

TOWNSHIP 19 SOUTH, RANGE 64 EAST

Chains

Survey commenced January 29, 1938, and executed with Young and Sons light mountain transit No. 8518 and Buff and Buff light mountain transit No. 9983, used by James W. Hardison, Public Land Surveyor; Young and Sons light mountain transit No. 8394, used by Wilson McConkie, Public Land Surveyor; and Buff and Buff light mountain transit No. 9210, used by J. Glenn Dyer, Public Land Surveyor. Each instrument is equipped with a Smith solar attachment and full vertical circle; the horizontal limb of each transit is provided with two double verniers, placed opposite to each other and reading to single minutes of arc, which is also the least count of the latitude and declination arcs and vertical circles. These instruments were approved for use on this survey by the district cadastral engineer, conditional upon satisfactory field tests as stated in assignment instructions dated January 4, 1938.

The instruments were in good condition and adjustment at the time of this survey. The country over which the lines were extended being all open desert and nearly barren hills, the solar attachments were not used, and all azimuths in this record are referred to true meridians determined by observations made upon Polaris during the progress of the survey, by the method of deflection angles and calculated courses, and the lines were carried forward by double fore and back sights.

The measurements were made with Lallie steel ribbon tapes, 5 and 8 chains in length; each tape is graduated every link for the first 100 links, and thereafter at intervals of 10 links. The tapes were tested by comparison with a Lufkin standard steel tape and found to be correct. The measurements were made on the slope; the vertical angle of each interval determined by clinometers, kept in good adjustment, and the slope measurements properly reduced to true horizontal distances, which are recorded in these field notes.

The data furnished with the special instructions gives the geographic position of the southeast corner of T. 19 S., R. 64 E., approximately as follows: latitude 36° 14.7' N., longitude 114° 46.5' W.

January 18, 1938, at the corner of Tps. 19 and 20 S., Rs. 64 and 65 E., hereinafter described, approximate latitude 36° 14.7' N., and approximate longitude 114° 46.5' W., at 11h 25m 50s p.m. by my watch which reads correct 120th meridian standard time, as determined by comparison with radio time signals, I make an observation upon Polaris at western elongation; making two readings each with the telescope in direct and reversed positions, reading the horizontal angle from a flag about 12 chs. north, west to Polaris.

Mean horizontal angle from flag west to Polaris..... 1° 16.5'
 Azimuth of Polaris..... 1° 16.2'
 Reduced bearing to flag..... N. 0° 00.3' E.

January 19: After sunrise I lay off the azimuth of the flag 0.3' to the west and mark the true meridian thus determined by a tack in a peg driven firmly in the ground about 12 chs. north. I make 7 repetitions of the angle, the multiple angle reads 0° 2.0'.

The latitude was checked by meridian observations of the sun, on the south boundary of T. 20 S., R. 64 E., Jan. 15; and on the east boundary of T. 20 S., R. 65 E.; both townships being grouped for survey with T. 19 S., R. 64 E. The latitude having been satisfactorily verified no latitude observation is recorded in the field notes of this township.

INDEPENDENT RESURVEY OF EAST BOUNDARY OF T. 19 S., R. 64 E.

Independent Resurvey superseding the survey executed by W. H. Myrick, U. S. Deputy Surveyor, in 1882.

Beginning at the cor. of Tps. 19 and 20 S., Rs. 64 and 65 E., which is an iron post, 3 ins. diam., firmly set, with brass cap properly marked and witnessed as described in the official record.

Thence