TOWNSHIP 18 SOUTH, RANGE 64 EAST

Survey commenced March 7, 1938, and executed with Young and Sons light mountain transit No. 8518 and Buff and Buff light mountain transit 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, and supplemental assignment instructions dated January 25, 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. 18 S., R. 64 E., approximately as follows: latitude 36° 20' N., longitude 114° 46.5' W.

March 7, 1938; at the cor. of Tps. 18 and 19 S., Rs. 64 and 65 E., hereinafter described, approximate latitude 36° 20' N., and approximate longitude 114° 46.5' W., at 8:17.5 p.m. by my watch, which reads correct 120th meridian time, as determined by comparison with radio time signals; I make an observation upon Polaris at western elongation; making 2 settings each with the telescope in direct and reversed positions, and marking the mean line thus determined by a tack in a peg driven firmly in the ground about 15 chs. N. I lay off the azimuth of Polaris, 1° 16.4', to the E. and mark the meridian by a tack in a peg driven firmly in the ground. I make 5 repetitions of the angle, the multiple angle reads 6° 22'.

To verify the latitude, same day, I make a meridian observation upon the sun, first setting on the lower limb, then after reversal of the instrument, setting on the upper limb, while the sun was still upon the meridian.

Mean observed altitude..... 48° 23'
Reduced Latitude..... 36° 20' 10"

INDEPENDENT RESURVEY OF EAST BOUNDARY OF T. 18 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. 18 and 19 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

North, bet. secs. 31 and 36, by projection of the meridian established by Polaris observation.

Over rolling desert land, through scattering undergrowth; desc. a