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# FIELD NOTES

of the

RETRACEMENT AND DEPENDENT RESURVEY OF THE FIRST STANDARD

PARALLEL NORTH, ALONG THE SOUTH BOUNDARY OF

TOWNSHIP 5 NORTH, RANGE 40 EAST.

INDEPENDENT RESURVEY OF THE WEST BOUNDARY.

SURVEY OF THE NORTH BOUNDARY AND SUBDIVISIONAL LINES OF

TOWNSHIP 5 NORTH, RANGE 40 EAST.

Of the Willamette Meridian,

In the State of Oregon

### EXECUTED BY

Otis O. Gould,

U. S. Transitman

In the capacity of U. S. Surveyor..., under Special Instructions dated April 11,  
1929, issued by the District Cadastral Engineer to govern surveys included in Group  
No. 135, which were approved by the Commissioner of the General Land  
Office, May 13, 1929, and Assignment Instructions dated June 2, 1931

Survey commenced Aug. 12, 1931

Survey completed Oct. 6, 1931



FIELD NOTES

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Township 5 North, Range 40 East.  
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Retracements are indicated in red.

Surveys are indicated in black.



Township 5 North, Range 40 East.

Date diagram for year 1931.

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Retracements dated in red.

Dependent Resurveys dated in blue.

Independent Resurveys dated in green.

Original Surveys dated in black.



## Township 5 North, Range 40 East.

The retracement and dependent resurvey of the 1st standard parallel north through range 40 east, the survey of the north and west boundaries and subdivisional lines of township 5 north, range 40 east, was executed with a Burt solar compass made by W. and L. E. Gurley, serial No. 20, U. S. G. S., constructed in accordance with the standard specifications of the general land office. The horizontal circle has a diameter of  $5\frac{3}{4}$  ins., with two double opposite verniers reading to single minutes; the sight vanes have a length of 8 inches and a spread of 14 inches. The instrument is equipped with a Burt solar attachment: radius of latitude arc 5.4 ins., and the declination arc  $4\frac{3}{4}$  ins., each with verniers reading to single minutes.

The observations in camp; on Polaris for the establishment of the meridian; and on the altitude observation on the sun on the meridian to verify the latitude and the reading of my watch, were executed with a light mountain solar transit made by Buff and Buff, Serial No. 9987, constructed in accordance with the standard specifications of the General Land Office. The horizontal circle has a diameter of  $4\frac{1}{2}$  inches, two double opposite verniers reading to single minutes; the telescope has fixed stadia wires, ratio 1:32, with focal constant of 1.2 lks. The instrument is equipped with the improved Smith solar attachment: radius of latitude arc  $2\frac{1}{2}$  ins., and of decl. arc  $3\frac{1}{2}$  ins., each with verniers reading to single minutes. The instruments were in good condition, having been placed in satisfactory adjustment prior to beginning the survey, and tested and found free from appreciable error, was approved by the district cadastral engineer on June 2, 1931. I examined all the instrumental adjustments before making the field tests hereinafter recorded.



## Township 5 North, Range 40 East.

The direction of all lines were determined by solar compass method. The measurements were made with a Lallie steel tape, 5 chs. in length, graduated every link for the first 100 lks., and the balance at intervals of 10 lks. The tape was tested by comparison with a Lufkin standard 1 ch. steel tape and found correct. The measurements were made on the slope, and the vertical angle of each interval was ascertained by a clinometer in good adjustment; the horizontal equivalents are entered in the field note record.

For meridian observation and test of instruments on meridian see final test of instrument in T. 5 N., R. 41 E.

## Chains

Retracement of the 1st Stan. Par. N., through R. 41 E.

From the original stan. cor. of Tps. 5 N., Rs. 40 and 41 E., which was changed to an angle point, as described in the notes of T. 5 N., R. 41 E., of this group.

West, retracing the S. bdy. of sec. 36.

39.69 Fall 9 lks. N. of the Stan.  $\frac{1}{4}$  sec. cor. of sec. 36.

65.89 Find no trace of the closing cor. of secs. 1 and 2, T. 4 N., R. 40 E. Set temp.

79.69 Find no trace of the Stan. cor. of secs. 35 and 36. Set temp.

West, retracing the S. bdy. of sec. 35.

40.00 Find no trace of the Stan.  $\frac{1}{4}$  sec. cor. of sec. 35. Set temp.

64.03 Fall 3 lks. N. of the closing cor. of secs. 2 and 3, T. 4 N., R. 40 E.

81.04 Fall 2 lks. N. of the Stan. cor. of secs. 34 and 35.

The E. half mile of sec. 36 is S.89°52'W., 39.67 chs.

and the W. half mile is N.89°58'W., 40.35 chs.

The south bdy. of sec. 35 is N.89°58'W., 80.69 chs.

From the sec. cor.

West, retracing the S. bdy. of sec. 34.

40.55 Fall 2 lks. N. of the Stan.  $\frac{1}{4}$  sec. cor. of sec. 34.



## Independent Resurvey of the West Bdy. of T. 5 N., R. 40 E.

## Chains

A fir, 18 ins. in diam., bears N. 31°W., 109 lks. dist.,  
marked T 5 N R 39 E S 1 B T

The old original cor. of secs. 1, 6, 7 and 12, which is  
a point determined from the original bearing tree,  
bears S. 56°W., 694 lks. dist.

I destroy all trace of this old cor. by obliterating the  
scribe marks on the old bearing tree.

Land, mountainous.

Soil, rocky loam, 2nd rate.

Timber, fir, pine, spruce and tamarack.

Undergrowth, huckleberry, salal, vinemaple, willow, fern,  
thorn, mountain laurel and alder.

North, bet. secs. 1 and 6.

Desc. 65 ft. over NW. slope, through second growth timber  
and brush.

- 2.50 Ravine, course W., asc. 50 ft. over SW. slope.  
6.35 Small spur, slopes W., desc. 70 ft. over NW. slope.  
12.80 Ravine, course W., asc. 385 ft. over SW. slope.  
33.30 Top of ascent, bears E. and W., thence along rolling W.  
slope.  
37.00 Descend 80 ft. over NW. slope.  
40.00 Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in  
the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked

$$\begin{array}{c} \frac{1}{4} \\ | \\ S \ 1 \ | \ S \ 6 \\ | \\ 1931 \end{array}$$

from which,

A fir, 12 ins. in diam., bears N. 72°E., 14 lks. dist.,  
marked  $\frac{1}{4}$  S 6 B T

A fir, 10 ins. in diam., bears S. 45°W., 19 lks. dist.,  
marked  $\frac{1}{4}$  S 1 B T



## Independent Resurvey of the West Bdy. of T. 5 N., R. 40 E.

## Chains

Find no trace of the original  $\frac{1}{4}$  sec. cor. of secs. 1 and 6.  
Desc. 250 ft. over NW. slope.

56.50 Ravine, course W., asc. 105 ft. over SW. slope.

62.00 Spur, slopes W., desc. 350 ft. over NW. slope.

77.00 Dry creek bed, 3 lks. wide, course W., asc. 60 ft. over  
SW. slope.

80.00 Dry creek bed, 2 lks. wide, course SW.

81.78 Point established at a latitudinal theoretical position  
due west from the cor. of Tps. 5 and 6 N., Rs. 40 and  
41 E.

Set an iron post, 3 ft. long, 3 ins. in diam., 15 ins. in  
the ground to solid rock, supported in a mound of stone,  
4 ft. base, 1 ft. high, for cor. of Tps. 5 and 6 N., Rs.  
39 and 40 E., with brass cap marked

T6N	
R39E	R40E
S36	S31
S 1	S 6
1931	

from which,

A fir, 30 ins. in diam., bears N.41°E., 222 lks. dist.,  
marked T 6 N R 40 E S 31 B T

A fir, 14 ins. in diam., bears S.73°E., 187 lks. dist.,  
marked T 5 N R 40 E S 6 B T

A fir, 20 ins. in diam., bears S.26 $\frac{1}{2}$ °W., 163 lks. dist.,  
marked T 5 N R 39 E S 1 B T

A fir, 24 ins. in diam., bears N.49°W., 101 lks. dist.,  
marked T 6 N R 39 E S 36 B T

The original cor. of Tps. 5 and 6 N., Rs. 39 and 40 E.,  
which is a basalt stone, properly marked and witnessed  
by two original bearing trees, bears N.58°28'W., 7.17  
chs. dist.

I destroy this old cor. and obliterate the scribe marks  
on the old bearing trees.

Land, mountainous.

Soil, rocky loam, 3rd rate.

Timber, fir, pine, spruce and tamarack.

Undergrowth, huckleberry, salal, willow and thorn.



## Township 5 North, Range 40 East.

## Final test of solar attachment.

Oct. 6; Near the center of sec. 17, T. 5 N., R. 40 E., at 4h 0m p.m., app. t., I set off  $45^{\circ}55'N.$ , on the lat. arc;  $5^{\circ}00'S.$ , on the decl. arc; and orient the instrument with the solar; the line of sight agrees with the meridian established by Polaris observation.

Oct. 7; at 8h 0m a.m., app. t., I set off  $45^{\circ}55'N.$ , on the lat. arc;  $5^{\circ}15\frac{1}{2}'S.$  on the decl. arc; and repeat the test of the solar; the line of sight agrees with the meridian established by Polaris observation.

General Description.

This township is located in the Umatilla National Forest Reserve, on top of the blue mountain in the north eastern part of Oregon. The general elevation of the township is around 5,000 ft. above sea level, but in the bottom of the South Fork of the Wenaha River Canyon the elevation is about 2,000 ft. lower. Most of the southern and eastern parts of the township lie on top of a high plateau, and are rolling or nearly level, but the northwestern portion, comprising about one third the total area of the township, and secs. 25 and 36, are exceptionally rough and broken. The soil is of a clayish loam composition but of good rate and produces an abundance of grass even on the steeper slopes. The timber is all second growth with the exception of a few patches the fires missed twenty or forty years ago when this forest was burned over. In some places it is impossible to tell exactly where the second growth ends and the old timber was left standing, as a large tree was left standing here and there through out most of the township. The timber consists of fir, pine, spruce, tamarack and yew. The undergrowth consists of huckleberry, vinemaple, alder, mountain laurel, willow, mountain ash, mountain mahogany, Oregon grape, thorn, syringa and wild rose.



## Township 5 North, Range 40 East.

The South Fork of the Wenaha River, extending through secs. 3, 4, 9, 17 and 18, is the largest stream of water, from 20 ft. to 40 ft. wide, during the summer months, and flows in a northeasterly direction. Bear Creek in secs. 25, 34, 35 and 36, is the second largest stream. There are also numerous smaller streams and many springs of fresh water throughout the township.

There is an old log cabin at Elk Flat in sec. 13, and at one time several acres of land were plowed and farmed, but the land has long since reverted back to its original state and the settler evacuated. There are two dirt roads that are kept in good traveling condition during the summer months, by the Forest Service, which are paralleled by Forest Service telephone lines. Eden Road through the southeastern part and another dirt road extending through the southern part of the township connecting Eden Road with the Sky Line Road, about 4 miles west of this township. There are many good pack trails throughout the township.

The land extending along the South Fork of the Wenaha River for a half mile on either side is reserved for a cattle range but the rest is leased for the grazing of sheep. About 6,000 sheep are grazed on this township during the summer months annually.

No indications of mineral were noted.

The average of a considerable number of readings over all parts of the township gives a value of  $21^{\circ}30'$  E., for the mean magnetic declination. There is a range of about  $4^{\circ}$  in local attraction.







CERTIFICATE OF UNITED STATES SURVEYOR.

I, Otis O. Gould <sup>U. S. T ransitman.</sup> ~~U. S. Surveyor~~, hereby certify upon honor that, in pursuance of special instructions received from the District Cadastral Engineer for Oregon bearing date of the 11th day of April, 19 29, I have well, faithfully, and truly in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the retracement and dependent resurvey of the first standard parallel north, along the south boundary of T. 5 N., R.40 E.: independent resurvey of the west boundary, survey of the north boundary and the subdivisional lines of township 5 north, range 40 east. of the Willamette Meridian, in the State of Oregon, which are represented in the foregoing field notes as having been executed by me, and under my direction; and that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the District Cadastral Engineer for Oregon and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Portland, Ore.

April 21, 1932.

Otis O. Gould  
 U. S. Transitman ~~U. S. Surveyor~~

APPROVAL.

OFFICE OF U. S. SUPERVISOR OF SURVEYS,

DENVER, COLORADO JUN 27 1932, 19

The foregoing field notes of the Retracement and Dependent Resurvey of 1st Standard Parallel North, along the South Boundary of T. 5 N., R. 40 E.; Independent Resurvey of the West Boundary; and Survey of the North Boundary and Subdivisional Lines of Township 5 North, Range 40 East of the Willamette Meridianm Oregon,

executed by Otis O. Gould, U. S. Transitman under his special instructions dated April 11, 19 29, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Samuel H. Johnson  
 U. S. Supervisor of Surveys.

~~I certify that the foregoing transcript of the field notes of the above described surveys in \_\_\_\_\_, has been correctly copied from the original notes on file in this office.~~

~~U. S. Supervisor of Surveys.~~