

Retracement of S. Bdy. T.32 N., R. 52 E.

1.

Chains

Survey commenced Aug. 24, 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 Assistant 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 p.m. and a.m. hours with a meridian determined by observations on Polaris, I proceed as follows.

At the cor. of secs. 4, 5, 32 and 33 on the S. Bdy. of the Tp., at 4 h 0 m p.m., l.m.t., I set off $40^{\circ}35'N$. on the lat. arc, $11^{\circ}15'N$. 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. The latitude of this corner is $40^{\circ}35'N$. and longitude $116^{\circ}08'W$.

At 9 h 24 m p.m., l.m.t., I observe Polaris at eastern elongation in accordance with Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground 5 chs. N. of my station.

August 24, 1915.

August 25, 1915.

At 7 h 45 m a.m., l.m.t., I lay off the azimuth of Polaris $1^{\circ}31'$ to the west, and mark the meridian thus determined by cutting a small groove in the stone set August 24th, on which the meridian falls 0.3 ins. east of the mark determined by the solar.

At 8 h 0 m a.m., l.m.t., I set off $40^{\circ}35'N$. on the lat. arc, $11^{\circ}01'N$. 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 my station. This mark falls 0.5 ins. E. of the meridian established by the Polaris observation.

The solar apparatus by p.m. and a.m. observations defines positions for meridians, respectively about $0^{\circ}15''$ west and $0^{\circ}26''$ 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 $N.18^{\circ}20'W$.; the angle thus determined gives the magnetic declination $18^{\circ}20'E$.

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

From the cor. of secs. 4, 5, 32 and 33, I retrace East between secs. 4 and 33, on the S. Bdy. of the Tp. I search diligently but find no trace of $\frac{1}{4}$ sec. cor. I search diligently but find no trace of the cor. of secs. 3, 4, 33 and 34. I set a temporary corner.

From the temporary cor. of secs. 3, 4, 33 and 34, I retrace East between secs. 3 and 34, on the S. Bdy. of the Tp. I search diligently but find no trace of $\frac{1}{4}$ sec. cor. I search diligently but find no trace of the cor. of secs. 2, 3, 34 and 35. I set a temporary corner.

From the temp. cor. of secs. 2, 3, 34 and 35, I retrace East between secs. 2 and 35. I search diligently but find no trace of $\frac{1}{4}$ sec. cor.

40.00

80.00

40.00

80.00

40.00