



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Clatsop Thin Sale 341-07-58

District: Tillamook

Date: 4/5/07

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$130,599.22	\$0.00	\$130,599.22
		<b>Project Work</b>	(\$32,330.00)
		<b>Advertised Value</b>	\$98,269.22



# Timber Sale Appraisal Timber Description Clatsop Thin Sale 341-07-58

"STEWARDSHIP IN FORESTRY"

**District:** Tillamook

**Location:** Portions of Sections 32 and 33, T4N, R9W, W.M., Clatsop County, Oregon.

**Date:** 4/5/07

**Stand Stocking:** 20%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	11	0	95
Western Hemlock / Fir	14	0	95
Sitka Spruce	19	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Sitka Spruce	Total
2S	17	142	8	167
3S	82	490	25	597
4S	56	158	4	218
<b>Total</b>	155	790	37	982

Comments: Pond Values Used: 1st Quarter Calendar Year 2007.

Western Red Cedar Stumpage Price = Pond Value minus Logging Cost  
\$865/MBF = \$1,150/MBF - \$285/MBF  
Red Alder and Other Hardwoods Stumpage Price = Pond Value minus Logging Cost  
\$405/MBF = \$690/MBF - \$285/MBF

#### HAULING

Hauling costs adjusted to make equivalent to \$700 daily truck cost.  
\$700 - % Profit & Risk ( $\$700 / 1.20$ ) = \$583 Daily Truck Cost.  
Hauling Cost Calculation Douglas-fir:  
\$583 Daily Truck Cost / (2 trips per day x 3.4 MBF per load) = \$85.74/MBF Hauling Cost.  
Hauling Cost Calculation Western Hemlock:  
\$583 Daily Truck Cost / (3 trips per day x 3.5 MBF per load) = \$55.52/MBF Hauling Cost.  
Hauling Cost Calculation Sitka Spruce:  
\$583 Daily Truck Cost / (5 trips per day x 3.8 MBF per load) = \$30.68/MBF Hauling Cost.

OTHER COSTS (Profit and Risk to be added):

Brand and Paint- \$2/MBF x 982 MBF = \$ 1,964  
Snag Creation- 70 snags created by girdling at 40 feet  
\$40/tree = \$2,800  
TOTAL OTHER COSTS + (P/R to be added): \$4,764

OTHER COSTS (No Profit and Risk Added):

Non-Project Roads :  
Non-Project Road #1 8 Stations x \$120 = \$960  
264cyds (6" rock) x \$14.00/cyard = \$3,696  
Road Closures:  
Move in = \$435  
Segment A to B, beginning at station 26+00  
Tank Trap-\$60 +waterbars (2640 feet with waterbars every 300 feet  
at \$25/waterbar)\$90 = \$220  
Segment C to D  
Tank Trap-\$60 +waterbars (1080 feet with waterbars every 300 feet  
at \$25/waterbar)\$90 = \$150  
TOTAL OTHER COSTS (No P&R Added): \$ 5,461

#### ROAD MAINTENANCE

Grading (once per 2 MMBF)  
Maintenance \$500/Mile x 2.2 miles x 1 grading / (982) = \$1.12  
Maintenance rock (Includes move in)  
Required crushed rock at 1 1/2-0" specification  
Haul Route  
( $\$11.90/\text{yard} (1.5") \times 1.7 \text{ miles} \times 15 \text{ cy/MMBF/mile} \times 1.0 \text{ MMBF}$ ) / 982 = \$0.31  
County Line Road reprocessing and compaction  
\$17.50/Station for 50 Stations = \$875 / 982 mbf = \$.89

TOTAL MAINTENANCE COST = \$2.32



# Timber Sale Appraisal

## Logging Conditions

### Clatsop Thin

### Sale 341-07-58

"STEWARDSHIP IN FORESTRY"

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<b>Combination#: 1</b>	Douglas - Fir	82.00%	
	Western Hemlock / Fir	82.00%	
	Sitka Spruce	82.00%	
<b>Yarding Distance:</b>	Long (1,500 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Medium Tower >40 - <70		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
<b>Loads/Day:</b>	6		<b>Bd. Ft./Load:</b> 3,500
<b>Cost/MBF:</b>	\$157.93		
<b>Machines:</b>			
	Log Loader (A)		
	Tower Yarder (Medium)		
<b>Combination#: 2</b>	Douglas - Fir	18.00%	
	Western Hemlock / Fir	18.00%	
	Sitka Spruce	18.00%	
<b>Yarding Distance:</b>	Short (400 ft)		<b>Downhill Yarding:</b> Yes
<b>Logging System:</b>	Track Skidder		<b>Process:</b> Manual Falling/Delimiting
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
<b>Loads/Day:</b>	6		<b>Bd. Ft./Load:</b> 3,500
<b>Cost/MBF:</b>	\$155.50		
<b>Machines:</b>			
	Log Loader (B)		
	Track Skidder		



# Timber Sale Appraisal Logging Costs Clatsop Thin Sale 341-07-58

"STEWARDSHIP IN FORESTRY"

Date: 4/5/07

Operating Seasons: 1.6

Profit & Risk: 20%

Project Costs: \$32,330

Other Costs (P/R): \$4,764

Slash Disposal: \$0

Other Costs: \$5,461

Miles of Road			
Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Road Maintenance: \$2.32

### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$85.74	2.0	3.4
Western Hemlock / Fir	\$55.52	3.0	3.5
Sitka Spruce	\$30.68	5.0	3.8



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Logging Costs Breakdown Clatsop Thin Sale 341-07-58

Costs	Douglas - Fir	Western Hemlock / Fir	Sitka Spruce
<b>Logging</b>	157.49	157.49	157.49
<b>Road Maintenance</b>	2.44	2.44	2.44
<b>Fire Protection</b>	4.42	4.42	4.42
<b>Hauling</b>	90.25	58.44	32.29
<b>Other (P/R appl.)</b>	4.85	4.85	4.85
<b>Profit &amp; Risk</b>	51.89	45.53	40.30
<b>Slash Disposal</b>	0.00	0.00	0.00
<b>Scaling</b>	2.00	2.00	2.00
<b>Other</b>	5.56	5.56	5.56
<b>Total</b>	318.90	280.73	249.35

<b>Amortization</b>	0.00	0.00	0.00
<b>Pond Value</b>	568.97	389.59	407.16
<b>Stumpage</b>	250.07	108.86	157.81
<b>Amortized</b>	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary Clatsop Thin Sale 341-07-58

**Amortized**

	Douglas - Fir	Westem Hemlock / Fir	Sitka Spruce
<b>MBF</b>	0.00	0.00	0.00
<b>Value</b>	0.00	0.00	0.00
<b>Total</b>	0.00	0.00	0.00

**Unamortized**

	Douglas - Fir	Westem Hemlock / Fir	Sitka Spruce
<b>MBF</b>	155.00	790.00	37.00
<b>Value</b>	250.07	108.86	157.81
<b>Total</b>	38,760.85	85,999.40	5,838.97

## Gross Timber Sale Value

**Recovery \$130,599.22**

Prepared by: Kate Skinner

Date: 4/5/07

District: Tillamook

Phone: (503) 842-2545



"STEWARDSHIP IN FORESTRY"

## PROJECT SUMMARY SHEET

Sale: Clatsop Thin

### IMPROVEMENT

Point	A to B	26+40	stations =	<u>\$2,222.46</u>
<b>SUBTOTAL IMPROVEMENT</b>				<b>\$2,222.46</b>

### CONSTRUCTION

Point	A to B	26+00	stations =	\$20,065.28
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### RECONSTRUCTION

Point	C to D	10+80	stations =	<u>\$8,333.65</u>
<b>SUBTOTAL IMPROVEMENT</b>				<b>\$28,398.93</b>

### MOVE IN

\$1,708.61

**GRAND TOTAL**

**\$32,330.00**



## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Clatsop Thin</u>		Road: <u>A to B</u>
Construction -	<u>26+00</u> stations <u>0.49</u> miles		Improvement - <span style="float: right;"><u>26+40</u> stations <u>0.50</u> miles</span>
CLEARING AND GRUBBING -			
Scattering	1.800 acres @	\$980.00 per acre =	<u>\$1,764.00</u>
		TOTAL CLEARING AND GRUBBING	<b>\$1,764.00</b>
EXCAVATION -			
Road Earthwork	26.40 sta. @	\$60.00 per sta. =	<u>\$1,584.00</u>
		TOTAL EXCAVATION	<b>\$1,584.00</b>
ROCK			
21+10 to 52+40	1,247 cy. of Crushed @	\$13.58 per c.y. =	<u>\$16,934.26</u>
		TOTAL ROCK	<b>\$16,934.26</b>
SPECIAL PROJECTS			
Grade and shape road -	52.40 stations @	\$15.50 per station	\$812.20
Roll subgrade w/ vibratory roller prior to rocking -	52.40 stations @	\$13.20 per station	\$691.68
Grass seed and fertilize -	2.28 acres @	\$220.00 per acre	\$501.60
Mulching -	0.000 acres @	\$600.00 per acre	<u>\$0.00</u>
		TOTAL SPECIAL PROJECTS	<b>\$2,005.48</b>
<b>GRAND TOTAL</b>			<b>\$22,287.74</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Clatsop Thin</u>		Road:	<u>C to D</u>
Reconstruction -	<u>10+85</u> stations <u>0.21</u> miles		Improvement -	<u>0+00</u> stations <u>0.00</u> miles
CLEARING AND GRUBBING -				
Scattering		1.000 acres @	\$980.00 per acre =	<u>\$980.00</u>
			TOTAL CLEARING AND GRUBBING	<b>\$980.00</b>
EXCAVATION -				
Road Earthwork		10.85 sta. @	\$65.00 per sta. =	<u>\$705.25</u>
			TOTAL EXCAVATION	<b>\$705.25</b>
ROCK				
0+00 to 10+85	450 cy. of	Crushed	@	\$13.74 per c.y. =
				<u>\$6,183.00</u>
			TOTAL ROCK	<b>\$6,183.00</b>
SPECIAL PROJECTS				
Grade and shape road -		10.85 stations @	\$15.50 per station	\$168.18
Roll subgrade w/ vibratory roller prior to rocking -		10.85 stations @	\$13.20 per station	\$143.22
Grass seed and fertilize -		0.70 acres @	\$220.00 per acre	\$154.00
Mulching -		0.000 acres @	\$600.00 per acre	\$0.00
			TOTAL SPECIAL PROJECTS	<b>\$465.40</b>
<b>GRAND TOTAL</b>				<b>\$8,333.65</b>

**ROCK COST SUMMARY**

Base Cost=  \$8.25  Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost Number /cu.yCu. Yds	ROCK COST
A to B	2.88	2.45	8.25	13.58 1247	16,934.26
C to D	3.04	2.45	8.25	13.74 450	6,183.00
Total C.Y. 1697 b Total					23,117.26

**TOTAL ROCKING COSTS 23,117.26**

## Move-In Calculations

Sale: Clatsop Thin

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
30.0	Pavement	30
0.5	Main Lines	7
0.4	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
0	Drill & Compressor	\$0.00		\$46.00	0.00	0.00	0	\$0.00	\$0.00
0	Brush Cutter	\$0.00		\$4.00	0.00	0.00	0	\$0.00	\$0.00
1	Graders	\$219.35		\$3.65	0.00	0.40	0.4	\$1.46	\$220.81
0	Loader (Small)	\$0.00	1	\$3.55	0.00	0.00	0	\$0.00	\$0.00
0	Loader (Med. & Large)	\$0.00	1	\$9.00	0.00	0.00	0	\$0.00	\$0.00
1	Rollers (smooth/grid) & Compactors	\$221.95		\$5.00	0.00	0.40	0.4	\$2.00	\$223.95
0	Excavators (Small)	\$0.00		\$22.00	0.00	0.00	0	\$0.00	\$0.00
0	Excavators (Med.)	\$0.00		\$35.50	0.00	0.00	0	\$0.00	\$0.00
1	Excavators (Large)	\$357.16	1	\$44.80	0.00	0.40	0.4	\$17.92	\$375.98
0	Tired Backhoes/Skidlers	\$0.00		\$3.00	0.00	0.00	0	\$0.00	\$0.00
0	Tractors (D6)	\$0.00	2	\$7.10	0.00	0.00	0	\$0.00	\$0.00
1	Tractors (D7)	\$340.68	2	\$11.30	0.00	0.40	0.4	\$4.52	\$345.20
0	Tractor (D8)	\$0.00	2	\$15.10	0.00	0.00	0	\$0.00	\$0.00
6	Dump Truck (10 cy +)	\$474.00		\$2.85	0.00	0.00	0	\$0.00	\$477.11
0	Dump Truck (Off Hiway)	\$0.00	1	\$4.75	0.00	0.00	0	\$0.00	\$0.00
1	Water Truck (1500 Gal)	\$64.33		\$2.85	0.00	0.40	0.4	\$1.14	\$65.56
0	Water Truck (2500 Gal)	\$0.00		\$2.85	0.00	0.00	0	\$0.00	\$0.00
0	Jaw	\$1,066.00							
0	2-Stage Crusher	\$1,597.00							
0	3-Stage Crusher	\$2,489.00							

<b>TOTAL MOVE-IN COSTS:</b>	<b>\$1,708.61</b>
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# OREGON DEPARTMENT OF FORESTRY

## CRUISE REPORT

### *Clatsop Thin*

1. **Type of Sale**

Partial cut Douglas-fir, Hemlock, Spruce, Recovery

2. **Legal Description**

Sections 32 and 33, T4N, R9W, W.M. Clatsop County, Oregon

3. **Sale Acreage**

	ACRES	
	<u>Sale</u>	<u>Net</u>
<b>Partial Cut</b>	63	60
<b>Total Acres</b>	63	60

Sale Acres

Area within the Timber Sale Boundary signs.

Net acres

*Used for calculating the advertised volume.*

Sale acres, less green tree retention, roads, utility, right-of-way, and less riparian areas inside the sale boundary.

4. **Cruising Procedures**

**A. Cruise Method**

A total of 36 variable radius plots were taken across the sale area. Plots were spaced on a square grid 250 x 250. All conifers 8 inches DBH and greater and all hardwoods 10 inches DBH and greater were recorded on all plots. Species were recorded on all trees, and they were graded and measured for merchantable height, diameter, and form factor.

**B. Plot size**

A basal area factor of 40 was used for conifer and alder. The point of observation is 4.5 feet.

**C. Grading System**

All trees were graded according to Columbia River Log Scaling and Grading Rules. Tree heights were recorded to a 7 inch top outside bark for hemlock, Sitka spruce; 6 inch top outside bark for Douglas-fir; 8 inches top outside bark for hardwoods; or three tenths (0.3) of DBH for all species, whichever was greater. Log lengths all favored 40 feet. Height

and diameter measurement standards were to the nearest foot or inch respectively. All diameters were taken at a height of 4.5 feet. Conifers less than 20 board feet and hardwoods less than 30 board feet were not recorded.

5. **Computation Procedure**

Plot data was entered into SuperAce for computation of basal area, stand tables, diameters, and volume to basal area ratio for each species and type. This data was then entered into the Volume Summary Worksheet to compute sale volumes. The standard error for the cruise was 8.5% and the coefficient variation was 51.1%.

6. **Hidden Defect and Breakage**

A 5% deduction was applied to the conifer volume to account for defect and breakage.

7. **Timber Description**

Approximately half of the sale area was planted in 1964. The timber is approximately 40-60 years old. The stand is predominately a conifer stand with scattered alder. The Douglas-fir has low symptoms of Swiss needle cast and there is minimal bear damage.

8. **Cruiser Names/Dates**

Wells/Luttrell/Winslow/Goetz/Savage, October 2006

9. **Revenue Distribution**

FDF: 100%

Tax Code: 10-04, Clatsop County

Deed Numbers: 51

10. **Attachments**

Stand Table

Volume Summaries

Logging Plan



"STEWARDSHIP IN FORESTRY"

## Clatsop Thin

### Volume Summary

Area 1						
60 acres						
SPECIES	Basal Area Per Acre	V. BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	24	113	2.7	163	5%	155
Spruce	6	109	0.7	39	5%	37
Hemlock	99	140	13.9	832	5%	790
TOTAL				1034		982

Stand Table Summary

T04N R09W S32 Ty120 60.00

Project CLTTHIN  
Acres 60.00

Time: 9:26:03AM  
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
WH	9	7	85	79	17.801	7.78	20.37	9.4	43.5	6.10	190	886	366	114	53
WH	10	3	86	68	6.126	3.33	6.13	11.4	49.6	2.24	70	304	134	42	18
WH	11	10	89	86	17.486	11.11	22.76	12.9	53.7	9.39	294	1,223	563	176	73
WH	12	2	83	102	2.810	2.22	4.27	16.6	63.2	2.26	71	270	136	42	16
WH	13	3	87	84	3.549	3.33	5.95	16.5	61.8	3.12	98	367	187	59	22
WH	14	9	86	107	9.236	10.00	19.45	19.3	81.4	12.01	375	1,583	721	225	95
WH	15	8	83	117	7.238	8.89	16.23	21.9	89.5	11.35	355	1,453	681	213	87
WH	16	8	86	104	6.273	8.89	14.10	23.0	92.7	10.35	324	1,307	621	194	78
WH	17	13	86	110	9.219	14.44	18.44	30.2	121.2	17.85	558	2,234	1,071	335	134
WH	18	3	86	105	1.888	3.33	3.78	35.1	131.1	4.23	132	495	254	79	30
WH	19	4	83	101	2.302	4.44	5.18	33.0	117.8	5.47	171	610	328	102	37
WH	20	7	86	106	3.624	7.78	7.75	39.5	149.0	9.80	306	1,154	588	184	69
WH	21	3	89	107	1.408	3.33	2.82	45.8	182.2	4.13	129	513	248	77	31
WH	22	1	78	62	.441	1.11	.44	64.0	130.0	.90	28	57	54	17	3
WH	23	2	81	104	.784	2.22	1.57	55.0	187.0	2.77	86	293	166	52	18
WH	24	2	88	107	.719	2.22	1.44	63.8	264.7	2.94	92	381	176	55	23
WH	25	1	90	111	.331	1.11	.66	72.2	340.0	1.53	48	225	92	29	14
WH	27	1	78	98	.290	1.11	.58	73.0	255.0	1.36	42	148	81	25	9
WH	31	1	82	104	.216	1.11	.43	104.9	425.0	1.45	45	184	87	27	11
WH	32	1	81	90	.199	1.11	.40	100.7	355.0	1.28	40	141	77	24	8
WH	Totals	89	86	94	91.939	98.89	152.74	22.6	90.5	110.52	3,454	13,829	6,631	2,073	830
WL	12	4	89	101	6.006	4.44	10.52	13.7	60.0	4.61	144	631	277	86	38
WL	13	1	82	106	1.263	1.11	2.53	15.7	60.0	1.27	40	152	76	24	9
WL	14	2	85	117	2.094	2.22	4.19	21.4	92.4	2.87	90	387	172	54	23
WL	15	2	81	119	1.848	2.22	3.70	23.1	92.4	2.73	85	342	164	51	20
WL	16	3	84	94	2.450	3.33	4.90	23.2	86.3	3.64	114	423	218	68	25
WL	17	2	87	97	1.361	2.22	2.72	29.5	117.5	2.57	80	320	154	48	19
WL	18	3	87	82	1.909	3.33	3.20	29.9	104.1	3.06	96	333	184	57	20
WL	19	2	80	90	1.165	2.22	2.33	32.2	105.0	2.40	75	245	144	45	15
WL	20	1	80	106	.509	1.11	1.02	41.7	130.0	1.36	43	132	82	26	8
WL	21	3	85	118	1.386	3.33	3.70	38.0	144.7	4.52	141	536	271	84	32
WL	22	4	88	103	1.665	4.44	3.33	51.7	205.9	5.51	172	686	331	103	41
WL	23	6	86	105	2.342	6.67	5.07	52.9	203.6	8.58	268	1,031	515	161	62
WL	24	3	89	97	1.058	3.33	2.12	62.6	256.1	4.24	132	542	254	79	33
WL	25	6	86	118	1.951	6.67	5.19	57.2	250.4	9.50	297	1,300	570	178	78
WL	26	1	74	142	.297	1.11	.30	38.1	160.0	.36	11	47	22	7	3
WL	27	5	82	108	1.402	5.56	3.37	67.0	245.7	7.24	226	829	434	136	50
WL	29	2	88	113	.493	2.22	1.23	74.0	345.1	2.92	91	426	175	55	26
WL	30	2	79	102	.460	2.22	.92	88.0	297.5	2.59	81	274	156	49	16
WL	31	5	84	103	1.074	5.56	2.59	86.5	323.4	7.16	224	836	430	134	50
WL	32	2	79	123	.402	2.22	1.01	98.3	375.1	3.17	99	378	190	59	23
WL	34	1	92	110	.175	1.11	.35	112.3	520.0	1.26	39	182	76	24	11
WL	36	1	92	104	.159	1.11	.32	146.0	720.0	1.49	46	229	89	28	14
WL	39	1	93	127	.131	1.11	.39	146.1	713.3	1.84	58	281	110	35	17
WL	45	1	83	117	.101	1.11	.30	159.3	716.7	1.55	48	217	93	29	13
WL	47	1	73	105	.091	1.11	.18	243.5	555.0	1.41	44	101	85	26	6
WL	50	1	93	106	.080	1.11									
WL	58	1	92	111	.061	1.11	.12	339.7	1770.0	1.33	41	216	80	25	13
WL	Totals	66	85	105	31.933	73.33	65.60	42.5	168.8	89.18	2,786	11,077	5,351	1,672	665
DF	8	2	83	75	6.579	2.22	6.58	8.0	40.0	1.51	53	263	90	32	16
DF	9	3	85	88	7.801	3.33	7.80	10.1	47.1	2.25	79	367	135	47	22
DF	10	2	89	68	3.999	2.22	4.00	12.1	49.6	1.38	49	198	83	29	12



Stand Table Summary

T04N R09W S32 Ty120 60.00

Project CLTTHIN  
Acres 60.00

Time: 9:26:03AM  
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	11	4	85	89	7.085	4.44	10.64	11.5	46.6	3.48	122	496	209	73	30
DF	12	2	81	95	2.929	2.22	4.34	15.6	53.5	1.93	68	232	116	41	14
DF	13	2	86	104	2.411	2.22	3.60	20.2	83.2	2.07	73	299	124	44	18
DF	14	2	84	64	2.100	2.22	3.08	17.3	59.1	1.52	53	182	91	32	11
DF	15	1	78	93	.905	1.11	1.81	18.9	60.0	.98	34	109	59	21	7
DF	16	1	88	80	.848	1.11	1.70	18.1	70.0	.88	31	119	53	18	7
DF	18	1	83	95	.602	1.11	2.41	13.7	52.5	.95	33	126	57	20	8
DF	19	1	84	90	.576	1.11	1.15	30.6	105.0	1.01	35	121	60	21	7
DF	30	1	89	126	.222	1.11	.67	75.3	363.3	1.43	50	242	86	30	15
DF	Totals	22	85	84	36.057	24.44	47.78	14.2	57.7	19.38	680	2,755	1,163	408	165
DL	10	2	78	69	4.074	2.22	4.07	12.3	30.0	1.36	50	122	81	30	7
DL	11	4	83	78	6.503	4.44	8.22	13.2	47.6	2.98	108	391	179	65	23
DL	14	2	80	95	2.094	2.22	4.19	17.3	59.6	1.99	72	250	119	43	15
DL	15	4	84	84	3.797	4.44	6.65	19.7	64.2	3.62	131	427	217	79	26
DL	17	1	88	81	.748	1.11	1.50	21.6	85.0	.89	32	127	53	19	8
DL	18	1	88	86	.602	1.11	1.20	28.1	105.0	.93	34	126	56	20	8
DL	19	1	88	102	.576	1.11	1.15	34.7	115.0	1.10	40	133	66	24	8
DL	20	3	81	94	1.518	3.33	3.04	37.8	115.0	3.16	115	349	190	69	21
DL	21	1	77	74	.466	1.11	.93	34.5	90.0	.89	32	84	53	19	5
DL	22	1	85	124	.437	1.11	1.31	35.0	143.3	1.26	46	188	76	28	11
DL	26	1	85	127	.297	1.11	.89	57.1	253.3	1.40	51	226	84	30	14
DL	29	1	85	112	.236	1.11	.47	91.8	390.0	1.19	43	184	71	26	11
DL	Totals	22	82	83	21.349	24.44	33.63	22.5	77.5	20.76	755	2,607	1,246	453	156
SF	11	1	91	100	1.595	1.11	1.60	20.2	90.0	.92	32	144	55	19	9
SF	16	1	79	101	.816	1.11	1.63	22.8	70.0	1.06	37	114	64	22	7
SF	17	1	92	45	.722	1.11	.72	29.0	60.0	.59	21	43	36	13	3
SF	19	1	84	91	.547	1.11	1.09	34.7	120.0	1.09	38	131	65	23	8
SF	26	1	92	93	.301	1.11	.60	70.4	295.0	1.22	42	178	73	25	11
SF	31	1	84	105	.216	1.11	.43	101.5	425.0	1.26	44	184	75	26	11
SF	40	1	74	127	.129	1.11	.39	128.9	486.7	1.42	50	188	85	30	11
SF	42	1	82	115	.116	1.11	.23	200.3	930.0	1.33	46	216	80	28	13
SF	46	1	91	145	.098	1.11	.29	213.0	1206.7	1.79	63	355	108	38	21
SF	48	1	78	70	.088	1.11	.18	171.0	595.0	.86	30	105	52	18	6
SF	52	1	90	171	.075	1.11	.23	265.7	1373.3	1.72	60	310	103	36	19
SF	56	1	93	160	.066	1.11	.20	345.3	2073.3	1.95	68	408	117	41	25
SF	59	1	83	115	.058	1.11	.12	397.7	1870.0	1.33	46	218	80	28	13
SF	Totals	13	87	94	4.828	14.44	7.71	75.0	336.6	16.55	578	2,594	993	347	156
RA	10	2	79	42	4.294	2.22	2.26								
RA	11	1	80	21	1.684	1.11	1.68	7.6	20.0	.35	13	34	21	8	2
RA	12	5	79	55	6.994	5.56	6.99	14.2	46.1	2.73	99	322	164	60	19
RA	13	4	80	83	4.660	4.44	6.98	16.7	58.5	3.20	116	408	192	70	24
RA	14	4	80	66	4.088	4.44	4.09	28.4	77.3	3.19	116	316	192	70	19
RA	15	3	80	67	2.778	3.33	3.70	22.1	70.1	2.25	82	259	135	49	16
RA	16	1	79	70	.816	1.11	1.63	16.3	65.0	.73	27	106	44	16	6
RA	17	2	79	63	1.386	2.22	2.07	26.3	76.7	1.49	54	158	90	33	10
RA	18	1	80	66	.643	1.11	.64	44.2	120.0	.78	28	77	47	17	5
RA	20	1	79	83	.536	1.11	1.07	33.0	105.0	.97	35	113	58	21	7
RA	Totals	24	79	60	27.878	26.67	31.11	18.4	57.7	15.71	571	1,794	942	343	108
SS	14	1	77	36	1.101	1.11	1.10	16.0	30.0	.45	18	33	27	11	2
SS	18	1	79	56	.602	1.11	.60	40.2	120.0	.63	24	72	38	15	4

Spruce Lease

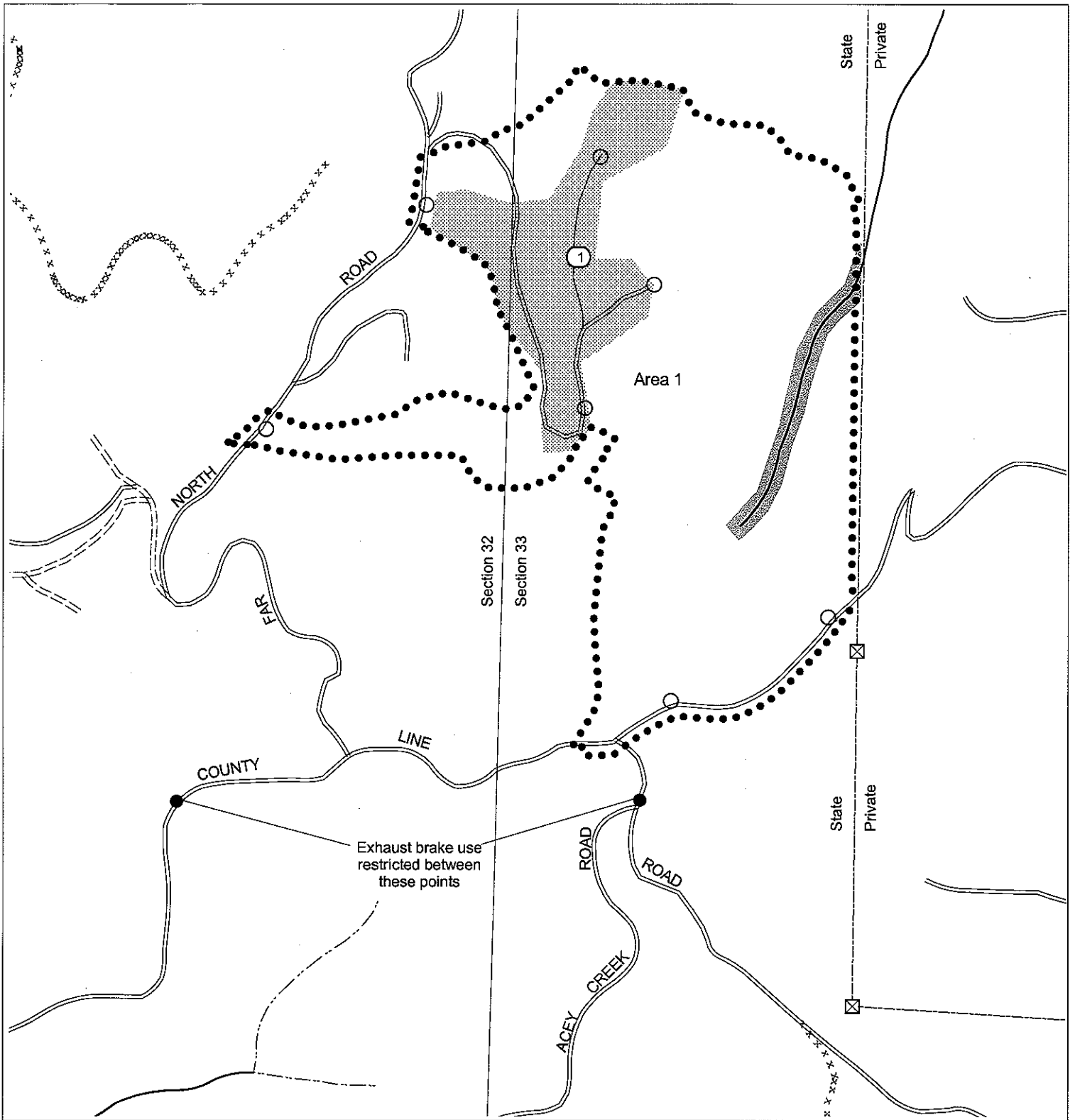
Stand Table Summary

T04N R09W S32 Ty120 60.00

Project CLTTHIN  
Acres 60.00

Time: 9:26:03AM  
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 Hf				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
SS	19	1	82	87	.547	1.11	1.09	33.8	105.0	.96	37	115	58	22	7
SS	24	1	81	121	.366	1.11	1.10	46.8	190.0	1.34	51	208	80	31	13
SS	28	1	82	110	.258	1.11	.52	89.9	340.0	1.21	46	175	72	28	11
SS	Totals	5	79	67	2.874	5.56	4.41	40.0	137.0	4.58	177	604	275	106	36
Totals		241	84	88	216.859	267.78	342.98	26.2	102.8	276.69	9,001	35,260	16,601	5,401	2,116



- Landing
- Ⓧ Domestic water supply intake
- Ⓜ Helicopter landing zone
- Ⓣ Truck turn-around
- ⓧ Survey corner
- Cable yarding
- ▒ Ground yarding
- ▤ Helicopter yarding
- ▥ Downhill yarding
- ▧ Buffer
- ▨ Non-required thinning
- ⋯ Area boundary
- ⋯ Sale boundary
- ⋯ Ownership boundary
- Perennial Type-F stream
- ⋯ Perennial Type-N stream
- Surfaced road
- ⋯ Unsurfaced road
- State/Federal highway
- County road
- Ⓣ Non-project road
- ⋯ Swing road
- ⋯ Legacy road
- ⋯ Blocked road
- ⋯ OHV trail
- ⋯ Non-motorized trail
- ⋯ Transmission line

### LOGGING PLAN

Timber Sale Contract No. 341-07-58

Clatsop Thin

Portions of Sections 32 and 33,

T4N, R9W, W. M.

Clatsop County, Oregon

Area	Type of Operation	Acres	
		Gross	Net
1	Partial Cut	63	60
Total		63	60

1000



1000 Feet

Tillamook District GIS

March 8, 2007

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