



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Lost Creek South
Sale TL-341-2025-W01039-01

District: Tillamook

Date: May 22, 2024

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,110,071.38	\$180,705.06	\$1,290,776.44
		Project Work:	(\$275,114.00)
		Advertised Value:	\$1,015,662.44



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Timber Description

Location:

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	21	0	97
Western Hemlock / Fir	16	0	96
Sitka Spruce	15	0	95
Alder (Red)	15	0	95
Maple	18	0	93

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	Camprun	Total
Douglas - Fir	2,210	904	0	0	0	0	0	3,114
Western Hemlock / Fir	156	412	0	0	0	0	0	568
Sitka Spruce	29	107	0	0	0	0	0	136
Alder (Red)	0	0	293	607	485	580	0	1,965
Maple	0	0	0	0	0	0	14	14
Total	2,395	1,423	293	607	485	580	14	5,797

Comments: Pond Values Used: Local Pond Values, April, 2024.

Expected Log Markets: Warrenton, Forest Grove, Mist, Tillamook, Garibaldi, Longview, Chehalis, and Willamina.

PRICING:

Western redcedar stumpage = pond value - (Douglas-fir) logging cost.
\$727.08/MBF = \$1,200/MBF - \$472.92/MBF

Fuel cost allowance based on month local pond values were collected.

Other Costs (with Profit & Risk to be added):

Machine Washing for Invasive Weed Compliance = \$2,000.00

Ditch Filters:

Bales of straw 16 @ \$14/bale = \$224.00

4 hour of labor @ \$50/hr = \$200.00

Close unsurfaced road segments, water bar and block (C315, 8 hours) \$127/hr = \$1,016.00

TOTAL Other Costs (with Profit & Risk to be added): \$3,440.00

Other Costs (No Profit & Risk added:

None.

SLASH PILING

(See attached appraisal. Includes move-in, piling materials, end-hauling) = \$20,247.00

ROAD MAINTENANCE

(See attached Road Maintenance Cost Summary Sheet)

TOTAL Road Maintenance: \$46,546 MBF = \$8.03/MBF



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Logging Costs

Operating Seasons: 4.00	Profit Risk: 12%
Project Costs: \$275,114.00	Other Costs (P/R): \$3,440.00
Slash Disposal: \$20,247.00	Other Costs: \$0.00

Miles of Road

Road Maintenance: \$8.03

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	4.4
Western Hemlock / Fir	\$0.00	3.0	4.3
Sitka Spruce	\$0.00	2.0	4.8
Alder (Red)	\$0.00	2.0	3.8
Maple	\$0.00	2.0	3.8



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$259.15	\$8.27	\$3.03	\$146.31	\$0.59	\$50.08	\$3.49	\$2.00	\$0.00	\$472.92
Western Hemlock / Fir									
\$259.15	\$8.35	\$3.03	\$100.78	\$0.59	\$44.63	\$3.49	\$2.00	\$0.00	\$422.02
Sitka Spruce									
\$259.15	\$8.43	\$3.03	\$136.72	\$0.59	\$48.95	\$3.49	\$2.00	\$0.00	\$462.36
Alder (Red)									
\$259.15	\$8.43	\$3.03	\$172.69	\$0.59	\$53.27	\$3.49	\$2.00	\$0.00	\$502.65
Maple									
\$259.15	\$8.59	\$3.03	\$175.98	\$0.59	\$53.68	\$3.49	\$2.00	\$0.00	\$506.51

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$781.29	\$308.37	\$0.00
Western Hemlock / Fir	\$0.00	\$653.24	\$231.22	\$0.00
Sitka Spruce	\$0.00	\$598.20	\$135.84	\$0.00
Alder (Red)	\$0.00	\$594.53	\$91.88	\$0.00
Maple	\$0.00	\$518.00	\$11.49	\$0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
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District: Tillamook

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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
Maple	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,114	\$308.37	\$960,264.18
Western Hemlock / Fir	568	\$231.22	\$131,332.96
Sitka Spruce	136	\$135.84	\$18,474.24
Alder (Red)	1,965	\$91.88	\$180,544.20
Maple	14	\$11.49	\$160.86

Gross Timber Sale Value

Recovery: \$1,290,776.44

Prepared By: Ryan Simpson

Phone: 503-325-5451

Slash piling Appraisal

Sale Number: TL-341-2025-W01039-01
Sale Name: Lost Creek South
Date: 05/22/2024

Vegetation Type/Zone	Vegetation Type/Zone Code	Production Rate (hr/ac)	Estimated Piles/Acre	Landing Production Rate (hrs/30 acres)
Doug-fir	A	0.5	0.5	6
Hemlock/Fir	B	1.3	4.5	8
Hemlock/Spruce	C	1.8	6.0	10
Hemlock	D	1.8	6.0	8
Conifer/Hardwood	E	1.0	2.0	8
Whole Tree Yarding	F	0.5	0.5	12

Sale Area	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour	Total Cost/Area	
1	MC	E	8	8	\$145.00	\$1,160.00	
2	MC	E	0	0	\$145.00	\$0.00	
3	MC	E	7	7	\$145.00	\$1,015.00	
4	MC	A	0	0	\$145.00	\$0.00	
In-unit Piling						Sub Total =	\$2,175.00

Sale Area	Number of Landings to be Piled	# cable acres per area	Total Cost/Area	Number of In-Unit Piles	Material Cost/Pile	Total Cost/Area	
1	7	80	\$3,093.33	23	\$0.00	\$0.00	
2	3	78	\$3,016.00	3	\$0.00	\$0.00	
3	5	40	\$1,546.67	19	\$0.00	\$0.00	
4	3	58	\$1,682.00	3	\$0.00	\$0.00	
Materials						Sub Total =	\$0.00

*Cost includes separating firewood
 (materials supplied by ODF)
Landing Piling Sub Total = \$9,338.00

Move-In Allowance	Number of Move-In's	Total Move-In Allowance			Move-In	Sub Total =	
\$1,290.00	2	\$2,580.00	Brush Piler				
\$205.00	2	\$410.00	Dump Truck (12cy)				
Move-In						Sub Total =	\$2,990.00

Dump Truck hrs	Cost/Hour	Total	Loader hrs	Cost/Hour	Total	
32	\$99.00	\$3,168.00	16	\$161.00	\$2,576.00	
Sub Total =						\$5,744.00

Grand Total = \$20,247.00

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale: Lost Creek South
Date: February 12, 2024
By: John Czarnecki

MBF: 5,797
\$\$/MBF: \$8.03

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
First Interim Operations	Grader 14G	\$972	1	16	\$126	\$2,988
	Dump Truck 12CY	\$205	1	8	\$99	\$997
	Rubber tired backhoe	\$401	1	4	\$97	\$789
	Vibratory Roller	\$972	1	8	\$97	\$1,748
Second Interim Operations & Snow Plowing	Grader 14G	\$972	1	16	\$126	\$2,988
	Grader 14G	\$972	1	60	\$126	\$8,532
Final Road Maintenance	Dump Truck 12CY	\$205	2	30	\$99	\$3,380
	Dump Truck 12CY (bank slough end-haul)			40	\$99	\$3,960
	FE Loader C966	\$931	1	12	\$108	\$2,227
	Vibratory Roller	\$972	1	60	\$97	\$6,792
	Water Truck 2,500 gallon	\$238	1	30	\$113	\$3,628
	C315 Excavator	\$1,005	1	16	\$127	\$3,037
	C315 Excavator (bank slough removal)			40	\$127	\$5,080
Labor			8	\$50	\$400	
Total						\$46,546

First and Second Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	4.0	2.0	8.0	60
Vibratory Roller	4.0	2.0	4.0	30

Final Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	1.5	11.3	7.5	60
Vibratory Roller	1.5	11.3	7.5	60

Process and compact: All crushed rock roads

Cook Creek Road: 1.4 Miles

McPherson Road: 3.5 Miles

Lost Creek Road: 2 Miles

Unnamed Spur Roads: 4.4 Miles

Grade & Process Total: 11.3 Miles

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Lost Creek South

Project No. 1: ROAD CONSTRUCTION:

	<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
Surfaced	1A to 1B	2.00	0.04	\$4,858.00
Unsurfaced	1C to 1D	28.15	0.53	\$28,654.00
	Road Maint.			\$283.67
	Move-In			\$1,751.30
TOTALS		30.15	0.57	\$35,547

Project No. 2: ROAD IMPROVEMENT:

	<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
	l1 to l2, l3 to l4	316.55	6.00	\$176,653.00
	l5 to l6, l7 to l8			
	l9 to l10, l11 to l12			
	l13 to l14, l15 to l16			
	Road Maint.			\$1,495.33
	Move-In			\$9,231.70
TOTALS			6.00	\$187,380

SPECIAL PROJECTS (Move-In and Road Maint. are included separately as needed, for each Special Project):

<u>Description</u>	<u>Length/Vol.</u>	<u>Cost</u>
Proj. 3 Rock Crushing		\$52,187.00
TOTAL		\$52,187

GRAND TOTAL **\$275,114**

Compiled By: Kraig Kirkpatrick

Date: 12/22/2023

Move In and Maintenance Calculator for Construction and Improvement

SALE NAME: Lost Creek South

Project No. 1: ROAD CONSTRUCTION:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Length/Mile</u>	<u>Cost</u>
Surfaced	1A to 1B	2.00	0.04	\$4,858
Unsurfaced	1C to 1D	28.15	0.53	\$28,654
TOTALS		30.15	0.57	\$33,512

Project No. 2: ROAD IMPROVEMENT:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Length/Mile</u>	<u>Cost</u>
	l1 to l2, l3 to l4	316.55	6.00	\$176,653
	l5 to l6, l7 to l8			
	l9 to l10, l11 to l12			
	l13 to l14, l15 to l16			
TOTALS			6.00	\$176,653

MOVE IN (Construction & Improvement Only)

	<u>Equipment</u>	<u>Length/Mile</u>	<u>Cost</u>
	D8 Dozer		\$1,755.00
	C330 Excavator		\$1,755.00
	C315 Excavator		\$1,005.00
	14G Grader		\$972.00
	C966 Loader		\$972.00
	C580 Backhoe		\$401.00
	Vibratory Roller		\$972.00
	Water Truck (2,500gal)		\$238.00
	10-12cy Highway Dump(x6)		\$1,230.00
	20cy Highway Dump w/pup (x3)		\$717.00
	24cy Off Highway Dump		\$966.00
TOTAL			\$10,983.00

ROAD MAINTENANCE (Construction & Improvement Only)

	<u>Length/Mile</u>	<u>Cost</u>
Lost Creek Road	0.5	\$1,779.00
TOTAL		\$1,779.00

SURFACING		Subgrade prep:		Description		Stations/amount	Rate/	Cost
1A-1B	Grade, Shape and Ditch 16'					2.00	\$22.89	\$45.78
1C-1D	Grade, Shape and outslope 14'					28.15	\$22.89	\$644.35
All Spurs	Subgrade Compaction					30.15	\$25.19	\$759.48

ROAD SEGMENT	1A to 1B		POINT TO POINT		Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per station	0+00 to 2+00 Number of stations			
Base Rock	6"-0" jaw-run	0+00 to 2+00	12	75	2.00	150	\$6.78	\$1,017
Landings	6"-0" jaw-run	2+00	N/A	88	landings	88	\$6.78	\$597
Total Rock for Road Segment:						238		\$1,614

Processing:		Description	No. sta	Rate/sta	Cost
		Water, Process & Compact Base Rock (6"-0"pr):	2	\$70.47	\$140.94
SUB TOTAL FOR SURFACING			Total		238
					\$3,204

SPECIAL PROJECTS		Description	Cy/Amount	Rate	Cost
		Waste Area Erosion Control (Seeding and Mulching)			
		Straw Bales (\$/bale)	10	\$13.39	\$133.90
		Pasture Seed Mix (\$/lb)	50	\$2.00	\$100.00
		Labor	5	\$50.00	\$250.00

SUB TOTAL FOR SPECIAL PROJECTS					\$484	
					<i>Subtotal of Surfacing & Spec. Proj.</i>	\$3,688
					<i>Subtotal of Clearing, Exc., Culv.</i>	\$29,824
GRAND TOTAL						\$33,512

Compiled By: Kraig Kirkpatrick Date: 12/20/2023

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Lost Creek South 0.00 MILES
ROAD: I1 to I2, I3 to I4, I5 to I6, I7 to I8, I9 to I10, I11 to I12, 316.55 STATIONS
POINTS: I13 to I14, I15 to I16 6.00 MILES

NEW CONSTRUCTION: _____ STATIONS
IMPROVEMENT: _____ STATIONS

CLEARING & GRUBBING		Acres/amount	x	Rate	=	Cost
Method						
I1 to I2						
156+85, 160+75	Scatter outside of right of way w/330 (\$/hr)	2	x	\$195.00	=	\$390.00
			x		=	\$0.00
			x		=	\$0.00
SUB TOTAL FOR CLEARING & GRUBBING						\$390

EXCAVATION		Cy/amount	x	Rate	=	Cost
Material						
I1 to I2						
76+35	Clear/grub fill slopes & end-haul to W.A. w/330 & 10-12cy dump. (\$/hr)	2.0	x	\$225.33	=	\$450.66
	Place fill armor w/330 (\$/hr)	2.0	x	\$195.00	=	\$390.00
156+85, 160+75	Landing Construction	2.0	x	\$487.00	=	\$974.00
160+75	End-haul excess excavation to sta. 156+85 w/330 & 10-12cy dump. (\$/hr)	2.0	x	\$225.33	=	\$450.66
			x		=	\$0.00
			x		=	\$0.00
			x		=	\$0.00
SUB TOTAL FOR EXCAVATION						\$2,265

CULVERT MATERIALS AND INSTALLATION		Lineal ft.	Rate	Cost	Location	Dialtype	Lineal ft.	Rate	Cost
I1 to I2									
57+35	18/cpp	30	\$24.37	\$731.10					\$0.00
60+15	18/cpp	30	\$24.37	\$731.10					\$0.00
				\$0.00					\$0.00
				\$0.00					\$0.00
				\$0.00					\$0.00

Other/miscellaneous:		Description	Quantity	Rate	Cost
		Culvert stakes & markers: 6' x 2 1/2" white fiberglass post	4	\$25.53	\$102.12
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION					\$1,564
<i>Subtotal of Clearing, Exc., Culv.</i>					\$4,220

SURFACING		Description		Stations/ amount	Rate/ sta/amt	Cost
Subgrade prep:		Grade, Shape and Ditch 16'		32.00	x	\$30.98
11-12		Grade, Shape outslope 14'		284.55	x	\$22.89
All spurs plus portions of 11-12		Install cross drain energy dissipators w/315 & 10-12cy		2.00	x	\$225.33
11-12		Install rock ditch filters w/315 & 10-12cy truck(\$/diss.)		6.00	x	\$28.60
11-12, 13-14, 15-16		Load and haul bank slough material (\$/sta.)		92.20	x	\$52.00
11-12		Ditch/drainage reestablishment & culv. cleanout w/grader, 315ex. & 10-12		32.00	x	\$25.19
All spurs		Subgrade Compaction		316.55	x	\$7,973.89
ROAD SEGMENT						
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Cost
				Volume (CY) per	Sta. to Sta. 0+00 to 193+35 Number of	
Surface Leveling Rock	1 1/2"-0" crushed	0+00 to 20+95(x7), 19+10, 26+06, 31+10, 32+00, 36+30(x2), 112+55, 130+80, 140+45, 146+77	N/A	11 load	17 loads	\$6,801
Surfacing	1 1/2"-0" crushed	20+95 to 33+00, 38+40 to 43+80, 54+05 to 65+55, 70+10 to 73+45, 74+75 to 77+75, 80+20 to 86+50, 101+50 to 103+50, 107+30 to 117+20, 119+85 to 121+85, 149+90 to 155+50, 162+55 to 165+65, 179+90 to 192+20	2	13 station	76.5 stations	\$36,170
Turnouts	1 1/2"-0" crushed	25+05,49+65,70+4 0.80+90,85+45,	2	11 turnout	5	\$2,000
Turnaround	1 1/2"-0" crushed	49+65	2	11 turnaround	1	\$400
Culvert Bedding and Backfill	1 1/2"-0" crushed	57+35, 60+15	N/A	33 culvert	2	\$2,400
Base Leveling Rock	6"-0" jaw-run	76+35(x2), 179+90 to 193+35	N/A	11 load	10	\$746
Base Rock Surfacing	6"-0" jaw-run	159+75 to 161+75, 173+65 to 193+35	10	63 station	21.7	\$9,269
Base Rock Turnaround	6"-0" jaw-run	140+45, 192+20	10	33 turnaround	2	\$447
Landings	6"-0" jaw-run	156+85, 160+75, 193+35	N/A	110 landing	3	\$2,237
Rock Ditch Filters	6"-0" jaw-run	30+80, 64+55, 76+35, 102+50, 113+75, 120+85	N/A	3 filter series	6	\$447
Culvert Energy Dissipator	24"-6" riprap	57+35, 60+15	N/A	11 dissipator	2	\$145
Fill Armoring	24"-6" riprap	76+35	N/A	11 load	16	\$1,156
Total Rock for Road Segment: 3,451 \$62,220						
ROAD SEGMENT						
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Cost
				Volume (CY) per	Sta. to Sta. 0+00 to 24+70 Number of	
Total Rock for Road Segment: 3,451 \$62,220						

Surfacing	1 1/2"-0" crushed	0+00 to 6+50,	2	station	13	stations	16.0	208	\$36.37	\$7,565
Surface Leveling Rock	1 1/2"-0" crushed	15+20 to 24+70	N/A	load	11	loads	2	22	\$36.37	\$800
Turnaround	1 1/2"-0" crushed	17+60, 23+20	2	turnaround	22	turnaround	1	22	\$36.37	\$800
Total Rock for Road Segment:										
13 to 14										
252										
\$9,165										
ROAD SEGMENT										
15 to 16										
POINT TO POINT										
15 to 16										
Sta. to Sta.										
0+00 to 9+50										
Number of										
Application										
Rock Size and Type										
Location										
Depth of Rock (inches)										
Volume (CY) per										
Cost										
Surfacing	1 1/2"-0" crushed	0+00 to 7+25	2	station	13	stations	7.25	94	\$36.37	\$3,428
Base Rock Surfacing	6"-0" jaw-run	7+25 to 9+50	10	station	63	stations	2.25	142	\$6.78	\$961
Base Rock Turnaround	6"-0" jaw-run	7+25	10	turnaround	33	turnaround	2	66	\$6.78	\$447
Landings	6"-0" jaw-run	9+50	N/A	landing	110	landings	1	110	\$6.78	\$746
Total Rock for Road Segment:										
15 to 16										
412										
\$5,582										
ROAD SEGMENT										
17 to 18										
POINT TO POINT										
17 to 18										
Sta. to Sta.										
0+00 to 6+25										
Number of										
Application										
Rock Size and Type										
Location										
Depth of Rock (inches)										
Volume (CY) per										
Cost										
Surfacing	1 1/2"-0" crushed	0+00 to 5+50	2	station	13	stations	5.5	72	\$36.37	\$2,600
Surface Leveling Rock	1 1/2"-0" crushed	3+25	N/A	load	11	loads	3	33	\$36.37	\$1,200
Turnaround	1 1/2"-0" crushed	1+35	2	turnaround	22	turnaround	1	22	\$36.37	\$800
Base Rock Surfacing	6"-0" jaw-run	5+50 to 6+25	10	station	63	stations	0.75	47	\$6.78	\$320
Landings	6"-0" jaw-run	6+25	N/A	landing	110	landings	1	110	\$6.78	\$746
Total Rock for Road Segment:										
17 to 18										
284										
\$5,667										
ROAD SEGMENT										
19 to 110										
POINT TO POINT										
19 to 110										
Sta. to Sta.										
0+00 to 78+05										
Number of										
Application										
Rock Size and Type										
Location										
Depth of Rock (inches)										
Volume (CY) per										
Cost										
Surfacing	3/4"-0" crushed	11+55 to 16+00,	2	station	13	stations	20.85	271	\$36.37	\$9,858
Surfacing	1 1/2"-0" crushed	21+50 to 28+45,	2	station	13	stations	35.1	456	\$36.37	\$16,596
		30+30 to 39+75								
		41+80 to 76+90								
		0+80, 2+05, 3+80,								
		6+20, 9+00, 17+90,								
		19+90(x2), 41+80,								
		43+15, 52+00(x2),								
		52+90(x2), 55+80,								
		56+90, 58+55(x2),								
		62+00(x2), 65+90,								
		67+45, 69+15(x2),								
		71+00, 72+85,								
		75+30(x2), 76+20								
Surface Leveling Rock	1 1/2"-0" crushed	76+90 to 78+05	N/A	load	11	loads	29	319	\$36.37	\$11,602
Base Rock Surfacing	6"-0" jaw-run	78+05	N/A	station	63	stations	1.15	72	\$6.78	\$491
Landings	6"-0" jaw-run	78+05	N/A	landing	110	landings	1	110	\$6.78	\$746
Total Rock for Road Segment:										
19 to 110										
1,229										
\$39,293										
ROAD SEGMENT										
111 to 112										
POINT TO POINT										
111 to 112										
Sta. to Sta.										
0+00 to 1+50										
Number of										
Application										
Rock Size and Type										
Location										
Depth of Rock (inches)										
Volume (CY) per										
Cost										
Base Rock Surfacing	6"-0" jaw-run	0+00 to 1+50	10	station	63	stations	1.5	95	\$6.78	\$641
Landings	6"-0" jaw-run	1+50	N/A	landing	110	landings	1	110	\$6.78	\$746
Total Rock for Road Segment:										
111 to 112										
205										
\$1,387										
ROAD SEGMENT										
113 to 114										
POINT TO POINT										
113 to 114										
Sta. to Sta.										
0+00 to 2+20										
Number of										
Application										
Rock Size and Type										
Location										
Depth of Rock (inches)										
Volume (CY) per										
Cost										

Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT Volume (CY) per	Sta. to Sta. 0+00 to 1+00 Number of	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Surfacing	1 1/2"-0" crushed	0+00 to 1+00	2	station 13	stations 1.0	13	\$36.37	\$473
Base Rock Surfacing	6"-0" jaw-run	0+00 to 2+20	10	station 63	stations 2.2	139	\$6.78	\$940
Landings	6"-0" jaw-run	2+20	N/A	landing 110	landings 1	110	\$6.78	\$746
Total Rock for Road Segment: \$2,158								
ROAD SEGMENT								
115 to 116								
POINT TO POINT								
115 to 116								
Depth of Rock (inches)								
10								
Location								
0+00 to 1+00								
Number of								
1								
stations								
63								
Rate/ Sta./ amt.								
\$6.78								
Cost								
\$427								
Landings								
9+50								
Rate/ Sta./ amt.								
\$6.78								
Cost								
\$746								
Total Rock for Road Segment: \$1,173								
115 to 116								
Number of								
173								
Rate/ Sta./ amt.								
\$6.78								
Cost								
\$1,173								

Processing:

Description	No.sta	Rate/sta	Cost
Water, Process & Compact 6"-0" jaw-run:	30.55	\$70.47	\$2,153
Surface Rock Water, Process & Compact	285.00	\$70.47	\$20,084

SUB TOTAL FOR SURFACING 3/4"-0" crushed 2,575 6.266 **\$170,464**

SPECIAL PROJECTS		Description	Cy/Amount	Rate	Cost
Erosion Control (Seeding and Mulching)					
		Straw Bales (\$/bale)	50	\$13.39	\$669.50
		Pasture Seed Mix (\$/lb)	150	\$2.00	\$300.00
		Labor	20	\$50.00	\$1,000.00
SUB TOTAL FOR SPECIAL PROJECTS					\$1,970
Subtotal of Surfacing & Spec. Proj.					\$172,433
Subtotal of Cleaning, Exc., Culv.					\$4,220
GRAND TOTAL					\$176,653

Compiled By: Kraig Kirkpatrick Date: 12/19/2023

Projects Road Maintenance Cost Summary

Sale: Lost Creek South
Date: 22-Dec-23
By: Kraig Kirkpatrick

Type	Equipment/Rationale			Hours	Rate	Cost
Project Work	Grader 14G			5	\$126	\$630
Final Haul	Dump Truck 12CY			1	\$99	\$99
Road	FE Loader C966			1		\$0
Maintenance	Vibratory Roller			5	\$97	\$485
	Water Truck 2,500 gallon			5	\$113	\$565
Total						\$1,779

Production Rates	Miles/day	Distance(miles)	Days
Grader	1.5	0.75	0.5
Vibratory Roller	1.5	0.75	0.5

NOTE:

Lost Creek Road From Quarry to Guard Dog Spur	0.50	Miles
Quarry to Lost Creek Stockpile Site	0.25	Miles
		Miles
		Miles
TOTAL=	0.75	Miles

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Lost Creek South

Project No. 1: ROAD CONSTRUCTION:

	<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
Surfaced	1A to 1B	2.00	0.04	\$4,858.00
Unsurfaced	1C to 1D	28.15	0.53	\$28,654.00
	Road Maint.			\$283.67
	Move-In			\$1,751.30
TOTALS		30.15	0.57	\$35,547

Project No. 2: ROAD IMPROVEMENT:

	<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
	l1 to l2, l3 to l4	316.55	6.00	\$176,653.00
	l5 to l6, l7 to l8			
	l9 to l10, l11 to l12			
	l13 to l14, l15 to l16			
	Road Maint.			\$1,495.33
	Move-In			\$9,231.70
TOTALS			6.00	\$187,380

SPECIAL PROJECTS (Move-In and Road Maint. are included separately as needed, for each Special Project):

<u>Description</u>	<u>Length/Vol.</u>	<u>Cost</u>
Proj. 3 Rock Crushing		\$52,187.00
TOTAL		\$52,187

GRAND TOTAL **\$275,114**

Compiled By: Kraig Kirkpatrick

Date: 12/22/2023

Move In and Maintenance Calculator for Construction and Improvement

SALE NAME: Lost Creek South

Project No. 1: ROAD CONSTRUCTION:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Length/Mile</u>	<u>Cost</u>
Surfaced	1A to 1B	2.00	0.04	\$4,858
Unsurfaced	1C to 1D	28.15	0.53	\$28,654
TOTALS		30.15	0.57	\$33,512

Project No. 2: ROAD IMPROVEMENT:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Length/Mile</u>	<u>Cost</u>
	11 to 12, 13 to 14	316.55	6.00	\$176,653
	15 to 16, 17 to 18			
	19 to 110, 111 to 112			
	113 to 114, 115 to 116			
TOTALS			6.00	\$176,653

MOVE IN (Construction & Improvement Only)

	<u>Equipment</u>	<u>Length/Mile</u>	<u>Cost</u>
	D8 Dozer		\$1,755.00
	C330 Excavator		\$1,755.00
	C315 Excavator		\$1,005.00
	14G Grader		\$972.00
	C966 Loader		\$972.00
	C580 Backhoe		\$401.00
	Vibratory Roller		\$972.00
	Water Truck (2,500gal)		\$238.00
	10-12cy Highway Dump(x6)		\$1,230.00
	20cy Highway Dump w/pup (x3)		\$717.00
	24cy Off Highway Dump		\$966.00
TOTAL			\$10,983.00

ROAD MAINTENANCE (Construction & Improvement Only)

	<u>Length/Mile</u>	<u>Cost</u>
Lost Creek Road	0.5	\$1,779.00
TOTAL		\$1,779.00

SURFACING		Subgrade prep:		Description		Stations/	Rate/	Cost		
1A-1B	1C-1D	1A to 1B	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT	Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
1A-1B	1C-1D	1A to 1B	6"-0" jaw-run	0+00 to 2+00	12	1A to 1B	0+00 to 2+00	150	\$22.89	\$45.78
			6"-0" jaw-run	2+00	N/A	Volume (CY)	Number of stations	88	\$22.89	\$644.35
						per	landings	1	\$25.19	\$759.48
								238		

Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT	Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Base Rock	6"-0" jaw-run	0+00 to 2+00	12	1A to 1B	0+00 to 2+00	150	\$6.78	\$1,017
Landings	6"-0" jaw-run	2+00	N/A	1A to 1B	landings	88	\$6.78	\$597
Total Rock for Road Segment: 1A to 1B \$1,614								

Processing:		Description	No. sta	Rate/sta	Cost
		Water, Process & Compact Base Rock (6"-0"pr):	2	\$70.47	\$140.94
SUB TOTAL FOR SURFACING			Total		\$3,204
			238		

SPECIAL PROJECTS		Description	Cy/Amount	Rate	Cost
		Waste Area Erosion Control (Seeding and Mulching)			
		Straw Bales (\$/bale)	10	\$13.39	\$133.90
		Pasture Seed Mix (\$/lb)	50	\$2.00	\$100.00
		Labor	5	\$50.00	\$250.00

SUB TOTAL FOR SPECIAL PROJECTS					\$484
					\$3,688
					\$29,824
GRAND TOTAL					\$33,512

Subtotal of Surfacing & Spec. Proj. \$3,688
 Subtotal of Clearing, Exc., Culv. \$29,824

Compiled By: Kraig Kirkpatrick Date: 12/20/2023

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Lost Creek South 0.00 MILES
ROAD: I1 to I2, I3 to I4, I5 to I6, I7 to I8, I9 to I10, I11 to I12, 316.55 STATIONS
POINTS: I13 to I14, I15 to I16 6.00 MILES

NEW CONSTRUCTION: STATIONS
IMPROVEMENT: STATIONS

CLEARING & GRUBBING		Acres/amount	x	Rate	=	Cost
I1 to I2	Method					
156+85, 160+75	Scatter outside of right of way w/330 (\$/hr)	2	x	\$195.00	=	\$390.00
			x		=	\$0.00
			x		=	\$0.00
SUB TOTAL FOR CLEARING & GRUBBING						\$390

EXCAVATION		Cy/amount	x	Rate	=	Cost
I1 to I2	Material					
76+35	Clear/grub fill slopes & end-haul to W.A. w/330 & 10-12cy dump. (\$/hr)	2.0	x	\$225.33	=	\$450.66
	Place fill armor w/330 (\$/hr)	2.0	x	\$195.00	=	\$390.00
156+85, 160+75	Landing Construction	2.0	x	\$487.00	=	\$974.00
160+75	End-haul excess excavation to sta. 156+85 w/330 & 10-12cy dump. (\$/hr)	2.0	x	\$225.33	=	\$450.66
			x		=	\$0.00
			x		=	\$0.00
			x		=	\$0.00
SUB TOTAL FOR EXCAVATION						\$2,265

CULVERT MATERIALS AND INSTALLATION		Lineal ft.	Rate	Cost	Location	Dialtype	Lineal ft.	Rate	Cost
I1 to I2									
57+35	18/cpp	30	\$24.37	\$731.10					\$0.00
60+15	18/cpp	30	\$24.37	\$731.10					\$0.00
				\$0.00					\$0.00
				\$0.00					\$0.00
				\$0.00					\$0.00

Other/miscellaneous:		Description	Quantity	Rate	Cost
		Culvert stakes & markers: 6' x 2 1/2" white fiberglass post	4	\$25.53	\$102.12
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION					\$1,564
<i>Subtotal of Clearing, Exc., Culv.</i>					\$4,220

SURFACING		Description		Stations/ amount	Rate/ sta/amt	Cost
Subgrade prep:		Grade, Shape and Ditch 16'		32.00	x	\$30.98
11-12		Grade, Shape outside 14'		284.55	x	\$22.89
All spurs plus portions of 11-12		Install cross drain energy dissipators w/315 & 10-12cy		2.00	x	\$225.33
11-12		Install rock ditch filters w/315 & 10-12cy truck(\$/diss.)		6.00	x	\$225.33
11-12, 13-14, 15-16		Load and haul bank slough material (\$/sta.)		92.20	x	\$28.60
11-12		Ditch/drainage reestablishment & culv. cleanout w/grader, 315ex. & 10-12		32.00	x	\$52.00
All spurs		Subgrade Compaction		316.55	x	\$25.19
						\$7,973.89
ROAD SEGMENT						
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Cost
				Volume (CY) per	Sta. to Sta. 0+00 to 193+35 Number of	
Surface Leveling Rock	1 1/2"-0" crushed	0+00 to 20+95(x7), 19+10, 26+06, 31+10, 32+00, 36+30(x2), 112+55, 130+80, 140+45, 146+77	N/A	load 11	17 loads	\$36.37
Surfacing	1 1/2"-0" crushed	20+95 to 33+00, 38+40 to 43+80, 54+05 to 65+55, 70+10 to 73+45, 74+75 to 77+75, 80+20 to 86+50, 101+50 to 103+50, 107+30 to 117+20, 119+85 to 121+85, 149+90 to 155+50, 162+55 to 165+65, 179+90 to 192+20	2	station 13	76.5 stations	\$36.170
Turnouts	1 1/2"-0" crushed	25+05-49+65, 70+4	2	turnout 11	5	\$36.37
Turnaround	1 1/2"-0" crushed	0.80+90,85+45, 49+65	2	turnaround 11	1	\$400
Culvert Bedding and Backfill	1 1/2"-0" crushed	57+35, 60+15	N/A	culvert 33	2	\$2,400
Base Leveling Rock	6"-0" jaw-run	76+35(x2), 179+90 to 193+35	N/A	load 11	10	\$746
Base Rock Surfacing	6"-0" jaw-run	159+75 to 161+75, 173+65 to 193+35	10	station 63	21.7	\$6.78
Base Rock Turnaround	6"-0" jaw-run	140+45, 192+20	10	turnaround 33	2	\$447
Landings	6"-0" jaw-run	156+85, 160+75, 193+35	N/A	landing 110	3	\$2,237
Rock Ditch Filters	6"-0" jaw-run	30+80, 64+55, 76+35, 102+50, 113+75, 120+85	N/A	3 filter series 11	6	\$447
Culvert Energy Dissipator	24"-6" riprap	57+35, 60+15	N/A	dissipator 11	2	\$145
Fill Armoring	24"-6" riprap	76+35	N/A	load 11	16	\$1,156
Total Rock for Road Segment: 3,451						
ROAD SEGMENT						
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Cost
				Volume (CY) per	Sta. to Sta. 0+00 to 24+70 Number of	
Total Rock for Road Segment: 3,451						
Total Rock for Road Segment: \$62,220						

Surfacing	1 1/2"-0" crushed	0+00 to 6+50,	2	station	13	stations	16.0	208	\$36.37	\$7,565
Surface Leveling Rock	1 1/2"-0" crushed	15+20 to 24+70	N/A	load	11	loads	2	22	\$36.37	\$800
Turnaround	1 1/2"-0" crushed	17+60, 23+20	2	turnaround	22	turnaround	1	22	\$36.37	\$800
Total Rock for Road Segment:										
13 to 14										
252										
\$9,165										
ROAD SEGMENT										
15 to 16										
POINT TO POINT										
15 to 16										
Sta. to Sta.										
0+00 to 9+50										
Number of										
Application										
Rock Size and Type										
Location										
Depth of Rock (inches)										
Volume (CY) per										
Cost										
Surfacing	1 1/2"-0" crushed	0+00 to 7+25	2	station	13	stations	7.25	94	\$36.37	\$3,428
Base Rock Surfacing	6"-0" jaw-run	7+25 to 9+50	10	station	63	stations	2.25	142	\$6.78	\$961
Base Rock Turnaround	6"-0" jaw-run	7+25	10	turnaround	33	turnaround	2	66	\$6.78	\$447
Landings	6"-0" jaw-run	9+50	N/A	landing	110	landings	1	110	\$6.78	\$746
Total Rock for Road Segment:										
15 to 16										
412										
\$5,582										
ROAD SEGMENT										
17 to 18										
POINT TO POINT										
17 to 18										
Sta. to Sta.										
0+00 to 6+25										
Number of										
Application										
Rock Size and Type										
Location										
Depth of Rock (inches)										
Volume (CY) per										
Cost										
Surfacing	1 1/2"-0" crushed	0+00 to 5+50	2	station	13	stations	5.5	72	\$36.37	\$2,600
Surface Leveling Rock	1 1/2"-0" crushed	3+25	N/A	load	11	loads	3	33	\$36.37	\$1,200
Turnaround	1 1/2"-0" crushed	1+35	2	turnaround	22	turnaround	1	22	\$36.37	\$800
Base Rock Surfacing	6"-0" jaw-run	5+50 to 6+25	10	station	63	stations	0.75	47	\$6.78	\$320
Landings	6"-0" jaw-run	6+25	N/A	landing	110	landings	1	110	\$6.78	\$746
Total Rock for Road Segment:										
17 to 18										
284										
\$5,667										
ROAD SEGMENT										
19 to 110										
POINT TO POINT										
19 to 110										
Sta. to Sta.										
0+00 to 78+05										
Number of										
Application										
Rock Size and Type										
Location										
Depth of Rock (inches)										
Volume (CY) per										
Cost										
Surfacing	3/4"-0" crushed	11+55 to 16+00,	2	station	13	stations	20.85	271	\$36.37	\$9,858
Surfacing	1 1/2"-0" crushed	21+50 to 28+45,	2	station	13	stations	35.1	456	\$36.37	\$16,596
		30+30 to 39+75								
		41+80 to 76+90								
		0+80, 2+05, 3+80,								
		6+20, 9+00, 17+90,								
		19+90(x2), 41+80,								
		43+15, 52+00(x2),								
		52+90(x2), 55+80,								
		56+90, 58+55(x2),								
		62+00(x2), 65+90,								
		67+45, 69+15(x2),								
		71+00, 72+85,								
		75+30(x2), 76+20								
Surface Leveling Rock	1 1/2"-0" crushed	76+90 to 78+05	N/A	load	11	loads	29	319	\$36.37	\$11,602
Base Rock Surfacing	6"-0" jaw-run	78+05	N/A	station	63	stations	1.15	72	\$6.78	\$491
Landings	6"-0" jaw-run	78+05	N/A	landing	110	landings	1	110	\$6.78	\$746
Total Rock for Road Segment:										
19 to 110										
1,229										
\$39,293										
ROAD SEGMENT										
111 to 112										
POINT TO POINT										
111 to 112										
Sta. to Sta.										
0+00 to 1+50										
Number of										
Application										
Rock Size and Type										
Location										
Depth of Rock (inches)										
Volume (CY) per										
Cost										
Base Rock Surfacing	6"-0" jaw-run	0+00 to 1+50	10	station	63	stations	1.5	95	\$6.78	\$641
Landings	6"-0" jaw-run	1+50	N/A	landing	110	landings	1	110	\$6.78	\$746
Total Rock for Road Segment:										
111 to 112										
205										
\$1,387										
ROAD SEGMENT										
113 to 114										
POINT TO POINT										
113 to 114										
Sta. to Sta.										
0+00 to 2+20										
Number of										
Application										
Rock Size and Type										
Location										
Depth of Rock (inches)										
Volume (CY) per										
Cost										

Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT Volume (CY) per	Sta. to Sta. 0+00 to 1+00 Number of	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Surfacing	1 1/2"-0" crushed	0+00 to 1+00	2	station 13	stations 1.0	13	\$36.37	\$473
Base Rock Surfacing	6"-0" jaw-run	0+00 to 2+20	10	station 63	stations 2.2	139	\$6.78	\$940
Landings	6"-0" jaw-run	2+20	N/A	landing 110	landings 1	110	\$6.78	\$746
Total Rock for Road Segment: \$2,158								
ROAD SEGMENT								
115 to 116								
POINT TO POINT								
115 to 116								
Depth of Rock (inches)								
10								
Location								
0+00 to 1+00								
Number of								
1								
stations								
63								
Rate/ Sta./ amt.								
\$6.78								
Cost								
\$427								
Landings								
9+50								
Rate/ Sta./ amt.								
\$6.78								
Cost								
\$746								
Total Rock for Road Segment: \$1,173								
115 to 116								
173								
TOTAL								
34"-0" crushed								
2,575								
Rate								
6,266								
Cost								
\$170,464								

Processing:

Description	No.sta	Rate/sta	Cost
Water, Process & Compact 6"-0" jaw-run:	30.55	\$70.47	\$2,153
Surface Rock Water, Process & Compact	285.00	\$70.47	\$20,084

SUB TOTAL FOR SURFACING

24"-12" rr	198	6"-0"r	3,223	1 1/2"-0" crushed	2,575	34"-0" crushed	271	Total	6,266
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SPECIAL PROJECTS		Description	Cy/Amount	Rate	Cost
Erosion Control (Seeding and Mulching)					
		Straw Bales (\$/bale)	50	\$13.39	\$669.50
		Pasture Seed Mix (\$/lb)	150	\$2.00	\$300.00
		Labor	20	\$50.00	\$1,000.00
SUB TOTAL FOR SPECIAL PROJECTS					\$1,970
Subtotal of Surfacing & Spec. Proj.					\$172,433
Subtotal of Cleaning, Exc., Culv.					\$4,220
GRAND TOTAL					\$176,653

Compiled By: Kraig Kirkpatrick Date: 12/19/2023

Projects Road Maintenance Cost Summary

Sale: Lost Creek South
Date: 22-Dec-23
By: Kraig Kirkpatrick

Type	Equipment/Rationale			Hours	Rate	Cost
Project Work	Grader 14G			5	\$126	\$630
Final Haul	Dump Truck 12CY			1	\$99	\$99
Road	FE Loader C966			1		\$0
Maintenance	Vibratory Roller			5	\$97	\$485
	Water Truck 2,500 gallon			5	\$113	\$565
Total						\$1,779

Production Rates	Miles/day	Distance(miles)	Days
Grader	1.5	0.75	0.5
Vibratory Roller	1.5	0.75	0.5

NOTE:

Lost Creek Road From Quarry to Guard Dog Spur	0.50	Miles
Quarry to Lost Creek Stockpile Site	0.25	Miles
		Miles
		Miles
TOTAL=	0.75	Miles

**Lost Creek South
TIMBER CRUISE REPORT
FY 2024**

1. **Sale Area Location:** Portions of Sections 19, 20, 28, 29, 30, 32, & 33 of T3N, R8W, W.M., Tillamook County, OR.
2. **Fund Distribution:** BOF 100% Tax Code: 5601 (100%)
3. **Sale Acreage by Area:**

Unit	Harvest Type	Gross Acres	Stream Buffer Acres	Reserve Tree Area	Non-Stocked Area	Existing R/W Acres	New R/W	Net Acres	Survey Method
1	Modified Clearcut	109	7	6	3	3	2	88	GIS
2	Modified Clearcut	126	28	14	5	1	<1	78	GIS
3	Modified Clearcut	59	4	2	2	4	-	47	GIS
4	Modified Clearcut	71	4	4	2	3	-	58	GIS
5	R/W	2	-	-	2	-	-	<1	LxW
TOTAL		367	43	26	14	11	2	271	

4. Cruisers and Cruise Dates:

Avery Petersen, John Czarnecki, Ryan Simpson and Michele Huffman (11/28/2023 - 11/29/2023).

5. Cruise Method and Computation:

Units 1, 2, and 3 West (U123W)*: Units 1, 2, and 3 West were variable plot cruised with a 40 BAF. A total of 41 plots were sampled on an 8.5 by 4 chain spacing with a grade to count ratio of 1:1, resulting in 22 grade plots and 19 count plots.

Units 1, 2, 3, and 4 East (U1234E)*: Units 1, 2, 3, and 4 East were variable plot cruised with a 40 BAF. A total of 47 plots were sampled on a 9 by 5 chain spacing with a grade to count ratio of 1:1, resulting in 25 grade plots and 22 count plots. The cruise results show 27 grade plots due to minor species being graded on two count plots.

Unit 5 (R/W): Stocked R/W acreage is less than 1 acre. Volume is negligible on the stocked portion of Unit 5 (R/W).

*Units 1, 2, and 3 were divided into two cruises based upon similar timber types.

Data was collected on Allegro 2 data collectors and downloaded to the Atterbury SuperACE 2008 program for computing. See the attached Cruise Designs for more details on the cruise method. The cruise calculations were processed in the Astoria District office.

UNIT(s)	CRUISE	TRACT	TYPE	ACRES
1, 2, & 3	LCS	U123W	00MC	108
1, 2, 3, & 4	LCS	U1234E	00MC	163

6. Timber Description:

Units 1, 2, and 3 West (U123W) are modified clearcuts with an average age of 65 years. The stands consist of Douglas-fir and red alder with minor components of western hemlock, Sitka spruce, and bigleaf maple. The average take Douglas-fir is approximately 20 inches DBH and 67 feet to a merchantable top. The average take red alder is approximately 15 inches DBH and 47 feet to a merchantable top. The average take western hemlock is approximately 15 inches DBH and 42 feet to a merchantable top. The average take Sitka spruce is approximately 15 inches DBH and 39 feet to a merchantable top. The average take bigleaf maple is approximately 16 inches DBH and 49 feet to a merchantable top. Average net volume to be harvested per acre is 21 MBF. All trees were cruised to a merchantable top of five inches DIB, 40% form point, or an otherwise anticipated break point.

Units 1, 2, 3, and 4 East (U1234E) are modified clearcuts with an average age of 65 years. The stands consist of Douglas-fir, red alder, and western hemlock with minor components of Sitka spruce, and bigleaf maple. The average take Douglas-fir is approximately 21 inches DBH and 73 feet to a merchantable top. The average take red alder is approximately 16 inches DBH and 52 feet to a merchantable top. The average take western hemlock is approximately 17 inches DBH and 52 feet to a merchantable top. The average take Sitka spruce is approximately 14 inches DBH and 39 feet to a merchantable top. The average take bigleaf maple is approximately 19 inches DBH and 19 feet to a merchantable top. Average net volume to be harvested per acre is 21 MBF. All trees were cruised to a merchantable top of five inches DIB, 40% form point, or an otherwise anticipated break point.

Unit 5 (R/W) consists of less than one acre of stocked R/W and volume is negligible.

7. Statistical Analysis and Stand Summary:

Statistics for Stand B.F. volumes

Type	Estimated CV	Target SE%	Actual CV	Actual SE%
U123W	50.0%	10.0%	62.8%	9.8%
U1234E	50.0%	10.0%	68.2%	9.9%

8. Volumes by Species and Log Grade:

Volumes by Species and Grade for All Sale Areas: (MBF) Volumes do not include "in-growth."

Conifer

Species	DBH	Net Vol.	2 Saw	3 Saw	4 Saw	% D & B	% Sale
Douglas-fir	21"	3,114	2,205	735*	174	1.0%	54%
Western hemlock	16"	568	156	308	104	0.4%	10%
Sitka spruce	15"	136	29	75	32	1.7%	2%
TOTALS	--	3,818	2,390	1,118	310	--	--

*This sale includes approximately 5 MBF of 12"+ 3-saw Douglas-fir.

Hardwood

Species	DBH	Net Vol.	12"+	10"-11"	8"-9"	6"-7"	% D & B	% Sale
Red alder	15"	1,965	485	607	293	580	4.9%	34%
Bigleaf maple	18"	14	-	13	-	1	4.0%	<1%
TOTALS	--	1,979	485	620	293	581	--	--

TOTAL VOLUME	5,797 MBF
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9. Approvals:

Prepared by: Ryan Simpson Date: 12/08/2023
 Unit Forester Approval: *[Signature]* Date: 1/16/2024

- 10. Attachments:** Cruise Design and Map (5 pages)
 Volume Report (3 pages)
 Statistics Report (6 pages)
 Log Stock Table (3 pages)
 Stand Table Summary (2 pages)

**CRUISE DESIGN
TILLAMOOK DISTRICT**

Sale Name: LCSUnits U123W

Harvest Type: Modified Clearcut

Approx. Cruise Acres: 108 Estimated CV% 50 Net BF/Acre SE% Objective 10% Net BF/AcrePlanned Sale Volume: 7,992 MBF Estimated Sale Area Value/Acre: \$6,966/Acre

A. Cruise Goals: (a) Grade minimum 80 conifer trees.
 (b) Sample 41 plots (22 grade/19 count); (c) Other goals (Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes.

B. Cruise Design:1. Plot Cruises: BAF: 40**Unit 123W:**

Cruise Line Direction: Unit 1: 10°/190° Unit 2: 167°/347° Unit 3: 98°/278°
 Cruise Line Spacing 8.5 (chains) 561 (feet)
 Cruise Plot Spacing 4 (chains) 264 (feet)
 Grade/Count Ratio 1:1

Take plots as marked on cruise map.

Grade minor species (true fir, spruce, cedar, maple, etc.) on count plots if encountered.DO NOT: record any 22' log lengths, or any 12', 24', or 32' log lengths for hardwoods.DO NOT: record snags < 15" DBH or record snag measurements on count plots.**C. Tree Measurements:**

1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 8" for hardwoods.
Record dbh to nearest 1/2" 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 is 6" for conifers and 6" for hardwoods or 40 % of dob at 16' form point. Generally, use 6" outside bark for trees < 20" dbh and 40% of dob @ FP for conifer trees > 20" 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, 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. Hardwoods shall be recorded in 8' and 10' multiples.

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); GF (Grand fir); SF (Silver fir); A (Red alder); M (Bigleaf maple); SN (Snag). For "leave 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
Hardwoods: Alder Grades: 12" + = 1 Sawmill; 10"-12" = 2 Sawmill; 10"-8" = 3 Sawmill; and 8"-6" 4 Sawmill, or R = Camp Run; 0 = Cull.
All Maple Camp Run = R

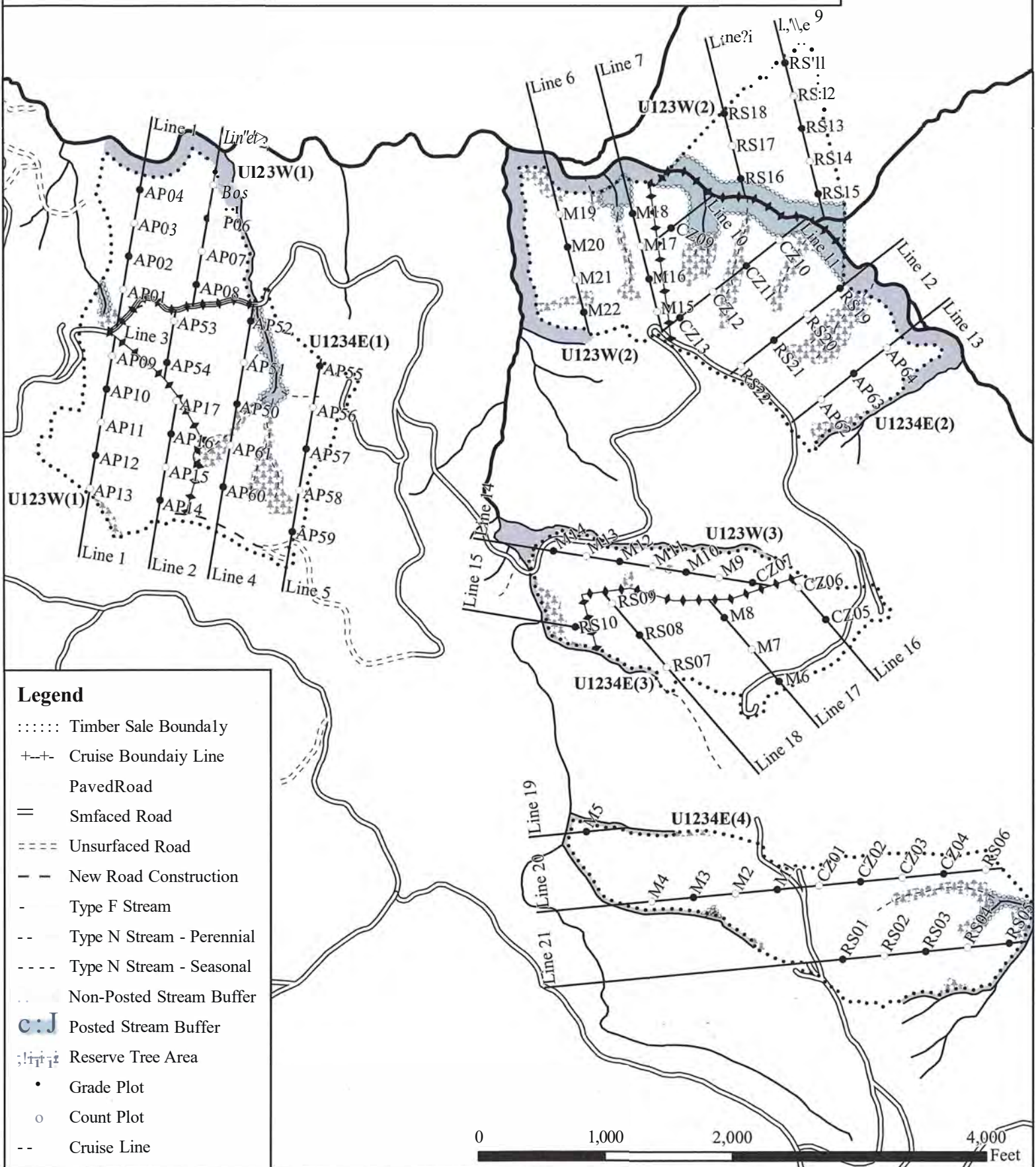
Grade oversized 3-SAW (DIB ≥ 12", knots > 2½" inside scaling cylinder affecting > 50% of log)

- 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 inter-visible 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.
- 9. **Cruising Equipment**: Relaskop, Rangefinder, Logger's Tape (with dbh on back), Compass, Allegro II Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint, Permanent Marker.
- 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: Ryan Simpson
Approved by: [Signature]
Date: 11/28/23

TIMBER CRUISE MAP
 OF TIMBER SALE CONTRACT
 NO. TL-341-2025-W01039-01
 LOST CREEK SOUTH PORTIONS
 OF SECTIONS
 19, 20, 28, 29, 30, 32, & 33
 OF T3N, R8W, W.M.,
 TILLAMOOK COUNTY, OREGON

Line Azimuths	U123W(1): 10°/190°	BAF: 40	U123W
	U123W(2): 167°/347°	Line Spacing	Count Plots: 19
	U123W(3): 98°/278°	U123W: 8.5 ch. (561 ft.)	Grade Plots: 22
	U1234E(1): 10°/190°	U1234E: 9 ch. (594 ft.)	U1234E
Line Azimuths	U1234E(2): 51°/231°	Plot Spacing	Count Plots: 22
	U1234E(3): 137°/317°	U123W: 4 ch. (264 ft.)	Grade Plots: 25
	U1234E(4): 85°/265°	U1234E: 5 ch. (330 ft.)	Total Plots: 88



T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1									
		Project: LCS										Date 1/4/2024									
												Time 11:19:19AM									
T03N R08W S29 T00MC										T03N R08W S29 T00MC											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
03N	08W	29	U1234E	00MC	163.00	47	112	S	W												
S Sp	So T	Gr rt	ad	%	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
					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													17	15		0.00	1.7	
D		DO	2S	69	1.3	8,959	8,846	1,442		42	58	3	2		94	38	16	389	2.22	22.8	
D		DO	3S	25	1.1	3,185	3,150	513	100			5	7	23	66	35	9	105	0.83	30.0	
D		DO	4S	6		705	705	115	100			45	42		13	22	6	30	0.43	23.2	
D	Totals			59	1.2	12,849	12,701	2,070		30	29	40	6	6	6	83	32	10	163	1.23	77.7
A		DO	CU													7	15		0.00	2.3	
A		DO	1S	19	5.2	1,253	1,189	194		90	10	19			81	35	13	200	1.41	5.9	
A		DO	2S	40	4.0	2,473	2,375	387	100				10	6	84	36	10	143	1.01	16.7	
A		DO	3S	14	4.0	873	838	137	100				17	15	67	35	9	89	0.69	9.5	
A		DO	4S	27	5.7	1,682	1,586	259	100			28	15	37	20	24	6	31	0.43	51.8	
A	Totals			28	4.7	6,282	5,988	976		80	18	2	11	10	14	64	28	8	70	0.69	86.1
H		DO	CU													8	17		0.00	2.4	
H		DO	2S	17	3.4	435	420	68		100			43		57	32	12	156	1.22	2.7	
H		DO	3S	65		1,561	1,561	255	100				11	22	67	36	9	116	0.93	13.4	
H		DO	4S	18		421	421	69	100			33	45	21		22	6	28	0.50	15.2	
H	Totals			11	.6	2,417	2,402	391		83	17		6	23	18	54	27	8	71	0.78	33.7
S		DO	3S	80	1.5	282	278	45	100						100	39	7	72	0.65	3.9	
S		DO	4S	20	13.8	78	67	11	100				36	64		29	6	36	0.61	1.9	
S	Totals			2	4.1	360	345	56	100				7	12	80	36	6	60	0.64	5.8	
M		DO	2S	100	4.0	26	25	4	100			100				18	10	58	1.11	.4	
M	Totals			0	4.0	26	25	4	100			100				18	10	58	1.11	.4	
Type Totals					2.2	21,932	21,460	3,498		51	24	24	7	9	10	74	29	9	105	0.93	203.7

Species, Sort Grade - Board Foot Volumes (Type)											Page	1								
T TSPCSTGR											Date	1/4/2024								
Project: LCS											Time	11:19:19AM								
T03N R08W S29 T00MC											T03N R08W S29 T00MC									
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
03N	08W	29	U123W	00MC	108.00	41	105	S	W											
S Spp	So T	Gr rt	%	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
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf	
A	DO	CU														24	16		0.00	2.2
A	DO	1S	29	5.5	2,850	2,694	291		74	26		4	12	5	79	35	14	238	1.73	11.3
A	DO	2S	22	4.0	2,121	2,036	220	100				2	8	8	83	35	10	135	0.99	15.1
A	DO	3S	16	7.0	1,553	1,445	156	100				9	10	42	38	29	8	61	0.61	23.7
A	DO	4S	33	4.3	3,114	2,979	322	100				20	8	18	55	26	6	36	0.45	82.2
A	Totals		43	5.0	9,637	9,154	989		71	22	8	9	9	16	65	29	8	68	0.68	134.4
D	DO	CU														9	22		0.00	.9
D	DO	2S	73	.6	7,108	7,064	763		46	54				1	99	40	15	393	2.19	18.0
D	DO	3S	21	.8	2,067	2,050	221	84	16			4	9	9	78	35	9	102	0.83	20.1
D	DO	4S	6	.6	555	552	60	100				30	54		16	24	6	32	0.48	17.4
D	Totals		45	.7	9,730	9,666	1,044		24	37	39	3	5	3	90	33	10	171	1.28	56.4
H	DO	2S	49		811	811	88		26	74			26		74	33	18	477	2.85	1.7
H	DO	3S	31		492	492	53	100				9	59		32	31	8	63	0.81	7.8
H	DO	4S	20		325	325	35	100				28	72			24	6	29	0.48	11.0
H	Totals		8		1,627	1,627	176		50	13	37	8	45		46	27	8	79	0.86	20.5
S	DO	2S	36		270	270	29		100						100	40	12	200	1.60	1.4
S	DO	3S	37		276	276	30	100						100		34	11	150	1.12	1.8
S	DO	4S	27		199	199	22	100				32	68			22	6	26	0.48	7.7
S	Totals		4		746	746	81		64	36		9	18	37	36	26	8	68	0.83	10.9
M	DO	2S	85	4.0	84	80	9	100						100		32	10	115	0.93	.7
M	DO	4S	15	4.0	14	13	1	100				100				14	6	19	0.36	.7
M	Totals		0	4.0	98	94	10	100				14		86		23	8	67	0.76	1.4
Type Totals				2.5	21,837	21,286	2,299		48	29	24	6	10	10	74	29	8	95	0.87	223.6

TC PSTATS		PROJECT STATISTICS							PAGE	1		
		PROJECT LCS							DATE	1/4/2024		
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
03N	08	29	U1234E	00MC		271.00	88	425	S	W		
03N	08W	29	U123W	00MC								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			88	425	4.8							
CRUISE			49	217	4.4	33,704	.6					
DBH COUNT												
REFOREST												
COUNT			36	177	4.9							
BLANKS			3									
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
R ALDER			95	65.2	15.1	49	20.9	81.5	7,619	7,249	2,126	2,041
DOUG FIR			86	33.0	20.6	71	16.8	76.1	11,606	11,491	2,762	2,762
WHEMLOCK			20	17.0	16.3	49	6.1	24.8	2,102	2,093	624	624
S SPRUCE			9	6.5	14.5	39	2.0	7.5	514	505	174	174
SN			5	2.0	16.4	72	0.7	2.9				
BL MAPLE			2	.5	17.5	35	0.2	.9	55	52	16	15
TOTAL			217	124.4	16.9	55	47.1	193.7	21,895	21,391	5,701	5,616
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			
R ALDER			79.5	8.2	136	148	160					
DOUG FIR			81.0	8.7	502	550	598					
WHEMLOCK			147.6	33.8	133	202	270					
S SPRUCE			77.6	27.4	68	93	119					
SN												
BL MAPLE			56.6	53.0	45	96	147					
TOTAL			118.9	8.1	281	306	331	564	141	63		
CL	68.1	COEFF	TREES/ACRE						# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
R ALDER			96.1	10.2	59	65	72					
DOUG FIR			137.3	14.6	28	33	38					
WHEMLOCK			188.8	20.1	14	17	20					
S SPRUCE			243.4	25.9	5	7	8					
SN			474.8	50.6	1	2	3					
BL MAPLE			659.9	70.3	0	1	1					
TOTAL			55.2	5.9	117	124	132	122	30	14		
CL	68.1	COEFF	BASAL AREA/ACRE						# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
R ALDER			90.0	9.6	74	81	89					
DOUG FIR			129.0	13.7	66	76	87					
WHEMLOCK			186.5	19.9	20	25	30					
S SPRUCE			240.2	25.6	6	7	9					
SN			439.5	46.8	2	3	4					
BL MAPLE			665.8	70.9	0	1	2					
TOTAL			53.6	5.7	183	194	205	115	29	13		
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			95.2	10.1	6,514	7,249	7,984					
DOUG FIR			131.3	14.0	9,884	11,491	13,099					
WHEMLOCK			189.7	20.2	1,670	2,093	2,516					
S SPRUCE			258.6	27.5	366	505	644					

TC PSTATS		PROJECT STATISTICS							PAGE	2
		PROJECT		LCS			DATE		1/4/2024	
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
03N	08	29	U1234E	00MC	271.00	88	425	S	W	
03N	08W	29	U123W	00MC						
CL	68.1		COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
SN										
BL MAPLE			718.8	76.6	12	52	93			
TOTAL			<i>69.1</i>	<i>7.4</i>	<i>19,817</i>	<i>21,391</i>	<i>22,965</i>	<i>191</i>	<i>48</i>	<i>21</i>

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT		LCS		DATE	1/4/2024	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
03N	08W	29	U1234E	00MC	163.00	47	219	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		47	219	4.7						
CRUISE		27	112	4.1	18,566		.6			
DBH COUNT										
REFOREST										
COUNT		20	93	4.7						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	49	35.5	20.7	73	18.2	82.6	12,849	12,701	3,024	3,024
R ALDER	41	50.3	15.5	52	16.8	66.3	6,282	5,988	1,729	1,660
WHEMLOCK	11	18.8	16.8	52	7.1	28.9	2,417	2,402	718	718
S SPRUCE	6	5.8	13.8	39	1.6	6.0	360	345	132	132
SN	4	3.0	16.0	77	1.1	4.3				
BL MAPLE	1	.4	19.0	19	0.2	.9	26	25	9	9
TOTAL	112	113.9	17.4	58	45.2	188.9	21,932	21,460	5,612	5,543
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	82.8	11.8	493	559	625					
R ALDER	57.9	9.0	130	143	156					
WHEMLOCK	56.7	17.9	116	142	167					
S SPRUCE	72.3	32.2	47	70	93					
SN										
BL MAPLE										
TOTAL	120.2	11.3	279	315	351	577	144	64		
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	135.8	19.8	28	35	43					
R ALDER	98.6	14.4	43	50	58					
WHEMLOCK	164.8	24.0	14	19	23					
S SPRUCE	252.9	36.9	4	6	8					
SN	371.9	54.2	1	3	5					
BL MAPLE	685.6	99.9	0	0	1					
TOTAL	46.5	6.8	106	114	122	86	22	10		
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	124.7	18.2	68	83	98					
R ALDER	100.2	14.6	57	66	76					
WHEMLOCK	164.8	24.0	22	29	36					
S SPRUCE	241.6	35.2	4	6	8					
SN	352.5	51.4	2	4	6					
BL MAPLE	685.6	99.9	0	1	2					
TOTAL	51.9	7.6	175	189	203	107	27	12		
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	124.8	18.2	10,391	12,701	15,011					
R ALDER	108.3	15.8	5,042	5,988	6,933					
WHEMLOCK	166.6	24.3	1,819	2,402	2,985					
S SPRUCE	254.5	37.1	217	345	473					

TC TSTATS				STATISTICS				PAGE 2	
				PROJECT LCS		DATE 1/4/2024			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	08W	29	U1234E	00MC	163.00	47	219	S	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
SN									
BL MAPLE		685.6	99.9	0	25	50			
TOTAL		<i>69.3</i>	<i>10.1</i>	<i>19,293</i>	<i>21,460</i>	<i>23,626</i>	<i>192</i>	<i>48</i>	<i>21</i>

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	LCS			DATE	1/4/2024	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
03N	08W	29	U123W	00MC	108.00	41	206	S	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	
TOTAL		63.4	9.9	19,182	21,286	23,391	160	40	18	

Log Stock Table - MBF

T03N R08W S29 Ty00MC	163.00
T03N R08W S29 Ty00MC	108.00

Project: LCS
Acres 271.00

Page 1
Date 1/4/2024
Time 11:19:20AM

Spp	S T	So Gr rt 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
A		DO 1S	16	52	6.7	49	2.5					13	17	19			
A		DO 1S	26	14	4.0	13	.7						13				
A		DO 1S	30	21	4.0	21	1.0							21			
A		DO 1S	32	15	4.0	15	.7					15					
A		DO 1S	40	409	5.3	387	19.7					236	97	23	31		
A		DO 2S	18	4	4.0	4	.2				4						
A		DO 2S	26	56	4.0	54	2.7				54						
A		DO 2S	32	43	4.0	42	2.1				42						
A		DO 2S	36	177	4.0	170	8.6				170						
A		DO 2S	38	24	4.0	23	1.2				23						
A		DO 2S	40	328	4.0	315	16.0				315						
A		DO 3S	16	13	30.5	9	.4				9						
A		DO 3S	18	6	4.0	6	.3				6						
A		DO 3S	26	14	4.0	13	.7				13						
A		DO 3S	28	6	4.0	5	.3				5						
A		DO 3S	30	22	4.0	21	1.1				21						
A		DO 3S	32	74	4.0	72	3.6				72						
A		DO 3S	34	16	4.0	15	.8				15						
A		DO 3S	36	85	5.9	80	4.1				80						
A		DO 3S	40	75	4.0	72	3.7				72						
A		DO 4S	12	6	4.0	6	.3			6							
A		DO 4S	13	8	4.0	8	.4			8							
A		DO 4S	14	7	4.0	7	.3			7							
A		DO 4S	15	41	4.0	39	2.0			39							
A		DO 4S	16	22	4.0	21	1.1			21							
A		DO 4S	17	10	4.0	9	.5			9							
A		DO 4S	18	2	4.0	2	.1			2							
A		DO 4S	19	17	4.0	16	.8			16							
A		DO 4S	20	29	4.0	27	1.4			27							
A		DO 4S	21	5	4.0	5	.2			5							
A		DO 4S	22	5	4.0	5	.3			5							
A		DO 4S	23	9	4.0	9	.4			9							
A		DO 4S	24	5	4.0	5	.2			5							
A		DO 4S	25	17	4.0	16	.8			16							
A		DO 4S	26	3	4.0	3	.1			3							
A		DO 4S	27	4	4.0	4	.2			4							

Log Stock Table - MBF

T03N R08W S29 Ty00MC 163.00
 T03N R08W S29 Ty00MC 108.00

Project: LCS
 Acres 271.00

Page 2
 Date 1/4/2024
 Time 11:19:20AM

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	30-39
A		DO	4S	28	5	4.0	5	.2			5								
A		DO	4S	29	13	28.0	9	.5			9								
A		DO	4S	30	4	4.0	4	.2			4								
A		DO	4S	31	13	4.0	13	.6			13								
A		DO	4S	32	75	7.5	69	3.5			69								
A		DO	4S	33	16	4.0	16	.8			16								
A		DO	4S	34	47	4.0	45	2.3			45								
A		DO	4S	35	10	4.0	9	.5			9								
A		DO	4S	36	70	4.0	68	3.4			68								
A		DO	4S	37	28	4.0	27	1.4			27								
A		DO	4S	38	9	4.0	8	.4			8								
A		DO	4S	39	71	4.0	68	3.5			68								
A		DO	4S	40	59	4.0	57	2.9			57								
A		Totals			2,065	4.9	1,965	33.9			580	293	607	264	128	62	31		
D		DO	2S	18	22	22.2	17	.5							17				
D		DO	2S	20	28		28	.9					4				24		
D		DO	2S	24	10		10	.3						10					
D		DO	2S	30	25		25	.8					25						
D		DO	2S	32	9	3.6	9	.3						9					
D		DO	2S	36	14		14	.4							14				
D		DO	2S	38	31		31	1.0							31				
D		DO	2S	40	2,090		2,072	66.5					363	387	720	494	108		
D		DO	3S	14	2		2	.1							2				
D		DO	3S	16	4		4	.1					4						
D		DO	3S	20	27		27	.9				8	19						
D		DO	3S	24	13		13	.4				8	4						
D		DO	3S	26	11		11	.3				6	4						
D		DO	3S	28	16		16	.5			3		13						
D		DO	3S	30	14		14	.5			6		8						
D		DO	3S	32	75		75	2.4			29	26	13	7					
D		DO	3S	34	63	2.8	61	2.0				21	31	9					
D		DO	3S	36	70	2.0	69	2.2			16	39	14						
D		DO	3S	38	50		50	1.6			34	15							
D		DO	3S	40	398	1.1	394	12.6			19	80	279		16				
D		DO	4S	12	3	12.0	3	.1			2		1						
D		DO	4S	16	33		33	1.1			23	10							
D		DO	4S	18	15		15	.5			13	2							

Log Stock Table - MBF

T03N R08W S29 Ty00MC 163.00
 T03N R08W S29 Ty00MC 108.00

Project: LCS
 Acres 271.00

Page 3
 Date 1/4/2024
 Time 11:19:20AM

Spp	S T	So Gr rt 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	30-39	40+
D		DO 4S	20	20		20	.6			15	5								
D		DO 4S	24	23		23	.7			18	5								
D		DO 4S	26	21		21	.7			21									
D		DO 4S	28	13		13	.4			13									
D		DO 4S	30	23		23	.7			23									
D		DO 4S	38	12		12	.4			9	3								
D		DO 4S	40	12		12	.4			12									
D		Totals		3,145		3,114	53.7			255	229	391	410	422	781	518	108		
S		DO 2S	40	29		29	21.4					29							
S		DO 3S	34	30		30	21.8					30							
S		DO 3S	38	12		12	9.0			12									
S		DO 3S	40	34	2.0	33	24.0			21		11							
S		DO 4S	16	7		7	5.0			7									
S		DO 4S	24	4		4	2.9			4									
S		DO 4S	26	15		15	10.7			15									
S		DO 4S	32	9	20.0	7	5.1			7									
S		Totals		139	1.7	137	2.4			66		41	29						
H		DO 2S	24	11		11	1.9						11						
H		DO 2S	26	32	7.7	29	5.1					29							
H		DO 2S	30	12		12	2.1						12						
H		DO 2S	40	104		104	18.3					39	31	33					
H		DO 3S	16	2		2	.4					2							
H		DO 3S	20	3		3	.5					3							
H		DO 3S	28	17		17	3.0					17							
H		DO 3S	30	43		43	7.5					43							
H		DO 3S	34	55		55	9.8			20		35							
H		DO 3S	36	12		12	2.1			12									
H		DO 3S	38	11		11	1.9			11									
H		DO 3S	40	165		165	29.1			6		159							
H		DO 4S	14	4		4	.8			4									
H		DO 4S	16	19		19	3.4			19									
H		DO 4S	18	4		4	.8			4									
H		DO 4S	20	5		5	.9			5									
H		DO 4S	24	31		31	5.5			31									
H		DO 4S	28	8		8	1.5			8									

Log Stock Table - MBF

T03N R08W S29 Ty00MC	163.00
T03N R08W S29 Ty00MC	108.00

Project: LCS
Acres 271.00

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	30-39	40+		
H		DO	4S	30	17		17	3.0			17											
H		DO	4S	32	14		14	2.5			14											
H		Totals			570		567	9.8			152	62	197	68	11	43	33					
M		DO	2S	18	4	4.0	4	28.6					4									
M		DO	2S	32	9	4.0	9	61.2					9									
M		DO	4S	14	2	4.0	1	10.2			1											
M		Totals			15	4.0	14	.2			1		13									
Total		All Species			5,933	2.3	5,797	100.0			1055	584	1249	772	561	887	582	108				

TC		PSTNDSUM		Stand Table Summary								Page		1	
												Date:		1/4/2024	
T03N R08W S29 Ty00MC 163.00				Project				LCS				Time:		11:19:21AM	
T03N R08W S29 Ty00MC 108.00				Acres				271.00				Grown Year:			
S Spe T	Sample DBH	Trees	Tot		Trees/ Acres	BA/ Acres	Logs Acres	Average Log		Tons/ Acres	Net Cu.Ft. Acres	Net Bd.Ft. Acres	Totals		
			FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
D	11	2	76	46	2.165	1.43	2.17	11.1	30.0	.69	24	65	186	65	18
D	12	2	86	46	2.580	2.03	2.58	13.3	45.0	.98	34	116	265	93	31
D	14	1	85	32	.668	.71	.67	13.4	30.0	.26	9	20	69	24	5
D	15	6	83	83	4.508	5.48	8.39	19.0	68.3	4.54	159	573	1,230	432	155
D	16	4	85	65	2.475	3.46	3.71	21.3	75.6	2.25	79	281	610	214	76
D	17	4	84	86	2.572	4.05	5.14	24.7	88.7	3.62	127	456	980	344	124
D	18	2	86	89	.978	1.73	1.96	28.4	107.9	1.58	56	211	429	151	57
D	19	5	85	99	2.298	4.47	5.11	30.7	112.5	4.48	157	575	1,213	426	156
D	20	5	85	106	2.049	4.47	5.35	31.6	127.4	4.82	169	682	1,306	458	185
D	21	1	85	131	.297	.71	.89	36.4	153.3	.92	32	137	251	88	37
D	22	6	84	100	1.850	4.88	3.97	43.7	159.0	4.94	173	631	1,340	470	171
D	23	6	83	107	1.797	5.18	4.54	43.7	163.9	5.66	199	745	1,533	538	202
D	24	5	85	94	1.518	4.77	3.36	47.9	186.1	4.59	161	625	1,243	436	169
D	25	8	85	123	2.115	7.21	6.14	49.4	216.1	8.63	303	1,326	2,340	821	359
D	26	1	86	139	.194	.71	.58	59.8	273.3	.99	35	159	269	94	43
D	27	2	84	127	.510	2.03	1.27	50.8	232.0	1.85	65	296	500	175	80
D	28	5	86	128	1.115	4.77	2.87	71.3	332.1	5.84	205	953	1,582	555	258
D	29	6	87	122	1.130	5.18	3.01	75.8	354.8	6.51	228	1,069	1,764	619	290
D	30	4	83	121	.704	3.46	1.97	73.3	327.0	4.11	144	643	1,113	391	174
D	31	1	81	92	.136	.71	.27	41.9	145.0	.33	11	40	88	31	11
D	32	4	84	140	.619	3.46	1.73	96.6	474.7	4.76	167	820	1,290	453	222
D	33	2	86	128	.291	1.73	.87	89.3	440.8	2.22	78	385	602	211	104
D	34	1	82	98	.113	.71	.23	114.2	435.0	.74	26	99	200	70	27
D	36	1	88	123	.101	.71	.30	104.4	540.0	.90	32	164	245	86	44
D	39	1	83	118	.122	1.01	.37	113.9	546.7	1.19	42	200	322	113	54
D	41	1	83	133	.111	1.01	.33	139.9	663.3	1.32	46	220	358	126	60
D	Totals	86	84	91	33.016	76.09	67.79	40.7	169.5	78.71	2,762	11,491	21,329	7,484	3,114
A	9	1	87	30	1.744	.77	1.74	5.2	19.2	.26	9	33	71	25	9
A	10	1	87	31	1.717	.94	1.72	6.1	19.2	.30	11	33	82	29	9
A	11	5	86	53	5.951	3.85	7.12	11.5	42.8	2.34	82	305	635	222	83
A	12	9	86	58	9.462	7.43	13.39	12.3	45.9	4.71	164	614	1,277	446	166
A	13	5	87	57	4.427	4.02	6.10	14.4	47.0	2.52	88	286	684	239	78
A	14	10	87	60	8.781	9.27	12.97	13.2	44.2	4.90	171	574	1,329	464	155
A	15	12	86	65	8.725	10.71	15.05	17.8	61.7	7.65	267	929	2,074	724	252
A	16	11	87	69	6.545	9.14	10.88	21.2	75.8	6.60	231	824	1,790	625	223
A	17	12	87	70	7.214	11.37	13.24	22.8	81.3	8.65	302	1,076	2,344	818	292
A	18	7	87	76	3.427	6.06	6.42	28.7	100.4	5.28	184	645	1,430	499	175
A	19	7	87	76	2.992	5.89	5.98	29.6	106.4	5.08	177	637	1,376	480	173
A	20	4	86	74	1.489	3.25	2.98	32.7	106.5	2.79	97	317	756	264	86
A	22	4	87	86	1.230	3.25	2.46	45.3	165.2	3.20	112	406	866	302	110
A	23	2	82	64	.534	1.54	1.07	37.7	129.6	1.15	40	138	313	109	38
A	24	1	87	62	.298	.94	.60	34.5	148.8	.59	21	89	160	56	24
A	25	1	86	65	.226	.77	.45	45.1	196.8	.58	20	89	158	55	24
A	29	2	86	97	.336	1.54	.67	76.6	336.0	1.47	51	226	400	139	61
A	32	1	66	68	.138	.77	.28	48.5	100.8	.38	13	28	104	36	8
A	Totals	95	86	63	65.236	81.50	103.12	19.8	70.3	58.48	2,041	7,249	15,847	5,532	1,965
H	12	1	81	40	1.045	.82	1.05	13.7	30.0	.46	14	31	125	39	8
H	13	3	87	57	2.671	2.46	4.45	12.5	42.0	1.78	56	187	481	150	51
H	14	2	86	60	2.960	3.16	4.44	16.4	50.0	2.34	73	222	633	198	60
H	15	3	79	38	2.627	3.22	2.63	20.7	40.2	1.74	54	106	472	147	29
H	17	3	83	63	3.135	4.75	5.20	23.2	82.2	3.87	121	428	1,049	328	116
H	18	1	83	60	.895	1.58	1.79	21.5	70.0	1.23	39	125	334	104	34

Stand Table Summary

T03N R08W S29 Ty00MC	163.00
T03N R08W S29 Ty00MC	108.00

Project **LCS**
Acres **271.00**

Time: **11:19:21AM**
Grown Year:

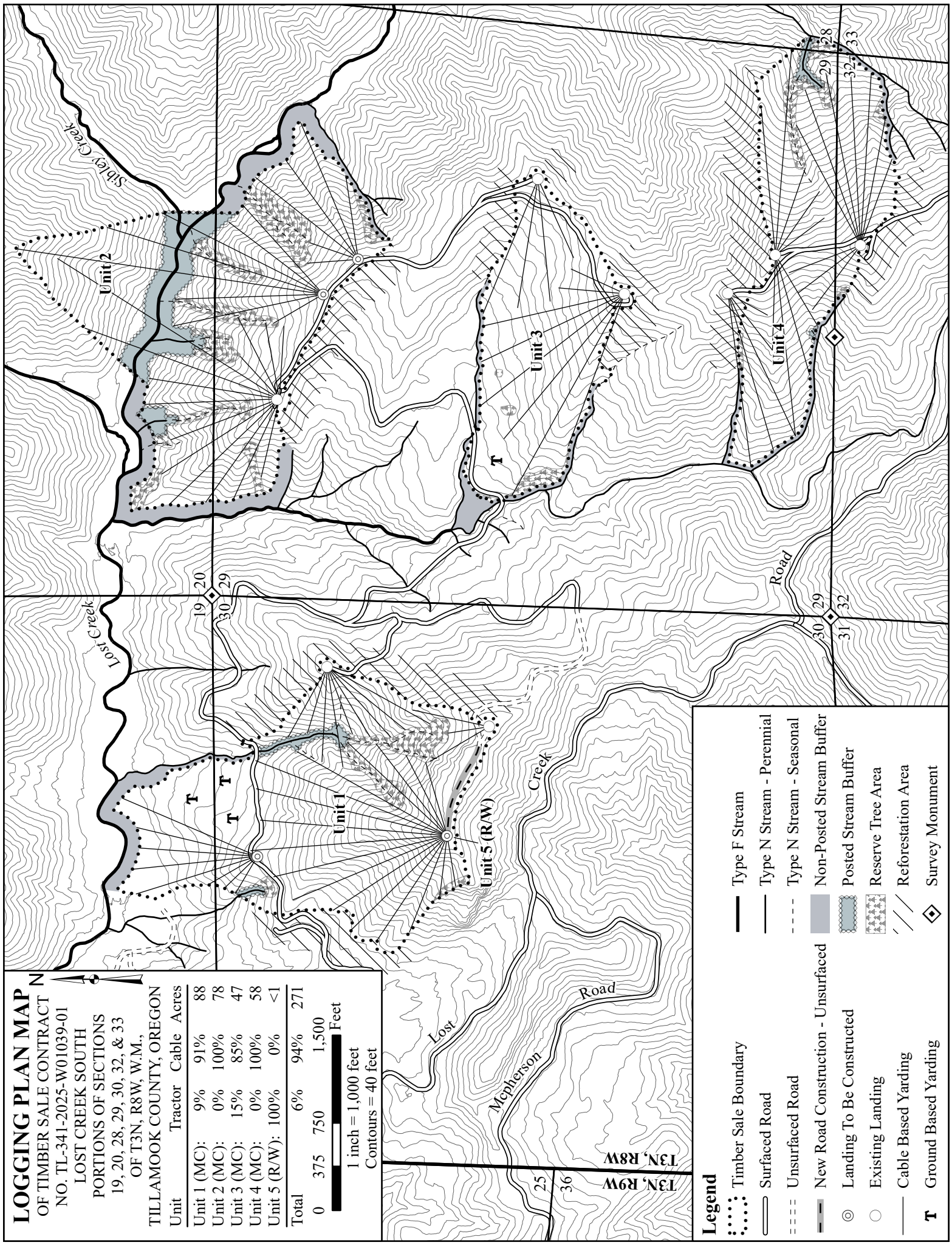
S Spc T	Sample DBH	Trees	Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
			FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
H	19	2	84	71	1.607	3.16	3.21	28.9	92.5	2.98	93	297	807	252	81
H	20	2	85	93	1.450	3.16	2.90	29.1	115.0	2.70	84	334	733	229	90
H	22	1	78	49	.311	.82	.31	63.1	70.0	.63	20	22	170	53	6
H	28	1	86	109	.192	.82	.58	60.0	286.7	1.11	35	165	300	94	45
H	32	1	85	111	.147	.82	.44	80.2	400.0	1.13	35	176	307	96	48
H	Totals	20	84	60	17.041	24.79	27.00	23.1	77.5	19.96	624	2,093	5,409	1,690	567
S	12	3	78	50	3.318	2.49	3.32	15.7	43.8	1.35	52	145	367	141	39
S	13	1	80	47	.648	.60	.65	17.9	40.0	.30	12	26	82	31	7
S	14	1	82	58	.559	.60	.56	25.3	60.0	.37	14	34	100	38	9
S	15	1	83	30	.487	.60	.49	17.1	30.0	.22	8	15	59	23	4
S	18	1	88	63	.733	1.30	1.47	22.4	85.0	.86	33	125	232	89	34
S	21	2	84	71	.787	1.89	1.33	41.5	121.2	1.43	55	161	388	149	44
S	Totals	9	81	53	6.531	7.47	7.80	22.3	64.7	4.52	174	505	1,226	472	137
M	16	1	86	60	.278	.39	.56	17.4	67.2	.27	10	37	73	26	10
M	19	1	86	21	.260	.51	.26	20.0	57.6	.14	5	15	39	14	4
M	Totals	2	86	41	.538	.90	.82	18.2	64.1	.41	15	52	111	40	14
SN	15	2	17		1.043	1.28									
SN	16	1	17		.458	.64									
SN	19	1	17		.325	.64									
SN	20	1	17		.178	.39									
SN	Totals	5	17		2.004	2.95									
Totals		217	85	68	124.368	193.70	206.53	27.2	103.6	162.08	5,616	21,391	43,923	15,218	5,797

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT
 NO. TL-341-2025-W01039-01
 LOST CREEK SOUTH
 PORTIONS OF SECTIONS
 19, 20, 28, 29, 30, 32, & 33
 OF T3N, R8W, W.M.,
 TILLAMOOK COUNTY, OREGON

Unit	Tractor	Cable	Acres
Unit 1 (MC):	9%	91%	88
Unit 2 (MC):	0%	100%	78
Unit 3 (MC):	15%	85%	47
Unit 4 (MC):	0%	100%	58
Unit 5 (R/W):	100%	0%	<1
Total	6%	94%	271

1 inch = 1,000 feet
 Contours = 40 feet



Legend

- ⋯⋯⋯ Timber Sale Boundary
- Surfaced Road
- - - - - Unsurfaced Road
- ▬ New Road Construction - Unsurfaced
- ⊙ Landing To Be Constructed
- Existing Landing
- Cable Based Yarding
- ⊠ Ground Based Yarding
- Type F Stream
- Type N Stream - Perennial
- - - - - Type N Stream - Seasonal
- ▬ Non-Posted Stream Buffer
- ▨ Posted Stream Buffer
- ▩ Reserve Tree Area
- ▧ Reforestation Area
- ◇ Survey Monument