

## Resurvey of a Portion of the W. Bdy. T.23 N., R.24 E.

1.

Chains

Survey commenced June 6, 1909, and executed with a W. and L. E. Gurley light mountain transit, no number, with 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 examined, tested on the true meridian at Reno, Nevada, found correct, and was approved by the Surveyor General for Nevada May 24, 1909.

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 my camp in T. 23 N., R. 23 E., bearing S.34°W. 15 chs. from the  $\frac{1}{4}$  sec. cor. between secs. 25 and 26; latitude 39°49'N., longitude 119°20'W., I set off 39°49' on the lat. arc; 22°40'N. on the decl. arc; and at 2 h 0 m P.M., l.m.t., determine with the solar a meridian and mark a point thereof by a tack in the top of a wooden peg driven firm in the ground 5 chs. N. of my station.

June 7; at 2 h 30 m A.M., by my watch, which is correct 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.

June 7, 1909; at 7 h 30 m A.M., l.m.t., I lay off the azimuth of Polaris 1°32' to the west and mark the meridian thus determined by a lead pencil mark on the peg set June 6, 1909, on which the meridian falls 0.4 ins. east of the mark determined by the solar.

At 10 h 0 m A.M., l.m.t., I set off 39°49' on lat. arc; 22°45'N. on decl. arc, and mark a point in the meridian determined with the solar by a cross on the peg already set 5 chs. N. of my station; this mark falls 0.1 ins. 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 0'21" West and 0'5" 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 at 8 h 0 m AM, is N.17°40'W., the angle thus determined gives the Mag. Decl. 17°40'E.

At the point of intersection of the township line of T. 23 N., Rs. 23 and 24 E., and the E. Bdy. of Pyramid Lake Indian Reservation, from which the 21-mile stone on said boundary bears S.22°E., 3.52 chs. dist.,

Set a lava stone 18x10x2 ins., 10 ins. in the ground for Closing Corner of Frac. secs. 19 and 24, marked C.C. P.L.I.R. on S. face; S 24 on W. and S. 19 on E. face; dig a pit 36x36x12 ins. 8 ft. S. of cor. and raise a mound of earth 4 ft. high, 2 ft. base, S. of cor. Thence I run, North between sections 19 and 24.

17.85 Set a lava stone 14x10x6 ins. 9 ins. in the ground for cor. of secs. 13, 18, 19 and 24, marked with 3 notches on N. and S. edges, dig pits 18x18x12 ins. in each sec. 5½ ft. dist., and raise a mound of earth 3½ ft. base, 1½ ft. high, W. of cor.