



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Pretty Penny
Sale FG-341-2019-W00545-01

District: Forest Grove

Date: November 13, 2018

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,271,484.56	\$0.00	\$2,271,484.56
		Project Work:	\$0.00
		Advertised Value:	\$2,271,484.56



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Timber Description

Location: Portions of Sections 21 and 28, T3N, R6W, W.M., Tillamook County, Oregon.

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	25	0	98
Western Hemlock / Fir	15	0	98

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	4,059	614	4,673
Western Hemlock / Fir	62	26	88
Total	4,121	640	4,761

Comments: Pond Values Used: Local Pond Values, November 2018.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$938.53/\text{MBF} = \$1,200/\text{MBF} - \$261.47/\text{MBF}$

Red Alder and other Hardwoods Stumpage Price = Pond Value minus Logging Cost:
 $\$453.53/\text{MBF} = \$715/\text{MBF} - \$261.47/\text{MBF}$

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: $3 \text{ pieces} \times \$1,000/\text{Piece} = \$3,000$
Slash Treatment: $15 \text{ acres} \times \$200/\text{acre} = \$3,000$
TOTAL Other Costs (No Profit & Risk added) = $\$12,000$

ROAD MAINTENANCE
Move-in: $\$4,000$
General Road Maintenance: $10.9 \text{ miles} \times \$1,200/\text{mile} = \$13,080$
TOTAL Road Maintenance: $\$17,080/4,762 \text{ MBF} = \$3.59/\text{MBF}$



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Logging Conditions

Combination#: 1 Douglas - Fir 74.66%
 Western Hemlock / Fir 71.09%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber

yarding distance: Short (400 ft) **downhill yarding:** No

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

loads / day: 9 **bd. ft / load:** 4600

cost / mbf: \$144.93

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

Combination#: 2 Douglas - Fir 25.34%
 Western Hemlock / Fir 28.91%

Logging System: Shovel **Process:** Stroke Delimber

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:** 4600

cost / mbf: \$57.46

machines: Stroke Delimber (B)



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District: Forest Grove

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Logging Costs

Operating Seasons: 2.00	Profit Risk: 10%
Project Costs: \$0.00	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$12,000.00

Miles of Road

Road Maintenance: \$3.59

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	4.6
Western Hemlock / Fir	\$0.00	2.0	3.7
Noble Fir	\$0.00	2.0	3.9



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Pretty Penny Sale FG-341-2019-W00545-01

District: Forest Grove

Date: November 13, 2018

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$122.76	\$3.66	\$1.84	\$105.33	\$0.00	\$23.36	\$0.00	\$2.00	\$2.52	\$261.47
Western Hemlock / Fir									
\$119.64	\$3.66	\$1.84	\$130.95	\$0.00	\$25.61	\$0.00	\$2.00	\$2.52	\$286.22

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$741.31	\$479.84	\$0.00
Western Hemlock / Fir	\$0.00	\$617.95	\$331.73	\$0.00



"STEWARDSHIP IN FORESTRY"

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Pretty Penny
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District: Forest Grove

Date: November 13, 2018

Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	4,673	\$479.84	\$2,242,292.32
Western Hemlock / Fir	88	\$331.73	\$29,192.24

Gross Timber Sale Value

Recovery: \$2,271,484.56

Prepared By: Mark Savage

Phone: 503-359-7437

TIMBER SALE SUMMARY
Pretty Penny
Contract # FG-341-2019-W00545-01

1. **Location:** Portions of Sections 21 and 28, T3N, R6W, W.M., Tillamook County, Oregon.
2. **Type of Sale:** This timber sale is a Modified Clearcut comprised of two sale areas. Area 1 is 33 net acres and Area 2 is 80 net acres. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF, Tillamook County, Tax Code 56-1.
4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.
5. **Cruise:** The timber sale was cruised by ODF Cruisers in September of 2018. For more information see Cruise Report.
6. **Timber Description:** The Timber Sale Area consists of a well-stocked 80 year old Douglas-fir stand with minor amounts of noble fir, western hemlock, and red alder. For Area 1 the stand has an average of 197 ft² of basal area for all species, an average Douglas-fir DBH of 24 inches, and an estimated average net Douglas-fir volume of approximately 45.2 MBF per acre. For Area 2 the stand has an average of 178 ft² of basal area for all species, an average Douglas-fir DBH of 25 inches, and an estimated average net Douglas-fir volume of approximately 39.8 MBF per acre.
7. **Topography and Logging Method:** Slopes within the sale areas range from 10% to 65% and are generally southwest in aspect. Elevations range from 1,560 to 2,500 feet. The following table summarizes the estimated maximum and average horizontal cable corridor length, the estimated maximum and average tractor skid trail length, and the percent harvest method for each Sale Area.

Sale Area	Tractor			Cable		
	Average	Maximum	%	Average	Maximum	%
Area 1	150	300	9	650	1,350	91
Area 2	300	725	33	500	925	67

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 west on Cochran Road for 8.6 miles to enter the eastern portion of Area 2. To access the western portion of Area 1, proceed an additional 1.6 miles west on Cochran Road.

CRUISE REPORT
Pretty Penny
Contract # FG-341-2019-W00545-01

1. LOCATION:

Portions of Sections 21 and 28, T3N, R6W, W.M., Tillamook County, Oregon.

2. CRUISE DESIGN:

Pre-cruise evaluation indicated that the stand's average DBH is approximately 21 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. Statistical analysis indicated that 37 variable radius plots utilizing a 40 BAF prism would produce an adequate sample size for the timber sale as a whole.

3. SAMPLING METHOD:

The Timber Sale Area was cruised in September of 2018. Area 1 and Area 2 were sampled with 37 plots laid out on a 5 chain x 6 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain. All plot trees were measured and graded.

4. CRUISE RESULTS:

171 trees were measured and graded producing a cumulative Sampling Error of 5.2% on the Basal Area and 5.8% 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. Bole heights were calculated to a six inch top.
- b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.
- c) **Form Factors** were measured for each grade tree using a form point of 16 feet.

6. DATA PROCESSING:

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

7. Cruisers: The sale was cruised by ODF cruiser Kenton Burns, Adrian Torres, and Mark Savage.

Prepared by: Mark Savage 11-26-18
Date

Reviewed by: Erik Marcy 11-26-18
Date

TC PSTATS		PROJECT STATISTICS							PAGE 1			
		PROJECT PRETTY							DATE 9/20/2018			
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
03N	06	21	00A1	00MC	Areas 1 & 2 Combined	113.00	37	171	S	W		
03N	06W	21	00A2	00MC								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			37	171	4.6							
CRUISE			37	171	4.6	6,302	2.7					
DBH COUNT												
REFOREST												
COUNT												
BLANKS												
100 %												
STAND SUMMARY												
			SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			167	54.1	24.6	132	36.1	179.3	42,661	42,212	8,828	8,828
NOB FIR			3	.7	29.6	136	0.6	3.3	677	652	143	143
WHEMLOCK			1	1.0	15.0	78	0.3	1.2	135	135	37	37
TOTAL			171	55.8	24.6	131	37.1	183.8	43,473	42,999	9,008	9,008
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			44.6	3.5	1,025	1,062	1,098					
NOB FIR			66.7	46.2	748	1,390	2,032					
WHEMLOCK												
TOTAL			45.8	3.5	1,025	1,062	1,099	84	21	9		
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			40.5	3.1	213	220	227					
NOB FIR			58.7	40.6	171	288	406					
WHEMLOCK												
TOTAL			41.6	3.2	213	220	227	69	17	8		
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			58.7	9.6	49	54	59					
NOB FIR			397.7	65.3	0	1	1					
WHEMLOCK			608.3	99.9	0	1	2					
TOTAL			57.7	9.5	50	56	61	133	33	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			32.0	5.2	170	179	189					
NOB FIR			344.1	56.5	1	3	5					
WHEMLOCK			608.3	99.9	0	1	2					
TOTAL			31.4	5.2	174	184	193	39	10	4		
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			35.9	5.9	39,724	42,212	44,701					
NOB FIR			355.5	58.4	271	652	1,033					
WHEMLOCK			608.3	99.9	0	135	269					
TOTAL			35.2	5.8	40,514	42,999	45,485	49	12	5		
CL	68.1	COEFF	NET CUFT FT/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
DOUG FIR			34.4	5.6	8,329	8,828	9,326					
NOB FIR			344.9	56.7	62	143	225					

TC PSTATS				PROJECT STATISTICS				PAGE	2	
				PROJECT	PRETTY			DATE	9/20/2018	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
03N	06	21	00A1	00MC		113.00	37	171	S	W
03N	06W	21	00A2	00MC						
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
WHEMLOCK			608.3	99.9	0	37	74			
TOTAL			33.5	5.5	8,513	9,008	9,503	45	11	5

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																		
T03N R06W S21 Ty00MC33.00 T03N R06W S21 Ty00MC80.00				Project: PRETTY Acres113.00														Page1 Date9/20/2018 Time3:36:57PM				
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def%GrossNet			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															4	22		0.00	1.7
DF			2M	86	1.2	37,091	36,658	4,142				31	69	0	0	0	99	40	17	477	2.36	76.8
DF			3M	12	.3	5,095	5,080	574			93		7	1	2	6	90	38	8	99	0.76	51.1
DF			4M	2		475	475	54			100			39	61			21	6	26	0.35	18.3
DF			Totals	98	1.1	42,661	42,212	4,770			12	27	60	1	1	1	97	36	13	285	1.64	147.9
NF			CU															4	36		0.00	.1
NF			2M	85	4.2	586	561	63				13	87			100		40	18	589	3.11	1.0
NF			3M	13		83	83	9		100						41	59	37	9	122	0.88	.7
NF			4M	2		8	8	1		100				100				18	6	20	0.32	.4
NF			Totals	2	3.6	677	652	74			14	11	75	1		5	94	33	14	299	2.01	2.2
WH			3M	85		115	115	13		100						100		40	9	120	0.83	1.0
WH			4M	15		19	19	2		100				100				16	6	20	0.32	1.0
WH			Totals	0		135	135	15		100				14		86		28	8	70	0.69	1.9
Totals					1.1	43,473	42,999	4,859			13	27	60	1	1	1	97	36	13	283	1.64	152.1

TC		PSTNDSUM		Stand Table Summary										Page		1	
														Date:		9/20/2018	
T03N R06W S21 Ty00MC 33.00 T03N R06W S21 Ty00MC 80.00				Project PRETTY										Time:		3:36:57PM	
				Acres 113.00										Grown Year:			
S Spec T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Net	Totals				
	DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre		Bd.Ft. Acre	Tons	Cunits	MBF	
DF	8	2	87	69	6.761	2.36	6.76	4.6	25.0	.89	31	169	101	35	19		
DF	10	1	86	71	2.163	1.18	2.16	11.5	60.0	.71	25	130	80	28	15		
DF	14	1	85	84	1.104	1.18	2.21	14.1	55.0	.89	31	121	100	35	14		
DF	15	1	89	117	.732	.90	1.46	23.6	105.0	.98	35	154	111	39	17		
DF	16	2	88	116	1.287	1.80	3.22	21.6	96.0	1.98	70	309	224	79	35		
DF	18	1	88	142	.508	.90	1.53	26.7	116.7	1.16	41	178	131	46	20		
DF	19	3	87	136	1.512	2.98	4.54	30.3	130.7	3.92	137	593	443	155	67		
DF	20	2	90	150	.953	2.08	2.86	37.0	179.2	3.01	106	512	340	119	58		
DF	21	4	88	134	1.728	4.16	5.18	36.7	166.8	5.42	190	865	612	215	98		
DF	22	8	88	141	2.936	7.75	8.36	44.9	203.6	10.70	375	1,702	1,209	424	192		
DF	23	9	88	150	2.803	8.09	9.03	45.8	214.5	11.80	414	1,937	1,333	468	219		
DF	24	6	87	145	2.074	6.52	6.22	51.8	231.9	9.18	322	1,443	1,038	364	163		
DF	25	13	87	146	4.087	13.93	12.52	54.9	250.4	19.58	687	3,136	2,213	776	354		
DF	26	14	87	148	4.022	14.83	12.55	60.1	284.1	21.51	755	3,567	2,431	853	403		
DF	27	13	87	148	3.504	13.93	10.96	64.7	305.8	20.23	710	3,352	2,286	802	379		
DF	28	13	86	145	3.390	14.50	10.10	71.0	338.9	20.45	718	3,424	2,311	811	387		
DF	29	14	86	148	3.356	15.39	10.52	72.8	350.0	21.82	766	3,683	2,466	865	416		
DF	30	9	86	155	1.934	9.49	6.17	79.6	397.7	13.99	491	2,453	1,580	555	277		
DF	31	10	86	149	2.197	11.52	6.59	88.4	425.7	16.62	583	2,807	1,878	659	317		
DF	32	11	85	151	2.173	12.14	7.31	82.4	400.4	17.18	603	2,928	1,942	681	331		
DF	33	4	86	166	.795	4.72	2.98	87.9	453.3	7.47	262	1,351	844	296	153		
DF	34	6	85	160	1.078	6.80	3.56	102.6	527.2	10.42	366	1,879	1,178	413	212		
DF	35	8	84	155	1.413	9.44	4.59	105.2	521.9	13.76	483	2,396	1,555	546	271		
DF	36	2	84	155	.294	2.08	.88	122.5	633.3	3.08	108	559	348	122	63		
DF	37	2	85	157	.316	2.36	.95	132.4	700.0	3.58	126	664	404	142	75		
DF	38	4	83	147	.528	4.16	1.58	124.2	604.1	5.61	197	957	633	222	108		
DF	39	2	81	150	.284	2.36	.85	136.0	658.3	3.31	116	562	374	131	63		
DF	41	1	79	130	.098	.90	.29	131.6	596.7	1.10	39	175	125	44	20		
DF	42	1	79	145	.093	.90	.28	154.3	736.7	1.23	43	206	139	49	23		
DF	Totals	167	87	132	54.126	179.32	146.26	60.4	288.6	251.59	8,828	42,212	28,429	9,975	4,770		
NF	20	1	86	129	.412	.90	1.24	31.7	106.7	.94	39	132	106	44	15		
NF	40	2	81	146	.270	2.36	.81	128.4	641.7	2.50	104	521	282	118	59		
NF	Totals	3	84	136	.682	3.26	2.05	70.0	318.7	3.44	143	652	389	162	74		
WH	15	1	86	78	.962	1.18	1.92	19.2	70.0	1.18	37	135	134	42	15		
WH	Totals	1	86	78	.962	1.18	1.92	19.2	70.0	1.18	37	135	134	42	15		
Totals		171	87	131	55.769	183.76	150.23	60.0	286.2	256.21	9,008	42,999	28,952	10,179	4,859		

Log Stock Table - MBF

T03N R06W S21 Ty00MC	33.00
T03N R06W S21 Ty00MC	80.00

Project: PRETTY
Acres 113.00

Page 2
Date 9/20/2018
Time 3:36:56PM

S Spp	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+
WH		Totals		15		15	.3			2	13								
Total		All Species		4,912	1.1	4,859	100.0			222	164	228	378	574	1671	1140	482		

TC PSTATS				PROJECT STATISTICS				PAGE	1		
				PROJECT		PRETTY		DATE	9/20/2018		
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
03N	06	21	00A1	00MC		Acreal 33.00	13	64	S	W	
				TREES		ESTIMATED	PERCENT				
				PER PLOT		TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES				
TOTAL			13	64	4.9						
CRUISE			13	64	4.9	2,015	3.2				
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			63	59.6	24.4	147	39.2	193.8	46,734	46,107	9,751
NOB FIR			1	1.4	20.0	129	0.7	3.1	536	451	134
TOTAL			64	61.0	24.3	146	39.9	196.9	47,270	46,559	9,885
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		47.5	6.0	881	937	993					
NOB FIR											
TOTAL		48.3	6.0	872	928	984	93	23	10		
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		44.3	5.6	186	197	208					
NOB FIR											
TOTAL		44.8	5.6	184	195	206	80	20	9		
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		37.9	10.9	53	60	66					
NOB FIR		360.6	103.9		1	3					
TOTAL		38.8	11.2	54	61	68	65	16	7		
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		32.5	9.4	176	194	212					
NOB FIR		360.6	103.9		3	6					
TOTAL		31.5	9.1	179	197	215	43	11	5		
CL	68.1	COEFF		NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15		
DOUG FIR		39.2	11.3	40,898	46,107	51,316					
NOB FIR		360.6	103.9		451	920					
TOTAL		38.3	11.0	41,418	46,559	51,699	63	16	7		
CL	68.1	COEFF		NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15		
DOUG FIR		36.5	10.5	8,724	9,751	10,778					
NOB FIR		360.6	103.9		134	273					
TOTAL		35.5	10.2	8,874	9,885	10,896	54	14		6	

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T03N R06W S21 Ty00MC 33.00				Project:		PRETTY											Page		1		
				Acres		33.00											Date		9/20/2018		
																	Time		3:35:29PM		
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
					4-5	6-11	12-16		17+	12-20	21-30	31-35	36-99								
DF			CU														4	22		0.00	2.0
DF			2M	79	1.6	37,350	36,739	1,212			46	54	1	1		99	40	16	415	2.08	88.5
DF			3M	19	.2	8,772	8,756	289		87		13		0	6	94	39	9	121	0.80	72.2
DF			4M	2		612	612	20		100			37	63			21	6	26	0.38	23.4
DF Totals				99	1.3	46,734	46,107	1,522		18	37	45	1	1	1	97	37	12	248	1.43	186.2
NF			2M	56	25.0	338	254	8			100					100	40	13	180	1.55	1.4
NF			3M	37		169	169	6		100						100	40	9	120	0.68	1.4
NF			4M	7		28	28	1		100			100				18	6	20	0.32	1.4
NF Totals				1	15.8	536	451	15		44	56		6			94	33	9	107	0.97	4.2
Totals					1.5	47,270	46,559	1,536		18	37	45	1	1	1	97	37	12	245	1.42	190.4

TC		PSTNDSUM										Stand Table Summary										Page		1	
																						Date:		9/20/2018	
T03N R06W S21 Ty00MC					33.00					Project					PRETTY					Time:		3:35:30PM			
										Acres					33.00					Grown Year:					
S Sp	T	DBH	Sample Trees	Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals											
				FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF									
DF		15	1	89	117	2.507	3.08	5.01	23.6	105.0	3.37	118	527	111	39	17									
DF		16	2	88	116	4.407	6.15	11.02	21.6	96.0	6.79	238	1,058	224	79	35									
DF		18	1	88	142	1.741	3.08	5.22	26.7	116.7	3.97	139	609	131	46	20									
DF		19	2	87	141	3.125	6.15	9.38	31.2	133.3	8.34	293	1,250	275	97	41									
DF		20	1	91	157	1.410	3.08	4.23	39.6	200.0	4.77	168	846	158	55	28									
DF		21	2	86	127	2.558	6.15	7.68	35.0	151.7	7.65	269	1,164	253	89	38									
DF		22	6	89	147	6.994	18.46	20.98	44.4	207.8	26.53	931	4,359	875	307	144									
DF		23	9	88	150	9.598	27.69	30.93	45.8	214.5	40.40	1,417	6,633	1,333	468	219									
DF		24	2	87	158	1.959	6.15	5.88	54.0	243.3	9.04	317	1,430	298	105	47									
DF		25	5	87	156	4.513	15.38	14.44	55.4	259.4	22.82	801	3,746	753	264	124									
DF		26	6	86	153	5.007	18.46	16.69	56.0	265.0	26.64	935	4,423	879	308	146									
DF		27	5	87	156	3.869	15.38	13.16	62.3	301.8	23.36	820	3,970	771	270	131									
DF		28	3	85	159	2.159	9.23	7.20	68.3	332.0	14.01	492	2,389	462	162	79									
DF		29	4	84	154	2.683	12.31	8.72	71.8	340.0	17.86	627	2,965	589	207	98									
DF		30	4	85	166	2.507	12.31	8.78	75.3	381.4	18.82	660	3,347	621	218	110									
DF		31	1	84	144	.587	3.08	1.76	84.2	366.7	4.22	148	646	139	49	21									
DF		32	3	85	148	1.653	9.23	5.51	84.1	420.0	13.20	463	2,314	436	153	76									
DF		34	1	81	180	.488	3.08	1.95	90.1	450.0	5.01	176	878	165	58	29									
DF		36	1	84	157	.435	3.08	1.31	122.5	633.3	4.56	160	827	150	53	27									
DF		38	2	82	149	.781	6.15	2.34	128.0	605.0	8.55	300	1,418	282	99	47									
DF		41	1	79	130	.336	3.08	1.01	131.6	596.7	3.78	132	601	125	44	20									
DF		42	1	79	145	.320	3.08	.96	154.3	736.7	4.22	148	707	139	49	23									
DF		Totals	63	87	147	59.639	193.85	184.14	53.0	250.4	277.90	9,751	46,107	9,171	3,218	1,522									
NF		20	1	86	129	1.410	3.08	4.23	31.7	106.7	3.22	134	451	106	44	15									
NF		Totals	1	86	129	1.410	3.08	4.23	31.7	106.7	3.22	134	451	106	44	15									
Totals			64	87	146	61.049	196.92	188.37	52.5	247.2	281.12	9,885	46,559	9,277	3,262	1,536									

Log Stock Table - MBF

T03N R06W S21 Ty00MC 33.00

Project: PRETTY
Acres 33.00Page 1
Date 9/20/2018
Time 3:35:29PM

S T Spp	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Sp	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	18	9		9	.6									9			
DF		2M	22	7		7	.5									7			
DF		2M	40	1,217	1.7	1,197	78.7						154	214	537	246	45		
DF		3M	22	1		1	.1					1							
DF		3M	32	5		5	.3			4	1								
DF		3M	34	11		11	.7			4	6								
DF		3M	36	12		12	.8			10		1							
DF		3M	38	6		6	.4			6									
DF		3M	40	255		255	16.7			33	49	134			12		27		
DF		4M	12	1		1	.1			1	0								
DF		4M	16	3		3	.2			3									
DF		4M	20	3		3	.2			3									
DF		4M	22	3		3	.2			3	1								
DF		4M	24	2		2	.1			2									
DF		4M	26	3		3	.2			3									
DF		4M	28	2		2	.1			2									
DF		4M	30	3		3	.2			3									
DF		Totals		1,542	1.3	1,522	99.0			76	58	136	154	214	549	262	72		
NF		2M	40	11	25.0	8	56.2					8							
NF		3M	40	6		6	37.5				6								
NF		4M	18	1		1	6.2			1									
NF		Totals		18	15.8	15	1.0			1	6	8							
Total		All Species		1,560	1.5	1,536	100.0			77	63	136	162	214	549	262	72		

TC PSTATS		PROJECT STATISTICS							PAGE	1		
		PROJECT				PRETTY			DATE	9/20/2018		
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
03N	06	21	00A2	00MC		Area2 80.00	24	107	S	W		
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			24	107	4.5							
CRUISE			24	107	4.5	4,287	2.5					
DBH COUNT												
REFOREST												
COUNT												
BLANKS												
100 %												
STAND SUMMARY												
			SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			104	51.9	24.8	125	34.8	173.3	40,981	40,605	8,447	8,447
NOB FIR			2	.4	40.0	146	0.5	3.3	735	735	147	147
WHEMLOCK			1	1.4	15.0	78	0.4	1.7	190	190	52	52
TOTAL			107	53.6	24.7	124	35.9	178.3	41,906	41,531	8,646	8,646
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			42.0	4.1	1,090	1,137	1,183					
NOB FIR			3.3	3.1	1,865	1,925	1,985					
WHEMLOCK												
TOTAL			43.1	4.2	1,095	1,142	1,190	74	19	8		
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			37.5	3.7	226	234	243					
NOB FIR			9.3	8.7	352	385	419					
WHEMLOCK												
TOTAL			38.7	3.7	226	235	244	60	15	7		
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			65.6	13.7	45	52	59					
NOB FIR			338.8	70.6	0	0	1					
WHEMLOCK			489.9	102.1		1	3					
TOTAL			63.9	13.3	46	54	61	170	43	19		
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			30.9	6.4	162	173	185					
NOB FIR			338.8	70.6	1	3	6					
WHEMLOCK			489.9	102.1		2	3					
TOTAL			30.3	6.3	167	178	190	38	10	4		
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			34.1	7.1	37,721	40,605	43,490					
NOB FIR			338.9	70.6	216	735	1,254					
WHEMLOCK			489.9	102.1		190	384					
TOTAL			33.3	6.9	38,651	41,531	44,411	46	12	5		
CL	68.1	COEFF	NET CUFT FT/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
DOUG FIR			33.2	6.9	7,862	8,447	9,032					
NOB FIR			339.6	70.7	43	147	251					

TC PSTATS		PROJECT STATISTICS							PAGE	2
		PROJECT		PRETTY				DATE		9/20/2018
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
03N	06	21	00A2	00MC		80.00	24	107	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
WHEMLOCK		489.9	102.1		52	106				
TOTAL		32.2	6.7	8,066	8,646	9,226		43	11	5

TC		PSPCSTGR Species, Sort Grade - Board Foot Volumes (Project)																	
T03N R06W S21 Ty00MC 80.00						Project: PRETTY						Page 1							
						Acres 80.00						Date 9/20/2018 Time 3:36:12PM							
S Spp	So Gr T rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
							Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
			4-5	6-11	12-16		17+	12-20	21-30	31-35	36-99								
DF	CU														5	21		0.00	1.6
DF	2M	90	1.0	36,984	36,624	2,930			25	75		0	1	99	40	17	509	2.51	72.0
DF	3M	8	.4	3,579	3,563	285		100			2	4	7	87	37	8	84	0.73	42.5
DF	4M	2		418	418	33		100			41	59			20	6	26	0.33	16.2
DF Totals		98	.9	40,981	40,605	3,248		10	23	67	1	1	1	97	36	13	307	1.77	132.2
WH	3M	85		163	163	13		100						100	40	9	120	0.83	1.4
WH	4M	15		27	27	2		100			100				16	6	20	0.32	1.4
WH Totals		0		190	190	15		100			14			86	28	8	70	0.69	2.7
NF	CU														4	36		0.00	.2
NF	2M	93		688	688	55				100				100	40	22	900	4.30	.8
NF	3M	7		48	48	4		100					100		33	10	125	1.26	.4
NF Totals		2		735	735	59		6		94			6	94	33	21	550	3.35	1.3
Totals			0.9	41,906	41,531	3,322		10	22	68	1	1	1	97	36	13	305	1.77	136.2

TC		PSTNDSUM										Stand Table Summary										Page		1	
																						Date:		9/20/2018	
T03N R06W S21 Ty00MC					80.00					Project PRETTY										Time:		3:36:13PM			
										Acres 80.00										Grown Year:					
S Spec T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals												
	DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF										
DF	8	2	87	69	9.549	3.33	9.55	4.6	25.0	1.26	44	239	101	35	19										
DF	10	1	86	71	3.056	1.67	3.06	11.5	60.0	1.00	35	183	80	28	15										
DF	14	1	85	84	1.559	1.67	3.12	14.1	55.0	1.25	44	171	100	35	14										
DF	19	1	88	129	.846	1.67	2.54	28.9	126.7	2.09	73	322	168	59	26										
DF	20	1	89	145	.764	1.67	2.29	35.0	163.3	2.28	80	374	183	64	30										
DF	21	2	89	139	1.386	3.33	4.16	37.9	178.3	4.49	158	741	359	126	59										
DF	22	2	86	126	1.263	3.33	3.16	46.4	192.0	4.17	146	606	334	117	48										
DF	24	4	87	140	2.122	6.67	6.37	50.9	227.5	9.24	324	1,448	739	259	116										
DF	25	8	87	141	3.911	13.33	11.73	54.6	245.8	18.24	640	2,885	1,460	512	231										
DF	26	8	88	145	3.616	13.33	10.85	62.7	296.2	19.40	681	3,214	1,552	544	257										
DF	27	8	87	145	3.353	13.33	10.06	66.1	307.9	18.94	665	3,098	1,515	532	248										
DF	28	10	86	142	3.898	16.67	11.30	71.7	340.7	23.11	811	3,851	1,849	649	308										
DF	29	10	86	146	3.634	16.67	11.26	73.1	353.2	23.46	823	3,979	1,877	659	318										
DF	30	5	87	148	1.698	8.33	5.09	82.6	409.3	11.99	421	2,085	959	337	167										
DF	31	9	86	149	2.862	15.00	8.59	88.8	430.7	21.73	762	3,698	1,738	610	296										
DF	32	8	85	152	2.387	13.33	8.06	82.0	394.8	18.83	661	3,181	1,506	528	254										
DF	33	4	86	166	1.122	6.67	4.21	87.9	453.3	10.55	370	1,908	844	296	153										
DF	34	5	86	157	1.322	8.33	4.23	105.0	541.9	12.65	444	2,292	1,012	355	183										
DF	35	8	84	155	1.996	13.33	6.49	105.2	521.9	19.44	682	3,385	1,555	546	271										
DF	36	1	84	153	.236	1.67	.71	122.5	633.3	2.47	87	448	198	69	36										
DF	37	2	85	157	.446	3.33	1.34	132.4	700.0	5.05	177	937	404	142	75										
DF	38	2	83	146	.423	3.33	1.27	121.4	603.3	4.39	154	766	351	123	61										
DF	39	2	81	150	.402	3.33	1.21	136.0	658.3	4.67	164	794	374	131	63										
DF	Totals	104	86	125	51.851	173.33	130.63	64.7	310.8	240.73	8,447	40,605	19,259	6,757	3,248										
NF	40	2	81	146	.382	3.33	1.15	128.4	641.7	3.53	147	735	282	118	59										
NF	Totals	2	81	146	.382	3.33	1.15	128.4	641.7	3.53	147	735	282	118	59										
WH	15	1	86	78	1.358	1.67	2.72	19.2	70.0	1.67	52	190	134	42	15										
WH	Totals	1	86	78	1.358	1.67	2.72	19.2	70.0	1.67	52	190	134	42	15										
Totals		107	86	124	53.591	178.33	134.49	64.3	308.8	245.94	8,646	41,531	19,675	6,917	3,322										

TC PLOGSTVB				Log Stock Table - MBF																	
T03N R06W S21 Ty00MC 80.00				Project: PRETTY				Page 1				Date 9/20/2018									
				Acres 80.00				Time 3:36:12PM													
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	24	9		9	.3							9							
DF		2M	32	20	3.0	19	.6										19				
DF		2M	40	2,930		2,902	89.3						216	361	1095	878	353				
DF		3M	14	6		6	.2					6									
DF		3M	22	1		1	.0				1										
DF		3M	26	1		1	.0				1										
DF		3M	28	3		3	.1			3											
DF		3M	30	5		5	.2			3	3										
DF		3M	32	13		13	.4			13											
DF		3M	34	8		8	.3			5	3										
DF		3M	36	31		31	1.0			30	2										
DF		3M	38	5		5	.2			5											
DF		3M	40	212		210	6.5			55	74	82									
DF		4M	12	2		2	.1			2	0										
DF		4M	14	1		1	.0				1										
DF		4M	16	1		1	.0				1										
DF		4M	18	10		10	.3			9	1										
DF		4M	22	12		12	.4			11	1										
DF		4M	24	3		3	.1			3											
DF		4M	26	1		1	.0			1											
DF		4M	28	4		4	.1			4											
DF		Totals		3,278		3,248	97.8			143	87	88	216	361	1103	878	373				
WH		3M	40	13		13	85.7				13										
WH		4M	16	2		2	14.3			2											
WH		Totals		15		15	.5			2	13										
NF		2M	40	55		55	93.5							18			37				
NF		3M	32	2		2	3.1					2									
NF		3M	34	2		2	3.4					2									
NF		Totals		59		59	1.8					4		18			37				
Total		All Species		3,353		3,322	100.0			145	100	92	216	361	1122	878	409				

TIMBER SALE SUMMARY
Pretty Penny
Contract # FG-341-2019-W00545-01

1. **Location:** Portions of Sections 21 and 28, T3N, R6W, W.M., Tillamook County, Oregon.
2. **Type of Sale:** This timber sale is a Modified Clearcut comprised of two sale areas. Area 1 is 33 net acres and Area 2 is 80 net acres. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF, Tillamook County, Tax Code 56-1.
4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.
5. **Cruise:** The timber sale was cruised by ODF Cruisers in September of 2018. For more information see Cruise Report.
6. **Timber Description:** The Timber Sale Area consists of a well-stocked 80 year old Douglas-fir stand with minor amounts of noble fir, western hemlock, and red alder. For Area 1 the stand has an average of 197 ft² of basal area for all species, an average Douglas-fir DBH of 24 inches, and an estimated average net Douglas-fir volume of approximately 45.2 MBF per acre. For Area 2 the stand has an average of 178 ft² of basal area for all species, an average Douglas-fir DBH of 25 inches, and an estimated average net Douglas-fir volume of approximately 39.8 MBF per acre.
7. **Topography and Logging Method:** Slopes within the sale areas range from 10% to 65% and are generally southwest in aspect. Elevations range from 1,560 to 2,500 feet. The following table summarizes the estimated maximum and average horizontal cable corridor length, the estimated maximum and average tractor skid trail length, and the percent harvest method for each Sale Area.

Sale Area	Tractor			Cable		
	Average	Maximum	%	Average	Maximum	%
Area 1	150	300	9	650	1,350	91
Area 2	300	725	33	500	925	67

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 west on Cochran Road for 8.6 miles to enter the eastern portion of Area 2. To access the western portion of Area 1, proceed an additional 1.6 miles west on Cochran Road.

VOLUME SUMMARY
 Volumes in MBF
Pretty Penny
FG-341-2019-W00545-01

November 2018

AREA 1: MC (33 ACRES)

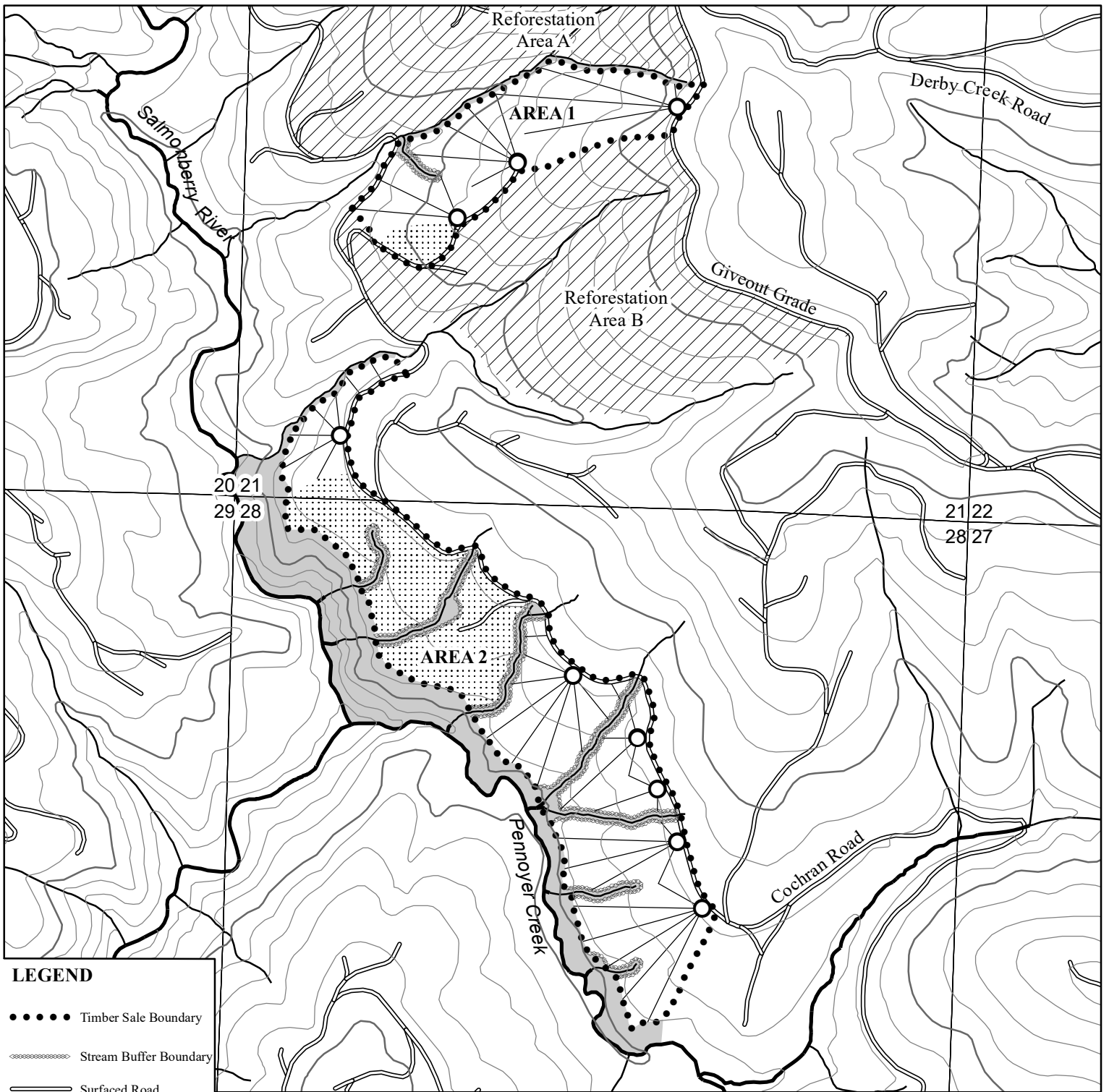
SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	1,212	289	20	1,521
	Hidden D&B (2%)	(24)	(6)	(0)	(30)
	NET TOTAL	1,188	283	20	1,491
	% of Total	80	19	1	
Noble Fir	Cruise Volume	8	6	1	15
	Hidden D&B (2%)	(0)	(0)	(0)	(0)
	NET TOTAL	8	6	1	15
	% of Total				

AREA 2: MC (80 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	2,930	285	33	3,248
	Hidden D&B (2%)	(59)	(6)	(1)	(65)
	NET TOTAL	2,871	279	32	3,183
	% of Total	90	9	1	
Noble Fir	Cruise Volume	55	4	0	59
	Hidden D&B (2%)	(1)	(0)	(0)	(1)
	NET TOTAL	54	4	0	58
	% of Total	93	7	0	
Western Hemlock	Cruise Volume	0	13	2	15
	Hidden D&B (2%)	(0)	(0)	(0)	(0)
	NET TOTAL	0	13	2	15
	% of Total	0	87	13	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	4,059	562	52	4,673
Noble Fir	62	10	1	73
Western Hemlock	0	13	3	16
TOTAL	4,121	585	56	4,762



LEGEND

- Timber Sale Boundary
- - - - - Stream Buffer Boundary
- Surfaced Road
- Cable Landing
- Tractor Landing
- ∠ Cable Yarding Area
- Tractor Yarding Area
- Type-F Stream
- Type-N Stream
- Stream Buffer
- /// Reforested Area
- Section Line
- 200 Foot Contour Band
- 40 Foot Contour Band

LOGGING PLAN

FOR TIMBER SALE CONTRACT # FG-341-2019-W00545-01
 PRETTY PENNY
 PORTIONS OF SECTIONS 21 & 28, T3N, R6W, W.M.
 TILLAMOOK COUNTY, OREGON

Forest Grove District GIS
 November, 2018

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
AREA 1	3	30
AREA 2	27	53
TOTAL	30	83