

A portion of the West boundary of T.7 S., R.67 E.

Chains

October 28, 1916: At 4h 45m a.m., l.m.t., I observe Polaris at approximate western elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined, on a stake firmly driven in the ground, about $5\frac{1}{2}$ chs. N. of my station.

At 7h 10m a.m., l.m.t., I lay off the azimuth of Polaris, $1^{\circ} 25\frac{1}{2}'$ to the east, and observe that the meridian thus determined coincides with the meridian determined and established by the solar on October 27.

At 7h 44m a.m., l.m.t., I set off $37^{\circ} 18'N.$, on the lat. arc; $13^{\circ} 07'S.$, on the decl. arc; and determine a meridian with the solar; this meridian coincides with the meridian established by the Polaris observation.

The solar apparatus, by p.m. and a.m. observations, defines positions for meridians, respectively coinciding with the meridian established by the Polaris observations, therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian, at 8h 00m a.m., is $N.16^{\circ} 30'W.$; the angle thus determined gives the mag. decl., $16^{\circ} 30'E.$

At the cor. of Tps. 6 and 7 S., Rs. 66 and 67 E., I set off $13^{\circ} 11\frac{1}{2}' S.$, on the decl. arc; and at 11h 44m l.m.t., observe the sun on the meridian; the resulting latitude is $37^{\circ} 20'$.

Note: A five chain steel tape and clinometer were used on all measurements of this work, the tape being frequently tested by comparison with a standard one chain steel tape kept for this purpose.

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From the cor. of secs. 1,6,7 and 12, Tps. 7 S., Rs. 66 and 67 E., which is an iron post, 3 ins. in diameter, firmly set 1 ft. above ground, marked and witnessed as