

## Chains

Survey commenced August 7, 1914, and executed with Young and Sons light mountain transits No. 8572 and 8589, with Smith solar attachments. The horizontal limbs are 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.

Instrument No. 8572 was examined and approved at Reno, Nevada, by G.D.D. Kirkpatrick, Assistant Supervisor of Surveys for Utah and Nevada, March 9, 1914.

Instrument No. 8589 was approved by the Asst. Supervisor of Surveys, at Salt Lake City, Utah.

All measurements are made with Lallies 5.00 ch. steel tapes, and slope angles measured with Leitz clinometers, furnished by G.D.D. Kirkpatrick, Assistant Supervisor of Surveys for Utah and Nevada, April 20, 1914.

Aug. 6: At camp, near the S. W. cor. of sec. 26, T. 33 N., R. 48 E., latitude  $40^{\circ} 41' N.$  At 3h. 00m., p.m., l.m.t., I set off  $40^{\circ} 41' N.$  on lat. arc,  $16^{\circ} 46' N.$  on decl. arc, and determine a meridian with the solar, and mark a point thereof, on a peg set firmly in the ground, 5.00 chs. N. of my station.

At 10h. 33m. p.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, 5.00 chs. N. of my station.

Aug. 6, 1914..

Aug. 7: At 7h. 00m., a.m., l.m.t., I lay off the azimuth of Polaris,  $1^{\circ} 31'$  to the west and mark the meridian thus determined, on the peg set Aug. 6 and find that it falls less than a minute from the meridian, determined Aug. 6, by the solar.

At 8h. 00m. a.m., l.m.t., I set off  $40^{\circ} 41' N.$  on the lat. arc,  $16^{\circ} 34' N.$  on the decl. arc and determine a meridian with the solar. I find that it falls less than one minute from the meridian determined by Polaris observation.

Therefore I conclude that the instrument is in satisfactory adjustment. Similar tests are made with instrument No. 8589, and, it is found to be in satisfactory adjustment.

Retraced by A. T. Harris:-

August 7: I set off  $40^{\circ} 40' N.$  on lat. arc;  $16^{\circ} 33' N.$  on the decl. arc; at 9h. 00m., a.m., l.m.t., and determine a meridian at the cor. of secs. 1, 2, 35 and 36 on the S. bdy. of the Tp., which is an iron post, heretofore described. Latitude  $40^{\circ} 40' N.$ ; longitude,  $116^{\circ} 32' W.$ , magnetic declination  $18^{\circ} 16' E.$

Thence I retrace.

N. on a blank line bet. secs. 35 and 36.

40.00 Make diligent search for  $\frac{1}{4}$  sec. cor. of secs. 35 and 36, but find none.

Set temp.  $\frac{1}{4}$  sec. cor. and continue N. on same line.

79.15 Fall 139 lks. W. of cor. of secs. 25, 26, 35 and 36, which is a decayed post, with one notch on E. and one notch on S., set in small mound of stone. This line bears N.  $1^{\circ} 00' E.$  and its true length is 79.16 chs.

August 7, 1914.