



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Sloopy
Sale FG-341-2021-W00550-01

District: Forest Grove

Date: June 24, 2020

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,134,752.36	\$17,323.85	\$2,152,076.21
		Project Work:	(\$245,250.01)
		Advertised Value:	\$1,906,826.20



Timber Sale Appraisal Sloopy Sale FG-341-2021-W00550-01

District: Forest Grove

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Timber Description

Location: Portions of Sections 28 & 29, T3N, R6W, W.M., Tillamook County, Oregon, and portions of Sections 32 & 33, T3N, R6W, W.M., Washington County, Oregon.

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	24	0	98
Western Hemlock / Fir	28	0	98
Alder (Red)	19	0	95

Volume by Grade	2S	3S & 4S 6"-11"	Camprun	Total
Douglas - Fir	3,834	761	0	4,595
Western Hemlock / Fir	175	26	0	201
Alder (Red)	0	0	85	85
Total	4,009	787	85	4,881

Comments: Pond Values Used: Local Pond Values, April 2020.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
\$928.79/MBF = \$1,144/MBF - \$215.21/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 hours x \$150/hour = \$1,500
Machine Time to Pile Landing Slash and Sort Firewood:
20 hours x \$150/hour = \$3,000
Snag Creation by Topping: 80 Trees x \$60/Tree = \$4,800
Equipment Cleaning: 3 pieces x \$1,000/Piece = \$3,000
Slash Disposal: 4 acres x \$200/acre = \$800
TOTAL Other Costs (No Profit & Risk added) = \$13,100

ROAD MAINTENANCE

General Road Maintenance (includes move-in, grader, roller): 9.7 miles x \$2,540.31/mile = \$24,641.00
TOTAL Road Maintenance: \$24,641.00/4,881 MBF = \$5.05/MBF



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Logging Conditions

Combination#: 1

Douglas - Fir	88.00%
Western Hemlock / Fir	88.00%
Alder (Red)	88.00%

Logging System: Cable: Large Tower >=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: 11 **bd. ft / load:** 4800

cost / mbf: \$117.42

machines: Log Loader (A)
Stroke Delimber (A)
Tower Yarder (Large)

Combination#: 2

Douglas - Fir	12.00%
Western Hemlock / Fir	12.00%
Alder (Red)	12.00%

Logging System: Shovel **Process:** Manual Delimbing

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

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 13 **bd. ft / load:** 4800

cost / mbf: \$53.32

machines: Shovel Logger



"STEWARDSHIP IN FORESTRY"

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Sale FG-341-2021-W00550-01

District: Forest Grove

Date: June 24, 2020

Logging Costs

Operating Seasons: 1.00	Profit Risk: 15%
Project Costs: \$245,250.01	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$13,100.00

Miles of Road

Road Maintenance: \$5.05

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
Western Hemlock / Fir	\$0.00	2.0	5.0
Alder (Red)	\$0.00	2.0	3.0



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Sloopy Sale FG-341-2021-W00550-01

District: Forest Grove

Date: June 24, 2020

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$109.73	\$5.15	\$0.90	\$67.29	\$0.00	\$27.46	\$0.00	\$2.00	\$2.68	\$215.21
Western Hemlock / Fir									
\$109.73	\$5.15	\$0.90	\$96.90	\$0.00	\$31.90	\$0.00	\$2.00	\$2.68	\$249.26
Alder (Red)									
\$109.73	\$5.30	\$0.90	\$166.25	\$0.00	\$42.33	\$0.00	\$2.00	\$2.68	\$329.19

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$667.04	\$451.83	\$0.00
Western Hemlock / Fir	\$0.00	\$540.77	\$291.51	\$0.00
Alder (Red)	\$0.00	\$533.00	\$203.81	\$0.00



"STEWARDSHIP IN FORESTRY"

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Sloopy
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District: Forest Grove

Date: June 24, 2020

Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	4,595	\$451.83	\$2,076,158.85
Western Hemlock / Fir	201	\$291.51	\$58,593.51
Alder (Red)	85	\$203.81	\$17,323.85

Gross Timber Sale Value

Recovery: \$2,152,076.21

Prepared By: Kenton Burns

Phone: 503-359-7477

PROJECT COST SUMMARY SHEET

Timber Sale: Sloopy
Sale Number: FG-341-2021-W00550-01

PROJECT NO. 1: ROCKED ROAD CONSTRUCTION

	<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
	<u>K to L</u>	<u>1+50</u>	<u>\$5,255.78</u>
		1+50 stations	
		0.03 miles	
Total Rock =	278 cy	Pit-run	
		Move-in =	<u>\$136.96</u>

TOTAL PROJECT NO. 1 COST = \$5,255.78

PROJECT NO. 2: ROAD IMPROVEMENT

	<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
	A to B	257+20	\$184,568.68
	C to D	45+20	\$33,462.96
	E to F	9+40	\$7,131.84
	G to H	5+30	\$5,519.76
	<u>I to J</u>	<u>3+15</u>	<u>\$3,215.93</u>
		317+10 stations	
		6.01 miles	
Total Rock =	2,281 cy	1½" - 0	
	310 cy	3" - 0	
	14,669 cy	Pit-run	
		Move-in =	<u>\$6,095.05</u>

TOTAL PROJECT NO. 2 COST = \$239,994.23

TOTAL CREDITS \$245,250.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sloopy
Road Segment: A to B

Sale Number: FG-341-2021-W00550-01
Improvement: 257+20 stations
4.87 miles

PROJECT NO. 2

Improvement

Clean ditch & scatter waste material	251.20	sta @	\$60.00	per sta =	\$15,072.00
Clean culvert inlet & outlet	29	ea @	\$25.00	per ea =	\$725.00
End-haul					
Excavate & load	100	cy @	\$1.60	per cy =	\$160.00
Haul	131	cy @	\$0.77	per cy =	\$100.87
Compact waste area	131	cy @	\$0.30	per cy =	\$39.30
Improve Turnarounds	1	ea @	\$41.25	per ea =	\$41.25
Construct Roadside 50' landing	1	ea @	\$165.00	per ea =	\$165.00
Grade, ditch, & roll	257.20	sta @	\$36.00	per sta =	\$9,259.20

TOTAL IMPROVEMENT COSTS = \$25,562.62

CULVERTS

Culverts and Bands

18" Diameter	300	LF @	\$18.37	per LF =	\$5,511.00
24" Diameter	120	LF @	\$29.43	per LF =	\$3,531.60
Markers & Stakes					
Culvert Markers	23	ea @	\$10.00	per ea =	\$230.00
Additional Installation Cost					
Culvert No. 1	2	hrs @	\$175.00	per hr =	\$350.00

TOTAL CULVERT COSTS = \$9,622.60

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$1.19	\$10.25	\$0.50	312	\$3,725.54
				Subtotal =	312	\$3,725.54
Surfacing rock						
Surfacing rock	1½" - 0	\$1.19	\$9.64	\$1.22	1,969	\$23,722.06
Base Rock	3" - 0	\$1.19	\$6.70	\$1.22	310	\$2,824.36
Surfacing rock	Pit-run	\$3.47	\$6.57	\$1.10	10,266	\$114,321.07
Junction	Pit-run	\$3.47	\$6.57	\$1.10	264	\$2,939.85
Junction	Pit-run	\$3.47	\$6.57	\$1.10	48	\$534.52
Turnaround	Pit-run	\$3.47	\$6.57	\$1.10	16	\$178.17
Roadside landing	Pit-run	\$3.47	\$6.57	\$1.10	95	\$1,057.90
				Subtotal =	12,968	\$145,577.92

Totals

All Rock =	13,280
1½" - 0 =	2,281
3" - 0 =	310
Pit-run =	10,689

TOTAL ROCK COSTS = \$149,303.46

EROSION CONTROL

Straw Mulch Bale	8	ea @	\$10.00	per ea =	\$80.00
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TOTAL EROSION CONTROL COSTS = \$80.00

TOTAL PROJECT COST = \$184,568.68

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sloopy
Road Segment: C to D

Sale Number: FG-341-2021-W00550-01
Improvement: 45+20 stations
0.86 miles

PROJECT NO. 2

Improvement

Clearing & grubbing (scatter)	0.52	ac @	\$1,078.00	per acre =	\$559.29
Clean ditch & scatter waste material	45.20	sta @	\$60.00	per sta =	\$2,712.00
Clean culvert inlet & outlet	7	ea @	\$25.00	per ea =	\$175.00
Improve Turnouts	5	ea @	\$33.00	per ea =	\$165.00
Improve 50' landing	1	ea @	\$110.00	per ea =	\$110.00
Grade, ditch, & roll	45.20	sta @	\$36.00	per sta =	\$1,627.20

TOTAL IMPROVEMENT COSTS = \$5,348.49

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	Pit-run	\$3.47	\$5.94	\$1.10	2,396	\$25,167.65
Turnout	Pit-run	\$3.47	\$5.94	\$1.10	120	\$1,260.69
70' Landing	Pit-run	\$3.47	\$5.94	\$1.10	150	\$1,575.87
Subtotal =					2,666	\$28,004.22

Totals

All Rock =	2,666
Pit-run =	2,666

TOTAL ROCK COSTS = \$28,004.22

EROSION CONTROL

Grass seed & fertilizer	0.26	ac @	\$425.00	per ac =	\$110.25
TOTAL EROSION CONTROL COSTS =					\$110.25

TOTAL PROJECT COST = \$33,462.96

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sloopy
Road Segment: E to F

Sale Number: FG-341-2021-W00550-01
Improvement: 9+40 stations
0.18 miles

PROJECT NO. 2

Improvement

Clearing & grubbing (scatter)	0.11	ac @	\$1,078.00	per acre =	\$116.31
Clean ditch & scatter waste material	9.40	sta @	\$60.00	per sta =	\$564.00
Improve Turnouts	1	ea @	\$33.00	per ea =	\$33.00
Improve 50' landing	1	ea @	\$110.00	per ea =	\$110.00
Grade, ditch, & roll	9.40	sta @	\$36.00	per sta =	\$338.40

TOTAL IMPROVEMENT COSTS = \$1,161.71

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	Pit-run	\$3.47	\$5.31	\$1.10	498	\$4,920.12
Turnout	Pit-run	\$3.47	\$5.31	\$1.10	24	\$237.02
50' Landing	Pit-run	\$3.47	\$5.31	\$1.10	80	\$790.06
Subtotal =					602	\$5,947.20

Totals

All Rock =	602
Pit-run =	602

TOTAL ROCK COSTS = \$5,947.20

EROSION CONTROL

Grass seed & fertilizer	0.05	ac @	\$425.00	per ac =	\$22.93
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TOTAL EROSION CONTROL COSTS = \$22.93

TOTAL PROJECT COST = \$7,131.84

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sloopy
Road Segment: G to H

Sale Number: FG-341-2021-W00550-01
Improvement: 5+30 stations
0.10 miles

PROJECT NO. 2

Improvement

Heavy road improvement	5.3	sta @	\$110.00	per sta =	\$583.00
Clearing & grubbing (scatter)	0.12	ac @	\$1,078.00	per acre =	\$131.16
Clean ditch & scatter waste material	5.30	sta @	\$60.00	per sta =	\$318.00
Improve Turnouts	1	ea @	\$33.00	per ea =	\$33.00
Improve Roadside 50' landing	1	ea @	\$82.50	per ea =	\$82.50
Improve 50' landing	1	ea @	\$110.00	per ea =	\$110.00
Grade, ditch, & roll	5.30	sta @	\$36.00	per sta =	\$190.80

TOTAL IMPROVEMENT COSTS = \$865.46

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	Pit-run	\$3.47	\$5.39	\$1.10	281	\$2,796.58
Turnout	Pit-run	\$3.47	\$5.39	\$1.10	24	\$238.94
Roadside landing	Pit-run	\$3.47	\$5.39	\$1.10	80	\$796.46
50' Landing	Pit-run	\$3.47	\$5.39	\$1.10	80	\$796.46
Subtotal =					465	\$4,628.44

Totals

All Rock =	465
Pit-run =	465

TOTAL ROCK COSTS = \$4,628.44

EROSION CONTROL

Grass seed & fertilizer	0.06	ac @	\$425.00	per ac =	\$25.86
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TOTAL EROSION CONTROL COSTS = \$25.86

TOTAL PROJECT COST = \$5,519.76

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sloopy
Road Segment: I to J

Sale Number: FG-341-2021-W00550-01
Improvement: 3+15 stations
0.06 miles

PROJECT NO. 2

Improvement

Clearing & grubbing (scatter)	0.11	ac @	\$1,078.00	per acre =	\$116.93
Clean ditch & scatter waste material	3.15	sta @	\$60.00	per sta =	\$189.00
Improve 50' landing	1	ea @	\$110.00	per ea =	\$110.00
Grade, ditch, & roll	3.15	sta @	\$36.00	per sta =	\$113.40

TOTAL IMPROVEMENT COSTS = \$529.33

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	Pit-run	\$3.47	\$6.57	\$0.75	167	\$1,800.69
50' Landing	Pit-run	\$3.47	\$6.57	\$0.75	80	\$862.86
				Subtotal =	247	\$2,663.55

Totals

All Rock =	247
Pit-run =	247

TOTAL ROCK COSTS = \$2,663.55

EROSION CONTROL

Grass seed & fertilizer	0.05	ac @	\$425.00	per ac =	\$23.05
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TOTAL EROSION CONTROL COSTS = \$23.05

TOTAL PROJECT COST = \$3,215.93

Timber Sale:	<u>Sloopy</u>	Sale Number:	<u>FG-341-2021-W00550-01</u>
Road Segment:	<u>K to L</u>	Construction:	<u>1+50</u> stations
			<u>0.03</u> miles

CONSTRUCTION				
Clearing & grubbing (scatter)	0.50	ac @	\$ 1,078.00	per ac = \$539.00
Balanced road construction	1.50	sta @	\$ 110.00	per sta = \$165.00
Drift road material	1.50	sta @	\$ 180.00	per sta = \$270.00
70' Landing Construction				
Drift & Compact Landing	544	cy @	\$ 1.40	per cy = \$1,075.60
Grade, ditch, & roll	1.50	sta @	\$36.00	per sta = \$54.00
TOTAL CONSTRUCTION COSTS =				\$2,103.60

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	Pit-run	\$3.47	\$6.57	\$1.10	98	\$1,085.74
70" Landing	Pit-run	\$3.47	\$6.57	\$0.75	180	\$1,941.44
				Subtotal =	278	\$3,027.18

Totals	All Rock =	278
	Pit-run =	278

EROSION CONTROL				
Grass seed & fertilizer	0.25	ac @	\$500.00 per ac =	<u>\$125.00</u>

TOTAL EROSION CONTROL COSTS = \$125.00

TOTAL PROJECT COST = \$5,255.78

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sloopy

Sale Number: FG-341-2021-W00550-01

MOVE-IN & EQUIPMENT CLEANING COSTS

<u>Equipment</u>	<u>Total</u>
Grader	\$1,033.69
Roller (smooth/grid) & Compactor	\$716.89
Excavator (Large) - Equipment Cleaning	\$2,033.69
Dozer (Large) - Equipment Cleaning	\$2,078.27
Dump Truck (10cy +)	\$184.63
Water Truck (2,500 Gal)	\$184.84

TOTAL MOVE-IN COSTS = \$6,232.01

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Sloopy
Sale Number: FG-341-2021-W00550-01
Quarry Name: Wolf Creek Grade Road Quarry

Pit-run: 14,946 cy (truck measure)
Total truck yardage: 14,946 cy
Total in place yardage: 11,497 cy

Swell: 130%
Compaction: 116%

Move-in & Other Base Cost

Quarry development & overburden removal	\$10,131.46
Move in excavator with cleaning	\$1,976.63
Move in dozer with cleaning	\$1,955.43
Move in loader	\$866.00
Move in Dump Trucks	\$270.00
Clean up quarry	\$500.00
Subtotal =	<u>\$15,699.52</u>
Per CY =	<u>\$1.05/cy</u>

Pit-run Base Cost

Rip rock	<u>\$2.10</u>	/ cy x	<u>11,497</u>	cy =	\$24,143.94
Load dump truck	<u>\$0.80</u>	/ cy x	<u>14,946</u>	cy =	\$11,957.00
Subtotal =					<u>\$36,100.94</u>
Per CY =					<u>\$2.42/cy</u>
Total =					<u>\$51,800.46</u>

Pit-run Base Cost = **\$3.47/cy**

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Sloopy
Sale Number: FG-341-2021-W00550-01
Stockpile Name: Rock Creek Ridge Stockpile
1 1/2" - 0: 2,281 cy (truck measure)
3" - 0: 310 cy (truck measure)
Total truck yardage: 2,901 cy

Move-in

Move in loader					\$723.12
Move in Dump Trucks					\$410.49
				Subtotal =	\$1,133.61
				Per CY =	\$0.39/cy

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

Load dump truck	\$0.80	/ cy x	2,901	cy =	\$2,320.40
				Subtotal =	\$2,320.40
				Per CY =	\$0.80
				Total =	\$3,454.01

1 1/2"-0 Cost = \$1.19/cy
3"-0 Cost = \$1.19/cy

TIMBER SALE SUMMARY
Sloopy
#FG-341-2021-W00550-01

1. **Location:** Portions of Sections 28 & 29, T3N, R6W, W.M., Tillamook County, Oregon, and portions of Sections 32 & 33, T3N, R6W, W.M., Washington County, Oregon.
2. **Type of Sale:** This timber sale is 66 net acres of Modified Clearcut. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF. 56% Washington County, 44% 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 Area was cruised by ODF Cruisers in May of 2020. 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 redcedar, true firs, and hardwoods. The stand has an average of 312 ft² of basal area all species, an average Douglas-fir DBH of 24 inches, and an estimated average net Douglas-fir volume of approximately 75 MBF per acre.
7. **Topography and Logging Method:** Slopes within the sale areas range from 5% to 70%, and variable in aspect. The timber sale is 12% ground-based yarding and 88% cable yarding. The average cable corridor length is approximately 800 feet and the maximum is approximately 1,300 feet. The average horizontal skid trail length is approximately 200 feet and the maximum is approximately 800 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 onto Cochran Road. Continue on the Cochran Road approximately 7 miles to the Standard Grade Road. Turn left on the Standard Grade Road and continue 1.2 miles to the Standard Grade Loop. Turn right, and continue approximately 3 miles to the Timber Sale Area.
9. **Projects:**

Project No. 1: Rocked Road Construction	\$5,255.78
Project No. 2: Road Improvement	\$239,994.23
Total Credit for all Projects	\$245,250.01

CRUISE REPORT
Sloopy
#FG-341-2021-W00550-01

1. LOCATION: Portions of Sections 28 & 29, T3N, R6W, W.M., Tillamook County, Oregon, and Portions of Sections 32 & 33, T3N, R6W, W.M., Washington County, Oregon.

2. CRUISE DESIGN: Pre-cruise evaluation indicated that the stand's average DBH is approximately 20 inches with a Coefficient of Variation of about 52%. 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 32 variable radius plots utilizing a 40 BAF prism would produce an adequate sample size.

3. SAMPLING METHOD: The Timber Sale Area was cruised in May of 2020. The Timber Sale Area was sampled with 33 variable radius grade plots laid out on a 4 chain x 5 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS: 257 trees were measured and graded producing a cumulative Sampling Error of 6.4% on the Basal Area and 6.5% on the 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. For conifers, bole heights were calculated to a six inch top. For hardwoods, bole heights were calculated to a seven 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:** For conifers, two percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage. For hardwoods, five 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 cruiser Kenton Burns.

Prepared by:	<u>Kenton Burns</u>	<u>5/28/2020</u>
	Name	Date

Reviewed by:	<u>Mark Savage</u>	<u>6/02/2020</u>
	Name	Date

TC PLOGSTVB		Log Stock Table - MBF																			
T03N R06W S28 Ty00MC				66.00		Project:		SLOOPY										Page		1	
						Acres		66.00										Date		5/20/2020	
																		Time		7:03:05AM	
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	20	2		2	.0					2									
DF		2M	30	19	4.8	18	.4					7				11					
DF		2M	40	3,956	1.6	3,892	83.0					371	613	1501	1093	300	13				
DF		3M	20	1		1	.0				1										
DF		3M	24	1		1	.0				1										
DF		3M	32	16		16	.3			16											
DF		3M	34	10		10	.2			9	1										
DF		3M	36	16		16	.4			15	1										
DF		3M	38	36		36	.8			18	18										
DF		3M	40	634		630	13.4			121	191	313		6							
DF		4M	12	10		10	.2			8	2										
DF		4M	14	7		7	.1			7											
DF		4M	16	5		5	.1			5	0										
DF		4M	18	3		3	.1			3	0										
DF		4M	20	3		3	.1			3	1										
DF		4M	22	10		10	.2			10											
DF		4M	24	5		5	.1			5											
DF		4M	26	5		5	.1			5											
DF		4M	28	9		9	.2			9											
DF		4M	30	6		6	.1			6											
DF		4M	32	2		2	.0			2											
DF		4M	40	2		2	.0			2											
DF		Totals		4,758	1.5	4,688	94.1			243	215	313	380	613	1507	1104	300	13			
RA		R	20	1		1	1.4			1											
RA		R	26	2		2	1.8			2											
RA		R	28	3		3	2.8			3											
RA		R	30	3		3	3.6			3											
RA		R	38	2		2	2.0			2											
RA		R	40	80		79	88.4			5		10	28	25	12						
RA		Totals		90		90	1.8			15		10	28	25	12						
NF		2M	20	5		5	2.6									5					
NF		2M	32	7		7	3.6							7							
NF		2M	40	169	1.7	166	81.2					4	32	53	41	36					
NF		3M	34	2		2	.8			2											
NF		3M	36	1		1	.4			1											
NF		3M	40	21		21	10.4			3	5	11	3								

TC		PLOGSTVB																		Log Stock Table - MBF									
T03N R06W S28 Ty00MC				66.00				Project: SLOOPY				Acres 66.00				Page 2													
																Date 5/20/2020													
																Time 7:03:05AM													
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+										
NF		4M	14	0		0	.1				0																		
NF		4M	18	1		1	.5			1	0																		
NF		4M	20	0		0	.2			0																			
NF		Totals		207	1.4	204	4.1			5	6	11	7	32	61	46	36												
Total		All Species		5,055	1.4	4,982	100.0			263	221	333	415	670	1580	1150	336	13											

TC PSTATS				PROJECT STATISTICS				PAGE	1		
				PROJECT	SLOOPY			DATE	5/20/2020		
TWP	RGE	SC	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt	
03N	06	28	00U1	00MC	66.00		33	257	S	W	
					TREES	ESTIMATED	PERCENT				
					PER PLOT	TOTAL	SAMPLE				
						TREES	TREES				
TOTAL			33	257	7.8						
CRUISE			33	257	7.8	6,856		3.7			
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			240	96.6	23.5	138	60.0	290.9	72,085	71,028	14,572
NOB FIR			10	2.8	28.2	149	2.3	12.1	3,137	3,095	621
R ALDER			7	4.4	18.7	96	2.0	8.5	1,364	1,358	327
TOTAL			257	103.9	23.4	136	64.3	311.5	76,586	75,481	15,520
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			50.9	3.3	968	1,001	1,034				
NOB FIR			39.0	13.0	1,104	1,269	1,434				
R ALDER			38.2	15.5	282	334	386				
TOTAL			52.0	3.2	961	993	1,025		108	27 12	
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			46.4	3.0	195	201	207				
NOB FIR			35.2	11.7	222	252	281				
R ALDER			35.2	14.3	69	80	92				
TOTAL			47.2	2.9	194	200	206		89	22 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			63.9	11.1	86	97	107				
NOB FIR			192.0	33.4	2	3	4				
R ALDER			413.8	72.0	1	4	8				
TOTAL			58.5	10.2	93	104	114		137	34 15	
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			40.0	7.0	271	291	311				
NOB FIR			174.7	30.4	8	12	16				
R ALDER			421.0	73.2	2	8	15				
TOTAL			36.7	6.4	292	312	331		54	13 6	
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			40.1	7.0	66,071	71,028	75,986				
NOB FIR			177.1	30.8	2,141	3,095	4,048				
R ALDER			416.2	72.4	375	1,358	2,341				
TOTAL			37.5	6.5	70,554	75,481	80,408		56	14 6	
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			40.8	7.1	13,539	14,572	15,605				
NOB FIR			175.2	30.5	432	621	810				

TC PSTATS				<u>PROJECT STATISTICS</u>				PAGE	2	
				PROJECT	SLOOPY			DATE	5/20/2020	
TWP	RGE	SC	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
03N	06	28	00U1	00MC	66.00		33	257	S	W
CL	68.1	COEFF		NET CUFT FT/ACRE				# OF PLOTS REQ.	INF. POP.	
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
R ALDER		415.9	72.3	90	327	563				
TOTAL		37.8	6.6	14,500	15,520	16,539	57	14	6	

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
<div>T03N R06W S28 Ty00MC66.00</div>				Project: SLOOPY												Page 1					
				Acres 66.00												Date 5/20/2020 Time 7:03:06AM					
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
				Def%	Gross	Net	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														18	16		0.00	2.4
DF			2M	83	1.6	60,258	59,270	3,912			33	67	0	0		99	40	17	457	2.19	129.6
DF			3M	15	.6	10,816	10,747	709		99		1	0	0	4	96	39	8	102	0.71	105.0
DF			4M	2		1,011	1,011	67		100			42	52	3	3	19	6	24	0.36	41.6
DF Totals				94	1.5	72,085	71,028	4,688		16	28	56	1	1	1	98	36	12	255	1.44	278.6
RA R				100	.5	1,364	1,358	90		28	59	13	1	8		90	35	10	153	1.04	8.9
RA Totals				2	.5	1,364	1,358	90		28	59	13	1	8		90	35	10	153	1.04	8.9
NF			CU														5	16		0.00	.7
NF			2M	87	1.6	2,749	2,706	179			20	80	3		4	93	39	18	551	2.68	4.9
NF			3M	12		361	361	24		87	13				7	93	39	9	117	0.86	3.1
NF			4M	1		27	27	2		100			100				18	7	24	0.44	1.1
NF Totals				4	1.4	3,137	3,095	204		11	19	70	3		4	92	34	14	315	1.87	9.8
Totals					1.4	76,586	75,481	4,982		16	28	56	1	1	1	97	36	12	254	1.44	297.3

TC		PSTNDSUM		Stand Table Summary										Page Date:		1 5/20/2020	
T03N R06W S28 Ty00MC 66.00					Project SLOOPY					Time: 7:03:07AM							
					Acres 66.00					Grown Year:							
S Sp	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Net		T o t a l s		
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF	
DF		9	1	88	81	2.744	1.21	2.74	8.7	50.0	.68	24	137	45	16	9	
DF		11	2	87	85	3.673	2.42	3.67	15.5	65.0	1.63	57	239	107	38	16	
DF		12	2	89	102	3.087	2.42	6.17	13.0	52.5	2.28	80	324	150	53	21	
DF		13	1	89	97	1.315	1.21	2.63	14.3	60.0	1.08	38	158	71	25	10	
DF		14	3	89	109	3.402	3.64	6.80	19.3	83.3	3.75	131	567	247	87	37	
DF		15	4	89	114	3.951	4.85	7.90	22.9	100.0	5.16	181	790	340	119	52	
DF		16	3	89	127	2.604	3.64	6.94	22.0	98.7	4.36	153	686	288	101	45	
DF		17	3	88	115	2.307	3.64	5.38	26.4	108.6	4.05	142	584	268	94	39	
DF		18	5	89	121	3.430	6.06	8.92	27.6	112.3	7.01	246	1,001	463	162	66	
DF		19	6	89	136	3.694	7.27	10.47	31.7	137.1	9.47	332	1,434	625	219	95	
DF		20	10	89	133	5.556	12.12	16.11	33.6	150.0	15.42	541	2,417	1,018	357	160	
DF		21	11	89	146	5.543	13.33	16.63	39.9	189.4	18.92	664	3,150	1,249	438	208	
DF		22	3	89	141	1.378	3.64	4.13	43.7	205.6	5.15	181	849	340	119	56	
DF		23	17	89	147	7.142	20.61	22.27	47.7	225.7	30.30	1,063	5,025	2,000	702	332	
DF		24	18	89	148	6.945	21.82	21.22	52.2	243.1	31.58	1,108	5,159	2,084	731	340	
DF		25	18	89	152	6.400	21.82	21.69	52.8	254.1	32.66	1,146	5,512	2,156	756	364	
DF		26	16	89	153	5.260	19.39	17.42	59.2	291.3	29.39	1,031	5,076	1,940	681	335	
DF		27	14	88	156	4.268	16.97	14.33	63.0	312.6	25.73	903	4,478	1,698	596	296	
DF		28	18	88	156	5.102	21.82	17.57	65.9	337.3	33.03	1,159	5,927	2,180	765	391	
DF		29	19	87	155	5.021	23.03	16.38	73.2	366.9	34.19	1,200	6,012	2,256	792	397	
DF		30	14	87	156	3.457	16.97	11.61	76.2	381.7	25.22	885	4,430	1,664	584	292	
DF		31	13	87	161	3.006	15.76	10.18	79.1	407.5	22.95	805	4,146	1,514	531	274	
DF		32	7	87	155	1.519	8.48	5.43	82.5	426.4	12.76	448	2,314	842	296	153	
DF		33	9	86	154	1.837	10.91	5.92	95.6	483.8	16.12	566	2,863	1,064	373	189	
DF		34	7	86	159	1.346	8.48	4.42	101.2	515.7	12.76	448	2,280	842	295	150	
DF		35	6	85	156	1.089	7.27	3.63	105.7	540.5	10.93	384	1,961	722	253	129	
DF		36	2	86	167	.343	2.42	1.20	111.9	602.9	3.83	134	724	253	89	48	
DF		37	4	86	163	.649	4.85	2.44	109.1	590.0	7.57	266	1,437	500	175	95	
DF		38	2	84	167	.308	2.42	1.08	120.5	635.7	3.70	130	685	244	86	45	
DF		39	1	81	154	.146	1.21	.44	140.1	700.0	1.75	61	307	115	41	20	
DF		44	1	84	160	.115	1.21	.46	144.2	777.5	1.89	66	357	125	44	24	
DF		Totals	240	88	138	96.636	290.91	276.18	52.8	257.2	415.29	14,572	71,028	27,409	9,617	4,688	
NF		21	1	91	145	.504	1.21	1.51	40.2	196.7	1.46	61	297	96	40	20	
NF		23	1	77	127	.420	1.21	1.26	40.1	143.3	1.21	50	181	80	33	12	
NF		26	1	90	147	.329	1.21	.99	64.5	316.7	1.53	64	312	101	42	21	
NF		27	1	88	151	.305	1.21	.91	66.9	320.0	1.47	61	293	97	40	19	
NF		30	1	90	173	.247	1.21	.99	72.6	395.0	1.72	72	390	114	47	26	
NF		31	2	88	163	.463	2.42	1.85	69.9	387.5	3.10	129	717	205	85	47	
NF		34	1	87	154	.192	1.21	.58	108.7	540.0	1.50	63	311	99	41	21	
NF		36	2	87	146	.343	2.42	1.03	118.1	576.7	2.92	122	593	193	80	39	
NF		Totals	10	87	149	2.802	12.12	9.12	68.1	339.5	14.91	621	3,095	984	410	204	
RA		15	1	90	105	.988	1.21	1.98	23.8	100.0	1.29	47	198	85	31	13	
RA		17	1	90	95	.769	1.21	1.54	31.0	125.0	1.31	48	192	86	31	13	
RA		19	2	91	83	1.231	2.42	2.46	32.7	125.0	2.21	81	308	146	53	20	
RA		20	1	94	102	.556	1.21	1.11	46.9	215.0	1.43	52	239	95	34	16	
RA		21	1	94	104	.504	1.21	1.01	49.0	215.0	1.36	49	217	90	33	14	
RA		24	1	90	96	.386	1.21	.77	64.7	265.0	1.37	50	204	91	33	13	
RA		Totals	7	91	96	4.433	8.48	8.87	36.8	153.1	8.98	327	1,358	593	216	90	
Totals		257	88	136		103.871	311.52	294.17	52.8	256.6	439.19	15,520	75,481	28,986	10,243	4,982	

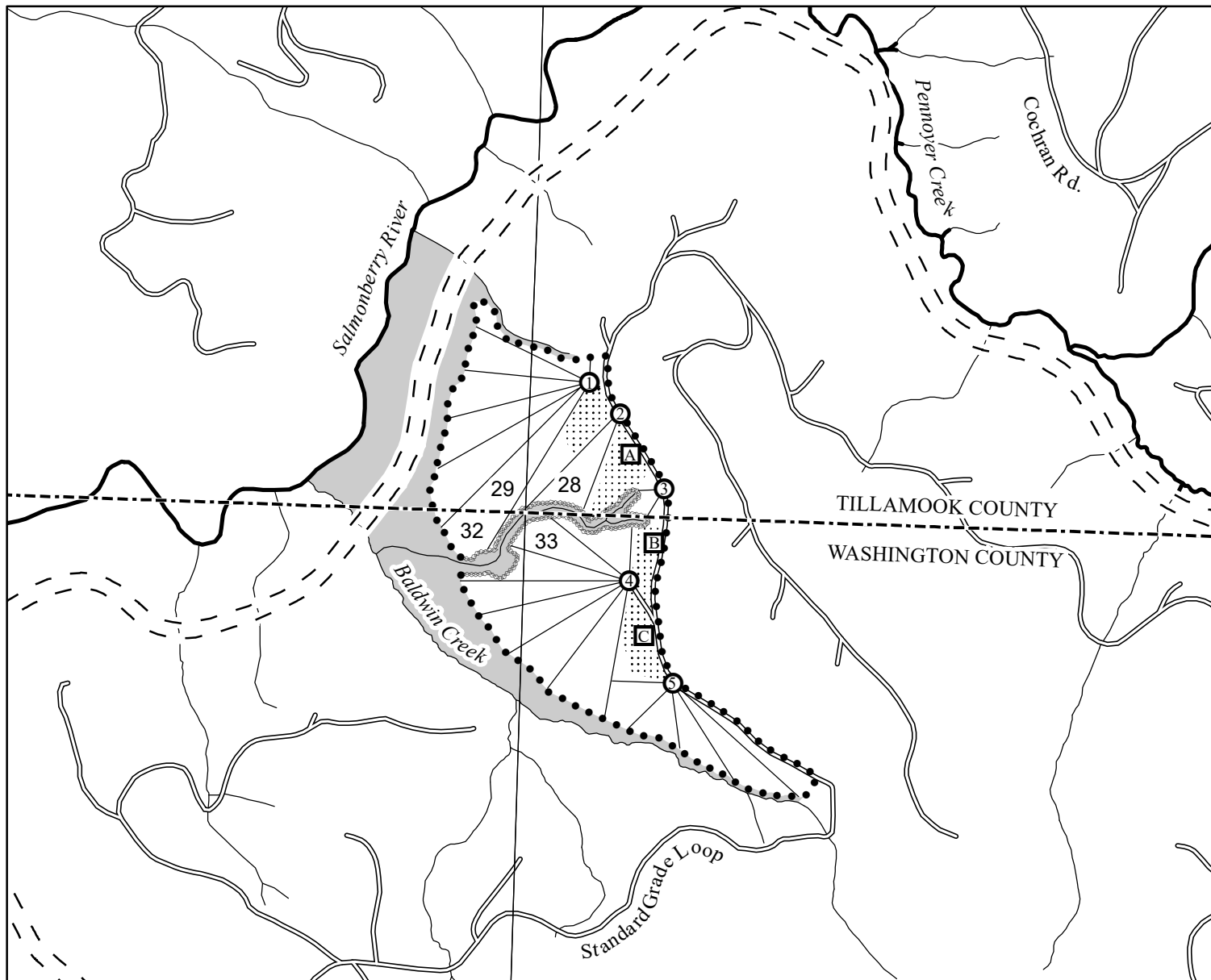
VOLUME SUMMARY
(Shown in MBF)
Sloopy
#FG-341-2021-W00550-01
May, 2020

MODIFIED CLEARCUT (66 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CAMP RUN	TOTAL
Douglas-fir	Cruise Volume	3,912	709	67	0	4,688
	Hidden D&B (2%)	(78)	(14)	(1)	(0)	(93)
	NET TOTAL	3,834	695	66	0	4,595
	% of Total	84	15	1	0	
Noble fir	Cruise Volume	179	24	2	0	205
	Hidden D&B (2%)	(4)	(0)	(0)	(0)	(4)
	NET TOTAL	175	24	2	0	201
	% of Total	87	12	1	0	
Red Alder	Cruise Volume	0	0	0	90	90
	Hidden D&B (5%)	(0)	(0)	(0)	(5)	(5)
	NET TOTAL	0	0	0	85	85
	% of Total	0	0	0	100	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	CAMP RUN	TOTAL
Douglas-fir	3,834	695	66	0	4,595
Noble fir	175	24	2	0	201
Red alder	0	0	0	85	85
TOTAL	4,009	719	68	85	4,881



Legend

- Timber Sale Boundary
- ODF Ownership Boundary
- Stream Buffer Boundary
- Surfaced Road
- - - New Road Construction
- Type-N Stream
- Type-F Stream
- Stream Buffer
- ▤ Cable Yarding Area
- ▤ Tractor Yarding Area
- Cable Landing
- Tractor Landing
- Section Lines
- - - County Line
- 40 Foot Countour Band
- 200 Foot Countour Band

LOGGING PLAN

FOR TIMBER SALE CONTRACT #FG-341-2021-W00550-01
SLOOPY

PORTIONS OF SECTIONS 28 & 29, T3N, R6W, W.M.,
TILLAMOOK COUNTY, OREGON,
PORTIONS OF SECTIONS 32 & 33, T3N, R6W, W.M.,
WASHINGTON COUNTY, OREGON

Forest Grove District GIS
May, 2020

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
TOTAL	8	58