

## Chains.

Survey commenced Aug. 25, 1915 and executed with a Young and Sons Transit No. 8589 and Keuffel and Esser Transit No. 20575, both instruments provided with Smith Solar attachments. The horizontal limbs are provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the lat. and decl. arcs.

Prior to the surveys on Group No. 36, the instruments were examined and approved by G. D. D. Kirkpatrick, Assistant Supervisor of Surveys for the States of Utah and Nevada.

Measurements on these surveys were made with a 5.00 chs. steel Lallie tape and the slope angles read with a clinometer.

Aug. 25, 1915.

Aug. 22, 1915: On this date, both instruments were tested at hourly intervals, on the meridian in camp located on the range line, Rs. 46 and 47 E., T. 19 N., near the  $\frac{1}{4}$  cor. of secs. 13 and 18, (for the establishment of the meridian, see the field notes of T. 19 N., R. 47 E.) and found to vary less than one minute of arc from the true meridian; therefore we conclude that the instruments are in satisfactory adjustment for the survey of T. 19 N., R. 46 E.

The magnetic bearing of the true meridian on this date at 8h 30m a.m., l.m.t., was N.  $17^{\circ} 30'$  W.; the angle thus determined, gives the magnetic decl.  $17^{\circ} 30'$  E.

Aug. 22, 1915.

## SOUTH BOUNDARY T. 19 N., R. 46 E.

Surveyed by H. W. Reppert.

Aug. 25, 1915: At 8h. 00m. a.m., l.m.t., I set off  $39^{\circ} 28'$  N. on the lat. arc;  $11^{\circ} 01'$  N. on the decl. arc and determine a meridian with the solar at the cor. of Tps. 18 and 19 N., Rs. 46 and 47 E., observed latitude  $39^{\circ} 28'$  N., longitude  $116^{\circ} 43\frac{1}{2}'$  W.

Thence I run,

W. on a random line on the S. bdy. of the Tp. setting temporary and  $\frac{1}{4}$  sec. cors. at intervals of 40.00 chs. and at a dist. of 320.00 chs. Set a temp. point for the cor. of secs. 3, 4, 33 and 34.

Aug. 25, 1915.

Surveyed by H.W.Reppert.

Aug. 26, 1915: At 9h 15m a.m., l.m.t., I set off  $39^{\circ} 28'$  N. on the lat. arc;  $10^{\circ} 39'$  N. on the decl. arc and determine a meridian with the solar at the temp. point for the cor. of secs. 3, 4, 33 and 34.

Thence I continue my random line west on the S. bdy. of the Tp., and at a distance of 534.40 chs. from the cor. of Tps. 18 and 19 N., Rs. 46 and 47 E., I intersect the N. and S. line 20.10 chs. N.  $0^{\circ} 5'$  E. of the SE. cor. of T. 19 N., R. 45 E., which is a granite stone 5 x 10 x 15 ins. above ground, firmly set, marked and witnessed as described by the surveyor general.

Not on the meridian on this date for an observation for latitude.

Aug. 26, 1915.

Surveyed by H. W. Reppert.

Aug. 27, 1915: Having ascertained by a previous random line that the S. bdy. would not fall within limits on the SE. cor. of Tp. 19 N., R. 45 E.; I set off  $39^{\circ} 28'$  N. on the lat. arc;  $10^{\circ} 18'$  N. on the decl. arc, and at 9h. a.m., l.m.t., determine a meridian with the solar.