

RETRACEMENT OF ~~THE SOUTH BOUNDARY OF T. 31 N., R. 31 E.~~

~~of~~ the 6th. Standard Parallel through R. 31 E.

Chains

August 3, 1912: At 7h.00.m. a.m., l.m.t., I lay off the azimuth of Polaris at the time of observation, $1^{\circ}09'$ to the west, and mark the meridian thus determined by a tack in the stake driven Aug. 2, on which the meridian falls 0.5 ins. west of the mark determined by the solar.

At 8h.00m. a.m., l. m. t., I set off $40^{\circ}32\frac{1}{2}'N.$ on the lat. arc; $17^{\circ}31'N.$ on the decl. arc; and mark a point in the meridian thus determined by a tack in the stake already driven 5 chs. N. of my station. This mark falls 0.6 ins. E. of the meridian established by Polaris observation .

The solar apparatus, by p.m. and a.m. observations defines positions for meridians about 26" east and 32" east respectively of the meridian established by Polaris observations; therefore I conclude the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 8h.00m. a.m. is $N.18^{\circ}30'W.$; the angle thus determined gives the magnetic declination $18^{\circ}30'E.$

Similar tests were made on the Burt solar compass including the corrections of level and collimation errors August 3, 1912.

August 7, 1912: At 3h. 30m. p.m., l.m.t., I set off $40^{\circ}30'N.$ on the lat. arc; $16^{\circ}21'N.$ on the decl. arc; and determine a meridian with the solar at the stand-
ard tp. cor. of T. 31 N., Rs. 31 and 32 E., heretofore
lat. $40^{\circ}30'N.$, long. $118^{\circ}26'W.$
described; thence, I run

West on retracement line on the S. bdy. of sec. 36.
Over heavily rolling foot hills.

- 4.50 Draw, course N.W.; ascend.
- 10.00 Top of steep ascent.
- 12.00 Top of hill 100 ft. high, and point whence, prospect hole bears S. 25 lks. An outcrop of quartz, containing many perfect crystals of quartz bears N. 15 lks.
- 19.50 Dry wash, 15 lks. wide, course N.W.