

2. Retracement of E. Bdy. T. 27 N., R. 43 E.

Chains

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 8h. 00m. a.m., l.m.t., I set my instrument No. 20575 in line with the meridian determined by H.W. Reppert, by an observation on May 5, 1915, near the $\frac{1}{4}$ cor. of secs. 14 and 15 in T. 27 N., R. 44 E., lat. $40^{\circ} 12' N.$, longitude $117^{\circ} 00' W.$ and set off $40^{\circ} 12' N.$ on the lat. arc; $18^{\circ} 58' N.$ on the decl. arc and determine a meridian with the solar, a point in line thereof falling about 0.5 ins. E. of the point determined by the Polaris observation.
 At 4h. 00m., p.m., l.m.t., I set off $40^{\circ} 12' N.$ on the lat. arc; $19^{\circ} 2\frac{1}{2}' N.$ on the decl. arc and determine a meridian with the solar, a point in line falling about 0.2 ins. W. of the point in line with the Polaris meridian.
 The solar apparatus on transit No. 20575 defines positions for meridian, respectively about $0' 26'' E.$ and $0' 10'' W.$ of the position of the meridian as determined by Polaris observation; therefore I conclude that this instrument is in very satisfactory condition.

May 16, 1915.

Retraced by H.W. Reppert.

May 6, 1915: At 8h. 05m., a.m., l.m.t., I set off $40^{\circ} 14' N.$ on the lat. arc; $16^{\circ} 22\frac{1}{2}' N.$ on the decl. arc, and determine a meridian with the solar at the cor. of Tps. 27 and 28 N., Rs. 43 and 44 E., longitude approximate $117^{\circ} 04' W.$; which is a granite stone, $6 \times 12 \times 10$ ins. above ground, firmly set, marked and witnessed as described by the Surveyor General.

Thence I retrace

South bet. secs. 1 and 6.

40.85

Intersect a point $18\frac{1}{2}$ lks. E. of the old $\frac{1}{4}$ sec. cor. of secs. 1 and 6 which is a granite stone, $5 \times 6 \times 8$ ins. above ground firmly set, marked and witnessed as described by the Surveyor General. The true return course of this half mile is therefore N. $0^{\circ} 16' E.$ and the length is 40.85 chs.

I continue my retracement S. along same line.

81.23

Intersect E. and W. line, 35 lks. E. of the cor. of secs. 1, 6, 7 and 12, which is a basalt stone, $10 \times 12 \times 16$ ins. above ground, firmly set, marked and witnessed as described by the Surveyor General.

The true return course of the last $\frac{1}{2}$ mile is therefore N. $0^{\circ} 14' E.$ and the length of the $\frac{1}{2}$ mile is 40.38 chs.

From the old cor. of secs. 1, 6, 7 and 12, I retrace South bet. secs. 7 and 12.

40.32

Intersect E. and W. line, $25\frac{1}{2}$ lks. E. of the old $\frac{1}{4}$ cor. of secs. 7 and 12, which is a basalt stone, $8 \times 10 \times 12$ ins. above ground, firmly set, marked and witnessed as described by the Surveyor General. The true return course of this $\frac{1}{2}$ mile is therefore N. $0^{\circ} 22' E.$ and the length of the $\frac{1}{2}$ mile is 40.32 chs.

I continue my retracement S. along same line.

80.65

Intersect the E. and W. line, 35 lks. E. of the old cor. of secs. 13, 18, 19 and 24, which is a basalt stone, $6 \times 8 \times 10$ ins. above ground, firmly set, marked and witnessed as described by the Surveyor General.

The true return course of the last $\frac{1}{2}$ mile is therefore N. $0^{\circ} 08' E.$ and the length of the $\frac{1}{2}$ mile is 40.33 chs.

From the corner of secs. 7, 12, 13 and 18, I retrace, South bet. secs. 13 and 18.

40.38

Intersect the E. and W. line, $18\frac{1}{2}$ lks. E. of the old $\frac{1}{4}$ cor. of secs. 13 and 18, which is a scoria stone,