

Mutter

Recd, April 3 1902 1

FIELD NOTES

Of the Survey of the Eastern Lines of
Township No. 2 North, Range No. 36 East,
Willamette Meridian, Oregon,

BY

Charles S. Campbell
Deputy Surveyor,

UNDER

his joint Contract No. 733 dated March 22, 1901

Survey commenced June 15, 1901

Survey completed June 19, 1901

Platted

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pages
Page 20 chains

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 ^{joint} 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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Meanders of Pages to

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. P. & 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.,
 P. & C., latitude 45°
 $58' - 48''$ 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 $45^{\circ} 34'$ 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^h 10^m 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^h 30^m 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. & M. 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 Polarix 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 Polarix 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., Com.

Chain 23^d - 24^h N. on the decl. arc; and at 12^h 01^m 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 in. diam., on line; on which, I cut 2 notches 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 18, 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 3⁴⁵^m
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, 30x12x6 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.

Firmly 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.

Thin coal 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 ^{4 m} 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 determine 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. 2 N., R. 26 E. - 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 $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face. From which a fir, 20 ins. diam., bears

N. 10° E., 47 lbs. dist., marked $\frac{1}{4}$ S. 6, B. T.

A fir, 18 ins. diam., bears S. 18° W., 9 lbs. dist., marked $\frac{1}{4}$ 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 N.
 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. & N., R. 36 E. - Con.

North half
Boundaries of T. & 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. & 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 J. 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 J. 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, 1902

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^d, 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.