

## Retracement of Subdivisions of T. 30 N., R. 43 E.

1.

Chains

Survey commenced June 24, 1914 and executed with Young & Sons Transit No. 8572, the instrument provided with a 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 lat. and decl. arcs; The instrument was examined, tested, and approved by G.D.D. Kirkpatrick, Assistant Supervisor of Surveys for the States of Utah and Nevada, by Assignment Instructions dated April 13, 1914.

The measurement on the survey of this township was taken with a 5- chain steel tape and the slope angles were obtained by the use of a clinometer.

June 28, 1914: I examine the adjustments of the transit, which I find correct, then to test out the solar apparatus I proceed as follows:-

At a point in camp, located in the North central portion of sec. 29, lat.  $40^{\circ} 27' N.$ ; approximate longitude  $117^{\circ} 09' W.$ ; I set off  $40^{\circ} 27' N.$  on the lat. arc;  $23^{\circ} 18\frac{1}{2}' N.$  on the decl. arc; and at 4h. 15m., p.m., l.m.t., determine a meridian with the solar and mark a point in the line thereof on a hub set 5- chs. N. of my station.

June 28, 1914.

June 29, 1914; At 1h. 5.8' a.m., l.m.t., an observation was made at eastern elongation on Polaris with Transit No. 9589, (see field notes of T. 29 N., R. 43 E.), and a point in the line thus determined was made on a hub set 5- chs. N. of the station. At 7h., 00m., a.m., l.m.t., of the same date the azimuth of Polaris  $1^{\circ} 31.4'$ , was set off to the west and a point marked in the line of the meridian thus determined, by a tack driven in the hub already set 5-chs. N. of my station. This point falls less than 0.4 ins. E. of the point determined by the Solar on June 28.

At 7h. 45m., a.m., l.m.t., I set off  $40^{\circ} 27' N.$  on the lat. arc;  $23^{\circ} 17' N.$  on the decl. arc; and determine a meridian with the solar, which falls less than 1' to the E. of the meridian determined by Polaris observation. The solar apparatus by p.m. and a.m. observations defines positions for meridians which vary from the meridian established by observations on Polaris, by less than 1' of arc; therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 7h. 50m., a.m., l.m.t., was  $N. 18^{\circ} 15' W.$ ; the angle thus determined gives the mag. decl.  $18^{\circ} 15' E.$

Tests on this instrument were made by A.T.Harris.

June 29, 1914.

Note: The tests of instruments on this township were subsequent to the commencement of work June 24, 1914. For tests of Instrument prior to June 24, refer to field notes of T. 30 N., R. 42 E., H.W.R.

## RETRACEMENT OF SUBDIVISIONS BY A.T.HARRIS

June 24, 1914:- At 8h. 10m., a.m., l.m.t., I set off  $40^{\circ} 27' N.$ , on the lat. arc;  $23^{\circ} 26' N.$  on the decl. arc; and determine with the the solar at the reestablished cor. of secs. 19 and 30, on the west bdy., heretofore described.

Thence retrace E. bet. secs. 19 and 30.

37.18 Set a temp.  $\frac{1}{4}$  sec. cor. No traces of the old  $\frac{1}{4}$  sec. cor. of secs. 19 and 30, are found after careful search, I continue my retracement along same line.