

## SURVEYS - GROUP 181 NEVADA: TEST OF INSTRUMENTS

This survey was executed with Buff and Buff transit No. 18001, Keuffel and Esser transit No. 23825 and W. and L. E. Gurley transit No. 262669, property of the General Land Office. These instruments are equipped with Smith solar attachments and with full vertical circles. The horizontal circles are equipped with two double verniers, reading to single minutes of arc, which is also the least count of the verniers of the vertical circles and the latitude and declination arcs of the solar attachments.

These instruments, having been tested and found free from appreciable error, were approved by the district cadastral engineer in supplemental assignment instructions dated September 10, 1936. These instruments were maintained in good adjustment during the progress of the field work.

In these surveys the solar attachments were not used. The alignment of all lines was taken from meridians previously determined by observations upon Polaris, taken in T. 12 N., R. 31 E., and carried forward by transit lines, taking the mean of direct and reversed sights at each transit station. The lines were frequently checked by reference to the meridians established in T. 12 N., R. 31 E. and in T. 12 N. R. 32 E.

The measurements were made with Lallie steel ribbon tapes, 5 and 8 chains in length. These tapes were graduated every link for the first chain and thereafter at intervals of 10 links. These tapes were compared with a Lufkin standard steel tape one chain in length and found to be correct. Measurements were made on the slope with vertical angles determined with improved type clinometers and the slope measurements were properly reduced to corresponding horizontal distances which appear in these notes.

SURVEY OF THE SOUTH BOUNDARY OF T. 12 N., R. 31 $\frac{1}{2}$  E.

Commence the survey of the S. bdy. of T. 12 N., R. 31 $\frac{1}{2}$  E. at the cor. of Tps. 12 N., Rs. 31 and 31 $\frac{1}{2}$  E., which is an iron post, 3 ins. diam., firmly set, mkd. and witnessed as described in the official record, field notes of the survey of T. 12 N., R. 31 E. this group.

East on a tangent, along the S. bdy. of T. 12 N., R. 31 $\frac{1}{2}$  E., setting temp.  $\frac{1}{4}$  sec. and sec. cors. at calculated distances. At 142.43 chs., the parallel intersects the independently resurveyed W. bdy. of Tp. 11 N., R. 32 E.

At point of intersection,

Set an iron post, 3 ft. long, 3 ins. diam., 10 ins. in the ground to solid rock, and in a mound of stone 5 ft. base to top of post, for cor. of T. 11 N., R. 31 E. and T. 12 N., R. 31 $\frac{1}{2}$  E., with brass cap mkd.

T12N	
R31 $\frac{1}{2}$ E	
S36	T11N
S1	S6
R31E	R32E
T11N	
	1936