



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Breaking Boundary
Sale TL-341-2024-W00953-01

District: Tillamook

Date: January 01, 2023

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,869,428.84	\$33,120.46	\$1,902,549.30
		Project Work:	(\$234,940.00)
		Advertised Value:	\$1,667,609.30



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Timber Description

Location: Section(s) 4, 5 of T3S R7W, Section(s) 32, 33 of T2S R7W W.M.

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	18	0	100
Western Hemlock / Fir	16	0	100
Alder (Red)	16	0	100

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	2,578	2,400	0	0	0	0	4,978
Western Hemlock / Fir	37	83	0	0	0	0	120
Alder (Red)	0	0	43	15	75	45	178
Total	2,615	2,483	43	15	75	45	5,276

Comments:

Additional Costs – Breaking Boundary

Pond Values Used: January 2023

Region: Astoria, Forest Grove, and Tillamook

Western red cedar and other cedars stumpage price = \$1,176/MBF - \$500/MBF = \$676/MBF

Pulp (Conifer and Hardwood) Price = \$2.50/Ton

Other costs with profit and risk added:

BRAND AND PAINT ALLOWANCE = \$2.00/ MBF

5,276 MBF x \$2.00/MBF = \$10,552.00

Heliport Construction: \$500/unit x 2 units = \$1,000.00

Move-in Machine Cleaning: \$1,000/machine x 2 machines x 2 seasons = \$4,000.00

TOTAL Other Costs with profit and risk to be added = \$15,552.00

Other Costs without Profit and Risk Added:

Slash piling and sorting (Cable Settings): \$5/ac x 152 ac. = \$760.00

Ditch Cleaning and Bank Sluff Removal:

Mobilization: two times – dump truck w/ tilt bed & small excavator: \$900 x 2 = \$1,800.00

Small excavator (Cat 312 or equivalent): 40 hours @ \$135/ hour = \$5,400.00

Dump truck: 40 hours @ \$90/ hour = \$3,600

TOTAL Other Costs without Profit and Risk added = \$11,560.00

ROAD MAINTENANCE:

Spot Rocking: 20cy/MMBF/mile x 5.276MMBF x \$15/cy x 9.95 miles /5,276 MBF = \$2.99/MBF

Interim Grading: \$1,150/mile x 9.95 miles x 1 times/ 5,276 MBF = \$2.17/MBF

Final Maintenance Grading: \$1,500/mile x 9.95 miles/ 5,276 MBF = \$2.83/MBF

Final Maintenance Compaction: \$900/mile x 4.5 miles/5,276 MBF = \$0.77/MBF

Total Road Maintenance: = \$8.76/MBF



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Logging Conditions

Combination#: 1

Douglas - Fir	87.63%
Western Hemlock / Fir	85.55%
Alder (Red)	84.84%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimiting

yarding distance: Long (1,500 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 6 **bd. ft / load:** 3800

cost / mbf: \$343.94

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

Combination#: 2

Douglas - Fir	12.37%
Western Hemlock / Fir	14.45%
Alder (Red)	15.16%

Logging System: Shovel **Process:** Harvester Head Delimiting

yarding distance: Short (400 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 12 **bd. ft / load:** 3800

cost / mbf: \$117.19

machines: Forwarder
Harvester



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Logging Costs

Operating Seasons: 2.00	Profit Risk: 1%
Project Costs: \$234,940.00	Other Costs (P/R): \$15,552.00
Slash Disposal: \$0.00	Other Costs: \$11,560.00

Miles of Road

Road Maintenance: \$8.76

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

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	4.0
Western Hemlock / Fir	\$0.00	2.0	3.8
Alder (Red)	\$0.00	3.0	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									
\$315.90	\$8.76	\$6.59	\$156.25	\$2.95	\$4.90	\$0.00	\$2.00	\$2.19	\$499.54
Western Hemlock / Fir									
\$311.17	\$8.76	\$6.59	\$164.47	\$2.95	\$4.94	\$0.00	\$2.00	\$2.19	\$503.07
Alder (Red)									
\$309.57	\$8.76	\$6.59	\$109.65	\$2.95	\$4.38	\$0.00	\$2.00	\$2.19	\$446.09

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$870.72	\$371.18	\$0.00
Western Hemlock / Fir	\$0.00	\$683.86	\$180.79	\$0.00
Alder (Red)	\$0.00	\$632.16	\$186.07	\$0.00



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Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	4,978	\$371.18	\$1,847,734.04
Western Hemlock / Fir	120	\$180.79	\$21,694.80
Alder (Red)	178	\$186.07	\$33,120.46

Gross Timber Sale Value

Recovery: \$1,902,549.30

Prepared By: Nathan Atchison

Phone: 503-815-7031



PROJECT SUMMARY SHEET

Sale: Breaking Boundary

CONSTRUCTION

Point	C to D	17+05	stations =	\$10,456.12
Point	G to H	1+65	stations =	\$3,372.72
Point	I to J	1+75	stations =	\$3,140.40
Point	U to V	6+85	stations =	\$3,183.58

SUBTOTAL CONSTRUCTION \$20,152.82

IMPROVEMENT

Point	A to B	149+50	stations =	\$38,616.00
Point	E to F	2+75	stations =	\$389.62
Point	K to L	108+35	stations =	\$44,861.86
Point	W to X	103+10	stations =	\$6,582.55

SUBTOTAL IMPROVEMENT \$90,450.03

RECONSTRUCTION

Point	C to D	7+70	stations =	\$4,440.28
Point	E to F	3+15	stations =	\$671.29
Point	K to L	47+70	stations =	\$23,319.21
Point	M to N	8+90	stations =	\$17,423.52
Point	O to P	17+60	stations =	\$34,697.47
Point	Q to R	4+85	stations =	\$12,022.41
Point	S to T	2+15	stations =	\$4,971.41

SUBTOTAL RECONSTRUCTION \$97,545.59

SPECIAL PROJECTS

Brush	5.7	miles of road	\$6,640.50
Block C to D, E to F(2+75 to 5+90), and U to V.			\$5,761.30
Coast Moon Pit Development			\$7,920.00

SUBTOTAL SPECIAL PROJECTS \$20,321.80

MOVE IN

\$6,469.76

GRAND TOTAL

\$234,940.00

SUMMARY OF CONSTRUCTION COST

Sale:	Breaking Boundary	Road:	A to B
Construction -	0+00 0.00	stations miles	Improvement -
	149+50 2.83	stations miles	Reconstruction -
	0+00 0.00	stations miles	

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	120	LF of 18"	\$3,030.00		80	LF of 24"	\$3,060.00
			\$3,030.00				\$3,060.00
<u>Culvert Stakes & Markers</u>							
15 markers			\$135.00				
TOTAL CULVERTS							\$6,225.00

ROCK

Cross Drain Backfill	20yds each	80	cy. of	Crushed	@	\$16.28 per c.y.=	\$1,302.40
Stream Crossing Backfill	25yds each	50	cy. of	Crushed	@	\$15.84 per c.y.=	\$792.00
Energy Dissipator	5yds each	30	cy. of	Rip Rap	@	\$28.12 per c.y.=	\$843.60
Landing Rock	79+25	70	cy. of	Pitrun	@	\$11.23 per c.y.=	\$786.10
Fill Reinforcement Wall	32+30	50	cy. of	Rip Rap	@	\$26.79 per c.y.=	\$1,339.50
Turnout Rock	20yds each	400	cy. of	Crushed	@	\$16.28 per c.y.=	\$6,512.00
Spot Rock	As Directed	500	cy. of	Crushed	@	\$16.28 per c.y.=	\$8,140.00
Energy Dissipator	104+00	5	cy. of	Rip Rap	@	\$28.30 per c.y.=	\$141.50
Energy Dissipator	49+50	5	cy. of	Rip Rap	@	\$27.15 per c.y.=	\$135.75
Cutbank Repair	128+40	20	cy. of	Pitrun	@	\$9.44 per c.y.=	\$188.80
TOTAL ROCK							\$20,181.65

SPECIAL PROJECTS

Clean slumps	0.50	hours @	\$220.00	per hour	\$110.00
Construct Landing	0.50	hours @	\$220.00	per hour	\$110.00
Construct waste areas -	0.50	hours @	\$220.00	per hour	\$110.00
Construct ditchouts -	1.00	@	\$65.00	each	\$65.00
Clean/Construct ditchlines with endhaul	23.10	stations @	\$145.00	per station	\$3,349.50
Clean/Construct ditchlines with no endhaul	10.70	stations @	\$90.00	per station	\$963.00
Construct Catchbasins	3.00	@	\$65.00	each	\$195.00
Grade and shape road -	149.50	stations @	\$24.40	per station	\$3,647.80
Roll subgrade w/ vibratory roller-	149.50	stations @	\$19.40	per station	\$2,900.30
Remove culverts from state lands	2.00	@	\$387.50	total	\$387.50
Grass seed -	0.50	acres @	\$310.00	per acre	\$155.00
Mulching -	0.250	acres @	\$865.00	per acre	\$216.25
TOTAL SPECIAL PROJECTS					\$12,209.35

GRAND TOTAL **\$38,616.00**

SUMMARY OF CONSTRUCTION COST

Sale:

Breaking Boundary

Road:

C to D

Construction -	17+05	stations	Improvement -	0+00	stations	Reconstruction -	7+70	stations
	0.32	miles		0.00	miles		0.15	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	Drill & Shoot	Endhaul	
7+70		8+10	9%			\$103	=			\$41.20
8+10		9+10	47%			\$380	=			\$380.00
9+10		11+15	21%			\$193	=			\$395.65
11+15		13+40	9%			\$103	=			\$231.75
13+40		16+30	24%			\$193	=			\$559.70
16+30		20+25	9%			\$103	=			\$406.85
20+25		22+05	40%			\$337	=			\$606.60
22+05		24+75	10%			\$125	=			\$337.50
									TOTAL	\$2,959.25

RECONSTRUCTION: CLEARING AND GRUBBING -
Woody Material Removal/plucking

0.39	acres @	\$1,200.00	per acre =		\$468.00
					TOTAL CLEARING AND GRUBBING
					\$468.00

RECONSTRUCTION: EXCAVATION -
Road Earthwork

7.70	sta. @	\$10.00	per sta. =		\$77.00
					TOTAL EXCAVATION
					\$77.00

RECONSTRUCTION: ENDHAUL -
Woody Material and Dirt
Spread & compact

280	cy. @	\$1.27	per c.y. =		\$355.60
280	cy. @	\$0.55	per c.y. =		\$154.00
					TOTAL ENDHAUL
					\$509.60

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	40	LF of 30"		\$2,000.00
				\$2,000.00
<u>Half Rounds</u>				

TOTAL CULVERTS \$2,000.00

ROCK

0+00 to	1+00	90	cy. of	Pitrun	@	\$11.24	per c.y. =		\$1,011.60
Turnaround	0+85	60	cy. of	Pitrun	@	\$11.24	per c.y. =		\$674.40
									TOTAL ROCK
									\$1,686.00

SPECIAL PROJECTS

Replace Fill(0+50)	8.00	hours @	\$302.50	per hour		\$2,820.00
Construct Landings	5.00	hours @	\$200.00	per hour		\$1,000.00
Construct waste area -	2.00	hours @	\$200.00	per hour		\$400.00
Construct turnoutss -	2.00	@	\$65.00	each		\$130.00
Placement of Geotextile Fabric	1.00	@	\$450.00	per hour		\$450.00
Grade and shape road -	24.75	stations @	\$24.40	per station		\$603.90
Roll subgrade w/ vibratory roller prior to rocking -	24.75	stations @	\$19.40	per station		\$480.15
Remove large stumps -	8.00	lump sum @	\$110.00			\$880.00
Mulching -	0.50	acres @	\$865.00	per acre		\$432.50
						TOTAL SPECIAL PROJECTS
						\$7,196.55

GRAND TOTAL **\$14,896.40**

SUMMARY OF CONSTRUCTION COST

Sale: **Breaking Boundary**

Road: **E to F**

Construction - <u>0+00</u> stations 0.00 miles	Improvement - <u>2+75</u> stations 0.05 miles	Reconstruction - <u>3+15</u> stations 0.06 miles
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RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	0.159	acres @	\$1,415.00 per acre =	\$224.99	\$224.99
TOTAL CLEARING AND GRUBBING					

SPECIAL PROJECTS

Remove tank trap and fill in waterbars	1.00	hours @	\$220.00 per hour	\$220.00	
Set aside boulders	0.25	hours @	\$220.00 per hour	\$55.00	
Construct Landing	0.50	hours @	\$220.00 per hour	\$110.00	
Cut bank sluff removal	0.50	hours @	\$385.00 per hour	\$192.50	
Grade and shape road -	5.90	stations @	\$24.40 per station	\$143.96	
Roll subgrade	5.90	stations @	\$19.40 per station	\$114.46	
TOTAL SPECIAL PROJECTS					\$835.92

GRAND TOTAL **\$1,060.91**

SUMMARY OF CONSTRUCTION COST

Sale:

Breaking Boundary

Road:

G to H

<u>Construction -</u>	<u>1+65</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
	0.03	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist.</u> <u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>	=	<u>Drill & Shoot</u>	<u>Endhaul</u>	
0+00		1+65	5%			\$103				\$169.95
									TOTAL	\$169.95

ROCK

0+00 to		1+65	120	cy. of	Pitrun	@	\$10.83	per c.y.=		\$1,299.60
Junction Rock		0+00	30	cy. of	Pitrun	@	\$10.82	per c.y.=		\$324.60
Landing Rock		1+65	90	cy. of	Pitrun	@	\$10.85	per c.y.=		\$976.50
									TOTAL ROCK	\$2,600.70

SPECIAL PROJECTS

Construct ditchout-	1.00		@	\$65.00	each		\$65.00	
Construct Landing	1.00		hours @	\$220.00	per hour		\$220.00	
Construct waste areas -	0.50		hours @	\$220.00	per hour		\$110.00	
Grade and shape road -	1.65		stations @	\$24.40	per station		\$40.26	
Roll subgrade	1.65		stations @	\$19.40	per station		\$32.01	
Remove large stumps -	1.00		lump sum @	\$110.00			\$110.00	
Grass seed -	0.08		acres @	\$310.00	per acre		\$24.80	
							TOTAL SPECIAL PROJECTS	\$602.07

GRAND TOTAL

\$3,372.72

SUMMARY OF CONSTRUCTION COST

Sale: **Breaking Boundary**

Road: **I to J**

<u>Construction -</u>	<u>1+75</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
	0.03	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist.</u> <u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>	=	<u>Drill & Shoot</u>	<u>Endhaul</u>	
0+00		1+75	10%			\$125				\$218.75
									TOTAL	\$218.75

ROCK

0+00 to	1+75	120	cy. of	Pitrun	@	\$10.52 per c.y.=	\$1,262.40	
Junction Rock	0+00	30	cy. of	Pitrun	@	\$10.50 per c.y.=	\$315.00	
Landing Rock	1+75	70	cy. of	Pitrun	@	\$10.54 per c.y.=	\$737.80	
							TOTAL ROCK	\$2,315.20

SPECIAL PROJECTS

Construct Landing	1.00	hours @	\$220.00	per hour	\$220.00	
Construct waste areas -	0.50	hours @	\$220.00	per hour	\$110.00	
Construct ditchouts -	1.00	@	\$65.00	each	\$65.00	
Grade and shape road -	1.75	stations @	\$24.40	per station	\$42.70	
Roll subgrade	1.75	stations @	\$19.40	per station	\$33.95	
Remove large stumps -	1.00	lump sum @	\$110.00		\$110.00	
Grass seed -	0.08	acres @	\$310.00	per acre	\$24.80	
					TOTAL SPECIAL PROJECTS	\$606.45

GRAND TOTAL **\$3,140.40**

SUMMARY OF CONSTRUCTION COST

Sale:

Breaking Boundary

Road:

K to L

Construction -	0+00	stations	Improvement -	108+35	stations	Reconstruction -	47+70	stations
	0.00	miles		2.05	miles		0.90	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Widening	0.016	acres @	\$955.00 per acre =	\$15.28
Scattering	2.409	acres @	\$1,415.00 per acre =	\$3,408.74
TOTAL CLEARING AND GRUBBING				\$3,424.02

RECONSTRUCTION: EXCAVATION -

Widening	66	cy. @	\$2.20 per c.y.=	\$145.20
TOTAL EXCAVATION				\$145.20

ROCK

108+35 to	156+05	2,680	cy. of	Jawrun	@	\$19.55 per c.y.=	\$52,394.00
Widening	115+05	15	cy. of	Jawrun	@	\$19.19 per c.y.=	\$287.85
Turnout	138+80	70	cy. of	Jawrun	@	\$19.69 per c.y.=	\$1,378.30
Landing Rock	154+15	80	cy. of	Jawrun	@	\$20.01 per c.y.=	\$1,600.80
Landing Rock	156+05	80	cy. of	Jawrun	@	\$20.05 per c.y.=	\$1,604.00
TOTAL ROCK							\$57,264.95

SPECIAL PROJECTS

Clear Landings	2.00	hours @	\$220.00 per hour	\$440.00
Lower Road(151+85 to 154+15)Large Excavator and Off Highway Dump	1.00	hours @	\$385.00 per hour	\$385.00
Remove Ravel (144+25 to 146+30)Large Excavator and Off Highway	1.00	hours @	\$385.00 per hour	\$385.00
Fill in tank trap and waterbars	2.00	hours @	\$220.00 per hour	\$440.00
Construct Ditchout	1.00	@	\$65.00 each	\$65.00
Construct Turnaround	1.00	@	\$110.00 each	\$110.00
Grade and shape road -	156.05	stations @	\$24.40 per station	\$3,807.62
Roll subgrade w/ vibratory roller prior to rocking -	47.70	stations @	\$19.40 per station	\$925.38
Remove large stumps -	1.00	lump sum @	\$110.00	\$110.00
Grass seed -	2.19	acres @	\$310.00 per acre	\$678.90
TOTAL SPECIAL PROJECTS				\$7,346.90

GRAND TOTAL

\$68,181.07

SUMMARY OF CONSTRUCTION COST

Sale:

Breaking Boundary

Road:

M to N

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	0.00	stations	<u>Reconstruction -</u>	8+90	stations
	0.00	miles		0.00	miles		0.17	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Widening	0.021	acres @	\$955.00	per acre =	\$20.06
Scattering	0.449	acres @	\$1,415.00	per acre =	\$635.34
TOTAL CLEARING AND GRUBBING					\$655.40

RECONSTRUCTION: EXCAVATION -

Widening	87	cy. @	\$2.20	per c.y.=	\$191.40
TOTAL EXCAVATION					\$191.40

ROCK

0+00 to	8+90	550	cy. of	Jawrun	@	\$19.67	per c.y.=	\$10,818.50
Junction Rock	0+00	30	cy. of	Jawrun	@	\$19.57	per c.y.=	\$587.10
Widening	2+90	10	cy. of	Jawrun	@	\$19.64	per c.y.=	\$196.40
Landing Rock	8+10	70	cy. of	Jawrun	@	\$19.74	per c.y.=	\$1,381.80
Landing Rock	8+90	100	cy. of	Jawrun	@	\$19.76	per c.y.=	\$1,976.00
TOTAL ROCK								\$14,959.80

SPECIAL PROJECTS

Construct Landings	3.00	hours @	\$220.00	per hour	\$660.00
Grade and shape road -	8.90	stations @	\$24.40	per station	\$217.16
Roll subgrade w/ vibratory roller prior to rocking -	8.90	stations @	\$19.40	per station	\$172.66
Remove large stumps -	4.00	lump sum @	\$110.00		\$440.00
Grass seed -	0.41	acres @	\$310.00	per acre	\$127.10
TOTAL SPECIAL PROJECTS					\$1,616.92

GRAND TOTAL **\$17,423.52**

SUMMARY OF CONSTRUCTION COST

Sale:	Breaking Boundary	Road:	O to P
Construction -	0+00 stations 0.00 miles	Improvement -	0+00 stations 0.00 miles
		Reconstruction -	17+60 stations 0.33 miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Widening	0.030	acres @	\$955.00	per acre =	\$28.65
Scattering	0.889	acres @	\$1,415.00	per acre =	\$1,257.94
TOTAL CLEARING AND GRUBBING					\$1,286.59

RECONSTRUCTION: EXCAVATION -

Widening	127	cy. @	\$2.20	per c.y.=	\$279.40
TOTAL EXCAVATION					\$279.40

ROCK

0+00 to	17+60	980	cy. of	Jawrun	@	\$19.92	per c.y.=	\$19,521.60
Junction Rock	0+00	60	cy. of	Jawrun	@	\$19.74	per c.y.=	\$1,184.40
Landing Rock	2+25	70	cy. of	Jawrun	@	\$19.78	per c.y.=	\$1,384.60
Widening	4+25	20	cy. of	Jawrun	@	\$19.83	per c.y.=	\$396.60
Landing Rock	4+60	50	cy. of	Jawrun	@	\$19.83	per c.y.=	\$991.50
Landing Rock	7+05	70	cy. of	Jawrun	@	\$19.89	per c.y.=	\$1,392.30
Landing Rock	11+35	80	cy. of	Jawrun	@	\$19.98	per c.y.=	\$1,598.40
Landing Rock	14+75	70	cy. of	Jawrun	@	\$20.05	per c.y.=	\$1,403.50
Landing Rock	17+60	60	cy. of	Jawrun	@	\$20.11	per c.y.=	\$1,206.60
TOTAL ROCK								\$29,079.50

SPECIAL PROJECTS

Approach widening (0+00 to 1+20)	3.00	hours @	\$220.00	per hour	\$660.00
Construct Landings(14+75, 17+60)	4.00	hours @	\$372.50	per hour	\$1,490.00
Construct Landings	2.00	hours @	\$220.00	per hour	\$440.00
Construct waste areas -	2.00	hours @	\$220.00	per hour	\$440.00
Grade and shape road -	17.60	stations @	\$24.40	per station	\$429.44
Roll subgrade w/ vibratory roller prior to rocking -	17.60	stations @	\$19.40	per station	\$341.44
Grass seed -	0.81	acres @	\$310.00	per acre	\$251.10
TOTAL SPECIAL PROJECTS					\$4,051.98

GRAND TOTAL **\$34,697.47**

SUMMARY OF CONSTRUCTION COST

Sale:

Breaking Boundary

Road:

Q to R

<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>4+85</u>	stations
	0.00	miles		0.00	miles		0.09	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	0.245	acres @	\$1,415.00 per acre =	\$346.68	
			TOTAL CLEARING AND GRUBBING	\$346.68	

ROCK

0+00 to	4+85	280	cy. of	Jawrun	@	\$19.88 per c.y.=	\$5,566.40
Junction Rock	0+00	30	cy. of	Jawrun	@	\$19.83 per c.y.=	\$594.90
Landing Rock	1+30	100	cy. of	Jawrun	@	\$19.85 per c.y.=	\$1,985.00
Landing Rock	3+50	70	cy. of	Jawrun	@	\$19.90 per c.y.=	\$1,393.00
Landing Rock	4+85	60	cy. of	Jawrun	@	\$19.93 per c.y.=	\$1,195.80
						TOTAL ROCK	\$10,735.10

SPECIAL PROJECTS

Construct Landings	3.00	hours @	\$220.00 per hour	\$660.00	
Grade and shape road -	4.85	stations @	\$24.40 per station	\$118.34	
Roll subgrade w/ vibratory roller prior to rocking -	4.85	stations @	\$19.40 per station	\$94.09	
Grass seed -	0.22	acres @	\$310.00 per acre	\$68.20	
			TOTAL SPECIAL PROJECTS	\$940.63	

GRAND TOTAL **\$12,022.41**

SUMMARY OF CONSTRUCTION COST

Sale: **Breaking Boundary**

Road: **S to T**

<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>2+15</u>	stations
	0.00	miles		0.00	miles		0.04	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	0.109	acres @	\$1,415.00 per acre =	\$154.24	
TOTAL CLEARING AND GRUBBING					\$154.24

ROCK

0+00 to	2+15	150	cy. of	Jawrun	@	\$19.93 per c.y.=	\$2,989.50
Junction Rock	0+00	30	cy. of	Jawrun	@	\$19.90 per c.y.=	\$597.00
Landing Rock	0+50	50	cy. of	Jawrun	@	\$19.91 per c.y.=	\$995.50
TOTAL ROCK							\$4,582.00

SPECIAL PROJECTS

Construct turnaround 0+50	0.50	hours @	\$220.00 per hour	\$110.00	
Grade and shape road -	2.15	stations @	\$24.40 per station	\$52.46	
Roll subgrade w/ vibratory roller prior to rocking -	2.15	stations @	\$19.40 per station	\$41.71	
Grass seed -	0.10	acres @	\$310.00 per acre	\$31.00	
TOTAL SPECIAL PROJECTS					\$235.17

GRAND TOTAL **\$4,971.41**

SUMMARY OF CONSTRUCTION COST

Sale:

Breaking Boundary

Road:

U to V

<u>Construction -</u>	<u>6+85</u> stations <u>0.13</u> miles	<u>Improvement -</u>	<u>0+00</u> stations <u>0.00</u> miles	<u>Reconstruction -</u>	<u>0+00</u> stations <u>0.00</u> miles
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CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist.</u> <u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>	=	<u>Drill & Shoot</u>	<u>Endhaul</u>	
0+00		6+85	25%		outslope	\$229				\$1,568.65
									TOTAL	\$1,568.65

ROCK

0+00	to	0+50	40	cy. of	Pitrun	@	\$9.36	per c.y.=		\$374.40
Junction Rock		0+00	30	cy. of	Pitrun	@	\$9.35	per c.y.=		\$280.50
									TOTAL ROCK	\$654.90

SPECIAL PROJECTS

Construct Landings	2.00	hours @	\$220.00	per hour		\$440.00	
Grade and shape road -	6.85	stations @	\$24.40	per station		\$167.14	
Roll subgrade w/ vibratory roller prior to rocking -	6.85	stations @	\$19.40	per station		\$132.89	
Remove large stumps -	2.00	lump sum @	\$110.00			\$220.00	
						TOTAL SPECIAL PROJECTS	\$960.03

GRAND TOTAL **\$3,183.58**

SUMMARY OF CONSTRUCTION COST

Sale: **Breaking Boundary** Road: **W to X**

<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>103+10</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
	0.00	miles		1.95	miles		0.00	miles

ROCK							
Spot Rock	As directed	200	cy. of	Crushed	@	\$18.09 per c.y. =	\$3,618.00
							TOTAL ROCK
							\$3,618.00

SPECIAL PROJECTS								
Grade and shape road -				103.10	stations @	\$24.40	per station	\$2,515.64
Roll subgrade w/ vibratory roller prior to rocking -				15.15	stations @	\$19.40	per station	\$293.91
Grass seed waste areas -				0.50	acres @	\$310.00	per acre	\$155.00
							TOTAL SPECIAL PROJECTS	
							\$2,964.55	

GRAND TOTAL	\$6,582.55
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ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	East Fork Trask	Location:	Sec. 18, T2S, R7W, W.M.
Sale:	Breaking Boundary	Road:	90 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	90 c.y.
Drill Pct.:	0%	In Place Total:	64 c.y.

Rip Rock:	\$3.35	/cu.yd.	x	64	cu.yds.	=	\$214.40
Load Dump Truck:	\$1.20	/cu.yd.	x	90	cu.yds.	=	\$108.00
Sort Rock	\$1.25	/cu.yd.	x	80	cu.yds.	=	\$100.00

Subtotal \$422.40

Move in Excavator	1	@	\$889.29	=	\$889.29
Move in Trucks	1	@	\$285.90	=	\$285.90
				Subtotal	\$1,175.19

Subtotal \$1,597.59

Base Cost= \$17.75 Per Cu.Yd.

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B Energy Dissipator (Rip Rap)	8.87	1.50	17.75	28.12	30	\$843.60
A to B Fill Reinforcement Wall (Rip Rap)	7.54	1.50	17.75	26.79	50	\$1,339.50
A to B Energy Dissipator (Rip Rap)	9.05	1.50	17.75	28.30	5	\$141.50
A to B Energy Dissipator (Rip Rap)	7.90	1.50	17.75	27.15	5	\$135.75
				Total C.Y.	90	Sub Total
						\$2,460.35

TOTAL ROCKING COSTS \$2,460.35

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	High Face	Location:	Sec. 4, T3S, R7W, W.M.
Sale:	Breaking Boundary	Road:	770 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	770 c.y.
Drill Pct.:	0%	In Place Total:	550 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. \$0.00

Rip Rock:	\$3.35 /cu.yd.	x	770 cu.yds.	=	\$2,579.50
Load Dump Truck:	\$1.20 /cu.yd.	x	770 cu.yds.	=	\$924.00
Sort Rock	\$1.20 /cu.yd.	x	770 cu.yds.	=	\$924.00

Subtotal \$4,427.50

TOTAL PRODUCTION COSTS \$4,427.50

Base Cost= \$5.75 Per Cu.Yd.

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B Landing Rock (Pitrun)	3.83	1.65	5.75	11.23	70	\$786.10
A to B Cutbank Repair (Pitrun)	2.79	0.90	5.75	9.44	20	\$188.80
C to D 0 100 (Pitrun)	3.84	1.65	5.75	11.24	90	\$1,011.60
C to D Turnaround (Pitrun)	3.84	1.65	5.75	11.24	60	\$674.40
G to H 0 165 (Pitrun)	3.43	1.65	5.75	10.83	120	\$1,299.60
G to H Junction Rock (Pitrun)	3.42	1.65	5.75	10.82	30	\$324.60
G to H Landing Rock (Pitrun)	3.45	1.65	5.75	10.85	90	\$976.50
I to J 0 175 (Pitrun)	3.12	1.65	5.75	10.52	120	\$1,262.40
I to J Junction Rock (Pitrun)	3.10	1.65	5.75	10.50	30	\$315.00
I to J Landing Rock (Pitrun)	3.14	1.65	5.75	10.54	70	\$737.80
U to V 0 50 (Pitrun)	1.96	1.65	5.75	9.36	40	\$374.40
U to V Junction Rock (Pitrun)	1.95	1.65	5.75	9.35	30	\$280.50
Total C.Y.					770	Sub Total
						\$8,231.70

TOTAL ROCKING COSTS \$8,231.70

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Coast Moon	Location:	Sec. 2 , T3S, R8W, W.M.
Sale:	Breaking Boundary	Road:	5915 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	5915 c.y.
Drill Pct.:	50%	In Place Total:	4225 c.y.

Drill & Shoot:	\$3.60	/cu.yd.	x	2113	cu.yds.	=	\$7,606.80
Rip Rock:	\$3.35	/cu.yd.	x	2112	cu.yds.	=	\$7,075.20
Push Rock:	\$1.20	/cu.yd.	x	5915	cu.yds.	=	\$7,098.00
Load Crusher:	\$1.20	/cu.yd.	x	5915	cu.yds.	=	\$7,098.00
Crush Rock:	\$4.30	/cu.yd.	x	5915	cu.yds.	=	\$25,434.50
Load Dump Truck:	\$1.20	/cu.yd.	x	5915	cu.yds.	=	\$7,098.00

Subtotal \$61,410.50

Move In/Set-up Jaw	1	@	\$2,121.00		\$2,121.00
Move In and set up Drill and Compressor	1	@	\$779.79	=	\$779.79
Move in Excavator	1	@	\$889.29	=	\$889.29
Move in Trucks	2	@	\$285.90	=	\$571.80
Change Gradation					
				Subtotal	\$4,361.88

TOTAL PRODUCTION COSTS \$65,772.38

Base Cost= \$11.12 Per Cu.Yd.

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
K to L 10835 15605 (Jawrun)	6.53	1.90	11.12	19.55	2680	\$52,394.00
K to L Widening (Jawrun)	6.17	1.90	11.12	19.19	15	\$287.85
K to L Turnout (Jawrun)	6.67	1.90	11.12	19.69	70	\$1,378.30
K to L Landing Rock (Jawrun)	6.99	1.90	11.12	20.01	80	\$1,600.80
K to L Landing Rock (Jawrun)	7.03	1.90	11.12	20.05	80	\$1,604.00
M to N 0 890 (Jawrun)	6.65	1.90	11.12	19.67	550	\$10,818.50
M to N Junction Rock (Jawrun)	6.55	1.90	11.12	19.57	30	\$587.10
M to N Widening (Jawrun)	6.62	1.90	11.12	19.64	10	\$196.40
M to N Landing Rock (Jawrun)	6.72	1.90	11.12	19.74	70	\$1,381.80
M to N Landing Rock (Jawrun)	6.74	1.90	11.12	19.76	100	\$1,976.00
O to P 0 1760 (Jawrun)	6.90	1.90	11.12	19.92	980	\$19,521.60
O to P Junction Rock (Jawrun)	6.72	1.90	11.12	19.74	60	\$1,184.40
O to P Landing Rock (Jawrun)	6.76	1.90	11.12	19.78	70	\$1,384.60
O to P Widening (Jawrun)	6.81	1.90	11.12	19.83	20	\$396.60
O to P Landing Rock (Jawrun)	6.81	1.90	11.12	19.83	50	\$991.50
O to P Landing Rock (Jawrun)	6.87	1.90	11.12	19.89	70	\$1,392.30
O to P Landing Rock (Jawrun)	6.96	1.90	11.12	19.98	80	\$1,598.40
O to P Landing Rock (Jawrun)	7.03	1.90	11.12	20.05	70	\$1,403.50
O to P Landing Rock (Jawrun)	7.09	1.90	11.12	20.11	60	\$1,206.60
Q to R 0 485 (Jawrun)	6.86	1.90	11.12	19.88	280	\$5,566.40
Q to R Junction Rock (Jawrun)	6.81	1.90	11.12	19.83	30	\$594.90
Q to R Landing Rock (Jawrun)	6.83	1.90	11.12	19.85	100	\$1,985.00
Q to R Landing Rock (Jawrun)	6.88	1.90	11.12	19.90	70	\$1,393.00
Q to R Landing Rock (Jawrun)	6.91	1.90	11.12	19.93	60	\$1,195.80
S to T 0 215 (Jawrun)	6.91	1.90	11.12	19.93	150	\$2,989.50
S to T Junction Rock (Jawrun)	6.88	1.90	11.12	19.90	30	\$597.00
S to T Landing Rock (Jawrun)	6.89	1.90	11.12	19.91	50	\$995.50
Total C.Y.					5915	Sub Total \$116,621.35

TOTAL ROCKING COSTS \$116,621.35

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Boundary Stockpile	Location:	Sec. 1 , T3S, R7W, W.M.
Sale:	Breaking Boundary	Road:	1230 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	1230 c.y.
Drill Pct.:	0%	In Place Total:	879 c.y.

Load Dump Truck: \$1.20 /cu.yd. x 1230 cu.yds. = \$1,476.00

Subtotal \$1,476.00

Move in Loader	1	@	\$774.29	=	\$774.29
Move in Trucks	3	@	\$285.90	=	\$857.70
				Subtotal	\$2,581.99

Base Cost= \$3.30 Per Cu.Yd.

TOTAL PRODUCTION COSTS \$4,057.99

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base/load Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B Cross Drain Backfill (Crushed)	9.43	3.55	3.30	16.28	80	\$1,302.40
A to B Stream Crossing Backfill (Crushed)	8.99	3.55	3.30	15.84	50	\$792.00
A to B Turnout Rock (Crushed)	9.43	3.55	3.30	16.28	400	\$6,512.00
A to B Spot Rock (Crushed)	9.43	3.55	3.30	16.28	500	\$8,140.00
W to X Spot Rock (Crushed)	11.24	3.55	3.30	18.09	200	\$3,618.00
				Total C.Y.	1230	Sub Total
						\$20,364.40

TOTAL ROCKING COSTS \$20,364.40

Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Breaking Boundary**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
26.0	Pavement	30
15.0	Main Lines	7
0.0	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Brush Cutter	\$632.00		\$4.00	0.00	8.50	8.5	\$34.00	\$666.00
1	Graders	\$812.57		\$3.65	0.00	4.00	4	\$14.60	\$827.17
1	Rollers (smooth/grid) & Compactors	\$684.50		\$5.00	0.00	4.00	4	\$20.00	\$704.50
2	Excavators (Large)	\$1,778.57	1	\$44.80	0.00	4.00	4	\$358.40	\$2,136.97
1	Tractors (D6)	\$882.44	2	\$7.10	0.00	4.00	4	\$28.40	\$910.84
1	Dump Truck (Off Hiway)	\$862.83	1	\$4.75	0.00	4.00	4	\$19.00	\$881.83
1	Water Truck (2500 Gal)	\$331.05		\$2.85	0.00	4.00	4	\$11.40	\$342.45
TOTAL MOVE-IN COSTS:									\$6,469.76



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

Breaking Boundary

Type of Sale

Regeneration harvest, Recovery

Legal Description

Section(s) 4 & 5 of T3S R7W W.M., and Sections 32 & 33 of T2S, R7W, W.M.,
Tillamook County, Oregon.

Sale Acreage

Sale acreage was determined by GPS, LIDAR, and orthophotographs along with GIS.

	<u>ACRES</u>	
	<u>Gross</u>	<u>Net</u>
Unit 1 (Modified Clearcut)	123	106
Unit 2 (Modified Clearcut)	106	68
Total	229	174

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

Used for calculating the advertised volume.

Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Cruising Procedures

A. Cruise Method

Timber sale units 1 and 2 were cruised using variable plot sampling. Both units were cruised by ODF staff between June and August of 2022. All conifers 8" DBH and greater containing 20 board feet and all hardwoods 10" DBH and greater containing 30 board feet were recorded on all plots. Species, DBH (to nearest inch), merchantable bole length (to nearest foot), form factor, and defect were recorded for all measure trees. Merchantable heights were recorded to 6" and 7" outside bark for conifers and hardwoods, respectively.

B. Plot size

Unit	BAF	Spacing
1	40.00	250' x 500'
2	40.00	200' x 615'

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Log

lengths favored 40' lengths.

Computation Procedure

Plot data was entered into SuperAce for computation of basal area, advertised volume, volume summary, log stock table, and stand table for each species and type.

Net sale acreage was used for volume calculation.

	Cruise Statistics (Board Foot Volumes)			
Unit	Acres	Number of Plots	SE (%)	CV (%)
1	106	35	4.9	28.9
2	68	29	7.7	40.6
Project Total	174	64	4.3	34.2

Hidden Defect and Breakage

A 2-5% reduction for conifers and a 1-2% reduction for hardwood volumes were applied for hidden defect and breakage. The conifer reduction was higher on Unit 2 due to the observation of an unidentified conk or canker noted on several Douglas-fir within the stand, as well as a much higher rate of old mechanical damage, forked tops, and general presence of defect compared to Unit 1.

Timber Description

Units 1 and 2 are modified clearcuts.

Unit 1 is a Douglas-fir dominated stand that was pre-commercial thinned as part of the 1990 Bales Creek PCT project, as well as commercial thinned as part of the FY2000 Many Bucks partial cut. A very minor amount of other conifers exist in the stand, primarily a few Sitka spruce and the occasional western hemlock, and a small amount of scattered red alder are found around riparian areas.

Unit 2 is comprised of Douglas-fir and red alder with minor elements of miscellaneous conifer like scattered western red cedar, western hemlock, and noble fir, as well as a small number of big leaf maple. The southwest edge of Unit 2 includes a yard-through area of regeneration and residual overstory from the FY2006 Bale Bound harvest.

Both stands were burned in 1933 in the Saddle Mountain Fire, and the stand in Unit 1 burned again in the 1951 North Fork Fire.

Sale Unit	Age	Species	DBH	Merchantable Bole Height (feet)	Merchantable top (inches inside bark)
1	59	Douglas-fir	17.6	73	5
		Western hemlock	21.7	83	5
		Red alder	14.0	61	6
2	44	Douglas-fir	17.0	79	5
		Western hemlock	16.7	87	5
		Red alder	16.8	61	6

Above date derived from statistics (type) reports using SuperAce 2008, developed by Atterbury Consultants, Inc.

Cruiser /Dates

ODF staff cruised both units between June and August of 2022.

Revenue Distribution

BOF – 100%

Tax Code: 800, 801

Deed Numbers: 169, 194, 295

Attachments

Volume Summary Table (2)

Stand Table (2)

Log Stock Tables (2)

Species, Sort, Grade Table (2)

Logging Plan (2)

Stand and Log Stock Tables Species Key

DF – Douglas-fir take

RA – red alder take

WH – western hemlock

DL – Douglas-fir leave

OC – other conifer

T03S R07W S05 T0100										T03S R07W S05 T0100				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
03S	07W	05	UNIT 1	0100	106.00	35	194	S	W					

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre						
								Net	BdFt	Def%	Gross	Net	Net MBF	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
DF	CO	2	51	.6	14,937	14,848	1,574			74	26			2	2	96	39	14	294	1.74	50.5					
DF	CO	3	35	.7	10,424	10,352	1,097			78	22			1	0	99	40	9	116	0.81	89.1					
DF	CO	4	14	.5	3,840	3,821	405	58	42					7	15	12	31	5	41	0.41	94.2					
DF	Totals		98	.6	29,201	29,021	3,076	8	33	46	13			1	3	3	36	9	124	0.89	233.7					
WH	CO	2	43		131	131	14			100						100	40	15	360	2.18	.4					
WH	CO	3	50		148	148	16		15	85						100	40	10	166	1.21	.9					
WH	CO	4	7		21	21	2	100								100	40	5	40	0.53	.5					
WH	Totals		1		299	299	32	7	7	86						100	40	10	169	1.21	1.8					
RA	H	4	100		235	235	25		100					18		82	29	7	55	0.63	4.3					
RA	Totals		1		235	235	25		100					18		82	29	7	55	0.63	4.3					
Type Totals				.6	29,736	29,556	3,133	8	34	46	13			1	3	3	36	9	123	0.89	239.7					

T02S R07W S33 T0100										T02S R07W S33 T0100				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
02S	07W	33	UNIT 2	0100	68.00	29	164	S	W					

Spp	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent 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						
DF	CO	2	51	.8	15,741	15,617	1,062			29	71		1	1		98	39	17	505	2.67	30.9
DF	CO	3	34	.6	10,526	10,467	712			90	10		1	2	1	97	39	9	111	0.73	94.5
DF	CO	4	15		4,321	4,321	294	45	55				14	17	5	65	29	6	38	0.35	112.5
DF	Totals		87	.6	30,588	30,405	2,068	6	39	18	37		3	4	1	93	35	8	128	0.86	237.9
RA	H	3	28		658	658	45			49	51		33			67	29	11	124	1.22	5.3
RA	H	4	72		1,633	1,633	111			53	11	37	16	7		77	28	8	79	0.76	20.8
RA	Totals		7		2,291	2,291	156			52	22	26	21	5		74	28	8	88	0.86	26.1
WH	CO	2	31		429	429	29				100					100	40	18	530	2.45	.8
WH	CO	3	55		738	738	50			78	22					100	39	10	136	0.85	5.4
WH	CO	4	14		178	178	12	55	45				8	14	79		29	5	33	0.33	5.4
WH	Totals		4		1,345	1,345	91	7	49	12	32		1	2	10	87	34	8	115	0.78	11.7
DL	CO	2	100		945	945	64				3	97				100	39	24	1121	5.53	.8
DL	Totals		3		945	945	64				3	97				100	39	24	1121	5.53	.8
Type Totals				.5	35,169	34,986	2,379	6	39	18	37		4	4	1	92	34	8	127	0.88	276.5

TC		TSTNDSUM											Stand Table Summary			
Project													BBOUND			
T03S R07W S05 T0100										T03S R07W S05 T0100						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
03S	07W	05	UNIT 1	0100	106.00	35	194	Date:	12/27/2021							
								Time:	12:39:46PM							
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits	MBF
DF		9	1	88	110	4.304	1.90	4.30	10.9	60.0	1.34	47	258	142	50	27
DF		10	3	83	58	10.458	5.70	10.46	10.1	36.7	3.02	106	383	320	112	41
DF		11	3	84	72	8.643	5.70	8.64	15.2	53.3	3.74	131	461	397	139	49
DF		13	5	86	83	10.314	9.51	18.57	14.8	53.3	7.82	274	990	829	291	105
DF		14	4	85	82	7.115	7.61	12.45	17.8	65.7	6.33	222	818	671	235	87
DF		15	4	84	90	6.198	7.61	10.85	22.1	78.6	6.85	240	852	726	255	90
DF		16	7	87	98	9.532	13.31	19.06	23.8	94.3	12.94	454	1,798	1,372	481	191
DF		17	6	85	103	7.238	11.41	14.48	28.0	106.7	11.53	405	1,544	1,223	429	164
DF		18	11	88	103	11.836	20.92	23.67	31.8	120.0	21.48	754	2,841	2,277	799	301
DF		19	15	86	104	14.485	28.52	30.90	34.4	124.7	30.33	1,064	3,853	3,215	1,128	408
DF		20	14	87	107	12.201	26.62	27.02	37.5	141.3	28.88	1,013	3,817	3,061	1,074	405
DF		21	6	86	109	4.743	11.41	11.07	39.6	151.4	12.48	438	1,676	1,323	464	178
DF		22	6	83	96	4.322	11.41	8.64	43.4	154.2	10.70	375	1,333	1,134	398	141
DF		23	10	84	103	6.590	19.01	13.18	49.7	185.0	18.65	655	2,438	1,977	694	258
DF		24	4	87	98	2.421	7.61	4.24	52.8	200.0	6.37	224	847	676	237	90
DF		25	3	89	114	1.673	5.70	3.90	60.3	247.1	6.71	236	965	712	250	102
DF		26	1	85	105	.516	1.90	1.03	71.9	275.0	2.11	74	284	224	79	30
DF		27	2	88	112	.956	3.80	2.39	65.3	286.0	4.45	156	684	472	166	72
DF		28	3	90	123	1.334	5.70	4.00	63.8	321.1	7.28	255	1,285	772	271	136
DF		29	1	89	116	.415	1.90	1.24	65.6	310.0	2.33	82	386	247	87	41
DF		30	1	83	111	.387	1.90	.77	93.9	375.0	2.07	73	291	220	77	31
DF		31	1	85	116	.363	1.90	1.09	74.9	326.7	2.32	82	356	246	86	38
DF		33	1	88	126	.320	1.90	.96	89.4	450.0	2.45	86	432	260	91	46
DF		37	1	89	117	.255	1.90	.76	110.1	563.3	2.40	84	430	254	89	46
DF		Totals	113	86	94	126.619	214.86	233.68	32.2	124.2	214.60	7,530	29,021	22,747	7,981	3,076
WH		20	1	84	99	.524	1.14	1.05	41.6	140.0	1.40	44	147	148	46	16
WH		24	1	83	97	.364	1.14	.73	57.9	210.0	1.35	42	153	143	45	16
WH		Totals	2	84	98	.888	2.29	1.78	48.3	168.7	2.74	86	299	291	91	32
RA		14	1	80	94	2.138	2.29	4.28	18.2	55.0	2.14	78	235	227	83	25
RA		Totals	1	80	94	2.138	2.29	4.28	18.2	55.0	2.14	78	235	227	83	25
OC		19	1	70	32	.580	1.14									
OC		28	1	85	102	.267	1.14									
OC		Totals	2	75	54	.848	2.29									
Totals			118	86	94	130.492	221.71	239.74	32.1	123.3	219.48	7693	29,556	23,265	8,155	3,133

TC		Stand Table Summary														
TSTNDSUM		Project BBOUND														
T02S R07W S33 T0100										T02S R07W S33 T0100						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
02S	07W	33	UNIT 2	0100	68.00	29	164	Date:	12/27/2021							
								Time:	12:37:09PM							
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits	MBF
DF		8	1	81	68	3.951	1.38	3.95	6.8	30.0	.77	27	119	52	18	8
DF		9	2	88	91	6.244	2.76	6.24	7.6	30.0	1.36	48	187	92	32	13
DF		10	1	81	113	2.529	1.38	5.06	8.7	40.0	1.26	44	202	86	30	14
DF		11	6	81	76	12.540	8.28	20.90	10.6	40.0	6.33	222	836	430	151	57
DF		12	8	87	104	14.050	11.03	28.10	13.6	55.6	10.86	381	1,563	738	259	106
DF		13	10	83	104	14.964	13.79	23.94	16.5	60.6	12.06	395	1,452	820	269	99
DF		14	12	84	106	15.483	16.55	30.97	19.9	82.5	17.56	616	2,555	1,194	419	174
DF		15	7	85	107	7.868	9.66	16.86	20.7	83.3	9.95	349	1,405	677	238	96
DF		16	8	84	117	7.903	11.03	18.77	23.4	94.2	12.51	439	1,768	851	299	120
DF		17	5	87	103	4.375	6.90	8.75	28.5	111.0	7.11	250	971	484	170	66
DF		18	6	86	115	4.683	8.28	11.71	27.6	104.7	9.20	323	1,225	626	220	83
DF		19	6	85	120	4.203	8.28	11.21	30.2	119.4	9.66	339	1,338	657	230	91
DF		20	4	82	108	2.529	5.52	6.32	29.0	90.0	5.22	183	569	355	125	39
DF		21	5	84	111	2.867	6.90	6.88	38.8	148.3	7.62	267	1,021	518	182	69
DF		22	1	90	121	.523	1.38	1.05	54.1	255.0	1.61	56	266	109	38	18
DF		23	4	89	128	1.912	5.52	5.74	43.0	194.2	7.04	247	1,114	478	168	76
DF		24	2	82	126	.878	2.76	1.76	60.4	240.0	3.02	106	421	205	72	29
DF		25	3	87	132	1.214	4.14	3.24	54.3	233.8	5.01	176	757	341	120	51
DF		27	2	85	112	.694	2.76	1.39	72.1	275.0	2.84	100	382	193	68	26
DF		28	3	85	112	.968	4.14	1.94	79.5	310.0	4.39	154	600	298	105	41
DF		29	4	85	124	1.203	5.52	3.31	68.2	304.5	6.43	226	1,007	437	153	69
DF		30	3	86	142	.843	4.14	2.53	79.9	400.0	5.76	202	1,012	392	137	69
DF		31	3	86	116	.789	4.14	2.11	75.9	336.3	4.56	160	708	310	109	48
DF		32	1	89	121	.247	1.38	.74	85.3	423.3	1.80	63	314	122	43	21
DF		33	1	89	128	.232	1.38	.70	91.5	470.0	1.82	64	327	124	43	22
DF		34	3	87	140	.656	4.14	1.97	101.3	513.3	5.69	200	1,011	387	136	69
DF		35	6	85	116	1.239	8.28	2.48	126.8	532.5	8.96	314	1,319	609	214	90
DF		36	4	88	145	.781	5.52	2.34	109.6	572.5	7.32	257	1,341	498	175	91
DF		37	5	89	130	.924	6.90	2.03	131.4	717.3	7.61	267	1,457	518	182	99
DF		38	3	84	126	.525	4.14	1.58	117.7	576.7	5.29	185	909	359	126	62
DF		39	5	84	146	.831	6.90	2.49	124.7	636.7	8.86	311	1,588	603	212	108
DF		40	1	89	121	.158	1.38	.47	128.6	690.0	1.74	61	327	118	41	22
DF		43	1	87	145	.137	1.38	.41	150.8	813.3	1.82	62	334	124	42	23
DF	Totals	136	85	105	118,943	187.59	237.91	29.8	127.8	203.02	7,094	30,405	13,805	4,824	2,068	
RA		12	1	90	74	1.756	1.38	1.76	18.5	70.0	.90	33	123	61	22	8
RA		13	2	79	81	2.993	2.76	4.49	18.5	56.7	2.28	83	254	155	56	17
RA		14	2	79	97	2.581	2.76	6.45	10.3	50.0	1.83	67	323	125	45	22
RA		15	2	77	67	2.248	2.76	2.25	33.3	70.0	2.06	75	157	140	51	11
RA		16	1	86	89	.988	1.38	1.98	23.9	90.0	1.30	47	178	88	32	12
RA		19	1	87	58	.701	1.38	1.40	22.1	60.0	.85	31	84	58	21	6
RA		20	2	72	47	1.264	2.76	2.53	14.2	60.0	1.21	36	152	82	24	10
RA		22	2	81	77	1.045	2.76	2.09	40.1	110.0	2.31	84	230	157	57	16
RA		24	2	77	102	.878	2.76	1.76	45.6	110.0	2.20	80	193	150	54	13
RA		27	2	93	100	.694	2.76	1.39	71.8	430.0	2.74	100	597	186	68	41
RA	Totals	17	81	79	15,147	23.45	26.08	24.3	87.8	17.68	635	2,291	1,202	432	156	
WH		13	1	92	97	1.496	1.38	2.99	16.9	75.0	1.62	51	224	110	34	15
WH		14	1	79	104	1.290	1.38	2.58	18.1	60.0	1.49	47	155	101	32	11
WH		15	1	93	97	1.124	1.38	2.25	22.1	100.0	1.59	50	225	108	34	15
WH		19	1	85	66	.701	1.38	1.40	25.9	90.0	1.22	36	126	83	25	9
WH		25	2	89	122	.809	2.76	2.43	53.2	253.3	4.13	129	615	281	88	42

TC TSTNDSUM														Stand Table Summary		
Project														BBOUND		
T02S R07W S33 T0100											T02S R07W S33 T0100					
Twp	Rge	Sec	Tract		Type	Acres	Plots	Sample Trees			Page:	2				
02S	07W	33	UNIT 2		0100	68.00	29	164			Date:	12/27/2021				
											Time:	12:37:09PM				
Spc	S T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s			
		DBH	Trees	16'				Ht Tot	Net Cu.Ft.		Net Bd.Ft.	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF
WH		Totals	6	88	98	5.420	8.28	11.65	26.8	115.5	10.05	312	1,345	683	212	91
DL		45	2	86	123	.250	2.76	.50	224.5	1120.0	3.08	112	559	210	76	38
DL		47	1	86	158	.114	1.38	.34	209.1	1123.3	1.97	72	386	134	49	26
DL		Totals	3	86	134	.364	4.14	.84	218.2	1121.4	5.06	184	945	344	125	64
OC		26	1	69	37	.374	1.38									
OC		33	1	88	97	.232	1.38									
OC		Totals	2	76	60	.606	2.76									
Totals			164	84	102	140.481	226.21	276.49	29.7	126.5	235.81	8225	34,986	16,035	5,593	2,379

TC		TLOGSTVB		Log Stock Table - MBF																
Project:										BBOUND										
T03S R07W S05 T0100										T03S R07W S05 T0100										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1											
03S	07W	05	UNIT 1	0100	106.00	35	194	Date	12/27/2022											
								Time	12:39:41PM											
Spp	T	So	Gr	Log	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+
DF	CO	2	24		31		31	1.0					11		20					
DF	CO	2	32		11		11	.4						11						
DF	CO	2	34		25		25	.8						25						
DF	CO	2	40		1,516	.6	1,507	49.0					678	333	301	161		34		
DF	CO	3	16		7		7	.2					7							
DF	CO	3	20		2		2	.1				2								
DF	CO	3	30		2		2	.1				2								
DF	CO	3	40		1,094	.7	1,087	35.3				220	255	379	182	51				
DF	CO	4	12		2		2	.1		2										
DF	CO	4	14		6		6	.2		4			1	1						
DF	CO	4	16		7		7	.2		4		3								
DF	CO	4	18		9		9	.3		8		1								
DF	CO	4	19		1		1	.0				1								
DF	CO	4	20		4		4	.1		4										
DF	CO	4	22		15		15	.5		15										
DF	CO	4	24		30		30	1.0		30										
DF	CO	4	26		10		10	.3		8		2								
DF	CO	4	30		7		7	.2		7										
DF	CO	4	32		11		11	.4		11										
DF	CO	4	34		37	2.3	36	1.2		33		3								
DF	CO	4	36		10		10	.3		10										
DF	CO	4	38		4		4	.1		4										
DF	CO	4	40		253	.5	252	8.2		95		85	49	22						
DF	Totals				3,095		3,076	98.2		236		318	307	402	878	420	321	161	34	
WH	CO	2	40		14		14	43.7							14					
WH	CO	3	40		16		16	49.3			2			13						
WH	CO	4	40		2		2	7.0		2										
WH	Totals				32		32	1.0		2	2			13	14					
RA	H	4	18		5		5	18.2			5									
RA	H	4	40		20		20	81.8			20									
RA	Totals				25		25	.8		5	20									
Total All Species					3,152		3,133	100.0		239	325	327	402	891	434	321	161	34		

TC		TLOGSTVB		Log Stock Table - MBF															
Project:										BBOUND									
T02S R07W S33 T0100										T02S R07W S33 T0100									
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1										
02S	07W	33	UNIT 2	0100	68.00	29	164	Date	12/27/2022										
									Time	12:37:11PM									
Spp	T	So	Gr	Log	Gross	% Def	Net	% Spc	Net Volume by Scaling Diameter in Inches										
									MBF	MBF	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23
DF	CO	2	18		4		4	.2							4				
DF	CO	2	20		3		3	.1					3						
DF	CO	2	28		15		15	.7				15							
DF	CO	2	36		14		14	.7								14			
DF	CO	2	38		26		26	1.3							12		15		
DF	CO	2	40		1,009	.8	1,000	48.4				116	82	290	228	286			
DF	CO	3	16		1		1	.0				1							
DF	CO	3	18		2		2	.1				2							
DF	CO	3	20		2		2	.1				2							
DF	CO	3	22		4		4	.2				4							
DF	CO	3	24		5		5	.2				5							
DF	CO	3	26		1		1	.0			1								
DF	CO	3	29		1		1	.1				1							
DF	CO	3	32		5		5	.2			5								
DF	CO	3	38		16		16	.8			8	8							
DF	CO	3	40		679	.6	675	32.6			121	228	252	74					
DF	CO	4	12		2		2	.1		2		0							
DF	CO	4	13		3		3	.2		3		0							
DF	CO	4	14		1		1	.0		1									
DF	CO	4	16		11		11	.5		11									
DF	CO	4	18		8		8	.4		7		1							
DF	CO	4	20		15		15	.7		13		1	1						
DF	CO	4	22		11		11	.5		10		1							
DF	CO	4	24		7		7	.3		7									
DF	CO	4	26		6		6	.3		4		2							
DF	CO	4	28		27		27	1.3		14		13							
DF	CO	4	32		13		13	.6		13									
DF	CO	4	36		11		11	.5		11									
DF	CO	4	40		178		178	8.6		35	85	58							
DF	Totals				2,080		2,068	86.9		132	221	303	276	204	85	290	243	299	15
RA	H	3	16		9		9	5.5					9						
RA	H	3	20		6		6	3.9				6							
RA	H	3	40		30		30	19.3			6	10	14						
RA	H	4	7																
RA	H	4	12		1		1	.7		1									
RA	H	4	14		10		10	6.5		3					8				
RA	H	4	18		2		2	1.1		2									
RA	H	4	20		4		4	2.8				4							
RA	H	4	22		6		6	3.9		3	4								
RA	H	4	24		2		2	1.3		2									
RA	H	4	40		86		86	54.9		31	9			12		33			
RA	Totals				156		156	6.5		41	23	16	35		8	33			
WH	CO	2	40		29		29	31.9							29				
WH	CO	3	36		8		8	8.3				8							
WH	CO	3	40		43		43	46.5			20	11	11						
WH	CO	4	18		1		1	1.0		1									
WH	CO	4	21		2		2	1.8			2								
WH	CO	4	32		10		10	10.4		6	4								

TC TLOGSTVB

Log Stock Table - MBF
Project: BBOUND

T02S R07W S33 T0100

T02S R07W S33 T0100

Twp Rge Sec Tract Type Acres Plots Sample Trees
02S 07W 33 UNIT 2 0100 68.00 29 164

Page 2
Date 12/27/2022
Time 12:37:11PM

Spp	T	S	So	Gr	Log	Gross	% Def	Net	% Spc	Net Volume by Scaling Diameter in Inches											
										MBF	MBF	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29
WH					Totals	91		91	3.8		7	5	20	19	11		29				
DL	CO	2	36			2		2	3.1							2					
DL	CO	2	40			62		62	96.9								8			9	45
DL					Totals	64		64	2.7							2	8			9	45
Total All Species						2,392		2,379	100.0		139	268	346	311	250	87	334	276	308	60	



"STEWARDSHIP IN FORESTRY"

Breaking Boundary

Volume Summary

Unit 1-Modified Clearcut				
106 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	29.02	3076	2%	3014
Hemlock	0.30	32	2%	31
Spruce		0	1%	0
Noble Fir		0	1%	0
Alder	0.24	25	2%	25
TOTAL	29.56	3133.0		3070

Unit 2-Modified Clearcut				
68 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	30.41	2068	5%	1965
Hemlock	1.35	91	2%	89
Spruce		0	1%	0
Noble Fir		0	1%	0
Alder	2.29	156	2%	153
TOTAL	34.04	2315		2207

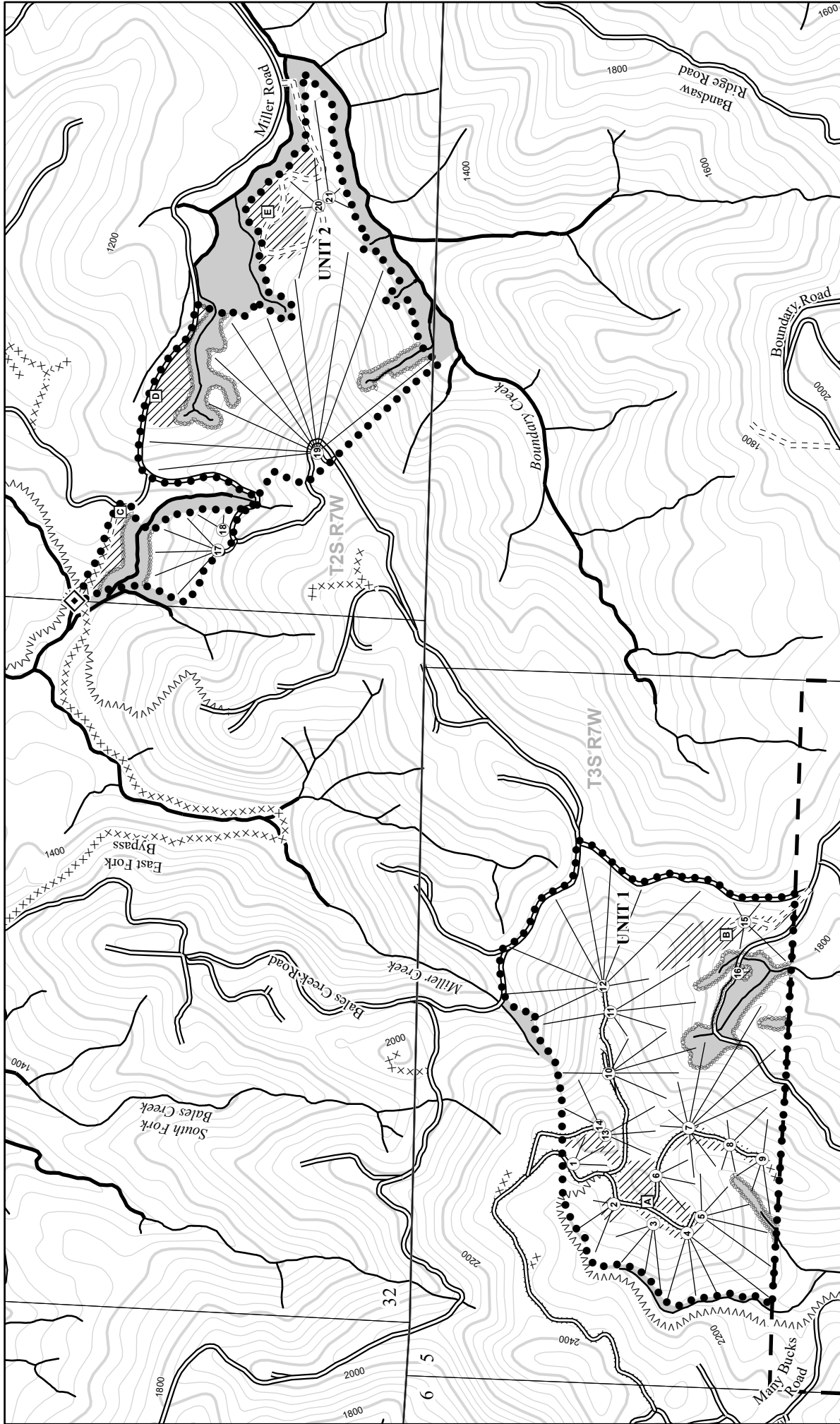


"STEWARDSHIP IN FORESTRY"

Breaking Boundary

Volume Summary

TOTAL SALE VOLUME		174	acres
SPECIES	Cruised Net (MBF)	Net Sale (MBF)	
Douglas-fir	5144	4978	
Hemlock	123	120	
Spruce	0	0	
Noble Fir	0	0	
Red Alder	181	178	
TOTAL	5448	5276	



Legend

- ◆ Corners
- Cable Landing
- Tractor Landing
- ▨ Cable Logging
- ▨ Ground Based
- ▨ Surfaced Road
- ▨ Unsurfaced Road
- xxx Blocked Road
- vvv Abandoned Road
- Type-F Stream
- Type-N Stream
- Sections
- 200' Contour
- 40' Contour
- ▨ Riparian Boundary
- ▨ Timber Sale Boundary
- ▨ Property Line

LOGGING PLAN

FOR TIMBER SALE CONTRACT TL-341-2024-W00953-01
 BREAKING BOUNDARY
 PORTIONS OF SECTIONS(S) 4, 5 OF T3S R7W,
 SECTIONS(S) 32, 33 OF T2S R7W W.M..
 TILLAMOOK COUNTY, OREGON

Tillamook District GIS
 JANUARY, 2023

This product is for informational use and may not be suitable for legal, engineering, or surveying purposes.



NET ACRES

	GROUND	CABLE	TOTAL
UNIT 1	11	95	106
UNIT 2	11	57	68
TOTAL	22	152	174

1 inch = 1,000 feet

0 1,000 2,000 Feet

