

HOMESTEAD ENTRY SURVEY NO. 192
 UMPQUA NATIONAL FOREST
 STATE OF OREGON

CHAINS

Entryman: Lemuel N. Emerson

H.E. No. 010339, dated September 30, 1915

Land District: Roseburg, Oregon

Survey commenced September 5, 1916, and executed with a Buff and Buff light mountain transit No. 9701 with solar attachment; the horizontal limb having two double verniers placed opposite to each other reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined, tested on the true meridian at Portland, Oregon, found correct and was approved by the Assistant Supervisor of Surveys for Oregon and Washington, April 29, 1916.

All measurements, unless otherwise specified, are made with a 1/8 inch steel tape, 5 chains in length, compared with a Chesterman standard steel tape. Clinometers are used to determine slope angles, and measurements are reduced to true horizontal distances.

I examine the adjustments of the transit and correct all errors; then, to test the solar apparatus by comparing its indications resulting from solar observations made during a.m. and p.m. hours, with a meridian determined by observations on Polaris, I proceed as follows:

September 5, 1916: At a point near the cabin on this claim, in latitude $43^{\circ}05'N.$, longitude $122^{\circ}37'W.$, (obtained from blue print accompanying Special Instructions, and subsequently verified) I set off $43^{\circ}05'N.$ on the latitude arc, $6^{\circ}41'N.$ on the decl. arc, and at 4h p.m., l.m.t. determine a meridian with the solar and mark a point thereof on a peg driven in the ground, .5 chs. north of my station.

At 8h35m p.m., l.m.t., I observe Polaris at eastern elongation and mark a point in the line thus determined on a peg driven in the ground, 5 chs. north of my station.

September 5, 1916

September 6, 1916: At 7h58m a.m., l.m.t., I lay off the azimuth of Pol. 94 minutes to the west, and mark the mer. thus determined, by a tack in the peg previously set, on which the mer. falls 0.25 ins. west of the mark determined by the solar.

At 8h a.m., l.m.t., I set off $43^{\circ}05'N.$ on the lat. arc; $6^{\circ}26'N.$ on the decl. arc, and mark a point in the mer. determined with the solar by a tack in the peg already set in the ground, 5 chs. north of station; this mark falls 0.3 ins. east of the mer. established by the Pol. obsn.

The solar apparatus by a.m. and p.m. obsns. defines positions for the mer. within 1 minute of arc of the mer. established by the Pol. obsn.; therefore I conclude that the adjustments of the instrument are satisfactory.

September 6, 1916: At cor. No. 4, hereinafter described, I set off $6^{\circ}22'N.$ on the decl. arc; and at 11h58m l.m.t. obs. the sun on the mer.; the resulting lat. is $43^{\circ}05'N.$, long. $122^{\circ}37'W.$

The mag. bearing of the true mer. at cor. No. 4 at 12h m., is $N.20^{\circ}15'W.$; the angle thus determined gives the mag. decl. $20^{\circ}15'E.$ The mean mag. decl. is $20^{\circ}18'E.$