



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
28 Squared  
Sale 341-13-63

District: Tillamook

Date: August 06, 2012

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**cost summary**

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$377,088.39	\$19,664.70	\$396,753.09
		Project Work:	\$0.00
		Advertised Value:	\$396,753.09



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**timber description**

**Location:** Portions of Section 28, T3S, R8W, W.M., Tillamook County, Oregon.

**Stand Stocking:** 80%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	23	0	95
Alder (Red)	18	0	90

Volume by Grade	10" - 11"	12"+	2S	3S	3S 12"+	6" - 7"	8" - 9"	Total
Douglas - Fir	0	0	980	218	35	0	0	1,233
Alder (Red)	9	19	0	0	0	15	12	55
Total	9	19	980	218	35	15	12	1,288



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comments: Pond Values Used: 2nd Quarter Calendar Year 2012.

Western Hemlock and Other Conifers Stumpage Price = Pond Value  
minus Logging Cost  
 $\$245/\text{MBF} = \$465/\text{MBF} - \$220/\text{MBF}$

Western redcedar & Other Cedars Stumpage Price = Pond Value minus  
Logging Cost  
 $\$730/\text{MBF} = \$950/\text{MBF} - \$220/\text{MBF}$

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$4.00/Gallon

HAULING COST ALLOWANCE

Hauling cost equivalent to \$780 daily truck cost.

Other Costs (with Profit & Risk to be added):

Brand and Paint:  $\$2/\text{MBF} \times 1,288 \text{ MBF} = \$2,576$

Snag Creation by Girdling at DBH:  $90 \text{ snags} \times \$5/\text{snag} = \$450$

Fall Non-Merchantable Trees on Area 2:  $1 \text{ acre} \times \$50/\text{acre} = \$50$

TOTAL Other Costs (with Profit & Risk to be added) = \$3,076

Other Costs (No Profit & Risk added):

YUM Yarding Area 2:  $1 \text{ acre} @ \$110/\text{acre} = \$110$

Equipment Cleaning:  $2 \text{ machines} @ \$1,000 \text{ per machine} = \$2,000$

Non-Project Roads:

Road 1:  $\$350/\text{sta} \times 9.8 \text{ sta} = \$3,430$

Road 2:  $\$100/\text{sta} \times 6.5 \text{ sta} = \$650$

Total Non-Project Roads: \$4,080

Access Road Brushing and Surfacing Costs (actual District costs)  
for Use of Forest Service Roads 8376, 8376113, and 8376141:

Brushing, logging out, ditch maintenance 2.1 miles  $\times \$700/\text{mile} = \$1,470$

Brushing, logging out, ditch maintenance 1.5 miles  $\times \$1,300/\text{mile} = \$1,950$

Surfacing 80 yards  $\times \$25/\text{yard} = \$2,000$

Total Brushing and Surfacing Costs = \$5,420

Forest Service Road Use Permit Fee:  $\$0.675/\text{mbf-mile}$  in excess of  
1,000 MBF removed.

$288 \text{ MBF} \times \$0.675 \times 3.6 \text{ miles} = \$699.84$

TOTAL Other Costs (No Profit & Risk added) = \$12,309.84

ROAD MAINTENANCE

Road Maintenance: Forest Service Roads 8376, 8376113, and 8376141  
Forest Service Road Maintenance Fee:  $\$1.44/\text{MBF-mile} \times 1,288 \text{ MBF} \times 3.6 \text{ miles} = \$6,676.99$   
 $1,288 \text{ MBF} \times \$5.18/\text{MBF} = \$6,676.99$

Additional spot rocking:  $(50 \text{ cy} \times \$25/\text{cy}) / 1,288 \text{ MBF} = \$0.97/\text{MBF}$

Total Road Maintenance: \$6.15/MBF



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal 28 Squared Sale 341-13-63

District: Tillamook

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## logging conditions

<b>combination#:</b>	1	Douglas - Fir	10.00%
<b>yarding distance:</b>	Short (400 ft)	<b>downhill yarding:</b>	No
<b>logging system:</b>	Cable: Small Tower <=40	<b>Process:</b>	Manual Delimbing
<b>tree size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
<b>loads / day:</b>	3.1	<b>bd. ft / load:</b>	4,000
<b>cost / mbf:</b>	\$217.82		
<b>machines:</b>	Log Loader (A) Tower Yarder (Small)		
<b>combination#:</b>	2	Douglas - Fir	90.00%
<b>yarding distance:</b>	Short (400 ft)	<b>downhill yarding:</b>	No
<b>logging system:</b>	Track Skidder	<b>Process:</b>	Manual Delimbing
<b>tree size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
<b>loads / day:</b>	4.5	<b>bd. ft / load:</b>	4,000
<b>cost / mbf:</b>	\$77.69		
<b>machines:</b>	Feller Buncher w/ Delimber		
<b>combination#:</b>	3	Alder (Red)	10.00%
<b>yarding distance:</b>	Short (400 ft)	<b>downhill yarding:</b>	No
<b>logging system:</b>	Cable: Small Tower <=40	<b>Process:</b>	Manual Delimbing
<b>tree size:</b>	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
<b>loads / day:</b>	4.0	<b>bd. ft / load:</b>	3,300
<b>cost / mbf:</b>	\$204.62		
<b>machines:</b>	Log Loader (A) Tower Yarder (Small)		
<b>combination#:</b>	4	Alder (Red)	90.00%
<b>yarding distance:</b>	Short (400 ft)	<b>downhill yarding:</b>	No
<b>logging system:</b>	Track Skidder	<b>Process:</b>	Manual Delimbing
<b>tree size:</b>	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
<b>loads / day:</b>	6.0	<b>bd. ft / load:</b>	3,300
<b>cost / mbf:</b>	\$70.63		
<b>machines:</b>	Feller Buncher w/ Delimber		



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# Timber Sale Appraisal 28 Squared Sale 341-13-63

District: Tillamook

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## logging costs

Operating Seasons:	1.00	Profit Risk:	12.00%
Project Costs:	\$0.00	Other Costs (P/R):	\$3,076.00
Slash Disposal:	\$0.00	Other Costs:	\$12,309.84

### Miles of Road

Road Maintenance: \$6.15

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	4.5
Alder (Red)	\$0.00	2.0	3.3



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### logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
<b>Douglas - Fir</b>									
\$91.70	\$6.46	\$3.40	\$81.25	\$2.39	\$22.22	\$0.00	\$5.00	\$9.56	\$221.98
<b>Alder (Red)</b>									
\$84.03	\$6.76	\$3.40	\$116.07	\$2.39	\$25.52	\$0.00	\$5.00	\$9.56	\$252.73

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$527.81	\$305.83	\$0.00
Alder (Red)	\$0.00	\$610.27	\$357.54	\$0.00



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**summary**

**Amortized**

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	1,233	\$305.83	\$377,088.39
Alder (Red)	55	\$357.54	\$19,664.70

**Gross Timber Sale Value**

Recovery: \$396,753.09

Prepared by: David Wells

Phone: 503-842-2545



"STEWARDSHIP IN FORESTRY"

## 28 Squared

### Volume Summary

Areas 1 and 2-Modified Clearcut				
45 acres				
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Douglas-fir	28.8	1298	5%	1233
Alder	1.4	61	10%	55
<b>TOTAL</b>	30.2	1359		1288

TOTAL SALE VOLUME			45	acres
SPECIES	Cruised Net (MBF)		Net Sale (MBF)	
Douglas-fir	1298		1233	
Red Alder	61		55	
<b>TOTAL</b>	1359		1288	



TC TLOGSTVB				Log Stock Table - MBF																				
				Project: 28																				
T03S R08W S28 TSALE												T03S R08W S28 TSALE												
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		Page		1						
03S		08W		28		AREA 1 AND 2		SALE		45.00		15		66		Date		6/18/2012						
																Time 4:19:37PM								
Spp	S	So	Gr	Log	T	rt	de	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	CO	2	18						6	5.0	6	.5							6					
DF	CO	2	20						7	14.5	6	.5							6					
DF	CO	2	32						15	5.0	14	1.2							14					
DF	CO	2	40						1,010	5.6	954	77.3				177		230	328	199	20			
DF	CO	3	18						4	13.6	3	.3				3								
DF	CO	3	22						8	13.6	7	.6				7								
DF	CO	3	25						1	5.0	1	.1					1							
DF	CO	3	29						3	5.0	3	.2				3								
DF	CO	3	31						2	5.0	1	.1				1								
DF	CO	3	32						44	5.0	42	3.4				2	19	15	5					
DF	CO	3	33						2	5.0	2	.2				2								
DF	CO	3	34						4	5.0	4	.3				4								
DF	CO	3	37						2	5.0	2	.2					2							
DF	CO	3	40						161	5.0	153	12.4				23	30	88	13					
DF	CO	4	12						1	5.0	1	.1			1		1							
DF	CO	4	13						0	5.0	0	.0			0									
DF	CO	4	14						1	5.0	1	.1			1	1								
DF	CO	4	15						4	5.0	4	.3			3	1								
DF	CO	4	16						1	5.0	1	.1			1									
DF	CO	4	17						1	5.0	1	.1				1								
DF	CO	4	18						2	5.0	2	.1			2									
DF	CO	4	19						3	5.0	3	.2			1	1	1							
DF	CO	4	21						1	5.0	1	.1					1							
DF	CO	4	24						3	5.0	3	.2				3								
DF	CO	4	25						4	5.0	4	.3			3	1								
DF	CO	4	29						3	5.0	2	.2			2									
DF	CO	4	30						2	5.0	2	.1			2									
DF	CO	4	32						4	5.0	4	.3			4									
DF	CO	4	33						2	5.0	2	.1			2									
DF	CO	4	38						2	5.0	2	.2			2									
DF	CO	4	40						2	5.0	2	.2			2									
DF	Totals								1,306	5.6	1,233	80.6		25	37	60	104	192	243	354	199	20		
RA	H	3	32						10	10.0	9	17.2					9							
RA	H	4	36						3	10.0	3	5.4				3								
RA	H	4	40						3	10.0	3	5.4				3								
RA	H	3	32						11	10.0	10	17.9					10							
RA	H	3	40						10	10.0	9	16.8					9							
RA	H	4	22						2	10.0	2	3.4				2								
RA	H	4	31						2	10.0	1	2.7				1								
RA	H	4	40						19	10.0	17	31.1				5	12							
RA	Totals								61	10.0	55	3.6				15	12	9	19					
DL	CO	2	40						212	2.1	208	85.9							4	7	58	116	22	
DL	CO	3	18						1		1	.5					1							
DL	CO	3	20						1		1	.5					1							
DL	CO	3	22						1		1	.5					1							
DL	CO	3	27						2		2	.6					2							
DL	CO	3	32						5		5	2.1								5				
DL	CO	3	37						2		2	.9					2							

TC				TLOGSTVB				Log Stock Table - MBF																															
Project: 28																																							
T03S R08W S28 TSALE												T03S R08W S28 TSALE																											
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		Page																							
03S		08W		28		AREA 1 AND 2		SALE		45.00		15		66		2																							
Date 6/18/2012																																							
Time 4:19:37PM																																							
S		So Gr		Log		Gross		%		Net		%		Net Volume by Scaling Diameter in Inches																									
Spp		T		rt de		Len		MBF		Def		MBF		Spc		2-3		4-5		6-7		8-9		10-11		12-13		14-15		16-19		20-23		24-29		30-39		40+	
DL		CO		3		40		23		4.6		22		8.9				5				17																	
DL				Totals				247		2.2		242		15.8				5		7		17		4		12		58		116		22							
Total All Species								1,614		5.2		1,530		100.0		25		56		72		120		228		247		366		257		136		22					

TC		TSTNDSUM		Stand Table Summary												
Project														28		
T03S R08W S28 TSALE												T03S R08W S28 TSALE				
Twp	Rge	Sec	Tract	Type				Acres	Plots	Sample Trees			Page:	1		
03S	08W	28	AREA 1 AND 2	SALE				45.00	15	66			Date:	06/19/2011		
														Time:	4:01:18PM	
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.		Net Bd.Ft.	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF
DF		17	2	88	101	3.384	5.33	8.46	22.1	92.0	5.33	187	778	240	84	35
DF		18	1	91	121	1.509	2.67	4.53	26.3	120.0	3.40	119	543	153	54	24
DF		19	3	86	100	4.063	8.00	9.48	30.3	112.9	8.19	287	1,070	368	129	48
DF		20	5	85	115	6.112	13.33	15.89	33.9	132.3	15.36	539	2,102	691	242	95
DF		21	4	87	122	4.435	10.67	13.30	36.1	154.2	13.69	480	2,051	616	216	92
DF		22	7	88	135	7.071	18.67	22.22	41.6	195.5	26.34	924	4,344	1,185	416	195
DF		23	3	84	126	2.773	8.00	8.32	41.9	184.4	9.94	349	1,534	447	157	69
DF		24	4	89	140	3.395	10.67	10.19	52.1	247.5	15.14	531	2,521	681	239	113
DF		25	5	85	125	3.911	13.33	11.73	49.8	217.3	16.64	584	2,550	749	263	115
DF		26	4	90	155	2.893	10.67	10.13	59.5	309.3	17.15	602	3,132	772	271	141
DF		27	2	87	132	1.341	5.33	3.35	74.1	352.0	7.08	249	1,180	319	112	53
DF		28	5	85	137	3.118	13.33	9.98	64.5	306.3	18.34	644	3,056	826	290	138
DF		29	1	90	137	.581	2.67	1.74	77.0	380.0	3.82	134	663	172	60	30
DF		30	3	86	141	1.630	8.00	4.89	80.1	391.1	11.16	392	1,912	502	176	86
DF		32	1	90	130	.477	2.67	1.43	75.6	393.3	3.09	108	563	139	49	25
DF		35	1	85	167	.399	2.67	1.60	96.1	532.5	4.37	153	850	197	69	38
DF		Totals	51	87	126	47.093	136.00	137.24	45.8	210.2	179.05	6,283	28,850	8,057	2,827	1,298
DL		17	1	90	110	1.692	2.67	3.38	31.8	125.0	2.94	108	423	132	48	19
DL		36	1	85	176	.377	2.67	1.51	105.5	585.0	4.38	159	883	197	72	40
DL		37	1	91	163	.357	2.67	1.43	110.1	675.0	4.33	157	964	195	71	43
DL		39	1	87	156	.321	2.67	.96	150.1	826.7	3.98	145	797	179	65	36
DL		40	1	89	134	.306	2.67	.92	141.0	776.7	3.55	129	712	160	58	32
DL		41	1	84	140	.291	2.67	.87	153.1	733.3	3.67	134	640	165	60	29
DL		42	1	88	178	.277	2.67	1.11	147.9	860.0	4.51	164	953	203	74	43
DL		Totals	7	89	136	3.621	18.67	10.18	97.8	527.6	27.37	996	5,373	1,231	448	242
RA		15	1	80	57	2.173	2.67	2.17	28.5	60.0	1.70	62	130	77	28	6
RA		17	1	70	67	1.692	2.67	1.69	46.4	90.0	2.16	78	152	97	35	7
RA		18	3	82	69	4.527	8.00	6.04	35.0	107.5	5.82	211	649	262	95	29
RA		20	2	80	69	2.445	5.33	3.67	40.3	103.3	4.06	148	379	183	67	17
RA		23	1	76	36	.924	2.67	.92	52.0	40.0	1.32	48	37	59	22	2
RA		Totals	8	79	64	11.761	21.33	14.49	37.8	93.0	15.06	547	1,347	678	246	61
Totals		66		85	115	62.475	176.00	161.92	48.3	219.7	221.47	7826	35,570	9,966	3,522	1,601



## OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

### *28 Squared*

#### 1. Type of Sale

Regeneration harvest, Recovery.

#### 2. Legal Description

Section 28, T3S, R8W, W.M., Tillamook County, Oregon.

#### 3. Sale Acreage

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

	ACRES	
	<u>Gross</u>	<u>Net</u>
Area 1 (Modified Clearcut)	50	44
Area 2 (Modified Clearcut)	1	1
Total	51	45

##### Gross Acres

Area within the Timber Sale Boundary signs

##### Net acres

*Used for calculating the advertised volume.*

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

#### 4. Cruising Procedures

##### **A. Cruise Method**

Areas 1 and 2 were combined and fifteen (15) plots were sampled on a square grid pattern spaced 350' between plots and 350' between cruise lines.

All conifers 8 inches DBH and greater containing 20 net board feet and all hardwoods 9 inches DBH and greater containing 30 net board feet were sampled for tree species, DBH, form factor, merchantable height, visible defect and grade. Diameters were measured outside bark to the nearest inch and merchantable heights were recorded to the nearest foot. The point of tree observation was 4.5 feet on all plots.

##### **B. Plot size**

All plots were variable radius plots. A BAF of 40 was used for all species.

##### **C. Grading System**

Tree heights were measured to a 6" merchantable top for conifers, and 7" for

hardwoods or 30% of DBH whichever was greater. All measurements were outside the bark. All species were graded using Columbia River Log Scaling and Grading Bureau rules, favoring a 40' log.

**5. Computation Procedure**

The volumes and statistics for the timber cruised were computed using SuperACE 2004, developed by Atterbury Consultants, Inc. The standard error and the coefficient of variation for the cruise as based on net board feet per acre shown in the table below.

Areas	C.V. (%)	S.E. (%)
1&2	49.7	13.3

**6. Hidden Defect and Breakage**

A 5% reduction was applied to conifers and a 10% reduction to hardwood volumes for hidden defect and breakage. This was in addition to visual defect deducted during the cruise.

**7. Timber Description**

The sale naturally established following a disturbance about 80 years ago and 44 of 45 net acres was thinned about 15 years ago.

No other management has occurred to the stand.

Sale Area – Species (%)	DBH	Merchantable Bole Height	Merchantable Top
Areas 1 and 2 – Douglas-fir (96%)	23.0	105	6"
Areas 1 and 2 – Alder (4%)	18.2	47	5"

**8. Cruiser Names/Dates**

2011, 2012 - Cruised by ODF District Personnel

**9. Revenue Distribution**

FDF 100%

Tax Code: 8 100%

Deed Numbers: 186

**10. Attachments**

Stand Table

Volume Summary

Log Stock Table  
Logging Plan

**11. Stand and Log Stock Tables Species Key**

DF – Douglas-fir take

RA – Red alder take

DL – Douglas-fir reserved

