



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Blue Bucket
Sale AT-341-2022-W00586-01

District: Astoria

Date: August 03, 2021

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,877,376.79	\$20,581.56	\$1,897,958.35
		Project Work:	(\$117,946.00)
		Advertised Value:	\$1,780,012.35



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Timber Description

Location:

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	19	0	97
Western Hemlock / Fir	20	0	95
Sitka Spruce	24	0	95
Alder (Red)	20	0	95

Volume by Grade	2S	3S & 4S 6"-11"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	1,375	559	0	0	0	1,934
Western Hemlock / Fir	2,412	896	0	0	0	3,308
Sitka Spruce	82	13	0	0	0	95
Red Cedar	0	0	0	0	0	0
Alder (Red)	0	0	19	30	5	54
Total	3,869	1,468	19	30	5	5,391

Comments: Pond Values Used: Local Pond Values, August, 2021.

Expected Log Markets: Tillamook, Warrenton, Garibaldi, Banks, North Plains, Forest Grove, Longview, WA, and Chehalis, WA.

PRICING:

Western Red Cedar and other Cedars stumpage = pond value - (Western hemlock) logging cost.
 $\$1,035.54/\text{MBF} = \$1,371/\text{MBF} - \$335.46/\text{MBF}$

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

Machine Washing for Invasive Weed Compliance = \$2,000

Ditch Filters:

16 bales of straw @ \$12/bale = \$192

2 hours of labor @ \$45/hr = \$90

TOTAL Other Costs (with Profit & Risk to be added):\$2,282

Other Costs (No Profit & Risk added):

None.

SLASH PILING

(See attached appraisal. Includes move-in, pile materials, and end-hauling) = \$16,543

ROAD MAINTENANCE

(See attached Road Maintenance Cost Summary Sheet)

TOTAL Road Maintenance: $\$22,904 / 5,391 \text{ MBF} = \$4.25/\text{MBF}$



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Logging Conditions

Combination#: 1

Douglas - Fir	78.00%
Western Hemlock / Fir	78.00%
Sitka Spruce	78.00%
Alder (Red)	78.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Manual Delimbing

yarding distance: Medium (800 ft) **downhill yarding:** No

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 7 **bd. ft / load:** 4500

cost / mbf: \$193.65

machines: Log Loader (A)
Tower Yarder (Medium)

Combination#: 2

Douglas - Fir	22.00%
Western Hemlock / Fir	22.00%
Sitka Spruce	22.00%
Alder (Red)	22.00%

Logging System: Shovel **Process:** Manual Falling/Delimbing

yarding distance: Medium (800 ft) **downhill yarding:** No

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 8 **bd. ft / load:** 4200

cost / mbf: \$117.19

machines: Shovel Logger



"STEWARDSHIP IN FORESTRY"

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Blue Bucket
Sale AT-341-2022-W00586-01

District: Astoria

Date: August 03, 2021

Logging Costs

Operating Seasons: 3.00

Profit Risk: 12%

Project Costs: \$117,946.00

Other Costs (P/R): \$2,282.00

Slash Disposal: \$16,543.00

Other Costs: \$0.00

Miles of Road

Road Maintenance: \$4.25

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	4.5
Sitka Spruce	\$0.00	2.0	4.6
Alder (Red)	\$0.00	2.0	3.8



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Blue Bucket Sale AT-341-2022-W00586-01

District: Astoria

Date: August 03, 2021

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$176.83	\$4.38	\$2.44	\$122.31	\$0.42	\$36.77	\$3.07	\$2.00	\$0.00	\$348.22
Western Hemlock / Fir									
\$176.83	\$4.46	\$2.44	\$110.84	\$0.42	\$35.40	\$3.07	\$2.00	\$0.00	\$335.46
Sitka Spruce									
\$176.83	\$4.46	\$2.44	\$108.42	\$0.42	\$35.11	\$3.07	\$2.00	\$0.00	\$332.75
Alder (Red)									
\$176.83	\$4.46	\$2.44	\$131.25	\$0.42	\$37.85	\$3.07	\$2.00	\$0.00	\$358.32

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$805.55	\$457.33	\$0.00
Western Hemlock / Fir	\$0.00	\$629.15	\$293.69	\$0.00
Sitka Spruce	\$0.00	\$557.74	\$224.99	\$0.00
Alder (Red)	\$0.00	\$739.46	\$381.14	\$0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Blue Bucket
Sale AT-341-2022-W00586-01

District: Astoria

Date: August 03, 2021

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	1,934	\$457.33	\$884,476.22
Western Hemlock / Fir	3,308	\$293.69	\$971,526.52
Sitka Spruce	95	\$224.99	\$21,374.05
Alder (Red)	54	\$381.14	\$20,581.56

Gross Timber Sale Value

Recovery: \$1,897,958.35

Prepared By: Ryan Simpson

Phone: 503-325-5451

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale: Blue Bucket
Date: August 10, 2021
By: Michele Huffman FL

MBF: 5,391
\$/MBF: \$4.25

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost	
Interim Operations	Grader 14G	\$875	2	8	\$113	\$2,654	
	Dump Truck 12CY	\$184	1	8	\$89	\$896	
	Rubber tired backhoe	\$875	1	4	\$87	\$1,223	
	Vibratory Roller	\$875	1	4	\$87	\$1,223	
Final Road Maintenance	Grader 14G	\$875	1	32	\$113	\$4,491	
	Dump Truck 12CY	\$184	2	24	\$89	\$2,504	
	FE Loader C966	\$875	1	6	\$94	\$1,439	
	Vibratory Roller	\$875	1	32	\$87	\$3,659	
	Water Truck 2,500 gallon	\$214	1	24	\$101	\$2,638	
	Excavator C315	\$905	1	8	\$114	\$1,817	
	Labor			8	\$45	\$360	
Total							\$22,904

Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	2.5	1.5	0.6	5

Final Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	1.5	5.9	3.9	31
Vibratory Roller	1.5	5.9	3.9	31

Process and compact: All crushed rock roads
Cole Mountain Ridge Road 1.6 Miles
East Summit Road 2 Miles
Spur 13 1.3 Miles
Unnamed Spurs: 1 Mile
Grade & Process Total = 5.9 Miles

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	5.0	10
Hemlock	D	1.8	5.0	8
Conifer/Hardwood	E	1.0	2.0	8
Whole Tree Yarding	F	0.5	0.5	12

Date: 08/10/2021

Unit	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour	Total Cost/Area	
1	MC	B	27	35	\$145	\$5,090	
2	MC	B	3	4	\$145	\$566	
					In-unit Piling	Sub Total =	\$5,655
Sale Area	Number of Landings to be Piled	Harvested acres per area	Total Cost/Area	Number of In- Unit Piles	Material Cost/Pile	Total Cost/Area	
1	12	67	\$2,591	133.5	\$5	\$668	
2	7	72	\$2,784	21	\$5	\$103	
*Cost includes separating firewood					Materials	Sub Total =	\$770
Additonal Move-in allowance					Landing Piling	Sub Total =	\$5,375
Move-In Allowance	Number of Move-In's	Total Move-In Allowance					
\$1,290.00	1.5	\$1,935					
					Move-In	Sub Total =	\$1,935
Slash Endhaul							
Dump Truck hrs	Cost/Hour	Total	Loader hrs	Cost/Hour	Total		
12	\$89.00	\$1,068	12	\$145	\$1,740		
						Sub Total =	\$2,808
Grand Total =							\$16,543

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Blue Bucket

Project No. : ROAD CONSTRUCTION:

<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
None			
TOTALS			

Project No. 1: ROAD IMPROVEMENT:

<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
I1 to I2, I3 to I4, I5 to I6	315.25	5.97	\$45,430.59
I7 to I8, I9 to I10, I11 to I12			
I13 to I14, and I15 to I16			
Road Maint.			\$3,140.00
Move-In			\$4,665.00
TOTALS		5.97	\$53,236

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. 2 Rock Crushing	3,366	\$64,310.00
Proj. 3 Stream Enhancement		\$400.00
TOTAL		\$64,710

GRAND TOTAL **\$117,946**

Compiled By: C. Hatcher 

Date: 07/21/2021

Move In and Maintenance Calculator for Construction and Improvement

SALE NAME: Blue Bucket

Project No. : ROAD CONSTRUCTION:

<u>Road segment</u>	<u>Length/Sta</u>	<u>Length/Mile</u>	<u>Cost</u>
None			
TOTALS			

Project No. 1: ROAD IMPROVEMENT:

<u>Road segment</u>	<u>Length/Sta</u>	<u>Length/Mile</u>	<u>Cost</u>
I1 to I2, I3 to I4, I5 to I6	315.25	5.97	\$45,431
I7 to I8, I9 to I10, I11 to I12			
I13 to I14, and I15 to I16			
TOTALS	315.25	5.97	\$45,431

MOVE IN (Construction & Improvement Only)

<u>Equipment</u>	<u>Length/Mile</u>	<u>Cost</u>
Vibratory Roller		\$875.00
C315 Excavator		\$905.00
C966 Front End Loader		\$875.00
14G Grader		\$875.00
10-12 yd ³ Dump Truck (5x)		\$920.00
Water Truck (2,500 gal)		\$215.00
TOTAL		\$4,665.00

ROAD MAINTENANCE (Construction & Improvement Only)

	<u>Length/Mile</u>	<u>Cost</u>
Final Project Road Maintenance	1.51	\$3,140.00
TOTAL		\$3,140.00

\$1,938

SURFACING				Description		Stations/ amount		x	Rate/ sta/amt	Cost
Subgrade prep: I1 to I2, I5 to I6, I7 to I8, I9 to I10, I11 to I12, I13 to I14, and I15 to I16				Grade, Shape and Ditch 16'		315.25		x	\$27.91	\$8,798.63
				Subgrade Compaction		315.25		x	\$22.69	\$7,153.02
				Sod removal and scatter on site		19.20		x	\$36.28	\$696.58
ROAD SEGMENT I1 to I2				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I1 to I2		0+00 to 189+00				
				Volume (CY) per	Number of					
Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	10	110	\$5.07	\$558
Surfacing	1 1/2"-0" crushed	142+70 to 150+20,	2	station	13	stations	25	325	\$5.07	\$1,648
Surfacing	1 1/2"-0" crushed	171+50 to 150+20 to	4	station	25	stations	21.3	533	\$5.07	\$2,702
Leveling Rock	1 1/2"-0" crushed	161+50,	N/A	load	11	loads	2	22	\$5.07	\$112
Turnout/Turnaround	4"-0" crushed	171+50	N/A	TO/TA	33	TO/TA	1	33	\$5.07	\$167
Turnouts	1 1/2"-0" crushed	162+75, 166+50,	N/A	turnout	11	turnouts	3	33	\$5.07	\$167
Turnouts	4"-0" crushed	180+05	N/A	turnout	22	turnouts	1	22	\$5.07	\$112
Landings	6"-0" pit run	161+50,	N/A	landing	44	landings	2	88	\$5.91	\$520
Total Rock for Road Segment:				I1 to I2				1,166		\$5,986
ROAD SEGMENT I3 to I4				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I3 to I4		0+00 to 16+15				
				Volume (CY) per	Number of					
Rock Ditch Filters	6"-4" pit-run	16+00	N/A	load	11	loads	2	22	\$5.91	\$130
Total Rock for Road Segment:				I3 to I4				22		\$130
ROAD SEGMENT I5 to I6				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I5 to I6		0+00 to 4+70				
				Volume (CY) per	Number of					
Surfacing	4"-0" crushed	0+00 to 4+70	4	station	25	stations	4.7	118	\$5.07	\$598
Turnaround	4"-0" crushed	3+80	N/A	turnaround	22	turnaround	1	22	\$5.07	\$112
Total Rock for Road Segment:				I5 to I6				140		\$710
ROAD SEGMENT I7 to I8				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I7 to I8		0+00 to 8+00				
				Volume (CY) per	Number of					
Junctions	1 1/2"-0" crushed	0+00	N/A	junction	22	junctions	1	22	\$5.07	\$112
Surfacing	4"-0" crushed	0+00 to 8+00	4	station	25	stations	8	200	\$5.07	\$1,014
Rock Ditch Filters	6"-4" pit-run	1+35	N/A	3 filter series	11	filter series	1	11	\$5.91	\$65
Turnaround	4"-0" crushed	4+15	N/A	turnaround	22	turnaround	1	22	\$5.07	\$112
Turnouts	4"-0" crushed	5+80	N/A	turnout	11	turnouts	1	11	\$5.07	\$56
Total Rock for Road Segment:				I7 to I8				266		\$1,358

ROAD SEGMENT				I9 to I10		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I9 to I10		0+00 to 78+20						
				Volume (CY) per		Number of						
Junctions	1 1/2"-0" crushed	0+00, 18+25, 26+80, 44+55	N/A	junction	11	junctions	3	33	\$5.07	\$167		
Surfacing	1 1/2"-0" crushed	0+00 to 70+75	2	station	13	stations	70.75	920	\$5.07	\$4,664		
Turnouts	1 1/2"-0" crushed	29+65, 41+45, 54+80	N/A	turnout	11	turnouts	3	33	\$5.07	\$167		
Landings	6"-0" pit run	50+75	N/A	landing	33	landings	1	33	\$5.91	\$195		
Turnout/Turnaround	4"-0" crushed	69+20	N/A	TO/TA	44	TO/TA	1	44	\$5.07	\$223		
Total Rock for Road Segment:				I9 to I10				1,063		\$5,417		
ROAD SEGMENT				I11 to I12		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I11 to I12		0+00 to 2+30						
				Volume (CY) per		Number of						
Junctions	1 1/2"-0" crushed	0+00	N/A	junction	11	junctions	1	11	\$5.07	\$56		
Surfacing	4"-0" crushed	0+00 to 2+30	4	station	25	stations	2.3	58	\$5.07	\$294		
Landings	6"-0" pit run	2+30	N/A	landing	77	landings	1	77	\$5.91	\$455		
Total Rock for Road Segment:				I11 to I12				146		\$805		
ROAD SEGMENT				I13 to I14		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I13 to I14		0+00 to 10+80						
				Volume (CY) per		Number of						
Junctions	1 1/2"-0" crushed	0+00	N/A	junction	11	junctions	1	11	\$5.07	\$56		
Surfacing	1 1/2"-0" crushed	0+00 to 10+80	2	station	13	stations	10.8	141	\$5.07	\$715		
Leveling Rock	1 1/2"-0" crushed	0+90	N/A	load	11	loads	1	11	\$5.07	\$56		
Turnaround	4"-0" crushed	7+90	N/A	turnaround	22	turnaround	1	22	\$5.07	\$112		
Landings	6"-0" pit run	2+30	N/A	landing	77	landings	1	77	\$5.91	\$455		
Total Rock for Road Segment:				I13 to I14				262		\$1,393		
ROAD SEGMENT				I15 to I16		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I15 to I16		0+00 to 6+10						
				Volume (CY) per		Number of						
Junctions	1 1/2"-0" crushed	0+00	N/A	junction	11	junctions	1	11	\$5.07	\$56		
Surfacing	4"-0" crushed	0+00 to 1+00	8	station	50	stations	1.0	50	\$5.07	\$254		
Traction Rock	1 1/2"-0" crushed	0+00 to 1+00	2	station	13	stations	1.0	13	\$5.07	\$66		
Surfacing	4"-0" crushed	1+00 to 6+10	4	station	25	stations	5.1	128	\$5.07	\$649		
Turnouts	4"-0" crushed	2+50	N/A	turnout	22	turnouts	1	22	\$5.07	\$112		
Landings	6"-0" pit run	6+10	N/A	landing	77	landings	1	77	\$5.91	\$455		
Total Rock for Road Segment:				I15 to I16				301		\$1,591		
Processing:												
Description									No.sta	Rate/sta	Cost	
Water, Process & Compact:									147.95	\$63.48	\$9,392	
Traction Rock Water, Process & Compact									1.00	\$63.48	\$63	
SUB TOTAL FOR SURFACING	24"-12" rr	24"-6" rr	12"-6" rr	6"-4" pr	6"-0"pr	4"-0" crushed	1 1/2"-0" crushed	2"-1" drainrock	3/4"-0" crushed	Total		
	0	0	0	33	352	752	2,229	0		3,366		
										\$43,493		
SPECIAL PROJECTS												
Description									Cy/Amount	Rate	Cost	
pit-run development											\$0.00	
riprap development											\$0.00	
SUB TOTAL FOR SPECIAL PROJECTS										\$0		
Subtotal of Surfacing & Spec. Proj.										\$43,493		
Subtotal of Clearing, Exc., Culv.										\$1,938		
GRAND TOTAL										\$45,431		

Compiled By: C. Hatcher

Date: 07/27/2021

SUMMARY OF ROCK DEVELOPMENT AND CRUSHING COSTS

PROJECT NO. 341-2022-W00537-01	Timber Sale Name: Blue Bucket
Quarry: Munce Quarry	Swell:
Location: NW1/4, NE1/4, Section 31, T5N, R8W	Shrink: 16%
County: Clatsop	
By: C. Hatcher	Loading Hopper: Yes
Date: 08/02/2021	

ROCK SIZE	REJECT	GRADATION	STOCKPILE CU. YDS.	TRUCK MEAS CU. YDS.	TOTAL CU. YDS.
3/4"-0"	3%	CR			
1-1/2"-0"	3%	CR		2,229	2,229
4"-0"	3%	CR		752	752
6"-0"		PR		385	385
24"-6"		RR			
36"		RR			
TOTAL CUBIC YARDS OF ROCK:				3,366	3,366

1) MOBILIZATION & SET UP:

EQUIPMENT	QUANTITY	RATE	COST	EQUIPMENT	QUANTITY	RATE	COST
				Off Highway Dump Truck	1	\$622	\$622
Screening Plants	1	\$622	\$622				
D8 Cat	1	\$1,581	\$1,581	Loading Hopper	1	\$622	\$622
				Loader	1	\$905	\$905
Drill & Compressor	1	\$1,581	\$1,581				
Powder	1	\$395	\$395	2 Stage Crusher	1	\$2,445	\$2,445
				Excavator	1	\$1,581	\$1,581
SUB TOTAL FOR MOBILIZATION				\$10,354			

EQUIPMENT SET UP	TIMES	RATE	COST
2 Stage Crusher	1	\$2,445	\$2,445
Screening Plants	1	\$330	\$330
Loading Hopper	1	\$330	\$330
Original Calibration	1	\$612	\$612
SUB TOTAL FOR SET UP COSTS		\$3,717	

TOTAL MOBILIZATION & SET UP COSTS	\$14,071
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2) CLEARING & GRUBBING

DESCRIPTION	QUANTITY	UNIT	RATE	COST
Clear, Load, Haul to Waste Area	4	hrs	\$189.00	\$756
Slash and Stumps (1 truck, 1 exc.)	4	hrs	\$143.00	\$572

TOTAL CLEARING & GRUBBING COSTS	\$1,328
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3) EXCAVATION

MATERIAL DESCRIPTION	QUANTITY	UNIT	RATE	COST
Overburden Removal (excavate, load	40	hrs	\$189.00	\$7,560
haul, and spread)	40	hrs	\$143.00	\$5,720
	8	hrs	\$178.00	\$1,424
Develop truck access to the top of the	4	hrs	\$189.00	\$756
quarry and to waste area w/ excavator,	4	hrs	\$143.00	\$572
off-highway truck, and D8	4	hrs	\$178.00	\$712
Develop and clear debris from quarry floor	4	hrs	\$143.00	\$572
and quarry face w/ excavator and truck	4	hrs	\$189.00	\$756

TOTAL EXCAVATION COSTS	\$18,072
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4) DEVELOP ROCK

ROCK SUMMARY			METHOD	%	QUANTITY	RATE	COST
Type	Cu. yd. Vol.	Weight	Ripping			\$3.40	
crushed	2,981	89%	Drill & shoot	97%	3,352	\$3.50	\$11,731
pit run	385	11%	Oversize red	3%	101	\$6.90	\$697
rip rap	0	0	Other				
Total	3,366						
reject	89	2.7%					
TOTAL ROCK DEVELOPMENT COSTS							\$12,428

5) CALIBRATION & TESTING

DESCRIPTION	NO.	\$/TEST	COST
Calibrate	1	\$507.00	\$507
Calibrate			
Test	3	\$57.30	\$172
Test			

TOTAL CALIBRATION & TESTING COSTS \$679

6) FEEDING & LOADING

DESCRIPTION	CU. YD. QUANTITY		COST CU. YD.		TOTAL COST
Dig & Feed Rock	3,070		\$0.98		\$3,020
Shot Rock Handling	20	Exc. C330 Hrs	\$175.00	\$/hr	\$3,500

TOTAL FEEDING & LOADING COSTS \$6,520

7) ROCK CRUSHING

ROCK SIZE	ROCK TYPE	CU. YD. QUANTITY	CRUSHER TYPE	HOURLY PRODUCTION	RATE CU. YD.	TOTAL COST
3/4"-0"	crushed					
1-1/2"-0"	crushed	2,229	2 stage w/s	120	\$2.89	\$6,446
4"-0"	crushed	752	2 stage w/s	140	\$2.48	\$1,864

TOTAL ROCK CRUSHING COSTS \$8,309

8) STOCKPILING

TOTAL STOCKPILING COSTS

9) MISCELLANEOUS COSTS

DESCRIPTION	COST
Load, Haul, and Spread the reject material at the waste area.	\$338
\$3.78 /CY 89 CY	
Final Quarry Dev., Access Road Const., Waterbarring, Drainage, Block Quarry Access	\$2,565

TOTAL MISCELLANEOUS COSTS \$2,903

10) GRAND TOTAL:

\$64,310

\$/Cubic Yard

\$21.57

Footnotes:

CRUSHED ROCK COST

SALE NAME: Blue Bucket

DATE: 07/27/2021

PROJECT: No. 1
Quarry: Munce Quarry

MATERIAL: 3/4"-0", 1 1/2"-0",
and 4"-0"

BY: C. Hatcher

[illegible]

ROCK HAUL:

Truck type: D20 No. trucks:
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$3.99	/cy
Load:		/cy
Spread:	\$1.08	/cy

Truck type: D12 No. trucks: 5
 Delay min.: 6 Efficiency: 85%

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 792

CRUSHED ROCK HAUL COSTS 2,981 cy @ \$5.07 /cy

Projects Road Maintenance Cost Summary

Sale: Blue Bucket
Date: 27-Jul-21
By: C. Hatcher

Type	Equipment/Rationale			Hours	Rate	Cost
Project Work	Grader 14G			8	\$113	\$904
Final Haul	Dump Truck 12CY			4	\$89	\$356
Road	FE Loader C966			4	\$94	\$376
Maintenance	Vibratory Roller			8	\$87	\$696
	Water Truck 2,500 gallon			8	\$101	\$808
Total						\$3,140

Production Rates

Grader

Vibratory Roller

Miles/day	Distance(miles)	Days
1.5	1.51	1.0
1.5	1.51	1.0

NOTE: Munce Road

1.51 Miles

TOTAL= 1.51 Miles

Blue Bucket
Project No 3. Stream Enhancement

		Number of trees		Placement	\$/tree	Subtotal
Location	Sites	per site	method			
SE1-SE2	10	1	Felling		\$40.00	\$400.00

Project Total **\$400**

**Blue Bucket
TIMBER CRUISE REPORT
FY 2022**

1. **Sale Area Location:** Portions of Sections 11, 12, & 13 of T4N, R9W, and portions of Section 7 of T4N, R8W, W.M., Clatsop County, OR.

2. **Fund Distribution:** Fund: BOF 48.12% CSL 51.88%
The percent break down for the BOF portion is:
Tax Code: 10-02 = 48.09%
 10-14 = 0.36%

3. **Sale Acreage by Area:**

Unit	Harvest Type	Gross Acres	Stream Buffer Acres	Existing R/W Acres	New R/W	Non-Stocked Area	Reserve Tree Area	Net Acres	Survey Method
1	Modified Clearcut	89	14	4	-	-	4	67	GIS
2	Modified Clearcut	97	19	4	-	2	-	72	GIS
TOTALS		186	33	8	-	2	4	139	

4. **Cruisers and Cruise Dates:** Ryan Simpson and John Czarnecki (7/15/2021-7/26/2021).

5. **Cruise Method and Computation:**

Units 1 and 2: Units 1 and 2 were variable plot cruised with a 40 BAF. A total of 59 plots were sampled on a 4 by 6.5 chain spacing with a grade to count ratio of 1:2, resulting in 19 grade plots and 40 count plots.

The number of count plots on the "take" tree statistics page do not equal those of the whole stand due to a blank plot consisting of only one snag. This is represented as a blank plot on the statistics page. The total number of plots match that of the whole stand.

The number of count and grade plots in the statistics differ from the cruise design due to minor species being graded on a count plot.

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 and 2	BLUEB	U12	00MC	139

6. **Timber Description:**

Units 1 and 2 are modified clearcuts with an average age of 56 years. The stands consist of western hemlock, Douglas-fir, and minor components of Sitka spruce, and red alder. The average take western hemlock is approximately 20 inches DBH and 79 feet to a merchantable top. The average take Douglas-fir is approximately 19 inches DBH and 85 feet to a merchantable top. The average take Sitka spruce is 24 inches DBH and 76 feet to a merchantable top. The average take red alder is approximately 20 inches DBH and 46 feet to a merchantable top. Average net volume to be harvested per acre is 39 MBF. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point.

7. Statistical Analysis and Stand Summary:

Statistics for Stand B.F. volumes

Unit	Estimated CV	Target SE%	Actual CV	Actual SE%
1 & 2	60.0%	11.0%	46.3%	6.0%

8. Volumes by Species and Log Grade:

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

Conifers

Species	DBH	Net Vol.	2 Saw	3 Saw	4 Saw	% D & B	% Sale
Western hemlock	20	3,308	2,412	690	206	1.5%	61
Douglas-fir	19	1,934	1,375	465	94	0.8%	36
Sitka spruce	24	95	82	13	--	2.2%	2
TOTALS	--	5,337	3,869	1,168	300	--	--

Hardwood

Species	DBH	Net Vol.	12"+	10"-11"	8"-9"	6"-7"	% D & B	% Sale
Red alder	20	54	30	19	--	5	0%	1
TOTALS	--	54	30	19	--	5	--	--

TOTAL VOLUME	5,391
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9. Approvals:

Prepared by: Michele Huffman
 Unit Forester Approval: 

Date: 08/02/2021
 Date: 8/26/2021

- 10. Attachments:** Cruise Design and Map (3 pages)
 Volume Report (1 page)
 Statistics Reports (3 pages)
 Log Stock Table (2 pages)
 Stand Table Summary (1 page)

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Blue Bucket

Units 1 and 2

Harvest Type: Modified Clearcut

Approx. Cruise Acres: 139 **Estimated CV%** 60 Net BF/Acre **SE% Objective** 11% Net BF/Acre

Planned Sale Volume : 4,896 MBF **Estimated Sale Area Value/Acre:** \$10,800/Acre

A. Cruise Goals: (a) Grade minimum 80 conifer trees.

(b) Sample 59 cruise plots (19 grade/ 40 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

Cruise Line Direction: Unit 1: 52°/232°, Unit 2: 7°/187°

Cruise Line Spacing 6.5 (chains) 429 (Feet)

Cruise Plot Spacing 4 (chains) 264 (Feet)

Grade/Count Ratio 1:2

Take plots as marked on cruise map.

Grade minor species (true fir and cedar) 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 < 12" 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 7" for conifers and 7" for hardwoods or 40% of dob at 16' form point. Generally, use 7" 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); 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.

Grade oversized 3-SAW (DIB $\geq$ 12", knots $> 2\frac{1}{2}$ " inside scaling cylinder affecting $> 50\%$ of log)

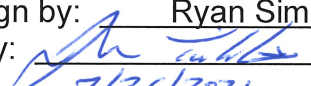
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally 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: 

Date: 7/26/2021

TIMBER CRUISE

OF TIMBER SALE CONTRACT
NO. AT-341-2022-W00586-01

BLUE BUCKET

PORTIONS OF SECTIONS
11, 12, & 13 OF T4N, R9W, W.M.,
CLATSOP COUNTY, OREGON

BAF = 40

Unit 1 AZ = 52° / 232°

Net Acres = 139

Unit 2 AZ = 7° / 187°

Grade Plots = 19

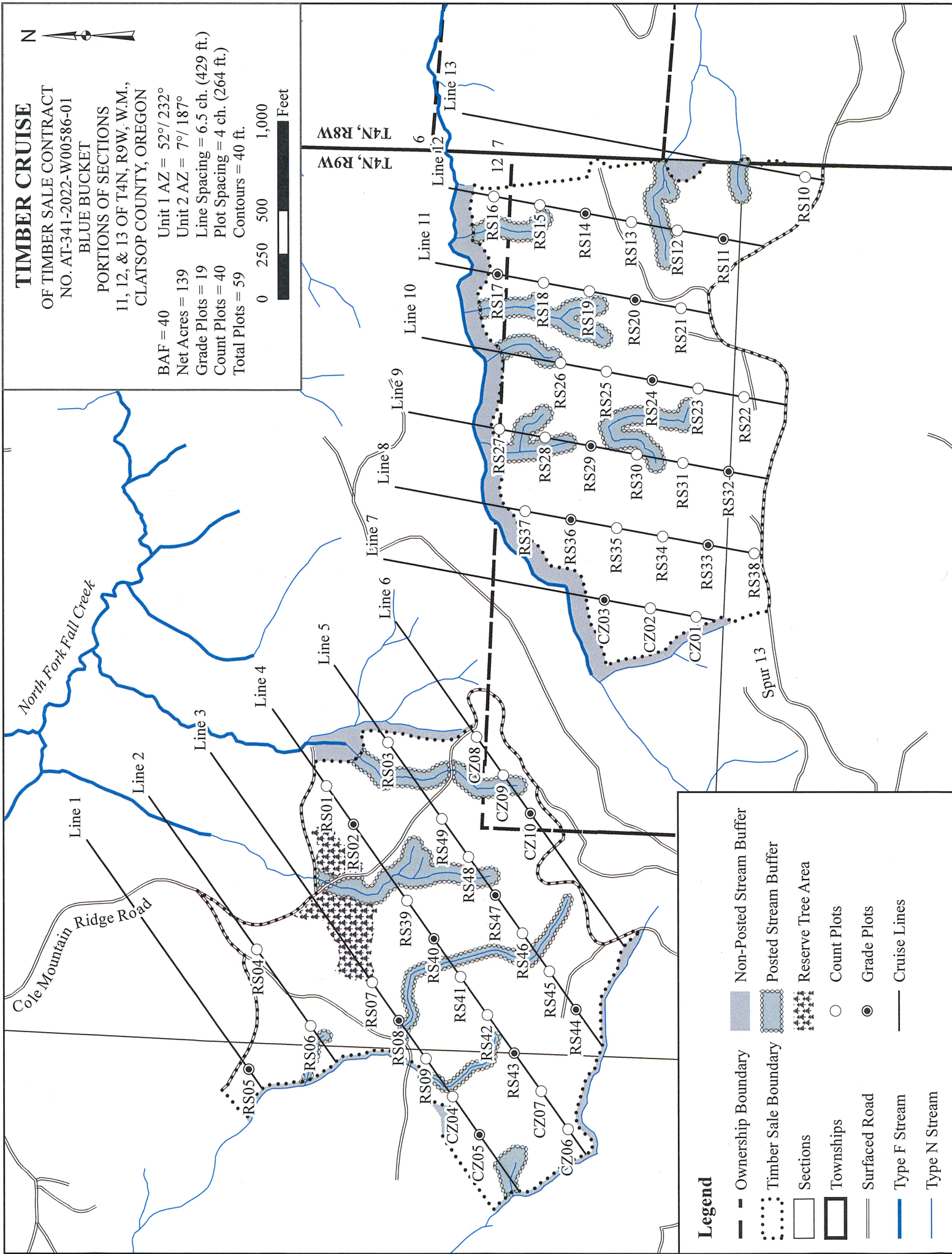
Line Spacing = 6.5 ch. (429 ft.)

Count Plots = 40

Plot Spacing = 4 ch. (264 ft.)

Total Plots = 59

Contours = 40 ft.



Legend

- Ownership Boundary
- Timber Sale Boundary
- Sections
- Townships
- Surfaced Road
- Type F Stream
- Type N Stream
- Non-Posted Stream Buffer
- Posted Stream Buffer
- Reserve Tree Area
- Count Plots
- Grade Plots
- Cruise Lines

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																			
T04N R09W S12 Ty00MC139.00						Project: BLUEB										Page 1							
						Acres 139.00										Date 8/2/2021							
																Time 10:34:30AM							
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre		
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf			
					4-5	6-11	12-16		17+	12-20	21-30	31-35	36-99										
H			DOCU														8	18		0.00	.9		
H			DO2S	72	1.6	17,633	17,349	2,412			64	36	0	6	2	91	38	15	335	2.01	51.7		
H			DO3S	21	1.4	5,036	4,966	690		85	15		3	27	18	53	34	9	109	0.87	45.7		
H			DO4S	7	.4	1,488	1,482	206		100			59	41			21	7	33	0.56	44.8		
H Totals				61	1.5	24,157	23,797	3,308		24	50	26	4	13	5	78	31	11	166	1.31	143.1		
D			DO2S	71	.6	9,955	9,893	1,375		1	64	35		1	1	98	40	14	311	1.77	31.8		
D			DO3S	24	1.6	3,402	3,347	465		100			1	38	14	47	34	9	95	0.78	35.1		
D			DO4S	5		674	674	94		100			88	12			18	7	25	0.48	27.5		
D Totals				36	.8	14,031	13,914	1,934		30	45	25	5	11	4	81	31	10	147	1.15	94.4		
A			DO1S	55		214	214	30			100				100		32	14	230	1.78	.9		
A			DO2S	35		134	134	19		100					100		34	10	130	1.24	1.0		
A			DO4S	10		37	37	5		100				100			24	7	40	0.75	.9		
A Totals				1		386	386	54		44	56			10	90		30	10	133	1.30	2.9		
S			DO2S	86	2.5	604	589	82			100				100		40	16	390	2.55	1.5		
S			DO3S	14		91	91	13		100					100		34	7	60	0.88	1.5		
S Totals				2	2.2	695	680	95		13	87				13	87	37	12	225	1.78	3.0		
Totals					1.3	39,269	38,777	5,391		26	49	25	4	12	6	78	31	10	159	1.26	243.4		

TC PSTATS			PROJECT STATISTICS						PAGE	1		
			PROJECT			BLUEB			DATE	8/24/2021		
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt	
04N	09	12	U12	00MC		139.00		59	327	1	W	
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES		PERCENT SAMPLE TREES				
TOTAL			59	327	5.5							
CRUISE			20	105	5.3	15,717		.7				
DBH COUNT												
REFOREST												
COUNT			39	217	5.6							
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
WHEMLOCK			58	58.6	19.8	79	28.1	124.7	24,157	23,797	5,822	5,822
DOUG FIR			36	35.7	19.3	85	16.5	72.5	14,031	13,914	3,386	3,386
SNAG			5	13.4	13.6	41	3.7	13.6				
S SPRUCE			1	1.5	24.0	76	1.0	4.7	695	680	199	199
R ALDER			2	2.0	19.5	46	0.9	4.1	386	386	113	113
CEDLEAV			3	1.8	14.2	16	0.5	2.0	73	70	32	32
TOTAL			105	113.1	19.0	75	50.9	221.7	39,343	38,847	9,553	9,553
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	
WHEMLOCK			58.7	7.7	491	532	573					
DOUG FIR			63.5	10.6	453	506	560					
SNAG												
S SPRUCE												
R ALDER			49.5	46.3	107	200	293					
CEDLEAV			87.6	60.6	60	153	246					
TOTAL			67.8	6.6	448	480	512	184	46	20		
CL	68.1	COEFF		TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH			5	10	15	
WHEMLOCK			92.7	12.1	52	59	66					
DOUG FIR			103.2	13.4	31	36	41					
SNAG			211.9	27.6	10	13	17					
S SPRUCE			316.3	41.1	1	2	2					
R ALDER			472.5	61.5	1	2	3					
CEDLEAV			650.8	84.6	0	2	3					
TOTAL			48.5	6.3	106	113	120	94	23	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	
WHEMLOCK			89.9	11.7	110	125	139					
DOUG FIR			100.0	13.0	63	73	82					
SNAG			209.4	27.2	10	14	17					
S SPRUCE			316.3	41.1	3	5	7					
R ALDER			472.5	61.5	2	4	7					
CEDLEAV			568.6	74.0	1	2	4					
TOTAL			41.2	5.4	210	222	234	68	17	8		
CL	68.1	COEFF		NET BF/ACRE					# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH			5	10	15	
WHEMLOCK			90.4	11.8	20,997	23,797	26,596					
DOUG FIR			101.0	13.1	12,087	13,914	15,742					
SNAG												
S SPRUCE			316.3	41.1	400	680	959					

PROJECT STATISTICS							PAGE	2		
TC		PSTATS		PROJECT	BLUEB		DATE	8/24/2021		
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	09	12	U12	00MC	139.00	59	327	1	W	
CL	68.1		COEFF		NET BF/ACRE		# OF PLOTS REQ.		INF. POP.	
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
R ALDER			472.5	61.5	149	386	623			
CEDLEAV			768.1	99.9	0	70	140			
TOTAL			46.3	6.0	36,509	38,847	41,185	85	21	9

TC PSTATS		PROJECT STATISTICS							PAGE	1		
		PROJECT BLUEB							DATE	8/24/2021		
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
04N	09	12	U12 TAKE	00MC	139.00	59	304	1	W			
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			59	304	5.2							
CRUISE			19	97	5.1	13,596	.7					
DBH COUNT												
REFOREST												
COUNT			39	207	5.3							
BLANKS			1									
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
WHEMLOCK			58	58.6	19.8	79	28.1	124.7	24,157	23,797	5,822	5,822
DOUG FIR			36	35.7	19.3	85	16.5	72.5	14,031	13,914	3,386	3,386
S SPRUCE			1	1.5	24.0	76	1.0	4.7	695	680	199	199
R ALDER			2	2.0	19.5	46	0.9	4.1	386	386	113	113
TOTAL			97	97.8	19.7	80	46.5	206.1	39,269	38,777	9,520	9,520
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		
WHEMLOCK			58.7	7.7	491	532	573					
DOUG FIR			63.5	10.6	453	506	560					
S SPRUCE												
R ALDER			49.5	46.3	107	200	293					
TOTAL			60.8	6.2	483	515	546	148	37	16		
CL	68.1	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
WHEMLOCK			92.7	12.1	52	59	66					
DOUG FIR			103.2	13.4	31	36	41					
S SPRUCE			316.3	41.1	1	2	2					
R ALDER			472.5	61.5	1	2	3					
TOTAL			49.2	6.4	92	98	104	97	24	11		
CL	68.1	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
WHEMLOCK			89.9	11.7	110	125	139					
DOUG FIR			100.0	13.0	63	73	82					
S SPRUCE			316.3	41.1	3	5	7					
R ALDER			472.5	61.5	2	4	7					
TOTAL			45.3	5.9	194	206	218	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		
WHEMLOCK			90.4	11.8	20,997	23,797	26,596					
DOUG FIR			101.0	13.1	12,087	13,914	15,742					
S SPRUCE			316.3	41.1	400	680	959					
R ALDER			472.5	61.5	149	386	623					
TOTAL			46.7	6.1	36,420	38,777	41,134	87	22	10		

TC PLOGSTVB				Log Stock Table - MBF															
T04N R09W S12 Ty00MC 139.00				Project: BLUEB Acres 139.00										Page 1 Date 8/2/2021 Time 10:36:23AM					
S T Spp	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	2S	20	4		4	.1					4							
H	DO	2S	24	82		82	2.5					51		14		17			
H	DO	2S	28	19		19	.6							19					
H	DO	2S	30	52		52	1.6					52							
H	DO	2S	32	32		32	1.0					32							
H	DO	2S	34	18		18	.5							18					
H	DO	2S	38	22		22	.7					22							
H	DO	2S	40	2,222	1.8	2,183	66.0					354		671	914	194	49		
H	DO	3S	20	18		18	.6				4	15							
H	DO	3S	24	70		70	2.1				5	51	15						
H	DO	3S	26	16	7.7	15	.5						15						
H	DO	3S	28	34		34	1.0					16	17						
H	DO	3S	30	67		67	2.0				17	51							
H	DO	3S	32	115		115	3.5			21		59	35						
H	DO	3S	34	8		8	.2			8									
H	DO	3S	36	57		57	1.7			32	8	17							
H	DO	3S	38	7		7	.2			7									
H	DO	3S	40	307	2.8	298	9.0			33	56	189	21						
H	DO	4S	12	2		2	.0				2								
H	DO	4S	14	4		4	.1			4									
H	DO	4S	16	34	2.6	33	1.0			23	11								
H	DO	4S	18	26		26	.8			12	11	4							
H	DO	4S	20	57		57	1.7			36	21								
H	DO	4S	24	48		48	1.5			9	39								
H	DO	4S	30	36		36	1.1			36									
H	Totals			3,358	1.5	3,308	61.4			220	172	402	619	721	914	211	49		
D	DO	2S	30	15	5.6	14	.7					14							
D	DO	2S	32	16		16	.8					16							
D	DO	2S	40	1,353		1,346	69.6					17	451	338	407	88	45		
D	DO	3S	16	6		6	.3					6							
D	DO	3S	24	48		48	2.5				21	27							
D	DO	3S	28	14		14	.7					14							
D	DO	3S	30	117		116	6.0				17	99							
D	DO	3S	32	67	6.8	63	3.3				47	16							
D	DO	3S	36	10		10	.5			10									
D	DO	3S	40	210		208	10.8			44	59	105							

TC PLOGSTVB				Log Stock Table - MBF																
T04N R09W S12 Ty00MC 139.00				Project: BLUEB Acres 139.00										Page 2 Date 8/2/2021 Time 10:36:23AM						
S T Spp	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+	
D	DO	4S	12	5		5	.3			5										
D	DO	4S	14	5		5	.2			5										
D	DO	4S	16	12		12	.6			3	8									
D	DO	4S	18	28		28	1.4			24	4									
D	DO	4S	20	33		33	1.7			26	7									
D	DO	4S	24	11		11	.6			4	7									
D	Totals			1,950		1,934	35.9			120	171	285	481	338	407	88	45			
A	DO	1S	32	30		30	55.5						30							
A	DO	2S	34	19		19	34.8					19								
A	DO	4S	24	5		5	9.7			5										
A	Totals			54		54	1.0			5		19		30						
S	DO	2S	40	84	2.5	82	86.7							82						
S	DO	3S	34	13		13	13.3			13										
S	Totals			97	2.2	94	1.8			13				82						
Total	All Species			5,458	1.3	5,390	100.0			357	343	706	1099	1089	1403	298	94			

TC		PSTNDSUM		Stand Table Summary								Page		1		
												Date:		8/2/2021		
T04N R09W S12 Ty00MC 139.00				Project				BLUEB				Time:		10:36:24AM		
				Acres				139.00				Grown Year:				
S Sp	T	DBH	Sample 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		10	1	85	84	3.943	2.15	3.94	17.0	60.0		67	237	93	33	
H		11	1	91	50	3.259	2.15	3.26	13.0	40.0		42	130	59	18	
H		13	1	86	111	2.333	2.15	4.67	21.0	75.0		98	350	136	49	
H		14	1	92	99	2.012	2.15	4.02	23.0	90.0		93	362	129	50	
H		15	1	89	82	1.753	2.15	3.51	22.5	80.0		79	280	110	39	
H		16	3	87	102	4.621	6.45	10.78	27.6	104.3		297	1,124	413	156	
H		17	1	88	99	1.364	2.15	2.73	36.0	130.0		98	355	137	49	
H		18	3	89	110	3.651	6.45	9.74	31.9	118.8		310	1,156	431	161	
H		19	5	89	95	5.462	10.75	13.11	35.3	130.0		463	1,704	644	237	
H		20	3	89	102	2.958	6.45	7.89	37.8	156.3		298	1,232	414	171	
H		21	11	89	108	9.836	23.66	28.61	39.2	164.1		1,120	4,695	1,557	653	
H		22	4	87	104	3.259	8.60	8.96	44.7	181.8		401	1,630	557	227	
H		23	6	88	109	4.473	12.90	11.93	52.3	215.6		623	2,572	866	357	
H		24	3	89	120	2.054	6.45	6.16	55.3	240.0		341	1,479	474	206	
H		25	5	89	115	3.155	10.75	9.46	57.5	249.3		544	2,360	756	328	
H		26	2	83	105	1.167	4.30	3.50	54.5	193.3		191	677	265	94	
H		27	3	85	116	1.623	6.45	4.87	66.1	286.7		322	1,396	447	194	
H		28	1	86	140	.503	2.15	1.51	80.3	376.7		121	568	168	79	
H		29	2	87	115	.938	4.30	2.81	75.8	350.0		213	985	297	137	
H		39	1	85	106	.259	2.15	.78	128.3	650.0		100	506	139	70	
H		Totals	58	88	101	58.623	124.75	142.24	40.9	167.3		5,822	23,797	8,092	3,308	
D		12	1	91	96	2.566	2.02	5.13	14.5	55.0		74	282	103	39	
D		13	1	88	81	2.186	2.02	4.37	15.0	50.0		66	219	91	30	
D		15	2	85	89	3.284	4.03	6.57	22.0	75.0		144	493	201	68	
D		16	1	89	112	1.443	2.02	2.89	30.5	115.0		88	332	122	46	
D		17	2	91	114	2.557	4.03	7.67	24.5	91.7		188	703	261	98	
D		18	5	91	112	5.701	10.08	14.82	31.1	119.2		461	1,767	640	246	
D		19	4	89	116	4.094	8.06	11.26	32.7	127.3		368	1,433	512	199	
D		20	3	91	117	2.771	6.05	8.31	34.9	143.3		290	1,191	403	166	
D		21	4	90	115	3.351	8.06	10.05	37.0	154.2		372	1,550	517	215	
D		22	2	90	123	1.527	4.03	4.58	43.5	183.3		199	840	277	117	
D		23	4	92	132	2.794	8.06	8.38	51.5	225.8		432	1,893	600	263	
D		24	1	91	136	.641	2.02	1.92	56.0	256.7		108	494	150	69	
D		25	2	90	122	1.182	4.03	3.55	54.3	236.7		193	839	268	117	
D		27	1	89	125	.507	2.02	1.52	64.0	280.0		97	426	135	59	
D		28	1	89	148	.471	2.02	1.41	79.0	383.3		112	542	155	75	
D		34	2	87	125	.639	4.03	1.92	101.0	475.0		194	911	269	127	
D		Totals	36	90	112	35.714	72.54	94.36	35.9	147.5		3,386	13,914	4,706	1,934	
S		24	1	82	92	1.511	4.75	3.02	66.0	225.0		199	680	277	94	
S		Totals	1	82	92	1.511	4.75	3.02	66.0	225.0		199	680	277	94	
A		19	1	86	50	1.033	2.03	1.03	42.0	130.0		43	134	60	19	
A		20	1	86	70	.932	2.03	1.86	37.5	135.0		70	252	97	35	
A		Totals	2	86	59	1.965	4.07	2.90	39.1	133.2		113	386	157	54	
Totals			97	89	104	97.813	206.10	242.52	39.3	159.9		9,520	38,777	13,233	5,390	

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT
NO. AT-341-2022-W00586-01
BLUE BUCKET

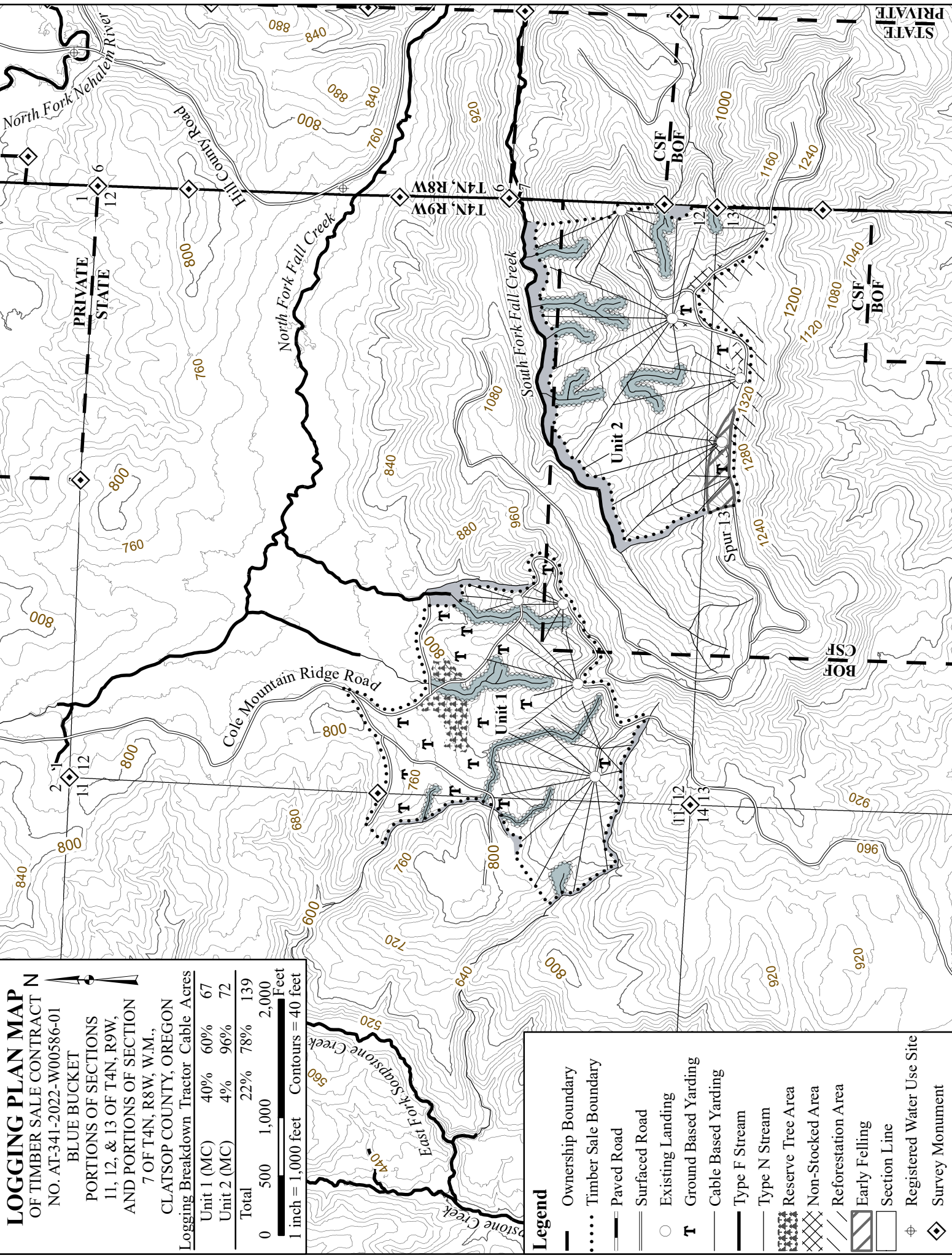
PORTIONS OF SECTIONS
11, 12, & 13 OF T4N, R9W,
AND PORTIONS OF SECTION
7 OF T4N, R8W, W.M.,
CLATSOP COUNTY, OREGON

Logging Breakdown Tractor Cable Acres

Unit 1 (MC)	40%	60%	67
Unit 2 (MC)	4%	96%	72

Total	22%	78%	139
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0 500 1,000 2,000 Feet
1 inch = 1,000 feet Contours = 40 feet



Legend

- Ownership Boundary
- Timber Sale Boundary
- Paved Road
- Surface Road
- Existing Landing
- Ground Based Yarding
- Cable Based Yarding
- Type F Stream
- Type N Stream
- Reserve Tree Area
- Non-Stocked Area
- Reforestation Area
- Early Felling
- Section Line
- Registered Water Use Site
- Survey Monument

North Arrow