



Timber Sale Appraisal
Clatsastic
Sale FG-341-2018-15-

District: Forest Grove

Date: February 20, 2018

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$3,443,295.15	\$56,673.24	\$3,499,968.39
		Project Work:	(\$116,540.00)
		Advertised Value:	\$3,383,428.39



Timber Sale Appraisal Clatskanie Sale FG-341-2018-15-

District: Forest Grove

Date: February 20, 2018

Timber Description

Location: Portions of Sections 2 and 11, T5N, R3W, W.M., Columbia County, Oregon.

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	17	0	98
Western Hemlock / Fir	10	0	95
Alder (Red)	13	0	95

Volume by Grade	2S	3S & 4S 6"-11"	Camprun	Total
Douglas - Fir	3,196	2,363	0	5,559
Western Hemlock / Fir	0	40	0	40
Alder (Red)	0	0	156	156
Total	3,196	2,403	156	5,755

Comments: Pond Values Used: Local Pond Values, December 2017.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$1,245/\text{MBF} = \$1,450/\text{MBF} - \$205/\text{MBF}$

SCALING COST ALLOWANCE = $\$5.00/\text{MBF}$

BRANDING AND PAINTING COST ALLOWANCE = $\$2.00/\text{MBF}$

FUEL COST ALLOWANCE = $\$3.00/\text{Gallon}$

HAULING COST ALLOWANCE

Hauling costs equivalent to \$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 $\$150/\text{hour} = \$3,000$

Machine Time to Pile Landing Slash:

20 hours x $\$150/\text{hour} = \$3,000$

Equipment Cleaning: 2 x $\$1,000/\text{Piece} = \$2,000$

Slash Treatment: 45 acres x $\$200/\text{acre} = \$9,000$

Weyerhaeuser Road use fee = $\$19,161.34$

TOTAL Other Costs (No Profit & Risk added) = $\$36,161.34$

ROAD MAINTENANCE

Move-in: $\$4,000$

General Road Maintenance: 4.6 miles x $\$1,200/\text{mile} = \$5,520$

TOTAL Road Maintenance: $\$9,520/5,715 \text{ MBF} = \$1.67/\text{MBF}$



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Logging Conditions

Combination#: 1	Douglas - Fir	100.00%
	Western Hemlock / Fir	100.00%
	Alder (Red)	100.00%
Logging System:	Shovel	Process: Stroke Delimber
yarding distance:	Long (1,500 ft)	downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	8	bd. ft / load: 4600
cost / mbf:	\$86.19	
machines:	Stroke Delimber (B)	



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Logging Costs

Operating Seasons: 1.00	Profit Risk: 10%
Project Costs: \$116,540.00	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$36,161.34

Miles of Road

Road Maintenance: \$1.67

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	3.6
Alder (Red)	\$0.00	1.0	3.6



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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									
\$86.19	\$1.70	\$0.76	\$86.48	\$0.00	\$17.51	\$0.00	\$7.00	\$6.28	\$205.92
Western Hemlock / Fir									
\$86.19	\$1.75	\$0.76	\$113.75	\$0.00	\$20.24	\$0.00	\$7.00	\$6.28	\$235.97
Alder (Red)									
\$86.19	\$1.75	\$0.76	\$227.50	\$0.00	\$31.62	\$0.00	\$7.00	\$6.28	\$361.10

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$821.97	\$616.05	\$0.00
Western Hemlock / Fir	\$0.00	\$702.80	\$466.83	\$0.00
Alder (Red)	\$0.00	\$724.39	\$363.29	\$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	5,559	\$616.05	\$3,424,621.95
Western Hemlock / Fir	40	\$466.83	\$18,673.20
Alder (Red)	156	\$363.29	\$56,673.24

Gross Timber Sale Value

Recovery: \$3,499,968.39

Prepared By: Kenton Burns

Phone: 503-359-7477

PROJECT COST SUMMARY SHEET

Timber Sale: Clatstastic
 Sale Number: 341-18-15

PROJECT NO. 1: ROAD CONSTRUCTION AND IMPROVEMENT**CONSTRUCTION**

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
F to G	2+75	\$920.32
B to H	5+50	\$2,136.64
	8+25 stations	
	0.16 miles	

SUBTOTAL CONSTRUCTION = \$3,056.96

IMPROVEMENTS

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to B	121+75	\$9,290.00
C to D	12+00	\$834.00
E to F	3+80	\$746.80
	137+55 stations	
	2.61 miles	

SUBTOTAL IMPROVEMENTS = \$10,870.80

TOTAL PROJECT NO. 1 COST = \$13,927.76

PROJECT NO. 2: SURFACING

<u>Road Segment</u>	<u>Rock Amount</u>	<u>Rock Type</u>	<u>Cost</u>
A to B	3512 cy	3" - 0	\$67,676.24
A to B	140 cy	1 1/2" - 0	\$1,572.20
C to D	605 cy	3" - 0	\$12,239.15
E to F	202 cy	Pit-run	\$3,666.30
E to F	20 cy	1 1/2" - 0	\$222.00
F to G	226 cy	Pit-run	\$4,153.88
B to H	372 cy	Pit-run	\$7,227.96
Total	160 cy	1 1/2" - 0	
	4117 cy	3" - 0	
	800 cy	Pit-run	

TOTAL PROJECT NO. 2 COST = \$96,757.73

PROJECT NO. 3 GRASS SEED, FERTILIZE, & MULCH

TOTAL PROJECT NO. 3 COST = \$121.13

MOVE-IN & EQUIPMENT CLEANING

Grader	\$707.29
Loader (into Stockpile)	\$662.48
Roller (smooth/grid) & Compactor	\$461.78
Excavator (Large) - Equipment Cleaning	\$1,707.29
Dozer (Large) - Equipment Cleaning	\$1,751.87
Dump Trucks (10cy +)	\$442.67

TOTAL MOVE-IN & EQUIPMENT CLEANING COST = \$5,733.38

TOTAL CREDITS \$116,540.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Clatstastic
Road Segment: A to B

Sale Number: 341-18-15
Improvement: 121+75 stations
2.31 miles

PROJECT NO. 1

EXCAVATION

Improve Junction	3.00	ea @	\$55.00	per sta =	\$165.00
Improve Turnout	14	ea @	\$33.00	per ea =	\$462.00
Grade, ditch, & roll	121.75	sta @	\$36.00	per sta =	\$4,383.00

TOTAL EXCAVATION COSTS = \$5,010.00

CULVERTS - MATERIALS & INSTALLATION

Culverts

210 LF of 18" \$4,200.00

Culvert Markers

8 markers \$80.00

TOTAL CULVERT COSTS = \$4,280.00

PROJECT NO. 1 TOTAL COST = \$9,290.00

PROJECT NO. 2:

SURFACING	6	" deep =	31 cy/sta				
A to B	3,274	cy of	3" - 0	@	\$19.27	per cy =	\$63,089.98
Turnouts (14)	196	cy of	3" - 0	@	\$19.27	per cy =	\$3,776.92
Junction	42	cy of	3" - 0	@	\$19.27	per cy =	\$809.34
Culvert bedding	140	cy of	1 1/2" - 0	@	\$11.23	per cy =	\$1,572.20
Rock Total =	3,652						
	3,512	cy of	3" - 0		\$19.27	per cy =	\$67,676.24
	140	cy of	1 1/2" - 0		\$11.23	per cy =	\$1,572.20

PROJECT NO. 2 TOTAL COST = \$69,248.44

TOTAL COST = \$78,538.44

SUMMARY OF CONSTRUCTION COST

Timber Sale:	<u>Clatstastic</u>	Sale Number:	<u>341-18-15</u>
Road Segment:	<u>B to H</u>	Construction:	<u>5+50</u> stations
			<u>0.10</u> miles

PROJECT NO. 1

EXCAVATION

Clearing & grubbing (scatter)	0.38	ac @	\$1,078.00	per acre =	\$409.64
Balanced road construction	5.50	sta @	\$110.00	per sta =	\$605.00
Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	5.50	sta @	\$36.00	per sta =	\$198.00
					TOTAL EXCAVATION COSTS = \$1,526.64

CULVERTS - MATERIALS & INSTALLATION

Culverts	
30 LF of 18"	\$600.00
Culvert Markers	
1 markers	\$10.00
TOTAL CULVERT COSTS = \$610.00	

PROJECT NO. 1 TOTAL COST = \$2,136.64

PROJECT NO. 2:

SURFACING	10	" deep =	53 cy/sta		
B to H	292	cy of	Pit-run	@	\$19.43 per cy = \$5,673.56
Landing	80	cy of	Pit-run	@	\$19.43 per cy = \$1,554.40
Rock Total =	372				
	372	cy of	Pit-run		\$19.43 per cy = \$7,227.96
					PROJECT NO. 2 TOTAL COST = \$7,227.96

PROJECT NO. 3:

Grass seed & fertilizer	0.19	acres	@	\$425.00	per acre = \$80.75
					PROJECT NO. 3 TOTAL COST = \$80.75

TOTAL COST = \$9,445.35

SUMMARY OF CONSTRUCTION COST

Timber Sale: Clatstastic Sale Number: 341-18-15
Road Segment: C to D Improvement: 12+00 stations
0.23 miles

PROJECT NO. 1

EXCAVATION

Improve Turnout	1	ea @	\$33.00	per ea =	\$33.00
Construct 50' Spur w/ Landing	1	ea @	\$369.00	per ea =	\$369.00
Grade, ditch, & roll	12.00	sta @	\$36.00	per sta =	\$432.00
TOTAL EXCAVATION COSTS =					\$834.00

PROJECT NO. 1 TOTAL COST = \$834.00

PROJECT NO. 2:

SURFACING	8	" deep =	42 cy/sta			
C to D	504	cy of	3" - 0	@	\$20.23	per cy = \$10,195.92
50' Spur w/ Landing	81	cy of	3" - 0	@	\$20.23	per cy = \$1,638.63
Turnout	20	cy of	3" - 0	@	\$20.23	per cy = \$404.60
Rock Total =	605					
	605	cy of	3" - 0		\$20.23	per cy = \$12,239.15

PROJECT NO. 2 TOTAL COST = \$12,239.15

TOTAL COST = \$13,073.15

SUMMARY OF CONSTRUCTION COST

Timber Sale: Clatstastic Sale Number: 341-18-15
 Road Segment: E to F Improvement: 3+80 stations
0.07 miles

PROJECT NO. 1

EXCAVATION

Grade, ditch, & roll 3.80 sta @ \$36.00 per sta = \$136.80
TOTAL EXCAVATION COSTS = \$136.80

CULVERTS - MATERIALS & INSTALLATION

Culverts

30 LF of 18" \$600.00

Culvert Markers

1 markers \$10.00

TOTAL CULVERT COSTS = \$610.00

PROJECT NO. 1 TOTAL COST = \$746.80

PROJECT NO. 2:

SURFACING	10	" deep =	53 cy/sta				
E to F	202	cy of	Pit-run	@	\$18.15	per cy =	\$3,666.30
Culvert bedding	20	cy of	1 1/2" - 0	@	\$11.10	per cy =	\$222.00
Rock Total =	222						
	202	cy of	Pit-run		\$18.15	per cy =	\$3,666.30
	20	cy of	1 1/2" - 0		\$11.10	per cy =	\$222.00

PROJECT NO. 2 TOTAL COST = \$3,888.30

TOTAL COST = \$4,635.10

SUMMARY OF CONSTRUCTION COST

Timber Sale: Clatstastic
 Road Segment: F to G

Sale Number: 341-18-15
 Construction: 2+75 stations
0.05 miles

PROJECT NO. 1

EXCAVATION

Clearing & grubbing (scatter)	0.19	ac @	\$1,078.00	per acre =	\$204.82
Balanced road construction	2.75	sta @	\$110.00	per sta =	\$302.50
Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	2.75	sta @	\$36.00	per sta =	\$99.00

TOTAL EXCAVATION COSTS = \$920.32

PROJECT NO. 1 TOTAL COST = \$920.32

PROJECT NO. 2:

SURFACING

F to G	146	cy of	Pit-run	@	\$18.38	per cy =	\$2,683.48
Landing	80	cy of	Pit-run	@	\$18.38	per cy =	\$1,470.40
Rock Total =	226						
	226	cy of	Pit-run		\$18.38	per cy =	\$4,153.88

PROJECT NO. 2 TOTAL COST = \$4,153.88

PROJECT NO. 3:

Grass seed & fertilizer	0.10	acres	@	\$425.00	per acre =	\$40.38
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PROJECT NO. 3 TOTAL COST = \$40.38

TOTAL COST = \$5,114.58

**CRUISE REPORT
CLATSTASTIC
341-18-15**

1. LOCATION: Portions of Sections 2 & 11, T5N, R3W, W. M., Columbia 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 cruised in January, 2018. Sale Areas 1, & 2 were sampled with 30 variable radius grade plots using a 40 BAF prism. Plots were laid out on a 4 chain x 8 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain. Area 3 (R/W) volumes were estimated by comparison to a similar aged 30 year old Douglas-fir stand. The volume estimate used for Area 3 was 20 MBF per acre.

4. CRUISE RESULTS

188 trees were measured and graded producing a cumulative Sampling Error of 5.7% on the Basal Area and 5.6% 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 Kenton Burns.

Prepared by:

 1/10/2018
ODF Forester Date

Reviewed by:

 1/10/2018
Eric Foucht Date

TC PSTATS			PROJECT STATISTICS						PAGE	1		
			PROJECT CLATSTIC						DATE	1/10/2018		
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
05N	03	02	00A1	00MC		116.00	30	188	S	W		
05N	03W	11	00A2	00MC								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			30	188	6.3							
CRUISE			30	188	6.3	20,109	.9					
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			178	153.4	16.8	124	57.4	234.9	49,391	48,858	10,540	10,540
R ALDER			7	10.8	12.6	94	2.6	9.3	1,462	1,412	309	309
WHEMLOCK			3	9.1	9.6	55	1.5	4.6	357	357	82	82
TOTAL			188	173.4	16.2	118	61.8	248.8	51,210	50,627	10,931	10,931
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		90.2	6.8	529	568	606						
R ALDER		57.5	23.4	150	196	242						
WHEMLOCK		25.0	17.3	33	40	47						
TOTAL		93.0	6.8	508	545	582	346	86	38			
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		83.6	6.3	112	119	127						
R ALDER		62.3	25.3	33	45	56						
WHEMLOCK		20.8	14.4	8	9	10						
TOTAL		86.3	6.3	107	115	122	298	74	33			
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		62.7	11.6	136	153	171						
R ALDER		344.4	63.9	4	11	18						
WHEMLOCK		547.7	101.7		9	18						
TOTAL		60.6	11.3	154	173	193	152	38	17			
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		33.4	6.2	220	235	249						
R ALDER		291.1	54.0	4	9	14						
WHEMLOCK		547.7	101.7		5	9						
TOTAL		30.5	5.7	235	249	263	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		32.9	6.1	45,878	48,858	51,838						
R ALDER		282.8	52.5	671	1,412	2,154						
WHEMLOCK		547.7	101.7		357	720						
TOTAL		30.4	5.6	47,774	50,627	53,480	38	10	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		31.2	5.8	9,930	10,540	11,150						
R ALDER		283.8	52.7	146	309	472						

TC PSTATS				PROJECT STATISTICS				PAGE 2		
PROJECT				CLATSTIC				DATE 1/10/2018		
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
05N	03	02	00A1	00MC	116.00	30	188	S	W	
05N	03W	11	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			547.7	101.7		82	165			
TOTAL			28.5	5.3	10,352	10,931	11,511	34	8	4

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
<div>T05N R03W S02 Ty00MC76.00</div>				Project: CLATSTIC												Page 1					
				Acres 76.00												Date 1/10/2018					
																Time 10:59:45AM					
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	
					Def%	Gross	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF			CU														6			0.00	1.8
DF			2M	53	1.6	28,767	28,307	2,151			61	39		2		98	40	15	333	1.69	84.9
DF			3M	41	.5	21,384	21,282	1,617		100					4	96	39	8	97	0.58	218.3
DF			4M	6		2,995	2,995	228		100			24	68		7	20	6	25	0.28	120.3
DF Totals				97	1.1	53,146	52,584	3,996		46	33	21	1	5	1	92	34	9	124	0.79	425.4
RA R				100	4.6	1,650	1,574	120		65	35		6	6		88	34	9	108	0.73	14.6
RA Totals				3	4.6	1,650	1,574	120		65	35		6	6		88	34	9	108	0.73	14.6
Totals					1.2	54,796	54,158	4,116		47	33	21	2	5	1	92	34	9	123	0.79	440.0

TC		PSTNDSUM		Stand Table Summary										Page Date:		1 1/10/2018		
<div>T05N R03W S02 Ty00MC76.00</div>					Project					CLATSTIC					Time:		10:59:46AM	
					Acres					76.00					Grown Year:			
S Spc	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Tons/ Acre	Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s		
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons	Cunits				MBF		
DF	8	1	86	100	5.457	1.90	5.46	5.6	30.0	.87	30	164	66		23	12		
DF	9	1	88	93	4.312	1.90	4.31	10.4	60.0	1.27	45	259	97		34	20		
DF	10	4	88	107	13.969	7.62	24.45	8.5	40.0	5.90	207	978	449		157	74		
DF	11	9	87	110	25.976	17.14	49.07	11.0	49.4	15.35	538	2,424	1,166		409	184		
DF	12	4	86	112	9.701	7.62	19.40	13.4	55.0	7.40	260	1,067	562		197	81		
DF	13	7	86	110	14.465	13.33	26.86	17.3	73.1	13.27	466	1,963	1,009		354	149		
DF	14	8	88	122	14.254	15.24	32.07	18.7	85.6	17.11	600	2,744	1,300		456	209		
DF	15	4	85	125	6.209	7.62	15.52	19.8	83.0	8.74	307	1,288	664		233	98		
DF	16	10	88	140	13.642	19.05	40.93	20.9	95.7	24.34	854	3,915	1,850		649	298		
DF	17	11	87	137	13.293	20.95	39.88	24.0	103.6	27.28	957	4,133	2,073		727	314		
DF	18	4	89	150	4.312	7.62	12.93	29.5	136.7	10.89	382	1,768	828		290	134		
DF	19	10	89	137	9.674	19.05	29.02	30.4	134.3	25.15	882	3,899	1,911		671	296		
DF	20	10	88	140	8.731	19.05	27.07	33.6	152.9	25.91	909	4,138	1,969		691	315		
DF	21	4	90	140	3.168	7.62	9.50	38.0	180.0	10.30	362	1,711	783		275	130		
DF	22	8	89	144	5.772	15.24	17.32	44.4	209.2	21.90	768	3,622	1,664		584	275		
DF	23	11	89	152	7.262	20.95	24.43	45.3	216.8	31.52	1,106	5,295	2,396		841	402		
DF	24	7	89	146	4.244	13.33	13.95	48.2	226.1	19.15	672	3,153	1,456		511	240		
DF	25	2	88	164	1.118	3.81	4.47	46.9	227.5	5.98	210	1,017	454		159	77		
DF	26	4	90	152	2.066	7.62	6.72	60.8	300.0	11.64	408	2,015	885		310	153		
DF	27	4	88	155	1.916	7.62	6.71	59.8	283.6	11.42	401	1,902	868		305	145		
DF	28	2	86	159	.891	3.81	3.56	56.4	282.5	5.73	201	1,007	435		153	77		
DF	30	2	87	158	.776	3.81	3.10	63.9	330.0	5.66	198	1,024	430		151	78		
DF	31	2	87	159	.727	3.81	2.54	78.6	387.1	5.70	200	985	433		152	75		
DF	33	3	88	156	.962	5.71	3.53	86.1	439.1	8.66	304	1,549	658		231	118		
DF	36	1	87	155	.269	1.90	.81	126.4	700.0	2.91	102	566	221		78	43		
DF	Totals	133	88	126	173.165	253.33	423.60	26.8	124.1	324.04	11,370	52,584	24,627		8,641	3,996		
RA	13	1	93	95	2.066	1.90	4.13	15.8	65.0	1.80	65	269	137		50	20		
RA	14	1	93	108	1.782	1.90	3.56	20.8	100.0	2.04	74	356	155		56	27		
RA	16	1	93	106	1.364	1.90	2.73	29.6	130.0	2.22	81	355	169		61	27		
RA	17	1	92	82	1.208	1.90	2.42	25.2	105.0	1.67	61	254	127		46	19		
RA	20	1	93	106	.873	1.90	1.75	46.9	195.0	2.25	82	341	171		62	26		
RA	Totals	5	93	99	7.294	9.52	14.59	24.9	107.9	9.98	363	1,574	759		276	120		
Totals		138	88	125	180.459	262.86	438.18	26.8	123.6	334.02	11,733	54,158	25,386		8,917	4,116		

TC PLOGSTVB			Log Stock Table - MBF																
T05N R03W S02 Ty00MC 76.00				Project: CLATSTIC Acres 76.00										Page 1 Date 1/10/2018 Time 10:59:44AM					
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	22	13	13.6	11	.3							11					
DF		2M	27	10	12.5	8	.2					8							
DF		2M	30	18	14.3	15	.4							15					
DF		2M	40	2,146	1.4	2,116	53.0					600	424	846	174	73			
DF		3M	31	3		3	.1			3									
DF		3M	32	20		20	.5			20									
DF		3M	34	34		34	.9			34									
DF		3M	36	59		59	1.5			30	20	8							
DF		3M	38	67		67	1.7			54	13								
DF		3M	40	1,442		1,435	35.9			347	490	598							
DF		4M	12	24		24	.6			24									
DF		4M	14	3		3	.1			3	0								
DF		4M	16	16		16	.4			16									
DF		4M	18	4		4	.1			4									
DF		4M	20	8		8	.2			8									
DF		4M	22	53		53	1.3			52	1								
DF		4M	24	38		38	1.0			37	1								
DF		4M	26	32		32	.8			32									
DF		4M	28	7		7	.2			7									
DF		4M	30	26		26	.6			26									
DF		4M	36	17		17	.4			17									
DF		Totals		4,039	1.1	3,996	97.1			713	526	606	609	424	872	174	73		
RA		R	20	7		7	6.2			7									
RA		R	30	7		7	5.7			7									
RA		R	36	6		6	5.2			6									
RA		R	40	105	5.5	99	82.9			5	16	37	21	21					
RA		Totals		125	4.6	120	2.9			25	16	37	21	21					
Total		All Species		4,164	1.2	4,116	100.0			738	541	643	629	445	872	174	73		

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
<div>T05N R03W S11 Ty00MC40.00</div>				Project: CLATSTIC										Page 1							
				Acres 40.00										Date 1/10/2018							
														Time 11:50:33AM							
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
WH		3M		39		407	407	16	100				100				34	6	50	0.32	8.1
WH		4M		61		628	628	25	100				100				28	6	34	0.30	18.2
WH Totals				2		1,035	1,035	41	100				61 39				30	6	39	0.30	26.4
RA R				100		1,105	1,105	44	100				48 52				22	7	49	0.42	22.4
RA Totals				3		1,105	1,105	44	100				48 52				22	7	49	0.42	22.4
DF CU																	8	35		0.00	.5
DF		2M		66	1.6	28,183	27,739	1,110			43	57		2	98	40	16	404	2.04	68.7	
DF		3M		30	.3	12,415	12,379	495	100					0	1	98	39	8	96	0.59	129.4
DF		4M		4		1,660	1,660	66	100				33	67			20	6	25	0.30	67.4
DF Totals				95	1.1	42,258	41,778	1,671	34	28	38		1	3	2	94	35	9	157	0.98	266.0
Totals					1.1	44,398	43,918	1,757	37	27	36		2	4	3	91	33	9	140	0.90	314.7

TC		PSTNDSUM										Stand Table Summary										Page		1	
																						Date:		1/10/2018	
T05N R03W S11 Ty00MC 40.00					Project					CLATSTIC					Time:		12:36:44PM								
					Acres					40.00					Grown Year:										
S Spc	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Totals									
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons	Cunits				MBF									
DF	9	1	87	78	10.060	4.44	10.06	8.2	40.0	2.35	82	402	94	33	16										
DF	10	2	88	98	16.297	8.89	24.45	9.1	43.3	6.33	222	1,059	253	89	42										
DF	11	1	88	111	6.734	4.44	13.47	10.4	45.0	4.01	141	606	160	56	24										
DF	12	1	88	84	5.659	4.44	5.66	18.5	70.0	2.99	105	396	120	42	16										
DF	13	1	85	106	4.822	4.44	9.64	16.3	60.0	4.47	157	579	179	63	23										
DF	14	3	89	110	12.473	13.33	24.95	19.1	85.0	13.55	475	2,120	542	190	85										
DF	15	2	88	115	7.243	8.89	14.49	23.6	102.5	9.73	341	1,485	389	137	59										
DF	16	1	88	110	3.183	4.44	6.37	24.8	105.0	4.49	158	668	180	63	27										
DF	17	3	87	126	8.459	13.33	22.56	24.7	103.7	15.85	556	2,340	634	222	94										
DF	18	3	89	134	7.545	13.33	22.64	27.0	121.1	17.40	611	2,741	696	244	110										
DF	19	2	87	132	4.515	8.89	13.54	29.2	128.3	11.25	395	1,738	450	158	70										
DF	20	2	89	144	4.074	8.89	12.22	35.6	166.7	12.40	435	2,037	496	174	81										
DF	21	3	89	134	5.543	13.33	16.63	36.9	171.1	17.48	613	2,846	699	245	114										
DF	23	1	89	145	1.540	4.44	4.62	50.1	240.0	6.59	231	1,109	264	93	44										
DF	24	4	89	153	5.659	17.78	18.39	49.7	230.8	26.08	915	4,244	1,043	366	170										
DF	25	1	86	140	1.304	4.44	3.91	52.8	236.7	5.88	206	926	235	83	37										
DF	27	2	88	173	2.236	8.89	8.94	57.0	301.3	14.53	510	2,694	581	204	108										
DF	28	2	83	165	2.079	8.89	8.32	57.3	280.0	13.58	476	2,328	543	191	93										
DF	31	2	84	159	1.696	8.89	6.78	68.2	333.8	13.18	463	2,264	527	185	91										
DF	33	2	79	163	1.497	8.89	5.24	86.5	378.6	12.92	453	1,983	517	181	79										
DF	34	1	88	163	.705	4.44	2.82	85.6	452.5	6.88	241	1,276	275	97	51										
DF	35	1	78	149	.665	4.44	2.00	105.7	436.7	6.01	211	871	240	84	35										
DF	36	1	87	177	.629	4.44	2.52	103.9	585.0	7.45	261	1,471	298	105	59										
DF	41	1	89	177	.485	4.44	1.94	120.8	747.5	6.67	234	1,449	267	94	58										
DF	43	1	79	161	.441	4.44	1.76	131.0	620.0	6.58	231	1,093	263	92	44										
DF	45	1	71	195	.402	4.44	1.61	148.5	652.5	6.81	239	1,050	273	96	42										
DF	Totals	45	88	118	115.945	200.00	265.51	33.8	157.4	255.48	8,964	41,778	10,219	3,586	1,671										
RA	8	1	93	88	12.732	4.44	12.73	4.3	30.0	1.50	54	382	60	22	15										
RA	13	1	93	96	4.822	4.44	9.64	15.8	75.0	4.19	153	723	168	61	29										
RA	Totals	2	93	90	17.554	8.89	22.38	9.2	49.4	5.69	207	1,105	228	83	44										
WH	9	1	86	52	10.060	4.44	10.06	7.1	30.0	2.28	71	302	91	29	12										
WH	10	2	88	57	16.297	8.89	16.30	10.2	45.0	5.32	166	733	213	67	29										
WH	Totals	3	87	55	26.358	13.33	26.36	9.0	39.3	7.61	238	1,035	304	95	41										
Totals		50	88	105	159.856	222.22	314.24	29.9	139.8	268.78	9,409	43,918	10,751	3,764	1,757										

TC PLOGSTVB				Log Stock Table - MBF																
T05N R03W S11 Ty00MC 40.00				Project: CLATSTIC										Page 1						
				Acres 40.00										Date 1/10/2018						
														Time 12:36:43PM						
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+
WH		3M	34		16		16	39.4			16									
WH		4M	26		12		12	29.2			12									
WH		4M	30		13		13	31.5			13									
WH		Totals			41		41	2.4			41									
RA		R	16		15		15	34.6			15									
RA		R	20		6		6	13.1			6									
RA		R	40		23		23	52.4				23								
RA		Totals			44		44	2.5			21	23								
DF		2M	34		25	11.1	23	1.4							23					
DF		2M	36		22	5.6	21	1.3							21					
DF		2M	40		1,079	1.3	1,066	63.8						243	181	263	242	104	32	
DF		3M	28		2		2	.1					2							
DF		3M	32		5		5	.3			5									
DF		3M	34		3		3	.2			3									
DF		3M	36		26		26	1.6			10	12	5							
DF		3M	38		46		46	2.7			46									
DF		3M	40		415		414	24.8			94	145	174							
DF		4M	12		8		8	.5			7	1								
DF		4M	14		4		4	.2			3		1							
DF		4M	16		3		3	.2			3									
DF		4M	18		1		1	.1				1								
DF		4M	20		5		5	.3			5									
DF		4M	22		8		8	.5			8									
DF		4M	24		6		6	.3			5	1								
DF		4M	26		7		7	.4			7									
DF		4M	28		7		7	.4			7									
DF		4M	30		16		16	1.0			16									
DF		Totals			1,690	1.1	1,671	95.1			220	160	182	243	181	307	242	104	32	
Total		All Species			1,776	1.1	1,757	100.0			282	183	182	243	181	307	242	104	32	

TIMBER SALE SUMMARY
CLATSTASTIC
Contract No. 341-18-15

1. **Location:** Portions of Sections 2 & 11, T5N, R3W, W. M., Columbia County, Oregon
2. **Type of Sale:** This timber sale is 116 net acres of Modified Clearcut in 2 sale areas, and a R/W of less than 1 acre. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF, 100% Columbia 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 January of 2018. For more information see Cruise Report.
6. **Timber Description:** Area 1 is 76 acres, has an average of 262 ft² of basal area, and 180 trees per acre for all species including Douglas-fir, red alder, and minor amounts of western hemlock and red cedar. Area 1 also has 52.5 MBF/acre and an average Douglas-fir DBH of 16 inches. Area 2 is 40 acres, has an average of 222 ft² of basal area, and 160 trees per acre for all species including Douglas-fir, red alder, and minor amounts of western hemlock and red cedar. Area 2 also has 41.7 MBF/acre and an average Douglas-fir DBH of 17 inches.
7. **Topography and Logging Method:** Slopes within the sale areas range from 5% to 40%. Elevations range from 880 to 1120 feet. The timber sale is 100% ground-based yarding. The average horizontal skid trail length is approximately 500 feet and the maximum is approximately 1,300 feet.
8. **Access:** All access to the Timber Sale Area is on surfaced all-weather roads. From Forest Grove travel north on highway 47 through Banks. Continue on highway 47 as it merges with highway 26, then splits off again to the right toward Vernonia near MP 77. Continue north on highway 47 approximately 16 miles through Vernonia then for another 8 miles to Apiary Road. Turn right onto Apiary Road and travel approximately 10.6 miles to the Little Clatskanie Mainline. Turn right onto the Little Clatskanie Mainline and continue approximately 3.5 miles to the northern portion of Area 1.
9. **Projects:**

Project No. 1: Road Construction and Improvement	\$13,927.76
Project No. 2: Surfacing	\$96,757.73
Project No. 3: Grass Seed, Fertilize, & Mulch	\$121.13
Move in and equipment cleaning:	\$5,733.38
 Total Credit for all Projects (rounded)	 \$116,540.00

VOLUME SUMMARY

Clatstastic
341-18-15

January 2018

VOLUMES IN MBF

AREA 1: MC (76 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	Cruise Volume	2,151	1,617	228	0	3,996
	Hidden D&B (2%)	(43)	(32)	(5)	0	(80)
	NET TOTAL	2,108	1,585	223	0	3,916
	% of Total	54	40	6	0	
Red Alder	Cruise Volume	0	0	0	120	120
	Hidden D&B (5%)	0	0	0	6	6
	NET TOTAL	0	0	0	114	114
	% of Total	0	0	0	100	

AREA 2: MC (40 ACRES)

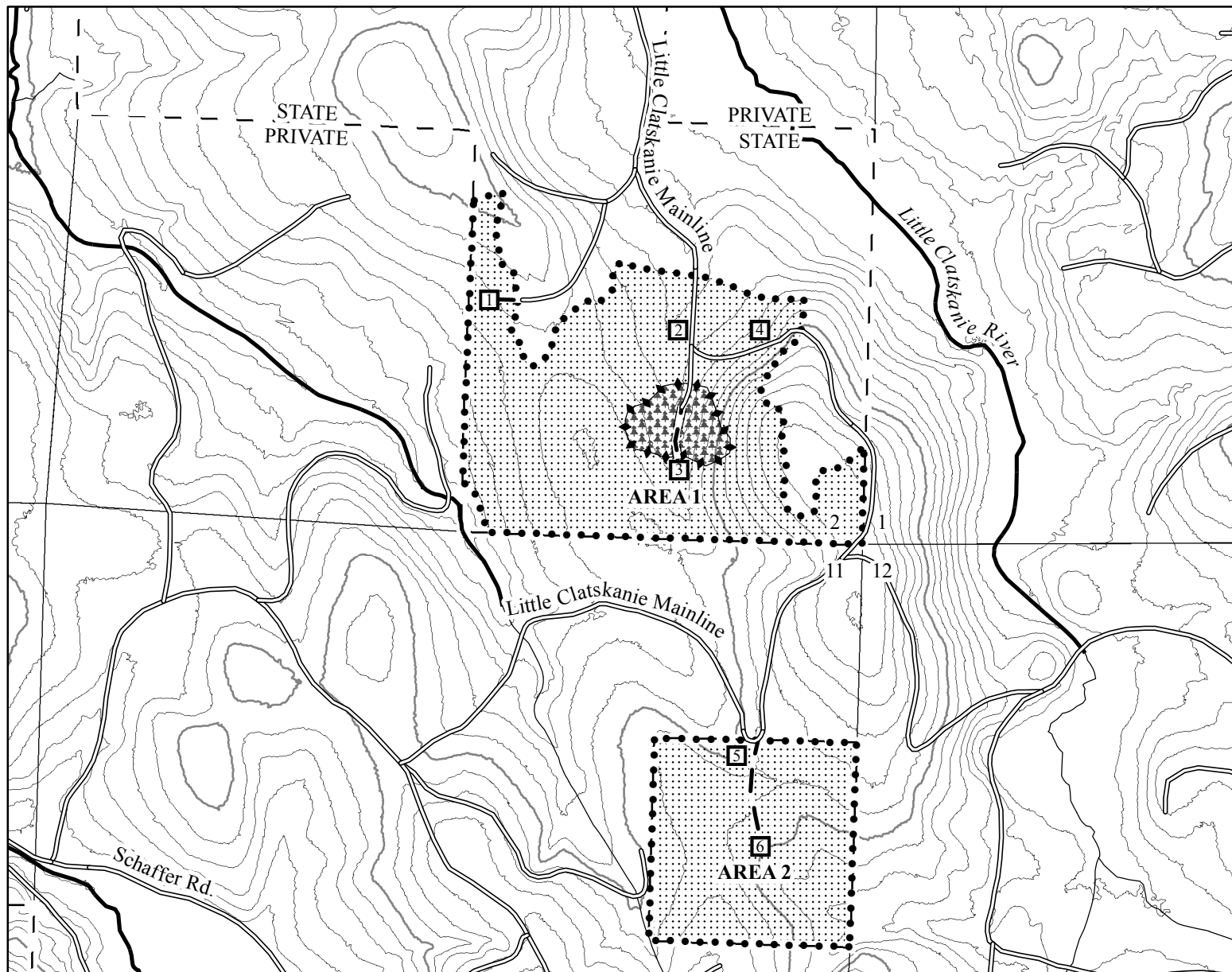
SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	Cruise Volume	1,110	495	66	0	1,671
	Hidden D&B (2%)	(22)	(10)	(1)	0	(33)
	NET TOTAL	1,088	485	65	0	1,638
	% of Total	66	30	4	0	
Western hemlock	Cruise Volume	0	16	25	0	41
	Hidden D&B (2%)	0	0	1	0	1
	NET TOTAL	0	16	24	0	40
	% of Total	0	40	60	0	
Red Alder	Cruise Volume	0	0	0	44	44
	Hidden D&B (5%)	0	0	0	2	2
	NET TOTAL	0	0	0	42	42
	% of Total	0	0	0	100	

AREA 3: R/W (<1 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	Cruise Volume	0	3	2	0	5
	Hidden D&B (2%)	()	()	()	0	()
	NET TOTAL	0	3	2	0	5
	% of Total	0	60	40	0	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	3,196	2,073	290	0	5,559
Western hemlock		16	24		40
Red Alder	0	0	0	156	156
Total	3,196	2,089	314	156	5,755



Legend

- Timber Sale Boundary
- ◆◆◆◆ Leave Area Boundary
- Surfacd Roads
- — New Road Construction
- ▬▬▬ Area 3 Right of Way
- Type F Stream
- Type N Stream
- Tractor Yarding Area
- ▨ Green Tree Retention
- Tractor Landing
- — — ODF Ownership Boundary
- Section Line
- 20 Foot Contour
- 200 Foot Contour

LOGGING PLAN

FOR TIMBER SALE CONTRACT 341-18 -15
CLATSTASTIC
PORTIONS OF SECTIONS 2 & 11,
T5N, R3W, W.M.,
COLUMBIA COUNTY, OREGON

Forest Grove District GIS
January, 2018

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



APPROXIMATE NET ACRES

	TRACTOR	CABLE
AREA 1	76	0
AREA 2	40	0
AREA 3	<1	0
TOTAL	116	0

1:12,000

1 inch = 1,000 feet

