

- 1 -

T. 45 N. bet. Rgs. 51 and 52 E.

Survey commenced June 21st 1911 and executed with a Young & Sons light mountain transit No. 8394 with solar attachment. The horizontal limb is provided with two double verniers placed apposite to each other and reading to single minutes of arc, which is also the least count of the latitude and declination arcs.

The instrument was examined, tested, and found correct.

In order 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 observation on Polaris, I proceed as follows: June 20th 1911: At camp near the center of sec. 35 T. 47 N. R. 52 E.

Latitude  $41^{\circ} 56'$  N.

Longitude  $116^{\circ} 07'$  W.

At 1h. 41m. a.m. by my watch which has been set to local mean time, I observe Polaris at Eastern Elongation, in accordance with Manual of instructions, and mark a point in the line thus determined, by cutting a cross on a wooden plug set in the ground 5 chs. N. of my station. At 7 a.m., l.m.t., I lay off the azimuth of Polaris  $1^{\circ}34'.4$  to the West, and mark the meridian thus determined, by driving a tack in a wooden plug, set firmly in the ground, west of the point established during the night.

At 8 a.m., l.m.t., I set off  $41^{\circ} 56'$  on the lat. arc, and  $23^{\circ} 27'$  N. on the decl. arc and determine a meridian with the solar, and at 4 p.m., l.m.t., I set off  $41^{\circ} 56'$  on the lat. arc and  $23^{\circ} 27\frac{1}{2}'$  N. on the decl. arc and determine a meridian with the solar.

The solar apparatus, by A.M. and P.M. observations, defines positions for meridians less than  $1'$  deviation from the meridian established by Polaris observations, therefore I conclude that the adjustments of the instrument are satisfactory.

I am unable to find any old corners on the 9th Standard