledges.
40.00	Set a sandstoen,16x11x5 ins.,11 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 cor.Pits impracticable.
60.00	Top of spur,500 ft.above hollow,bears N.80° E.and S.80° W.;descend abruptly.
80.00	Set a sandstone,14x12x4 ins.,9 ins.in the ground,for cor.of secs.19,24,25,and 30,marked with 4 notches on N.and 2 notches on S.edges;from which A pinion pine,6 ins.diam.,bears N.65° E.,65 lks.dist.,marked T.14 S.,R.20 E.,S.19,B.T. A red pine,10 ins.diam.,bears S.69° E.,50 lks.dist.,marked T.14 S.,R.20 E.,S.30,B.T.

Chains	
	A cedar,6 ins.diam.,bears S.34° W.,40 lks. dist.,marked T.14 S.,R.19 E.,S.25 ,B.T.
	A red pine,7 ins.diam.,bears S.58° W.,60 lks.dist.,marked T.14 S.,R.19 E.,S.24,B.T.
	Land,mountainous.
	Soil,stony;3rd. rate.
	Timber,pine and cedar.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	North,bet.secs.19 and 24.
	Over mountainous land;through heavy timber;descend.
8.00	Bottom of hollow,100 ft.below sec.cor.,course W.; leave heavy and enter scattering timber,bears E.and W. Ascend.
40.00	Set a sandstone,15x8x6 ins.,10 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,9 ins.diam.,bears N.80° E.,70 lks.dist.,marked ¼ S.19,B.T.
	A pinion pine,6 ins.diam.,bears N.73° W.,65 lks.dist.,marked ¼ S.24,B.T.
50.00	Top of spur,450 ft.above hollow,bears E.and W.;enter heavy timber;descend.
80.00	Set a sandstone,30x9x4 ins.,24 ins.in the ground,for cor.of secs.13,18,19,and 24,marked with 3 notches on N.and 3 notches on S.edges;from which
	A pinion pine,5 ins.diam.,bears N.47° E.,70 lks.dist.,marked T.14 S.,R.20 E.,S.18,B.T.
	A pinion pine,9 ins.diam.,bears S.18° E.,80 lks.dist.,marked T.14 S.,R.20 E.,S.19,B.T.
	A pinion pine,8 ins.diam.,bears S.26° W.,65 lks.dist.,marked T.14 S.,R.19 E.,S.24,B.T.
	A pinion pine,6 ins.diam.,bears N.52° W.,35 lks.dist.,marked T.14 S.,R.19 E.,S.13,B.T.
	Land,mountainous.

West boundary of T.14 S.,R.20 E.-Continued.

Chains	
	Soil,gravelly and stony;3rd and 4th rate.
	Timber,cedar and pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	August 18,1901:At the noon hour the sky is overcast and solar observations are impossible.

	North,bet.secs.13 and 18.
	Over mountainous land;through scattering timber;descend over ledges.
3.00	Bottom of hollow,30 ft.below sec.cor.,course W.;ascend.
34.00	Top of ridge,450 ft.above hollow,bears N.70° W.and S.70° E.;leave ledges;descend.
40.00	Set a sandstone,14x6x6 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A red pine,9 ins.diam.,bears E.,40 lks.dist., marked ¼ S.16,B.T. A red pine,7 ins.diam.,bears S.60° W.,25 lks. dist.,marked ¼ S.13,B.T.
55.00	Bottom of hollow,350 ft.below ridge,course N.80° W.; ascend over ledges.
80.00	Top of ascent,300 ft.above mesa,bears N.W.and S.E. Set a sandstone,24x12x4 ins.,18 ins.in the ground,for cor.of secs.7,12,13,and 18,marked with 2 notches on N.and 4 notches on S.edges;and raise a mound of stone, 2 ft .base,1½ ft.high,W.of cor.Pits impracticable.
	Land ,mountainous.
	Soil,sandy loam and rocky;2nd and 4th rate.
	Timber,red pine.
	Good grass for grazing.
	Mountainous land,80.00 chs.

	North,bet.secs.7 and 12.
	Over rolling mesa;through heavy timber;

Chains	
14.00	Edge of mesa,bears E.and W.;descend over ledges.
22.50	Bottom of hollow,550 ft.below mesa,course W.;ascend.
37.00	Top of sandstone,ledge,25 ft.high,bears E.and W.; thence over mesa.
40.00	Set a sandstone,15x10x6 ins.,10 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,8 ins.diam.,bears N.55 °E.,30 lks. dist.,marked ¼ S.7,B.T. A pinion pine,9 ins.diam.,bears S.60° W.,25 lks.dist.,marked ¼ S.12,B.T.
49.50	Edge of mesa,bears E.and W.;descend.
70.00	Bottom of hollow,200 ft.below mesa,course W.;ascend.
75.00	Top of ascent,200 ft.above hollow,bears E.and W.; thence over mesa.
80.00	Set a limestone,36x10x4 ins.,27 ins.in the ground, for cor.of secs.1,6,7,and 12,marked with 1 notch on N.and 5 notches on S.Edges;from which A pinion pine,10 ins.diam.,bears N.60° E., 100 lks.dist.,marked T.14 S.,R.20 E.S.6,B.T. A pinion pine,10 ins.diam.,bears S.42° E.,25 lks.dist.,marked T.14 S.,R.20 E.,S.7,B.T. A pinion pine,24 ins.diam.,bears S.32° W.,40 lks.dist.,marked T.14 S.,R.19 E.,S.12,B.T. A pinion pine,8 ins.diam.,bears N.40° W.,30 lks.dist.,marked T.14 S.,R.19 E.,S.1,B.T.
	Land,mountainous and rolling mesa.
	Soil,gravelly and stony;3rd and 4th rate.
	Timber,pine and cedar.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.

	North,bet.secs.1 and 6.
	Over rolling mesa;through heavy timber.
7.00	Edge of mesa,bears E.and W.;descend.

Chains	
17.00	Bottom of hollow,200 ft.below mesa,course N.80° W.; ascend.
38.00	Top of ridge,20 ft.above hollow,bears E.and W.;descend.
40.00	Set a sandstone,14x7x6 ins .,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,8 ins.diam.,bears N.15° E., 32 lks.dist.,marked ¼ S.B,B.T. A pinion pine,6 ins.diam.,bears W.,43 lks. dist.,marked ¼ S.1,B.T.
45.00	Bottom of hollow,150 ft.below ridge,course W.;ascend.
51.00	Top of ascent,200 ft.above hollow,bears E.and W.; thence over rolling mesa.
73.00	Edge of mesa,bears E.and W.;descend abruptly.
80.00	Bottom of Canon,350 ft.below ridge,course N.60° W.

Set temp.cor.of Tps.13 and 14 S.,Rs.19 and 20 E.

Note:For description of permanent cor.see notes of the N.bdy.of T.14 S.,R.20 E.

Land,mountainous and rolling mesa.

Soil,gravelly ;3rd rate.

Timber,cedar and pine.

Mountainous or heavily timbered land,80.00 chs.

August 18,1901.

August 19,1901:At 7h3 m a.m.,l.m.t.,we set off 39° 38' N.;on the lat.arc;12° 55'N.,on the decl.arc;and determine a true meridian with the solar,at the temp. cor.of Tps.13 and 14 S.,Rs.19 and 20 E.

Thence we run

N.89° 54'E.,on a random line along the N.bdy.of T.14 S.,R.20 E.,setting temp.¼ sec.and sec.cors.at intervals of 40.00 chs.;and at 478.80 chs.,intersect the Green River Guide Meridian,83 lks.S.of the cor.of Tps.13 and 14 S.,Rs.20 and 21 E.,heretofore described,

The falling answers to a correction of 0° 06'or 16½

Chains	
	lks.South per mile counting from the N.E.cor.of the Tp.
	August 19,1901:At the noon hour the sky is overcast and solar observations are impossible.
	Thence we run
	S.89° 48'W.,on a true line along N.bdy.of Tp.,bet. secs.1 and 36.
	Over mountainous land;through heavy timber and scattering undergrowth;descend.
8.25	Bottom of hollow,69 ft.below Tp.cor.,course N.20°W.; trail,bears N.20°W.and S.20°E.;ascend.
40.00	Set a limestone,18x10x5 ins.,12 ins. in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,10 ins.diam.,bears N.51°W.,20 lks.dist.,marked ¼ S.36,B.T.
	A cedar,5 ins.diam.,bears S.63°E.,18 lks. dist.,marked ¼ S.1,B.T.
58.00	Top of ascent,200 ft.above hollow,bears N.and S.; thence over mesa.
78.50	Edge of mesa,bears N.80°E.and S.80°W.;descend.
80.00	Set an oilshale stone,16x8x8 ins .,11 ins.in the ground,for cor.of secs.1,2,35,and 36,marked with 1 notch on E.and 5 notches on W.edges;from which
	A pinion pine,12 ins.diam.,bears N.42°E.,100 lks.dist.,marked T.13 S.,R.20 E.,S.36,B.T.
	A pinion pine,8 ins.diam.,bears S.48°E.,125 lks.dist.,marked T.14 S.,R.20 E.,S.1,B.T.
	A cedar,4 ins .diam.,bears S.20°W.,95 lks. dist.,marked T.14 S.,R.20 E.,S.2,B.T.
	A pinion pine,12 ins.diam.,bears N.W.,85 lks. dist.,marked T.13 S.,R.20 E.,S.35,B.T.
	Land,mountainous and level.
	Soil,gravelly;3rd rate.
	Timber,cedar and pine.
	Undergrowth,sage brush.
	Good grass for grazing.

Chains	
	Mountainous or heavily timbered land,80.00 chs.
	S.89° 48'W.,on a true line bet.secs.2 and 35.
	Over mountainous land;through heavy timber and scattering undergrowth;descend.
40.00	Set a limestone,20x7x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,8 ins.diam.,bears N.20°E.,98 lks. dist.,marked ¼ S.35,B.T.
	A pinion pine,8 ins.diam.,bears S.44°W.,147 lks.dist.,marked ¼ S.2,B.T.
,58.25	Bottom of Agency Draw,450 ft.below mesa,course N.; ascend. Trail in bottom,bears with canon.
80.00	Set a limestone,18x8x5 ins.,12 ins.in the ground,for cor.of secs.2,3,34,and 35,marked with 2 notches on E.and 4 notches on W.edges;from which
	A pinion pine,12 ins.diam.,bears N.24°E., 115 lks.dist.,marked T.13 S.,R.20 E.,S.35,B.T.
	A cedar,8 ins.diam.,bears S.70°E.,170 lks. dist.,marked T.14 S.,R.20 E.,S.2,B.T.
	A pinion pine,16 ins.diam.,bears S.15°W., 245 lks.dist.,marked T.14 S.,R.20 E.S.3,B.T.
	A cedar,6 ins.diam.,bears N.31°W.,227 lks. dist.,marked T.13 S.,R.20 E.,S.34,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80,00 chs.
	S.89° 48'W.,on a true line bet.secs.3 and 34.
	Over mountainous land; through scattering timber and scattering undergrowth;ascend.

Chains	
28.50	Top of ridge,300 ft.above sec.cor.,bears N.and S.; This ridge is the main divide bet.Hill Creek and Willow Creek.Descend.
40.00	Set an oilshale stone,16x10x5 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,8 ins.diam.,bears N.20° E.,45 lks. dist.,marked ¼ S.34,B.T. A pinion pine,10 ins.diam.,bears S.15° W., 68 lks.dist.,marked ¼ S.3,B.T.
80.00	Set a limestone,24x10x6 ins.,18 ins.in the ground,for cor.of secs.3,4,33,and 34,marked with 3 notches on E. and 3 notches on W.edges;from which A pinion pine,10 ins.diam.,bears N.55° E.,90 lks.dist.,marked T.13 S.,R.20 E.,S.34,B.T. A pinion pine,10 ins.diam.,bears S.32° E.105 lks.dist.,marked T.14 S.,R.20 E.,S.3,B.T. A cedar,10 ins.diam.,bears S.41° W.,155 lks. dist.,marked T.14 S.,R.20 E.,S.4,B.T. A pinion pine,6 ins.diam.,bears N.18° W.,71 lks.dist.,marked T.13 S.,R.20 E.,S.33,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,80.00 chs.

	S.89° 48' W.,on a true line bet.secs.4 and 33.
	Over mountainous land;through scattering timber and scattering undergrowth;descend.
8.25	Bottom of hollow,100 ft .below sec.cor.,course N.20° W.
	Ascend. Trail in bottom,bears with hollow.
40.00	Set a limestone,24x6x6 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

Chains	
	A cedar,4 ins.diam.,bears N.32°E.,58 lks. dist.,marked ¼ S.33,B.T.
	A cedar,12 ins.diam.,bears S.72°W.,43 lks. dist.,marked ¼ S.4,B.T.
68.00	Top of ascent,250 ft.above hollow,bears N.and S.; thence over rolling mesa.Enter dense undergrowth.
71.15	Edge of mesa,bears N.and S.;descend.
80.00	Set an oilshale stone,20x8x4 ins.,15 ins.in the ground,for cor.of secs.4,5,32,and 33,marked with 4 notches on E.and 2 notches on W.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and nearly level.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	August 19,1901.

August 20,1901;At 7 h 2 m a.m.,l.m.t.,we set off 39° 38'N.,on the lat.arc;12° 36'N.,on the decl.arc;and determine a true meridian with the solar,at the cor. of secs.4,5,32,and 33,

Thence we run

S.89° 48'W.,on a true line bet.secs.5 and 32.

Over mountainous land;through scattering timber and dense undergrowth;descend.

36.10	Bottom of hollow,150 ft.below sec.cor.,course N.; ascend.
40.00	Set a limestone,16x8x5 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,7 ins.diam.,bears N.,7 lks.dist., marked ¼ S.32,B.T.

Chains

A cedar,6 ins.diam.,bears S.30° W.,26 lks. dist.,marked ¼ S.5,B. T.

80.00 Set an oilshale stone,24x6x4 ins.,18 ins.in the ground,for cor.of secs.5,6,31,and 32,marked with 5 notches on E.and 1 notches on W.edges;from which

A cedar ,6 ins.diam.,bears N.40° E.,80 lks. dist.,marked T.13 S.,R.20 E.,S.32,B.T.

A pinion pine,6 ins.diam.,bears S.50° E.,110 lks.dist.,marked T.14 S.,R.20 E.,S.5,B.T.

A pinion pine,5 ins.diam.,bears S.60° W.,35 lks.dist.,marked T.14 S.,R.20 E.,S.6,B.T.

A pinion pine,8 ins.diam.,bears N.30° W.,118 lks.dist.,marked T.13 S.,R.20 E.,S.31,B.T.

Land,mountainous.

Soil,Gravelly;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

S.89° 48'W.,on a true line bet.secs.6 and 31.

Over mountainous land;through scattering timber and dense undergrowth;ascend.

1.50 Top of ridge,25 ft.above sec.cor.,bears N.and S.; descend.

10.00 Foot of descent,200 ft.below ridge,bears N.and S.; thence over mesa.

40.00 Set an oilshale stone,18x10x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A pinion pine,10 ins.diam.,bears N.50° W.,78 lks.dist.,marked ¼ S.31,B.T.

A pinion pine,10 ins.diam.,bears S.57° E.,70 lks.dist.,marked ¼ S.6,B.T.

67.28 Edge of mesa,bears N.and S.;descend over ledges.

North boundary of T.14 S.,R.20 E -Continued.

Chains

78.80 The temp.cor.of Tps.13 and 14 S.,Rs.19 and 20 E.
Set a sandcoated limestone,18x8x6 ins.,12 ins.in the ground,for cor.of Tps.13 and 14 S.,Rs.19 and 20 E., marked with 13 S.on N.E.,20 E.on S.E.,14 S.on S.W., and 19 E.on N.W.face;with 6 notches on each edge; from which

A cedar,6 ins.diam.,bears N.60° W.,107 lks. dist.,marked T.13 S.,R.19 E.,S.36,B.T.

No other trees within limits;and raise a mound of stone,2 ft.base,1½ ft.high,S.of cor.Pits impracticable.

Land,mountainous and nearly level.

Soil,gravelly;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land ,or land covered with dense undergrowth,78.80 chs.

August 20,1901.

BOUNDARIES OF T.14 S.,R.20 E.

Latitudes,departures,and closing errors.

Line designated	true bearing	distance	latitudes N. chs.	latitudes S. chs.	departures E. chs.	departures W. chs.
W.bdy.T.14 S.,R.20 E	North	480.00	480.00			
N.bdy.T.14 S.,R.20 E	N.89° 48'E.	478.80	1.67		478.80	
E.bdy.T.14 S.,R.20 E	South	480.00		480.00		
S.bdy.T.14 S.,R.20 E.	S.89° 54'W.	478.55		.83		478.5
Convergency					.60	
Totals			481.67	480.83	479.40	478.5
Error in latitude			480.83		478.55	
			.84			
Error in departure					.85	

This township is rather rough in the central part, and a rolling mesa in the South and West ;it is well timbered,but has no water.It should be subdivided.

John R. Stewart

U.S.DEPUTY SURVEYORS

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PAGE

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by _____

_____, United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of _____

_____

showing the respective capacities in which they acted:

_____, *Chainman.*

_____, *Chainman.*

_____, *Moundman.*

_____, *Moundman.*

_____, *Axman.*

_____, *Axman.*

_____, *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted _____

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

_____

_____

_____ of the _____

_____ meridian, _____ of _____, which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for _____

_____, *Chainman.*

_____, *Chainman.*

_____, *Moundman.*

_____, *Moundman.*

_____, *Axman.*

_____, *Axman.*

_____, *Flagman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

6—151

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, ..., United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from United States Surveyor General for ....., bearing date of the ..... day of ....., 189 , I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for ....., the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of .....

.....

.....

.....

..... of the ..... meridian, in the ..... of ....., which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for ..... and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

.....

United States Deputy Surveyor

Subscribed by said ....., and sworn to before me this ..... day of ....., 189

.....

.....

SEAL

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah, February 5th, 1903.

The foregoing field notes of the survey of The West & North Boundaries of Township 4 South, Range 20 East of the Salt Lake Base & Meridian, Utah

executed by Scott C. Stewart & John W. Stewart under his contract No. 212, dated April 12, 1901, 189 , having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Edward M. Anderson

United States Surveyor General

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

.....

United States Surveyor General

4-171

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4—679.

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BOOK A-289

FIELD NOTES

OF THE SURVEY OF THE

H.J.B.

SUBDIVISION

of

Township No. 14 South, Range No. 20 East,

Of the SALT LAKE BASE AND *Meridian,*

in the STATE OF UTAH,

AS SURVEYED BY

Scott P. Stewart and John R. Stewart, *United States Deputy Surveyors*

Under ~~his~~ their *Contract No.* 242, *dated* April 12, 1901. ~~189~~

Survey commenced August 20, 1901. ~~189~~

Survey completed August 28, 1901. ~~189~~

6—151

high 59-69 40

NAMES AND DUTIES OF ASSISTANTS.

Andy J. Stewart Chainman

Edwin H. Peay Chainman

Vosco Call Chainman

Hugh Conover Chainman,

Clarence S. Jarvis Moundman

John J. Harding Moundman

George W. Ekins Axman

Harry Burton, Axman,

Harvey R. Booth Flagman

Gilbert Burr, Flagman.

In preliminary affidavits &c. for D. F. 155, R. 30, E.

BOOK A-289

INDEX DIAGRAM.

Township....., *Range*.....

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

WE, _____ and _____ do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of

_____

_____, *Chainman.*

_____, *Chainman.*

Subscribed and sworn to before me this _____ day of _____, 189

_____

SEAL

_____

WE, _____ and _____ do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Moundman.*

_____, *Moundman.*

Subscribed and sworn to before me this _____ day of _____, 189

_____

SEAL

_____

WE, _____ and _____ do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Axman.*

_____, *Axman.*

Subscribed and sworn to before me this _____ day of _____, 189

_____

SEAL

_____

I, _____, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of _____

_____, *Flagman.*

Subscribed and sworn to before me this _____ day of _____, 189

_____

SEAL

_____

Subdivision of T.14 S.,R.20 E.

Survey commenced August 20,1901,and executed with a W.and L.E.Gurley light mountain transit,No.3,with 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;and a W.and L.E.Gurley plain transit, No.2,of which the horizontal limb is provided with one double vernier reading to single minutes of arc. The instruments were examined,tested on the true meridian at Salt Lake City,found correct,and approved by the surveyor general for Utah,the former on June 6,1901,and the latter on May 29,1901.

We examine the adjustments of the transits,and correct the level and collimation errors,then,to test the solar apparatus ,of the No.3,instrument,by comparing its indications resulting from observations made during p.m.and a.m.hours,with a true meridian determined by observation on Polaris,we proceed as follows;

At the cor.of secs.1,2,35,and 36,on S.bdy.of Tp., heretofore described,latitude 39° 33'N.,longitude 109° 40'W.;we set off 39° 33'N.,on the lat.arc; 12° 27'N.,on the decl.arc;and at 3 h 0 m p.m.,l.m.t.,determine a true meridian with the solar,and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N. of the cor.

At 9 h 33 m p.m.,l.m.t.,we observe Polaris at eastern elongation,in accordance with the Manual ,and mark a point in the line thus determined ,on a plug driven in the ground,5.00 chs.N.of the cor.

August 20,1901.

August 21,1901:At 6 h 30 m a.m.,l.m.t.,we lay off the azimuth of Polaris,1° 35'to the west,and mark the true meridian thus determined by cutting a small groove

Chains	
	in the stone set August 20, on which the true meridian falls 0.35 ins. east of the mark determined with the solar.
	At 7 h 3 m a.m., l.m.t., we set off 39° 33' N., on the lat. arc; 12° 16' N., on the decl. arc; and mark a point in the true meridian determined with the solar, by a cross on the stone, already set, 5.00 chs. N. of the cor.; this mark falls 0.30 ins. east of the true meridian established by Polaris observation.
	The solar apparatus by p.m. and a.m. observations, defines positions for true meridians, respectively about 0' 18" west and 0' 16" east of the true meridian established by Polaris observation; therefore we conclude that the adjustments of the instruments are satisfactory.
	The magnetic bearing of the true meridian at 7 h 30 m a.m. is 16° 14.5' W., the angle thus determined, reduced by the table, page 100, of the Manual, gives the mean mag. decl. 16° 9' E.
	From the above described cor. we run N. 0° 01' W., bet. secs. 35 and 36.
	Over rolling mesa; through heavy timber; and scattering undergrowth.
40.00	Set a sandstone, 20x12x4 ins., 15 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which
	A cedar, 10 ins. diam., bears N. 52° E., 225 lks. dist., marked $\frac{1}{4}$ S. 36, B.T.
	A cedar, 10 ins. diam., bears S. 60° W., 130 lks. dist., marked $\frac{1}{4}$ S. 35, B.T.
65.00	Leave timber and enter dense undergrowth, bears E. and W.
80.00	Set a limestone, 24x8x5 ins., 18 ins., in the ground, for cor. of secs. 25, 26, 35, and 36, marked with 1 notch on S. and 1 notch on E. edges; from which

Subdivision of T 14 S.,R.20 E.-Continued.

Chains	
	A pinion pine,12 ins.diam.,bears S.70° W.,130 lks.dist.,marked T.14 S.,R.20 E.,S.35,B.T.
	A cedar,6 ins.diam.,bears N.75° W.,100 lks. dist.,marked T.14 S.,R.20E.,S.26,B.T.
	No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land ,rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	N.89° 54'E.,on a random line bet.secs.25 and 36.
40.00	Set temp.¼ sec.cor.
80.04	Intersect the Green River Guide Meridian,14 lks. N. of the cor.of secs.25,30,31,and 36,heretofore described.
	Thence we run
	West,on a true line bet.secs.25 and 36.
	Over rolling mesa;through dense undergrowth and scattering timber;
26.00	Leave mesa,bears N.and S.;ascend.
35.00	Top of ascent,200 ft.above mesa,bears N.and S.;thence over mesa.
40.00	Set a limestone,20x6x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,6 ins.diam.,bears N.5° W.,25 lks. dist.,marked ¼ S.25,B.T.
	A pinion pine,10 ins.diam.,bears S.10° W.,10 lks.dist.,marked ¼ S.36,B.T.
47.50	Leave timber,bears N.and S.
80.04	The cor.of secs.25,26,35,and 36.
	Land,mountainous and level.

Chains	
	Soil, sandy loam; 2nd rate.
	Timber, cedar and pinion pine.
	Undergrowth, sage brush.
	Good grass for grazing.
	Mountainous land, or land covered with dense undergrowth, 80.04 chs.
	N. 0° 01' W., bet. secs. 25 and 26.
	Over rolling mesa; through dense undergrowth.
6.00	Enter scattering timber, bears E. and W.
38.00	Edge of mesa, bears N.W. and S.E.; descend.
40.00	Set a sandstone, 18x10x4 ins., 12 ins. in the ground, for 1/4 sec. cor., marked 1/4 on W. face; from which A pinion pine, 8 ins. diam., bears N. 80° E., 70 lks. dist., marked 1/4 S. 25, B.T. A pinion pine, 10 ins. diam., bears S. 82° W., 25 lks. dist., marked 1/4 S. 26, B.T.
45.00	Bottom of hollow, 100 ft. below mesa, course N. 30° W.; ascend.
54.00	Top of ascent, 200 ft. above hollow, bears N. 20° W. and S. 20° E.; thence over mesa.
80.00	Set a sandstone, 30x10x4 ins., 24 ins. in the ground, for cor. of secs. 23, 24, 25, and 26, marked with 2 notches on S. and 1 notch on E. edges; from which A pinion pine, 8 ins. diam., bears N. 45° E., 150 lks. dist., marked T. 14 S., R. 20 E., S. 24, B.T. A pinion pine, 12 ins. diam., bears S. 65° E., 100 lks. dist., marked T. 14 S., R. 20 E., S. 25, B.T. A pinion pine, 10 ins. diam., bears S. 45° W., 50 lks. dist., marked T. 14 S., R. 20 E., S. 26, B.T. A pinion pine, 11 ins. diam., bears N. 40° W., 125 lks. dist., marked T. 14 S., R. 20 E., S. 23, B.T.
	Land, mountainous and rolling mesa.
	Soil, sandy and gravelly; 2nd and 3rd rate.
	Timber, cedar and pinion pine.

Chains	
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	East,on a random line bet.secs.24 and 25.
40.00	Set temp.¼ sec.cor..
79.90	Intersect the Green River Guide Meridian,at the cor. of secs.19,24,25,and 30,heretofore described,
	Thence we run
	West,on a true line bet.secs.24 and 25.
	Over rolling mesa;through dense undergrowth and scattering timber.
32.00	Edge of mesa,bears N.and S.;ascend.
39.95	Set a sandstone,18x12x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,8 ins.diam.,bears N.30° E.,45 lks.dist.,marked ¼ S.24,B.T.
	A pinion pine,6 ins.diam.,bears S.6° W.,30 lks.dist.,marked ¼ S.25,B.T.
43.00	Top of ascent,100 ft.above mesa,bears N.and S.;thence over rolling mesa.
79.90	The cor.of secs. 23,24,25,and 26.
	Land,mountainous and rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,79.90 chs.
	N.0° 01' W.,bet.secs.23 and 24.
	Over rolling mesa;through heavy timber and dense undergrowth.

Chains	
40.00	Set a sandstone,20x12x4 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,10 ins.diam.,bears N.55° E.,50 lks. dist.,marked ¼ S.24,B.T. A pinion pine,12 ins.diam.,bears N.47° W.,20 lks.dist.,marked ¼ S.23,B.T.
46.00	Old Indian trail,bears N.25° E.and S.25° W.
80.00	Set a quartzite stone,18x12x4 ins.,12 ins.in the ground,for cor.of secs.13,14,23,and 24,marked with 3 notches on S.and 1 notch on E.edges;from which A cedar,6 ins.diam.,bears N.67° E.,70 lks. dist.,marked T.14 S.,R.20 E.,S.13,B.T. A pinion pine,12 ins.diam.,bears S.70° E.,80 lks.dist.,marked T.14 S.,R.20 E.,S.24,B.T. A cedar,9 ins.diam.,bears S.25° W.,40 lks. dist.,marked T.14 S.,R.20 E.,S.23,B.T. A pinion pine,8 ins.diam.,bears N.48° W.,40 lks.dist.,marked T.14 S.,R.20 E.,S.14,B.T. Land,rolling mesa. Soil,sandy loam;2nd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Heavily timbered land,or land covered with dense undergrowth,80.00 chs. August 21,1901:At the noon hour the sky is overcast and solar observations are impossible.
	East,on a random line bet.secs.13 and 24,
40.00	Set temp.¼ sec.cor.
79.86	Intersect the Green River Guide Meridian,5 lks.S.of the cor.of secs.13,18,19,and 24,heretofore described. Thence we run S.89° 58' W.,on a true line bet.secs.13 and 24.

Chains	
	Over rolling mesa;through dense undergrowth.
23.00	Edge of mesa,bears N.and S.;leave undergrowth and enter heavy cedar and pinion pine;ascend.
39.93	Set a sandstone,20x10x4 ins.,15 ins.in the ground,for ¼ sec.cor. ,marked ¼ on N.face ;from which A pinion pine,8 ins.diam.,bears N.30° W.,130 lks.dist.,marked ¼ S.13,B.T. A pine ,12 ins.diam.,bears S.10° W.,50 lks. dist.,marked ¼ S.24,B.T.
44.00	Top of ascent,150 ft.above mesa,bears N.and S.;thence over mesa.
50.00	Old indian trail,bears N.25° E.and S.25° W.
79.86	The cor.of secs.13,14,23,and 24.
	Land,mountainous,and rolling mesa.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,79.86 chs.

	N.0° 01'W.,bet.secs.13 and 14.
	Over rolling mesa;through dense undergrowth and scattering timber.
20.00	Edge of mesa,bears N.E.and S.W.;leave undergrowth and enter heavy timber,bears N.E.and S.W.;descend.
35.50	Bottom of hollow,200 ft.below mesa,course N.15° E.; leave timber and enter dense undergrowth ,bears N.15° E.and S.15° W.;ascend.
40.00	Set a sandstone,14x8x4 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
61.00	Top of ridge,150 ft.above hollow,bears N.E.and S.W.; descend.

Chains	
80.00	Set a sandstone,30x12x4 ins.,24 ins.in the ground, for cor.of secs.11,12,13, and 14,marked with 4 notches on S.and 1 notch on E.edges;dig pits,18x18x12 ins., in each sec.,5½ ft.dist.,and raise a mound of earth, 4 ft.base, 2 ft.high,W.of cor.
	Land,mountainous and rolling mesa.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	N.89° 58'E.,on a random line bet.secs.12 and 13.
40.00	Set temp.¼ sec.cor.
79.80	Intersect the Green River Guide Meridian,18 lks.S.of the cor.of secs.7,12,13 ,and 18,heretofore described.
	Thence we run
	S.89° 50'W.,on a true line bet.secs.12 and 13.
	Over rolling mesa;through dense undergrowth and scattering timber.
20.00	Edge of mesa,bears N.and S.;descend.
28.00	Bottom of hollow,150 ft.below mesa,course N.10° W.; ascend.
35.00	Top of ridge,150 ft.above hollow,bears N.and S.;descend.
39.90	Set a lime coated sandstone,18x10x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,4 ins.diam.,bears N.20° E.,50 lks.dist.,marked ¼ S.12,B.T.
	A cedar,8 ins.diam.,bears S.5° E.,137 lks. dist.,marked ¼ S.13,B.T.
47.00	Bottom of hollow,175 ft.below ridge,course N.15° E.;

Chains	
	ascend.
48.50	Old Indian trail,bears N.15° E.and S.15° W.
54.00	Enter heavy timber,bears N.and S..
55.50	Top of ridge,150 ft.above hollow,bears N.W. and S.E.
	descend.
62.00	leave timber and enter dense undergrowth,bears N.W.
	and S.E.
67.75	Bottom of canyon,150 ft.below ridge,course N.40° W.;
	ascend.
79.80	The cor.of secs.11,12,13,and 14.
	Land,mountainous and rolling mesa.
	Soil,sandy and gravelly ;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered
	with dense undergrowth,79.80 chs.
	N.0° 01'W.,bet.secs.11 and 12.
	Over mountainous land;through dense undergrowth,and
	scattering timber;descend.
21.00	Bottom of hollow,40 ft.below cor.,course N.W.;ascend.
40.00	Top of ascent,300 ft.above hollow,bears N.W.and S.E.;
	Set a sand coated limestone,24x12x4 ins.,18 ins.in
	the ground,for ¼ sec.cor.,marked ¼ on W.face; from
	which
	A pinion pine,14 ins.diam.,bears N.48° E.,50
	lks.dist.,marked ¼ S.12,B. T.
	A pinion pine,8 ins.diam.,bears N.69° W.,44
	lks.dist.,marked ¼ S.11,B.T.
65.00	Edge of mesa,bears N.30° W. and S.30° E.;descend.
72.00	Bottom of hollow,250 ft.below mesa,course N.30° W.;
	ascend.
80.00	Set an oil shale ,18x8x4 ins.,12 ins.in the ground,for
	cor.of secs.1,2,11,and 12,marked with 5 notches on S.

Chains	
	and 1 notch on E.edges;from which
	A pinion pine,8 ins.diam.,bears N.50° E.,43 lks.dist.,marked T.14 S.,R.20 E.,S.1,B.T.
	A pinion pine,10 ins.diam.,bears S.35° E.,47 lks.dist.,marked T.14 S.,R.20 E.,S.12,B.T.
	A pinion pine,8 ins .diam.,bears S.20° W.,50 lks.dist.marked T.14 S.,R.20 E.,S.11,B.T.
	A pinion pine,8 ins.diam.,bears N.40° W.,55 lks.dist.,marked T.14 S.,R.20 E.,S.2,B.T.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and gravelly ;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.89° 50'E.,on a random line bet.secs.1 and 12.
40.00	Set temp. $\frac{1}{4}$ sec.cor.
79.70	Intersect The Green River Guide Meridian,at the cor. of secs.1,6, 7,and 12,heretofore described.
	Thence we run
	S.89° 50'W.,on a true line bet.secs.1 and 12.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
15.00	Bottom of hollow,200 ft.below cor.,course N.W.;ascend.
26.00	Top of ridge,150 ft.above hollow,bears N.and S.;descend.
38.25	Indian trail,bears N.and S.;in bottom of canyon,100 ft.below ridge,course N.;ascend.
39.85	Set a sandstone,20x12x6 ins.,15 ins.in the ground, for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on N.face;from which
	A pinion pine,6 ins.diam.,bears N.83° W.,299 lks.dist.,marked $\frac{1}{4}$ S.1,B.T.
	A pinion pine,6 ins.diam, bears S.42° W.,275

Chains	
	lks.dist.,marked ¼ S.12,B.T.
46.00	Top of ascent,250 ft.above canyon,bears N.and S.; thence over mesa.
65.00	Edge of mesa,bears N.and S.;enter heavy timber, bears N.and S.;descend.
79.70	The cor.of secs.1,2,11,and 12,
	Land,mountainous and rolling mesa.
	Soil,sandy and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,79.70 chs.

N.0° 01'W.,on a random line bet.secs.1 and 2.

40.00 Set temp.¼ sec.cor.

80.00 Intersect N.bdy.of Tp.at the cor.of secs.1,2,35,and 36,heretofore described,

Thence we run

S.0° 01'E.,on a true ,line bet.secs.1 and 2.

Over mountainous land;through dense undergrowth and scattering timber;descend.

11.75 Bottom of hollow,200 ft.below cor.,course W.;ascend.

22.50 Top of ridge,200 ft.above hollow,bears E.and W.;descend.

33.00 Bottom of hollow,250 ft.below ridge,course W.;ascend.

40.00 Set a sandstone,20x8x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

A cedar ,6 ins.diam. ,bears N.31° E.,174 lks. dist.,marked ¼ S.1,B.T.

A cedar,14 ins.diam.,bears N.47° W.,121 lks. dist.,marked ¼ S.2,B.T.

51.25 Top of ridge,250 ft above hollow,bears N.W.and S.E.; descend.

55.50 Bottom of hollow,150 ft.below ridge,course N.45° W.;

Chains	
	ascend.
77.00	Top of spur,150 ft.above hollow,bears N.W.and .E.; descend.
80.00	The cor.of secs.1,2,11,and 12.
	Land,mountainous.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	August 21,1901.

August 22,1901;At 7 h 30 m a.m.,l.m.t, we set off 39° 33'N.,on the lat.arc;11° 55'N.,on the decl.arc;and determine a true meridian with the solar,at the cor. of secs.2,3,34,and 35,on S.bdy.of Tp.,heretofore described.

Thence we run

N.0° 01'W.,bet.secs.34 and 35.

Over rolling mesa;through dense undergrowth.

11.00	Old indian trail,bears N.60° E.and S.60° W.
40.00	Set a sand coated limestone,24x12x4 ins.,18 ins.in the ground,for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face;dig pits,18x18x12 ins.,N.and S.of stone,3 ft.dist.;and raise a mound of earth,4 ft.base,.2 ft.high,W.of cor.
65.00	Edge of mesa,bears N.35° E.and S.35° W.;enter heavy cedar and pinion pine timber and leave undergrowth, bears with mesa.Descend.
71.00	Bottom of hollow,100 ft.below mesa,course N.E.;ascend.
80.00	Set a sandstone,18x10x6 ins.,12 ins.in the ground,for cor.of secs.26,27,34,and 35,marked with 1 notch on S.and 2 notches on E.edges;from which
	A pinion pine,14 ins.diam.,bears N.50° E.,60

Chains	
	lks.dist.,marked T.14 S.,R.20 E.,S.26,B.T.
	A pinion pine,8 ins.diam.,bears S.30° E.,50
	lks.dist.,marked T.14 S.,R.20 E.,S.35,B.T.
	A pinion pine,12 ins.diam.,bears S.30° W.,95
	lks.dist.,marked T.14 S.,R.20 E.,S.34,B.T.
	A pinion pine,15 ins.,diam.,bears N.50° W.,130
	lks.dist.,marked T.14 S.,R.20 E.,S.27,B.T.
	Land,mountainous and nearly level.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	N.89° 54'E.,on a random line bet.secs.26 and 35.
40.00	Set temp. ¼ sec.cor.
80.08	Intersect N.and S.line,14 lks.N.of the cor.of secs. 25,26,35,and 36,
	Thence we run
	West,on a true line bet.secs.26 and 35.
	Over rolling mesa;through dense undergrowth and scattering timber.
20.00	Old indian trail,bears N.30° E.and S.30° W.
40.04	Set a sandstone,20x10x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,11 ins.diam.,bears N.11° W.,38
	lks.dist.,marked ¼ S.26,B.T.
	A pinion pine,10 ins.diam.,bears S.45° E.,65
	lks.dist.,marked ¼ S.35,B.T.
43.00	Edge of mesa,bears N.and S.;descend.
48.00	Bottom of hollow,250 ft.below mesa,course N.5° E.;ascend.
55.00	Top of ridge,100 ft.above hollow,bears N.10° E.and S.10° W.;descend.

Chains	
71.75	Bottom of hollow,250 ft.below ridge,course N.15° E.; ascend.
80.08	The cor.of secs.26,27,34,and 35,
	Land,mountainous and level.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.08 chs.

	N.0° 01'W.,bet.secs.26 and 27.
	Over mountainous land;through heavy timber and scattering undergrowth;ascend.
35.00	Top of ridge,350 ft.above sec.cor.,bears E.and W.; descend.
40.00	Set a sandstone,16x14x5 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,14 ins.diam.,bears N.85° E.,50 lks.dist.,marked ¼ S.26,B.T.
	A cedar,4 ins.diam.,bears N.85° W.,25 lks. dist.,marked ¼ S.27,B.T.
66.60	Bottom of hollow,250 ft.below ridge,course N.40° W.; ascend.
69.56	Old indian trail,bears N.40° W.and S.40° E.
80.00	Set a sandstone,20x10x4 ins.,15 ins.in the ground, for cor.of secs.22,23,26,and 27,marked with 2 notches on S.and 2 notches on E.edges;from which
	A pinion pine,10 ins.diam.,bears N.10° E.,100 lks.dist.,marked T.14 S.,R.20 E.,S.23,B.T.
	A cedar,8 ins.diam.,bears S.27° E.,75 lks. dist.,marked T .14 S.,R.20 E.,S.26,B.T.
	A cedar,6 ins.diam.,bears S.55° W.,90 lks. dist.,marked T.14 S.,R.20 E.,S.27,B.T.

Chains	
	A cedar,14 ins.diam.,bears N.57°W.,55 lks. dist.,marked T.14 S.,R.20 E.,S.22,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	East,on a random line bet.secs.23 and 26.
40.00	Set temp.¼ sec.cor.
80.18	Intersect N.and S.line,12 lks.S.of the cor.of secs. 23,24,25,and 26.
	Thence we run
	S.89°55'W.,on a true line bet.secs.23 and 26.
	Over level mesa;through dense undergrowth.
14.00	Edge mesa,bears N.25°W.and S.25°E.;descend.
16.25	Trail,bears N.25°W.and S.25°E.
16.70	Bottom of Agency Draw ,250 ft.below mesa,course N. 25°W.;ascend.
25.00	Top of ascent,200 ft.above Canyon,bears N.25°W.and S.25°E.;thence over mesa.
40.09	Set a lime coated sandstone,16x10x5 ins.,11 ins.in the ground,for ¼ sec .cor.,marked ¼ on N.face;from which
	A cedar,14 ins.diam.,bears N.55°E.,35 lks. dist.,marked ¼ S.23,B.T.
	A cedar,10 ins.diam.,bears S.5°W.,70 lks. dist.,marked ¼ S.26,B.T.
65.00	Edge of mesa,bears N.W.and S.E.;descend.
67.00	Bottom of hollow,200 ft.below mesa,course N.W.;ascend.
70.00	Top of ridge,75 ft.above hollow,bears N.W.and S.E.; descend.
80.18	The cor.of secs.22,23,26,and 27.
	Land,mountainous and nearly level.
	Soil,sandy loam;2nd rate.

Chains	
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.18 chs.
	N.0° 01'W.,bet.secs.22 and 23.
	Over mountainous land;through heavy timber and scattering undergrowth;ascend.
14.00	Top of ridge,150 ft.above sec.cor.,bears N.W.and S.E.;descend.
38.30	Bottom of hollow,250 ft.below ridge,course N.W.;ascend.
40.00	Set a sandstone,18x10x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,6 ins.diam.,bears N.86°E.,85 lks.dist.,marked ¼ S.23,B.T. A cedar,8 ins.diam .,bears S.56°W.,200 lks. dist.,marked ¼ S.22,B.T.
63.50	Top of ridge,300 ft.above hollow,bears N.40°W.and S.40°E.;descend.
80.00	Set a sandstone,18x8x6 ins.,12 ins.in the ground,for cor.of secs.14,15,22,and 23,marked with 3 notches on S.and 2 notches on E.edges;from which A pinion pine,4 ins.diam.,bears N.55°E.,70 lks.,dist.,marked T.14 S.,R.20 E.,S.14,B.T. A pinion pine,24 ins.diam.,bears S.54°E.,55 lks.dist.,marked T.14 S.,R.20 E.,S.23,B.T. A cedar,14 ins.diam.,bears S.60°W.,80 lks. dist.,marked T.14 S.,R.20 E.,S.22,B.T. A pinion pine,30 ins.diam.,bears N.20°W.,70 lks.dist.,marked T.14 S.,R.20 E .,S.15,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.

Chains	
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	August 22,1901:At this cor.we set off 11°51'N.,on the decl.arc;and at 0 h 3 m p.m.,l.m.t.,observe the sun on the meridian ,the resulting lat.is 39°36'N.,which is the proper lat.nearly.
	N.89°55'E.,on a random line bet.secs.14 and 23.
40.00	Set temp. ¼ sec.cor.
80.26	Intersect N.and S.line,8 lks.S.of the cor .of secs. 13,14,23,and 24,
	Thence we run
	S.89°52'W.,on a true line bet.secs.14 and 23.
	Over rolling mesa;through dense undergrowth and scattering timber.
7.00	Edge of mesa,bears N.and S.;descend.
36.90	Bottom of Agency Draw,200 ft.below mesa,course N.;
	Trail in bottom,bears N.and S.;ascend.
40.13	Set a sandstone,18x10x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
60.00	Top of ridge,150 ft.above canyon,bears N.10°E.and S.10°W.;descend.
80.26	The cor.of secs.14,15,22,and 23.
	Land,mountainous and nearly level.
	Soil,sandy and gravelly loam;2nd rate.
	Timber, cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.26. chs.

Chains	
	N.0° 01'W.,bet.secs.14 and 15.
	Over mountainous land;through heavy timber;descend.
2.00	Bottom of hollow,20 ft.below sec.cor.,course N.80° W.; ascend.
14.00	Top of ridge,200 ft.above hollow,bears N.80° W.and S.80° E.;descend.
15.50	Leave timber and enter dense undergrowth,bears E.and W.
28.00	Bottom of hollow,150 ft.below ridge,course N.W.;ascend.
30.00	Leave undergrowth and enter heavy timber,bears N.W. and S.E.
40.00	Set a limestone,20x12x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,14 ins.diam.,bears S.75° E.,60 lks. dist.,marked ¼ S.14,B.T.
	A cedar,20 ins.diam.,bears S.30° W.,55 lks. dist.,marked ¼ S. 15,B.T.
41.00	Top of ridge,75 ft.above hollow,bears N.25° W.and S. 25° E.;descend.
57.50	Bottom of hollow,100 ft.below ridge,course N.80° W.; ascend.
72.00	Top of ascent,200 ft.above hollow,bears E.and W.; thence over mesa.
80.00	Set a lime coated sandstone,22x10x5 ins.,16 ins.in the ground,for cor.of secs.10,11,14,and 15 ,marked with 4 notches on S. and 2 notches on E.edges;from which
	A pinion pine,8 ins.diam.,bears N.55° E.,70 lks.dist.,marked T.14 S., R.20 E.,S.11,B.T.
	A cedar,12 ins.diam.,bears S.45° E.,130 lks. dist.,marked T.14 S.,R.20 E.,S.14,B.T.
	A pinion pine,14 ins.diam.,bears S.60° W.,95 lks.dist.,marked T.14 S.,R.20 E.,S.15,B.T.
	A cedar,8 ins.diam.,bears N.35° W.,32 lks. dist.,marked T.14 S.,R.20E.,S.10,B.T.

Chains	
	Land,mountainous and nearly level.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.89° 52'E.,on a random line bet.secs.11 and 14.
40.00	Set temp.¼ sec.cor.
80.10	Intersect N.and S. line,10 lks.N.of the cor.of secs. 11,12,13,and 14.
	Thence we run
	S.89° 56'W.,on a true line bet.secs.11 and 14.
	Over mountainous land;through dense undergrowth;ascend.
5.00	Leave undergrowth and enter heavy timber,bears N.and S.
11.00	Top of ascent,bears N.and S.;thence over level mesa.
22.50	Edge of mesa, bears N.and S.;descend.
28.00	Bottom of hollow,150 ft.below mesa, course N.;ascend.
33.50	Top of ridge,150 ft.above hollow,bears N.and S.;descend.
40.05	Set a quartzite stone,24x14x5 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,6 ins.diam.,bears N.55° E.,80 lks. dist.,marked ¼ S.11,B.T.
	A cedar,5 ins.diam.,bears S.18° E.,85 lks. dist.,marked ¼ S.14,B .T.
43.00	Bottom of Agency Draw,250 ft.below ridge,course N.; ascend.
45.50	Trail,bears N.and S.
62.00	Top of ascent,250 ft.above canyon,bears N.and S.; thence over mesa.
80.10	The cor.of secs.10,11,14,and 15.

Chains | Land,mountainous and level.
Soil,sandy and gravelly loam;2nd and 3rd rate.
Timber,cedar and pinion pine.
Undergrowth,sage brush.
Good grass for grazing.
Mountainous or heavily timbered land,or land covered with dense undergrowth,80.10 chs.

N.0° 01'W.,bet.secs.10 and 11.
Over level mesa;through dense undergrowth and heavy cedar and pinion pine timber.

1.25 | Edge of mesa,bears E.and W.;descend .

7.00 | Leave timber,bears E.and W.

21.00 | Leave undergrowth and enter heavy timber,bears N.80° E.and S.80° W.

27.75 | Bottom of hollow,200 ft.below mesa,course W.;ascend.

36.00 | Leave heavy timber and enter scattering timber and dense undergrowth,bears E.and W.

40.00 | Set a sandstone,20x12x4 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
A cedar,5 ins.diam.,bears N.58° E.,93 lks. dist.,marked ¼ S.11,B.T.
A cedar,4 ins.diam.,bears S.24° W.,89 lks. dist.,marked ¼ S.10,B.T.

80.00 | Set a limestone,26x10x4 ins.,19 ins.in the ground, for cor.of secs.2,3,10,and 11,marked with 5 notches on S.and 2 notches on E.edges;from which
A cedar,10 ins.diam.,bears N.25° E.,325 lks. dist.,marked T.14 S.,R.20 E.S.2,B.T.
A pinion pine,10 ins.diam.,bears S.80° E.,300 lks.dist.,marked T.14 S.,R.20 E.,S.11,B.T.
A cedar,10 ins.diam.,bears N.13° W.,275 lks. dist.,marked T.14 S.,R.20 E.,S.3,B.T.
No tree within limits in sec.10;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Chains	
	Land,mountainous and level.
	Soil,sandy and gravelly loam; 2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	N.89° 56'E.,on a random line bet.secs.2 and 11.
40.00	Set temp.¼ sec.cor.
79.90	Intersect N.and S.line,5 lks.N.of the cor.of secs. 1,2,11,and 12.
	Thence we run
	S.89° 58'W.,on a true line bet.secs.2 and 11.
	Over mountainous land;throughdense undergrowth;descend.
7.00	Bottom of hollow,125 ft.below cor.,course N.30°W.; ascend.
17.00	Leave undergrowth and enter heavy timber,bears N. and S.
23.00	Top of ridge,250 ft.above hollow,bears N.and S.;descend.
39.95	Trail in Agency Draw,250 ft.below ridge,course N.
	Set a sandstone,18x8x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,10 ins.diam.,bears N.9°W.,84 lks. dist.,marked ¼ S.2,B.T.
	A cedar,9 ins.diam.,bears S.45 W.,70 lks. dist.,marked ¼ S.11,B.T.
	Ascend.
72.50	Top of ridge,150 ft.above canyon,bears N.20°W.and S.20°E.;descend.
79.90	The cor.of secs.2,3,10,and 11.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.

Chains Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,or land covered with dense undergrowth,79.90 chs.

August 22,1901.

August 23,1901:At 7 h 0 m a.m.,l.m.t.,we set off 39° 37'N.,on the lat.arc;11° 36'N.,on the decl.arc;and determine a true meridian with the solar,at the cor. of secs.2,3,10,and 11.

Thence we run

N.0° 01'W.,on a random line bet.secs.2 and 3.

40.00 Set temp.¼ sec.cor.

79.98 Intersect N.bdy.of Tp.at the cor.of secs.2,3,34,and 35,heretofore described.

Thence we run

S.0° 01'E.,on a true line bet.secs.2 and 3.

Over mountainous land;through dense undergrowth and scattering timber;ascend gradually.

39.98 Set a sandstone,26x6x4 ins.,19 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

A pinion pine,6 ins.diam.,bears S.79° E.,70 lks.dist.,marked ¼ S.2,B.T.

A pinion pine,12 ins.diam.,bears S.60° W.,45 lks.dist.,marked ¼ S.3,B.T.

69.00 Top of ridge,300 ft.above sec.cor.,bears N.20° W.and S.20° E.;descend.

79.98 The cor.of secs.2,3,10,and 11.

Land,mountainous .

Soil,sandy and gravelly loam;2nd and 3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,79.98 chs.

Chains	
	From the cor.of secs.3,4,33,and 34,on S.bdy.of Tp., heretofore described.
	Thence we run
	N.0° 02'W.,bet.secs.33 and 34.
	Over rolling mesa;through dense undergrowth.
40.00	Set a sandstone,24x12x4 ins.,18 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar;8 ins.diam.,bears N.9° E.,300 lks. dist.,marked ¼ S.34,B.T.
	A cedar,12 ins.diam.,bears S.57° W.,275 lks. dist.,marked ¼ S.33,B.T.
75.00	Leave undergrowth and enter heavy timber,bears E.and W.
80.00	Set a sandstone,16 x10x10 ins.,11 ins.in the ground, for cor.of secs.27,28,33,and 34,marked with 1 notch on S.and 3 notches on E.edges;from which
	A pinion pine,20 ins.diam.,bears N.32° E.,130 lks.dist.,marked T.14 S.,R.20 E.,S.27,B.T.
	A cedar,30 ins.diam.,bears S.63° E.,18 lks. dist.,marked T.14 S.,R.20 E.,S.34,B.T.
	A cedar,36 ins.diam.,bears S.29° W.,24 lks. dist.,marked T.14 S.,R.20 E.,S.33,B.T.
	A pinion pine,12 ins.diam.,bears N.45° W.,70 lks.dist.,marked T.14 S.,R.20 E.,S.28,B.T.
	Land, mountainous.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion.
	Undergrowth,sage brush
	Good grass for grazing.
	Heavily timbered land,or land covered with dense undergrowth,80.00 chs.

	N.89° 54'E.,on a random line bet.secs.27 and 34.
40.00	Set temp.¼ sec.cor.

Chains	
79.88	Intersect N.and S.line,at the cor.of secs.26,27,34, and 35,
	Thence we run
	S.89° 54'W.,on a true line bet.secs.27 and 34.
	Over mountainous land;through heavy cedar and pinion pine timber;ascend.
5.00	Leave timber and enter dense undergrowth,bears N.and S.
6.00	Top of ridge,10 ft.above sec.cor.,bears N.15°E.and S.15°W.;descend.
13.00	Bottom of swale,30 ft.below ridge,course N.15 °E.; ascend.
18.00	Top of ascent,100 ft.above swale,bears N.and S.; thence over mesa.
38.94	Edge of mesa,bears N.15°E.and S.15°W.;descend abruptly.
39.94	Set a sandstone,16x9x5 ins.,11 ins.in the ground, for ¼ sec.cor.,marked $\frac{}{1/4}$ on N.face;from which
	A pinion pine,14 ins.diam.,bears N.85°W.,75 lks.dist.,marked ¼ S.27,B.T.
	A pinion pine,14 ins.diam.,bears S.20°W.,30 lks.dist.,marked ¼ S.34,B.T.
44.25	Bottom of canyon,250 ft.below mesa,course N.;ascend.
44.64	Trail,bears N.and S.
54.50	Top of ascent,250 ft.above canyon,bears N.and S.; thence over mesa.
64.50	Edge of mesa,bears N.and S.;descend.
71.20	Bottom of hollow,175 ft.below mesa,course N.;ascend.
78.00	Top of ascent,200 ft.above hollow,bears N.and S.; thence over rolling mesa.
79.88	The cor.of secs.27,28,33,and 34.
	Land,mountainous and level.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine .
	Undergrowth,sage brush.
	Good grass for grazing.

Subdivision of T.14 S. .20 E - ntinued.

Chains	
	Mountainous ornheavily timbered land,or land covered with dense undergrowth,79.88 chs.
	August 23,1901:At the noon hour the sky is overcast and solar observations are impossible.
	N.0°02'W.,bet.secs.27 and 28.
	Over mesa;through heavy timber.
13.75	Edge of mesa,bears N.W.and S.E.;descend.
30.00	Bottom of hollow,80 ft.below mesa,course N.20°W.;ascend.
40.00	Top of ridge,200 ft.above hollow,bears E.and W.; Set a sandstone,14x12x6 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,5 ins.,diam., bears N.70°E.,85 lks.dist.,marked ¼ S.27,B.T. A pinion pine,4 ins.diam.,bears S.53°W.,60 lks.dist.,marked ¼ S.28,B.T.
	Descend.
67.00	Bottom of hollow,200 ft.below ridge,course N.20°E.; ascend.
80.00	Set a limestone,14x8x6 ins.,9 ins.in the ground,for cor.of secs.21,22,27,and 28,marked with 2 notches on S.and 3 notches on E.edges;from which. A pinion pine,18 ins.diam.,bears N.55°E.,105 lks.dist.,marked T.14 S.,R.20 E.,S.22,B.T. A cedar,6 ins.,diam.,bears S.52°E.,65 lks. dist.,marked T.14 S.,R.20 E.,S.27,B.T. A pinion pine,5 ins.diam.,bears S.34°W.,85 lks.dist.,marked T.14 S.,R.20 E.,S.28,B.T. A pinion pine,36 ins.diam.,bears N.15°E.,40 lks.dist.,marked T.14 S.,R.20 E.,S.21,B.T.
	Land,mountainous and level.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.

Chains	
	Mountainous or heavily timbered land,80.00 chs.
	S.89° 54'E.,on a random line bet.secs.22 and 27.
40.00	Set temp.‡ sec.cor.
79.92	Intersect N.and S.line at the cor.of secs.22,23,26, and 27.
	Thence we run
	S.89° 54'E.,on a true line bet.secs.22 and 27.
	Over mountainous land;through heavy timber;descend.
11.70	Trailbears N.W. and S.E.
13.50	Bottom of hollow ,150 ft.below sec.cor.,course N.40°W.;ascend.
23.50	Top of ridge,60 ft.above canyon,bears N.and S.;descend.
26.25	Bottom of hollow,60 ft.below ridge,course N.20°E.;ascend.
39.96	Set a sandstone,18x8x8 ins.,12 ins.in the ground, for ‡ sec.cor.,marked ‡ on N.face;from which
	A cedar,10 ins.,diam.,bears N.30°E.,140 lks. dist.,marked ‡ S.22,B.T.
	A cedar,8 ins.diam.,bears S.10°E.,25 lks. dist.,marked ‡ S.27,B.T.
57.50	Top of ridge,300 ft.above hollow,bears N.10°E.and S. 10°W.;descend.
75.00	Bottom of hollow,300 ft.below ridge,course N.15°E.; trail in bottom or hollow;ascend.
79.92	The cor.of secs.21,22,27,and 28.
	Land,mountainous.
	Soil,sandy and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,79.92 chs.
	N.0°02'W.,bet.secs.21 and 22.

division of T.14 S. 20 E.-Continued

Chains	
	Over mountainous land ;through heavy timber;ascend.
40.00	Set a sandstone,20x12x4 ins.,16 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,6 ins.diam.,bears N.48° E.,35 lks. dist.,marked ¼ S.22,B.T. A cedar,12 ins.diam.,bears N.55° W.,4 lks. dist.,marked ¼ S.21,B.T.
40.90	Top of ascent,300 ft.above sec.cor.,bears N.10° E. and S.10° W.;thence over rolling mesa.Leave heavy timber and enter scattering timber and dense undergrowth,bears N.10° E.and S.10° W.
71.00	Edge of mesa,bears N.70° E.and S.70° W.;leave undergrowth and enter heavy timber,bears N.70° E.and S.70° W.;descend.
74.10	Bottom of hollow,30 ft.below mesa,course N.E.;ascend.
80.00	Set a sandstone,30x10x5 ins.24 ins. in the ground, for cor.of secs.15,16,21,and 22,marked 14 S.,S.15 on N.E.;20 E.,S.22 on S.E.;S.21 on S.W.;and S.16 on N.W.faces;with 3 notches on E.and 3 notches on S. edges;from which A cedar,10 ins.diam.,bears N.50° E.,70 lks. dist.,marked T.14 S.,R.20 E.,S.15,B.T. A pinion pine,14 ins.diam.,bears S.45° E.,105 lks.dist.,marked T.14 S.,R.20 E.,S.22,B.T. A pinion pine,6 ins.diam.,bears S.80° W.,145 lks.dist.,marked T.14 S.,R.20 E.,S.21,B.T. A cedar,16 ins.diam.,bears N.60° W.,100 lks. dist.,marked T.14 S.,R.20 E.,S.16,B.T. Land,mountainous and level. Soil,sandy loam and gravelly ;2nd and 3rd rate. Timber.cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.

Chains

August 23,1901:At this cor.,latitude 39° 36'N.,longitude 109° 41'W.,we set off 39° 36'N.,on the lat.arc; 11° 28'N.,on the decl arc;at 3 h 0 m p.m.,l.m.t., and mark a point in the true meridian determined with the solar,by a cross on a stone firmly set in the ground,5.00 chs.N.of the cor.

At 9 h 21 m p.m.,l.m.t.,we observe Polaris at eastern elongation,with the No.2,transit,in accordance with the Manual,and mark a point in the line thus determined,by a tack driven in a wooden plug firmly set in the ground,5.00 chs.N.of the cor.

August 23,1901.

August 24,1901:At 6 h 30 m a.m.,l.m.t.,we lay off the azimuth of Polaris 1° 35'to the west,and mark the true meridian thus determined,by cutting a small groove in the stone,already set 5.00 chs.N.of our station;on which the true meridian falls 0.21 ins.east of the mark determined with the solar.

At 7 h 2 m a.m.,l.m.t.,we set off 39° 36'N.,on the lat. arc;11° 16'N.,on the decl.arc;and mark the true meridian determined with the solar,by a cross on the stone,already set 5.00 chs.N.of the cor.;on which the true meridian falls 0.34 ins.east of the true meridian determined by Polaris observation.

The solar apparatus by p.m.and a.m.observations,defines positions for true meridians,respectively about 0'11"west and 0'18"east of the true meridian established by Polaris observation;therefore we conclude that the adjustments of the imstruments are satisfactory.

The magnetic bearing of the true meridian at 7 h 30 m a.m.is 15° 41.6'W.,the angle thus determined reduced by the table page 100 of the Manual,gives the mean mag.decl.15° 36'E.

Chains	
	From the cor.of secs.15,16,21,and 22,we run
	N.89° 54'E.,on a random line bet.secs.15 and 22.
40.00	Set temp.¼ sec.cor.
79.80	Intersect N.and S.line,10 lks.S.of the cor.of secs. 14,15,22,and 23.
	Thence we run
	S.89° 50'W.,on a true line bet.secs.15 and 22.
	Over mountainous land;through heavy cedar and pinion pine timber;descend.
32.00	Trail,bears N.and S.
32.75	Bottom of hollow,150 ft.below sec.cor.,course N.;ascend.
39.90	Set a sandstone,16x7x5 ins.,11 ins.in the ground, for ¼ sec.cor.,marked .¼ on N.face;from which
	A cedar,13 ins.diam.,bears N.12° E.,100 lks. dist.,marked ¼ S.15,B.T.
	A pinion pine,8 ins.diam.,bears S.30° W.,50 lks.dist.,marked ¼ S.22,B.T.
64.50	Top of ridge,150 ft.above hollow,bears N.20° W.and S. 20° E.;descend.
70.90	Bottom of hollow,100 ft.below ridge,course N.;ascend.
74.50	Top of spur,100 ft.above hollow,bears N.and S.;descend.
77.00	Bottom of hollow,50 ft.below spur,course N.10° E.;ascend.
79.80	The cor.of secs.15,16,21,and 22.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,79.80 chs.

	N.0° 02'W.,bet.secs.15 and 16.
	Over mountainous land;through heavy timber;ascend.
5.00	Top of ascent,150 ft.above sec.cor.,bears N.10° E.and

Chains	
	S.10° W.;thence over rolling mesa.Enter dense brush.
40.00	Set a sandstone,16x7x4 ins.11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,11 ins.diam.,bears N.43° E.,50 lks.dist.,marked ¼ S.15,B.T.
	A pinion pine,10 ins.diam.,bears N.74° W.,100 lks.dist.,marked ¼ S.16,B.T.
42.00	Edge of mesa,bears N.10° W.and S.10° E.;descend .
47.00	Bottom of swale ,50 ft.below mesa,course N.E.;ascend.
61.50	Top of ascent,150 ft.above swale,bears N.30° E.and S. 30° W.;thence over rolling mesa.Enter scattering timber.
80.00	Set a sandstone,28x12x5 ins.,21 ins.in the ground, for cor.of secs.9,10,15,and 16,marked with 4 notches on S.and 3 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and rolling mesa.
	Soilsandy loam and gravelly 2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.

	N.89° 50'E.,on a random line bet.secs.10 and 15.
40.00	Set temp.¼ sec.cor.
79.64	Intersect N.and S.line,11 lks.N.of the cor.of secs. 10,11,14,and 15.
	Thence we run
	S.89° 55'W.,on a true line bet.secs.10 and 15.
	Over rolling mesa;through Dense undergrowth and scattering timber.
8.50	Edge of mesa,bears N.and S.;descend.
29.50	Trail,bears N.20° E.and S.20° W.
34.00	Bottom of hollow,200 ft.below mesa,course N.20° E.; ascend.

Chains	
34.80	Foot of perpendicular cliff,25 ft.high,bears N.20° E. and S.20° W.
39.82	Set a limestone,18x12x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,10 ins.diam.,bears N.62° E.,100 lks. dist.,marked ¼ S.10,B.T. A cedar,8 ins.diam.,bears S.41° E.,170 lks. dist.,marked ¼ S.15,B.T.
60.00	Top of ascent,250 ft.above hollow,bears N.and S.; thence over rolling mesa.
79.64	The cor.of sets.9,10,15,and 16. Land,mountainous and rolling. Soil,sandy loam and gravelly;2nd and 3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,79.64 chs.

N.0° 02'W.,bet.secs.9 and 10.
Over rolling mesa;through scattering timber and dense undergrowth.

35.00	Edge of mesa,bears N.10° W.and S.10° E.;descend abruptly.
40.00	Set a limestone,16x10x6 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,10 ins.diam.,bears S.63° E.,80 lks. dist.,marked ¼ S.10,B.T. A cedar,14 ins.diam.,bears N.38° W.,45 lks. dist.,marked ¼ S.9,B.T.
80.00	Set a limestone,20x8x6 ins.,15 ins.in the ground,for cor.of secs.3,4,9,and 10,marked with 5 notches on S. and 3 notches on E.edges;from which A cedar,5 ins.diam.,bears S.3° E.,100 lks.

Chains

dist.,marked T.14 S.,R.20 E.,S.10,B .T.

A cedar,7 ins.diam.,bears S.15 °E.,210 lks. dist.,marked T.14 S.,R.20 E.,S.9,B.T.

A cedar,4 ins.diam.,bears N.24°W.,300 lks. dist.,marked T.14 S.,R.20 E.,S.4,B.T.

No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Land,mountainous and rolling.

Soil,sandy and gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

N.89° 55'E.,on a random line bet.secs.3 and 10.

40.00 Set temp. ¼ sec.cor.

79.60 Intersect N.and S.line,11 lks.S.of the cor.of secs. 2,3,10,and 11.

Thence we run

S.89° 50'W.,on a true line bet.secs.3 and 10.

Over mountainous land;through scattering timber and dense undergrowth;descend.

33.20 Top of perpendicular cliff,100 ft.high,bears N.and S.

38.00 Bottom of hollow,300 ft.below sec:cor.,course N.20° W.;ascend.

38.50 Trail,bears N.20°W.and S.20°E.

39.80 Set a sandstone,18x6x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A cedar,4 ins.diam.,bears N.50°W.,40 lks. dist.,marked ¼ S.3,B.T.

A pinion pine,20 ins.diam.,bears S.20°E.,150 lks.dist.,marked ¼ S.10,B.T.

57.60 Top of ridge,200 ft.above hollow,bears N.and S.;descend.

Chains	
63.75	Bottom of hollow,50 ft.below ridge,course N.;ascend.
79.60	The cor.of secs.3,4,9,and 10.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.60 chs.
	August 24,1901:At the noon hour the sky is overcast and solar observations are impossible.
	N.0° 02'W.,on a random line bet.secs.3 and 4.
40.00	Set temp.¼ secs.cor.
80.02	Intersect N.bdy.of Tp.2 lks.E.of the cor.of secs.3, 4,33,and 34,heretofore described.
	Thence we run
	S.0° 03'E.,on a true line bet.secs.3 and 4.
	Over mountainous land;through scattering timber and scattering undergrowth;descend.
19.00	Bottom of hollow,200 ft.below sec.cor.,course N.W.; ascend.
19.45	Trail,bears N.W.and S.E.
40.02	Set a limestone,16x10x4 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on the W.face;from which
	A cedar,5 ins.diam.,bears S.77° E.,30 lks. dist.,marked ¼ S.3,B.T.
	A cedar,5 ins.diam.,bears N.40° W.,25 lks. dist.,marked ¼ S.,4 B.T.
80.02	The cor.of secs.3,4,9,and 10.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.

Chains Good grass for grazing.

Mountainous land,80.02 chs.

From the cor.of secs.4,5,32,and 33, on S.bdy.of Tp., heretofore described.

We run

N.0° 03'W.,bet.secs.32 and 33.

Over rolling mesa;through dense undergrowth.

40.00 Set a limestone,18x5x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable. Enter scattering timber,bears E.and W.

80.00 Set a sandstone,20x8x6 ins.,15 ins.in the ground,for cor.of secs.28,29,32,and 33,marked with 1 notch on S.and 4 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Land,nearly level.

Soil,sandy loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Land covered with dense undergrowth,80.00 chs.

August 24,1901.

August 26,1901:At 7 h 2 m a.m.,l.m.t.,we set off 39° 34'N.,on the lat.arc;10° 34'N.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.28,29,32,and 33.

Thence we run

N.89° 54'E .,on a random line bet.secs.28 and 33.

40.00 Set temp.¼ sec.cor.

79.90 Intersect N.and S.line,at the cor.of secs.27,28,33, and 34.

Thence we run

S.89° 54'W.,on a true line bet.secs.28 and 33.

Subdivision of T.14 S. R.20 E.-Continued.

Chains	
	Over rolling mesa;through dense undergrowth,and heavy cedar and pinion pine timber.
13.20	Edge of mesa,bears N.20° E.and S.20° W.;descend.
22.60	Bottom of hollow,60 ft.below mesa,course N.20° E.;ascend.
33.00	Top of ascent,200 ft.above hollow, bears N.and S.; thence over rolling mesa.
39.95	Set a limestone,16x10x4 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,12 ins.diam.,bears N.85° E.,125 lks. dist.,marked ¼ S.28,B.T. A cedar,18 ins.diam.,bears S.30° W.,150 lks. dist.,marked ¼ S.33,B.T.
60.00	Leave timber,bears N.and S.
79.90	The cor.of secs.28,29,32,and 33.
	Land,mountainous and nearly level.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,79.90 chs.

	N.0° 03 'W.,bet.secs.28 and 29.
	Over rolling mesa;through dense undergrowth.
27.00	Edge of mesa,bears N.E.and S.W.;descend.
34.70	Bottom of hollow,200 ft.below mesa,course N.30° E.; ascend.Enter scattering timber,bears with hollow.
40.00	Set a limestone,18x10x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,14 ins.diam.,bears N.45° E.,70 lks.dist.,marked ¼ S.,28,B.T. A pinion pine,10 ins.diam.,bears S.60° W.;25 lks.dist.,marked ¼ S.29,B.T.
42.00	Top of ascent,200 ft.above hollow,bears N.30° E.and

Chains S.30° W.;thence over rolling mesa.

80.00 Set a limestone,20x8x5 ins.,15 ins.in the ground,for cor.of secs.20,21,28,and 29,marked with 2 notches on S.and 4 notches on E.edges;from which

A pinion pine,15 ins.diam.,bears N.40° E.,35 lks.dist.,marked T.14 S.,R.20 E.,S.21,B.T.

A pinion pine,14 ins.diam.,bears S.44° E.,147 lks.dist.,marked T.14 S.,R.20 E.,S.28,B.T.

A cedar,20 ins.diam.,bears S.14° W.,50 lks. dist.,marked T.14 S.,R.20 E.,S.29,B.T.

A cedar,12 ins.diam.,bears N.7° W.,48 lks. dist.,marked T.14 S.,R.20 E.,S.20,B.T.

Land,mountainous and nearly level.

Soil,sandy and gravelly loam;2nd and 3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

N.89° 54'E.,on a random line bet.secs.21 and 28.

40.00 Set temp.¼ sec.cor.

79.84 Intersect N.and S.line,10 lks.S.of the cor.of secs. 21,22,27,and 28.

Thence we run

S.89° 50'W.,on a true line bet.secs.21 and 28.

Over mountainous land;through heavy timber;ascend.

18.70 Top of ridge,75 ft.above sec.cor.,bears N.20° E.and S. 20° W.;descend.

31.00 Bottom of hollow,100 ft.below ridge,course N.20° E.; ascend.

39.02 Set a limestone,16x10x4 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which

A pinion pine,30 ins.diam.,bears N.60° W.,70 lks.dist.,marked ¼ S.21,B.T.

Subdivision of T.14 S. R.20 E.-Continued.

Chains	
	A cedar,36 ins.diam.,bears S.71°W.,47 lks. dist.,marked ¼ S.28,B.T.
44.50	Top of ascent,edge of flat ridge,150 ft.above hollow, bears N.and S.
47.50	Edge of flat ridge,bears N.and S.descend.
57.00	Bottom of hollow,250 ft.below ridge,course N.10°E.; ascend.
69.40	Top of ascent,250 ft.above hollow,bears N.10°E .and S.10°W.;thence over rolling mesa.
79.84	The cor.of secs.20,21,28,and 29.
	Land,mountainous and rolling mesa.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,79.84 chs.

N.0°03'W.,bet.secs.20 and 21.
Over rolling mesa;through scattering timber and dense undergrowth,

26.50	Edge of mesa,bears N.10°E.and S.10°W.;descend.
40.00	Set a limestone,20x10x4 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinie,20 ins.diam.,bears S.30°E.,36 lks. dist.,marked ¼ S.21,B.T.
	A pinion pine,6 ins.diam.,bears S.47°W.,42 lks.dist.,marked ¼ S.20,B.T.
61.15	Bottom of hollow,200 ft.below mesa,course N.5°E.;as-cend.
80.00	Set a limestone,18x7x4 ins.,12 ins.in the ground, for cor.of secs.16,17,20,and 21,marked with 3 notches on S.and 4 notches on E.edges;from which
	A cedar,16 ins.diam.,bears S.30°E.,33 lks. dist.,marked T.14 S.,R.20 E.,S.21,B.T.
	No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Chains	
	Land,mountainous.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth, sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.89° 50'E.,on a random line bet.secs.16 and 21.
40.00	Set temp.$\frac{1}{4}$ sec.cor.
79.70	Intersect N.and S.line,2 lks.N.of the cor.of secs. 15,16,21,and 22.
	Thence we run
	S.89° 51'W.,on a true line bet.secs.16 and 21.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
1.50	Top of ascent,50 ft.above cor.,bears N.10°E. and S. 10°W.;thence over mesa.
11.25	Edge of mesa,bears N.20°W.and S.20°E.;descend.
21.00	Bottom of hollow,60 ft.below mesa,course N.;ascend.
25.00	Top of spur,40 ft.above hollow,bears N.and S.;descend.
32.00	Bottom of hollow,40 ft.below ridge,course N.20°E.; ascend.
39.85	Set a sandstone,14x10x6 ins.,9 ins.in the ground,for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on N.face;from which
	A pinion pine,17 ins.,diam.,bears N.12°W.,75 lks.dist.,marked $\frac{1}{4}$ S.16,B.T.
	A pinion pine,10 ins.diam.,bears S.20°E.,65 lks.dist.,marked $\frac{1}{4}$ S.,21,B.T.
58.00	Top of ascent,100 ft.above hollow,bears N.and S.; thence over mesa.
62.00	Edge of mesa,bears N.and S.;descend.
77.00	Bottom of hollow,200 ft.below mesa ,course N.10°W.; ascend.

Chains	
79.70	The cor.of secs.16,17,20,and 21.
	Land,mountainous and level.
	Soil,sandy and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth ,sage brush.
	Good grazing.
	Mountainous land,or land covered with dense undergrowth,79.70 chs.
	August 26,1901:At this cor.we set off 10° 29'N.,on the decl.arc;and at 0 h 2 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39° 36'N.,
	N.0° C3'W.,bet.secs.16 and 17.
	Over mountainous land;through scattering timber;descend gradually.
10.60	Bottom of hollow,50 ft.below cor.,course N.20° E.;ascend.
38.00	Enter heavy timber,bears E.and W.
40.00	Set a limestone,16x9x5 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,12 ins.diam.,bears S.80° E.,48 lks.dist.,marked .¼ S.,16,B.T.
	A pinion pine,10 ins.diam.,bears W.,20 lks. dist.,marked ¼ S.17,B.T.
53.00	Top of ascent,250 ft.above hollow,bears N.W.and S.E.
	Thence over mesa.
61.00	Edge of mesa,bears N.80° E.and S.80° W.;descend.
80.00	Set a limestone,18x8x5 ins.,12 ins.in the ground,for cor.of secs.8,9,16,and 17,marked with 4 notches on S.and 4 notches on E.edges;from which
	A pinion pine,16 ins.diam.,bears N.20° E.,35 lks.dist.,marked T.14 S.,R.20 E.,S.9,B.T.
	A pinion pine,14 ins.diam.,bears S.80° E.,65 lks.dist.,marked T .14 S.,R.20 E.,S.16,B.T.

Chains	
	A cedar,6 ins.diam.,bears S.23° W.,46 lks. dist.,marked T.14 S.,R.20 E.,S.17,B.T.
	A cedar,15 ins.diam.,bears N.41° W.,27 lks. dist.,marked T.14 S.,R.20 E.,S.8,B.T.
	Land,mountainous and level.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	N.89° 51'E.,on a random line bet.secs.9 and 16.
.40.00	Set temp.¼ sec.cor.
79.60	Intersect N.and S.line,10 lks.N.of the cor.of secs. 9,10,15,and 16.
	Thence we run
	S.89° 55'W.,on a true line bet.secs.9 and 16.
	Over rolling mesa;through dense undergrowth and scattering timber.
7.00	Edge of mesa,bears N.20° W.and S.20° E.;descend.
39.80	Set a limestone,16x8x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high, N.of cor.Pits impracticable.
40.30	Bottom of hollow,200 ft.below mesa,course N.;ascend.
77.50	Top of ridge,150 ft.above hollow,bears N.and S.;descend.
79.60	The cor.of secs.8,9,16,and 17.
	Land,mountainous and level.
	Soil,sandy and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.60 chs.

Subdivision of T.14 S. R.20 E. -Continued.

Chains	
	N.0° 03'W.,bet.secs.8 and 9.
	Over mountainous land;through scattering timber and dense undergrowth;descend.
8.50	Bottom of hollow,150 ft.below cor.,course N.20° E.; ascend.
40.00	Set a limestone,18x6x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
80.00	Top of ridge,250 ft.above hollow,bears N.10° E.and S. 10° W.
	Set a limestone,18x8x4 ins.,12 ins.in the ground,for cor.of secs.4,5,8,and 9,marked with 5 notches on S. and 4 notches on E.edges;from which
	A pinion pine,6 ins.diam.,bears N.30° E.,34 lks.dist.,marked T.14 S.,R.20 E.,S.4,B.T.
	A pinion pine,8 ins.diam.,bears S.80° E., 33 lks.dist.,marked T.14 S.,R.20 E.,S.9,B.T.
	A pinion pine,6 ins.,diam.,bears S.33° W.,63 lks.dist.,marked T.14 S.,R.20 E.,S.8,B.T.
	A pinion pine,5 ins.diam.,bears N.30° W.,21 lks.dist.,marked T.14 S.,R.20 E.,S.5,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 55'E.,on a random line,bet.secs.4 and 9.
40.00	Set temp.¼ sec.cor.
79.80	Intersect N.and S.line,7 lks.S.of the cor.of secs.3, 4,9,and 10.
	Thence we run
	S.89° 52'W.,on a true line bet.secs.4 and 9.

Chains	
	Over mountainous land; through scattering timber and dense undergrowth;ascend.
6.50	Top of spur,200 ft.above cor.,bears N.and S.;descend.
25.00	Bottom of hollow,50 ft.below ridge,course N.;ascend.
30.00	Top of spur,50 ft.above hollow,bears N.and S.;descend.
36.00	Trail,bears N.and S. In hollow,course N.;ascend.
39.90	Set a sandstone,20x12x4 ins.,15 ins.in the ground, for 1/4 sec.cor.,marked 1/4 on N.face;from which A cedar 6,ins.diam.,bears N.25° W.,100 lks. dist.,marked 1/4 S.4,B.T. A pinion pine,6 ins.diam.,bears S.25° E.,115 lks.dist.,marked 1/4 S.9,B.T.
79.80	The cor.of secs.4,5,8,and 9, Land,mountainous. Soil,sandy and gravelly loam;2nd and 3rd rate. Timber,cedar and pinion pine. Undergrowth, sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,79.80 chs.

	N.0° 02'W.,on a random line bet.secs.4 and 5.
40.00	Set temp.1/4 sec.cor.
80.06	Intersect N.bdy.of Tp.at the cor.of secs.4,5,32,and 33,heretofore described. Thence we run S.0° 02'E.,on a true line bet.secs.4 and 5. Over mountainous land;through dense undergrowth and scattering timber;ascend.
36.00	Top of ascent,200 ft.above cor.,bears E.and W.;thence over mesa.
40.06	Set a limestone,18x12x4 ins.,12 ins.in the ground, for 1/4 sec.cor.,marked 1/4 on W.face;from which A pinion pine,12 ins.diam.,bears N.85° E.,25 lks.dist.,marked 1/4 S.4,B.T.

Subdivision of T.14 S.R.20 E.-Continued.

Chains.	
	A pinion pine 14 ins. diam. bears N.82°W.102 lks. dist., marked $\frac{1}{4}$ S.5 B.T.
47.50	Edge of mesa, bears E. and W. ; descend.
80.06	The cor. of secs. 4-5-8 and 9.
80..	Land mountainous and level.
	Soil sandy and gravelly loam; 2nd. rate.
	Timber cedar and pinion pine.
	Undergrowth sagebrush.
	Good grass for grazing.
	Mountainous land, or land covered with dense undergrowth 80.06 chs.

August 26, 1901.

August 27-1901: At 7 h. 2 m. a.m. l.m.t., we set off 39° 33'N. on the lat. arc; 10°13'N. on the decl. arc; and determine a true meridian with the solar at the cor. of secs. 5-6-31 and 32, on S. bdy. of Tp., heretofore described. Thence we run

N. 0°03'W. bet. secs. 31 and 32

Over rolling mesa; through scattering timber and dense undergrowth.

40.00	Set a sandstone 16x10x4 ins. 11 ins. in the ground, for $\frac{1}{2}$ sec. cor., marked $\frac{1}{2}$ on W. face; dig pits 18x18x 12 ins. N. and S. of stone 3 ft. dist.; and raise a

BOOK A-289

Subdivision of T.14 S.R.20 E.-Continued.

Chains.	
	mound of earth 4 ft. base 2 ft. high W. of cor.
80.00	Set a limestone 24x15x5 ins. 18 ins. in the ground, for cor. of secs. 29-30-31 and 32, marked with 1 notch on S. and 5 notches on E. edges; and raise a mound of stone 2 ft. base 1½ ft. high W. of cor.
	Pits impracticable.
	Land rolling mesa.
	Soil sandy loam; 2nd. rate.
	Timber cedar and pinion pine.
	Undergrowth sagebrush.
	Good grass for grazing.
	Land covered with dense undergrowth 80.00 chs.

N.89°54'E. on a random line bet. secs. 29 and 32

40.00	Set temp. ¼ sec. cor.
80.00	Intersect N. and S. line 10 lks. S. of the cor. of secs. 28-29-32 and 33.

Thence we run,

S.89°50'W. on a true line bet. secs. 29 and 32

Over rolling mesa.

Through dense undergrowth and scattering timber,

40.00	Set a sandstone 24x14x4 ins. 18 ins. in the ground, for ¼ sec. cor., marked ¼ on N. face; dig pits 18x18x12

Subdivision of T. 14 S. R. 20 E.-Continued.

Chains.	
	ins. E. and W. of stone, 3 ft. dist.; and raise a mound
	of earth 4 ft. base 2 ft. high N. of cor.
80.00	The cor. of secs. 29-30-31 and 32.
	Land rolling mesa.
	Soil sandy loam; 2nd. rate.
	Timber cedar and pinion pine.
	Undergrowth sagebrush.
	Good grass for grazing.
	Land covered with dense undergrowth 80.00 chs.

S. 89°54' W. on a random line bet. secs. 30 and 31

40.00 Set temp. ½ sec. cor.

78.50 Intersect W. bdy. of Tp. at the cor. of secs. 25-30-31 and 36, heretofore described.

Thence we run

N. 89°54' E. on a true line bet. secs. 30 and 31

Over mountainous land, through heavy timber and scattering undergrowth.

Ascend.

38.40 Top of ascent 200 ft. above cor., bears N. and S.

Thence over rolling mesa.

38.50 Set a limestone 24x12x7 ins., 18 ins. in the ground, for ¼ sec. cor., marked ½ on N. face; from which

Subdivision of T.14 S.R.20 E.-Continued.

Chains.	
	A pinion pine 6 ins. diam. bears N.25 lks. dist. marked ¼ S.30 B.T.
	A pinion pine 8 ins. diam. bears S.20°W.55 lks. dist., marked ¼ S.31 B.T.
73.00	Leave timber and enter dense undergrowth, bears N. and S.
78.50	The cor. of secs. 29-30-31 and 32.
	Land mountainous and rolling mesa.
	Soil sandy loam and gravelly; 2nd. and 3rd. rate.
	Timber cedar and pinon pine.
	Undergrowth sagebrush.
	Good grass for grazing.
	Mountainous or heavily timbered land, or land covered with dense undergrowth 78.50 chs.
	N.0°03'W. bet. secs. 29 and 30
	Over rolling mesa; through dense undergrowth.
35.00	Enter scattering timber, bears E. and W.
40.00	Set a sandstone 14x10x5 ins. 9 ins. in the ground, for ¼ sec. cor., marked ¼ on W. face; from which
	A pinion pine 15 ins. dia. bears N.40°E.55 lks. dist., marked ¼ S.29 B.T.
	A cedar 10 ins. diam. bears S.80°W.65 lks. dist. marked ¼ S.30 B.T.
55.00	Edge of mesa, bears N.E. and S.W.; descend.
80.00	Set a limestone 30x9x5 ins. 24 ins. in the ground, for cor. of secs. 19-20-29 and 30, marked with 2 notches on S. and 5 notches on E. edges; and raise a mound of stone 2 ft. base 1½ ft. high W. of cor.
	Pits impracticable.
	Land mountainous and rolling mesa.
	Soil sandy loam and rocky; 2nd. and 4th. rate.
	Timber cedar and pinion pine
	Undergrowth sagebrush.
	Good grass for grazing.

Chains

Mountainous land,or land covered with dense undergrowth,80.00 chs.

August 27,1901;At the noon hour the sky is overcast and solar observations are impossible.

N.89° 50'E.,on a random line bet.secs.20 and 29.

40.00 Set temp.¼ sec.cor.

79.90 Intersect N.and S.line,5 lks.S.of the cor.of secs. 20,21,28,and 29.

Thence we run

S.89° 48'W.,on a true line bet.secs.20 and 29.

Over rolling mesa;through dense undergrowth and heavy timber.

4.50 Edge of mesa,bears N.and S.;descend.

12.70 Bottom of hollow,200 ft.below mesa,course N.;ascend.

20.00 Top of ascent,200 ft.above hollow,bears N.and S.; thence over mesa.

25.00 Edge of mesa,bears N.and S.;descend.

32.55 Bottom of hollow,200 ft.below mesa,course N.;ascend.

38.80 Top of ascent,200 ft.above hollow,bears N.and S.; thence over mesa.

39.95 Set a sandstone,30x12x5 ins.,24 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which

A pinion pine,6 ins.diam.,bears N.36 lks. dist.,marked ¼ S.,20,B.T.

A pinion pine,5 ins.diam.,bears S.40°W.,45 lks.dist.,marked ¼ S.29,B.T.

59.50 Edge of mesa,bears N.and S.;descend.

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

Land,mountainous and level.

Soil,sandy and gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,or land covered

Chains with dense undergrowth,79.90 chs.

S.89° 54'W.,on a random line bet.secs.19 and 30.

40.00 Set temp.¼ sec.cor.

78.46 Intersect W.bdy.of Tp.at the cor.of secs.19,24,25, and 30,heretofore described,.

Thence we run

N.89° 54'E.,on a true line bet.secs.19 and 30.

Over mountainous land;through dense undergrowth and scattering timber;ascend.

18.75 Top of ascent,250 ft.above sec.cor.,bears N.35°W.and S.35°E.;thence over rolling mesa.

38:46 Set a sandstone,14x10x4 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A pinion pine,6 ins.diam.,bears N.26°E.,60 lks.dist.,marked ¼ S.19,B.T.

A pinion pine,6 ins.diam.,bears S.30°W.,40 lks.dist.,marked ¼ S.30,B.T.

60.50 Edge of mesa,bears N. and S.;descend.

78.05 Bottom of hollow,200 ft.below mesa,course N.10°W.; ascend.

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

Land,mountainous and level.

Soil,sandy loam and gravelly ;2nd and 3rd rate.

Timber,cedar and pinion pine;.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth,78.46 chs.

N.0° 03'W.,bet.secs.19 and 20.

Over mountainous land;through dense undergrowth and scattering timber;ascend.

40.00 Top of ascent,250 ft.above sec.cor.,bears E.and W.

Chains	
	Set a limestone,15x10x5 ins.,10 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,8 ins.diam.,bears S.75° E.,75 lks.dist.,marked ½ S.20,B.T.
	A pinion pine,24 ins.diam.,bears S.75° W.,45 lks.dist.,marked ½ S.19,B.T.
	Thence over rolling mesa.
57.25	Top of perpendicular cliff,25 ft.high,bears E.and W.
	Leave mesa;descend.
80.00	Bottom of hollow,150 ft.below mesa,course N.E.
	Set a sandstone,24x15x4 ins.,18 ins.in the ground, for cor.of secs.17,18,19,and 20,marked with 3 notches on S.and 5 notches on E.edges;from which
	A pinion pine,7 ins.diam.,bears N.7° E.,55 lks.dist.,marked T.14 S.,R.20 E.,S.17,B.T.
	A pinion pine,4 ins.diam.,bears S.45° E.,30 lks.dist.,marked T.14 S.,R.20 E.,S.20,B.T.
	A pinion pine,10 ins.diam.,bears S.25° W.,75 lks.dist.,marked T.14 S.,R.20 E.,S.19,B.T.
	A pinion pine,7 ins.diam.,bears N.30° W.,70 lks.dist.,marked T .14 S.,R.20 E.,S.18,B.T.
	Land,mountainous amd rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 48'E.,on a random line bet.secs.17 and 20.
40.00	Set temp.¼ sec.cor.
79.86	Intersect N.and S.line,1 lks.N.of the cor.of secs. 16,17,20,and 21.
	Thence we run
	S.89° 48'W.,on a true line bet.secs.17 and 20.

Chains. Over mountainous land;through scattering timber and dense undergrowth;ascend.

12.00 Top of ridge,50 ft.above cor.,bears N.and S.;descend.

24.25 Bottom of hollow,50 ft.below ridge,course N.10°E.;ascend.

39.98 Set a limestone,18x7x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A pinion pine,7 ins.diam.,bears N.10°E.,74 lks.dist.,marked ¼ S.17,B.T.

A pinion pine,18 ins.diam.,bears S.50°W.,84 lks.dist.,marked ¼ S.,20,B.T.

44.00 Top of ridge,250 ft.above hollow,bears N.35°E.and S.35°W.;descend.

79.86 The cor.of secs.17,18,19,and 20.

Land,mountainous.

Soil,sandy and gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,79.86 chs.

S.89°54'W.,on a random line bet.secs.18 and 19.

40.00 Set temp.¼ sec.cor.

78.36 Intersect W.bdy.of Tp.5 lks.S.of the cor. of secs. 13,18,19,and 24.

Thence we run

N.89°56'E.,on a true line bet.secs.18 and 19.

Over mountainous land;through heavy timber and scattering undergrowth;descend.

12.75 Bottom of hollow, 200 ft.below cor.,course N.80°W.;ascend.

30.00 Top of ascent,300 ft.above hollow,bears N.and S.;thence over rolling mesa.

Subdivision of T.14 S. R.20 E -Continued.

Chains	
32.00	Leave heavy timber and enter scattering timber and dense undergrowth,bears N.and S.
38.36	Set a limestone ,24x8x4 ins.,18 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,9 ins.diam.,bears N.22° E.,50 lks. dist.,marked ¼ S.18,B.T. A pinion pine,12 ins.diam.,bears S.16° E.,58 lks.dist.,marked ¼ S.19,B.T.
70.00	Edge of mesa,bears N.and S.;descend.
78.36	The cor.of secs.17,18,19,and 20.

Land,mountainous and rolling mesa.

Soil,sandy loam and gravelly ;2nd and 3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,or land covered with dense undergrowth,78.36 chs.

August 27,1901.

August 28,1901:At 7 h 3 m a.m.,l.m.t.,we set off 39° 36'N.,on the lat.arc;9° 52''N.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.17,18,19,and 20.

Thence we run

N.0° 03'W.,bet.secs.17 and 18.

Over mountainous land;through dense undergrowth and scattering timber;ascend.

15.00	Top of ascent,250 ft.above sec.cor.,bears N.E.and S. W.;thence over rolling mesa.
40.00	Set a limestone,15x10x4 ins.10 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,5 ins.diam.,bears N.80° E.,25 lks.dist.,marked ¼ S.,17,B.T. A pinion pine,6 ins.diam.,bears S.80° W.,25

Chains	
	lks.dist.,marked ¼ S.18,B.T.
61.00	Edge of mesa,bears N.E.and S.W.;descend.
80.00	Set a limestone,18x8x5 ins.,12 ins.in the ground,for cor.of secs.7,8,17,and 18,marked with 4 notches on S.and 5 notches on E.edges;from which
	A pinion pine,12 ins.diam.,bears N.60° E.,30 lks.dist.,marked T.14 S.,R.20 E.,S.8,B.T.
	A pinion pine,12 ins.diam.,bears S.48° E.,60 lks.dist.,marked T.14 S.,R.20 E.,S.17,B.T.
	A pinion pine,7 ins.diam.,bears S.37° W.,50 lks.dist.,marked T.14 S.,R.20 E.,S.18,B.T.
	A cedar,8 ins.diam.,bears N.40° W.,150 lks. dist.,marked T.14 S.,R.20 E.,S.7,B.T.
	Land,mountainous. and rolling mesa.
	Soil,sandy and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 48'E.,on a random line bet.secs.8 and 17.
40.00	Set temp.¼ sec.cor.
79.88	Intersect N.and S.line,19 lks.N.of the cor.of secs. 8,9,16,and 17.
	Thence we run
	S.89° 56'W.,on a true line bet.secs.8 and 17.
	Over mountainous land;through heavy timber;descend.
10.00	Bottom of hollow,150 ft.below sec.cor.,course N.10° E.
	Ascend.
35.00	Top of ascend,250 ft.above hollow,bears N.and S.; thence over rolling mesa.
39.94	Set a limestone,16x8x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,6 ins.diam.,bears N.27° W.,15

Subdivision of T.14 S.,R.20 E.-Continued.

Chains	
	lks.dist.,marked ¼ S.18,B.T.
	A pinion pine,18 ins.diam.,bears S.13°W.,22 lks.dist.marked ¼ S.,17,B.T.
70.00	Edge of mesa,bears N.and S.;descend.
79.88	The cor.of secs.7,8,17,and 18.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine,
	Good grass for grazing.
	Mountainous or heavily timbered land,79.88 chs.

S.89° 56'W.,on a random line bet.secs.7 and 18.

40.00	Set temp. ¼ sec.cor.
78.50	Intersect W.bdy .of Tp.12 lks.N. of the cor.of secs. 7,12,13,and 18,heretofore described.
	Thence we run
	N.89° 51'E.,on a true line bet.secs.7 and 18.
	Over rolling mesa;through dense undergrowth and scattering timber.
38.50	Set a limestone,16x10x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,7 ins.diam.,bears N.20°W.,90 lks.dist.,marked ¼ S.7,B .T.
	A pinion pine,12 ins.diam.,bears S.,80 lks. dist.,marked ¼ S.18,B.T.
65.00	Edge of mesa,bears N.and S.;descend gradually.
74.00	Bottom of swale,100 ft.below mesa,course N.;ascend.
78.50	The cor.of secs.7,8,17,and 18.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine,
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,78.50 chs.

Chains

N.0°03'W.,bet.secs.7 and 8.

Over rolling mountains;through scattering timber and scattering undergrowth;descend.

20.00 Bottom of hollow,150 ft.below cor.,course N.30°E.;ascend.

34.50 Top.of ridge,200 ft.above hollow,bears N.W.and S.E.;descend.

40.00 Set a sandstone,24x15x5 ins.,18 ins. in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which

A pinion pine,4 ins.diam.,bears N.88°W.,135 lks.dist.,marked ¼ S.7,B.T.

A cedar,9 ins.diam.,bears N.55°E.,35 lks. lks.dist.,marked ¼ S.8,B.T.

57.00 Bottom of hollow,150 ft.below ridge,course N.80°E.;ascend.

80.00 Set a limestone,18x6x4 ins.,12 ins.in the ground, for cor.of secs.5,6,7,and 8,marked with 5 notches on S.and 5 notches on E.edges;from which

A pinion pine,8 ins.diam. ,bears N.8°E.,30 lks.dist.,marked T.14 S.,R.20 E.,S.5,B.T.

A pinion pine,14 ins.diam.,bears S.22°E.,120 lks.dist.,marked T.14 S.,R.20E.,S.8,B.T.

A pinion pine,8 ins.diam.,bears S.55°W.,75 lks.dist.,marked T.14 S.,R.20 E.,S.7,B.T.

A pinion pine,12 ins.diam.,bears N.64°W.,90 lks.dist.,marked T.14 S.,R.20 E.,S.6,B.T.

Land,mountainous.

Soil,gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,80.00 chs.

August 28,1901:At this cor.we set off 9°47"N.,on the decl.arc;and at o h 3 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39°37'N.

Chains	
	N.89° 56'E.,on a random line bet.secs.5 and 8.
40.00	Set temp.¼ sec.cor.
79.70	Intersect N. and S.line,14 lks.S.of the cor.of secs. 4,5,8,and 9,
	Thence we run
	S.89° 50'W.,on a true line,bet.secs.5 and 8.
	Over mountainous land ;through heavy timber;descend.
39.85	Bottom of hollow,250 ft.below sec.cor.,course N.10°E.
	Set a limestone,20x6x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,9 ins.diam.,bears N.68°E.,133 lks.
=	dist.,marked ¼ S.5,B.T.
	A cedar,6 ins.diam.,bears S.69°W.,96 lks.
	dist.,marked ¼ S.8,B.T.
79.70	The cor.of secs.5,6,7, and 8.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,79.70 chs.

	S.89° 51'W.,on a random line bet.secs.6 and 7.
40.00	Set temp.¼ sec.cor.
78.64	Intersect W.bdy.of Tp.at the cor.of secs.1,6,7,and 12, heretofore described.
	Thence we run
	N.89° 51'E.,on a true line bet.secs.6 and 7.
	Over rolling mesa;through heavy timber.
38.64	Set a sandstone,20x14x6 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,12 ins.diam.,bears N.20°W.,65 lks.dist.,marked ¼ S.6,B.T.
	A pinion pine,6 ins.diam.,bears S.10°W.,20 lks.dist.,marked ¼ S.7,B.T.
75.75	Edge of mesa,bears N.10°E.and S.10°W.;descend.

Chains	
78.64	The cor.of secs.5,6,7,and8, Land,mountainous and rolling mesa. Soil,sandy loam and gravelly;2nd and 3rd rate. Timber,cedar and pinion pine. Good grass for grazing . Mountainous or heavily timbered land,78.64 chs.

	N.0° 03'W.,on a random line bet.secs.5 and 6.
40.00	Set temp.¼ sec.cor.
80.04	Intersect N.bdy.of Tp.3 lks.East of the cor.of secs. 5,6,31,and 32,heretofore described. Thence we run S.0° 04'E.,on a true line bet.secs.5 and 6. Over mountainous land;through scattering timber and dense undergrowth;descend.
30.00	Bottom of hollow,100 ft.below sec.cor.,course E.;ascend.
40.04	Set an oil shale stone,18x6x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,12 ins.diam.,bears E.,19 lks. dist.,marked ¼ S.5,B.T. A pinion pine,14 ins.diam.,bears N.65°W.,130 lks.dist.,marked ¼ S.6,B.T.
60.00	Top of ascent,250 ft.above hollow,bears E.and W.; thence over rolling mesa.
64.50	Edge of mesa,bears N.10°E.and S.10°W.;descend.
80.04	The cor.of secs.5,6,7,and 8. Land ,mountainous and rolling mesa. Soil,sandy and gravelly loam;2nd and 3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,80.04 chs.

Su division of T 14 S R 20 E -Concluded

Chains

August 28,1901.

GENERAL DESCRIPTION.

This township contains several varieties of land from level mesas to mountain ridges ,and the soil ranges from rich sandy loam to rocky ridges.The soil of the mesas and the bottoms of hollows is generally sandy or gravelly loam capable of producing good crops without irrigation .The remainder of the township is mostly 3rd rate excepting a few rocky ridges.The south western portion of the township is mostly a rolling mesa.

Cedar and pinion pine timber are found in nearly all parts of the township,but is generally scattering on the mesas.

There are no settlers in the township.

There is no water in the township.

This township is well adapted for winter and early spring grazing but is too dry for summer grazing.

There are no indications of mineral in the township.

Scott R. Stewart
John R. Stewart

U.S.Deputy Surveyors.

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PAGE

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by .....

....., United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of .....

.....

showing the respective capacities in which they acted:

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted .....

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

.....

.....

..... of the .....

..... meridian, ... of ....., which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for .....

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

.....

Subscribed and sworn to before me this .....
day of ....., 189

.....

SEAL

.....

0—161

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, _____, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from _____ United States Surveyor General for _____, bearing date of the _____ day of _____, 189 , I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for _____, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____ _____ _____ _____ _____ of the _____ _____ meridian, in the _____ of _____, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

_____

United States Deputy Surveyor.

Subscribed by said _____, and sworn to before me this _____ day of _____, 189

_____

SEAL

_____

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah, February 5, 1903, 189

The foregoing field notes of the survey of the Subdivisional Lines of Township 14 South, Range 20 East of the Salt Lake Base & Meridian, Utah

_____

executed by Scott P. Stewart and John W. Stewart under his contract No. 242, dated April 2, 1901, 189 , having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

_____

United States Surveyor General

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

_____

United States Surveyor General

6—151

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4—679.

I

BOOK A-289

FIELD NOTES

K.J.B.

OF THE SURVEY OF THE

WEST AND NORTH BOUNDARIES

of

Township No.14 South , Range No.19 East ,

Of the SALT LAKE BASE AND *Meridian,*

of the STATE OF UTAH,

AS SURVEYED BY

Scott P.Stewart and John R.Stewart, *United States Deputy Survey*

Under ~~his~~ their *Contract No.* 242, *dated* April 12,1901.,

Survey commenced August 29,1901.,

Survey completed August 31,1901.,

6—151

W. Bdy high 60000
N. " " 60004

NAMES AND DUTIES OF ASSISTANTS.

Andy J. Stewart Chainman

Edwin H. Peay Chainman

Vosco Call Chainman

Hugh Conover Chainman

Clarence S. Jarvis Moundman

John J. Harding Moundman.

George W. Ekins, Axman

Harry Burton Axman

Harvey R. Booth Flagman

Gilbert Burr Flagman.

For preliminary affidavits see book "C" T15S R20E

6—151

BOOK A-289

INDEX DIAGRAM.

Township....., *Range*.....

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

WE, _____ and _____ do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of

_____

_____, *Chainman.*

_____, *Chainman.*

Subscribed and sworn to before me this _____ day of _____, 189

_____

SEAL

_____

WE, _____ and _____ do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Moundman.*

_____, *Moundman.*

Subscribed and sworn to before me this _____ day of _____, 189

_____

SEAL

_____

WE, _____ and _____ do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Axman.*

_____, *Axman.*

Subscribed and sworn to before me this _____ day of _____, 189

_____

SEAL

_____

I, _____, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of _____

_____, *Flagman.*

Subscribed and sworn to before me this _____ day of _____, 189

_____

SEAL

_____

West boundary of T.14 S.,R.18 E.

Survey commenced August 29,1901,and executed with a W.and L.E.Gurley light mountain transit,No.3,with 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 thelatitude and declination arcs;and a W.and L.E.Gurley plain transit,No.2,of which the horizontal limb is provided with one double vernier readigg to single minutes of arc.

The instruments were examined,tested on the true meridian at Salt Lake City,found correct,and approved by the surveyor general for Utah,the former on June 6,1901,and the latter on May 29,1901.

We examine the adjustments of the instruments and correct the level and collimation errors,then,to test the solar apparatus ,of the No.3 instrument ,by comparing its indications resulting from solar observations made during p.m.amd a.m.hours ,with a true meridian determined by observation on Polaris,we proceed as follows:

At the cor.of Tps 14 and 15 S.,Rs.18 and 19 E., heretofore described,latitude 39° 33'N.,longitude 109° 53'W.;we set off 39° 33'N.,on the lat.arc;9° 23'N.,on the decl.arc;and at 3h 2 m p.m.,l.m.t.,determine a true meridian with the solar,and mark a point thereof on a stone ,firmly set in the ground,5.00 chs.N. of the cor.

At 8 h 58 m p.m.,l.m.t.,we observe Polaris at eastern elongation,in accordance with the Manual,and mark a point in the line thus determined,on a plug driven in the ground,5.00 chs.N.of the cor.

August 29,1901.

August 30,1901:At 6 h 30 m a.m.,l.m.t.,we lay off the azimuth of Polaris 1° 35'to the west,and mark the true

Chains	
	meridian thus determined by cutting a small groove in the stone already set 5.00 chs.N.of thecor.,on which the true meridian falls 0.33 ins.east of the mark determined with the solar.
	At 7 h 3 m a.m.,l.m.t.,we set off 39° 33'N.,on the lat.arc;9° 10'N.,on the decl.arc;and mark a point in the true meridian determined with the solar,by a cross on the stone,already set 5.00 chs.N.of the cor, this mark falls 0.28 ins.east of the true meridian established by Polaris observation.
	The solar apparatus by p.m.and a.m. observations defines positions for true meridians,respectively about 0'17"west and 0'15"east of the true meridian established by Polaris observation;therefore we conclude that the adjustments of the instruments are satisfactory.
	The magnetic bearing of the true meridian at 7 h 30 m a.m. is 16° 14.5'W.,the angle thus determined, reduced by the table page 100 of the Manual,gives the mean mag.decl.16° 09'E.
	From the above described cor.we run
	North,bet.secs.31 and 36.
	Over mountainous land;through scattering timber and scattering undergrowth;descend.
40.00	Set a sandstone,18x14x5 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
53.00	Bottom of hollow,35o ft.below sec.cor.,course N.W.; ascend.
71.00	Top of gidge,250 ft.above hollow,bears E.and W.;enter heavy timber,bears with ridge;descend.
80.00	Set a limestone,18x14x4 ins.,12 ins in the ground, for cor.of secs.25,30,31,and 36,marked with 5 notches on N.and 1 notch on S.edges;from which

West boundary of T.14 S. R.19 E.-Continued.

Chains.

A pinion pine,6 ins.diam.,bears N.45° E.,31 lks.dist.,marked T.14 S.,R.19 E.,S.30,B.T.

A pinion pine,12 ins.diam.,bears S.43° E.,70 lks.dist.,marked T.14 S.,R.19 E.,S.31,B.T.

A cedar ,8 ins.diam.,bears S.41° W.,20 lks. dist.marked,T.14 S.,R.18 E.,S.36,B.T.

A cedar,6 ins.diam.,bears N.54° W.,26 lks. dist.,marked T.14 S.,R.18 E.,S.25,B.T.

Land,mountainous.

Soil,gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,80.00 chs.

North,bet.secs.25 and 30.

Over mountainous land;through heavy timber and scattering undergrowth;descend.

12.00 Trail,bears N.E.and S.W. Enter scattering timber.

22.00 Foot of descent,250 ft.below ridge,bears E.and W.; thence over gently rolling mesa. Enter dense brush.

40.00 Set a sandstone,30x12x4 ins.,25 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which

A cedar,6 ins.diam.,bears N.80° E.,34 lks. dist.,marked ¼ S.30,B.T.

A cedar,8 ins.diam.,bears N.63° W.,53 lks. dist.,marked ¼ S.25,B.T.

59.50 Edge of mesa,bears N.20° E.and S.20° W.;descend.

80.00 Foot of descent,200 ft.below mesa,bears N.20° E.and S.20° W.;enter bottom of Tabyago Canon.

Set a sandstone,15x10x5 ins.,10 ins.in the ground, for cor.of secs.19,24,25,and 30,marked with 4 notches on N.and 2 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Chains	
	Land,mountainous and rolling mesa.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	North,bet.secs.19 and 24.
	Over level canon bottom;through dense undergrowth;
15.00	Wash,6 lks.wide ,in bottom of Tabyago Canon,course N.20° E.
32.00	Trail,bears N.20° E.and S.20° W.
35.00	Begin ascent of mountain,bears N.20° E.and S.20° W.
40.00	Set a limestone,20x7x6 ins.,15 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 cor.Pits impracticable.
45.00	Enter scattering timber,bears E.and W.
80.00	Set a limestone,26x8x5 ins.,19 ins.in the ground ,for cor.of secs.13,18,19,and 24,marked with 3 notches on N.and 3 notches on S.edges;from which
	A cedar,15 ins.diam.,bears N.60° E.,54 lks. dist.,marked T.14 S.,R.19 E.,S.18,B.T.
	A pinion pine,6 ins.diam.,bears S.42° E.,93 lks.dist.,marked T.14 S.,R.19 E.,S.19,B.T.
	A pinion pine,6 ins.diam.,bears S.23° W.,39 lks.dist.,marked T.14 S.,R.18 E.,S.24,B.T.
	A pinion pine,8 ins.diam.,bears N.70° W.,102 lks.dist.,marked T.14 S.,R.18 E.,S.13,B.T.
	Land,mountainous and level canon bottom.
	Soil,sandy and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing;

West boundary of T 14 S. R.19 E.-Continued.

Chains	
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	August 30,1901:At the noon hour the sky is overcast and solar observations are impossible.
	North,bet.secs.13 and 18.
	Over mountainous land,through dense undergrowth and scattering timber;ascend.
1.00	Top of ridge;50 ft.above sec.cor.,bears N.E.and S.W. Descend.
8.00	Bottom of hollow,60 ft.below ridge,course E.;ascend.
9.50	Trail,bears E.and W.
17.50	Top of Perpendicular cliff,20 ft.high,bears E.and W. Also top of ascent,bears E.and W.;thence over mesa.
18.00	Leave undergrowth and enter heavy timber,bears E.and W.
22.50	Leave heavy timber and enter scattering timber and scattering undergrowth,bears E .and W.
40.00	Set a limestone,16x10x8 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,8 ins.diam.,bears S.80°W.,80 lks.dist.,marked ¼ S.13,B.T. No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
46.30	Edge of mesa,bears N.E.and S.W.descend.
53.80	Bottom of hollow,60 ft.below mesa,course N.30°E.; ascend.
61.00	Top of spur,60 ft.above hollow,bears N.E.and S.W.; descend.
66.30	Bottom of hollow,30 ft.below ridge,course N.80°E.; ascend.
75.00	Top of spur,50 ft.above hollow,bears E.and W.;descend.
78.00	Bottom of hollow,25 ft.below spur,course S.E.;ascend.
80.00	Set a sandstone,20x12x6 ins.,15 ins.in the ground,for cor.of secs.7,12,13,and 18,marked with 2 notches on

Chains	
	N.and 4 notches on S.edges;from which
	A cedar,12 ins.diam.,bears N.64° E.,85 lks. dist.,marked T.14 S.,R.19 E.,S.7,B.T.
	A pinion pine,5 ins.diam.,bears S.52° E.,62 lks.dist.,marked T.14 S.,R.19 E.,S.18,B.T.
	A pinion pine,8 ins.diam.,bears S.80° W.,160 lks.dist.,marked T.14 S.,R.18 E.,S.13,B.T.
	A pinion pine,8 ins.diam.,bears N.47° W.,160 lks.dist.,marked T.14 S.,R.18 E.,S.12,B.T.
	Land,mountainous.and level.
	Soil,sandy loam and rocky; 2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	North,bet.secs.7 and 12.
	Over mountainous land;through heavy timber and scattering undergrowth;ascend.
2.50	Top of ascent,50 ft.above cor.,bears E.and S.60° W.; thence over mesa.
26.00	Edge of mesa,bears N.E.and S.W.;descend.
38.90	Bottom of hollow,100 ft.below mesa,course N.50° E.; ascend.
40.00	Set a limestone,16x8x6 ins.,11 ins.in the ground,for 1/4 sec.cor.,marked 1/4 on W.face;from which
	A pinion pine,12 ins.diam.,bears N.30° E.,80 lks.dist.,marked 1/4 S.7,B.T.
	A cedar,16 ins.diam.,bears N.79° W.,50 lks. dist.,marked 1/4 S.12,B.T.
72.60	Top of ascent,150 ft.above hollow,bears N.70° W.and S.70° E.;thence over mesa.
80.00	Set a limestone,18x14x10 ins.,12 ins.in the ground,

ounda r c o - ontinue

Chains	for cor.of secs.1,6,7,and 12,marked with 1 notch on N.and 5 notches on S.edges;from which
	A cedar,8 ins.diam.,bears N.64° E.,40 lks. dist.,marked T.14 S.,R.19 E.,S.6,B.T.
	A cedar,4 ins.diam.,bears S.47° E.,43 lks. dist.,marked T.14 S.,R.19 E.,S.7,B.T.
	A cedar,9 ins.diam.,bears S.30° W.,140 lks. dist.,marked T.14 S.,R.18 E.,S.12,B.T.
	A cedar,4 ins.diam.,bears N.50° W.,41 lks. dist.,marked T.14 S.,R.18 E.,S.1,B.T.
	Land,mountainous and level.
	Soil,sandy loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	North,bet.secs.1 and 6.
	Over mesa;through heavy timber and dense undergrowth.
40.00	Set a limestone,16 x10x4 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,14 ins.diam.,bears S.48° E., 80 lks.dist.,marked ¼ S.6,B.T.
	A cedar,5 ins.diam.,bears N.74° W.,63 lks. dist.,marked ¼ S.1,B.T.
43.30	Edge of mesa,bears N.E.and S.W.;descend.
64.25	Bottom of hollow,100 ft.below mesa,course N.E.;ascend.
80.00	Set temp.cor.of TPs.13 and 14 S.,Rs.18 and 19 E.
	Note:For description of permanent cor.see notes of N. bdy.of T.14 S.,R.19 E.
	Land,mountainous and level.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.

Chains	
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	August 30,1901.
	August 31,1901:At 7 h 0 m a.m.,l.m.t.,we set off 39° 38'N.,on the lat.arc;8° 48'N.,on the decl.arc;and determine a true meridian with the solar,at the temp. cor.of Tps.13 and 14 S.,Rs.18 and 19 E.
	Thence we run
	N.89° 57'E.,on a random line along the N.bdy.of Tp. setting temp.¼ sec.and sec.cors.at intervals of 40.00 chs.,and at 480.04 chs.intersect E.bdy.of Tp.98 lks. N.of the cor.of Tps.13 and 14 S.,Rs.19 and 20 E., heretofore described;the falling answers to a correction of 56 lks.or 04'N.per mile counting from the cor.of Tps.13 and 14 S.,Rs.19 and 20 E.
	Thence we run
	N.89° 56'W.,on a true line bet.secs.1 and 36.
	Over mountainous land;through dense undergrowth;descend.
28.00	Foot of descent,300 ft.below cor.,bears N.and S.; enter bottom of Hill Creek Canon.
31.25	Hill Creek(dry),course N.
32.70	Trail,bears N.and S.
40.00	Set a sandstone,20x10x6 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high, N.of cor.Pits impracticable.
41.50	Leave bottom of canon,bears N.and S.;ascend.over a series of ledges.
64.00	Top of ascent,350 ft.above canon,bears N.and S.;leave ledges;thence over mesa.
80.00	Set a limestone,18x8x6 ins.,12 ins.in the ground,for cor.of secs.1,2,35,and 36,marked with 1 notch on E. and 5 notches on W.edges;from which
	A cedar,6 ins.diam.,bears N.22° E.,36 lks.

North boundary of T.14 S.,R.19 E.-Continued.

Chains

dist.,marked T.13 S.,R.19 E.,S.36,B.T.

A pinion pine,6 ins.diam.,bears S.60° E.,63 lks.dist.,marked T.14 S.,R.19 E.,S.1,B.T.

A cedar,8 ins.diam.,bears S.80° W.,32 lks. dist.,marked T.14 S.,R.19 E.,S.2,B.T.

A pinion pine,12 ins.diam.,bears N.2° W.,21 lks.dist.,marked T.13 S.,R.19 E.,S.35,B.T.

Land,mountainous and level.

Soil,gravelly;3rd rate.

Timber,cedar and pinion pine,

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

August 31,1901:At the noon hour the sky is overcast and solar observations are impossible.

N.89° 56'W.,on a true line bet.secs.2 and 35.

Over rolling mesa ;through heavy timber.

40.00 Set a limestone,18x8x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A pinion pine,10 ins.diam.,bears N.70° E.,15 lks.dist.,marked ¼ S.35,B.T.

A pinion pine,6 ins.diam.,bears S.7° W.,57 lks.dist.,marked ⊥ S.2,B.T.

43.00 Edge of mesa,bears N.W.and S.E.;descend.

49.00 Bottom of wide hollow,200 ft.below mesa,course S.E.; ascend.

54.00 Top of ascent,250 ft.above hollow,bears N.W.and S.E.

Thence over rolling mesa.

80.00 Set a limestone,18x6x6 ins.,12 ins.in the ground,for cor.of secs.2,3,34,and 35,marked with 2 notches on E. and 4 notches on W.edges;from which

A pinion pine,12 ins.diam.,bears N.20° E.,50 lks.dist.,marked T.13 S.,R.19 E., S.35,B.T.

Chains

A pinion pine,24 ins.diam.,bears S.20° E., 75 lks.dist.,marked T.14 S.,R.19 E.S.2,B.T.

A cedar,14 ins.diam.,bears S.80° W.,50 lks. dist.,marked T.14 S.,R.19 E.,S.3,B.T.

A pinion pine,14 ins.diam.,bears N.65° W.,17 lks.dist.,marked T.13 S.,R.19 E.,S.34,B.T.

Land,mountainous and rolling mesa.

Soil,gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Good grass for grazing.

Mountainous or heavily timbered land,80.00 chs.

N.89° 56'W.,on a true line bet.secs.3 and 34.

Over rolling mesa;through heavy timber.

12.00 Edge of mesa,bears N.10° E.and S.10° W.;descend.

20.50 (Trail in) Bottom of hollow,100 ft.below mesa,course N.;ascend.

40.00 Set a sandstone,16x9x5 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A cedar,5 ins.diam.,bears N.25° E.,77 lks. dist.,marked ¼ S.34,B.T.

A pinion pine,10 ins.diam.,bears S.15° W., 106 lks.dist.,marked ¼ S.3,B.T.

73.45 Foot of perpendicular cliff,15 ft.high,bears N.20° E. and S.20° W.

75.00 Top of ridge,300 ft.above hollow,bears N.20° E.and S.20° W.;descend.

80.00 Set a sandstone,18x12x4 ins.,12 ins.in the ground,for cor.of secs.3,4,33,and 34,marked with 3 notches on E. and 3 notches on W.edges;from which

A pinion pine,11 ins.diam.,bears N.64° E.,63 lks.dist.,marked T.13 S.,R.19 E.,S.34,B.T.

A pinion pine,12 ins.diam.,bears S.60° E.,78 lks.dist.,marked T.14 S.,R.19 E.,S.3,B.T.

A pinion pine,12 ins.diam.,bears S.58° W.,78 lks.dist.,marked T.14 S.,R.19 E.,S.4,B.T.

orth boundar of T 14 S R 19 E -Continued.

Chains	
	A pinion pine,6 ins.diam.,bears N.40°W., 141 lks.dist.,marked T 13 S.,R.19 E.,S.33,B.T.
	Land,mountainous and nearly level.
	Soil,sandy and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	N.89°56'W.,on a true line bet.secs.4 and 33.
	Over mountainous land;through scattering timber and scattering undergrowth;descend.
8.50	Bottom of hollow,200 ft.below sec.cor.,course N.20°E.
	Ascend.
30.00	Top of ridge,200 ft.above h ollow,bears N.25°E.and S.25°W.;descend.
40.00	Set a limestone,14x12x4 ins.10 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face; from which
	A pinion pine,12 ins.diam.,bears N.25°E., 60 lks.dist.,marked ¼ S.33,B.T.
	A pinion pine,12 ins.diam.,bears S.45°E.,60 lks.dist.,marked ¼ S.4,B.T.
43.50	Bottom of hollow,100 ft.below ridge,course N.35°E.; ascend.
52.50	Top of ridge,100 ft.above hollow,bears N.20°W.and S.10°W.;descend.
80.00	Set a sandstone,24x10x4 ins.,18 ins.,in the ground,for cor.of secs.4,5,32,and 33,marked with 4 notches on E. and 2 notches on W.edges;from which
	A cedar,6 ins.diam.,bears N.30°E.,68 lks. dist.,marked T.13 S.,R.19 E.,S. 33,B.T.
	A pinion pine,6 ins.diam.,bears S.60°E.,40 lks.dist.,marked T.14 S.,R.19 E.,S.4,B.T.
	A pinion pine,15 ins.diam.,bears S.50°W. 50 lks.dist.,marked T.14 S.,R.19 E.,S.5,B.T.
	A red cedar,6 ins.diam.,bears N.30°W.,150

Chains	
	lks.dist.,marked T.13 S.,R.19 E.,S.32,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber.cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.
	N.89° 56'W.,on a true line bet.secs.5 and 32.
	Over mountainous land;through scattering timber and dense undergrowth;descend.
20.50	Bottom of hollow,250 ft.below sec.cor.,course N.30° W.;ascend.
28.50	Foot of perpendicular ledge ,20 ft.high,bears N.and S.
40.00	Set a sandstone,18x12x5 ins.,12 ins.in the ground,for ¼ sec.cor., marked ¼ on N.face;from which
	A cedar,8 ins.diam.,bears N.10° E.,60 lks.dist.,marked ¼ S.32,B.T.
	A cedar,8 ins.diam.,bears S.30° W.,130 lks.dist.,marked ¼ S.5,B.T.
47.00	Top of ridge,200 ft.above hollow,bears N.10° W.and S. 10° E.;descend.
73.50	Foot of descent,bears N.10° E.and S.10° W.;enter bottom of Tabyago Canon.
75.00	Trail,bears N.and S.
76.00	Wash,10 lks.wide,(dry)in bottom of Tabyago Canon, course N.
77.00	Leave canon bottom ,bears N.and S.;ascend.
80.00	Set a sandstone,15x12x6 ins.,10 ins.in the ground, for cor.of secs.5,6,31,and 32,marked with 5 notches on E.and 1 notch on W.edges; from which
	A cedar,36 ins.diam.,bears N.80° E.,40 lks.dist.,marked T.13 S.,R.19 E.,S.32,B.T.
	A pinion pine,12 ins.diam.,bears S.30° W.

Chains	
	120 lks.dist.,marked T.14 S.,R.19 E.,S.6,B.T.
	A pinion pine,12 ins.diam.,bears N.60° W.,40 lks.dist.,marked T.13 S.,R.19 E.,S.31,B.T.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.89° 56'W.,on a true line bet.sec. 6 and 31.
	Over mountainous land;through scattering timber and dense undergrowth;descend.
15.00	Bottom of hollow,200 ft.below sec.cor.,course N.85° E.
	Ascend.
40.00	Set a limestone,24x6x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar ,5 ins.diam.,bears N.57° W.,12 lks. dist.,marked ¼ S.31,B.T.
	A ce dar,8 ins.diam.,bears S.51° W.,100 lks. dist.,marked ¼ S.6,B.T.
77.00	Enter heavy timber,bears N.and S.
80.04	The temp.cor.of Tps.13 and 14 S.,Rs.18 and 19 E. Set a limestone,24x10x6 ins.18 ins.in the ground,for cor.of Tps.13 and 14 S.,Rs.18 and 19 E.,marked 14 S. on N.E.,19 E.on S.E.,14 S.on S.W.,and 18 E.on N.W. faces;with 6 notches on each edge;from which
	A cedar,8 ins.diam.,bears N.60° E.,55 lks. dist.,marked T.13 S.,R.19 E.,S.31,B.T.
	A cedar,4 ins.diam.,bears S.48° E.,63 lks. dist.,marked T.14 S.,R.19 E.,S.6,B.T.
	A cedar,8 ins.diam.,bears S.30° W.,100 lks. dist.,marked T.14 S.,R.18 E.,S.1,B.T.
	A cedar,4 ins.diam.,bears N.59° W.,120 lks.

North boundary of T.14 S.,R.19 E. -Concluded

Chains dist.,marked T.13 S.,R.18 E., S.36,B.T.

Land,mountainous.

Soil,gravelly loam;2nd rate.

Timber.cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,or land covered with dense undergrowth,80.04 chs.

August 31,1901.

Boundaries of T.14 S.,R.19 E.

Latitudes,departures,and closing errors.

Line designated	true bearing	distance	latitudes		departures	
			N.	S.	E.	W.
	chs.	chs.	chs.	chs.	chs.	chs.
W.bdy.of T.14 S.,R.19 E.	North	480.00	480.00			
N.bdy.of T.14 S.,R.19 E.S.	89° 56'E.	480.04		.56	480.04	
E.bdy.of T.14 S.,R.19 E.	South	480.00		480.00		
S.bdy.of T.14 S.,R.19 E.S.	89° 57'W.	479.20		42		479.20
Convergency					.60	
Totals			480.00	480.98	480.64	479.20
				480.00	479.20	
Errors in latitude				.98		
Error in departure					1.44	

This township is rough and mountainous in the eastern part and in the northwestern part .There are two large mesas running through the township from south west to northeast.The township is well timbered.

The township should be subdivided.

Scott P. Stewart
John R. Stewart
U.S.Deputy Surveyors.

August 31,1901.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by _____

_____, United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of _____

_____

showing the respective capacities in which they acted:

_____, *Chainman.*

_____, *Chainman.*

_____, *Moundman.*

_____, *Moundman.*

_____, *Axman.*

_____, *Axman.*

_____, *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted _____

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

_____

_____

_____ of the _____

_____ meridian, _____ of _____, which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for _____

_____, *Chainman.*

_____, *Chainman.*

_____, *Moundman.*

_____, *Moundman.*

_____, *Axman.*

_____, *Axman.*

_____, *Flagman.*

_____

Subscribed and sworn to before me this _____ day of _____, 189

_____

_____

SEAL

6—151

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, ..., United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from ..... United States Surveyor General for ..... bearing date of the ..... day of ....., 189 , I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for ....., the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of .....

..... of the ..... meridian, in the ..... of ....., which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for ..... and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

United States Deputy Surveyor.

Subscribed by said ....., and sworn to before me this ..... day of ....., 189

SEAL

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL.

Salt Lake City, Utah, January 9, 1901

The foregoing field notes of the survey of The West & North Boundaries Township 14 South Range 19 East of the Salt Lake Base & Meridian, Utah

executed by Scott P. Stewart and John R. Stewart under his contract No. 242, dated April 12 1901, 189 , having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Edward H. Anderson
United States Surveyor General

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

.....
United States Surveyor General

6—151

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J.

BOOK A-289

FIELD NOTES

R.3.B.

OF THE SURVEY OF THE

SUBDIVISION

of

Township No.14 South , Range No.19 East ,

Of the SALT LAKE BASE AND *Meridian,*

in the STATE OF UTAH

AS SURVEYED BY

Scott P.Stewart and John R.Stewart , *United States Deputy Surveyor*

Under their ~~his~~ *Contract No.* 242 , *dated* April 12,1901. , ~~1899~~

Survey commenced September 2,1901. ,~~1899~~

Survey completed September 9,1901. , ~~1899~~

6—151

Surv 60.02.05

NAMES AND DUTIES OF ASSISTANTS.

Andy J. Stewart Chainman,
Edwin A. Peay Chainman,
Vosco Call Chainman,
Hugh Conover Chainman.
Clarence S. Jarvis Moundman,
John J. Harding Moundman,
George W. Ekins, Axman,
Harry Burton Axman,
Harvey R. Booth Flagman,
Gilbert Burr, Flagman

For preliminary affidavits see book D. T. 15 S. R. 20 E.

6—151

BOOK A-289

INDEX DIAGRAM.

Township....., *Range*.....

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

WE, ...and .....
do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of

.....

....., *Chainman.*

....., *Chainman.*

Subscribed and sworn to before me this .....
day of ....., 189

SEAL

WE, ...and .....
do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of

.....

....., *Moundman.*

....., *Moundman.*

Subscribed and sworn to before me this .....
day of ....., 189

SEAL

WE, ...and .....
do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of

.....

....., *Axman.*

....., *Axman.*

Subscribed and sworn to before me this .....
day of ....., 189

SEAL

I, ..., do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of .....

....., *Flagman.*

Subscribed and sworn to before me this .....
day of ....., 189

SEAL

Subdivision of T.14 S.,R 19 E

Survey commenced September 2,1901,and executed with a W.and L.E.Gurley ,light mountain transit,No.3,with solar attachment,The hor izontal limb is provided with two double verniers placed opposite to each other reading to single minutes of arc,which is the least count of the latitude and declination arcs;and a W.a and L.E.Gurley plain transit,No.2,of which the horizontal limb is provided with one double vernier reading to single minutes of arc.

The instruments were examined,tested on the true meridian at Salt Lake City,found correct,and were approved by the surveyor general for Utah,the former on June,6,1901,and the latter on May 29,1901.

We examine the adjustments of the instruments and correct the level and collimation errors,then,to test the solar apparatus ,of the No.3 instrument,by comparing its indications resulting from solar observations made during p.m.and a.m.hours,with a true meridian determined by observation on Polaris,we proceed as follows:

At the cor.of secs.1,2,35,and 36,on S.bdy.of Tp., heretofore described, latitude 39° 33'N.,longitude 109° 47'W.,we set off 39° 33'N.,on the lat.arc;7° 56'N.,on the decl.arc;and at 3 h 0 m p.m.,l.m.t.,determine a true meridian with the solar ,and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N.of the cor.

At 8 h 42 m p.m.,l.m.t.,we observe Polaris at eastern elongation,in accordance with the Manual,and mark a point in the line thus determined,on a plug driven in the ground,5.00 chs.N.of the cor.

September 2,1901.

September 3,1901:At 6 h 30 m a.m.,l.m.t.,we lay off the azimuth of Polaris 1° 35'to the west,and mark the

Chains	
	true meridian thus determined by cutting a small groove in the stone already set,5.00 chs.N.of our station;on which the true meridian falls 0.26 ins. east of the mark determined with the solar.
	At 7 h 3 m a.m.,l.m.t.,we set off 39° 33'N.,on the lat arc;7° 43'N.,on the decl.arc;and mark a point in the true meridian determined with the solar,by a cross on the stone already set 5.00 chs.N.of the cor.; this mark falls 0.25 ins.east of the true meridian established by Polaris observation.
	The solar apparatus by p.m.and a.m. observations, defines positions for true meridians respectively about 0'14"west and 0'14" eastof the true meridian established by Polaris observation ;therefore we conclude that the adjustments of the instruments are satisfactory.
	The magnetic bearing of the true meridian at 7 h 30 m a.m.is 16° 11.8'W.,the angle thus determined, reduced by the table ,page 100 of the Manual,gives the mean mag.decl,16° 09'E.
	From the above described cor.we run N.0° 01'W.,bet.secs.35 and 36. Over mountainous land;through scattering timber; ascend over ledges.
20.00	Foot of perpendicular ledge,40 ft.high,bears N.80° W. and S.80° E.
33.50	Top of ridge,600 ft.above sec.cor.,bears E.and W.; descend.Leave ledges.
40.00	Set a limestone,14x10x5 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft .base,1½ ft.high,W.of cor.Pits impracticable.
47.00	Bottom of hollow,250 ft.below ridge,course E.;ascend.
57.00	Top of ascent,400 ft.above hollow,bears E.and W.; thence over rolling mesa. Enter dense undergrowth.

Chains	
80.00	Set a sandstone,18x10x6 ins.,12 ins.in the ground, for cor.of secs.25,26,35,and 36,marked with 1 notch on E.and 1 notch on S.edges;from which A cedar,11 ins.diam.,bears N.30° E.,16 lks. dist.,marked T.14 S.,R.19 E.,S.25,B.T. A pinion pine,9 ins.diam.,bears S.21° E.,40 lks.dist.,marked T.14 S.,R.19 E.,S.36,B.T. A pinion pine,10 ins.diam.,bears S.43° W.,100 lks.dist.,marked T.14 S.,R.19 E.,S.35,B.T. A pinion pine,11 ins.diam.,bears N.38° W.,16 lks.dist.,marked T.14 S.,R.19 E.,S.26,B.T. Land,mountainous and rolling. Soil,gravelly and rocky;2nd and 3rd rate. Timber,cedar and pinion pine. Good grass for grazing. Mountainous land or land covered with dense under-growth,80.00 chs.
	N.89° 57'E.,on a random line bet.secs.25 and 36.
40.00	Set temp.¼ sec.cor.
80.20	Intersect E.bdy.of Tp.,7 lks.S.of the cor.of secs. 25,30,31,and 36,heretofore described, Thence we run S.89° 54'W.,on a true line bet.secs.25 and 36. Over mountainous land;through heavy timber;descend.
30.10	Leave heavy and enter scattering timber,bears N.and S.
40.10	Set a sandstone,14x10x6 ins.,9 ins,in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
43.00	Foot of descent,250 ft.below sec.cor.,bears N.and S. Enter bottom of Hill Creek Canon.
49.90	Hill Creek bed(dry),course N.
50.50	Trail,bears N.and S.
52.00	Leave canon bottom,bears N.and S.;ascend.

Chains	
70.00	Top of ascent,250 ft.above canon,bears N.and S.;
	Thence over mesa.Enter heavy timber,bears N.and S.
80.20	The cor.of secs.25,26,35,and 36 .
	Land,mountainous and level.
	Soil,gravelly ;3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.20 chs.

N.0° 01'W.,bet.secs.25 and 26.
Over rolling mesa;through heavy timber and scattering undergrowth;

15.00	Edge of mesa,bears E.and W.;descend abruptly over ledges.
22.50	Bottom of hollow,300 ft.below mesa,course N.70° E.; leave ledges;ascend.
37.50	Top of ridge,350 ft.above hollow,bears N.E.and S.W.; descend.
40.00	Set a sandstone,16x12x6 ins.,11 ins.in the ground, for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face;from which
	A cedar,6 ins.diam.,bears E.85° E.,34 lks. dist.,marked $\frac{1}{4}$ S.25,B.T.
	A pinion pine,8 ins.diam.,bears S.35° W.,40 lks. dist.,marked $\frac{1}{4}$ S.26,B.T.
57.60	Bottom of hollow,250 ft. below ridge,course N.35° E.; ascend.
80.00	Set a sandstone,16x8x5 ins.,11 ins.in the ground,for cor.of secs.23,24,25,and 26,marked with 2 notches on S.and 1 notch on E.edges;from which
	A pinion pine,10 ins.diam.,bears N.36° E.,70 lks.dist.,marked T.14 S.,R.19 E.,S.24,B.T.
	A red pine,11 ins.diam.,bears S.75° E.,104 lks.dist.,marked T.14 S.,R.19 E.,S.25,B.T.
	A red pine,12 ins.diam.,bears S.52° W.,31 lks.

Chains	
	dist.,marked T.14 S.,R.19 E.,S.26,B.T.
	A pinion pine,5 ins.diam.,bears N.43° W.,38 lks.dist.,marked T.14 S.,R.19 E.,S.23,B.T.
	Land,mountainous and rolling.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	Timber,cedar ,red pine,and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	N.89° 54'E.,on a random line bet.secs.24 and 25.
40.00	Set temp.¼ sec.cor.
80.30	Intersect E.bdy.of Tp.10 lks.S.of the cor.of secs. 19,24,25,and 30,heretofore described.
	Thence we run
	S.89° 50'W.,on a true line bet.secs.24 and 25.
	Over mountainous land;through scattering timber and scattering undergrowth;descend.
40.15	Set a sandstone,14x8x6 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ N.face;and raise a mound of stone,2 ft.base,1½ ft .high,N.of cor.Pits impracticable.
52.00	Foot of descent,250 ft.below sec.cor.,bears N.and S.
	Enter bottom of Hill Creek Canon.
57.20	Hill Creek,3 lks.wide 10 lks.deep,course N.
59.00	Leave canon,bears N.and S.;ascend.Trail,bears N.and S.
80.30	The cor.of secs.23,24,25,and 26.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.30.chs.

Chains N.0°01'W.,bet.secs.23 and 24.

Over mountainous land;through scattering timber and scattering undergrowth;ascend.

40.00 Set a sandstone,14x10x5 ins.,9 ins.in the ground;for ¼ sec.cor.,marked ¼ on W.face;from which

A pinion pine,8 ins.diam.,bears S.40°E.,50 lks.dist.,marked ¼ S.24,B.T.

A pinion pine,4 ins.diam.,bears N.70°W.,80 lks.dist.,marked ¼ S.23,B.T.

64.50 Top of ridge,250 ft.above ¼ sec.cor.,bears N.E.and S.W.;descend.

80.00 Set a sandstone,18x9x4 ins.,12 ins.in the ground, for cor.of secs.13,14,23,and 24,marked with 3 notches on S.and 1 notch on E.edges;from which

A cedar ,15 ins.diam.,bears N.77°E.,14 lks. dist.,marked T.14 S.,R.19 E.,S.13,B.T.

A pinion pine,10 ins.diam.,bears S.18°E.,33 lks.dist.,marked T.14 S.,R.19 E.,S.24,B.T.

A pinion pine,9 ins.diam.,bears S.49°W.,130 lks.dist.,marked T.14 S.,R.19 E.,S.23,B.T.

A pinion pine,8 ins.diam.,bears N.31°W.,100 lks.dist.,marked T.14 S.,R.19 E.,S.14,B.T.

Land,mountainous.

Soil,gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,80.00 chs.

September 3,1901:At this cor.we set off 7°37'N.,on the decl.arc;and at 0 h 3 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39°36'N.

N.89°50'E.,on a random line bet.secs.13 and 24.

40.00 Set temp.¼ sec.cor.

80.40 Intersect E.bdy.of Tp.5 lks.S.of the cor.of secs.

Chains	
	13,18,19,and 24,heretofore described.
	Thence we run
	S.89° 48'W.,on a true line bet.secs.13 and 24.
	Over mountainous land;through sacttering timber and undergrowth;ascend gently.
40.20	Set a sandstone,20x6x6 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
45.00	Top of spur,200 ft.above sec.cor.,bears N.W.and S.E. Descend.
54.00	Foot of descent,250 ft.below spur,bears N.and S.Enter canon bottom of Hill Creek Canon.
58.75	Hill Creek,3 lks.wide,2 ins.deep,course N.;
60.00	Leave canon bottom,bears N.and S.Trail,bears N.and S.
80.40	The cor.of secs.13,14, 23,and 24.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Undergrowth,sage brush.
	Mountainous land,80.40 chs.

	N.0° 01'W.,bet .secs.13 and 14.
	Over mountainous land;through heavy timber;descend.
17.00	Bottom of hollow,250 ft.below sec.cor.,course N.80°E; ascend.
40.00	Set a sandtone,16x10x5 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,4 ins.diam.,bears S.45°E.,40 lks. dist.,marked ¼ S.13,B.T.
	A pinion pine,8 ins.diam.,bears N.70°W.,100 lks.dist.,marked ¼ S.14,B.T.
42.25	Top of ridge,250 ft.above hollow,bears N.50°E.and S.50°W.;descend.

Chains	
51.25	Bottom of hollow,300 ft.below ridge,course N.75° E.; ascend.
65.00	Top of ridge,600 ft.above hollow,bears E.and W.;descend.
80.00	Set a limestone,18x8x4 ins.,12 ins.in the ground,for cor.of secs.11,12,13,and 14,marked with 4 notches on S.and 1 notch on E.edges;from which A pinion pine,10 ins.diam.,bears N.14° E.,50 lks.dist.,marked T.14 S.,R.19 E.,S.12,B.T. A pinion pine,12 ins.diam.,bears S.53° E.,47 lks.dist.,marked T.14 S.,R.19 E.,S.13,B.T. A pinion pine,7 ins.diam.,bears S.14° W.,80 lks.dist.,marked T.14 S.,R.19 E.,S.14,B.T. A pinion pine,9 ins.diam.,bears N.75° W.,55 lks.dist.,marked T.14 S.,R.19 E.,S.11,B.T.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.

	N.89° 48'E.,on a random line bet.secs.12 and 13.
40.00	Set temp.$\frac{1}{4}$ sec.cor.
80.46	Intersect E.bdy.of Tp.at the cor.of secs.7,12,13,and 18,heretofore described.
	Thence we run
	S.89° 48'W.,on a true line bet.secs.12 and 13.
	Over mountainous land;through scattering timber;descend from edge of mesa.
28.00	Bottom of hollow,250 ft.below sec.cor.,course N.W.; ascend.
31.50	Top of spur,100 ft.above hollow,bears N.20° W.and S. 20° E.;descend.
37.00	Foot of descent,200 ft .below spur,bears N.and S.; Enter bottom of Hill Creek Canon,

Chains	
38.50	Wash,5 lks.wide in bottom of Hill Creek Canon,course N.
40.23	Set a limestone,14x12x6 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
45.00	Trail,bears N.and S.
47.00	Leave canon bottom,bears N.and S.;ascend.
64.50	Top of ridge,250 ft.above canon,bears N.E.and S.W.; descend.
76.00	Bottom of hollow,160 ft.below ridge,course N.E.;ascend. Enter scattering undergrowth,bears N.and S.
80.46	The cor.of secs.11,12,13,and 14.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.46 chs.

N.0° 01'W.,bet.secs.11 and 12.

Over mountainous land;through heavy timber and scattering undergrowth;ascend.

10.00	Top of ridge,200 ft.above canon,bears N.40°E.and S. 40°W.;descend.
22.00	Bottom of hollow,350 ft.below ridge,course N.E.; ascend.
40.00	Top of spur,200 ft.above hollow,bears N.E.and S.W. Set a sandstone,20x10x6 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which

A pinion pine,10 ins.diam.,bears N.75°E.,25 lks.dist.,marked ¼ S.12,B.T.

A pinion pine,10 ins.diam.,bears W.,45 lks. dist.,marked ¼ S.11,B.T.

Chains	
	Descend.
42.00	Bottom of hollow,50 ft.below spur,course E.;ascend.
52.65	Foot of perpendicular cliff,50 ft.high,bears N.70° E. and S.70° W.
55.50	Top of ridge,700 ft.above hollow,bears N.E.and S.W.; descend.
80.00	Set a sand coated limestone,14x12x5 ins.,9 ins.in the ground,for cor.of secs.1,2,11,and 12,marked with 5 notches on S.and 1 notch on E.edges;from which
	A red pine,14 ins.diam.,bears N.41° E.,47 lks.dist.,marked T.14 S.,R.19 E.,S.1,B.T.
	A red pine,14 ins.diam.,bears S.34° E.,47 lks.dist.,marked T.14 S.,R.19 E.,S.12,B.T.
	A pinion pine,9 ins.diam.,bears S.24° W.,46 lks.dist.,marked T.14 S.,R.19 E.,S.11,B.T.
	A pinion pine,10 ins.diam.,bears N.76° W.,62 lks.dist.,marked T.14 S.,R.19 E.,S.2,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar,red pine,and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.

	N.89° 48' E.,on a random line bet.secs.1 and 12.
40.00	Set temp.¼ sec.cor.
80.30	Intersect E.bdy.of Tp.5 lks.N.of the cor.of secs.1, 6,7,and 12,heretofore described,
	Thence we run
	S.89° 50' W.,on a true line bet.secs.1 and 12.
	Over rolling mesa;through heavy timber.
30.00	Edge of mesa,bears N.and S.;descend.
40.15	Set a sandstone,16x10x4 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,8 ins.diam.,bears N.45° E.,25 lks.dist.,marked ¼ S.1,B.T.

Chains	
	A pinion pine,8 ins.diam.;bears S.27° E.,30 lks.dist.,marked $\frac{1}{4}$ S.12,B.T.
46.25	Foot of descent,350 ft.below mesa,bears N.10° E.and S.10° E.;enter botton of Hill Creek Canon.
50.00	Wash(dry),6 lks.wide,in bottom of Hill Creek Canon, course N.
52.00	Trail,bears N.E.and S.
54.00	Leave canon bottom ,bears N.and S.;ascend.
80.30	The cor.of secs.1,2,11,and 12.
	Land,mountainous and rolling mesa.
	Soil,gravelly loam;and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.30 chs.

N.0° 01'W.,on a random line bet.secs.1 and 2.

40.00	Set temp.$\frac{1}{4}$ sec.cor.
80.05	Intersect N.bdy.of Tp.7 lks.E.of the cor.of secs.1,2, 35,and 36,heretofore described.
	Thence we run
	S.0° 04'E.✓,on a true line bet.secs.1 and 2.
	Over gently rolling mesa;through scattering timber and dense undergrowth.
12.00	Edge of mesa,bears N.60° E.and S.60° W.; descend.
36.75	Top of perpendicular ledge,50 ft.high,bears N.85° W. and S.85° E.
37.35	Bottom of canon,300 ft.below mesa,course E.;ascend.
37.50	Trail,bears E.and W.
40.05	Set a limestone,18x10x4 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,1½ ft.high,W.of cor.Pits impracticable.
55.50	Foot of perpendicular ledge (on ridge) 25 ft.high,bears N.70° E. and S.70° W.
68.00	Bottom of hollow,200 ft.below ridge,course N.70° E.; ascend.
74.00	Top of spur,150 ft.above hollow,bears N.80° E.and S.80°

Chains	
	W.;descend.
77.50	Bottom of hollow,50 ft. below ridge,course N.70° E.;ascend.
80.05	The cor.of secs.1,2,11,and 12.
	Land,mountainous and nearly level.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.05 chs.

September 3,1901.

September 4,1901:At 7 h 3 m a.m.,l.m.t., we set off 39° 33'N.,on the lat .arc;7° 21'N.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.2,3,34,and 35,on S.bdy of Tp.,heretofore described.

Thence werun

N.0° 01'W.,bet.secs.34 and 35.

Over rolling mesa;through dense undergrowth and scattering timber.

7.57	Edge of mesa,bears E.and W.;leave undergrowth and enter heavy timber,bears E.and W.;descend.
31.25	Bottom of hollow,150 ft.below mesa,course E.;ascend.
40.00	Set a sandstone,20x10x8 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,8 ins.diam.,bears N.55° E.,45 lks.dist.,marked ¼ S.35,B.T.
	A pinion pine,10 ins.diam.,bears S.60° W.,100 lks.dist.,marked ¼ S.34,B.T.
43.00	Leave timber,bears E.and W.
48.00	Top of ascent,250 ft.above hollow,bears S.W.and S.E.
	Thence over rolling mesa.Enter dense undergrowth.
80.00	Set a sandstone,18x10x4 ins.,12 ins.in the ground,

Chains	
	for cor.of secs.26,27,34,and 35,marked with 2 notches on E.and 1 notch on S.edges;dit pits,18x18x12 ins., in each sec.,5½ ft.dist.;and raise a mound of earth, 4 ft.base,2 ft.high,W.of cor.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	N.89° 57'E.,on a random line bet.secs.26 and 35.
40.00	Set temp.¼ sec.cor.
80.24	Intersect N.and S.line,20 lks.N.of the cor.of secs. 25,26,35,and 36,
	Thence we run
	S.89° 48'W.,on a true line bet.secs.26 and 35.
	Over rolling mesa;through heavy timber.
37.00	Leave heavy timber and enter scattering timber,bears N.and S.
40.12	Set a limestone,18x10x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
65.00	Leave timber and enter dense undergrowth,bears N.and S.
80.24	The cor.of secs.26,27,34,and 35.
	Land ,rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Heavily timbered land,or land covered with dense undergrowth,80.24 chs.

chains	
	N.0° 01'W.,bet.secs.26 and 27.
	Over rolling mesa;through dense undergrowth.
15.00	Enter scattering timber,bears E.and W.
40.00	Set a sandstone,18x10x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,12 ins.diam.,bears S.68°W.,80 lks.
	dist.,marked ¼ S.27,B.T.
	No other tree within limits;raise a mound of stone,
	2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
80.00	Set a limestone,18x10x4 ins.,12 ins.in the ground,
	for cor.of secs.22,23,26,and 27,marked with 2 notches
	on S.and 2 notches on E.edges;from which
	A cedar,8 ins.diam.bears N.62°E.,61 lks.dist.,
	marked T.14 S.,R.19 E.,S.23,B.T.
	A pinion pine,5 ins.diam.,bears S.75°E.,65 lks.
	dist.,marked T.14 S.,R.19 E.,S.26,B.T.
	A cedar ,5 ins.diam.,bears S.6°W.,58 lks.dist.,
	marked T.14 S.,R.19 E.,S.27,B.T.
	A pinion pine,12 ins.diam.,bears N.51°W.,120
	lks.dist.,marked T.14 S.,R.19 E.,S.22,B.T.
	Land,rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Land covered with dense undergrowth,80.00 chs.
	N.89° 48'E.,on a random line bet.secs.23 and 26.
40.00	Set temp.¼ sec.cor.
80.20	Intersect N.and S.line,at the cor.of secs.23,24,25,
	and 26,
	Thence we run
	S.89° 48'W.,on a true line bet.secs.23 and 26.
	Over mountainous land;through scattering timber and
	dense undergrowth;ascend.

Chains	
15.00	Top of ascent,200 ft.above sec.cor.,bears N.and S.; thence over rolling mesa.
40.10	Set a sandstone,16x10x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A pinion pine,11 ins.diam.,bears N.12° E.,60 lks.dist.,marked ¼ S.23,B.T. A pinion pine,10 ins.diam.,bears S.40° W.,75 lks.dist.,marked ¼ S.,26,B.T.
80.20	The cor.of secs.22,23,26,and 27. Land,mountainous and rolling mesa. Soil,sandy loam;2nd rate. Timber,cedar and pinion pine. Undergrowth,sage brush and shadscales. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,80.20 chs. September 4,1901:At the noon hour the sky is overcast and solar observations are impossible.

N.0° 01'W.,bet.secs.22 and 23.
Over rolling mesa;through heavy timber.

40.00	Set a sandstone,14x10x9 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,6 ins.diam.,bears S.80° E.,25 lks. dist.,marked ¼ S.23,B.T. A pinion pine,12 ins.diam.,bears N.70° W.,40 lks.dist.,marked ¼ S.22,B.T.
63.00	Edge of mesa,bears E.and W.;descend.
68.30	Bottom of hollow,200 ft.below mesa,course N.W.; ascend.
80.00	Set a sandstone,18x6x4 ins.,12 ins.in the ground,for cor.of secs.14,15,22,and 23,marked with 3 notches on S.and 2 notches on E.edges;from which A cedar,4 ins.diam.,bears N.64° E.,70 lks.

Chains	
	dist.,marked T.14 S.,R.19 E.,S.14,B.T.
	A cedar,9 ins.diam.,bears S.23° E.,75 lks.
	dist.,marked T.14 S.,R.19 E.,S.23,B.T.
	A pinion pine ,10 ins.diam.,bears S.73° W.,71
	lks.dist.,marked T.14 S.,R.19 E.,S.22,B.T.
	A pinion pine,11 ins.diam.,bears N.32° W.,72
	lks.dist.,marked T.14 S.,R.19 E.,S.15,B.T.
	Land,mountainous and rolling mesa.
	Soil,gravelly and sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	N.89° 48'E.,on a random line bet.secs.14 and 23.
40.00	Set temp.¼ sec.cor.
80.06	Intersect N.and S.line,11 lks.N.of the cor.of secs. 13,14,23,and 24.
	Thence we run
	S.89° 53'W.,on a true line bet.secs.14 and 23.
	Over mountainous land;Through scattering timber and dense undergrowth;ascend.
5.00	Top of ascent,150 ft.above sec.cor.,bears N.and S.;
	Thence over mesa.
40.03	Set a sandstone,18x10x6 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,7 ins.diam.,bears N.70° E.,42
	lks.dist.,marked ¼ S.14,B.T.
	A pinion pine,12 ins.diam.,bears S.35° W.,25
	lks.dist.,marked ¼ S.23,B.T.
60.00	Edge of mesa,bears N.and S.;descend.
80.06	The cor.of secs.14,15,22,and 23.
	Land,mountainous and rolling mesa.
	Soil,gravelly and sandy loam;2nd rate.
	Timber,cedar and pinion pine.

Chains	
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.06 chs.
	N.0° 01'W.,bet.secs.14 and 15.
	Over mountainous land;through heavy timber;ascend.
5.00	Top of spur,200 ft.above sec.cor., bears E.and W.; descend.
40.00	Set a sandstone,16x9x5 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,7 ins.diam.,bears S.74°E.,67 lks. dist.,marked ¼ S.14,B.T. A cedar,5 ins.diam.,bears N.11°W.,54 lks. dist.,marked ¼ S.15,B.T.
59.00	Bottom of hollow,400 ft.below ridge,course N.20°W.; ascend.
68.00	Foot of perpendicular ledge,20 ft.high,bears E.and W.
70.00	Top of ridge,150 ft.above hollow,bears E.and W.; Leave heavy timber and enter scattering timber,bears E.and W.;descend.
80.00	Trail in Canon,300 ft.below ridge,course N.20°E. Set a sandstone,16x8x5 ins.,11 ins.in the ground,for cor.of secs.10,11,14,and 15,marked with 4 notches on S.and 2 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	N.89° 53'E.,on a random line bet.secs.11 and 14.
40.00	Set temp.¼ sec.cor.

Chains	
80.02	Intersect N.and S.line,12 lks.N.of the cor.of secs. 11,12,13,and 14.
	Thence we run
	S.89° 58'W.,on a true line bet.secs.11 and 14.
	Over mountainous land;through heavy timber and scattering undergrowth;ascend.
8.00	Top of ascent,100 ft.above sec.cor.,bears N.and S.; thence over rolling mesa.
40.01	Set a hard sandstone,18x12x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,7 ins.diam.,bears N.70°E.,25 lks.dist.,marked ½ S.11,B.T.
	A pinion pine,9 ins.diam.,bears S.12°W.,52 lks.dist.,marked ¼ S.14,B.T.
42.50	Edge of mesa,bears N.10°E.and S.10°W.;leave heavy timber and enter scattering timber,bears N.10°E.and S.10°W.;descend.
80.02	The cor.of secs.10,11,14,and 15.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and gravelly ;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.02 chs.

	N.0°01'W.,bet.secs.10 and 11.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
40.00	Set a sandstone,16x10x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
48.50	Top of ridge,400 ft.above sec.cor.,bears N.E.and S.W. Descend.
61.30	Bottom of hollow,350 ft.below ridge,course E.;ascend.

hains	
69.20	Foot of perpendicular ledge,70 ft.high,bears E.and W.
75.00	Top of ridge,400 ft.above hollow,bears E.and W.;descend.
80.00	Set a limestone,20x8x4 ins.,15 ins.in the ground,for cor. of secs.2,3,10,and 11,marked with 5 notches on S.and 2 notches on E.edges;from which A pinion pine,10 ins.diam.,bears N.47° E.,58 lks.dist.;marked T.14 S.,R.19 E.,S.2,B.T. A pinion pine,8 ins.diam.,bears S.53° E.,20 lks.dist.,marked T.14 S.,R.19 E.,S.11,B.T. A pinion pine,9 ins.diam.,bears S.73° W.,59 lks.dist.,marked T.14 S.,R.19 E.,S.10 ,B.T. A pinion pine,9 ins.diam.,bears N,39° W.,44 lks.dist.,marked T.14 S.,R.19 E.,S.3,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 58'E.,on a random line bet.secs.2 and 11.
40.00	Set temp.$\frac{1}{4}$ sec.cor.
80.22	Intersect N.and S. line,10 lks.S.of the cor.of secs. 1,2,11,and 12.
	Thence we run
	S.89° 54'W.,on a true line bet.secs.2 and 11.
	Over mountainous land;through heavy timber;ascend.
23.80	Trail on top of ridge,250 ft.above sec.cor.,bears N. and S.;descend.
40.11	Set a sandstone,18x10x4 ins.,12 ins.in the ground,for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on N.face;from which A pinion pine,5 ins.diam.,bears N.46° W.,110 lks.dist.,marked $\frac{1}{4}$ S.2,B.T.

Chains	
	A pinion pine,15 ins.diam.,bears S.40° E.,37 lks.dist.,marked ½ S.11,B.T.
50.00	Trail,bears N.20° E.and S.20° W.,in bottom of canon, 600 ft.below ridge,course N.20° E.;ascend.
80.22	The cor.of secs.2,3,10,and 11.
	Land,mountainous.
	Soil,gravelly; 3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.22 chs.
	September 4,1901.

September 5,1901:At 7 h 0 m a.m.,l.m.t.,we set off 39° 37'N.,on the lat.arc;6° 59'N.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.2,3,10,and 11.

Thence we run

N.0° 01'W.,on a random line bet.secs.2 and 3.

40.00	Set temp.¼ sec.cor.
80.20	Intersect N.bdy.of Tp.11 lks.E.of the corner of secs.2,3,34,and 35,heretofore described.

Thence we run

S.0° 06'E.,on a true line bet.secs.2 and 3.

Over rolling mesa;through scattering timber and dense undergrowth.

40.20	Set a sandstone,20x10x6 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft. base,1½ ft.high,W.of cor.Pits impracticable.
60.00	Edge of mesa,bears N.E.and S.W.;ascend gradually.
80.20	The cor.of secs.2,3,10,and 11.

Land,mountainous and rolling mesa.

Soil,gravelly loam and sandy loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Chains	
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.20 chs.
	From the cor.of secs.3,4,33,and 34,on S.bdy.of Tp. heretofore described.
	Thence we run
	N.0° 02'W.,bet.secs.33 and 34.
	Over rolling mesa;through heavy timber.
25.00	Trail,bears N.E.and S.W.
40.00	Set a sandstone,24x8x8 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,16 ins.diam.,bears N.40° E.,49 lks. dist.,marked ¼ S.34,B.T.
	A cedar,6 ins.diam.,bears N.18° W.,85 lks. dist.,marked ¼ S.33,B.T.
41.00	Edge of mesa,bears N.10° E.and N.10° W.;descend
51.00	Bottom of hollow,200 ft.below mesa,course N.10° W.; ascend.
70.00	Top of spur,200 ft.above hollow,bears E.and W.;descend.
77.50	Bottom of hollow,150 ft .below ridge,course S.85° W.; ascend.
80.00	Set a sandstone,24x7x5 ins.,18 ins.in the ground,for cor.of secs.27,28,33,and 34,marked with 1 notch on S.and 3 notches on E.edges;from which
	A pinion pine,10 ins.diam.,bears N.15° E., 60 lks.dist.,marked T.14 S.,R.19 E.,S.27,B.T.
	A pinion pine,12 ins.diam.,bears S.36° E.,60 lks.dist.,marked T.14 S.,R.19 E.,S.34,B.T.
	A cedar,10 ins.diam.,bears S.39° W.,82 lks. dist.,marked T.14 S.,R.19 E.,S.33,B.T.
	A pinion pine,8 ins.diam.,bears N.51° W.,110 lks.dist.,marked T.14 S.,R.19 E.,S.28,B.T.
	Land,mountainous and rolling mesa.

Chains	
	Soil,gravelly and sandy loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	September 5,1901:At this cor.we set off 6° 53'N.,on the decl.arc;and at 0 h 3 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat is 39° 34' N.
	N.89° 57'E.,on a random line bet.secs.27 and 34.
40.00	Set temp.¼ sec.cor.
79.70	Intersect N.and S.line,7 lks.N.of the cor.of secs. 26,27,34,and 35.
	Thence we run
	West,on a true line bet.secs.27 and 34.
	Over rolling mesa;through dense undergrowth.
39.85	Set a sandstone,18x12x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone, 2ft.base,1½ ft.high,N.of cor.Pits impracticable.
67.00	Enter scattering timber,bears N.and S.
74.00	Edge of mesa,bears N.and S.;descend.
79.70	The cor.of secs.27,28,33,and 34.
	Land,mountainous and rolling mesa.
	Soil,sandy and gravelly loam ;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.70 chs.
	N.0° 02'W.,bet.secs.27 and 28.
	Over mountainous land;through heavy timber;ascend.
20.00	Top of ridge,100 ft.above sec.cor.,bears E.and W.; descend.

Chains	
40.00	Set a sandstone,18x8x6ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,6 ins.diam.,bears N.70°E.,85 lks. dist.,marked ¼ S.27,B.T. No other tree within limits;raise a mound of stone, 2 ft .base,1½ ft.high,W.of cor.Pits impracticable.
43.70	Trail,bears N.E.and S.W.
44.00	Bottom of canon,300 ft.below ridge,course N.E.;ascend.
48.00	Foot of perpendicular ledge,10 ft.high,bears N.E. and S.W.
57.00	Foot of perpendicular ledge,15 ft.high,bears N.E.and S.W.
58.00	Top of ascent,200 ft.above hollow,bears N.E.and S.W. Thence over rolling mesa.
77.00	Edge of mesa,bears E.and W.;descend.
80.00	Set a sandstone,24x7x5 ins.,18 ins.in the ground,for cor.of secs.21,22,27,and 28,marked with 2 notches on S.and 3 notches on E.edges;from which A pinion pine,10 ins.diam.,bears N.15°E.,60 lks.dist.,marked T.14 S.,R.19 E.,S.22,B.T. A pinion pine,12 ins.diam.,bears S.36°E.,60 lks.dist.,marked T.14 S.,R.19 E.,S.27,B.T. A cedar,10 ins.diam.,bears S.39°W.,82 lks. dist.,marked T.14 S.,R.19 E.,S.28,B.T. A pinion pine,8 ins.diam.,bears N.51°W.,110 lks.dist.,marked T.14 S.,R.19 E.,S.21,B.T. Land,mountainous and rolling mesa. Soil,sandy loam and gravelly ;2nd and 3rd rate. Timber,cedar and pinion pine. Good grass for grazing. Mountainous or heavily timbered land,80.00 chs.

East,on a random line bet.secs.22 and 27.

40.00	Set temp.¼ sec.cor.

Chains

80.04 Intersect N.and S.line at the cor.of secs.22,23,26, and 27.

Thence we run

West ,on a true line bet.secs.22 and 27.

Over rolling mesa;through heavy timber and scattering undergrowth.

30.00 Edge of mesa,bears N.and S.;descend.

40.02 Set a sandstone,16x12x4 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which

A pinion pine,5 ins.diam.,bears N.45° E.,150 lks.dist.,marked ¼ S.22,B.T.

A cedar,4 ins.diam.,bears S.51°W.,49 lks. dist.,marked ¼ S.27,B.T.

48.75 Bottom of canon,150 ft.below mesa,course N.12°W.; ascend. abruptly over ledges and boulders. Trail in bottom.

62.00 Top of ridge,200 ft.above canon,bears N.E.and S.W.; leave ledges;descend.

80.04 The cor.of secs.21,22,27,and 28.

Land,mountainous and rolling mesa.

Soil,gravelly and sandy loam;and rocky;2nd and 4th rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,80.04 chs.

N.0°02'W.,bet.secs.21 and 22.

Over mountainous land ;through heavy timber and scattering undergrowth;descend.

8.00 Bottom of hollow,200 ft.below sec.cor.,course N.E.;

23.00 Top of ascent,200 ft.above hollow,bears N.E.and S.W.

Thence over mesa.Foot of ledge,bears N.E.and S.W.

30.00 Edge of mesa,bears N.80°E.and S.80°W.;descend.

40.00 Set a sandstone,16x6x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

Chains	
	A cedar,5 ins.diam.,bears N.33° E.,60 lks. dist.,marked $\frac{1}{4}$ S.22,B.T.
	A cedar,6 ins.diam.,bears S.60° W.,27 lks. dist.,marked $\frac{1}{4}$ S.21,B.T.
58.50	Bottom of canon,300 ft.below mesa,course N.80° E.;ascend.
60.00	Trail,bears N.80° E.and S.80° W.
61.70	Foot of perpendicular ledge,40 ft.high,bears N.80° E. and S.80° W.
69.80	Top of ridge,200 ft.above canon,bears N.80° E.and S. 80° W.;descend.
80.00	Set a sandstone,18x12x5 ins.,12 ins.in the ground,for cor.of secs.15,16,21,and 22, marked 14 S. on N.E.,and 19 E.on S.E.faces ;with three notches on S.and 3 notches on E.edges;from which
	A cedar,20 ins.diam.,bears N.32° E.,85 lks. dist.,marked T.14 S.,R.19 E.,S.15,B.T..
	A cedar,5 ins.diam.,bears S.60° E.,92 lks. dist.,marked T.14 S.,R.19 E.,S.22,B.T.
	A cedar,14 ins.diam.,bears S.51° W.,150 lks. dist.,marked T.14 S.,R.19 E.,S.21,B.T.
	A cedar,8 ins.diam.,bears N.67° W.,110 lks. dist.,marked T.14 S.,R.19 E.,S.16,B.T.

Land,mountainous and level.

Soil,gravelly;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,80.00 chs.

September 5,1901;At this cor.we set off 39° 36'N.,on the lat.arc;6° 50'N.,on the decl.arc;and at 4 h 2 m p.m.,l.m.t.,determine a true meridian with the solar and mark a point thereof on a stone firmly set in the ground,5.00 chs.N.of the cor.

September 5,1901.

Chains	
	September 6,1901:At 2h 25 m a.m.,l.m.t.,we observe Polaris at upper culmination with the No.3 transit,in accordance with the Manual,and mark a point in the true meridian thus determined by a cross on the stone already set 5.00 chs.N.of our station;this mark falls 0.29 ins.east of the mark determined by the solar. At 7 h 0 m a.m.,l.m.t.,we set off 39° 36'N.,on the lat. arc;6° 37'N.,on the decl.arc;and mark the true meridian determined with the solar,by a small groove in the stone,already set 5.00 chs.N.of our station ; this mark falls 0.35 ins.east of the true meridian established by Polaris observation.
	The solar apparatus by p.m.and a.m.observations defines positions for true meridians respectively about 0'15"west and 0'18"east of the true meridian eatablished by Polaris observation;therefore we conclude that the adjustments of the instruments are satisfactory.
	The magnetic bearing of the true meridian at 7 h 30 m a.m.,is 15° 39..8'W.,the angle thus determined reduced by the table page 100 of the Manual,gives the mean mag.decl.15° 37'E.
	From the cor.of secs.15,16,21,and 22,we run East,on a random line bet.secs.15 and 22 .
40.00	Set temp.¼ sec.cor.
80.10	Intersect N.and S.line,at the cor.of secs.14,15,22, and 23.
	Thence we run West,on a true line bet.secs.15 and 22.
	Over mountainous land;through scattering timber and scattering undergrowth;descend.
33.00	Trail,bears N.and S.,in bottom of canon,350 ft.below sec.cor.,course N.;ascend.
40.05	Set a sandstone,18x10x5 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
60.00	Top of ridge,300 ft.above canon,bears N.E.and S.W.;

Chains	descend.
80.10	The cor.of secs.15,16,21,and 22.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.10 chs.
	N.0° 02'W.,bet.secs.15 and 16.
	Over mountainous land;through scattering timber and scattering undergrowth;descend.
6.50	Bottom of hollow,250 ft.below sec.cor.,course N.80°E.
	Ascend.
8.65	Top of ridge,150 ft.above hollow,bears N.80°E.and S. 80°W.;descend.
16.50	Bottom of hollow,100 ft.below ridge,course S.80°E.; ascend.
40.00	Set a limestone,22x11x4 ins.,16 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,24 ins.diam.,bears N.69°E.,36 lks.dist.,marked ¼ S.15,B.T.
	A cedar,5 ins.diam.,bears S.35°W.,68 lks. dist.,marked ¼ S.16,B.T.
43.75	Foot of perpendicular ledge,50 ft.high,bears E.and W.
56.20	Top of flat top ridge,250 ft.above hollow,bears N.E.a and S.W.
60.50	Leave flat ridge,bears N.E.and S.W.;descend.
80.00	Set a limestone,18x8x6 ins.12 ins.in the ground,for cor.of secs.9,10,15,and 16,marked with 4 notches on S.and 3 notches on E.edges;from which
	A pinion pine,10 ins.diam.,bears N.63°E.,70 lks.dist.,marked T.14 S.,R.19 E.,S.10,B.T.
	A pinion pine,8 ins.diam.,bears S.62°E.,85 lks.dist.,marked T.14 S.,R.19 E.,S.15,B.T.

Chains	
	A pinion pine,7 ins.diam.,bears S.73°W.,100 lks.dist.,marked T.14 S.,R.19 E.,S.16,B.T.
	A pinion pine,8 ins.diam.,bears N.40°W.,60 lks.dist.,marked T.14 S.,R.19 E.,S.9,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.
	East,on a random line bet.secs.10 and 15.
40.00	Set temp.¼ sec.cor.
80.16	Intersect N.and S.line,10 lks.S.of the cor.of secs. 10,11,14,and 15.
	Thence we run
	S.89° 56'W.,on a true line bet.secs.10 and 15.
	Over mountainous land;through heavy timber and scattering undergrowth;ascend.
15.00	Top of ascent,200 ft.above sec .cor.,bears N.and S.; thence over rolling mesa.
35.00	Edge of mesa,bears N.W.and S.E.;descend.
39.90	Bottom of hollow,200 ft.below mesa,course S.E.;ascend.
40.08	Set a sandstone,20x14x4 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,14 ins.diam.,bears N.15°W.,50 lks.dist.,marked ¼ S.10,B.T.
	A pinion pine,9 ins.diam.,bears S.45°E.,40 lks.dist.,marked ¼ S.15,B.T.
80.16	The cor.of secs.9,10,15,and 16.
	Land,mountainous and rolling mesa.
	Soil,gravelly loam and sandy ;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.16 chs.

Subdivision of T.14 S.,R.19 E.-Continued.

Chains	
	N.0°02'W.,bet.secs.9 and 10.
	Over mountainous land;through heavy timber;ascend.
10.00	Top of ascent,100 ft.above sec.cor.,bears N.80°E.and S.80°W.;thence over rolling mesa.
14.75	Leave timber and enter dense undergrowth,bears E.and W.
21.50	Leave undergrowth and enter heavy timber,bears E.and W.
23.60	Edge of mesa,bears N.E.and S.W.;descend.
40.00	Set a limestone,24x6x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,14 ins.diam.,bears N.80°E.,124 lks.dist.,marked ¼ S.10,B.T. A cedar,8 ins.diam.,bears S.9°W.,278 lks. dist.,marked ¼ S.9,B.T.
56.00	Bottom of hollow,150 ft.below mesa,course N.30°E.;ascend.
57.20	Trail,bears N.30°E.and S.30°W.
64.00	Top of ascent,150 ft.above hollow,bears N.E.and S.W.; thence over rolling mesa.
80.00	Set a limestone,16x12x4 ins.,12 ins.in the ground,for cor.of secs.3,4,9,and 10,marked with 5 notches on S. and 3 notches on E.edges;from which A cedar,14 ins.diam.,bears N.40°E.,78 lks. dist.,marked T.14 S.,R.19 E.,S.3,B.T. A cedar,8 ins.diam.,bears S.4°30'E.,100 lks. dist.,marked T.14 S.,R.19 E.,S.10,B.T. A pinion pine,10 ins.diam.,bears S.71°W.,53 lks.dist.,marked T.14 S.,R.19 E.,S.9,B.T. A pinion pine,18 ins.diam.,bears N.33°W.,125 lks.dist.,marked T.14 S.,R.19 E.,S.4,B.T.
	Land,mountainous and rolling mesa.
	Soil,gravelly and rocky;3rd and 4th rate.
	Timber,cedar and pinion pine.

Subdivision of T.14 S.,R.19 E.-Continued.

Chains Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.

September 6,1901:At the noon hour the sky is overcast and solar observations are impossible.

N.89° 56'E.,on a random line bet.secs.3 and 10.

40.00 Set temp.⅄ sec.cor.

80.20 Intersect N.and S.line,at the cor.of secs.2,3,10,and 11.

Thence we run

S.89° 56'W.,on a true line bet.secs.3 and 10.

Over mountainous land;through heavy timber and scattering undergrowth;ascend.

12.00 Top of ascent,150 ft.above sec.cor.,bears N.40° E.and S.40° W.;thence over rolling mesa.

40.10 Set a limestone,19x6x4 ins.,12 ins.in the ground,for ⅄ sec.cor.,marked ⅄ on N.face;from which

A pinion pine,6 ins.diam.,bears N.40° E.,55 lks.dist.,marked ⅄ S.3,B.T.

A pinion pine,8 ins.diam.,bears S.,50 lks. dist.,marked ⅄ S.10,B.T.

48.00 Trail,bears N.30° E.and S.30° W.

55.00 Edge of mesa,bears N.30° E.and S.30° W.;descend.

65.00 Bottom of hollow,250 ft.below mesa,course N.E.;ascend.

67.50 Top of ascent,100 ft.above hollow,bears N.E.and S.W. thence over rolling mesa.

70.00 Trail,bears N.E.and S.W.

80.20 The cor.of secs.3,4,9,and 10.

Land,mountainous and rolling mesa.

Soil,gravelly loam and rocky;3rd and 4th rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Chains	
	Good grass for grazing.
	Mountainous or heavily timbered land,80.20 chs.
	N.0° 02'W.,on a random line bet.secs.3 and 4.
40.00	Set temp.¼ sec.cor.
80.32	Intersect N.bdy.of Tp.18 lks.East of the cor.of secs.3,4,33,and 34,heretofore described.
	Thence we run
	S.0° 10'E.,on a true line bet.secs.3 and 4.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
17.00	Top of ridge,250 ft.above sec.cor.,bears N.E.and S.W.;descend.
33.50	Bottom of hollow,50 ft.below ridge,course N.E.;ascend.
38.00	Leave undergrowth and enter heavy timber,bears E.and W.
40.32	Set a sandstone,18x9x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,6 ins.diam.,bears N.50° E.,75 lks.dist.,marked ¼ S.3,B.T.
	A pinion pine,10 ins.diam.,bears S.40° W.,62 lks.dist.,marked ¼ S.4,B.T.
57.50	Top of ascent,200 ft.above hollow,bears N.W.and S.E.; thence over rolling mesa.
80.32	The cor.of secs.3,4,9,and 10.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.32 chs.

Chains	
	From the cor.of secs.4,5,32,and 33,on S.bdy.of Tp., heretofore described.
	Thence we run
	N.0° 03'W.,bet.secs.32 and 33.
	Over rolling mesa;through scattering timber and dense undergrowth.
40.00	Set a sandstone,18x10x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
80.00	Set a lime coated sandstone,28x14x4 ins.,21 ins.in the ground,for cor.of secs.28,29,32,and 33,marked with 1 notch on S.and 4 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Land covered with dense undergrowth,80.00 chs.
	N.89° 57'E.,on a random line bet.secs.28 and 33.
40.00	Set temp.¼ sec.cor.
79.72	Intersect N.and S.line,7 lks.N.ofthe cor. of secs. 27,28,33,and 34.
	Thence we run
	West,on a true line bet.secs.28 and 33.
	Over mountainous land;through dense undergrowth and scattering timber;descend gradually.
4.40	Top of perpendicular ledge,25 ft.high,bears N.and S.
8.00	A small spring bears South about 3.00 chs.dist.
11.00	Bottom of hollow,200 ft.below sec.cor.,course N.60° W.
	Ascend.
22.70	Top of spur,100 ft.above hollow,bears N.20°W.and S.20°E.

Chains	
	Descend.
30.00	Trail,bears N.20° E.and S.20° W.,in bottom of ccanon, 200 ft.below ridge,course N.20° E.;ascend.
39.00	Top of ascent,150 ft.above canon,bears N.20° E.and S.20° W.;thence over rolling mesa.
39.86	Set a sandstone,20x10x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A pinion pine,8 ins.diam.,bears N.35° W.,60 lks.dist.,marked ¼ S.28,B.T. A pinion pine,10 ins.diam.,bears S.40° W.,150 lks.dist.,marked ¼ S.33,B.T.
50.00	Leave timber,bears N.and S.
79.72	The cor.of secs.28,29,32,and 33.
	Land,mountainous and rolling mesa.
	Soil,gravelly and sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.72 chs.
	September 6,1901.

September 7,1901:At 7 h 0 m a.m.,l.m.t.,we set off 39° 34' N.,on the lat.arc;6° 15' N.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.28,29,32,and 33.

Thence we run

N.0° 03' W.,bet.secs.28 and 29.

Over rolling mesa;through dense undergrowth .

38.00	Leave undergrowth and enter heavy timber,bears E. and W.
40.00	Set a sandstone,24x12x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,6 ins.diam.,bears S.45° E.,17 lks. dist.,marked ¼ S.28,B.T.

Chains	
	A cedar,12 ins.diam.,bears N.80° W.,28 lks. dist.,marked ¼ S.29,B.T.
46.00	Edge of mesa,bears N.E.and S.W.;descend.
56.00	Bottom of canon,250 ft.below mesa ,course N.30° E.; ascend.
61.25	Foot of perpendicular ledge,25 ft.high,bears N.E.and S.W.
70.00	Top of ascent,250 ft.above canon,bears N.30° E.and S.30° W.;thence over mesa.Leave heavy timber and enter scattering timber and dense undergrowth,bears N.E.and S.W.
80.00	Set a sandstone, 30x12x4 ins.,24 ins. in the ground, for cor.of secs.20,21,28,and 29,marked with 2 notches on S.and 4 notches on E.edges;from which
	A cedar ,6 ins.diam.,bears N.15° E.,30 lks. dist.,marked T.14 S.,R.19 E.,S.21,B.T.
	A cedar,16 ins.diam.,bears S.25° E.,117 lks. dist.,marked T.14 S.,R.19 E.,S.28,B.T.
	No other trees within limits;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and rolling mesa.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	East,on a random line bet.secs.21 and 28.
40.00	Set temp.¼ sec.cor.
79.60	Intersect N.and S.line at the cor.of secs.21,22,27, and 28.
	Thence we run
	West,on a true line bet.secs.21 and 28.

Subdivision of T.14 S. R.19 E.-Continued.

Chains Over mountainous land;through scattering timber and dense undergrowth;descend.

13.00 Bottom of hollow,150 ft.below sec.cor.,course N.E.; ascend.

20.00 Top of ascent,100 ft.above hollow,bears N.E.and S. W.;thence over rolling mesa.

39.80 Set a sandstone,18x10x6 ins.,12 ins.in the ground, for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on N.face;amd raise a mound of stone,2 ft.base,$1\frac{1}{2}$ ft.high,N.of cor.Pits impracticable.

50.00 Edge of mesa,bears N.E.and S.W.;descend.

63.50 Bottom of hollow,250 ft.below mesa,course N.10° E.; ascend.

73.50 Top of ascent,150 ft.above hollow,bears N.30° E.and S.30° W.;thence over rolling mesa.

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

Land,mountainous and rolling mesa.

Soil,gravelly;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,79.60 chs.

N.0° 03'W.,bet.secs.20 and 21.

Over rolling mesa;through dense undergrowthand scattering timber.

12.00 Edge of mesa,bears N.80° E.and S.80° W.;ascend.

17.00 Trail,bears N.70° E.and S.70° W.

24.00 Top of ridge,200 ft.above mesa,bears E.and W.;descend.

35.00 Bottom of hollow.75 ft.below ridge,course S.75° E.; ascend.

40.00 Set a sandstone,20x12x5 ins.,15 ins.in the ground,for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face;from which

Chains	
	A pinion pine,14 ins.diam.,bears N.45° E.,60 lks.dist.,marked ½ S.21,B.T.
	A cedar,8 ins.diam.,bears S.30°W.,65 lks. dist.,marked ½ S.20,B.T.
40.25	Top of ascent,250 ft.above hollow,bears N.65°E.and S.65°W.;thence over rolling mesa.
57.50	Edge of mesa,bears N.60°E.and S.60°W.;descend.
61.00	Bottom of hollow,100 ft.below mesa,course N.60°E.; ascend.
65.00	Top of ascent,200 ft.above hollow,bears N.60°E.and S.60°W.;thence over rolling mesa.
80.00	Set a sandstone,18x7x6 ins.,12 ins.in the ground ,for cor.of secs.16,17,20,and 21,marked with 3 notches on S.and 4 notches on E.edges;from which
	A pinion pine, 20 ins.diam.,bears S.60°W.,285 lks.dist.,marked T.14 S.,R.19 E.,S.20,B.T.
	A pinion pine,14 ins.diam.,bears N.50°W., 250 lks.dist.,marked T.14 S.,R.19 E.S.17,B.T.
	No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and rolling mesa.
	Soil,gravelly and sandy loam;2nd. rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.00 chs.

	East,on a random line bet.secs.16 and 21.
40.00	Set temp.¼ sec.cor.
79.74	Intersect N.and S.line,at the cor.of secs.15,16,21, and 22.
	Thence we run
	West,on a true line bet.secs.16 and 21.
	Over mountainous land;through heavy timber;ascend.

Chains

35.00 Top of ascent,200 ft.above sec.cor.,bears N.and S.; thence over rolling mesa.

39.87 Set a sandstone,18x10x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face ;from which

A cedar ,12 ins.diam.,bears N.31° E.,53 lks. dist.,marked ¼ S.16,B.T.

A pinion pine,18 ins.diam.,bears S.18° W.,60 lks.dist.,marked ¼ S.21,B.T.

57.00 Leave heavy timber and enter scattering timber and dense undergrowth,bears N.and S.

79.74 The cor.of secs.16,17,20,and 21.

Land,mountainous and rolling mesa.

Soil,gravelly and sandy loam;3rd and 2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous or heavily timbered land,or land covered with dense undergrowth ,79.74 chs.

September 7,1901:At the noon hour the sky is overcast and solar observations are impossible.

N.0° 03' W.,bet.secs.16 and 17.

Over rolling mesa;through dense undergrowth .

12.00 Leave undergrowth and enter heavy timber,bears E.and W.

17.00 Leave timber and enter dense undergrowth,bears E.and W.

40.00 Set a limestone, 24x10x 4 ins.,18 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

50.00 Trail,bears N.E.and S.W.

80.00 Set a limestone,18x12x4 ins.,12 ins.in the ground,for cor.of secs.8,9,16,and 17,marked with 4 notches on S.

Chains	
	and 4 notches on E.edges;from which
	A cedar,12 ins.diam.,bears S.66° W.,83 lks.
	dist.,marked T.14 S.,R.19 E.,S.17,B.T.
	A cedar,10 ins.diam.,bears N.28° W.,170 lks.
	dist.,marked T.14 S.,R.19 E.,S.8,B.T.
	No other trees within limits;raise a mound of stone,
	2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Land covered with dense undergrowth,or heavily timbered land,80.00 chs.
	East,on a random line bet.secs.9 and 16.
40.00	Set temp.¼ sec.cor.
79.88	Intersect N.and S.line,10 lks.S.of the cor.of secs.
	9,10,15,and 16.
	Thence we run
	S.89° 56'W.,on a true line bet.secs.9 and 16.
	Over mountainous land;through scattering timber and
	dense undergrowth;ascend.
5.00	Top of ascent,100 ft.above sec.cor.,bears N.and S.;
	thence over mesa.
17.50	Edge of mesa,bears N.and S.;descend.
20.00	Bottom of hollow,150 ft.below mesa,course N.;ascend.
26.50	Top of ascent,100 ft.above hollow,bears N.and S.;
	thence over level mesa.
37.00	Edge of mesa,bears N.10° E.and S.10° W.;descend.
39.94	Set a sandstone,16x16x4 ins.,11 ins.in the ground,for
	¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,2 ft.in diam.,bears S.31° W.,100
	lks.dist.,marked ¼ S.16,B.T.
	A cedar,11 ins.diam.,bears N.71° E.,45 lks.
	dist.,marked ¼ S.9,B.T.

Chains	
44.00	Trail,bears N.40°E.and S.40°W.
47.50	Bottom of hollow,200 ft.below mesa,course N.30°E.;ascend.
50.25	Top of ascent,150 ft.above hollow,bears N.20°E.and S.20°W.;thence over rolling mesa.
79.88	The cor.of secs.8,9,16,and 17.
	Land,mountainous and nearly level.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.88 chs.

N.0°03'W.,bet.secs.8 and 9.

Over rolling mesa;through scattering timber and dense undergrowth.

14.00 Leave undergrowth and enter heavy timber ,bears E. and W.

36.50 Leave heavy timber and enter scattering timber and dense undergrowth,bears E.and W.

40.00 Set a sandstone,22x12x4 ins.,16 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

A cedar,4 ins.diam.,bears N.82°E.,130 lks. dist.,marked ¼ S.9,B.T.

A cedar,6 ins.diam.,bears S.61°W.,165 lks. dist.,marked ¼ S.8,B.T.

80.00 Set a sandstone,18x8x6 ins.,12 ins.in the ground,for cor.of secs.4,5,8,and 9,marked with 5 notches on S. and 4 notches on E.edges;from which

A pinion pine,9 ins.diam.,bears N.67°E.,60 lks.dist.,marked T.14 S.,R.19 E.,S.4,B.T.

A pinion pine,6 ins.diam.,bears S.34°E.,90 lks.dist.,marked T.14 S.,R.19 E.,S.9,B.T.

Chains	
	A pinion pine,8 ins.diam.,bears S.43° W.,60 lks.dist.marked T.14 S.,R.19 E.,S.8,B.T.
	A pinion pine,12 ins.diam.,bears N.63° W.,47 lks.dist.,marked T.14 S.,R.19 E.,S.5,B.T.
	Land,rolling mesa.
	Soil,sandy loam ;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	N.89° 56'E.,on a random line bet.secs.4 and 9.
40.00	Set temp.¼ sec.cor.
80.00	Intersect N.and S.line,23 lks.S.of the cor.of secs. 3,4,9,and 10.
	Thence we run
	S.89° 46'W.,on a true line bet .secs. 4 and 9.
	Over rolling mesa;through heavy timber.
28.00	Leave heavy timber and enter scattering timber and dense undergrowth,bears N.and S.
31.00	Trail,bears N.and S.
32.00	Leave undergrowth and enter heavy timber,bears N.and S.
37.00	Edge of mesa,bears N.40° W.and S.40° E.;descend.
40.00	Set a limestone,18x8x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face; from which
	A pinion pine,6 ins.diam.,bears N.,30 lks. dist.,marked ¼ S.4,B.T.
	A pinion pine,8 ins.,diam.,bears S.12° W., 30 lks.dist.,marked ¼ S.9,B.T.
43.00	Bottom of hollow,200 ft.below mesa,course N.20° W.; ascend.
45.00	Top of spur,100 ft.above hollow,bears N.and S.10° E.; descend.

Subdi ision of T.14 S. R.19 E -Continued.

Chains	
56.00	Bottom of hollow,150 ft.below spur,course N.;ascend.
61.00	Top of ascent,150 ft.above hollow,bears N.30° W.and S. 30° E.;thence over rolling mesa.
80.00	The cor.of secs.4,5,8,and 9.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and gravelly ;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	N.0° 03'W.,on a random line bet.secs. 4 and 5.
40.00	Set temp.¼ sec.cor.
80.36	Intersect N. bdy.of Tp.,16 lks. East of the cor.of secs.4,5,32,and 33,heretofore described.
	Thence we run
	S.0° 10'E.,on a true line bet.secs.4 and 5.
	Over mountainous land ;through heavy timber and scattering undergrowth;ascend.
23.50	Top of ascent,250 ft.above sec.cor.,bears N.80° E .and S.80° W.;thence over mesa.
28.25	Edge of mesa,bears N.W.and S.E.;descend.
40.36	Set a limestone,28x8x4 ins.,21 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,4 ins.diam.,bears N.30° E.,35 lks. dist.,marked ¼ S.4,B.T.
	A pinion pine,14 ins.diam.,bears S.80° W.,32 lks.dist.,marked ¼ S.5,B.T.
43.00	Bottom of hollow,250 ft.below mesa,course N.W.;ascend.
55.00	Top of ascent,300 ft.above hollow,bears N.70° W.and S.70° E.;thence over rolling mesa.
80.36	The cor.of secs.4,5,8,and 9.
	Land,mountainous and nearly level.
	Soil,sandy loam and gravelly ;2nd and 3rd rate.

Chains	
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.36 chs.
	September 7,1901.
	September 9,1901:At 8 h 3 m a.m.,l.m.t.,we set off 39° 33'N.,on the lat.arc;5° 28'N.,on the decl.arc;amd determine a true meridian with the solar,at the cor. of secs.5,6,31,and 32,on S.bdy.of Tp.,heretofore described,
	Thence we run
	N.0° 03'W.,bet.secs.31 and 32.
	Over mountainous land;through scattering timber and dense undergrowth;descend.
1.00	Bottom of hollow,10 ft.below sec.cor.,course N.30°E.; ascend.
25.00	Top of ridge,150 ft.above hollow,bears N.35°E.and S.35°W.;descend.
40.00	Set a sandstone,20x10x6 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
43.00	Bottom of hollow,150 ft.below ridge,course N.50°E.; ascend.
57.50	Leave undergrowth and enter heavy timber,bears E. and W.
80.00	Set a sandstone,18x14x4 ins.,12 ins.in the ground,for cor.of secs.29,30,31,and 32,marked with 1 notch on S.and 5 notches on E.edges;from which
	A cedar,12 ins.diam.,bears N.31°E.,110 lks. dist.,marked T.14 S.,R.19 E.,S.29,B.T.
	A pinion pine,6 ins.diam.,bears S.30°E.,70 lks.dist.,marked T.14 S.,R.19 E.,S.32,B.T.
	A pinion pine,12 ins.diam.,bears S.37°W.,150

Subdivision of T.14 S.,R.19 E.-Continued.

Chains	
	lks.dist.,marked T.14 S.,R.19 E.,S.31,B.T.
	A pinion pine,10 ins.diam.,bears N.37°W.,150 lks.dist.,marked T.14 S.,R.19 E.,S.30,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	N.89°57'E.,on a random line bet.secs.29 and 32.
40.00	Set temp.¼ sec.cor.
80.00	Intersect N.and S.line ,7 lks.N.of the cor.of secs. 28,29,32,and 33.
	Thence we run
	West,on atrue line bet.secs.29 and 32.
	Over rolling mesa;through scattering timber and dense undergrowth.
30.00	Edge of mesa,bears N.and S.;descend.
35.50	Bottom of hollow,200 ft.below mesa,course N.;ascend.
40.00	Set a sandstone,28x8x5 ins.,21 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,8 ins.diam.,bears N.62°E.,45 lks.dist.,marked ¼ S.29,B.T.
	A pinion pine,8 ins.diam.,bears S.10°E.,37 lks.dist.,marked ¼ S.32,B.T.
66.50	Leave undergrowth and enter heavy timber,bears N.and S.
80.00	The cor.of secs.29,30,31,and 32.
	Land,mountainous and rolling mesa.
	Soil,white clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.

Subdivision of T.14 S.,R.19 E.-Continued.

Chains	
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	S.89° 57'W.,on a random line bet.secs.30 and 31.
40.00	Set temp.¼ sec.cor.
79.32	Intersect W.bdy.of Tp.18 lks.N.of the cor.of secs. 25,30,31,and 36,heretofore described.
	Thence we run
	N.89° 49'E.,on a true line bet.secs.30 and 31.
	Over mountainous land;through scattering timber and scattering undergrowth;ascend.
15.00	Top of ridge,150 ft.above sec.cor.,bears N.and S.; descend.
29.00	Bottom of hollow,250 ft.below ridge,course N.20°W.; ascend.
39.32	Set a limestone,16x8x6 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,10 ins.diam.,bears N.5°E.,20 lks.dist.,marked ¼ S.30,B.T.
	A pinion pine,10 ins.diam.,bears S.30°W.,36 lks.dist.,marked ¼ S.31,B.T.
70.00	Top of ridge,300 ft.above hollow,bears N.E.and S.W.; descend.
79.32	The cor.of secs.29,30,31,and 32.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,79.32 chs.
	N.0° 03'W.,bet.secs.29 and 30.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.

Chains

2.00 Top of ridge,10 ft.above sec.cor.,bears E.and W.; descend.

8.00 Bottom of hollow,100 ft.below ridge,course E.;ascend.

40.00 Set a sandstone,15x9x6 ins.,10 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

A pinion pine,8 ins.diam.,bears N.80° E.,18 lks.dist.,marked ¼ S.29,B.T.

A cedar,16 ins.diam.,bears S.65° W.,47 lks. dist.,marked ¼ S.30,B.T.

52.00 Top of ridge,250 ft.above hollow,bears N.E.and S.W.; descend.

75.00 Foot of descent,200 ft.below ridge,bears E.and W.; thence over rolling mesa.

80.00 Set a sandstone,16x14x6 ins.,11 ins.in the ground, for cor.of secs.19,20,29,and 30,marked with 2 notches on S.and 5 notches on E.edges;from which

A cedar,10 ins.diam.,bears S.27° W.,80 lks. dist.,marked T.14 S.,R.19 E.,S.30,B.T.

No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Land,mountainous and rolling mesa.

Soil,gravelly;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,oak and sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

September 9,1901:At this cor,we set off 5° 23'N.,on the decl.arc;and at 0 h 2 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39° 35'N.

East,on a random line bet.secs.20 and 29.

40.00 Set temp.¼ sec.cor.

80.20 Intersect N.and S. line,14 lks.S.of the cor.of secs.

Chains	
	20,21,28,and 29.
	Thence we run
	S.89° 54'W.,on a true line bet.secs.20 and 29.
	Over rolling mesa;through dense undergrowth and scattering timber.
28.00	Trail,bears N.10°E.and S.10°W.
40.10	Set a sandstone,18x8x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,4 ins.diam.,bears N.50°W.,175 lks. dist.,marked ¼ S.20,B.T.
	A cedar,30 ins.diam.,bears E.55°E.,165 lks. dist.,marked ¼ S.29,B.T.
55.00	Edge of mesa,bears N.and S.;ascend ridge.
56.00	Leave undergrowth and enter heavy timber,bears N.and S.
61.00	Top of ridge,150 ft.above mesa,bears N.and S.;descend.
72.50	Foot of descent,200 ft.below ridge,bears N.and S.; leave timber and enter dense undergrowth;thence over rolling mesa.
80.20	The cor.of secs.19,20,29,and 30.
	Land,mountainous and rolling mesa.
	Soil,white loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage and oak.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.20 chs.

	S.89°49'W.,on a random line bet.secs.19 and 30.
40.00	Set temp.¼ sec.cor.
73.53	Intersect E.bdy.of Tp.at the cor.of secs.19,24,25,and 30,heretofore described.
	Thence we run
	N.89°49'E.,on a true line bet.secs. 19 and 30.
	Over mountainous land;through dense undergrowth and

Subdivision of T.14 S.,R. 9 E -Continued.

Chains	
	scattering timber;ascend.
6.00	Top of ascent,50 ft.above sec.cor.,bears N.20° E.and S.20° W.;thence over rolling mesa.
39.53	Set a limestone,20x8x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,30 ins.diam.,bears N.10°E.,290 lks. dist.,marked ¼ S.19,B.T. A pinion pine,6 ins.diam.,bears S.40°E.,220 lks.dist.,marked ¼ S.30,B.T.
47.50	Trail,bears N.60° E.and S.60° W.
79.53	The cor.of secs.19,20,29,and 30.
	Land,mountainous and rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,79.53 chs.

	N.0° 03'W.,bet.secs.19 and 20.
	Over rolling mesa;through dense undergrowth.
7.00	Enter heavy timber,bears E.and W.
17.00	Leave timber,bearsE.and W. Trail,bears N.E.and S.W.
40.00	Set a sandstone,18x14x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
44.50	Enter heavy timber,bears E.and W.
75.00	Leave heavy timber and enter scattering timber,bears E.and W.
80.00	Set a limestone,16x12x4 ins.,11 ins.in the ground,for cor.of secs.17,18,19,and 20,marked with 3 notches on S.and 5 notches on E.edges;from which A cedar,10 ins.diam.,bears N.14°E.,13 lks. dist.,marked T.14 S.,R.19 E.,S.17,B.T. A cedar,6 ins.diam.,bears S.33°E.,140 lks.

Subdivision of T.14 S.,R.19 E.-Continued.

Chains	
	dist.,marked T.14 S.,R.19 E.,S.20,B.T.
	A cedar,12 ins.diam.,bears S.72°W.,150 lks. dist.,marked T.14 S.,R.19 E.,S.19,B.T.
	A pinion pine,14 ins.diam.,bears N.45°W.,75 lks.dist.,marked T.14 S.,R.19 E.,S.18,B.T.
	Land,rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Heavily timbered land,or land covered with dense undergrowth,80.00 chs.

	N.89°54'E.,on a random line bet.secs 17 and 20.
40.00	Set temp.¼ sec.cor.
80.10	Intersect N.and S.line,9 lks.N.of the cor.of secs. 16,17,20,and 21.
	Thence we run
	S.89°58'W.,on a true line bet.secs. 17 and 20.
	Over rolling mesa;through dense undergrowth and scattering timber.
16.40	Trail,bears N.and S.
24.75	Trail,bears N.and S.
40.05	Set a limestone,16x10x4 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,12 ins.diam.,bears N.67°E.,93 lks. dist.,marked ¼ S.17,B.T.
	A cedar,12 ins.diam.,bears S.51°E.,40 lks. dist.,marked ¼ S.20,B.T.
80.10	The cor.of secs.17,18,19,and 20.
	Land,rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.

Chains	
	Land covered with dense undergrowth,80.10 chs.
	S89° 49'W.,on a random line bet.secs.18 and 19.
40.00	Set temp.¼ sec.cor.
79.75	Intersect W.bdy.of Tp.,11 lks.S.of the cor.of secs. 13,18,19,and 24,heretofore described,
	Thence we run
	N.89° 54'E.,on a true line bet.secs.18 and 19.
	Over mountainous land;through scattering timber and scattering undergrowth;descend.
14.00	Foot of descent,150 ft.below sec.cor.,bears N.20°E. and S.20°W.;enter bottom of Tabyago Canon.
15.75	Trail,bears with canon.
20.00	Wash,20 lks.wide,course N.20°E.;leave canon bottom ; ascend. Enter dense undergrowth,bears with canon.
39.75	Set a sandstone,18x12x6 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,12 ins.diam.,bears N.70°W.,250 lks.dist.,marked ¼ S.18,B.T.
	A pinion pine,8 ins.diam.,bears S.25°W.,50 lks.dist.,marked ¼ S.19,B.T.
40.00	Top of ascent,200 ft.above canon,bears N.20°E.and S 20°W.;thence over rolling mesa.
52.50	Leave dense undergrowth and enter heavy timber,bears N.and S.
79.75	The cor.of secs.17,18,19,and 20.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,79.75 chs.

September 9,1901.

Subdivision of T.14 S.,R.19 E.-Continued

Chains	
	September 10,1901:At 7 h 3 m a.m.,l.m.t.,we set off 39° 36'N.,on the lat.arc;5° 07'N.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.17,18,19,and 20.
	Thence we run
	N.0° 03'W.,bet.secs.17 and 18.
	Over rolling mesa;through scattering timber and dense undergrowth.
40.00	Set a limestone,18x12x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,10 ins.diam.,bears N.57°E.,115 lks. dist.,marked ¼ S.17,B.T.
	A pinion pine,10 ins.diam.,bears S.57°W.,30 lks.dist.,marked ¼ S.18,B.T.
80.00	Set a limestone,14x12x4 ins.,9 ins.,in the ground, for cor.of secs.7,8,17,and 18,marked with 4 notches on S.and 5 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Land covered with dense undergrowth,80.00 chs.
	N.89° 58'E.,on a random line bet.secs.8 and 17.
40.00	Set temp.¼ sec.cor.
80.28	Intersect N.and S.line,5 lks.N.of the cor.of secs. 8,9,16,and 17.
	Thence we run
	West ,on a true line bet.secs.8 and 17.
	Over rolling mesa;through dense undergrowth and scattering timber.
8.00	Edge of mesa,bears N.and S.;descend.

Chains	
12.00	Bottom of hollow,100 ft.below mesa;course N.;ascend.
17.50	Top of spur,100 ft.above hollow,bears N.E.and S.W.; descend.
21.00	Bottom of hollow,50 ft.below ridge,course N.E.;ascend.
36.00	Top of spur,200 ft.above hollow,bears N.and S.;descend.
40.14	Bottom of hollow,100 ft.below spur,course N.20° W. Set a sandstone,20x12x4 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which A pinion pine,18 ins.diam.,bears N.48° E.,150 lks.dist.,marked ¼ S.8,B.T. A cedar,16 ins.,diam.,bears S.80° E.,250 lks.dist.,marked ¼ S.17,B.T.
46.50	Top of ascent,250 ft.above hollow,bears N.10° W.and S. 10° E.;thence over rolling mesa.
80.28	The cor.of secs.7,8,17,and 18. Land,mountainous and rolling mesa. Soil,gravelly loam and sandy;2nd and 3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,80.28 chs.

S.89° 54'W.,on a random line bet.secs.7 and 18.

40.00	Set temp.¼ sec.cor.
79.90	Intersect W.bdy.of Tp.14 lks.S.of the cor.of secs.7, 2, 13,and 18,heretofore described. Thence we run East,on a true line bet.secs.7 and 18. Over mountainous land;through heavy timber;ascend.
3.50	Top of ascent,50 ft.above sec.cor.,bears N.80° W.and S.80° E.;thence over mesa.
8.50	Enter scattering undergrowth,bears N.and S.

Subdivision of T.14 S.,R.19 E.-Continued.

Chains	
19.65	Edge of mesa,bears N.and S.;descend.
27.90	Top of perpendicular ledge,100 ft.high,bears N.and S.
32.00	Leave heavy timber and enter scattering timber and dense undergrowth,bears N.10° E.and S.10° W.
39.90	Set a limestone,15x10x5 ins.,10 ins. in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,10 ins.diam.,bears N.80° E.,45 lks. dist.,marked ¼ S.7,B.T. A pinion pine,8 ins.diam.,bears S.40° E.,75 lks.dist.,marked ¼ S.18,B.T.
41.00	Foot of perpendicular ledge,20 ft.high;also foot of descent,250 ft.below mesa,bears N.20° E.and S.20° W.; enter bottom of Tabyago Canon.
44.25	Trail,bears N.20° E.and S.20° W.
46.00	Wash,15 lks.wide,in Tabyago Canon,course N.20° E.
46.50	Leave canon bottom ,bears N.20° E.and S.20° W.;ascend.
62.50	Top of ascent,200 ft.above canon,bears N.20° E.and S.20° W.;thence over rolling mesa.
79.90	The cor .of secs.7,8,17,and 18.
	Land,mountainous and rolling mesa.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,79.90 chs.

	N.0° 03' W.,bet.secs.7 and 8.
	Over rolling mesa;through heavy timber.
40.00	Set a limestone,28x6x4 ins.,21 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,5 ins.diam.,bears N.65° E.,100 lks.dist.,marked ¼ S.8,B.T. A pinion pine,5 ins.diam.,bears S.61° W.,30 lks.dist.,marked ¼ S.7,B.T.

Subdivision of T.14 S.,R.19 E.-Continued.

Chains	
46.50	Edge of mesa,bears N.W.and S.E.;descend.
67.00	Bottom of hollow,200 ft.below mesa,course W.;ascend.
71.25	Top of ascent,150 ft.above hollow,bears N.80° W.and S.80° E.;thence over rolling mesa. Enter scattering s ge.
80.00	Set a limestone,18x10x6 ins.,12 ins.in the ground,for cor.of secs.5,6,7,and 8,marked with 5 notches on S. and 5 notches on E.edges;from which A cedar,12 ins.diam.,bears N.73° E.,90 lks. dist.,marked T.14 S.,R.19 E.,S.5,B.T. A cedar,16 ins.diam.,bears S.41° E.,150 lks. dist.,marked T.14 S.,R.19 E.,S.8,B.T. A pinion pine,20 ins.diam.,bears S.43° W.,100 lks.dist.,marked T.14 S.,R.19 E.,S.7,B.T. A pinion pine,5 ins.diam.,bears N.20° W.,50 lks.dist.,marked T.14 S.,R.19 E.,S.6,B.T.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	September 9,1901:At the noon hour the sky is overcast and solar observations are impossible.

	East,on a random line bet.secs.5 and 8.
40.00	Set temp.$\frac{1}{4}$ sec.cor.
80.30	Intersect N.and S.line,24 lks.N.of the cor.of secs. 4,5,8,and 9.
	Thence we run
	N.89° 50' W.,on a true line bet.secs.5 and 8.
	Over rolling mesa,through scattering timber and dens undergrowth.
3.66	Edge of mesa,bears N.10° W.and S.10° W.;descend.
18.15	Bottom of hollow,150 ft.below mesa, course N.20° W.; ascend.

Subdivision of T 14 S R 19 E -Continued

Chains	
40.15	Set a sandstone,24x8x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ 6n N.face;from which A pinion pine,8 ins.diam.,bears N.80° E.,35 lks.dist.,marked ¼ S.5,B.T. A pinion pine,6 ins.diam..,bears S.18° W.,47 lks.dist.,marked ¼ S.8,B.T.
54.30	Top of ascent,250 ft.above hollow,bears N.and S.; thence over rolling mesa.
80.30	The cor.of secs.5,6,7,and8.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and rocky;2nd and 4th rate.
	Undergrowth,sage brush.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous land ,or land covered with dense undergrowth,80.30 chs.

	Wast,on a random line bet.secs.6 and7 .
40.00	Set temp.¼ sec.cor.
79.96	Intersect W.bdy.of Tp.at the cor.of secs.1,6,7,and 12,heretofore described.
	Thence we run
	East,on a true line bet.secs.6 and 7.
	Over rolling mesa;through scattering timber and dense undergrowth.
30.00	Edge of mesa,bears N.20° E.and S.20° W.;descend.
39.96	Set a sandstone,22x8x5 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A pinion pine,11 ins.diam.,bears N.30° E.,80 lks.dist.,marked ¼ S.6,B.T. A cedar,6 ins.diam.,bears S.12° E.,300 lks. dist.,marked ¼ S.7,B.T.
42.00	Leave timber,bears N.and S.
54.30	Trail,bears N.20° E.and S.20° W.

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Chains

55.00 Enter heavy timber,bears N.and S.

62.75 Foot of descent,300 ft.below mesa,bears N.20°E.and S. 20°W.;also foot of perpendicular ledge,30 ft.high, bears N.20°E.and S.20°W.;enter bottom of Tabyago canon.

66.40 Trail,bears N.20°E.and S.20°W.

67.50 Wash,20 lks.wide,in bottom of Tabyago Canon,course N.20°E.

68.00 Leave canon bottom ,bears N.20°E.and S.20°W.;ascend.

71.00 Top of ascent,250 ft.above canon,bears N.20°E.and S.20°W.;thence overrolling mesa.

79.96 The cor.of secs.5,6,7,and 8.

Land,mountainous and rolling mesa.

Soilsandy loam and rocky;2nd and 4th rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land;or land covered with dense undergrowth,79.96 chs.

N.0°03'W.,on a random line bet.secs.5 and 6.

40.00 Set temp.¼ sec.cor.

80.24 Intersect N.bdy.of Tp7 lks.East of the cor.of secs. 5,6,31,and 32,heretofore described.

Thence we run

S.0°06'E.,on a true line bet.secs.5 and 6.

Over mountainous land;through dense undergrowth;ascend.

2.00 Top of ridge,20 ft.above sec.cor.,bears E.and S.70°W. Descend.

6.80 Top of perpendicular ledge,50 ft.high,bears N.60°E. and S.60°W.

6.90 Foot of descent,150 ft.below ridge,bears N.E.and S.W. Enter bottom of Tabyago Canon.

7.55 Trail,bears N.E.and S.W.

Subdivision of T.14 S.,R.19 E.-Continued

Chains	
9.50	Wash,15 lks.wide,in bottom of Tabyago canon,course N.E.;
9.75	Leave bottom of Tabyago canon,bears N.E.and S.W.;ascend gradually along face of mountain.
34.75	Enter bottom of Tabyago Canon,bears N.W.and S.E.;
36.00	A sandstone,boulder,30x20x10 ft.above ground,on line.
36.80	Wash,15 lks.wide,in Tabyago Canon,course N.W.
40.24	Set a sandstone,16x8x5 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
41.95	Trail,bears N.10° E.and S.10° W.
50.40	Wash,15 lks.wide,in bottom of Tabyago Canon,course N.20° E.
50.50	Leave canon bottom,bears N.20° E.and S.20° W.;ascend.
62.00	Top of ascent,200 ft.above canon,bears N.E.and S.W.; thence over rolling mesa.Enter scattering timber, bears N.E.and S.W.
80.24	The cor.of secs.5,6,7,and 8.

Land,mountainous and rolling mesa.

Soil,sandy loam and rocky;2nd and 4th rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.24 chs.

September 9,1901.

GENERAL DESCRIPTION.

This township contains nearly every variety of land from level mesas to high mountain ridges,and the soil ranges from sandy and gravelly loam to rocks. The soil of the mesas and bottom of hollows is generally sandy and gravelly loam;2nd rate,capable of producing good crops without irrigation.the soil of the

Subdivision of T.14 S.,R.19 E.-Concluded.

remaining portion of the township is generally gravelly;3rd rate.

The township is well timbered with cedar and pinion pine.

There is some water in Hill Creek Canon which runs through the east tier of secs.and one spring in sec. 33,

There are no settlers in the township.

There is no mineral in the township.

Scott R. Stewart
John R. Stewart
U.S.Deputy Surveyors.

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PAGE

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by .....

....., United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of .....

.....

showing the respective capacities in which they acted:

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

In final affidavit to Book X. Fp. 115 R 19

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted .....

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

.....

.....

..... of the .....

..... meridian, ... of ....., which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for .....

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

In final affidavit to Book X. Fp. 115 R 19

Subscribed and sworn to before me this .....

day of ....., 189

SEAL

6—151

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, ..., United States Deputy Surveyor, ... solemnly swear that, in pursuance of a contract received from United States Surveyor General for ....., bearing date of t... ..... day of ....., 189 , I have well, faithfully, and truly, in my ow... proper person, and in strict conformity with the instructions furnished by the United States Survey... General for ....., the Manual of Surveying Instructions, and the laws of th... United States, surveyed all those parts or portions of .....

.....

.....

.....

..... of the .....

..... meridian, in the ..... of ....., which are represented in th... foregoing field notes as having been surveyed by me, and under my direction; and I do further solemn... swear that all the corners of said survey have been established and perpetuated in strict accordance wit... the Manual of Surveying Instructions, and the special written instructions of the United States Survey... General for ..... and in the specific manner described in the field notes, and th... the foregoing are the original field notes of such survey; and should any fraud be detected, I will suff... the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

.....

United States Deputy Surveyo...

Subscribed by said ....., and sworn to before me this ..... day of ....., 189

SEAL

.....

.....

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah February 5 1903, 189

The foregoing field notes of the survey of the subdivisional lines of Township 14 South Range 19 East of the Salt Lake Base & Meridian, Utah

executed by Scott P. Stewart and John R. Stewart under ~~his~~ their contract No. 242, dated April 12 1901, ~~189~~ , having bee... critically examined, and the necessary corrections and explanations made, the said field notes, and th... surveys they describe, are hereby approved.

Edward H. Anderson

United States Surveyor Genera...

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

.....

United States Surveyor General

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Filed May 23 1902

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4—679.

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BOOK A-289

FIELD NOTES

OF THE SURVEY OF THE

K.J.B.

West and North Boundaries,

of

Township No. 3 South,

Range No. 20 East,

Of the Salt Lake Base and Meridian,

In the State of Utah

AS SURVEYED BY

Scott A. Stewart and John R. Stewart, United States Deputy Surveyors

Under his Contract No. 242, dated April 12, 1901., ~~189~~

Survey commenced September 9, 1901., ~~189~~

Survey completed September 11, 1901. ~~, 189~~

6—151

N Bdy high 6.00001

N " " 5.79.685

BOOK A-289

NAMES AND DUTIES OF ASSISTANTS.

Andy J. Stewart Chainman.
Edwin H. Peay, Chainman.
Vosco Call Chainman.
Hugh Conover, Chainman.
Clarence S. Jarvis, Moundman.
John J. Harding, Moundman.
George W. Ekins, Axman.
Harry Burton, Axman.
Harvey R. Booth Flagman
Gilbert Burr Flagman

For preliminary affidavits see book C. Tp. 15 S, R 20 E

6—151

BOOK A-289

INDEX DIAGRAM.

Township....., *Range*.....

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

WE, _____ and _____
do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of

_____

_____, *Chainman.*

_____, *Chainman.*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

WE, _____ and _____
do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Moundman.*

_____, *Moundman.*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

WE, _____ and _____
do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Axman.*

_____, *Axman.*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

I, _____, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of _____

_____, *Flagman*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

st boundary of T.13 S.,R.20 E.

Survey commenced September 9,1901,and executed with a W.and L.E.Gurley,light mountain transit,No.3,with 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 latitude and declination arcs; and a W.and L.E.Gurley ,plain transit,No.2,of which the horizontal limb is provided with one double vernier,reading to single minutes of arc.

The instruments were examined,tested on the true meridian at Salt Lake City,found correct,and were approved by the surveyor general for Utah,the former on June 6,1901,and the latter on May 29,1901.

We examine the adjustments of the instruments and correct the level and collimation errors,then ,to test the solar apparatus ,of the No.3 instrument,by comparing its indications resulting from solar observations made during p.m.and a.m.hours with,with a true meridian determined by observation on Polaris, we proceed as follows:

At the cor.of Tps.13 and 14 S.,Rs.19 and 20 E., heretofore described,latitude 39° 38'N.,longitude109° 46'W.,we set off 39° 38'N.,on the lat.arc;5° 20'N.,on the decl.arc;and at 4 h 2 m p.m.,l.m.t.,determine a true meridian with the solar,and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N. of our station.

September 9,1901.

September 10,1901:At 2 h 6 m a.m.,l.m.t.,we observe Polaris at upper culmination,in accordance with the Manual,and mark a point in the true meridian thus determined,by a small groove in the stone already set 5.00 chs.N.of our station,on which the true meridian falls 0.31 ins.east of the true meridian determined

Chains	
	by the solar.
	At 7 h 0 m a.m.,l.m.t.,se set off 39° 38'N.,on the lat.arc;5° 7'N.,on decl.arc;and mark a point in the true meridian determined with the solar,by a cross on the stone,already set,5.00 chs.N.of the cor.; this mark falls 0.24 ins.east of the true meridian established by Polaris observation.
	The solar apparatus by p.m.and a.m.observations defines positions for true meridians,respectively about 0'16"west and 0'13"east of the true meridian established by Polaris observation.;therefore we conclude that the adjustments of the instruments are satisfactory.
	The magnetic bearing of the true meridian at 7 h 30 m a.m.is 16° 16.8'W.,the angle thus determined, reduced by the table page 100 of the Manual,gives the mean mag.decl.16° 11'E.
	From the above described cor.we run North,bet.secs.31 and 36.
	Over mountainous land;through scattering timber and scattering undergrowth;descend.
2.00	Bottom of hollow,50 ft.below Tp.cor.,course W.;ascend.
5.60	Top of perpendicular ledge,100 ft.high,also top of ascent,150 ft.above hollow,bears E.and W.;thence over rolling mesa.Enter dense undergrowth.
40.00	Set a limestone,16x9x5 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,6 ins.diam.,bears N.80° E.,15 lks.dist.,marked ¼ S.31,B.T.
	A pinion pine,10 ins.diam.,bears S.70° W.,36 lks.dist.,marked ¼ S.36,B.T.
42.50	Edge of mesa,bears E.and W.;descend.
47.50	Bottom of hollow,150 ft.below mesa,course N.40° W.; ascend.
55.00	Top of ridge,125 ft.above hollow,bears E.and W.;des-

Chains	
	cend.
56.00	Top of perpendicular ledge,60 ft.high,bears E.and W.
76.00	Bottom of hollow,200 ft.below ridge,course N.60°W.; ascend.
78.50	Leave timber,bears E.and W.
80.00	Set a limestone,24x12x6 ins.,18 ins.in the ground,for cor.of secs.25,30,31,and 36,marked with 1 notch on S. and 5 notches on N.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land ,mountainous and rolling mesa.
	Soil,sandy and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	North,bet.secs.25 and 30.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
25.00	Top of ridge,400 ft.above sec.cor.,bears E.and W.; descend.
40.00	Set a sandstone,24x12x6 ins.,18 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
43.50	Bottom of hollow,375 ft.below ridge,course N.60°W.; ascend.
66.00	Top of ridge,450 ft.above hollow, bears E.and W.; descend.
80.00	Set a limestone,22x12x4 ins.,16 ins.in the ground,for cor.of secs.19,24,25,and 30,marked with 2 notches on S.and 4 notches on N.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	and,mountainous.

West [illegible] arw of T 13 S R 20 E.-Continued

Chains	
	Soil,gravelly and rocky;3rd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	North,bet.secs.19 and 24.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
2.00	Bottom of hollow,50 ft.below sec.cor.,course W.; ascend.
5.45	Top of perpendicular ledge,25 ft.high,bears E.and W. Ascend more gradually.
8.00	Top of spur,200 ft.above hollow,bears E.and W.;descend.
26.00	Foot of descent,400 ft.below ridge,bears N.10°E.and S.10°W.;enter bottom of Hill Creek Canon.
29.00	Wash,20 lks.wide,in Hill Creek Canon,course N.10°E.;
40.00	Set a sandstone,14x10x4 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
40.25	Wash,25 lks.wide,in canon,course N.10°W.
56.00	Leave canon bottom,bears N.20°W.and S.20°E.;ascend.
68.00	Top of ridge,300 ft.above canon,bears E.and W.;descend.
72.00	Bottom of hollow,300 ft.below ridge,course W.;ascend.
80.00	Set a sandstone,18x8x6 ins.,12 ins.in the ground,for cor.of secs.13,18,19,and 24,marked with 3 notches on S.and 3 notches on N.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.

Chains	
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	North,bet.secs.13 and 18.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
32.00	Top of ridge,400 ft.above sec.cor.,bears E.and W.; descend.
40.00	Set a limestone,16x8x6 ins.11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
80.00	Foot or descent,450 ft.below ridge,bears N.10°E.and S.10°W.Enter bottom of Hill Creek Canon.
	Set a sandstone,14x11x5 ins.,9 ins.in the ground,for cor.of secs.7,12,13,and 18,marked with 4 notches on S.and 2 notches on N.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	North,bet.secs.7 and 12.
	Over level canon bottom;through dense undergrowth.
40.00	Set a limestone,20x7x5 ins.,15 ins.im the ground,for ¼ sec.cor.,marked ¼ on W.face;dig pits,18x18x12 ins. N.and S.of stone,3 ft.dist.,and raise a mound of earth,4 ft.base,2 ft.high,W.of cor.
78.00	Leave canon bottom,bears N.10°W.and S.10°E.;ascend.
80.00	Top of ridge, 50 ft.above canon,bears N.W.and S.E.;

West boundary of T.13 S. R.20 E.-Continued.

Chains	
	Set a limestone,18x8x4 ins.12 ins.in the ground,for cor.of secs.1,6,7,and 12,marked with 5 notches on S. and 1 notch on N.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,level and mountainous.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	September 10,1901:At the noon hour the sky is overcast and solar observations are impossible.
	North,bet.secs.1 and 6.
	Over mountainous land;through dense undergrowth ;descend.
3.00	Bottom or hollow,100 ft.below sec.cor.,course N.W.; ascend.
7.50	Top of spur,100 ft.above hollow,bears E.and W.;descend.
12.00	Foot of descent,200 ft.below spur,bears N.20° E.and S.20° W.Enter bottom of Hill Creek Canon.
13.00	Wash,15 lks.wide,in canon,course N.20° E.;enter dense greasewood.
34.00	Willow fence,bears N.E.and S.W.
36.00	Top of spur jutting out into canon,20 ft.high,bears E.and W.
40.00	Set a limestone,18x11x4 ins.12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
56.50	Willow fence,bears E.and W.
79.00	Wash ,10 lks.wide,in canon,course N.10° W.
80.00	Set temp.cor.of Tps.12 and 13 S.,Rs.19 and 20 E.
	Note:For notes of permanent cor.see N.bdy.of T.13 S.,

Chains	
	R.20E.
	Land,mountainous and level.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Undergrowth,sage brush and grease wood.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

N.89° 48'E.,on a random line along N.bdy.of Tp.setting temp.¼ sec. and sec.cors.at intervatls of 40.00 chs.and at 479.68 chs.Intersect E.bdy.of Tp.,or Green River Guide Meridian ,1.40 chs.N.of the cor. of Tps.12 and 13 S.,Rs.20 and 21 E.,heretofore described;the falling answers to a correction of 10' or 5.1ks.S.per mile counting from the cor.of Tps. 12 and 13 S.,Rs.20 and 21 E.

September 10,1901.

SEPTEMBER 11,1901:At 7 h 2 m.a.m.,l.m.t.,we set off 39° 38'N.,on the lat arc;4° 44'N.,on the decl.arc;and determine a true meridian with the solar at the cor. of Tps.12 and 13 S.,Rs.20 and 21 E.

Thence we run S.89° 58'W.,on a true line bet.secs. 1 and 36.

Over mountainous land;through dense undergrowth;ascend.

2.25 Top of ridge,50 ft.above sec.cor.,bears N.and S.;descend.

40.00 Set a quartzite stone,26x10x4 ins.,16 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.

40.75 Bottom of hollow,250 ft.below ridge,course N.;ascend.

48.00 Top of spur,75 ft.above hollo-,bears N.60°W.and S.60°

Chains	
50.00	Top of perpendicular ledge,60 ft.high,bears N.35° W. and S.35° E.
52.50	Bottom of Agency Draw,100 ft.below spur,course N.10° E. Ascend.
80.00	Set a quartzite stone,24x8x7 ins.,18 ins.in the ground, for cor.of secs.1,2,35,and 36,marked with 1 notch on E.and 5 notches on W.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable. Land,mountainous . Soil,gravelly and rocky;3rd and 4th rate. No timber. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,80.00 chs.

S.89° 58'W.,on a true line bet.secs.2 and 35.
Over mountainous land;through dense undergrowth;ascend.

24.00	Top of ridge,150 ft.above sec.cor.,bears N.20° E.and S.20° W.; descend.
39.00	Bottom of hollow,200 ft.below ridge,course N.10° E.; ascend.
40.00	Set a sandstone;20x8x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
47.50	Top of ridge,125 ft.above hollow,bears N.10° E.and S.10° W.;descend.
59.80	Bottom of hollow,150 ft.below ridge,course N.20° E.; ascend.
79.00	Top of ridge,375 ft.above hollow,bears N.75° E.and S.75° W.;descend.
80.00	Set a sandstone,24x10x4 ins.,18 ins.in the ground,for cor.of secs.2,3,34,and 35,marked with 2 notches on E. and 4 notches on W.edges; and raise a mound of stone,

Chains 2 ft.baae,1½ ft.high,W.of cor.Pits impracticable.
Land,mountainous.
Soil,gravelly and rocky;3rd and 4th rate.
No timber.
Undergrowth,sage brush and shadscales.
Good grass for grazing.
Mountainous land;or land covered with dense undergrowth,80.00 chs.

S.89°58'W.,on a true line bet.secs 3 and 34.
Over mountainous land;through dense undergrowth;descend.

9.75 Bottom of hollow,100 ft.below sec.cor.,course N.E.; ascend.Enter scattering timber,bears with hollow.

17.00 Top of ridge,100 ft.above hollow,bears N.E.and S.W.; descend.

23.00 Bottom of hollow,100 ft.below ridge,course N.E.;ascend.

40.00 Set a limestone,24x7x6 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
A cedar,4 ins.diam.,bears N.30°E.,25 lks. dist.,marked ¼ S.34,B.T.
A cedar,6 ins.diam .,bears S.20°E.,120 lks. dist.,marked ¼ S.3,B.T.

62.70 Foot of perpendicular ledge,15 ft.high,bears N.and S.

74.40 Top of ridge,200 ft.above hollow,bears N.and S.;descend.

79.00 Bottom of hollow,200 ft.below ridge,course N.10°W.; ascend.

80.00 Set a sandstone,16x10x4 ins.,11 ins.in the ground,for cor.of secs.3,4,33,and 34,marked with 3 notches on E. and 3 notches on W.edges;from which
A cedar,15 ins.diam.,bears N.56°E.,170 lks. dist.,marked T.12 S.,R.20 E.,S.34,B.T.
A pinion pine,4 ins.diam.,bears S.53°E.,272

Chains	
	lks .dist.,marked T.13 S.,R.20 E.,S.3,B.T.
	A cedar,6 ins.diam.,bears S.33° W.,165 lks. dist.,marked T.13 S.,R.20 E.S.4;B.T.
	No other tree within limits;dig a pit,18x18x12 ins., in sec.33,5½ ft.dist.,and raise a mound of earth 4 ft.base,2 ft.high,W.of cor.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	S.89° 58'W.,on a true line bet.secs.4 and 33.
	Over mountainous land;through scattering timber and scattering undergrowth;ascend gradually.
40.00	Set an oilshale stone,18x10x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,8 ins.diam.,bears N.52° E.,159 lks.dist.,marked ¼ S.,33,B.T.
	A pinion pine,8 ins.diam.,bears S.33° W.,89 lks.dist.,marked ¼ S.4,B.T.
54.00	Top of ridge,350 ft.above sec.cor.,bears N.and S.; descend.
76.00	Bottom of hollow,250 ft.below ridge,course N.10° W.; ascend.
80.00	Set a limestone,16x8x6 ins.,11 ins.in the ground,for cor.of secs.4,5,32,and 33,marked with 4 notches on E.and 2 notches on W.edges;from which
	A cedar,5 ins.diam.,bears N.50° E.,65 lks. dist.,marked T.12 S.,R.20 E.,S.33,B.T.
	A cedar,8 ins.,diam.,bears S.10° E.,44 lks.dist.,marked T.13 S.,R.20 E.,S.4,B.T.
	A cedar,6 ins.diam.,bears S.65° W.,113 lks.

Chains	
	dist.,marked T.13 S.,R.20 E.,S.5,B.T.
	A cedar,5 ins.diam.,bears N.25° W.,75 lks. dist.,marked T.12 S.,R.20 E.,S.32,B.T.
	Land,mountainous.
	Soil,gravelly ;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.
	September 11,1901:At this cor.we set off 4° 38'N.,on the decl.arc;and at 0 h 2 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39° 38'N.,
	S.89° 58'W.,on a true line bet.secs.5 and 32.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
10.00	Top of ridge,150 ft.above sec.cor.,bears N.W.and S. 20° E.;descend.
40.00	Set an oilshale stone,16x10x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,6 ins.diam.,bears N.25° E.,60lks. dist.,marked ¼ S.32,B.T. A cedar,8 ins.diam.,bears S.60° W.,85 lks. dist.,marked ¼ S.5,B.T.
54.00	Trail,bears N.W.and S.E.
80.00	Set a limestone,26x6x6 ins.,16 ins.in the ground,for cor.of secs.5,6,31,and 32,marked with 5 notches on E.and 1 notch on W.edges; and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly ;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-

North boundary of T.13 S..R.20 E.-Continued.

Chains	
	growth,80.00 chs.
	S.89° 58'W.,on a true line bet.secs.6 and 31.
	Over mountainous land;through scattering timber and scattering undergrowth;descend gradually.
40.00	Set a sandstone,18x8x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
69.50	Foot of descent,350 ft.below sec.cor.,bears N.10° E. and S.10°W.;enter bottom of Hill Creek Canon.
79.68	The temp.cor.of Tps.12 and 13 S.,Rs.19 and 20 E. Set a limestone,30x11x5 ins.,22 ins.in the ground,for cor.of Tps.12 and 13 S.,Rs.19 and 20 E.,marked 12 S. on N.E.,20 E.on S.E.,13 S.on S.W.,and 19 E.on N.W. faces;with 6 notches on each edge;and raise a mound of stone, 2 ft.base,1½ ft.high,S.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,79.68 chs.

September 11,1901.

Boundaries of T.13 S.,R.20 E.

Latitudes,departures and closing errors.

Line designated	true bearing	distance chs.	latitudes N. chs.	latitudes S. chs.	departures E. chs.	departures W. chs.
N.bdy.of T.13 S.,R.20 E.	North	480.00	480.00			
N.bdy.of T.13 S.,R.20 E.N.	89° 58'E.	479.68	.28		479.68	
E.bdy.of T.13 S.,R.20 E.	South	480.00		480.00		
S.bdy.of T.13 S.,R.20 E.S.	89° 48'W.	478.80		1.68		478.80
Convergency					.60	
			480.28	481.68	480.28	478.80
Error in lat.				480.28	478.80	
				1.40		
Error in dep.					1.48	

Boundaries of T.13 S.,R.20 E.-Concluded.

This township is mostly mountainous with the exceptio of a few small mesas.the township is well timber and thereis enough water in winter season for grazing purposes.The township should be subdivided.

Scott P. Stewart
John R. Stewart
U.S.Deputy Surveyors.

September 11,1901.

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PAGE

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by ..... United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of .....

showing the respective capacities in which they acted:

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted ..... United States Deputy Surveyor, in surveying all those parts or portions of the ..... of the ..... meridian, ... of ....., which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for .....

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

Subscribed and sworn to before me this .....
day of ....., 189

SEAL

6—151

BOOK A-203

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, _____, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from _____, bearing date of the _____ day of _____, 189 , I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for _____, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____ _____ _____ _____ _____ of the _____ _____ meridian, in the _____ of _____, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

_____
United States Deputy Surveyor

Subscribed by said _____, and sworn to before me this _____ day of _____, 189

SEAL

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah, February 4, 1903 189

The foregoing field notes of the survey of the West & North Boundaries of Township 13 South Range 20 East of the Salt Lake Base & Meridian Utah

executed by Scott P. Stewart and John R. Stewart under their contract No. 242, dated April 12, 1901, 189 , having been critically examined, and the necessary corrections and explanations made, the said field notes, and surveys they describe, are hereby approved.

Edward H. Anderson
United States Surveyor General.

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

_____
United States Surveyor General.

6—151

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J—679.

BOOK A-289

FIELD NOTES

K.J.B.

OF THE SURVEY OF THE

SUBDIVISION

of

Township No.13 South , Range No.20 East ,

Of the SALT LAKE BASE AND *Meridian,*

in the STATE OF UTAH,

AS SURVEYED BY

Scott P.Stewart and John R.Stewart, *United States Deputy Surveyors*

Under their *Contract No.* 242, *dated* April 12,1901.

Survey commenced September 11,1901.

Survey completed Septembet 19,1901.

6—151

high 59.74.72

NAMES AND DUTIES OF ASSISTANTS.

Andy J. Stewart	Chainman,
Edwin A. Peay	Chainman,
Vosco Call	Chainman,
Hugh Conover	Chainman,
Clarence S. Jarvis	Moundman,
John J. Harding.	Moundman,
George W. Ekins	Axman,
Harry Burton	Axman,
Harvey R. Booth	Flagman,
Gilbert Burr	Flagman,

For preliminary affidavits see book D. Tp. 15 S R 20 E

6—151

BOOK A-289

INDEX DIAGRAM.

Township....., *Range*.....

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

WE, _____ and _____
do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of

_____

_____, *Chainman.*

_____, *Chainman.*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

WE, _____ and _____
do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Moundman.*

_____, *Moundman.*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

WE, _____ and
do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Axman.*

_____, *Axman.*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

I, _____, do solemnly swear that I will well and trul
perform the duties of flagman according to instructions given me, to the best of my skill and ability, in th
survey of _____

_____, *Flagman*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

Subdivision of T.13 S.,R.20 E.

Survey commenced September 11,1901,and executed with a W.and L.E.Gurley light mountain transit,No.3,with 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 latitude and declination arcs;and a W.and L.E.Gurley plain transit,No.2,of which the horizontal limb is provided with one double vernier reading to single minutes of arc.

The instruments were examined,tested on the true meridian at Salt Lake City,found correct,and were approved by the surveyor general for Utah,the former on June 6,1901,and the latter on May 29,1901.

We examine the adjustments of the instruments and correct the level and collimation errors,then ,to test the solar apparatus,of the No.3,instrument,by comparing its indications resulting from solar observations made during p.m.and a.m.hours ,with a true meridian determined by observation on Polaris,we proceed as follows:

At the cor.of secs.1,2,35,and 36,on S.bdy.of Tp., heretofore described,latitude 39° 38'N.,longitude 109° 40'W.;we set off 39° 38'N.,on the lat.arc;4° 34'N., on the decl.arc;and at 4 h.3 m p.m.,l.m.t.,determine a true meridian with the solar,and mark a point thereofon a stone,firmly set in the ground,5.00 chs.N.of the cor.

September 11,1901.

September 12,1901:At 1 h.58 m a.m.,l.m.t.,we observe Polaris at upper culmination ,in accordance with the Manual,and mark the true meridian thus determined by cutting a small groove in the stone,already set 5.00 chs.N.of our station;on which the true meridian falls 0.36 ins.east of the mark determined by the solar.

Subdivision of T 13 S ,R.20 E.-Continued.

Chains	
	At 7 h 3 m a.m.,l.m.t.,we set off 39° 38'N.,on the lat.arc;4° 21'N.,on the decl.arc;and determine a true meridian with the solar,and mark a point thereof by a cross on the stone,already set 5.00 chs.N.of the cor.;this mark falls 0.29 ins.east of the true meridian determined by the Polaris observation.
	The solar apparatus by p.m.and a.m.observations, defines positions for true meridians respectively about 0'19"west and 0'15"east of thetrue meridian determined by observation on Polaris;therefore we conclude that the adjustments of the instruments are satisfactory.
	The magnetic bearing of the true meridian at 7 h 30 m a.m.is 16° 15.8'W.,the angle thus determined reduced by the table page 100 of the Manual,gives the mean mag.decl.16° 11'E.
	From the above described cor.we run
	N.0° 01'W.,bet.secs.35 and 36.
	Over rolling mesa;through heavy timber.
5.00	Leave timber and enter dense undergrowth,bears E.and W.
20.00	Enter scattering timber,bears E.and W.
40.00	Set a limestone,16x10x5 ins.,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,10 ins.diam.,bears N.65°E.,160 lks. dist.,marked ¼ S.36,B.T.
	A pinion pine,10 ins.diam.,bears N.36°W.,143 lks.dist.,marked ¼ S.,35,B.T.
45.00	Leave undergrowth and enter heavy timber,bears E.and W.
57.00	Leave mesa,bears E.and W.;descend.
80.00	Set a limestone,22x12x4 ins.,16 ins.in the ground, for cor.of secs.25,26,35,and 36,marked with 1 notch on S.and 1 Notch on E.edges;from which
	A cedar,7 ins.diam.,bears N.43°E.,300 lks.

Chains	
	dist.,marked T.13 S.,R.20 E.,S.25,B.T.
	No other trees within limits;raise a mound of stone,
	2 ft.bsae,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land or land covered
	with dense undergrowth,80.00 chs.
	N.89° 48'E.,on a random line bet.secs.25 and 36.
40.00	Set temp.¼ sec.cor.
79.84	Intersect the Green River Guide Meridian,10 lks.N.of
	the cor.of secs.25,30,31,and 36,heretofore described.
	thence we run
	S.89° 52'W.,on a true line bet.secs.25 and 36.
	Over mountainous land;through scattering timber and
	dense undergrowth;ascend
39.92	Set a oilshale stone,30x10x4 ins.22 ins.in the ground,
	for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,6 ins.diam.,bears N.72°E.,50 lks.
	dist.,marked ¼ S.25,B.T.
	A cedar,6 ins.diam.,bears S.74°W.,55 lks.
	dist.,marked ¼ S.36,B.T.
40.00	Top of ridge,250 ft.above sec.cor.,bears N,30°W.and
	S.30°E.;descend.
50.00	Bottom of hollow,200 ft.below ridge,course N.30°W.;
	ascend.
61.00	Top of ridge,200 ft.above hollow,bears N.30°W.and
	S.30°E.;descend.
79.84	The cor.of secs.25,26,35,and 36.
	Land,mountainous.
	Soil,gravelly; 3rd rate.
	Timber,cedar and pinion pine.

Subdivision of T 13 S. R.20 E.-Continued.

Chains	
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.84 chs.
	N.0° 01'W.,bet.secs.25 and 26.
	Over mountainous land;through dense undergrowth and scattering timber;ascend.
35.00	Top of ridge,300 ft.above sec.cor.,bears N.30°W.and S.30°E.;descend.
40.00	Bottom of hollow,200 ft.below ridge,course N.22°W. Set a limestone,36x7x5 ins.,27 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,9 ins.diam.,bears N.47°E.,64 lks.dist.,marked ¼ S.25,B.T.
	A pinion pine,5 ins.diam.,bears S.85°W.,20 lks.dist.,marked ¼ S .26,B.T.
76.50	Top of ridge,250 ft.above hollow,bears N.25°W.and S.25°E.;descend.
80.00	Set a sandstone,30x10x4 ins.,27 ins.in the ground, for cor.of secs.23,24,25,and 26,marked with 2 notches on S.and 1 notch on E.edges;from which
	A pinion pine,7 ins.diam.,bears N.63°E.,170 lks.dist.,marked T.13 S.,R.20 E.,S.24,B.T.
	A pinion pine,5 ins.diam.,bears S.35°E.,60 lks.dist.,marked T.13 S.,R.20 E.,S.25,B.T.
	A pinion pine,10 ins.diam.,bears S.36°W.,120 lks.dist.,marked T.13 S.,R.20 E.,S.26,B.T.
	A pinion pine,9 ins.diam.,bears N.33°W.,30 lks.dist.,marked T.13 S.,R.20 E.,S.23,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth ,sage brush.
	Good grass for grazing.

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	N.89° 52'E.,on a random line bet.secs.24 and 25.
40.00	Set temp.¼ sec.cor.
79.84	Intersect the Green River Guide Meridian,at the cor. of secs.19,24,25,and 30,heretofore described.
	Thence we run
	S.89° 52'W.,on a true line bet.secs.24 and 25.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
5.00	Top of ridge,50 ft.above sec.cor.,bears N.E.and S.W.; descend.
20.00	Bottom of hollow,100 ft.below ridge,course N.;ascend.
28.50	Top of ridge,200 ft.above hollow,bears N.and S.;des-cend.
39.92	Set asandstone,24x8x6 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
48.00	Bottom of hollow,250 ft.below ridge,course N.50° E.; ascend.
79.84	The cor.of secs.23,24,25,and 26.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,79.84 chs.
	N.0° 01'W.,bet.secs.23 and 24.
	Over mountainous land;through scattering timber and scattering undergrowth;ascend.
23.25	Top of ridge,100 ft.above sec.cor.,bears N.10° E.and S.10° W.;descend.

Subdivision of T.13 S. R.20 E.-Continued.

Chains	
40.00	Set a limestone,24x8x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,8 ins.diam.,bears S.85°E.,70 lks.dist.,marked ¼ S.24,B.T. A pinion pine,4 ins.diam.,bears S.28°W.,30 lks.dist.,marked ¼ S.23,B.T.
80.00	Set a limestone,18x10x5 ins.,12 ins.in the ground, for.cor.of secs.13,14,23,and 24,marked with 3 notches on S.and 1 notch on E.edges;from which A cedar,7 ins.diam.,bears N.51°E.,71 lks. dist.,marked T.13 S.,R.20 E.,S.13,B.T. A cedar,6 ins.diam.,bears S.45°E.,38 lks. dist.,marked T.13 S.,R.20 E.,S.24,B.T. A cedar,10 ins.diam.,bears S.80°W.,200 lks. dist.,marked T.13 S.,R.20 E.,S.23,B.T. A pinion pine,4 ins.diam.,bears N.25°W.,200 lks.dist.,marked T.13 S.,R.20 E.,S.14,B.T.
	Land,mountainous. Soil,gravelly;3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,80.00 chs.

	N.89° 52'E.,on a random line bet.secs.13 and 24.
40.00	Set temp.¼ sec.cor.
79.90	Intersect the Green River Guide Meridian,5 lks.N.of the cor.of secs.13,18,19,and 24,heretofore described.
	Thence we run S.89° 54'W.,on a true line bet.secs.13 and 24. Over mountainous land;through scattering timber and dense undergrowth;descend.
2.50	Bottom of hollow,50 ft.below sec.cor.,course N.20°W.
	Ascend.
32.00	Leave timber,bears N.and S.

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
39.95	Set a sandstone,18x7x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
77.50	Top of ridge,200 ft.above hollow,bears N.W.and S.E.; descend.
79.90	The cor.of secs.13,14,23,and 24.
	Land,mountainous.
	Soil,gravelly;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.90 chs.
	September 12,1901:At this cor.we set off 4°15'N.,on the decl.arc;and at 0 h 2 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39°41'N.

	N.0°01'W.,bet.secs.13 and 14.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
2.50	Top of ridge,50 ft.above sec.cor.,bears N.40°W.and S.40°E.;descend.
40.00	Set a sandstone, 40x10x4 ins.,30 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,6 ins.diam.,bears S.27°E.,50 lks. dist.,marked ¼ S.13,B.T.
	A cedar,6 ins.diam.,bears N.35°W.,40 lks. dist.,marked ¼ S.14,B.T.
66.00	Bottom of hollow,275 ft.below ridge,course N.35°W.; ascend.
80.00	Set a sandstone,36x8x5 ins.,27 ins.in the ground,for cor.of secs.11,12,13,and 14,marked with 4 notches on S.and 1 notch on E.edges;and raise a mound of stone,

Chains	
	2 ft.base,1½ ft.high,W.of cor.Pits Impracticable.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	N.89° 54'E.,on a random line bet.secs.12 and 13.
40.00	Set temp.¼ sec.cor.
80.04	Intersect the Green River Guide Meridian ,5 lks. N. of the cor.of secs.7,12,13,and 18,heretofore described.
	Thence we run
	S.89° 56'W.,on a true line bet.secs.12 and 13.
	Over mountainous land;through scattering timber and dense undergrowth;descend gradually.
40.02	Set a sandstone,20x10x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;dig pits,18x18x12 ins., E.and W.of stone,3 ft.dist.,and raise a mound of earth,4 ft.base,2 ft.high,N.of cor.
65.00	Bottom of hollow,250 ft.below ¼ sec.cor.,course N. 35°W.;ascend.
75.00	Top of ridge,200 ft.above hollow,bears N.and S.;descend.
80.04	The cor.of secs.11,12,13,and 14,
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.04 chs.

Subdivision of T.13 S. R.20 E.-Continued.

Chains	
	N.0° 01'W.,bet.secs.11 and 12.
	Over mountainous land;through scattering timber and dense undergrowth;descend.
22.00	Bottom of hollow,250 ft.below sec.cor.,course N.35°W. ascend.
40.00	Bottom of Agency Draw,course N10°E.
	Set a sandstone,18x6x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Ascend.
60.00	Top of ridge,400 ft.above Agency Draw,bears N.E.and S.W.;descend.
67.00	Bottom of hollow,200 ft.below ridge,course E.;ascend.
80.00	Set a sandstone,30x6x5 ins.,22 ins.in the ground,for cor.of secs.1,2,11,and 12,marked with 5 notches on S. and 1 notch on E.edges;dig pits,18x18x12 ins.,in each sec.,5½ ft.dist.,and raise a mound of earth,4 ft.base 2 ft.high, W.of cor.
	Land,mountainous.
	Soil, gravelly and rocky;3rd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 56'E.,on a random line bet.secs.1 and 12.
40.00	Set temp. ¼ sec.cor.
80.00	Intersect the Green River Guide Meridian ,10 lks.S. of the cor.of secs.1,6,7,and 12,heretofore described.
	Thence we run,
	S.89° 52'W.,on a true line bet.secs.1 and 12.
	Over mountainous land;through dense undergrowth;ascend.

Chains	
5.00	Top of ridge,50 ft.above sec.cor.,bears N.and S.; descend.
16.00	Bottom of hollow,160 ft.below ridge,course N.30°W.; ascend.
21.50	Top of ridge,200 ft.above hollow,bears N.32°W.and S.32°E.;descend.
40.00	Set a sandstone,36x6x5 ins.,27 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
76.00	Bottom of Agency Draw,400 ft.below ridge,course N.; ascend.
80.00	The cor.of secs.1,2,11,and 12.
	Land,mountainous.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.0°01'W.,on a random line bet.secs.1 and 2.
40.00	Set temp.¼ sec.cor.
80.06	Intersect N.bdy.of Tp.20 lks.East of the cor.of secs. 1,2,35,and 36,heretofore described.
	Thence we run
	S.0°10'E.,on a true line bet.secs.1 and 2.
	Over mountainous land;through dense undergrowth;descend.
2.20	Bottom of hollow,50 ft.below sec.cor.,course E.;ascend.
30.00	Top of ridge,200 ft.above hollow,bears N.E.and S.W.; descend.
40.06	Set a sandstone,30x10x5 ins.,22 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound

Chains	
	of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable
51.50	Bottom of hollow,200 ft.below ridge,course E.;ascend.
80.06	The cor.of secs.1,2,11,and 12,
	Land,mountainous.
	Soil,gravelly;3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.06 chs.

September 12,1901.

September,13 ,1901:At 7 h 4 m a.m.,l.m.t.,we set off 39° 38'N.,on the lat.arc;3° 58'N.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.2,3,34,and 35,on S.bdy.of Tp.,heretofore described.

Thence we run

N.0° 01'W.,bet.secs.34 and 35.

Over mountaious land;through scattering timber and scattering undergrowth;descend.

29.50 Bottom of hollow,250 ft.below sec.cor.,course N.30°E. Ascend.

40.00 Set a limestone,24x24x9 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

A pinion pine,6 ins.diam.,bears N.45°E.,110 lks.dist.,marked ¼ S.35,B.T.

A pinion pine,12 ins.diam.,bears N.80°W.,75 lks.dist.,marked ¼ S.,34,B.T.

60.00 Top of ridge,250 ft.above hollow,bears E.and W.;descend.

80.00 Set a sandstone,22x12x4 ins.,16 ins.in the ground,for cor.of secs.26,27,34,and 35,marked with 1 notch on S. and 2 notches on E.edges;from which

Chains	
	A cedar,8 ins.,diam.,bears N.7°E.,53 lks. dist.,marked T.13 S.,R.20 E.,S.26,B.T.
	A pinion pine,7 ins.diam.,bears S.60°E.,80 lks.dist.,marked T.13 S.,R.20 E.,S.35,B.T.
	A cedar,12 ins.,diam.,bears S.45°W.,110 lks. dist.,marked T.13 S.,R.20 E.,S.34,B.T.
	Accedar,8 ins.diam.,bears N.75°W.,67 lks. dist.,marked T.13 S.,R.20 E.,S.27,B.T.
	Land,mountainous.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.

	N.89°48'E.,on a random line bet.secs. 26 and 35.
40.00	Set temp.$\frac{1}{4}$ sec.cor.
79.83	Intersect N.and S.line,at the cor.of secs.25,26,35, and 36.
	Thence we run
	S.89°48'W.,on a true line bet.secs.26 and 35.
	Over mountainous land;through scattering timber and dense undergrowth;descend gradually;
39.91½	Set a sandstone,18x10x4 ins.,12 ins.in the ground, for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on N.face;from which
	A pinion pine,12 ins.diam.,bears N.45°E.,5 lks.dist.,marked $\frac{1}{4}$ S.26,B.T.
	A pinion pine,10 ins.diam.,bears S.10°E.,70 lks.dist.,marked $\frac{1}{4}$ S.35,B.T.
53.50	Bottom of Agency Draw,300 ft.below sec.cor.,course N.;ascend.
68.50	Top of ridge,100 ft.above canon,bears N.and S.;descend.
78.00	Bottom of hollow,50 ft.below ridge,course N.;ascend.
79.83	The cor.of secs.26,27,34,and 35.
	Land,mountainous.

BOOK A-289

Chains	
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.85 chs.
	N.0° 01'W.,bet.secs.26 and 27.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
5.40	Bottom of hollow,50 ft.below sec.cor.,course N.40°E.; ascend.
21.00	Top of ridge,150 ft.above hollow,bears N.E.and S.W. Descend.
36.75	Bottom of hollow,200 ft.below ridge,course N.40°E.; ascend.
40.00	Set a sandstone,24x12x6 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
50.00	Top of spur,250 ft.above hollow,bears N.60°E.and S.60°W.;descend.
80.00	Set a sandstone,24x8x7 ins.18 ins.in the ground,for cor.of secs.22,23,26,and 27,marked with 2 notches on S.and 2 notches on E.edges;from which
	A cedar,5 ins.diam.,bears N.60°E.,62 lks. dist.,marked T.13 S.,R.20 E.,S.23,B.T.
	A cedar,6 ins.diam.,bears S.70°E.,147 lks. dist.,marked T.13 S.,R.20 E.,S.26,B.T.
	A cedar,6 ins.,diam.,bears S.80°W.,110 lks. dist.,marked T.13 S.,R.20 E.,S.27,B.T.
	A cedar,5 ins.diam.,bears N.48°W.,54 lks. dist.,marked T.13 S.,R.20 E.,S.22,B.T.
	amd,mountainous.
	Soil,gravelly;3rd rate.

Subdivision of T.13 S. R.20 E.-Continued.

Chains	
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	N.89° 48'E.,on a random line bet.secs.23 and 26.
40.00	Set temp.¼ sec.cor.
79.86	Intersect N.and S.line,18 lks.N. of the cor.of secs. 23,24,25,and 26.
	Thence we run
	S.89° 56'W.,on a true line bet.secs.23 and 26.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
1.70	Top of ridge,25 ft.above sec.cor.,bears N.25°W.and S.25°E.;descend.
15.50	Bottom of hollow,200 ft.below ridge,course N.30°W.; ascend.
25.00	Top of ridge,300 ft.above hollow,bears N. 25°W.and S.25°E.;descend.
39.93	Set a sandstone,20x12x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,8 ins.diam.,bears N.30°E.,10 lks. dist.,marked ¼ S.23,B.T. A pinion pine,8 ins.diam.,bears S.40°E.,125 lks.dist.,marked ¼ S.26,B.T.
79.00	Bottom of Agency Draw,400 ft.below ridge,course N.20° E.;ascend.
79.86	The cor.of secs.22,23,26,and 27.
	Land,mountainous.
	Soil,gravelly ;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,79.86 chs.

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
	N.0° 01'W.,bet.secs.22 and 23.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
7.00	Bottom of hollow,75 ft.below sec.cor.,course N.60° E.; ascend.
13.50	Top of ridge,200 ft.above hollow,bears E.and W.;descend.
21.00	Bottom of hollow,300 ft.below ridge,course E.;ascend.
32.50	Top of ridge,300 ft.above hollow,bears E.and W.;descend.
40.00	Set a sandstone,22x8x6 ins.,16 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,6 ins.diam.,bears S.65° E.,30 lks. dist.,marked ¼ S.23,B.T. A cedar,8 ins.diam.,bears N.80° W.,25 lks. dist.,marked ¼ S.22,B.T.
40.10	Bottom of hollow,200 ft.below ridge,course N.60° E.;- ascend.
73.50	Top of ridge,300 ft.above hollow,bears E.and W.;descend.
80.00	Set a sandstone,20x8x5 ins.,15 ins.in the ground,for cor.of secs.14,15,22,and 23,marked with 3 notches on S.and 2 notches on E.edges;from which A cedar,7 ins.diam.,bears N.23° E.155 lks. dist.,marked T.13 S.,R.20 E.,S.14,B.T. A pinion pine,8 ins.diam.,bears N.20° W.,170 lks.dist.,marked T.13 S.,R.20 E.,S.15,B.T. No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable. Land,mountainous. Soil,gravelly loam and rocky;2nd and 4th rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing.

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	September 13,1901:At this cor.we set off 3° 52'N.,on the decl.arc;and at 0.h 2 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39° 41'N.,
	N.89° 56'E.,on a random line bet.secs.14 and 23.
40.00	Set temp.¼ sec.cor.
79.74	Intersect N.and S.line, at the cor.of secs.13,14,23, and 24.
	Thence we run
	S.89° 56'W.,on a true line bet.secs.14 and 23.
	Over mountainous land;through scattering undergrowth and scattering timber;descend.
39.87	Set a limestone,24x10x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,8 ins.diam.,bears N.10° E.,150 lks. dist.,marked ¼ S.14,B.T.
	A cedar,6 ins.diam.,bears S.20 °E.,50 lks. dist.,marked ¼ S.23,B.T.
51.00	Bottom of Agency Draw,400 ft.below sec.cor.,course N.30° E.;ascend.
79.74	The cor.of secs.14,15,22,and 23.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,79.74 chs.
	N.0° 01'W.,bet.secs.14 and 15.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
12.75	Bottom of hollow,150 ft.below sec.cor.,course N.75°

Chains	
	E.;ascend.
20.00	Top of ridge,200 ft.above hollow,bears N.80° E.and S.80° W.;descend.
32.40	Bottom of hollow,150 ft.below ridge,course S.75° E.; ascend.
40.00	Set a sandstone,22x8x7 ins.,16 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,10 ins.diam.,bears N.25° E.,273 lks. dist.,marked ¼ S.14,B.T. No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
47.50	Top of ridge,250 ft.above hollow,bears E.and W.;descend.
56.30	Bottom of hollow,150 ft.below ridge,course S.80° E.; ascend.
66.50	Top of ridge,125 ft.above hollow,bears E.and W.; descend.
78.00	Bottom of hollow,200 ft.below ridge,course S.75° E.; ascend.
80.00	Set a sandstone,24x8x8 ins.,18 ins.in the ground,for cor.of secs.10,11,14,and 15,marked with 4 notches on S.and 2 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable. Land,mountainous. Soil,white clay and gravelly loam;2nd rate. Timber,cedar and pinion pine. Undergrowth,sage brush and shadscales. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,80.00 chs.

N.89° 56'E.,on a random line bet.secs.11 and 14.

40.00 Set temp.¼ sec.cor.

79.70 Intersect N.and S.line,5 lks.S.of the cor.of secs. 11,12,13,and 14.

hence we run

Chains	
	S.89° 54'W.,on a true line bet.secs.11 and 14.
	Over mountsinous land;through dense undergrowth;descend.
4.00	Bottom of Agency Draw,50 ft.below sec.cor.,course N.;ascend.
4.50	Trail,in canon,bears N.and S.
39.85	Set a sandstone,24x14x8 ins.,18 ins.in the ground,for ¼ sec.cor.,marked¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
65.00	Top of ridge,450 ft.above canon,bears N.70°W.and S. 70°E.;descend.
79.70	The cor.of secs.10,11,14,and 15.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.70 chs.
	N.0°01'W.,bet.secs.10 and 11.
	Over mountainous land;through dense undergrowth and scattering timber;ascend.
9.25	Top of ridge,225 ft.above sec.cor.,bears E.and W.; descend.
14.25	Bottom of hollow,200 ft.below ridge,course N.80°E.; ascend.
26.00	Top of ridge,225 ft.above hollow,bears N.80°E.and S.80°W.;descend.
40.00	Set a sandstone,20x7x7 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,8 ins.diam.,bears N.5°E.,32 lks.dist.,marked ¼ S.11,B.T.
	A pinion pine,7 ins.diam.,bears N.63°W.,92

Chains	
	lks.dist.,marked ¼.S.10,B.T.
53.50	Bottom of hollow,150 ft.below ridge,course N.E.;ascend.
54.00	Leave timber,bears N.E.and S.W.
70.00	Top of ridge,200 ft.above hollow,bears N.E.and S.W.;descend.
70.20	Trail,bears N.E.and S.W.
80.00	Set a sandstone,20x8x8 ins.,15 ins.in the ground,for cor.of secs.2,3,10,and 11,marked with 5 notches on S.and 2 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,white clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 54'E.,on a random line bet.secs.2 and 11.
40.00	Set temp.¼ sec.cor.
79.80	Intersect N.and S.line,10 lks.N.of the cor.of secs. 1,2,11,and 12.
	Thence we run
	S.89° 58'W.,on a true line bet.secs.2 and 11.
	Over mountainous land;through Dense undergrowth;ascend.
39.90	Set a sandstone,24x10x6 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
42.50	Top of ridge,300 ft.above sec.cor.,bears N.25° E.and S.25° W.;descend.
50.00	Bottom of hollow,250 ft.below ridge,course N.35° E.; ascend.
54.00	Top of ridge,100 ft.above hollow,bears N.35° E.and S.35° W.;descend.

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
61.50	Bottom of hollow,100 ft.below ridge,course N.35° E.; ascend.
73.00	Trail on top of ridge,150 ft.above hollow,bears N. 40° E.and S.40° W.;descend.
79.80	The cor.of secs.2,3,10,and 11.
	Land,mountainous.
	Soil,white clay and gravelly;3rd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.80 chs.
	September 13,1901.

September 14,1901:At 7 h 2 m a.m.,l.m.t.,we set off 39° 42' N.,on the lat.arc;3° 35' N.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.2,3,10,and 11.

Thence we run

N.0° 01' W.,on a random line bet.secs.2 and 3.

40.00	Set temp.$\frac{1}{4}$ sec.cor.
80.20	Intersect N.bdy.of Tp.,30 lks.East of the cor.of secs.2,3,34,and 35,heretofore described.

Thence we run

S.0° 14' E.,on a true line bet.secs.2 and 3.

Over mountainous land;through dense undergrowth;descend.

7.00	Bottom of hollow,275 ft.below sec.cor.,course S.70° E. Ascend.
28.50	Top of ridge,300 ft.above hollow,bears N.80° E.and S. 80° W.;descend.
29.50	Top of perpendicular cliff,25 ft.high,bears N.80° E. and S.80° W.
35.50	Bottom of hollow,250 ft.below ridge,course N.80° E.; ascend.

Chains	
40.20	Set a sandstone,30x14x4 ins.,22 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
62.50	Top of ridge,150 ft.above hollow,bears N.40° E.and S. 40° W.;descend.
77.25	Bottom of hollow,175 ft.below ridge,course N.E.;as- cend.
80.20	The cor.of secs.2,3,10,and 11.
	Land,mountainous .
	Soil,gravelly;3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under- growth,80.20 chs.

From the cor.of secs.3,4,33,and 34,on S.bdy.of Tp., heretofore described.

We run

N.0° 02'W.,bet.secs.33 and 34.

Over mountainous land;through dense undergrowth and scattering timber; ascend gradually;

40.00	Set a limestone,20x12x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,12 ins.diam.,bears N.86° E.,57 lks.dist.,marked ¼ S.34,B.T.
	A cedar,6 ins.diam.,bears S.80° W.,103 lks. dist.,marked ¼ S.33,B.T.
64.00	Top of ridge,200 ft.above ¼ sec.cor.,bears N.80° W. and S.80° E.;descend.
73.00	Bottom of hollow,200 ft.below ridge,course S.80° E.; ascend.
80.00	Set a limestone,28x12x6 ins.,21 ins.in the ground, for cor.of secs.27,28,33,and 34,marked with 1 notch on S.and 3 notches on E.edges;and raise a mound of

Chains	
	stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.89° 48'E.,on a random line bet.secs.27 and 34.
40.00	Set temp.¼ sec.cor.
79.70	Intersect N.and S.line,at the cor.of secs.26,27,34, and 35.
	Thence we run
	S.89° 48'W.,on a true line bet.secs.27 and 34.
	Over mountainous land;through dense undergrowth and scattering timber;ascend.
6.00	Top of spur,100 ft.above sec.cor.,bears N.40°E.and S.40°W.;descend.
10.00	Bottom of hollow,100 ft.below spur,course N.E.;ascend.
24.80	Top of divide ridge bet.Hill and Willow Creek Canons, 250 ft.above hollow,bears N.10°W.and S.10°E.;descend.
39.85	Set a sandstone,20x10x6 ins.,15 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
40.00	Bottom of hollow,250 ft.below ridge,course S.W.;ascend.
65.00	Top of ridge,150 ft.above hollow,bears N.30°E.and S. 30°W.;descend.
79.70	The cor.of secs.27,28,33,and 34.
	Land,mountainous.
	Soil,gravelly ;3rd rate.
	Timber,cedar and pinion pine.

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
	Undergrowth,sage brush.
	Mountainous land,or land covered with dense undergrowth,79.70 chs.
	N.0°02'W.,bet.secs.27 and 28.
	Over mountainous,land;through scattering timber and dense undergrowth;descend.
1.25	Bottom of hollow,10 ft.below sec.cor.,course W.;ascend.
12.00	Top of ridge,200 ft.above hollow,bears E.and W.;descend.
20.30	Bottom of hollow,75 ft.below ridge,course W.;ascend.
27.00	Top of ridge,50 ft.above hollow,bears E.and W.;descend.
37.50	Bottom of hollow,50 ft.below ridge,course N.W.;ascend.
40.00	Set a limestone,16x10x8 ins.,11 ins.in the ground,for ¼ sec.cor., marked ¼ on W.face;from which A cedar,10 ins.diam.,bears S.81°E.,120 lks. dist.,marked ¼ S.27,B.T. A cedar,4 ins.diam.,bears N.55°W.,140 lks. dist.,marked ¼ S.28,B.T.
74.00	Top of ridge,200 ft.above hollow,bears E.and W.;descend.
80.00	Set a limestone,24x8x6 ins.,18 ins.in the ground,for cor.of secs.21,22,27,and 28,marked with 2 notches on S.and 3 notches on E.edges;from which A pinion pine,10 ins.diam.,bears N.37°E.;92 lks.dist.,marked T.13 S.,R.20 E.,S.22,B.T. A pinion pine,10 ins.diam.,bears S.76°E.,32 lks.dist.,marked T.13 S.,R.20 E.,S.27,B.T. A pinion pine,7 ins.diam.,bears S.55°W.;88 lks.dist.,marked T.13 S.,R.20 E.,S.28,B.T. A pinion pine,7 ins.diam.,bears N.50°W.,13 lks.dist.,marked T.13 S.,R.20 E.,S.21,B.T.

Chains	
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	September 14,1901:At the noon hour the sky is overcast and solar observations are impossible.
	N.89°48'E.,on a random line bet.secs.22 and 27.
40.00	Set temp.¼ sec.cor.
79.60	Intersect N.and S.line,18 lks.N.of the cor.of secs. 22,23,26,and 27.
	Thence we run
	S.89°56'W.,on a true line bet.secs. 22 and 27.
	Over mountainous land;through scattering timber and dense undergrowth;descend.
5.50	Bottom of hollow,75 ft.below sec.cor.,course N.E.; ascend.
39.80	Set a sandstone,16x10x7 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face; from which A cedar,8 ins.diam.,bears N.55°E.,75 lks. dist.,marked ¼ S.22,B.T. A cedar,6 ins.diam.,bears S.30°E.,50 lks. dist.,marked ¼ S.27,B.T.
43.50	Enter heavy timber,bears N.and S.
50.00	Top of ascent,250 ft.above hollow,bears N.20°E.and S.20°W.;thence over rolling mesa.
56.00	Leave heavy timber and enter scattering timber ,bears N.and S.
59.20	Trail,bears N.and S.
65.50	Edge of mesa,bears N.20°W.and S.;descend.
79.60	The cor .of secs.21,22,27,and 28.
	Land,mountainous and rolling mesa.

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
	Soil,gravelly and clay loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,79.60 chs.
	N.0° 02'W.,bet.secs.21 and 22.
	Over mountainous land;through scattering timber and dense undergrowth;descend.
4.50	Bottom of hollow,100 ft.below sec.cor.,course S.60°W. Ascend.
31.00	Top of ascent,300 ft.above hollow,bears E.and W.; thence over level mesa.
40.00	Set a limestone,33x8x4 ins.,24 ins.in the ground, for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face;from which A cedar,5 ins.diam.,bears S.70°E.,175 lks. dist.,marked $\frac{1}{4}$ S.22,B.T. A cedar,6 ins.diam.,bears S.22°W.,265 lks. dist.,marked $\frac{1}{4}$ S.21,B.T.
65.00	Enter heavy timber,bears E.and W.
80.00	Set a limestone,30x6x4 ins.,22 ins.in the ground,for cor.of secs.15,16,21,and 22,marked 13 S.on N.E.,and 20 E.on S.E.faces;with 3 notches on S.and 3 notches on E.edges;from which A pinion pine,5 ins.diam.,bears N.74°E.,193 lks.dist.,marked T.13 S.,R.20 E.,S.15,B.T. A pinion pine,10 ins.,diam.,bears S.71°E.,240 lks.dist.,marked T.13 S.,R.20 E.,S.22,B.T. A cedar,9 ins.diam.,bears S.60°W.,167 lks. dist.,marked T.13 S.,R.20 E.,S.21,B.T. A pinion pine,9 ins.diam.,bears N.26°W.,92 lks.dist.,marked T.13 S.,R.20 E.,S.16,B.T.
	Land,mountainous and level.
	Soil,sandy and white clay loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.

Chains	Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense under-growth,80.00 chs.

September 14,1901:At this cor.we set off 38°41'N.,on the lat.arc;3°26'N.,on the decl.arc;and at 4 h 0 m p.m.,l.m.t.,determine a true meridian with the solar and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N.of the cor.

September 14,1901.

September 16,1901:At 1 h 46 m a.m.,l.m.t.,we observe Polaris at upper culmination ,in accordance with the Manual,with the NO.2 instrument,and mark a point in the true meridian thus determined by a small groove in the stone already set 5.00 chs N.of the cor.;this mark falls 0.24 ins.east of the true meridian determined with the solar.

At 7 h 0 a.m.,l.m.t.,we set off 38°41'N.,on the lat. arc;2°49'N.,on the decl.arc;and mark the true meridian determined with the solar by a cross on the stone,already set 5.00 chs N.of the cor.;this mark falls 0.33 ins.east of the true meridian established by Polaris observation.

The solar apparatus by p.m.,and a.m.observations, defines positions for true meridians respectively about 0'13"west and 0'17"east of the true meridian established by Polaris observation;therefore we conclude that the adjustments of the instruments are satisfactory.

The magnetic bearing of the true meridian at 7.h 30 m a.m.is 16°14.8'W.,the angle thus determined reduced by the table page 100 of the Manual,gives the mean mag.decl.16°12'E.

From the cor.of secs.15,16,21,and 22,we run

Subdivision of T.13 S.,R.20 E.-Continued.

Chains N.89° 56'E.,on a random line bet.secs.15 and 22.

40.00 Set temp.¼ sec.cor.

79.66 Intersect N.and S.line,5 lks.N.of the cor.of secs. 14.15.22,and 23.

Thence we run

S.89° 56'W.,on a true line bet.secs 15 and 22.

Over mountainous land;through scattering timber and dense undergrowth;ascend.

12.25 Foot of perpendicular ledge,100 ft.high,bears N.and S.

22.50 Top of ridge,300 ft.above sec.cor.,bears N.and S.; descend.

34.30 Bottom of hollow,100 ft.below ridge,course S.E.;ascend.

39.83 Set a limestone,28x6x4 ins.,21 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A pinion pine,8 ins.diam.,bears N.41°E.,110 lks.dist.,marked ¼ S.15,B.T.

A cedar,5 ins.diam.,bears S.3°W.,40 lks. dist.,marked ¼ S.22,B.T.

44.00 Top of spur,75 ft.above hollow,bears N.and S.;descend.

51.75 Bottom of hollow,100 ft.below spur,course S.60°E.; ascend.

75.50 Top of ascent,300 ft.above hollow,bears N.20°W.and S.40°E.;thence over level mesa.

79.66 The cor.of secs.15,16,21,and 22.

Land,mountainous and level.

Soil,gravelly and sandy loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,79.66 chs.

Subdivision of T.13 S. R.20 E.-Continued.

Chains N.0°02'W.,bet.secs.15 and 16.

Over level mesa;through dense undergrowth and scattering timber.

10.00 Edge of mesa,bears N.80°W.and S.80°E.;descend.

12.00 Bottom of hollow,40 ft.below mesa,course S.80°E.; ascend.

20.00 Top of ridge,200 ft.above hollow,bears E.and W.;descend.

24.00 Bottom of hollow,150 ft.below ridge,course S.80°E.; ascend.

40.00 Set a sandstone,24x5x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

A pinion pine,8 ins.diam.,bears N.87°E.,187 lks.dist.,marked ¼ S.15,B.T.

A pinion pine,7 ins.diam.,bears N.31°W.,93 lks.dist.,marked ¼ S.16,B.T.

62.00 Foot of perpendicular ledge,25 ft.high,bears E.and W.

73.50 Top of Divide ridge,400 ft.above hollow,bears N.30°E. and S.30°W.;this is the main divide ridge bet.Hill Creek and Willow Creek Canons;descend.

80.00 Set a sandstone,18x10x4 ins.,12 ins.in the ground, for cor.of secs.9,10,15,and 16,marked with 4 notches on S.and 3 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft high,W.of cor.Pits impracticable.

Land,mountainous and level.

Soil,gravelly and sandy;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

N.89°58'E.,on a random line bet.secs.10 and 15.

40.00 Set temp.¼ sec.cor.

79.68 Intersect N.and S.line,at the cor.of secs.10,11,14,

Subdivision of T.13 S. R.20 E.-Continued.

Chains 15.

Thence we run

S.89° 58'W.,on a true line bet.secs.10 and 15.

Over mountainous land;through scattering timber and dense undergrowth;descend.

4.50 Bottom of hollow,50 ft.below sec.cor.,course S.70°E.; ascend.

21.20 Bottom of same hollow,course N.E.;ascend.

27.20 Foot of perpendicular ledge,10 ft.high,bears N.E.and S.W.

39.84 Set a limestone,20x6x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A pinion pine,4 ins.diam.,bears N.33°E.,80 lks.dist.,marked ¼ S.10,B.T.

A pinion pine,6 ins.diam.,bears S.22°E.,80 lks.dist.,marked ¼ S.15,B.T.

59.50 Top of ridge,150 ft.above hollow,bears N.30°W.and S. 30°E.;descend.

64.85 Bottom of hollow,200 ft.below ridge,course S.30°E.; ascend.

78.00 Top of main divide ridge bet.Hill Creek and Willow Creek Canons,300 ft.above hollow,bears N.and S.;descend.

79.68 The cor.of secs.9,10,15,and 16.

Land,mountainous .

Soil,gravelly;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,79.68 chs.

N.0°02'W.,bet.secs.9 and 10.

Over mountainous land;through scattering timber and dense undergrowth;descend gradually.

Chains	
40.00	Set a sandstone,24x8x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,8 ins.diam.,bears N.66° E.,52 lks.dist.,marked ¼ S.10,B.T. A pinion pine,7 ins.diam.,bears S.40° W.,57 lks.dist.,marked ¼ S.9,B.T.
52.00	Bottom of hollow,150 ft.below sec.cor.,course N.W.; ascend abruptly.
57.50	Foot of perpendicular ledge,50 ft.high,bears N.80° W. and S.80° E.
57.75	Top of ridge,300 ft. above hollow,bears N.80° W.and S.80° E.;descend.
80.00	Set a sandstone,16x12x4 ins.,11 ins.in the ground,for cor.of secs.3,4,9,and 10,marked with 5 notches on S. and 3 notches on E.edges;from which A pinion pine,8 ins.diam.,bears N.65° E.,80 lks.dist.,marked T.13 S.,R.20 E.,S.3,B.T. A pinion pine,10 ins.diam.,bears S.46° E.,93 lks.dist.,marked T.13 S.,R.20 E.,S.10,B.T. A pinion pine,6 ins.diam.,bears S.28° W.,60 lks.dist.,marked T.13 S.,R.20 E.,S.9,B.T. A pinion pine,6 ind.diam.,bears N.58° W.,58 lks.dist.,marked T.13 S.,R.20 E.,S.4,B:T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 58'E.,on a random line bet.secs.3 and 10.
40.00	Set temp.¼ sec.cor.
79.84	Intersect N.and S.line,14 lks.N.of the cor.of secs. 2,3,10,and 11.
	Thence we run

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
	N.89° 56'W.,on a true line bet.secs.3 and 10.
	Over mountainous land;through dense undergrowth;descend.
5.00	Bottom of hollow,100 ft.below sec.cor.,course N.50°E.; ascend.
12.75	Enter scattering timber,bears N.and S.
39.92	Set a sandstone,18x8x4 ins.,12 ins.in the ground,for ¼ sec.c.or.,marked ¼ on N.face;from which A cedar,10 ins.diam.,bears N.20°W.,65 lks. dist.,marked ¼ S.3,B.T. A pinion pine,6 ins.diam.,bears S.10°E.,45 lks.dist.,marked ¼ S.10,B.T.
66.50	Top of main divide ridge,400 ft.above ¼ sec.cor., bears N.and S.;this is the main divide ridge bet. Hill Creek and Willow Creek Canons;descend.
67.50	Bottom of hollow,100 ft.below ridge,course N.10°W.; ascend.
73.00	Top of ridge,100 ft.above hollow,bears N.and S.;descend.
79.84	The cor.of secs.3,4,9,and 10.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.84 chs.
	September 16,1901:At this cor.we set off 2°42'N.,on the decl.arc;and at 0 h 2 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39°42'N.
	N.0°02'W.,on a random line bet.secs.3 and 4.
40.00	Set temp.¼ sec.cor.
80.25	Intersect N.bdy.of Tp.,37 lks.East of the cor.of secs.3,4,33,and 34.,heretofore described.
	Thence we run
	S.0°18'E.,on a true line bet.secs.3 and 4.

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
	Over mountainous land;through scattering timber;ascend gradually along west side of hollow.
40.25	Set a limestone,24x12x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,5 ins.diam.,bears S.52° E.,54 lks. dist.,marked ¼ S.3,B.T. A cedar,8 ins.diam.,bears S.48° W.,10 lks. dist.,marked ¼ S.4,B.T.
63.20	Bottom of hollow,course N.20° E.;ascend.
80.25	The cor.of secs.3,4,9,and 10.
	Land,mountainous. Soil,gravelly;3rd rate. Timber,cedar and pinion pine. Good grass for grazing. Mountainous land,80.25 chs.

From the cor.of secs.4,5,32,and 33,on S.bdy.of Tp., heretofore described.

We run

N.0° 03'W.,bet.secs.32 and 33.

Over mountainous land;through scattering timber and scattering undergrowth;ascend.

30.00	Top of ridge,150 ft.above sec.cor.,bears N.W.and S. E.;descend.
40.00	Set a limestone,20x6x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,6 ins.diam.,bears S.80° E.,18 lks. dist.,marked ¼ S.33,B.T. A cedar,6 ins.diam.,bears N.20° W.,50 lks. dist.,marked ¼ S.32,B.T.
60.00	Bottom of hollow,150 ft.below ridge,course N.30° W.; ascend.
80.00	Set a quartzite stone,28x10x6 ins.,21 ins.in the ground,for cor.of secs.28,29,32,and 33,marked with 1 notch on S.and 4 notches on E.edges;from which A pinion pine,6 ins.diam.,bears N.65° E.,20

Chains	
	lks.dist.,marked T.13 S.,R.20 E.,S.28,B.T.
	A pinion pine,10 ins.diam.,bears S.5° E.,58 lks.dist.,marked T.13 S.,R.20 E.,S.33,B.T.
	A pinion pine,8 ins.diam.,bears S.33° W.,32 lks.dist.,marked T.13 S.,R.20 E.,S.32,B.T.
	A cedar,8 ins.,diam.,bears N.22° W.,100 lks. dist.,marked T.13 S.,R.20 E.,S.29,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.

	N.89° 48'E.,on a random line bet.secs.28 and 33.
40.00	Set temp.¼ sec.cor.
79.90	Intersect N.and S.line,14 lks.N.of the cor.of secs. 27,28,33,and 34.
	Thence we run
	S.89° 54'W.,on a true line bet.secs.28 and 33.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
5.50	Bottom of hollow,50 ft.below sec.cor.,course N.35° W.; ascend.
20.00	Top of ridge,150 ft.above hollow,bears N.10 °W.and S.10° E.;descend.
24.75	Bottom of hollow,50 ft.below ridge,course N.33° W.; ascend.
39.95	Set a limestone,14x9x4 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,5 ins.diam.,bears N.60° W.,55 lks. dist.,marked ¼ S.28,B.T.
	A pinion pine,12 ins.diam.,bears S.43° W.,100 lks.dist.,marked ¼ S.33,B.T.
46.00	Top of ridge,100 ft.above hollow,bears N.and S.;des- cend.

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
58.30	Bottom of hollow,50 ft.below ridge,course N.10°E.; ascend.
73.40	Top of ridge,50 ft.above hollow,bears N.and S.;descend.
79.90	The cor.of secs,28,29,32,and 33.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth ,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.90 chs.
	September 16.1901.

September 17,1901:At 7 h 0 m a.m.,l.m.t.,we set off 39° 39'N.,on the lat.arc;2°26'N.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.28,29,32,and 33.

Thence we run

N.0° 03'W.,bet.secs.28 and 29.

Over mountainous land;through scattering timber and scattering undergrowth;ascend.

36.00	Top of ridge,200 ft.above sec.cor.,bears N.55°W.and S.55°E.;descend.
40.00	Set a limestone,18x10x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,6 ins.diam.,bears S.37°E.,63 lks. dist.,marked ¼ S.28,B.T.
	A cedar,12 ins.diam.,bears W.,24 lks.dist., marked ¼ S.29,B.T.
61.25	Trail,bears N.60°W.and S.60°E.
63.00	Bottom of hollow,250 ft.below ridge,course N.60°W.; ascend.
64.75	Foot of perpendicular ledge,50 ft.high,bears E.and W.
80.00	Set a limestone,22x14x7 ins.,16 ins.in the ground,

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
	for cor.6f secs.20,21,28,and.29,marked with 2 notches on S.and 4 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,white clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.

N.89° 54'E.,on a random line bet.secs.21 and 28.

40.00 Set temp.¼ sec.cor.

80.00 Intersect N.and S.line,27 lks.N.of the cor.of secs. 21,22,27,and 28.

Thence we run

N.89° 54'W.,on a true line bet.secs.21 and 28.

Over mountainous land;through dense undergrowth and scattering timber ;descend.

28.00 Trail,bears N.E.and S.W.

29.50 Bottom of hollow,20 ft.below sec.cor.,course S.W.; ascend.

40.00 Set a sandstone,28x8x5 ins.,21 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A cedar,12 ins.diam.,bears N.13°E.113 lks. dist.,marked ¼ S.21,B.T.

A cedar,5 ins.diam.,bears S.55°E.,79 lks. dist.,marked ¼ S.28;B.T.

60.00 Top of ridge,200 ft.above hollow,bears N.E.and S.W: descend.

70.00 Trail,bears N.E.and S.W.

71.00 Leave timber,bears N.and S.

73.00 Bottom of hollow,100 ft.below ridge,course S.W.;ascend.

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

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.0°03'W.,bet.secs.20 and 21.
	Over mountainous land;through scattering timber and scattering undergrowth;ascend.
5.00	Top of ridge,50 ft.above sec.cor.,bears N.E.and S.W.; descend.
18.00	Bottom of hollow,150 ft.below ridge,course S.68°W.; ascend.
22.00	Top of ridge,150 ft.above hollow,bears N.E.and S.W.; descend.
40.00	Set a sandstone,18x10x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,10 ins.diam.,bears N.60°E.,65 lks. dist.,marked ¼ S.21,B.T. A cedar,8 ins.diam.,bears S.50°W.,45 lks. dist.,marked ¼ S.20,B.T.
40.16	Bottom of hollow,150 ft.below ridge,course S.40°W.; ascend.
70.00	Top of ridge,200 ft.above hollow,bears N.E.and S.W.; descend.
80.00	Set a limestone,16x10x4 ins.,11 ins.in the ground, for cor.of secs.16,17,20,and 21,marked with 3 notches on S.and 4 notches on E.edges;from which A pinion pine,10 ins.diam.,bears N.50°E.,55 lks.dist.,marked T.13 S.,R.20 E.,S.16,B.T. A cedar,8 ins.diam.,bears S.70°E.,43 lks. dist.,marked T.13 S.,R.20 E.,S.21,B.T. A pinion pine,8 ins.diam.,bears S.60°W.,68

Subdivision of T.13 S., R.20 E.-Continued.

Chains.

lks.dist.,marked T.13 S.,R.20 E.,S.20,B.T.

A pinion pine,8 ins.diam.,bears N.12° W.,36 lks.dist.,marked T.13 S.,R.20 E.,S.17,B.T.

Land,mountainous.

Soil,gravelly;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,80.00 chs.

S.89 °54'E.,on a random line bet.secs.16 and 21.

40.00 Set temp.¼ sec.cor.

80.20 Intersect N.and S.line,20 lks.N.of the cor.of secs. 15,16,21, and 22.

Thence we run

N.89° 45'W.,on a true line bet.secs.16 and 21.

Over level mesa;through scattering undergrowth and heavy timber.

40.10 Set a limestone,30x8x6 ins.22 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A cedar,10 ins.diam.,bears N.70° E.,62 lks. dist.,marked ¼ S.16,B.T.

A cedar,6 ins.diam.,bears S.50° E.,35 lks. dist.,marked ¼ S.21,B.T.

40.15 Edge of mesa,bears N.and S.;descend.

45.75 Bottom of hollow,200 ft.below mesa,course S.14° W.; ascend.

55.00 Top of ridge,175 ft.above hollow,bears N.E.and S.W.; descend.

80.20 The cor.of secs.16,17,20,and 21.

Land,mountainous and level.

Soil,sandy and gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Chains	
	Mountainous or heavily timbered land,80.20 chs.
	N.0° 03'W.,bet.secs.16 and 17.
	Over mountainous land;through scattering timber and dense undergrowth;descend.
8.10	Bottom of hollow,130 ft.below sec.cor.,course S.60° W.;ascend.
30.00	Top of ridge,250 ft.above hollow,bears E. and W.; descend.
40.00	Set a quartzite stone,15x10x6 ins.,10 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,4 ins.diam.,bears S.80°E.,18 lks.dist.,marked ¼ S.16,B.T. No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
80.00	Set a limestone,20x12x5 ins.,15 ins.in the ground, for cor.of secs.8,9,16,and 17,marked with 4 notches on S.and 4 notches on E.edges;from which A pinion pine,8 ins.diam.,bears N.30°E.,105 lks.dist.,marked T.13 S.,R.20 E.,S.9,B.T. A pinion pine,6 ins.diam.,bears S.64°E.,94 lks.dist.,marked T.13 S.,R.20 E.,S.16,B.T. A pinion pine,8 ins.diam.,bears S.73°W.,96 lks.dist.,marked T.13 S.,R.20 E.,S.17,B.T. A pinion pine,10 ins.diam.,bears N.64°W.,73 lks.dist.,marked T.13 S.,R.20 E.,S.8,B.T. Land,mountainous. Soil,gravelly loam;2nd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,80.00 chs. September 17,1901:At the noon hour the sky is overcast and solar observations are impossible.

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
	S.89° 45'E.,on a random line bet.secs.9 and 16.
40.00	Set temp.¼ sec.cor.
80.30	Intersect N.and S.line,23 lks.S.of the cor.of secs. 9,10,15,and 16.
	Thence we run
	N.89° 55'W.,on a true line bet.secs.9 and 16.
	Over mountainous land;through heavy timber;descend abruptly.
25.90	Begin gentle descent,bears N.20°E.and S.20°W.
40.15	Set a limestone,18 x10x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,15 ins.diam.,bears N.15°E.,180 lks.dist.,marked ¼ S.9,B.T.
	A cedar,18 ins.diam.,bears S.20°W.,25 lks. dist.,marked ¼ S.16,B.T.
80.30	The cor.of secs.8,9,16,and 17.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.30 chs.

	N.0° 03'W.,bet.secs.8 and 9.
	Over mountainous land;through heavy timber;descend gradually.
19.00	Bottom of hollow,75 ft.below sec.cor.,course N.80°W.
	Ascend gently.
40.00	Set a limestone,20x8x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,15 ins.diam.,bears S.15°E.,27 lks.dist.,marked ¼ S.9,B.T.
	A pinion pine,5 ins.diam.,bears S.82°E.,71 lks.dist.,marked ¼ S.8,B.T.
72.50	Top of ridge,150 ft.above hollow,bears N.W.and S.E.;

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
	descend.
80.00	Bottom of hollow,100 ft.below ridge,course N.W.;
	Set a limestone,16x9x5 ins.,11 ins.in the ground,for cor.of secs.4,5,8,and 9.,marked with 5 notches on S. and 4 notches on E.edges;from which
	A cedar,8 ins.diam.,bears N.13° E.,39 lks. dist.,marked T.13 S.,R.20 E.,S.4,B.T.
	A cedar,6 ins.diam.,bears S.21° E.,65 lks. dist.,marked T.13 S.,R.20 E.,S.9,B.T.
	A pinion pine,6 ins.diam.,bears S.63° W.,67 lks.dist.,marked T.13 S.,R.20 E.,S.8,B.T.
	A pinion pine,8 ins.diam.,bears N.34° W.,62 lks.dist.,marked T.13 S.,R.20 E.,S.5,B.T.
	Land,mountainous.
	Soil,white clay and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	S.89° 55'E.,on a random line bet.secs.4 and 9.
40.00	Set temp.¼ sec.cor.
80.24	Intersect N.and S.line,15 lks.S.of the cor.of secs. 3,4,9,and 10.
	Thence we run
	S.89° 59'W.,on a true line bet.secs.4 and 9.
	Over mountainous land through scattering timber ;descend.
3.00	Bottom of hollow,30 ft.below sec.cor.,course N.;ascend.
8.50	Top of ridge,150 ft.above hollow,bears N.and S.;descend.
32.00	Bottom of hollow,250 ft.below ridge,course N.W.;ascend.
40.12	Set a limestone,18x10x5 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which

Subdivision of T.13 S.,R.20 E -Continued

Chains	
	A pinion pine,8 ins.diam.,bears N.60° E.,84 lks.dist.,marked ¼ S.4,B.T.
	A pinion pine,16 ins.diam.,bears S.15° E.,77 lks.dist.,marked ¼ S.9,B.T.
63.50	Top of ridge,250 ft.above hollow,bears N.and S.;descend.
80.24	The cor.of secs.4,5,8,and 9.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Good grass for grazing.
	Mountainous land,80.24 chs.

N.0° 03'W.,on a random line bet.secs.4 and 5.

40.00 Set temp.¼ sec.cor.

80.25 Intersect N.bdy.of Tp.20 lks.East of the cor.of secs.4,5,32,and 33,heretofore described.

Thence we run

S. 0° 12'E.,on a true line bet.secs.4 and 5.

Over mountainous land;through scattering timber and dense undergrowth;ascend.

26.00 Top of ridge,200 ft,above sec.cor.,bears N.20° W.and S.20° E.;descend.

40.25 Set a limestone,18x9x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

A cedar,9 ins.diam.,bears N.68° E.,32 lks. dist.,marked ¼ S.4,B.T.

A cedar,14 ins.diam.,bears W.,40 lks.dist., marked ¼ S.5,B.T.

80.25 The cor.of secs.4,5,8,and 9.

Land,mountainous.

Soil,gravelly;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Chains	
	Mountainous land,or land covered with dense under-growth,80.25 chs.
	September 17,1901.
	September 18,1901:At 7 h 3 m a.m.,l.m.t.,we set off 39° 38'N.,on the lat .arc;2° 3'N.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.5,6,31,and 32,on S.bdy.of Tp.,heretofore described.
	Thence we run
	N.0° 03'W.,bet.secs.31 and 32.
	Over mountainous land;through scattering timber and dense undergrowth;descend gradually.
40.00	Set a limestone,20x8x6 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,8 ins.diam.,bears N.20° E.,90 lks. dist.,marked ¼ S.32,B.T.
	A cedar,6 ins.diam.,bears S.85° W.,25 lks. dist.,marked ¼ S.31,B.T.
80.00	Set a limestone,20x8x6 ins.,15 ins.in the ground , for cor.of secs.29,30,31,and 32,marked with 1 notch on S.and 5 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly ;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	N.89° 48'E.,on a random line bet.secs.29 and 32.
40.00	Set temp.¼ sec.cor.

Subdivision of T.13 S. R.20 E.-Continued.

Chains	
79.90	Intersect N.and S.line,18 lks.N.of the cor.of secs. 28,29,32,and 33.
	Thence we run
	S.89° 56'W.,on a true line bet.secs.29 and 32.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
5.00	Bottom of hollow,25 ft.below sec.cor.,course N.;ascend.
10.00	Top of ridge,50 ft.above hollow,bears N.20°W.and S. 20°E.;descend.
31.48	Bottom of hollow,75 ft.below ridge,course N.20°W.; ascend.
39.95	Set a quartzite stone,24x12x6 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face; from which
	A cedar,4 ins.diam.,bears N.45°E.,100 lks. dist.,marked ¼ S.29,B.T.
	A cedar,5 ins.diam.,bears S.20°E.,65 lks. dist.,marked ¼ S.32,B.T.
79.90	The cor.of secs.29,30,31,and 32.
	Land,mountainous.
	Soil,gravelly and clay loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land ,or land covered with dense undergrowth,79.90 chs.

	S.89°48'W.,on a random line bet.secs.30 and 31.
40.00	Set temp.¼ sec.cor.
78.95	Intersect W.bdy.of Tp.5 lks.S.of the cor.of secs. 25,30,31,and 36,heretofore described.
	Thence we run
	N.89°50'E.,on a true line bet.secs.30 and 31.
	Over mountainous land;through dense undergrowth and scattering timber;ascend.

Chains	
38.95	Set a quartzite stone,22x12x5 ins.,16 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,6 ins.diam.,bears N.60° E.,216 lks. dist.,marked ¼ S.30,B.T. A cedar,8 ins.diam.,bears S.48° W.,76 lks. dist.,marked ¼ S.31,B.T.
39.00	Begin more gradual ascent,bears N.10° W.and S.10° E.
57.95	Top of ridge,400 ft.above sec.cor.,bears N.and S.; descend.
68.00	Bottom of hollow,150 ft.below ridge,course N;30° E.; ascend.
77.00	Top of ridge,100 ft.above hollow.,bears N.E.and S. W.;descend.
78.95	The cor.of secs.29,30,31,and 32. Land,mountainous. Soil,gravelly;3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,78.95 chs.

N.0° 03'W.,bet.secs.29 and 30.
Over mountainous land;through dense undergrowth and scattering timber;ascend.

2.00	Top of ridge,25 ft.above sec.cor.,bears N.E.and S.W.; descend.
8.25	Bottom of hollow,50 ft.below ridge,course N.E.;ascend.
30.00	Top of ridge,100 ft.above hollow,bears E.and W.;descend.
40.00	Set a limestone,24x10x5 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
80.00	Set a limestone,15x12x4 ins.,10 ins.in the ground,for cor.of secs.19,20,29,and 30,marked with 2 notches on S.and 5 notches on E.edges;from which A pinion pine,5 ins.diam.,bears N.45° E.,316 lks.dist.,marked T.13 S.,R.20 E.,S.20,B.T. A pinion pine,4 ins.diam.,bears S.65° E.,54 lks.dist.,marked T.13 S.,R.20 E.,S.29,B.T. A pinion pine,10 ins.diam.,bears S.46° W.,64 lks.dist.,marked T.13 S.,R.20 E.,S.30,B.T. A pinion pine,4 ins.diam.,bears N.29° W.,114 lks.dist.,marked T.13 S.,R.20 E.,S.19,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	September 18,1901:At the noon hour the sky is overcast and solar observations are impossible.
	N.89° 56'E.,on a random line bet.secs.20 and 29.
40.00	Set temp.¼ sec.cor.
79.98	Intersect N.and S.line,18 lks.S.of the cor.of secs. 20,21,28,and 29.
	Thence we run
	S.89° 48'W.,on a true line bet.secs.20 and 29.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
5.00	Top of ridge,40 ft.above sec.cor.,bears N.E.and S.W.; descend.
26.00	Bottom of hollow,200 ft.below ridge,course S.60° W.; ascend.
35.00	Top of ridge,100 ft.above hollow,bears N.and S.;descend.

Chains

37.00 Trail,bears N.60°W.and S.60°E.

38.00 Bottom of hollow,25 ft.below ridge,course N.60°W.; ascend.

39.99 Set a sandstone,18x8x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.

56.00 Top of ridge,200 ft.above hollow,bears N.and S.;descend.

69.00 Bottom of hollow,200 ft.below ridge,course N.30°W.; ascend.

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

Land,mountainous.

Soil,gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,79.98 chs.

S.89°50'W.,on a random line bet.secs.19 and 30.

40.00 Set temp.¼ sec.cor.

79.12 Intersect W.bdy.of Tp.,5 lks.S.of the cor.of secs. 19,24,25,and 30,heretofore described.

Thence we run

N.89°52'E.,on a true line bet.secs.19 and 30.

Over mountainous land;over ledges;through dense undergrowth;ascend.

7.00 Leave ledges,and begin more gradual ascent,bears N.W. and S.E.

39.12 Set a limestone,24x5x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,3 ft.base,1½ ft.high,N.of cor.Pits impracticable.

40.00 Top of ridge,250 ft.above sec.cor.,bears N.and S.;

Chains	
	descend.
55.40	Bottom of hollow,200 ft.below ridge,course N.20° E.; ascend.
79.12	The cor.of secs.19,20,29,and 30.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.12 chs.

	N.0° 03'W.,bet.secs.19 and 20.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
16.80	Trail,bears N.60° W.and S.60° E.
18.00	Bottom of hollow,200 ft.below sec.cor.,course N.70° W.;ascend.
40.00	Set a limestone,15x10x5 ins.,10 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,9 ins.diam.,bears N.86° E.,65 lks.dist.,marked ¼ S.20,B.T.
	A pinion pine,9 ins.,diam.,bears N.84° W.,45 lks.dist.,marked ¼ S.19,B.T.
62.00	Top of ridge,250 ft.above hollow,bears E.and W.;descend.
80.00	Set a limestone,15x8x7 ins.,10 ins.in the ground,for cor.of secs.17,18,19,and 20,marked with 3 notches on S.and 5 notches on E.edges;from which
	A cedar,5 ins.diam.,bears N.63° E.,86 lks. dist.,marked T.13 S.,R.20 E.,S.17,B.T.
	A cedar,7 ins.diam.,bears S.27° E.,131 lks. dist.,marked T.13 S.,R.20 E.,S.20,B.T.
	A cedar,8 ins.diam.,bears S.75° W.,94 lks. dist.,marked T.13 S.,R.20 E.,S.19,B.T.

Chains	
	A cedar,7 ins.diam.,bears N.16°W.,160 lks. dist.,marked T.13 S.,R.20 E.S.18,B.T.
	Land,mountainous.
	Soil,gravelly and white clay loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.89°48'E.,on a random line bet.secs.17 and 20.
40.00	Set temp.¼ sec.cor.
80.02	Intersect N.and S.line,28 lks.N.of the cor.of secs. 16,17,20,and 21.
	Thence we run
	West,on a true line bet.secs.17 and 20:
	Over mountainous land;through heavy timber;descend.
15.00	Leave heavy timber and enter scattering timber,bears N.and S.
18.60	Bottom of hollow,150 ft.below sec.cor.,course S.W.; ascend.
33.00	Top of ascent,150 ft.above hollow,bears N.E.and S.W.; thence over mesa. Enter heavy timber,bears N.E.and S.W.
40.01	Set a limestone,16x10x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,7 ins.diam.,bears N.55°E.,75 lks. dist.,marked ¼ S.17,B.T.
	A pinion pine,4 ins.diam.,bears S.30°E.,35 lks.dist.,marked ¼ S.20,B.T.
45.00	Edge of mesa,bears N.75°E.and S.75°W.;descend.
80.02	The cor.of secs.17,18,19,and 20.
	Land,mountainous and level.
	Soil,white clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.

Chains Good grass for grazing.

Mountainous or heavily timbered land,80.02 chs.

S.89° 52'E.,on a random line bet.secs.18 and 19.

40.00 Set temp.¼ sec.cor

79.28 Intersect W.bdy.of Tp.,5 lks.S.of the cor.of secs. 13,18,19,and 24,heretofore described.

Thence we run N.89° 54'E.,on a true line bet.secs. 18 and 19.

Over mountainous land;through scattering undergrowth; ascend gradually.

10.00 Enter scattering timber,bears N.and S.

39.28 Set a limestone,22x10x4 ins.,16 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.

43.00 Top of ridge,350 ft.above sec.cor.,bears N.W.and S. E.;descend.

79.28 The cor.of secs.17,18,19,and 20.

Land,mountainous.

Soil,white clay and gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,79.28 chs.

N.0° 03'W.,bet.secs.17 and 18.

Over mountainous land;through scattering timber and scattering undergrowth;descend gradually;

40.00 Set a limestone,26x5x5 ins.,19 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

57.00 Bottom of hollow,300 ft.below sec.cor.,course N.50°

Subdivision of T.13 S.,R.20 E.-Continued.

Chains	
	W.;ascend.
80.00	Set a limestone,24x10x7 ins.,18 ins.in the ground,for cor.of secs.7,8,17,and 18,marked with 4 notches on S.and 5 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,white clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00chs.

	East ,on arandom line bet.secs.8 and 17.
40.00	Set temp.¼ sec.cor .
79.90	Intersect N.and S.line,19 lks.N.of the cor.of secs. 8,9,16,and 17.
	Thence we run
	N.89° 52'W.,on a true line bet.secs.8 and 17.
	Over mountainous land;through scattering timber and dense undergrowth;descend gradually;
39.95	Bottom of hollow,250 ft.below sec.cor.,course N.W.; Set a limestone,18x10x4 ins.,12 ins.in the ground,, for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
	Ascend.
50.50	Top of ridge,250 ft.above hollow,bears N.W.and S.E.; descend.
79.90	The cor.of secs.7,8,17,and 18.
	Land,mountainous.
	Soil,gravelly and white clay loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.90 chs.

Chains

September 18,1901.

September 19,1901:At 7 h 3 m a.m.,l.m.t.,we set off 39° 42'N.,on the lat.arc;1° 39'N.,on the decl.arc;and determine a true meridian with the solar,at the cor. of secs.7,8,17,and 18.

Thence we run

S.89° 54'W.,on a random line bet.secs.7.and 18.

40.00 Set temp. ¼ sec. cor.

79.46 Intersect W.bdy.of Tp.,8 lks.S.of the cor.of secs. 7,12,13,and 18,heretofore described.

Thence we run

N.89° 57'E.,on a true line bet.secs.7 and 18.

Over mountainous land;through scattering timber and dense undergrowth;ascend.

23.00 Top of ridge,200 ft.above sec.cor.,bears N.50°W.and S.50°E.;descend.

39.46 Bottom of hollow,250 ft.below ridge,course N.60°W.

Set a limestone,14x12x5 ins.,9 ins.in the ground ,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.

Ascend.

79.46 The cor.of secs.7,8,17,and 18.

Land,mountainous.

Soil,white clay loam and gravelly;2nd and 3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,79.46 chs.

N.0° 03'W.,bet.secs.7 and 8.

Over mountainous land;through dense undergrowth ;

Chains	
	ascend.
25.00	Top of ridge,250 ft.above sec.cor.,bears E.and W.; descend.
38.00	Bottom of hollow,250 ft.below ridge,course N.85°W.; ascend.
40.00	Set a limestone,18x8x8 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
80.00	Set a sandstone,18x10x6 ins.,12 ins.in the ground,for cor.of secs.5,6,7,and 8,marked with 5 notches on S. and 5 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly and clay loam;2nd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	S.89° 52'E.,on a random line bet.secs.5 and 8.
40.00	Set temp.¼ sec.cor.
80.00	Intersect N.and S.line,16 lks.S.of the cor.of secs. 4,5,8,and 9.
	Thence we run
	N.89° 59'W.,on a true line bet.secs.5 and 8.
	Over mountainous land;through scattering timber and scattering undergrowth;ascend.
10.50	Top of ridge,250 ft.above sec.cor.,bears N.60°W.and S.60°E.;descend.
40.00	Set an oilshale stone,18x10x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,5 ins.diam.,bears N.20°E.,54 lks. dist.,marked ¼ S.5,B.T.

Chains	
	A cedar, 8 ins. diam., bears S. 10° E., 47 lks. dist., marked ½ S. 8, B. T.
71.50	Bottom of hollow, 250 ft. below ridge, course S.W.; ascend.
80.00	The cor. of secs. 5, 6, 7, and 8.
	Land, mountainous.
	Soil, gravelly and clay loam; 2nd rate.
	Timber, cedar and pinion pine.
	Undergrowth, sage brush.
	Good grass for grazing.
	Mountainous land, 80.00 chs.
	S. 89° 57' W., on a random line bet. secs. 6 and 7.
40.00	Set temp. ¼ sec. cor.
79.58	Intersect W. bdy. of Tp. 7 lks. S. of the cor. of secs. 1, 6, 7, and 12, heretofore described.
	Thence we run
	East, on a true line bet. secs. 6 and 7.
	Over mountainous land; through dense undergrowth; descend.
5.00	Bottom of hollow, 50 ft. below sec. cor., course N. 70° W.; ascend.
39.58	Set a limestone, 18x6x5 ins., 12 ins. in the ground, for ¼ sec. cor., marked ¼ on N. face; and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor. Pits impracticable.
78.00	Top of ridge, 275 ft. above hollow, bears N. 80° E. and S. 80° W.; descend.
79.58	The cor. of secs. 5, 6, 7, and 8.
	Land, mountainous.
	Soil, white clay loam; 3rd rate.
	No timber.
	Undergrowth, sage brush.
	Good grass for grazing.
	Mountainous land, or land covered with dense undergrowth, 79.58 chs.
	September 19, 1901: At this cor. we set off 1° 33' N., on

Subdivision of T.13 S.,R.20 E.-Continued,

Chains	
	the decl.arc;and at 11 h 59 m a.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39° 42' N.
	N.0° 03'W.,on a random line bet.secs.5 and 6.
40.00	Set temp.¼ sec.cor.
80.10	Intersect N.bdy.of Tp. 5 lks.West of the cor.of secs.5,6,31,and 32,heretofore described.
	Thence we run
	S.0° 01'E.,on a random line bet.secs.5 and 6.
	Over mountainous land;through dense undergrowth;ascend.
8.00	Top of ridge,50 ft.above sec.cor.,bears S.80°E.and N.80°W.;descend.
38.50	Bottom of hollow,200 ft.below ridge,course W.;ascend.
40.10	Set a limestone,20x6x6 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
79.00	Top of ridge,200 ft.above hollow,bears N.80°E.and S.80°W.;descend.
80.10	The cor.of secs.5,6,7,and 8.
	Land,mountainous.
	Soil,white clay loam;3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.10 chs.
	September 19,1901.

GENERAL DESCRIPTION.

This township is nearly all mountainous excepting a small mesa in in the center of the township,and the soil ranges from rocky ground to rich loam.The soil

Subdivision of T.13 S.,R.20 E.-Concluded.

Chains of the bottoms of hollows and the mesas is generally white clay or gravelly loam;2nd rate,and capably of producing good crops without irrigation.

The soil of the remaining portion of the township is generally gravelly ;3rd rate excepting a few rocky ridges.

Cedar and pinion pine timber is found in nearly parts of the township.

There are no settlers in the township .

There is no water in the township.

The township is well adapted for winter and early spring grazing.

There are no indications of mineral in the township.

Geo. P. Stewart
John R. Stewart
U.S.Deputy Surveyors.

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FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by .....

....., United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of .....

.....

showing the respective capacities in which they acted:

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

In final affidavits see book X. Tp. 11 S. R. 19 E.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted .....

....., United States Deputy Surveyor, in surveying all hose parts or portions of the .....

.....

.....

.....of the .....

..... meridian, ... of ..... which are represented n the foregoing field notes as having been surveyed by him and under his direction; and that said survey as been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the orner monuments established, according to the instructions furnished by the United States Surveyor eneral for .....

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

In final affidavits see book X. Tp. 11 S. R. 19 E.

.....

bscribed and sworn to before me this .....

day of ....., 189

SEAL

.....

.....

6—161

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, _____, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from _____, bearing date of the United States Surveyor General for _____ day of _____, 189 , I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for _____, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____ _____ _____ _____ _____ of the _____ meridian, in the _____ of _____, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

_____
United States Deputy Surveyor.

Subscribed by said _____, and sworn to before me this _____ day of _____, 189

SEAL

_____

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah, February 5, 1903, 189

The foregoing field notes of the survey of the Subdivisional Lines of Township 13 South Range 20 East of the Salt Lake Base & Meridian, Utah

executed by Scott P. Stewart & Johnson P. Stewart under his contract No. 262, dated April 12, 1901, 189 , having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Edward M. Anderson
United States Surveyor General.

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

_____
United States Surveyor General.

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Filed May 13. 1901.

4—679.

M.

BOOK A-289

FIELD NOTES

OF THE SURVEY OF THE

WEST AND NORTH BOUNDARIES

of

Township No. 13 South, Range No. 19 East,

Of the Salt Lake Base and *Meridian,*

in the STATE OF UTAH?

AS SURVEYED BY

Scott P. Stewart and John R. Stewart, *United States Deputy Surveyor,s*

under their Contract No. 242, *dated* April 12, 1901.

Survey commenced September 19, 1901.

Survey completed September 21, 1901.

6—151

BOOK A-289

NAMES AND DUTIES OF ASSISTANTS.

Andy J. Stewart	Chainman,
Edwin A. Peay	Chainman,
Vosco Call	Chainman,
Hugh Conover	Chainman,
Clarence S. Jarvis	Moundman,
John J. Harding	Moundman,
George W. Ekins	Axman,
Harry Burton	Axman,
Harvey R. Booth	Flagman,
Gilbert Burr	Flagman,

For preliminary affidavits see book C. Tp. 15 S R 20 E

6—151

BOOK A-289

INDEX DIAGRAM.

Township....., *Range*.....

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

We, _____ and _____ do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of _____

_____, *Chainman.*

_____, *Chainman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

We, _____ and _____ do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of _____

_____, *Moundman.*

_____, *Moundman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

We, _____ and _____ do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of _____

_____, *Axman.*

_____, *Axman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

I, _____, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of _____

_____, *Flagman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

West Boundary of T.13 S.,R.19 E.-

Survey commenced September 19,1901,and executed with a W.and L.E.Gurley light mountain transit,No.3,with 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 latitude and declination arcs;and a W.and L.E.Gurley plain transit,No.2,of which the horizontal limb is provided with one double vernier reading to single minutes of arc.

The instruments were examined,tested on the true meridian at Salt Lake City,Found correct,and were approved by the surveyor general for Utah,the former on June 6,1901,and the latter on May 29,1901.

We examine the adjustments of the instruments and correct the level and collimation errors,then to test the solar apparatus of the No.3 instrument,by comparing its indications resulting from solar observations made during p.m.and a.m.hours ,with a true meridian established by Polaris observation ,we proceed as follows:

At the cor.of Tps.13 and 14 S.,Rs.18 and 19 E.,heretofore described,latitude 39° 38'N.,longitude 109° 57' W.;we set off 39° 38'N.,on the lat.arc;1° 30'N.,on the decl.arc;(at 4 h 0 m p.m.,l.m.t.,) and determine a true meridian with the solar and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N.of the cor.

September 19,1901.

September 20,1901: At 1 h 29 m a.m.,l.m.t.,we observe Polaris at upper culmination in accordance with the Manual,and mark the true meridian thus determined by cutting a small groove in the stone already set 5.00 chs.N.of the cor.;this mark falls 0.37 ins.east of the mark determined by the solar.

At 7 h 0 m a.m.,l.m.t.,we set off 39° 38'N.,on the lat. arc;1° 16'N.,on the decl.arc;and mark the true meridian determined by the solar,by a cross on the stone

West boundary of T.13 S.,R.19 E.-Continued.

Chains	
	already set 5.00 chs.N.of the cor.;this mark falls 0.39 ins.east of the true meridian determined by observation on Polaris.
	The solar apparatus by p.m.and a.m.observations, defines positions for true meridians respectively about 0'20"west and 0'20"east of the true meridian established by Polaris observation;therefore we conclude that the adjustments of the instruments are satisfactory.
	The magnetic bearing of the true meridian at 7 h 30 m a.m.is 16° 16.8'W.,the angle thus determined reduced by the table page 100 of the Manual,gives the mean mag.decl.16° 11'E.
	From the above described cor.we run North ,bet.secs.31 and 36.
	Over mountainous land;through scattering timber and scattering undergrowth;ascend.
10.50	Top of ascent,200 ft.above cor.,bears E.and W.; thence over rolling mesa.Enter dense sage brush.
15.00	Leave timber ,bears E.and W.
37.05	Trail,bears N.30° E.and S.30° W.
40.00	Set a sandstone,16x7x6 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
75.60	Trail,bears N.10° E.and S.10° W.
80.00	Set a sandstone,16x10x4 ins.,11 ins.in the ground, cor.of secs.25,30,31,and 36,marked with 5 notches on N.and 1 notch on S.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,rolling mesa. and mountainous.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-

West boundary of T.13 S.,R.19 E.-Continued.

Chains	
	growth,80.00 chs.
	North,bet.secs.25 and 30.
	Over rolling mesa;through dense undergrowth.
35.00	Enter heavy cedar and pinion pine timber,bears E.and W.
38.50	Leave timber,bears E.and W.
40.00	Set a sandstone,24x6x5 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,4 ins.diam.,bears S.29°W.,200 lks. dist.,marked ¼ S.25,B.T. A cedar,5 ins.diam.,bears S.10°E.,300 lks. dist.,marked ¼ S.30,B.T.
54.00	Enter heavy timber,bears E.and W.
62.00	Leave timber,bears E.and W.
80.00	Set a limestone,26x7x5 ins.,20 ins.in the ground,for cor.of secs.19,24,25,and 30,marked with 2 notches on S.and 4 notches on N.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	North ,bet.secs.19 and 24.
	Over rolling mesa;through dense undergrowth.
28.00	Edge of mesa,bears N.70°E.and S.70°W.;descend.
40.00	Set a sandstone,18x6x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
56.00	Bottom of hollow,200 ft.below mesa,course N.80°W.;

Chains

ascend. Enter scattering timber,bears with hollow.

80.00 Set a sandstone,18x10x7 ins.,12 ins.in the ground,for cor.of secs.13,18,19,and 24,marked with 3 notches on S.and 3 notches on N.edges;from which

A cedar,6 ins.diam.,bears N.40°E.,43 lks. dist.,marked T.13 S.,R.19 E.,S.18,B.T.

A cedar,6 ins.,diam.,bears S.65°E.,41 lks. dist.,marked T.13 S.,R.19 E.,S.19,B.T.

A cedar,18 ins.diam.,bears S.50°W.,65 lks. dist.,marked T.13 S.,R.18 E.,S.24,B.T.

A cedar,8 ins.diam.,bears N.50°W.,90 lks. dist.,marked T.13 S.,R.18 E.,S.13,B.T.

Land,mountainous and rolling mesa.

Soil,sandy and white clay loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

September 20,1901:At the noon hour the sky is overcast and solar observations are impossible.

North,bet.secs.13 and 18.

Over mountainous land;through scattering timber and dense undergrowth;ascend.

16.00 Top of ascent,150 ft.above sec.cor.,bears E.and W.; thence over rolling mesa.

40.00 Set a limestone,20x8x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

65.00 Edge of mesa,bears N.E.and S.W.;descend.

77.74 Bottom of hollow,350 ft.below mesa,course N.E.;ascend.

78.50 Top of ascent,250 ft.above hollow,bears N.E.and S.W.

West boundar of T.13 S.,R.19 E.-Continued.

Chains Thence over mesa.

80.00 Set a sandstone,24x8x7 ins.18 ins.in the ground,for cor.of secs.7,12,13,and 18,marked with 2 notches on N.and 4 notches on S.edges; and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Land,mountainous and rolling mesa.

Soil,sandy loam and white clay;2nd and 3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense under-growth,80.00 chs.

North ,bet.secs.7 and 12.

Over rolling mesa;through dense undergrowth and scattering timber.

40.00 Set a sandstone,18x8x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

A cedar,6 ins.diam.,bears S.79° E.,75 lks. dist.,marked ¼ S.7,B.T.

A cedar,7 ins.diam.,bears S.80° W.,130 lks. dist.,marked ¼ S.12,B.T.

73.00 Edge of mesa,bears N.W.and S.E.;descend.

80.00 Set a sandstone,50x10x8 ins.,37 ins.in the ground,for cor.of secs.1,6,7,and 12,marked with 1 notch on N. and 5 notches on S.edges;from which

A cedar ,6 ins.diam.,bears N.83° E.,67 lks. dist.,marked T.13 S.,R.19 E.,S.6,B.T.

A cedar,7 ins.diam.,bears S.20° E.,100 lks. dist.,marked T.13 S.,R.19 E.,S.7,B.T.

A cedar,8 ins.diam.,bears S.75° W.,40 lks. dist. ,marked T.13 S.,R.18 E.,S.12,B.T.

No other tree within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Land,mountainous and rolling mesa.

Soil,sandy loam and clay ;2nd and 3rd rate.

Chains	
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

North,bet secs.1 and 6.

Over mountainous land;through. dense undergrowth and scattering timber;descend.

20.00 Bottom of hollow,250 ft.below sec.cor.,course N.E.; ascend.

40.00 Set a sandstone,24x10x4 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 cor.Pits impracticable.

80.00 Set temp.cor.of Tps.12 and 13 S.,Rs.18 and 19 E.

Note:For description of permanent cor.see notes of N.bdy.of T.13 S.,R.19 E.

Land,mountainous.

Soil,gravelly and clay;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

September 20,1901.

September 21,1901:At 7 h 0 m a.m.,l.m.t.,we set off 39° 43' N.,on the lat.arc;0° 53' N.,on the decl.arc;and determine a true meridian with the solar at the temp. cor.of Tps.12 and 13 S.,Rs.18 and 19 E.

Thence we run

S.89° 56' E.,on a random line along N.bdy.of Tp.setting temp.$\frac{1}{4}$ sec.and sec.cors.at intervals of 40.00

Chains	
	chs.,and at 480.20 chs.intersect E.bdy.of T.13 S.,R. 19 E.,56 lks.South of the cor.of Tps.12 and 13 S.,Rs. 19 and 20 E.,heretofore described,the falling answers to a correction of 4'.
	September 21,1901:At this cor.we set off 0° 46'N.,on the decl.arc;and at 0 h 2 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39° 43'N.
	Thence we run
	West,on a true line along N.bdy.of Tp.bet.secs.1 and 36.
	Over mountainous land;through dense undergrowth;
.25	Hill Creek bed(dry),20 lks.wide,course N.10° W.
.50	Leave canon bottom,bears N.10° W.and S.10° E.;ascend.
35.00	Top of ridge,250 ft.above Tp.cor.,bears N.E.and S.W.; descend.
40.00	Set a limestone,24x14x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable .
62.00	Bottom of hollow,250 ft.below ridge,course N.20° E.; ascend. Enter scattering timber,bears with hollow.
80.00	Set an oilshale stone,18x10x10 ins.,12 ins.in the ground,for cor.of secs.1,2,35,and 36,marked with 1 notch on E.and 5 notches on W.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly and clay;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	West,on a true line bet.secs.2 and 35.

North boundary of T.13 S. R.19 E.-Continued.

Chains	
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
8.00	Top of ridge,200 ft.above sec.cor.,bears N.and S.;descend.
21.00	Bottom of hollow,250 ft.below ridge,course N.20° E.Ascend.
40.00	Set a limestone,18x8x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
77.50	Top of ridge,250 ft.above hollow,bears N.60° E.and S.60° W.;descend.
80.00	Set a limestone,18x10x4 ins.,12 ins.in the ground, for cor.of secs.2,3,34,and 35,marked with 2 notches on E.and 4 notches on W.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth ,80.00 chs.

	West,on a true line bet.secs.3 and 34.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
27.00	Bottom of hollow,200 ft.below sec.cor.,course N.60° E. Ascend.
40.00	Set a limestone,24x14x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face; and raise a mound of stone,2 ft.base,1½ ft .high,N.of cor.Pits impracticable.
50.00	Top of ascent,250 ft.above hollow,bears N.E.and S.W.

North boundary of T.13 S. R.19 E.-Continued.

Chains	
	Thence over rolling mesa.
80.00	Set a limestone,20x14x4 ins.,16 ins.in the ground,fo cor.of secs.3,4,33,and 34,marked with 3 notches on E.and 3 notches on W.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and rolling mesa.
	Soil,gravelly and sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	West,on a true line bet.secs.4 and 33.
	Over rolling mesa;through dense undergrowth .
40.00	Set a limestone,18x8x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impractic-able.
80.00	Set a limestone,18x12x4 ins.12 ins.in the ground,for cor.of secs.4,5,32,and 33,marked with 4 notches on E.and 2 notches on W.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W .of cor.Pits impracticable.
	Land,rolling mesa.
	Soil,clay and sandy loam;2nd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Land covered with dense undergrowth,80.00 chs.
	West,on a true line bet.secs.5 and 32.
	Over mesa;through dense undergrowth.
.25	Edge of mesa,bears N.and S.;descend.
5.00	Bottom of hollow,200 ft.below mesa,course N.20° E.;

Chains	
	ascend.
12.00	Top of ascent,175 ft.above hollow,bears N.and S.; thence over rolling mesa.
30.00	Edge of mesa,bears N.and S.;descend.
37.50	Bottom of hollow,200 ft.below mesa,course N.20° E.; ascend.
40.00	Set a limestone,22x12x4 ins.,16 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
43.00	Top of ascent,200 ft.above hollow,bears N.10° E.and S.10° W.;thence over rolling mesa.
77.00	Edge of mesa,bears N.and S.;descend .
78.50	Bottom of head of hollow,100 ft.below mesa,course N.10° W.;ascend.
80.00	Top of ascent,100 ft.above hollow,bears N.10° W.and S. 10° E.
	Set a limestone,18x12x5 ins.,12 ins.in the ground,for cor.of secs.5,6,31,and 32,marked with 5 notches on E. and 1 notch on W.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and rolling mesa.
	Soil,sandy and white clay loam;2nd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	West,on a true line bet.secs.6 and 31.
	Over rolling mesa;through dense undergrowth.
6.50	Edge of mesa,bears N.20° E.and S.20° W.;descend.
40.00	Set a sandstone,30x7x5 ins.,22 ins.in the ground,for ¼ sec .cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft. high,N.of cor.Pits impractic-

Chains	able.
52.50	Bottom of Tabyago Canon,450 ft.below mesa,course N.; ascend.Trail in bottom,bears with canon.
80.20	The temp.cor.of Tps.12 and 13 S.,Rs.18 and 19 E. Set a quartzite stone,30x8x4 ins.,22 ins.in the ground,for.cor.of Tps.12 and 13 S.,Rs.18 and 19 E., marked 12 S.on N.E.,19 E.on S.E.,13 S.on S.W.,and 18 E.on N.W.faces;with 6 notches on each edge;and raise a mound of stone, 2 ft.base,1½ ft.high,S.of cor. Pits impracticable. Land,mountainous and rolling mesa. Soil,white clay loam;2nd rate. No timber. Undergrowth,sage brush and shadscales. Good grass for grazing. Mountainous land,or land covered with dense under growth,80.20 chs.

September 21,1901.

Boundaries of T.13 S.,R.19 E.

Latitudes,departures,and closing errors.

Line designated	true bearing	distance chs.	latitudes N. chs.	latitudes S. chs.	departures E. chs.	departures W. chs.
W.bdy.of T.13 S.,R.19 E.	North	480.00	480.00			
N.bdy.of T.13 S.,R.19 E.	East	480.20			480.20	
E.bdy.of T.13 S.,R.19 E.	South	480.00		480.00		
S.bdy.of T.13 S.,R.19 E.	N.89° 56'W.	480.04	.56			480.04
Convergency					.60	
Totals			480.56	480.00	480.80	480.04
			480.00		480.04	
Error in lat.			.56			
Error in dep.					.76	

This township is rough and mountainous with the exception of some high rolling mesas.the township is well timbered,and well adaped for winter grazing. It should be subdivided.

Scott P. Stewart.
John R. Stewart
U.S.Deputy Surveyors.

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FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by ..... , United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of .....

.....

lowing the respective capacities in which they acted:

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted ..... , United States Deputy Surveyor, in surveying all ose parts or portions of the .....

.....

.....

..... of the .....

..... meridian, ... of ....., which are represented the foregoing field notes as having been surveyed by him and under his direction; and that said survey s been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the rner monuments established, according to the instructions furnished by the United States Surveyor neral for .....

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

.....

scribed and sworn to before me this .....
day of ....., 189

.....

SEAL

.....

—151

BOOK A-280

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, ..., United States Deputy Surveyor, ... solemnly swear that, in pursuance of a contract received from ... United States Surveyor General for ....., bearing date of ... . day of ....., 189 , I have well, faithfully, and truly, in my ... proper person, and in strict conformity with the instructions furnished by the United States Survey... General for ....., the Manual of Surveying Instructions, and the laws of t... United States, surveyed all those parts or portions of .....

.....

.....

.....

.....of the

..... meridian, in the ..... of ....., which are represented in t... foregoing field notes as having been surveyed by me, and under my direction; and I do further solem... swear that all the corners of said survey have been established and perpetuated in strict accordance wi... the Manual of Surveying Instructions, and the special written instructions of the United States Su... General for .....and in the specific manner described in the field notes, and th... the foregoing are the original field notes of such survey; and should any fraud be detected, I will su... the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

.....

United States Deputy Survey...

Subscribed by said ....., and sworn to before me this ..... day of ....., 189

SEAL

.....

.....

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah, February 5th, 1903, 189

The foregoing field notes of the survey of The West and North Boundaries of Township 13 South, Range 19 East of the Salt Lake Base and Meridian, Utah

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.....

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.....

executed by Scott P. Stewart and John W. Stewart under his contract No. 242, dated April 12, 1901, 189 , having be... critically examined, and the necessary corrections and explanations made, the said field notes, and t... surveys they describe, are hereby approved.

Edward M. Anderson

United States Surveyor Gene...

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

.....

United States Surveyor Gen...

6—151

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BOOK A-289

FIELD NOTES

OF THE SURVEY OF THE

SUBDIVISION

of

Township No.12 South , Range 19 East ,

Of the SALT LAKE BASE AND *Meridian,*

In the STATE OF UTAH.

AS SURVEYED BY

Scott I.Stewart and John H.Stewart *United States Deputy Surveyors*

Under their *Contract No.* 242 *dated* April 12,1901. *189*

Survey commenced September 22,1901. *189x*

Survey completed September 30,1901. *189x*

BOOK A-289

NAMES AND DUTIES OF ASSISTANTS.

Andy J. Stewart	Chainman,
Edwin A. Peay	Chainman,
Vosco Call	Chainman,
Hugh Conover	Chainman,
Clarence S. Jarvis	Moundman,
John J. Harding	Moundman,
George W. Ekins	Axman,
Harry Burton	Axman,
Harvey R. Booth	Flagman,
Gilbert Burr	Flagman,

For preliminary affidavits see book D. Tp. 15 S. R. 20 E.

6—151

BOOK A-289

INDEX DIAGRAM.

Township....., *Range*.....

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

WE, _____ and _____ do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of

_____

_____, *Chainman.*

_____, *Chainman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

WE, _____ and _____ do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Moundman.*

_____, *Moundman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

WE, _____ and _____ do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of

_____

_____, *Axman.*

_____, *Axman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

_____

_____

I, _____, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of _____

_____, *Flagman.*

Subscribed and sworn to before me this _____ day of _____, 189

SEAL

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Subdivision of T.13 S.,R.19 E.

Chains

Survey commenced September 22,1901,and executed with a W.and L.E.Gurley light mountain transit,No.3,with 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 latitude and declination arcs;and a W.and L.E.Gurley plain transit,No.2,of which the horizontal limb is provided with one double vernier reading to single minutes of arc;

The instruments were examined,tested on the true meridian at Salt Lake City,found correct,and were approved by the surveyor general for Utah,the former on June 6,1901,and the latter on May 29,1901.

We examine the adjustments of the instruments,and correct the level and collimation errors,then,to test the solar apparatus,of the No.3 instrument,by comparing its indications resulting from solar observations made during p.m.and a.m.hours,with a true meridian established by Polaris observation,we proceed as follows:

At the cor.of secs.1,2,35,and 36,on S.bdy.of Tp., heretofore described,latitude 39° 38'N.,longitude 109° 47'W.,we set off 39° 38'N.,on the lat.arc;0° 20'N.,on the decl.arc;and (at 4 h 3 m p.m.,l.m.t.,) determine a true meridian with the solar and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N.of the cor.

September 22,1901.

September 23,1901:At 1 h 18 m a.m.,l.m.t.,we observe Polaris at upper culmination in accordance with the Manual,and mark the true meridian thus determined by cutting a small groove in the stone already set 5.00 chs.N.of the cor.;this mark falls 0.28 ins.east of the mark determined by the solar.

At 7 h 0 m a.m.,l.m.t.,we set off 39° 38'N.,on the lat arc;0° 6'N.,on the decl.arc;and mark the true meridian

Chains	
	determined with the solar,by a cross on the stone, already set. 5.00 chs.N.of our station;this mark falls 0.22 ins.east of the true meridian established by Polaris observation.
	The solar apparatus by p.m.and a.m.observations, defines positions for true meridians ,respectively about 0'15"west and 0'12"east of the true meridian established by Polaris observation;therefore we conclude that the adjustments of the instruments are satisfactory.
	The magnetic bearing of the true meridian at 7 h 30 m a.m.is 16° 13.8'W.,the angle thus determined reduced by the table page 100 of the Manual,gives the mean mag.decl.16° 11'E.
	From the above described cor we run N.0° 01'W.,bet.secs.35 and 36.
	Over rolling mesa;through heavy timber.
40.00	Set a sandstone,24x10x4 ins.,18 ins.in the ground,for ¼ sec.cor., marked ¼ on W.face;from which
	A pinion pine,6 ins.diam.,bears N.70°E.,70 lks.dist.,marked ¼ S.36,B.T.
	A cedar,6 ins.diam.,bears W.,50 lks.dist., marked ¼ S.35,B.T.
48.00	Edge of mesa,bears E.and W.descend.
67.50	Bottom of hollow,150 ft.below mesa,course N.E.;ascend.
80.00	Set a limestone,30x9x4 ins.,22 ins.in the ground,for cor.of secs.25,26,35,and 36,marked with 1 notch on S. and 1 notch on E.edges;from which
	A pinion pine,6 ins.,diam.,bears N.51°E., 150 lks.dist,marked T.13 S.,R.19 E.,S.25,B.T.
	A cedar,4 ins.diam.,bears S.35°E.,55 lks. dist.,marked T.13 S.,R.19 E.,S.36,B.T.
	A cedar,4 ins.diam.,bears S.40°W.,130 lks. dist.,marked T.13 S.,R.19 E.,S.35,B.T.
	A pinion pine,7 ins.diam.,bears N.75°W.,200 lks.dist.,marked T.13 S.,R.19 E.,S.26,B.T.

Subdivision of T.13 S. R.19 E.-Continued.

Land,mountainous and rolling mesa.

Soil,sandy and clay loam;2nd rate.

Timber,cedar and pinion pine.

Good grass for grazing.

Mountainous or heavily timbered land,80.00 chs.

S.89° 56'E.,on a random line bet.secs.25 and 36.

40.00 Set temp.¼ sec.cor .

80.38 Intersect E.bdy.of Tp.,10 lks.S.of the cor.of secs. 25,30,31,and 36,heretofore described.

Thence we run

West,on a true line bet.secs.25 and 36.

Over mountainous land;through dense undergrowth and scattering timber;descend.

9.00 Foot of descent,150 ft.below sec.cor.,bears N.and S.; enter bottom of Hill Creek Canon,

9.50 Hill Creek bed(dry)20 lks.wide,course N.10°W.

11.80 Trail,bears N.and S.

13.75 Foot of perpendicular ledge,30 ft.high,bears N.and S. Leave canon bottom,bears N.and S.;ascend.

30.75 Top of ascent,500 ft.above , bears N.and S.;thence over rolling mesa.

40.19 Set a limestone,24x14x5 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.

57.25 Edge of mesa,bears N.E.and S.;descend.

60.75 Bottom of hollow,200 ft.below mesa,course N.50°E.; ascend.

80.38 The cor.of secs.25,26,35,and 36.

Land,mountainous and rolling mesa.

Soil,gravelly and white clay loam;2nd and 3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Chains | Mountainous land,or land covered with dense undergrowth,80.38 chs.

N.0°01'W.,bet.secs.25 and 26.

Over mountainous land;through dense undergrowth and scattering timber;ascend.

1.00 Top of ridge,10 ft.above sec.cor.,bears N.E.and S.W.; descend.

40.00 Set a limestone,14x10x5 ins.9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

A pinion pine,6 ins.diam.,bears N.60°E.,30 lks.dist.,marked ¼ S.25,B.T.

A pinion pine,5 ins.diam.,bears S.35°W.,35 lks.dist.,marked ¼ S.26,B.T.

47.50 Bottom of hollow,250 ft.below ridge,course N.60°E.; ascend.

55.00 Enter heavy timber and leave undergrowth,bears N.E. and S. W.

70.00 Leave timber,bears E.and W.

80.00 Set a limestone,16x11x5 ins.,11 ins.in the ground,for cor.of secs.23,24,25,and 26,marked with 2 notches on S.and 1 notch on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Land,mountainous.

Soil,gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.

East,on a random line bet.secs.24 and 25.

40.00 Set temp.¼ sec.cor.

80.26 Intersect E.bdy.of Tp.10 Lks.S.of the cor.of secs.

Subdivision of T.13 S. R.19 E.-Continued.

hains 19,24,25,and 30,heretofore described.

Thence we run S.89° 56'W.,on a true line bet.secs. 24and 25.

Over mountainous land;through dense undergrowth and scattering timber;descend.

5.50 Foot of descent,100 ft.below sec.cor.,bears N.20°W. and S.20°E.;enter bottom of Hill Creek Canon.

17.40 Hill Creek Bed(dry),20 lks.wide,course N.20°E.
23.00 Trail,bears N.and S.
25.00 Leave canon bottom ,bears N.and S.;ascend.

40.13 A pinion pine,8 ins.diam.,for ¼ sec.cor.,We mark ¼ S.24 on N.and S.25 on S.sides;from which

A pinion pine,10 ins.diam.,bears N.25°E.,40 lks.dist.,marked ¼ S.24,B.T.

A pinion pine,9 ins.diam.,bears S.20°E.,60 lks.dist.,marked ¼ S.25,B.T.

80.26 The cor.of secs.23,24,25,and 26.

Land,mountainous.

Soil,gravelly loam and white loam ;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.26.chs.

N.0° 01'W.,bet.secs.23 and 24.

Over mountainous land;through scattering timber and scattering undergrowth;ascend.

33.00 Top of ridge,200 ft.above sec.cor.,bears N.60°E.and S.60°W.;descend.

40.00 Set a sandstone,16x12x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

65.00 Bottom of hollow,200 ft.below ridge,course N.80°E.; ascend.

Subdivision of T.13 S..R.19 E.-Continued.

Chains	
80.00	Set a limestone,16x9x8 ins.,11 ins.in the ground,for cor.of secs.13,14,23,and 24,marked with 3 notches on S.and 1 notch on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,Gravelly loam and white clay;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,80.00 chs.
	September 23,1901:At the noon hour the sky is overcast and solar observations are impossible.

	N.89° 56'E.,on a random line bet.secs.13 and 24.
40.00	Set temp.¼ sec.cor.
80.00	Intersect E.bdy.of Tp.10 lks.S.of the cor.of secs. 13,18,19,and 24,heretofore described.
	Thence we run
	S.89° 52'W.,on a true line bet.secs.13 and 24;
	Over mountainous land;through dense undergrowth and scattering timber;descend.
7.00	Top of perpendicular ledge,25 ft.high,bears N.and S.
7.25	Foot of descent,100 ft.below sec.cor.,bears N.and S.; enter bottom of Hill Creek Canon.
12.00	Hill Creek Bed(dry),20 lks.wide,course N.10°W.
20.00	Trail,bears N.and S.
24.00	Leave canon bottom,bears N.5°E.and S.5°W.;ascend.
40.00	Set a limestone,18x12x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
48.00	Bottom of hollow,100 ft.below ¼ sec.cor.,course N.30° E.;ascend.
70.00	Top of ridge,150 ft.above hollow,bears N.30°E.and S.30°W.;descend.
80.00	The cor.of secs.13,14,23,and 24.

division of T 13 S R.19 E.-Continued.

Chains Land,mountainous.

Soil,gravelly;3rd rate.

Timber,cedar and pinion pine.

Undergrowth ,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

N.0° 01'W.,bet.secs.13 and 14.

Over mountainous land;through scattering timber and scattering undergrowth;descend.

8.00 Bottom of hollow,200 ft.below sec.cor.,course S.W.; ascend.

16.50 Top of ridge,200 ft.above hollow,bears N.80° E.and S.80° W.;descend.

28.00 Bottom of hollow,200 ft.below ridge,course N.65° E.; ascend.

35.00 Top of ridge,250 ft.above hollow,bears N.65° E.and S. 65° W.;descend.

40.00 Set a limestone,16x11x9 ins .,11 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracti - able.

43.75 Bottom of hollow,175 ft.below ridge,course N.75° E.; ascend.

80.00 Set a limestone,20x12x4 ins.,15 ins.in the ground, for cor.of secs.11,12,13,and 14,marked with 4 notche on S.and 1 notch on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impractic- able.

Land,mountainous.

Soil,white clay loam and gravelly;2nd and 3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Chains	
	Mountainous land,80.00 chs.
	N.89° 52'E.,on a random line bet.secs.12 and 13.
40.00	Set temp.¼ sec.cor.
80.10	Intersect E.bdy.of Tp.10 lks.S.of the cor.of secs. 7.12,13,and 18,heretofore described.
	Thence we run
	S.89° 48'W.,on a true line bet.secs.12 and 13.
	Over mountainous land;through dense undergrowth,in bottom of Hill Creek Canon .
.90	Hill Creek Bed(dry),20 lks.wide,course N.5°W.;
5.00	Trail,bears N.5°W.and S.5°E.
5.50	Leave canon bottom;bears N.5°W.and S.5°E.;ascend.
40.05	Set a limestone,18x13x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
54.00	Bottom of hollow,50 ft.below ¼ sec.cor.,course N.75° E.;ascend.
80.10	The cor.of secs.11,12,13,and 14.
	Land,mountainous.
	Soil,white clay loam and gravelly;2nd and 3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.10 chs.
	N.0° 01'W.,bet.secs.11 and 12.
	Over mountainous land;through dense undergrowth and scattering timber;ascend.
30.50	Trail,bears N.E.and S.W.
40.00	Set a limestone,18x8x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impractic-

Chains	
	able.
47.00	Top of ridge,250 ft.above sec.cor.,bears N.E.and S. W.;descend.
80.00	Set a sandstone,24x6x5 ins.,18 ins.in the ground,for cor.of secs.1,2,11,and 12,marked with 5 notches on S.and 1 notch on E.edges;from which A cedar,7 ins.diam.,bears N.30°E.,75 lks. dist.,marked T.13 S.,R.19 E.,S.1,B.T. A cedar,6 ins.,diam.,bears S.80°E.,100 lks.dist.,marked T.13 S.,R.19 E.,S.12,B.T. A cedar,7 ins.diam.,bears S.20°W.,100 lks. dist.,marked T.13 S.,R.19 E.,S.11,B.T. A cedar,7 ins.diam.,bears N.20°W.,125 lks. dist.,marked T.13 S.,R.19 E.,S.2,B.T.
	Land,mountainous.
	Soil,white clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.89°48'E.,on a random line bet.secs.1 and 12.
40.00	Set temp.¼ sec.cor.
79.90	Intersect E.bdy.of Tp.,15 lks.N.of the cor.of secs. 1,6,7,and 12,heretofore described.
	Thence we run
	S.89°54'W.,on a true line bet.secs.1 and 12.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
4.00	Foot of descent,50 ft.below sec.cor.,bears N.W.and S.E.;enter bottom of Hill Creek Canon.Trail,bears N.W.and S.E.
9.25	Hill Creek bed(dry),20 lks.wide,course N.
18.00	Leave canon bottom,bears N.10°W.and S.10°E.;ascend.
39.95	Set a limestone,24x10x5 ins.,18 ins.in the ground,for

Chains	
	¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
46.00	Trail,bears N.25° E.and S.25° W.
71.00	Top of ridge,350 ft.above canon,bears N.40° E.and S. 40° W.;descend.
79.90	The cor.of secs.1,2,11,and 12.
	Land,mountainous.
	Soil,clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.90 chs.
	N.0° 01'W.,on a random line bet.secs.1 and 2.
40.00	Set temp.¼ sec.cor.
80.30	Intersect N.bdy.of Tp.10 lks.E.of the cor.of secs. 1,2,35,and 36,heretofore described.
	Thence we run
	S.0° 05'E.,on a true line bet.secs.1 and 2.
	Over mountainous land;through scattering timber and scattering undergrowth;descend gradually.
40.30	Set an oilshale stone,24x16x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ 6n W.face;from which
	A cedar,6 ins.diam.,bears S.80° E.,20 lks. dist.,marked ¼ S.1,B.T.
	A cedar,10 ins.diam.,bears S.80° W.,75 lks. dist.,marked ¼ S.2,B.T.
50.00	Bottom of hollow,250 ft.below sec.cor.,course N.30° E. Ascend.
80.30	The cor.of secs.1,2,11,and 12.
	Land,mountainous.
	Soil,white clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.

Chains	
	Good grass for grazing.
	Mountainous land,80.30 chs.
	September 23,1901.

September 24,1901:At 8 h 0 m a.m.,l.m.t.,we set off 39° 38'N.,on the lat.arc;0° 19'S.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.2,3,34,and 35,on S.bdy.of Tp.,heretofore described.

Thence we run

N.0° 01'W.,bet.secs.34 and 35.

Over rolling mesa;through heavy timber.

39.50	Edge of mesa,bears N.20°E.and S.20°W.;descend.
40.00	Set sandstone,24x10x8 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,10 ins.diam.,bears S.40°E., 60 lks.dist.,marked ¼ S.35,B.T. A pinion pine,6 ins.,diam.,bears W.,18 lks.dist.,marked ¼ S.34,B.T.
49.50	Bottom of hollow ,300 ft.below mesa,course N.30°E.; ascend.
57.50	Top of ascent,bears N.30°E.and S.30°W.,250 ft.above hollow;thence over mesa.
80.00	Set a limestone.20x11x4 ins.,15 ins.in the ground, for cor.of secs.26,27,34,and 35,marked with 1 notch on S.and 2 notches on E.edges;from which A pinion pine,9 ins.diam.,bears N.60°E., 65 lks.dist.,marked T.13 S.,R.19 S.26,B.T. A pinion pine,8 ins.diam.,bears S.44°E.,30 lks.dist.,marked T.13 S.,R.19 E.,S.35,B.T. A pinion pine,6 ins.diam.,bears S.80°W.,170 lks.dist.,marked T.13 S.,R.19 E.,S.34,B.T. A pinion pine,6 ins.diam.,bears N.70°W.,200 lks.dist., marked T.13 S.,R.19 E.,S.27,B.T.

Land,mountainous and rolling mesa.

Chains	
	Soil,gravelly and clay loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.
	S.89° 56'E.,on a random line bet.secs.26 and 35.
40.00	Set temp .¼ sec.cor.
80.20	Intersect N.and S.line,14 lks.S.of the cor.of secs. 25,26,35,and 36.
	Thence we run
	S.89° 58'W.,on a true line bet.secs.26 and 35.
	Over mountainous land;through heavy timber and scattering undergrowth;ascend.
1.00	Top of ridge,10 ft.above sec.cor.,bears N.E.and S.W.; descend.
15.00	Bottom of hollow,100 ft.below ridge,course N.;ascend.
30.00	Top of ridge,100 ft.above hollow,bears N.and S.;descend.
40.10	Set a limestone,15x9x4 ins.,10 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,10 ins.diam.,bears N.20°W., 168 lks.dist.,marked ¼ S.26,B.T.
	A cedar,6 ins.diam.,bears S.15°W.,80 lks. dist.,marked ¼ S.35,B.T.
40.20	Bottom of hollow,75 ft.below ridge,course N.;ascend.
45.00	Top of ridge,75 ft.above hollow,bears N.and S.;descend.
47.50	Bottom of hollow,150ft.below ridge,course N.20°E.;ascend.
75.00	Top of ascent,100 ft.above hollow,bears N.30°E.and S.30°W.;thence over rolling mesa.
80.20	The cor.of secs.26,27,34,and 35.
	Land,mountainous and rolling mesa.
	Soil,gravelly and clay loam;2nd rate.

Chains	
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.20 chs.
	N.0°01'W.,bet.secs.26 and 27.
	Over rolling mesa;through heavy timber.
6.00	Leave heavy timber and enter scattering timber and dense undergrowth.
20.00	Edge of mesa,bears N.60°E.and S.60°W.;descend.
29.40	Bottom of hollow,200 ft.below mesa,course N.E.;ascend.
30.00	Leave undergrowth and enter heavy timber,bears E.and W.
40.00	Set a limestone,16x10x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,15 ins.diam.,bears S.50°E., 60 lks.dist.,marked ¼, S.26,B.T.
	A pinion pine,8 ins.diam.,bears S.85°W., 50 lks.dist.,marked ¼ S.27,B.T.
41.00	Top of ridge,100 ft.above hollow,bears N.E.and S.W.; descend.
51.00	Bottom of hollow,50 ft.below ridge,course N.30°E.; ascend.
80.00	Set a limestone,22x11x4 ins.,16 ins.in the ground,for cor.of secs.22,23,26,and 27,marked with 2 notches on S.and 2 notches on E.edges.;from which
	A pinion pine,5 ins.diam.,bears N.51°E.,153 lks.dist.,marked T.13 S.,R.19 E.,S.23,B.T.
	A pinion pine,6 ins.diam.,bears S.56°E.,108 lks.dist.,marked T.13 S.,R.19 E.,S.26,B.T.
	A pinion pine,8 ins.diam.,bears S.30°W.,81 lks.dist.,marked T.13 S.,R.19 E.,S.27,B.T.
	A pinion pine,8 ins.diam.,bears N.64°W.,66 lks.dist.,marked T.13 S.,R.19 E.,S.22,B.T.

Chains	
	Land,mountainous and rolling mesa.
	Soil,white clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	N.89° 58'E.,on a random line bet.secs.23 and 26.
40.00	Set temp.¼ sec.cor.
80.14	Intersect N.and S.line,10 lks.S.of the cor.of secs. 23,24,25,and 26.
	Thence we run
	S.89° 54'W.,on a true line bet.secs.23 and 26.
	Over mountainous land;through dense undergrowth ;ascend.
20.00	Enter scattering timber,bears N.and S.
25.00	Top of ridge,200 ft.above sec.cor.,bears N.20°E.and S.20°W.;descend.
36.50	Bottom of hollow,250 ft.below ridge,course N.25°E.; ascend.
40.07	Set a limestone,18x9x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;fromwhich
	A cedar,9 ins.diam.,bears N.70°W.,70 lks. dist.,marked ¼ S.23,B.T.
	A pinion pine,9 ins.diam.,bears S.30°E., 33 lks.dist.,marked ¼ S.26,B.T.
80.14	The cor.of secs.22,23,26,and 27.
	Land,mountainous.
	Soil,gravelly and white loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.14 chs.

Chains	
	N.0° 01'W.,bet.secs.22 and 23.
	Over mountainous land;through heavy timber;ascend.
10.00	Leave timber and enter dense undergrowth,bears E.and W.
24.00	Top of ridge,200 ft.above sec.cor.,bears N.60° E.and S.60° W.;descend.
40.00	Set a limestone,18x10x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
43.10	Leave undergrowth and enter heavy timber,bears E.and W.
61.75	Bottom of hollow,250 ft.below ridge,course N.E.;ascend.
70.00	Leave timber,bears E.and W.
80.00	Set a limestone ,18x13x4 ins.,12 ins.in the ground, for cor.of secs.14,15,22,and 23,marked with 3 notches on S.and 2 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	September 24,1901:At this cor.we set off 0° 25'S.,on the decl.arc;and at 0 h 2 m p.m.,l.m.t.,observe the sun on themeridian, the resulting lat.is 39° 41'N.
	N.89° 54'E.,on a random line bet.secs.14 and 23.
40.00	Set temp.¼ sec.cor.

Chains	
79.96	Intersect N.and S.line,14 lks.N.of the cor.of secs. 13,14,23,and 24.
	Thence we run
	West,on a true line bet.secs.14 and 23.
	Over mountainous land;through dense undergrowth;descend.
8.00	Bottom of hollow,100 ft.below sec.cor.,course S.W.; ascend.
35.00	Enter scattering timber,bears N.and S.
39.98	Set a limestone,16x9x8 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,4 ins.diam.,bears N.5° E.,100 lks. dist.,marked ¼ S.14,B.T.
	A cedar,7 ins.diam.,bears S.40° E.,40 lks. dist.,marked ¼ S.23,B.T.
79.96	The cor.of secs.14,15,22,and 23.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.96 chs.

	N.0° 01'W.,bet.secs.14 and 15.
	Over mountainous land;through scattering timber;ascend.
39.50	Top of ascent,200 ft.above sec.cor.,bears N.50° E.and S.50° W.;thence over rolling mesa through dense undergrowth.
40.00	Set a limestone,18x9x8 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
80.00	Set a limestone,18x8x4 ins.,12 ins.in the ground;for

Chains	
	cor.of secs.10,11,14,and 15,marked with 4 notches On S.and 2 notches on E.edges; from which
	A cedar,7 ins.diam.,bears N.36° E.,115 lks. dist.,marked T.13 S.,R.19 E.,S.11,B.T.
	A cedar,6 ins.diam.,bears S.46° E.,85 lks. dist.,marked T.13 S.,R.19 E.,S.14,B.T.
	A cedar,5 ins.diam.,bears S.39° W.,95 lks. dist.,marked T.13 S.,R.19 E.,S.15,B.T.
	A pinion pine,9 ins.diam.,bears N.14° W.,116 lks.dist.,marked T.13 S.,R.19 E.,S.10,B.T.
	Land,mountainous.and nearly level .
	Soil,gravelly loam and sandy loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	East,on a random line bet.secs. 11 and 14.
40.00	Set temp.¼ sec.cor.
80.00	Intersect N.and S.line at the cor.of secs.11,12,13, and 14,
	Thence we run
	West,on a true line bet.secs.11 and 14.
	Over mountainous land; through scattering timber;as-cend.
40.00	Set a limestone,30x10x4 ins.,22 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impractic - able.
59.50	Top of ascent,250 ft.above sec.cor.,bears N.20° E. and S.20° W.;thence over rolling mesa.
	Enter dense undergrowth,bears N.20° E.and S.20° W.
80.00	The cor.of secs.10,11,14,and 15.
	Land,mountainous and rolling mesa.

Subdivision of T.13 S.,R.19 E.-Continued.

Chains	
	Soil,sandy and clay loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.0° 01'W.,bet.secs.10 and 11.
	Over rolling mesa;through dense undergrowth and scattering timber.
40.00	Set a limestone,22x10x4 ins.,16 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
60.00	Leave mesa,bears E.and W.;descend.
80.00	Set a sandstone,24x10x5 ins.,18 ins.in the ground, for cor.of secs.2,3,10,and 11,marked with 5 notches on S and 2 notches on E.edges;from which A cedar,9 ins.diam.,bears N.20°E.,225 lks. dist.,marked T.13 S.,R.19 E.,S.2,B.T. A cedar,6 ins.diam.,bears S.70°E.,275 lks. dist.,marked T.13 S.,R.19 E.,S.11,B.T. A cedar,5 ins.diam.,bears S.50°W.,175 lks. dist.,marked T.13 S.,R.19 E.,S.10,B.T. A cedar,8 ins.diam.,bears N.40°W., 150 lks. dist.,marked T.13 S.,R.19 E.,S.3,B.T.
	Land,mountainous and rolling mesa.
	Soil,sandy and clay loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

Subdivision of T.13 S. R.19 E.-Continued.

hains. East,on a random line bet.secs.2 and 11.

40.00 Set temp.¼ sec.cor.

79.96 Intersect N.and S.line,10 lks.S.of the cor.of secs. 1,2,11,and 12.

Thence we run

S.89° 56'W.,on a true line bet.secs.2 and 11.

Over mountainous land;through scattering timber and scattering undergrowth;descend.

9.50 Bottom of hollow,150 ft.below sec.cor.,course N.10°E.

Ascend.

34.50 Top of ridge,200 ft.above hollow,bears N.20°E.and S. 20°W.;descend.

39.98 Set a sandstone,40x14x4 ins.,30 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft .high,N.of cor.Pits impracticable.

79.96 The cor.of secs.2,3,10,and 11.

Land,mountainous.

Soil,gravelly and clay loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous land,79.96 chs.

September 24,1901.

September 25,1901:At 7 h 0 m a.m.,l.m.t.,we set off 39° 42'N.,on the lat.arc;0° 40'S.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.2,3,10,and 11.

Thence we run

N.0° 01'W.,on a random line bet.secs.2 and 3.

40.00 Set temp.¼ sec.cor.

80.43 Intersect N.bdy.of Tp.16 lks.E.of the cor.of secs. 2,3,34,and 35,heretofore described.

Thence we run

Subdivision of T.13 S. R.19 E.-Continued.

Chains	
	S.0° 08'E.,on a true line bet.secs.2 and 3.
	Over mountainous land;through scattering timber;ascend.
2.25	Top of ridge,50 ft.above sec.cor.,bears N.65°E.and S.65°W.;descend.
12.00	Bottom of hollow,160 ft.below ridge,course N.70°E.; ascend.
36.50	Top of ridge,200 ft.above hollow,bears E.and W.;descend.
40.43	Set a limestone,28x6x4 ins.,21 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,6 ins.diam.,bears S.65°E.,66 lks. dist.,marked ¼ S.2,B.T. A cedar,8 ins.diam.,bears S.66°W.,140 lks. dist.,marked ¼ S.3,B.T.
59.00	Bottom of hollow,250 ft.below ridge,course N.30°E.; ascend.Enter scattering undergrowth,bears with hollow.
80.43	The cor.of secs.2,3,10,and 11.
	Land,mountainous .
	Soil,white clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.43 chs.

	From the cor.of secs.3,4,33,and 34,on S.bdy.of Tp., heretofore described.
	We run
	N.0° 02'W.,bet.secs.33 and 34.
	Over mountainous land;through scattering timber;descend gradually.
10.00	Leave timber and enter scattering undergrowth,bears E.and W.
40.00	Set a limestone,16x8x6 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of

Chains

stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

45.20 Bottom of hollow,200 ft.below sec.cor.,course N.20° E Ascend.

75.00 Top of ridge,250 ft.above hollow,bears N.60° E.and S.60° W.;descend.

80.00 Set a limestone,15x10x4 ins.,10 ins.in the ground,fo cor.of secs.27,28,33,and 34,marked with 1 notch on S.and 3 notches on E.edges;from which

A cedar,6 ins.diam.,bears S.45° E.,140 ; lks.dist.,marked T.13 S.,R.19 E.,S.27,B.T

A pinion pine,8 ins.diam.,bears S.30° W.,160 lks.dist.,marked T.13 S.,R.19 E.,S.33,B.T.

No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Land,mountainous.

Soil,clay loam and gravelly;2nd and 3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,80.00 chs.

S.89° 56'E.,on a random line bet.secs.27 and 34.

40.00 Set temp.¼ sec.cor.

80.14 Intersect N.and S.line,10 lks.S.of the cor.of secs. 26,27,34,and 35.

Thence we run

West ,on a true line bet.secs.27 and 34.

Over rolling mesa;through heavy timber .

35.00 Leave mesa,bears N.60° E.and S.60° W.;descend.

40.07 Set a limestone,18x8x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A pinion pine,12 ins.diam.,bears N.18° E., 105 lks.dist.,marked ¼ S.27,B.T.

A pinion pine,14 ins.diam.,bears S.45° W.,

Chains	
	18 lks.dist.,marked ‡ S.34,B.T.
41.50	Bottom of hollow,200 ft.below mesa,course N.80° E.; ascend.
50.00	Leave heavy timber and enter scattering timber and scattering undergrowth,bears N.and S.
53.35	Trail,bears N.50° E.and S.50° W.
73.00	Top of ridge,200 ft.above hollow,bears N.50° E.and S.50° W.;descend.
80.14	The cor.of secs.27,28,33,and 34.

Land,mountainous and rolling mesa.

Soil,gravelly loam and clay loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,80.14 chs.

September 25,1901:At this cor.we set off 0° 47'S.,on the decl.arc;and at 0 h 3 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39° 39'N.

N.0° 02'W.,bet.secs.27 and 28.

Over mountainous land;through scattering timber and dense undergrowth;descend.

3.75	Enter heavy timber,bears E.and W.
16.00	Bottom of hollow,150 ft.below sec.cor.,course N.E.; ascend.
32.00	Top of ridge,200 ft.above hollow,bears N.E.and S.W.; leave timber,bears with ridge.Descend.
38.50	Enter heavy timber,bears E.and W.
40.00	Set a sandstone,24x8x6 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ‡ on W.face;from which

A cedar,8 ins.diam.,bears N.50° E.,40 lks. dist.,marked ‡ S.27,B.T.

A cedar,6 ins.diam.,bears N.80° W.,30 lks. dist.,marked ‡ S.28,B.T.

65.00	Bottom of hollow,250 ft.below ridge,course N.E.;as-

Subdivision of T.13 S. R.19 E.-Continued.

Chains cend.

80.00 Set a sandstone,18x12x8 ins.,12 ins.in the ground,f cor.of secs.21,22,27,and 28,marked with 2 notches on S.and 3 notches on E.edges;from which

A cedar,14 ins.diam.,bears N.62° E.,145 lks. dist.,marked T.13 S.,R.19 E.,S.22,B.T.

A cedar,8 ins.diam.,bears S.55° E.,157 lks. dist.,marked T.13 S.,R.19 E.,S.27,B.T.

A cedar,4 ins.diam.,bears S.45° W.,180 lks. dist.,marked T.13 S.,R.19 E.,S.28,B.T.

A cedar,8 ins.diam.,bears N.34° W.,217 lks. dist.,marked T.13 S.,R.19 E.,S.21,B.T.

Land,mountainous.

Soil,gravelly and clay loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.

East,on a random line bet.secs.22 and 27.

40.00 Set temp.¼ sec.cor.

79.90 Intersect N.and S.line,at the cor.of secs.22,23,26, and 27.

Thence we run

West,on a true line bet.secs.22 and 27.

Over mountainous land;through dense undergrowth and scattering timber;ascend.

6.50 Top of ridge,50 ft.above sec.cor.,bears N.E.and S.W.; descend.

20.50 Bottom of hollow,150 ft.below ridge,course N.E.;ascend.

39.95 Set a limestone,36x14x6 ins.,27 ins.in the ground,f ¼ sec.cor.,marked ¼ on N.face;from which

A cedar,5 ins.diam.,bears N.17° W.,127 lks.

Subdivision of T.13 S.,R.19 E.-Continued.

Chains	
	dist.,marked ¼ S.22,B.T.
	A pinion pine,6 ins.diam.,bears S.26° W.,83 lks.dist.,marked ¼ S.27,B.T.
47.00	Top of ridge,250 ft.above hollow,bears N.20°E.and S. 20° W.;descend.
64.00	Bottom of hollow,150 ft.below ridge,course N.E.;ascend.
68.00	Trail,bears N.E.and S.W.
79.90	The cor.of secs.21,22,27,and 28.
	Land,mountainous.
	Soil,clay and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.90 chs.
	N.0° 02'W.,bet.secs.21 and 22.
	Over mountainous land;through scattering timber and scattering undergrowth;ascend.
40.00	Set a limestone,16x7x6 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,4 ins.diam.,bears N.60° E.,63 lks. dist.,marked ¼ S.22,B.T.
	A cedar,4 ins.diam.,bears S.70° W.,47 lks. dist.,marked ¼ S.21,B.T.
45.50	Top of ridge,250 ft.above sec.cor.,bears N.20° E.and S.20° W.;descend.Divide between Hill Creek and Tabyago Canon
80.00	Set a limestone,22x12x4 ins.,16 ins.in the ground,for cor.of secs.15,16,21,and 22,marked 13.S.on N.E.and 19 E.on S.E.face;with 3 notches on S.and 3 notches on E.edges;from which
	A cedar,5 ins.diam.,bears N.40° E.,93 lks. dist.,marked T.13 S.,R.19 E.,S.15,B.T.
	A cedar,10 ins.diam.,bears S.75° E.,125 lks.

Chains	
	dist.,marked T.13 S.,R.19 E.,S.22,B.T.
	A pinion pine,14 ins.diam.,bears S.53° W.,9 lks.dist.,marked T.13 S.,R.19 E.,S.21,B.T.
	A cedar,6 ins.diam.,bears N.38° W.,65 lks. dist.,marked T.13 S.,R.19 E.,S.16,B.T.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.
	East,on a random line bet.secs.15 and 22.
40.00	Set temp.¼ sec.cor.
80.08	Intersect N.and S.line,19 lks.N.of the cor.of secs. 14,15,22,and 23.
	Thence we run
	N.89° 52' W.,on a true line bet.secs.15 and 22.
	Over mountainous land;through dense undergrowth and scattering timber;ascend.
40.04	Set a sandstone,18x15x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face; from which
	A cedar,8 ins.diam.,bears N.7° W.,55 lks. dist.,marked ¼ S.15,B.T.
	A pinion pine,4 ins.diam.,bears S.18° W., 45 lks.dist.marked ¼ S.22,B.T.
65.50	Top of divide ridge between Hill Creek and Tabyago canons,400 ft.above sec.cor.,bears N.30° E.and S.30° W.
	Descend.
80.08	The cor.of secs.15,16,21,and 22.
	Land,mountainous.
	Soil,gravelly and clay;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.

Subdivision of T 13 S. R 19 E -Continued

Chains

Mountainous land, or land covered with dense undergrowth, 80.08 chs.

September 25, 1901: At this cor. we set off 39° 41' N., on the lat. arc; 0° 5½' S., on the decl arc; and at 4 h 2 m p.m., l.m.t., determine a true meridian with the solar and mark a point in the line thus determined by a cross on a stone, set firmly in the ground, 5.00 chs. N. of our station.

September 25, 1901.

September 26, 1901: At 1 h 6 m a.m., l.m.t., we observe Polaris at upper culmination, in accordance with the Manual, and mark the true meridian thus determined by a small groove in the stone, already set 5.00 chs. N. of the cor.; on which the true meridian falls 0.35 ins. east of the mark determined by the solar.

At 7 h 0 m a.m., l.m.t., we set off 39° 41' N., on the lat. arc; 1° 04' S., on the decl. arc; and mark a point in the true meridian determined with the solar, by a cross on the stone, already set 5.00 chs. N. of the cor.; this mark falls 0.27 ins. east of the true meridian established by Polaris observation.

The solar apparatus by p.m. and a.m. observations, defines positions for true meridians respectively about 0'18" west and 0'14" east of the true meridian established by Polaris observation; therefore we conclude that the adjustments of the instruments are satisfactory.

The magnetic bearing of the true meridian at 7 h 30 m a.m., is 16° 14.8' W., the angle thus determined reduced by the table page 100 of the Manual, gives the mean mag. decl. 16° 12' E.

From the cor. of secs. 15, 16, 21, and 22, we run

N. 0° 02' W. bet. secs. 15 and 16.

Subdivision of T.13 S.,R.19 E.-Continued.

Chains	
	Over mountainous land;through scattering timber; descend .
21.80	Bottom of hollow,200 ft.below sec.cor.,course N.80°W. Ascend.
40.00	Set a limestone,18x10x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,6 ins.diam.,bears N.65°E.,70 lks.dist.,marked ¼ S.15,B.T. A cedar,4 ins.diam.,bears N.85°W.,40 lks. dist.,marked ¼ S.16,B.T.
50.00	Top of ridge,100 ft.above hollow,bears E.and W.;descend.
60.00	Bottom of hollow,100 ft.below ridge,course W.;ascend.
64.50	Top of ascent,100 ft.above hollow,bears E.and W.; thence over rolling mesa through dense undergrowth.
80.00	Set a limestone,18x9x4 ins.,12 ins.in the ground, for cor.of secs.9,10,15,and 16,marked with 4 notches on S.and 3 notches on E.edges;from which A pinion pine,8 ins.diam.,bears N.45°E.,66 lks.dist.,marked T.13 S.,R.19 E.,S.10,B.T. A cedar,6 ins.diam.,bears S.20°E.,95 lks. dist.,marked T.13 S.,R.19 E.,S.15,B.T. A pinion pine,12 ins.diam.,bears S.80°W., 152 lks.dist.,marked T.13 S.R.19 E.,S.16,B.T. A cedar,6 ins.diam.,bears N.35°W.,115 lks. dist.,marked T.13 S.,R.19 E.,S.9,B.T.

Land,mountainous and rolling mesa.

Soil,clay and gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

S.89° 52'E.,on a random line bet.secs.10 and 15.

Chains

40.00 Set temp.¼ sec.cor.

80.16 Intersect N.and S.line,27 lks.S.of the cor.of secs. 10,11,14,and 15.

Thence we run

S.89° 56'W.,on a true line bet.secs.10 and 15.

Over rolling mesa;through dense undergrowth and scattering timber.

40.08 Set a limestone,16x9x8 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A cedar,4 ins.diam.,bears N.20°E.,115 lks. dist.,marked ¼ S.10,B.T.

A pinion pine,8 ins.diam.,bears S.,100 lks. dist.,marked ¼ S.15,B.T.

80.16 The cor.of secs.9,10,15,and 16.

Land,rolling mesa.

Soil,sandy loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Land covered with dense undergrowth,80.16 chs.

N.0°02'W.,bet.secs.9 and 10.

Over rolling mesa;through dense undergrowth and scattering timber.

40.00 Set a sandstone,36x7x4 ins.,27 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

A pinion pine,10 ins.diam.,bears N.83°W., 60 lks.dist.,marked ¼ S.9 ,B.T.

No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

52.50 Trail,bears N.50°E.and S.50°W.

80.00 Set a sandstone,20x7x5 ins.,15 ins.in the ground,for cor.of secs.3,4,9,and 10,marked with 5 notches on S. and 3 notches on E.edges;and raise a mound of stone,

Subdivision of T 13 S R 19 E -Continued.

Chains 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Land,rolling mesa.

Soil,sandy loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Land,covered with dense undergrowth,80.00 chs.

N.89° 56'E.,on a random line bet.secs.3 and 10.

40.00 Set temp.¼ sec.cor.

80.08 Intersect N.and S.line,5 lks.N.of the cor.of secs. 2,3,10,and 11.

Thence we run

S,89° 58'W.,on a true line bet.secs.3 and 10 .

Over mountainous land;through dense undergrowth and scattering timber;descend.

9.50 Bottom of hollow,100 ft.below sec.cor.,course N.E.; ascend.

40.04 Set a sandstone,30x10x4 ins.,22 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face; and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.

60.00 Top of ascent,200 ft.above hollow,bears N.20° E.and S.20° W.;thence over rolling mesa.

80.08 The cor.of secs.3,4,9,and 10.

Land,mountainous and rolling mesa.

Soil,clay loam and gravelly;2nd and 3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.08 chs.

N.0° 02'W.,on a random line bet.secs.3 and 4.

Chains	
40.00	Set temp.$\frac{1}{4}$ sec.cor.
80.48	Intersect N.bdy.of Tp.21 lks.E.of the cor.of secs. 3,4,33,and 34.
	Thence we run
	S.0° 11'E.,on a true line bet.secs.3 and 4.
	Over rolling mesa;through dense undergrowth and scattering timber.
34.00	Edge of mesa,bears N.E.and S.W.;descend.
40.48	Set a sandstone,30x8x6 ins.,22 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,1½ ft.high,W.of cor.Pits impracticable.
41.50	Bottom of hollow,150 ft.below mesa,course N.E.;ascend.
45.50	Top of ascent,150 ft.above hollow,bears N.E.and S.W.; thence over rolling mesa.
80.48	The cor.of secs.3,4,9,and 10.
	Land,mountainous and rolling mesa.
	Soil,clay and sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.48 chs.

	From the cor.of secs.4,5,32,and 33,on S.bdy.of Tp. heretofore described.
	We run
	N.0° 03'W.,bet.secs.32 and 33,
	Over mountainous land;through dense undergrowth and scattering timber;ascend.
20.25	Top of ascent,100 ft.above sec.cor.,bears E.and W.; thence over rolling mesa.
40.00	Set a sandstone,14x10x5 ins.,9 ins.in the ground,for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face;from which;

Chains	
	A cedar;8 ins.diam.,bears N.82°W.,100 lks. dist.,marked ½ S.32,B.T.
	A cedar,5 ins.diam.,bears S.86°E.,55 lks. dist.,marked ½ S.33,B.T.
60.00	Enter heavy timber,bears E.and W.
65.00	Leave heavy timber and enter scattering timber,bears E.and W.
80.00	Set a sandstone,15x11x4 ins.,10 ins.in the ground,for cor.of secs.28,29,32,and 33,marked with 1 notch on S. and 4 notches on E.edges;from which
	A pinion pine,8 ins.diam.,bears N.80°E.,185 lks.dist.,marked T.13 S.,R.19 E.,S.28,B.T.
	A pinion pine,9 ins.diam.,bears N.60°W.,112 lks.dist.,marked T.13 S.,R.19 E.,S.29,B.T.
	No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and rolling mesa.
	Soil,clay and sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.

	S.89°56'E.,on a random line bet.secs.28 and 33.
40.00	Set temp.¼ sec.cor.
80.16	Intersect N.and S.line,23 lks.S.of the cor.of secs. 27,28,33,and 34.
	Thence we run
	S.89°54'W.,on a true line bet.secs.28 and 33.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
20.00	Bottom of hollow,200 ft.below sec.cor.,course N.60°E.
	Ascend.
40.08	Set a limestone,16x12x5 ins.,11 ins.in the ground;

Chains	
	for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
47.70	Top of ascent,200 ft.above hollow,bears N.10° E.and S.10° W.;thence over gently rolling mesa;
80.16	The cor.of secs.28,29,32,and 33.
	Land,mountainous and rolling mesa.
	Soil,sandy and clay loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.16 chs.
	September 26,1901.

September 27,1901:At 7 h 0 m a.m,l.m.t.,we set off 39° 39'N.,on the lat.arc;1° 27'S.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.28,29,32,and 33.

Thence we run

N.0° 03'W.,bet.secs.28 and 29.

Over rolling mesa;through dense undergrowth and scattering timber.

13.50	Leave mesa,bears N.W.and S.E.;descend.
29.50	Bottom of hollow,150 ft.below mesa,course N.80° W.; ascend.
36.75	Top of ascent,175 ft.above hollow,bears N.80° W.and S.80° E.;thence across mesa.
40.00	Set a sandstone,18x14x7 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,10 ins.diam.,bears N.80° E., 135 lks.dist.,marked ¼ S.28,B.T.
	A pinion pine,10 ins.diam.,bears N.85° W., 54 lks.dist.,marked ¼ S.29,B.T.
46.50	Leave mesa,bears N.85° W.and S.85° E.;descend.

Chains	
56.50	Bottom of hollow,200 ft.below mesa,course N.60° W.; ascend.
80.00	Set a limestone,28x12x4 ins.,21 ins.in the ground,fo cor.of secs.20,21,28,and 29,marked with 2 notches on S.and 4 notches on E.edges;from which A cedar,6 ins.diam.,bears S.80° W.,140 lks. dist.,marked T.13 S.,R.19 E.,S.29,B.T. A cedar,8 ins.diam.,bears N.80° W.,140 lks. dist.,marked T.13 S.,R.19 E.,S.20,B.T. No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and rolling mesa.
	Soil,clay and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 54'E.,on a random line bet.secs.21 and 28.
40.00	Set temp.¼ sec.cor.
80.28	Intersect N.and S.line,14 lks.S.of the cor.of secs. 21,22,27,and 28.
	Thence we run
	S.89° 48'W.,on a true line bet.secs.21 and 28.
	Over Mountainous land;through dense undergrowth;ascend.
28.00	Top of ascent,200 ft.above sec.cor.,bears N.and S.; enter scattering timber,Bears N.and S.;thence across rolling mesa.
40.14	Set a sandstone,24x12x6 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A pinion pine,6 ins.diam.,bears N.5° E.,50 lks.dist.,marked ¼ S.21,B.T.

Chains	
	A pinion pine,4 ins.diam.,bears S.60° E.,60 lks.dist.,marked ½ S.28,B.T.
62.00	Leave mesa,bears N.and S.;descend.
80.28	The cor.of secs.20,21,28,and 29.
	Land,mountainous and rolling mesa.
	Soil,sandy and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.28 chs.
	N.0° 03'W.,bet.secs.20 and 21.
	Over mountainous land;through dense undergrowth and scattering timber;ascend.
16.00	Top of ridge,150 ft.above sec.cor.,bears E.and W.; descend.
40.00	Set a limestone,18x6x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A pinion pine,10 ins.diam.,bears N.65° E.,91 lks.dist.,marked ¼ S.21,B.T.
	A pinion pine,14 ins,diam.,bears S.80° W.,75 lks.dist.,marked ¼ S.20,B.T.
80.00	Set a limestone,24x12x4 ins.,18 ins.in the ground,for cor.of secs.16,17,20,and 21,marked with 3 notches on S.and 4 notches on E.edges ;from which
	A pinion pine,8 ins.diam.,bears N.42° E.,80 lks.dist.,marked T.13 S.,R.19 E.,S.16,B.T.
	A cedar,8 ins.diam.,bears S.62° E.,56 lks. dist.,marked T.13 S.,R.19 E.,S.21,B.T.
	A cedar,6 ins.diam.,bears S.50° W.,100 lks. dist.,marked T.13 S.,R.19 E.,S.20,B.T.
	A pinion pine,15 ins.diam.,bears N.30° W.,119 lks.dist.,marked T.13 S.,R.19 E.,S.17,B.T.
	Land,mountainous.

Chains Soil,gravelly loam;3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth;80.00 chs.

N.89° 48'E.,on a random line bet.secs.16 and 21.

40.00 Set temp.¼ sec.cor.

80.28 Intersect N.and S.line,5 lks.N.of the cor.of secs. 15,16,21,and 22.

Thence we run

S.89° 50'W.,on a true line bet.secs.16 and 21.

Over mountainous land;through scattering timber and scattering undergrowth;ascend.

3.00 Top of ridge,100 ft.above sec.cor.,bears N.and S.; descend.

40.14 Set a sandstone,26x7x7 ins.,19 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which

A cedar,5 ins.diam.,bears N.40°E.,60 lks. dist.,marked ¼ S.16,B.T.

No other tree within limits;raise a mound of stone, 2 ft.base,1½ ft .high,N.of cor.Pits impracticable.

40.60 Bottom of hollow,200 ft.below ridge,course N.20°W.; ascend.

52.00 Top of ridge,200 ft.above hollow,bears N.and S.;descend.

80.28 The cor.of secs.16,17,20,and 21 .

Land,mountainous.

Soil,clay and gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous land,80.28 chs.

September 27,1901:At the noon hour the sky is over-

Chains	
	cast and solar observations are impossible.
	N.0° 03'W.,bet.secs.16 and 17.
	Over mountainous land;through heavy timber ;descend.
29.50	Trail in " hollow,300 ft.below sec.cor.,course N.80°W.
	Ascend.Leave heavy and enter scattering timber.
40.00	Set a limestone,20x12x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
77.50	Top of ascent,300 ft.above hollow,bears E.and W.; thence over rolling mesa. Enter dense undergrowth.
80.00	Set a sandstone,28x8x4 ins.,21 ins.in the ground,for cor.of secs.8,9,16,and 17,marked with 4 notches on S.and 4 notches on E.edges;from which A pinion pine,8 ins.diam.,bears N.40°E., 200 lks.dist.,marked T.13 S.,R.19 E.,S.9,B.T. A pinion pine,6 ins.diam.,bears S.85°E.,150 lks.dist.,marked T.13 S.,R.19 E.,S.16,B.T. A pinion pine,8 ins.diam.,bears S.35°W.,35 lks.dist.,marked T.13 S.,R.19 E.,S.17,B.T. A pinion pine,6 ins.diam.,bears N.30°W.,225 lks.dist.,marked T.13 S.,R.19 E.,S.8,B.T.
	Land,mountainous and rolling.
	Soil,sandy and clay loam;and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.
	N.89° 50'E.,on a random line bet.secs.9 and 16.

Chains	
40.00	Set temp.¼ sec.cor.
80.34	Intersect N.and S.line,24 lks.N.of the cor.of secs. 9,10,15,and 16.
	Thence we run
	West,on a true line bet.secs.9 and 16.
	Over rolling mesa;through heavy timber and scattering undergrowth.
33.50	Trail,bears N.and S.
40.17	Set a sandstone,20x10x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,9 ins.diam.,bears N.70° W.,25 lks.dist.,marked ¼ S.9,B.T.
	A cedar,6 ins.diam.,bears S.67° E.,90 lks. dist.,marked ¼ S.16,B.T.
80.34	The cor.of secs.8,9,16,and 17.
	Land,rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Heavily timbered land,80.34 chs.

	N.0° 03'W.,bet.secs.8 and 9.
	Over mesa;through heavy timber.
5.00	Leave mesa,bears N.E.and S.W.;leave timber and enter dense undergrowth,bears N.E.and S.W.;descend.
22.00	Bottom of hollow,200 ft.below mesa,course W.;ascend.
32.00	Top of ascent,200 ft.above hollow,bears E.and W.; thence across mesa.
40.00	Set a sandstone,20x10x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
54.00	Leave mesa,bears N.60° E.and S.60° W.;descend.

Chains	
70.50	Bottom of hollow,200 ft.below mesa,course S.40°W.; ascend.
79.50	Top of ascent,225 ft.above hollow,bears E.and S.W.; thence over mesa.
80.00	Set a sandstone,24x10x5 ins.,18 ins.in the ground,for cor.of secs.4,5,8,and 9,marked with 5 notches on S. and 4 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and level.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.00 chs.

	East,on a random line bet.secs.4 and 9.
40.00	Set temp.¼ sec.cor.
80.04	Intersect N.and S.line,5 lks.S.of the cor.of secs. 3,4,9,and 10.
	Thence we run
	S.89° 58'W.on a true line bet.secs.4 and 9.
	Over rolling mesa;through heavy timber.
40.02	Set a limestone,24x8x4 ins.,21 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,7 ins.diam.,bears N.80°E.,70 lks.dist.,marked ¼ S.4,B.T.
	A pinion pine,7 ins.diam.,bears S.30°W.,25 lks.dist.,marked ¼ S.9,B.T.
60.00	Leave timber and enter dense undergrowth,bears N.and S.
80.04	The cor.of secs.4,5,8,and 9.
	Land,rolling mesa.
	Soil,sandy loam;2nd rate.
	Timber,cedar and pinion pine.

Subdivision of T.13 S.,R.19 E.-Continued.

Chains	
	Undergrowth,sage brush.
	Good grass for grazing.
	Heavily timbered land,or land covered with dense undergrowth,80.04 chs.
	N.0°03'W.,on a random line bet.secs.4 and 5.
40.00	Set temp.¼ sec.cor.
80.40	Intersect N.bdy.of Tp.10 lks.E.of the cor.of secs. 4,5,32,and 33.
	Thence we run
	S.0°07'E.,on a true line bet.secs.4 and 5.
	Over rolling mesa;through dense undergrowth.
6.00	Leave mesa,bears N.10°W.and S.10°E.;descend.
15.00	Bottom of hollow,150 ft.below mesa,course N.10°W.; ascend.
20.00	Top of ascent,150 ft.above hollow,bears N.10°W.and S.10°E.;thence across mesa.
40.40	Set a sandstone,24x8x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
80.40	The cor.of secs.4,5,8,and 9.
	Land,mountainous and rolling mesa.
	Soil,sandy loam;and gravelly;2nd and 3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.40 chs.
	September 27,1901.

September 28,1901:At 7 h 0 m a.m.,l.m.t.,we set off 39°38'N.,on the lat.arc;1°50'S.,on the decl.arc;and determine a true meridian with the solar at the cor.

Chains	
	of secs.5,6,31,and 32,on S.bdy.of Tp.,heretofore described.
	Thence we run
	N.0°03'W.,bet.secs.31 and 32 .
	Over mountainous land;through dense undergrowth and scattering timber;descend.
2.00	Bottom of hollow,100 ft.below sec.cor.,course E.;ascend.
40.00	Set a limestone,24x12x5 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,10 ins.diam.,bears N.30°E.,27 lks. dist.,marked ¼ S.32,B.T.
	A cedar,12 ins.diam.,bears S.80°W.,70 lks. dist.,marked ¼ S.,31,B.T.
67.70	Top of ascent,250 ft.above hollow,bears N.E.and S.W.; thence across mesa.
80.00	Set a sandstone,20x16x4 ins.,15 ins.in the ground,for cor.of secs.29,30,31,and 32,marked with 1 notch on S. and 5 notches on E.edges;from which
	A pinion pine,5 ins.diam.,bears N.5°E.,40 lks.dist.,marked T.13 S.,R.19 E.,S.29,B.T.
	A pinion pine,18 ins.diam.,bears S.75°E.,47 lks.dist.,marked T.13 S.,R.19 E.,S.32,B.T.
	A pinion pine,15 ins.diam.,bears S.4°W.,107 lks.dist.,marked T.13 S.,R.19 E.,S.31,B.T.
	A pinion pine,12 ins.diam.,bears N.15°W.,9 lks.dist,marked T.13 S.,R.19 E.,S.30,B.T.
	Land,mountainous and level.
	Soil,sandy loam and clay loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

Subdivision of T.13 S.,R.19 E.-Continued.

Chains	
	S.89° 56'E.,on a random line bet.secs.29 and 32.
40.00	Set temp.¼ sec.cor.
80.20	Intersect N.and S.line,24 lks.S.of the cor.of secs. 28,29,32,and 33.
	Thence we run
	S.89° 54'W.,on a true line bet.secs.29 and 32.
	Over level mesa;through dense undergrowth.
3.50	Leave undergrowth and enter heavy timber,bears N.and S.
5.00	Leave mesa,bears N.10°W.and S.10°E.;descend abruptly.
25.00	Top of perpendicular cliff,20 ft.high,bears N.W.and S.E.
40.10	Set a sandstone,24x10x8 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A.cedar,6 ins.diam.,bears N.70°E.,80lks. dist.,marked ¼ S.29,B.T.
	A cedar,5 ins.diam.,bears S.,65 lks. dist.,marked ¼ S.32,B.T.
48.70	Trail,bears N.and S.
50.00	Bottom of Tabyago Canon,600 ft.below mesa,course N.; ascend.
73.50	Top of ascent,625 ft.above canon,bears N.and S.; thence over mesa.
80.20	The cor.of secs.29,30,31,and 32.
	Land,mountainous and level.
	Soil,sandy and clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine,
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.20 chs.

	N.89° 56'W.,on a random line bet.secs.30 and 31.
40.00	Set temp.¼ sec.cor.

Chains	
79.88	Intersect W.bdy.of Tp.10 lks.N.of the cor.of secs. 25,30,31,and 36,heretofore described.
	Thence we run
	East,on a true line bet.secs.30 and 31.
	Over rolling mesa;through dense undergrowth.
1.50	Trail,bears N.10° E.and S.10° W.
16.10	Trail,bears N.10° E.and S.10° W.
24.50	Leave undergrowth and enter heavy timber,bears N.10° E.and S.10° W.
28.75	Leave mesa,bears N.10° E.and S.10° W.;descend.
34.40	Bottom of hollow,100 ft.below mesa,course N.20° E.; ascend.
39.75	Top of ascent,100 ft.above hollow ,bears N.20° E.and S.20° W.;thence over level mesa.
39.88	Set a sandstone,24x12x4 ins.,18 ins.in the ground, for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on N.face;from which
	A pinion pine,12 ins.diam.,bears N.58° E., 68 lks.dist.,marked $\frac{1}{4}$ S.30,B.T.
	A cedar,18 ins.diam.,bears S.58° E.,68 lks. dist.,marked $\frac{1}{4}$ S.31,B.T.
51.50	Leave mesa,bears N.20° E.and S.20° W.;descend.
52.50	Bottom of hollow,100 ft.below mesa,course N.20° E.; ascend.
54.90	Top of ascent,100.ft.above hollow,bears N.20° E.and S.20° W.;thence over mesa.
79.88	The cor.of secs.29,30,31,and 32.
	Land,mountainous and level.
	Soil,sandy loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,79.88 chs.

Subdivision of T.13 S.,R.19 E.-Continued.

Chains	
	N.0° 03'W.,bet.secs.29 and 30.
	Over level mesa;through heavy timber.
23.50	Leave mesa,bears E.and W.;leave heavy and enter scattering timber and scattering undergrowth,bears E.and W.Descend.
40.00	Set a limestone,16x8x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,14 ins.diam.,bears N.75°E., 54 lks.dist.,marked ¼ S.29,B.T. A pinion pine,9 ins.diam.,bears S.80°W., 32 lks.dist.,marked ¼ S.30,B.T.
43.00	Bottom of hollow,200 ft.below mesa,course N.80°E.; ascend.
58.00	Top of ridge,200 ft.above hollow,bears N.E.and S.W.; descend.
80.00	Set a limestone,18x10x4 ins.,12 ins.in the ground,for cor.of secs.19,20,29,and 30,marked with 2 notches on and 5 notches on E.edges;from which A pinion pine,6 ins.diam.,bears N.74°E.201 lks.dist.,marked T.13 S.,R.19 E.,S.20,B.T. A cedar,18 ins.diam.,bears S.30°E.,58 lks. dist.,marked T.13 S.,R.19 E.,S.29,B.T. A pinion pine,6 ins.diam.,bears S.60°W.,24 lks.dist.,marked T.13 S.,R.19 E.,S.30,B.T. A cedar,5 ins.diam.,bears N.20°W.,28 lks. dist.,marked T.13 S.,R.19 E.,S.19,B.T.
	Land,mountainous and level.
	Soil,white clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.

N.89° 54'E.,on a random line bet.secs.20 and 29.

Chains	
40.00	Set temp.¼ sec.cor.
80.30	Intersect N.and S.line;5 lks.N.of the cor.of secs. 20,21,28,and 29.
	Thence we run
	S.89° 56'W.,on a true line bet.secs.20 and 29.
	Over mountainous land;through scattering timber and scattering undergrowth;descend gradually.
15.00	Commence steep descent,bears N.and S.
30.00	Trail,in bottom of Tabyago Canon,300 ft.below sec. cor.,course N.;ascend.
40.15	Set a sandstone,18x12x6 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which
	A pinion pine,10 ins.diam.,bears N.80°W.,100 lks.dist.,marked ¼ S. 20,B.T.
	A cedar,6 ins.diam.,bears S.,60 lks. dist., marked ¼ S.29,B.T.
41.00	Begin more gradual ascent,bears N.and S.
64.25	Top of ridge,350 ft.above hollow,bears N.and S.;descend.
80.30	The cor.of secs.19,20,29,and 30.
	Land,mountainous.
	Soil,white clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.30 chs.

	West,on a random line bet.secs.19 and 30.
40.00	Set temp.¼ sec.cor.
80.04	Intersect W.bdy.of Tp.21 lks.N.of the cor.of secs. 19,24,25,and 30,heretofore described.
	Thence we run
	N.89° 51'E.,on a true line bet.secs.19 and 30.
	Over rolling mesa;through dense undergrowth.

chains	
29.60	Trail,bears N.and S.
40.04	Set a limestone,24x6x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable;
59.50	Leave undergrowth and enter heavy timber,bears N.40° E. and S.15°W.
59.60	Edge of mesa,bears N.40°E.and S.15°W.; descend.
75.75	Bottom of hollow,350 ft.below mesa,course N.20°E.; ascend.
80.04	The cor.of secs.19,20,29,and 30.
	Land,mountainous and rolling mesa.
	Soil,sandy and gravelly loam;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous or heavily timbered land,or land covered with dense undergrowth,80.04 chs.
	September 28,1901:At the noon hour the sky is overcast and solar observations are impossible.

	N.0°03'W.,bet.secs.19 and 20.
	Over mountainous land;through scattering timber and scattering undergrowth;descend.
14.50	Bottom of hollow,200 ft.below sec.cor.,course N.30°E. Ascend.
30.00	Top of ascent,300 ft.above hollow,bears N.E.and S.W. Thence over flat top ridge.
38.00	Leave ridge,bears N.E.and S.W.;descend.
40.00	Set a limestone,24x12x4 ins.,18 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,6 ins.diam.,bears N.20°E.,50 lks.dist.,marked ¼ S.20,B.T.
	No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Chains	
75.50	Bottom of hollow,250 ft.below ridge,course N.30° E.; ascend.
80.00	Set a limestone,20x12x4 ins.,15 ins.in the ground,for cor.of secs.17,18,19,and 20,marked with 3 notches on S.and 5 notches on E.edges;from which
	A cedar,6 ins.diam.,bears N.70° E.,290 lks. dist.,marked T.13 S.,R.19 E.,S.17,B.T.
	A cedar,8 ins.diam.,bears S.70° E.,250 lks. dist.,marked T.13 S.,R.19 E.,S.20 ,B.T.
	A cedar,7 ins.diam.,bears S.25° W.,200 lks. dist.,marked T.13 S.,R.19 E.,S.19,B.T.
	No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.

	N.89° 56'E.,on a random line bet.secs.17 and 20.
40.00	Set temp.¼ sec.cor.
80.12	Intersect N.and S.line,10 lks.N.of the cor.of secs. 16,17,20,and 21.
	Thence we run
	West,on a true line bet.secs.17 and 20.
	Over mountainous land;through dense undergrowth and scattering timber;descend gradually.
8.00	Begin more abrupt descent,bears N.and S.
18.00	Trail,bears N.and S.
21.80	Bottom of Tabyago Canon,250 ft.below sec.cor.,course N.;ascend.
40.06	Set a limestone,18x12 x4 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;from which

Chains	
	A pinion pine,10 ins.diam.,bears N.40° W., 35 lks.dist.,marked ⅄ S.17,B.T.
	A pinion pine,8 ins.diam.,bears S.20° E., 25 lks.dist.,marked ⅄ S.20,B.T.
42.50	Top of ridge,250 ft.above canon,bears N.and S.W.; descend.
75.00	Bottom of hollow,150 ft.below ridge,course N.25° E.; ascend.
80.12	The cor.of secs.17,18,19,and 20.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.12 chs.
	S.89° 51'W.,on a random line bet.secs.18 and 19.
40.00	Set temp.⅄ sec.cor.
80.18	Intersect W.bdy.of Tp.,21 lks.S.of the cor.of secs. 13,18,19,and 24,heretofore described.
	Thence we run
	East,on a true line bet.secs.18 and 19.
	Over mountainous land;through scattering timber and dense undergrowth;ascend.
21.50	Top of ridge,100 ft.above sec.cor.,bears N.20° W.and S.20° E.;descend.
40.18	Set a limestone,30x12x7 ins.,22 ins.in the ground,for ⅄ sec.cor.,marked ⅄ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
45.00	Bottom of hollow,150 ft.below ridge,course N.;ascend.
74.50	Top of ridge,100 ft.above hollow,bears N.20° E.and S. 20° W.;descend.
80.18	The cor.of secs.17,18,19,and 20.

Subdivision of T.13 S..R.19 E.-Continued.

Chains	
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.18 chs.
	N.0°03'W.,bet.secs.17 and 18.
	Over mountainous land;through scattering timber and scattering undergrowth;ascend.
11.00	Top of ridge,100 ft.above sec.cor.,bears N.30°E.and S.30°W.;descend.
40.00	Set a sandstone,18x8x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,4 ins.diam.,bears N.87°E.,75 lks. dist.,marked ¼ S.17,B.T. A cedar,5 ins.diam.,bears N.80°W.,110 lks. dist.,marked ¼ S.18,B.T.
80.00	Set a sandstone,24x15x5 ins.,18 ins.in the ground, for cor.of secs.7,8,17,and 18,marked with 4 notches on S.and 4 notches on E.edges;from which A cedar,10 ins.diam.,bears N.60°W.,180 lks. dist.,marked T.13 S.,R.19 E.,S.7,B.T. No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,clay and gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.
	September 28,1901.

Chains	
	September 30,1901;At 7 h 0 m a.m.,l.m.t.,we set off 39° 42'N.,on the lat.arc;2° 37'S.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.7,8,17,and 18.
	Thence we run
	East,on a random line bet.secs.8 and 17.
40.00	Set temp.¼ sec.cor.
80.22	Intersect N.and S.line,at the cor.of secs.8,9,16,and 17.
	Thence we run
	West,on a true line bet.secs.8 and 17.
	Over mesa;through heavy timber.
9.00	Edge of mesa,bears N.and S.;descend.
34.60	Trail,bears N.10°W.and S.10°E.in bottom of hollow, 300 ft.below mesa,course N.10°W.;this is Tabyago Canon.Ascend.
39.00	Top of spur,50 ft.above canon,bears N.and S.10°W.; descend.Leave heavy and enter scattering timber.
40.11	Set a sandstone,18x12x6 ins.,12 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base.1½ ft.high,N.of cor.Pits impracticable. Enter scattering undergrowth
43.00	Bottom of hollow,100 ft.below spur,course N.;ascend.
67.50	Top of ridge,250 ft.above hollow,bears N.20°W.,and S.20°E.;descend.
77.75	Bottom of hollow,150 ft.below ridge,course N.;ascend.
80.22	The cor.of secs.7,8,17,and 18.
	Land,mountainous and level.
	Soil,sandy and gravelly;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.22 chs.

	West,on a random line bet.secs.7 and 18.

Chains	
40.00	Set temp.¼ sec.cor.
80.30	Intersect W.bdy.of Tp.,24 lks.N.of the cor.of secs. 7,12,13,and 18,heretofore described.
	Thence we run
	N.89° 50' E.,on a true line bet.secs.7 and 18.
	Over mesa;through dense undergrowth .
5.00	Leave mesa,bears N.E.and S.W.;descend.
10.50	Bottom of hollow,250 ft.below mesa,course N.E.;ascend.
14.00	Top of ascent,200 ft.above hollow,bears N.E.and S.W.
	Thence over mesa.
34.00	Edge of mesa,bears N.20° E.and S.20° W.;descend through scattering timber.
39.90	Bottom of hollow,250 ft.below mesa,course N.20° E.; ascend.
40.30	Set a limestone,36x8x4 ins.,27 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
53.50	Top of ridge,200 ft.above hollow,bears N.20° W.and S.20° E.;descend.
80.30	The cor.of secs.7,8,17,and 18.
	Land,mountainous and level.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.30 chs.

	N.0° 03' W.,bet.secs.7 and 8.
	Over mountainous land;through scattering timber and dense undergrowth;descend.
38.50	Trail,bears N.W.and S.E.
38.60	Bottom of Tabyago Canon,250 ft.below sec.cor.,course

Subdivision of T 13 S. R.19 E.-Continued.

Chains N.W.;ascend.

40.00 Set a sandstone,20x10x4 ins.,15 ins.in the ground,fo ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

60.00 Top of ascent,350 ft.above canon,bears N.W.and S.E.

Thence over rolling mesa.

78.00 Leave mesa,bears E.and W.;descend.

80.00 Set a sandstone,25x10x5 ins.,19 ins.in the ground,for cor.of secs.5,6,7,and 8,marked with 5 notches on S. and 5 notches on E.edges;from which

A cedar,9 ins.diam.,bears N.67°E.,100 lks. dist.,marked T.13 S.,R.19 E.,S.5,B.T.

A pinion pine,10 ins.diam.,bears S.25°E.,20 lks.dist.,marked T.13 S.,R.19 E.,S.8,B.T.

A pinion pine,7 ins.diam.,bears S.20°W.,25 lks.dist.,marked T.13 S.,R.19 E.,S.7,B.T.

A cedar,6 ins.diam.,bears N.60°W.,150 lks. dist.,marked T.13 S.,R.19 E.,S.6,B.T.

Land,mountainous and rolling mesa.

Soil,sandy loam and gravelly;2nd and 3rd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

East,on a random line bet.secs.5 and 8.

40.00 Set temp.¼ sec.cor.

80.06 Intersect N.and S.line,at the cor.of secs.4,5,8,and 9.

Thence we run

West,on a true line bet.secs.5 and 8.

Over rolling mesa;through dense undergrowth.

40.03 Set a sandstone,18x4x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impractic-

Chains	
	able.
50.00	Enter scattering timber,bears N.and S.
65.00	Edge of mesa,bears N.and S.;descend.
80.06	The cor.of secs.5,6,7,and 8.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.06 chs.
	September 30,1901:At this cor.we set off 2° 44'S.,on the decl.arc;and at 0 h 3 m p.m.,l.m.t.,observe the sun on the true meridian,the resulting lat.is 39° 42' N.

	S.89° 50'W.,on a random line bet.secs.6 and 7.
40.00	Set temp.$\frac{1}{4}$ sec.cor.
80.16	Intersect W.bdy.of Tp.,24 lks.S.of the cor.of secs. 1,6,7,and 12,heretofore described.
	Thence we run
	East,on a true line bet.secs.6 and 7.
	Over mountainous land;through dense undergrowth;ascend.
17.50	Top of ridge,100 ft.above sec.cor.,bears N.10° E.and S.10°W.;descend.
28.70	Bottom of hollow,150 ft.below ridge,course N.;ascend.
37.00	Top of ridge,150 ft.above hollow,bears N.and S.;descend.
40.16	Set a limestone,30x10x4 ins.,22 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,1½ Ft.high,N.of cor.Pits impracticable.
61.20	Trail,bears N.and S.
61.50	Bottom of Tabyago Canon,400 ft.below ridge,course N.;ascend.

Chains	
80.16	The cor.of secs.5,6,7,and 8.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.16 chs.
	N.0°03'W.,on a random line bet.secs.5 and 6.
40.00	Set temp.¼ sec.cor.
80.28	Intersect N.bdy.of Tp,2 lks.E.of the cor. of secs.5,6,31,and 32,heretofore described.
	Thence we run
	S.0°04'E.,on a true line bet.secs.5 and 6.
	Over rolling mesa;through dense undergrowth.
40.28	Set a limestone,24x6x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
61.00	Leave mesa,bears N.W.and S.E.;descend.
62.00	Enter scattering timber,bears E.and W.
69.50	Bottom of hollow,200 ft.below mesa,course W.;ascend.
80.28	The cor.of secs.5,6,7,and 8.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and clay;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.28 chs.
	September 30,1901.

General Description.

This township contains nearly every variety of land from level mesas to high ridges,and the soil ranges from rich loam to rocky land.the soil of the mesas and bottom of hollows is generally sandy or clay loam;2nd rate,capable of producing good crops without irrigation.The remainder of the township is generally gravelly;3rd rate.

There is a good growth of grass all over the township ,but it is only adapted for winter and early spring grazing on account of the scarcity of water in the summer months.

Cedar and pinion pine timber is found in nearly all parts of the township,the trees are not large.

There are no settlers in the township.

There is no mineral in the township .

Scott R. Stewart.
John R. Stewart
U.S.Deputy Surveyors.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by .....

....., United States Deputy Surveyor, to assist in running, measuring, and arking the lines and corners described in the foregoing field notes of the survey of .....

.....

owing the respective capacities in which they acted:

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

In final affidavits see book X. Tp. 11 S. R. 19 E.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted .....

....., United States Deputy Surveyor, in surveying all ose parts or portions of the .....

.....

.....

..... of the .....

..... meridian, ... of ..... , which are represented the foregoing field notes as having been surveyed by him and under his direction; and that said survey s been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the ner monuments established, according to the instructions furnished by the United States Surveyor neral for .....

....., *Chainman.*

....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Axman.*

....., *Axman.*

....., *Flagman.*

In final affidavits see book X. Tp. 11 S. R. 19 E.

.....

bscribed and sworn to before me this .....

day of ....., 189

SEAL

.....

.....

-151

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, _____, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from _____ United States Surveyor General for _____, bearing date of the _____ day of _____, 189 , I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for _____, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____ _____ _____ _____ _____ of the _____ _____ meridian, in the _____ of _____, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

_____
United States Deputy Surveyor

Subscribed by said _____, and sworn to before me this _____ day of _____, 189

_____

SEAL

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah, January 5, 1903 189

The foregoing field notes of the survey of the subdivisional lines of Township 13 South, Range 19 East of the Salt Lake Base & Meridian, Utah

executed by Scott P. Stewart & John R. Stewart under his contract No. 242, dated August 20, 1901, 189 , having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Edward M. Anderson
United States Surveyor General

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

_____
United States Surveyor General

6-151

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BOOK A-289

FIELD NOTES

OF THE SURVEY OF THE

West and North Boundaries

of

Township No. 12 South,

Range No. 20 East

Of the Salt Lake Base and Meridian,

In the State of Utah,

AS SURVEYED BY

Cott P. Stewart and John C. Stewart, United States Deputy Surveyors

Under their Contract No. 242, dated April 12, 1901, ~~189~~

urvey commenced September 30, 1901, ~~189~~

urvey completed October 2, 1901, ~~189~~

6—151

W Bdy high 6-00.00'

" " 5.79.90'

NAMES AND DUTIES OF ASSISTANTS.

Andy J. Stewart, Chainman,
Edwin A. Peay, Chainman,
Vosco Call, Chainman,
Hugh Conover, Chainman,
Clarence S. Jarvis, Moundman,
John J. Harding, Moundman,
George W. Ekins, Axman.
Harry Burton, Axman.
Harvey R. Booth, Flagman.
Gilbert Burr, Flagman.

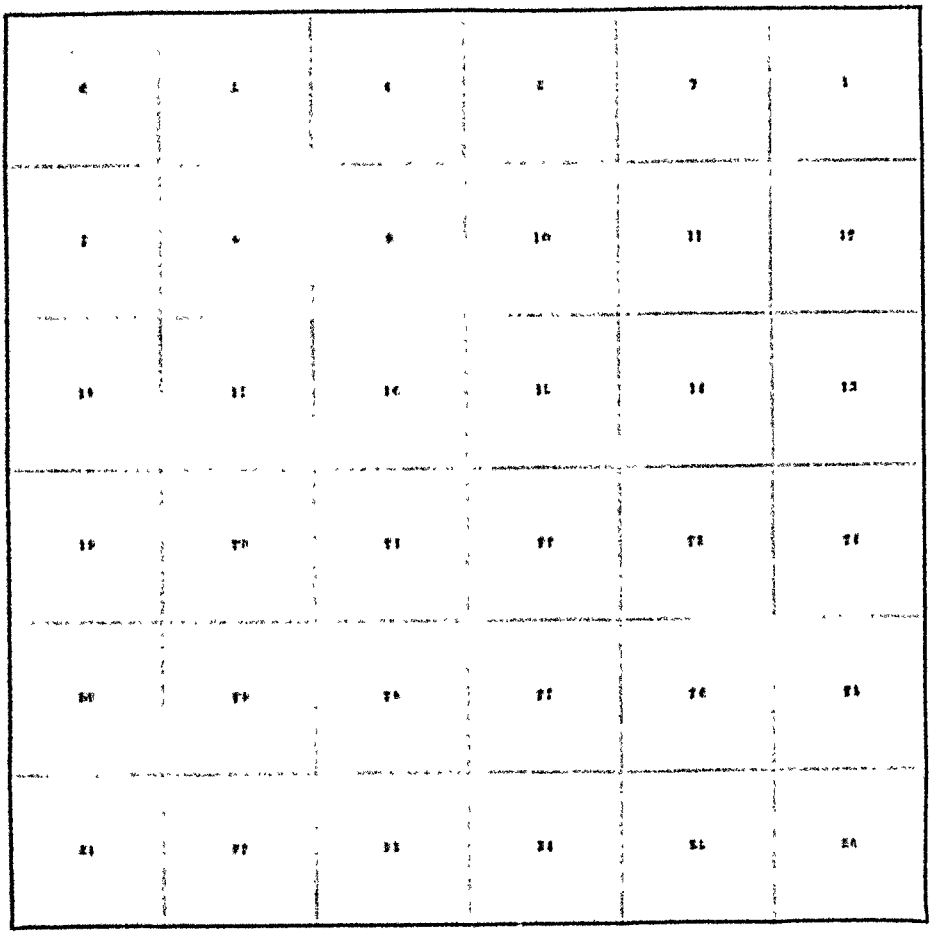
For preliminary affidavit see book C, F 15 S R 20 E.

6—151

BOOK A-289

INDEX DIAGRAM.

Township ..... , *Range* .....



Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

WE, _____ and _____

do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey

_____

_____, *Chainman.*

_____, *Chainman.*

Subscribed and sworn to before me this _____
day of _____, 189

SEAL

_____

_____

WE, _____ and _____

do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey

_____

_____, *Moundman.*

_____, *Moundman.*

Subscribed and sworn to before me this _____
day of _____, 189

SEAL

_____

_____

WE, _____ and _____

do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey

_____

_____, *Axman.*

_____, *Axman.*

Subscribed and sworn to before me this _____
day of _____, 189

SEAL

_____

_____

I, _____, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of _____

_____, *Flagman.*

Subscribed and sworn to before me this _____
day of _____, 189

SEAL

_____

_____

West boundary of T.12 S.,R.20 E.

Survey commenced September 30,1901,and executed with a W.and L.E.Gurley light mountain transit,No.3,with 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 latitude and declination arcs;and a W.and L.E.Gurley plain transit,No.2,of which the horizontal limb is provided with one double vernier, reading to single minutes of arc.

The instruments were examined ,tested on the true meridian at Salt Lake City,found correct,and were approved by the surveyor general for Utah,the former on June 6,1901,and the latter on May 29,1901.

We examine the adjustments of the instruments,and correct the level and collimation errors,then,to test the solar apparatus of the No.3 instrument,by comparing its indications resulting from solar observations made during p.m.and a.m.hours,with a true meridian established by observation on Polaris,we proceed as follows:

At the cor.of Tps.12 and 13 S.,Rs.19 and 20 E.,heretofore described,longitude 109° 46' W.,latitude 39° 43' N.,we set off 39° 43' N.,on the lat.arc;2° 45' S.,on the decl.arc;(at 4 h 0 m p.m.,l.m.t.,) and determine a true meridian with the solar and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N.of the cor.

September 30,1901.

October 1,1901:At 0 h 47 m a.m.,l.m.t.,we observe Polaris at upper culmination,with the No.2,instrument, in accordance with the Manual,and mark the true meridian thus determined by cutting a small groove in the stone,already set 5,00 chs.N.of the cor.;this mark falls 0.22 ins.east of the mark determined with the solar.

Chains	
	At 7 h 2 m a.m.,l.m.t.,we set off 39° 43'N.,on the lat. arc; 3° 00'S.,on the decl.arc;and mark the true meridian determined with the solar,by a cross on the stone,already set 5.00 chs.N.of our station;this mark falls 0.32 ins.east of the true meridian established by Polaris observation.
	The solar apparatus of the No.3 instrument by p.m. and a.m.observations,defines positions for true meridians ,respectively about 0'12"west and 0'17"east of the true meridian established by Polaris observation,with the No.2 instrument;therefore we conclude that the adjustments of the instruments are satisfactory.
	The magnetic bearing of the true meridian at 7 h 30 m a.m.is 16° 13.8'W.,the angle thus determined reduced by the table page 100 of the Manual,gives the mean mag.decl.16° 11'E.
	From the above described cor.
	We run
	North,bet.secs.31 and 36.
	Over level canon bottom ;through dense undergrowth.
	In Hill Creek Canon.
40.00	Set a limestone,14x11x5 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
60.00	Leave canon bottom,bears N.W.and S.E.;ascend.
64.00	Top of spur,100 ft.above canon,bears N.E.and S.W.; descend.
73.00	Bottom of hollow,100 ft.below spur,course S.W.;ascend.
80.00	Top of spur,150 ft.above hollow,bears N.E.and S.W.; Set a limestone,15x9x5 ins.,10 ins.in the ground,for cor.of secs.25,30,31,and 36,marked with 5 notches on N.and 1 notch on S.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Chains	
	Land,mountainous and level.
	Soil,gravelly;3rd rate.
	No timber.
	Undergrowth,sage brush and grease wood.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	North,bet.secs.25 and 30.
	Over mountainous land;through dense undergrowth;descend.
40.00	Set a sandstone,20x10x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
54.50	Bottom of hollow,150 ft.below sec.cor.,course N.W.; ascend.
60.00	Enter scattering timber,bears E.and W.
80.00	Set a limestone,18x10x4 ins.,12 ins.in the ground,for cor.of secs.19,24,25,and 30,marked with 4 notches on N.and 2 notches on S.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	North,bet.secs.19 and 24.
	Over mountainous land;through dense undergrowth ;descend.
40.00	Set a limestone,20x6x4 ins.,15 ins.in the ground,for

West boundary of T.12 S..R.20 E.-Continued.

Chains	
	¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
56.00	Bottom of hollow,200 ft.below sec.cor.,course N.W.; ascend.
70.00	Top of ridge,250 ft.above hollow,bears N.W.and S.E.; descend.
80.00	Set a limestone,20x14x4 ins.,15 ins.in the ground, for cor.of secs.13,18,19,and 24,marked with 3 notches on N.and 3 notches on S.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth, 80.00 chs.
	October 1,1901:At the noon hour the sky is overcast and solar observations are impossible.

	North,bet.secs.13 and 18.
	Over mountainous land;through dense undergrowth;descend.
10.70	Bottom of hollow,100 ft.below sec.cor.,course N.70° W.;;ascend.
20.00	Top of ridge,200 ft.above hollow.bears N.W.and S.E.; descend.
40.00	Bottom of hollow,200 ft.below ridge,course N.80°W. Set a limestone,14x9x6 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft;high,W.of cor.Pits impracticable.Ascend.
60.00	Top of ridge,250 ft.above hollow,bears E.and W.;des-

Chains	
	cend.
80.00	.Set a limestone,20x8x5 ins.,15 ins.in the ground,for cor.of secs.7,12,13,and 18,marked with 2 notches on N.and 4 notches on S.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly and clay;3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	North,bet.secs.7 and 12.
	Over mountainous land;through dense undergrowth;descend gradually.
40.00	Set a limestone,20x6x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
80.00	Set a limestone,20x8x4 ins.,15 ins.in the ground,for cor.of secs.1,6,7,and 12,marked with 1 notch on N.and 5 notches on S.edges;and raise a mound of stone,2 ft. base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly and clay loam;2nd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	North,bet.secs.1 and 6.
	Over mountainous land;through dense undergrowth;ascend.

Chains	
25.00	Begin abrupt ascent,bears N.50° W.and S.50° E.;
32.00	Top of ridge,350 ft.above sec.cor.,bears N.40° W.and S.40° E.;descend.
40.00	Set a sandstone,18x12x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
80.00	Set temp.cor.of Tps.11 and 12 S.,Rs.19 and 20 E.
	Note:For description of Permanent cor.see notes of North boundary of T.12 S.,R.20 E.
	Land,mountainous.
	Soil,gravelly and clay loam;2nd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	October 1,1901.

October 2,1901:At 7 h 0 m a.m.,l.m.t.,we set off 59° 49'N.,on the lat.arc;3° 24'S.,on the decl.arc;and determine a true meridian with the solar at the temp. cor.of Tps.11 and 12 S.,Rs.19 and 20 E.

Thence we run

N.89° 58'E.,on a random line alone N.bdy.of Tp.,setting temp.¼ sec.and sec,cors.at intervals of 40.00 chs., and at 479.90 chs.intersect Green River Guide Meridian 28 lks.N.of the cor.of Tps.11 and 12 S.,Rs.20 and 21 E.,heretofore described;the falling answers to a correction of 2'.

Thence we run

West,on a true line bet.secs.1 and 36.

Over mountainous land;through dense undergrowth;descend.

North boundary of T.12 S.,R.20 E -Continued.

Chains	
31.00	Bottom of hollow,150 ft.below sec.cor.,course N.;ascend.
39.50	Top of ridge,200 ft.above hollow,bears N.10° E.and S.10° W.;descend.
40.00	Set a sandstone,24x5x4 ins.18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
43.00	Bottom of Hollow,250 ft.below ridge,course N.E.;ascend.
80.00	Set a sandstone,30x8x6 ins.,22 ins.in the ground,for cor.of secs.1,2,35,and 36,marked with 1 notch on E.and 5 notches on W.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly and clay loam;2nd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	October 2,1901:At this cor.we set off 3° 30'S.,on the decl.arc;and at 0 h 2 m p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39° 49'N.

	West,on a true line bet.secs.2 and 35.
	Over mountainous land;through scattering undergrowth;ascend.
40.00	Top of ridge,200 ft.above sec.cor.,bears N.and S.: Set an oil shale stone,30x14x5 ins.;22 ins.in the ground,for ¼ sec.cor., marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
	Descend.

Chains	
42.35	Bottom of hollow,150 ft.below ridge,course N.;ascend.
46.00	Trail,bears N.W.and S.E.
47.00	Top of ridge,150 ft.above hollow,bears N.40° W.and S.40° E.;descend.
60.30	Bottom of hollow,250 ft.below ridge,course N.60° W.; ascend.
66.00	Top of ridge,250 ft.above hollow,bears N.30° W.and S.30° E.;descend.
80.00	Set a sandstone,20x14x4 ins.,15 ins.in the ground,for cor.of secs.2,3,34,and 35,marked with 2 notches on E. and 4 notches on W.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous .
	Soil,gravelly;3rd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,80.00 chs.

	West,on a true line bet.secs.3 and 34.
	Over mountainous land;through dense undergrowth;ascend.
22.00	Top of spur,150 ft.above sec.cor.,bears N.20° E.and S.20° W.;descend.
28.75	Bottom of hollow,150 ft.below spur,course N.;ascend.
33.00	Top of spur,100 ft.above hollow,bears N.and S.;descend.
37.00	Bottom of hollow,175 ft.below spur,course N.40° E.; ascend.
40.00	Set a limestone,28x8x6 ins.,21 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
46.00	Top of ridge,200 ft.above hollow,bears N.20° E.and S.20° W.;descend.

Chains	
52.00	Bottom of hollow,75 ft.below ridge,course N.20° E.;ascend.
62.00	Top of divide ridge,bet.Hill and Willow Creek canons, 200 ft.above hollow,bears N.20° E.and S.20° W.;descend.
66.50	Bottom of hollow,150 ft.below ridge,course N.;ascend.
73.00	Top of ridge,150 ft.above hollow,bears N.20° W.and S. 20° E.;descend.
78.80	Bottom of hollow,150 ft.below ridge,course N.6° W.;ascend.
80.00	Set a limestone,24x12x4 ins.,18 ins.in the ground,for cor.of secs.3,4,33,and 34,marked with 3 notches on E. and 3 notches on W.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly and clay loam;2nd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	West,on a true line bet.secs.4 and 33.
	Over mountainous land;through dense undergrowth;ascend.
3.00	Top of ridge,100 ft.above sec.cor.,bears N.and S.; descend.
8.00	Bottom of hollow,100 ft.below ridge,course N.W.;ascend.
25.00	Top of ridge,220 ft.above hollow,bears N.and S.;descend.
31.00	Bottom of hollow,200 ft.below ridge,course N.;ascend.
40.00	Set a sandstone,18x10x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of

Chains stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.

55.00 Top of ridge,150 ft.above hollow,bears N.60°W.and S.60°E.;descend.

64.00 Bottom of hollow,150 ft.below ridge,course N.W.;ascend.

80.00 Set a sandstone,18x8x6 ins.,12 ins.in the ground,for cor.of secs.4,5,32,and 33,marked 4 notches on E.and 2 notches on W.edges;and raise a mound of stone,2 ft. base,1½ ft.high,W.of cor.Pits impracticable.

Land,mountainous.

Soil,gravelly and clay loam;2nd rate.

No timber.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

West,on a true line bet.secs.5 and 32.

Over mountainous land;through dense undergrowth;ascend.

25.00 Top of ridge,150 ft.above sec.cor.,bears N.and S.; descend.

38.00 Bottom of hollow,150 ft.below ridge,course N.20°E.; ascend.

40.00 Set a sandstone,16x8x8 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face; and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.

64.50 Top of ridge,250 ft.above hollow,bears N.and S.;descend.

80.00 Set a sandstone,18x11x4 ins.,12 ins.in the ground,for cor.of secs.5,8,31,and 32,marked with 5 notches on E.and 1 notch on W.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Chains	
	Land,mountainous.
	Soil,gravelly;3rd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	West,on a true line bet.secs.6 and 31.
	Over mountainous land;through dense undergrowth;descend.
16.00	Bottom of hollow,225 ft.below sec.cor.,course N.;ascend.
40.00	Set a sandstone,18x7x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
41.00	Top of ridge,250 ft.above hollow,bears N.10°W.and S.10°E.;descend.
55.00	Bottom of hollow,200 ft.below ridge,course N.30°E.; ascend.
68.00	Top of ridge,250 ft.above hollow,bears N.15°E.and S.15°W.;descend.
79.90	The temp.cor.of Tps.11 and 12 S.,Rs.19 and 20 E.
	Set a limestone,24x9x7 ins.,18 ins.in the ground,for cor.of Tps.11 and 12 S.,Rs.19 and 20 E.,marked 11 S. on N.E.,20 E.on S.E.,12 S.on S.W.,and 19 E.on N.W. faces;with 6 notches on each edge;and raise a mound of stone,2 ft.base,1½ ft.high,S.of cor.Pits impracticable.
	Land,mountainous.
	Soil,clay and gravelly loam2nd and 3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.

North boundary of T.12 S.,R.20 E.-Concluded.

Chains | Mountainous land,or land covered with dense under-growth,79.90 chs,

October 2,1901.

Boundaries of T.12 S.,R.20 E.

Latitudes,departures,and closing errors.

Line designated	true bearing	dist-ance Chs.	latitudes N. Chs.	latitudes S. Chs.	departure E. Chs.	departure W. Chs.
W.bdy.T.12 S.,R.20 E.	North	480.00	480.00			
N.bdy.T.12 S.,R.20 E.	East	479.90			479.90	
E.bdy.T.12 S.,R.20 E.	South	480.00		480.00		
S.bdy.T.12 S.,R.20 E.	S.89° 58'W.	479.68		.28		479.68
Convergency					.60	
Totals			480.00	480.28	480.50	479.68
				480.00	479.68	
Error in lat.				.28		
Error in dep.					.82	

This township is nearly all mountainous,and is well adapted for grazing in winter and early spring. The township should be subdivided.

Scott P. Stewart.
John R. Stewart.
U.S.Deputy Surveyors.

October 2,1901.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by ..... , United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of ..... , showing the respective capacities in which they acted:

..... , *Chainman.*

..... , *Chainman.*

..... , *Moundman.*

..... , *Moundman.*

..... , *Leman.*

..... , *Leman.*

..... , *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted ..... , United States Deputy Surveyor, in surveying all the parts or portions of the ..... of the ..... meridian, ... of ..... which are represented on the foregoing field notes as having been surveyed by him and under his direction; and that said survey is known in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the proper monuments established, according to the instructions furnished by the United States Surveyor General for

..... , *Chainman.*

..... , *Chainman.*

..... , *Moundman.*

..... , *Moundman.*

..... , *Leman.*

..... , *Leman.*

..... , *Flagman.*

....

Subscribed and sworn to before me this .....

day of ..... , 189 .

SEAL.

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, ______________________________, United States Deputy Surveyor, solemnly swear that, in pursuance of a contract received from ______________ United States Surveyor General for ______________________ bearing date of ______________ day of ______________________, 189 , I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for ______________________, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of ______________________

____

____

____ of the ______________

______________ meridian, in the ______________ of ______________, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for ______________________ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey; and should any fraud be detected, I will submit to the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

____
United States Deputy Surveyor.

Subscribed by said ______________________, and sworn to before me
this ______ day of ______________________ 189

____

____

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL.

Salt Lake City, Utah, February 1903. 18

The foregoing field notes of the survey of the West & South Boundaries of Township 12 South Range 20 East of the Salt Lake Base & Meridian, Utah

____

____

____

executed by Scott P. Stewart & John R. Stewart under his Contract No. 242, dated April 2, 1901, 189 , having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Edward H. Anderson
United States Surveyor General.

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

____
United States Surveyor General.

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4—679.

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BOOK A-289

FIELD NOTES

OF THE SURVEY OF THE

SUBDIVISION

of

Township No.12 South , Range No.20 East ,

Of the SALT LAKE BASE AND *Meridian,*

of the STATE OF UTAH,

AS SURVEYED BY

Scott P.Stewart and John R.Stewart , *United States Deputy Surveyors*

nder their Contract No. 242 , *dated* April 12,1901. , ~~188~~

Survey commenced October 3,1901. , ~~188~~

Survey completed October 11,1901. , ~~188~~

6—151

Surv'd 59-77.30

NAMES AND DUTIES OF ASSISTANTS.

Andy J. Stewart	Chainman,
Edwin A. Peay	Chainman,
Vosco Call	Chainman,
Hugh Conover	Chainman,
Clarence S. Jarvis	Moundman,
John J. Harding	Moundman,
George W. Ekins	Axman,
Harry Burton	Axman,
Harvey R. Booth	Flagman,
Gilbert Burr	Flagman,

For preliminary affidavits see book D. Sp. 15. 5 N.Z.

6—151

BOOK A-289

INDEX DIAGRAM.

Township....., *Range*.....

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

WE, _____ and
do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level t
chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; th
we will report the true distances to all notable objects, and the true lengths of all lines that we assist i
measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey
_____

_____, *Chainma*

_____, *Chainma*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

WE, _____ and
do solemnly swear that we will well and truly perform the duties of moundmen in the establishm
of corners, according to the instructions given us, to the best of our skill and ability, in the survey
_____

_____, *Mound*

_____, *Moundm*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

WE, _____ and
do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corn
and other duties, according to instructions given us, to the best of our skill and ability, in the survey
_____

_____, *Axm*

_____, *Axm*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

I, _____, do solemnly swear that I will well and
perform the duties of flagman according to instructions given me, to the best of my skill and ability, in
survey of _____

_____, *Flag*

Subscribed and sworn to before me this _____
day of _____, 189

_____

SEAL

_____

6—151

Subdivision of T.12 S. R.20 E.

Survey commenced October 3,1901,and executed with a W.and L.E.Gurley light mountain transit,No.3,with 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 latitude and declination arc;and a W.and L.E.Gurley plain transit,No.2,of which the horizontal limb is provided with one double vernier reading to single minutes of arc.

The instruments were examined ,tested on the true meridian at Salt Lake City,found correct,and were approved by the surveyor general for Utah,the former on June 6,1901,and the latter on May 29,1901.

We examine the adjustments of the instruments,and correct the level and collimation errors,then to test the solar apparatus,of the No.3 instrument,by comparing its indications resulting from solar observations made during p.m.and a.m.hours,with a true meridian established by Polaris observation,we proceed as follows:

At the cor.of secs.1,2,35,and 36,on S.bdy.of Tp., heretofore described,latitude 39° 43'N.,longitude 109° 40'W.,we set off 39° 43'N.,on the lat.arc;3° 56'S.,on the decl.arc;(at 4 h 3 m p.m.,l.m.t.,) and determine a true meridian with the solar,and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N.of the cor.

October 3,1901.

October 4,1901:At 0 h 32 m a.m.,l.m.t.,we observe Polaris at upper culmination,with the No.2 instrument, in accordance with the Manual,and mark the true meridian thus determined,by cutting a small groove in the stone already set 5.00 chs.N.of the cor.;this mark falls 0.35 ins.east of the true meridian determined with the solar.

Chains	
	At 7 h 0.m a.m.,l.m.t.,we set off 39° 43'N.,on the lat. arc;4° 09'S.,on the decl.arc;and mark the true meridian determined with the solar,by a cross on the stone already set 5.00 chs.North of the cor.;this mark falls 0.26 ins.east of the true meridian established by Polar observation.
	The solar apparatus by p.m.and a.m.observations,defines positions for true meridians,respectively about 0'18"west and 0'14"east of the true meridian established by Polaris observation,with the No.2 instrument;therefore we conclude that the adjustments of the instruments are satisfactory.
	The magnetic bearing of the true meridian at 7 h 30 m a.m.is 16° 15'.8'W.,the angle thus determined reduced by the table page 100 of the Manual,gives the mean mag.decl.16° 13'E.
	From the above described cor
	we run
	N.0° 01'W.,bet.secs.35 and 36.
	Over mountainous land;through scattering undergrowth; descend.
11.00	Bottom of hollow,150 ft.below sec.cor.,course N.E.; ascend.
40.00	Top of ridge,250 ft.above hollow,bears N.E.and S.W. Set a limestone,24x8x8 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Descend.
65.00	Trail,bears N.E.and S.W.
68.00	Bottom of hollow,250 ft.below ridge,course N.55°E.; ascend.
80.00	Set a limestone,36x6x5 ins.,27 ins.in the ground,for cor.of secs.25,26,35,and 36,marked with 1 notch on S.and 1 notch on E.edges;and raise a mound of stone,

Chains	
	2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,80.00 chs.
	N.89° 58'E.,on a random line bet.secs.25 and 36.
40.00	Set temp.¼ sec.cor.
80.20	Intersect.Green River Guide Meridian,18.1ks.S.of the cor.of secs.25,30,31,and 36,heretofore described.
	Thence we run
	S.89° 50'W.,on a true line bet.secs.25 and 36.
	Over mountainous land;through scattering undergrowth; ascend.
10.50	Top of ridge,150 ft.above sec.cor.,bears N.40° W.and S.40° E.;descend.
40.10	Set a limestone,36x6x6 ins.,27 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high ,N.of cor.Pits impracticable.
41.50	Trail,bears N.6° W.and S.6° E.
41.60	Bottom of Agency Draw,350 ft.below ridge,course N.6° W.;ascend.
80.20	The cor.of secs.25,26,35,and 36.
	Land,mountainous.
	Soil,clay loam and gravelly;2nd and 3rd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,80.20 chs.
	N.0° 01'W.,bet.secs.25 and 26.

Chains	
	Over mountainous land;through dense undergrowth;descend.
9.75	Bottom of hollow,150 ft.below sec.cor.,course N.40° E. Ascend.
17.40	Trail,bears N.E.and S.W.
20.00	Top of ridge,150 ft.above hollow,bears N.E.and S.W.; descend.
25.50	Bottom of hollow,200 ft.below ridge,course N.E.;ascend.
40.00	Set a sandstone,40x5x4 ins.,30 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
60.00	Top of ridge,250 ft.above hollow,bears N.E.and S.W.; descend.
71.75	Bottom of hollow,150 ft.below ridge,course N.E.;ascend.
80.00	Set a sandstone,30x6x4 ins.,22 ins.in the ground,for cor.of secs.23,24,25,and 26,marked with 2 notches on S.and 1 notch on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,clay loam and gravelly;2nd and 3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 50'E.,on a random line bet.secs.24 and 25.
40.00	Set temp.¼ sec.cor.
80.00	Intersect Green River Guide Meridian,10 lks.S.of the cor.of secs.19,24,25,and 30,heretofore described.
	Thence we run
	S.89° 46'W.,on a true line bet.secs.24 and 25.

Chains	
	Over mountainous land;through scattering undergrowth. Ascend.
20.00	Trail,bears N.35° E.and S.35° W.
39.00	Top of ridge,200 ft.above sec.cor.,bears N.E.and S.E. Descend.
40.00	Set a sandstone,30x8x6 ins.,22 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
50.25	Bottom of Agency Draw,350 ft.below ridge,course N.; ascend.
80.00	The cor.of secs.23,24,25,and 26.
	Land,mountainous.
	Soil,clay loam and gravelly;2nd and 3rd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,80.00 chs.

	N.0° 01'W.,bet.secs.23 and 24.
	Over mountainous land;through dense undergrowth ;ascend.
5.00	Top of ridge,100 ft.above sec.cor.,bears N.E.and S.W. Descend.
10.00	Bottom of hollow,100 ft.below ridge,course N.40° E.; ascend.
40.00	Set a slate rock,20x6x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
59.00	Trail on top of ridge,200 ft.above hollow,bears N.40° E.and S.40° W.;descend.
69.00	Bottom of hollow,150 ft.below ridge,course N.40° E.; ascend.
80.00	Set a limestone,18x9x4 ins.,12 ins.in the ground,for

Chains	
	cor.of secs.13,14,23,and 24,marked with 3 notches on S.and 1 notch on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly and clay loam;2nd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land;or land covered with dense undergrowth,80.00 chs.
	October 4,1901:At this cor.we set off 4° 17'S.,on the decl.arc;and at 0 h 2 m p.m.,l.m.t.,observe the sun on the meridian ,the resulting lat.is 39° 46'N.
	N.89° 46'E.,on a random line bet.secs.13 and 24.
40.00	Set temp.¼ sec.cor.
79.80	Intersect the Green River Guide Meridian,5 lks.S.of the cor.of secs.13,18,19,and 24,heretofore described.
	Thence we run
	S.89° 44'W.,on a true line bet.secs.13 and 24.
	Over level canon bottom(Willow Creek Canon);through dense undergrowth.
5.00	Leave canon bottom,bears N.60°W.and S.E.;ascend.
10.00	Top of spur,150 ft.above canon,bears N.and S.;descend.
24.00	Bottom of Agency Draw,150 ft.below spur,course N.5°E. Ascend.
39.90	Set a sandstone,20x6x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face; and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
47.50	Top of ridge,200 ft.aboye canon,bears N.40°E.and S. 40°W.;descend.
65.00	Bottom of hollow,250 ft.below ridge,course N.40°E.; ascend.

Chains	
79.80	The cor.of secs.13,14,23,and 24.
	Land,mountainous.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.80 chs.
	N.0° 01'W.,bet.secs.13 and 14.
	Over mountainous land;through dense undergrowth;ascend.
2.50	Top of ridge,100 ft.above sec.cor.,bears N.60° E.and S.60° W.;descend.
14.00	Bottom of hollow,150 ft.below ridge,course N.60° E.; ascend.
26.00	Top of ridge,150 ft.above hollow,bears N.E.and S.W.; descend.
40.00	Set a sandstone,30x5x4 ins.,22 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,1½ ft.high,W.of cor.Pits impracticable.
49.75	Bottom of hollow,175 ft.below ridge,course N.50° E.; ascend.
58.00	Top of ridge,175 ft.above hollow,bears N.50° E.and S.50° W.;descend.
80.00	Set a limestone,20x12x4 ins.,15 ins.in the ground,fo cor.of secs.11,12,13,and 14,marked with 4 notches on S.and 1 notch on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	No timber.
	Undergrowth,sage brush ,shadscales ,and greasewood.

Chains	
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.89° 44'E.,on a random line bet.secs 12 and 13.
40.00	Set temp.¼ sec.cor.
79.74	Intersect Green River Guide Meridian,19 lks.N.of the cor.of secs.7,12,13,and 18,heretofore described.
	Thence we run
	S.89° 52'W.,on a true line bet.secs.12 and 13.
	Over mountainous land;through dense undergrowth;descend.
13.00	Foot of descent,150 ft.below sec.cor.,bears N.and S.; enter bottom of Willow Creek Canon.
15.00	Old road,bears N.and S.
27.50	Willow Creek bed(dry),20 lks.wide,course N.4°W.
39.87	Set a sandstone,24x8x6 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high, N.of cor.Pits impracticable.
50.00	Leave canon,bears N.and S.;ascend.
79.74	The cor.of secs.11,12,13,and 14.
	Land,mountainous and level.
	Soil,sandy and gravelly;2nd and 3rd rate.
	No timber.
	Undergrowth,sage brush ,shadscales and greasewood.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.74 chs.
	N.0° 01'W.,bet.secs.11 and 12.
	Over mountainous land;through dense undergrowth;descend.
7.00	Bottom of hollow,100 ft.below sec.cor.,course N.80° E.;ascend.

Chains	
15.00	Top of ridge,100 ft.above hollow,bears N.80°E.and S. 80°W.;descend.
30.00	Bottom of hollow,150 ft.below ridge,course N.80°E.; ascend.
40.00	Set a sandstone,24x6x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
68.00	Trail on top of ridge,200 ft.above hollow,bears N.70° W.and S.70°E.;descend.
80.00	Set a limestone,20x6x4 ins.,15 ins.in the ground,for cor.of secs.1,2,11,and 12,marked with 5 notches on S.and 1 notch on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89°52'E.,on a random line bet.secs 1 and 12.
40.00	Set temp.¼ sec.cor.
79.78	Intersect the Green River Guide Meridian,11 lks.N. of the cor.of secs.1,6,7,and 12,heretofore described.
	thence we run
	S.89°57'W.,on a true line bet.secs.1 and 12.
	Over level canon botton;through dense undergrowth:
2.50	Willow Creek bed(dry),20 lks.wide,course N.E.
20.00	Leave canon bottom,bears N.E.and S.W.;ascend.
39.89	Set a sandstone,36x10x6 ins.,27 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.

Chains	
79.78	The cor.of secs.1,2,11,and 12.
	Land,mountainous and level.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	No timber.
	Undergrowth,sage brush and greasewood.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,79.78 chs.

	N.0°01'W.,on a random line bet.secs.1 and 2.
40.00	Set temp.¼ sec.cor.
80.00	Intersect N.bdy.of Tp.at the cor.of secs.1,2,35,and 36,heretofore described.
	Thence we run
	S.0°01'E.,on a true line bet.secs. 1 and 2.
	Over mountainous land;through dense undergrowth;descend.
10.00	Bottom of hollow,200 ft.below sec.cor.;course N.50°E.
	Ascend.
10.10	Trail,bears N.50°E.and S.50°W.
40.00	Set a sandstone,30x5x4 ins.,22 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
40.05	Top of ridge,250 ft.above hollow,bears N.50°E.and S.50°W.;descend.
75.00	Bottom of hollow,150 ft.below ridge,course E.;ascend.
80.00	The cor.of secs.1,2,11,and 12.
	Land,mountainous.
	Soil,clay loam and gravelly;2nd and 3rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-

Chains	
	growth,80.00 chs.
	October 4,1901.
	October 5,1901:At 8 h 0 m a.m.,l.m.t.,we set off 39° 43'N.,on the lat.arc;4° 35'S.,on the decl.arc;and determine a true meridian with the solar,at the cor. of secs.2,3,34,and 35,on S.bdy.of Tp.,heretofore described.
	Thence we run
	N.0° 01'W.,bet.secs.34 and 35.
	Over mountainous land;through dense undergrowth;descend.
9.50	Bottom of hollow,350ft.below sec.cor.,course N .75°E.
	Ascend.
21.00	Top of ridge,225 ft.above hollow,bears N.80°E.and S.80°W.;descend.
39.10	Bottom of hollow,250 ft.below ridge,course E.;ascend.
40.00	Set a sandstone,30x8x8 ins.,22 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
48.00	Top of ascent,250 ft.above hollow,bears E.and W.; thence over mesa.
68.40	Leave mesa,bears E.and W.;descend.
78.00	Bottom of hollow,300 ft.below mesa,course N.70°E.; ascend.
80.00	Set a sandstone,28x9x6 ins.,21 ins.in the ground,for cor.of secs.26,27,34,and 35,marked with 1 notch on S.and 2 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and level.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.

Chains	
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	N.89° 58'E.,on a random line bet.secs.25 and 36.
40.00	Set temp.¼ sec.cor.
80.04	Intersect N.and S.line at the cor.of secs.25,26,35, and 36.
	Thence we run
	S.89° 58'W.,on a true line bet.secs.26 and 35.
	Over mountainous land;through dense undergrowth;des-cend.
11.00	Bottom of hollow,150 ft.below sec.cor.,course N.30° E.;ascend.
18.00	Trail,bears N. 30°E.and S.30°W.On ridge,bears same.
40.02	Set a sandstone,20x15x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impractic-able.
77.00	Bottom of hollow,200 ft.below ¼ sec.cor.,course N. 70°E.;ascend.
80.04	The cor.of secs.26,27,34,and 35.
	Land,mountainous.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	No timber.
	Undergrowth,sage brush and grease wood.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.04 chs.
	N.0° 01'W.,bet.secs.26 and 27.
	Over mountainous land;through dense undergrowth;as-cend.
4.80	Top of ridge,100 ft.above sec.cor.,bears E.and W.; descend.

Subdivision of T 12 S.,R.20 E.-Continued.

Chains.	
8.50	Bottom of hollow,125 ft.below ridge,course E.;ascend.
15.80	Top of ascent,150 ft.above hollow,bears E.and W.; thence across mesa.
18.45	Leave mesa,bears E.and W.;descend.
27.50	Bottom of hollow,200 ft.below mesa,course N.70° E.;ascend.
35.00	Top of ridge,150 ft.above hollow,bears N.70° E.and S.70° W.;descend.
40.00	Bottom of hollow,150 ft.below ridge,course N.55° E.; Set a sandstone,24x10x8 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft. base,1½ ft.high,W.of cor.Pits impracticable. Ascend.
42.55	Top of ridge,50 ft.above hollow,bears N.55° E.and S. 55° W.;descend.
56.70	Bottom of hollow,100 ft.below ridge,course S.80° E.; ascend.
65.45	Top of ridge,200 ft.above hollow,bears N.80° E.and S.80° W.;descend.
71.50	Bottom of hollow,200 ft.below ridge,course N.35° E.; ascend.
80.00	Set a quartzite stone,24x8x8 ins.,18 ins.in the ground,for cor.of secs.22,23,26,and 27,marked with 2 notches on S.and 2 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits inpracticable.

Land,mountainous and level.

Soil,gravelly and rocky;3rd and 4th rate.

No timber.

Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

Chains	
	N.89° 58'E.,on a random line bet.secs.23 and 26.
40.00	Set temp.¼ sec.cor.
79.80	Intersect N.and S.line,7 lks.S.of the cor.of secs. 23,24,25,and 26.
	Thence we run
	S.89° 55'W.,on a true line bet.secs.23 and 26.
	Over mountainous land;through dense undergrowth;ascend.
4.00	Top of ridge,100 ft.above sec.cor.,bears N.E.and S.W.;descend.
25.00	Bottom of hollow,200 ft.below ridge,course N.55°E.; ascend.
39.90	Set a sandstone,18x9x8 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
60.00	Top of spur,100 ft.above hollow,bears N.40°E.and S.40°W.;descend.
75.80	Bottom of hollow,150 ft.below spur,course N.70°E.; ascend.
79.80	The cor.of secs.22,23,26,and 27.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	No timber.
	Undergrowth ,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.80 chs.
	October 5,1901:At the noon hour the aky is overcast and solar observations are impossible.

	N.0°01'W.,bet.secs.22 and 23.
	Over mountainous land;through dense undergrowth;ascend.
4.80	Top of ascent,100 ft.above sec.cor.,bears E.and W.;

Chains	
	thence across rolling mesa.
15.80	Trail,bears N.80° E.and S.80° W.
30.00	Leave mesa,bears N.85° E. and S.85° W.; descend.
38.00	Bottom of hollow,100 ft.below mesa,course N.80° E.; ascend.
40.00	Set a sandstone,24x8x6 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on W face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
44.25	Top of ascent,150 ft.above hollow,bears N.50° E.and S.50° W.;thence over mesa.
50.00	Leave mesa,bears N.50° E.and S.50° W.;descend.
52.00	Bottom of hollow,100 ft.below mesa,course N.80° E.; ascend.
61.00	Top of ridge,150 ft.above hollow,bears E.and W.;descend.
64.00	Bottom of hollow,150 ft.below ridge,course E.;ascend.
68.00	Top of ridge,100 ft.above hollow,bears E.and W.;descend.
77.60	Bottom of hollow,150 ft.below ridge,course S.80° E.; ascend.
80.00	Set a quartzite stone,24x8x8 ins.,18 ins.in the ground,for cor.of secs.14,15,22,and 23,marked with 3 notches on S.and 2 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous and level.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

N.89° 55'E.,on a random line bet.secs.14 and 23.

Chains	
40.00	Set temp. ¼ sec.cor.
79.70	Intersect N.and S.line,11 lks.S.of the cor.of secs. 13,14,23 and 24.
	Thence we run
	S.89° 50'W.,on a true line bet.secs.14 and 23.
	Over mountainous land;through dense undergrowth;ascend.
4.00	Top of ridge,25 ft.above sec.cor.,bears N.60°E.and S.60°W.;descend.
20.00	Bottom of hollow,50 ft.below ridge,course N.50°E.; ascend.
28.50	Top of ridge,100 ft.above hollow,bears N.60°E.and S. 60°W.;descend.
39.85	Set a sandstone,24x6x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
70.00	Bottom of hollow,100 ft.below ridge,course N.20°E.; ascend.
79.70	The cor.of secs.14,15,22,and 23.
	Land,mountainous.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	No timber .
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.70 chs.
	N.0° 01'W.,bet.secs.14 and 15.
	Over mountainous land;through dense undergrowth;ascend.
9.80	Top of ridge,50 ft.above sec.cor.,bears E.and W.;descend.
19.40	Bottom of hollow,100 ft.below ridge,course E.;ascend.

Chains	
30.00	Top of ridge,100 ft.above hollow,bears E.and W.;descend.
31.50	Bottom of hollow,50 ft.below ridge,course E.;ascend.
40.00	Set a sandstone,15x8x7 ins.,10 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
43.00	Top of ridge,50 ft.above hollow,bears E.and W.;descend.
48.55	Bottom of hollow,50 ft.below ridge,course E.;ascend.
50.50	Top of ridge,50 ft.above hollow,bears E.and W.;descend.
55.00	Bottom of hollow,50 ft.below ridge,course E.;ascend.
59.40	Top of ridge,75 ft.above hollow,bears E.and W.;descend.
70.80	Bottom of hollow,100 ft.below ridge,course E.;ascend.
72.25	Top of ridge,100 ft.above hollow,bears E.and W.;descend.
80.00	Set a limestone,30x8x5 ins.,22 ins.in the ground,for cor.of secs.10,11,14,and 15,marked with 4 notches on S.and 2 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;4rd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 50'E.,on a random line bet.secs.11 and 14.
40.00	Set temp.¼ sec.cor.
79.60	Intersect N.and S.line,11 lks.S.of the cor.of secs. 11,12,13,and 14.
	Thence we run

Chains	
	S.89° 45'W.,on atrue line bet.secs.11 and 14.
	Over mountainous land;through dense undergrowth;descend.
6.10	Bottom of hollow,100 ft.below sec.cor.,course N.50°E.
	Ascend.
20.00	Top of ridge,150 ft.above hollow,bears N.20°E.and S. 20°W.;descend.
28.50	Bottom of hollow,300 ft.below ridge,course N.20°E.; ascend.
39.80	Set a sandstone,20x10x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face; and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
51.50	Top of ridge,100 ft.above hollow,bears N.20°E.and S. 20°W.;descend.
65.00	Bottom of hollow,150 ft.below ridge,course S.65°E.; ascend.
79.60	The cor.of secs.10,11,14,and 15.
	Land,mountainous.
	Soil,gravelly loam and clay loam;2nd rate.
	No timber .
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.60 chs.

	N.0° 01'W.,bet.secs.10 and 11.
	Over mountainous land;through dense undergrowth;descend.
4.20	Bottom of hollow,100 ft.below sec.cor.,course E.;ascend.
16.50	Foot of perpendicular ledge,100 ft.high,bears E.and W.
24.25	Top of ridge,450 ft.above hollow,bears N.E.and S.W.; descend.

Chains	
38.25	Bottom of hollow,100 ft.below ridge,course N.E.;ascend.
40.00	Set a sandstone,16x14x8 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
43.00	Top of ridge,60 ft.above hollow,bears N.E.and S.W.; descend.
80.00	Set a sandstone,24x12x4 ins.,18 ins.in the ground,for cor.of secs.2,3,10,and 11,marked with 5 notches on S.and 2 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,sandy and gravelly;3rd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 45'E.,on a random line bet.secs.2 and 11.
40.00	Set temp.¼ sec.cor.
79.80	Intersect N.and S.line,11 lks.N.of the cor.of secs. 1,2,11,and 12.
	Thence we run
	S.89° 50'W.,on a true line bet.secs.2 and 11.
	Over mountainous land;through dense undergrowth;ascend.
19.00	Trail on top of ridge,200 ft.above sec.cor.,bears N.70°W.and S. 70°E.;descend.
39.90	Set a sandstone,24x12x4 ins.,18 ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
40.20	Bottom of hollow,200 ft.below ridge,course N.;ascend.

Chains

43.80 Top of ridge,60 ft.above hollow,bears N.and S.;descend.

55.20 Bottom of hollow,200 ft.below ridge,course N.60°W.;ascend.

79.80 The cor.of secs.2,3,10,and 11.

Land,mountainous.

Soil,sandy and gravelly;3rd rate.

No timber.

Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,79.80 chs.

October 5,1901.

October 7,1901:At 7 h 0 m a.m.,l.m.t.,we set off 39° 48'N.,on the lat.arc;5°18'S.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.2,3,10,and 11.

Thence we run

N.0°01'W.,on a random line bet.secs.2 and 3.

40.00 Set temp.¼ sec.cor.

79.98 Intersect N.bdy.of Tp.at the cor.of secs.2,3,34,and 35, heretofore described.

Thence we run

S.0°01'E.,on a true line bet.secs.2 and 3.

Over mountainous land;through dense undergrowth;descend.

5.00 Bottom of hollow,100 ft.below sec.cor.,course S.E.;ascend.

30.00 Top of ridge,150 ft.above hollow,bears E.and W.;descend.

39.98 Set a sandstone,30x10x10 ins.,22 ins.in the ground, for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,3 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Chains	
60.00	Bottom of hollow,200 ft.below ridge,course N.30°E.; ascend.
79.98	The cor.of secs.2,3,10,and 11.
	Land,mountainous.
	Soil,gravelly and sandy;3rd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.98 chs.

From the cor.of secs. 3,4,33,and 34,on S.bdy.of Tp. heretofore described.

Thence we run

N.0° 02'W.,bet.secs.33 and 34.

Over mountainous land;through dense undergrowth and scattering timber;descend.

4.50 Bottom of hollow,50 ft.below sec.cor.,course N.20°W.; ascend.

40.00 Set a sandstone,20x12x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

A cedar,4 ins.diam.,bears N.87 °W.,97 lks. dist.,marked ¼ S.33,B.T.

A pinion pine,8 ins.diam.,bears N.60°E.,225 lks.dist.,marked ¼ S.34,B.T.

80.00 Set a limestone,20x8x4 ins.,15 ins.in the ground,for cor.of secs.27,28,33,and 34,marked with 1 notch on S. and 3 notches on E.edges;from which

A cedar,8 ins.diam.,bears N.80°E.,120 lks. dist.,marked T.12 S.,R.20 E.,S.27,B.T.

A cedar,6 ins.diam.,bears S.52°E.,110 lks. dist.,marked T.12 S.,R.20 E.,S.34,B.T.

A cedar,10 ins.diam.,bears S.34°W.,75 lks. dist.,marked T.12 S.,R.20 E.,S.33,B.T.

Chains	
	A cedar,10 ins.diam.,bears N.59° W.,60 lks. dist.,marked T.12 S.,R.20 E.,S.28,B.T.
	Land,mountainous.
	Soil,sandy and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush .
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.89° 58'E.,on a random line bet.secs.27 and 34.
40.00	Set temp.¼ sec.cor.
80.00	Intersect N.and S.line,5 lks.N.of the cor.of secs. 26,27,34,and 35.
	Thence we run
	West,on a true line bet.secs.27 and 34.
	Over mountainous land;through dense undergrowth and scattering timber;ascend.
15.00	Top of ridge,150 ft.above sec.cor.,bears N.55° E.and S.55° W.;descend.
40.00	Set a limestone,28x5x5 ins.,21 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,6 ins.diam.,bears N.30° E.,20 lks. dist.,marked ¼ S.27,B.T.
	A cedar,4 ins.diam.,bears S.12° E.,115 lks. dist.,marked ¼ S.34,B.T.
45.00	Bottom of hollow,150 ft.below ridge,course N.80° E.; ascend.
56.50	Top of ridge,50 ft.above hollow,bears N.80° E.and S. 80° W.;descend.
70.00	Bottom of hollow,150 ft.below ridge,course N.E.;ascend.
76.25	Top of divide ridge,between Hill and Willow Creek canons,250 ft.above hollow,bears N.and S.;descend.
80.00	The cor.of secs.27,28,33,and 34.

Chains	
	Land,mountainous.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	October 7,1901:At the noon hour the sky is overcast and solar observations are impossible.
	N.0°02'W.,bet.secs.27 and 28.
	Over mountainous land;through dense undergrowth and scattering timber;ascend.
30.00	Top of divide ridge,between Hill Creek and Willow Creek canons,100 ft.above sec.cor.,bears N.25°W.and S.25°E.;descend.
40.00	Set a limestone,26x8x5 ins.,20 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,9 ins.diam.,bears S.71°E.,100 lks. dist.,marked ¼ S.27,B.T.
	A cedar,5 ins.diam.,bears S.60°W.,70 lks. dist.,marked ¼ S.28,B.T.
52.50	Trail,bears N.E.and S.W.
60.00	Bottom of hollow,150 ft.below ridge,course S.E.;ascend.
70.00	Top of ridge,150 ft.above hollow,bears E.and W.;descend.
80.00	Set a sandstone,18x10x6 ins.,12 ins.in the ground,for cor.of secs.21,22,27,and 28,marked with 2 notches on S.and 3 notches on E.edges;from which
	A cedar,4 ins.diam.,bears N.86°E.,97 lks. dist.,marked T.12 S.,R.20 E.,S.22,B.T.
	A cedar,6 ins.diam.,bears S.40°E.,150 lks. dist.,marked T.12 S.,R.20 E.,S.27,B.T.
	A cedar,6 ins.diam.,bears S.30°W.,175 lks.

Chains	
	dist.,marked T.12 S.,R.20 E.,S.28,B.T.
	A cedar,8 ins.diam.,bears N.52° W.,40 lks. dist.,marked T.12 S.,R.20 E.,S.21,B.T.
	Land,mountainous.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	East,on a random line bet.secs.22 and 27.
40.00	Set temp.¼ sec.cor.
79.60	Intersect N.and S.line,5 lks.S.of the cor.of secs. 22,23,26,and 27.
	Thence we run
	S.89° 58' W.,on a true line bet.secs.22 and 27.
	Over mountainous land;through dense undergrowth;descend.
8.50	Bottom of hollow,100 ft.below sec.cor.,course S.70° E.
	Ascend.
25.50	Top of ridge,150 ft.above hollow,bears N.80° W.and S. 80° E.;descend.
28.00	Bottom of hollow,150 ft.below ridge,course S.80° E.; ascend.
39.80	Set a limestone,24x6x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
41.50	Trail,bears N.80° E.and S.80° W.
45.00	Enter scattering timber,bears N.and S.
79.60	The cor.of secs.21,22,27,and 28.
	Land,mountainous.
	Soil,clay and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.

Chains	
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.60 chs.

N.0° 02'W.,bet.secs.21 and 22.

Over mountainous land;through dense undergrowth;ascend.

7.00 Foot of perpendicular oil shale ledge,20 ft.high,bears N.30° E.and S.30° W.;

27.75 Top of same ledge,50 ft.high,bears E.and W.Edge of impassable gulch.

Set a sandstone,16x16x9 ins.,11 ins.in the ground,for W.C.to ¼ sec.cor.,marked W.C.¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

To determine the distance across the gulch ,we set a flag on line on the N.side of the gulch;then measure a base line West 10.00 chs.to a point whence the flag bears N.15° 2'E.

log 10.00= 1.00000

log cot. 15° 2'= .570938

1.570938=37.23 chs.;also

27.75+37.23 makes

64.98 To north side of gulch;top of ridge,bears N.80° E. and S.80° W.;descend.

80.00 Set a limestone,24x8x6 ins.,18 ins.in the ground,for cor.of secs.15,16,21,and 22,marked 12 S.on N.E.and 20 E.on S.E.faces;with 3 notches on S.and 3 notches on E.edges;from which

A pinion pine,8 ins.diam.,bears N.87° E.,90 lks.dist.,marked T.12 S.,R.20 E.,S.15,B.T.

A cedar,5 ins.diam.,bears S.54° E.,150 lks. dist.,marked T.12 S.,R.20 E.,S.22,B.T.

A pinion pine,5 ins.diam.,bears S.51° W.,8 lks.dist.,marked T.12 S.,R.20 E.,S.21,B.T.

Chains ... A pinion pine,6 ins.diam.,bears N.52° W.,50 lks.dist.,marked T.12 S.,R.20 E.,S.16,B.T.

Land,mountainous.

Soil,gravelly and sandy loam and rocky;2nd and 4th rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

October 7,1901:At this cor we set off 39° 46'N.,on the lat.arc;5° 29'S.,on the decl.arc;and (4 h 0 m p.m.,l.m.t.,) determine a true meridian with the solar and mark a point thereof on a stone,firmly set in the ground,5.00 chs.N.of the cor.

October 7,1901.

October 8,1901:At 0.h 16m.a.m.,l.m.t.,we observe Polaris at upper culmination with the No.2 instrument, in accordance with the Manual,and mark the true meridian thus determined by cutting a small groove in the stone,already set 5.00 chs N.of cor;this mark falls 0.29 ins.east of the mark determined by the solar .

At 7 h 2 m a.m.,l.m.t.,we set off 39° 46'N.,on the lat. arc.5° 41'S.,on the decl.arc;and mark the true meridian determined with solar,by a cross on the stone,already set 5.00 chs.N.of our station;this mark falls 0.36 ins.east of the true meridian established by Polaris observation.

The solar apparatus by p.m.and a.m.observations,defines positions for true meridians respectively about 0'15"west and 0'19"east of the true meridian established by Polaris observation;therefore we conclude that the adjustments of the instruments are satisfactory.

Chains	
	The magnetic bearing of the true meridian at 7 h 30 m a.m.is 16° 14.8'W.,the angle thus determined,reduced by the table page 100 of the Manual,gives the mean mag.decl.16° 12'E.
	From the above described cor.we run
	N.89° 58'E.,on a random line bet.secs.15 and 22.
40.00	Set temp.¼ sec.cor.
79.94	Intersect N.and S.line,5 lks.N.of the cor.of secs.14, 15,22,and 23,
	Thence we run
	West,on a true line bet.secs.15 and 22.
	Over mountainous land;through dense undergrowth;descend.
7.50	Bottom of hollow,100 ft.below sec.cor.,course S.60° E. Ascend.
39.97	Set a limestone,30x6x4 ins.,22 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face; and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
48.00	Top of divide ridge,between Hill Creek and Willow Creek canons,350 ft.above hollow,bears N.35° E.and S.35° W.;descend.
60.00	Bottom of hollow,200 ft.below ridge,course N.;ascend.
78.00	Top of ridge,150 ft.above hollow,bears N.10° W.and S. 10° E.;descend.
79.94	The cor.of secs.15,16,21,and 22.
	Land,mountainous.
	Soil,gravelly loam and clay loam;2nd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.94 chs.

Chains	
	N.0°02'W.,bet.secs.15 and 16.
	Over mountainous land;through dense undergrowth and scattering timber;ascend.
5.00	Top of ridge,50 ft.above sec.cor.,bears N.10°W.and S.10°E.;descend.
40.00	Set a sandstone,18x10x8 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,4 ins.diam.,bears N.15°E.,250 lks. dist.,marked ¼ S.15,B.T.
	A cedar,4 ins.diam.,bears N.86°W.,297 lks. dist.,marked ¼ S.16,B.T.
66.00	Bottom of hollow,150 ft.below ridge,course N.10°E.; ascend.
80.00	Set a limestone,24x10x4 ins.,18 ins.in the ground, for cor.of secs.9,10,15,and 16,marked with 4 notches on S.and 3 notches on E.edges;from which
	A cedar,4 ins.diam.,bears N.55°E.,40 lks. dist.,marked T.12 S.,R.20 E.,S.10,B.T.
	A cedar,4 ins.diam.,bears S.42°E.,71 lks. dist.,marked T.12 S.,R.20 E.,S.15,B.T.
	A cedar,4 ins.diam.,bears S.16°W.,65 lks. dist.,marked T.12 S.,R.20 E.,S.16,B.T.
	A cedar,5 ins.diam.,bears N.3°W.,100 lks. dist.,marked T.12 S.,R.20 E.,S.9,B.T.
	Land,mountainous.
	Soil,clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	East,on a random line bet.secs.10 and 15.
40.00	Set temp.¼ sec.cor.
80.16	Intersect N.and S.line,11 lks.N.of the cor.of secs.

Chains	
	10,11,14,and 15.
	Thence we run
	N.89° 55'W.,on a true line bet.secs.10 and 15.
	Over mountainous land;through dense undergrowth;ascend.
13.00	Trail,bears N.E.and S.10°W.
20.00	Foot of perpendicular ledge,50 ft.high,bears N.and S.
26.00	Top of divide ridge,between Hill Creek and Willow Creek canons,300 ft.above sec.cor.,bears N.and S.; descend.
40.08	Set a sandstone,20x10x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
78.00	Bottom of hollow,350 ft.below ridge,course N.10°W.; ascend.Enter scattering timber,bears with hollow.
80.16	The cor.of secs.9,10,15,and 16.
	Land,mountainous.
	Soil,clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.16 chs.

	N.0°02'W.,bet.secs.9 and 10.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
14.00	Bottom of hollow,50 ft.below sec.cor.,course N.10°W.; ascend.
33.00	Top of ridge,100 ft.above hollow,bears E.and W.;descend.
40.00	Set a sandstone,26x7x7 ins.,20 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,5 ins.diam.,bears S.45°E.,36 lks.

Chains	
	dist.,marked ¼ S.10,B.T.
	A cedar,5 ins.diam.,bears S.80° W.,53 lks.
	dist.,marked ¼ S.9,B.T.
71.00	Bottom of hollow,100 ft.below ridge,course N.W.;ascend.
75.50	Trail,bears N.80° W.and S.80° E.
78.50	Top of spur,60 ft.above hollow,bears E.and W.;descend.
80.00	Set a sandstone,30x9x7 ins.,22 ins.in the ground,for cor.of secs.3,4,9 and 10,marked with 5 notches on S. and 3 notches on E.edges;from which
	A cedar,6 ins.diam.,bears N.22° E.,275 lks.
	dist.,marked T.12 S.,R.20 E.,S.3,B.T.
	A cedar,8 ins.diam.,bears N.39° W.,299 lks.
	dist.,marked T.12 S.,R. 20 E.,S.4,B.T.
	No other trees within limits;raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	S.89° 55'E.,on a random line bet.secs.3 and 10.
40.00	Set temp.¼ sec.cor.
80.04	Intersect N.and S.line,5 lks.S.of the cor.of secs. 2,3,10,and 11.
	Thence we run
	N.89° 57'W.,on a true line bet.secs 3 and 10.
	Over mountainous land;through dense undergrowth;ascend.
5.00	Top of ridge,50 ft.above sec.cor.,bears N.and S.;descend.

Chains	
17.50	Bottom of hollow,100 ft.below ridge,course N.35° E.; ascend.
35.25	Old wagon road,bears N.E.and S.W.
40.02	Set a sandstone,24x8x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
59.00	Top of divide ridge,bet.Hill Creek and Willow Creek canons,300 ft.above hollow,bears N.and S. Enter scattering timber,bears N.and S. Descend.
80.04	The cor.of secs.3,4,9,and 10. Land,mountainous. Soil,clay loam and gravelly;2nd and 3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,80.04 chs. October 8,1901:At the noon hour the sky is overcast and solar observations are impossible.

	N.0° 02'W.,on a random line bet.secs.3 and 4.
40.00	Set temp.¼ sec.cor.
80.04	Intersect N.bdy.of Tp.2 lks.W.of the cor.of secs. 3,4,33,and 34,heretofore described. Thence we run S.0° 01'E.,on a true line bet.secs.3 and 4. Over mountainous land;through dense undergrowth; along east side of ridge.
40.04	Set a sandstone,18x14x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.

Chains	
46.50	Bottom of hollow,50 ft.below ¼ sec.cor.,course N.20° E.;ascend.
47.00	Enter scattering timber,bears N.20°E.and S.20°W.
74.00	Top of ridge,150 ft.above hollow,bears N.80°E.and S.80°W.;descend.
75.50	Top of perpendicular ledge,15 ft.high,bears N.80°E. and S.80°W.
78.50	Bottom of hollow,100 ft.below ridge,course S.60°W.; ascend.
80.04	The cor.of secs.3,4,9,and 10.
	Land,mountainous.
	Soil,clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.04 chs.

From the cor.of secs.4,5,32,and 33,on S.bdy.of Tp., heretofore described

We run

N.0°03'W.,bet.secs.32 and 33.

Over mountainous land;through dense undergrowth;descend.

12.50	Bottom of hollow,100 ft.below sec.cor.,course N.10°W.
	Enter scattering timber,bears N.10°W.and S.10°E.
	Ascend.
40.00	Set,an oilshale stone,15x10x4 ins.,10 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which
	A cedar,6 ins.diam.,bears S.20°E.,70 lks. dist.,marked ¼ S.33,B.T.
	A cedar,8 ins.diam.,bears S.13°W.,65 lks. dist.,marked ¼ S.32,B.T.
75.30	Trail,bears N.60°E.and S.60°W.

Subdivision of T.12 S.,R.20 E.-Continued.

Chains	
80.00	Set a limestone,24x9x9 ins.,18 ins.in the ground,for cor.of secs.28,29,32,and 33,marked with 1 notch on S.and 4 notches on E.edges;from which A cedar,8 ins.diam.,bears N.85° E.,35 lks. dist.,marked T.12 S.,R.20 E.,S.28,B.T. A cedar,5 ins.diam.,bears S.11° E.,109 lks. dist.,marked T.12 S.,R.20 E.,S.33,B.T. A cedar,20 ins.diam.,bears S.60° W.,55 lks. dist.,marked T.12 S.,R.20 E.,S.32,B.T. A cedar,20 ins.diam.,bears N.68° W.,100 lks. dist.,marked,T.12 S.,R.20,E.,S.29,B.T.
	Land,mountainous.
	Soil,Clay loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.89° 58'E.,on a random line bet.secs.28 and 33.
40.00	Set temp.¼ sec.cor.,
79.74	Intersect N.and S.line,5 lks.S.of the cor.of secs. 27,28,33,and 34.
	Thence we run
	S.89° 56'W.,on a true line bet.secs.28 and 33.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
24.00	Bottom of hollow,275 ft.below sec.cor.,course N.30° W.
	Ascend.
39.87	Set an oil shale stone,18x10x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,6 ins.diam.,bears N.20° W.,41 lks. dist.,marked ¼ S.28,B.T. A cedar,5 ins.diam.,bears S.33° E., 27 lks.

Chains

dist.,marked ⅛ S.33,B.T.

55.00 Top of ridge,200 ft.above hollow,bears N.and S.;descend.

67.00 Trail,bears N.50° E.and S.70° W.

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

Land,mountainous.

Soil,clay and gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,79.74 chs.

October 8,1901.

October 9,1901:At 7 h 2 m a.m.,l.m.t.,we set off 39° 44'N.,on the lat.arc;6° 04'S.,on the decl.arc;and determine a true meridian with the solar,at the cor.of secs.28,29,32,and 33.

Thence we run

N.0° 03'W.,bet.secs.28 and 29.

Over mountainous land;through dense undergrowth and scattering timber;ascend.

18.00 Top of ridge,200 ft.above sec.cor.,bears E.and W.; descend.

40.00 Set a limestone,36x4x4 ins.,27 ins.in the ground,for ⅛ sec.cor.,marked ⅛ on W.face;from which

A pinion pine,8 ins.diam.,bears S.75° E.,50 lks.dist.,marked ⅛ S.28,B.T.

A pinion pine,10 ins.diam.,bears N.60° W.,20 lks.dist.,marked ⅛ S.29,B.T.

79.75 Bottom of hollow,250 ft.below ridge,course N.W.;ascend.

80.00 Set a sandstone,16x7x7 ins.,11 ins.in the ground,for cor.of secs.20,21,28,and 29,marked with 2 notches on S.and 4 notches on E.edges;from which

Subdivision of T.12 S.,R.20 E.-Continued.

Chains	
	A cedar,8 ins.diam.,bears S.55° E.,298 lks. dist.,marked T.12 S.,R.20 E.,S.28,B.T.
	A cedar,8 ins.diam.,bears S.23° W.,170 lks. dist.,marked T.12 S.,R.20 E.,S.29,B.T.
	A cedar,10 ins.diam.,bears N.20° W.,71 lks. dist.,marked T.12 S.,R.20 E.,S.20,B.T.
	No tree in sec.21;and raise a mound of stone,2 ft. base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly;3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	N.89° 56'E.,on a random line bet.secs.21 and 28.
40.00	Set temp.¼ sec.cor.
79.96	Intersect N.and S.line,19 lks.S.of the cor.of secs. 21,22,27,and 28.
	Thence we run
	S.89° 48'W.,on a true line bet.secs. 21 and 28 .
	Over mountainous land;through dense undergrowth and scattering timber;ascend.
6.00	Foot of perpendicular oil shale ledge,20 ft.high,bears N.E.and S.W.
10.50	Top of divide ridge,bet.Hill Creek and Willow Creek canons,200 ft.above sec.cor.,bears N.25° W.and S.; descend.
14.10	Top of perpendicular oil shale stone,ledge,30 ft. high,bears N.W.and S.E.
39.98	Set a sandstone,16x9x5 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,5 ins.diam.,bears N.,75 lks.dist., marked ¼ S.21,B.T..

Chains

A cedar,10 ins.diam.,bears S.80°W.,60 lks. dist.,marked ¼ S.28,B.T.

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

Land,mountainous.

Soil,gravelly loam;2nd rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,79.96 chs.

N.0°03'W.,bet.secs.20 and 21.

Over mountainous land;through dense undergrowth and scattering timber;ascend gradually.

40.00 Set a sandstone,16x9x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which

A cedar,5 ins.diam.,bears S.38°E.,40 lks. dist.,marked ¼ S.21,B.T.

A cedar,10 ins.diam.,bears S.26°W.,69 lks. dist.,marked ¼ S.20,B.T.

80.00 Set a sandstone,18x10x8 ins.,12 ins.in the ground,for cor.of secs.16,17,20,and 21,marked with 3 notches on S.and 4 notches on N.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,E.of cor.Pits impracticable.

Land,mountainous.

Soil,gravelly loam and rocky;2nd and 4th rate.

Timber,cedar and pinion pine.

Undergrowth,sage brush and shadscales.

Good grass for grazing.

Mountainous land,or land covered with dense undergrowth,80.00 chs.

N.89°48'E.,on a random line bet.secs.16 and 21.

40.00 Set temp.¼ sec.cor.

Chains	
80.00	Intersect N.and S.line,5 lks.S.of the cor.of secs. 15,16,21,and 22.
	Thence we run
	S.89° 40'W.,on a true line bet.secs.16 and 21.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
5.00	Bottom of hollow,100 ft.below sec.cor. ,course N.; ascend.
20.00	Top of ascent,200 ft.above hollow,bears N.and S.; thence over rolling mesa.
40.00	Set a sandstone,16x8x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,12 ins.diam.,bears N.5° E.,70 lks. dist.,marked ¼ S.16,B.T.
	A cedar,12 ins.diam.,bears S.25° W.,65 lks. dist.,marked ¼ S.21,B.T.
68.00	Edge of mesa,bears W.and S.;descend.
80.00	The cor.of secs.16,17,20,and 21.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth ,sage brush and chaparral.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-growth,80.00 chs.
	October 6,1901:At this cor.we set off 6° 12'E.,on the declnre;and at 0h 2 m p.m.,l.m.t.,observe the sun on the meridian ,the resulting lat.is 39° 46'N.

	N.0° 03'W.,bet.secs.16 and 17.
	Over mountainous land;through scattering undergrowth; ascend.
5.00	Top of ascent,75 ft.above sec.cor.bears N.70°W.and S.70°E.
	Enter heavy timber,bears N.70°W.and S.70°E.

Chains	
	Thence over rolling mesa.
40.00	Set a sandstone,18x8x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A pinion pine,6 ins.diam.,bears N.30° E.,54 lks.dist.,marked ¼ S.16,B.T. A pinion pine,6 ins.diam.,bears N.50° W.,67 lks.dist.,marked ¼ S.17,B.T.
40.10	Leave mesa,bears E.and W.;descend.
80.00	Set a sandstone,20x6x6 ins.,15 ins.in the ground,for cor.of secs.8,9,16,and 17,marked with 4 notches on S.and 4 notches on E.edges;from which A cedar,6 ins.diam.,bears N.60° E.,35 lks. dist.,marked T.12 S.,R.20 E.,S.9,B.T. A pinion pine,5 ins.diam.,bears S.65° E.,92 lks.dist.,marked T.12 S.,R.20 E.,S.16,B.T. A pinion pine,6 ins.diam.,bears S.32° W.,30 lks.dist.,marked T.12 S.,R.20 E.,S.17,B.T. A pinion pine,5 ins.diam.,bears N.50° W.,87 lks.dist.,marked T.12 S.,R.20 E.,S.8 ,B.T.
	Land,mountainous and rolling mesa.
	Soil,sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous or heavily timbered land,80.00 chs.

	N.89° 46'E.,on a random line bet.secs.9 and 16.
40.00	Set temp.¼ sec.cor.
79.80	Intersect N.and S.line,5 lks.N.of the cor.of secs. 9,10,15,and 16.
	Thence we run
	S.89° 48'W.,on a true line bet.secs.9 and 16.
	Over mountainous land;through dense undergrowth and scattering timber;ascend.
10.00	Top of ridge,100 ft.above sec.cor.,bears N.and S.;des-

Chains	
	cend.
24.00	Bottom of hollow,100 ft.below ridge,course N.;ascend.
39.90	Set a limestone,24x6x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,9 ins.diam.,bears N.30° E.,43 lks. dist.,marked ¼ S.9,B.T. A cedar,8 ins.diam.,bears S.25° E.,64 lks. dist.,marked ¼ S.16,B.T.
58.50	Top of ridge,150 ft.above hollow,bears N.W.and S.E.; descend.
62.00	Bottom of hollow,150 ft.below ridge,course N.W.;ascend.
79.80	The cor.of secs.8,9,16,and 17. Land,mountainous. Soil,gravelly;3rd rate. Timber,cedar and pinion pine. Undergrowth,sage brush and shadscales. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,79.80 chs.

N.0° 03'W.,bet.secs.8 and 9.
Over mountainous land,through dense undergrowth and scattering timber;descend.

10.00	Bottom of hollow.200 ft,below sec.cor.,course N.20° W.;ascend.
40.00	Top of ridge,150 ft.above hollow,bears E.and W.;descend. Set a limestone,18x10x6 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;from which A cedar,6 ins.diam.,bears S.70° E.,59 lks. dist.,marked ¼ S.9,B.T. A cedar,5 ins.diam.;bears N.70° W.,30 lks. dist.,marked ¼ S.8,B.T.
70.00	Bottom of hollow,230 ft.below ridge,course N.E.;

Chains	descend.
80.00	Set a sandstone,18x9x9 ins.12 ins. in the ground,for cor.of secs.4,5,8,and 9.,markedwith 5 notches on S. and 4 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,sandy and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.89° 48'E.,on a random line bet.secs.4 and 9.
40.00	Set temp.¼ sec.cor.
79.90	Intersect N.and S.line,5 lks.N.of the cor.of secs. 3,4,9,and 10.
	Thence we run
	S.89° 50'W.,on a true line bet.secs.4 and 9.
	Over mountainous land;through dense undergrowth and scattering timber;descend,
2.80	Bottom of hollow,100 ft.below sec.cor.,course S.W.; ascend.
7.00	Ledge,20 ft.high,bears N.80° E.and S.80° W.
11.00	Top of ridge,100 ft.above hollow,bears N.E.and S.W.; descend.
39.95	Bottom of hollow,175 ft.below ridge,course N.20° W.; Set a sandstone,20x8x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
	Ascend.
42.00	Trail,bears N.80° E.and S.80° W.;
47.50	Bottom of hollow,250 ft.below ridge,course N.E.;ascend.

Chains	
79.90	The cor.of secs.4,5,8,and 9.
	Land,mountainous.
	Soil,clay and sandy loam and gravelly;2nd and 3rd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.90 chs.
	N.0° 03'W.,on a random line bet.secs.4 and 5.
40.00	Set temp.$\frac{1}{4}$ sec.cor.
80.00	Intersect N.bdy.of Tp.,2 lks.E.of the cor.of secs. 4,5,32,and 33,heretofore described.
	Thence we run
	S.0° 04'E.,on a true line bet.secs.4 and 5.
	Over mountainous land;through dense undergrowth;ascend.
27.00	Top of ridge,250 ft.above sec.cor.,bears N.20°E.and S.20°W.;descend.
39.00	Bottom of hollow,100 ft.below ridge,course N.30°E.; ascend.
40.00	Set a sandstone,18x10x5 ins.,12 ins.in the ground,for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face;and dig pits,18x18x12 ins.,N.and S.of stone,3 ft.dist.,and raise a mound of earth,4 ft.base,2 ft.high,W. of cor.
78.50	Top of ridge,250 ft.above hollow,bears N.E.and S.W.; descend.
80.00	The cor.of secs.4,5,8,and 9.
	Land,mountainous.
	Soil,clay and gravelly loam;2nd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense under-

Chains	
	growth,80.00 chs.
	October 9,1901.
	October 10,1901:At 7 h 0 m a.m.,l.m.t.,we set off 39° 43'N.,on the lat.arc;6° 27'S.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.5,6,31,and 32,on S.bdy.of Tp.,heretofore described.
	Thence we run
	N.0° 03'W.,bet.secs. 31 and 32.
	Over mountainous land;through dense undergrowth;ascend.
40.00	Set a limestone,18x6x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
48.00	Top of ridge,250 ft.above sec.cor.,bears N.60° W.and S.60° E.;descend.
80.00	Set a limestone,18x6x5 ins.,12 ins.in the ground,for cor.of secs.29,30,31,and 32,marked with 1 notch on S.and 5 notches on E.edges;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,sandy and gravelly loam;2nd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	N.89° 58'E.,on a random line bet.secs 29 and 32.
40.00	Set temp.¼ sec.cor.
79.78	Intersect N.and S.line,5 lks.N.of the cor.of secs.

Chains	
	28,29,32,and 33.
	Thence we run
	West,on a true line bet.secs.29 and 32.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
32.00	Bottom of hollow.250 ft.below sec.cor.,course N.30° W.
	Ascend.
39.89	Set a limestone,24x5x5 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
79.78	The cor.of secs.29,30,31,and 32.
	Land,mountainous.
	Soil,gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.78 chs.
	S.89° 58'W.,on a random line bet.secs.30 and 31.
40.00	Set temp.¼ sec.cor.
79.90	Intersect W.bdy.of Tp.,at the cor.of secs.25,30,31, and 36,heretofore described.
	Thence we run
	N.89° 58'E.,on a true line bet.secs.30 and 31.
	Over mountainous land;through scattering undergrowth and scattering timber;descend.
39.90	Set a limestone,18x8x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
59.00	Top of ridge,200 ft.above ¼ sec.cor.,bears N.30° W.and S.30° E.;descend.
79.90	The cor.of secs.29,30,31,and 32.

Chains	Land,mountainous. Soil,gravelly loam and rocky;2nd and 4th rate. Timber,cedar and pinion pine. Undergrowth,sage brush. Good grass for grazing. Mountainous land,79.90 chs.
	N.0° 03'W.,bet.secs.29 and 30. Over mountainous land;through dense undergrowth; ascend.
40.00	Top of ridge,200 ft.above sec.cor.,bears N.30°E. and S.30°W. Set a limestone,14x10x5 ins.,9 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable. Descend.
80.00	Set a limestone,20x9x6 ins.,15 ins.in the ground,for cor.of secs.19,20,29,and 30,marked with 2 notches on S.and 5 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable. Land,mountainous. Soil,gravelly loam;2nd rate. No timber. Undergrowth,sage brush. Good grass for grazing. Mountainous land,or land covered with dense undergrowth,80.00 chs.
	East,on a random line bet.secs.20 and 29.
40.00	Set temp.¼ sec.cor.
79.94	Intersect N.and S.line,11 lks.N.of the cor.of secs. 20,21,28,and 29. Thence we run

Chains	
	N.89° 55'W.,on a true line bet.secs.20 and 29.
	Over mountainous land;through scattering timber and dense undergrowth;descend.
1.25	Bottom of hollow,10 ft.below sec.cor.,course N.W.; ascend.
30.00	Top of ridge,100 ft.above hollow,bears N.W.and S.E.; descend.
39.97	Set a limestone,16x10x4 ins.,11 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which A cedar,6 ins.diam.,bears N.30°E.,60 lks. dist.,marked ¼ S.20,B.T. A cedar,8 ins.diam.,bears S.65°W.,115 lks. dist.,marked ¼ S.29,B.T.
74.00	Bottom of hollow,200 ft.below ridge,course N.W.;ascend.
79.94	The cor.of secs.19,20,29,and 30.
	Land,mountainous.
	Soil,gravelly loam and rocky;2nd and 4th rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.94 chs.

	S.89° 58'W.,on a random line bet.secs.19 and 30.
40.00	Set temp.¼ sec.cor.
79.98	Intersect W.bdy.of Tp.,at the cor.of secs.19,24,25, and 30,heretofore described.
	Thence we run
	N.89° 58'E.,on a true line bet.secs.19 and 30.
	Over mountainous land;through dense undergrowth;ascend.
1.00	Top of ridge,10 ft.above sec.cor.,bears N.30° E.and S.E.;descend.
30.00	Bottom of hollow,250 ft.below ridge,course N.;ascend.

Chains	
39.98	Set a limestone,20x7x4 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
55.00	Top of ridge,200 ft.above hollow,bears N.30°W.and S.30°E.;descend.
79.98	The cor.of secs.19,20,29,and 30.
	Land,mountainous.
	Soil,gravelly and clay loam;2nd rate.
	No timber.
	Undergrowth, sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.98 chs.

	N.0°03'W.,bet.secs.19 and 20.
	Over mountainous land;through dense undergrowth;descend.
10.00	Bottom of hollow,100 ft.below sec.cor.,course N.30°W. Ascend.
36.50	Top of ridge,200 ft.above hollow,bears N.60°W.and S.60°E.;descend.
40.00	Set a limestone,20x6x5 ins.,15 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
59.00	Bottom of hollow,150 ft.below ridge,course N.50°W.; ascend.Enter scattering timber,bears with hollow.
80.00	Set a limestone,14x10x6 ins.,9 ins.in the ground,for cor.of secs.17,18,19,and 20,marked with 3 notches on S.and 6 notches on E.edges;from which
	A cedar,4 ins.diam.,bears N.22°E.,158 lks. dist.,marked T.12 S.,R.20 E.,S.17,B.T.
	A cedar,8 ins.diam.,bears S.36°E.,200 lks.

Chains	
	dist.,marked T.12 S.,R.20 E.,S.20,B.T.
	A cedar,4 ins.diam.,bears S.9° W.,159 lks. dist.,marked T.12 S.,R.20 E.,S.19,B.T.
	A cedar,10 ins.diam.,bears N.40° W.,62 lks. dist.,marked T.12 S.,R.20 E.,S.18,B.T.
	Land,mountainous .
	Soil,clay and gravelly loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	October 10,1901::At this cor.we set off 6° 35'S.,on the decl.arc;and at 0 h 2 m.p.m.,l.m.t.,observe the sun on the meridian,the resulting lat.is 39° 46'N.
	S.89° 55'E.,on a random line bet.secs.17 and 20.
40.00	Set temp.¼ sec.cor.
79.80	Intersect N.and S.line,7 lks. S.of the cor.of secs. 16,17,20,and 21.
	Thence we run
	N.89° 58'W.,on a true line bet.secs.17 and 20.
	Over mountainous land;through scattering timber and dense undergrowth;descend gradually.
39.90	Set a limestone,18x7x7 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;from which
	A cedar,6 ins.diam.,bears N.10° W., 28 lks. dist.,marked ¼ S.17,B.T.
	A pinion pine,5 ins.diam.,bears S.40° E.,59 lks.dist.,marked ¼ S.20,B.T.
79.80	The cor.of secs.17,18,19,and 20.
	Land,mountainous.
	Soil,gravelly and clay loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.

Chains	
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,79.80 chs.
	S.89° 58'W.,on a random line bet.secs.18 and 19.
40.00	Set temp.¼ sec.cor.
80.02	Intersect W.bdy.of Tp11 lks.S.of the cor.of secs. 13,18,19,and 24,heretofore described.
	Thence we run
	S.89° 57'E.,on a true line bet.secs.18 and 19.
	Over mountainous land;through dense undergrowth and scattering timber;descend.
5.00	Bottom of hollow,75 ft.below sec.cor. ,course N.W.; ascend.
13.50	Top of ridge,150 ft.above hollow,bears N.W.and S.E.; descend.
40.02	Bottom of hollow,200 ft.below ridge,course N.65°W. Set a limestone,18x9x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
	Ascend.
80.02	The cor.of secs.17,18,19,and 20.
	Land,mountainous.
	Soil,gravelly and clay loam;2nd rate.
	Timber,cedar and pinion pine.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.02 chs.
	N.0° 03'W.,bet.secs.17 and 18.
	Over mountainous land,through dense undergrowth;ascend.

Chains	
10.00	Top of ridge,100 ft.above sec.cor.,bears E.and W.; descend.
40.00	Bottom of hollow,150 ft.below ridge,course S.W.; Set a limestone,15x10x6 ins.,10 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone,2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Ascend.
60.00	Top of ridge,100 ft.above hollow,bears E.and W.;descend.
80.00	Set a limestone,20x12x4 ins.,15 ins.in the ground,for cor.of secs.7,8,17,and 18,marked with 4 notches on S. and 5 notches on E.edges;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly and clay loam;2nd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	S.89° 58'E.,on a random line bet.secs.8 and 17.
40.00	Set temp.¼ sec.cor.
79.86	Intersect N.and S.line,5 lks.S.of the cor.of secs. 8,9,16,and 17.
	Thence we run
	West,on a true line bet.secs.8 and 17.
	Over mountainous land;through heavy timber;ascend.
7.00	Top of ridge,100 ft.above sec.cor.,bears N.and S.; descend.
30.00	Bottom of hollow,150 ft.below ridge,course N.5°E.; ascend.
39.93	Set a limestone,16x6x4 ins.,12 ins.in the ground,for

Chains	
	¼ sec.cor.,marked ¼ on N.face;from which A pinion pine,5 ins.diam.,bears N.65° W.,34 lks.dist.,marked ¼ S.8,B .T. A cedar,6 ins.diam.,bears S.69° E.,36 lks. dist.,marked ¼ S.17,B.T.
56.50	Top of ridge,200 ft.above hollow,bears N.W.and S.E. Leave heavy and enter scattering timber,bears with ridge.Descend.
65.00	Begin more gradual descent,bears N.W.and S.E.
79.86	The cor.of secs.7,8,17,and 18. Land,mountainous. Soil,gravelly and sandy loam and rocky;2nd and 4th rate. Timber,cedar and pinion pine. Good grass for grazing. Mountainous or heavily timbered land,79.86 chs.
	N.89° 57'W.,on a random line bet.secs.7 and 18.
40.00	Set temp.¼ sec.cor.
80.20	Intersect W.bdy.of Tp.10 lks.N.of the cor.of secs. 7,12,13,and 18,heretofore described. Thence we run N.89° 59'E.,on a true line bet.secs.7 and 18. Over mountainous land;through scattering timber and dense undergrowth;ascend gradually.
40.20	Set a limestone,24x9x4 ins.,18 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
80.20	The cor.of secs.7,8,17,and 18. Land,mountainous. Soil,gravelly and clay loam;2nd rate. Timber,cedar and pinion pine. Undergrowth,sage brush and shadscales. Good grass for grazing.

Subdivision of T.12 S.,R.20 E.-Continued.

Chains	
	Mountainous land,or land covered with dense undergrowth,80.20 chs.
	October 10,1901.
	October 11,1901:At 7 h 3 m a.m.,l.m.t.,we set off 39° 47'N.,on the lat.arc;6° 50'S.,on the decl.arc;and determine a true meridian with the solar at the cor. of secs.7,8,17,and 18.
	Thence we run
	N.0° 03'W.,bet.secs.7 and 8 .
	Over mountainous land;through dense undergrowth;ascend gradually.
17.50	Begin more abrupt ascent,bears N.W.and S.E.
27.40	Top of ridge,350 ft.above sec.cor.,bears N.30° W.and S.30° E.;descend.
40.00	Bottom of hollow,250 ft.below ridge,course N.35° W. Set a limestone,18x10x5 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,$1\frac{1}{2}$ ft.high,W.of cor.Pits impracticable.
	Ascend.
60.00	Top of ridge,200 ft.above hollow,bears N.W.and S.E.; descend.
80.00	Set a sandstone,18x12x8 ins.,12 ins.in the ground, for cor.of secs.5,6,7,and 8,marked with 5 notches on S.and 5 notches on E.edges;and raise a mound of stone, 2 ft.base,$1\frac{1}{2}$ ft.high,W.of cor.Pits impracticable.
	Land,mountainous.
	Soil,gravelly loam and sandy;2nd and 3rd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

Chains	
	East,on a random line bet.secs.5 and 8.
40.00	Set temp.¼ sec.cor.
80.00	Intersect N.and S.line,5 lks.S.of the cor.of secs. 4,5,8,and 9.
	Thence we run
	S.89° 58'W.,on a true line bet.secs.5 and 8.
	Over mountainous land;through dense undergrowth;ascend.
1.50	Top of ridge,25 ft.above sec.cor.,bears N.E.and S.W.; descend.
40.00	Set a limestone,18x10x5 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
44.00	Bottom of hollow,150 ft.below ridge,course N.50° E.; ascend.
54.00	Top of ridge,200 ft.above hollow,bears N.and S.;descend.
67.00	Bottom of hollow,200 ft.below ridge,course N.;ascend.
80.00	The cor.of secs.5,6,7,and 8.
	Land,mountainous.
	Soil,gravelly and sandy loam;2nd rate.
	No timber.
	Undergrowth,sage brush.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.

	S.89° 59'W.,on a random line bet.secs.6 and 7.
40.00	Set temp.¼ sec.cor.
80.00	Intersect W.bdy.of Tp.2 1ks.S.of the cor.of secs. 1,6,7,and 12.
	Thence we run
	East,on a true line bet.secs.6 and 7.
	Over mountainous land;through dense undergrowth;as-

Chains	
	cend gradually.
29.00	Begin steep ascent,bears N.W.and S.E.
34.50	Top of ridge,250 ft.above sec.cor.,bears N.40° W.and S.40° E.;descend.
40.00	Bottom of hollow,75 ft.below ridge,course N.20° E.; Set a limestone,18x8x4 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face;and raise a mound of stone,2 ft.base,1½ ft.high,N.of cor.Pits impracticable.
	Ascend.
49.00	Top of ridge,100 ft.above hollow,bears N.and S.;descend.
60.00	Bottom of hollow,150 ft.below ridge,course N.20° W.; ascend.
68.50	Top of ridge,60 ft.above hollow,bears N.20° W.and S. 20° E.;descend.
80.00	The cor.of secs.5,6,7,and 8.
	Land,mountainous.
	Soil,gravelly and clay loam;2nd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.00 chs.
	October 11,1901:At the noon hour the sky is overcast and solar observations are impossible.
	N.0° 03'W.,on a random line bet.secs.5 and 6.
40.00	Set temp.¼ sec.cor.
80.20	Intersect N.bdy.of Tp.,10 lks.E.of the cor.of secs. 5,6,31,and 32.,heretofore described.
	Thence we run
	S.0° 07'E.,on a true line bet.secs.5 and 6.
	Over mountainous land;through dense undergrowth;ascend.

Chains	
19.00	Top of ridge,150 ft.above sec.cor.,bears E.and W.;descend.
26.00	Bottom of hollow,200 ft.below ridge,course N.60° W.; ascend.
40.20	Set a sandstone,18x9x8 ins.,12 ins.in the ground,for ¼ sec.cor.,marked ¼ on W.face;and raise a mound of stone, 2 ft.base,1½ ft.high,W.of cor.Pits impracticable.
80.20	The cor.of secs.5,6,7,and 8.
	Land,mountainous.
	Soil,clay and gravelly loam;2nd rate.
	No timber.
	Undergrowth,sage brush and shadscales.
	Good grass for grazing.
	Mountainous land,or land covered with dense undergrowth,80.20 chs.
	October 11,1901.

General Description.

This township contains nearly every variety of land from level mesas to high mountain ridges,and the soil ranges from rocky land to rich loam.The soil of the mesas and bottoms of hollows is generally sandy or clay loam; 2nd rate.The soil of the remaining portion of the township is mostly gravelly with the exception of a few rocky ridges,and can be classed as 3rd rate.

There is some pinion pine and cedar timber in the township but it is mostly scrubby and not valuable for anything.

There are no settlers in the township.

There is no water in the township at this time of year,but during the winter and early spring there is usually a small stream of water in Willow Creek Canon.

Subdivision of T.12 S.,R.20 E.-Concluded.

There is no mineral in the township.

It is principally valuable for winter grezing purposes.

There are croppings of oil shale in most of the canons throughout the township .

Scott P. Stewart
John R. Stewart
U.S.Deputy Surveyors.

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PAGE

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by ..... , United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of .....

showing the respective capacities in which they acted:

..... , *Chainman.*

..... , *Chainman.*

..... , *Moundman.*

..... , *Moundman.*

..... , *Axman.*

..... , *Axman.*

..... , *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted ..... , United States Deputy Surveyor, in surveying all those parts or portions of the .....

..... meridian, ... of ..... , which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for .....

..... *Chainman.*

..... , *Chainman.*

..... , *Moundman.*

..... , *Moundman.*

..... , *Axman.*

..... , *Axman.*

..... , *Flagman.*

Subscribed and sworn to before me this ..... day of ....., 189

SEAL

6–131

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, ..., United States Deputy Surve
solemnly swear that, in pursuance of a contract received from
United States Surveyor General for ....., bearing date
..... day of ....., 189 , I have well, faithfully, and truly, in
proper person, and in strict conformity with the instructions furnished by the United States S
General for ....., the Manual of Surveying Instructions, and the laws
United States, surveyed all those parts or portions of .....
.....
.....
.....
..... of the
..... meridian, in the ..... of ....., which are represented
foregoing field notes as having been surveyed by me, and under my direction; and I do further so
swear that all the corners of said survey have been established and perpetuated in strict accordan
the Manual of Surveying Instructions, and the special written instructions of the United States S
General for ..... and in the specific manner described in the field notes, a
the foregoing are the original field notes of such survey; and should any fraud be detected, I will
the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

Final official seal of X. H.

.....
United States Deputy Su

Subscribed by said ....., and sworn to before me
this ..... day of ....., 189

SEAL

.....

.....

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah, February 5th 19

The foregoing field notes of the survey of the subdivisional lines Township 12 South Range 20 East of the Sa Lake Base & Meridian Utah

executed by Scott P. Stewart and John R. Stewart
under ~~his~~ their contract No. 242, dated April 12 1901, ~~189~~, havin
critically examined, and the necessary corrections and explanations made, the said field notes, a
surveys they describe, are hereby approved.

Edward H. Anderson
United States Surveyor Ge

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

.....
United States Surveyor Ge

6—151