



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Skookum Ridge
Sale TL-341-2019-W00757-01

District: Tillamook

Date: October 09, 2018

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,196,418.29	\$125,113.01	\$1,321,531.30
		Project Work:	(\$163,290.00)
		Advertised Value:	\$1,158,241.30



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District: Tillamook

Date: October 09, 2018

Timber Description

Location: Sections 20 and 29, T2S, R8W, W.M., Tillamook County, Oregon.

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	23	0	95
Western Hemlock / Fir	16	0	95
Alder (Red)	13	0	90

Volume by Grade	2S	3S & 4S 6"-11"	4S	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	142	121	0	0	0	0	0	263
Western Hemlock / Fir	2,005	1,544	0	0	0	0	0	3,549
Red Cedar	0	0	6	0	0	0	0	6
Alder (Red)	0	0	0	7	62	96	184	349
Total	2,147	1,665	6	7	62	96	184	4,167

Comments: Pond Values Used: September 2018
Region: Astoria, Forest Grove, and Tillamook

Western Red Cedar and Other Cedars Stumpage Price = Pond Value – Logging Cost
 $\$1,233/\text{MBF} - \$264/\text{MBF} = \$969/\text{MBF}$

Pulp (Conifer and Hardwood) Price = \$ 25/ MBF

BRAND AND PAINT ALLOWANCE = \$2.00/ MBF

FUEL COST ALLOWANCE = \$3.00/ Gallon

HAULING COST ALLOWANCE

Hauling cost equivalent to \$950 daily truck cost

Other Costs with Profit and Risk to be added:

Snag creation: 222 snags x \$10/ snag = \$2,220

TOTAL Other Costs with profit and Risk to be added = \$2,220

Other Costs with No Profit and Risk Added:

Machine Cleaning: \$1000/machine x 2 machines x 2 seasons = \$4,000

Slash piling and sorting (Cable Ground): \$5/ac x 40 ac. = \$200

Heliport Construction: 3 hours machine loader time for slash moving @ \$140/ hour = \$420

Non-project Road 1: \$100/ station x 7+00 stations = \$700

Non-project Road 2: \$100/ station x 3+75 stations = \$375

Non-project Road 3: \$150/ station x 3+00 stations = \$450

Non-project Road 4: \$100/ station x 2+50 stations = \$250

Non-project Road 5: \$100/ station x 7+50 stations = \$750

Road blocking \$50/ block x 5 roads = \$250

Tailhold Dozer: 2 months x \$1500/month + \$500 move in = \$3,500

Stimson Road Use Agreement (Old Crow/3000 ML): 4,167 MBF x \$8.39 = \$34,961

(8.3 miles x \$1.01/MBF/mi.= \$8.39/MBF)

Privy: 12 months x \$300/month = \$3,600

Ditch Cleaning, Bank Sluff Removal and Deadman Tailhold:

Mobilization: one time – dump truck w/ tilt bed & small excavator: \$890

Medium excavator (Cat 320 or equivalent): 10 @ \$135/ hour = \$1,350

Dump truck: 10 hours @ \$90/ hour = \$900

TOTAL Other Costs no Profit and Risk added = \$52596.00

ROAD MAINTENANCE:

Portions of Simmons Ridge Road and Skookum Lake Road (ODF Roads only).

Area 1 Spot Rocking: 20cy/MMBF/mile x 4.1 MMBF x \$6/CY x 1.5mi / 4,167 MBF= \$0.18/MBF

Interim Grading: \$500/ mile x 1.5 miles x 2 times/ 4,167 MBF = \$0.36/MBF

Final Maintenance Grading: \$1,500 x 1.5 miles/4,167 MBF = \$0.54/MBF

Final Maintenance Compaction: \$950/mile x 0.75 miles/ 4,167 MBF = \$0.17/ MBF

Total Road Maintenance: \$1.25/MBF



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Logging Conditions

Combination#: 1

Douglas - Fir	64.00%
Western Hemlock / Fir	64.00%
Alder (Red)	64.00%

Logging System: Shovel **Process:** Harvester Head Delimbing
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 12.5 **bd. ft / load:** 4000
cost / mbf: \$106.88
machines: Forwarder
Harvester

Combination#: 2

Douglas - Fir	18.00%
Western Hemlock / Fir	18.00%
Alder (Red)	18.00%

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: 9.5 **bd. ft / load:** 4000
cost / mbf: \$204.75
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

Combination#: 3

Douglas - Fir	18.00%
Western Hemlock / Fir	18.00%
Alder (Red)	18.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
yarding distance: Long (1,500 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 6 **bd. ft / load:** 4050
cost / mbf: \$320.18
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)



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Logging Costs

Operating Seasons: 2.00	Profit Risk: 12%
Project Costs: \$163,290.00	Other Costs (P/R): \$2,220.00
Slash Disposal: \$0.00	Other Costs: \$52,596.00

Miles of Road

Road Maintenance: \$1.25

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	4.0
Western Hemlock / Fir	\$0.00	3.0	3.8
Alder (Red)	\$0.00	2.0	3.5



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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									
\$162.89	\$1.31	\$2.11	\$124.69	\$0.53	\$34.98	\$0.00	\$2.00	\$12.62	\$341.13
Western Hemlock / Fir									
\$162.89	\$1.31	\$2.11	\$87.50	\$0.53	\$30.52	\$0.00	\$2.00	\$12.62	\$299.48
Alder (Red)									
\$162.89	\$1.38	\$2.11	\$149.28	\$0.53	\$37.94	\$0.00	\$2.00	\$12.62	\$368.75

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$700.00	\$358.87	\$0.00
Western Hemlock / Fir	\$0.00	\$610.00	\$310.52	\$0.00
Alder (Red)	\$0.00	\$727.24	\$358.49	\$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
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	263	\$358.87	\$94,382.81
Western Hemlock / Fir	3,549	\$310.52	\$1,102,035.48
Alder (Red)	349	\$358.49	\$125,113.01

Gross Timber Sale Value

Recovery: \$1,321,531.30

Prepared By: Harold Stevens

Phone: 503-815-7044



"STEWARDSHIP IN FORESTRY"

PROJECT SUMMARY SHEET

Sale: Skookum Ridge

CONSTRUCTION

Point	E to F	16+00	stations =	\$5,383.01
Point	I to J	6+50	stations =	\$2,772.30
Point	K to L	10+20	stations =	\$3,031.44
Point	M to N	3+00	stations =	\$1,564.80
SUBTOTAL CONSTRUCTION				\$12,751.55

IMPROVEMENT

Point	A to B	295+00	stations =	\$71,985.97
Point	C to D	322+70	stations =	\$35,733.87
Point	E to F	6+50	stations =	\$1,118.54
Point	G to H	11+70	stations =	\$1,252.79
Point	O to P	32+70	stations =	\$6,940.24
SUBTOTAL IMPROVEMENT				\$117,031.41

SPECIAL PROJECTS

Install New Gate	1.0	On Segment A to B	\$3,570.00
Brush	29.0	miles of road	\$24,650.00
SUBTOTAL SPECIAL PROJECTS			\$28,220.00

MOVE IN

\$5,287.04

GRAND TOTAL

\$163,290.00

Sale:		Skookum Ridge			Road:		A to B				
Construction -		0+00 0.00	stations miles	Improvement -		295+00 5.59	stations miles	Reconstruction -		0+00 0.00	stations miles
IMPROVEMENT: CLEARING AND GRUBBING -											
Side cast				0.163	acres @	\$660.00	per acre =			\$107.58	
Widening				0.259	acres @	\$660.00	per acre =			\$170.94	
TOTAL CLEARING AND GRUBBING										\$278.52	
IMPROVEMENT: EXCAVATION -											
Pullback				496	cy. @	\$1.40	per c.y.=			\$694.40	
Widening				1079	cy. @	\$1.40	per c.y.=			\$1,510.60	
TOTAL EXCAVATION										\$2,205.00	
IMPROVEMENT: ENDHAUL -											
Pullback		14+80	to	15+80	16	cy. @	\$3.04	per c.y.=			\$48.64
Pullback		271+50	to	273+20	25	cy. @	\$4.10	per c.y.=			\$102.50
Pullback		275+10	to	275+30	26	cy. @	\$3.92	per c.y.=			\$101.92
Pullback		276+70	to	276+90	26	cy. @	\$3.79	per c.y.=			\$98.54
Pullback		281+10	to	281+30	26	cy. @	\$3.55	per c.y.=			\$92.30
Pullback		283+20	to	283+70	65	cy. @	\$3.40	per c.y.=			\$221.00
Pullback		285+00	to	286+00	130	cy. @	\$3.28	per c.y.=			\$426.40
Pullback		288+60	to	290+00	182	cy. @	\$3.07	per c.y.=			\$558.74
Widening		14+80	to	15+80	194	cy. @	\$3.04	per c.y.=			\$589.76
Widening		149+50	to	150+30	20	cy. @	\$5.04	per c.y.=			\$100.80
Widening		211+80	to	212+30	85	cy. @	\$5.20	per c.y.=			\$442.00
Widening		221+80	to	222+30	39	cy. @	\$4.82	per c.y.=			\$187.98
Widening		228+80	to	229+80	73	cy. @	\$4.55	per c.y.=			\$332.15
Widening		238+10	to	238+70	26	cy. @	\$4.21	per c.y.=			\$109.46
Widening		247+30	to	248+40	53	cy. @	\$3.87	per c.y.=			\$205.11
Widening		271+50	to	273+20	246	cy. @	\$3.59	per c.y.=			\$883.14
Widening		283+20	to	283+70	87	cy. @	\$3.40	per c.y.=			\$295.80
Widening		285+00	to	286+00	174	cy. @	\$3.28	per c.y.=			\$570.72
Widening		288+60	to	290+00	82	cy. @	\$3.07	per c.y.=			\$251.74
Spread & compact					1575	cy. @	\$0.25	per c.y.=			\$393.75
TOTAL ENDHAUL										\$6,012.45	
CULVERTS - MATERIALS & INSTALLATION											
<u>Culverts</u>											
		90	LF of 18"	\$1,575.00			380	LF of 24"	\$10,260.00		
		40	LF of 30"	\$1,440.00			100	LF of 36"	\$4,800.00		
				\$3,015.00					\$15,060.00		
<u>Culvert Markers</u>											
		16	markers	\$128.00							
				\$128.00							
TOTAL CULVERTS										\$18,203.00	
ROCK											
242+60 to		295+00	1,830	cy. of	Jaw-Run	@	\$16.71	per c.y.=			\$30,579.30
Culvert Bedding/Backfill		All Culverts	90	cy. of	Stockpile	@	\$10.02	per c.y.=			\$901.80
Spot Rock		Widenings	100	cy. of	Stockpile	@	\$13.59	per c.y.=			\$1,359.00
Junction Rock		295+00	20	cy. of	Jaw-Run	@	\$16.24	per c.y.=			\$324.80
Energy Dissipator		All Culverts	90	cy. of	Riprap	@	\$11.46	per c.y.=			\$1,031.40
Ditch Fill		256+40-258+00	10	cy. of	Pit-Run	@	\$11.66	per c.y.=			\$116.60
Fill Reconstruction		258+00	80	cy. of	Pit-Run	@	\$11.65	per c.y.=			\$932.00
TOTAL ROCK										\$35,244.90	
SPECIAL PROJECTS											
Remove gate assembly & deliver to ODF -			2.00	@			\$150.00	each			\$300.00
Construct waste areas -			1.00	hours @			\$130.00	per hour			\$130.00
Construct ditchouts -			2.00	@			\$90.00	each			\$180.00
Grade and shape road -			295.00	stations @			\$15.50	per station			\$4,572.50
Clean culvert inlets -			246.20	stations @</							

SUMMARY OF CONSTRUCTION COST

Sale:

Skookum Ridge

Road:

C to D

Construction -	0+00	stations	Improvement -	322+70	stations	Reconstruction -	0+00	stations
	0.00	miles		6.11	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Side cast	0.041	acres @	\$660.00	per acre =	\$27.06	
Widening	0.079	acres @	\$660.00	per acre =	\$52.14	
			TOTAL CLEARING AND GRUBBING			\$79.20

IMPROVEMENT: EXCAVATION -

Pullback	113	cy. @	\$1.40	per c.y.=	\$158.20	
Widening	309	cy. @	\$1.40	per c.y.=	\$432.60	
			TOTAL EXCAVATION			\$590.80

IMPROVEMENT: ENDHAUL -

Pullback	67+90	to	68+40	8	cy. @	\$4.37	per c.y.=	\$34.96	
Pullback	71+00	to	71+50	8	cy. @	\$4.30	per c.y.=	\$34.40	
Pullback	74+40	to	75+00	18	cy. @	\$4.20	per c.y.=	\$75.60	
Pullback	105+50	to	106+20	14	cy. @	\$3.42	per c.y.=	\$47.88	
Pullback	117+50	to	118+10	65	cy. @	\$3.11	per c.y.=	\$202.15	
Widening	95+50	to	96+00	44	cy. @	\$3.67	per c.y.=	\$161.48	
Widening	100+80	to	101+50	31	cy. @	\$3.54	per c.y.=	\$109.74	
Widening	102+40	to	103+10	27	cy. @	\$3.49	per c.y.=	\$94.23	
Widening	105+50	to	106+20	42	cy. @	\$3.42	per c.y.=	\$143.64	
Widening	139+00	to	140+00	78	cy. @	\$3.09	per c.y.=	\$241.02	
Widening	159+10	to	160+30	87	cy. @	\$3.04	per c.y.=	\$264.48	
Spread & compact				422	cy. @	\$0.25	per c.y.=	\$105.50	
							TOTAL ENDHAUL		\$1,515.08

CULVERTS - MATERIALS & INSTALLATION

Culverts

40	LF of 18"	\$700.00	40	LF of 24"	\$1,080.00
		\$700.00			\$1,080.00

Culvert Markers

18 markers	\$144.00
	\$144.00

TOTAL CULVERTS \$1,924.00

ROCK

147+00	to	172+00	440	cy. of	Stockpile	@	\$10.88	per c.y.=	\$4,787.20	
147+00	to	173+60	860	cy. of	Pit-Run	@	\$10.42	per c.y.=	\$8,961.20	
Culvert Bedding		All Culverts	10	cy. of	Stockpile	@	\$10.10	per c.y.=	\$101.00	
Spot Rock		TBD	200	cy. of	Stockpile	@	\$11.00	per c.y.=	\$2,200.00	
Rebuild Subgrade		106+00	20	cy. of	Riprap	@	\$11.72	per c.y.=	\$234.40	
Energy Dissipator		All Culverts	10	cy. of	Riprap	@	\$10.49	per c.y.=	\$104.90	
							TOTAL ROCK			\$16,388.70

SPECIAL PROJECTS

Grade and shape road -	322.70	stations @	\$15.50	per station	\$5,001.85	
Pull ditch and endhaul to waste area -	52.00	stations @	\$100.00	per station	\$5,200.00	
Bench below subgrade at 106+00 to rebuild with riprap -	2.00	hours @	\$225.00	per hour	\$450.00	
Haul or push large boulder to stable location at 149+20 -	1.00	hour @	\$225.00		\$225.00	
Roll subgrade w/ vibratory roller prior to rocking -	322.70	stations @	\$13.20	per station	\$4,259.64	
Grass seed and fertilize -	0.18	acres @	\$220.00	per acre	\$39.60	
Mulching -	0.100	acres @	\$600.00	per acre	\$60.00	
			TOTAL SPECIAL PROJECTS			\$15,236.09

GRAND TOTAL \$35,733.87

SUMMARY OF CONSTRUCTION COST

Sale:

Skookum Ridge

Road:

E to F

<u>Construction -</u>	<u>16+00</u>	<u>stations</u>	<u>Improvement -</u>	<u>6+50</u>	<u>stations</u>	<u>Reconstruction -</u>	<u>0+00</u>	<u>stations</u>
	<u>0.30</u>	<u>miles</u>		<u>0.12</u>	<u>miles</u>		<u>0.00</u>	<u>miles</u>

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

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station		
6+50		7+20	30%		Outslope	\$191	=	\$133.70
7+20		9+10	40%		Outslope	\$243	=	\$461.70
9+10		17+40	30%		Outslope	\$191	=	\$1,585.30
17+40		21+60	35%		Outslope	\$191	=	\$802.20
21+60		22+50	10%		Outslope	\$90	=	\$81.00
								<u>TOTAL</u>
								\$3,063.90

IMPROVEMENT: CLEARING AND GRUBBING -

Scattering	0.180	acres	@	\$980.00	per acre =	\$176.40	
							<u>TOTAL CLEARING AND GRUBBING</u>
							\$176.40

CULVERTS - MATERIALS & INSTALLATION

Culverts

30	LF of 24"	\$810.00
		<u>\$810.00</u>

Culvert Markers

1	markers	\$8.00
		<u>\$8.00</u>

TOTAL CULVERTS

\$818.00

ROCK

0+00	to	1+00	30	cy. of	Stockpile	@	\$10.82	per c.y.=	\$324.60
Culvert Surfacing		9+70	20	cy. of	Pit-Run	@	\$10.49	per c.y.=	\$209.80
Junction Rock		0+00	10	cy. of	Stockpile	@	\$10.81	per c.y.=	\$108.10
Energy Dissipator		9+70	5	cy. of	Riprap	@	\$10.79	per c.y.=	\$53.95
Hardened Ford		18+50	20	cy. of	Pit-Run	@	\$10.65	per c.y.=	\$213.00
									<u>TOTAL ROCK</u>
									\$909.45

SPECIAL PROJECTS

Construct hardened ford -	1.00	@	\$150.00		\$150.00
Construct waste areas -	1.00	hour @	\$130.00	per hour	\$130.00
Construct landing at Point F -	1.00	@	\$250.00		\$250.00
Construct turn around before landing at Point F -	1.00	@	\$75.00		\$75.00
Grade and shape road -	22.50	stations @	\$14.00	per station	\$315.00
Roll subgrade w/ vibratory roller -	22.50	stations @	\$13.20	per station	\$297.00
Grass seed and fertilize -	0.84	acres @	\$220.00	per acre	\$184.80
Mulching -	0.220	acres @	\$600.00	per acre	\$132.00
					<u>TOTAL SPECIAL PROJECTS</u>
					\$1,533.80

GRAND TOTAL

\$6,501.55

SUMMARY OF CONSTRUCTION COST

Sale:

Skookum Ridge

Road:

G to H

<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>11+70</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
	0.00	miles		0.22	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -
Scattering

0.380 acres @ \$980.00 per acre = \$372.40
TOTAL CLEARING AND GRUBBING \$372.40

SPECIAL PROJECTS

Construct turnaround at 8+60 -	1.00	@	\$75.00		\$75.00
Construct landing at 10+50 -	1.00	@	\$300.00		\$300.00
Improve landing at Point H -	1.00	@	\$75.00		\$75.00
Grade and shape road -	11.70	stations @	\$15.50	per station	\$181.35
Roll subgrade w/ vibratory roller -	11.70	stations @	\$13.20	per station	\$154.44
Grass seed and fertilize -	0.43	acres @	\$220.00	per acre	\$94.60
			TOTAL SPECIAL PROJECTS		\$880.39
			GRAND TOTAL		\$1,252.79

SUMMARY OF CONSTRUCTION COST

Sale:		Skookum Ridge			Road:		I to J				
Construction -		6+50	stations	Improvement -		0+00	stations	Reconstruction -		0+00	stations
		0.12	miles			0.00	miles			0.00	miles
CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -											
Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station					
0+00		3+20	20%		Outslope	\$139	=			\$444.80	
3+20		3+50	30%		Outslope	\$191	=			\$57.30	
3+50		3+90	40%		Outslope	\$243	=			\$97.20	
3+90		4+85	30%		Outslope	\$191	=			\$181.45	
4+85		6+50	20%		Outslope	\$139	=			\$229.35	
										TOTAL	\$1,010.10
ROCK											
Junction Rock		0+00	20	cy. of	Jaw-Run	@	\$16.94 per c.y.=			\$338.80	
Log Fill Crossing		3+40	20	cy. of	Pit-Run	@	\$11.46 per c.y.=			\$229.20	
Hardened Ford		4+30	20	cy. of	Pit-Run	@	\$11.48 per c.y.=			\$229.60	
										TOTAL ROCK	\$797.60
SPECIAL PROJECTS											
Construct landing at Point J -					1.00	@	\$250.00			\$250.00	
Construct turnaround before landing -					1.00	@	\$75.00			\$75.00	
Construct hardened ford -					1.00	@	\$150.00			\$150.00	
Grade and shape road -					6.50	stations @	\$14.00	per station		\$91.00	
Construct log fill crossing -					1.00	@	\$200.00			\$200.00	
Roll subgrade w/ vibratory roller -					6.50	stations @	\$13.20	per station		\$85.80	
Grass seed and fertilize -					0.24	acres @	\$220.00	per acre		\$52.80	
Mulching -					0.100	acres @	\$600.00	per acre		\$60.00	
										TOTAL SPECIAL PROJECTS	\$964.60
										GRAND TOTAL	\$2,772.30

SUMMARY OF CONSTRUCTION COST

Sale:		<u>Skookum Ridge</u>			Road:		<u>K to L</u>		
<u>Construction -</u>		<u>10+20</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
		0.19	miles		0.00	miles		0.00	miles
<u>CONSTRUCTION:</u> CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -									
	<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist.</u> <u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>		
	0+00		6+20	20%		Outslope	\$139	=	\$861.80
	6+20		7+30	30%		Outslope	\$191	=	\$210.10
	7+30		8+20	25%		Outslope	\$165	=	\$148.50
	8+20		8+70	30%		Outslope	\$191	=	\$95.50
	8+70		10+20	25%		Outslope	\$165	=	\$247.50
									<u>TOTAL</u>
									\$1,563.40
<u>ROCK</u>									
Junction Rock	0+00		20	cy. of	Jaw-Run	@	\$17.06 per c.y.=		\$341.20
Hardened Ford	8+00		20	cy. of	Pit-Run	@	\$11.65 per c.y.=		\$233.00
									<u>TOTAL ROCK</u>
									\$574.20
<u>SPECIAL PROJECTS</u>									
Construct landing at Point L -					1.00	@	\$250.00		\$250.00
Construct turnaround before landing -					1.00	@	\$75.00		\$75.00
Grade and shape road -					10.20	stations @	\$14.00	per station	\$142.80
Construct hardened ford -					1.00	@	\$150.00		\$150.00
Roll subgrade w/ vibratory roller -					10.20	stations @	\$13.20	per station	\$134.64
Grass seed and fertilize -					0.37	acres @	\$220.00	per acre	\$81.40
Mulching -					0.100	acres @	\$600.00	per acre	\$60.00
									<u>TOTAL SPECIAL PROJECTS</u>
									\$893.84
								GRAND TOTAL	\$3,031.44

Sale:		Skookum Ridge		Road:		M to N	
Construction -	3+00 0.06	stations miles	Improvement -	0+00 0.00	stations miles	Reconstruction -	0+00 0.00
CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -							
Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	
0+00		0+50	30%		Outslope	\$191	= \$95.50
0+50		1+00	40%		Outslope	\$243	= \$121.50
1+00		1+60	50%		Outslope	\$459	= \$275.40
1+60		2+40	30%		Outslope	\$191	= \$152.80
2+40		3+00	25%		Outslope	\$165	= \$99.00
						TOTAL	\$744.20
ROCK							
Junction Rock		0+00	20	cy. of	Jaw-Run	@	\$17.09 per c.y.= \$341.80
						TOTAL ROCK	\$341.80
SPECIAL PROJECTS							
Construct landing at Point N -				1.00	@	\$250.00	\$250.00
Construct turnaround before landing -				1.00	@	\$75.00	\$75.00
Grade and shape road -				3.00	stations @	\$14.00	per station \$42.00
Roll subgrade w/ vibratory roller -				3.00	stations @	\$13.20	per station \$39.60
Grass seed and fertilize -				0.11	acres @	\$220.00	per acre \$24.20
Mulching -				0.080	acres @	\$600.00	per acre \$48.00
						TOTAL SPECIAL PROJECTS	\$478.80
						GRAND TOTAL	\$1,564.80

Sale:		<u>Skoookum Ridge</u>		Road:		<u>O to P</u>		
<u>Construction -</u>	0+00 0.00	stations miles	<u>Improvement -</u>	32+70 0.62	stations miles	<u>Reconstruction -</u>	0+00 0.00	stations miles
<p><u>IMPROVEMENT:</u> CLEARING AND GRUBBING -</p> <p>Widening 0.023 acres @ \$660.00 per acre = \$15.18</p> <p>Scattering 0.230 acres @ \$980.00 per acre = \$225.40</p> <p>TOTAL CLEARING AND GRUBBING \$240.58</p> <p><u>IMPROVEMENT:</u> EXCAVATION -</p> <p>Widening 98 cy. @ \$1.40 per c.y. = \$137.20</p> <p>TOTAL EXCAVATION \$137.20</p> <p><u>IMPROVEMENT:</u> ENDHAUL -</p> <p>Widening 16+20 to 17+20 98 cy. @ \$3.34 per c.y. = \$327.32</p> <p>Spread & compact 98 cy. @ \$0.25 per c.y. = \$24.50</p> <p>TOTAL ENDHAUL \$351.82</p> <p>CULVERTS - MATERIALS & INSTALLATION</p> <p><u>Culverts</u> 40 LF of 30" \$1,440.00</p> <p><u>Culvert Markers</u> 1 markers \$8.00</p> <p>TOTAL CULVERTS \$1,448.00</p> <p>ROCK</p> <p>Culvert Bedding/Backfill 10+00 10 cy. of Stockpile @ \$10.09 per c.y. = \$100.90</p> <p>Energy Dissipator 10+00 10 cy. of Riprap @ \$10.84 per c.y. = \$108.40</p> <p>Fill Reconstruction 10+00 150 cy. of Pit-Run @ \$10.84 per c.y. = \$1,626.00</p> <p>TOTAL ROCK \$1,835.30</p> <p>SPECIAL PROJECTS</p> <p>Clean culvert in/outlet at 32+70 - 1.00 hours @ \$145.00 per hour = \$145.00</p> <p>Fill roadway @ area of 10+00 - 4.00 hours @ \$145.00 per hour = \$580.00</p> <p>Grade and shape road - 32.70 stations @ \$14.00 per station = \$457.80</p> <p>Pull ditches and endhaul - 14.00 stations @ \$60.00 per station = \$840.00</p> <p>Roll subgrade w/ vibratory roller - 32.70 stations @ \$13.20 per station = \$431.64</p> <p>Remove culverts from state lands 1.00 @ \$282.90 total = \$282.90</p> <p>Grass seed and fertilize - 0.25 acres @ \$220.00 per acre = \$55.00</p> <p>Mulching - 0.225 acres @ \$600.00 per acre = \$135.00</p> <p>TOTAL SPECIAL PROJECTS \$2,927.34</p> <p>GRAND TOTAL \$6,940.24</p>								

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Jaw_Run	Location:	SE 1/4, SW 1/4, Sec 15, T2S, R8W, WM
Sale:	Skookum Ridge	Road:	3245 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	3245 c.y.
Drill Pct.:	75%	In Place Total:	2318 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. \$6,197.46

Drill & Shoot:	\$2.50 /cu.yd.	x	1739 cu.yds.	=	\$4,347.50
Rip Rock:	\$1.90 /cu.yd.	x	579 cu.yds.	=	\$1,100.10
Load Crusher:	\$0.70 /cu.yd.	x	1910 cu.yds.	=	\$1,337.00
Crush Rock:	\$2.60 /cu.yd.	x	1910 cu.yds.	=	\$4,966.00
Load Dump Truck:	\$0.70 /cu.yd.	x	3245 cu.yds.	=	\$2,271.50

Subtotal \$20,219.56

Move In/Set-up Crusher	1	@	\$1,718.60	=	\$1,718.60
Move In and set up Drill and Compressor	1	@	\$535.97	=	\$535.97
Move in Roller and Compactor	1	@	\$535.97	=	\$535.97
Move in Grader	1	@	\$168.18	=	\$168.18
Move in Loader	1	@	\$764.70	=	\$764.70
Move in Excavator	1	@	\$1,030.87	=	\$1,030.87
Move in Trucks	3	@	\$173.36	=	\$520.08

Subtotal \$5,274.37

TOTAL PRODUCTION COSTS \$25,493.93

Base Cost Jaw-Run	\$9.59	Per Cu.Yd.
Base Cost Other	\$5.39	Per Cu.Yd.

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B 24260 29500 (Jaw-Run)	4.67	2.45	9.59	16.71	1830	\$30,579.30
A to B Junction Rock (Jaw-Run)	4.20	2.45	9.59	16.24	20	\$324.80
A to B Energy Dissipator (Riprap)	4.67	1.40	5.39	11.46	90	\$1,031.40
A to B Ditch Fill (Pit-Run)	4.87	1.40	5.39	11.66	10	\$116.60
A to B Fill Reconstruction (Pit-Run)	4.86	1.40	5.39	11.65	80	\$932.00
C to D 14700 17360 (Pit-Run)	3.93	1.10	5.39	10.42	860	\$8,961.20
C to D Rebuild Subgrade (Riprap)	4.93	1.40	5.39	11.72	20	\$234.40
C to D Energy Dissipator (Riprap)	3.70	1.40	5.39	10.49	10	\$104.90
E to F Culvert Surfacing (Pit-Run)	4.00	1.10	5.39	10.49	20	\$209.80
E to F Energy Dissipator (Riprap)	4.00	1.40	5.39	10.79	5	\$53.95
E to F Hardened Ford (Pit-Run)	4.16	1.10	5.39	10.65	20	\$213.00
I to J Junction Rock (Jaw-Run)	4.90	2.45	9.59	16.94	20	\$338.80
I to J Log Fill Crossing (Pit-Run)	4.97	1.10	5.39	11.46	20	\$229.20
I to J Hardened Ford (Pit-Run)	4.99	1.10	5.39	11.48	20	\$229.60
K to L Junction Rock (Jaw-Run)	5.02	2.45	9.59	17.06	20	\$341.20
K to L Hardened Ford (Pit-Run)	5.16	1.10	5.39	11.65	20	\$233.00
M to N Junction Rock (Jaw-Run)	5.05	2.45	9.59	17.09	20	\$341.80
O to P Energy Dissipator (Riprap)	4.05	1.40	5.39	10.84	10	\$108.40
O to P Fill Reconstruction (Pit-Run)	4.05	1.40	5.39	10.84	150	\$1,626.00
				Total C.Y.	3245	Sub Total \$46,209.35

TOTAL ROCKING COSTS \$46,209.35

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	3" Stockpile	Location:	SE 1/4, SW 1/4, Sec 15, T2S, R8W, WM
Sale:	Skookum Ridge	Road:	240 c.y.
Swell:		Stockpile:	c.y.
Shrinkage		Total Truck Loads:	240 c.y.
Drill Pct.:	0%	In Place Total:	c.y.

Pit Development & Cleanup \$0.00

Load Dump Truck: \$0.70 /cu.yd. x 240 cu.yds. = \$168.00

Subtotal \$168.00

Move in Loader 1 @ \$764.70 = \$764.70
 Move in Trucks 1 @ \$173.36 = \$173.36

Subtotal \$938.06

Base Cost= \$4.61 Per Cu.Yd. TOTAL PRODUCTION COSTS \$1,106.06

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
C to D Spot Rock (Stockpile)	3.94	2.45	4.61	11.00	200	\$2,200.00
E to F 0 100 (Stockpile)	3.76	2.45	4.61	10.82	30	\$324.60
E to F Junction Rock (Stockpile)	3.75	2.45	4.61	10.81	10	\$108.10
				Total C.Y.	240	Sub Total \$2,632.70

TOTAL ROCKING COSTS \$2,632.70

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	2.5" Stockpile	Location:	SE 1/4, SW 1/4, Sec 30, T2S, R8W, WM
Sale:	Skookum Ridge	Road:	650 c.y.
Swell:		Stockpile:	c.y.
Shrinkage		Total Truck Loads:	650 c.y.
Drill Pct.:	0%	In Place Total:	c.y.

Pit Development & Cleanup \$0.00

Load Dump Truck: \$0.70 /cu.yd. x 650 cu.yds. = \$455.00

Subtotal \$455.00

Move in Roller and Compactor	1	@	\$466.06	=	\$466.06
Move in Grader	1	@	\$146.24	=	\$146.24
Move in Loader	1	@	\$664.95	=	\$664.95
Move in Trucks	2	@	\$150.75	=	\$301.50

Subtotal \$1,578.75

Base Cost=	\$3.13	Per Cu.Yd.	TOTAL PRODUCTION COSTS \$2,033.75
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Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B Culvert Bedding/Backfill (Stockpile)	5.49	1.40	3.13	10.02	90	\$901.80
A to B Spot Rock (Stockpile)	8.01	2.45	3.13	13.59	100	\$1,359.00
C to D 14700 17200 (Stockpile)	5.30	2.45	3.13	10.88	440	\$4,787.20
C to D Culvert Bedding (Stockpile)	5.57	1.40	3.13	10.10	10	\$101.00
O to P Culvert Bedding/Backfill (Stockpile)	5.56	1.40	3.13	10.09	10	\$100.90
				Total C.Y.	650	Sub Total \$7,249.90

TOTAL ROCKING COSTS	\$7,249.90
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Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Skookum Ridge**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
8.2	Pavement	30
10.6	Main Lines	7
6.0	Steep Grades	2

								Within	
No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Area Cost	Total Cost
1	Brush Cutter	\$598.31		\$4.00	0.00	0.00	0	\$0.00	\$598.31
1	Graders	\$668.91		\$3.65	0.00	0.00	0	\$0.00	\$668.91
1	Rollers (smooth/grid) & Compactors	\$466.06		\$5.00	0.00	0.00	0	\$0.00	\$466.06
1	Excavators (Med.)	\$727.05		\$35.50	0.00	0.00	0	\$0.00	\$727.05
1	Excavators (Large)	\$902.70	1	\$44.80	0.00	0.00	0	\$0.00	\$902.70
1	Tractor (D8)	\$820.89	2	\$15.10	0.00	0.00	0	\$0.00	\$820.89
2	Dump Truck (10 cy +)	\$376.07		\$2.85	0.00	0.00	0	\$0.00	\$376.07
1	Dump Truck (Off Hiway)	\$727.05	1	\$4.75	0.00	0.00	0	\$0.00	\$727.05
				TOTAL MOVE-IN COSTS:					\$5,287.04



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT *Skookum Ridge*

1. Type of Sale

Regeneration harvest, Recovery

2. Legal Description

Sections 20 and 29, T2S, R8W, W.M., Tillamook County, Oregon.

3. Sale Acreage

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

<u>ACRES</u>		
	<u>Gross</u>	<u>Net</u>
Area 1 (Modified Clearcut)	137	111

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

Used for calculating the advertised volume.

Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. Cruising Procedures

A. Cruise Method

All of the sale areas were cruised on a rectangular grid with 175' between plots and 700' between lines.

The timber sale areas were cruised using variable plot sampling. All conifers 8" DBH and greater and all hardwoods 10" DBH and greater were recorded on all plots. On even numbered plots tree species and number were recorded and on odd numbered plots species, diameter (inch), height, form factor, and sawmill grade were recorded. Heights were recorded to 6" and 7" outside bark for conifers and hardwoods, respectively. Merchantable heights were recorded to 6" and 7" outside bark for conifers and hardwoods, respectively.

B. Plot size

Area	BAF
1	40.00 (28 plots)
1	27.78 (2 plots)

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Log lengths favored 40' lengths.

5. Computation Procedure

Plot data was entered into SuperAce for computation of basal area, advertised volume, volume summary, log stock table, and stand table for each species and type. Cruise volumes were grown forward to 2018 from the cruise date.

Net sale acreage was used for volume calculation.

Cruise Statistics (Board Foot Volumes)			
Area	Number of Plots	SE (%)	CV (%)
1	30	8.9	47.9
Total	30	8.9	47.9

6. Hidden Defect and Breakage

A 1% reduction was applied to conifers and a 2% reduction to hardwood volumes for hidden defect and breakage.

7. Timber Description

The western portion of the sale area was burned in the 1933 Tillamook Fire and again in 1939's Saddle Mountain Fire. There has been no previous stand management activities since seedlings were planted in the mid to late 1960's. The stand has grown into a closed single canopy of conifer with elements of hardwood.

The stand is comprised of multiple merchantable species, please see the table below:

Sale Area	Species	DBH	Merchantable Bole Height (feet)	Merchantable top (inches inside bark)
1	Western hemlock	16.2	60	5
	Noble fir	22.7	84	5
	Douglas-fir	22.7	76	5
	Red Alder	13.7	33	6
	Western red cedar	11.2	36	5

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

8. Cruiser /Dates

The timber sale area was cruised by ODF in 2017.

9. Revenue Distribution

FDF 100%

Tax Code: 901 – 99%
801 – 1%

Deed Numbers: 144

10. Attachments

Volume Summary

Stand Table

Log Stock Tables

Logging Plan

11. Stand and Log Stock Tables Species Key

WH – Western hemlock take

DF – Douglas-fir take

NF – Noble fir take

RA – Red alder take

RC – Western red cedar

OC – Other conifer

FI		Stand Table Summary														
Project SKOOKUM																
T02S R08W S21 TSALE													T02S R08W S21 TSALE			
Twp	Rge	Sec	Tract	Type			Acres		Plots	Sample Trees			Page:	1		
02S	08W	21	AREA1GROW	SALE			111.00		30	123			Date:	09/18/2018		
													Time:	12:06:06PM		
S Spc	T	Sample		Av		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	Trees	FF 16'	Ht Tot				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
WH		9		81	76	11.206	5.22	11.35	10.6	41.9	3.82	120	476	424	133	53
WH		11		84	70	19.478	13.06	23.48	12.7	43.5	9.52	299	1,021	1,056	332	113
WH		12		83	95	3.447	2.61	6.98	13.6	52.4	3.01	95	366	334	105	41
WH		13		86	83	12.956	12.26	21.56	16.6	59.8	11.36	357	1,290	1,261	397	143
WH		15		86	78	12.384	14.87	18.38	20.6	63.5	12.04	378	1,167	1,336	420	130
WH		16		89	91	9.365	13.06	17.12	24.7	94.4	13.43	422	1,616	1,491	469	179
WH		17		83	91	4.991	7.83	8.47	28.9	92.1	7.79	245	780	864	272	87
WH		18		89	95	8.635	15.89	17.50	32.3	119.9	17.96	565	2,098	1,994	627	233
WH		19		88	102	10.491	20.89	22.61	34.7	129.1	24.98	786	2,921	2,772	872	324
WH		20		87	97	5.780	13.06	11.71	39.1	133.0	14.54	457	1,557	1,614	508	173
WH		21		86	99	4.239	10.44	8.59	41.1	145.2	11.21	353	1,247	1,245	392	138
WH		22		89	102	2.007	5.22	4.07	46.9	191.4	6.06	191	778	673	212	86
WH		23		87	107	5.310	15.67	11.62	47.0	192.6	18.50	546	2,238	2,054	606	248
WH		24		89	100	.805	2.61	1.63	57.7	215.0	2.99	94	351	332	104	39
WH		25		89	107	.773	2.61	1.57	62.8	241.2	3.12	98	378	347	109	42
WH		29		89	127	.583	2.61	1.77	67.3	258.6	3.79	119	458	421	132	51
WH		31		83	93	.505	2.61	.51	33.9	52.4	.55	17	27	61	19	3
WH		33		92	129	.453	2.61	1.38	84.6	283.1	3.70	117	390	411	129	43
WH		36		80	104	.372	2.61	.75	111.0	445.6	2.66	84	336	295	93	37
WH		37		86	121	.352	2.61	.71	149.9	529.5	3.40	107	378	377	119	42
WH		Totals		86	87	114.133	168.35	191.77	28.4	103.6	174.44	5,451	19,872	19,363	6,051	2,206
NF		12		83	87	2.332	1.99	4.73	11.9	41.1	1.35	56	194	150	62	22
NF		13		83	99	2.089	1.99	4.24	17.3	66.8	1.76	73	283	195	81	31
NF		17		87	105	2.541	3.97	5.15	26.5	107.9	3.28	137	556	364	152	62
NF		18		89	120	1.071	1.99	3.26	26.5	116.4	2.07	86	379	230	96	42
NF		19		89	105	2.749	5.35	5.57	35.4	136.8	4.74	197	763	526	219	85
NF		20		89	118	.896	1.99	1.82	44.3	184.9	1.93	81	336	215	89	37
NF		21		89	118	.798	1.99	2.43	35.9	171.2	2.09	87	415	232	97	46
NF		22		89	101	2.223	5.96	4.51	47.9	190.3	5.18	216	857	575	240	95
NF		23		87	118	1.389	3.97	3.51	46.3	197.4	3.90	162	693	433	180	77
NF		24		88	103	1.241	3.97	3.16	50.5	234.8	3.83	160	743	425	177	82
NF		26		86	107	.539	1.99	1.09	64.9	236.2	1.70	71	258	189	79	29
NF		27		89	116	.995	3.97	2.02	78.2	338.9	3.78	158	683	420	175	76
NF		28		89	116	1.836	7.95	4.18	75.3	340.7	7.55	314	1,423	838	349	158
NF		29		90	128	.862	3.97	2.17	80.9	399.3	4.22	176	868	469	195	96
NF		31		89	122	1.138	5.96	2.69	90.9	422.6	5.87	245	1,137	652	272	126
NF		32		89	132	.355	1.99	1.08	82.8	359.5	2.14	89	388	238	99	43
NF		33		92	142	.335	1.99	1.02	91.8	482.8	2.25	94	492	249	104	55
NF		34		88	125	.617	3.97	1.56	107.6	525.9	4.02	168	819	446	186	91
NF		35		86	132	.594	3.97	1.50	111.8	532.2	4.04	168	801	448	187	89
NF		41		89	119	.212	1.99	.43	166.3	770.4	1.72	72	332	191	79	37
NF		Totals		87	110	24.811	70.90	56.11	50.1	221.3	67.42	2,809	12,418	7,484	3,118	1,378
RA		9		78	50	11.388	5.51	11.46	5.3	21.5	1.65	60	246	184	67	27
RA		10		83	60	4.763	2.75	4.79	9.8	32.2	1.29	47	155	143	52	17
RA		11		78	53	4.239	2.75	4.27	11.8	32.2	1.38	50	138	153	56	15
RA		12		72	95	3.253	2.75	6.55	7.4	21.5	1.38	49	141	153	54	16
RA		13		85	78	8.346	8.26	11.07	18.1	62.2	5.51	201	689	612	223	76
RA		15		81	66	8.972	11.01	11.25	19.6	53.8	6.05	220	605	672	245	67
RA		20		81	89	1.292	2.75	1.30	30.5	128.9	1.09	40	168	121	44	19
RA		21		89	70	1.145	2.75	1.15	60.0	193.4	1.90	69	223	211	77	25
RA		22		89	83	2.145	5.51	3.25	46.1	160.9	4.12	150	523	457	166	58

FI		TSTNDSUM												Stand Table Summary													
Project														SKOOKUM													
T02S R08W S21 TSALE														T02S R08W S21 TSALE													
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		Page: 2											
02S		08W		21		AREA1GROW		SALE		111.00		30		123		Date: 09/18/2018											
																Time: 12:06:06PM											
S Spc	T	Sample		Av		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	Trees	FF 16'	Ht Tot				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF											
RA		23		92	99	.975	2.75	1.96	43.4	166.6	2.34	85	327	260	95	36											
RA		Totals		81	67	46.518	46.81	57.06	17.0	56.3	26.71	971	3,214	2,965	1,078	357											
DF		20		92	97	2.690	6.14	5.45	38.2	143.8	5.93	208	784	658	231	87											
DF		22		89	89	2.270	6.14	4.60	41.0	133.5	5.37	189	615	596	209	68											
DF		28		88	118	1.477	6.14	2.99	77.7	333.8	6.63	233	999	736	258	111											
DF		Totals		90	99	6.437	18.43	13.05	48.2	183.8	17.93	629	2,398	1,990	698	266											
RC		11		81	58	1.334	.94	1.35	14.3	42.1	.46	19	57	51	22	6											
RC		Totals		81	58	1.334	.94	1.35	14.3	42.1	0.46	19	57	51	22	6											
Totals				85	85	193.233	305.43	319.34	30.9	118.9	286.96	9880	37,959	31,852	10,967	4,213											

FI TLOGSTVB				Log Stock Table - MBF															
				Project: SKOOKUM															
T02S R08W S21 TSALE												T02S R08W S21 TSALE							
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	2										
02S	08W	21	AREA1GROW	SALE	111.00	30	123	Date	9/18/2018										
								Time	12:06:06PM										
S Spp	So	Gr	Log	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
NF	CO	4	25	3		3	.2		3										
NF	CO	4	26	2		2	.1			2									
NF	CO	4	33	5		5	.3		5										
NF	CO	4	34	6		6	.4		6										
NF	CO	4	36	13		13	.9		13										
NF Totals				1,385		1,378	32.7		35	72	55	128	155	247	235	305	148		
RA	H	2	20	19		19	5.2					19							
RA	H	2	36	23		23	6.4					23							
RA	H	2	40	65		65	18.3					31	34						
RA	H	3	16	22		22	6.2					22							
RA	H	3	20	21		21	5.9					21							
RA	H	3	40	25		25	6.9					25							
RA	H	4	12	14		14	4.0			14									
RA	H	4	16	12	33.3	8	2.2				8								
RA	H	4	18	13		13	3.7			13									
RA	H	4	20	10		10	2.8			10									
RA	H	4	21	12		12	3.3			12									
RA	H	4	25	17		17	4.8			17									
RA	H	4	26	15		15	4.3			15									
RA	H	4	28	17		17	4.9			17									
RA	H	4	35	14		14	3.9			14									
RA	H	4	38	16		16	4.5			16									
RA	H	4	40	45		45	12.5			45									
RA Totals				361	1.1	357	8.5		174	8	68	73	34						
DF	CO	2	40	228	1.2	225	84.7					135		90					
DF	CO	3	40	20		20	7.7			20									
DF	CO	4	27	8		8	3.0		8										
DF	CO	4	33	12		12	4.7		12										
DF Totals				269		266	6.3		20	20		135		90					
RC	CO	4	35	6		6	100.0		6										
RC Totals				6		6	.1		6										
Total All Species				4,322	2.5	4,213	100.0		432	377	339	488	1003	501	481	409	183		

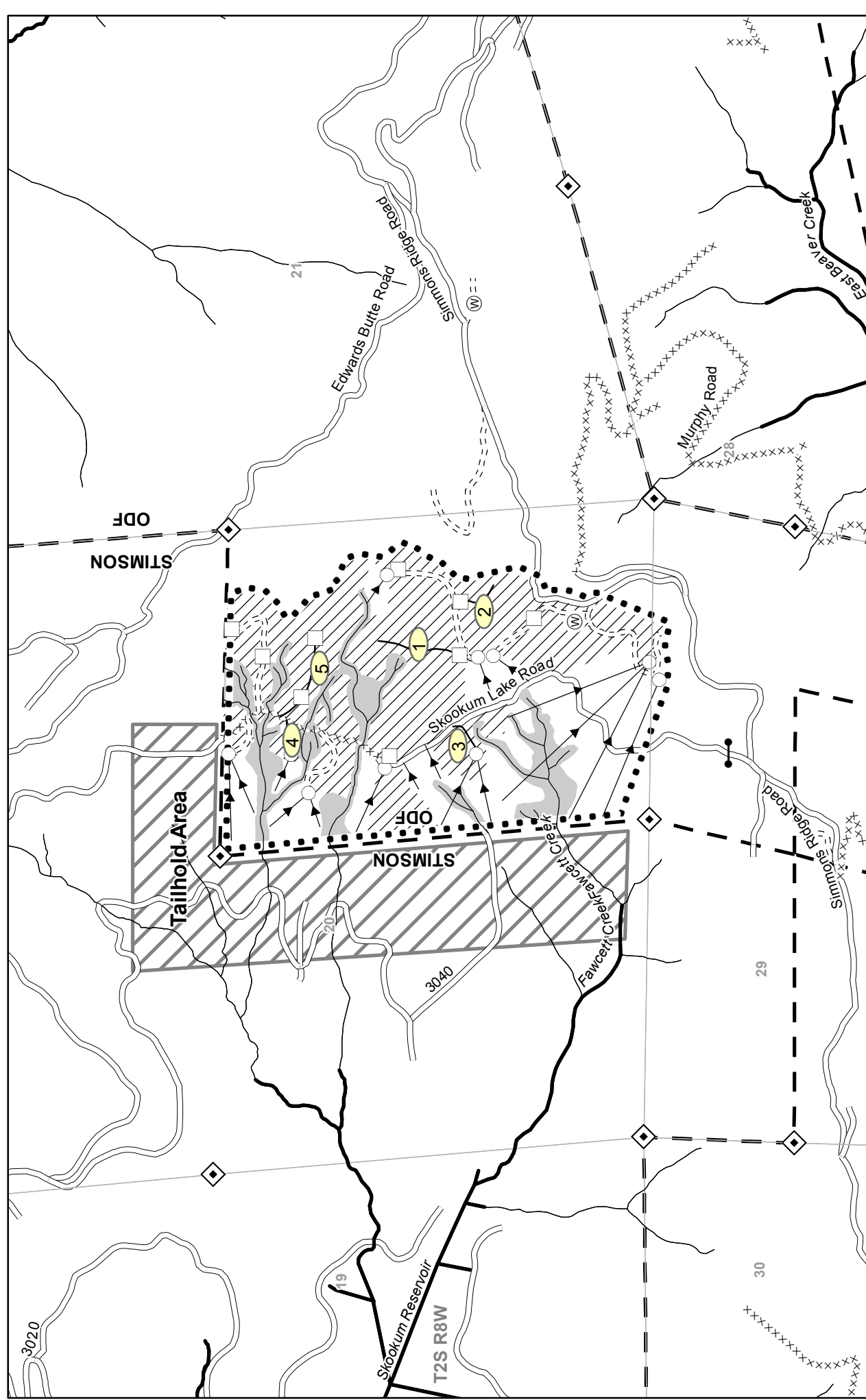


"STEWARDSHIP IN FORESTRY"

Skookum Ridge TL-341-2019-W00757-01 **Volume Summary**

Area 1-Modified Clearcut				
		111 acres		
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Western hemlock	19.8	2206	1%	2184
Noble Fir	12.4	1378	1%	1364
Douglas-fir	2.39	266	1%	263
Red Alder	3.20	357	2%	350
Western red cedar	0.05	6	1%	6
TOTAL	37.8	4213		4167

TOTAL SALE VOLUME			111 acres
SPECIES	Cruised Net (MBF)	Net Sale (MBF)	
Western hemlock	2206	2184	
Noble fir	1378	1364	
Douglas-fir	266	263	
Red Alder	357	350	
Western red cedar	6	6	
TOTAL	4213	4167	



LOGGING PLAN

Timber Sale Contract TL341-2019-W00757-01

SKOOKUM RIDGE

Portions of Sections 20 and 29
T2S, R8W, W.M.,

Type of		Acres
Area	Operation	Gross Net
1	Modified Clearcut	137 111
Total		137 111

Tillamook District GIS

9/10/2018

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



- | | | | | | |
|--|------------------------------|--|---------------------------|--|--------------------|
| | Rock source | | Tailhold Area | | Swing road |
| | Stock pile | | Buffer | | Non-project road |
| | Waste area | | Non-required thinning | | Blocked road |
| | Bridge | | Cable yarding | | OHV trail |
| | Gate | | Ground yarding | | Ownership boundary |
| | Survey corner | | Helicopter yarding | | Fish stream |
| | Domestic water supply intake | | Downhill yarding | | Non-fish stream |
| | Truck turn-around | | Green tree retention area | | Unsurfaced road |
| | Helicopter landing zone | | | | Surfaced road |
| | Cultural site | | | | Paved road |
| | | | | | Abandoned road |