



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Miller Sale 341-04-72

District: Tillamook

Date: 4/2/04

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,566,894.03	\$0.00	\$1,566,894.03
		Project Work	(\$387,634.00)
		Advertised Value	\$1,179,260.03



Timber Sale Appraisal Timber Description Miller Sale 341-04-72

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Portions of Section 28, 32, and 33, T2S, R7W, W.M., Tillamook County, OR

Date: 4/2/04

Stand Stocking: 40%

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

Volume by Grade	Douglas - Fir	Total
2S	250	250
3S	3,910	3,910
4S	881	881
Total	5,041	5,041

Comments: Pond Values Used: 1st Quarter 2004.

Road Maintenance

Total: \$ 1.95 /mbf

Grading: 7 miles x \$500 /mile x 2 gradings / 5041mbf = \$1.39 /mbf

Surfacing: \$4 /cu yd x 20 cu yds /mile /mmbf x 7miles x 5 mmbf /5041mbf = \$0.56 /mbf

Other costs (add Profit & Risk):

Brand and paint: \$2.00 /mbf x 5041mbf = \$10,082

Other costs (Profit and Risk included)

Total: \$38,304

Non Project roads: \$18,130

Spur 1: 7 stations, Spur 2: 4 stations, Spur 3: 10 stations, Spur 4: 11 stations, Spur 5: 17 stations

Non-project road improvement: 49 stations x \$120 /station = \$5,880

Rock for non-project road construction: 50 cu yds/station x 49 stations x \$5 /cu yd = \$ 12,250

Slash piling and sorting: 281 ac clearcut cable harvest x 1 hr x \$110 /hr /50ac = \$616

Swing road: (23 ac x 15 mbf/ac) + (27 ac x 9 mbf/ac) x \$25 /mbf = \$14,700

OHV trails: \$4858

Clearing OHV trails: 5021 ft x \$0.40 /ft = \$2008

Block trails: 16 trailheads x \$75 /ea = \$1,200

Block cutbanks on C to D: 2 x \$75/ea = \$150

Construct grade dips on OHV trails: 20 dips x \$75/ea = \$1,500

Alder price: \$580.00 pond value - \$262.93 logging costs = \$317.07 stumpage value

Cedar price: \$1000.00 pond value - \$262.93 logging costs = \$737.07 stumpage value



Timber Sale Appraisal

Logging Conditions

Miller

Sale 341-04-72

"STEWARDSHIP IN FORESTRY"

Combination#: 1 Douglas - Fir 74.00%

Yarding Distance: Medium (800 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: 6 **Bd. Ft./Load:** 3,500
Cost/MBF: \$156.32

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

Combination#: 2 Douglas - Fir 26.00%

Yarding Distance: Short (400 ft) **Downhill Yarding:** Yes
Logging System: Track Skidder **Process:** Manual Felling/Delimiting
Tree Size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
Loads/Day: 8 **Bd. Ft./Load:** 3,500
Cost/MBF: \$116.62

Machines:
Log Loader (B)
Track Skidder



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal

Logging Costs

Miller

Sale 341-04-72

Date: 4/2/04

Operating Seasons: 2.0

Profit & Risk: 15%

Project Costs: \$387,634

Other Costs (P/R): \$10,082

Slash Disposal: \$0

Other Costs: \$38,304

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

Road Maintenance: \$1.95

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 Miller Sale 341-04-72

Costs	Douglas - Fir
Logging	146.00
Road Maintenance	2.05
Fire Protection	1.08
Hauling	69.16
Other (P/R appl.)	2.00
Profit & Risk	33.04
Slash Disposal	0.00
Scaling	2.00
Other	7.60
Total	262.93

Amortization	0.00
Pond Value	573.76
Stumpage	310.83
Amortized	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Miller Sale 341-04-72

Amortized

	Douglas - Fir
MBF	0.00
Value	0.00
Total	0.00

Unamortized

	Douglas - Fir
MBF	5,041.00
Value	310.83
Total	1,566,894.03

Gross Timber Sale Value

Recovery \$1,566,894.03

Prepared by: Elissa Wells

Date: 4/2/04

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: Miller Timber Sale Date: Mar. 02 2004

Construction -

Point	C - D	19+40	stations =	\$21,315.53
Point	E - F	29+45	stations =	\$50,467.99
Point			stations =	\$0.00
Point			stations =	\$0.00
Point			stations =	\$0.00
SUB TOTAL				<u>\$71,783.52</u>

Improvement -

Point	A - B	475+85	stations =	\$247,436.94
Point	C - D	58+85	stations =	\$50,634.40
Point	G - H	3+60	stations =	\$2,860.81
Point			stations =	\$0.00
Point			stations =	\$0.00
SUB TOTAL				<u>\$300,932.15</u>

Special Projects -

Vacate Road				
Point	H - I	45+45	stations =	\$9,060.95
Steampot Creek Stream Enhancement Project				\$3,760.00
				<u>\$0.00</u>
SUB TOTAL				\$12,820.95

Project Move - In -

<u>Grader, Vibratory Roller, Excavator, Crawler Tractor, 2 Dump Trucks</u>		
<u>Water Truck</u>		\$2,097.30
		\$0.00
		<u>\$0.00</u>
SUB TOTAL		\$2,097.30

GRAND TOTAL \$387,633.92

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Miller Timber Sale</u>	Road:	<u>Points A - B East Trask, Miller</u>
Construction -	<u> </u> stations	Improvement -	<u>475+85</u> stations
	<u> </u> miles		<u>9.01</u> miles
CLEARING AND GRUBBING -			
Scattering	3.20 acres @	\$815.00 per acre =	<u>\$2,608.00</u>
			TOTAL CLEARING AND GRUBBING
			\$2,608.00
EXCAVATION -			
Excavator	4.5 hr.s @	\$130.00 per hr. =	\$585.00
	45.75 sta. @	\$55.00 per sta. =	\$2,516.25
	99 cys. @	\$2.68 per c.y. =	\$265.32
	40 cys. @	\$3.10 per c.y. =	\$124.00
Widening For Ditch	623 cys. @	\$2.94 per c.y. =	\$1,831.62
	161 cys. @	\$3.88 per c.y. =	\$624.68
	0 cys. @	\$0.00 per c.y. =	\$0.00
			TOTAL EXCAVATION
			\$5,946.87
CULVERT MATERIALS -			
Culverts			
602 LF of 18"	<u>\$8,879.50</u>	34 LF of 24"	<u>\$603.50</u>
	\$8,879.50		\$603.50
Half Rounds			
80 LF of 21"	\$912.00	20 LF of 30"	\$290.00
0 LF of 36"	<u>\$0.00</u>	0 LF of 42"	<u>\$290.00</u>
	\$912.00		\$580.00
Culvert Stakes			
20 1/2 round stakes @	\$8.00 per stake =	\$160.00	
20 marker stakes @	\$8.00 per stake =	\$160.00	
			TOTAL CULVERT MATERIALS
			\$11,295.00
SURFACING- 2"-0" Crushed Rock: Sta.s 0+00 to 363+50			
6" Depth	11,996 cy. of	Crshd Rock @	\$14.66 per c.y.= \$175,861.36
CrvWiden	240 cy. of	Crshd Rock @	\$14.66 per c.y.= \$3,518.40
48Trnouts	528 cy. of	Crshd Rock @	\$14.66 per c.y.= \$7,740.48
			TOTAL SURFACING
			\$187,120.24
SPOT ROCK: Stas. 396+50, 418+10			
6" Depth	40 cy. of	Crshd Rock @	\$14.66 per c.y.= \$586.40
			TOTAL SURFACING
			\$586.40
SURFACING- 4"-0" Crushed Rock: Sta.s 429+00 to 475+85			
8" Depth	2,061 cy. of	4"-0"Crshd @	\$12.12 per c.y.= \$24,979.32
CrvWiden	110 cy. of	4"-0"Crshd @	\$12.12 per c.y.= \$1,333.20
6Trnouts	90 cy. of	4"-0"Crshd @	\$12.12 per c.y.= \$1,090.80
SmTurnrnd	15 cy. of	4"-0"Crshd @	\$12.12 per c.y.= \$181.80
			TOTAL SURFACING
			\$27,585.12
SPECIAL PROJECTS			
Place 10 CY Rip Rap @ Behind NW & NE Wingwalls of Bridge @ Sta. 59+90			\$145.90
Place 40 CY Pit Run Base Rock--Sta.s 201+50 to 203+00			\$378.00
Culvert Work Specified @ Stations 25+30, 95+40, 115+20 Plus 2 Culvert Bands			\$102.20
Remove Old Culverts From State Land			\$204.29
Pull Ditch & End Haul: Sta.s 0+00 - 429+00			\$4,027.63
Grade Road: Sta.s 0+00 - 475+85: 475+85 Stations @ \$9.75/sta.			\$4,639.54
Roll Subgrade: Sta.s 429+00 - 475+85: 46+85 Stations @ \$11/sta.			\$515.35
Grass Seed & Fertilize Ditches, Catch Basins, Areas of Disturbed Soil, Waste Areas			\$1,082.40
Mulch Ditches, Waste Areas, Disturbed Soil: Sta.s 0+00 to 363+50			\$1,200.00
			TOTAL SPECIAL PROJECTS
			\$12,295.31
			GRAND TOTAL
			\$247,436.94

SUMMARY OF CONSTRUCTION COST

Sale: MILLER TIMBER SALE Road: Points C - D Road 2

Construction - 19+40 stations
0.37 miles

Improvement - 58+85 stations
1.11 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00	
Scattering	5.60 acres @	\$815.00 per acre =	\$4,564.00	
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00	
TOTAL CLEARING AND GRUBBING				\$4,564.00

EXCAVATION -

	hr.s @	\$0.00 per hr. =	\$0.00	
	47.40 sta. @	\$65.00 per sta. =	\$3,081.00	
End Haul Fill	472 cys. @	\$2.80 per c.y. =	\$1,321.60	
Drift Fill	1286 cys. @	\$2.40 per c.y. =	\$3,086.40	
Cut & Fill	288 cys. @	\$1.50 per c.y. =	\$432.00	
Sidecast	387 cys. @	\$1.15 per c.y. =	\$445.05	
End Haul Fill	994 cys. @	\$3.14 per c.y. =	\$3,121.16	
TOTAL EXCAVATION				\$11,487.21

CULVERT MATERIALS -

Culverts					
44	LF of 18"	\$649.00	42	LF of 24"	\$745.50
0	LF of 30"	\$0.00	0	LF of 36"	\$0.00
		\$649.00			\$745.50
Half Rounds					
20	LF of 21"	\$228.00	0	LF of 30"	\$0.00
		\$228.00			\$0.00
Culvert Stakes					
4	1/2 round stakes @	\$8.00 per stake =	\$32.00		
2	marker stakes @	\$8.00 per stake =	\$16.00		
TOTAL CULVERT MATERIALS				\$1,670.50	

SURFACING- 4"-0" Crushed Rock

8" Depth	3,443 cy. of	4"-0"Crshd @	\$13.26 per c.y. =	\$45,654.18
CrvWiden	175 cy. of	4"-0"Crshd @	\$13.26 per c.y. =	\$2,320.50
10Trnouts	150 cy. of	4"-0"Crshd @	\$13.26 per c.y. =	\$1,989.00
SmTurnrnd	15 cy. of	4"-0"Crshd @	\$13.26 per c.y. =	\$198.90
TOTAL SURFACING				\$50,162.58

SPECIAL PROJECTS

Grade Road: (78+25 Stations @ \$9.75/sta.)	\$762.94
Roll Subgrade: \$11/sta.	\$860.75
Grass Seed, Fertilize And Mulch Areas of Disturbed Soil: 2.8 Acres @ \$820/ac..	\$2,296.00
Remove Old Culvert From State Land	\$145.95
TOTAL SPECIAL PROJECTS	\$4,065.64

GRAND TOTAL \$71,949.93

SUMMARY OF CONSTRUCTION COST

Sale: Miller Timber Sale Road: E to F

Construction - 29+45 stations
0.56 miles

Improvement - 0.00 stations
0.00 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00	
Scattering	3.00 acres @	\$815.00 per acre =	\$2,445.00	
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00	
TOTAL CLEARING AND GRUBBING				\$2,445.00

EXCAVATION -

	0 hr.s @	\$0.00 per hr. =	\$0.00	
	14.80 sta. @	\$65.00 per sta. =	\$962.00	
Fill	3575 cys. @	\$2.91 per c.y. =	\$10,403.25	
To Waste Area	3746 cys. @	\$2.99 per c.y. =	\$11,200.54	
TOTAL EXCAVATION				\$22,565.79

CULVERT MATERIALS -

Culverts				
36	LF of 18"	\$531.00	0	LF of 24" \$0.00
0	LF of 54"	\$0.00	0	LF of 60" \$0.00
		<u>\$531.00</u>	<u>\$0.00</u>	
Half Rounds				
20	LF of 21"	\$228.00	0	LF of 30" \$0.00
0	LF of 60"	\$0.00	0	LF of 66" \$0.00
		<u>\$228.00</u>	<u>\$0.00</u>	
Culvert Stakes				
4	1/2 round stakes @	\$8.00 per stake =	\$32.00	
1	marker stakes @	\$8.00 per stake =	\$8.00	
TOTAL CULVERT MATERIALS				\$799.00

SURFACING- 4"-0" Crushed Rock

8" Depth	1,296 cy. of	4"-0"Crshd @	\$14.11 per c.y.=	\$18,286.56
CrvWiden	130 cy. of	4"-0"Crshd @	\$14.11 per c.y.=	\$1,834.30
4Trnouts	60 cy. of	4"-0"Crshd @	\$14.11 per c.y.=	\$846.60
SmTurnmd	15 cy. of	4"-0"Crshd @	\$14.11 per c.y.=	\$211.65
TOTAL SURFACING				\$21,179.11

MISCELLANEOUS-

Fill	200 cy. of	Pit Run @	\$9.64 per c.y.=	\$1,928.00
	cy. of	@	\$0.00 per c.y.=	\$0.00
TOTAL MISCELLANEOUS				\$1,928.00

SPECIAL PROJECTS

Place 500 Sq. Yd.s Woven Subgrade Fabric: Sta.s 0+00 to 3+60	\$500.00	
Grade Road: \$9.75/sta. X 29.45 Stations	\$287.14	
Roll Subgrade: \$11/sta. X 29.45 Stations	\$323.95	
Grass Seed & Fertilize Areas of Disturbed Soil & Waste Areas: 2 Acres @ 220	\$440.00	
TOTAL SPECIAL PROJECTS		\$1,551.09

GRAND TOTAL **\$50,467.99**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

SALE: MILLER

Pit:	<u>Tucca</u>	Location:	<u>SW1/4 SW1/4 SEC3 T3S R7W</u>
Rock:	<u>4"-0" Crushed</u>	Road:	<u>7690 c.y.</u>
Swell:	<u>1.40</u>	Stockpile Size:	<u> c.y.</u>
Shrinkage	<u>1.16</u>	Total Truck Loads:	<u>7690 c.y.</u>
Drill Pct.:	<u>25%</u>	In Place Total:	<u>5493 c.y.</u>

Pit Development:				\$2,000.00
Drill & Shoot:	<u>\$2.10</u> /cu.yd.	x	<u>1373</u> cu.yds.	= \$2,883.30
Strip Rock:	<u>\$1.50</u> /cu.yd.	x	<u>4,120</u> cu.yds.	= \$6,180.00
Push Rock:	<u>\$0.60</u> /cu.yd.	x	<u>7690</u> cu.yds.	= \$4,614.00
Load Crusher:	<u>\$0.60</u> /cu.yd.	x	<u>7690</u> cu.yds.	= \$4,614.00
Crushing:	<u>\$2.25</u> /cu.yd.	x	<u>7690</u> cu.yds.	= \$17,302.50
Load Dump Truck:	<u>\$0.60</u> /cu.yd.	x	<u>7690</u> cu.yds.	= \$4,614.00
Oversize Reduction:	<u>\$4.00</u> /cu.yd.	x	<u>0</u> cu.yds.	= \$0.00
			Sub Total	\$42,207.80

Move-In:		
Drill & Compressor		\$43.20
Loader		\$53.00
Excavator		\$212.00
6 Dump Trucks		\$87.77
Crusher Move-In		\$926.26
Crusher Set-Up		<u>\$1,598.00</u>
TOTAL		\$2,920.23

Base Cost= \$5.87 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 - B	\$4.95	\$1.30	\$5.87	\$12.12	2276	\$27,585.12
C - D	\$6.09	\$1.30	\$5.87	\$13.26	3783	\$50,162.58
E - F	\$6.94	\$1.30	\$5.87	\$14.11	1501	\$21,179.11
G - H	\$6.15	\$1.30	\$5.87	\$13.32	173	\$2,304.36
			Total C.Y.		7733	Sub Total \$101,231.17

TOTAL ROCKING COSTS = \$101,231.17

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

SALE: MILLER

Pit:	<u>BOUNDARY PIT</u>	Location:	<u>SE1/4 NE1/4 Sec1 T2S R7W</u>
Rock:	<u>2"-0" Crushed</u>	Road:	<u>12784 c.y.</u>
Swell:	<u>1.40</u>	Stockpile Size:	<u>c.y.</u>
Shrinkage:	<u>1.16</u>	Total Truck Loads:	<u>12784 c.y.</u>
Drill Pct.:	<u>100%</u>	In Place Total:	<u>9131 c.y.</u>

Pit Development:					\$2,500.00
Drill & Shoot:	<u>\$2.10</u>	/cu.yd.	x	<u>9131</u>	cu.yds. = \$19,175.10
Strip Rock:	<u>\$1.50</u>	/cu.yd.	x	<u>0</u>	cu.yds. = \$0.00
Push Rock:	<u>\$0.60</u>	/cu.yd.	x	<u>12784</u>	cu.yds. = \$7,670.40
Load Crusher:	<u>\$0.60</u>	/cu.yd.	x	<u>12784</u>	cu.yds. = \$7,670.40
Crushing:	<u>\$2.25</u>	/cu.yd.	x	<u>12784</u>	cu.yds. = \$28,764.00
Load Dump Truck:	<u>\$0.60</u>	/cu.yd.	x	<u>12784</u>	cu.yds. = \$7,670.40
Oversize Reduction:	<u>\$4.00</u>	/cu.yd.	x	<u>0</u>	cu.yds. = \$0.00
				Sub Total	\$73,450.30

Move-In:		
Drill & Compressor		\$159.06
Loader		\$90.00
Excavator		\$841.78
6 Dump Trucks		\$570.24
Crusher Move-In		\$1,054.02
Crusher Set-Up		\$1,598.00
TOTAL		<u>\$4,313.10</u>

Base Cost= \$6.08 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 - B	\$7.28	\$1.30	\$6.08	\$14.66	12784	\$187,413.44
	\$0.00	\$0.00	\$0.00	\$0.00	0	\$0.00
	\$0.00	\$0.00	\$0.00	\$0.00	0	\$0.00
				Total C.Y.	12784	Sub Total \$187,413.44

TOTAL ROCKING COSTS = \$187,413.44

**SPECIAL PROJECT
STEAMPOT STREAM ENHANCEMENT**

Cost Estimate for Steampot Creek Stream Enhancement Project			(Instream Work)
	Hours	Cost/Hour	Cost
Move In Costs			
Excavator to job site	1	\$120.00	\$120.00
Dump truck to job site	1	\$60.00	\$60.00
Log truck to job site	1	\$60.00	\$60.00
Total Move In Costs			\$240.00
Equipment Time Including Operator			
Excavator obtain trees	12	\$120.00	\$1,440.00
Excavator load boulders	3	\$120.00	\$360.00
Dump truck move boulders	3	\$60.00	\$180.00
Excavator place trees and boulder	10	\$120.00	\$1,200.00
Log truck haul trees	4	\$60.00	\$240.00
			\$0.00
			\$0.00
Total Equipment Cost			\$3,420.00
Material Cost			
Seed, mulch.			\$100.00
Total Cost			\$3,760.00

OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT



"STEWARDSHIP IN FORESTRY"

Miller

1. **Type of Sale:**

Clearcut Harvest, Recovery.

2. **Legal Description:**

Section 28, 32, and 33, T2S, 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	Harvest Type	Sale	Total	Net
1	Clearcut	90	84	82
2	Regen	97	87	78
3	Clearcut	122	126	101
4	Clearcut	86	89	76
5	Regen	45	43	43
Total		440	429	380

Sale acres:

Area within the Timber Sale Boundary signs.

Total acres:

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. For accomplishment reporting - clearcut (regeneration) harvest.

Net acres:

Less green tree retention, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary. For calculating the advertised volume.

4. **Cruise Measures:**

A: Cruise Method

98 variable-radius plots were measured with proportional numbers of count and grade plots in each sale area. Cruise lines were run at various directions appropriate for each sale area and spaced at 200-foot intervals. On all plots, tree count by diameter and species was recorded, and alder was measured for height and was graded. On 47 plots, Douglas-fir 9-inches DBH and greater was measured for height and form, and graded. Every other plot was a grade plot. Diameters were measured to the nearest inch; heights were measured to the nearest foot. The cruise had a coefficient of variation of 32.2 and a SE of 7.8% for net board feet/acre.

B: Plot size

A 20 BAF was used for Douglas-fir. A 10 BAF was used for other species and snags.

C: Grading System:

Douglas-fir was measured and graded to a 5" top favoring 40 foot log lengths using Columbia River rules. Alder was measured to an 8" top and graded camprun.

5. **Computation Procedure:**

Plot data was entered into SuperAce for computation of basal area, V-BAR, stand tables and diameters. This data was then entered into the Volume Summary Worksheet to compute sale volumes.

6. **Defect and Breakage:**

A 5% reduction for defect and breakage was applied to the volume.

7. **Timber Description:**

The sale area burned in the 1933, 1939, and 1951 Tillamook fires. The area was seeded during 1960-1961 and the SE third was re-seeded in 1967 and 1969. Pre-commercial thinning and pruning was done to a portion of the sale area in 1989.

8. **Cruiser Names/Dates:**

Wells, Everingham, and Pine, Oct. 2003

9. **Revenue Distribution:**

100% FDF

Tax Code: 8-1

Deed Number: 169

100% Rehabilitation Obligated

10. **Attachments:**

Volume Summary

Logging Plan



"STEWARDSHIP IN FORESTRY"

Miller

Volume Summary

Area 1							
CC		82 acres					
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	15	159	98	15.6	1279	5%	1215
TOTAL					1279		1215

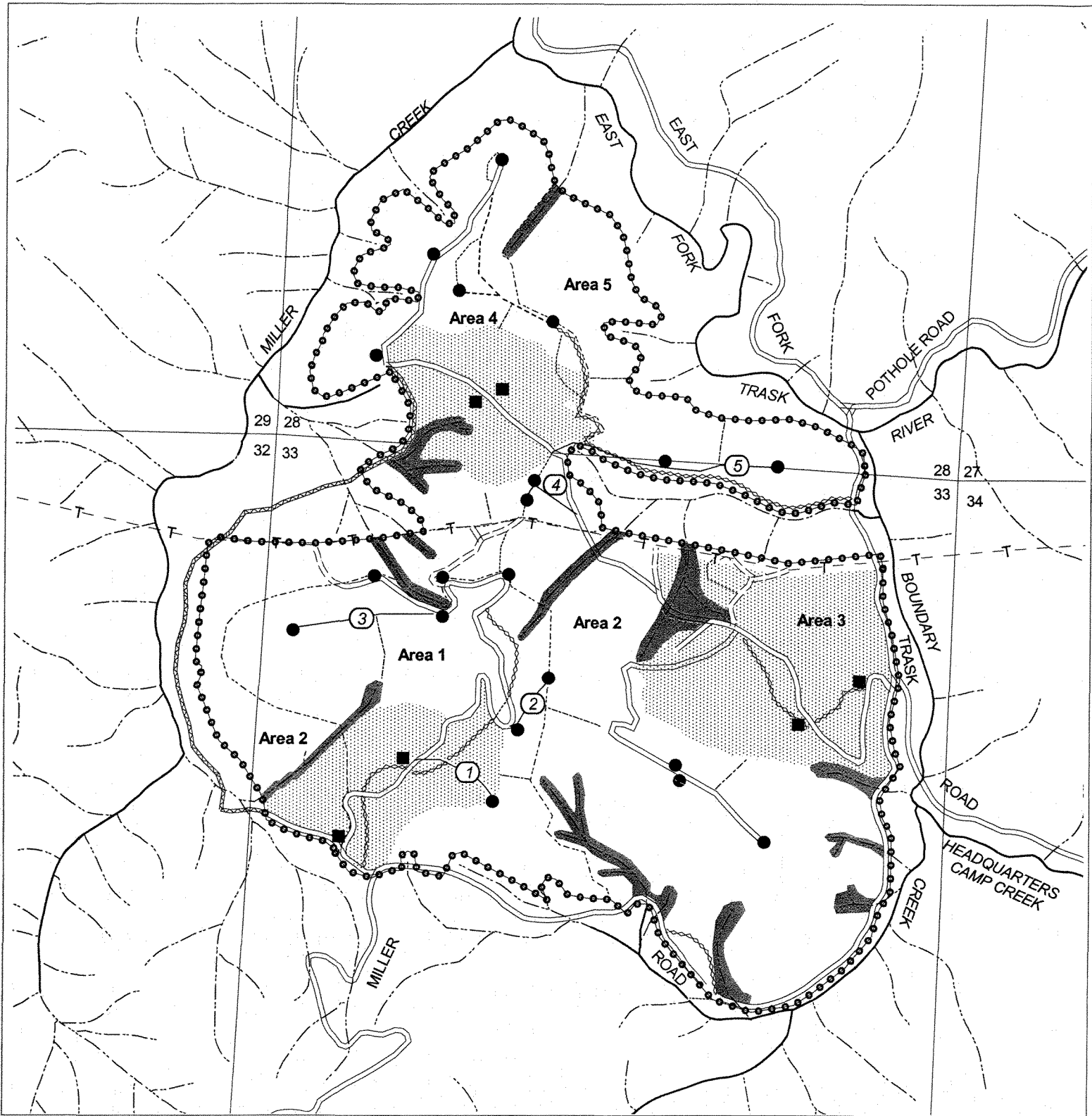
Area 2							
T1		78 acres					
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	13	123	97	11.9	928	5%	882
TOTAL					928		882

Area 3							
CC		101 acres					
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	14	156	98	15.3	1545	5%	1468
TOTAL					1545		1468

Area 4							
CC		76 acres					
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	13	156	99	15.4	1170	5%	1112
TOTAL					1170		1112

Area 5							
T1		43 acres					
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	12	81	110	8.9	383	5%	364
TOTAL					383		364

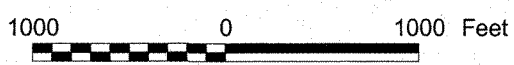
TOTAL SALE VOLUME				
SPECIES	QMD	MBF		Net Vol. (MBF)
Douglas-fir	13	5305	5%	5041
TOTAL				5041



- Tractor landing
- Cable landing
- ▲ Domestic water supply
- ⊗ Blocked
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- Buffer
- ▨ Non-required thinning
- ⊂ Green tree retention area
- Setting boundary
- - - Area boundary
- Sale boundary
- Ownership boundary
- Type-F stream
- - - Type-N stream
- Surfaced road
- - - Unsurfaced road
- State highway
- County road
- ② Non-project road
- - - Swing road
- - - Abandoned road
- ⊂ OHV trail
- - - Non-motorized trail
- - - Transmission line

LOGGING PLAN
 Timber Sale Contract No. 341-04-72
 Miller
 Portions of Sections 28, 32 and 33,
 T2S, R7W, W. M.
 Tillamook County, Oregon

Area	Type of Operation	Acres	
		Sale	Net
1	Clearcut	90	82
2	Regen	97	78
3	Clearcut	122	101
4	Clearcut	86	76
5	Regen	45	43
Total		440	380





Oregon Department of Forestry

WRITTEN PLAN

"STEWARDSHIP IN FORESTRY"

SALE NAME: Miller

PROTECTED WATERS: East Fork of the Trask River and Boundary Creek

LOCATION: Portions of Sections 28, 32, and 33, T2S, R7W, W.M., Tillamook County, Oregon.

Riparian Management Area:

The SE boundary for this sale is immediately adjacent to the 100-foot inner RMA for two Type F streams.

Protection Measures:

Yarding Systems, Layout, and Stream Protection

When cables hang through or over the RMA, all necessary precautions shall be taken to protect all RMA components. Necessary measures include, but are not limited to:

- Pulling cables out of the Riparian Management Area prior to rigging the next yarding road
- Yarding roads will be spaced an average of 150 feet apart where they extend over or through the riparian management area.

Adjacent trees and snags shall be felled away from or parallel to the RMA to prevent them from entering the RMA.

Trees that fall or slide into the Type F streams shall not be removed without prior approval from STATE.

Date: Oct. 31, 2003
By: Elissa Wells

OREGON DEPARTMENT OF FORESTRY
WRITTEN PLAN
MILLER TIMBER SALE

Protected Waters: Steampot Creek, Miller Creek and East Fork Trask River, Type F streams of the Trask River Basin.

Location: Sec.'s 7, 17, 18, 20, 21, 28, 29, 32, 33, T2S, R7W, W.M.

Activities: Placing trees in the RMA of Steampot Creek for in-stream habitat improvement. Road vacating on an unnamed road, portions of which are within 100 feet of Miller Creek, a Type F stream. Culvert replacement, road widening, grading and rocking the East Fork Trask Road, portions of which are within 100 feet of the East Fork Trask River, a Type F stream.

Protection Measures: Work will not be allowed from October 16 through April 30. No activity within 100 feet of the protected waters or in-stream activity will be conducted before July 1 or after September 15 without prior approval from the Oregon Department of Fish and Wildlife.

Road closure activities will include excavating material from stream crossings to restore natural stream channel widths, with the stream banks shaped at a 1½ to 1 width-to-height ratio, and water barring the roads.

Habitat improvement work on Steampot Creek will be done only during dry weather periods and low water stream flows. Machine activity in the stream will be kept to a minimum. Disturbance of existing vegetation will be kept to a minimum. All practical erosion control measures will be taken to minimize sedimentation to waters of the State. Access trails will be blocked, water barred, seeded with grass and mulched upon completion. Alders that are cleared to gain access will be placed in the stream or used to block access trails.

All other areas of disturbed soil resulting from project work, including fill slopes, sidecast retrieval slopes, cut banks and waste areas will be grass seeded, fertilized and mulched upon completion of work.

Prepared By: Carl J. Walter, Road Specialist
Date: October 29, 2003