Chains

Survey commenced Oct. 13,1915 and executed with a Young and Sons Transit No. 8589 and a Keuffel and Esser No. 20575, both instruments provided with Smith Solar attachments. The horizontal limbs provided with two double verniers placed opposite to each other and reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs. The instruments were approved by G.D.D.Kirkpatrick,Assistant Supervisor of Surveys of Utah and Nevada.

The measurements on these surveys were taken with a 5.00 ch. steel Lallie tape and the slope angles determined by the use of clinometers.

Prior to the following test of the instruments in this township, the instruments were tested on a true meridian in camp T. 21 N.,R. 48 E. and the instruments found to be in good adjustment.

Oct. 25, 1915: I examine the adjustment of the transit No. 8589 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 observation on Polaris, I proceed as follows:

At a point in camp which is situated in the N. half of sec. 14, T. 22 N., R. 48 E., latitude 39° 47'N., longitude 116° 32'W.; I set off 11° 57'S. on the declination arc; 39° 47'N. latitude arc, and at 4h.00m.p.m., l.m.t., determine a meridian with the solar and mark a point in line thereof by a tack driven in a hub set 5.00 chs. N. of my station.

Oct. 25, 1915.

Oct. 26, 1915: At 5h 11.4m a.m.,l.m.t., I observe Polaris at western elongation and mark a point in line by a tack driven in a hub set approximately 5.00 chs. N. of my station.

At 7h 30m a.m.,l.m.t., I lay off the azimuth of Polaris 1°30½' to the east, and mark a point in the meridian thus determined by a tack driven in a hub already set 5.00 chs. N. of my station; this point falls 0.2 ins. to the right of the point determined with the solar.

At 8h a.m.,l.m.t., I set off 39° 47'N. on the latitude arc; 12° 11'S. on the declination arc and determine a meridian with the solar, a point in line thereof being identical with the point as determined by the Polaris observation.

The solar apparatus by a.m. and p.m. observations, determine positions for meridian, respectively,about 10" W. and 0.0" E. of the meridian determined by Polaris observations, therefore I conclude that the instrument is in satisfactory condition.

Similar tests to the above were made on Transit No. 20575 and the same found to be in perfect adjustment. The magnetic bearing of the true meridian at 8h 10m a.m.,l.m.t., is N.17° 45'W.; the angle thus determined gives the magnetic declination as 17° 45'E.

Oct. 26, 1915.

Test of above instruments, made by H.W.Reppert.

RETRACEMENT AND RESURVEY E. BDY. T. 22 N., R. 48 E.

Retraced by H.W.Reppert.

Oct. 13, 1915: At 8h 30m a.m., .m.t., I set off 39° 44'N. on the lat. arc; 7° 30½' S. on the decl. arc; and determine a meridian with the solar at the cor. of Tps.