

South Boundary T. 9 N., R. 67 E.

1.

Chains

Survey commenced June 18, 1915, and executed with a Young and Sons light mountain transit, No. 8295, 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 examined, tested on the true meridian at Salt Lake City, Utah, found correct and was approved by the Assistant Supervisor of Surveys for Nevada, May 14, 1915.

I examine the adjustments of the transit, find them correct; 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 camp in the Northwest quarter of sec. 15, T. 9 N., R. 67 E.; latitude, $38^{\circ} 39' N.$, longitude, $114^{\circ} 27' W.$; I set off $38^{\circ} 39' N.$, on the lat. arc; $23^{\circ} 25' N.$ on the decl. arc; and at 3h. 01m., p.m., l.m.t., determine a meridian with the solar and mark a point thereof, on a stake firmly driven in the ground about 6 chs. N. of my station.
June 18, 1915.

June 19, 1915: At 1h. 47m., a.m., l.m.t., I observe Polaris at approximate eastern elongation, in accordance with the Manual of Instructions and mark a point in the line thus determined on a stake driven in the ground about 6 chs. N. of my station.

At 7h. 00m. a.m., l.m.t., I lay off the azimuth of Polaris, $1^{\circ} 28'$ to the west and mark a point in the meridian thus determined by a cross on the stake set June 18, the same coinciding with the mark determined by the solar on that date.

At 7h. 31m., a.m., l.m.t., I set off $38^{\circ} 39' N.$, on the lat. arc; $23^{\circ} 26' N.$ on the decl. arc; and mark a point in the meridian determined with the solar by a cross on the stake already set about 6 chs. N. of my station; this mark coincides with the meridian established by the Polaris observation.

The solar apparatus by p. m. and a.m., observations, defines positions for meridians, respectively coinciding with the meridian established by the Polaris observation; therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 7h. 40m. a.m. is $N. 16^{\circ} 50' W.$; the angle thus determined gives the mag. decl. $16^{\circ} 50' E.$

A 5 ch. tape and clinometer was used on all measurements of this work.

June 19, 1915.

June 25, 1915: At 9h. 32m. a.m., l.m.t., I set off $38^{\circ} 35' N.$ on the lat. arc, $23^{\circ} 25' N.$ on the decl. arc; and determine a meridian with the solar at the cor. of Tps. 8 and 9 N., Rs. 66 and 67 E., heretofore described. Thence I run

East bet. secs. 6 and 31.

Rolling land, dense cedars and pinon pine, scattering sage brush, greasewood and grass.

37.90 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap mkd.,

S31

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S6

1915