Chains

Survey commenced Dec. 9, 1914, and executed with a Young and Sons light mountain transit No.8146, with solar attachment.

The horizontal limb is provided with two double verniers placed opposite each other, reading to single minutes of arc; which is the least count of the latitude and declination arcs.

The instrument was examined, tested on the meridian at Salt Lake City, and found correct and was approved by the Asst. Supervisor of Surveys, for Nevada, July 23, 1914.

I examine the adjustments of the instrument and correct the level and collimation errors; then, to test the solar apparatus by comparing its indications resulting from solar observation made during a.m. hours with a Polaris meridian (partial test), I proceed as follows:

At my camp near S. Bdy. Sec. 8, T. 31 N., R. 50 E., in latitude 40°30'N., longitude 116°23'W., at 2 h 18 m, a.m., l.m.t., I observe Polaris at western elongation in accordance with the Manual of Instructions and mark the line thus determined by a tack driven in a wooden plug set in the ground 5.00 chs. N. of corner.

At 8 h 30 m, a.m., l.m.t., I lay off the azimuth of Polaris 1°30' to the east and mark the meridian thus determined by a cross on a stone firmly set in the ground 5.00 chs. N. of the cor.

At 9 h 0 m, a.m., l.m.t., I set off 40°30'N. on the lat. arc; 22°45'S. on the decl. arc; and determine a meridian with the solar, and mark a point thereof on the stone already set 5.00 chs. N. of the cor., this mark falls 0.31 ins. east of the meridian determined by Polaris observation; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the meridian at 9 h 30 m, a.m., is 17°30'E.

Steel tapes 500 lks. long, tested with a 100 lk. standard tape were used for measurements, and all vertical angles read with Lietz clinometers.

At 10 h 0 m, a.m., l.m.t., I set off 40°30'N. on the lat. arc; 22°46'S. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 9, 10, 15 and 16, which is a willow stake 1½ ins. dia., 2 ft. long, with marks nearly obliterated by decay, also with trace of old mound and pits, which I re-establish as follows:

Set an iron post 3 ft. long, 2 ins. in dia., 24 ins. in the ground for the cor. of secs. 9, 10, 15 and 16, with brass cap mkd:

T31N	R50E
S9	S10
S16	S15

1914

raise a mound of stone 2 ft. base, 1½ ft. high, W. of cor.

Thence West on a retracement between secs. 9 and 16.

39.92 Fall 85 lks. N. of the ¼ sec. cor. between secs. 9 and 16, which is a willow stake 1 in. in dia., 16 ins. long, with only faint marks visible.

The course of this line is S.88°47'W. and the length 39.93 chs.

79.85 Fall 170 lks. N. of the cor. of secs. 8, 9, 16 and 17, which is a willow stake 1½ ins. in dia., 30 ins. long, partly decayed, lying flat on the ground, nearly covered and on an old mound with trace of pits.

The course of this line is S.88°47'W., and the length 39.94 chs.