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UNITED STATES
DEPARTMENT OF THE INTERIOR
GENERAL LAND OFFICE

FIELD NOTES

of Dependent Resurvey of

East, South, and North Boundaries

and

Subdivision

of

Township 3 North, Range 27 East.

Of the Willamette Meridian,

In the State of Oregon.

EXECUTED BY

Otis O. Gould, Surveyor.

Under special instructions dated January 26, 1938, which provided
and letter dated May 18, 1940.

for the surveys included under Group No. 217, bearing the approval of the

Commissioner of the General Land Office under date of March 12, 1938.

and assignment instructions dated April 18, 1940.

Survey commenced May 3, 1940.

Survey completed May 22, 1940.

INDEX DIAGRAM.

Township -----, Range -----

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

INDEX DIAGRAM.

Township 3 North, Range 27 East.

14		14		13		12		12		11	
6	46	5	39	4	33	3	26	2	20	1	6
46		45		38		32		26		20	
7	45	8	38	9	31	10	25	11	19	12	5
44		44		37		31		24		19	
18	44	17	37	16	30	15	24	14	18	13	5
43		43		36		30		23		18	
19	42	20	36	21	29	22	23	23	17	24	4
42		41		35		29		22		17	
30	41	29	34	28	28	27	22	26	16	25	3
40		40		34		28		21		16	
31	39	32	33	33	27	34	21	35	15	36	2
10		9		9		8		7		7	

Township 3 North, Range 27 East.

Chains.

These surveys were executed with a 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 $4\frac{1}{2}$ ins., with two double opposite verniers reading to single minutes; the vertical circle has a diameter of 4 ins., with one double vernier reading to single minutes; the telescope has fixed stadia wires, ratio 1:132, with focal constant of 1.2 lks. The instrument is equipped with improved Smith solar attachment; radius of latitude arc $2\frac{1}{2}$ ins., and declination arc $3\frac{1}{2}$ ins., each with verniers reading to single minutes. The instrument was 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 April 18, 1940. I examined all the instrumental adjustments before making the field tests hereinafter recorded.

The directions of all lines were determined by solar transit method, checked by direct observations on the sun. At least one direct observation was taken every day possible, the deflection angles turned with care and azimuth checked by comparison with solar observations and with all lines intersected. 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 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.

The data furnished with the special instructions give the geographic position of the cor. of Tps. 2 and 3 N., Rs. 22 and 23 E., as follows: latitude $45^{\circ}41\frac{1}{2}'N.$, and longitude $120^{\circ}00'W.$

May 2, 1940; at camp located at Hermiston, Oregon, in latitude $45^{\circ}50'N.$, and longitude $119^{\circ}18'W.$, at 5h 5m 9s a.m., l.m.t., or 5h 2m 21s a.m. by my watch, which reads correct 120th meridian time as determined by radio signals I observe Polaris at Eastern elongation, making two sights each with the telescope in direct and reversed positions, and place a tack at the mean point, on a peg driven firmly in the ground 10 chs. N. After sunrise I lay off the azimuth of Polaris $1^{\circ}27'59''$ and make a meridian mark on a second peg, 25.59 lks. (16.89 ft.) to the west of the mean point in the line determined by the observation; I verify the angle by a vernier reading of the instrument.

In order to verify the latitude of this station and the reading of my watch, I make a meridian observation of the sun, first setting on the lower limb and noting the transit of the west limb, then after reversal of the instrument, setting on the upper limb and noting the transit of the east limb, as follows:

Mean observed altitude	-----	59° 41' 30"
Reduced latitude	-----	45° 49' 48"
Mean watch time of observation	-----	11h 54m 05s
Watch slow of l.m.t.	-----	2m 48s
Same, by reference to radio time signals and calculated difference in longitude	-----	2m 48s

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 and ascertain that the resulting orientation of the instrument, when compared with the meridian established by Polaris observation, has a maximum error of less than $1' 30''$.

I repeat the tests of the arcs daily by noon observation, and verify the meridian indications at frequent intervals throughout the survey.

The observed magnetic declination is $21^{\circ} 00'E.$

Dependent Resurvey of East Boundary of T. 3 N., R. 27 E.

Chains.

"Preliminary to the resurvey all lines are retraced and diligent search is made for all original corners. Identified corners are reestablished in their original positions and all lost corners are reestablished by proportionate measurements based on the official record of the original survey. The retracement data are thoroughly verified and in the interest of simplicity only the true line notes are shown herein."

"Reestablishment of the surveys executed by N. H. Gates, Deputy Surveyor, in 1859."

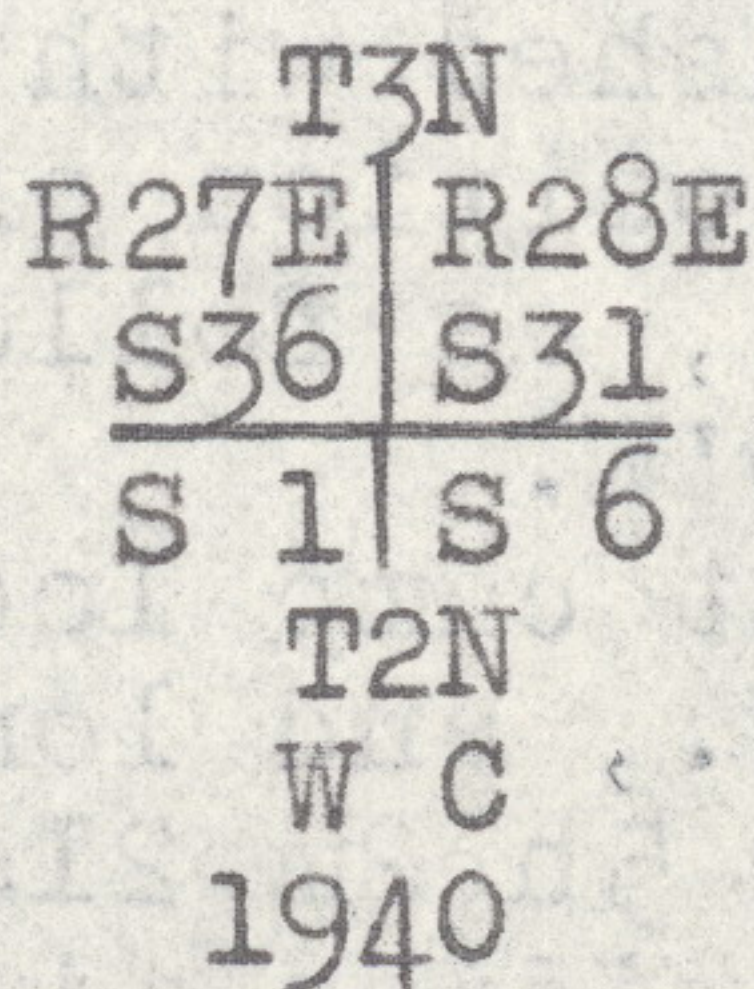
I commence the dependent resurvey of the east boundary at the cor. of Tps. 2 and 3 N., Rs. 27 and 28 E., a point in center of intersection of roads, extending N.20°E. and S.20°W., accepted and recognized as true corner by local settlers for many years.

At point for cor.

Deposit a basalt stone, 16x14x12 ins., marked X, 26 ins. in the ground.

At a point 70 lks. S.45°W., of true cor. point.

Set an iron post, 3 ft. long, 3 ins. diam., 27 ins. in the ground, with broken glass deposited at the base, for witness cor. to the cor. of Tps. 2 and 3 N., Rs. 27 and 28 E., with brass cap marked



The geographic position of true point for cor. of Tps. 2 and 3 N., Rs. 27 and 28 E., is latitude 45°41½'N., and longitude 119°22'W.

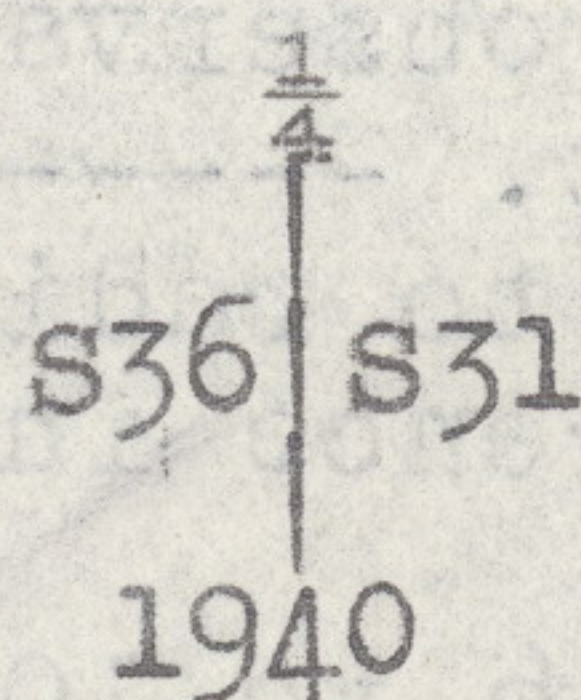
Thence, from true point for cor.

N.0°02'E., bet. secs. 31 and 36.

Over rolling land, along center of road.

40.05 Proportionate measurement.

Set an iron post, 3 ft. long, 1 in. diam., 48 ins. in the ground, 1 ft. below surface of road, with broken glass deposited at the base, for ¼ sec. cor., with brass cap marked



At a point 35 lks. E. of true cor.

Set an iron post, 3 ft. long, 1 in. diam., 27 ins. in the ground, with broken glass deposited at the base, for witness cor. to the ¼ sec. cor., with brass cap marked

Dependent Resurvey of Subdivisions of T. 3 N., R. 27 E.

Chains

Land, rolling.
Soil, sandy; 2nd rate.
No timber; undergrowth, sagebrush and greasewood.

FINAL TEST OF SOLAR ATTACHMENT.

May 22, 1940, at camp located at Hermiston, Oregon, at 8h 00m a.m., app. t., I set off $45^{\circ}50'N.$, on the lat arc; $20^{\circ}27\frac{1}{2}'N.$, on the declination arc; and orient the instrument with the solar; the line of sight agrees with the meridian established by Polaris observation.

At 4h 00m p.m. app. t., I set off $45^{\circ}50'N.$, on the lat. arc; $20^{\circ}31\frac{1}{2}'N.$, on the declination arc; and repeat the test of the solar; the line of sight agrees with the meridian established by Polaris observation.

GENERAL DESCRIPTION.

All of township 3 north, range 27 east is rolling with a difference in elevation of only about 350 ft., with an average elevation of about 750 ft. above sea level. The soil is very sandy and wind blown in a few places, with sand dunes of from 10 ft. to 50 ft. in height. No timber is found in this township with the exception of a few planted shade trees. The entire township is covered with sagebrush and greasewood, with scattering patches of cacti. The best bunch grass in group No. 217, is found on the higher land in the southern part of this township.

The only stream of running water is Butter Creek, flowing through sections 25 and 36, which is mostly used for irrigation purposes. Irrigation canals and ditches are located in sections 1, 2, 3, 10, and 11. Several ponds are located in the northeastern part of this township, formed by the overflow of irrigation canals and ditches. A pond of about 40 acres in area has been formed in this way at the $\frac{1}{4}$ section corner of sections 9 and 10.

Farms under irrigation are located in sections 2, 3, 25, and 36, of this township. The main highway between Hermiston and Lexington is accessible near the southeastern corner of this township. A graveled road extends along the east boundary of sec. 36 and the S. $\frac{1}{2}$ of the east boundary of section 25. A good graveled road extends through sections 1 and 2, ending near the center of section 3. Ungraded roads lead to most parts of the township.

This township is being used for the pasturing of cattle and sheep during the winter months.

No mineral was noted in this township.

The average of a considerable number of readings over all parts of the township gives a value of $20^{\circ}30'E.$, for the mean magnetic declination. There is a range of 6° in local attraction.

4-680
(Revised May 1934)

FIELD ASSISTANTS

NAMES	CAPACITY
Dick Tscheu	Principal Assistant.
William Doescher	Chainman.
George F. Dawson, Jr.	Axeman.
James P. Greiner	Truckdriver.
Charles A. Walker	Axeman.
Virgil Grover	Axeman.
Preston Paige Ebert	Cornerman.
Alexander Thomson	Cornerman.

~~CERTIFICATE OF UNITED STATES SURVEYOR~~

I, Otis O. Gould, Surveyor, HEREBY CERTIFY upon honor that, in pursuance of special instructions bearing date of the 26th day of January, 1938, and letter dated May 18, 1940. received from the district cadastral engineer for Oregon., with assignment instructions dated April 18, 1940, I have ~~surveyed~~ dependently resurveyed the East, South, and North boundaries, and subdivisions of T. 3 N., R. 27 E.

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 said survey has been made in strict conformity with said instructions, the Manual of Instructions for the Survey of the Public Lands of the United States, and in the specific manner described in the foregoing field notes.

Portland, Oregon.

Otis O. Gould

Feb. 8, 1941.

Surveyor.

~~CERTIFICATE OF APPROVAL~~

OFFICE OF U.S. SUPERVISOR OF SURVEYS,

Denver, Colorado, July 31, 1941

The foregoing field notes of the ~~survey of~~ dependent resurvey of the East, South, and North boundaries, and subdivisions of T. 3 N., R. 27 E., of the Willamette Meridian, Oregon.

executed by Otis O. Gould, Surveyor, under special instructions dated January 26, 1938. and assignment instructions dated and letter dated May 18, 1940. April 18, 1940, having been critically examined, and the necessary corrections made prior to their certification by the engineer, the said field notes, and the survey therein described, are hereby approved.

Wanda A. Cannon

U.S. Supervisor of Surveys.

~~CERTIFICATE OF TRANSCRIPT~~

~~I certify that the foregoing transcript of the field notes of the above-described surveys in~~

~~is a true copy of the original field notes on file in the public survey office.~~

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