

## Township 28 North, Range 55 East.

## Chains

The completion survey of T. 28 N., R. 55 E., was executed with Buff and Buff light mountain solar transit No. 9210, the property of the General Land Office. For description, date of approval, and field test of this instrument, together with the test of all minor equipment, see the official field notes of the completion survey of T. 27 N., R. 55 E.

The geographic position of the SW. cor. of T. 28 N., R. 55 E., is latitude  $40^{\circ} 15' N.$ , longitude  $115^{\circ} 50' W.$

In order to test for correctness, at such times as necessary, the indications of the solar apparatus when compared with the true meridian, I proceed as follows:

July 21, 1939, at camp, in the NW $\frac{1}{4}$  sec. 2, T. 28 N., R. 55 E., latitude  $40^{\circ} 19' N.$ , longitude  $115^{\circ} 44\frac{1}{2}' W.$ , at 8h 25m a.m. app. t., I make a series of three altitude observations of the sun for azimuth each with the telescope in direct and reversed positions, observing opposite limbs of the sun and reading the horizontal deflection angle from a point about 3 miles to the N., NE. to the sun.

Observation	Telescope	Sun	Watch time	Vertical Angle	Horizontal Angle
1st	Direct		8h12m	$40^{\circ} 09' 00''$	$56^{\circ} 14' 00''$ to NE.
"	Reversed		8h18m	$41^{\circ} 47' 00''$	do
	Mean		8h15m	$40^{\circ} 58' 00''$	$56^{\circ} 26' 00''$ do
2nd	Direct		8h13m	$40^{\circ} 23' 00''$	$55^{\circ} 43' 00''$ do
"	Reversed		8h17m	$41^{\circ} 34' 00''$	$57^{\circ} 10' 00''$ do
	Mean		8h15m	$40^{\circ} 58' 30''$	$56^{\circ} 26' 30''$ do
3d	Direct		8h14m	$41^{\circ} 03' 00''$	$56^{\circ} 35' 30''$ do
	Reversed		8h16m	$40^{\circ} 48' 00''$	$56^{\circ} 11' 30''$ do
	Mean		8h15m	$40^{\circ} 55' 30''$	$56^{\circ} 23' 30''$ do

By 1st obsn. point bears N.  $40^{\circ} 49' 25'' E.$

By 2nd obsn. point bears N.  $40^{\circ} 49' 24'' E.$

By 3d obsn. point bears N.  $40^{\circ} 49' 30'' E.$

Mean true bearing point N.  $40^{\circ} 49' 26'' E.$

From the point above noted about 3 miles to the N., I deflect an angle  $40^{\circ} 49\frac{1}{2}'$  to the west, and establish a point in the true meridian by a tack driven in a lath, firmly set in the ground, about 20 chs. N.

July 25, 1939, every 30 min. 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 of Buff and Buff solar transit No. 9210, and ascertain that the resulting orientation of the instrument when compared with the true meridian, has a maximum error of less than  $1' 30''$ .

## DEPENDENT RESURVEY OF THE S. BDY. OF T. 29 N., R. 55 E.

After diligent search, no trace could be found of the original cor. of Tps. 28 and 29 N., Rs. 55 and 56 E., therefore at a point determined by double proportion,

Set an iron post, 3 ft. long, 3 ins. diam., 30 ins. in the ground, for the cor. of Tps. 28 and 29 N., Rs. 55 and 56 E., with brass cap mkd.

T 29 N  
R55E    R56E  
S36    S31  
S 1    S 6  
T 28 N  
1939

of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, S. of cor.

raise a mound