

This survey was commenced July 14-1894, and made with an engineers transit. Diam. of hor. circle 7 in. 6 in. needle.
 Preliminary to making this survey, I go to the $\frac{1}{4}$ Sec. cor. on the line between Secs 17 and 20. T₆. N. N. P. S. W. Bull Lake Meridian which is a limestone 12 X 7 in. firmly set, and marked $\frac{1}{4}$ on N. side which is to be destroyed by the "Blue Creek Reservoir". Having set the instrument over the centre of this $\frac{1}{4}$ cor. carefully leveled, I direct the telescope to Polaris, at 11^h 51^m P.M. July 14th local mean time of eastern elongation, and for future reference mark the true azimuth of the star, so determined by driving a stake on the line about 150. feet northward of the $\frac{1}{4}$ cor.

July 14th 1894.

At 9. a.m. July 15th I set the transit over the centre of this $\frac{1}{4}$ Sec. cor. and find the magnetic bearing of the azimuth line established last night to be N 15° 54' W.

North end of needle 15° 54' east.

The azimuth of Polaris 1° 41' east.

The sun's true variation 17° 35' east.

and after allowing 5' diurnal change (as per table on page 55 of printed instructions), find the mean declination to be 17° 30' E.

I now lay off by the horizontal limb the azimuth of the star 1° 41' plus 90° 13' = 91° 54' to the west, for a random line, bet. Secs 17 and 20. and from this $\frac{1}{4}$ Sec. cor. I run

Iron S 89° 47' W.

on a random line between Secs 17 and 20.

To 17° 35' E.

Chs.

7.82

39.90

set a temporary witness corner (at safe distance from the) find the corner to Secs 17-18-19 and 20, on line which is a line stone 12 X 10 in. firmly set, and marked with 5 notches on the E. and 3 notches on the S. edges.

Thence I run

N 89° 47' E. on a true line between Secs 17 and 20.

To 17° 35' E.

32.08

Set a post 3 ft long, 3 in square with marked stone 12 ins. in the ground for witness to $\frac{1}{4}$ Sec. cor. marked $\frac{1}{4}$ S. W. C. on N. side face dug pits 18 X 18 X 12 ins. E and W. of post, 5 $\frac{1}{2}$ ft. deep, and raised a mound of earth 1 $\frac{1}{2}$ ft. high, 3 $\frac{1}{2}$ ft. base around post. (and at a safe distance from the water line of the Blue) $\frac{1}{2}$ links W. of the western boundary line of the Blue Creek Reservoir, the $\frac{1}{4}$ Sec. cor. on the line bet. Secs 17 and 20.

39.90

From the $\frac{1}{4}$ Sec. cor. on the line between Secs 17 and 20,

Iron

N. 89° 47' E. on a random line between Secs 17 and 20.

set a temporary witness corner,

find the corner to Secs 16-17-20 and 21, on line, which is a granite 10 X 8 ins firmly set and marked with 4 notches on the E. and 3 notches on the S. edges;

Thence I run

S 89° 47' W. on a true line bet. Secs 17 and 20

To 17° 35' E.

32.85

Set a post 3 ft. long 3 ins. square with marked stone 12 ins. in the ground for witness to $\frac{1}{4}$ Sec. cor. marked $\frac{1}{4}$ S. W. C. on N. face dug pits 18 X 18 X 12 ins. E and W. of post 5 $\frac{1}{2}$ ft. dist, and raised a mound of earth 1 $\frac{1}{2}$ ft. high, 3 $\frac{1}{2}$ ft. base around post. 9 links E. of the easterly boundary line of the Blue Creek Reservoir the $\frac{1}{4}$ Sec. cor. on the line bet. Sec. 17 and 20.

39.90