Timber Sale Appraisal
CE Junction
Sale FG-341-2024-W00949-01

District: Forest Grove

Date: December 14, 2023

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$1,804,626.77	$0.00	$1,804,626.77
		Project Work:	($97,000.00)
		Advertised Value:	$1,707,626.77

Timber Sale Appraisal
CE Junction
Sale FG-341-2024-W00949-01

District: Forest Grove **Date: December 14, 2023**

Timber Description

Location:

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	26	0	98
Western Hemlock / Fir	23	0	98

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	3,483	452	3,935
Western Hemlock / Fir	69	110	179
Total	3,552	562	4,114

Comments: LOCAL POND VALUES, OCTOBER 2023

WESTERN REDCEDAR AND OTHER CEDARS:
STUMPAGE PRICE = POND VALUE - DOUG-FIR LOGGING COST
$854.86 = $1,190 - $335.14

NOBLE FIR AND OTHER CONIFERS:
STUMPAGE PRICE = POND VALUE - WESTERN HEMLOCK LOGGING COST
$196.73 = $555.78 - $359.05

RED ALDER AND OTHER HARDWOODS:
STUMPAGE PRICE = POND VALUE - DOUGLAS-FIR LOGGING COST
$165.86 = $501.00 - $335.14

BRANDING AND PAINTING ALLOWANCE = $2.00/MBF

FUEL COST ALLOWANCE = $5.00/GAL

HAULING COST ALLOWANCE = $1,250/DAY

OTHER COSTS (WITH PROFIT & RISK ADDED): N/A

OTHER COSTS (NO PROFIT & RISK ADDED):

EQUIPMENT CLEANING: 3 PIECES @ $1,000/PIECE = $3,000

MACHINE TIME TO BLOCK/WATERBAR ROADS AND SKID TRAILS:
20 HOURS X $200/HOUR = $4,000

MACHINE TIME TO PILE LANDING SLASH AND SORT FIREWOOD:
20 HOURS X $200/HOUR = $4,000

TOTAL OTHER COSTS (NO P&R) = $11,000

SLASH TREATMENT: 40 ACRES X $250/ACRE = $10,000

ROAD MAINTENANCE (INCLUDES SPOT ROCKING, GRADING, & ROLLING):

MOVE IN: $3,501.18
GENERAL ROAD MAINT: 8.30 miles X $2,440.30 = $20,254.49
TOTAL ROAD MAINTENANCE: $23,755.67 / 4,114 MBF = $5.77/MBF

District: Forest Grove **Date: December 14, 2023**

Logging Conditions

Combination#: 1

Douglas - Fir	68.00%
Western Hemlock / Fir	68.00%

Logging System: Shovel **Process:** Harvester Head Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 16 **bd. ft / load:** 4600
cost / mbf: $135.87
machines: Forwarder
Harvester

Combination#: 2

Douglas - Fir	32.00%
Western Hemlock / Fir	32.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 12 **bd. ft / load:** 4600
cost / mbf: $144.53
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

Timber Sale Appraisal
CE Junction
Sale FG-341-2024-W00949-01

District: Forest Grove **Date: December 14, 2023**

Logging Costs

Operating Seasons:	2.00	**Profit Risk:**	15%
Project Costs:	$97,000.00	**Other Costs (P/R):**	$0.00
Slash Disposal:	$10,000.00	**Other Costs:**	$11,000.00

Miles of Road **Road Maintenance:** $5.77

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	4.6
Western Hemlock / Fir	$0.00	2.0	4.0

Timber Sale Appraisal
CE Junction
Sale FG-341-2024-W00949-01

District: Forest Grove **Date: December 14, 2023**

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$138.64	$5.89	$2.13	$138.59	$0.00	$42.79	$2.43	$2.00	$2.67	$335.14
Western Hemlock / Fir									
$138.64	$5.89	$2.13	$159.38	$0.00	$45.91	$2.43	$2.00	$2.67	$359.05

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$784.80	$449.66	$0.00
Western Hemlock / Fir	$0.00	$555.78	$196.73	$0.00

Timber Sale Appraisal
CE Junction
Sale FG-341-2024-W00949-01

District: Forest Grove **Date: December 14, 2023**

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	3,935	$449.66	$1,769,412.10
Western Hemlock / Fir	179	$196.73	$35,214.67

Gross Timber Sale Value

Recovery: $1,804,626.77

Prepared By: Shamus Smith **Phone:** 503-359-7404

TIMBER SALE SUMMARY
CE Junction
#FG-341-2024-W00949-01

1. **Location:** Portions of Sections 16, 17, 20, & 21, T3N, R6W, W.M., Tillamook County, Oregon.

2. **Type of Sale:** The Timber Sale Area consists of a single 110 acre Modified Clearcut. The timber will be sold on a recovery basis at a sealed bid auction.

3. **Revenue Distribution:** 100% BOF; 100% Tillamook County (5601)

4. **Sale Acreage:** Acres are net of Stream Buffers and road prisms. Acreage was determined using ESRI ArcMap GIS Pro software.

5. **Cruise:** The Timber Sale was cruised by ODF Cruisers in October of 2023. For more information, see Cruise Report.

6. **Timber Description:** The Timber Sale Area consists of a well-stocked, 82 year-old stand of Douglas-fir with minor components of western hemlock, red alder, and noble fir. This timber stand has an average of 161 ft^2 of basal area and an average Douglas-fir DBH of 27 inches. The estimated average net Douglas-fir volume is approximately 35.8 MBF per acre.

7. **Topography and Logging Method:** Slopes within the Timber Sale Area range from 5% to 60% with variable aspects. The Timber Sale Area is 68% ground-based yarding and 32% cable yarding. The average horizontal skid trail length is 400 feet and the maximum is approximately 800 feet. The average cable yarding road length is 750 feet and the maximum is approximately 1200 feet.

8. **Access:** Access to the Timber Sale Area is on surfaced roads. From Forest Grove, travel north on Highway 47 through Banks then merge onto Highway 26 westbound and continue for approximately 11.5 miles to Timber Road and turn left. Follow Timber Road south approximately 3 miles to Cochran Road. Turn right on Cochran Road and proceed for approximately 1.5 miles to Wheeler Road. Turn right on Wheeler Road and proceed for 3.1 miles to Fire Road 2 and turn left. Follow Fire Road 2 for 2.8 miles to Giveout Mountain Road and turn right. Follow Giveout Mountain Road 0.3 miles to an unnamed spur road and turn right. Follow unnamed spur 0.1 miles and turn left on another unnamed spur road. Proceed for 0.2 miles to access the southern portion of the Timber Sale Area.

9. **Projects:**

Project No. 1: Dirt Road Construction	$8,920.35
Project No. 2: Road Improvement	$86,542.77
Project No. 3: Road Blocking	$1,536.88
Total Credit for all Projects	$97,000.00

PROJECT COST SUMMARY SHEET

Timber Sale: CE Junction
Sale Number: FG-341-2024-W00949-01

PROJECT NO. 1: DIRT ROAD CONSTRUCTION

Road Segment	Length	Cost
G to H	12+05	$6,706.61
I to J	3+25	$1,746.17
	15+30 stations	
	0.29 miles	

Total Rock =

120 cy 4" - 0

Move-in = $467.57

TOTAL PROJECT COST = $8,920.35

PROJECT NO. 2: ROAD IMPROVEMENT

Road Segment	Length	Cost
A to B	201+00	$17,939.79
B to C	160+45	$16,365.01
C to D	48+80	$33,333.40
E to F	18+80	$14,368.34
	429+05 stations	
	8.13 miles	

Total Rock =

1,921 cy 1½" - 0
1,203 cy 4" - 0
36 cy Riprap

Move-in = $4,536.23

TOTAL PROJECT COST = $86,542.77

PROJECT NO. 3: ROAD BLOCKING

Road Segment	Length	Cost
G to H	12+05	$242.00
I to J	3+25	$30.25
	15+30 stations	
	0.29 miles	

Move-in = $1,264.63

TOTAL PROJECT COST = $1,536.88

TOTAL CREDITS = $97,000.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: CE Junction | Sale Number: FG-341-2024-W00949-01

Road Segment: A to B | Improvement: 201+00 stations; 3.81 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT						
Clearing & grubbing (scatter)	2.31	ac @	$1,692.00	per acre =	$3,908.52	
Clean culvert inlet & outlet, scatter waste	3	ea @	$27.50	per ea =	$82.50	
Clean culvert inlet & outlet, end-haul waste	1	ea @	$27.50	per ea =	$27.50	
Haul waste material	1	cy @	$0.98	per cy =	$0.98	
Shape and compact waste material	1	cy @	$0.35	per cy =	$0.35	
Construct settling pond	18	ea @	$27.50	per ea =	$495.00	
Settling pond waste material end-haul						
Excavate & load	15	cy @	$1.94	per cy =	$29.10	
Haul	20	cy @	$0.98	per cy =	$19.60	
Compact waste area	20	cy @	$0.35	per cy =	$7.00	
Settling pond waste material end-haul						
Excavate & load	3	cy @	$1.94	per cy =	$5.82	
Haul	4	cy @	$0.69	per cy =	$2.76	
Compact waste area	4	cy @	$0.35	per cy =	$1.40	
Grade, ditch, & roll	201	sta @	$39.65	per sta =	$7,969.65	
				TOTAL IMPROVEMENT COSTS =		$12,550.18

CULVERTS						
Culverts and Bands						
18" Diameter	120	lf @	$22.05	per lf =	$2,646.00	
Markers & Stakes						
Culvert markers	11	ea @	$12.00	per ea =	$132.00	
				TOTAL CULVERT COSTS =		$2,778.00

ROCK

	Rock Size	Base Cost $/cy	Haul Cost $/cy	Placement/ Processing Cost $/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	$1.79	$4.72	$0.55	72	$508.41
Energy dissipator	Riprap	$2.17	$5.56	$1.75	24	$227.52
Inlet armor	Riprap	$2.17	$5.56	$1.75	12	$113.76
				Subtotal =	108	$849.69

Totals		
	All Rock =	108
	1½" - 0	72
	Riprap	36

TOTAL ROCK COSTS = $849.69

EROSION CONTROL						
Grass seed & fertilizer	2.31	ac @	$697.50	per ac =	$1,611.22	
Straw mulch acre	0.13	ac @	$990.00	per ac =	$128.70	
Straw mulch bale	2	ea @	$11.00	per ea =	$22.00	
				TOTAL EROSION CONTROL COSTS =		$1,761.92

TOTAL PROJECT COST = $17,939.79

SUMMARY OF CONSTRUCTION COST

Timber Sale: CE Junction | Sale Number: FG-341-2024-W00949-01

Road Segment: B to C | Improvement: 160+45 stations; 3.04 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT						
Clearing & grubbing (scatter)	1.85	ac @	$1,692.00	per acre =	$3,130.20	
Clean culvert inlet & outlet, scatter waste	5	ea @	$27.50	per ea =	$137.50	
Grade, ditch, & roll	160.45	sta @	$39.65	per sta =	$6,361.84	
				TOTAL IMPROVEMENT COSTS =		$9,629.54
CULVERTS						
Culverts and Bands						
18" Diameter	30	lf @	$22.05	per lf =	$661.50	
Markers & Stakes						
Culvert markers	11	ea @	$12.00	per ea =	$132.00	
				TOTAL CULVERT COSTS =		$793.50

ROCK

	Rock Size	Base Cost $/cy	Haul Cost $/cy	Placement/ Processing Cost $/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	$1.79	$10.76	$0.55	24	$314.43
				Subtotal =	24	$314.43
Surfacing rock						
Spot rock	1½" - 0	$1.79	$10.76	$1.35	312	$4,337.17
				Subtotal =	312	$4,337.17
			Totals	All Rock =	336	
				1½" - 0	336	

TOTAL ROCK COSTS = $4,651.60

EROSION CONTROL						
Grass seed & fertilizer	1.85	ac @	$697.50	per ac =	$1,290.37	
				TOTAL EROSION CONTROL COSTS =		$1,290.37

TOTAL PROJECT COST = $16,365.01

SUMMARY OF CONSTRUCTION COST

Timber Sale: CE Junction | Sale Number: FG-341-2024-W00949-01

Road Segment: C to D | Improvement: 48+80 stations; 0.92 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT						
Clearing & grubbing (scatter)	0.57	ac @	$1,692.00	per acre =	$964.44	
Clean culvert inlet & outlet, scatter waste	1	ea @	$27.50	per ea =	$27.50	
Improve turnout	5	ea @	$36.30	per ea =	$181.50	
Construct roadside landing	1	ea @	$181.50	per ea =	$181.50	
Improve landing	1	ea @	$172.70	per ea =	$172.70	
Grade, ditch, & roll	48.80	sta @	$39.65	per sta =	$1,934.92	
				TOTAL IMPROVEMENT COSTS =		$3,462.56

CULVERTS						
Markers & Stakes						
Culvert markers	2	ea @	$12.00	per ea =	$24.00	
				TOTAL CULVERT COSTS =		$24.00

ROCK

	Rock Size	Base Cost $/cy	Haul Cost $/cy	Placement/ Processing Cost $/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	1½" - 0	$1.79	$14.26	$1.35	1,513	$26,328.00
Junction	4" - 0	$1.32	$8.40	$1.35	60	$664.10
Turnout	4" - 0	$1.32	$8.40	$1.35	70	$774.78
Turnaround	4" - 0	$1.32	$8.40	$1.35	10	$110.68
Roadside landing	4" - 0	$1.32	$8.40	$1.35	95	$1,051.49
Landing	4" - 0	$1.32	$8.40	$1.35	47	$520.21
				Subtotal =	1,795	$29,449.27

Totals	
All Rock =	1,795
1½" - 0	1,513
4" - 0	282

TOTAL ROCK COSTS = $29,449.27

EROSION CONTROL						
Grass seed & fertilizer	0.57	ac @	$697.50	per ac =	$397.57	
				TOTAL EROSION CONTROL COSTS =		$397.57

TOTAL PROJECT COST = $33,333.40

SUMMARY OF CONSTRUCTION COST

Timber Sale: CE Junction | Sale Number: FG-341-2024-W00949-01

Road Segment: E to F | Improvement: 18+80 stations; 0.36 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.22	ac @	$1,692.00	per acre =	$372.24
Construct turnaround	1	ea @	$90.75	per ea =	$90.75
Approach to landing	2.40	sta @	$759.00	per sta =	$1,821.60
Construct roadside landing	1	ea @	$181.50	per ea =	$181.50
Improve landing	1	ea @	$121.00	per ea =	$121.00
Improve landing	1	ea @	$172.70	per ea =	$172.70
Grade, ditch, & roll	18.80	sta @	$39.65	per sta =	$745.42

TOTAL IMPROVEMENT COSTS = $3,505.21

ROCK

	Rock Size	Base Cost $/cy	Haul Cost $/cy	Placement/ Processing Cost $/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	4" - 0	$1.32	$8.96	$1.35	583	$6,779.31
Junction	4" - 0	$1.32	$8.96	$1.35	12	$139.54
Turnaround	4" - 0	$1.32	$8.96	$1.35	20	$232.57
Approach to landing	4" - 0	$1.32	$8.96	$1.35	74	$860.50
Roadside landing	4" - 0	$1.32	$8.96	$1.35	95	$1,104.69
Landing	4" - 0	$1.32	$8.96	$1.35	47	$546.53
Landing	4" - 0	$1.32	$8.96	$1.35	90	$1,046.55
				Subtotal =	921	$10,709.68

Totals		
	All Rock =	921
	4" - 0	921

TOTAL ROCK COSTS = $10,709.68

EROSION CONTROL

Grass seed & fertilizer	0.22	ac @	$697.50	per ac =	$153.45

TOTAL EROSION CONTROL COSTS = $153.45

TOTAL PROJECT COST = $14,368.34

SUMMARY OF CONSTRUCTION COST

Timber Sale: CE Junction Sale Number: FG-341-2024-W00949-01

Road Segment: I to J Construction: 3+25 stations

0.06 miles

PROJECT NO. 1: DIRT ROAD CONSTRUCTION

CONSTRUCTION						
Clearing & grubbing (scatter)	0.38	ac @	$1,692.00	per ac =	$642.96	
Balanced road construction	3.25	sta @	$120.00	per sta =	$390.00	
Turnaround	1	ea @	$90.75	per ea =	$90.75	
Landing	1	ea @	$345.40	per ea =	$345.40	
Grade, ditch, & roll	3.25	sta @	$39.65	per sta =	$128.86	
				TOTAL CONSTRUCTION COSTS =		$1,597.97
EROSION CONTROL						
Grass seed & fertilizer	0.19	ac @	$780.00	per ac =	$148.20	
				TOTAL EROSION CONTROL COSTS =		$148.20
				TOTAL PROJECT COST =		$1,746.17

PROJECT NO. 3: ROAD BLOCKING

BLOCKING						
Construct waterbar	1	ea @	$30.25	per ea =	$30.25	
				TOTAL EROSION CONTROL COSTS =		$30.25
				TOTAL PROJECT COST =		$30.25

SUMMARY OF CONSTRUCTION COST

Timber Sale: CE Junction Sale Number: FG-341-2024-W00949-01

Road Segment: G to H Construction: 12+05 stations

0.23 miles

PROJECT NO. 1: DIRT ROAD CONSTRUCTION

CONSTRUCTION

Clearing & grubbing (scatter)	1.39	ac @	$1,692.00	per ac =	$2,351.88	
Balanced road construction	12.05	sta @	$120.00	per sta =	$1,446.00	
Turnout	1	ea @	$72.60	per ea =	$72.60	
Turnaround	1	ea @	$90.75	per ea =	$90.75	
Landing	1	ea @	$345.40	per ea =	$345.40	
Grade, ditch, & roll	12.05	sta @	$39.65	per sta =	$477.78	
				TOTAL CONSTRUCTION COSTS =		$4,784.41

ROCK

	Rock Size	Base Cost $/cy	Haul Cost $/cy	Placement/ Processing Cost $/cy	Total CY	Rock Cost
Surfacing rock						
Landing	4" - 0	$1.32	$8.80	$1.35	120	$1,376.20
				Subtotal =	120	$1,376.20

Totals		
	All Rock =	120
	4" - 0	120

TOTAL ROCK COSTS = $1,376.20

EROSION CONTROL

Grass seed & fertilizer	0.70	ac @	$780.00	per ac =	$546.00	
				TOTAL EROSION CONTROL COSTS =		$546.00

TOTAL PROJECT COST = $6,706.61

PROJECT NO. 3: ROAD BLOCKING

BLOCKING

Construct tank trap	1	ea @	$60.50	per ea =	$60.50	
Construct waterbar	6	ea @	$30.25	per ea =	$181.50	
				TOTAL EROSION CONTROL COSTS =		$242.00

TOTAL PROJECT COST = $242.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: CE Junction Sale Number: FG-341-2024-W00949-01

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

Equipment	Total
Grader	$402.12
Roller (smooth/grid) & Compactor	$384.63
Excavator (Large) - Equipment Cleaning	$1,781.85
Dozer (Large) - Equipment Cleaning	$1,781.85
Dump Truck (10cy +)	$351.09
Water Truck (2,500 Gal)	$317.32
TOTAL MOVE-IN COSTS =	**$5,018.86**

PROJECT No. 3 MOVE-IN, WITHIN AREA MOVE, & CLEANING COSTS

Equipment	Total
Loader (Small)	$1,264.63
TOTAL MOVE-IN COSTS =	**$1,264.63**

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale:	CE Junction
Sale Number:	FG-341-2024-W00949-01
Stockpile Name:	Straight Arrow Stockpile
4" - 0:	1,323 cy (truck measure)
Riprap:	36 cy (truck measure)
Total truck yardage:	1,359 cy

Move-in					
Move in excavator					$547.86
Move in Dump Trucks					$20.63
				Subtotal =	$568.49
				Per CY =	$0.42/cy
4"-0 Base Cost					
Load dump truck	$0.90	/ cy x	1,323	cy =	$1,190.70
				Subtotal =	$1,190.70
				Per CY =	$0.90
Riprap Base Cost					
Load dump truck	$1.75	/ cy x	36	cy =	$63.00
				Subtotal =	$63.00
				Per CY =	$1.75

4"-0 Cost =	**$1.32/cy**
Riprap Cost =	**$2.17/cy**

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: CE Junction
Sale Number: FG-341-2024-W00949-01
Stockpile Name: Ingersoll Stockpile

1 1/2" - 0: 1,921 cy (truck measure)
Total truck yardage: 1,921 cy

Move-in					
Move in excavator					$850.87
Move in loader					$764.92
Move in Dump Trucks					$96.19
				Subtotal =	$1,711.98
				Per CY =	$0.89/cy
1 1/2"-0 Base Cost					
Load dump truck	$0.90	/ cy x	1,921	cy =	$1,728.90
				Subtotal =	$1,728.90
				Per CY =	$0.90

1 1/2"-0 Cost = **$1.79/cy**

CRUISE REPORT
CE Junction
#FG-341-2024-W00949-01

1. LOCATION:

Portions of Sections 16, 17, 20 & 21, T3N, R6W, W.M., Tillamook County, Oregon.

2. CRUISE DESIGN:

The timber cruise was designed using an estimated coefficient of variation (CV) of 60%, average stand diameter of 23 inches, sampling error (SE) of 11% and a minimum of 100 grade trees.

3. SAMPLING METHOD:

The Timber Sale Area was cruised in October of 2023 with 28 variable radius grade plots using a 40 BAF prism. Plots were laid out 5 chain x 6 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS:

105 trees were measured and graded producing a standard error of 6.2% on the Douglas-fir Basal Area and 7.3% on the Douglas-fir Net Board Foot Volume.

5. TREE MEASUREMENT AND GRADING:

All sample trees were measured and graded following the Official Log Scaling and Grading Rules as adopted by the NW Log Rules Advisory Group. 40 foot segments were favored.

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 SuperAce 2008 cruise software.

b) **Deductions:** The following percent volume deductions are by species to account for the hidden defect and breakage. For conifers two percent was deducted.

7. CRUISERS: The sale was cruised by Shamus Smith

Prepared by: Shamus Smith 10-18-2023

Reviewed by: Mark Savage 12-13-2023
Date

TC PLOGSTVB

Log Stock Table - MBF

TT3N RR6W S17 TyMC01 110.00

Project: CEJUNC
Acres 110.00

Page 1
Date 11/1/2023
Time 7:23:14AM

Spp	ST	Sort	Grade	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+
WH		2M		40	70		70	38.4							22	23		24		
WH		3M		40	109		109	59.7				8	20	38	10	11	23			
WH		4M		20	1		1	.6			1									
WH		4M		30	1		1	.6			1									
WH		4M		34	1		1	.7			1									
WH		Totals			183		183	4.3			3	8	20	38	32	34	23	24		
DF		2M		24	16		16	.4							16					
DF		2M		40	3,552		3,538	88.1						179	212	1219	1211	687	29	
DF		3M		32	7		7	.2			7									
DF		3M		34	3		3	.1			3									
DF		3M		36	18		18	.4			18									
DF		3M		38	8		8	.2			8									
DF		3M		40	362		362	9.0			49	106	168	30	9					
DF		4M		14	1		1	.0			1									
DF		4M		16	1		1	.0			1									
DF		4M		18	2		2	.0			2									
DF		4M		20	3		3	.1			3									
DF		4M		22	6		6	.1			6									
DF		4M		24	6		6	.1			6									
DF		4M		26	2		2	.1			2									
DF		4M		28	1		1	.0			1									
DF		4M		30	4		4	.1			4									
DF		4M		32	2		2	.0			2									
DF		4M		40	36		36	.9			36									
DF		Totals			4,029		4,015	93.8			148	106	168	209	238	1219	1211	687	29	
NF		2M		40	46	13.8	40	91.7								16	24			
NF		3M		40	4		4	8.3				4								
NF		Totals			49	12.8	43	1.0				4				16	24			
SS		3M		16	14		14	36.7										14		
SS		3M		24	16		16	42.2									16			
SS		4M		20	8		8	21.1								8				
SS		Totals			38		38	.9								8	16	14		
Total		All Species			4,299		4,278	100.0			151	117	188	247	270	1278	1273	725	29	

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

TT3N RR6W S17 TyMC01 110.00

Project: **CEJUNC**

Acres **110.00**

Page **1**

Date **11/1/2023**

Time **7:22:27AM**

Spp	S T	So Grt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
WH		2M	38		638	638	70			66	34				100	40	16	438	2.36	1.5
WH		3M	60		993	993	109		26	43	31				100	40	12	232	1.37	4.3
WH		4M	2		31	31	3		100			34	31	35		26	6	31	0.62	1.0
WH	**Totals**		4		1,662	1,662	183		17	51	32	1	1	1	98	38	12	247	1.52	6.7
DF		CU														17	20		0.00	1.7
DF		2M	88	.4	32,441	32,308	3,554			19	81		0		100	40	18	569	2.72	56.8
DF		3M	10		3,612	3,612	397		90	10				3	97	39	8	108	0.84	33.3
DF		4M	2		578	578	64		100			11	30	3	56	29	6	43	0.42	13.6
DF	**Totals**		94	.4	36,631	36,497	4,015		11	18	72	0	1	0	99	38	14	346	1.86	105.4
DF	S	CU														31	11		0.00	8.8
DF	**Totals**															31	11		0.00	8.8
NF		2M	91	13.8	417	360	40			40	60				100	40	19	500	2.55	.7
NF		3M	9		32	32	4		100						100	40	8	90	0.87	.4
NF	**Totals**		1	12.8	450	392	43		8	37	55				100	40	15	363	1.99	1.1
SS		3M	78		270	270	30				100	47	53			20	23	430	3.34	.6
SS		4M	22		72	72	8				100	100				20	17	230	1.99	.3
SS	**Totals**		1		342	342	38				100	58	42			20	21	363	2.89	.9
Totals				0.5	39,084	38,893	4,278		11	19	70	1	1	0	98	37	13	316	1.73	123.0

PROJECT STATISTICS

PROJECT CEJUNC

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
T3N	R6	17	00U1	MC01	110.00	26	110	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	26	110	4.2		
CRUISE	26	110	4.2	5,053	2.2
DBH COUNT					
REFOREST					
COUNT					
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	97	38.8	26.6	137	29.0	149.2	36,631	36,497	7,399	7,399
DOUG FIR-S	5	3.2	20.9	109	1.7	7.7				
WHEMLOCK	6	3.3	22.8	117	1.9	9.2	1,662	1,662	389	389
NOB FIR	1	.4	28.0	154	0.3	1.5	450	392	86	86
S SPRUCE	1	.3	30.0	127	0.3	1.5	342	342	54	54
TOTAL	*110*	*45.9*	*26.0*	*133*	*33.2*	*169.2*	*39,084*	*38,893*	*7,928*	*7,928*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

SAMPLE TREES - BF

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DOUG FIR	46.6	4.7	1,243	1,305	1,367			
DOUG FIR-S								
WHEMLOCK	74.7	33.3	478	717	955			
NOB FIR								
S SPRUCE								
TOTAL	*54.1*	*5.2*	*1,147*	*1,210*	*1,272*	*117*	*29*	*13*

SAMPLE TREES - CF

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DOUG FIR	42.1	4.3	249	260	271			
DOUG FIR-S								
WHEMLOCK	72.0	32.0	112	165	219			
NOB FIR								
S SPRUCE								
TOTAL	*49.8*	*4.7*	*231*	*242*	*254*	*99*	*25*	*11*

TREES/ACRE

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	109.7	21.9	30	39	47			
DOUG FIR-S	293.8	58.8	1	3	5			
WHEMLOCK	227.6	45.5	2	3	5			
NOB FIR	509.9	102.0		0	1			
S SPRUCE	509.9	102.0		0	1			
TOTAL	*92.6*	*18.5*	*37*	*46*	*54*	*357*	*89*	*40*

BASAL AREA/ACRE

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	30.8	6.2	140	149	158			
DOUG FIR-S	294.9	59.0	3	8	12			
WHEMLOCK	222.9	44.6	5	9	13			
NOB FIR	509.9	102.0		2	3			
S SPRUCE	509.9	102.0		2	3			
TOTAL	*26.2*	*5.2*	*160*	*169*	*178*	*28*	*7*	*3*

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
T3N	R6	17	00U1	MC01	110.00	26	110	S	W

CL 68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	36.5	7.3	33,834	36,497	39,161			
DOUG FIR-S								
WHEMLOCK	231.0	46.2	894	1,662	2,429			
NOB FIR	509.9	102.0		392	792			
S SPRUCE	509.9	102.0		342	690			
TOTAL	*32.8*	*6.5*	*36,346*	*38,893*	*41,440*	*45*	*11*	*5*

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	34.2	6.8	6,893	7,399	7,905			
DOUG FIR-S								
WHEMLOCK	228.2	45.6	211	389	566			
NOB FIR	509.9	102.0		86	173			
S SPRUCE	509.9	102.0		54	110			
TOTAL	*30.9*	*6.2*	*7,438*	*7,928*	*8,418*	*40*	*10*	*4*

TC PSTNDSUM

Stand Table Summary

Page 1
Date: 11/1/2023

TT3N RR6W S17 TyMC01 110.00

Project CEJUNC
Acres 110.00

Time: 7:22:30AM
Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		11	2	89	88	4.662	3.08	4.66	16.3	70.0	2.16	76	326	238	83	36
DF		12	1	90	100	1.959	1.54	1.96	20.2	90.0	1.13	40	176	124	43	19
DF		13	1	90	100	1.669	1.54	1.67	22.7	90.0	1.08	38	150	119	42	17
DF		18	1	88	106	.871	1.54	1.74	33.4	130.0	1.66	58	226	183	64	25
DF		20	2	86	132	1.410	3.08	4.23	29.6	138.3	3.57	125	585	392	138	64
DF		21	1	87	143	.640	1.54	1.92	39.9	196.7	2.18	77	377	240	84	42
DF		23	2	86	143	1.066	3.08	3.20	46.3	215.0	4.22	148	688	464	163	76
DF		24	8	87	143	3.918	12.31	11.75	50.8	231.7	17.02	597	2,723	1,873	657	300
DF		26	6	86	137	2.504	9.23	7.51	58.9	260.0	12.60	442	1,953	1,386	486	215
DF		27	3	87	144	1.161	4.62	3.48	65.5	311.1	6.50	228	1,083	715	251	119
DF		28	7	86	148	2.518	10.77	7.92	68.2	323.6	15.39	540	2,562	1,693	594	282
DF		29	5	86	150	1.677	7.69	5.03	77.6	382.7	11.12	390	1,925	1,224	429	212
DF		30	9	86	159	2.821	13.85	9.72	77.2	388.7	21.38	750	3,777	2,352	825	415
DF		31	4	87	153	1.174	6.15	3.52	76.3	375.8	7.66	269	1,324	843	296	146
DF		32	17	86	155	4.683	26.15	14.87	90.9	460.7	38.53	1,352	6,853	4,238	1,487	754
DF		33	1	86	166	.259	1.54	1.04	84.7	455.0	2.50	88	471	275	97	52
DF		34	12	86	156	2.928	18.46	9.76	99.4	501.3	27.66	970	4,892	3,042	1,067	538
DF		35	1	86	165	.230	1.54	.92	94.1	520.0	2.47	87	479	272	95	53
DF		36	4	85	158	.871	6.15	3.05	108.4	567.9	9.41	330	1,730	1,035	363	190
DF		38	4	85	159	.781	6.15	2.54	128.7	679.2	9.31	327	1,725	1,024	359	190
DF		40	2	86	162	.353	3.08	1.06	159.3	865.0	4.80	168	915	528	185	101
DF		41	1	84	153	.168	1.54	.67	117.5	585.0	2.25	79	393	247	87	43
DF		42	1	85	172	.160	1.54	.64	140.4	765.0	2.56	90	489	282	99	54
DF		44	2	83	154	.291	3.08	.87	148.6	770.0	3.70	130	673	407	143	74
DF		Totals	97	87	137	38.773	149.23	103.73	71.3	351.8	210.87	7,399	36,497	23,196	8,139	4,015
WH		19	2	88	103	1.563	3.08	2.34	44.8	176.7	3.36	105	414	369	115	46
WH		20	1	88	137	.705	1.54	1.41	48.7	220.0	2.20	69	310	242	75	34
WH		23	1	86	122	.533	1.54	1.60	44.0	190.0	2.25	70	304	248	77	33
WH		34	1	80	128	.244	1.54	.73	97.6	413.3	2.29	71	303	252	79	33
WH		36	1	83	131	.218	1.54	.65	112.2	506.7	2.34	73	331	258	81	36
WH		Totals	6	87	117	3.263	9.23	6.74	57.7	246.6	12.43	389	1,662	1,368	427	183
NF		28	1	91	154	.360	1.54	1.08	79.5	363.3	2.06	86	392	227	94	43
NF		Totals	1	91	154	.360	1.54	1.08	79.5	363.3	2.06	86	392	227	94	43
SS		30	1	85	127	.313	1.54	.94	57.8	363.3	1.41	54	342	155	60	38
SS		Totals	1	85	127	.313	1.54	.94	57.8	363.3	1.41	54	342	155	60	38
DF	S	18	1	85	60	.871	1.54									
DF	S	19	1	86	122	.781	1.54									
DF	S	20	1	86	124	.705	1.54									
DF	S	25	1	86	131	.451	1.54									
DF	S	26	1	86	135	.417	1.54									
DF	S	Totals	5	86	109	3.226	7.69									
Totals			110	87	133	45.935	169.23	112.49	70.5	345.7	226.78	7,928	38,893	24,945	8,720	4,278

VOLUME SUMMARY
(Shown in MBF)
CE Junction
FG-341-2024-W00949-01
December 2023

Timber Sale Area: Modified Clearcut (110 Acres)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	3,554	397	64	4,015
	Hidden D&B (2%)	(71)	(8)	(1)	(80)
	NET TOTAL	3,483	389	63	3,935
	% of Total	88	10	2	
Western Hemlock	Cruise Volume	70	109	3	182
	Hidden D&B (2%)	(1)	(2)	(0)	(3)
	NET TOTAL	69	107	3	179
	% of Total	38	60	2	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	3,483	389	63	3,935
Western Hemlock	69	107	3	179
Total	3,552	496	66	4,114

- Timber Sale Boundary
- Posted Stream Buffer Boundary
- Surfaced Road
- New Road Construction
- Type-F Stream
- Type-N Stream - Perennial
- Type-N Stream - Seasonal
- Stream Buffer
- Cable Landing
- Tractor Landing
- Cable Yarding Area
- Tractor Yarding Area
- Green Tree Retention Area
- Section Lines
- 40 Foot Contour Band
- 200 Foot Contour Band

LOGGING PLAN

FOR TIMBER SALE CONTRACT #FG-341-2024-W00949-01
CE JUNCTION
PORTIONS OF SECTIONS 16, 17, 20 & 21, T3N, R6W, W.M.,
TILLAMOOK COUNTY, OREGON

Forest Grove District GIS
December, 2023
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

0 500 1,000 2,000
Feet

N