

Chains

Surveyed by W.A.Pray, U.S. Surveyor.

Survey commenced May 11, 1915, and executed with a Young & 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 lat. and decl. arcs. The instrument was approved by Mr. G. D. D. Kirkpatrick, Asst. Supervisor of Surveys for Nevada.

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. 3, 4, 9 and 10; lat.  $40^{\circ}33'N.$ ; long.  $116^{\circ}20'W.$ , I set off  $40^{\circ}33'N.$  on the lat. arc;  $17^{\circ}49'N.$  on the decl. arc; and at 4 h 0 m, p.m., l.m.t., 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.

May 11, 1915.

May 12, 1915.

At 4 h 15 m, a.m., l.m.t., I observe Polaris at eastern 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. north of my station.

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 on the stone set May 11th; this mark falls 0.9 ins. W. of the mark determined by the solar. At 8 h 0 m, a.m., l.m.t., I set off  $40^{\circ}33'N.$  on the lat. arc;  $17^{\circ}59'N.$  on the decl. arc, and determine a meridian with the solar, and mark a point thereof on the stone set 5 chs. N. of cor. This point falls 0.9 ins. west of the meridian established by the Polaris observation.

The solar apparatus by P.M. and A.M. observations defines positions for meridians about 0.48 " east and west, respectively, 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 at 8 h 30 m, a.m., l.m.t., is  $N.18^{\circ}15'W.$ ; the angle thus determined gives the mag. decl.  $18^{\circ}15'E.$

From the cor. of secs. 3, 4, 9 and 10; which corner is an iron post firmly set in the ground, of the size, marked and witnessed as described by the Surveyor General, I retrace

$S.87^{\circ}00'E.$  bet. secs. 3 and 10.

40.00 Search diligently but find no trace of  $\frac{1}{4}$  sec. cor.

80.00 Search diligently but find no trace of the cor. for secs. 2, 3, 10 and 11.

Set a temp. cor. for cor. of secs. 2, 3, 10 and 11.

I continue my line retracing.

$S.87^{\circ}00'E.$  between secs. 2 and 11.

40.00 Search diligently but find no trace of  $\frac{1}{4}$  sec. cor.

80.00 Search diligently but find no trace of the cor. for secs. 1, 2, 11 and 12.

Set a temp. cor.