



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Rooster Cogburn
Sale FG-341-2021-W00237-01

District: Forest Grove

Date: March 10, 2021

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$3,024,831.08	\$0.00	\$3,024,831.08
		Project Work:	(\$241,895.00)
		Advertised Value:	\$2,782,936.08



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District: Forest Grove

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Timber Description

Location:

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	24	0	98
Western Hemlock / Fir	22	0	98

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	4,276	812	5,088
Western Hemlock / Fir	64	13	77
Total	4,340	825	5,165

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

Red Alder and Other Hardwoods Stumpage Price = Pond Value minus Logging Cost:
 $\$420.55/\text{MBF} = \$603/\text{MBF} - \$182.45/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$942.55/\text{MBF} = \$1,125/\text{MBF} - \$182.45/\text{MBF}$

Noble fir and Other Conifers Stumpage Price = Pond Value minus Logging Cost:
 $\$427.72/\text{MBF} = \$624.14/\text{MBF} - \$196.42/\text{MBF}$

BRANDING AND PAINTING COST ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE
Hauling costs equivalent to \$950 daily truck cost.

Other Costs (with Profit & Risk to be added): None

Other Costs (No Profit & Risk added):
Machine Time to Block/Waterbar Roads, and Skid Trails:
 $10 \text{ hours} \times \$150/\text{hour} = \$1,500$
Machine Time to Pile Landing Slash and Sort Firewood:
 $20 \text{ hours} \times \$150/\text{hour} = \$3,000$
Equipment Cleaning: 3 pieces $\times \$1,000/\text{Piece} = \$3,000$
Slash Disposal: 33 acres $\times \$200/\text{acre} = \$6,600$
TOTAL Other Costs (No Profit & Risk added) = \$14,100

ROAD MAINTENANCE

Move-in (Includes: Move-in, Grading, Rolling and Spot Rocking):
\$3,183.84
General Road Maintenance: 6.17 Miles $\times \$2,409.38 = \$14,865.87$
TOTAL Road Maintenance: $\$18,049.71 / 5,165\text{MBF} = \$3.49/\text{MBF}$



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Logging Conditions

Combination#: 1 Douglas - Fir 26.80%
 Western Hemlock / Fir 27.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 10 **bd. ft / load:** 4700
cost / mbf: \$127.66
machines: Log Loader (A)
 Stroke Delimber (A)
 Tower Yarder (Medium)

Combination#: 2 Douglas - Fir 73.20%
 Western Hemlock / Fir 73.00%

Logging System: Shovel **Process:** Stroke Delimber
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 12 **bd. ft / load:** 4100
cost / mbf: \$64.47
machines: Stroke Delimber (B)



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Logging Costs

Operating Seasons: 1.00	Profit Risk: 15%
Project Costs: \$241,895.00	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$14,100.00

Miles of Road

Road Maintenance: \$3.49

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	4.7
Western Hemlock / Fir	\$0.00	3.0	4.0



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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									
\$81.40	\$3.56	\$0.85	\$68.73	\$0.00	\$23.18	\$0.00	\$2.00	\$2.73	\$182.45
Western Hemlock / Fir									
\$81.53	\$3.56	\$0.85	\$80.75	\$0.00	\$25.00	\$0.00	\$2.00	\$2.73	\$196.42

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$770.48	\$588.03	\$0.00
Western Hemlock / Fir	\$0.00	\$624.14	\$427.72	\$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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	5,088	\$588.03	\$2,991,896.64
Western Hemlock / Fir	77	\$427.72	\$32,934.44

Gross Timber Sale Value

Recovery: \$3,024,831.08

Prepared By: Kenton Burns

Phone: 503-359-7477

TIMBER SALE SUMMARY
Rooster Cogburn
#FG-341-2021-W00237-01

1. **Location:** Portions of Sections 25 & 26, T3N, R6W, W.M., Tillamook County, Oregon, and portions of Section 35, T3N, R6W, W.M., Washington County Oregon.
2. **Type of Sale:** This timber sale is 89 net acres of Modified Clearcut, and 1 acre of Right-of-Way Timber. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF, 24% Washington County, 76% Tillamook County (Tax Code 56-1).
4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.
5. **Cruise:** The Timber Sale was cruised by ODF Cruisers in February of 2021. For more information see Cruise Report.
6. **Timber Description:** The Timber Sale Area consists of an over-stocked 80 year old Douglas-fir stand with minor amounts of western hemlock, western redcedar, true firs, and hardwoods. The stand has an average of 232 ft² of basal area per acre for all species, an average Douglas-fir DBH of 24 inches, and an estimated average net Douglas-fir volume of approximately 56.7 MBF per acre.
7. **Topography and Logging Method:** Slopes within the sale areas range from 5% to 80%, but are generally less than 35%, and variable in aspect. The timber sale is 73% ground-based yarding and 27% cable yarding. The average cable corridor length is 450 feet and the maximum is approximately 1,100 feet. The average horizontal skid trail length is approximately 200 feet and the maximum is approximately 500 feet.
8. **Access:** All access to the Timber Sale Area is on surfaced all-weather roads. From Forest Grove, travel north on Highway 8 to its junction with Highway 6. Turn left and travel west approximately 3.5 miles to Timber Road. Turn right, proceed north on Timber Road approximately 6.5 miles, and turn left onto Cochran Road. Continue west on Cochran Road for 3.8 miles to the Round Top Road and turn left. Continue for 0.3 miles on Round Top Road and turn right onto the Gold Miner Spur. Continue for approximately 1 mile, and turn right on a spur road to the southern portion of the Timber Sale Area.

9. **Projects:**

Project No. 1: Rocked Road Construction	\$161,332.89
Project No. 2: Road Improvement	\$76,967.40
Project No. 3: Gate Installation	\$3,594.71
 Total Credit for all Projects (rounded)	 \$241,895.00

PROJECT COST SUMMARY SHEET

Timber Sale: Rooster Cogburn
Sale Number: FG-341-2021-W00237-01

PROJECT NO. 1: ROCKED ROAD CONSTRUCTION

	Road Segment	Length	Cost
	B to C	42+70	\$80,277.08
	D to E	19+10	\$35,359.01
	F to G	1+75	\$6,347.64
	H to I	14+10	\$28,640.76
	J to K	2+40	\$5,376.74
		80+05 stations	
		1.52 miles	
Total Rock =	2,549 cy	1½" - 0	
	3,811 cy	3" - 0	
	117 cy	Pit-run	
	12 cy	Large Riprap	
		Move-in =	\$5,331.66
		TOTAL PROJECT COST =	\$161,332.89

PROJECT NO. 2: ROAD IMPROVEMENT

	Road Segment	Length	Cost
	A to B	161+65	\$68,824.45
	L to M	7+25	\$4,919.74
		168+90 stations	
		3.20 miles	
Total Rock =	4,301 cy	1½" - 0	
	319 cy	3" - 0	
	12 cy	Large Riprap	
		Move-in =	\$3,223.21
		TOTAL PROJECT COST =	\$76,967.40

PROJECT NO. 3: GATE INSTALLATION

	Location	Gate Size	Cost
	Point N	20'	\$3,444.17
Total Rock =	24 cy	1½" - 0	
	12 cy	Blocking Boulders	
		Move-in =	\$150.54
		TOTAL PROJECT COST =	\$3,594.71
		TOTAL CREDITS =	\$241,895.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Rooster Cogburn
Road Segment: A to B

Sale Number: FG-341-2021-W00237-01
Improvement: 161+65 stations

PROJECT NO. 2

IMPROVEMENT

Clearing & grubbing (scatter)	1.86	ac @	\$1,078.00	per acre =	\$2,005.08
Construct Settling Ponds	6	ea @	\$25.00	per ea =	\$150.00
Improve Turnouts	22	ea @	\$33.00	per ea =	\$726.00
Grade, ditch, & roll	161.65	sta @	\$36.00	per sta =	\$5,819.40

TOTAL IMPROVEMENT COSTS = \$8,700.48

CULVERTS

Culverts and Bands					
18" Diameter	80	LF @	\$20.00	per LF =	\$1,600.00
24" Band	2	ea @	\$29.43	per ea =	\$58.86
Markers & Stakes					
Culvert Markers	2	ea @	\$10.00	per ea =	\$20.00

TOTAL CULVERT COSTS = \$1,678.86

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$0.98	\$11.26	\$0.50	24	\$305.76
Energy dissipator	24"-12"	\$1.78	\$11.26	\$1.60	12	\$175.68
Subtotal =					36	\$481.44
Surfacing rock						
Surfacing rock	1½" - 0	\$0.98	\$11.26	\$1.22	3,991	\$53,718.86
Junction	1½" - 0	\$0.98	\$11.26	\$1.22	132	\$1,776.72
Turnout	1½" - 0	\$0.98	\$11.26	\$1.22	154	\$2,072.84
Subtotal =					4,277	\$57,568.42

Totals	All Rock =	4,313
	1½" - 0 =	4,301
	Riprap =	12

TOTAL ROCK COSTS = \$58,049.86

EROSION CONTROL

Grass seed & fertilizer	0.93	ac @	\$425.00	per ac =	\$395.25
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TOTAL EROSION CONTROL COSTS = \$395.25

TOTAL PROJECT COST = \$68,824.45

SUMMARY OF CONSTRUCTION COST

Timber Sale: Rooster Cogburn
Road Segment: B to C

Sale Number: FG-341-2021-W00237-01
Construction: 42+70 stations
0.81 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	4.91	ac @	\$1,078.00	per ac =	\$5,292.98
Balanced road construction	41.35	sta @	\$110.00	per sta =	\$4,548.50
Drift	1.35	sta @	\$180.00	per sta =	\$243.00
Adverse Drift	1.70	sta @	\$540.00	per sta =	\$918.00
Fill Construction					
Drift & compact fill	500	cy @	\$1.40	per cy =	\$700.00
"Y" junction	1.00	sta @	\$110.00	per sta =	\$110.00
Turnouts	6	ea @	\$66.00	per ea =	\$396.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
Landing	1	ea @	\$220.00	per ea =	\$220.00
Grade, ditch, & roll	42.70	sta @	\$36.00	per sta =	\$1,537.20

TOTAL CONSTRUCTION COSTS = \$14,048.18

CULVERTS

Culverts and Bands					
18" Diameter	190	LF @	\$20.00	per LF =	\$3,800.00
24" Diameter	50	LF @	\$29.00	per LF =	\$1,450.00
30" Band	1	ea @	\$73.58	per ea =	\$73.58
Markers & Stakes					
Culvert markers	7	ea @	\$10.00	per ea =	\$70.00
Additional Installation Cost					
Puncheon Removal - Culvert No. 7	2	hrs @	\$175.00	per hr =	\$350.00

TOTAL CULVERT COSTS = \$5,743.58

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Energy dissipator	24"-12"	\$10.53	\$2.00	\$1.60	12	\$169.56
Subgrade reinforcement	Pitrun	\$10.53	\$2.00	\$0.75	117	\$1,553.76
Subtotal =					129	\$1,723.32
Surfacing rock						
Base rock	3" - 0	\$0.98	\$15.80	\$1.22	1,324	\$23,832.00
Surfacing rock	1½" - 0	\$0.98	\$15.80	\$1.22	1,324	\$23,832.00
"Y" Junction	1½" - 0	\$0.98	\$15.80	\$1.22	65	\$1,170.00
Junction	3" - 0	\$0.98	\$15.80	\$1.22	192	\$3,456.00
Turnout	3" - 0	\$0.98	\$15.80	\$1.22	174	\$3,132.00
Turnaround	3" - 0	\$0.98	\$15.80	\$1.22	20	\$360.00
Landing	3" - 0	\$0.98	\$15.80	\$1.22	95	\$1,710.00
Subtotal =					3,194	\$57,492.00

Totals

All Rock =	3,323
1½" - 0 =	1,389
Pit-run =	117
Riprap =	12

TOTAL ROCK COSTS = \$59,215.32

EROSION CONTROL

Grass seed & fertilizer	2.46	ac @	\$500.00	per ac =	\$1,230.00
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TOTAL EROSION CONTROL COSTS = \$1,270.00

TOTAL PROJECT COST = \$80,277.08

SUMMARY OF CONSTRUCTION COST

Timber Sale: Rooster Cogburn
Road Segment: D to E

Sale Number: FG-341-2021-W00237-01
Construction: 19+10 stations
0.36 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	2.20	ac @	\$1,078.00	per ac =	\$2,371.60
Balanced road construction	18.05	sta @	\$110.00	per sta =	\$1,985.50
Drift	1.05	sta @	\$180.00	per sta =	\$189.00
Turnouts	3	ea @	\$66.00	per ea =	\$198.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
Roadside landing	1	ea @	\$165.00	per ea =	\$165.00
Landing	1	ea @	\$220.00	per ea =	\$220.00
Grade, ditch, & roll	19.10	sta @	\$36.00	per sta =	\$687.60

TOTAL CONSTRUCTION COSTS = \$5,899.20

CULVERTS

Culverts and Bands

18" Diameter	60	LF @	\$20.00	per LF =	\$1,200.00
24" Diameter	40	LF @	\$29.00	per LF =	\$1,160.00
30" Band	1	ea @	\$73.58	per ea =	\$73.58

Markers & Stakes

Culvert markers	3	ea @	\$10.00	per ea =	\$30.00
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TOTAL CULVERT COSTS = \$2,463.58

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Base rock	3" - 0	\$0.98	\$15.63	\$1.22	592	\$10,555.36
Surfacing rock	1½" - 0	\$0.98	\$15.63	\$1.22	592	\$10,555.36
Turnout	3" - 0	\$0.98	\$15.63	\$1.22	87	\$1,551.21
Turnaround	3" - 0	\$0.98	\$15.63	\$1.22	20	\$356.60
Roadside landing	3" - 0	\$0.98	\$15.63	\$1.22	95	\$1,693.85
Landing	3" - 0	\$0.98	\$15.63	\$1.22	95	\$1,693.85
Subtotal =					1,481	\$26,406.23

Totals

All Rock =	1,481
1½" - 0 =	592
3" - 0 =	889

EROSION CONTROL

Grass seed & fertilizer	1.10	ac @	\$500.00	per ac =	\$550.00
Straw mulch (bale)	4	ea @	\$10.00	per ea =	\$40.00

TOTAL EROSION CONTROL COSTS = \$590.00

TOTAL PROJECT COST = \$35,359.01

SUMMARY OF CONSTRUCTION COST

Timber Sale: Rooster Cogburn
Road Segment: F to G

Sale Number: FG-341-2021-W00237-01
Construction: 1+75 stations

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	0.21	ac @	\$1,078.00	per ac =	\$226.38
Balanced road construction	1.75	sta @	\$110.00	per sta =	\$192.50
"Y" junction	1.00	sta @	\$110.00	per sta =	\$110.00
Landing	1	ea @	\$220.00	per ea =	\$220.00
Grade, ditch, & roll	1.75	sta @	\$36.00	per sta =	\$63.00

TOTAL CONSTRUCTION COSTS = \$811.88

CULVERTS

Culverts and Bands					
18" Diameter	30	LF @	\$20.00	per LF =	\$600.00
Markers & Stakes					
Culvert markers	1	ea @	\$10.00	per ea =	\$10.00

TOTAL CULVERT COSTS = \$610.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Base rock	3" - 0	\$1.35	\$15.47	\$1.22	55	\$992.19
Surfacing rock	1½" - 0	\$1.35	\$15.47	\$1.22	55	\$992.19
"Y" Junction	3" - 0	\$1.35	\$15.47	\$1.22	65	\$1,172.59
Landing	3" - 0	\$1.35	\$15.47	\$1.22	95	\$1,713.78
				Subtotal =	270	\$4,870.76

Totals

All Rock =	270
1½" - 0 =	55
3" - 0 =	215

TOTAL ROCK COSTS = \$4,870.76

EROSION CONTROL

Grass seed & fertilizer	0.11	ac @	\$500.00	per ac =	\$55.00
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TOTAL EROSION CONTROL COSTS = \$55.00

TOTAL PROJECT COST = \$6,347.64

SUMMARY OF CONSTRUCTION COST

Timber Sale: Rooster Cogburn
Road Segment: H to I

Sale Number: FG-341-2021-W00237-01
Construction: 14+10 stations
0.27 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	1.62	ac @	\$1,078.00	per ac =	\$1,746.36
Balanced road construction	12.20	sta @	\$110.00	per sta =	\$1,342.00
Drift	1.90	sta @	\$180.00	per sta =	\$342.00
Turnouts	2.0	ea @	\$66.00	per ea =	\$132.00
Turnarounds	2	ea @	\$82.50	per ea =	\$165.00
Landing	1	ea @	\$220.00	per ea =	\$220.00
Grade, ditch, & roll	14.10	sta @	\$36.00	per sta =	\$507.60

TOTAL CONSTRUCTION COSTS = \$4,454.96

CULVERTS

Culverts and Bands					
18" Diameter	120	LF @	\$20.00	per LF =	\$2,400.00
Markers & Stakes					
Culvert markers	4	ea @	\$10.00	per ea =	\$40.00

TOTAL CULVERT COSTS = \$2,440.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Base rock	3" - 0	\$0.98	\$16.04	\$1.22	438	\$7,989.12
Surfacing rock	1½" - 0	\$0.98	\$16.04	\$1.22	438	\$7,989.12
Junction	3" - 0	\$0.98	\$16.04	\$1.22	48	\$875.52
Turnout	3" - 0	\$0.98	\$16.04	\$1.22	58	\$1,057.92
Turnaround	3" - 0	\$0.98	\$16.04	\$1.22	40	\$729.60
Curve widening	3" - 0	\$0.98	\$16.04	\$1.22	53	\$966.72
Landing	3" - 0	\$0.98	\$16.04	\$1.22	95	\$1,732.80
Subtotal =					1,170	\$21,340.80

Totals

All Rock =	1,170
1½" - 0 =	438
3" - 0 =	732

TOTAL ROCK COSTS = \$21,340.80

EROSION CONTROL

Grass seed & fertilizer	0.81	ac @	\$500.00	per ac =	\$405.00
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TOTAL EROSION CONTROL COSTS = \$405.00

TOTAL PROJECT COST = \$28,640.76

SUMMARY OF CONSTRUCTION COST

Timber Sale: Rooster Cogburn
Road Segment: J to K

Sale Number: FG-341-2021-W00237-01
Construction: 2+40 stations

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	0.28	ac @	\$1,078.00	per ac =	\$301.84
Balanced road construction	2.40	sta @	\$110.00	per sta =	\$264.00
Landing	1	ea @	\$220.00	per ea =	\$220.00
Grade, ditch, & roll	2.40	sta @	\$36.00	per sta =	\$86.40

TOTAL CONSTRUCTION COSTS = \$872.24

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Base rock	3" - 0	\$0.98	\$15.90	\$1.22	75	\$1,357.50
Surfacing rock	1½" - 0	\$0.98	\$15.90	\$1.22	75	\$1,357.50
Landing	3" - 0	\$0.98	\$15.90	\$1.22	95	\$1,719.50
Subtotal =					245	\$4,434.50

Totals

All Rock =	245
1½" - 0 =	75
3" - 0 =	170

TOTAL ROCK COSTS = \$4,434.50

EROSION CONTROL

Grass seed & fertilizer	0.14	ac @	\$500.00	per ac =	\$70.00
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TOTAL EROSION CONTROL COSTS = \$70.00

TOTAL PROJECT COST = \$5,376.74

SUMMARY OF CONSTRUCTION COST

Timber Sale: Rooster Cogburn
Road Segment: L to M

Sale Number: FG-341-2021-W00237-01
Improvement: 7+25 stations
0.14 miles

PROJECT NO. 2

IMPROVEMENT

Clearing & grubbing (scatter)	0.09	ac @	\$1,078.00	per acre =	\$97.02
Improve Roadside landing	1	ea @	\$82.50	per ea =	\$82.50
Improve landing	1	ea @	\$110.00	per ea =	\$110.00
Grade, ditch, & roll	7.25	sta @	\$36.00	per sta =	\$261.00

TOTAL IMPROVEMENT COSTS = \$550.52

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	3" - 0	\$0.98	\$11.43	\$1.22	225	\$3,066.75
Roadside landing	3" - 0	\$0.98	\$11.43	\$1.22	47	\$640.61
Landing	3" - 0	\$0.98	\$11.43	\$1.22	47	\$640.61
Subtotal =					319	\$4,347.97

Totals

All Rock =	319
3" - 0 =	319

TOTAL ROCK COSTS = \$4,347.97

EROSION CONTROL

Grass seed & fertilizer	0.05	ac @	\$425.00	per ac =	\$21.25
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TOTAL EROSION CONTROL COSTS = \$21.25

TOTAL PROJECT COST = \$4,919.74

SUMMARY OF CONSTRUCTION COST

Timber Sale: Rooster Cogburn
 Road Segment: Point N

Sale Number: FG-341-2021-W00237-01

PROJECT NO. 2

GATE INSTALLATION

Pickup, Transport and Install Gate	1	ea @ \$1,200.00	per ea =	\$1,200.00
Painting, cutting, welding and concrete	1	ea @ \$1,750.00	per ea =	\$1,750.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Blocking Boulders	36"-24"	\$1.78	\$11.26	\$1.22	12	\$171.13
Surfacing rock	1½" - 0	\$0.98	\$11.26	\$1.22	24	\$323.04
Subtotal =					36	\$494.17

Totals

All Rock =	36
1½" - 0 =	24
Blocking Boulders =	12

TOTAL ROCK COSTS = \$494.17

TOTAL PROJECT COST = \$3,444.17

SUMMARY OF CONSTRUCTION COST

Timber Sale: Rooster Cogburn

Sale Number: FG-341-2021-W00237-01

PROJECT No. 1 & 2 MOVE-IN, WITHIN AREA MOVE, & CLEANING COSTS

<u>Equipment</u>	<u>Total</u>
Grader	\$1,154.70
Loader (Med. & Large)	\$1,017.47
Roller (smooth/grid) & Compactor	\$811.50
Excavator (Large) - Equipment Cleaning	\$2,154.70
Dozer (Large) - Equipment Cleaning	\$2,199.28
Dump Truck (10cy +)	\$200.96
Dump Truck (Off Highway)	\$968.28
Water Truck (2,500 Gal)	\$198.52

TOTAL MOVE-IN COSTS = \$8,705.41

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Rooster Cogburn
Sale Number: FG-341-2021-W00237-01
Stockpile Name: Wildcat Stockpile

1 1/2" - 0: 6,874 cy (truck measure)
3" - 0: 4,130 cy (truck measure)
Riprap: 24 cy (truck measure)
Blocking Boulders: 12 cy (truck measure)
Total truck yardage: 11,040 cy

Move-in

Move in excavator					\$780.10
Move in loader					\$698.83
Move in Dump Trucks					\$430.13
				Subtotal =	\$1,909.06
				Per CY =	\$0.17/cy

1 1/2"-0 and 3"-0 Base Cost

Load dump truck	<u>\$0.80</u>	/ cy x	<u>11,004</u>	cy =	<u>\$8,803.20</u>
				Subtotal =	<u>\$8,803.20</u>
				Per CY =	<u>\$0.80</u>

Riprap & Boulder Base Cost

Load dump truck	<u>\$1.60</u>	/ cy x	<u>36</u>	cy =	<u>\$57.60</u>
				Subtotal =	<u>\$57.60</u>
				Per CY =	<u>\$1.60</u>

1 1/2"-0 Cost = \$0.98/cy
3"-0 Cost = \$0.98/cy
Jaw-Run Cost = \$0.98/cy
Riprap Cost = \$1.78/cy
Blocking Boulders \$1.78/cy

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Rooster Cogburn
Sale Number: FG-341-2021-W00237-01
Stockpile Name: Dunbar Quarry

Pit-run: 117 cy (truck measure)
Total truck yardage: 117 cy

Move-in

Move in excavator	\$826.24
Move in Dump Trucks	<u>\$113.10</u>
Subtotal =	<u>\$939.34</u>
Per CY =	<u>\$8.03/cy</u>

Riprap and Boulder Base Cost

Rip & load dump truck	<u>\$2.50</u>	/ cy x	<u>117</u>	cy =	<u>\$292.50</u>
				Subtotal =	<u>\$292.50</u>
				Per CY =	<u>\$2.50</u>

Pit-Run Cost = **\$10.53/cy**
Boulders = **\$10.53/cy**

CRUISE REPORT
Rooster Cogburn
#FG-341-2021-W00237-01

1. LOCATION: Portions of Sections 25 & 26, T3N, R6W, W.M., Tillamook County, Oregon, and portions of Section 35, T3N, R6W, W.M., Washington County, Oregon.

2. CRUISE DESIGN: Pre-cruise evaluation indicated that the stand's average DBH is approximately 17 inches with a Coefficient of Variation of about 53%. For sales of this size and approximate value, ODF cruise standards require a Sampling Error of 9% at a 68% confidence level, and a minimum sample size of 100 graded trees. Statistical analysis indicated that 34 variable radius plots utilizing a 40 BAF prism would produce an adequate sample size.

3. SAMPLING METHOD: The Timber Sale Area was cruised in February 2021. The Timber Sale Area was sampled with 35 variable radius grade plots laid out on a 5 chain x 5 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS: 203 trees were measured and graded producing a cumulative Sampling Error of 5.9% on the Basal Area per acre and 6.5% on the Board Foot Volume per acre.

5. TREE MEASUREMENT AND GRADING: All sample trees were measured and graded following Columbia River Log Scale grade rules and favored 40 foot segments.

- a) **Height Standards:** Total tree heights were measured to the nearest foot. Bole heights were calculated to a six inch top.
- b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.
- c) **Form Factors:** Measured for each grade tree using a form point of 16 feet.

6. DATA PROCESSING:

- a) **Volumes and Statistics:** Cruise estimates and sampling statistics were derived from Super Ace 2008 cruise software.
- b) **Deductions:** Two percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage.

7. CRUISERS: The sale was cruised by ODF cruisers Kenton Burns and Mark Savage.

Prepared by:	<u>Kenton Burns</u>	<u>02/17/2021</u>
	Name	Date

Reviewed by:	<u>Mark Savage</u>	<u>03/09/2021</u>
	Name	Date

TC PSTATS			PROJECT STATISTICS						PAGE	1	
			PROJECT		ROOSTER		DATE 2/16/2021				
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt
T3N	R6	25	00A1	00MC		89.00		35	203	S	W
					TREES		ESTIMATED		PERCENT		
					PER PLOT		TOTAL		SAMPLE		
			PLOTS		TREES		TREES		TREES		
TOTAL			35	203	5.8						
CRUISE			35	203	5.8		6,731		3.0		
DBH COUNT											
REFOREST											
COUNT											
BLANKS											
100 %											
STAND SUMMARY											
SAMPLE			TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
TREES			/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR			196	73.3	23.7	141	46.0	224.0	58,372	57,916	11,602
WHEMLOCK			3	1.3	22.2	139	0.7	3.4	876	876	182
WR CEDAR			2	.7	24.0	97	0.5	2.3	280	280	84
NOB FIR			2	.3	37.0	174	0.4	2.3	736	736	133
TOTAL			203	75.6	23.7	141	47.6	232.0	60,265	59,809	12,002
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	SAMPLE TREES - BF						# OF TREES REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15
DOUG FIR			52.4	3.7	1,055	1,096	1,137				
WHEMLOCK			79.1	54.7	427	943	1,460				
WR CEDAR			23.9	22.4	299	385	471				
NOB FIR			27.1	25.4	1,809	2,425	3,041				
TOTAL			53.7	3.8	1,058	1,099	1,141	115	29	13	
CL	68.1	COEFF	SAMPLE TREES - CF						# OF TREES REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15
DOUG FIR			47.1	3.4	208	215	222				
WHEMLOCK			71.9	49.7	95	190	285				
WR CEDAR			10.4	9.7	105	116	127				
NOB FIR			20.6	19.3	353	438	522				
TOTAL			48.0	3.4	208	216	223	92	23	10	
CL	68.1	COEFF	TREES/ACRE						# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15
DOUG FIR			64.2	10.8	65	73	81				
WHEMLOCK			364.4	61.5	0	1	2				
WR CEDAR			412.1	69.6	0	1	1				
NOB FIR			412.8	69.7	0	0	1				
TOTAL			63.9	10.8	67	76	84	163	41	18	
CL	68.1	COEFF	BASAL AREA/ACRE						# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15
DOUG FIR			35.8	6.0	210	224	238				
WHEMLOCK			331.4	56.0	2	3	5				
WR CEDAR			412.1	69.6	1	2	4				
NOB FIR			412.1	69.6	1	2	4				
TOTAL			35.2	5.9	218	232	246	49	12	5	
CL	68.1	COEFF	NET BF/ACRE						# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15
DOUG FIR			38.5	6.5	54,155	57,916	61,678				
WHEMLOCK			334.8	56.5	381	876	1,371				
WR CEDAR			418.3	70.6	82	280	478				
NOB FIR			416.3	70.3	219	736	1,254				

TC PSTATS				PROJECT STATISTICS				PAGE	2	
				PROJECT ROOSTER				DATE	2/16/2021	
TWP	RGE	SC	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
T3N	R6	25	00A1	00MC	89.00		35	203	S	W
CL	68.1		COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
TOTAL			38.6	6.5	55,912	59,809	63,706	59	15	7
CL	68.1		COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR			36.7	6.2	10,883	11,602	12,321			
WHEMLOCK			332.8	56.2	80	182	284			
WR CEDAR			413.3	69.8	25	84	143			
NOB FIR			414.0	69.9	40	133	226			
TOTAL			36.5	6.2	11,261	12,002	12,742	53	13	6

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
<div>TT3N RR6W S25 Ty00MC</div> <div>89.00</div>				Project: ROOSTER										Page 1							
				Acres 89.00										Date 2/16/2021							
														Time 3:26:22PM							
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
					Def%	Gross	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF			CU														13	14		0.00	5.4
DF			2M	84	.9	49,337	48,881	4,350			33	67	1	0		99	40	17	467	2.22	104.6
DF			3M	14		8,151	8,151	725		100				1	5	93	39	8	105	0.70	77.8
DF			4M	2		885	885	79		100			53	47			19	6	24	0.37	37.1
DF Totals				97	.8	58,372	57,916	5,155		16	28	57	1	1	1	97	35	12	258	1.46	224.8
RC			2M	84		236	236	21			100					100	40	15	325	2.28	.7
RC			3M	12		33	33	3		100						100	40	8	90	0.79	.4
RC			4M	4		11	11	1		100				100			28	6	30	0.63	.4
RC Totals				0		280	280	25		16	84			4		96	37	11	193	1.56	1.5
WH			2M	82		725	725	65			57	43				100	40	15	382	1.87	1.9
WH			3M	16		138	138	12		100						100	40	8	109	0.71	1.3
WH			4M	2		13	13	1		100			100				16	6	20	0.32	.6
WH Totals				1		876	876	78		17	47	35	1			99	36	11	230	1.33	3.8
NF			2M	97		718	718	64			12	88				100	39	20	781	3.53	.9
NF			3M	2		13	13	1		100					100		32	9	90	0.92	.1
NF			4M	1		5	5	0		100			100				12	9	30	0.61	.2
NF Totals				1		736	736	66		2	12	86	1		2	98	35	18	600	3.12	1.2
Totals					0.8	60,265	59,809	5,323		15	28	57	1	1	1	97	35	12	259	1.47	231.3

TC		PSTNDSUM		Stand Table Summary									Page		1	
													Date:		2/16/2021	
TT3N RR6W S25 Ty00MC 89.00				Project					ROOSTER			Time:		3:26:23PM		
				Acres					89.00			Grown Year:				
S Sp	T	Tot			Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s			
		DBH	Sample Trees	FF 16'				Av Ht	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits	MBF
DF		9	1	85	63	2.587	1.14	2.59	7.6	30.0	.56	20	78	50	18	7
DF		10	1	88	88	2.095	1.14	2.10	12.8	60.0	.76	27	126	68	24	11
DF		11	2	88	101	3.463	2.29	5.20	12.4	53.3	1.83	64	277	163	57	25
DF		13	2	88	97	2.480	2.29	4.96	14.2	57.5	2.01	70	285	179	63	25
DF		14	2	87	105	2.138	2.29	3.21	21.1	93.3	1.93	68	299	171	60	27
DF		15	1	89	123	.931	1.14	1.86	23.6	105.0	1.25	44	196	111	39	17
DF		17	4	89	127	2.900	4.57	7.98	24.8	106.4	5.64	198	848	502	176	75
DF		18	2	89	133	1.293	2.29	3.88	26.5	115.0	2.93	103	446	260	91	40
DF		19	6	90	150	3.483	6.86	10.45	33.7	159.4	10.04	352	1,666	894	314	148
DF		20	11	89	133	5.762	12.57	16.76	33.8	151.9	16.14	566	2,546	1,436	504	227
DF		21	6	89	142	2.851	6.86	8.55	39.5	192.2	9.62	338	1,644	856	301	146
DF		22	10	89	146	4.329	11.43	13.42	42.9	203.5	16.42	576	2,732	1,461	513	243
DF		23	10	89	145	3.961	11.43	11.88	47.9	229.3	16.24	570	2,725	1,445	507	243
DF		24	10	88	148	3.638	11.43	11.64	50.1	236.3	16.62	583	2,750	1,479	519	245
DF		25	12	89	150	4.023	13.71	13.41	53.0	252.3	20.27	711	3,383	1,804	633	301
DF		26	18	88	161	5.579	20.57	19.84	57.0	286.9	32.24	1,131	5,691	2,869	1,007	507
DF		27	8	88	161	2.299	9.14	8.34	60.3	308.3	14.32	503	2,570	1,275	447	229
DF		28	11	87	162	2.940	12.57	10.69	63.5	325.7	19.34	679	3,483	1,721	604	310
DF		29	19	87	165	4.734	21.71	17.69	67.4	344.1	34.00	1,193	6,087	3,026	1,062	542
DF		30	16	86	168	3.725	18.29	14.20	70.1	359.2	28.39	996	5,101	2,526	886	454
DF		31	7	86	168	1.526	8.00	5.67	78.9	402.3	12.75	447	2,281	1,135	398	203
DF		32	10	87	169	2.046	11.43	7.98	81.2	435.1	18.47	648	3,473	1,644	577	309
DF		33	6	87	165	1.154	6.86	4.23	88.7	465.9	10.70	375	1,972	952	334	176
DF		34	4	87	177	.725	4.57	2.90	93.8	516.9	7.75	272	1,499	690	242	133
DF		35	6	86	165	1.026	6.86	3.76	100.1	520.5	10.74	377	1,959	956	335	174
DF		36	4	86	165	.647	4.57	2.43	102.1	559.3	7.06	248	1,357	628	220	121
DF		37	2	87	186	.306	2.29	1.22	113.5	661.3	3.96	139	810	353	124	72
DF		38	1	84	161	.145	1.14	.58	103.7	510.0	1.72	60	296	153	54	26
DF		39	2	85	171	.276	2.29	1.10	118.0	650.0	3.71	130	716	330	116	64
DF		40	1	84	165	.131	1.14	.52	119.6	625.0	1.79	63	327	159	56	29
DF		41	1	85	155	.125	1.14	.37	139.8	790.0	1.49	52	295	133	47	26
DF		Totals	196	88	141	73.321	224.00	219.41	52.9	264.0	330.67	11,602	57,916	29,430	10,326	5,155
WH		18	1	93	123	.647	1.14	1.94	27.4	126.7	1.70	53	246	152	47	22
WH		22	1	86	154	.433	1.14	1.30	48.0	220.0	1.99	62	286	178	55	25
WH		33	1	86	158	.192	1.14	.58	114.6	596.7	2.12	66	344	188	59	31
WH		Totals	3	90	139	1.272	3.43	3.82	47.6	229.5	5.82	182	876	518	162	78
NF		36	1	85	160	.162	1.14	.65	93.5	490.0	1.45	60	317	129	54	28
NF		38	1	87	189	.145	1.14	.58	125.3	722.5	1.75	73	419	155	65	37
NF		Totals	2	86	174	.307	2.29	1.23	108.6	600.0	3.20	133	736	285	119	66
RC		24	2	80	97	.728	2.29	1.46	57.9	192.5	1.98	84	280	176	75	25
RC		Totals	2	80	97	.728	2.29	1.46	57.9	192.5	1.98	84	280	176	75	25
Totals			203	88	141	75.628	232.00	225.91	53.1	264.7	341.66	12,002	59,809	30,408	10,681	5,323

TC PLOGSTVB		Log Stock Table - MBF																	
TT3N RR6W S25 Ty00MC				89.00		Project: ROOSTER												Page 1	
						Acres		89.00										Date 2/16/2021	
																		Time 3:26:21PM	
Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		2M	16	15		15	.3										15		
DF		2M	20	19		19	.4										9	10	
DF		2M	28	12		12	.2										12		
DF		2M	40	4,346		4,305	83.5					395		694	1626	1217	373		
DF		3M	24	1		1	.0				1								
DF		3M	25	2		2	.0				2								
DF		3M	26	2		2	.0				2								
DF		3M	28	4		4	.1				3	1							
DF		3M	30	3		3	.1				1	2							
DF		3M	32	15		15	.3				15								
DF		3M	34	24		24	.5				14	10							
DF		3M	36	17		17	.3				16	1							
DF		3M	38	49		49	.9				12	28	9						
DF		3M	40	610		610	11.8				103	147	360						
DF		4M	12	12		12	.2				9	2	0						
DF		4M	14	6		6	.1				5	1							
DF		4M	16	9		9	.2				8	1							
DF		4M	18	6		6	.1				5	1							
DF		4M	20	9		9	.2				7	2							
DF		4M	22	8		8	.2				8	1							
DF		4M	24	8		8	.1				7	1							
DF		4M	25	1		1	.0				1								
DF		4M	26	11		11	.2				11								
DF		4M	28	7		7	.1				7								
DF		4M	30	3		3	.1				3								
DF		Totals		5,195		5,155	96.8			235	200	369	395	694	1626	1238	397		
RC		2M	40	21		21	84.4							21					
RC		3M	40	3		3	11.7				3								
RC		4M	28	1		1	3.9			1									
RC		Totals		25		25	.5			1	3			21					
WH		2M	40	65		65	82.7					22		26		17			
WH		3M	40	12		12	15.8			2	7	3							
WH		4M	16	1		1	1.5			1									
WH		Totals		78		78	1.5			3	7	3	22	26		17			

TC		PLOGSTVB		Log Stock Table - MBF															
TT3N RR6W S25 Ty00MC89.00				Project: Acres		ROOSTER 89.00										Page		2	
																Date		2/16/2021	
																Time		3:26:21PM	
S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches												
							2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+	
NF	2M	36	3		3	4.0						3							
NF	2M	40	61		61	93.6								14		12	35		
NF	3M	32	1		1	1.8				1									
NF	4M	12	0		0	.7				0									
NF	Totals		66		66	1.2				2		3		14		12	35		
Total	All Species		5,364		5,323	100.0				239	212	372	419	716	1666	1250	450		

VOLUME SUMMARY
(Shown in MBF)
Rooster Cogburn
FG-341-2021-W00237-01
March 2021

UNIT 1: MC (89 ACRES)

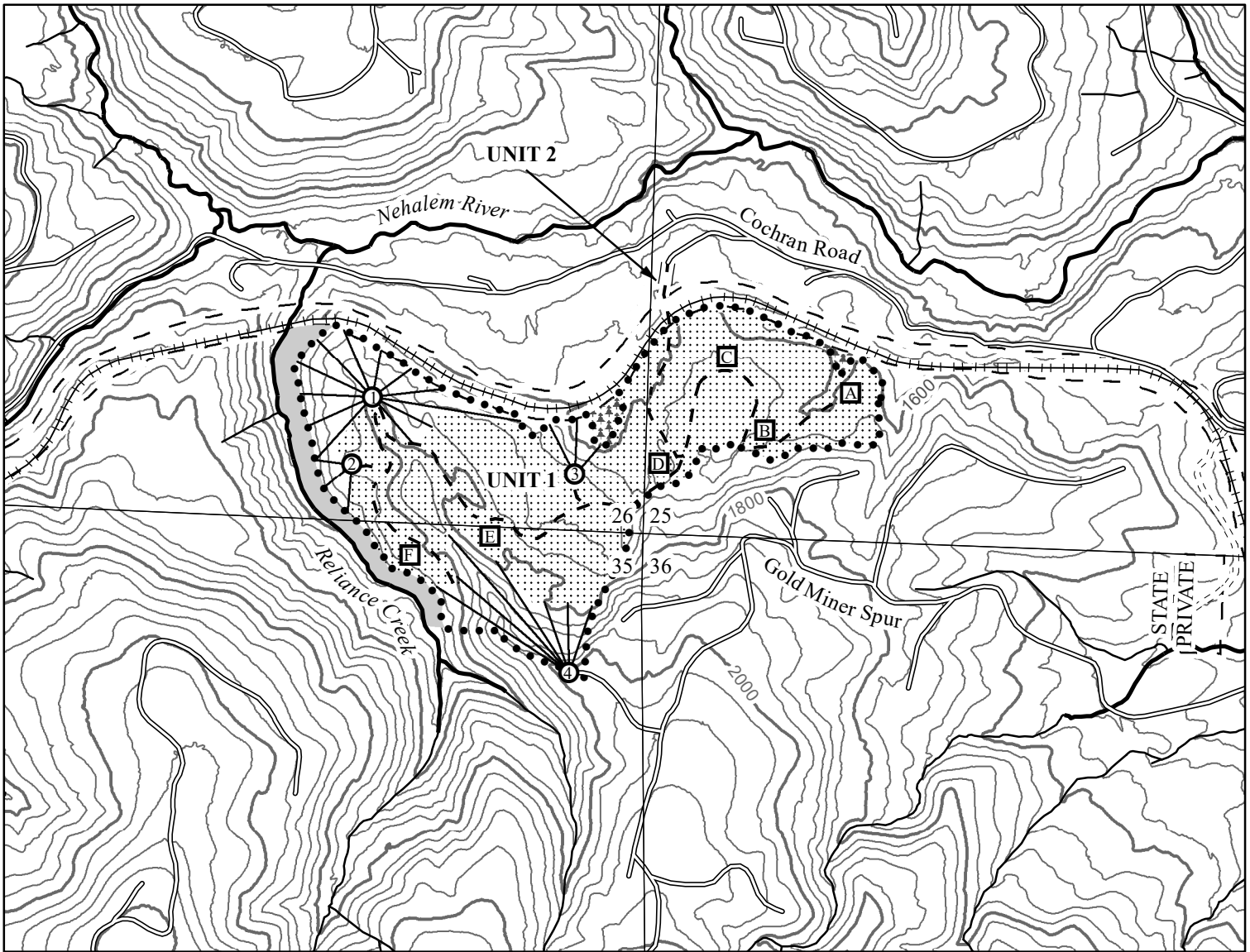
SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	4,350	725	79	5,154
	Hidden D&B (2%)	(87)	(15)	(2)	(104)
	NET TOTAL	4,263	710	77	5,050
	% of Total	84	14	2	
Western Hemlock	Cruise Volume	65	12	1	78
	Hidden D&B (2%)	(1)	(0)	(0)	(1)
	NET TOTAL	64	12	1	77
	% of Total	83	16	1	

UNIT 2: R/W (1 ACRE)

Douglas-fir	Cruise Volume	13	23	2	38
	Hidden D&B (2%)	(0)	(0)	(0)	(0)
	NET TOTAL	13	23	2	38
	% of Total	34	61	5	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	4,276	733	79	5,088
Western Hemlock	64	12	1	77
Total	4,340	745	80	5,165



Legend

- Timber Sale Boundary
- == Right-of-Way Boundary
- ODF Ownership Boundary
- Surfaced Road
- - - New Road Construction
- +++++ Railroad
- Type-F Stream
- Type-N Stream
- Stream Buffer
- ▨ Green Tree Retention Area
- ▤ Cable Yarding Area
- ▧ Tractor Yarding Area
- Cable Landing
- Tractor Landing
- 40 Foot Contour Band
- 200 Foot Contour Band
- Section Lines

LOGGING PLAN

FOR TIMBER SALE CONTRACT #FG-341-2021-W00237-01
 ROOSTER COGBURN
 PORTIONS OF SECTIONS 25 & 26, T3N, R6W, W.M.,
 TILLAMOOK COUNTY, OREGON,
 AND PORTIONS OF SECTION 35, T3N, R6W, W.M.,
 WASHINGTON COUNTY, OREGON

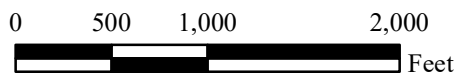
Forest Grove District GIS
 March, 2021

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



1:12,000

1 inch = 1,000 feet



APPROXIMATE NET ACRES

	TRACTOR	CABLE
UNIT 1	65	24
UNIT 2	1	0
TOTAL	66	24