

HOMESTEAD ENTRY SURVEY NO. 190  
 SIUSLAW NATIONAL FOREST  
 STATE OF OREGON

CHAINS

Entryman - Bert Martin

H.E. No. 02958, dated December 29, 1908

Land District - Roseburg, Oregon

Survey commenced September 21, 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 21, 1916: At my camp near N. bdy. of sec. 9, T. 20 S., R. 11 W., W.M., latitude  $43^{\circ}51'N.$ , longitude  $124^{\circ}00'W.$  (calculated from blue print accompanying Special Instructions.)

I set off  $43^{\circ}51'N.$  on the lat. arc;  $0^{\circ}34'N.$  on the decl. arc, and at 4h00m p.m., l.m.t., determine a mer. with the solar and mark a point thereof on a peg driven in the ground 5 chs. N. of my station.

At 7h33m p.m., l.m.t., I observe Polaris at eastern elongation and mark a point on the line thus determined on a peg driven in the ground 5 chs. N. of my station.

September 21, 1916

September 22, 1916: At 7:55 a.m., l.m.t., I lay off the azimuth of Pol.  $1^{\circ}35'$  to the W. and mark the mer. thus determined by a notch in the peg already set, 5 chs. N. of my station, on which the mer. falls 0.4 ins. W. of the mark determined by the solar.

At 8h00m a.m., l.m.t., I set off  $43^{\circ}51'N.$  on the lat. arc;  $0^{\circ}19'N.$  on the decl. arc, and mark a point on the mer. determined with the solar by a notch in the peg already set in the ground, 5 chs. N. of my station. The mark falls 0.25 ins. E. 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 m. of arc of the mer. established by the Pol. obsn.; therefore I conclude that the adjustments of the instrument are satisfactory.

September 22, 1916: At cor. No. 1 of this survey, hereinafter described, I set off  $0^{\circ}14'N.$  on the decl. arc; and at 11h53m l.m.t., obs. the sun on the mer.; the resulting lat. is  $43^{\circ}51'N.$ , long.  $123^{\circ}59'W.$

The mag. bearing of the true mer. at noon at cor. No. 1 is  $N.21^{\circ}25'W.$ ; the angle thus determined gives the mag. decl.  $21^{\circ}25'E.$  The mean mag. decl. is  $21^{\circ}28'E.$