

Resurvey of Fractional Subs. T.34 N., R.57 E.

1.

Chains

Survey commenced Oct. 19, 1915, and executed with a Young and Sons transit No. 6517, with Smith solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, 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 by Asst. Supervisor of Surveys G. D. D. Kirkpatrick.

I examine the adjustments of the transit and correct the level and collimation 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 observations on Polaris, I proceed as follows;

At the cor. of secs. 13, 18, 19 and 24, on the W. Bdy. of the Tp., which is an iron post 3 ins. in diam, set 24 ins. in the ground with a brass cap mkd:

T 34 N	
R56E	R57E
S13	S18
S24	S19
1915	

and witnessed by pits and a mound of earth W. of post, in latitude $40^{\circ}48'N.$, longitude $115^{\circ}36'W.$, at 4 h 0 m, p.m., l.m.t., I set off $40^{\circ}48'N.$ on the lat. arc, $9^{\circ}49'S.$ on the decl. arc, and determine a meridian with the solar, and mark a point thereof on a stone firmly set in the ground 5 chs. N. of the cor.

October 19, 1915.

Oct. 20, 1915.

At 5 h 39 m, a.m., l.m.t., I observe Polaris at western elongation in accordance with the Manual of Instructions, and mark a point in the line thus determined on a peg driven in the ground 5 chs. N. of the cor.

At 7 h 30 m, a.m., l.m.t., I lay off the azimuth of Polaris $1^{\circ}30'30''$ to the east and mark the meridian thus determined by cutting a small groove in the stone set Oct. 19, on which the meridian falls 0.8 ins. east of the mark determined by the solar. At 8 h 0 m, a.m., l.m.t., I set off $40^{\circ}48'N.$ on the lat. arc, $10^{\circ}04'S.$ on the decl. arc and mark a point in the meridian determined with the solar, by a cross on the stone already set 5 chs. N. of the cor. This mark falls 1 inch east of the meridian established by the Polaris observation.

The solar apparatus by p.m. and a.m. observations defines positions for meridians, respectively, about $0^{\circ}42''$ west and $0^{\circ}53''$ east of 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 is $N.18^{\circ}10'W.$ the angle thus determined gives the magnetic declination $18^{\circ}10'E.$

The lines of this survey were measured with a 5 chain steel tape and clinometer.

From the cor. of secs. 13, 18, 19 and 24, I retrace $N.89^{\circ}42'E.$ between secs. 18 and 19.

41.10 I search diligently but find no $\frac{1}{4}$ sec. cor.

81.10 I search diligently but find no cor. of secs. 17, 18, 19 and 20. Set a temporary corner.

From the temp. cor. of secs. 17, 18, 19 and 20, North on a retracement between secs. 17 and 18.