

## Completion Survey of the East Half of Sec. 25, T. 27 N., R. 57 E.

## Chains

The east boundary of section 25 and the east 20.00 chains of the line between sections 24 and 25 were surveyed by Deputy Surveyors Hatch and Eaton in 1869, under contract No. 32. These surveys are shown on the township plat for T. 27 N., R. 57 E., approved March 29, 1870.

The following field notes are those of the dependent resurvey of the east boundary of section 25 and the east 20.00 chains of the line between sections 24 and 25; and the survey of the remainder of the east half mile between sections 24 and 25, the east half mile between sections 25 and 36, and the subdivisional north-south center line of section 25.

The survey was executed with a W. and L. E. Gurley solar transit, serial number 371609, which conforms to the standard instrumental specification of the Bureau of Land Management. The instrument was maintained in precise adjustment throughout the progress of the survey.

The measurements were made with a narrow steel tape, 8 chains in length, graduated to tenths of links for the first link, to links for the next 99 links, and thereafter at intervals of 10 links. The tape was tested by comparison with a one-chain standard steel tape and found correct. The measurements were made on the slope and the vertical angle of each interval was ascertained by two clinometers in good adjustment. The slope distances were properly reduced to horizontal equivalents which are entered in the field note record.

The geographic position of the cor. of secs. 25, 30, 31 and 36 is in latitude  $40^{\circ} 11' 08''$  N. and longitude  $115^{\circ} 29' 21''$  W., as determined by data furnished with the special instructions.

The directions of the lines of survey were determined generally by sustained angulation carried forward from the following altitude observations on the sun for azimuth taken at the cor. of sections 19, 24, 25 and 30: latitude  $40^{\circ} 12' N.$ , longitude  $115^{\circ} 29' 21'' W.$  Monday, June 15, 1959, 4<sup>h</sup> 52<sup>m</sup> pm. 1 m. t., I made a series of 6 altitude observations upon the sun for azimuth, 3 each with the telescope in direct and reversed positions and observe angle from a flag on my random magnetic line 66.83 chains south, to the left of the sun.

Time of observation (105th meridian standard time)	4 <sup>h</sup> 52 <sup>m</sup>
Mean observed vertical angle	35° 44'
Horizontal angle to sun	91° 09' 30"
Declination of sun	23° 18' 46"
True bearing of random line	S. 0° 36' W.

The magnetic declination was read at a number of stations throughout the section and the average of the several readings was found to be  $16^{\circ} 45' E.$

## Dependent Resurvey of the East Boundary of Section 25, T. 27 N., R. 57 E.

Reestablishment of the survey executed by Hatch and Eaton, Deputy Surveyors in 1869.

Beginning at the cor. of secs. 25, 30, 31 and 36, which is monumented with a concrete post, 3 ins. diam., 6 ins. above the ground, with brass cap mkd. U. S. DEPT. OF AGRICULTURE in the upper semicircle, and BIOLOGICAL SURVEY in the lower semicircle (outer edge); with the further markings on the brass cap

5  
T27N  
R57E R58E  
S25|S30  
S36|S31  
1936