

10. Retracement of Subdivisions of T. 33 N., R. 52 E.

Chains

No timber.
Undergrowth; sagebrush, good grass for grazing.
Drainage, N. E.
Scott P. Stewart,
U. S. Surveyor

Aug. 8, 1914.

RETRACEMENT OF SUBDIVISIONS OF T. 33 N., R. 52 EAST

Survey commenced July 31, 1914 and executed with a Young and Son's transit No. 8148, with Smith's solar attachment. The horizontal limb is provided with 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 instrument was approved for use in this survey by Mr. G.D.D. Kirkpatrick, Assistant Supervisor of Surveys. I examine the adjustments of the transit and correct the level and collimation errors, then to test the solar apparatus by comparing its indications from solar observations made during A. M. and P.M. hours, with a meridian determined by observation on Polaris, I proceed as follows:

At my camp which is located in the town of Carlin, Nev., T. 33 N., R. 52 E., in sec. 27, in approximate lat. $40^{\circ} 40'$ Long. $116^{\circ} 08' W.$, I set off $40^{\circ} 40'$ on the lat. arc; $18^{\circ} 20' N.$ on the decl. arc; and determine a meridian with the solar at 4h. 30m., p.m. l.m.t., and mark a point in the line thus determined by a peg, driven firmly in the ground about 5 chs. N.

July 31: At 10h. 57m., p.m., l.m.t., I observe Polaris at Eastern Elongation and mark the direction of the line thus determined by a peg driven firmly in the ground about 5 chs. N.

Aug 1: At 6h. 30m., a.m., I lay off the azimuth of Polaris $1^{\circ} 30'$ to the W. and note that this meridian practically agrees with the meridian determined July 31st. At 7h. a.m., l.m.t., I set off $40^{\circ} 40'$ on the lat. arc; $18^{\circ} 10' N.$ on the decl. arc and determine a meridian with the solar, this meridian agrees with the Polaris meridian, therefore I conclude the instrument is in good adjustment.

The magnetic bearing of the true meridian at 7h. a.m. is N. $17^{\circ} 40' W.$, the angle thus determined gives the magnetic declination $17^{\circ} 40' E.$

Steel tapes, 5 chs. long were used by both parties in all field work, together with clinometers for determining slope angles, and the reduced horizontal distance only appear in the field notes. The tapes were tested during the progress of the survey, comparisons being made with a standard tape, 1 ch. long, kept and used for that purpose.