

## Test of Instrument

July 13, 1921, at the same station, at 0h. 14m a.m., 1.m.t., I observe Polaris at eastern elongation, making four observations, two each with the telescope in direct and reversed positions, and mark the mean point in the line thus determined, on a peg driven firmly in the ground 5.00 chs. N.

At 7h 0m a.m., app.t. I lay off the azimuth of Polaris  $1^{\circ} 27' 47''$  to the west, and mark the meridian determined by a nail driven in the hub previously set 5.00 chs. N., and on which the point falls  $15''$  W. of the points determined with the solar on previous date. Therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the meridian at 8h. 0m a.m., app. t., is  $18^{\circ} 25'$  W.; the angle thus determined gives the magnetic declination  $18^{\circ} 25'$  E.

Measurements on this survey were made with Lallie 5.00 ch. steel tapes, which were frequently compared with a U.S. standard 1.00 ch. steel tape, kept for this purpose only.

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

Throughout the survey of T. 28 N., R. 40 E., the adjustments of transits No. 8513 and 20122 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 those of the meridian established by Polaris observation.

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Survey of the South Boundary T. 28 N., R. 40 E.

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From the cor. of Tps. 27 and 28 N., Rs. 39 and 40 E., hereinafter described. I run East, on a random line, on S. Bdy. of Tp., setting temp. points at 40.00 and 80.00 chs., and at 472.90 chs. in-