



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Beagle Hill Sale 341-03-18

District: Tillamook

Date: 6/28/02

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$996,053.76	\$0.00	\$996,053.76
		Project Work	(\$133,626.00)
		Advertised Value	\$862,427.76



**Timber Sale Appraisal
Timber Description
Beagle Hill
Sale 341-03-18**

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Sections 5&6, T2SR7W and
Sections 31&32, T1SR7W

Date: 6/28/02

Stand Stocking: 100%

Species	Avg. DBH	Amortized %	Recovery %
Douglas - Fir	13	0	95

Volume by Grade	Douglas - Fir	Total
3S	3,833	3,833
4S	379	379
Total	4,212	4,212

Comments: Pond Values Used: 2nd Quarter 2002

Road Maintenance: Total = \$1.40

Toll Road:

Grading - 2 miles X 2 gradings X 500/mile = 2000/4212MBF = \$0.47

Surfacing - \$5/yard X 4 MMBF X 2 miles X 50 CYds/mile /4212MBF = \$0.47

Compacting surface - 50 stations@\$11/stax2times+\$280move-in=1380/4212mbf = \$0.33

Eagle Hill Road:

100 cyds pitrun @ \$5.50 cy = \$550/4212mbf = \$0.13

Other Cost (plus profit and risk): Total = \$10,674

Brand and paint: \$2.00MBF X4212mbf = \$8,424

skid logs from cable landing - 90mbf@\$25/mbf = \$2,250

Other Cost (profit and risk included): Total = \$9,550

Non-project road improvement:

15 stations @ \$45/sta. = \$675

Pit-run rock 500 cyds @ \$5.50/cy = \$2,750

move-in cost = \$650

Clear debris from OHV trails - 9000feet @ \$0.40/ft = \$3,600

Block trails(20) and construct grade dips(5) -25 @\$75/ea =\$1875

Hardwood Pond Value of \$450 obtained from Northwest Hardwoods for April 2002.

\$450-\$266.69 = \$183.31



Timber Sale Appraisal Logging Conditions Beagle Hill Sale 341-03-18

"STEWARDSHIP IN FORESTRY"

Combination#: 1 Douglas - Fir 87.00%

Yarding Distance: Medium (800 ft) **Downhill Yarding:** No

Logging System: Cable: Medium Tower >40 - <70 **Process:** Manual Delimiting

Tree Size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF

Loads/Day: 6 **Bd. Ft./Load:** 3,500

Cost/MBF: \$157.93

Machines:
Log Loader (A)
Tower Yarder (Medium)

Combination#: 2 Douglas - Fir 13.00%

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: 8 **Bd. Ft./Load:** 3,500

Cost/MBF: \$125.67

Machines:
Feller Buncher w/ Delimber
Log Loader (B)
Stroke Delimber (B)
Track Skidder



**Timber Sale Appraisal
Logging Costs
Beagle Hill
Sale 341-03-18**

"STEWARDSHIP IN FORESTRY"

Date: 6/28/02

Operating Seasons: 1.5

Profit & Risk: 15%

Project Costs: \$133,626

Other Costs (P/R): \$10,674

Slash Disposal: \$0

Other Costs: \$9,550

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

Road Maintenance: \$1.40

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	3.5



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Breakdown Beagle Hill Sale 341-03-18

Costs	Douglas - Fir
Logging	153.74
Road Maintenance	1.47
Fire Protection	0.97
Hauling	69.16
Other (P/R appl.)	2.53
Profit & Risk	34.18
Slash Disposal	0.00
Scaling	2.00
Other	2.27
Total	266.32

Amortization	0.00
Pond Value	502.80
Stumpage	236.48
Amortized	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Beagle Hill Sale 341-03-18

Amortized

	Douglas - Fir
MBF	0.00
Value	0.00
Total	0.00

Unamortized

	Douglas - Fir
MBF	4,212.00
Value	236.48
Total	996,053.76

Gross Timber Sale Value

Recovery \$996,053.76

Prepared by: Steve Langer

Date: 6/28/02

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: Beagle Hill

CONSTRUCTION

Point	A to B	9 + 40	stations =	\$5,812.36
Point	C to D	6 + 55	stations =	\$4,553.08
SUBTOTAL CONSTRUCTION				\$10,365.44

IMPROVEMENT

Point	A to B	28 + 90	stations =	\$17,869.93
Point	C to D	128 + 00	stations =	\$88,976.20
Point	E to F	15 + 50	stations =	\$7,326.33
Point	G to H	17 + 00	stations =	\$7,991.37
SUBTOTAL IMPROVEMENT				\$122,163.83

SPECIAL PROJECTS

SUBTOTAL SPECIAL PROJECTS \$0.00

MOVE IN

\$1,096.81

GRAND TOTAL **\$133,626**

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Beagle Hill</u>		Road:	<u>A to B</u>
Construction -	<u>9 + 40</u> stations <u>0.18</u> miles		Improvement -	<u>28 + 90</u> stations <u>0.55</u> miles
CLEARING AND GRUBBING -				
Scattering		2.19 acres @	\$815.00 per acre =	<u>\$1,784.85</u>
			TOTAL CLEARING AND GRUBBING	\$1,784.85
EXCAVATION -				
Improvement & berm	0 + 00 to 20 + 00	20.00 sta. @	\$65.00 per sta. =	\$1,300.00
Construction	20 + 00 to 29 + 40	9.40 sta. @	\$100.00 per sta. =	\$940.00
Improvement	29 + 40 to 38 + 30	8.90 sta. @	\$65.00 per sta. =	<u>\$578.50</u>
			TOTAL EXCAVATION	\$2,818.50
ENDHAUL and COMPACTION-				
Drift & Compact	20 + 00 to 29 + 40	9.40 sta. @	\$125.00 per sta. =	<u>\$1,175.00</u>
			TOTAL ENDHAUL	\$1,175.00
CULVERTS - MATERIALS & INSTALLATION				
Culverts				
164	LF of 18"	\$2,419.00	0	LF of 24" \$0.00
0	LF of 30"	\$0.00	0	LF of 36" \$0.00
0	LF of 42"	\$0.00	0	LF of 48" \$0.00
0	LF of 54"	\$0.00	0	LF of 60" \$0.00
		\$2,419.00		\$0.00
Half Rounds				
20	LF of 21"	\$228.00	0	LF of 30" \$0.00
0	LF of 36"	\$0.00	0	LF of 42" \$0.00
		\$228.00		\$0.00
Culvert Stakes & Markers				
4	stakes	\$32.00		
5	markers	\$30.00		
		\$62.00		
			TOTAL CULVERTS	\$2,709.00
SURFACING-				
0 + 00 to 38 + 30	2,898 cy. of	Pit-run @	\$4.66 per c.y. =	<u>\$13,504.68</u>
			TOTAL SURFACING	\$13,504.68
SPECIAL PROJECTS-				
Grade and shape road with ditch		38.30 stations @	\$14.20 per station	\$543.86
Roll subgrade w/ vibratory roller prior to rocking		38.30 stations @	\$11.00 per station	\$421.30
Turnouts and turnout construction		1.75 hour @	\$130.00 per hour	\$227.50
Remove large stumps		2.00 hour @	\$130.00 per hour	\$260.00
Grass seed and fertilize		1.32 acres @	\$180.00 per acre	<u>\$237.60</u>
			TOTAL SPECIAL PROJECTS	\$1,690.26
GRAND TOTAL				\$23,682.29

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Beagle Hill</u>	Road:	<u>C to D</u>
Construction -	<u>6 + 55</u> stations <u>0.12</u> miles	Improvement -	<u>128 + 00</u> stations <u>2.42</u> miles
CLEARING AND GRUBBING -			
Scattering - road		5.740 acres @	\$815.00 per acre = \$4,678.39
Piling - waste areas		0.50 acres @	\$905.00 per acre = \$452.50
			TOTAL CLEARING AND GRUBBING
			\$5,130.89
EXCAVATION -			
Improvement & berm	0 + 00 to 128 + 00	128.0 sta. @	\$65.00 per sta. = \$8,320.00
Construction	128 + 00 to 134 + 55	6.8 sta. @	\$100.00 per sta. = \$685.00
Rip & remove boulders	45 + 50 to 48 + 60	3.1 sta. @	\$35.00 per sta. = \$108.50
Widening	5 + 00 to 7 + 75	898 cys. @	\$1.15 per cy. = \$1,032.70
Widening	31 + 00 to 34 + 25	1,325 cys. @	\$1.15 per cy. = \$1,523.75
Widening	35 + 10 to 36 + 70	685 cys. @	\$1.15 per cy. = \$787.75
Widening	37 + 65 to 39 + 40	425 cys. @	\$1.15 per cy. = \$488.75
Widening	44 + 50 to 47 + 30	891 cys. @	\$1.15 per cy. = \$1,024.65
			TOTAL EXCAVATION
			\$13,941.10
ENDHAUL & COMPACTION-			
Endhaul - drift to waste area Sta. 7 + 75	5 + 00 to 7 + 75	898 cys. @	\$0.66 per cy. = \$589.60
Endhaul - truck to waste area Sta. 40 + 00 CtoD from	31 + 00 to 34 + 25	1,325 cys. @	\$0.65 per cy. = \$857.76
Endhaul - truck to waste area Sta. 40 + 00 CtoD from	35 + 10 to 36 + 70	605 cys. @	\$0.66 per cy. = \$400.58
Endhaul - drift fill material to Sta. 36 + 70 to 37 + 65	36 + 00 to 36 + 70	80 cys. @	\$0.28 per cy. = \$22.32
Endhaul - drift to waste area Sta. 40 + 00	37 + 65 to 39 + 40	425 cys. @	\$0.62 per cy. = \$262.30
Endhaul - truck to waste area Sta. 52 + 50 CtoD from	45 + 50 to 47 + 30	849 cys. @	\$0.63 per cy. = \$537.70
Endhaul - truck to fill 72 + 00 to 72 + 50	46 + 70 to 47 + 30	42 cys. @	\$0.82 per cy. = \$34.33
Fill placement	36 + 70 to 37 + 65	80 cys. @	\$0.35 per cy. = \$28.00
Fill placement	72 + 00 to 72 + 50	42 cys. @	\$0.35 per cy. = \$14.70
Compact waste area Sta. 7 + 75 C to D		898 cys. @	\$0.35 per cy. = \$314.30
Compact waste area Sta. 40 + 00 C to D		2,355 cys. @	\$0.35 per cy. = \$824.25
Compact waste area Sta. 52 + 50 C to D		849 cys. @	\$0.35 per cy. = \$297.15
			TOTAL ENDHAUL
			\$4,183.00
CULVERTS - MATERIALS & INSTALLATION			
Culverts			
462 LF of 18"		\$6,828.10	80 LF of 24" \$1,420.00
0 LF of 30"		\$0.00	0 LF of 36" \$0.00
0 LF of 42"		\$0.00	0 LF of 48" \$0.00
0 LF of 54"		\$0.00	0 LF of 60" \$0.00
		<u>\$6,828.10</u>	<u>\$1,420.00</u>
Half Rounds			
80 LF of 21"		\$912.00	10 LF of 30" \$145.00
0 LF of 36"		\$0.00	0 LF of 42" \$0.00
		<u>\$912.00</u>	<u>\$145.00</u>
Culvert Stakes & Markers			
18 stakes		\$144.00	
18 marker		\$108.00	
		<u>\$252.00</u>	
			TOTAL CULVERTS
			\$9,557.10
SURFACING-			
	0 + 00 to 134 + 55	9,907 cy. of Pit Run @	\$5.56 per c.y. = \$55,082.92
			TOTAL SURFACING
			\$55,082.92
SPECIAL PROJECTS-			
Grade and shape road with a ditch		93.90 stations @	\$14.20 per station \$1,333.38
Grade and shape road with outslope		40.65 stations @	\$9.75 per station \$396.34
Roll subgrade w/ vibratory roller prior to rocking		134.55 stations @	\$11.00 per station \$1,480.05
Remove buried logs from subgrade		2.50 hours @	\$130.00 per hour \$325.00
Remove large stumps		3.50 hours @	\$130.00 per hour \$455.00
Construct a 10' wide x 30' long x 4' deep culvert catch basin		1.50 hours @	\$130.00 per hour \$195.00
Turnouts, turnaround & waste areas construction		5.75 hours @	\$130.00 per hour \$747.50
Grass seed and fertilize		3.90 acres @	\$180.00 per acre \$702.00
			TOTAL SPECIAL PROJECTS
			\$6,634.27
			GRAND TOTAL
			\$93,529.27

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Beagle Hill</u>		Road:	<u>E to F</u>								
Construction -	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">0+00</td> <td style="text-align: left;">stations</td> </tr> <tr> <td style="text-align: right; border-top: 1px solid black;">0.00</td> <td style="text-align: left; border-top: 1px solid black;">miles</td> </tr> </table>	0+00	stations	0.00	miles		Improvement -	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">15+50</td> <td style="text-align: left;">stations</td> </tr> <tr> <td style="text-align: right; border-top: 1px solid black;">0.29</td> <td style="text-align: left; border-top: 1px solid black;">miles</td> </tr> </table>	15+50	stations	0.29	miles
0+00	stations											
0.00	miles											
15+50	stations											
0.29	miles											
CLEARING AND GRUBBING -												
Scattering		1.07 acres @	\$815.00 per acre =	\$870.01								
			TOTAL CLEARING AND GRUBBING	\$870.01								
EXCAVATION -												
Road Earthwork	0+00 to 15+50	15.5 sta. @	\$65.00 per sta. =	\$1,007.50								
			TOTAL EXCAVATION	\$1,007.50								
ENDHAUL -												
		0 cy @	\$0.00 per cy	\$0.00								
			TOTAL ENDHAUL	\$0.00								
CULVERTS - MATERIALS & INSTALLATION												
	Culverts											
	0	LF of 18"	\$0.00									
	0	LF of 30"	\$0.00									
	0	LF of 42"	\$0.00									
	0	LF of 54"	\$0.00									
			\$0.00									
	Half Rounds											
	0	LF of 21"	\$0.00									
	0	LF of 36"	\$0.00									
			\$0.00									
	Culvert Stakes & Markers											
	0	stakes	\$0.00									
	0	marker	\$0.00									
			\$0.00									
			TOTAL CULVERTS	\$0.00								
SURFACING-												
0+00 to 15+50	898	cy. of Pit-run	@ \$5.35 per c.y. =	\$4,804.30								
			TOTAL SURFACING	\$4,804.30								
SPECIAL PROJECTS												
Grade and shape road		15.50 stations @	\$9.75 per station	\$151.13								
Roll subgrade w/ vibratory roller prior to rocking		15.50 stations @	\$11.00 per station	\$170.50								
Turnout and turnaround construction		0.75 hour @	\$130.00 per hour	\$97.50								
Remove large stumps		1.00 hour @	\$130.00 per hour	\$130.00								
Grass seed and fertilize		0.53 acres @	\$180.00 per acre	\$95.40								
			TOTAL SPECIAL PROJECTS	\$644.53								
GRAND TOTAL				\$7,326.33								

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Beagle Hill</u>		Road:	<u>G to H</u>
Construction -	0+00 stations <u>0.00 miles</u>		Improvement -	17+00 stations <u>0.32 miles</u>
CLEARING AND GRUBBING -				
Scattering	1.17 acres @		\$815.00 per acre =	<u>\$954.20</u>
			TOTAL CLEARING AND GRUBBING	\$954.20
EXCAVATION -				
Road Earthwork	0+00 to 17+00	17.0 sta. @	\$65.00 per sta. =	<u>\$1,105.00</u>
			TOTAL EXCAVATION	\$1,105.00
ENDHAUL -				
		0 cy @	\$0.00 per cy	<u>\$0.00</u>
			TOTAL ENDHAUL	\$0.00
CULVERTS - MATERIALS & INSTALLATION				
Culverts				
0 LF of 18"	\$0.00		0 LF of 24"	\$0.00
0 LF of 30"	\$0.00		0 LF of 36"	\$0.00
0 LF of 42"	\$0.00		0 LF of 48"	\$0.00
0 LF of 54"	<u>\$0.00</u>		0 LF of 60"	<u>\$0.00</u>
	\$0.00			\$0.00
Half Rounds				
0 LF of 21"	\$0.00		0 LF of 30"	\$0.00
0 LF of 36"	<u>\$0.00</u>		0 LF of 42"	<u>\$0.00</u>
	\$0.00			\$0.00
Culvert Stakes & Markers				
0 stakes	\$0.00			
0 marker	<u>\$0.00</u>			
	\$0.00			
			TOTAL CULVERTS	\$0.00
SURFACING-				
0+00 to 17+00	969 cy. of	Pit-Run	@	\$5.38 per c.y. =
				<u>\$5,213.22</u>
			TOTAL SURFACING	\$5,213.22
SPECIAL PROJECTS-				
Grade and shape road	17.00 stations @	\$9.75 per station		\$165.75
Roll subgrade w/ vibratory roller prior to rocking	17.00 stations @	\$11.00 per station		\$187.00
Turnouts and turnaround construction	0.50 hour @	\$130.00 per hour		\$65.00
Remove large stumps	1.50 hour @	\$130.00 per hour		\$195.00
Grass seed and fertilize	0.59 acres @	\$180.00 per acre		<u>\$106.20</u>
			TOTAL SPECIAL PROJECTS	\$718.95
			GRAND TOTAL	\$7,991.37

PIT RUN ROCK DEVELOPMENT COST SUMMARY

Sale: **Beagle Hill**

Station 29 + 40 on A to B

Pit: Eagle Hill
 Rock: Pit-run
 Swell: 1.40
 Shrinkage: 1.16
 Drill Pct.: 80%

Location: NW 1/4, SE 1/4, Sec 5, T2S, R7W, W.M.
 Road: 14672 c.y.
 Stockpile Base: c.y.
 Total Truck Loads: 14672 c.y.
 In Place Total: 10480 c.y.

Clear, scalp, load & compact overburden; construct access road:

D-8 Cat and excavator - 9 Hrs. @ \$260.00/Hr	\$2,340.00
End-haul overburden to waste area:	
Dump Truck-20 Hrs. @ \$57.00/Hr	\$1,140.00
Grass seed and fertilize waste area and access road : 0.25 acres @ \$180.00/ac	\$45.00
Drill and Shoot	\$2.10 /cu.yd. 8384 cu.yds. = \$17,606.40
Strip	\$1.75 /cu.yd. 2096 cu.yds. = \$3,668.00
Push Rock	\$0.60 /cu.yd. 14672 cu.yds. = \$8,803.20
Load Dump Truck:	\$0.60 /cu.yd. 14672 cu.yds. = \$8,803.20
Subtotal	\$42,405.80

Move in Drill	189.18
Move in Loader	260.91
Move in D8 from Point C	10.57
Move in Excavator from Point C	31.36
Move-in Trucks -	236.55
Subtotal	\$728.57

TOTAL PRODUCTION COSTS	\$43,134.37
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Base Cost = \$2.94 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	\$0.82	\$0.90	\$2.94	\$4.66	2898	\$13,504.68
C to D	\$1.72	\$0.90	\$2.94	\$5.56	9907	\$55,082.92
E to F	\$1.51	\$0.90	\$2.94	\$5.35	898	\$4,804.30
G to H	\$1.54	\$0.90	\$2.94	\$5.38	969	\$5,213.22
Total C.Y.					14672	Sub Total \$78,605.12

TOTAL ROCKING COSTS	\$78,605.12
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MOVE-IN CALCULATIONS

Sale: **Beagle Hill**

LOWBOY HAUL (One Way)		
DISTANCE	ROADWAY	AVE SPEED (MPH)
12.0	Highway	40
1.0	Main Lines (Off Road)	10
1.0	Pulling 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	0	0	\$0.00	\$0.00
0	Brush Cutter	\$0.00		\$4.00	0	0	0	\$0.00	\$0.00
1	Graders	\$47.45		\$3.65	0	2.7	2.7	\$9.86	\$57.31
0	Loader (Small)	\$0.00	1	\$3.55	0	0	0	\$0.00	\$0.00
0	Loader (Med. & Large)	\$0.00	1	\$9.00	0	0	0	\$0.00	\$0.00
1	Rollers & Compactors	\$112.13		\$5.00	0	0.7	0.7	\$3.50	\$115.63
0	Excavators (Small)	\$0.00		\$22.00	0	0	0	\$0.00	\$0.00
0	Excavators (Med.)	\$0.00		\$35.50	0	0	0	\$0.00	\$0.00
1	Excavators (Large)	\$225.29	1	\$44.80	0	2.7	2.7	\$120.96	\$346.25
0	Rubber Tired Backhoes/Skidlers	\$0.00		\$3.00	0	0	0	\$0.00	\$0.00
0	Tractors (D6)	\$0.00	2	\$7.10	0	0	0	\$0.00	\$0.00
1	Tractors (D7)	\$205.62	2	\$11.30	0	1.5	1.5	\$16.95	\$222.57
1	Tractor (D8)	\$215.97	2	\$15.10	0	2.7	2.7	\$40.77	\$256.74
3	Dump Truck (10 cy +)	\$85.50		\$2.85	0	1.5	1.5	\$12.83	\$98.33
0	Dump Truck (Off Hiway)	\$0.00	1	\$4.75	0	0	0	\$0.00	\$0.00
0	Water Truck (1500 Gal)	\$0.00		\$2.85	0	0	0	\$0.00	\$0.00
0	Water Truck (2500 Gal)	\$0.00		\$2.85	0	0	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:	\$1,096.81
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OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT



Beagle Hill

1. **Type of Sale:** Clearcut Harvest/ Recovery.
2. **Legal Description:** Portions of Sections 5 and 6, T2S, R7W, and Sections 31 and 32, T1S, R7W, W.M., Tillamook County, Oregon.
3. **Sale Acreage:** The sale boundaries were plotted on a digital orthophotograph and the acreage was calculated with GIS.

ACRES			
Area	Sale	Total	Net
1	112	117	112
2	108	128	107
3	57	65	56
4	22	23	22
Total	299	333	297

Sale Acres: Area within the Timber Sale Boundary signs.

Total Acres: For accomplishment reporting

Clearcut: Sale acres; plus green tree retention acres outside the sale boundary; less roads and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Net Acres: Used for calculating the advertised volume.

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

4. **Cruising Procedures:**
 - A. **Cruise Method:** Plots were established on a grid of 250 X 500. A total of 99 full point plots were taken. All trees and snags were recorded by diameter class. For V-BAR (volume to basal area ratio) and grade information, the second and third Douglas-fir on every other plot were measured and graded.
 - B. **Plot Size:** A basal area factor of 20 was used. The point observation for conifers and hardwoods was 4.5 feet.
 - C. **Grading System:** Grade breakdown was based on grades assigned when measuring V-BAR trees.

5. **Computation Procedures:** Basal area was calculated from plot data taken. Information from these plots was then used to compute basal area and average diameter of the trees to be removed and retained. V-BAR (Volume-Basal Area Ratio) was computed by entering V-BAR measurements into SuperAce Timberland Appraisal and Planning System from Atterbury Consultants Inc., version 95.02.21. See attached Volume Computation Summary and Stand Tables.
6. **Defect and Breakage:** A 5% defect and breakage reduction was applied to the volume.
7. **Timber Description:** All sale areas burned in the 1933 and 1939 fires. The south portion of Area 1 burned in the 1951 fire. The sale area was planted from 1962 to 1967 and is currently 34 to 40 years old. The Douglas fir on the sale area has severe symptoms of Swiss needle cast with one to two years of needle retention and growth has slowed. The majority of the alder was treated with herbicides about 35 years ago to reduce competition with Douglas-fir. The surviving alder trees have poorly formed crowns and short boles.
8. **Cruiser Names/Dates:** Shaver/Walter, February, 2002.
9. **Revenue Distribution:**
100% FDF
Tax Code: 9-1(61%), 9-2(39%)
Deed Numbers: 161, 169, 209, 231
100% Rehabilitation Obligated
10. **Attachments:**
Volume Summary
Stand Tables
Logging Plan



"STEWARDSHIP IN FORESTRY"

Beagle Hill

Volume Summary

Area 1							
112 acres							
SPECIES	QMD	Basal Area	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	13.1"	163	94	15.3	1713.6	5%	1628
TOTAL							1628

Area 2							
107 acres							
SPECIES	QMD	Basal Area	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	16.1"	160	95	15.2	1626.4	5%	1545
TOTAL							1545

Area 3							
56 acres							
SPECIES	QMD	Basal Area	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	12.9	143	103	14.7	823.2	5%	782
TOTAL							782

Area 4							
22 acres							
SPECIES	QMD	Basal Area	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	13.2	154	80	12.3	270.6	5%	257
TOTAL							257

Beagle Hill

Volume Summary

TOTAL SALE VOLUME 297 net harvest acres				
SPECIES	QMD	MBF	D&B	Net Vol. (MBF)
Douglas-fir	13.2	4434	5%	4212
TOTAL		4434		4212



Beagle Hill Area 1

Stand Table

DBH	Take Trees	Leave Trees	Number of Plots	Take Trees per Acre	Leave Trees per Acre	Trees per Acre
8"	0	0	35	0.0	0.0	0.0
9"	0	0	35	0.0	0.0	0.0
10"	49	0	35	51.8	0.0	51.8
11"	0	0	35	0.0	0.0	0.0
12"	63	1	35	46.8	0.7	47.5
13"	0	0	35	0.0	0.0	0.0
14"	90	1	35	48.9	0.5	49.4
15"	0	0	35	0.0	0.0	0.0
16"	46	0	35	18.4	0.0	18.4
17"	0	0	35	0.0	0.0	0.0
18"	25	4	35	7.9	1.3	9.1
19"	0	0	35	0.0	0.0	0.0
20"	12	8	35	3.1	2.1	5.1
21"	0	0	35	0.0	0.0	0.0
22"	0	0	35	0.0	0.0	0.0
24"	0	3	35	0.0	0.5	0.5
26"	0	1	35	0.0	0.1	0.1
28"	0	1	35	0.0	0.1	0.1
30"	0	0	35	0.0	0.0	0.0
32"	0	0	35	0.0	0.0	0.0
34"	0	0	35	0.0	0.0	0.0
36"	0	0	35	0.0	0.0	0.0
Total	285	19		177	5	182

Trees/plt	8.7	Trees/ac	182
Tk trs/plt	8.1	Tk trs/ac	177
Lv trs/plt	0.5	Lv trs/ac	5

BA(acre)	174	Current Stand - QM Diameter	13.2
BA(tree)	0.95	Leave Stand - QM Diameter	19.2
Lv BA/ac	11	Take trees - QM Diameter	13.0
Tk BA/ac	163		

Relative Density	48
Relative Den. - Leave	2



Beagle Hill Area 2

Stand Table

DBH	Take Trees	Leave Trees	Number of Plots	Take Trees per Acre	Leave Trees per Acre	Trees per Acre
8"	0	0	38	0.0	0.0	0.0
9"	0	0	38	0.0	0.0	0.0
10"	46	2	38	44.8	1.9	46.7
11"	0	0	38	0.0	0.0	0.0
12"	66	3	38	45.2	2.1	47.2
13"	0	0	38	0.0	0.0	0.0
14"	92	0	38	46.0	0.0	46.0
15"	0	0	38	0.0	0.0	0.0
16"	50	0	38	18.4	0.0	18.4
17"	0	0	38	0.0	0.0	0.0
18"	36	0	38	10.4	0.0	10.4
19"	0	0	38	0.0	0.0	0.0
20"	8	4	38	1.9	0.9	2.8
21"	0	0	38	0.0	0.0	0.0
22"	6	2	38	1.3	0.4	1.7
24"	0	6	38	0.0	0.9	0.9
26"	0	2	38	0.0	0.3	0.3
28"	0	8	38	0.0	1.1	1.1
30"	0	6	38	0.0	0.6	0.6
32"	0	0	38	0.0	0.0	0.0
34"	0	0	38	0.0	0.0	0.0
36"	0	0	38	0.0	0.0	0.0
Total	304	33		168	8	176

Trees/plt	8.9	Trees/ac	176
Tk trs/plt	8.0	Tk trs/ac	168
Lv trs/plt	0.9	Lv trs/ac	8

BA(acre)	177	Current Stand - QM Diameter	13.6
BA(tree)	1.01	Leave Stand - QM Diameter	19.6
Lv BA/ac	17	Take trees - QM Diameter	13.2
Tk BA/ac	160		

Relative Density	48
Relative Den. - Leave	4



Beagle Hill Area 3 Stand Table

DBH	Take Trees	Leave Trees	Number of Plots	Take Trees per Acre	Leave Trees per Acre	Trees per Acre
8"	0	0	16	0.0	0.0	0.0
9"	0	0	16	0.0	0.0	0.0
10"	21	0	16	48.6	0.0	48.6
11"	0	0	16	0.0	0.0	0.0
12"	24	0	16	39.0	0.0	39.0
13"	0	0	16	0.0	0.0	0.0
14"	35	0	16	41.6	0.0	41.6
15"	0	0	16	0.0	0.0	0.0
16"	24	0	16	21.0	0.0	21.0
17"	0	0	16	0.0	0.0	0.0
18"	6	0	16	4.1	0.0	4.1
19"	0	0	16	0.0	0.0	0.0
20"	3	0	16	1.7	0.0	1.7
21"	0	0	16	0.0	0.0	0.0
22"	1	0	16	0.5	0.0	0.5
24"	0	7	16	0.0	2.6	2.6
26"	0	2	16	0.0	0.6	0.6
28"	0	5	16	0.0	1.6	1.6
30"	0	8	16	0.0	2.0	2.0
32"	0	0	16	0.0	0.0	0.0
34"	0	0	16	0.0	0.0	0.0
36"	0	0	16	0.0	0.0	0.0
Total	114	22		156	7	163

Trees/plt	8.5	Trees/ac	163
Tk trs/plt	7.1	Tk trs/ac	156
Lv trs/plt	1.4	Lv trs/ac	7

BA(acre)	170	Current Stand - QM Diameter	13.8
BA(tree)	1.04	Leave Stand - QM Diameter	27.2
Lv BA/ac	28	Take trees - QM Diameter	12.9
Tk BA/ac	143		

Relative Density	46
Relative Den. - Leave	5



"STEWARDSHIP IN FORESTRY"

Beagle Hill Area 4 Stand Table

DBH	Take Trees	Leave Trees	Number of Plots	Take Trees per Acre	Leave Trees per Acre	Trees per Acre
8"	0	0	10	0.0	0.0	0.0
9"	0	0	10	0.0	0.0	0.0
10"	14	0	10	51.8	0.0	51.8
11"	0	0	10	0.0	0.0	0.0
12"	19	0	10	49.4	0.0	49.4
13"	0	0	10	0.0	0.0	0.0
14"	12	0	10	22.8	0.0	22.8
15"	0	0	10	0.0	0.0	0.0
16"	14	0	10	19.6	0.0	19.6
17"	0	0	10	0.0	0.0	0.0
18"	14	0	10	15.4	0.0	15.4
19"	0	0	10	0.0	0.0	0.0
20"	3	0	10	2.7	0.0	2.7
21"	0	0	10	0.0	0.0	0.0
22"	1	0	10	0.8	0.0	0.8
24"	0	3	10	0.0	1.8	1.8
26"	0	3	10	0.0	1.5	1.5
28"	0	1	10	0.0	0.5	0.5
30"	0	0	10	0.0	0.0	0.0
32"	0	0	10	0.0	0.0	0.0
34"	0	0	10	0.0	0.0	0.0
36"	0	0	10	0.0	0.0	0.0
Total	77	7		163	4	166

Trees/plt	8.4	Trees/ac	166
Tk trs/plt	7.7	Tk trs/ac	163
Lv trs/plt	0.7	Lv trs/ac	4

BA(acre)	168	Current Stand - QM Diameter	13.6
BA(tree)	1.01	Leave Stand - QM Diameter	26.0
Lv BA/ac	14	Take trees - QM Diameter	13.2
Tk BA/ac	154		

Relative Density	46
Relative Den. - Leave	3



Beagle Hill

Stand Table

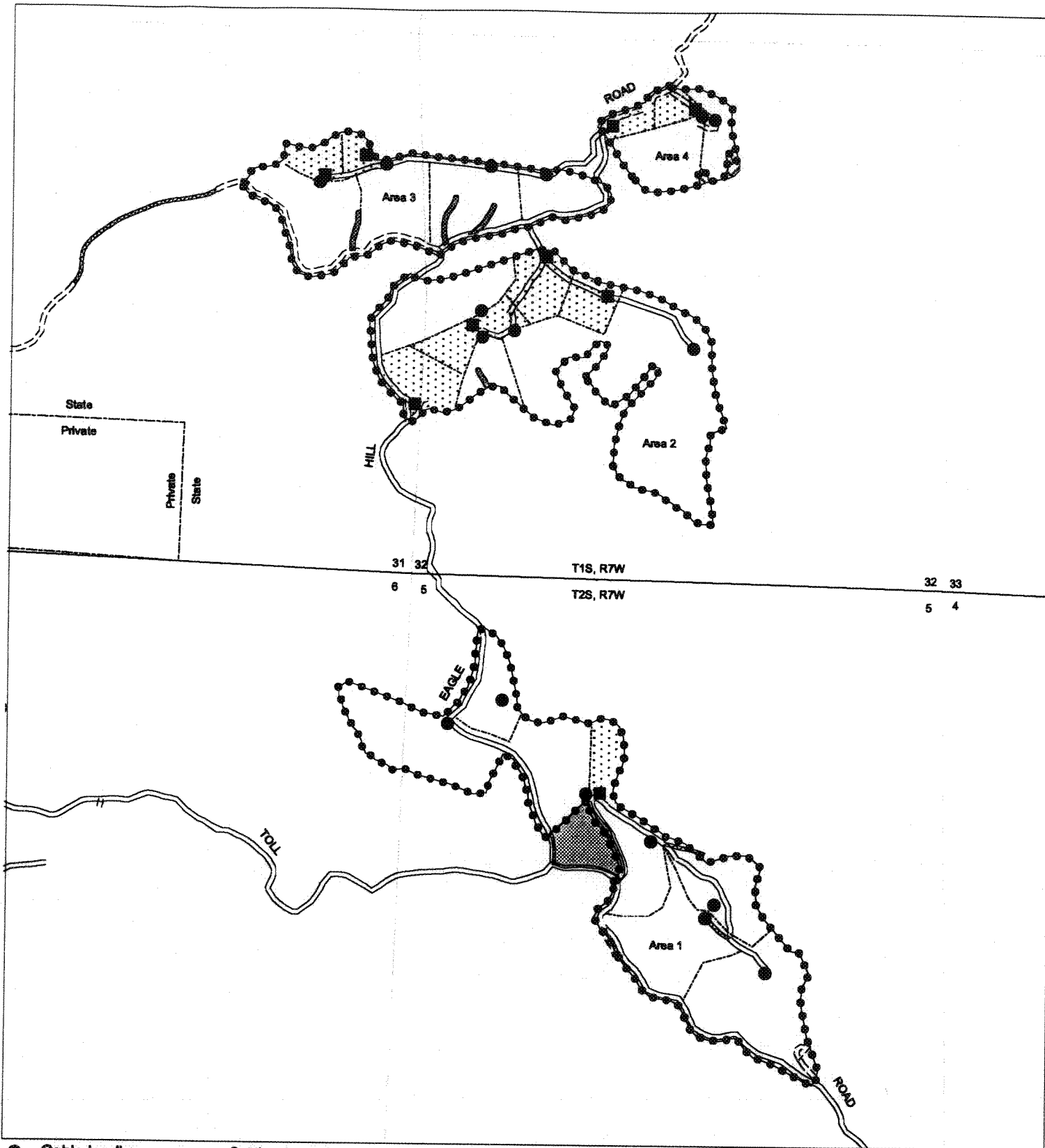
All areas

DBH	Take Trees	Leave Trees	Number of Plots	Take Trees per Acre	Leave Trees per Acre	Trees per Acre
8"	0	0	99	0.0	0.0	0.0
9"	0	0	99	0.0	0.0	0.0
10"	130	2	99	48.6	0.7	49.3
11"	0	0	99	0.0	0.0	0.0
12"	172	4	99	45.2	1.1	46.2
13"	0	0	99	0.0	0.0	0.0
14"	229	1	99	43.9	0.2	44.1
15"	0	0	99	0.0	0.0	0.0
16"	134	0	99	18.9	0.0	18.9
17"	0	0	99	0.0	0.0	0.0
18"	81	4	99	9.0	0.4	9.4
19"	0	0	99	0.0	0.0	0.0
20"	26	12	99	2.4	1.1	3.5
21"	0	0	99	0.0	0.0	0.0
22"	8	2	99	0.6	0.2	0.8
24"	0	19	99	0.0	1.2	1.2
26"	0	8	99	0.0	0.4	0.4
28"	0	15	99	0.0	0.8	0.8
30"	0	14	99	0.0	0.6	0.6
32"	0	0	99	0.0	0.0	0.0
34"	0	0	99	0.0	0.0	0.0
36"	0	0	99	0.0	0.0	0.0
Total	780	81	99	169	7	175

Trees/plt	8.7	Trees/ac	175
Tk trs/plt	7.9	Tk trs/ac	169
Lv trs/plt	0.8	Lv trs/ac	7

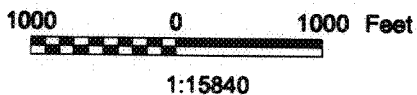
BA(acre)	174	Current Stand - QM Diameter	13.5
BA(tree)	0.99	Leave Stand - QM Diameter	21.4
Lv BA/ac	16	Take trees - QM Diameter	13.1
Tk BA/ac	158		

Relative Density	47
Relative Den. - Leave	4



- Cable landing
- Tractor landing
- ⊞ Green tree retention area
- ▨ Buffer zone
- Cable yarding
- ⊞ Ground yarding
- Setting boundary
- Area boundary
- ⊞ Sale boundary
- ==== Unsurfaced road
- ==== Surfaced road
- ==== State highway
- ==== Abandoned road
- ==== Road construction
- ==== County road
- ==== OHV trail
- Non-motorized trail

LOGGING PLAN
 Timber sale contract No. 341-03-18
 Beagle Hill
 Sections 31 and 32, T1S, R7W, and
 Sections 5 and 6, T2S, R7W, W. M.
 Tillamook County, Oregon



Area	Acres	
	Sale	Net
1	112	112
2	108	107
3	57	56
4	22	22
Total	299	297

OREGON DEPARTMENT OF FORESTRY
WRITTEN PLAN

SALE NAME: **Beagle Hill**

PROTECTED RESOURCE: **No High Risk Sites were identified on the sale areas. If active landslides and slumps; slopes steeper than 80%; headwalls or draws steeper than 70% are found that constitute a High Risk Site the following protection measures will apply.**

LOCATION: **Portions of Sections 5 & 6, T2S, R7W, and Sections 31&32, T1S,R7W,W.M., Tillamook County, Oregon.**

ACTIVITY: **Cable yarding across or adjacent to High Risk Sites.**

PROTECTION MEASURES:

YARDING:

- Logs will have at least one end suspended when yarding through high risk sites.
- Soil gouging will be limited to a depth of 1 foot (measured vertically) when yarding through high risk sites.

PREPARED BY: **Steve Langer**
Forester, South Unit
May 22, 2002