with the solar , which falls 30" W. of the meridian established by Polaris observations; therefore I conclude that the adjustments of the instrument are satisfactory.

At app.. noon with the lat. arc unchanged , I observe the sun on the meridian; the resulting reading of the decl. arc is 10°15' S., which agrees with the computed declination of the sun.

The magnetic bearing of the true meridian, at 12h 0m noon l.m.t., is 17° 40' W.; the angle thus determined gives the mag. decl. 17° 40' E.

Measurements on the exterior boundaries as well as the subdivisions of this township were made with a 5.00 chs. steel tape, which was frequently compared with a standard 1.00 ch. steel tape.

Slope angles were determined by the use of clinometers. the adjustments of which were made by comparing its readings with those of the transit.

Throughout the survey of this township, the adjustments of the transit, were frequently examined, and tests of the solar apparatus were made at least once a week, by comparing the results of a.m. and p.m. observations with a meridian determined by an observation on Polaris.

October 20, 1922.

Survey of the South Boundary of T. 13 N., R. 30 E.

Chains

From the cor. of Ts. 12 and 13 N., Rs. 29 and 30 E., which is an iron post, described in the field notes for T. 13 N., R. 29 E. under this group.

East, on a true line, bet. secs. 6 and 31.

Over rolling lands, through dense undergrowth.

13.80 Dry wash, course NW.;

35.35 Center of old railroad grade, bears N. 51° E. and S. 51° W.

38.82 Point for ¼ sec. cor. of secs. 6 and 31, according to Instructions. At which point,