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REFERRING THE LINES TO THE PAGES OF THE FIELD NOTES.

*Township No. 2 North Range No. 36 East* Will. Mer.

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# FIELD NOTES

Of the survey of the *exterior*

Lines of *Township No. 2 North,*

*Range No. 36 East,* Willamette Meridian, Oregon,

as surveyed by *Charles L. Campbell*

U. S. Deputy Surveyor, under his <sup>joint</sup> contract No. *733*

dated *March 22*, 190*1*

Survey commenced *June 15*, 190*1*

Survey completed *June 19*, 190*1*

## NAMES AND DUTIES OF ASSISTANTS.

*Glyde W. Riddell*, Chainman.

*Ray D. Campbell*, Chainman.

....., Chainman.

....., Chainman.

*W. A. Best Campbell*, Axman.

....., Axman.

....., Flagman.

PRELIMINARY OATHS OF ASSISTANTS.

WE, Blyde W. Riddell and  
Roy J. Campbell

do solemnly swear that we will faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distance to all notable objects, and the true length of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with the instructions given us, in the survey

of the exterior  
lines of Township No. 2 North, Range No. 36 East  
Willamette Meridian, Oregon.

Blyde W. Riddell, Chainman.  
Roy J. Campbell, Chainman.  
\_\_\_\_\_, Chainman.  
\_\_\_\_\_, Chainman.

Subscribed and sworn to before me this fiftieth  
day of June, 1901.

Charles L. Campbell  
U. S. Dept. Surveyor

[SEAL.]

I WE, W. A. Burt Campbell

and \_\_\_\_\_  
do solemnly swear that we will well and truly perform the duties of axmen, mound men, and flagman in the establishment of corners and other duties, according to instructions given us, and to the best of our

skill and ability, in the survey of the exterior lines of  
Township No. 2 North, Range No. 36 East,  
Willamette Meridian, Oregon.

W. A. Burt Campbell, Axman.  
\_\_\_\_\_, Axman.  
\_\_\_\_\_, Flagman.

Subscribed and sworn to before me this fiftieth  
day of June, 1901.

Charles L. Campbell  
U. S. Dept. Surveyor

[SEAL.]

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East boundary of T. 2 N., R. 26 E.

Chain

Survey commenced June 15, 1901, and executed with a W. & L. G. Gurley solar compass, No. 210. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined, used on the true meridian at The Dalles, Oregon, found correct and was approved by Mr. Chas. A. Schely, C. E., May 23, 1901, under authority given him by the surveyor

East boundary of T. & N. R. & C. - Cor  
 Chain general for Oregon,  
 May 7, 1901.

I examine the  
 adjustments of the  
 instrument and  
 find no level or  
 collimation errors;  
 then to test the  
 solar apparatus  
 by comparing its  
 indications,  
 resulting from  
 solar observations  
 made during a.  
 m. and p. m.  
 hours, with a  
 true meridian de-  
 termined by obser-  
 vations of Polaris,  
 I proceed as follows:

June 15, 1901:

At my camp, near  
 the Cor. of sec. 13,  
 14, 23 and 24, T. & N.,  
 R. & C., latitude  $45^{\circ}$   
 $58' - 48''$  N., longitude  
 $118^{\circ} - 15'$  W., at  $4^{\text{h}} - 05^{\text{m}}$

9  
3

Coast boundary of T. & N. P. 86 C. - Con.

Chain p. nk., l. m. t., I  
set off  $45^{\circ} 39'$  on the  
lat. arc;  $23^{\circ} 20' N.$   
on the decl. arc;  
determine with the  
solar a true  
meridian; and  
mark a point  
thereof on a stone  
set firmly in the  
ground 5.00 chs.  
N. of my station.

At  $1^{\text{h}} 50^{\text{m}}$  a. m.,  
by my watch,  
which is  $2^{\text{m}} 30^{\text{s}}$   
fast of l. m. t., I  
observe Polaris at  
eastern elongation,  
in accordance  
with Manual of  
Instructions, and  
mark a point on  
the line thus  
determined on a plug  
driven in the  
ground, 5.00 chs. N.  
of my station.

4

Coast boundary of T. & N. P. 36 C. - Con.  
Chains June 15, 1901.

June 17: At 5<sup>h</sup>-10<sup>m</sup> a.  
m. l. m. t., I lay  
off the azimuth  
of Polaris, 10°-44' to  
the west, and  
mark the true  
meridian thus  
determined, by cut-  
ting a small groove  
in the stone set  
June 15, on which  
the true meridian  
falls 0.3 in. east  
of the mark deter-  
mined by the  
solar.

At 5<sup>h</sup>-30<sup>m</sup> a. m.,  
l. m. t., I set off  
45°-39' on the lat.  
arc; 23°-23' N. on  
the decl. arc; and  
mark a point in  
the true meridian  
determined with



East boundary of P. & H. P. 266 C. - Con.

Chain the solar, by a cross on the stone already set 500 chs. N. of my station; this point falls 0.4 in. east of the true meridian established by the Polar observation.

The solar apparatus by p.m. and a.m. observations, defines positions for true meridian, respectively about 0' 21" east and 0' 16" west of the meridian established by the Polar observation; therefore, I conclude that the adjustment of the instrument are satisfactory.

The magnetic bearing of the true meridian, at 9.9.44

East boundary of T. & N., R. 36 E. - Con.  
 Chain is  $N. 20^{\circ} - 30' W.$  The  
 angle thus de-  
 termined, reduced  
 by the table, gives  
 the mean mag-  
 netic declination  
 $20^{\circ} - 26' 5.$

June 17, 1901

I commence at the  
 cor. of sec. 13, 15, -  
 19 and 24, on the  
 E. bdy. of the T. & N.,  
 which is a basalt  
 stone,  $18 \times 9 \times 6$  ins.,  
 set loosely in the  
 ground, and wit-  
 nessed or described  
 by the surveyor  
 General, with the  
 exception of the  
 S. W. and N. W. bearing  
 trees which have  
 been destroyed  
 by fire from all

East boundary of T. & N., R. 36 E. - Cor.  
 chains of bearings.

I reestablish the old  
 cor. at the same  
 point as follows:  
 Set basalt stone,  
 18 x 9 x 6 ins., 12 ins.  
 in the ground for  
 cor. of Sec. 13, 18, 19  
 and 24, marked  
 with a notch on  
 the S. and N. edges.  
 From which  
 a fir, 8 ins. diam.,  
 bears N. 60° E., 21 lbs.  
 dist., marked T. & N.,  
 R. 37 E., S. 18, B. S.  
 A fir, 12 ins. diam.,  
 bears S. 29½° W., 46 lbs.  
 dist., marked T. &  
 N., R. 36 E., S. 24, B. S.  
 A fir, 7 ins. diam.,  
 bears N. 36¼° W., 47 lbs.  
 dist., marked T. &  
 N., R. 36 E., S. 13, B. S.  
 Raise mound of  
 stone, 2 ft. base, 1½  
 ft. high, W. of cor.

5

East boundary of T. & N. P. 86 C. - Con.  
Chain Pile impracticable.

Thence Run  
N. on true line  
bet. sec. 18 and 18.  
descend gradually  
along N. slope  
of mountain, through  
scattering pine and  
fir timber.

4000 Set basalt stone,  
20 x 10 x 5 in., 15 in.  
in the ground for  
corner, marked  
 $\frac{1}{4}$  on N. face. From  
which a fir, 16  
in. diam., bears  
S. 57° W., 69 lbs. dist.,  
marked  $\frac{1}{4}$  S. 13,  
B.P. No other  
tree in limits.

Raise mound of  
stone, 2 ft. base,  
1 1/2 ft. high W. of  
cor. Pile im-  
practicable.  
At this  
cor., I set off

East boundary of T. & N. R. 26 E. - Con  
 Chain 23<sup>d</sup> - 24<sup>h</sup> N. on the  
 decl. arc; and  
 at 12<sup>h</sup> 01<sup>m</sup> p. m., l.  
 m. t., observe the  
 sun on the  
 meridian the  
 resulting lat. is  
 45° 39' which is  
 about 0.2 less than  
 the proper lat.

48.00 Stony point, bears  
 N. 36° W.

abrupt descent into  
 canyon, through  
 dense undergrowth  
 and heavy timber.

04.41  
 64.41

A white fir, 20  
 ins. diam., on line;  
 on which, I cut a  
 notch on N. and  
 S. edges.

54.41

Foot of steep descent.  
 Creek, 25 lbs. wide,  
 slow current, course  
 N. 80° W.

This stream sinks  
 just W. of line.

East boundary of T. & N., P. & C. Co.

- 5777 Tamarack, 35 ins. diam, on line, I mark with 2 notches on N. and S. sides.
- 6770 Foot of mountain, 500 ft. below sec. cor., bear N. 30° E., S. 30° W.
- 6775 S. Fork Umatilla River, 30 lbs. wide, slow current, pure water, course N. 30° E.  
Pass over timbered bottom lands, not subject to inundation.
- 7575 Leave bottom lands, bear N. 40° E., S. 40° W., and ascend steep bank.
- 7800 Top of bank, 20 ft. high, bear N. 45° E., S. 60° W.  
Enter dense fir thicket bear N.

East boundary of T. & N., R. 36 E. - Con.  
Chains 60° E., N. 60° W.

Ascend gradually  
along E. slope  
of mountain.

8000 A fir, 10 in. diam.,  
for cor. of sec. 7, 12,  
13 and 15, I marked  
T. & N., S. 7 on N. E.,  
R. 37 E., S. 18 on S. E.,  
R. 36 E., S. 13 on S. W., and  
T. & N., S. 12 on N. W. sides;  
with 4 notches on  
S. and 2 notches on  
N. sides; from  
which

A fir 10 in. diam.,  
bear N. 10° E., 18 lbs.  
dist., marked T.  
& N., R. 37 E., S. 7, B. T.

A fir, 12 in. diam.,  
bear S. 15° E., 26 lbs.  
dist., marked T. & N.  
R. 37 E., S. 18, B. T.

A lamaraek, 30 in.  
diam., bear S. 50° W.,  
20 lbs. dist., marked  
T. & N., R. 36 E., S. 13, B. T.

East boundary of T. & N., R. 36 C. - Con.

Chains of 12, 12 in. diam,  
bear N. 56° W., 29  
lks. dist., marked  
T. & N., R. 36 C., S. 12,  
B. T.

Land mountainous.  
Soil, gravelly loam  
and siltstone; and  
and 4th rate.

Timber, pine, fir,  
spruce, tamarack  
and cottonwood;  
undergrowth, maple  
cherry, huckleberry  
and willow.

Mountainous or  
heavily timbered  
land, 5000 ft.

---

June 18: At 3<sup>45</sup><sup>m</sup>  
p. m., l. m. t., I  
set of 45° 40' on the  
lat. arc; 28° 24' N.  
on the decl. arc;  
and determine  
a true meridian



East boundary of P. & N. R. 260 - Con.

Chains with the solar  
at the cor. of sec.  
7, 12, 18 and 18.

Thence I run  
N. on true line  
bet. sec. 7 and 12.

Ascend along E slope  
of mountain, through  
heavy timber and  
dense undergrowth.

1.75 A tamarack 24  
in. diam. on  
line, I mark  
with 2 notches on  
N. and S. sides.

12.50 Leave heavy timber  
and enter scatter-  
ing timber, bear  
E. and N.

15.50 Ridge point, bear  
E. and N.

descend into ravine.

23.00 Dry bed of stream,  
100 yds. wide, course  
N. 80° E. Water  
sinks just N. of  
line. Ascend.

East boundary of T. & M., P. & C. Con.

5600 Ridge, 300 ft. high,  
bears N. C., S. W. I  
descend along E. slope  
of mountain.

4000 Set ironstone, 15 x  
10 x 8 in., 10 in. in  
ground for  $\frac{1}{4}$  sec.  
cor., marked  $\frac{1}{4}$  on  
W. face. From  
which

A fir, 10 in. diam.,  
bears N. 10° E., 57 lks.  
dist., marked  $\frac{1}{4}$  S. 7,  
B. V.

A fir, 12 in. diam.,  
bears S. 76° W., 53 lks.  
dist., marked  $\frac{1}{4}$  S.  
12, B. V. This

cor. stands about  
1500 ft. above the  
Unatilla River.

6225 Dry bed of stream,  
1 lks. wide, in  
canyon 500 ft. deep,  
course S. 30° E.

Water runs just  
W. of line.

Coal boundary of T. & N., R. 36 C. - Con.

Ascend along W. slope  
of mountain, bears  
N. W., S. C.

8000 Set basalt stone, 30x  
12x6 in., 22 in. in  
the ground for  
cor. of sec. 1, 6, 7  
and 12, marked  
with 5 notches on  
S. and 1 notch on  
N. edge. From  
which a fur, 18 in.  
diam, bears S. 29° W.,  
78 lbs. dist, marked  
S. & N., R. 36 C. S., B. T.  
No other trees in  
limits. Raise  
mound of stone,  
3 ft. base, 2 ft. high,  
W. of cor. This  
cor stands about  
1800 ft. above  
Unabilla River.  
Land, mountainous.  
Soil, sandy grass  
lands; Verd rate.  
Timber, pine, fir,

East boundary of T. & N., P. & C. Co.  
 Chain Lantharack, cotton-  
 wood and spruce;  
 undergrowth, maple,  
 cherry and yew.  
 Mountain side land  
 & rocks.

June 18, 1901.

June 19: at <sup>4 m</sup> 7:50  
 a.m., l.m.t., I  
 set off  $45^{\circ} 41'$  on  
 the lat. arc;  $23^{\circ}$   
 $26'$  N. on the decl.  
 arc; and deter-  
 mine a true  
 meridian with  
 the solar at the  
 cor. of sec. 1, 6, 7  
 and 12.

Thence I run  
 N. on true line  
 bet. sec. 1 and 6.  
 Around along N.  
 slope of Brown  
 Linn through  
 scattering timber.

East boundary of T. N. P. 26 C. - Con.

and occasional patches of dense undergrowth.

35.00 Enter heavy timber bears E. and W.

40.00 Set ironstone, 12 x 8 8 x wire, 10 wire in ground for 1/4 sec. cor., marked 1/4 on W. face. From which a fir, 20 ins. diam., bears

N. 10° E., 47 lbs. dist., marked 1/4 S. 6, B. T.

A fir, 18 ins. diam., bears S. 18° W., 9 lbs. dist., marked 1/4 S. 1, B. T. This

cor. stands about 800 ft. above sec. cor.

48.00 Leave timber, bears E. and S. 60° W.

57.00 Summit of main divide bet. Umanilla River and Mackinnon Creek,

East boundary of T. & M., R. & C. - Con.

Chain 1800 ft. above  
Umatilla River,  
bear N. 10° E., S. 60°  
W.

Pass along level  
summit of  
mountain.

61.20 Trail to Gibbon,  
course N. 10° E., S. 60°  
W.

70.20 Enter heavy pine  
and fir timber,  
bear N. 60° W., S. 30° E.  
descend gradually  
N. slope of moun-  
tain.

71.59 Intersect T. & M. line  
24.84 ch. E. of the T. & M.  
cor. of T. & M., R.  
& C.  
Set basalt stone,  
15 x 12 x 8 ins., 10 ins.  
in the ground, for  
closing cor. of T. & M.  
& R. 36 and 37  
E., on S. side of T. & M.  
& R. 37 N., marked

East boundary of T. & N., R. 36 E. - Con.  
 Chain with C. C. on S.;  
 and with 6 grooves  
 on S., E., and W.  
 faces. From  
 which a fir, 10  
 ins. diam., bears  
 S. 45° E., 28 lks. dist.,  
 marked T. & N.,  
 R. 36 E., S. 6, B. T.  
 A fir, 12 ins. diam.,  
 bears S. 50° W., 39 lks.  
 dist., marked T.  
 & N., R. 36 E., S. 1, B. T.  
 Note - I destroy  
 all marks of the  
 S. W. cor. of T. & N.,  
 R. 36 E., which is a  
 fir, 24 ins. diam.,  
 marked and wit-  
 nessed as described  
 by the surveyor  
 General, that  
 pertain to T. & N.,  
 R. 36 and 37 E.  
 Land, mountainous  
 soil, stony and  
 loam; 4th and 1st rate.

East boundary of T. & N. P. & C. Co.  
Chain Timber, pine, fir,  
lamarack and  
spruce; undergrowth,  
willow, mountain  
laurel and yew.  
Mountainous land  
71.59 ch.

June 19: at  
this closing T. & N.  
cor., I set off  
 $23^{\circ} - 24'$  N. on the  
decl. arc; and  
at  $12^{\text{h}} - 01$  p. m.,  
L. M. T., observe  
the sun on the  
meridian; the  
resulting lat. is  
 $45^{\circ} - 41.5'$ , which  
is about  $0.1$  greater  
than the proper  
latitude.

June 19, 1901.



East boundary of T. 2 N., R. 36 E. - Con.

North half  
Boundaries of T. 2 N., R. 36 E.

Latitudes; Departures; Closing Error

Line	Bearing	Dis.		Lat.		Depe.	
		Che.	Che.	N.	S.	E.	W.
Body Irregular		432.34			.57		432.34
Res. " N. 20° E.		246.55	233.50			84.92	
N. " East		346.42		231.59		346.42	
E. " South		231.59			231.59		
Convergence						.36	
Totals			232.50	232.16	431.70	432.44	
			232.16			431.70	
Error in	Lat. 1.34					Depe. 0.34	

General description.

The northern half of T. 2 N., R. 36 E. contains some good arable land. There are several

East boundary of T. 2 N., R. 6 E. - Con.

patches of good  
fir and pine  
timber. Water  
is very plentiful  
and the entire  
region is covered  
with a rich,  
nutritious growth  
of grasses. The  
remaining half of  
the township  
should be subdivi-  
ded.

Charles E. Campbell.  
U. S. Dept. Surveyor.

Note - No person  
authorized to ad-  
minister oaths,  
other than myself  
is available with-  
out great delay  
and expense;  
therefore, I administer  
the required pre-  
liminary and final  
oaths.

Charles L. Campbell,  
U.S. Dept. Surveyor.

FINAL OATHS FOR SURVEYS.

A list of the names of the individuals employed by Charles L. Campbell, U. S. Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the surveys of the exterior lines of Township No. 2 North Range No. 36 East, Willamette Meridian, Oregon, showing the respective capacities in which they acted:

- ....., Compassman.
Clyde W. Riddell, Chainman.
Roy D. Campbell, Chainman.
....., Chainman.
....., Chainman.
W. A. Burt Campbell, Axman.
....., Axman.
....., Flagman.

FINAL OATHS OF ASSISTANTS.

We hereby certify that we assisted Charles L. Campbell, U. S. Deputy Surveyor, in surveying all those parts or portions of the exterior lines of Township No. 2 North Range No. 36 East, Willamette Meridian, Oregon, as are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established according to the instructions furnished by the U. S. Surveyor-General of Oregon:

- ....., Compassman.
Clyde W. Riddell, Chainman.
Roy F. Campbell, Chainman.
....., Chainman.
....., Chainman.
W. A. Burt Campbell, Axman.
....., Axman.
....., Flagman.

Subscribed and sworn to before me, this fourteenth day of June, 1891 1901.

[SEAL.]

Charles L. Campbell, U. S. Deputy Surveyor.

FINAL OATH OF DEPUTY SURVEYOR.

I, Charles L. Campbell, United States

Deputy Surveyor, do solemnly swear that in pursuance of instructions received from Robert A. Halusham, U. S.

Surveyor-General for Oregon, bearing date of the third

day of April, 1901, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the U. S. Surveyor-General for Oregon, the Manual of Surveying Instructions, and the laws of the United States, surveyed

all those parts or portions of the exterior lines of Township No. 2 North, Range No. 36 East,

Willamette Meridian, in the State of Oregon, which are represented in the foregoing field notes as having been surveyed by me and under my directions; and I do further solemnly swear 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 U. S. Surveyor-General for Oregon, and in the specific manner described in the field notes, and that the foregoing are the true field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury, under the provisions of an act of Congress approved August 8, 1846.

Charles L. Campbell  
U. S. Deputy Surveyor.

Subscribed by said Charles L. Campbell, U. S.

Deputy Surveyor, and sworn to before me this 8th day of Feb, 1901

E. L. Lee  
County Clerk

## Office of U. S. Surveyor-General,

PORTLAND, OREG., *March 4*, 190*3*

The foregoing field notes of the survey of the *Part of the*  
*East Boundary of Township*  
*2 South Range 36 East*  
*Will. Mer Oregon*

executed by *Charles J. Campbell U.S.*  
*Deputy Surveyor*

under his contract No. *733*, dated *March*  
*22<sup>d</sup>*, 190*1*, having been critically examined,

and the necessary corrections and explanations made, the said field  
 notes and the surveys they describe, are hereby approved.

*Kerry M. Nelson*  
 U. S. Surveyor-General.