TOWNSHIP 45 NORTH, RANGE 59 EAST

Chains

Resurvey of the N. bdy., T. 44 N., R. 59 E., commenced August 17, 1935, by Robert C. Yundt, Surveyor, and executed with Buff & Buff solar transit No. 9797, equipped with improved Smith solar attachment. The instrument has a full vertical circle provided with double verniers reading to single minutes of arc; the horizontal circle is provided with two double verniers, graduated to single minutes of arc. As the solar attachment was not used on this survey, no tests are given. The survey was made in conjunction with that of T. 45 N., R. 58 E., and reference is made to the field notes of that township for a more complete description of the instrument and a determination of the direction of the lines of the survey.

The subdivisional survey of T. 45 N., R. 59 E., commenced July 10, 1940, by James W. Hardison, Surveyor, and executed with Buff and Buff solar transit No. 9983 and Young and Son solar transit No. 8518, each transit equipped with Smith solar attachments and each provided with full vertical circles with double verniers reading to single minutes of arc; the horizontal circle of each is provided with two double verniers reading to single minutes of arc.

The instruments were in good condition and were placed in satisfactory adjustment and were tested and found free from appreciable error prior to the beginning of the survey.

As the various points for the initiation of the lines of the subdivisional survey were inaccessible, the directions of the lines were initially determined by the solar transit method extended by back and fore sight methods and frequently verified by Polaris observations throughout the progress of the survey.

July 8, 1939, in camp in Sec. 12, T. 45 N., R. 59 E., in latitude 41°48' N., and longitude 115°16' W., at 0h 44.5m a.m., l.m.t., or 0h 25.6m a.m., by my watch, which reads correct 115th meridian time as determined by radio signals, I observe Polaris at eastern elongation, making two sights each with the telescope in direct and reversed position and place a tack at the mean point on a peg driven firmly in the ground 10 chs. north. After sunrise, I lay off the azimuth of Polaris, 1° 22.8' 24.08 lks. to the west of the mean point in the line determined by the observation. I verify the angle by a reverse reading of the instrument.

Every 30 minutes from 6 to 10:30 a.m. and from 1:30 to 6 p.m., I make proper settings on the arcs of the solar attachment and ascertain that the resulting orientation of the instrument, when compared with the meridian established by Polaris observation, has a maximum error of less than 1' 30".

Measurements were made with Lallie steel tapes, 5 chains in length, graduated every link for the first 100 links, and the balance at intervals of 10 lks. The tapes were tested by comparison with a Lufkin standard and found correct. Measurements were made on the slope, and the vertical angle of each interval was ascertained by a clinometer in good adjustment; the horizontal equivalents are entered in the field note record.

DEPENDENT RESURVEY NORTH BOUNDARY OF T. 44 N., R. 59 E.

Reestablishment of survey executed by Maxson and Gignoux in 1897.

From the cor. of Tps. 44 and 45 N., Rs. 59 and 60 E., a flat topped basalt stone, 18x20 ins. surface, projecting 3 ins. above ground, mkd. and witnessed as described in the official record.

N. 89° 53' W., along the N. bdy. of sec. 1, T. 44 N., R. 59 E., (E. ½ mile).

Asc. 130 ft. over NE. slope.

18.50 Draw, drains NE., asc. 560 ft. over E. slope.

38.20 Spur, projects SE., desc. 30 ft. along broken S. slope.

39.52 The ¼ sec. cor. of secs. 1 and 36, a stone in place, 4x5x5 ft. above ground, mkd. ¼ near the center of the W. face. As this corner now

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