

## Survey of the West Boundary of T. 32 N., R. 30 E.

west, and mark the meridian thus determined by a tack in the stake set August 30, on which the meridian falls 0.8 ins. west of the mark determined with the solar.

At 8<sup>h</sup> 05<sup>m</sup> a. m. l. m. t., I set off 40° 37' N. on the lat. arc; 8° 39' N. on the decl. arc; and mark a point in the meridian determined with the solar, by a tack in the stake already driven 5 chs. N. of my station; this mark falls 0.4 ins. east of the meridian established by Polaris observations.

The solar apparatus, by p. m. and a. m. observations, defines positions for meridians, respectively about 42" and 21" east of the meridian established by the Polaris observations; therefore I conclude the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 8<sup>h</sup> 15<sup>m</sup> a. m. is N. 18° 30' W.; the angle thus determined gives the magnetic declination 18° 30' E.

Similar tests were made on the Young and Son's transit, with Smith's solar attachment, including the correction of the level and collimation errors.

August 31, 1912: At 9<sup>h</sup> 00<sup>m</sup> a. m. l. m. t., I set off 40° 35' N. on the lat. arc; 8° 38' on the decl. arc; and determine a meridian with the solar at the cor. of T. 31 and 32 N., R. 29 and 30 E., heretofore described; thence, I run north on a random line along the W. bdy. of T. 32 N., R. 30 E., setting temp. cor.  $\frac{1}{4}$  sec. and sec. cor. at intervals of 40.00 chs.; and at 480.00 chs., I set a temp. cor. for T. 32 and 33 N., R. 29 and 30 E.

August 31, 1912.

Survey of the South Boundary of T. 32 N., R. 30 E.