

Subdivision of Fractional T. 7 S., R. 67 E.

Shaw's

Survey commenced Aug. 23, 1911, and executed with a Reuffel and Esser Solar Transit, N. 20575, the horizontal limb having two double verniers placed opposite each other and reading to single minutes of arc, which is also the least count of the latitude and declination arcs.

I examine the adjustments of the transit, and correct the level and collimation errors; then, in order to test the solar apparatus, by comparing the results of observations on the sun, made during a. m. and p. m. hours, with a true meridian determined by observations on Polaris, I proceed as follows:

At my camp, which is located in the S.W. $\frac{1}{4}$ of Sec. 35, about 20 chs. N. of the S. Ely. of Twp., latitude $37^{\circ}16'N$.

At 5^h 03^m p. m., l. m. t., I set off $37^{\circ}16'N$ on the lat. arc, $11^{\circ}36'N$ on the decl. arc; and mark the meridian thus determined with the solar, by a cross on a stone firmly set in the ground, 5 chs. N. of the instrument.

At 9^h 28^m p. m., l. m. t., I observe Polaris at eastern elongation, in accordance with instructions in the manual, and mark the line thus determined, by a tack driven in a wooden peg, set in the ground, 5 chs. N. of my station.

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Aug. 24, 1911: At 7^h 30^m a. m., l. m. t., I lay off the azimuth of Polaris, $1^{\circ}28'$, to the west, and mark the meridian thus determined, by cutting a small groove in the stone set last evening, on which the meridian falls 0.3 chs.