



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Upper Deck
Sale FG-341-2019-017-

District: Forest Grove

Date: May 31, 2018

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,598,304.05	\$0.00	\$2,598,304.05
		Project Work:	(\$31,660.00)
		Advertised Value:	\$2,566,644.05



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District: Forest Grove

Date: May 31, 2018

Timber Description

Location: Portions of Section 36, T1N, R6W, W.M., and Section 1, T1S, R6W, W.M., Washington County, Oregon

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	20	0	98
Western Hemlock / Fir	20	0	98

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	3,103	1,399	4,502
Western Hemlock / Fir	49	30	79
Total	3,152	1,429	4,581

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

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
\$1,080.01/MBF = \$1,355/MBF - \$274.99/MBF

Red Alder and other Hardwoods Stumpage Price = Pond Value minus Logging Cost:
\$390.01/MBF = \$665/MBF - \$274.99/MBF

BRANDING AND PAINTING COST ALLOWANCE =\$2.00/MBF

FUEL COST ALLOWANCE =\$3.00/Gallon

HAULING COST ALLOWANCE
Hauling costs equivalent to \$780 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 hours x \$150/hour = \$3,000
Machine Time to Pile Landing Slash:
20 hours x \$150/hour = \$3,000
Stimson Reprod Damage Fee = \$5,656
Stimson Road Use Fee = \$33,164
Equipment Cleaning: 3 pieces x \$1,000/Piece = \$3,000
Slash Treatment: 20 acres x \$200/acre = \$4,000
TOTAL Other Costs (No Profit & Risk added) = \$51,820

ROAD MAINTENANCE

Move-in: \$4,000
General Road Maintenance (Combined): \$9,150
[Upper Sunday Road - 3.0 miles x \$1,200/mile = \$3,600]
[Stimson Mainline - 11.1 miles x 500/mile = \$5,550]

TOTAL Road Maintenance: \$13,150/4,581 MBF = \$2.87/MBF



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Logging Costs

Operating Seasons: 1.00	Profit Risk: 15%
Project Costs: \$31,660.00	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$51,820.00

Miles of Road

Road Maintenance: \$2.87

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	4.8



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling / Brand & Paint	Other	Total
Douglas - Fir									
\$168.41	\$2.93	\$0.96	\$55.25	\$0.00	\$34.13	\$0.00	\$2.00	\$11.31	\$274.99
Western Hemlock / Fir									
\$168.41	\$2.93	\$0.96	\$82.88	\$0.00	\$38.28	\$0.00	\$2.00	\$11.31	\$306.77

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$845.00	\$570.01	\$0.00
Western Hemlock / Fir	\$0.00	\$713.34	\$406.57	\$0.00



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Upper Deck
Sale FG-341-2019-017-

District: Forest Grove

Date: May 31, 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	4,502	\$570.01	\$2,566,185.02
Western Hemlock / Fir	79	\$406.57	\$32,119.03

Gross Timber Sale Value

Recovery: \$2,598,304.05

Prepared By: Mark Savage

Phone: 503-359-7437

PROJECT COST SUMMARY SHEET

Timber Sale: Upper Deck

Sale Number: 341-19-17

PROJECT NO. 1: ROAD CONSTRUCTION

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to B	17+50	\$4,727.01
C to D	10+50	\$2,625.06
E to F	5+00	\$1,494.34
G to H	7+20	\$2,554.90
	40+20	stations
	0.76	miles

TOTAL PROJECT NO. 1 COST = \$11,401.31

PROJECT NO. 2: SURFACING

<u>Road Segment</u>	<u>Rock Amount</u>	<u>Rock Type</u>	<u>Cost</u>
G to H	728 cy	Pit-run	\$6,348.16
Total	728 cy	Pit-run	

TOTAL PROJECT NO. 2 COST = \$6,348.16

PROJECT NO. 3 GRASS SEED, FERTILIZE, & MULCH

TOTAL PROJECT NO. 3 COST = \$592.88

PROJECT NO. 4 ROAD BRUSHING

TOTAL PROJECT NO. 4 COST = \$5,842.00

MOVE-IN, WITH-IN AREA MOVE, & EQUIPMENT CLEANING

Brush Cutter (Project No. 4)	\$588.40
Grader	\$843.31
Roller (smooth/grid) & Compactor	\$594.01
Excavator (Project No. 4) - Equipment Cleaning	\$1,188.40
Excavator - Equipment Cleaning	\$1,944.31
Dozer (Large) - Equipment Cleaning	\$1,944.12
Dump Trucks (10cy +)	\$373.10

TOTAL MOVE-IN & EQUIPMENT CLEANING COST = \$7,475.65

TOTAL CREDITS \$31,660.00

SUMMARY OF CONSTRUCTION COST

Timber Sale:	<u>Upper Deck</u>	Sale Number:	<u>341-19-17</u>
Road Segment:	<u>E to F</u>	Construction:	<u>5+00</u> stations <u>0.09</u> miles

PROJECT NO. 1

EXCAVATION

Clearing & grubbing (scatter)	0.35	ac @	\$862.40	per acre =	\$301.84
Balanced road construction	5.00	sta @	\$110.00	per sta =	\$550.00
Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	5.00	sta @	\$36.00	per sta =	\$180.00

PROJECT NO. 1 TOTAL COST = \$1,494.34

PROJECT NO. 3:

Grass seed & fertilizer	0.18	acres	@	\$425.00	per acre =	\$74.38
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PROJECT NO. 3 TOTAL COST = \$74.38

TOTAL COST = \$1,568.72

SUMMARY OF CONSTRUCTION COST

Timber Sale: Upper Deck Sale Number: 341-19-17

PROJECT NO. 4:

Road Brushing

<u>Brush Density</u>	<u>miles @</u>	<u>\$ per mile =</u>	
Light	3.45	\$700.00	\$2,415.00
Moderate	2.01	\$1,000.00	\$2,010.00
Heavy	1.09	\$1,300.00	\$1,417.00
<u>Total Miles=</u>		6.55	

TOTAL COST = \$5,842.00

CRUISE REPORT

Upper Deck

341-19-17

1. LOCATION: Portions of Section 36, T1N, R6W, W.M., and Section 1, T1S, R6W, W.M., Washington County, Oregon.

2. CRUISE DESIGN:

Pre-cruise evaluation indicated that the stand's average DBH is approximately 17 inches and the coefficient of variation is about 50%. For sales of this size and approximate value, ODF cruise standards require a sampling error of 9% at a 68% confidence level, and a minimum sample size of 100 graded trees. The cruise design chosen for this sale is a variable radius sample plot using a 40 BAF prism.

3. SAMPLING METHOD:

The Timber Sale Area was sampled in April, 2018 with 34 variable radius grade plots using a 40 BAF prism. Plots were laid out on a 5 chain x 5 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS

202 trees were measured and graded producing a cumulative Sampling Error of 5.3% on both the Douglas-fir basal area and the Douglas-fir board foot volume.

5. TREE MEASUREMENT AND GRADING:

All sample trees were measured and graded following Columbia River Log Scale grade rules and favored 40 foot segments.

a) Height Standards:

Total tree heights were measured to the nearest foot. Bole heights were calculated to a top DIB of six inches or 25% of DBH, whichever is larger.

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 Mark Savage, Adrian Torres, and Kenton Burns.

Prepared by: Mark Savage

Reviewed by:


Jeff Peck

4-17-18
Date

TC PSTATS		PROJECT STATISTICS							PAGE 1	
		PROJECT UPPERD							DATE 5/8/2018	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
TIN	R6	36	00A1	00MC		107.00	34	202	S	W
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES			
TOTAL			34	202	5.9					
CRUISE			34	202	5.9	11,567	1.7			
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	198	105.4	20.1	118	51.9	232.9	43,371	42,939	9,852	9,852
WHEMLOCK	3	1.6	20.4	110	0.8	3.5	572	560	148	148
NOB FIR	1	1.1	14.0	127	0.3	1.2	198	198	44	44
TOTAL	202	108.1	20.1	118	53.0	237.6	44,141	43,697	10,044	10,044
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		65.4	4.6	639	670	701				
WHEMLOCK		66.5	46.0	232	430	628				
NOB FIR										
TOTAL		65.8	4.6	633	664	694	173	43	19	
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		60.4	4.3	145	152	158				
WHEMLOCK		60.9	42.1	65	112	159				
NOB FIR										
TOTAL		60.8	4.3	144	150	157	147	37	16	
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		64.0	11.0	94	105	117				
WHEMLOCK		417.6	71.6	0	2	3				
NOB FIR		583.1	99.9	0	1	2				
TOTAL		65.0	11.1	96	108	120	168	42	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	5.3	221	233	245				
WHEMLOCK		429.3	73.6	1	4	6				
NOB FIR		583.1	99.9	0	1	2				
TOTAL		29.9	5.1	225	238	250	36	9	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		31.0	5.3	40,656	42,939	45,222				
WHEMLOCK		446.7	76.5	131	560	989				
NOB FIR		583.1	99.9	0	198	396				
TOTAL		30.1	5.2	41,446	43,697	45,948	36	9	4	
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		30.5	5.2	9,337	9,852	10,367				
WHEMLOCK		441.1	75.6	36	148	259				

Log Stock Table - MBF

TT1N RR6W S36 Ty00MC 107.00

Project: UPPERD
Acres 107.00

Page 1
Date 5/8/2018
Time 1:15:54PM

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	12	11		11	.2					3					8		
DF		2M	20	7		7	.2					7							
DF		2M	34	20		20	.4					12		8					
DF		2M	40	3,161	1.0	3,128	68.1					509	568	1196	781	58	17		
DF		3M	20	1		1	.0				1								
DF		3M	22	1		1	.0				1								
DF		3M	26	6		6	.1				2	4							
DF		3M	28	8		8	.2				4	5							
DF		3M	30	5		5	.1				4	1							
DF		3M	32	31		31	.7				27	3	2						
DF		3M	34	89		89	1.9				43	46							
DF		3M	36	51		51	1.1				44	7							
DF		3M	38	6		6	.1				6								
DF		3M	40	1,098	1.2	1,085	23.6				199	294	529	9	19	18	17		
DF		4M	12	5		5	.1				4	0							
DF		4M	14	4		4	.1				4								
DF		4M	16	32		32	.7				32	1							
DF		4M	18	11		11	.2				11								
DF		4M	20	11		11	.2				10	1							
DF		4M	22	25		25	.6				24	1							
DF		4M	24	20		20	.4				18	2							
DF		4M	26	12		12	.3				12								
DF		4M	28	14		14	.3				14								
DF		4M	30	8		8	.2				8								
DF		4M	36	2	50.0	1	.0				1								
DF		Totals		4,641		4,595	98.3				466	364	535	531	576	1223	799	83	17
WH		2M	40	51	2.5	50	83.7						35	16					
WH		3M	36	4		4	6.4				4								
WH		3M	40	5		5	8.3				5								
WH		4M	28	1		1	1.6				1								
WH		Totals		61	2.1	60	1.3				10		35	16					
NF		3M	40	21		21	100.0				7	14							
NF		Totals		21		21	.5				7	14							
Total		All Species		4,723	1.0	4,676	100.0				483	378	535	566	576	1238	799	83	17

TC PSTNDSUM		Stand Table Summary										Page	1		
												Date:	5/8/2018		
TTIN RR6W S36 Ty00MC 107.00		Project UPPERD										Time:		1:15:55PM	
		Acres 107.00										Grown Year:			
S Spec 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	8	2	90	93	6.741	2.35	6.74	4.4	25.0	.85	30	169	91	32	18
DF	9	1	88	86	2.663	1.18	2.66	9.8	60.0	.75	26	160	80	28	17
DF	10	2	90	105	4.314	2.35	6.47	9.5	46.7	1.75	62	302	188	66	32
DF	11	2	90	117	3.565	2.35	7.13	11.8	55.0	2.39	84	392	256	90	42
DF	12	3	88	103	4.494	3.53	8.99	12.7	55.0	3.25	114	494	347	122	53
DF	13	5	88	104	6.382	5.88	12.76	15.3	65.0	5.56	195	830	595	209	89
DF	14	3	88	123	3.302	3.53	6.60	20.0	90.0	3.77	132	594	403	141	64
DF	15	9	88	112	8.628	10.59	17.26	22.7	100.0	11.15	391	1,726	1,193	419	185
DF	16	6	88	115	5.056	7.06	10.11	26.9	115.8	7.77	272	1,171	831	292	125
DF	17	10	87	119	7.464	11.76	16.42	28.0	113.6	13.11	460	1,866	1,402	492	200
DF	18	11	87	122	7.323	12.94	19.97	26.1	105.0	14.88	522	2,097	1,592	559	224
DF	19	7	85	116	4.183	8.24	10.16	32.0	118.8	9.27	325	1,207	992	348	129
DF	20	9	86	123	4.853	10.59	12.94	32.9	139.2	12.13	425	1,801	1,297	455	193
DF	21	4	86	129	1.956	4.71	5.87	34.9	147.5	5.84	205	866	625	219	93
DF	22	6	85	116	2.674	7.06	7.58	38.4	156.5	8.29	291	1,185	887	311	127
DF	23	3	87	138	1.223	3.53	3.67	45.5	206.7	4.76	167	758	510	179	81
DF	24	7	85	126	2.621	8.24	7.49	47.9	204.5	10.22	359	1,532	1,094	384	164
DF	25	13	85	130	4.487	15.29	13.46	51.7	221.3	19.83	696	2,978	2,122	744	319
DF	26	14	85	127	4.467	16.47	12.44	57.5	244.6	20.38	715	3,044	2,181	765	326
DF	27	9	85	134	2.663	10.59	7.99	61.4	270.0	13.98	491	2,157	1,496	525	231
DF	28	11	85	132	3.026	12.94	9.08	65.0	286.4	16.82	590	2,600	1,799	631	278
DF	29	10	85	134	2.565	11.76	7.69	70.5	318.0	15.46	542	2,447	1,654	580	262
DF	30	16	84	138	3.835	18.82	11.74	72.8	332.2	24.38	856	3,902	2,609	915	417
DF	31	10	83	136	2.245	11.76	6.73	80.9	361.7	15.52	544	2,435	1,660	583	261
DF	32	11	83	131	2.317	12.94	6.74	85.5	380.3	16.43	577	2,564	1,758	617	274
DF	33	5	84	140	.990	5.88	2.97	93.8	445.3	7.95	279	1,323	850	298	142
DF	34	3	85	135	.560	3.53	1.68	99.4	472.2	4.76	167	793	509	179	85
DF	36	1	84	138	.166	1.18	.50	109.8	513.3	1.56	55	256	167	59	27
DF	37	1	69	150	.158	1.18	.47	112.9	420.0	1.52	53	199	163	57	21
DF	39	2	82	135	.284	2.35	.85	128.2	601.7	3.11	109	512	333	117	55
DF	41	1	86	153	.128	1.18	.38	161.9	846.7	1.78	62	326	190	67	35
DF	45	1	82	141	.107	1.18	.32	174.8	793.3	1.59	56	254	170	60	27
DF	Totals	198	87	118	105.439	232.94	245.89	40.1	174.6	280.79	9,852	42,939	30,044	10,542	4,595
WH	18	1	84	113	.666	1.18	1.33	36.1	135.0	1.54	48	180	164	51	19
WH	19	1	84	98	.598	1.18	1.20	36.4	130.0	1.39	43	155	149	47	17
WH	27	1	83	130	.296	1.18	.89	63.4	253.3	1.80	56	225	193	60	24
WH	Totals	3	84	110	1.559	3.53	3.41	43.3	164.0	4.73	148	560	506	158	60
NF	14	1	88	126	1.101	1.18	2.20	20.0	90.0	1.06	44	198	113	47	21
NF	Totals	1	88	126	1.101	1.18	2.20	20.0	90.0	1.06	44	198	113	47	21
Totals		202	87	118	108.098	237.65	251.50	39.9	173.7	286.57	10,044	43,697	30,663	10,747	4,676

WRITTEN PLAN
Upper Deck
Timber Sale #341-19-17

LEGAL DESCRIPTION: Portions of Section 36, T1N, R6W, W.M., and Section 1, T1S, R6W, W.M., Washington County, Oregon.

PROTECTED RESOURCE: Sunday Creek a medium Type-F stream which bisects the timber sale area. Two unnamed medium Type-F streams are tributaries to Sunday Creek, and flow adjacent to the western and eastern timber sale boundaries.

DESCRIPTION OF THE AREA: Slopes adjacent to the above creeks range from 5% in the flood plane to over 80% immediately upslope. Streamside vegetation along these type F streams include mature Douglas-fir and red alder.

PROTECTION MEASURES: Sunday Creek was buffered an average distance of 115 feet upslope from the floodplain edges with both "Timber Sale Boundary" and "Buffer Zone" signs and associated flagging. The two medium Type-F streams were buffered, with "Timber Sale Boundary" signs and associated flagging, outside the sale area with an average distance exceeding 115 feet upslope from the floodplain. Skyline cables may hang over these streams on the opposite slope or ridge to facilitate logging. When cables pass through or over the stream buffers, all necessary precautions shall be taken to protect all stream buffer components. Trees felled within the buffer for cable corridors shall not be yarded.

Prepared by: Mark Savage 05/17/2018

Reviewed by: Erik Marcy 5-30-18
Erik Marcy; Unit Forester Date

TIMBER SALE SUMMARY
Upper Deck
Contract No. 341-19-17

1. **Location:** Portions of Section 36, T1N, R6W, W.M., and Section 1, T1S, R6W, W.M., Washington County, Oregon.
2. **Type of Sale:** This timber sale is 107 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 stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.
5. **Cruise:** The Timber Sale was cruised by ODF Cruisers in April of 2018. For more information see Cruise Report.
6. **Timber Description:** The Timber Sale Area consists of a well-stocked 60 year old Douglas-fir stand with minor amounts of western hemlock and noble fir. The stand has an average of 238 ft² of basal area (all species), an average Douglas-fir DBH of 20 inches, and an estimated average net Douglas-fir volume of approximately 42.1 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 67% cable-based yarding. The maximum cable corridor length is approximately 1,350 feet and the average length is 650 feet. The timber sale is 33% ground-based yarding. The average horizontal skid trail length is approximately 250 feet and the maximum is approximately 500 feet.
8. **Access:** The sale area is accessed via Highway 47 to Scoggins Valley Road to West Shore Road. Drive approximately 1.6 miles and turn left on to Lee County Road for 0.4 miles. Turn right onto Stimson mainline. Drive to milepost 13.5 and turn left onto Upper Sunday Creek Road. To access the northern portion of the timber sale; drive 0.3 miles on Upper Sunday Creek Road and turn left. Keep to the right to Point A and then walk in on the new construction road 0.4 miles to the timber sale area. To access the southern portion of the timber sale; follow Upper Sunday Creek Road 2.2 miles to the timber sale area. There is a gate at the property boundary that will require a key to access this portion of the timber sale area. **Keys and lock combination are available at the district office in Forest Grove.**

9. Projects:

Project No. 1: Road Construction	\$11,401.31
Project No. 2: Surfacing	\$6,348.16
Project No. 3: Grass Seeding, Fertilize, Mulch	\$592.88
Project No. 4: Road Brushing	\$5,842.00
Move in and equipment cleaning:	\$7,475.65
Total Credit for all Projects	\$31,660.00

VOLUME SUMMARY

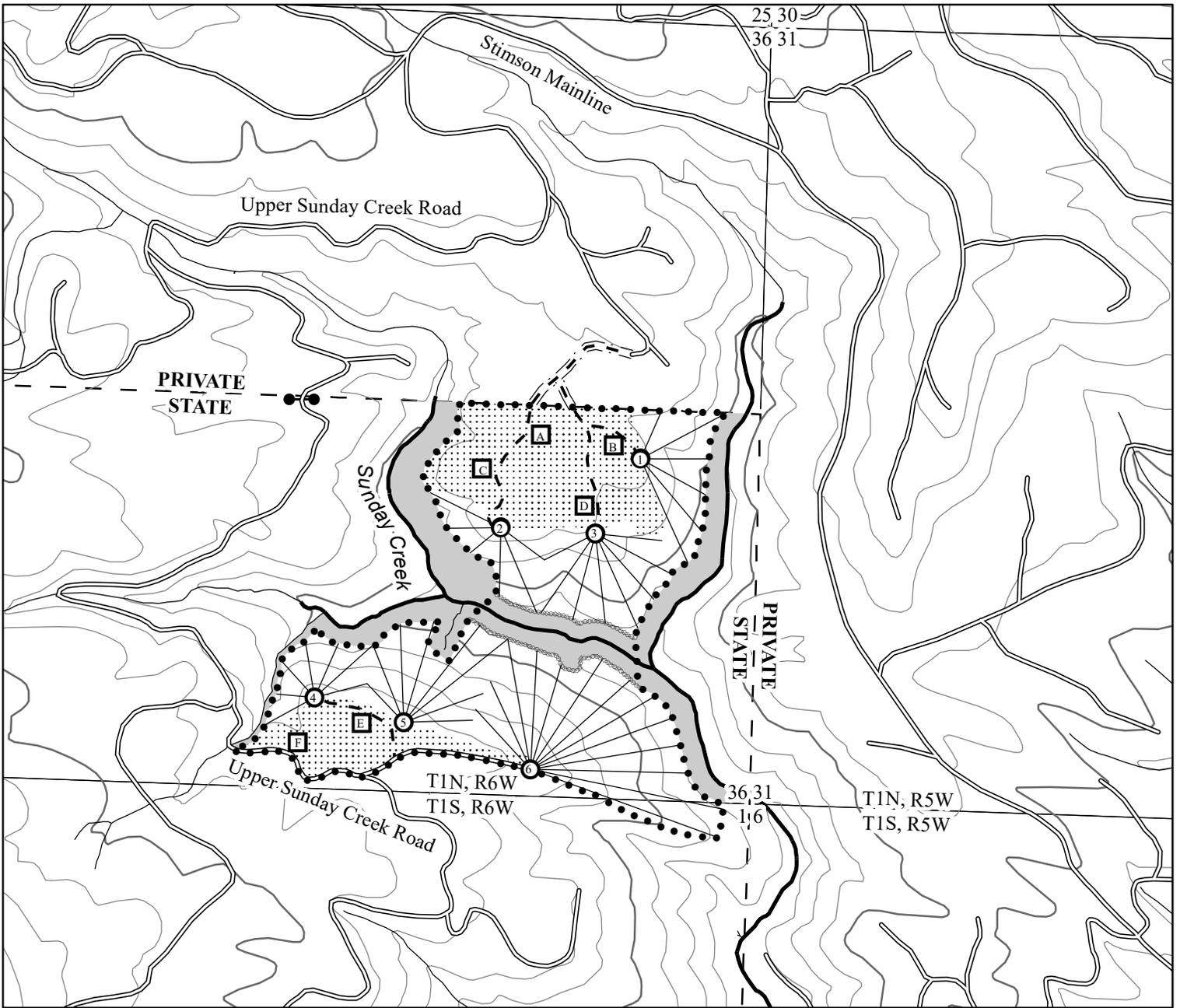
(Shown in MBF)

**Upper Deck
341-19-17**

May, 2018

Timber Sale Area: MC (107 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	3,166	1,285	143	4,594
	Hidden D&B (2%)	(63)	(26)	(3)	(92)
	NET TOTAL	3,103	1,259	140	4,502
	% of Total	69	28	3	
<hr/>					
Western hemlock & other conifers	Cruise Volume	50	30	1	81
	Hidden D&B (2%)	(1)	(1)	()	(2)
	NET TOTAL	49	29	1	79
	% of Total	62	37	1	
<hr/>					
Total		3,152	1288	141	4,581



LEGEND

- Cable Landing
- Tractor Landing
- Timber Sale Boundary
- Surfaced Roads
- New Road Construction
- Posted Right of Way Boundary
- Gate
- Type F Stream
- Type N Stream
- Posted Stream Buffer Boundary
- Stream Buffer
- Cable Yarding Area
- Tractor Yarding Area
- 200 Foot Contour Band
- 20 Foot Contour Band
- ODF Ownership Boundary
- Section Line

LOGGING PLAN

FOR TIMBER SALE CONTRACT 341-19-17
 UPPER DECK
 PORTIONS OF SECTION 36, T1N, R6W, W.M., &
 PORTIONS OF SECTION 1, T1S, R6W, W.M.
 WASHINGTON COUNTY, OREGON

Forest Grove District GIS
 May, 2018

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



1:12,000

1 inch = 1000 feet

0 500 1,000 2,000 Feet



APPROXIMATE NET ACRES

CABLE	TRACTOR
72	35