Harkin Larkin Sorts Area 1
FY 2018
TIMBER CRUISE REPORT

1. **Sale Area Location:** Area 1 is located in portions of Sections 19 & 20 T8N, R6W, W.M., Clatsop County, Oregon.

2. **Fund Distribution: Fund:** BOF 100% CSL 0%
   Tax Code: 4-03 100%

3. **Sale Acreage by Area:**

Area	Harvest Type	Gross Acres	Stream Buffer Acres	New R/W Acres	Existing R/W Acres	Net Acreage	Survey Method
1	Modified Clearcut	50	2	0	2	46	GIS
TOTALS		**50**	**2**	**0**	**2**	**46**	

4. **Cruisers and Cruise Dates:** Area 1 was cruised by Bryce Rodgers with John Choate, Ed Holloran with Avery Petersen and Cody Valencia with Ella Salkeld on May 31, 2017.

5. **Cruise Method and Computation:** Area 1 is a modified clear cut unit. A variable plot cruise with a 40 BAF was used for this Area. The plots were located on a 5 chain by 3 chain grid, with a count/cruise plot ratio of 2:1. A total of 32 plots were sampled.

   Cruisers used Allegro 2 data collectors, and were downloaded to the Atterbury Super A.C.E. program at the Astoria District for computing. See the attached Cruise Design for more details on the cruise method. The cruise calculations were processed in the Astoria District office.

AREA	PROJECT	TRACT	CRUISE TYPE
1	Larkin1	A1 Take	00MC

6. **Timber Description:** **Area 1** is an approximately 85 year old stand of Douglas-fir, with some western hemlock, Sitka spruce and red alder. The average take Douglas-fir tree size for harvest is approximately 22 inches DBH, with an average merchantable tree height of 72 feet. The average take hemlock tree size is approximately 18 inches DBH, with an average merchantable tree height of 60 feet. The average take alder tree size is approximately 15 inches DBH with an average merchantable tree height of 38 feet. The average volume per acre to be harvested (net) is approximately 34 MBF. All trees were cruised to a merchantable top of 6 inch DIB or 40% fp.

   Cedar is a reserved species.

7. **Statistical Analysis: (See also "Statistics Reports," attached.)**

Area	Target CV	Target SE%	Actual CV	Actual SE%
1	45	9	49.2	8.7

The statistics is for this area and Take and Leave trees combined based on Net BF/Acre.

8. **Take Volumes by Species and Log Grades for All Sale Areas by MBF:** (See "Species, Sort Grade-Board Feet Volumes (Project)", "Statistics (Project)", and the "Stand Table Summary" attached). Volumes do not include "in-growth." The majority of defect and breakage was taken out during the cruise.

Species	DBH	Net Vol.	2 Saw	3Saw	4 Saw	% D & B	% Sale
Douglas-fir	22	1,335	1,087	222	26	2	84
W. Hemlock/fir	18	176	112	55	9	3	11
Sitka Spruce	17	26		21	5	11	2
Net Conifer Volume		1,537					97

Species	DBH	Net Vol.	12" +	10" - 11"	8" – 9"	6" – 7"	% D & B	% Sale
Alder & Other hardwoods	15	46		18		28	0	3

TOTAL NET VOLUME FOR SALE = 1,583 MBF

Sort Breakdown:

Sort #	Species	Sort Specifications	Estimated Net MBF	Sale %
1	WH/fir	6" to 20" Sawlogs	129	8
2	WH//fir	21" + Sawlogs	46	3
3	DF	6" to 20" Sawlogs	751	47
4	DF	21" + Sawlogs	584	37
5	SS	6" to 20" Sawlogs	25	2
6	RA	6"+ Camprun Sawlogs	46	3
7	Pulp	Pulp 2"+ & SS >20"	900 tons	

Pulp Volume based on approximately 2-3% of sawlog volume.

9. **Prepared by:** Bryce Rodgers **Date:** 6/8/17

10. **Approved by:** Jeremy Johnson **Date:** 9/6/2017

11. **Attachments:**
Cruise Plans & Maps – (3 pages)
Species, Sort, Grade Reports – Take (1 pages)
Statistics Reports – (1 pages)
Stand Table Report – (2 pages)
Log Stock Table Report – Take (2 pages)

CRUISE DESIGN
ASTORIA DISTRICT

Sale Name: Harkin Larkin **Area** 1

Harvest Type: **CC** PC CT "Automark Thinning" (circle one)

Approx. Cruise Acres: 50 **Estimated CV%** 40 Net BF /Acre **SE% Objective** 9 Net BF /Acre

Planned Sale Volume: 1.755 MMBF **Estimated Sale Area Value/Acre:** $18,525
(39 MBF/Ac. @ $475/Acre)

A. **Cruise Goals:** (a) Grade minimum 90 conifer and 10 hardwood trees: (b) Sample 33 cruise plots; (c) Other goals ___ Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes; ____ Determine LWD (down wood) cubic feet and decay classes; ____ Determine "diameter limit" harvest parameters.

B. **Cruise Design:**
1. **Plot Cruises:** BAF 40 (Full point; Half point) (circle one)
Fixed Plot Size ____ Plot Radius ____ feet
Cruise Line Direction(s) Due East/West - 90° / 270°
Cruise Line Spacing 5 chains 330 feet
Cruise Plot Spacing 3 chains 198 feet
Grade/Count Ratio 2:1 .
2. **ITS (Sample Tree) Cruises:** Measure-grade ratios: D-fir ____ Hemlock ____
Spruce ____ True Fir ____Cedar ____ Hardwood ____

Take plots as marked on cruise map. All cedar will be reserved. Record all snags as SN
Grade all hardwoods on grade plots. (not camp run)

C. **Tree Measurements:**
1. **Diameter:** Minimum DBH to cruise is 8 " for conifers and 8" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

2. **Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.

3. **Top Cruise Diameter (TCD):** Minimum top outside bark (DOB) for conifer is 7", 7" for hardwoods or 40 % of DOB at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of DOB @ FP for trees > 18" DBH.

4. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths in conifer and 30' and 40' for hardwoods (8'/10' multiples), whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

6. **Species, Sort, and Grade Codes:** A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
   B. Sort: Use code "1" (Domestic).
   C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull ; 9 = Utility
   Hardwoods: Either Camp Run or Grade - #1 Sawmill = 12" + scaling diameter; #2 Sawmill = 10" and 11"; #3 Sawmill = 8" and 9", and #4 Sawmill = 6" and 7".

7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

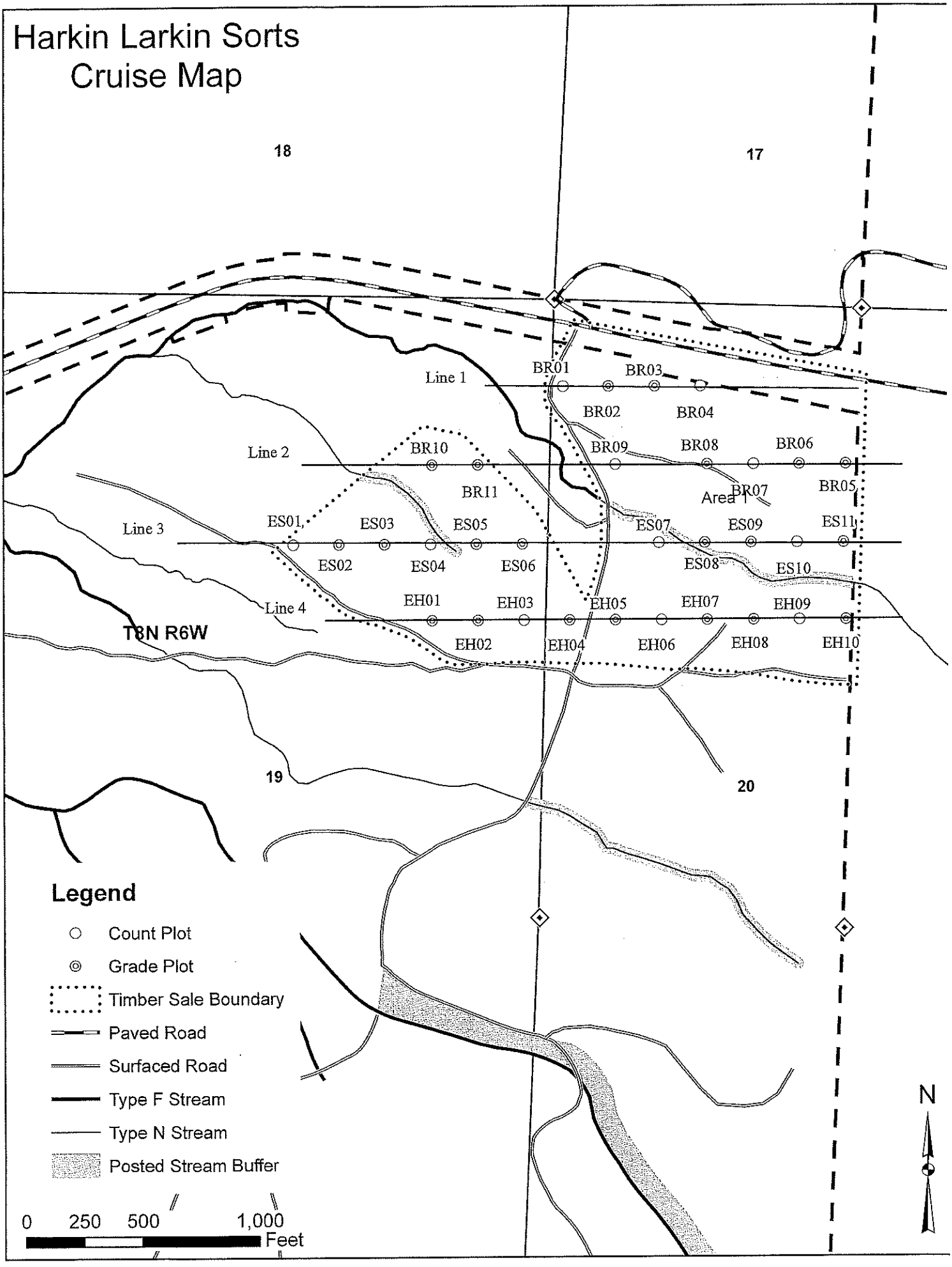
8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at intervisible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.
   ITS and 100% Cruises: Mark cruise "strips" with various colored flagging (not pink). Mark trees measured and graded with yellow paint.

9. **Cruising Equipment:** Relaskop Rangefinder Logger's Tape (with dbh on back) Biltmore Stick, Compass, Cruise Cards in Tatum OR Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.

10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Bryce Rodgers

Approved by: _____ Date: 7/26/17


Harkin Larkin Sorts
Cruise Map
18
17
Line 1
BR01
BR03
BR02
BR04
Line 2
BR10
BR09
BR08
BR06
BR11
BR07
BR05
Area 1
Line 3
ES01
ES03
ES05
ES07
ES09
ES11
ES02
ES04
ES06
ES08
ES10
Line 4
EH01
EH03
EH05
EH07
EH09
T8N R6W
EH02
EH04
EH06
EH08
EH10
19
20
Legend
Count Plot
Grade Plot
Timber Sale Boundary
Paved Road
Surfaced Road
Type F Stream
Type N Stream
Posted Stream Buffer
0
250
500
1,000
Feet
N

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: LARKIN1

Page 1
Date 7/17/2017
Time 9:09:42AM

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
08N	06W	19	A1TAKE	00MC	46.00	32	93	1	W

T08N R06W S19 T00MC

T08N R06W S19 T00MC

Spp	ST	So rt	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
D		DO	CU		100.0	495											5	23		0.00	3.5
D		DO	2S	81	.7	23,804	23,637	1,087			30	70	1	2	4	93	38	17	494	2.72	47.8
D		DO	3S	17	.8	4,856	4,816	222		93	1	6	1	4	25	69	36	8	100	0.82	48.3
D		DO	4S	2	.9	567	562	26		100			80	20			19	6	23	0.40	24.0
D	**Totals**			84	2.4	29,722	29,015	1,335		17	25	58	3	2	7	88	33	12	235	1.62	123.6
H		DO	CU		100.0	90											5	19		0.00	1.2
H		DO	2S	63	1.6	2,466	2,426	112			38	62	1		6	93	39	17	501	2.90	4.8
H		DO	3S	31		1,189	1,189	55		100					67	33	34	8	92	0.78	12.9
H		DO	4S	6		197	197	9		100			58	42			20	6	25	0.44	7.8
H	**Totals**			11	3.3	3,941	3,812	176 ~~176~~		36	24	40	4	2	25	69	29	10	143	1.21	26.8
A		DO	2S	39		396	396	18		100					100		32	11	140	1.31	2.8
A		DO	4S	61		601	601	28		100			9	36		54	31	6	46	0.62	12.9
A	**Totals**			3		997	997	46		100			6	22	40	33	31	7	63	0.75	15.8
S		DO	3S	81	13.4	522	452	21		17		83				100	40	15	355	2.70	1.3
S		DO	4S	19		102	102	5		100			100				18	8	30	0.72	3.4
S	**Totals**			2	11.2	624	554	26 ~~25~~		32		68	18			82	24	10	119	1.62	4.7
Type Totals					2.6	35,285	34,378	1,583 ~~1,581~~		22	24	54	3	3	10	84	32	11	201	1.49	170.8

TC TSTATS

STATISTICS

PROJECT LARKIN1

DATE 8/18/2017

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	06W	19	A1	00MC	46.00	32	156	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	32	156	4.9		
CRUISE	21	94	4.5	4,087	2.3
DBH COUNT					
REFOREST					
COUNT	11	61	5.5		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	75	57.6	21.5	72	31.3	145.0	29,722	29,015	6,612	6,527
WHEMLOCK	13	13.6	18.4	60	5.8	25.0	3,941	3,812	966	950
R ALDER	3	12.9	14.6	39	3.9	15.0	997	997	364	364
S SPRUCE	2	4.0	16.9	29	1.5	6.3	624	554	182	182
SNAG	1	.7	25.0	26	0.5	2.5				
TOTAL	*94*	*88.9*	*20.0*	*63*	*43.3*	*193.8*	*35,285*	*34,378*	*8,124*	*8,022*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	82.7	9.5	961	1,063	1,164			
WHEMLOCK	118.2	34.1	451	685	918			
R ALDER	69.4	48.0	47	90	133			
S SPRUCE	130.0	121.7		370	820			
SNAG								
TOTAL	*91.6*	*9.4*	*863*	*953*	*1,043*	*335*	*84*	*37*

CL: 68.1 %	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	78.5	13.9	50	58	66			
WHEMLOCK	181.3	32.0	9	14	18			
R ALDER	316.6	55.9	6	13	20			
S SPRUCE	261.0	46.1	2	4	6			
SNAG	393.5	69.5	0	1	1			
TOTAL	*75.2*	*13.3*	*77*	*89*	*101*	*226*	*56*	*25*

CL: 68.1 %	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	48.9	8.6	132	145	158			
WHEMLOCK	156.1	27.6	18	25	32			
R ALDER	315.9	55.8	7	15	23			
S SPRUCE	236.1	41.7	4	6	9			
SNAG	393.5	69.5	1	3	4			
TOTAL	*44.2*	*7.8*	*179*	*194*	*209*	*78*	*20*	*9*

CL: 68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	57.5	10.2	26,069	29,015	31,962			
WHEMLOCK	161.7	28.6	2,723	3,812	4,901			
R ALDER	316.8	56.0	439	997	1,555			
S SPRUCE	257.5	45.5	302	554	806			
SNAG								
TOTAL	*49.2*	*8.7*	*31,391*	*34,378*	*37,366*	*97*	*24*	*11*

TC TSTATS

STATISTICS

PROJECT LARKIN1

DATE 7/17/2017

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	06W	19	A1TAKE	00MC	46.00	32	153	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	32	153	4.8		
CRUISE	21	93	4.4	4,053	2.3
DBH COUNT					
REFOREST					
COUNT	11	60	5.5		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	75	57.6	21.5	72	31.3	145.0	29,722	29,015	6,612	6,527
WHEMLOCK	13	13.6	18.4	60	5.8	25.0	3,941	3,812	966	950
R ALDER	3	12.9	14.6	39	3.9	15.0	997	997	364	364
S SPRUCE	2	4.0	16.9	29	1.5	6.3	624	554	182	182
TOTAL	*93*	*88.1*	*19.9*	*63*	*42.8*	*191.3*	*35,285*	*34,378*	*8,124*	*8,022*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	82.7	9.5	961	1,063	1,164			
WHEMLOCK	118.2	34.1	451	685	918			
R ALDER	69.4	48.0	47	90	133			
S SPRUCE	130.0	121.7		370	820			
TOTAL	*90.5*	*9.4*	*873*	*964*	*1,054*	*327*	*82*	*36*

CL: 68.1 %	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	78.5	13.9	50	58	66			
WHEMLOCK	181.3	32.0	9	14	18			
R ALDER	316.6	55.9	6	13	20			
S SPRUCE	261.0	46.1	2	4	6			
TOTAL	*76.6*	*13.5*	*76*	*88*	*100*	*234*	*59*	*26*

CL: 68.1 %	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	48.9	8.6	132	145	158			
WHEMLOCK	156.1	27.6	18	25	32			
R ALDER	315.9	55.8	7	15	23			
S SPRUCE	236.1	41.7	4	6	9			
TOTAL	*45.3*	*8.0*	*176*	*191*	*207*	*82*	*20*	*9*

CL: 68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	57.5	10.2	26,069	29,015	31,962			
WHEMLOCK	161.7	28.6	2,723	3,812	4,901			
R ALDER	316.8	56.0	439	997	1,555			
S SPRUCE	257.5	45.5	302	554	806			
TOTAL	*49.2*	*8.7*	*31,391*	*34,378*	*37,366*	*97*	*24*	*11*

TC TSTNDSUM

Stand Table Summary

Project LARKIN1

T08N R06W S19 T00MC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
08N	06W	19	A1TAKE	00MC	46.00	32	93

T08N R06W S19 T00MC

Date: 07/17/20

Time: 9:11:39AM

Spc	S T	Sample DBH	Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
D		8	1	85	21	5.539	1.93	5.54	4.0	20.0		22	111		10	5
D		9	1	82	42	4.376	1.93	4.38	7.0	20.0		31	88		14	4
D		12	1	86	66	2.462	1.93	2.46	19.0	60.0		47	148		22	7
D		14	2	85	92	3.617	3.87	7.23	19.5	70.0		141	506		65	23
D		15	4	88	105	6.302	7.73	12.60	25.1	93.8		317	1,182		146	54
D		16	2	84	73	2.769	3.87	5.54	20.0	70.0		111	388		51	18
D		17	1	89	127	1.227	1.93	3.68	26.7	103.3		98	380		45	17
D		18	5	87	99	5.470	9.67	10.94	34.4	122.0		376	1,335		173	61
D		19	3	88	105	2.946	5.80	6.87	34.6	122.9		238	844		109	39
D		20	1	89	115	.886	1.93	2.66	30.0	116.7		80	310		37	14
D		21	4	87	103	3.215	7.73	6.43	49.5	172.5		318	1,109		146	51
D		22	2	84	110	1.465	3.87	3.66	45.4	168.0		166	615		76	28
D		23	3	85	101	2.010	5.80	4.02	56.5	200.0		227	804		104	37
D		24	4	87	104	2.462	7.73	5.54	55.6	211.1		308	1,169		142	54
D		25	1	89	121	.567	1.93	1.70	53.0	223.3		90	380		41	17
D		28	3	86	116	1.356	5.80	3.62	72.8	312.5		263	1,130		121	52
D		29	2	85	141	.843	3.87	2.53	71.8	336.7		182	851		84	39
D		30	1	89	146	.394	1.93	1.18	91.7	453.3		108	536		50	25
D		31	5	89	143	1.844	9.67	5.90	83.6	424.4		493	2,505		227	115
D		32	7	88	143	2.423	13.53	7.27	100.2	499.0		729	3,628		335	167
D		33	1	91	150	.326	1.93	.98	116.3	636.7		114	622		52	29
D		34	1	86	157	.307	1.93	.92	122.0	596.7		112	549		52	25
D		35	3	86	132	.868	5.80	2.60	110.7	534.4		288	1,392		133	64
D		36	4	86	144	1.094	7.73	3.28	125.2	635.8		411	2,087		189	96
D		37	1	88	107	.259	1.93	.78	106.3	503.3		83	391		38	18
D		38	4	87	136	.982	7.73	2.95	132.4	653.3		390	1,925		179	89
D		40	2	86	140	.443	3.87	1.33	126.5	686.7		168	913		77	42
D		41	1	86	130	.211	1.93	.63	148.0	726.7		94	460		43	21
D		43	2	84	146	.383	3.87	1.15	178.2	878.3		205	1,010		94	46
D		44	2	85	163	.366	3.87	1.28	175.6	928.6		225	1,190		104	55
D		47	1	85	130	.160	1.93	.48	194.0	953.3		93	459		43	21
D		Totals	75	86	95	57.572	145.00	120.14	54.3	241.5		6,527	29,015		3,002	1,335
H		12	1	92	73	2.449	1.92	4.90	12.0	45.0		59	220		27	10
H		13	2	90	69	4.173	3.85	6.26	19.3	73.3		121	459		56	21
H		15	1	89	62	1.567	1.92	3.13	18.0	70.0		56	219		26	10
H		16	1	86	81	1.377	1.92	2.75	26.0	85.0		72	234		33	11
H		20	2	88	92	1.763	3.85	3.53	44.5	162.5		157	573		72	26
H		22	1	92	93	.728	1.92	1.46	53.5	225.0		78	328		36	15
H		27	1	83	106	.484	1.92	.97	74.5	285.0		72	276		33	13
H		30	1	85	89	.392	1.92	.78	98.0	410.0		77	321		35	15
H		35	1	88	112	.288	1.92	.86	108.7	470.0		94	406		43	19
H		41	1	86	87	.210	1.92	.42	175.0	765.0		73	321		34	15
H		47	1	85	110	.160	1.92	.48	190.0	950.0		91	455		42	21
H		Totals	13	89	78	13.590	25.00	25.54	37.2	149.3		950	3,812		437	175
A		13	1	87	40	5.424	5.00	5.42	16.0	40.0		87	217		40	10
A		14	1	87	56	4.677	5.00	4.68	29.0	70.0		136	327		62	15
A		18	1	87	59	2.829	5.00	5.66	25.0	80.0		141	453		65	21
A		Totals	3	87	50	12.931	15.00	15.76	23.1	63.3		364	997		167	46
S		13	1	78	28	3.390	3.13	3.39	13.0	30.0		44	102		20	5
S		30	1	82	99	.637	3.13	1.27	108.0	355.0		138	452		63	21

TC TSTNDSUM

Stand Table Summary

Project LARKIN1

T08N R06W S19 T00MC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
08N	06W	19	A1TAKE	00MC	46.00	32	93

Date: 07/17/20
Time: 9:11:39AM

Spc	S T	Sample DBH	Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
S		Totals	2	79	39	4.027	6.25	4.66	38.9	118.7		182	554		84	25
Totals			93	86	83	88.119	191.25	166.10	48.3	207.0		8022	34,378		3,690	1,581

TC TLOGSTVB

Log Stock Table - MBF

Project: LARKIN1

T08N R06W S19 T00MC

T08N R06W S19 T00M

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
08N	06W	19	A1TAKE	00MC	46.00	32	93

Page 1
Date 7/17/2017
Time 9:11:57AM

Spp	S T	So	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches: 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-20	21-25	26-29	30-39	40+
D		DO	CU	3	5	100.0														
D		DO	CU	4	2	100.0														
D		DO	CU	6	2	100.0														
D		DO	CU	8	8	100.0														
D		DO	CU	15	6	100.0														
D		DO	2S	16	13	15.7	11	.9						5		1		6		
D		DO	2S	20	5		5	.4						4		1				
D		DO	2S	24	11		11	.8											11	
D		DO	2S	26	2		2	.2								2				
D		DO	2S	30	4		4	.3						4						
D		DO	2S	32	38		38	2.9						11			22	6		
D		DO	2S	36	24		24	1.8						5			19			
D		DO	2S	40	997	.6	992	74.3						92		127	223	389	86	74
D		DO	3S	14	1		1	.0					1							
D		DO	3S	16	2		2	.1				1	1							
D		DO	3S	24	8		8	.6					8							
D		DO	3S	28	2		2	.1					2							
D		DO	3S	32	56		56	4.2			13	19	22	2						
D		DO	3S	36	12	5.8	12	.9			4		8							
D		DO	3S	38	3		3	.2			3									
D		DO	3S	40	141	.8	139	10.4			39	31	56					13		
D		DO	4S	14	5		5	.4			5									
D		DO	4S	16	7	3.6	6	.5			4	2	0							
D		DO	4S	20	9		9	.7			9									
D		DO	4S	28	2		2	.2			2									
D		DO	4S	30	3		3	.2			3									
D		Totals			1,367	2.4	1,335	84.4			82	53	97	123	131	264	400	110	74	
H		DO	CU	4	2	100.0														
H		DO	CU	6	2	100.0														
H		DO	2S	16	1		1	.6							1					
H		DO	2S	32	7		7	4.0						2				6		
H		DO	2S	40	105	1.7	104	59.0						10	17	36	14	13	14	
H		DO	3S	32	37		37	21.0			7	8	22							
H		DO	3S	36	6		6	3.3			6									
H		DO	3S	40	12		12	6.9				3	10							
H		DO	4S	16	4		4	2.1			4									
H		DO	4S	20	2		2	.9			2									
H		DO	4S	26	4		4	2.2			4									
H		Totals			181	3.3	175	11.1			21	11	32	11	18	36	19	13	14	
A		DO	2S	32	18		18	39.7					18							
A		DO	4S	16	3		3	5.7			3									
A		DO	4S	30	10		10	21.8			10									
A		DO	4S	40	15		15	32.8			15									
A		Totals			46		46	2.9			28		18							
S		DO	3S	40	24	13.4	21	81.6				4				17				
S		DO	4S	18	5		5	18.4				5								

TC TLOGSTVB

Log Stock Table - MBF

Project: LARKIN1

T08N R06W S19 T00MC

T08N R06W S19 T00M

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
08N	06W	19	A1TAKE	00MC	46.00	32	93

Page 2
Date 7/17/2017
Time 9:11:57AM

Spp	S T	So Grt	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-20	21-25	26-29	30-39	40+
S		Totals			29	11.2	25	1.6				8				17				
Total All Species					1,623	2.6	1,581	100.0			131	72	147	134	149	317	419	124	88	

LOGGING PLAN

OF TIMBER SALE CONTRACT NO. 341-18-80
HARKIN LARKIN SORTS AREA 1
PORTIONS OF SECTION 19, AND 20 T8N, R6W,
W.M, CLATSOP COUNTY, OREGON.

Approximate Net Acreage	MC Acres
Area 1 (MC) -	46
Total Sale Acreage =	46

Logging Breakdown	Tractor	Cable
Area 1 (MC) -	100%	0%
Total=	100%	0%