

Chains

Survey commenced May 30, 1916, and executed with a Young & Sons light mountain transit No. 6517, 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.

The instrument was approved by the Assistant Supervisor of Surveys at Salt Lake City, Utah, April 17, 1916.

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

At my camp near the north side of Sec. 12, T. 35 N., R. 50 E.; latitude $40^{\circ}55'N.$, longitude $116^{\circ}19'W.$, I set off $40^{\circ}55'N.$ on the lat. arc, $21^{\circ}51'N.$ on the decl. arc; and at 3 h 57 m, p.m., l.m.t., determine with the solar a meridian, and mark a point thereof on a wooden plug set in the ground 5 chs. N. of my station.

May 30, 1916.

May 31:

At 3 h 0 m, a.m., l.m.t., I observe Polaris at eastern elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground 5 chs. N. of my station.

At 7 h 50 m, a.m., l.m.t., I lay off the azimuth of Polaris $1^{\circ}35'$ to the west, and mark the meridian thus determined by cutting a small groove in the stake already set 5 chs. N. of my station, on which the meridian falls 0.32 ins. east of the mark determined by the p.m. solar observation.

At 7 h 57 m, a.m., l.m.t., I set off $40^{\circ}55'N.$ on the lat. arc; $21^{\circ}57'N.$ on the decl. arc; and mark a point in the meridian determined with the solar by a tack in the stake already set 5 chs. N. of my station; this mark falls 0.3 ins. east of the line determined by the Polaris observation.

The solar apparatus by p.m. and a.m. observations defines positions for meridians respectively about $0'17''$ west and $0'16''$ east of the meridian established by Polaris observations; therefore I conclude that the adjustments of the instrument are satisfactory.

At the close of the survey of this township the instrument was also found to be in adjustment.

From the cor. of secs. 6 and 7, T.35 N., R. 51 E., now an angle point, only, which is a volcanic stone $6 \times 9 \times 6$ ins. above ground, firmly set and marked dimly with 1 notch on N. and 5 notches on S. edges; with also an iron post 3 ins. diam., 12 ins. above ground marked:

T 35 N
|
R 51 E
|
AP

1914

with a stone mound 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Thence South on a random line, along the E. Bdy. of T.35 N., R. 50 E., setting temporary corners at 40 and 80 chs., the first mile, however, was made 71.82 chs. only.

407.82

Fall 12 lks. E. of the cor. of Tps. 34 and 35 N., R. 51 E., heretofore described.

The course of this line is therefore $N.0^{\circ}1'E.$