

E. bdy. of T. 8 N., R. 49 E.

1.

Chains

Survey commenced July 18, 1914 and executed with a Young and Sons light mountain transit No. 6517, 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 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 24, 1914. I examine the adjustments of the transit, find them correct; then to test the solar apparatus by comparing it's 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 center of sec. 22, T. 8 N., R. 49 E.; latitude $38^{\circ} 32' N.$, longitude $116^{\circ} 28' W.$, at 11h 49m p.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 5 chs. N. of my station.

July 18, 1914.

July 19, 1914: At 7h 00m a.m., l.m.t., I lay off the azimuth of Polaris $1^{\circ} 28\frac{1}{2}'$ to the west and mark a point in the true meridian thus determined on a stake driven in the ground, 5 chs. N. of my station.

At 8h 06 m a.m., l.m.t., I set off $38^{\circ} 32' N.$, on the lat. arc; $20^{\circ} 57' N.$ on the decl. arc and determine a meridian with the solar; the meridian thus determined coincides with the meridian established by the Polaris observation.

At 12h 06m l.m.t., I set off $20^{\circ} 55' N.$, on the decl. arc and observe the sun on the meridian, the resulting lat. is $38^{\circ} 32'$.

At 3h 06m p.m., l.m.t., I set off $38^{\circ} 32' N.$, on the lat. arc; $20^{\circ} 54' N.$, on the decl. arc and determine a meridian with the solar; the meridian thus determined coincides with the meridian established by the Polaris observation. The solar apparatus by a.m. and p.m. observations coincide 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 3h 30m p.m. is $17^{\circ} 35' W.$; the angle thus determined gives the mag. decl. $17^{\circ} 35' E.$

A five chain tape and clinometer was used on all measurements of this work.

July 19, 1914.

July 21, 1914: At 10h 06m a.m., l.m.t., I set off $38^{\circ} 29\frac{1}{2}' N.$, on the latitude arc; $20^{\circ} 33\frac{1}{2}' N.$ on the decl. arc and determine a meridian with the solar at the cor. of Tps. 7 and 8 N., Rs. 49 and 50 E., heretofore described.

Thence I run

N. along the E. bdy. of the township between secs. 31 and 36.

Over rough mountainous land through medium growth of cedars and pinon pine and scattering undergrowth of sagebrush, wild peach, mountain rush, buck brush and grass.