



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Farest Sale 341-06-56

District: Tillamook

Date: 1/9/06

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$376,891.12	\$40,161.96	\$417,053.08
		Project Work	(\$37,230.00)
		Advertised Value	\$379,823.08



Timber Sale Appraisal Timber Description Farest Sale 341-06-56

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Portions of Section 14, 3S, 8W, W.M.; Tillamook County, Oregon

Date: 1/9/06

Stand Stocking: 60%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	15	0	95
Western Hemlock / Fir	16	0	95
Alder (Red)	15	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Alder (Red)	Total
2S	110	74	17	201
3S	713	307	5	1,025
4S	139	73	142	354
Total	962	454	164	1,580

Comments: Pond Values Used: 4th Quarter Calendar Year 2005.

Hauling Costs Used: System currently uses hauling costs of \$460 daily truck cost. Additional hauling costs added in Other Costs (No P&R) to make equivalent to \$700 daily truck cost.

TOTAL Other Costs (Profit & Risk to be added) = \$3,160

Brand and Paint: $\$2.00/\text{mbf} \times 1,580 \text{ mbf} = \$3,160$

TOTAL Other Costs (No Profit & Risk added): \$46,086.80

Additional Hauling Costs = $\$25/\text{MBF} \times 1,580\text{MBF} = \$39,500$

Slash piling and sorting: (73 acres of cable harvest*1 hour of machine time/ 50 acres) at \$110/hr= \$160.60

Construction of Non-project roads:

Np #1: $\$130/\text{sta} \times 11 \text{ Stations} = \$1,430$

Np #2: $\$130/\text{sta} \times 12 \text{ Stations} = \$1,560$

Pit run (approach rock): $2 \text{ Stations} \times 50\text{cy} \times \$16.97/\text{cy} = \$1,697$

BLM rockwear fee (3-8-15 Rd.): $80\text{cy} \times \$19.24/\text{cy} = \$1,539.20$

Construction of drivable waterbars: $8 \times \$25 \text{ per waterbar} = \200

Western Red Cedar Stumpage Price = Pond Value minus Logging Costs

$\$540/\text{MBF} = \$825/\text{MBF} - \$285/\text{MBF}$



Timber Sale Appraisal Logging Conditions Farest Sale 341-06-56

"STEWARDSHIP IN FORESTRY"

Combination#: 1	Douglas - Fir	48.92%	
	Western Hemlock / Fir	46.06%	
	Alder (Red)	36.59%	
Yarding Distance:	Short (400 ft)		Downhill Yarding: No
Logging System:	Cable: Medium Tower >40 - <70		Process: Stroke Delimber
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
Loads/Day:	5		Bd. Ft./Load: 3,300
Cost/MBF:	\$198.95		
Machines:	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)		
Combination#: 2	Douglas - Fir	51.08%	
	Western Hemlock / Fir	53.94%	
	Alder (Red)	63.41%	
Yarding Distance:	Short (400 ft)		Downhill Yarding: Yes
Logging System:	Track Skidder		Process: Feller Buncher
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
Loads/Day:	7		Bd. Ft./Load: 3,300
Cost/MBF:	\$152.33		
Machines:	Feller Buncher w/ Delimber Log Loader (B) Stroke Delimber (B) Track Skidder		



Timber Sale Appraisal

Logging Costs

Farest

Sale 341-06-56

"STEWARDSHIP IN FORESTRY"

Date: 1/9/06

Operating Seasons: 2.0

Profit & Risk: 12%

Project Costs: \$37,230

Other Costs (P/R): \$3,160

Slash Disposal: \$0

Other Costs: \$46,087

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

Road Maintenance: \$0.00

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	3.0	3.3
Western Hemlock / Fir	\$0.00	3.0	3.3
Alder (Red)	\$0.00	2.0	3.0



Timber Sale Appraisal Logging Costs Breakdown Farest Sale 341-06-56

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
Logging	175.14	173.80	169.39
Road Maintenance	0.00	0.00	0.00
Fire Protection	3.43	3.43	3.43
Hauling	46.11	46.11	80.84
Other (P/R appl.)	2.00	2.00	2.00
Profit & Risk	27.20	27.04	30.68
Slash Disposal	0.00	0.00	0.00
Scaling	2.00	2.00	0.00
Other	29.17	29.17	29.17
Total	285.05	283.55	315.51

Amortization	0.00	0.00	0.00
Pond Value	621.15	401.53	560.40
Stumpage	336.10	117.98	244.89
Amortized	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Forest Sale 341-06-56

Amortized

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
MBF	0.00	0.00	0.00
Value	0.00	0.00	0.00
Total	0.00	0.00	0.00

Unamortized

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
MBF	962.00	454.00	164.00
Value	336.10	117.98	244.89
Total	323,328.20	53,562.92	40,161.96

Gross Timber Sale Value

Recovery \$417,053.08

Prepared by: Kate Skinner

Date: 1/9/06

District: Tillamook

Phone: (503) 842-2545



PROJECT SUMMARY SHEET

Sale: Farest

CONSTRUCTION

Point	A to B	14+90	stations =	\$9,123.44
Point	G to H	10+20	stations =	\$10,348.46
SUBTOTAL CONSTRUCTION				\$19,471.90

IMPROVEMENT

Point	C to D	6+40	stations =	\$5,464.71
Point	E to F	22+20	stations =	\$10,622.30
SUBTOTAL IMPROVEMENT				\$16,087.01

MOVE IN **\$1,666.95**

GRAND TOTAL **\$37,225.86**

SUMMARY OF CONSTRUCTION COST

Sale:	Forest					Road:	A to B	
Construction -	<u>14+90</u> stations					Improvement -	<u>0+00</u> stations	
	<u>0.28</u> miles						<u>0.00</u> miles	
CLEARING AND GRUBBING -								
Scattering		1.20	acres @		\$980.00	per acre =	<u>\$1,176.00</u>	
							TOTAL CLEARING AND GRUBBING	
							\$1,176.00	
EXCAVATION -								
New Construction		5.75	sta. @		\$90.00	per sta. =	\$517.50	
New Construction		9.15	sta. @		\$140.00	per sta. =	<u>\$1,281.00</u>	
							TOTAL EXCAVATION	
							\$1,798.50	
ROCK								
0+00 to 5+75	331	cy. of	Pit-Run	@	\$16.33	per c.y.=	<u>\$5,405.23</u>	
							TOTAL ROCK	
							\$5,405.23	
SPECIAL PROJECTS								
Construct turnouts and turnaround -		1.00	hours @		\$145.00	per hour	\$145.00	
Grade and shape road -		14.90	stations @		\$14.00	per station	\$208.60	
Proof-Roll subgrade prior to rocking		5.75	stations @		\$4.70	per station	\$27.03	
Roll subgrade w/ vibratory roller prior to rocking -		14.90	stations @		\$13.20	per station	\$196.68	
Grass seed and fertilize -		0.62	acres @		\$220.00	per acre	\$136.40	
Mulching - 0+00 to 2+00		0.05	acres @		\$600.00	per acre	<u>\$30.00</u>	
							TOTAL SPECIAL PROJECTS	
							\$743.71	
GRAND TOTAL								\$9,123.44

SUMMARY OF CONSTRUCTION COST

Sale:	Forest	Road:	C to D
Construction -	<u>0+00</u> stations <u>0.00</u> miles	Improvement -	<u>6+40</u> stations <u>0.12</u> miles
CLEARING AND GRUBBING -			
Roadside Brushing		0.12 miles @	\$800.00 per mile = \$96.00
Scattering - cut nonmerchantable trees larger than brushing spec.		0.07 acres @	\$980.00 per acre = \$68.60
			TOTAL EXCAVATION
			\$164.60
ROCK			
0+00 to 6+40	305 cy. of Pit-Run	@	\$16.47 per c.y. = \$5,023.35
			TOTAL ROCK
			\$5,023.35
SPECIAL PROJECTS			
Grade and shape road - ditch		6.40 stations @	\$15.50 per station \$99.20
Proof-Roll subgrade prior to rocking		6.40 stations @	\$4.70 per station \$30.08
Roll subgrade w/ vibratory roller prior to rocking -		6.40 stations @	\$13.20 per station \$84.48
Grass seed and fertilize -		0.15 acres @	\$220.00 per acre \$33.00
Mulching - 0+00 to 2+00		0.05 acres @	\$600.00 per acre \$30.00
			TOTAL SPECIAL PROJECTS
			\$276.76
GRAND TOTAL			\$5,464.71

SUMMARY OF CONSTRUCTION COST

Sale:	Forest	Road:	E to F
Construction -	$\frac{0+00}{0.00}$ stations miles	Improvement -	$\frac{22+20}{0.42}$ stations miles
CLEARING AND GRUBBING - Roadside Brushing 0+00 to 18+20 Scattering		0.34 miles @ 0.14 acres @	\$800.00 per mile = \$272.00 \$980.00 per acre = \$137.20 TOTAL CLEARING AND GRUBBING
			\$409.20
EXCAVATION - Road Earthwork		4.00 sta. @	\$90.00 per sta. = \$360.00 TOTAL EXCAVATION
			\$360.00
ROCK 0+00 to	20+35	429 cy. of Crushed	@ \$20.59 per c.y. = \$8,833.11 TOTAL ROCK
			\$8,833.11
SPECIAL PROJECTS			
Construct turnouts and turnaround -		1.0 hours @	\$145.00 per hour = \$145.00
Grade and shape road - ditch		22.20 stations @	\$15.50 per station = \$344.10
Proof-Roll subgrade prior to rocking		20.35 stations @	\$4.70 per station = \$95.65
Roll subgrade w/ vibratory roller prior to rocking -		22.20 stations @	\$13.20 per station = \$293.04
Grass seed and fertilize -		0.51 acres @	\$220.00 per acre = \$112.20
Mulching - 0+00 to 2+00		0.05 acres @	\$600.00 per acre = \$30.00
			TOTAL SPECIAL PROJECTS
			\$1,019.99
GRAND TOTAL			\$10,622.30

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Farest</u>					Road:	<u>G to H</u>
Construction -	<u>10+20</u> stations <u>0.19</u> miles					Improvement -	<u>0+00</u> stations <u>0.00</u> miles
CLEARING AND GRUBBING -							
Scattering		0.94	acres @	\$980.00	per acre =	\$921.20	
						TOTAL CLEARING AND GRUBBING	\$921.20
EXCAVATION -							
New Construction		6.90	sta. @	\$290.00	per sta. =	\$2,001.00	
New Construction		3.30	sta. @	\$90.00	per sta. =	\$297.00	
						TOTAL EXCAVATION	\$2,298.00
ROCK							
0+00 to 6+90	387	cy. of	Pit-Run	@	\$16.97	per c.y. =	\$6,567.39
							TOTAL ROCK
							\$6,567.39
SPECIAL PROJECTS							
Construct turnouts and turnaround -		1.0	hours @	\$145.00	per hour	\$145.00	
Grade and shape road - outslope		10.20	stations @	\$14.00	per station	\$142.80	
Proof-Roll subgrade prior to rocking		6.90	stations @	\$4.70	per station	\$32.43	
Roll subgrade w/ vibratory roller prior to rocking -		10.20	stations @	\$13.20	per station	\$134.64	
Grass seed and fertilize -		0.35	acres @	\$220.00	per acre	\$77.00	
Mulching - 0+00 to 2+00		0.05	acres @	\$600.00	per acre	\$30.00	
						TOTAL SPECIAL PROJECTS	\$561.87
GRAND TOTAL							\$10,348.46

Move-In Calculations

Sale: Farest

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
47.4	Highway	35
11.9	Main Lines	12
0.0	Steep Grades	5

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
1	Brush Cutter	\$417.95		\$4.00	0.00	0.50	0.5	\$2.00	\$419.95
0	Graders	\$0.00		\$3.65	0.00	0.00	0	\$0.00	\$0.00
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
0	Rollers (smooth/grid) & Compactors	\$0.00		\$5.00	0.00	0.00	0	\$0.00	\$0.00
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)	\$599.56	1	\$44.80	0.00	1.00	1	\$44.80	\$644.36
0	Tired Backhoes/Skidders	\$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
0	Tractors (D7)	\$0.00	2	\$11.30	0.00	0.00	0	\$0.00	\$0.00
1	Tractor (D8)	\$587.54	2	\$15.10	0.00	1.00	1	\$15.10	\$602.64
0	Dump Truck (10 cy +)	\$0.00		\$2.85	0.00	0.00	0	\$0.00	\$0.00
0	Dump Truck (Off Hiway)	\$0.00	1	\$4.75	0.00	0.00	0	\$0.00	\$0.00
0	Water Truck (1500 Gal)	\$0.00		\$2.85	0.00	0.00	0	\$0.00	\$0.00
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							

TOTAL MOVE-IN COSTS:	\$1,666.95
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ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit: Sale: Swell: Shrinkage: Drill Pct.:	D.K. Quarries, Inc. Rock Canyon Quarry Farest 0.00 0.00 0%	Location:	Oretown, Oregon Road: 1452 c.y. Stockpile: c.y. Total Truck Loads: 1452 c.y. In Place Total: 1452 c.y.
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Move in Roller	1	@	\$206.08	=	\$206.08
Move in Grader	1	@	\$73.49	=	\$73.49
Move in Trucks	5	@	\$58.71	=	\$293.55
Subtotal					\$573.12

TOTAL PRODUCTION COSTS	\$573.12
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Base Cost for Crushed 1 1/2"-0"=	\$7.88	Per Cu.Yd.
Base Cost for Pit-run=	\$5.39	Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST	
A to B Pit-run	9.84	1.10	5.39	16.33	331	5,405.23	
C to D Pit-run	9.98	1.10	5.39	16.47	305	5,023.35	
E to F Crushed 1 1/2"-0"	10.26	2.45	7.88	20.59	429	8,833.11	
G to H Pit-run	10.48	1.10	5.39	16.97	387	6,567.39	
Total C.Y.					1452	Sub Total	25,829.08

TOTAL ROCKING COSTS	25,829.08
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OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

Forest

1. **Type of Sale:** Regeneration harvest – Recovery
2. **Legal Description:** Portions of Section 14, T3S, R8W, W.M., Tillamook County, Oregon.
3. **Sale Acreage:** The sale boundary was plotted on a digital orthophotograph and the acreage was calculated with GIS.

Area	Harvest Type	Sale	Net
1	Partial Cut	32	32
2	Modified Clearcut	95	84
3	Partial Cut	4	4
4	Modified Clearcut	22	20
5	Modified Clearcut	3	3
6	Modified Clearcut	22	19
Total		178	162

Sale Acres

Area within the Timber Sale Boundary signs

Net acres for calculating the advertised volume

Sale acres, less green tree retention, less roads, and less riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. Cruising Procedures:

A. **Cruise Method:** A total of 60 plots were taken. Cruise lines and plots were placed to obtain representative sampling intensities throughout the six sale areas. All trees were recorded by diameter class. Diameters were measured to the nearest inch and heights to the nearest foot. Conifers less than 9" DBH and hardwood less than 10" DBH were not sampled. Tree count by diameter and species was recorded on all plots. On modified clearcut areas, every other plot measured merchantable height and form. On partial cut areas, one tree of each species was measured for merchantable height and form. The cruise had a coefficient of variation of 42.7 and a SE% of 5.5 for the net board feet/acre.

B. **Plot size:** All plots were variable radius full point plots. A BAF of 20 was used for conifers and hardwoods in all areas. The point of tree observation was 4.5 feet.

- C. **Grading System:** Tree heights were measured to a 6" merchantable top for conifers and 8" for hardwoods. Conifer was graded using Columbia River rules favoring a 40' log. Alder was graded to the top end diameter for determining sort while still favoring a 40' log. 2S equals 12" and greater, 3S equals 10" and 11", and 4S equals 8" and 9".
- D. **Defect and Breakage:** A 5% defect and breakage reduction was applied to conifers and a 10% reduction to hardwood volumes.
- E. **Cruiser Names / Dates:** Ed Wallmark, Jim Neuman. October, 2005.

5. **Computation Procedures:** Plot data was entered into SuperAce for computation of stand tables. Take and leave trees were determined and SuperAce was rerun to compute basal area, V-BAR, stand tables and diameters. This data was entered into a volume summary worksheet to compute sale volumes.
6. **Timber Description:** The sale contains 46 year old western hemlock and Douglas-fir with symptoms of Swiss Needle Cast. Scattered patches of red alder are concentrated mainly in riparian areas. Areas with high concentrations of brush were deducted from the acreages shown in the volume summary. Three acres were deducted from Area 2, two from Area 4, and two from Area 6. The total net acres shown in the volume summary reflects these changes.
7. **Revenue Distribution:**
100% CSL
Tax Code: 8
Deed No. 534
0% Rehabilitation Obligated
8. **Appendices:**
- Volume Summary
- Stand Table
- Logging Plan



"STEWARDSHIP IN FORESTRY"

Forest

Volume Summary

Area 1 - Partial Cut							
32 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	14	29	108	3.1	99	5%	94
Hemlock	15	54	129	7.0	224	5%	213
Alder	19	3	76	0.2	6	10%	5
TOTAL					329		312

Area 2 - Modified Clearcut							
84 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	14	43	104	4.5	378	5%	359
Hemlock	18	23	96	2.2	185	5%	176
Alder	13	38	46	1.7	143	10%	129
TOTAL					706		664

Area 3 - Partial Cut							
4 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	14	29	108	3.1	12	5%	11
Hemlock	15	54	129	7.0	28	5%	27
Alder	19	3	76	0.2	1	10%	1
TOTAL					41		39

Area 4 - Modified Clearcut							
20 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	14	111	110	12.2	244	5%	232
Alder	13	34	41	1.4	28	10%	25
TOTAL					272		257



"STEWARDSHIP IN FORESTRY"

Farest

Volume Summary

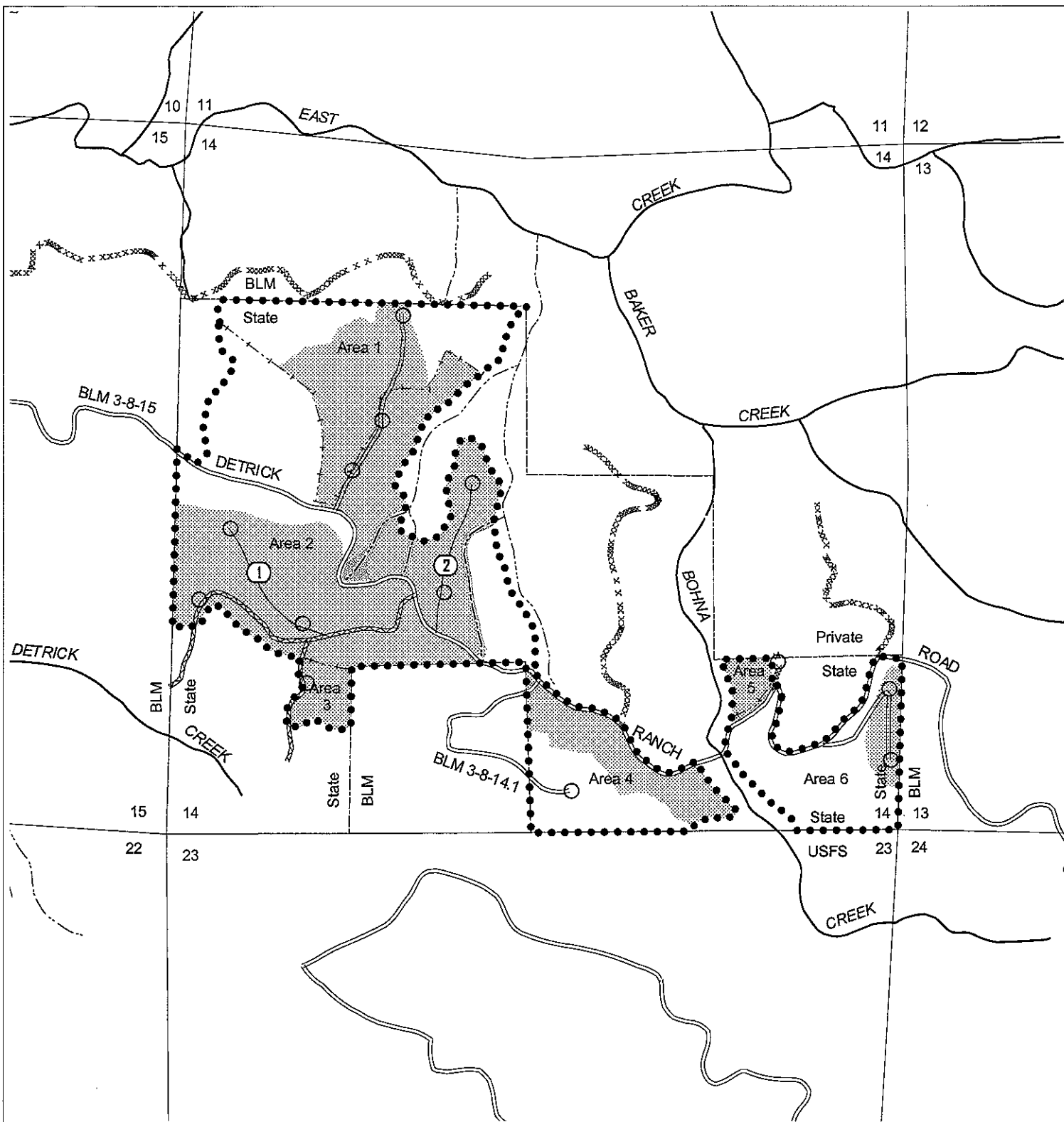
Area 5 - Modified Clearcut							
3 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	14	111	110	12.2	37	5%	35
Alder	13	34	41	1.4	4	10%	4
TOTAL					41		39

Area 6 - Modified Clearcut							
19 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	18	110	116	12.8	243	5%	231
Hemlock	14	25	83	2.1	40	5%	38
TOTAL					283		269

TOTAL SALE VOLUME			162 acres
SPECIES	Gross (MBF)	Net Vol (MBF)	
Douglas-fir	1013	962	
Hemlock	477	454	
Alder	182	164	
TOTAL	1672	1580	

TC PSTNDSUM		Stand Table Summary										Page 1			
		Project FAREST										Date: 12/1/2005			
		Acres 36.00										Time: 2:36:50PM			
		Grown Year:													
		T03S R08W S14 TyTHIN 32.00													
		T03S R08W S21 TyTHIN 4.00													
		<i>Areas 1 and 3 combined</i>													
S Spc 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
WL	14	1	86	110	20.590	22.01	41.18	20.2	85.0	26.64	832	3,500	959	300	126
WL	18	2	89	90	15.285	27.01	30.57	30.5	120.4	29.83	933	3,680	1,074	336	132
WL	20	1	89	71	2.292	5.00	4.58	30.9	110.0	4.54	142	504	163	51	18
WL	22	1	87	82	8.338	22.01	16.68	43.9	165.0	23.42	732	2,752	843	263	99
WL	Totals	5	87	97	46.504	26.03	93.01	28.4	112.2	84.43	2,639	10,436	3,039	950	376
WH	13	1	87	83	4.383	4.04	8.77	14.5	55.0	4.06	127	482	146	46	17
WH	14	4	89	89	19.654	21.01	35.53	18.5	76.6	21.01	657	2,721	756	236	98
WH	15	1	86	79	3.292	4.04	6.58	19.1	70.0	4.02	126	461	145	45	17
WH	16	1	83	86	2.894	4.04	5.79	23.3	90.0	4.32	135	521	155	49	19
WH	17	1	92	101	2.563	4.04	5.13	30.7	130.0	5.03	157	666	181	57	24
WH	18	1	91	75	2.286	4.04	4.57	26.2	95.0	3.84	120	434	138	43	16
WH	19	2	88	100	4.104	8.08	8.21	38.1	140.0	10.01	313	1,149	360	113	41
WH	20	1	93	70	1.852	4.04	3.70	30.9	110.0	3.67	115	407	132	41	15
WH	Totals	12	89	87	41.029	53.33	78.28	22.3	87.4	55.95	1,748	6,843	2,014	629	246
DF	11	1	87	67	4.233	2.79	4.23	14.1	60.0	1.70	60	254	61	21	9
DF	12	3	87	97	8.529	6.70	17.06	10.9	45.0	5.31	186	768	191	67	28
DF	13	1	94	69	3.031	2.79	3.03	21.1	70.0	1.82	64	212	65	23	8
DF	14	1	90	79	2.613	2.79	5.23	14.5	55.0	2.16	76	287	78	27	10
DF	15	2	89	85	4.553	5.59	9.11	18.1	72.5	4.71	165	660	169	59	24
DF	16	1	87	83	2.001	2.79	4.00	19.7	70.0	2.25	79	280	81	28	10
DF	18	1	88	94	1.581	2.79	3.16	28.4	110.0	2.56	90	348	92	32	13
DF	21	1	83	95	1.161	2.79	2.32	42.8	145.0	2.83	99	337	102	36	12
DF	Totals	11	88	84	27.702	29.05	48.14	17.0	65.4	23.33	819	3,146	840	295	113
DL	13	1	93	84	8.725	8.04	17.45	13.4	55.0	6.43	234	960	231	84	35
DL	17	1	88	86	5.102	8.04	10.20	23.7	90.0	6.65	242	918	239	87	33
DL	18	1	86	120	4.551	8.04	9.10	34.1	135.0	8.55	311	1,229	308	112	44
DL	Totals	3	90	93	18.378	24.13	36.76	21.4	84.5	21.62	786	3,107	778	283	112
RA	19	2	87	62	1.209	2.38	1.21	50.3	150.0	1.67	61	181	60	22	7
RA	Totals	2	87	62	1.209	2.38	1.21	50.3	150.0	1.67	61	181	60	22	7
Totals		33	88	91	134.823	184.92	257.39	23.5	92.1	187.00	6,053	23,713	6,732	2,179	854

Basal Area: $Take = 82.58 ft^2$ $Leave = 100.16 ft^2$



- Landing
- Ⓧ Domestic water supply intake
- Ⓜ Helicopter landing zone
- Ⓣ Truck turn-around
- ▭ 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
- ▬ Legacy road
- xxxx Blocked road
- County road
- Ⓣ Non-project road
- Swing road
- ⊖ OHV trail
- ⋯ Non-motorized trail
- T T Transmission line

LOGGING PLAN
 Timber Sale Contract No. 341-06-56
 Forest
 Portions of Section 14,
 T3S, R8W, W. M.
 Tillamook County, Oregon

1000 0 1000 Feet

Area	Type of Operation	Acres	
		Gross	Net
1	Partial cut	32	32
2	Modified clearcut	95	84
3	Partial cut	4	4
4	Modified clearcut	22	20
5	Modified clearcut	3	3
6	Modified clearcut	22	19
Total		178	162

Tillamook District GIS
 12-06-2005
 This product is for informational use and
 may not have been prepared for, or suitable
 for legal, engineering, or surveying purposes.

