



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Noble Cause
Sale FG-343-2019-W00224-01

District: Forest Grove

Date: July 03, 2018

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$60,638.68	\$0.00	\$60,638.68
		Project Work:	\$0.00
		Advertised Value:	\$60,638.68



Timber Sale Appraisal Noble Cause Sale FG-343-2019-W00224-01

District: Forest Grove

Date: July 03, 2018

Timber Description

Location: Portions of Section 25 and 26, T1N, R6W, W.M, Washington County, Oregon

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	22	0	95
Western Hemlock / Fir	22	0	95

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	25	11	36
Western Hemlock / Fir	107	41	148
Total	132	52	184

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

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$950/\text{MBF} = \$1,350/\text{MBF} - \$400/\text{MBF}$
 Red Alder and other hardwoods stumpage Price = Pond Value minus Logging Cost:
 $\$440/\text{MBF} = \$840/\text{MBF} - \$400/\text{MBF}$

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 Pile Landing Slash:
 $10 \text{ hours} \times \$150/\text{hour} = \$1,500$
 Equipment Cleaning: 1 pieces $\times \$1,000/\text{Piece} = \$1,000$
 Slash Treatment: 8 acres $\times 200/\text{acre} = \$1,600$
 TOTAL Other Costs (No Profit & Risk added) = \$4,100

ROAD MAINTENANCE
 Move-in: \$1,200
 $1 \text{ mile} \times \$1,200/\text{mile} = 1,200$
 General Road Maintenance (Combined): \$2,400
 TOTAL Road Maintenance: $\$2,400/184 \text{ MBF} = \$13.04/\text{MBF}$



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Logging Conditions

Combination#: 1	Douglas - Fir	100.00%
	Western Hemlock / Fir	100.00%
Logging System:	Shovel	Process: Manual Delimbing
yarding distance:	Short (400 ft)	downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	4	bd. ft / load: 4600
cost / mbf:	\$180.84	
machines:	Shovel Logger	



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Logging Costs

Operating Seasons: 0.00	Profit Risk: 20%
Project Costs: \$0.00	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$4,100.00

Miles of Road

Road Maintenance: \$13.04

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

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	4.8
Western Hemlock / Fir	\$0.00	2.0	4.0



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$180.84	\$13.69	\$0.00	\$103.91	\$0.00	\$59.69	\$0.00	\$2.00	\$22.28	\$382.41
Western Hemlock / Fir									
\$180.84	\$13.69	\$0.00	\$124.69	\$0.00	\$63.84	\$0.00	\$2.00	\$22.28	\$407.34

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$843.31	\$460.90	\$0.00
Western Hemlock / Fir	\$0.00	\$704.95	\$297.61	\$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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	36	\$460.90	\$16,592.40
Western Hemlock / Fir	148	\$297.61	\$44,046.28

Gross Timber Sale Value

Recovery: \$60,638.68

Prepared By: Adrian Torres

Phone: 503-359-7460

TIMBER SALE SUMMARY
Noble Cause
Contract No. FG-343-2019-W00224-01

1. **Location:** Portions of Section 25 and 26, T1N, R6W, W.M, Washington County, Oregon.
2. **Type of Sale:** This timber sale is 8 net acres of Modified Clearcut. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF; Washington County.
4. **Sale Acreage:** Acres are net of road prisms. Acreage was determined using ESRI ArcMap GIS software.
5. **Cruise:** The Timber Sale was cruised by ODF Cruisers in July of 2018. For more information see Cruise Report.
6. **Timber Description:** The Timber Sale Area consists of a 68 year old Noble fir stand with minor amounts of Douglas-fir and Western hemlock. The stand has an average of 189 ft² of basal area (all species), an average Noble fir DBH of 22 inches and Douglas-fir DBH of 22 inches, and an estimated average net Noble fir volume of approximately 18.4 MBF per acre and 4.6 MBF per acre for Douglas-fir.
7. **Topography and Logging Method:** Slopes within the sale area range from 5% to 40% and primarily southern in aspect. The timber sale is 100% ground-based yarding. The average horizontal skid trail length is approximately 175 feet and the maximum is approximately 440 feet.
8. **Access:** The sale area can be accessed via Highway 6 at the summit. Take Beaverdam Road approximately 8 miles to a 4 way C-line junction. Continue south on unnamed road for .8 miles to the Seven Cedars Rd junction. Make a right turn on unnamed road for .56 miles. Make a right at the first junction. Go through the ODF gate and continue .5 miles to the top of South Saddle Mountain (ODF Repeater).
9. **Projects:** NA

CRUISE REPORT
Noble Cause
FG-343-2019-W00224-01

1. LOCATION: Sections 25 and 26, T1N, R6W, W.M., Washington Co. Oregon

2. CRUISE DESIGN:

For sales of this size and approximate value, ODF cruise standards require a Sampling Error of 8% at a 68% confidence level. Statistical analysis indicated that 8 variable radius plots (employing all measure plot) utilizing a 40 BAF prism would produce an adequate sample size.

3. SAMPLING METHOD:

The Timber Sale Area was cruised on July 3, 2019. The Timber Sale Area was sampled with 7 variable radius grade plots laid out on a 4 x 3 chain line. Plots falling on or near existing roads or timber sale boundaries were offset 1 chain.

4. CRUISE RESULTS

33 trees were measured and graded producing a cumulative Sampling Error of 9.6% on the Basal Area and 9.7% 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.

5. 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.

6. Cruisers: The sale was cruised by ODF cruisers Adrian Torres.

Prepared by:

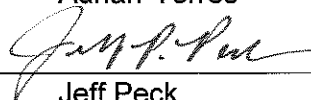


July 03, 2018

Adrian Torres

Date

Reviewed by:



07 03-2018

Jeff Peck

Date

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																
<div>T001 R009 S26 Ty00MC8.00</div>						Project: NOBLE CAUSE										Page 1				
						Acres 8.00										Date 7/9/2018				
																Time 11:14:01AM				
S Spp	So Gr T rt ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
							Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
			4-5	6-11	12-16		17+	12-20	21-30	31-35	36-99									
NF	2M	74		13,686	13,686	109			79	21	1			99	39	15	324	1.95	42.2	
NF	3M	20	1.7	3,717	3,652	29			100					4	96	39	8	91	0.82	40.1
NF	4M	6		1,032	1,032	8			100		15	48	24	13		25	6	34	0.50	30.2
NF Totals		78	.4	18,435	18,370	147		26	59	16	2	3	2	94		35	10	163	1.23	112.5
DF	2M	71	9.1	3,628	3,297	26			100					100		40	14	279	1.89	11.8
DF	3M	19		883	883	7			100					100		38	8	118	0.87	7.5
DF	4M	10		446	446	4			100			76	24			28	6	38	0.57	11.6
DF Totals		20	6.7	4,956	4,626	37		29	71			7	2	90		35	10	150	1.22	30.9
WH	3M	88		485	485	4			100					100		40	10	150	1.06	3.2
WH	4M	12		65	65	1			100		100					16	6	20	0.37	3.2
WH Totals		2		550	550	4			100		12			88		28	8	85	0.86	6.5
Totals			1.7	23,941	23,546	188		28	60	12	2	4	2	93		35	10	157	1.22	149.9

TC PSTATS			PROJECT STATISTICS					PAGE 1				
			PROJECT NOBLE CAUSE					DATE 7/9/2018				
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
001	009	26	00A1	00MC		8.00	7	33	S	W		
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			7	33	4.7							
CRUISE			7	33	4.7	599	5.5					
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	
NOB FIR			25	56.3	21.6	91	30.8	142.9	18,435	18,370	4,883	4,880
DOUG FIR			7	15.4	21.8	88	8.6	40.0	4,956	4,626	1,323	1,323
WHEMLOCK			1	3.2	18.0	73	1.3	5.7	550	550	156	156
TOTAL			33	74.9	21.5	90	40.7	188.6	23,941	23,546	6,363	6,359
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		
NOB FIR			35.7	7.3	345	372	399					
DOUG FIR			27.2	11.1	278	313	348					
WHEMLOCK												
TOTAL			36.1	6.3	331	353	376	52	13	6		
CL	68.1	COEFF	SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
NOB FIR			35.0	7.1	92	99	106					
DOUG FIR			22.4	9.1	82	90	99					
WHEMLOCK												
TOTAL			34.1	5.9	90	96	101	46	12	5		
CL	68.1	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
NOB FIR			56.5	23.0	43	56	69					
DOUG FIR			119.9	48.8	8	15	23					
WHEMLOCK			264.6	107.7		3	7					
TOTAL			38.6	15.7	63	75	87	69	17	8		
CL	68.1	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
NOB FIR			45.3	18.4	117	143	169					
DOUG FIR			115.5	47.0	21	40	59					
WHEMLOCK			264.6	107.7		6	12					
TOTAL			23.6	9.6	170	189	207	26	6	3		
CL	68.1	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
NOB FIR			42.8	17.4	15,169	18,370	21,572					
DOUG FIR			123.4	50.2	2,304	4,626	6,948					
WHEMLOCK			264.6	107.7		550	1,142					
TOTAL			23.7	9.7	21,273	23,546	25,819	26	7	3		
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		
NOB FIR			44.1	17.9	4,004	4,880	5,755					
DOUG FIR			115.9	47.2	699	1,323	1,947					

TC PSTATS		PROJECT STATISTICS							PAGE	2
		PROJECT NOBLE CAUSE							DATE	7/9/2018
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
001	009	26	00A1	00MC	8.00	7	33	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			264.6	107.7		156	325			
TOTAL			23.3	9.5	5,756	6,359	6,962	25	6	3

TC PLOGSTVB				Log Stock Table - MBF																			
T001 R009 S26 Ty00MC 8.00				Project: NOBLE CAUSE				Acres 8.00				Page 1				Date 7/9/2018				Time 11:14:02AM			
Spp	S T	So rt	Gr 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		2M	20		1		1	.8					1										
NF		2M	40		108		108	73.7					28	33	47								
NF		3M	32		1		1	.7			1												
NF		3M	36		3		3	2.2			3												
NF		3M	38		2		2	1.3			2												
NF		3M	40		24	2.2	23	15.7			6	4	13										
NF		4M	16		1		1	.6			1												
NF		4M	20		0		0	.3			0												
NF		4M	24		2		2	1.3			2												
NF		4M	26		1		1	1.0			1												
NF		4M	28		1		1	.4			1												
NF		4M	32		1		1	.7			1												
NF		4M	34		1		1	.6			1												
NF		4M	36		1		1	.7			1												
NF		Totals			147		147	78.0			20	4	13	29	33	47							
DF		2M	40		29	9.1	26	71.3					4	17	5								
DF		3M	36		2		2	5.0			2												
DF		3M	40		5		5	14.1					5										
DF		4M	24		1		1	2.6			1												
DF		4M	30		2		2	4.7			2												
DF		4M	32		1		1	2.3			1												
DF		Totals			40	6.7	37	19.6			5		5	4	17	5							
WH		3M	40		4		4	88.2					4										
WH		4M	16		1		1	11.8			1												
WH		Totals			4		4	2.3			1		4										
Total		All Species			192	1.7	188	100.0			26	4	22	33	51	52							

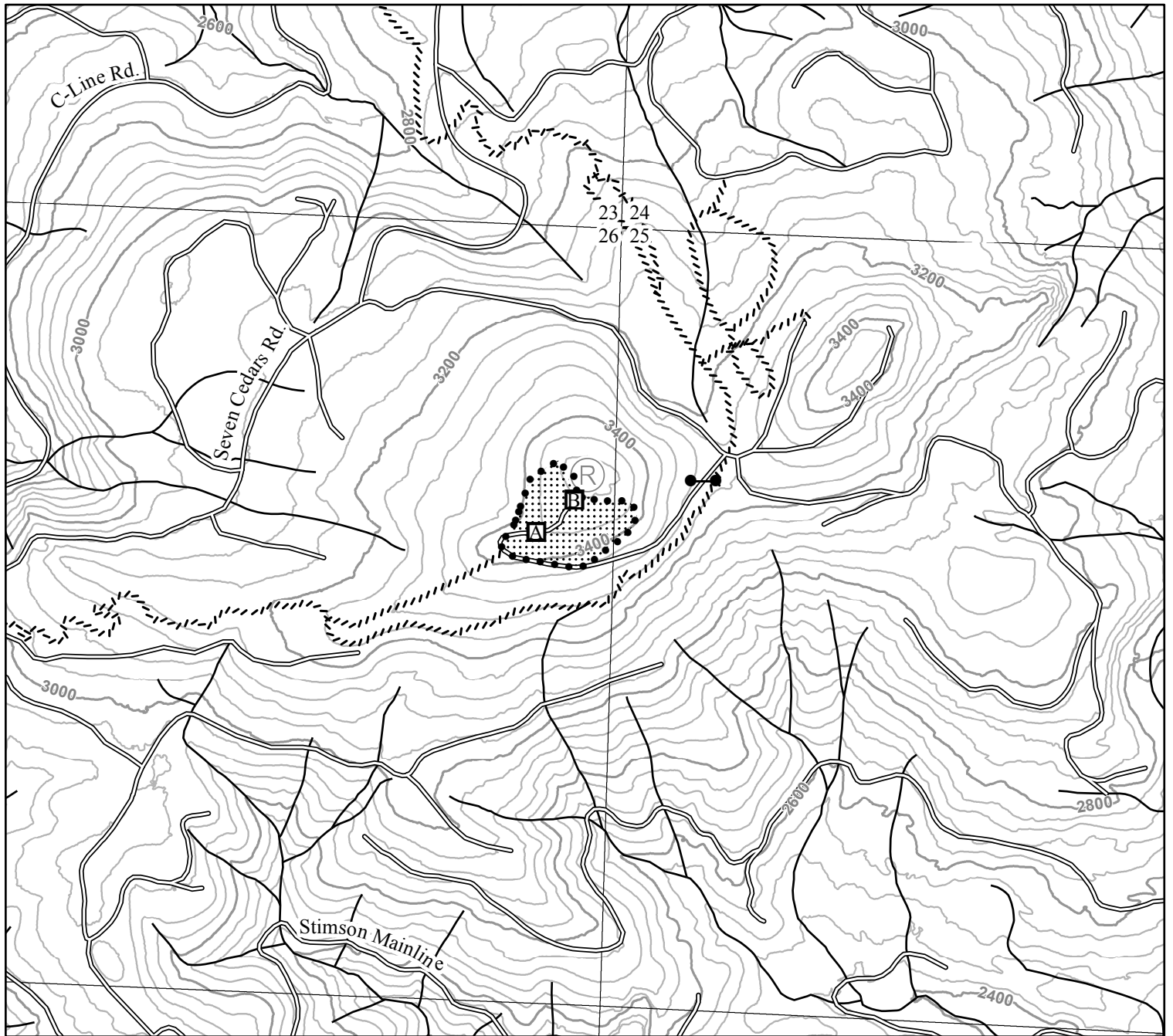
TC		PSTNDSUM										Stand Table Summary										Page		1	
																						Date:		7/9/2018	
T001 R009 S26 Ty00MC					8.00					Project					NOBLE CAUSE					Time:		11:14:00AM			
										Acres					8.00					Grown Year:					
S Spec T				Tot					Average Log		Net		Net		Totals										
	DBH	Sample Trees	FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF										
NF	14	1	90	81	5.345	5.71	10.69	14.9	55.0	3.82	159	588	31	13	5										
NF	16	1	87	88	4.093	5.71	8.19	22.2	90.0	4.36	182	737	35	15	6										
NF	18	1	90	87	3.234	5.71	6.47	27.9	95.0	4.33	181	614	35	14	5										
NF	19	1	88	85	2.902	5.71	5.80	29.8	105.0	4.16	173	609	33	14	5										
NF	20	3	89	87	7.858	17.14	15.72	36.1	133.3	13.60	567	2,095	109	45	17										
NF	21	2	88	96	4.751	11.43	9.50	41.1	147.5	9.37	391	1,402	75	31	11										
NF	22	5	89	96	10.823	28.57	21.65	46.8	182.0	24.32	1,013	3,940	195	81	32										
NF	23	1	88	104	1.981	5.71	3.96	53.6	215.0	5.10	212	852	41	17	7										
NF	24	2	87	98	3.638	11.43	7.28	56.7	222.5	9.90	412	1,619	79	33	13										
NF	25	2	91	98	3.353	11.43	6.71	64.9	260.0	10.44	435	1,743	84	35	14										
NF	26	2	84	96	3.100	11.43	6.20	63.5	240.0	9.44	393	1,488	76	31	12										
NF	27	1	85	85	1.437	5.71	2.87	65.4	225.0	4.51	188	647	36	15	5										
NF	28	1	86	95	1.336	5.71	2.67	75.3	300.0	4.92	201	802	39	16	6										
NF	29	1	81	80	1.246	5.71	2.49	69.8	220.0	4.17	174	548	33	14	4										
NF	30	1	83	93	1.164	5.71	2.33	85.1	295.0	4.75	198	687	38	16	5										
NF	Totals	25	88	91	56.260	142.86	112.52	43.4	163.3	117.20	4,880	18,370	938	390	147										
DF	17	1	87	95	3.625	5.71	7.25	27.0	110.0	5.58	196	798	45	16	6										
DF	22	3	88	87	6.494	17.14	12.99	43.7	148.3	16.16	567	1,927	129	45	15										
DF	24	2	87	82	3.638	11.43	7.28	49.5	160.0	10.26	360	1,164	82	29	9										
DF	25	1	88	92	1.676	5.71	3.35	59.7	220.0	5.71	200	738	46	16	6										
DF	Totals	7	88	88	15.433	40.00	30.87	42.9	149.9	37.70	1,323	4,626	302	106	37										
WH	18	1	88	73	3.234	5.71	6.47	24.2	85.0	5.00	156	550	40	13	4										
WH	Totals	1	88	73	3.234	5.71	6.47	24.2	85.0	5.00	156	550	40	13	4										
Totals		33	88	90	74.927	188.57	149.85	42.4	157.1	159.91	6,359	23,546	1,279	509	188										

VOLUME SUMMARY
(Shown in MBF)
Noble Cause
FG-343-2019-W00224-01
July 2019













TIMBER SALE AREA: MC (8 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Noble Fir	Cruise Volume	109	29	8	146
	Hidden D&B (2%)	(2)	(1)	()	(3)
	NET TOTAL	107	28	8	143
	% of Total	75	20	6	
Douglas-fir	Cruise Volume	26	7	4	37
	Hidden D&B (2%)	(1)	()	()	(1)
	NET TOTAL	25	7	4	36
	% of Total	69	19	11	
Western Hemlock	Cruise Volume	0	4	1	5
	Hidden D&B (2%)	()	()	()	()
	NET TOTAL	0	4	1	5
	% of Total	0	80	20	

SALE TOTAL				
SPECIES	2 SAW	3 SAW	4 SAW	TOTAL
NobleFir	107	28	8	143
Douglas-fir	25	7	4	36
Western Hemlock	0	4	1	5
Total	132	39	13	184



Legend

-  Tractor Landing
-  ODF Gate
-  Timber Sale Boundary
-  ODF Radio Site
-  Surface Roads
-  Recreation Trail
-  Type F Stream
-  Type N Stream
-  Tractor Yarding Area
-  Section Line
-  40 ft contours
-  200 ft contours

LOGGING PLAN

FOR TIMBER SALE CONTRACT # FG-343-2019-W00224-01
 NOBLE CAUSE
 PORTIONS OF SECTIONS 25 & 26, T1N, R6W, W.M.
 WASHINGTON COUNTY, OREGON

Forest Grove District GIS
 July, 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

0 250 500 1,000 1,500 2,000



APPROXIMATE NET ACRES

	TRACTOR	CABLE
AREA	8	0
TOTAL	8	0