



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
Harkin Larkin Area 2  
Sale AT-341-2018-44-

District: Astoria

Date: January 16, 2018

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**Cost Summary**

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,369,046.62	\$18,999.13	\$1,388,045.75
		Project Work:	\$0.00
		Advertised Value:	\$1,388,045.75





# Timber Sale Appraisal Harkin Larkin Area 2 Sale AT-341-2018-44-

**District: Astoria**

**Date: January 16, 2018**

## Timber Description

**Location:** Portions of Sections 19, and 20, T8N, R6W, W.M., Clatsop County, Oregon.

**Stand Stocking:** 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	34	0	97
Western Hemlock / Fir	16	0	97
Sitka Spruce	15	0	97
Alder (Red)	16	0	96

Volume by Grade	2S	3S & 4S 6" - 11"	8" - 9"	10" - 11"	6" - 7"	Total
Douglas - Fir	2,075	131	0	0	0	2,206
Western Hemlock / Fir	269	116	0	0	0	385
Sitka Spruce	0	35	0	0	0	35
Alder (Red)	0	0	21	12	4	37
<b>Total</b>	2,344	282	21	12	4	2,663

**Comments:** Pond Values Used: December 2018.

Expected Log Markets: Mist, Clatskanie, Tillamook, Forest Grove, Longview (WA), Chehalis (WA), Elma (WA), Raymond (WA), Banks, Warrenton, Garabaldi, Noti, Riddle, and Springfield.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:  
\$1,256/MBF = \$1,500/MBF - \$244/MBF

SCALING COST ALLOWANCE = \$5.00/MBF

BRANDING AND PAINTING COST ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE  
Hauling is equivalent to \$780 daily truck cost.

Other Costs (with Profit & Risk to be added):  
Log Loader Slash & Landing Piling (includes Move-in and Pile Materials) = \$17,522  
TOTAL Other Costs (with Profit & Risk to be added) = \$17,522

Other Costs (No Profit & Risk added):  
Machine Washing for Invasive Weed Compliance = \$2,000  
TOTAL Other Costs (No Profit & Risk added) = \$2,000



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**Logging Conditions**

<b>Combination#:</b> 1	Douglas - Fir	100.00%
	Western Hemlock / Fir	100.00%
	Sitka Spruce	100.00%
	Alder (Red)	100.00%
<b>Logging System:</b>	Shovel	<b>Process:</b> Manual Felling/Delimbing
<b>yarding distance:</b>	Medium (800 ft)	<b>downhill yarding:</b> No
<b>tree size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
<b>loads / day:</b>	9	<b>bd. ft / load:</b> 4200
<b>cost / mbf:</b>	\$104.16	
<b>machines:</b>	Shovel Logger	

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### Logging Costs

Operating Seasons: 2.00	Profit Risk: 10%
Project Costs: \$0.00	Other Costs (P/R): \$17,522.00
Slash Disposal: \$0.00	Other Costs: \$2,000.00

#### Miles of Road

Road Maintenance: \$0.44

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

#### Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	4.0
Western Hemlock / Fir	\$0.00	2.0	3.4
Sitka Spruce	\$0.00	2.0	3.4
Alder (Red)	\$0.00	2.0	3.0



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**Logging Costs Breakdown**

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling / Brand & Paint	Other	Total
<b>Douglas - Fir</b>									
\$104.16	\$0.45	\$3.29	\$100.42	\$6.58	\$21.49	\$0.00	\$7.00	\$0.75	\$244.14
<b>Western Hemlock / Fir</b>									
\$104.16	\$0.45	\$3.29	\$118.15	\$6.58	\$23.26	\$0.00	\$7.00	\$0.75	\$263.64
<b>Sitka Spruce</b>									
\$104.16	\$0.45	\$3.29	\$118.15	\$6.58	\$23.26	\$0.00	\$7.00	\$0.75	\$263.64
<b>Alder (Red)</b>									
\$104.16	\$0.46	\$3.29	\$135.20	\$6.58	\$24.97	\$0.00	\$7.00	\$0.75	\$282.41

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$790.06	\$545.92	\$0.00
Western Hemlock / Fir	\$0.00	\$671.00	\$407.36	\$0.00
Sitka Spruce	\$0.00	\$489.74	\$226.10	\$0.00
Alder (Red)	\$0.00	\$795.90	\$513.49	\$0.00



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**Summary**

**Amortized**

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00
Sitka Spruce	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	2,206	\$545.92	\$1,204,299.52
Western Hemlock / Fir	385	\$407.36	\$156,833.60
Sitka Spruce	35	\$226.10	\$7,913.50
Alder (Red)	37	\$513.49	\$18,999.13

**Gross Timber Sale Value**

**Recovery:** \$1,388,045.75

**Prepared By:** John Choate

**Phone:** 503-325-5451

### Site Prep Appraisal

**Sale Number:** 341-18-44  
**Sale Name:** Harkin Larkin A2  
**Date:** 07/13/2017

Vegetation Type/Zone	Vegetation Type/Zone Code	Production Rate (hr/ac)	Estimated Piles/Acre
Doug-fir	A	0.5	2.0
Hemlock/Fir	B	1.5	4.5
Hemlock/Spruce	C	2.0	6.0
Hemlock	D	2.0	6.0
Conifer/Hardwood	E	1.5	4.5
Whole Tree Yarding	F	0.25	0.5

Sale Area	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour C325	Total Cost/Area		
2	MC	B	67	101	\$129.00	\$12,964.50		
					In-unit Piling	<b>Sub Total =</b>	\$12,964.50	
Sale Area	Number of Landings to be Piled	Cost/Landing Pile	Total Cost/Area	Number of In-Unit Piles	Material Cost/Pile	Total Cost/Area		
2	8	\$220.00	\$1,760.00	301.5	\$5.00	\$1,507.50		
					Materials	<b>Sub Total =</b>	\$1,507.50	
					Landing Piling	<b>Sub Total =</b>	\$1,760.00	
Move-In Allowance	Number of Move-In's	Total Move-In Allowance						
\$1,290.00	1	\$1,290.00			Move-In	<b>Sub Total =</b>	\$1,290.00	
<b>Grand Total =</b>							<b>\$17,522.00</b>	



### Road Maintenance Cost Summary (Interim only)

**Sale:** Harkin Larkin Area 2  
**Date:** September 6, 2017  
**By:** Bryce Rodgers

**MBF:** 2,663  
**\$\$/MBF:** \$0.44

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
Interim Operations Entries: 1	Grader 14G	\$778	1	4	\$100	\$1,178
Final Road Maintenance						
<b>Total</b>						<b>\$1,178</b>

#### Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	2.5	1.00	0.4	4

#### Final Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	1.5			
Vibratory Roller	1.5			

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**HARKIN LARKIN AREA 2**  
**FY 2018**  
**TIMBER CRUISE REPORT**

1. **Sale Area Location:** Area 2 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	Treatment	Gross Acres	Stream Buffer Acres	New R/W Acres	Existing RW Acres	Reserve Tree Area	Net Acreage	Survey Method
2	Modified Clearcut	71	2	0	1	1	67	GIS

4. **Cruisers and Cruise Dates:** Area 2 was cruised by Bryce Rodgers with John Choate, Ed Holloran with Cody Valencia, Jenny Johnson with Ella Salkeld and John Tillotson on July 6, 2017.

5. **Cruise Method and Computation:** Area 2 is a modified clearcut 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/grade plot ratio of 2:1. A total of 41 plots were sampled.

Cruisers used Allegro 2 data collectors that 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  
2

PROJECT  
LARKIN2

TRACT  
TK

CRUISE TYPE  
00MC

**Timber Description:** Area 2 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 is approximately 33 inches DBH, with an average merchantable tree height of 113 feet. The average take hemlock tree size is approximately 16 inches DBH, with an average merchantable tree height of 37 feet. The average take red alder tree size for harvest is approximately 15 inches DBH, with an average merchantable tree height of 65 feet. The average volume per acre to be harvested (net) is approximately 39.7 MBF. All trees were cruised to a merchantable top of 6 inch DIB or 40% fp.

Cedar is a reserved species.

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

Area	Target CV	Target SE%	Actual CV	Actual SE%
2	45	9	34.7	5.4

The statistics are for all areas and Take and Leave trees combined based on Net BF/Acre.

7. **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.

## Conifer

Species	DBH	Net Vol. MBF	2 Saw	3Saw	4 Saw	% D & B	% Sale
Douglas-fir	34	2,206	2,075	131	0	1	83
Western Hemlock/fir	16	385	269	83	33	6	14
Sitka Spruce	13	35	0	22	13	28	1

## Hardwoods

Species	DBH	Net Vol. MBF	12"+	10-12"	8-10"	6-8"	% D & B	% Sale
Red Alder	16	37	0	12	21	4	10	2

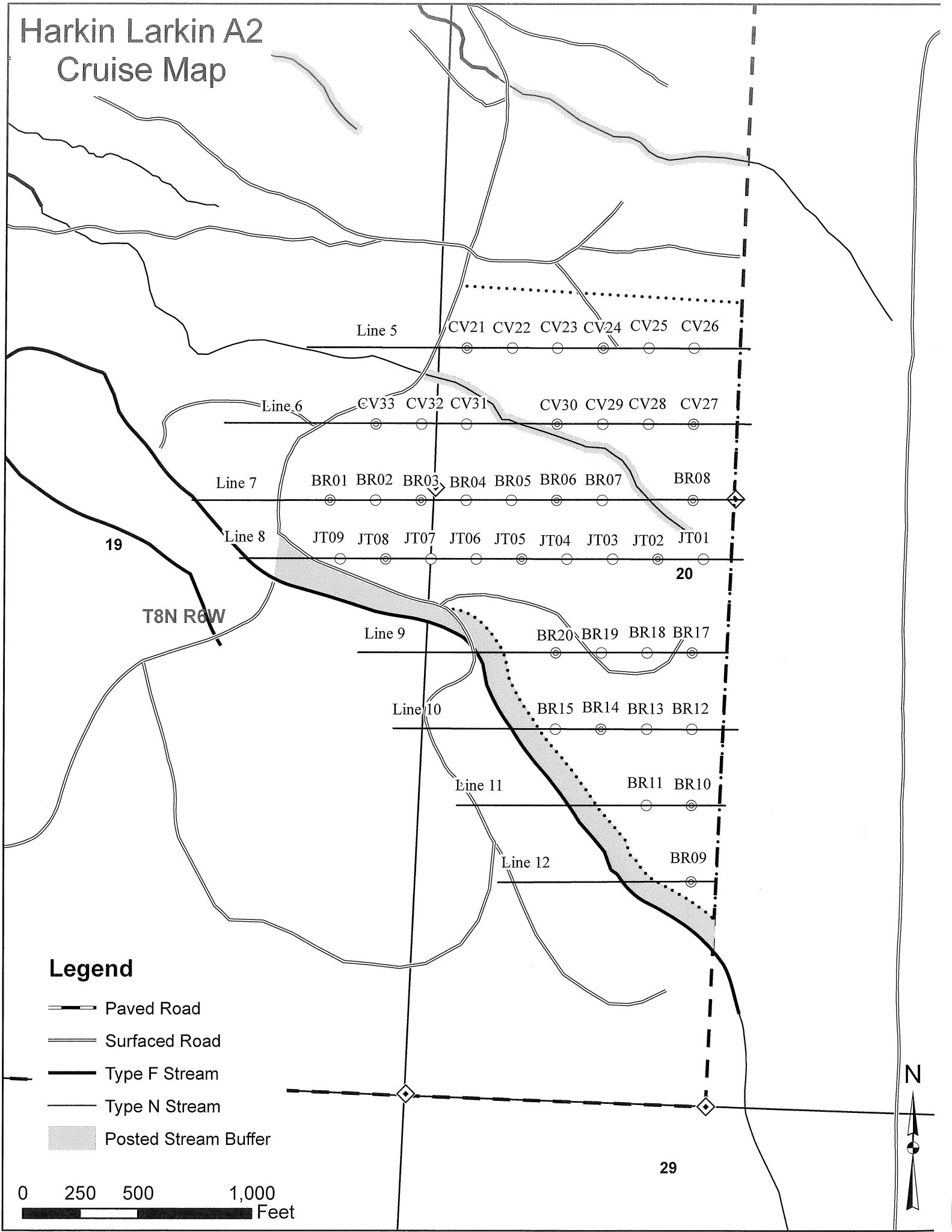
<b>TOTAL NET VOLUME</b>	<b>2,663 MBF</b>
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8. Prepared by: Cody ValenciaDate: 7/13/1710. Approved by: Date: 8/18/17

11. Attachments:

- Cruise Plans & Maps (3)
- Species, Sort, Grade Report (1)
- Statistics Reports (1)
- Stand Table Report (1)
- Log Stock Table Report MBF (2)

# Harkin Larkin A2 Cruise Map



0 250 500 1,000 Feet



T	Species, Sort Grade - Board Foot Volumes (Type)															Page 1						
Project: LARKIN2																	Date	7/18/2017				
																	Time	1:16:24PM				
T08N R06W S19 T00MC										T08N R06W S19 T00MC												
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt													
08N	06W	19	TK	00MC	67.00	41	76	1	W													
S So Gr T rt ad Spp			%	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre		
			Net BdFt	Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf			
										4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft		
D	DO	CU		100.0	194													7	26		0.00	.9
D	DO	2S	94	.4	31,095	30,976	2,075					12	88	1	1	2	95	38	20	695	3.48	44.6
D	DO	3S	6	1.5	1,989	1,960	131				70	3	26	7	18	32	43	30	11	145	1.34	13.5
D Totals			83	1.0	33,278	32,936	2,206 2,207				4	11	85	1	2	4	92	36	18	558	3.06	59.0
H	DO	CU		100.0	292													7	13		0.00	6.3
H	DO	2S	69	1.6	4,089	4,022	269				2	5	93	5	2		93	30	18	573	3.55	7.0
H	DO	3S	22		1,240	1,240	83				59	19	22		5	36	59	37	8	100	0.85	12.5
H	DO	4S	9		491	491	33				100				100			24	6	32	0.43	15.3
H Totals			14	5.9	6,112	5,753	385				23	8	70	4	11	8	78	26	10	140	1.18	41.1
S	DO	CU		100.0	202													16	8		0.00	6.7
S	DO	3S	62		327	327	22				100					100		40	14	290	2.22	1.1
S	DO	4S	38		197	197	13				100			23		77		30	7	47	0.65	4.2
S Totals			1	27.9	726	524	35				38	62		9		29	62	23	8	44	0.65	12.0
A	DO	CU		100.0	47													5	15		0.00	1.2
A	DO	2S	33		186	186	12				100					100		40	11	180	1.22	1.0
A	DO	3S	57	4.7	326	311	21				100				51	49		33	8	84	0.81	3.7
A	DO	4S	10		54	54	4				100			100				20	6	20	0.42	2.7
A Totals			1	10.1	612	551	37				100			10	29		61	26	9	64	0.77	8.6
Type Totals				2.4	40,728	39,763	2,663 2,664				9	11	80	2	4	5	89	31	13	329	2.19	120.8

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	LARKIN2		DATE	8/18/2017			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
08N	06W	19	A2	00MC	67.00	41	193	1	W		
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL		41	193	4.7							
CRUISE		20	81	4.1	4,331	1.9					
DBH COUNT											
REFOREST											
COUNT		21	101	4.8							
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		58	19.2	33.5	113	20.4	118.0	33,278	32,936	6,486	6,457
WHEMLOCK		12	30.6	15.5	37	10.2	40.0	6,112	5,753	1,353	1,289
S SPRUCE		4	9.1	14.7	27	2.8	10.7	1,311	1,144	322	277
SNAG		3	1.7	33.8	76	1.8	10.7				
R ALDER		3	3.7	15.5	65	1.2	4.9	639	577	182	173
DOUGLEAV		1	.3	37.0	123	0.3	2.0	653	653	118	118
TOTAL		81	64.6	23.0	61	38.9	186.3	41,993	41,063	8,462	8,314
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		37.6	4.9	1,792	1,885	1,978					
WHEMLOCK		134.9	40.6	454	765	1,076					
S SPRUCE		189.2	108.1		2,255	4,692					
SNAG											
R ALDER		27.2	18.8	130	160	190					
DOUGLEAV											
TOTAL		77.4	8.6	1,473	1,611	1,750	239	60	27		
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		56.6	8.8	18	19	21					
WHEMLOCK		138.0	21.5	24	31	37					
S SPRUCE		316.5	49.4	5	9	14					
SNAG		212.4	33.1	1	2	2					
R ALDER		337.6	52.7	2	4	6					
DOUGLEAV		447.1	69.8	0	0	0					
TOTAL		79.6	12.4	57	65	73	253	63	28		
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		54.6	8.5	108	118	128					
WHEMLOCK		124.5	19.4	32	40	48					
S SPRUCE		276.7	43.2	6	11	15					
SNAG		204.6	31.9	7	11	14					
R ALDER		327.7	51.1	2	5	7					
DOUGLEAV		447.1	69.8	1	2	3					
TOTAL		27.4	4.3	178	186	194	30	8	3		
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		53.4	8.3	30,192	32,936	35,679					
WHEMLOCK		137.9	21.5	4,515	5,753	6,991					
S SPRUCE		288.5	45.0	629	1,144	1,659					
SNAG											

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	LARKIN2			DATE	8/18/2017	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
08N	06W	19	A2	00MC	67.00	41	193	1	W	
CL: 68.1 %		COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD: 1.0		VAR.		S.E.%	LOW	AVG	HIGH	5	10	15
R ALDER		322.1	50.3	287	577	868				
DOUGLEAV		447.1	69.8	198	653	1,109				
TOTAL		31.8	5.0	39,026	41,063	43,100	40	10	4	

TC TSTATS				STATISTICS PROJECT LARKIN2				PAGE 1 DATE 7/18/2017		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
08N	06W	19	TK	00MC	67.00	41	177	1	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		41	177	4.3						
CRUISE		19	76	4.0	4,321	1.8				
DBH COUNT										
REFOREST										
COUNT		22	93	4.2						
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		58	19.2	33.5	113	20.4	118.0	33,278	32,936	6,486
WHEMLOCK		12	30.6	15.5	37	10.2	40.0	6,112	5,753	1,353
S SPRUCE		3	10.9	12.8	27	2.7	9.8	726	524	236
R ALDER		3	3.7	15.5	65	1.2	4.9	612	551	181
TOTAL		76	64.5	22.2	60	36.7	172.7	40,728	39,763	8,256
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		37.6	4.9	1,792	1,885	1,978				
WHEMLOCK		134.9	40.6	454	765	1,076				
S SPRUCE		140.4	97.1	4	127	250				
R ALDER		32.2	22.3	119	153	187				
TOTAL		59.8	6.9	1,463	1,571	1,678	143	36	16	
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		56.6	8.8	18	19	21				
WHEMLOCK		138.0	21.5	24	31	37				
S SPRUCE		316.9	49.4	6	11	16				
R ALDER		337.6	52.7	2	4	6				
TOTAL		85.2	13.3	56	64	73	290	72	32	
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		54.6	8.5	108	118	128				
WHEMLOCK		124.5	19.4	32	40	48				
S SPRUCE		301.0	47.0	5	10	14				
R ALDER		327.7	51.1	2	5	7				
TOTAL		32.5	5.1	164	173	181	42	11	5	
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		53.4	8.3	30,192	32,936	35,679				
WHEMLOCK		137.9	21.5	4,515	5,753	6,991				
S SPRUCE		303.0	47.3	276	524	772				
R ALDER		320.1	49.9	276	551	826				
TOTAL		34.7	5.4	37,612	39,763	41,915	48	12	5	



TC TSTNDSUM				Stand Table Summary											
				Project		LARKIN2									
T08N R06W S19 T00MC										T08N R06W S19 T00MC					
Twp	Rge	Sec	Tract	Type			Acres		Plots	Sample Trees		Page: 1			
08N	06W	19	TK	00MC			67.00		41	76		Date: 07/18/20			
												Time: 1:16:23PM			
Spc	S T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	Totals		
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.		Net Bd.Ft.	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits
D		27	1	89	136	.512	2.04	1.54	69.7	316.7	107	486	72	33	
D		28	4	89	136	1.904	8.14	5.71	74.7	360.0	426	2,056	286	138	
D		29	7	89	145	3.106	14.25	9.32	82.5	408.1	769	3,803	515	255	
D		30	3	90	150	1.244	6.11	3.73	93.6	468.9	349	1,750	234	117	
D		31	3	90	147	1.165	6.11	3.49	97.3	492.2	340	1,720	228	115	
D		32	6	89	145	2.187	12.21	6.56	101.8	503.9	668	3,305	448	221	
D		33	5	89	143	1.713	10.18	5.14	107.7	550.0	554	2,827	371	189	
D		34	3	89	137	.968	6.11	2.91	110.1	548.9	320	1,595	214	107	
D		35	4	91	155	1.219	8.14	3.66	130.1	693.3	476	2,535	319	170	
D		36	3	88	133	.864	6.11	2.59	115.3	583.3	299	1,512	200	101	
D		37	5	89	149	1.363	10.18	4.09	140.1	753.3	573	3,080	384	206	
D		38	2	89	143	.517	4.07	1.55	143.5	728.3	223	1,129	149	76	
D		39	2	89	149	.491	4.07	1.47	153.2	806.7	225	1,187	151	80	
D		40	1	89	128	.233	2.04	.70	141.7	683.3	99	478	66	32	
D		41	2	87	153	.444	4.07	1.33	172.7	895.0	230	1,192	154	80	
D		42	1	85	161	.212	2.04	.85	139.7	717.5	118	607	79	41	
D		43	1	85	137	.202	2.04	.61	172.7	873.3	105	529	70	35	
D		44	2	90	158	.386	4.07	1.35	173.1	978.6	234	1,320	157	88	
D		46	2	88	155	.353	4.07	1.06	222.2	1205.0	235	1,275	158	85	
D		49	1	86	146	.155	2.04	.47	232.3	1176.7	108	549	73	37	
D		Totals	58	89	145	19.236	118.05	58.11	111.1	566.8	6,457	32,936	4,326	2,207	
H		10	2	85	41	12.223	6.67	12.22	9.0	30.0	110	367	74	25	
H		11	1	78	72	5.051	3.33	5.05	18.0	60.0	91	303	61	20	
H		14	1	83	45	3.118	3.33	3.12	16.0	40.0	50	125	33	8	
H		15	1	85	72	2.716	3.33	2.72	24.0	70.0	65	190	44	13	
H		16	1	91	17	2.544	3.33	2.54	17.0	80.0	43	204	29	14	
H		17	1	85	50	2.115	3.33	2.11	32.0	60.0	68	127	45	9	
H		28	1	92	99	.780	3.33	1.56	94.5	425.0	147	663	99	44	
H		29	1	91	88	.727	3.33	1.45	90.5	405.0	132	589	88	39	
H		35	1	91	141	.499	3.33	1.50	136.7	763.3	205	1,142	137	77	
H		37	1	91	130	.446	3.33	1.34	131.7	683.3	176	915	118	61	
H		39	1	91	141	.402	3.33	1.21	168.0	936.7	203	1,129	136	76	
H		Totals	12	85	55	30.620	40.00	34.82	37.0	165.2	1,289	5,753	864	385	
A		14	1	87	79	1.521	1.63	3.04	20.0	60.0	61	183	41	12	
A		16	1	87	70	1.165	1.63	2.33	19.5	65.0	45	151	30	10	
A		17	1	87	87	1.032	1.63	2.06	31.5	105.0	65	217	44	15	
A		Totals	3	87	78	3.717	4.88	7.43	23.0	74.1	171	551	115	37	
S		9	1	89	17	6.748	3.25								
S		14	1	92	42	3.042	3.25	3.04	21.0	50.0	64	152	43	10	
S		23	1	82	75	1.127	3.25	2.25	52.5	165.0	118	372	79	25	
S		Totals	3	89	30	10.917	9.76	5.30	34.4	98.9	182	524	122	35	
Totals		76 87 79			64.491	172.68	105.66	76.7	376.3	8100	39,763	5,427	2,664		

Log Stock Table - MBF  
Project: LARKIN2

T08N R06W S19 T00M

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Date 7/18/2017  
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Table 1-10.251 M																			
Spp	S T	So rt	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	16-19	20-23	24-29
D		DO	CU	6	8	100.0													
D		DO	CU	10	5	100.0													
D		DO	2S	18	5		5	.2				5							
D		DO	2S	20	18		18	.8					3	4				11	
D		DO	2S	22	15		15	.7				8		7					
D		DO	2S	26	5		5	.2				3	3						
D		DO	2S	28	5		5	.2				5							
D		DO	2S	32	47	2.5	45	2.1				9	3	8	7	18			
D		DO	2S	36	4		4	.2					4						
D		DO	2S	38	20		20	.9						10	11				
D		DO	2S	40	1,934	.4	1,927	87.3				31	72	363	640	658	164		
D		DO	2S	41	31		31	1.4								31			
D		DO	3S	16	3		3	.2				3							
D		DO	3S	18	2		2	.1					2						
D		DO	3S	20	4		4	.2				4							
D		DO	3S	22	4		4	.2			2	2							
D		DO	3S	24	2		2	.1			2								
D		DO	3S	26	3		3	.1					3						
D		DO	3S	28	16		16	.7			4	12							
D		DO	3S	32	35		35	1.6			8	27							
D		DO	3S	34	6		6	.3				6							
D		DO	3S	36	3		3	.1				3							
D		DO	3S	38	4		4	.2				4							
D		DO	3S	40	51	3.9	49	2.2			3	11			11		23		
D		Totals			2,230	1.0	2,207	82.8			20	73	62	86	392	669	707	198	
H		DO	CU	5	4	100.0													
H		DO	CU	6	6	100.0													
H		DO	CU	10	9	100.0													
H		DO	2S	14	14		14	3.5				14							
H		DO	2S	30	5		5	1.4				5							
H		DO	2S	40	255	1.8	250	65.0							121	85	44		
H		DO	3S	26	4		4	1.0				4							
H		DO	3S	32	30		30	7.7				5	6		18				
H		DO	3S	36	20		20	5.3			20								
H		DO	3S	40	29		29	7.5			21	8							
H		DO	4S	24	25		25	6.4			25								
H		DO	4S	26	8		8	2.2			8								
H		Totals			409	5.9	385	14.5			74	13	23	6		140	85	44	
S		DO	CU	16	14	100.0													
S		DO	3S	40	22		22	62.4					22						
S		DO	4S	20	3		3	8.6			3								
S		DO	4S	34	10		10	29.0			10								
S		Totals			49	27.9	35	1.3			10	3		22					
A		DO	CU	5	3	100.0													
A		DO	2S	40	12		12	33.7				12							
A		DO	3S	28	2		2	5.6			2								

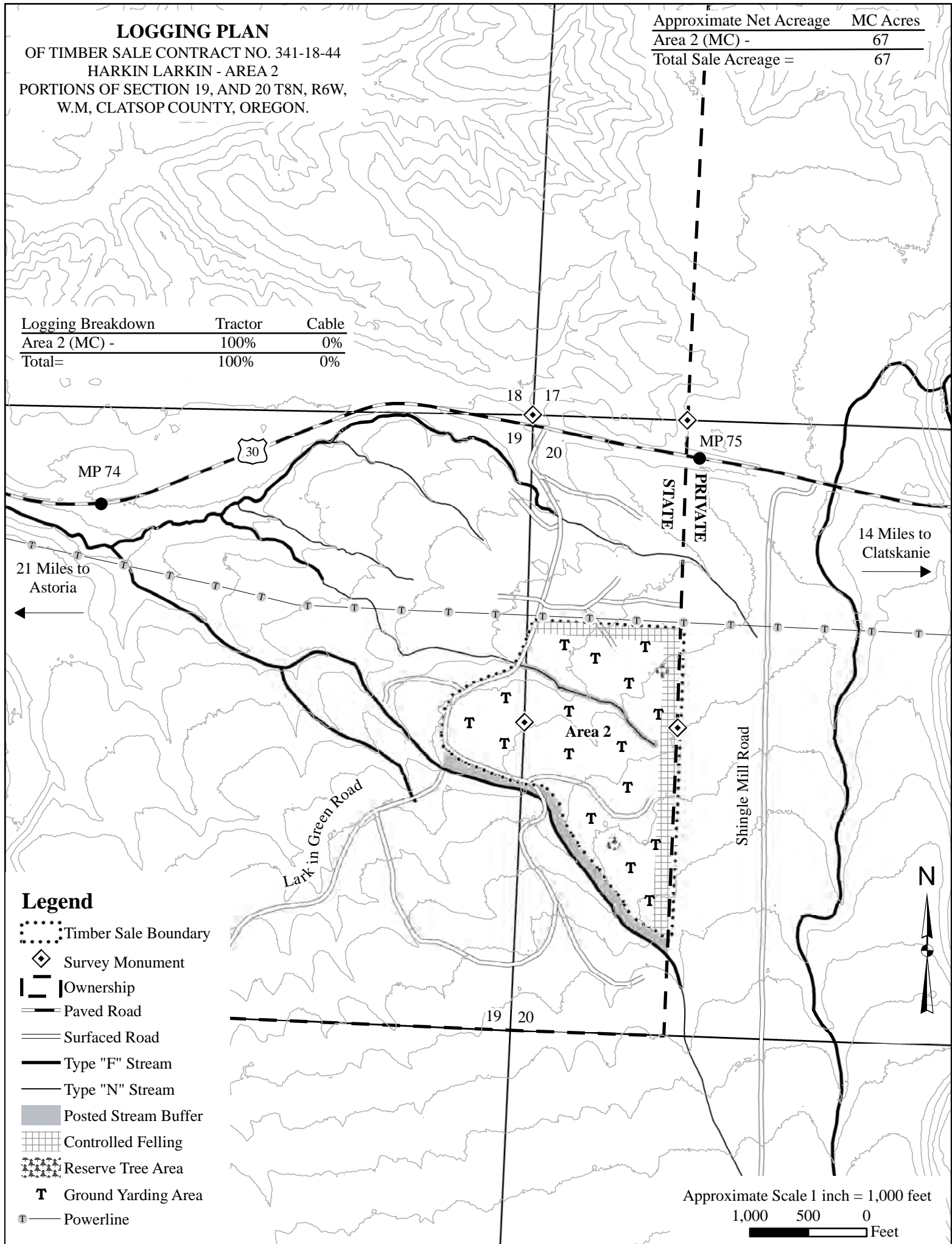
TC TLOGSTVB				Log Stock Table - MBF																
				Project: LARKIN2																
T08N R06W S19 T00MC										T08N R06W S19 T00M										
Twp	Rge	Sec	Tract			Type	Acres	Plots	Sample Trees		Page		2							
08N	06W	19	TK			00MC	67.00	41	76		Date		7/18/2017							
											Time		1:16:23PM							
S So Gr Log				Gross		%	Net	%	Net Volume by Scaling Diameter in Inches											
Spp	T	rt	de	Len	MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
A		DO	3S	30	9		9	23.3					9							
A		DO	3S	38	11	9.1	10	27.6				10								
A		DO	4S	20	4		4	9.8			4									
A Totals				41	10.1		37	1.4			6	10	21							
Total All Species				2,729	2.4		2,664	100.0			90	33	107	85	114	392	809	792	242	

# LOGGING PLAN

OF TIMBER SALE CONTRACT NO. 341-18-44  
HARKIN LARKIN - AREA 2  
PORTIONS OF SECTION 19, AND 20 T8N, R6W,  
W.M, CLATSOP COUNTY, OREGON.

Approximate Net Acreage	MC Acres
Area 2 (MC) -	67
Total Sale Acreage =	67

Logging Breakdown	Tractor	Cable
Area 2 (MC) -	100%	0%
Total=	100%	0%



## Legend

- Timber Sale Boundary
- Survey Monument
- Ownership
- Paved Road
- Surfaced Road
- Type "F" Stream
- Type "N" Stream
- Posted Stream Buffer
- Controlled Felling
- Reserve Tree Area
- T Ground Yarding Area
- Powerline

Approximate Scale 1 inch = 1,000 feet

1,000 500 0  
Feet

