

the sun on the meridian; the resulting reading of the decl. arc is $10^{\circ} 51.5' N.$, which agrees with the computed declination of the sun.

At 3h. 0m., p.m. app. t., with the lat. arc unchanged I set off $10^{\circ} 54.3' N.$, on the decl. arc; and determine a meridian with the solar, which falls $30''$ west of the meridian established as heretofore described.

As all of the solar observations during the usual hours of the hours of solar work come within $1' 30''$ of the true meridian I conclude that the adjustments of the instrument are satisfactory.

Throughout the survey of T. 13 N., R. 25 E., the adjustments of the instruments were frequently examined and the solar apparatus tested at least once a week by comparing the results of a.m. and p.m. observations with the meridian established by direct observations of the sun for azimuth and by observations on Polaris.

Measurements were made with 5.00 ch. steel tapes, which were frequently compared with a U.S. standard 1.00 ch. steel tape.

Slope angles were determined by means of clinometers the adjustments of which were made by comparing their readings with those of the Transits.

Retracement of S. Bdy. T. 13 N., R. 25 E.

Chains Preliminary to the reestablishment of the exterior lines I retrace said lines, making diligent search for old cors. at 40.00 and 80.00 chs. and setting temp. points,

When an old cor. or recognized property cor. is reached I return along the line and adjust all temp. points to distances proportional to those of the original survey.

From the $\frac{1}{4}$ cor. of secs. 4 and 33, on S. Bdy. hereinafter described, I retrace N. $89^{\circ} 43' W.$, bet. secs. 4 and 33, and 5 and 32, and at $118.04\frac{1}{2}$ chs. fall 69 lks. S. of old