



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Karthenon
Sale FG-341-2022-W00864-01

District: Forest Grove

Date: January 24, 2022

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,298,255.00	\$12,188.40	\$2,310,443.40
		Project Work:	(\$54,104.00)
		Advertised Value:	\$2,256,339.40



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Timber Description

Location:

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	25	0	98
Alder (Red)	22	0	95

Volume by Grade	2S	3S & 4S 6"-11"	Camprun	Total
Douglas - Fir	3,549	592	0	4,141
Alder (Red)	0	0	42	42
Total	3,549	592	42	4,183

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

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$927.15/\text{MBF} = \$1,175/\text{MBF} - \$247.85/\text{MBF}$

Western hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost:
 $\$349.15 = \$597 - \$247.85$

BRANDING AND PAINTING COST ALLOWANCE = $\$2.00/\text{MBF}$

FUEL COST ALLOWANCE = $\$3.00/\text{Gallon}$

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:
 $20 \text{ hours} \times \$150/\text{hour} = \$3,000$
Machine Time to Pile Landing Slash:
 $20 \text{ hours} \times \$150/\text{hour} = \$3,000$
Equipment Cleaning: $3 \text{ pieces} \times \$1,000/\text{Piece} = \$3,000$
TOTAL Other Costs (No Profit & Risk added) = $\$9,000$

SLASH TREATMENT: $40 \text{ acres} \times \$250/\text{acre} = \$10,000$

ROAD MAINTENANCE
(Includes: Move-in, Grading, Rolling and Spot Rocking)
Move-in = $\$1,939.99$
General Road Maintenance: $3.06 \text{ miles} \times \$3,655.59 = \$11,186.10$
TOTAL Road Maintenance: $\$13,126.09 / 4,183 \text{ MBF} = \$3.13/\text{MBF}$



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Logging Conditions

Combination#: 1	Douglas - Fir	100.00%
	Alder (Red)	100.00%
Logging System:	Shovel	Process: Harvester Head Delimiting
yarding distance:	Short (400 ft)	downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	12	bd. ft / load: 3900
cost / mbf:	\$114.19	
machines:	Forwarder Harvester	



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Logging Costs

Operating Seasons: 1.00	Profit Risk: 10%
Project Costs: \$54,104.00	Other Costs (P/R): \$0.00
Slash Disposal: \$10,000.00	Other Costs: \$9,000.00

Miles of Road

Road Maintenance: \$3.13

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	4.8
Alder (Red)	\$0.00	2.0	3.0



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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									
\$114.19	\$3.19	\$1.05	\$100.94	\$0.00	\$21.94	\$2.39	\$2.00	\$2.15	\$247.85
Alder (Red)									
\$114.19	\$3.29	\$1.05	\$166.25	\$0.00	\$28.48	\$2.39	\$2.00	\$2.15	\$319.80

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$802.85	\$555.00	\$0.00
Alder (Red)	\$0.00	\$610.00	\$290.20	\$0.00



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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	4,141	\$555.00	\$2,298,255.00
Alder (Red)	42	\$290.20	\$12,188.40

Gross Timber Sale Value

Recovery: \$2,310,443.40

Prepared By: Adrian Torres

Phone: 503-359-7460

PROJECT COST SUMMARY SHEET

Timber Sale: Karthenon
Sale Number: FG-341-2022-W00864-01

PROJECT NO. 1: ROAD IMPROVEMENT

	<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
	A to B	105+00	\$26,355.75
	C to D	14+40	\$3,969.74
	E to F	11+60	\$4,953.07
	G to H	15+70	\$7,461.24
	I to J	7+00	\$5,388.84
		153+70 stations	
		2.91 miles	
Total Rock =	907 cy	1½" - 0	
		Move-in =	<u>\$5,975.36</u>
		TOTAL PROJECT COST =	<u>\$54,104.00</u>
		TOTAL CREDITS =	<u>\$54,104.00</u>

SUMMARY OF CONSTRUCTION COST

Timber Sale: Karthenon
 Road Segment: A to B

Sale Number: FG-341-2022-W00864-01
 Improvement: 105+00 stations
1.99 miles

PROJECT NO. 1: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	1.21	ac @	\$1,078.00	per acre =	\$1,304.38
Construct ditch & scatter waste material	6.00	sta @	\$60.00	per sta =	\$360.00
Clean culvert inlet & outlet, scatter waste	5	ea @	\$25.00	per ea =	\$125.00
Improve Turnouts	8	ea @	\$33.00	per ea =	\$264.00
Grade, ditch, & roll	105.00	sta @	\$36.00	per sta =	\$3,780.00

TOTAL IMPROVEMENT COSTS = \$5,833.38

CULVERTS

Culverts and Bands					
18" Diameter	180	lf @	\$20.00	per lf =	\$3,600.00
Markers & Stakes					
Culvert Markers	10	ea @	\$10.00	per ea =	\$100.00

TOTAL CULVERT COSTS = \$3,700.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$18.90	\$17.43	\$0.50	144	\$5,303.52
				Subtotal =	144	\$5,303.52
Surfacing rock						
Spot rock	1½" - 0	\$18.90	\$17.43	\$1.22	200	\$7,510.00
Junction	1½" - 0	\$18.90	\$17.43	\$1.22	36	\$1,351.80
Turnout	1½" - 0	\$18.90	\$17.43	\$1.22	56	\$2,102.80
				Subtotal =	292	\$10,964.60

Totals		All Rock =	436
		1½" - 0	436

TOTAL ROCK COSTS = \$16,268.12

EROSION CONTROL

Grass seed & fertilizer	1.21	ac @	\$425.00	per ac =	\$514.25
Straw Mulch Bale	4	ea @	\$10.00	per ea =	\$40.00

TOTAL EROSION CONTROL COSTS = \$554.25

TOTAL PROJECT COST = \$26,355.75

SUMMARY OF CONSTRUCTION COST

Timber Sale: Karthenon
 Road Segment: C to D

Sale Number: FG-341-2022-W00864-01
 Improvement: 14+40 stations
0.27 miles

PROJECT NO. 1: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.17	ac @	\$1,078.00	per acre =	\$183.26
Clean culvert inlet & outlet, scatter waste	2	ea @	\$25.00	per ea =	\$50.00
Improve Turnouts	1	ea @	\$33.00	per ea =	\$33.00
Improve Turnaround	1	ea @	\$41.25	per ea =	\$41.25
Improve Landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	14.40	sta @	\$36.00	per sta =	\$518.40

TOTAL IMPROVEMENT COSTS = \$982.91

CULVERTS

Markers & Stakes					
Culvert Markers	2	ea @	\$10.00	per ea =	\$20.00

TOTAL CULVERT COSTS = \$20.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Spot rock	1½" - 0	\$18.90	\$16.99	\$1.22	20	\$742.20
Turnout	1½" - 0	\$18.90	\$16.99	\$1.22	7	\$259.77
Turnaround	1½" - 0	\$18.90	\$16.99	\$1.22	6	\$222.66
Landing	1½" - 0	\$18.90	\$16.99	\$1.22	45	\$1,669.95
				Subtotal =	78	\$2,894.58

Totals	All Rock =	78
	1½" - 0	78

TOTAL ROCK COSTS = \$2,894.58

EROSION CONTROL

Grass seed & fertilizer	0.17	ac @	\$425.00	per ac =	\$72.25
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TOTAL EROSION CONTROL COSTS = \$72.25

TOTAL PROJECT COST = \$3,969.74

SUMMARY OF CONSTRUCTION COST

Timber Sale: Karthenon
 Road Segment: E to F

Sale Number: FG-341-2022-W00864-01
 Improvement: 11+60 stations
0.22 miles

PROJECT NO. 1: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.14	ac @	\$1,078.00	per acre =	\$150.92
Contract Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Improve Turnaround	1	ea @	\$41.25	per ea =	\$41.25
Improve Landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	11.60	sta @	\$36.00	per sta =	\$417.60

TOTAL IMPROVEMENT COSTS = \$832.77

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Spot rock	1½" - 0	\$18.90	\$17.48	\$1.22	50	\$1,880.00
Turnout	1½" - 0	\$18.90	\$17.48	\$1.22	7	\$263.20
Turnaround	1½" - 0	\$18.90	\$17.48	\$1.22	6	\$225.60
Landing	1½" - 0	\$18.90	\$17.48	\$1.22	45	\$1,692.00
Subtotal =					108	\$4,060.80

Totals	All Rock =	108
	1½" - 0	108

TOTAL ROCK COSTS = \$4,060.80

EROSION CONTROL

Grass seed & fertilizer	0.14	ac @	\$425.00	per ac =	\$59.50
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TOTAL EROSION CONTROL COSTS = \$59.50

TOTAL PROJECT COST = \$4,953.07

SUMMARY OF CONSTRUCTION COST

Timber Sale: Karthenon
 Road Segment: G to H

Sale Number: FG-341-2022-W00864-01
 Improvement: 15+70 stations
0.30 miles

PROJECT NO. 1: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.19	ac @	\$1,078.00	per acre =	\$204.82
Clean culvert inlet & outlet, scatter waste	2	ea @	\$25.00	per ea =	\$50.00
Improve Turnaround	1	ea @	\$41.25	per ea =	\$41.25
Improve Roadside Landing	1	ea @	\$82.50	per ea =	\$82.50
Improve Landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	15.70	sta @	\$36.00	per sta =	\$565.20

TOTAL IMPROVEMENT COSTS = \$1,100.77

CULVERTS

Culverts and Bands					
18" Diameter	30	lf @	\$20.00	per lf =	\$600.00
Markers & Stakes					
Culvert Markers	2	ea @	\$10.00	per ea =	\$20.00

TOTAL CULVERT COSTS = \$620.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$18.90	\$17.66	\$0.50	24	\$889.44
				Subtotal =	24	\$889.44
Surfacing rock						
Spot rock	1½" - 0	\$18.90	\$17.66	\$1.22	50	\$1,889.00
Turnaround	1½" - 0	\$18.90	\$17.66	\$1.22	6	\$226.68
Roadside landing	1½" - 0	\$18.90	\$17.66	\$1.22	25	\$944.50
Landing	1½" - 0	\$18.90	\$17.66	\$1.22	45	\$1,700.10
				Subtotal =	126	\$4,760.28

Totals	All Rock =	150
	1½" - 0	150

TOTAL ROCK COSTS = \$5,649.72

EROSION CONTROL

Grass seed & fertilizer	0.19	ac @	\$425.00	per ac =	\$80.75
Straw Mulch Bale	1	ea @	\$10.00	per ea =	\$10.00

TOTAL EROSION CONTROL COSTS = \$90.75

TOTAL PROJECT COST = \$7,461.24

SUMMARY OF CONSTRUCTION COST

Timber Sale: Karthenon
 Road Segment: I to J

Sale Number: FG-341-2022-W00864-01
 Improvement: 7+00 stations
0.13 miles

PROJECT NO. 1: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.09	ac @	\$1,078.00	per acre =	\$97.02
Construct Turnaround	1	ea @	\$82.50	per ea =	\$82.50
Improve Landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	7.00	sta @	\$36.00	per sta =	\$252.00

TOTAL IMPROVEMENT COSTS = \$588.52

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
Subgrade rock						
Bedding and backfill	1½" - 0	\$18.90	\$16.99	\$0.50	24	\$873.36
				Subtotal =	24	\$873.36
Surfacing rock						
Spot rock	1½" - 0	\$18.90	\$16.99	\$1.22	50	\$1,855.50
Turnaround	1½" - 0	\$18.90	\$16.99	\$1.22	16	\$593.76
Landing	1½" - 0	\$0.00	\$16.99	\$1.22	45	\$819.45
				Subtotal =	111	\$3,268.71

Totals	All Rock =	135
	1½" - 0	135

TOTAL ROCK COSTS = \$4,142.07

EROSION CONTROL

Grass seed & fertilizer	0.09	ac @	\$425.00	per ac =	\$38.25
Straw Mulch Bale	1	ea @	\$10.00	per ea =	\$10.00

TOTAL EROSION CONTROL COSTS = \$48.25

TOTAL PROJECT COST = \$5,388.84

SUMMARY OF CONSTRUCTION COST

Timber Sale: Karthenon

Sale Number: FG-341-2022-W00864-01

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

<u>Equipment</u>	<u>Total</u>
Grader	\$703.20
Loader (Med. & Large)	\$633.42
Roller (smooth/grid) & Compactor	\$458.60
Excavator (Large) - Equipment Cleaning	\$1,703.20
Dozer (Large) - Equipment Cleaning	\$1,747.78
Dump Truck (10cy +)	\$729.16
	<hr/>
TOTAL MOVE-IN COSTS =	<u><u>\$5,975.36</u></u>

CRUISE REPORT
Karthenon
FG-341-2022-W00864-01

1. LOCATION: Portions of Sections 10 and 15, T5N, R3W, W.M., Columbia County, Oregon.

2. CRUISE DESIGN:

Pre-cruise evaluation indicated that the stand's average DBH is approximately 23 inches and the coefficient of variation is about 55%. 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. The cruise design chosen for this sale is a variable radius sample plot using a 40 BAF prism.

3. SAMPLING METHOD:

The Timber Sale Area was sampled in January 2022 with 34 variable radius grade plots using a 40 BAF prism. Plots were laid out on a 6 chain x 6 chain grid for the Unit. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS:

126 trees were measured and graded producing a cumulative Sampling Error of 6.3% on the Douglas-fir basal area and 7.5% for the Douglas-fir net board foot volume.

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 top DIB of six inches (or 25% of DBH, whichever is larger) for conifers.
- 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:** The following percent volume deductions are by species to account for the hidden defect and breakage. For conifers two percent was deducted. For hardwoods five percent was deducted.

7. CRUISERS: The sale was cruised by ODF cruisers Adrian Torres, Kenton Burns, Nate Hunter, and Shamus Smith.

Prepared by: Adrian Torres 01/24/2022
Date

Reviewed by: Mark Savage 01/24/2022
Date

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT		KARTH			DATE		1/19/2022		
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
05N	03	10	00U1	00MC		113.00	34	131	S	W	
		PLOTS		TREES	TREES	ESTIMATED TOTAL	PERCENT SAMPLE				
				PER PLOT	TREES	TREES					
TOTAL		34		131	3.9						
CRUISE		34		131	3.9	5,588	2.3				
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	119	40.7	25.1	150	27.9	140.0	37,486	37,388	7,410	7,410	
DOUG FIR-S	5	4.8	15.0	46	1.5	5.9					
WHEMLOCK	3	2.5	15.9	96	0.9	3.5	532	517	126	126	
WR CEDAR	2	.6	27.4	96	0.4	2.4	283	283	86	86	
R ALDER	2	.9	22.4	97	0.5	2.4	424	386	92	92	
TOTAL	131	49.5	23.9	136	31.5	154.1	38,726	38,575	7,714	7,714	
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		54.3	5.0	1,097	1,155	1,212					
DOUG FIR-S											
WHEMLOCK		26.6	18.4	169	207	245					
WR CEDAR		7.1	6.7	462	495	528					
R ALDER		6.3	5.9	424	450	476					
TOTAL		61.8	5.4	1,010	1,068	1,126	152	38	17		
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		47.0	4.3	214	224	234					
DOUG FIR-S											
WHEMLOCK		27.4	19.0	41	50	60					
WR CEDAR		8.7	8.2	138	150	162					
R ALDER		15.0	14.0	93	108	123					
TOTAL		54.1	4.7	199	209	219	117	29	13		
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		46.4	8.0	37	41	44					
DOUG FIR-S		368.0	63.1	2	5	8					
WHEMLOCK		328.2	56.2	1	3	4					
WR CEDAR		408.6	70.0	0	1	1					
R ALDER		583.1	99.9	0	1	2					
TOTAL		54.7	9.4	45	49	54	120	30	13		
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		36.7	6.3	131	140	149					
DOUG FIR-S		296.3	50.8	3	6	9					
WHEMLOCK		326.3	55.9	2	4	6					
WR CEDAR		406.0	69.6	1	2	4					
R ALDER		583.1	99.9	0	2	5					
TOTAL		36.2	6.2	145	154	164	52	13	6		

PROJECT STATISTICSPROJECT **KARTH**

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
05N	03	10	00U1	00MC	113.00	34	131	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		43.5	7.5	34,598	37,388	40,177			
DOUG FIR-S									
WHEMLOCK		329.7	56.5	225	517	810			
WR CEDAR		406.8	69.7	86	283	481			
R ALDER		583.1	99.9	0	386	772			
TOTAL		42.0	7.2	35,795	38,575	41,354	71	18	8

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		39.7	6.8	6,906	7,410	7,914			
DOUG FIR-S									
WHEMLOCK		329.6	56.5	55	126	197			
WR CEDAR		406.5	69.7	26	86	145			
R ALDER		583.1	99.9	0	92	184			
TOTAL		37.4	6.4	7,220	7,714	8,208	56	14	6

T05N R03W S10 Ty00MC 113.00	Project: KARTH Acres 113.00	Page 1 Date 1/19/2022 Time 10:48:58AM
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Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF		CU															23	9		0.00	6.2
DF		2M		85	.3	32,140	32,043	3,621			31	69					40	17	491	2.28	65.2
DF		3M		13	.0	4,724	4,722	534		100				1	2	97	39	8	108	0.75	43.6
DF		4M		2		622	622	70		100			24	35	12	28	24	6	36	0.41	17.5
DF	Totals			97	.3	37,486	37,388	4,225		14	27	59	0	1	0	98	37	12	282	1.52	132.5
WH		2M		25	10.0	149	134	15			100					100	40	12	180	1.09	.7
WH		3M		66		337	337	38		100						100	40	9	132	0.76	2.5
WH		4M		9		46	46	5		100		37	63				23	6	25	0.37	1.8
WH	Totals			1	2.8	532	517	58		74	26		3	6	91		34	9	102	0.72	5.1
RC		2M		86		246	246	28			52	48				100	40	16	427	2.93	.6
RC		3M		14		38	38	4		100					41	59	36	7	66	0.87	.6
RC	Totals			1		283	283	32		13	45	42			5	95	38	12	246	1.95	1.2
RA		CR		100	8.8	424	386	44		20	46	35		11		89	37	12	224	1.45	1.7
RA	Totals			1	8.8	424	386	44		20	46	35		11		89	37	12	224	1.45	1.7
Totals					0.4	38,726	38,575	4,359		15	27	58	0	1	1	98	37	12	275	1.49	140.4

TC		PSTNDSUM		Stand Table Summary										Page 1			
														Date: 1/19/2022			
T05N R03W S10 Ty00MC 113.00				Project KARTH						Time: 10:49:00AM							
				Acres 113.00						Grown Year:							
S Spc	T	DBH	Sample Trees	FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
DF		9	1	72	35	2.663	1.18										
DF		13	1	89	113	1.276	1.18	2.55	17.5	85.0	1.28	45	217	144	51	25	
DF		14	1	72	34	1.101	1.18										
DF		15	3	88	117	2.876	3.53	5.75	23.6	106.7	3.87	136	614	437	153	69	
DF		16	1	89	160	.843	1.18	2.53	23.6	116.7	1.70	60	295	193	68	33	
DF		18	4	89	139	2.663	4.71	7.99	27.7	121.7	6.31	221	972	713	250	110	
DF		19	1	88	120	.598	1.18	1.20	39.6	165.0	1.35	47	197	152	53	22	
DF		20	3	90	144	1.618	3.53	4.85	35.4	163.3	4.90	172	793	554	194	90	
DF		21	5	88	139	2.446	5.88	7.34	37.4	168.0	7.82	274	1,233	883	310	139	
DF		22	4	90	104	1.783	4.71	4.01	41.1	184.4	4.70	165	740	531	186	84	
DF		23	3	89	165	1.223	3.53	2.45	50.3	238.3	3.51	123	583	397	139	66	
DF		24	11	89	159	4.119	12.94	13.48	52.0	253.9	19.97	701	3,423	2,256	792	387	
DF		25	8	89	150	2.761	9.41	8.28	58.4	280.0	13.79	484	2,319	1,559	547	262	
DF		26	17	88	158	5.424	20.00	18.19	59.3	296.5	30.74	1,079	5,393	3,473	1,219	609	
DF		27	4	89	169	1.184	4.71	4.73	58.0	313.7	7.82	274	1,485	884	310	168	
DF		28	11	88	157	3.026	12.94	9.63	71.8	365.7	19.71	692	3,522	2,228	782	398	
DF		29	9	87	157	2.308	10.59	7.44	75.2	380.0	15.94	559	2,826	1,801	632	319	
DF		30	13	88	165	3.116	15.29	11.26	77.2	411.3	24.80	870	4,633	2,802	983	524	
DF		31	5	88	155	1.122	5.88	3.59	87.3	457.5	8.93	313	1,643	1,009	354	186	
DF		32	3	88	181	.632	3.53	2.32	92.8	498.2	6.13	215	1,154	693	243	130	
DF		33	1	89	180	.198	1.18	.79	91.1	492.5	2.06	72	390	232	82	44	
DF		34	6	84	128	1.120	7.06	2.99	101.5	518.7	8.63	303	1,549	976	342	175	
DF		35	4	87	176	.704	4.71	2.64	106.2	594.7	7.99	280	1,571	903	317	177	
DF		37	2	87	167	.315	2.35	1.10	121.7	675.7	3.82	134	745	432	152	84	
DF		39	1	85	167	.142	1.18	.43	119.9	710.0	1.45	51	302	164	58	34	
DF		42	1	89	185	.122	1.18	.49	156.5	930.0	2.18	77	455	247	87	51	
DF		50	1	88	148	.086	1.18	.26	239.8	1293.3	1.77	62	335	200	70	38	
DF		Totals	124	87	139	45.469	145.88	126.29	58.7	296.1	211.19	7,410	37,388	23,864	8,373	4,225	
WH		15	1	91	92	.959	1.18	1.92	21.3	90.0	1.31	41	173	148	46	19	
WH		16	1	88	78	.843	1.18	1.69	21.1	85.0	1.14	35	143	128	40	16	
WH		17	1	89	121	.746	1.18	1.49	33.2	135.0	1.58	50	202	179	56	23	
WH		Totals	3	89	96	2.548	3.53	5.10	24.7	101.5	4.03	126	517	455	142	58	
RA		21	1	93	98	.489	1.18	.98	48.3	215.0	1.30	47	210	147	53	24	
RA		24	1	92	95	.374	1.18	.75	59.7	235.0	1.23	45	176	139	51	20	
RA		Totals	2	93	97	.864	2.35	1.73	53.2	223.7	2.53	92	386	286	104	44	
RC		26	1	80	102	.319	1.18	.64	70.4	235.0	1.06	45	150	119	51	17	
RC		29	1	80	89	.256	1.18	.51	79.6	260.0	.96	41	133	108	46	15	
RC		Totals	2	80	96	.576	2.35	1.15	74.5	246.1	2.01	86	283	228	97	32	
Totals			131	87	136	49.456	154.12	134.26	57.5	287.3	219.76	7,714	38,575	24,833	8,716	4,359	

Log Stock Table - MBF

T05N R03W S10 Ty00MC 113.00

Project: KARTH
Acres 113.00

Page 1
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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
DF		2M	40	3,632		3,621	85.7					281	545	1353	1084	309	48	
DF		3M	26	1		1	.0				1							
DF		3M	27	2		2	.1				2							
DF		3M	28	1		1	.0				1							
DF		3M	30	1		1	.0				1							
DF		3M	31	3	8.6	3	.1				3							
DF		3M	32	1		1	.0				1							
DF		3M	33	9		9	.2			7	1							
DF		3M	36	4		4	.1			4								
DF		3M	37	2		2	.0				2							
DF		3M	38	6		6	.1			6								
DF		3M	39	4		4	.1			4								
DF		3M	40	500		500	11.8			77	165	257						
DF		4M	12	1		1	.0			1								
DF		4M	13	3		3	.1			3								
DF		4M	14	4		4	.1			4								
DF		4M	16	2		2	.0			2								
DF		4M	17	2		2	.1			2								
DF		4M	18	1		1	.0			1								
DF		4M	19	2		2	.0			2								
DF		4M	20	3		3	.1			2	1							
DF		4M	21	1		1	.0			1								
DF		4M	23	1		1	.0			1								
DF		4M	24	5		5	.1			5								
DF		4M	25	1		1	.0			1								
DF		4M	26	1		1	.0				1							
DF		4M	27	3		3	.1			3								
DF		4M	28	5		5	.1			5								
DF		4M	29	2		2	.1			2								
DF		4M	30	6		6	.1			6								
DF		4M	31	2		2	.0			2								
DF		4M	32	2		2	.1			2								
DF		4M	35	5		5	.1			5								
DF		4M	37	6		6	.2			6								
DF		4M	39	6		6	.1			6								
DF		4M	40	7		7	.2				7							
DF		Totals		4,236		4,225	96.9			160	187	257	281	545	1353	1084	309	48

Log Stock Table - MBF

T05N R03W S10 Ty00MC 113.00

Project: KARTH
Acres 113.00

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Date 1/19/2022
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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
WH		2M	40	17	10.0	15	26.0					15						
WH		3M	40	38		38	65.2				8	31						
WH		4M	18	2		2	3.3			2								
WH		4M	28	3		3	5.6			3								
WH		Totals		60	2.8	58	1.3			5	8	31	15					
RC		2M	40	28		28	86.7							28				
RC		3M	32	2		2	5.4			2								
RC		3M	40	3		3	7.9			3								
RC		Totals		32		32	.7			4				28				
RA		CR	27	5		5	10.7					5						
RA		CR	38	4		4	8.9			4								
RA		CR	40	39	10.8	35	80.5						20	15				
RA		Totals		48	8.8	44	1.0			4		5	20	15				
Total		All Species		4,376		4,359	100.0			173	195	292	296	565	1396	1084	309	48

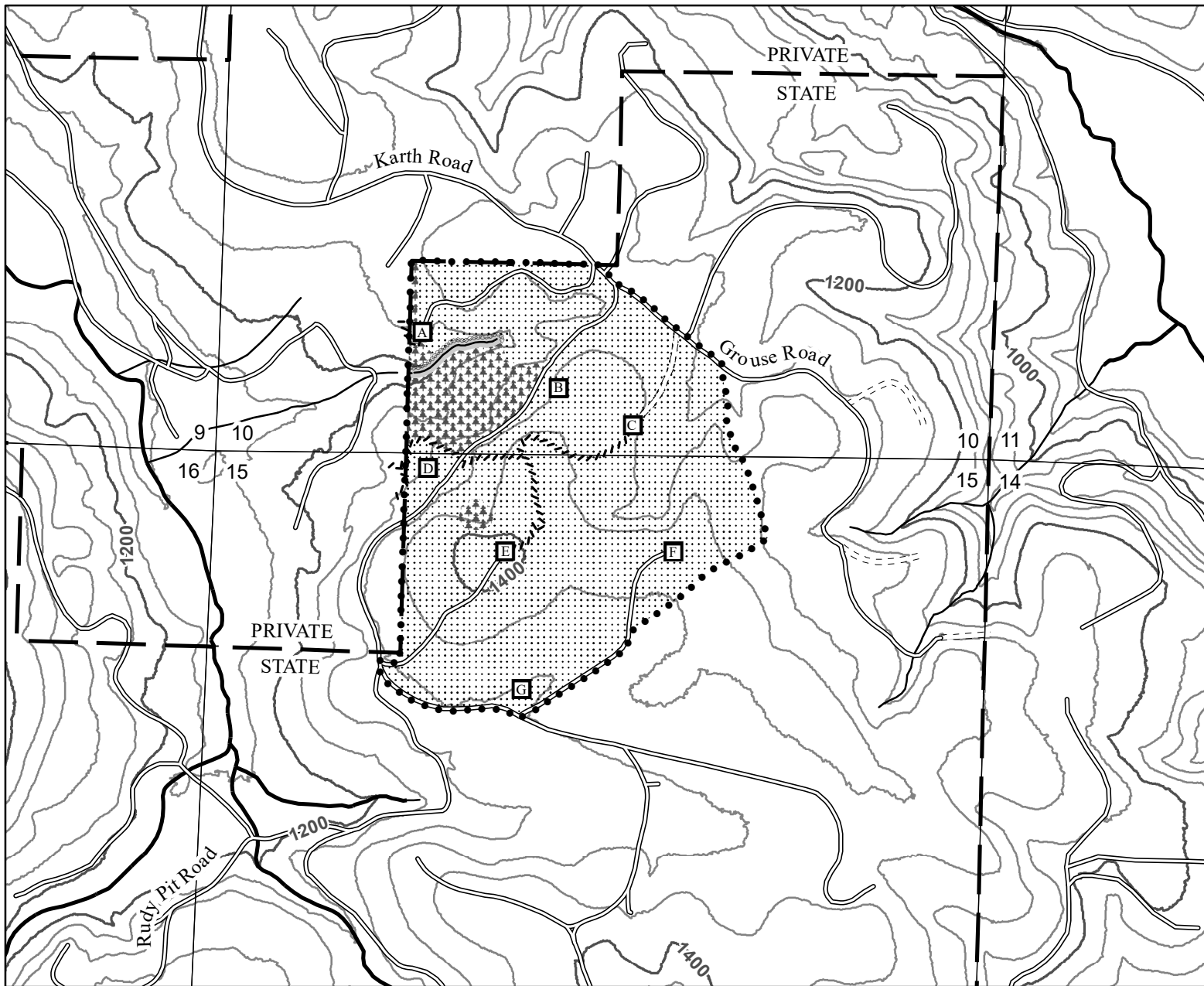
Volume Summary
(Shown in MBF)
Karthenon
FG-341-2022-W00864-01
January 2022

UNIT 1: MC (113 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	Cruise Volume	3,621	534	70	0	4,225
	Hidden D&B (2%)	(72)	(11)	(1)	(0)	(84)
	NET TOTAL	3,549	523	69	0	4,141
	% of Total	86	13	1	0	
Red alder	Cruise Volume	0	0	0	44	44
	Hidden D&B (5%)	(0)	(0)	(0)	(2)	(2)
	NET TOTAL	0	0	0	42	42
	% of Total	0	0	0	100	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	3,549	523	69	0	4,141
Red alder	0	0	0	42	42
Total	3,549	523	69	42	4,183



Legend

- Timber Sale Boundary
- Stream Buffer Boundary
- [] ODF Ownership Boundary
- Surfaced Road
- ==== Unsurfaced Road
- ////// Recreational Trail
- Type-F Stream
- Type-N Stream
- Stream Buffer
- Tractor Yarding Area
- [] Tractor Landing
- Green Tree Retention Area
- [] Section Line
- 40 Foot Contour Band
- 200 Foot Contour Band

LOGGING PLAN

FOR TIMBER SALE CONTRACT #FG-341-2022-W00864-01
 KARTHENON
 PORTIONS OF SECTIONS 10 & 15, T5N, R3W, W.M.,
 COLUMBIA COUNTY, OREGON

Forest Grove District GIS
 January, 2022

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



APPROXIMATE NET ACRES

	TRACTOR	CABLE
TOTAL =	113	0

1:12,000

1 inch = 1,000 feet

