

Chs.

Survey commenced October 18, 1914, and executed with a Young & Sons transit, No. 8582, with Smith 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 for Nevada and Utah, at Salt Lake City, Utah.

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 determined by observations on Polaris, I proceed as follows:

At a station established at my camp, which is located near the $\frac{1}{4}$ sec. cor. of secs. 7 and 18, T. 42 N., R. 61 E.; lat. $41^{\circ}32\frac{1}{2}'N.$, longitude $115^{\circ}08'W.$, I observe Polaris at western elongation, at 5 h 41 m, A.M., l.m.t., in accordance with Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground about 5 chs. N. of my station.

At 6 h 30 m A.M., l.m.t., I lay off the azimuth of Polaris, $1^{\circ}32'$ to the east, and mark the meridian thus determined, by driving a small nail in a stake firmly driven in ground, about 5 chs. N. of my station.

At 8 h 0 m A.M., l.m.t., I set off $41^{\circ}32'N.$ on the lat. arc; $9^{\circ}25'S.$ on the decl. arc; and determine a meridian with the solar; this line falls less than 1' to the right of the meridian determined by Polaris observation.

At 11 h 45 m A.M., l.m.t., I observe the sun for altitude, on the meridian. The resulting latitude is $41^{\circ}32\frac{1}{2}'N.$

At 3 h 0 m P.M., l.m.t., I set off $41^{\circ}32\frac{1}{2}'N.$ on the lat. arc; $9^{\circ}33'S.$ on the decl. arc; and determine a meridian with the solar, at my station at camp; this line practically coincides with the meridian determined by Polaris observation. I therefore conclude that the adjustments of the instrument are satisfactory.

All measurements are taken with a 5 ch. steel tape and all slope angles read with a clinometer.

October 18, 1914.

October 19, 1914: At 8 h 0 m A.M., l.m.t., I set off $41^{\circ}29'N.$ on the lat. arc; $9^{\circ}47'S.$ on the decl. arc, and determine a meridian at the cor. of Ts. 41 and 42 N., Rs. 60 and 61 E., which is a limestone $16 \times 8 \times 8$ ins. marked and witnessed as described by the Surveyor General.

Thence I retrace

North on the E. Bdy. of T. 42 N., R. 60 E.

Make diligent search for old $\frac{1}{4}$ and sec. cors., at intervals of 40 chs., but finding none.

471.63

The old cor. Ts. 42 and 43 N., Rs. 60

and 61 E., which is a trap stone $34 \times 12 \times 10$

marked and witnessed as described by the Surveyor General, bears E. 5.17 chs.

The course of this line is therefore $N.0^{\circ}38'E.$, and the length 471.66 chs., the proportional distance for each mile is 78.61 chs.

October 19, 1914.

Oct. 29, 1914: At 8 h 0 m A.M., l.m.t., I set off $41^{\circ}29'$ on the lat. arc; $13^{\circ}16'S.$ on the decl. arc, and determine a meridian at the old corner of Ts. 41 and 42 N., Rs. 60 and 61 E.

This corner being in good shape, I do not re-establish.

From this corner, fence bears $N.1^{\circ}E.$

Thence I run