



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Elk Bugle
Sale TL-341-2024-W01036-01

District: Tillamook

Date: November 13, 2023

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,581,108.58	\$31,950.76	\$2,613,059.34
		Project Work:	(\$147,620.00)
		Advertised Value:	\$2,465,439.34



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Elk Bugle
Sale TL-341-2024-W01036-01

District: Tillamook

Date: November 13, 2023

Timber Description

Location: T1S,R 6W, sections 30, 31, 32

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	17	0	100
Alder (Red)	14	0	100

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	3,097	3,249	0	0	0	0	6,346
Alder (Red)	0	0	110	45	27	134	316
Total	3,097	3,249	110	45	27	134	6,662

Comments:

Additional Costs – Elk Bugle
Pond Values Used: November 2023
Region: Astoria, Forest Grove, and Tillamook
Western red cedar and other cedars stumpage price = \$1,180/MBF - \$356/MBF = \$824/MBF
Western Hemlock and other conifer stumpage price = \$559/MBF-\$356/MBF = \$203/MBF
Pulp (Conifer and Hardwood) Price = \$2.50/Ton
FUEL COST ALLOWANCE = \$5.00/Gallon
HAULING COST ALLOWANCE (\$120.00/hr x 10 hr.= \$ 1,200.00) = \$1,200/DAY

Other costs with profit and risk added:

BRAND AND PAINT ALLOWANCE = \$2.00/ MBF
6,662 MBF x \$2.00/MBF = \$13,324
Non-Project #1: \$400/station x 5+00 = \$2,000
Machine time to block/waterbar dirt roads and skid trails: 4 x \$100/spur = \$400
Fell & Buck to facilitate full-suspension over Type F (unit 4)
\$15/MBF X 26MBF/ac. X 14 ac. = \$5,460

TOTAL Other Costs with profit and risk to be added = \$21,184

Other Costs with no Profit and Risk Added:

Slash piling and sorting (Cable Settings): \$5/ac x 185 ac. = \$925
Heliport Construction: \$500/unit x 3 unit = \$1500
Move-in Machine Cleaning: \$1,000/machine x 2 machines x 2 season = \$4,000

Ditch Cleaning and Bank Sluff Removal:

Mobilization: two time – dump truck w/ tilt bed & small excavator: \$950 x 2 = \$1,900
Small excavator (Cat 312 or equivalent): 40 hours @ \$145/hr = \$5,800
Dump truck: 40 hours @ \$95/ hour = \$3,800

TOTAL Other Costs with no Profit and Risk added = \$17,925

Road Maintenance

Spot Rocking: 20cy/MMBF/mile x 6.662 MMBF x \$12.00/cy x 14 miles /6,662 MBF = \$3.36/MBF
Interim Grading: \$1,150/mile x 14 miles x 3 times/ 6,662 MBF = \$7.25/MBF
Final Maintenance Grading: \$1,500/mile x 14 miles/ 6,662 MBF = \$3.15/MBF
Final Maintenance Compaction: \$1,000/mile x 7 miles/6,662 MBF = \$1.05/MBF
Total Road Maintenance: = \$14.81/MBF



Timber Sale Appraisal
Elk Bugle
Sale TL-341-2024-W01036-01

District: Tillamook

Date: November 13, 2023

Logging Conditions

Combination#: 1 Douglas - Fir 40.83%
 Alder (Red) 24.68%

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: 8 **bd. ft / load:** 3800

cost / mbf: \$262.44

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

Combination#: 2 Douglas - Fir 34.91%
 Alder (Red) 54.11%

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

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

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

loads / day: 10 **bd. ft / load:** 3800

cost / mbf: \$209.95

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

Combination#: 3 Douglas - Fir 7.25%
 Alder (Red) 5.06%

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

yarding distance: Medium (800 ft) **downhill yarding:** Yes

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

loads / day: 9 **bd. ft / load:** 3800

cost / mbf: \$233.28

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

Combination#: 4 Douglas - Fir 17.01%
 Alder (Red) 16.14%

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: 20 **bd. ft / load:** 3800

cost / mbf: \$131.58

machines: Forwarder
 Harvester



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Elk Bugle
Sale TL-341-2024-W01036-01

District: Tillamook

Date: November 13, 2023

Logging Costs

Operating Seasons: 2.00	Profit Risk: 8%
Project Costs: \$147,620.00	Other Costs (P/R): \$21,184.00
Slash Disposal: \$0.00	Other Costs: \$17,925.00

Miles of Road

Road Maintenance: \$14.81

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	3.0	4.8
Alder (Red)	\$0.00	2.0	4.3



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Elk Bugle
Sale TL-341-2024-W01036-01

District: Tillamook

Date: November 13, 2023

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$219.74	\$14.81	\$1.32	\$86.81	\$3.18	\$26.07	\$0.00	\$2.00	\$2.69	\$356.62
Alder (Red)									
\$211.44	\$14.81	\$1.32	\$145.35	\$3.18	\$30.09	\$0.00	\$2.00	\$2.69	\$410.88

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$763.35	\$406.73	\$0.00
Alder (Red)	\$0.00	\$511.99	\$101.11	\$0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Elk Bugle
Sale TL-341-2024-W01036-01

District: Tillamook

Date: November 13, 2023

Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	6,346	\$406.73	\$2,581,108.58
Alder (Red)	316	\$101.11	\$31,950.76

Gross Timber Sale Value

Recovery: \$2,613,059.34

Prepared By: Nathan Bell

Phone: 503-842-2545



PROJECT SUMMARY SHEET

Sale: Elk Bugle

CONSTRUCTION

Point	C to D	1+40	stations =	\$4,866.52
Point	E to F	7+65	stations =	\$17,964.67
Point	O to P	4+25	stations =	\$11,883.05
SUBTOTAL CONSTRUCTION				\$34,714.24

IMPROVEMENT

Point	A to B	484+15	stations =	\$56,717.96
Point	G to H	1+00	stations =	\$185.00
Point	K to L	43+35	stations =	\$2,027.25
SUBTOTAL IMPROVEMENT				\$58,930.21

RECONSTRUCTION

Point	A to B	2+35	stations =	\$577.73
Point	I to J	6+35	stations =	\$11,818.48
Point	M to N	28+65	stations =	\$5,869.22
SUBTOTAL RECONSTRUCTION				\$18,265.43

SPECIAL PROJECTS

Stream Enhancement - Project No. 2	\$25,000.00
Post-Harvest Road Vacate - Project No. 3	\$4,325.00
SUBTOTAL SPECIAL PROJECTS	\$29,325.00

MOVE IN **\$6,385.12**

GRAND TOTAL **\$147,620.00**

SUMMARY OF CONSTRUCTION COST

Sale:	Elk Bugle		Road: A to B					
Construction -	0+00 0.00	stations miles	Improvement -	484+15 9.17	stations miles	Reconstruction -	2+35 0.04	stations miles
IMPROVEMENT: CLEARING AND GRUBBING -								
Sod removal, alder plucking 456+50 to 484+15								
Widening								
	0.100	acres @		\$955.00	per acre =		\$95.50	
	0.165	acres @		\$955.00	per acre =		\$157.58	
							TOTAL CLEARING AND GRUBBING	\$253.08
IMPROVEMENT: EXCAVATION -								
Widening								
	635	cy. @		\$2.80	per c.y.=		\$1,778.00	
							TOTAL EXCAVATION	\$1,778.00
IMPROVEMENT: ENDHAUL -								
Widening								
	9+30	to	10+90	482	cy. @	\$1.91	per c.y.=	\$920.62
Widening								
	462+50	to	467+80	153	cy. @	\$1.95	per c.y.=	\$298.35
Spread & compact								
				635	cy. @	\$0.55	per c.y.=	\$349.25
							TOTAL ENDHAUL	\$1,568.22
RECONSTRUCTION: CLEARING AND GRUBBING -								
Scattering								
	0.060	acres @		\$1,415.00	per acre =		\$84.90	
							TOTAL CLEARING AND GRUBBING	\$84.90
RECONSTRUCTION: EXCAVATION -								
Road Earthwork								
	2.35	sta. @		\$100.00	per sta. =		\$235.00	
							TOTAL EXCAVATION	\$235.00
CULVERTS - MATERIALS & INSTALLATION								
		<u>Culverts</u>						
	120	LF of 18"	\$3,030.00			190	LF of 24"	\$7,267.50
	100	LF of 30"	\$19,171.48			40	LF of 36"	\$2,030.00
		<u>Culvert Stakes & Markers</u>						
		34 markers	\$306.00					
							TOTAL CULVERTS	\$31,804.98
ROCK								
484+15 to	486+50	160	cy. of	Pit-Run	@	\$15.76	per c.y.=	\$2,521.60
9+30 to	10+90	60	cy. of	Pit-Run	@	\$7.85	per c.y.=	\$471.00
9+30 to	10+90	30	cy. of	Crushed	@	\$7.25	per c.y.=	\$217.50
Culvert Bedding/Backfill	Multiple Locations	300	cy. of	Crushed	@	\$8.17	per c.y.=	\$2,451.00
Landing Rock	Point B	100	cy. of	Pit-Run	@	\$15.78	per c.y.=	\$1,578.00
Fill Armor	163+20	140	cy. of	Pit-Run	@	\$10.31	per c.y.=	\$1,443.40
Junction Rock	484+15	20	cy. of	Crushed	@	\$13.99	per c.y.=	\$279.80
Spot Rock	229+30 to 484+15	100	cy. of	Crushed	@	\$12.03	per c.y.=	\$1,203.00
Energy Dissipator	Multiple Locations	40	cy. of	Riprap	@	\$9.19	per c.y.=	\$367.60
Ditch Fill	138+00 to 138+50	20	cy. of	Crushed	@	\$7.74	per c.y.=	\$154.80
							TOTAL ROCK	\$10,687.70
SPECIAL PROJECTS								
Construct Landing at Point B -								
	1.00	@		\$410.00	each		\$410.00	
Hone fill slope @ stations 9+30 & 138+00 -								
	2.00	hours @		\$185.00	per hour		\$370.00	
Handheld vibratory compactor and labor @ 73+65 -								
	1.00	lump sum @		\$445.00	each		\$445.00	
Grade and shape road -								
	187.20	stations @		\$24.40	per station		\$4,567.68	
Roll w/ vibratory roller -								
	187.20	stations @		\$19.40	per station		\$3,631.68	
Remove culverts from state lands								
	11.00	@		\$1,150.20	total		\$1,150.20	
Grass seed and fertilize -								
	0.30	acres @		\$310.00	per acre		\$93.00	
Mulching -								
	0.250	acres @		\$865.00	per acre		\$216.25	
							TOTAL SPECIAL PROJECTS	\$10,883.81
GRAND TOTAL								\$57,295.69

SUMMARY OF CONSTRUCTION COST

Sale: **Elk Bugle** Road: **C to D**

Construction -	1+40	stations	Improvement -	0+00	stations	Reconstruction -	0+00	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 -

Station	to	Station	Avg. Sideslope	<u>Avg. Dist.</u> To W.A. (mi.)	Outslope/Ditch	Cost per Station	=		
0+00		1+40	30%		Outslope	\$450	=	\$630.00	
								TOTAL	\$630.00

ROCK

0+00 to	1+40	110	cy. of	Pit-Run	@	\$15.63 per c.y.=		\$1,719.30	
Landing Rock	Point D	100	cy. of	Pit-Run	@	\$15.64 per c.y.=		\$1,564.00	
Junction Rock	0+00	20	cy. of	Crushed	@	\$13.82 per c.y.=		\$276.40	
								TOTAL ROCK	\$3,559.70

SPECIAL PROJECTS

Construct Landing at Point D -	1.00	@	\$600.00	each		\$600.00	
Grade and shape road -	1.40	stations @	\$24.40	per station		\$34.16	
Roll subgrade w/ vibratory roller prior to rocking -	1.40	stations @	\$19.40	per station		\$27.16	
Grass seed and fertilize -	0.05	acres @	\$310.00	per acre		\$15.50	
						TOTAL SPECIAL PROJECTS	\$676.82

GRAND TOTAL **\$4,866.52**

SUMMARY OF CONSTRUCTION COST

Sale: **Elk Bugle** Road: **E to F**

Construction -	7+65	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.14	miles		0.00	miles		0.00	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	=	
0+00		4+00	50%		Outslope	\$706	=	\$2,824.00
4+00		7+65	45%		Outslope	\$414	=	\$1,511.10
TOTAL								\$4,335.10

ROCK

0+00 to	7+65	560	cy. of	Pit-Run	@	\$14.46	per c.y.=	\$8,097.60
Landing Rock	3+60, Point F	220	cy. of	Pit-Run	@	\$14.54	per c.y.=	\$3,198.80
Junction Rock	0+00	20	cy. of	Crushed	@	\$12.58	per c.y.=	\$251.60
TOTAL ROCK								\$11,548.00

SPECIAL PROJECTS

Construct Landings at 3+60 and Point F-	2.00	@	\$800.00	each	\$1,600.00
Construct waste area -	1.00	@	\$100.00	each	\$100.00
Grade and shape road -	7.65	stations @	\$24.40	per station	\$186.66
Roll subgrade w/ vibratory roller prior to rocking -	7.65	stations @	\$19.40	per station	\$148.41
Grass seed and fertilize -	0.15	acres @	\$310.00	per acre	\$46.50
TOTAL SPECIAL PROJECTS					\$2,081.57

GRAND TOTAL **\$17,964.67**

SUMMARY OF CONSTRUCTION COST

Sale: **Elk Bugle** Road: **G to H**

Construction -	0+00	stations	Improvement -	1+00	stations	Reconstruction -	0+00	stations
	0.00	miles		0.02	miles		0.00	miles

SPECIAL PROJECTS

Block road at point H -	1.00	hours @	\$185.00	per hour	\$185.00	
				TOTAL SPECIAL PROJECTS	\$185.00	

GRAND TOTAL **\$185.00**

SUMMARY OF CONSTRUCTION COST

Sale: **Elk Bugle**

Road: **I to J**

<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>6+35</u>	stations
	0.00	miles		0.00	miles		0.12	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	0.170	acres @	\$1,415.00	per acre =	\$240.55	
TOTAL CLEARING AND GRUBBING						\$240.55

RECONSTRUCTION: EXCAVATION -

Road Earthwork	6.35	sta. @	\$100.00	per sta. =	\$635.00	
TOTAL EXCAVATION						\$635.00

ROCK

0+00 to	6+35	440	cy. of	Pit-Run	@	\$18.30	per c.y.=	\$8,052.00
Landing Rock	Point J	100	cy. of	Pit-Run	@	\$18.37	per c.y.=	\$1,837.00
Junction Rock	0+00	20	cy. of	Crushed	@	\$16.43	per c.y.=	\$328.60
TOTAL ROCK								\$10,217.60

SPECIAL PROJECTS

Construct Landing at Point J-	1.00	@	\$410.00	each	\$410.00	
Grade and shape road -	6.35	stations @	\$24.40	per station	\$154.94	
Roll subgrade w/ vibratory roller prior to rocking -	6.35	stations @	\$19.40	per station	\$123.19	
Grass seed and fertilize -	0.12	acres @	\$310.00	per acre	\$37.20	
TOTAL SPECIAL PROJECTS						\$725.33

GRAND TOTAL	\$11,818.48
--------------------	--------------------

SUMMARY OF CONSTRUCTION COST

Sale: **Elk Bugle**

Road: **K to L**

<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>43+35</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
	0.00	miles		0.82	miles		0.00	miles

IMPROVEMENT: EXCAVATION -

Clean existing banks/ditches	43.35	sta. @	\$20.00	per sta. =	\$867.00	
				TOTAL EXCAVATION		\$867.00

IMPROVEMENT: ENDHAUL -

Excavation endhaul	0+00	to	43+35	40	cy. @	\$2.68	per c.y. =	\$107.20
Spread & compact				40	cy. @	\$0.55	per c.y. =	\$22.00
							TOTAL ENDHAUL	\$129.20

ROCK

Rock Ditch Filter	4 Locations	8	cy. of	Drain Rock	@	\$27.10	per c.y. =	\$216.80
							TOTAL ROCK	\$216.80

SPECIAL PROJECTS

Trail blocking @ 0+00, 7+70 -	4.00	hours @	\$185.00	per hour	\$740.00
Grass seed and fertilize -	0.10	acres @	\$310.00	per acre	\$31.00
Mulching -	0.050	acres @	\$865.00	per acre	\$43.25
				TOTAL SPECIAL PROJECTS	\$814.25

GRAND TOTAL	\$2,027.25
--------------------	-------------------

SUMMARY OF CONSTRUCTION COST

Sale: **Elk Bugle**

Road: **M to N**

Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	28+65	stations
	0.00	miles		0.00	miles		0.54	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Widening	0.027	acres @	\$955.00	per acre =	\$25.79	
Scattering	0.790	acres @	\$1,415.00	per acre =	\$1,117.85	
TOTAL CLEARING AND GRUBBING						\$1,143.64

RECONSTRUCTION: EXCAVATION -

Road Earthwork	28.65	sta. @	\$25.00	per sta. =	\$716.25	
Widening	89	cy. @	\$2.20	per c.y.=	\$195.80	
TOTAL EXCAVATION						\$912.05

RECONSTRUCTION: ENDHAUL -

Widening	0+70	to	2+70	59	cy. @	\$2.09	per c.y.=	\$123.31
Widening	5+05	to	6+05	30	cy. @	\$2.13	per c.y.=	\$63.90
Spread & compact				89	cy. @	\$0.55	per c.y.=	\$48.95
TOTAL ENDHAUL								\$236.16

ROCK

0+00 to	1+00		70	cy. of	Pit-Run	@	\$19.69	per c.y.=	\$1,378.30
Spot Rock	0+00 to 28+65		40	cy. of	Pit-Run	@	\$7.11	per c.y.=	\$284.40
TOTAL ROCK									\$1,662.70

SPECIAL PROJECTS

Construct landing @ 28+65 -	1.00	hours @	\$410.00	per hour	\$410.00	
Grade and shape road -	28.65	stations @	\$24.40	per station	\$699.06	
Roll subgrade w/ vibratory roller -	28.65	stations @	\$19.40	per station	\$555.81	
Grass seed and fertilize -	0.75	acres @	\$310.00	per acre	\$232.50	
Mulching -	0.020	acres @	\$865.00	per acre	\$17.30	
TOTAL SPECIAL PROJECTS						\$1,914.67

GRAND TOTAL **\$5,869.22**

SUMMARY OF CONSTRUCTION COST

Sale: **Elk Bugle** Road: **0 to P**

Construction -	4+25	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.08	miles		0.00	miles		0.00	miles

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

Station	to	Station	Avg. Sideslope	<u>Avg. Dist.</u> To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	\$1,912.50	
0+00		4+25	30%			\$450	=	TOTAL	\$1,912.50

ROCK

0+00 to	4+25	300	cy. of	Pit-Run	@	\$20.31	per c.y.=	\$6,093.00	
Landing Rock	Point P	100	cy. of	Pit-Run	@	\$20.36	per c.y.=	\$2,036.00	
Junction Rock	0+00	20	cy. of	Crushed	@	\$18.47	per c.y.=	\$369.40	
								TOTAL ROCK	\$8,498.40

SPECIAL PROJECTS

Construct Landing at Point P -	1.00	@	\$600.00	each	\$600.00			
Construct turnaround before landing -	1.00	@	\$100.00	each	\$100.00			
Grade and shape road -	4.25	stations @	\$24.40	per station	\$103.70			
Roll subgrade w/ vibratory roller prior to rocking -	4.25	stations @	\$19.40	per station	\$82.45			
Tree felling w/rootwads -	1.00	lump sum @	\$555.00		\$555.00			
Grass seed and fertilize -	0.10	acres @	\$310.00	per acre	\$31.00			
TOTAL SPECIAL PROJECTS								\$1,472.15

GRAND TOTAL **\$11,883.05**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Crushed	Location:	Sec. 13, T1S, R7W, W.M.
Sale:	Elk Bugle		Sec. 1, 11, T2S, R7W, W.M.
Swell:	1.40	Road:	550 c.y.
Shrinkage	1.16	Total Truck Loads:	550 c.y.
Drill Pct.:	100%	In Place Total:	393 c.y.

Load Dump Truck: \$1.20 /cu.yd. x 550 cu.yds. = \$660.00

Subtotal \$660.00

Move in Loader 1 @ \$985.31 = \$985.31

Subtotal \$985.31

Base Cost= \$2.99 Per Cu.Yd.

TOTAL PRODUCTION COSTS \$1,645.31

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 930 1090 (Crushed)	2.36	1.90	2.99	7.25	30	\$217.50
A to B Culvert Bedding/Backfill (Crushed)	3.28	1.90	2.99	8.17	300	\$2,451.00
A to B Junction Rock (Crushed)	7.45	3.55	2.99	13.99	20	\$279.80
A to B Spot Rock (Crushed)	5.49	3.55	2.99	12.03	100	\$1,203.00
A to B Ditch Fill (Crushed)	2.85	1.90	2.99	7.74	20	\$154.80
C to D Junction Rock (Crushed)	8.93	1.90	2.99	13.82	20	\$276.40
E to F Junction Rock (Crushed)	7.69	1.90	2.99	12.58	20	\$251.60
I to J Junction Rock (Crushed)	11.54	1.90	2.99	16.43	20	\$328.60
O to P Junction Rock (Crushed)	13.58	1.90	2.99	18.47	20	\$369.40
				Total C.Y.	550	Sub Total
						\$5,532.10

TOTAL ROCKING COSTS \$5,532.10

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Pit_run	Location:	Sec. 25, T1S, R8W, W.M.
Sale:	Elk Bugle		Sec. 1, 3, 12, T2S, R7W, W.M.
Swell:	1.40	Road:	2548 c.y.
Shrinkage	1.16	Total Truck Loads:	2548 c.y.
Drill Pct.:	100%	In Place Total:	1820 c.y.

Drill & Shoot:	\$3.60	/cu.yd.	x	1592	cu.yds.	=	\$5,731.20
Rip Rock:	\$3.35	/cu.yd.	x	228	cu.yds.	=	\$763.80
Push Rock:	\$1.20	/cu.yd.	x	637	cu.yds.	=	\$764.40
Load Dump Truck:	\$1.20	/cu.yd.	x	2548	cu.yds.	=	\$3,057.60
					Subtotal		\$10,317.00

Move In and set up Drill and Compressor	1	@	\$1,013.60	=	\$1,013.60
Move in Loader	1	@	\$985.31	=	\$985.31
Move in Trucks	2	@	\$267.81	=	\$535.62
				Subtotal	\$2,534.53

Base Cost=	\$5.04	Per Cu. Yd.	TOTAL PRODUCTION COSTS \$12,851.53
------------	--------	-------------	---

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 48415 48650 (Pit-Run)	9.07	1.65	5.04	15.76	160	\$2,521.60
A to B 930 1090 (Pit-Run)	5.00	1.65	1.20	7.85	60	\$471.00
A to B Landing Rock (Pit-Run)	9.09	1.65	5.04	15.78	100	\$1,578.00
A to B Fill Armor (Pit-Run)	3.07	2.20	5.04	10.31	140	\$1,443.40
A to B Energy Dissipator (Riprap)	6.34	1.65	1.20	9.19	40	\$367.60
C to D 0 140 (Pit-Run)	8.94	1.65	5.04	15.63	110	\$1,719.30
C to D Landing Rock (Pit-Run)	8.95	1.65	5.04	15.64	100	\$1,564.00
E to F 0 765 (Pit-Run)	7.77	1.65	5.04	14.46	560	\$8,097.60
E to F Landing Rock (Pit-Run)	7.85	1.65	5.04	14.54	220	\$3,198.80
I to J 0 635 (Pit-Run)	11.61	1.65	5.04	18.30	440	\$8,052.00
I to J Landing Rock (Pit-Run)	11.68	1.65	5.04	18.37	100	\$1,837.00
K to L Rock Ditch Filter (Drain Rock)	12.06	10.00	5.04	27.10	8	\$216.80
M to N 0 100 (Pit-Run)	13.00	1.65	5.04	19.69	70	\$1,378.30
M to N Spot Rock (Pit-Run)	1.27	0.80	5.04	7.11	40	\$284.40
O to P 0 425 (Pit-Run)	13.62	1.65	5.04	20.31	300	\$6,093.00
O to P Landing Rock (Pit-Run)	13.67	1.65	5.04	20.36	100	\$2,036.00
Total C.Y.					2548	Sub Total \$40,858.80

TOTAL ROCKING COSTS	\$40,858.80
----------------------------	--------------------

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

Sale: **Elk Bugle**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
16.0	Pavement	30
12.0	Main Lines	7
4.0	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	Graders	\$954.00		\$11.00	0.00	6.00	6	\$66.00	\$1,020.00
1	Rollers (smooth/grid) & Compactors	\$715.09		\$5.50	0.00	4.00	4	\$22.00	\$737.09
1	Excavators (Med.)	\$1,045.47		\$39.50	0.00	4.00	4	\$158.00	\$1,203.47
1	Excavators (Large)	\$1,112.81	1	\$50.00	0.00	4.00	4	\$200.00	\$1,312.81
1	Tractor (D8)	\$1,148.28	2	\$16.75	0.00	4.00	4	\$67.00	\$1,215.28
2	Dump Truck (10 cy +)	\$545.16		\$3.25	0.00	11.00	11	\$71.50	\$616.66
1	Water Truck (1500 Gal)	\$267.81		\$3.00	0.00	4.00	4	\$12.00	\$279.81
TOTAL MOVE-IN COSTS:									\$6,385.12



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT Elk Bugle

Type of Sale

Regeneration harvest, Recovery

Legal Description

Sections 30, of T1S R6W. Tillamook County, W.M.
 Sections 31 & 32 of T1S R6W. Washington County, W.M.

Sale Acreage

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

	<u>ACRES</u>	
	<u>Gross</u>	<u>Net</u>
Unit 1 (Modified Clearcut)	94	76
Unit 2 (Modified Clearcut)	47	35
Unit 3 (Modified Clearcut)	155	97
Unit 4 (Modified Clearcut)	36	14
Total	332	222

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

The timber sale was cruised using variable plot sampling. The unit was cruised by ODF staff June to September 2023. 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	325’ x 325’
2	40.00	250’ x 250’
3	40.00	350’ x 350’
4	27.78	250’ x 250’

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.

Unit	Cruise Statistics (Board Foot Volumes)			
	Acres	Number of Plots	SE (%)	CV (%)
1	76	30	6.5	35.2
2	35	25	5.7	27.8
3	97	49	3.9	27.4
4	14	12	9.5	31.4
Project Total	222	116	3.8	40.6

Hidden Defect and Breakage

A 2% reduction for conifers and a 4% reduction for hardwood volumes were applied for hidden defect and breakage.

Timber Description

All units were planted between 1955 and 1956.

Unit 1 is modified clearcut. The Unit is a Douglas-fir dominated stand. The area east of July Creek Road in the unit was thinned as part of the La Cruz Thin in 2001.

Unit 2 is modified clearcut. The Unit is a Douglas-fir dominated stand. Approximately 80% was thinned as part of the La Cruz Thin in 2001.

Unit 3 is modified clearcut. The Unit is a Douglas-fir dominated stand with 9% red alder and a minor component of Big Leaf Maple. The area to the northwest of the mid-slope road in the unit was thinned (approximately 65% of the unit) as part of the La Cruz thin in 2001.

Unit 4 is modified clearcut. The Unit is a Douglas-fir dominated stand with 5% Red Alder. The unit has no past management.

Sale Unit	Age	Species	DBH	Merchantable Bole Height (feet)
1	66	Douglas-fir	19.5	82
2	66	Douglas-fir	16.8	72
3	66	Douglas-fir	15.8	75
		Red alder	14	53
4	66	Douglas-fir	13.4	66
		Red alder	12.1	47

Above data derived from Statistics (type) report using SuperAce 2008, developed by Atterbury consultants, Inc.

Cruiser /Dates

ODF Staff Cruised; June - September 2023.

Revenue Distribution

BOF – 100%

Tax Code: 511.07 (99%)
 902 (1%)

Deed Numbers: 276, 115

Attachments

- Volume Summary Table
- Stand Table
- Log Stock Table
- Species, Sort, Grade Table
- Logging Plan

Stand and Log Stock Tables Species Key

- DF – Douglas-fir
- RA – Red alder
- OC – Other Conifer
- DL—Douglas-fir Leave - Trees to be used for Wood Placement Project.
- BM—Big Leave Maple

T01S R06W S31 T0100										T01S R06W S31 T0100			
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
01S	06W	31	UNIT 1	0100	76.00	30	94	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	64	.3	20,159	20,105	1,528			79	21	1			99	40	14	312	1.81	64.4						
DF	CO	3	30	.7	9,605	9,533	725			100				2	98	40	9	109	0.78	87.8						
DF	CO	4	6	.9	1,794	1,777	135	80	20			20	29	28	23	26	5	28	0.36	62.6						
DF	Totals		100	.4	31,557	31,415	2,388	5	31	51	13	1	2	2	95	36	9	146	1.03	214.8						
Type	Totals			.4	31,557	31,415	2,388	5	31	51	13	1	2	2	95	36	9	146	1.03	214.8						

T01S R06W S31 T0100										T01S R06W S31 T0100				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
01S	06W	31	UNIT 2	0100	35.00	25	88	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	49	.3	17,047	17,000	595			71	29					100	40	14	315	1.72	54.0					
DF	CO	3	41	.1	13,905	13,896	486			100						100	40	8	109	0.72	127.8					
DF	CO	4	10	1.0	3,304	3,272	115	95	5			14	23	29	33		30	5	32	0.34	102.8					
DF	Totals		100	.3	34,256	34,168	1,196	9	41	35	15	1	2	3	94		36	8	120	0.82	284.6					
Type	Totals			.3	34,256	34,168	1,196	9	41	35	15	1	2	3	94		36	8	120	0.82	284.6					

T01S R06W S32 TMC										T01S R06W S32 TMC				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
01S	06W	32	UNIT 3	MC	97.00	49	182	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	Dia	Bd	CF/	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf	
DF	CO	2	37	1.0	9,798	9,697	941		74	26		1	1	98	40	14	305	1.80	31.8	
DF	CO	3	51	.1	13,634	13,617	1,321		97	3		0		100	40	8	103	0.68	132.5	
DF	CO	4	12		2,895	2,895	281	89	11			21	31	14	35	26	5	29	0.27	100.0
DF	Totals		88	.4	26,327	26,210	2,542	10	52	29	10	2	4	2	92	35	8	99	0.71	264.3
RA	H	3	23		744	744	72	63	37					100	40	11	185	1.36	4.0	
RA	H	4	77	1.0	2,507	2,482	241	100				4	4	13	80	35	7	63	0.63	39.4
RA	Totals		11	.8	3,251	3,226	313	92	8			3	3	10	84	35	7	74	0.71	43.4
BM	H	4	100	5.1	111	106	10	36	64			72	28		30	8	92	1.08	1.2	
BM	Totals		0	5.1	111	106	10	36	64			72	28		30	8	92	1.08	1.2	
DL	CO	2	85		275	275	27		17	83				100	40	17	480	2.56	.6	
DL	CO	3	11		34	34	3	100						100	40	11	180	1.31	.2	
DL	CO	4	4		11	11	1	100				33	67		20	8	30	0.57	.4	
DL	Totals		1		321	321	31	14	14	71		1	2	96	33	13	280	1.91	1.1	
Type Totals				.5	30,010	29,862	2,897	9	56	26	9	2	4	3	91	35	8	96	0.72	310.0

T01S R06W S32 TMC	T01S R06W S32 TMC
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt	BdFt
01S 06W 32 UNIT 4 MC 14.00 12 47 S	W

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre					
								Net	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/	
													4-5	6-11	12-16	17+	12-20	21-30	31-35						36-99
DF	CO	2	19	2.6	4,928	4,801	67			89	11			8	92	39	14	264	1.70	18.2					
DF	CO	3	63		15,733	15,733	220			100					100	40	8	96	0.63	163.3					
DF	CO	4	18		4,436	4,436	62	94	6			16	26	15	43	28	5	30	0.26	148.8					
DF	Totals		95	.5	25,097	24,971	350	17	64	17	2	3	5	4	88	35	7	76	0.56	330.3					
RA	H	4	100		1,226	1,226	17			100				5	25	70	34	7	62	0.59	19.7				
RA	Totals		5		1,226	1,226	17			100				5	25	70	34	7	62	0.59	19.7				
Type Totals				.5	26,323	26,197	367	16	66	16	2	3	4	5	88	35	7	75	0.56	350.0					

TC		TSTNDSUM											Stand Table Summary				
Project													ELKB				
T01S R06W S31 T0100										T01S R06W S31 T0100							
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1								
01S	06W	31	UNIT 1	0100	76.00	30	94	Date:	12/11/2022								
								Time:	1:19:20PM								
Spc	S 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		10	1	77	53	4.187	2.28										
DF		11	2	83	89	6.921	4.57	10.38	12.2	43.3	3.61	127	450	274	96	34	
DF		13	1	83	109	2.478	2.28	4.96	16.6	60.0	2.34	82	297	178	62	23	
DF		14	1	83	72	2.136	2.28	2.14	26.7	70.0	1.63	57	150	124	43	11	
DF		15	2	87	85	3.722	4.57	7.44	17.8	65.0	3.78	132	484	287	101	37	
DF		16	5	76	95	8.178	11.42	13.08	24.4	92.5	9.11	320	1,210	692	243	92	
DF		17	4	85	94	5.795	9.13	10.14	28.5	108.6	8.25	290	1,101	627	220	84	
DF		18	8	87	103	10.338	18.27	20.68	30.0	115.6	17.70	621	2,391	1,345	472	182	
DF		19	9	85	110	10.439	20.55	24.36	32.5	121.4	22.57	792	2,958	1,715	602	225	
DF		20	11	86	111	11.514	25.12	25.12	38.3	145.0	27.45	963	3,643	2,086	732	277	
DF		21	9	87	120	8.545	20.55	23.74	35.3	145.2	23.87	837	3,446	1,814	636	262	
DF		22	10	87	120	8.651	22.84	24.22	39.3	166.8	27.15	952	4,040	2,063	724	307	
DF		23	7	85	117	5.541	15.99	14.25	46.0	191.7	18.69	656	2,731	1,421	499	208	
DF		24	8	85	104	5.815	18.27	12.36	54.8	214.1	19.30	677	2,646	1,467	515	201	
DF		25	4	77	102	2.680	9.13	6.70	48.1	177.0	9.18	322	1,186	698	245	90	
DF		26	4	89	107	2.478	9.13	5.57	64.0	272.2	10.17	357	1,518	773	271	115	
DF		28	2	85	122	1.068	4.57	3.20	63.2	276.7	5.78	203	887	439	154	67	
DF		30	2	79	119	.930	4.57	2.33	79.3	306.0	5.26	184	712	400	140	54	
DF		31	2	84	123	.871	4.57	2.61	75.5	333.3	5.63	197	871	428	150	66	
DF		32	1	86	103	.409	2.28	.82	104.9	435.0	2.45	86	356	186	65	27	
DF		34	1	83	107	.362	2.28	.72	117.8	470.0	2.43	85	340	185	65	26	
DF		Totals	94	84	103	103.058	214.67	214.82	37.0	146.2	226.33	7,941	31,415	17,201	6,036	2,388	
Totals			94	84	103	103.058	214.67	214.82	37.0	146.2	226.33	7941	31,415	17,201	6,036	2,388	

TC		TSTNDSUM											Stand Table Summary				
Project													ELKB				
T01S R06W S31 T0100											T01S R06W S31 T0100						
Twp	Rge	Sec	Tract		Type	Acres	Plots	Sample Trees			Page:	1					
01S	06W	31	UNIT 2		0100	35.00	25	88			Date:	11/06/2021					
											Time:	8:38:05AM					
Spc	S 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	78	62	7.709	2.69	7.71	7.3	30.0	1.60	56	231	56	20	8	
DF		9	1	82	72	6.091	2.69	6.09	10.1	40.0	1.76	62	244	61	22	9	
DF		10	2	84	90	9.867	5.38	9.87	13.2	50.0	3.71	130	493	130	46	17	
DF		11	3	82	86	12.232	8.07	20.39	10.8	40.0	6.25	219	815	219	77	29	
DF		12	2	83	79	6.852	5.38	6.85	20.3	65.0	3.97	139	445	139	49	16	
DF		13	3	84	107	8.758	8.07	17.52	15.3	61.7	7.64	268	1,080	267	94	38	
DF		14	3	87	94	7.552	8.07	15.10	17.3	70.0	7.45	261	1,057	261	91	37	
DF		15	4	87	98	8.771	10.76	17.54	20.9	86.2	10.44	366	1,513	365	128	53	
DF		16	7	86	102	13.491	18.84	26.98	24.3	97.1	18.68	656	2,621	654	229	92	
DF		17	10	86	96	17.072	26.91	32.44	27.8	105.8	25.68	901	3,431	899	315	120	
DF		18	4	90	104	6.091	10.76	12.18	32.5	122.5	11.30	396	1,492	395	139	52	
DF		19	7	88	108	9.567	18.84	21.87	32.6	124.4	20.30	712	2,720	711	249	95	
DF		20	9	88	109	11.101	24.22	25.90	36.4	142.4	26.88	943	3,688	941	330	129	
DF		21	6	83	100	6.713	16.15	13.43	39.0	154.2	14.93	524	2,070	523	183	72	
DF		22	3	86	115	3.058	8.07	8.15	40.6	172.5	9.43	331	1,407	330	116	49	
DF		23	5	89	110	4.663	13.45	11.19	48.1	210.0	15.35	539	2,350	537	189	82	
DF		24	6	89	122	5.139	16.15	12.85	54.4	244.0	19.93	699	3,135	697	245	110	
DF		25	5	88	119	3.947	13.45	9.47	58.7	264.2	15.85	556	2,502	555	195	88	
DF		26	2	87	116	1.460	5.38	2.92	73.0	322.5	6.07	213	941	213	75	33	
DF		27	1	85	114	.677	2.69	1.35	77.7	340.0	3.00	105	460	105	37	16	
DF		28	3	84	112	1.888	8.07	3.78	64.0	261.7	6.89	242	988	241	85	35	
DF		31	1	88	108	.513	2.69	1.03	103.8	470.0	3.04	107	483	106	37	17	
DF	Totals	88	85	97		153.211	236.80	284.60	29.6	120.1	240.15	8,426	34,168	8,405	2,949	1,196	
Totals		88	85	97		153.211	236.80	284.60	29.6	120.1	240.15	8426	34,168	8,405	2,949	1,196	

TC		TSTNDSUM											Stand Table Summary			
Project													ELKB			
T01S R06W S32 TMC											T01S R06W S32 TMC					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1		Date: 12/11/2021		Time: 1:55:35PM			
01S	06W	32	UNIT 3	MC	97.00	49	182									
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	2	82	67	6.739	2.35	3.37	8.7	40.0	.84	29	135	81	29	13
DF		9	3	81	89	7.987	3.53	7.99	9.9	36.7	2.25	79	293	218	77	28
DF		10	3	84	105	6.469	3.53	8.63	11.5	50.0	2.82	99	431	274	96	42
DF		11	9	84	103	16.040	10.59	32.08	10.4	42.8	9.54	335	1,372	926	325	133
DF		12	9	83	97	13.478	10.59	23.96	13.0	50.0	8.88	312	1,198	861	302	116
DF		13	10	83	105	12.760	11.76	24.24	16.5	61.6	11.39	400	1,493	1,105	388	145
DF		14	8	83	113	8.802	9.41	18.70	18.4	72.9	9.79	344	1,364	950	333	132
DF		15	5	85	110	4.792	5.88	9.58	22.3	93.0	6.10	214	891	592	208	86
DF		16	11	86	118	9.266	12.94	22.74	22.3	91.1	14.47	508	2,072	1,403	492	201
DF		17	11	85	111	8.208	12.94	17.91	26.6	105.4	13.57	476	1,888	1,316	462	183
DF		18	12	83	112	7.987	14.11	16.64	31.7	117.6	15.05	528	1,957	1,459	512	190
DF		19	10	84	117	5.974	11.76	14.93	30.8	115.2	13.10	460	1,720	1,271	446	167
DF		20	8	84	115	4.313	9.41	11.32	32.3	125.7	10.42	366	1,423	1,011	355	138
DF		21	11	84	114	5.379	12.94	13.20	38.3	143.7	14.42	506	1,897	1,399	491	184
DF		22	8	84	125	3.564	9.41	10.69	38.1	158.3	11.61	407	1,693	1,126	395	164
DF		23	9	85	114	3.669	10.59	8.97	45.6	184.1	11.64	409	1,651	1,130	396	160
DF		24	4	88	126	1.498	4.70	4.49	46.7	209.2	5.98	210	940	580	204	91
DF		25	6	81	118	2.070	7.06	4.49	56.6	241.5	7.24	254	1,083	702	246	105
DF		26	7	84	117	2.233	8.23	6.06	55.8	229.5	9.63	338	1,391	934	328	135
DF		27	3	85	125	.887	3.53	2.37	64.1	275.0	4.32	152	651	419	147	63
DF		29	1	83	140	.256	1.18	.77	69.7	330.0	1.53	54	254	148	52	25
DF		30	1	85	124	.240	1.18	.72	72.0	326.7	1.47	52	235	143	50	23
DF		32	1	86	110	.211	1.18	.42	107.1	420.0	1.29	45	177	125	44	17
DF	Totals	152	84	106		132.820	178.78	264.28	24.9	99.2	187.36	6,574	26,210	18,174	6,377	2,542
RA		10	1	75	68	2.863	1.56	2.86	14.1	50.0	1.11	40	143	108	39	14
RA		11	2	75	82	4.733	3.12	4.73	18.7	60.0	2.43	88	284	235	86	28
RA		12	2	74	115	3.977	3.12	5.97	17.2	53.3	2.83	103	318	274	100	31
RA		13	2	79	104	3.388	3.12	5.08	20.2	66.7	2.82	103	339	274	100	33
RA		14	6	76	94	8.765	9.37	11.69	23.4	67.5	7.53	274	789	730	265	77
RA		15	2	76	68	2.545	3.12	2.55	31.7	75.0	2.22	81	191	215	78	19
RA		16	1	78	77	1.118	1.56	1.12	40.4	120.0	1.24	45	134	120	44	13
RA		17	4	79	78	3.963	6.25	5.94	32.4	93.3	5.29	192	555	513	187	54
RA		19	1	81	83	.793	1.56	1.59	33.3	105.0	1.45	53	167	141	51	16
RA		21	1	81	96	.649	1.56	1.30	45.4	145.0	1.62	59	188	157	57	18
RA		22	1	91	63	.592	1.56	.59	63.8	200.0	1.04	38	118	101	37	11
RA	Totals	23	77	88		33.387	35.92	43.42	24.8	74.3	29.58	1,076	3,226	2,869	1,043	313
DL		28	2	86	126	.382	1.63	1.15	63.8	280.0	2.01	73	321	195	71	31
DL	Totals	2	86	126		.382	1.63	1.15	63.8	280.0	2.01	73	321	195	71	31
BM		16	1	81	43	.585	.82	.58	26.3	50.0	.41	15	29	39	15	3
BM		23	1	82	65	.283	.82	.57	38.6	135.0	.58	22	76	56	21	7
BM	Totals	2	81	50		.868	1.63	1.15	32.3	91.8	0.99	37	106	96	36	10
OC		21	1	89	107	.339	.82									
OC		22	1	81	48	.309	.82									
OC		40	1	61	27	.094	.82									
OC	Totals	3	82	72		.742	2.45									
Totals		182	82	102		168.199	220.41	309.99	25.0	96.3	219.94	7760	29,862	21,334	7,527	2,897

TC		TSTNDSUM											Stand Table Summary				
Project													ELKB				
T01S R06W S32 TMC											T01S R06W S32 TMC						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1		Date:	11/06/2021					
01S	06W	32	UNIT 4	MC	14.00	12	47	Time:	8:43:53AM								
Spc	S 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	2	82	67	25.317	8.84	12.66	8.7	40.0	3.15	111	506	44	15	7	
DF		9	1	81	110	10.002	4.42	10.00	11.6	40.0	3.30	116	400	46	16	6	
DF		10	1	83	98	8.101	4.42	8.10	14.8	60.0	3.43	120	486	48	17	7	
DF		11	5	83	102	33.477	22.09	66.95	10.5	42.0	20.09	705	2,812	281	99	39	
DF		12	5	82	96	28.130	22.09	45.01	13.0	48.7	16.74	587	2,194	234	82	31	
DF		13	3	82	97	14.381	13.26	23.97	17.8	62.0	12.19	428	1,486	171	60	21	
DF		14	6	84	112	24.800	26.51	53.73	18.2	73.8	27.81	976	3,968	389	137	56	
DF		15	3	85	107	10.802	13.26	21.60	21.5	85.0	13.25	465	1,836	186	65	26	
DF		16	3	85	121	9.494	13.26	22.15	23.2	95.7	14.67	515	2,120	205	72	30	
DF		17	2	86	110	5.606	8.84	11.21	28.8	115.0	9.21	323	1,289	129	45	18	
DF		18	3	83	114	7.501	13.26	15.00	33.5	125.0	14.33	503	1,875	201	70	26	
DF		19	2	84	125	4.488	8.84	13.46	28.4	108.3	10.90	383	1,459	153	54	20	
DF		20	2	84	95	4.051	8.84	8.10	35.4	135.0	8.18	287	1,094	115	40	15	
DF		21	1	86	129	1.837	4.42	5.51	35.5	146.7	5.58	196	808	78	27	11	
DF		22	2	84	127	3.348	8.84	10.04	38.6	161.7	11.06	388	1,624	155	54	23	
DF		26	1	81	77	1.198	4.42	1.20	95.1	290.0	3.25	114	348	45	16	5	
DF		32	1	85	110	.791	4.42	1.58	107.1	420.0	4.83	169	665	68	24	9	
DF		Totals	43	83	100	193.324	190.00	330.30	19.3	75.6	181.97	6,385	24,971	2,548	894	350	
RA		10	1	74	68	6.112	3.33	6.11	14.1	50.0	2.37	86	306	33	12	4	
RA		12	1	75	110	4.244	3.33	4.24	23.8	70.0	2.78	101	297	39	14	4	
RA		14	2	76	89	6.236	6.67	9.35	22.4	66.7	5.76	209	624	81	29	9	
RA		Totals	4	75	86	16.592	13.33	19.71	20.1	62.2	10.91	397	1,226	153	56	17	
Totals			47	82	99	209.916	203.33	350.01	19.4	74.8	192.88	6781	26,197	2,700	949	367	

Project: **ELKB**

T01S R06W S31 T0100 **T01S R06W S31 T0100**

Twp Rge Sec Tract Type Acres Plots Sample Trees Page
01S 06W 31 UNIT 1 0100 76.00 30 94 Date 12/11/2023
Time 1:19:18PM

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
DF		CO	2		20	9	11.1	8	.3					8					
DF		CO	2		40	1,523	.2	1,520	63.7				469	546	411	93			
DF		CO	3		34	15		15	.6				15						
DF		CO	3		40	715	.8	710	29.7		140	290	279						
DF		CO	4		12	1	50.0	1	.0		1								
DF		CO	4		13	1		1	.0		1								
DF		CO	4		14	4		4	.2		3	1							
DF		CO	4		15	5		5	.2		3	1	1						
DF		CO	4		16	5		5	.2		5								
DF		CO	4		17	6		6	.2		6								
DF		CO	4		18	1		1	.1			1							
DF		CO	4		19	4		4	.2		3	1							
DF		CO	4		21	6		6	.2		3	2	1						
DF		CO	4		22	10		10	.4		10								
DF		CO	4		24	5		5	.2		5								
DF		CO	4		25	6		6	.2		4	2							
DF		CO	4		26	5		5	.2		5								
DF		CO	4		27	2		2	.1		2								
DF		CO	4		28	5		5	.2		5								
DF		CO	4		30	2		2	.1		2								
DF		CO	4		31	12	4.5	12	.5		8	4							
DF		CO	4		32	8		8	.4		6	3							
DF		CO	4		33	4		4	.2		4								
DF		CO	4		35	14		14	.6		14								
DF		CO	4		40	31		31	1.3		23	7							
DF		Totals				2,398		2,388	100.0		109	164	293	294	469	555	411	93	
Total All Species					2,398		2,388	100.0		109	164	293	294	469	555	411	93		

TC		TLOGSTVB		Log Stock Table - MBF																	
Project:										ELKB											
T01S R06W S31 T0100										T01S R06W S31 T0100											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1												
01S	06W	31	UNIT 2	0100	35.00	25	88	Date	11/6/2023												
									Time	8:35:09AM											
Spp	T	So	Gr	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+
DF		CO	2	40		597	.3	595	49.8					185	150	246	14				
DF		CO	3	37		7		7	.6				7								
DF		CO	3	38		6		6	.5			6									
DF		CO	3	40		473	.1	473	39.5			94	135	243							
DF		CO	4	14		1		1	.1		1										
DF		CO	4	15		2		2	.1		2										
DF		CO	4	16		1		1	.1		1	1									
DF		CO	4	17		3		3	.3		3	1									
DF		CO	4	18		6		6	.5		6										
DF		CO	4	19		2		2	.2		2	1									
DF		CO	4	20		1		1	.1		1										
DF		CO	4	21		2		2	.1		2										
DF		CO	4	22		4		4	.3		4										
DF		CO	4	23		1		1	.1		1										
DF		CO	4	24		1		1	.1			1									
DF		CO	4	25		1		1	.1		1										
DF		CO	4	27		2		2	.1		2										
DF		CO	4	28		2		2	.1		2										
DF		CO	4	29		2		2	.2		2										
DF		CO	4	30		12		12	1.0		11	1									
DF		CO	4	31		1		1	.1		1										
DF		CO	4	32		1		1	.1			1									
DF		CO	4	33		2		2	.2		2										
DF		CO	4	34		10	6.5	10	.8		10										
DF		CO	4	35		19	2.2	19	1.6		19										
DF		CO	4	37		2		2	.2		2										
DF		CO	4	38		4		4	.4		4										
DF		CO	4	40		27		27	2.3		27										
DF		CO	4	41		5		5	.4		5										
DF		Totals				1,199		1,196	100.0		109	106	142	243	185	150	246	14			
Total All Species						1,199		1,196	100.0		109	106	142	243	185	150	246	14			

TC TLOGSTVB

Log Stock Table - MBF

Project: ELKB

T01S R06W S32 TMC

T01S R06W S32 TMC

Twp Rge Sec Tract Type Acres Plots Sample Trees
01S 06W 32 UNIT 3 MC 97.00 49 182

Page 2
Date 12/11/2023
Time 1:55:34PM

SPP	T	S	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
RA					Totals	315		313	10.8			133	108	46	27				
BM	H	4	26			7	7.7	7	64.3							7			
BM	H	4	27			1		1	8.0			1							
BM	H	4	33			3		3	27.7			3							
BM					Totals	11	5.1	10	.4			4				7			
DL	CO	2	40			27		27	85.7					4		22			
DL	CO	3	40			3		3	10.7				3						
DL	CO	4	13			0		0	1.2			0							
DL	CO	4	27			1		1	2.4			1							
DL					Totals	31		31	1.1			1	0	3	4	22			
Total All Species						2,911		2,897	100.0		251	560	495	556	358	297	350	30	

Log Stock Table - MBF

Project: ELKB

T01S R06W S32 TMC

T01S R06W S32 TMC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1
01S	06W	32	UNIT 4	MC	14.00	12	47	Date	11/6/2023
								Time	8:42:15AM

Spp	T	S	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
DF		CO	2		32	5		5	1.5					5						
DF		CO	2		40	64	2.8	62	17.7					27	28		7			
DF		CO	3		40	220		220	63.0			81	78	61						
DF		CO	4		13	1		1	.4			1								
DF		CO	4		16	2		2	.5			2								
DF		CO	4		17	2		2	.5			2								
DF		CO	4		18	3		3	.8			3								
DF		CO	4		19	1		1	.2			1								
DF		CO	4		20	2		2	.5				2							
DF		CO	4		21	2		2	.5			2								
DF		CO	4		22	2		2	.5			2								
DF		CO	4		23	3		3	.7			3								
DF		CO	4		24	1		1	.2			1								
DF		CO	4		25	1		1	.2			1								
DF		CO	4		28	7		7	2.0			7								
DF		CO	4		29	2		2	.5			2								
DF		CO	4		31	4		4	1.2			2	2							
DF		CO	4		33	2		2	.7			2								
DF		CO	4		35	3		3	.8			3								
DF		CO	4		36	9		9	2.6			9								
DF		CO	4		38	2		2	.6			2								
DF		CO	4		39	2		2	.7			2								
DF		CO	4		40	14		14	3.9			14								
DF		Totals				351		350	95.3		58	85	78	61	32	28		7		
RA		H	4		15	1		1	5.1			1								
RA		H	4		33	4		4	24.9			4								
RA		H	4		40	12		12	70.0			4	8							
RA		Totals				17		17	4.7			9	8							
Total All Species						369		367	100.0		58	94	86	61	32	28		7		



"STEWARDSHIP IN FORESTRY"

Elk Bugle

Volume Summary

Area 1-Modified Clearcut				
453		76 acres		
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	31.415	2387.5	2%	2340
TOTAL	31.42	2388		2340

Areas 2-Modified Clearcut				
446		35 acres		
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	34.168	1195.9	2%	1172
TOTAL	34.17	1196		1172

Areas 3-Modified Clearcut				
464		97 acres		
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	26.210	2542	2%	2491
Alder	3.226	313	4%	300
TOTAL	29.4	2855		2791



"STEWARDSHIP IN FORESTRY"

Elk Bugle

Volume Summary

Areas 4-Modified Clearcut				
445		14 acres		
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	24.971	350	2%	343
Alder	1.226	17	4%	16
TOTAL	26.2	367.0		359

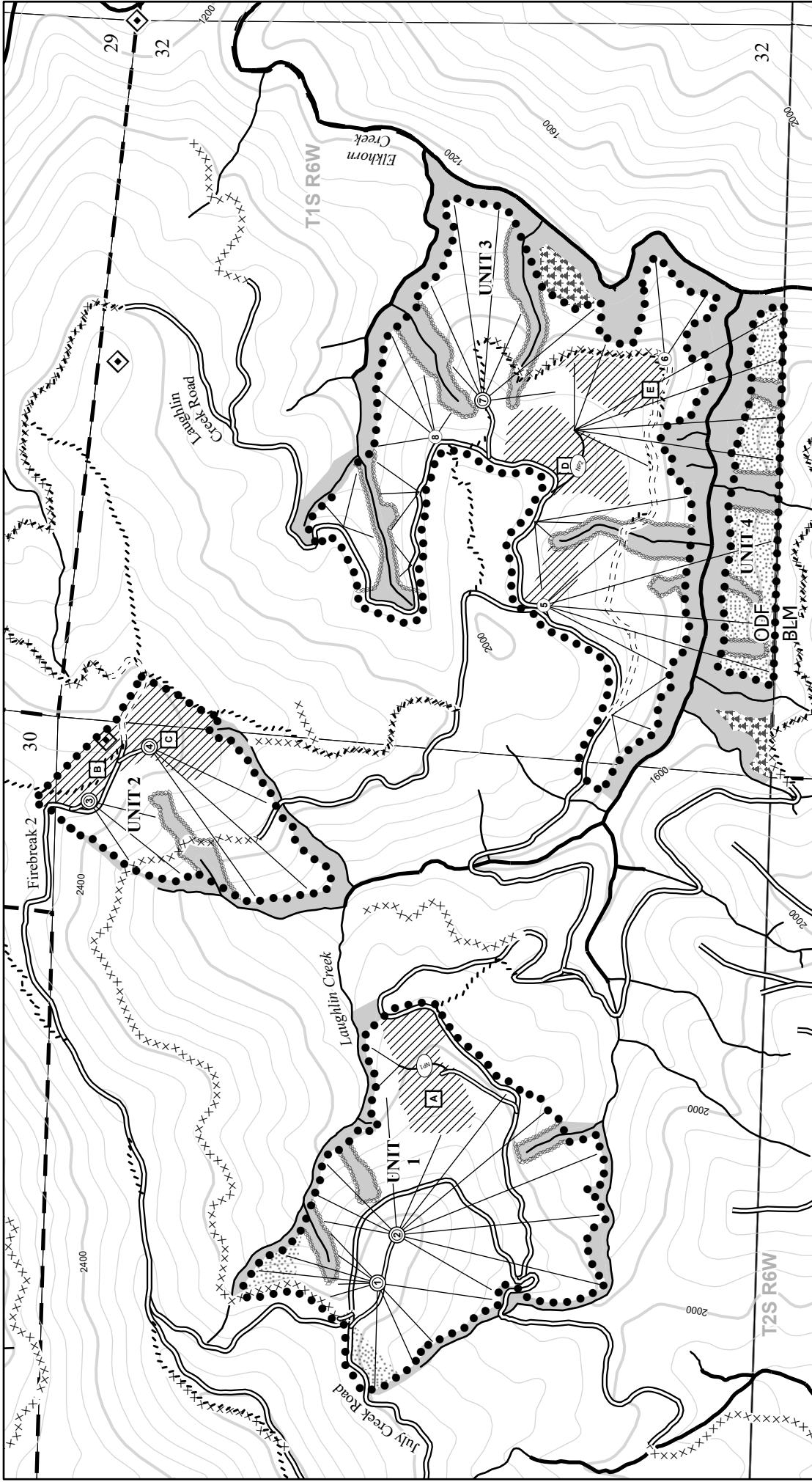


"STEWARDSHIP IN FORESTRY"

Elk Bugle

Volume Summary

TOTAL SALE VOLUME		222	acres
SPECIES	Cruised Net (MBF)	Net Sale (MBF)	
Douglas-fir	6475	6346	
Hemlock	0	0	
Spruce	0	0	
	0	0	
Red Alder	330	316	
TOTAL	6805	6662	



Legend

- ◆ Corners
- Ground
- ⊙ Landing To Be Constructed
- Existing Landing
- Cable Logging
- ▨ Cable Haulback
- ▨ Ground Based
- ▨ Recreation Trail
- ▨ Surfaced Road
- ▨ Unsurfaced Road
- xxx Blocked Road
- Type-F Stream
- Type-N Stream
- ⊙ Green Tree Retention
- Sections
- 200' Contour
- 40' Contour
- ▨ Riparian Boundary
- Timber Sale Boundary
- ▨ Property Line

LOGGING PLAN

FOR TIMBER SALE CONTRACT TL-341-2024-W01036-01
 ELK BUGLE
 Sections 30, of T1S R6W, Tillamook County, W.M.
 Sections 31 & 32 of T1S R6W, Washington County, W.M.



Tillamook District GIS
 DECEMBER, 2023

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

NET ACRES			
UNIT	GROUND	CABLE	TOTAL
UNIT 1	8	68	76
UNIT 2	12	23	35
UNIT 3	16	81	97
UNIT 4	0	14	14
TOTAL	36	186	222

