

Chains

Survey commenced Aug. 9, 1914, and executed with a Buff and Buff transit No. 8028, with a Smith solar attachment. For description and approval of instrument see book "A" of this survey.

I examine the adjustments of the transit and find no 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 my camp, which is in sec. 26, T. 34 N., R. 51 E., in approximate lat. $40^{\circ}46'N.$, Longitude $116^{\circ}13'W.$, I set off $40^{\circ}46'$ on the lat. arc; $15^{\circ}54'N.$ on the decl. arc; and determine a meridian with the solar at 4 h 30 m 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. of my station.

At 10 h 23 m, p.m., l.m.t., I observe Polaris at eastern elongation, in accordance with the Manual of Instructions and mark the direction of the line thus determined on a peg driven firmly in the ground about 5 chs. N. of my station.

August 9, 1914.

August 10: At 6 h 0 m, a.m., l.m.t., I lay off the azimuth of Polaris $1^{\circ}30'$ to the west, and note that this meridian practically agrees with the meridian determined August 9.

At 7 h 0 m, a.m., l.m.t., I set off $40^{\circ}46'$ on the lat. arc; $15^{\circ}44'N.$ on the decl. arc; and determine a meridian with the solar. This meridian agrees with the Polaris meridian within a minute of bearing; I therefore conclude the instrument is in good adjustment.

The magnetic bearing of the true meridian at 7 h 0 m, a.m., is $N.17^{\circ}45'W.$, the angle thus determined gives the magnetic declination of $17^{\circ}45'E.$

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

I begin at the Tp. Cor. of Ts. 33 and 34 N., Rs. 51 and 52 E., heretofore described.

Thence North on a retracement on the E. Bdy. of sec. 36.

40.00 No trace of the original cor.

80.00 No trace of original sec. cor. Set a temp. sec. cor.

North between secs. 25 and 30, from the temp. sec. Cor., retracing.

41.17 The original $\frac{1}{4}$ sec. cor. of secs. 25 and 30, which is a cedar post 3 ins. in dia., 36 ins. long, with $S\frac{1}{4}$ marked on one face, lying on top of a mound of earth; no other evidence can be found.

81.17 At this point, I find an old mound and pits, but no trace of the post can be found and no other evidence of