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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GENERAL LAND OFFICE

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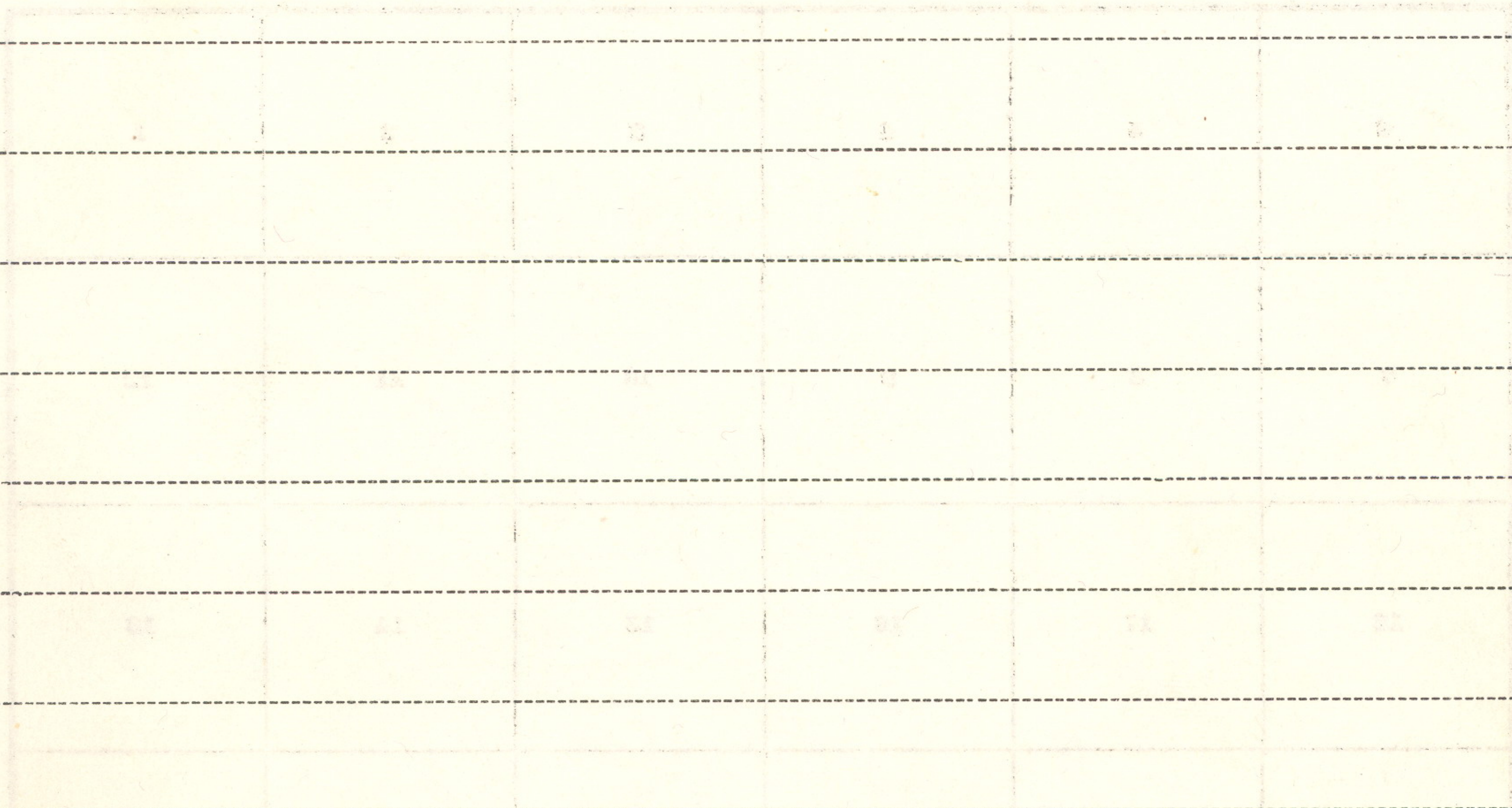
# FIELD NOTES

of Dependent Resurvey of

THE FIRST STANDARD PARALLEL NORTH, Through Range 27 East.

and

DEPENDENT RESURVEY OF EAST BOUNDARY OF T. 4 N., R. 27 E.



Of the Willamette Meridian,

In the State of Oregon.

EXECUTED BY

Otis O. Gould, Surveyor.

Under special instructions dated September 9, 1940, which provided  
for the surveys included under Group No. 260, bearing the approval of the  
Commissioner of the General Land Office under date of January 9, 1941.  
and assignment instructions dated January 21, 1941

Survey commenced January 23, 1941.

Survey completed January 25, 1941.

FIELD NOTES

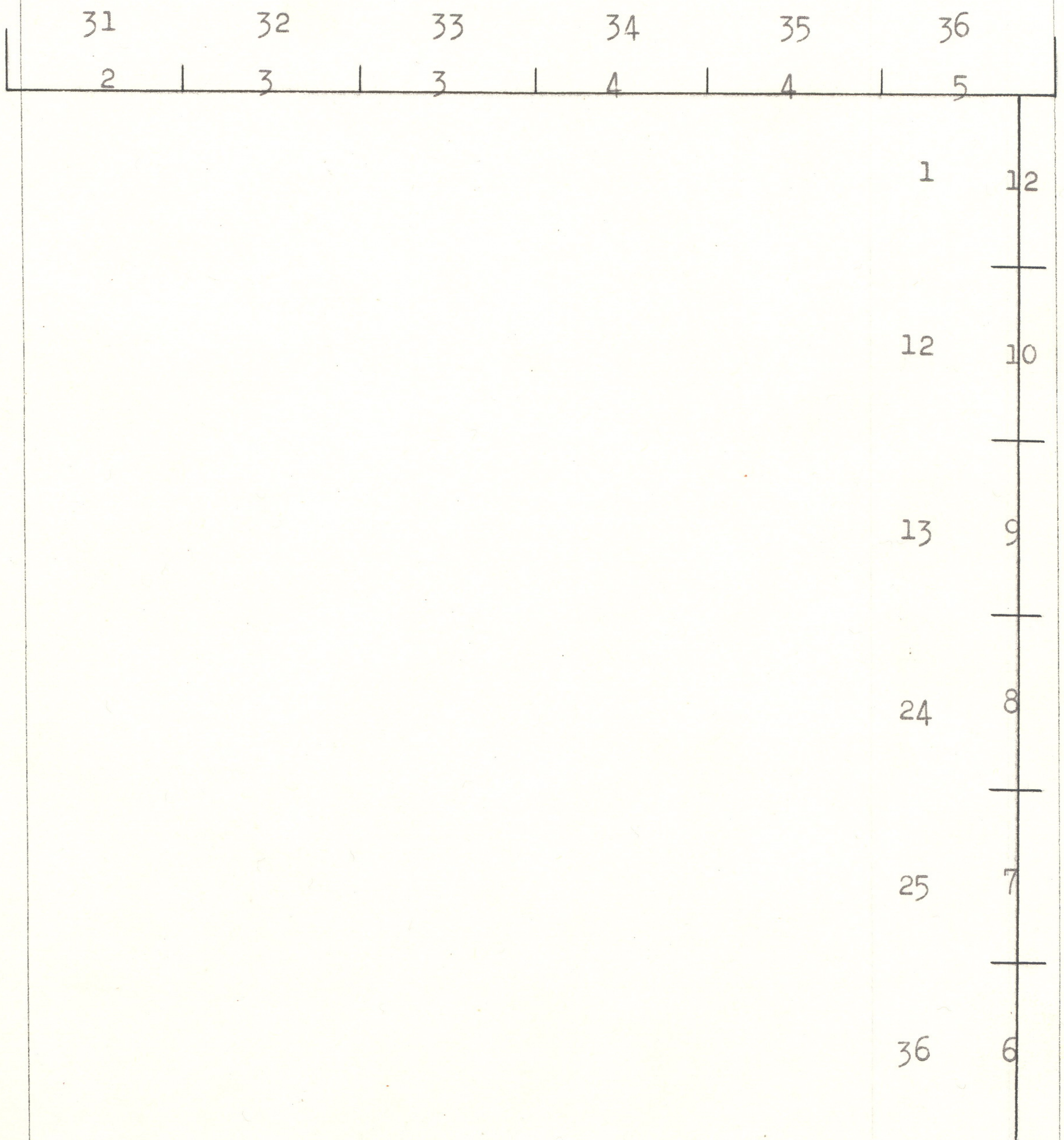
INDEX DIAGRAM.

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 4 North, Range 27 East.



## Township 4 North, Range 27 East.

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 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 January 21, 1941. I examined all the instrumental adjustments before making the field tests hereinafter recorded.

The direction 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 azimuth of these lines was also checked on a meridian and base line, established in this township by the army engineers. 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 gives the geographic position of the cor. of Tps. 1 and 2 N., Rs. 27 and 28 E., as follows: latitude  $45^{\circ}36'N.$ , and longitude  $119^{\circ}22\frac{1}{4}'W.$

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 120 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 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° 38' 00"
Reduced latitude -----	45° 49' 56"
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 meridional indications at frequent inter-

Township 4 North, Range 27 East.

Chains

vals throughout the survey.  
The observed magnetic declination is 21° 00'E.

Dependent Resurvey of 1st Standard Par. N., S. Bdy.  
T. 5 N., R. 27 E.

"Reestablishment of the surveys executed by H. J. G. Maxon and Jared S. Hurd, Deputy Surveyors in 1860, and the east 1½ miles resurveyed by N. O. Walden, in 1874."

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 is thoroughly verified and in the interest of simplicity only the true line notes are shown herein.

I commence the dependent resurvey of the 1st standard parallel N., S. Bdy. of T. 5 N., R. 27 E., at the standard cor. of Tps., 5 N., Rs. 26 and 27 E., which is an iron post, 3 ins. diam., 9 ins. above ground, firmly set, marked and witnessed as described in the official record.

The geographic position of this cor. is latitude 45° 52'N., and longitude 119°30'W.

Thence

N.89°47'E., on true line along S. bdy. of sec. 31.

Over rolling land, through scattering sagebrush.

39.72 Proportionate measurement.

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

S C  
¼ S 31  
1941

dig pits,  
18x18x12 ins., E. and W. of post, 3 ft. dist.

79.44 The standard cor. of secs. 31 and 32, which is the rotten remains of old stake, bearing traces of incomplete scribe marks.

At point for cor.

Set an iron post, 3 ft. long, 2 ins. diam., 27 ins. in the ground, with the marked stake deposited at the base, for standard cor. of secs. 31 and 32, with brass cap marked

S C  
T5N R27E  
S31|S32

1941

dig pits,  
18x18x12 ins., N., E., and W. of post, 3 ft. dist.

Dependent Resurvey of 1st Standard Parallel N., S. Bdy.  
T. 5 N., R. 27 E.

Chains

66.50 Ungraded road, bears N. and S.

80.30 Proportionate measurement.

Set an iron post, 3 ft. long, 2 ins. diam., 27 ins. in the ground, with broken glass deposited at the base, for standard cor. of secs. 35 and 36, with brass cap marked

S C  
T5N R27E  
S35 | S36

1941

18x18x12 ins., N., E., and W. of post, 3 ft. dist. dig pits,

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

S.89°57'E., along the S. bdy. of sec. 36.

Over rolling land, through scattering sagebrush.

40.15 Proportionate measurement.

Set an iron post, 3 ft. long, 1 in. diam., 27 ins. in the ground, with broken glass deposited at the base, for standard 1/4 sec. cor., with brass cap marked

S C  
1/4 S 36

1941

18x18x12 ins., E. and W. of post, 3 ft. dist. dig pits,

70.88 Proportionate measurement.

Set an iron post, 3 ft. long, 3 ins. diam., 27 ins. in the ground, with broken glass deposited at the base, for closing cor. of Tps. 4 N., Rs. 27 and 28 E., with brass cap marked

T5N R27E  
S36  
S1 | S6  
R27E | R28E  
T4N  
C C

1941

18x18x12 ins., E., S., and W. of post, 3 ft. dist. dig pits,

80.30 Proportionate measurement.

Set an iron post, 3 ft. long, 3 ins. diam., 27 ins. in the ground, with broken glass deposited at the base, for standard cor. of Tps. 5 N., Rs. 27 and 28 E., with brass cap marked

S C  
T5N  
R27E | R28E  
S36 | S31

1941

Dependent Resurvey of 1st Standard Par. N., S. Bdy.  
T. 5 N., R. 27 E.

Chains

18x18x12 ins., N., E. and W. of post, 3 ft. dist.

From this point, the standard cor. of secs. 32 and 33,  
T. 5 N., R. 28 E., bears S. 89° 57' E., 160.60 chs. dist.,  
a basalt stone, 12x10x9 ins., set under surface of road,  
extending E. and W., and marked with a cross (X).

At point for cor.

Set an iron post, 3 ft. long, 2 ins. diam., 48 ins. in the  
ground, 1 ft. under surface of road, with basalt stone  
deposited at the base, for standard cor. of secs. 32 and  
33, with brass cap marked

S C  
T5N R28E  
S32|S33

1941

At a point 25 lks. N. of true cor.

Set an iron post, 3 ft. long, 2 ins. diam., 27 ins. in the  
ground, with broken glass deposited at the base, for  
witness cor. to the standard cor. of secs. 32 and 33,  
with brass cap marked

S C  
T5N R28E  
S32|S33

WC 25 N

1941

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

Dependent Resurvey of the East Bdy. of T. 4 N., R. 27 E.

"Reestablishment of the surveys executed by Ebenezer E.  
Haft, Deputy Surveyor in 1860 and resurveyed by N. O.  
Walden, Deputy Surveyor, in 1874."

I commence the dependent resurvey of the E. bdy. at the  
cor. of Tps. 3 and 4 N., Rs. 27 and 28 E., which is a  
basalt stone, 18x16x10 ins., set under surface of road,  
bearing N. and S., and marked with a cross (X).

Thence

N. 0° 07' W., on true line bet. secs. 31 and 36.

Over rolling land, along road.

- 1.15 House, bears W., about 1.00 ch. dist.
- 3.90 Barn, bears W., about 1.00 ch. dist.
- 25.90 House, bears E., about 1.50 chs. dist.
- 40.00 The 1/4 sec. cor., which has been perpetuated with a basalt  
stone, 16x10x8 ins., set under surface of roads, bearing  
N., S., and E., and marked with a cross (X).

At point for cor.

Set an iron post, 3 ft. long, 1 in. diam., 48 ins. in the

532

## Dependent Resurvey of East Boundary of T. 4 N., R. 27 E.

Chains

Over rolling land, through scattering sagebrush.

40.57

Proportionate measurement.

Set an iron post, 3 ft. long, 1 in. diam., 27 ins. in the ground, with broken glass deposited at the base, for  $\frac{1}{4}$  sec. cor., with brass cap marked.

S 1 S 6

11941

dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.

81.68

The closing cor. of Tps. 4 N., Rs. 27 and 28 E., previously described.

Land, rolling.

Soil, sandy; 2nd rate.

No timber; undergrowth, sagebrush and greasewood.

Jan 25, 1941, at camp located at Hermiston, Oregon, at 4h 00m p.m., app. t., I set off  $45^{\circ}50'N.$ , on the lat. arc;  $18^{\circ}46'S.$ , on the decl. arc; and orient the instrument with the solar; the line of sight agrees with the meridian established by Polaris observation.

Jan. 26, 1941, at 8h 00m. a.m. app. t., I set off  $45^{\circ}50'N.$  on the lat. arc;  $18^{\circ}36'S.$ , 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.

The north and east boundaries of T. 4 N., R. 27 E., are both gently rolling at an average elevation of about 400 ft. above sea level. The soil is very sandy but produces good crops when irrigated. No timber is found on these boundaries. Sagebrush and greasewood, scattering cacti and a fair stand of native grass are found on both of these boundaries.

The only running water is found in irrigation ditches and canals crossing the east boundary. A number of farms are located near the east boundary.

The Union Pacific Railroad and telegraph line crosses the east boundary near the central part of the N.  $\frac{1}{2}$  of section 25. A good graveled road extends along the east boundary from the corner of Tps. 3 and 4 N., Rs. 27 and 28 E., to about 15.00 chs. S. of the cor. of secs. 1, 6, 7, and 12, Tps. 4 N., Rs. 27 and 28 E.

All of township 4 north, range 27 east, north of the Union Pacific Railroad and to within  $\frac{1}{2}$  mile of the east boundary is being converted into an ordnance depot at this time.

No mineral was noted on these boundaries.

The average of a considerable number of readings over these two boundaries gives a value of  $21^{\circ}00'E.$ , for the mean magnetic declination. There is a range of  $6^{\circ}$  in local attraction.



4-680  
(Revised May 1934)

FIELD ASSISTANTS

NAMES	CAPACITY
Leonard Carter	Public Land Surveyor.
Oskar T. Dauelsberg	Public Land Surveyor.

CERTIFICATE OF ~~UNITED STATES~~ SURVEYOR

I, Otis O. Gould, Surveyor., HEREBY CERTIFY upon honor that, in pursuance of special instructions bearing date of the 9th day of September, 1941 received from the district cadastral engineer for Oregon, with assignment instructions dated Jan. 21, 1941, I have ~~surveyed~~ dependently resurveyed the first standard parallel north, through range 27 east, and the east boundary of T. 4 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.

Jan. 30, 1941.

Otis O. Gould.

Surveyor.

## CERTIFICATE OF APPROVAL

OFFICE OF U.S. SUPERVISOR OF SURVEYS,

DENVER, COLORADO FEB 21, 1941

The foregoing field notes of the ~~survey of~~ dependent resurvey of the first standard parallel north, through range 27 east, and the east boundary of township 4 north, range 27 east.

executed by Otis O. Gould, Surveyor., under special instructions dated Sept. 9, 1940., and assignment instructions dated Jan. 21, 1941, 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.

Frank A. Johnson  
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.~~