NARRATIVE

THE PURPOSE OF THIS SURVEY WAS TO TIE, MONUMENT, AND/OR MAINTAIN CERTAIN CORNERS AND MARK CERTAIN BOUNDARIES OF STATE OWNED LANDS IN SECTION 4, TOWNSHIP 7 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN.

DETAILED NARRATIVES ARE WRITTEN FOR EACH CORNER TIED, MONUMENTED, AND/OR MAINTAINED, AS SUBMITTED UNDER CORNER INFORMATION.

DESCRIPTION OF STATE BOUNDARIES SURVEYED

THE NORTH AND SOUTH BOUNDARIES OF SECTION 4, TOWNSHIP 7 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, LOCATED IN SKAMANIA COUNTY, WASHINGTON.

EQUIPMENT USED, METHOD OF SURVEY, AND ACCURACY

• THIS SURVEY WAS PERFORMED WITH THE USE OF TWO LEICA GS14 GLOBAL POSITIONING SYSTEM (GPS) RECEIVERS. THE INITIAL CONTROL POINT (1) WAS ESTABLISHED FROM TIES TO THE NATIONAL GEODETIC SURVEY (NGS) CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS). THIS CONTROL POINT WAS OBSERVED BY A MINIMUM OF TWO SESSIONS SEPARATED BY A MINIMUM OF ONE HOUR. THE RAW GPS DATA WAS SUBMITTED TO THE NGS ONLINE POSITIONING USER SERVICE (OPUS) WEBSITE FOR SOLUTIONS AT LEAST 24 HOURS AFTER FIELD OBSERVATIONS WERE MADE. THE RETURNED SOLUTIONS WERE THEN AVERAGED. • ADDITIONAL CONTROL POINTS (2, 3, 4, 5, 6, 7, 8, 9, 10, 11, AND 12) WERE MADE WITH REAL TIME KINEMATIC (RTK) STYLE OF SURVEY METHOD CALIBRATED TO THE INITIAL CONTROL POINT. CONTROL POINTS AND CORNERS TIED WITH RTK WERE OBSERVED BY MEASURING TO THE POINT, THEN RE-INITIALIZING SIGNAL LOCK OF THE RTK RECEIVER TO ESTABLISH THREE OR MORE INDEPENDENT MEASUREMENTS. ADDITIONAL CORNER TIES, SETS, AND GROUND TRAVERSES WERE PERFORMED WITH A LEICA TS12 DIGITAL TOTAL STATION. CORNER MONUMENTS TIED WERE CHECKED WITH DOUBLE MEASURES OF BOTH DIRECTION AND DISTANCE. THE TRAVERSE DATA WAS PROCESSED USING STAR*NET, VERSION 7.1.0.5. THIS METHOD MEETS THE RELATIVE ACCURACY STANDARDS AS SPECIFIED IN WAC 332-130-080/085/090. • TIES TO CORNER REFERENCES WERE MADE WITH A HAND COMPASS AND STEEL TAPE. PLASTIC REFERENCE TAGS WERE SET ON A BLAZED FACE AT CHEST HEIGHT OF REFERENCE TREES.

CONTROL SPECIFICATIONS

THE CONTROL PORTION OF THIS SURVEY IS IN COMPLIANCE WITH THE FEDERAL GEODETIC CONTROL COMMITTEES GEODETIC ACCURACY STANDARDS AND SPECIFICATIONS FOR USING GPS RELATIVE POSITIONING TECHNIQUES, VERSION 5.0, UPDATED AUGUST 1, 1989 FOR GROUP C, ORDER 1 SURVEYS.

CONVERGENCE

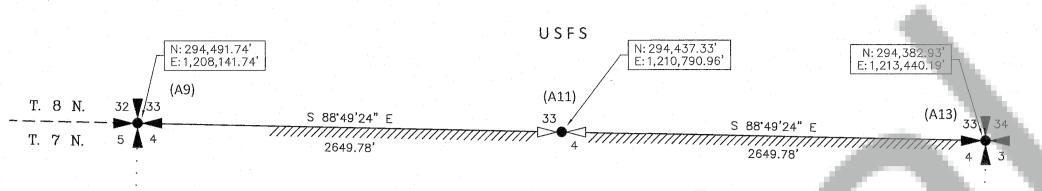
-1° 13' 51.5" AT THE 1/4 SECTION CORNER COMMON TO SECTIONS 4 AND 33 OF TOWNSHIPS 7 AND 8 NORTH, RANGE 5 EAST.

THE AREAS AND DISTANCES SHOWN ARE GRID. DIVIDE THE GRID DISTANCE BY THE COMBINED GRID FACTOR OF 0.999817418 TO OBTAIN THE GROUND DISTANCE. THE GRID FACTOR IS DERIVED FROM AN ELEVATION FACTOR OF 0.999871198 AND A LATITUDE FACTOR OF 0.999946213.

APPROXIMATE MEAN ELEVATION AT THE PROJECT SITE = 2,760 FT.

G.L.O. HISTORY

1899 LEWIS D.W. SHELTON, UNDER CONTRACT NUMBER 552, SURVEYED THE EXTERIOR BOUNDARIES AND THE SUBDIVISIONAL LINES OF TOWNSHIP 7 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN.



BASIS OF MERIDIAN:

BEARINGS AND DISTANCES ARE BASED ON THE WASHINGTON COORDINATE SYSTEM, NAD-83 (2011) EPOCH 2010.00, SOUTH ZONE.

DERIVED FROM TIES TO THE FOLLOWING NGS CORS STATIONS:

BASE STATIONS USED:

	PID		DESIGNATION	LATITUDE	LONGITUDE
	AJ7202	CPXF	CHARLES PACK EXPE	N 46°50'24.291"	W 122°15'23.407"
	DE6433	WDBN	WOODBURN COOP	N 45°10'15.096"	W 122°52'12.130"
	DG8344	P420	FANTASYFD_WA2004	N 46°35'18.952"	W 122°51'58.733"
	DH4129	P698	MSH_SESLPEWA2004	N 46°10'24.461"	W 122°09'38.141"
	DJ4303	GRMD	GRAND MOUND	N 46°47'43.735"	W 123°01'21.289"
ı	DJ6121	GWN5	APPLETON 5	N 45°46'57.463"	W 121°19'39.165"
	DK4151	P446	KELSO_AIR_WA2007	N 46°06'56.369"	W 122°53'33.975"

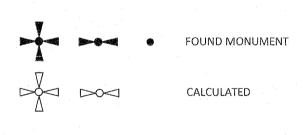
NEW POSITIONS DETERMINED BY G.P.S. METHODS:

TATION	NORTHINGS	EASTINGS	DESCRIPTIONS
1	292120.707'	1209592.428'	GPS, SPIKE
2	292129.992	1209602.547	RTK, SPIKE
3	294491.743'	1208141.741'	D.N.R. MON.
4	288841.757'	1213333.930'	D.N.R. MON.
5	288917.308	1208043.122	RTK, SPIKE
6	288888.561'	1208014.125'	RTK, SPIKE
7	294428.785'	1213401.266'	RTK, SPIKE
8	293889.995'	1213209.758'	RTK, SPIKE
9	288737.420'	1210432.997'	RTK, SPIKE
10	288704.634	1210275.569'	RTK, SPIKE
11	293509.465'	1209172.463'	RTK, SPIKE
12	293920.915'	1209285.331'	RTK, SPIKE

POSTED LINE:

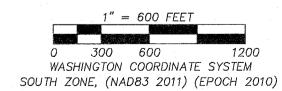
INDICATES PROPERTY LINE POSTED WITH 5 1/2 FOOT TALL, WHITE FIBERGLASS POSTS SET AT RANDOM INTERVALS OF ABOUT 200 FEET. POSTS ARE SET WITHIN ONE FOOT OF THE ACTUAL LINES SURVEYED.

CORNER SYMBOLS:



SET DNR MONUMENT







AUDITOR'S CERTIFICATE

SKAMANIA COUNTY DEPUTY AUDITOR

SURVEYOR'S CERTIFICATE

2693.95

S 89'09'08" E

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

PLS #22349



IN NOVEMBER, 2018.

N: 288,925.72' E: 1,208,006.72'

S

SHAGRA OF WASH COLORDO POR WA 2633.93'

S 89'02'26" E

////////////

N: 288,885.86'

E: 1,210,700.37'

(E11)

PRIVATE

A SURVEY IN SECTION 4,
TOWNSHIP 7 NORTH, RANGE 5 EAST, W.M.

(E13)

N: 288,841.76'

E:1,213,333.93'

STATE OF WASHINGTON DEPARTMENT OF NATURAL RESOURCES

LAND SURVEY SECTION - P.O. BOX 47030 OLYMPIA, WASHINGTON 98504-7030 (360) 902-1206 "ARCTIC COBRA S.4" SURVEY
FIELD CREW: J. CHRISTEN, R. SEILER

J. EDMINSTER, PLS N. LINK, PLS

FIELD BOOK: 3080

FINAL MAP NUMBER: 2049

SHEET 1 OF 2

11/6/2018

CORNER INFORMATION

(A9) SECTION CORNER COMMON TO SECTIONS 4, 5, 32, & 33

ACCEPTED CORNER

06/20/18: FOUND A D.N.R. CONCRETE MONUMENT.

HISTORY:

1899 G.L.O. SURVEYOR, LEWIS D.W. SHELTON, UNDER CONTRACT NUMBER 552, SET A POST.

1970 CHARLES E. WHITTEN, PLS 12412, SET A D.N.R. CONCRETE MONUMENT, AS PER A CORNER RECORD ON FILE AT THE PUBLIC LAND SURVEY OFFICE IN OLYMPIA.

1972 AN INTERNATIONAL PAPER COMPANY CORNER RECORD, ON FILE AT THE PUBLIC LAND SURVEY OFFICE IN OLYMPIA, NOTES A D.N.R. CONCRETE MONUMENT AND REFERENCES.

1982 MICHAEL G. HOBBS, PLS 15652, FOUND A D.N.R. CONCRETE MONUMENT, AS PER LAND RECORD FILED IN BOOK 7/5 OF MONUMENTS AT PAGE 33, SKAMANIA COUNTY RECORDS.

1985 MICHAEL G. HOBBS, PLS 15652, FOUND A D.N.R. CONCRETE MONUMENT, AS PER RECORD OF SURVEY FILED IN BOOK 2 OF SURVEYS AT PAGE 190, SKAMANIA COUNTY RECORDS.

06/20/18: FOUND A D.N.R. CONCRETE MONUMENT.

THE FOLLOWING REFERENCES WERE NOTED:

- REMAINS OF AN 18" ROTTED FIR STUMP
WITH VISIBLE SCRIBING BEARS N43°E, 4.95'.

- A 32" FIR STUMP WITH VISIBLE SCRIBING BEARS S63°E, 3.96'.

- A 60" FIR WITH A BLAZED FACE BEARS S11°W, 12.12'

- A 4" FIR BEARS WEST, 13.20'.
NAIL SET RIGHT SIDE CENTER.

- AN 8" FIR SNAG WITH VISIBLE SCRIBING BEARS S11°W, 12.12'

- AN ORANGE CARSONITE WITNESS POST BEARS SOUTH 5.0'.

FIELD BOOK 3080, PAGE 26

(A11) 1/4 SECTION CORNER COMMON TO SECTIONS 4 & 33

CALCULATED CORNER

FIELD BOOK 3080, PAGE 46

HISTORY:

1899 G.L.O. SURVEYOR, LEWIS D.W. SHELTON, UNDER CONTRACT NUMBER 552, SET A POST

THERE WAS NO REMAINING EVIDENCE OF THIS CORNER IN THE FIELD NOR RECORDS INDICATING THAT IT WAS EVER FOUND.

07/11/18: AT A SINGLE PROPORTIONATE POSITION, SET A PROPERLY IDENTIFIED, STANDARD D.N.R. MONUMENT.

THE FOLLOWING REFERENCES WERE NOTED:

- A 20" CEDAR BEARS N08°E, 10.25'.

NAIL SET LEFT SIDE CENTER.

- AN 18" FIR BEARS S72°E, 9.50'.

NAIL SET RIGHT SIDE CENTER.

- A 12" HEMLOCK BEARS N36°W, 4.77'.

NAIL SET RIGHT SIDE CENTER.

- AN ORANGE CARSONITE WITNESS POST BEARS SOUTH 2.0'.

(A13) SECTION CORNER COMMON TO SECTIONS 3, 4, 33, & 34

ACCEPTED CORNER

06/26/18: FOUND A D.N.R. CONCRETE MONUMENT.

HISTORY:

1899 G.L.O. SURVEYOR, LEWIS D.W. SHELTON, UNDER CONTRACT NUMBER 552,

1969 CHARLES E. WHITTEN, PLS 12412, SET A D.N.R. CONCRETE MONUMENT,
AS PER A CORNER RECORD ON FILE AT THE PUBLIC LAND SURVEY OFFICE
IN OLYMPIA

1982 MICHAEL G. HOBBS, PLS 15652, FOUND A D.N.R. CONCRETE MONUMENT, AS PER LAND RECORD FILED IN BOOK 7/5 OF MONUMENTS AT PAGE 35, SKAMANIA COUNTY RECORDS.

06/26/18: FOUND A D.N.R. CONCRETE MONUMENT.

THE FOLLOWING REFERENCES WERE NOTED:

- A 20 FIR WITH CHOP MARKS BEARS N78°E, 36.00'.

- AN 18 FIR WITH CHOP MARKS BEARS S74°W, 37.56'.

- A 20 FIR WITH CHOP MARKS BEARS N31°W, 12.92'.

- AN ORANGE CARSONITE WITNESS POST BEARS 4.0' SOUTH.

FIELD BOOK 3080, PAGE 32

(E9) SECTION CORNER COMMON TO SECTIONS 4, 5, 8, & 9

ACCEPTED CORNER

06/25/18: FOUND A D.N.R. CONCRETE MONUMENT.

HISTOR

1899 G.L.O. SURVEYOR, LEWIS D.W. SHELTON, UNDER CONTRACT NUMBER 552,

1969 CHARLES E. WHITTEN, PLS 12412, SET A D.N.R. CONCRETE MONUMENT, AS PER A CORNER RECORD ON FILE AT THE PUBLIC LAND SURVEY OFFICE IN OLYMPIA.

1982 MICHAEL G. HOBBS, PLS 15652, FOUND A D.N.R. CONCRETE MONUMENT, AS PER LAND RECORD FILED IN BOOK 7/5 OF MONUMENTS AT PAGE 28, SKAMANIA COUNTY RECORDS.

1985 MICHAEL G. HOBBS, PLS 15652, FOUND A D.N.R. CONCRETE MONUMENT, AS PER RECORD OF SURVEY FILED IN BOOK 2 OF SURVEYS AT PAGE 190, SKAMANIA COUNTY RECORDS.

1985 WILLIAM F. HAGEDORN, PLS 9579, FOUND A D.N.R. CONCRETE MONUMENT, AS PER RECORD OF SURVEY FILED IN BOOK 2 OF SURVEYS AT PAGE 206, SKAMANIA COUNTY RECORDS.

2002 KEVIN D. BLUHM, PLS 29269, FOUND A D.N.R. CONCRETE MONUMENT, AS PER RECORD OF SURVEY FILED IN BOOK 3 OF SURVEYS AT PAGE 443, SKAMANIA COUNTY RECORDS.

06/25/18: FOUND A D.N.R. CONCRETE MONUMENT.

THE FOLLOWING REFERENCES WERE NOTED:

- A 10" HEMLOCK BEARS N61°E, 23.69'.

MEASURED FROM A 60D SPIKE IN FACE.

- A 24" HEMLOCK BEARS S31°E, 16.40.

MEASURED FROM A 60D SPIKE IN FACE.

- A 16" HEMLOCK BEARS S19°W, 10.78'.

NAIL SET LEFT SIDE CENTER.

- A 22" HEMLOCK BEARS N09°W, 16.15'.

MEASURED FROM A 60D SPIKE IN FACE.

- AN ORANGE CARSONITE WITNESS POST BEARS NORTH 4.0'.

FIELD BOOK 3080, PAGE 30

(E11) 1/4 SECTION CORNER COMMON TO SECTIONS 4 & 9

ACCEPTED CORNER

HISTORY:

1899 G.L.O. SURVEYOR, LEWIS D.W. SHELTON, UNDER CONTRACT NUMBER 552, SET A GRANITE STONE.

RECORDS OF THIS CORNER BEING FOUND WERE NOT LOCATED.

07/11/18: FOUND A 2" x 3" CEDAR HUB AND 40" HEMLOCK WITH 10" DEEP CHOP MARKS.

THE FOLLOWING REFERENCES WERE NOTED:
- A 12" HEMLOCK WITH CHOP MARKS BEARS \$73°E, 19.16'.

MEASURED FROM A 60D SPIKE IN FACE.
- A 40" HEMLOCK WITH 10" DEEP CHOP MARKS
BEARS S25°E, 22.90' (G.L.O. S24 3/4°E, 36 LINKS = 23.76')

- A STREAM BEARS APPROXIMATELY 25' TO THE WEST. (G.L.O. CALL - WEST, 0.35 CHAINS = 23.10') - A 4" HEMLOCK BEARS N50°W, 5.95'.

MEASURED FROM A 60D SPIKE IN FACE.

NAIL SET RIGHT SIDE CENTER.
- AN ORANGE CARSONITE WITNESS POST BEARS NORTH 2.0'.

FIELD BOOK 3080, PAGE 40

(E13) SECTION CORNER COMMON TO SECTIONS 3, 4, 9, & 10

ACCEPTED CORNER

06/21/18: FOUND A D.N.R. CONCRETE MONUMENT.

HISTORY

1899 G.L.O. SURVEYOR, LEWIS D.W. SHELTON, UNDER CONTRACT NUMBER 552,

1970 CHARLES E. WHITTEN, PLS 12412, SET A D.N.R. CONCRETE MONUMENT, AS PER A CORNER RECORD ON FILE AT THE PUBLIC LAND SURVEY OFFICE

1982 MICHAEL G. HOBBS, PLS 15652, FOUND A D.N.R. CONCRETE MONUMENT, AS PER LAND RECORD FILED IN BOOK 7/5 OF MONUMENTS AT PAGE 24, SKAMANIA COUNTY RECORDS.

 1985 MICHAEL G. HOBBS, PLS 15652, FOUND A D.N.R. CONCRETE MONUMENT, AS PER RECORD OF SURVEY FILED IN BOOK 2 OF SURVEYS AT PAGE 190, SKAMANIA COUNTY RECORDS.
 1985 WILLIAM F. HAGEDORN, PLS 9579, FOUND A D.N.R. CONCRETE MONUMENT,

1985 WILLIAM F. HAGEDORN, PLS 9579, FOUND A D.N.R. CONCRETE MONOMENT AS PER RECORD OF SURVEY FILED IN BOOK 2 OF SURVEYS AT PAGE 206, SKAMANIA COUNTY RECORDS.

06/21/18: FOUND A D.N.R. CONCRETE MONUMENT.

THE FOLLOWING REFERENCES WERE NOTED:
- A 4" ALDER BEARS N28°E, 12.40'.
NAIL SET RIGHT SIDE CENTER.

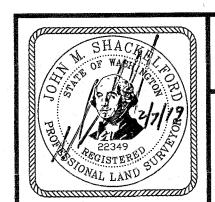
- A 28" FIR BEARS S03°E, 19.35'.

MEASURED FROM A 60D SPIKE IN FACE.

- A 28" FIR BEARS N64°W, 30.53'.
 MEASURED FROM A 60D SPIKE IN FACE.
 - A 15" FIR BEARS N24°W, 73.91'.

MEASURED FROM A 60D SPIKE IN FACE.
- AN ORANGE CARSONITE WITNESS POST BEARS WEST 2.0'.

FIELD BOOK 3080, PAGE 28



A SURVEY IN SECTION 4, TOWNSHIP 7 NORTH, RANGE 5 EAST, W.M.

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

LAND SURVEY SECTION - P.O. BOX 47030 OLYMPIA, WASHINGTON 98504-7030 (360) 902-1206

"ARCTIC COBRA S.4" SURVEY

FIELD CREW: J. CHRISTEN, R. SEILER
J. EDMINSTER, PLS

N. LINK, PLS

FIELD BOOK: 3080

FINAL MAP NUMBER: 2049

11/6/2018

SHEET 2 OF 2