

## Resurvey of East Bdy. of T.22 N., R. 23 E., M.D.M.

1.

Survey commenced June 4, 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 Sec. 26, T. 23 N., R. 23 E., and bearing S.  $34^{\circ}00'W.$  15 chs. from the  $\frac{1}{4}$  sec. cor. bet. secs. 25 and 26 of said Tp., latitude  $39^{\circ}49'N.$ , longitude  $119^{\circ}20'W.$ , I set off  $39^{\circ}49'$  on the lat. arc;  $22^{\circ}27'N.$  on the decl. arc, and at 2 h 00 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 5, at 2 h 33m 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 5, 1909. At 8 h 00 m A.M., l.m.t., I lay off the azimuth of Polaris  $1^{\circ}32'$  to the west and mark the meridian thus determined by a lead pencil mark on the peg set June 4, 1909, on which the meridian falls 0.3 ins. east of the mark determined by the solar.

At 10 h 00 m l.m.t., I set off  $39^{\circ}49'$  on lat. arc,  $22^{\circ}33'N.$  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 0.3 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  $0^{\circ}10'W.$  and  $0^{\circ}10'E.$  of the meridian established by the Polaris observations. I therefore conclude that the adjustments are satisfactory. The magnetic bearing of the meridian is  $N.17^{\circ}40'W.$  making mag. decl.  $17^{\circ}40'E.$

From the cor. to Tps. 21 and 22 N., R. 23 and 24 E. to wit: a basalt stone  $8 \times 8 \times 5$  ins. above ground, marked and witnessed as described by the Surveyor General

Thence I run

North on a blank line on the east boundary of the Tp. in search of  $\frac{1}{4}$  sec. and sec. cors.

I find old  $\frac{1}{4}$  sec. cor. 9 lks. to W. of line.

I find old sec. cor. 20 lks. to W. of line.

I find old  $\frac{1}{4}$  sec. cor. 8 lks. to W. of line.

I find old sec. cor. 13 lks. to W. of line.

From the fact that the bearings and lengths of the foregoing lines differ from the records thereof,

I therefore return to cor. to Tps. 21 and 22 N., Rs.

23 and 24 E. and run thence

$N.0^{\circ}08'W.$  between secs. 31 and 36.

Wash, 3 ft. deep, course E.

Course is  $02^{\circ}$   
would make falling  $02^{\circ}06'$   
or 10 lks. W of line

40.05  
80.15  
119.60  
159.55

38.60