



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Miami High Sale 341-04-55

District: Tillamook

Date: 10/7/03

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$266,378.78	\$23,014.80	\$289,393.58
		Project Work	(\$95,348.00)
		Advertised Value	\$194,045.58



**Timber Sale Appraisal
Timber Description
Miami High
Sale 341-04-55**

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Portions of Sections 11, 12, & 13, T2N, R9W, and Section 18, T2N, R8W, W.M., Tillamook County, Oregon

Date: 10/7/03

Stand Stocking: 20%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	14	0	95
Western Hemlock / Fir	11	0	95
Noble Fir	14	0	95
Alder (Red)	11	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Noble Fir	Alder (Red)	Total
2S	353	81	0	0	434
3S	781	683	43	0	1,507
4S	143	97	0	0	240
Camprun	0	0	0	90	90
Total	1,277	861	43	90	2,271

Comments: Pond Values Used: 3rd Quarter 2003 + Local Pond Values

Additional Costs (Profit and Risk to be added)

Brand and Paint - $\$2/\text{MBF} \times 2271 \text{ MBF} = \4542

Swing road (200') - $\$25/\text{MBF} \times 140 \text{ MBF} = \3500

Total Other Costs + (P/R) = \$8042

Additional Costs (Profit and Risk Included)

Non-Project Roads - (Seeding included)

Road 1 - 6 Stations x \$120 = \$ 720

Road 2 - 7 Stations x \$ 90 = \$ 630

Approach Rock - (first station of each road, pit-run, 9" minimum depth)

2 Stations x 50 cu. yds. x \$4.50/yd = \$ 450

Total Other Costs = \$1800

Road Maintenance

Grading - once per 2 MMBF

$\$500/\text{Mile} \times 1 \text{ Grading} \times 8 \text{ miles} / 2271 = \1.76

Maintenance Rock - approximately 25 cu. yds./MMBF/Mile

$50 \text{ cu. yds.} \times 8 \text{ miles} \times \$6.75/\text{yard} / 2271 = \1.19

Total Maintenance Cost = \$2.95



Timber Sale Appraisal

Logging Costs

Miami High

Sale 341-04-55

"STEWARDSHIP IN FORESTRY"

Date: 10/7/03

Operating Seasons: 1.6

Profit & Risk: 15%

Project Costs: \$95,348

Other Costs (P/R): \$8,042

Slash Disposal: \$0

Other Costs: \$1,800

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

Road Maintenance: \$2.95

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	3.5
Western Hemlock / Fir	\$0.00	3.0	3.2
Noble Fir	\$0.00	3.0	3.5
Alder (Red)	\$0.00	3.0	2.5

Local Pond Values

Date	Species	Grade	Value
10/7/03	Alder (Red)	Camprun	\$520.00



Timber Sale Appraisal Logging Costs Breakdown Miami High Sale 341-04-55

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Western Hemlock / Fir	Noble Fir	Alder (Red)
Logging	171.09	171.44	171.99	171.17
Road Maintenance	3.11	3.11	3.11	3.11
Fire Protection	1.99	1.99	1.99	0.00
Hauling	69.16	46.11	46.11	53.79
Other (P/R appl.)	3.69	3.69	3.69	0.00
Profit & Risk	37.36	33.95	34.03	34.21
Slash Disposal	0.00	0.00	0.00	0.00
Scaling	2.00	2.00	2.00	2.00
Other	0.83	0.83	0.83	0.00
Total	289.23	263.12	263.75	264.28

Amortization	0.00	0.00	0.00	0.00
Pond Value	465.99	308.03	310.00	520.00
Stumpage	176.76	44.91	46.25	255.72
Amortized	0.00	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Miami High Sale 341-04-55

Amortized

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

Unamortized

	Douglas - Fir	Western Hemlock / Fir	Noble Fir	Alder (Red)
MBF	1,277.00	861.00	43.00	90.00
Value	176.76	44.91	46.25	255.72
Total	225,722.52	38,667.51	1,988.75	23,014.80

Gross Timber Sale Value

Recovery \$289,393.58

Prepared by: Tim Lieske

Date: 10/7/03

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: Miami High

CONSTRUCTION

Point	A to B	26+40	stations =	\$47,834.31
SUBTOTAL CONSTRUCTION				\$47,834.31

IMPROVEMENT

Point	A to B	7+80	stations =	\$4,401.40
Point	C to D	55+00	stations =	\$41,181.34
SUBTOTAL IMPROVEMENT				\$45,582.74

STOCKPILE

				\$0.00
SUBTOTAL STOCKPILE				\$0.00

MOVE IN **\$1,931.21**

GRAND TOTAL **\$95,348**

SUMMARY OF CONSTRUCTION COST

Sale: Miami High

Road: A to B

Construction - 26+40 stations
0.50 miles

Improvement - 7+80 stations
0.15 miles

CLEARING AND GRUBBING -

Scattering - road	1.76 acres @	\$815.00 per acre =	\$1,434.40
End-hauling - road to waste area on spur road off FB#3 shown on Exhibit A	1.86 acres @	\$1,200.00 per acre =	\$2,232.00
Piling - waste areas	0.40 acres @	\$905.00 per acre =	<u>\$362.00</u>
		TOTAL CLEARING AND GRUBBING	\$4,028.40

EXCAVATION -

Common	+00	to	2+60	2.60 sta. @	\$100.00 per sta. =	\$260.00
Common	2+60	to	5+00	2.40 sta. @	\$160.00 per sta. =	\$384.00
Common	5+00	to	6+30	105 cys. @	\$1.15 per cy. =	\$120.75
Rock	5+00	to	6+30	290 cys. @	\$3.20 per cy. =	\$928.00
Common & rippable rock	6+30	to	7+10	0.80 sta. @	\$210.00 per sta. =	\$168.00
Rock	7+10	to	8+00	390 cys. @	\$4.05 per cy. =	\$1,579.50
Common & rippable rock	8+00	to	9+75	1.75 sta. @	\$210.00 per sta. =	\$367.50
Rock	9+75	to	10+45	614 cys. @	\$4.05 per cy. =	\$2,486.70
Common, rippable rock & drift for fill	10+45	to	11+35	0.90 sta. @	\$240.00 per sta. =	\$216.00
Common	11+35	to	18+35	2589 cys. @	\$1.40 per cy. =	\$3,624.60
Rock	11+35	to	18+35	759 cys. @	\$6.20 per cy. =	\$4,705.80
Common	18+35	to	25+20	1403 cys. @	\$1.40 per cy. =	\$1,964.20
Rock	18+35	to	25+20	553 cys. @	\$4.05 per cy. =	\$2,239.65
Common	25+20	to	26+40	103 cys. @	\$1.15 per cy. =	\$118.45
Rock	25+20	to	26+40	41 cys. @	\$3.20 per cy. =	\$131.20
Improvement	26+40	to	34+20	7.80 sta. @	\$100.00 per sta. =	<u>\$780.00</u>
					TOTAL EXCAVATION	\$20,074.35

ENDHAUL & COMPACTION-

Endhaul - truck to waste area off FB#3 from	11+35	to	18+35	3348 cys. @	\$0.80 per cy.=	\$2,678.40
Endhaul - truck to waste area off FB#3 from	18+35	to	25+20	978 cys. @	\$1.02 per cy.=	\$997.56
Endhaul - truck to waste area off FB#3 from	25+20	to	26+40	144 cys. @	\$1.09 per cy.=	\$156.96
Compact fill material	17+35	to	18+35	84 cys. @	\$0.35 per cy.=	\$29.40
Compact fill material	18+35	to	25+20	978 cys. @	\$0.35 per cy.=	\$342.30
Compact waste area FB#3				4,470 cys. @	\$0.40 per cy.=	<u>\$1,788.00</u>
					TOTAL ENDHAUL	\$5,992.62

CULVERTS - MATERIALS & INSTALLATION

Culverts	116	LF of 18"	\$1,711.00	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>
			\$1,711.00			\$0.00
Half Rounds	80	LF of 21"	\$912.00	0	LF of 30"	\$0.00
	0	LF of 36"	<u>\$0.00</u>	0	LF of 42"	<u>\$0.00</u>
			\$912.00			\$0.00
Culvert Stakes & Markers	16	stakes	\$128.00			
	4	markers	<u>\$32.00</u>			
			\$160.00			
					TOTAL CULVERTS	\$2,783.00

SURFACING-	0+00 to 34+20	Road	2,634	cy. of	Pit-run	@	\$5.97 per c.y.=	<u>\$15,724.80</u>
							TOTAL SURFACING	\$15,724.80

SPECIAL PROJECTS-

Grade and shape road with a ditch	25.20	stations @	\$14.20	per station	\$357.84
Grade and shape road with outslope	9.00	stations @	\$13.70	per station	\$123.30
Roll subgrade w/ vibratory roller prior to rocking	34.20	stations @	\$11.00	per station	\$376.20
Remove large stumps	4.00	hours @	\$140.00	per hour	\$560.00
Turnouts, turnarounds, lead off ditches and ditchouts	2.00	hours @	\$140.00	per hour	\$280.00
Grass seed and fertilize - road & waste areas	2.36	acres @	\$220.00	per acre	\$519.20
Mulch - road & waste areas	2.36	acres @	\$600.00	per acre	<u>\$1,416.00</u>
				TOTAL SPECIAL PROJECTS	\$3,632.54

GRAND TOTAL **\$52,235.71**

SUMMARY OF CONSTRUCTION COST

Sale: Miami High

Road: C to D

Construction - 0+00 stations
0.00 miles

Improvement - 55+00 stations
1.04 miles

CLEARING AND GRUBBING -

Scattering - road	3.00	acres @	\$815.00	per acre =	\$2,445.00
Piling - waste area	0.40	acres @	\$905.00	per acre =	\$362.00
TOTAL CLEARING AND GRUBBING					\$2,807.00

EXCAVATION -

Improvement			28.9	sta. @	\$30.00	per sta. =	\$867.00
Widening - rock - culvert lays and ditchlines	1+25	to	55+00	338	cys. @	\$3.20	per cy. = \$1,081.60
Widening - slough - use for ditches & fill slopes	1+25	to	20+65	356	cys. @	\$1.15	per cy. = \$409.40
Widening - common	20+75	to	23+50	269	cys. @	\$1.15	per cy. = \$309.35
Widening - reduce elevation 2 feet for curve radius	21+05	to	22+70	182	cys. @	\$1.15	per cy. = \$209.30
Widening - rock	23+50	to	26+00	482	cys. @	\$4.05	per cy. = \$1,952.10
Widening - common	23+50	to	26+00	408	cys. @	\$1.15	per cy. = \$469.20
Berm	14+60	to	19+70	42	cys. @	\$1.15	per cy. = \$48.30
Berm	19+70	to	20+75	43	cys. @	\$1.15	per cy. = \$49.45
Berm	20+75	to	22+55	22	cys. @	\$1.15	per cy. = \$25.30
Berm	31+05	to	36+70	70	cys. @	\$1.15	per cy. = \$80.50
Pullback	1+85	to	7+50	691	cys. @	\$1.40	per cy. = \$967.40
Pullback	8+50	to	13+90	660	cys. @	\$1.40	per cy. = \$924.00
Pullback	22+55	to	24+65	214	cys. @	\$1.40	per cy. = \$299.60
Pullback	26+00	to	28+75	225	cys. @	\$1.40	per cy. = \$315.00
Pullback	43+55	to	45+70	219	cys. @	\$1.40	per cy. = \$306.60
Pullback	47+05	to	49+50	250	cys. @	\$1.40	per cy. = \$350.00
TOTAL EXCAVATION							\$8,664.10

ENDHAUL & COMPACTION-

Endhaul - truck to waste area off FB#3 from	1+25	to	55+00	4,471	cys. @	\$2.23	per cy. = \$9,970.33
Compact waste area FB#3				4,471	cys. @	\$0.30	per cy. = \$1,341.30
TOTAL ENDHAUL							\$11,311.63

CULVERTS - MATERIALS & INSTALLATION

Culverts							
	294	LF of 18"	\$4,336.50		72	LF of 24"	\$1,278.00
	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>\$4,336.50</u>				<u>\$1,278.00</u>
Half Rounds							
	120	LF of 21"	\$1,368.00		0	LF of 30"	\$0.00
	0	LF of 36"	\$0.00		0	LF of 42"	\$0.00
			<u>\$1,368.00</u>				<u>\$0.00</u>
Culvert Stakes & Markers							
	24	stakes	\$192.00				
	12	markers	\$96.00				
			<u>\$288.00</u>				
TOTAL CULVERTS							\$7,270.50

SURFACING-

0+00 to 55+00 Road	1,409	cy. of	2 1/2" - 0"	@	\$3.85	per c.y. =	\$5,421.37
11+45 Energy dissipater @ outlet	20	cy. of	Riprap	@	\$5.50	per c.y. =	\$110.08
28+75 Energy dissipater @ outlet	30	cy. of	Riprap	@	\$5.50	per c.y. =	\$165.12
37+70 Energy dissipater @ outlet	10	cy. of	Riprap	@	\$4.89	per c.y. =	\$48.94
40+00 Energy dissipater @ outlet	20	cy. of	Riprap	@	\$4.89	per c.y. =	\$97.88
42+45 Energy dissipater @ outlet	20	cy. of	Riprap	@	\$4.89	per c.y. =	\$97.88
44+60 Energy dissipater @ outlet	30	cy. of	Pit-run	@	\$4.89	per c.y. =	\$146.82
TOTAL SURFACING							\$6,088.07

SPECIAL PROJECTS-

Grade and shape road with a ditch	47.00	stations @	\$14.20	per station	\$667.40
Grade and shape road with outslope	8.00	stations @	\$9.75	per station	\$78.00
Roll subgrade w/ vibratory roller prior to rocking	55.00	stations @	\$11.00	per station	\$605.00
Remove 5 old culverts form State Land					\$306.44
Remove large stumps and cut stumps below subgrade	3.50	hours @	\$140.00	per hour	\$490.00
Turnouts, lead off ditches and ditchouts	4.50	hours @	\$140.00	per hour	\$630.00
Grass seed and fertilize - road & waste area	2.76	acres @	\$220.00	per acre	\$607.20
Mulch - road & waste area	2.76	acres @	\$600.00	per acre	\$1,656.00
TOTAL SPECIAL PROJECTS					\$5,040.04

GRAND TOTAL **\$41,181.34**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Sale: Miami High

Pit: Upper Miami
 Rock: Riprap
 Swell: 0.00
 Shrinkage: 0.00
 Drill Pct.: 0%

Location: W1/2 SE1/4 SEC11, T2N, R9W, W. M.
 Road: 130 c.y.
 Stockpile: c.y.
 Total Truck Loads: 130 c.y.
 In Place Total: 130 c.y.

Load Rock: \$1.40 /cu.yd. x 130 cu.yds. = \$182.00
 Subtotal \$182.00

Move in excavator from Miami High Pit \$134.40
 Subtotal \$134.40

TOTAL PRODUCTION COSTS \$316.40

Base Cost- \$2.43 Per Cu.Yd.

Road	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
C to D	\$1.67	\$1.40	\$2.43	\$5.50	50	<u>\$275.19</u>
Sta. 11+45 to 28+75						
C to D	\$1.06	\$1.40	\$2.43	\$4.89	80	<u>\$391.51</u>
Sta. 37+70 to 44+60						
Total C.Y.					130	Sub Total <u>\$666.70</u>

TOTAL ROCKING COSTS \$666.70

ROCK SUMMARY FOR HAUL AND PLACEMENT FROM STOCKP

Sale: Miami High

Pit: <u>Miami Stockpile</u>	Location: <u>SW1/4 NE1/4 SEC14 T2N R9W W. M.</u>
Rock: <u>2 1/2"-0"</u>	Road: <u>1,409 c.y.</u>
Swell: <u>0.00</u>	Stockpile: <u>000 c.y.</u>
Shrinkage: <u>0.00</u>	Total Truck Loads: <u>1,409 c.y.</u>
Drill Pct.: <u>0%</u>	In Place Total: <u>1,409 c.y.</u>

Load Rock: \$0.60 /cu.yd. x 1,409 cu.yds. = \$845.22
 Subtotal \$845.22

Move in water truck \$65.44
 Move in roller from Miami High Pit \$21.15
 Move in loader from Miami High Pit \$38.07
 Subtotal \$124.66

TOTAL PRODUCTION COSTS \$969.88

Base Cost- \$0.69 Per Cu.Yd.

Road	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
C to D	\$1.86	\$1.30	\$0.69	\$3.85	1,409	<u>\$5,421.37</u>
Sta. 0+00 to 55+00						
				Total C.Y.	1,408.70	Sub Total <u>\$5,421.37</u>

TOTAL ROCKING COSTS \$5,421.37

PIT RUN ROCK DEVELOPMENT COST SUMMARY

Sale: Miami High		at Station Station 11+35 on A to B	
Pit:	<u>Miami High</u>	Location:	<u>NE 1/4, SE 1/4, Sec 13, T2N, R9W, W.M.</u>
Rock:	<u>Pit-run</u>	Road:	<u>2634 c.y.</u>
Swell:	<u>1.40</u>	Stockpile Base:	<u>c.y.</u>
Shrinkage:	<u>1.16</u>	Total Truck Loads:	<u>2634 c.y.</u>
Drill Pct.:	<u>100%</u>	In Place Total:	<u>1881 c.y.</u>

Clear, scalp, load & compact overburden; construct access road:
 D-8 Cat and excavator - 8 Hrs. @ \$270.00/Hr \$2,160.00
 End-haul overburden to waste area:
 Dump Truck-12 Hrs. @ \$60.00/Hr \$720.00
 Grass seed, fertilize and mulch waste area and access road :
 0.15 acres @ \$780.00/acre \$117.00
 Drill and Shoot \$2.10 /cu.yd. x 1881 cu.yds. = \$3,950.96
 Push Rock \$0.60 /cu.yd. x 2634 cu.yds. = \$1,580.38
 Load Dump Truck: \$0.60 /cu.yd. x 2634 cu.yds. = \$1,580.38
Subtotal \$10,108.72

Move in Drill 216.51
 Move in Loader 295.13
 Move in D8 320.14
 Move in Excavator 342.63
 Move-in Trucks 261.44
Subtotal \$1,435.85

TOTAL PRODUCTION COSTS	\$11,544.57
-------------------------------	--------------------

Base Cost= \$4.38 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	\$0.69	\$0.90	\$4.38	\$5.97	2634	<u>\$15,724.80</u>
Total C.Y.					2634	Sub Total <u>\$15,724.80</u>

TOTAL ROCKING COSTS	\$15,724.80
----------------------------	--------------------

MOVE-IN CALCULATIONS

Sale: Miami High

LOWBOY HAUL (One Way)		
DISTANCE	ROADWAY	AVE SPEED (MPH)
14.8	Highway	40
9.5	Main Lines (Off Road)	15
2.0	Pulling 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
1	Drill & Compressor	\$207.31		\$46.00	0	3.2	3.2	\$147.20	\$354.51
0	Rock Breaker	\$0.00		\$4.00	0	0	0	\$0.00	\$0.00
1	Graders	\$99.89		\$3.65	0	1.6	1.6	\$5.84	\$105.73
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	\$207.31		\$5.00	0	1.6	1.6	\$8.00	\$215.31
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)	\$333.67	1	\$44.80	0	1.6	1.6	\$71.68	\$405.35
0	Rubber Tired Backhoes/Skidders	\$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)	\$300.99	2	\$11.30	0	0	0	\$0.00	\$300.99
1	Tractor (D8)	\$317.12	2	\$15.10	0	1.6	1.6	\$24.16	\$341.28
3	Dump Truck (10 cy +)	\$194.37		\$2.85	0	1.6	1.6	\$13.68	\$208.05
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: \$1,931.21



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

Miami High

1. Type of Sale

Partial cut and Clear cut -- Recovery

2. Legal Description

Portions of Sections 11, 12, & 13, T2N, R9W and Portions of Section 18, T2N, R8W, WM, Tillamook County, Oregon.

3. Sale Acreage

	ACRES		
	<u>Sale</u>	<u>Total</u>	<u>Net</u>
Area 1 (Clearcut)	48	48	48
Area 2 (Clearcut)	33	37	33
Area 3 (Partial Cut)	88	88	73
<hr/>			
Total	169	173	154

Sale Acres: Area within the Timber Sale Boundary signs.

Total Acres: Sale acres, plus green tree retention areas outside the timber 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: 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.

Partial Cut - Sale acres minus areas of low stocking, hardwoods, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. Cruising Procedures

A. Cruise Method

The number of variable radius basal area plots recorded on Areas 1, 2, and 3 were 21, 14, and 31, respectively. Diameters and species were recorded and a minimum of two trees per plot were graded and measured for merchantable height and form factor. Plots were spaced 320', 300', and 350' apart on a grid pattern in Areas 1, 2, and 3, respectively. All conifers 8 inches DBH and greater and all hardwoods 10 inches DBH and greater were recorded on all plots.

B. Plot size

A basal area factor of 40 was used in all areas. The point of observation was at 4.5 feet.

C. Grading System

Conifer trees were graded according to Columbia River Log Scaling and Grading Rules. Conifer trees were measured to either a 6-inch top or to a top diameter four tenths of DBH favoring 40-foot log lengths. Heights were measured to the nearest foot. All conifer diameters were measured at a height of 4.5 feet to the nearest 1-inch. Conifers less than 20 board feet were not recorded

5. Computation Procedure

Measured trees were used to develop a volume basal area ratio (V-BAR) for each species. V-Bar for take trees were computed using the Atterbury SuperA.C.E.98 program. Residual and surplus trees were designated on each cruise plot to develop a stand table, which was used to expand the volume for the sale.

6. Hidden Defect and Breakage

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

7. Timber Description

This area was burned in the 1933 Tillamook Fire and 1945 Wilson River/Salmonberry Fire. The sale consists of three areas. Areas 1 and 2 are approximately 45-50 year old planted Douglas-fir and other conifers from natural regeneration. Area 3 is a 60 year-old naturally regenerated stand of hemlock, Douglas-fir, and noble fir with some 45 year-old planted Douglas-fir. All areas have dense conifer on the upper slopes and scattered alder and conifer in the draws and old skid trails. The current stand condition is closed-single canopy. Douglas-fir has severe symptoms of Swiss needle cast.

8. Cruiser Names/Dates

Frison / Bond / Wells; May 2003.

9. Revenue Distribution

FDF: 100%

Tax Code: 56 – 97% and 56-1 – 3%

Deed Numbers: 67, 68, 462, 463, 515

48% Rehabilitation Obligated

10. Attachments

Stand Tables

Volume Summary

Logging Plan

T02N R09W S01 TyA1 1.00

Project MIAMIHI
 Acres 1.00

Time: 11:27:22AM
 Grown Year:

S Spc T	Sample DBH	FF Trees	Tot Av Ht		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals				
			16'	17'				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF		
DF	26	3	81	17	1.550	5.71											
DF	27	2	81	17	.958	3.81											
DF	Totals	5	81	17	2.508	9.52											
DX	8	2	81	17	10.913	3.81											
DX	9	3	81	17	12.935	5.71											
DX	11	2	81	17	5.772	3.81											
DX	12	5	80	17	12.126	9.52											
DX	13	7	80	17	14.465	13.33											
DX	14	6	80	17	10.691	11.43											
DX	15	3	80	17	4.656	5.71											
DX	16	4	81	17	5.457	7.62											
DX	17	5	80	17	6.042	9.52											
DX	18	5	80	17	5.389	9.52											
DX	19	4	81	17	3.870	7.62											
DX	20	4	81	17	3.492	7.62											
DX	21	7	80	17	5.543	13.33											
DX	22	6	81	17	4.329	11.43											
DX	23	6	80	17	3.961	11.43											
DX	24	4	81	17	2.425	7.62											
DX	25	5	80	17	2.794	9.52											
DX	Totals	78	80	17	114.862	148.57											
HX	8	2	91	17	10.913	3.81											
HX	9	1	90	17	4.312	1.90											
HX	10	4	90	17	13.969	7.62											
HX	11	2	90	17	5.772	3.81											
HX	12	2	91	17	4.850	3.81											
HX	13	2	90	17	4.133	3.81											
HX	14	3	91	17	5.345	5.71											
HX	16	2	91	17	2.728	3.81											
HX	Totals	18	90	17	52.024	34.29											
RA	8	1	86	17	5.457	1.90											
RA	9	1	87	17	4.312	1.90											
RA	10	2	86	17	6.985	3.81											
RA	11	2	86	17	5.772	3.81											
RA	12	2	86	17	4.850	3.81											
RA	13	2	86	17	4.133	3.81											
RA	14	4	86	17	7.127	7.62											
RA	17	1	87	17	1.208	1.90											
RA	Totals	15	86	17	39.844	28.57											
SS	16	1	89	17	1.364	1.90											
SS	Totals	1	89	17	1.364	1.90											
WH	17	2	91	17	2.417	3.81											
WH	18	3	91	17	3.234	5.71											
WH	20	1	90	17	.873	1.90											
WH	21	1	91	17	.792	1.90											
WH	22	1	90	17	.722	1.90											
WH	24	1	91	17	.606	1.90											
WH	Totals	9	91	17	8.643	17.14											

Totals 126 84 17 219.245 240.00

Conifer Leave trees - 12.5 tpa
 28.6 ft² ba

TC PSTNDSUM		Stand Table Summary										Page	1		
T02N R09W S02 TyA2		1.00		Project MIAMIHI				Date:		8/13/2003		Time:		11:01:40AM	
		Acres				1.00		Grown Year:							
S Spc T	DBH	Sample Trees	FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
								Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DF	21	1	81	17	1.223	2.86									
DF	25	1	81	17	.838	2.86									
DF	Totals	2	81	17	2.061	5.71									
DX	9	1	81	17	6.467	2.86									
DX	10	1	81	17	5.135	2.86									
DX	11	1	80	17	4.662	2.86									
DX	12	3	80	17	11.177	8.57									
DX	13	1	80	17	3.100	2.86									
DX	15	5	81	17	11.682	14.29									
DX	16	4	81	17	8.245	11.43									
DX	17	2	81	17	3.780	5.71									
DX	18	2	81	17	3.234	5.71									
DX	19	3	80	17	4.249	8.57									
DX	Totals	23	81	17	61.732	65.71									
NFX	16	2	91	17	4.067	5.71									
NFX	20	1	91	17	1.310	2.86									
NFX	Totals	3	91	17	5.377	8.57									
HX	8	3	90	17	24.098	8.57									
HX	9	6	91	17	39.278	17.14									
HX	10	5	91	17	26.126	14.29									
HX	11	7	91	17	30.964	20.00									
HX	12	8	90	17	29.288	22.86									
HX	13	7	90	17	21.805	20.00									
HX	14	6	91	17	16.439	17.14									
HX	15	3	90	17	6.985	8.57									
HX	16	1	90	17	2.046	2.86									
HX	Totals	46	91	17	197.029	131.43									
NF	21	1	90	17	1.188	2.86									
NF	22	1	91	17	1.082	2.86									
NF	23	2	91	17	1.981	5.71									
NF	25	4	91	17	3.353	11.43									
NF	Totals	8	91	17	7.603	22.86									
RA	10	1	86	17	5.684	2.86									
RA	11	2	86	17	8.752	5.71									
RA	13	1	86	17	3.197	2.86									
RA	Totals	4	86	17	17.633	11.43									
WH	16	1	90	17	2.021	2.86									
WH	17	1	90	17	1.813	2.86									
WH	18	1	90	17	1.635	2.86									
WH	20	1	91	17	1.310	2.86									
WH	23	1	90	17	.982	2.86									
WH	Totals	5	90	17	7.760	14.29									
Totals		91	88	17	299.194	260.00									

CONIFER LEAVE TREES - 17.4 tpa
42.9 ft² BA

TC PSTNDSUM		Stand Table Summary										Page	2			
T02N R09W S03 TyA3		1.00	Project MIAMIHI				Date:		8/13/2003		Time:		11:30:35AM			
		Acres				1.00		Grown Year:								
S Spc T	Sample DBH	FF Trees	Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
			16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
RA	11	3	86	17	5.866	3.87										
RA	12	1	87	17	1.643	1.29										
RA	13	2	86	17	2.800	2.58										
RA	14	1	87	17	1.207	1.29										
RA	15	1	86	17	1.051	1.29										
RA	16	1	87	17	.924	1.29										
RA	20	1	87	17	.591	1.29										
RA	Totals	15	87	17	30.273	19.35										
WH	10	3	91	17	7.353	3.87										
WH	11	1	91	17	1.955	1.29										
WH	13	5	90	17	6.985	6.45										
WH	14	5	91	17	5.919	6.45										
WH	15	8	91	17	8.470	10.32										
WH	16	7	91	17	6.424	9.03										
WH	17	4	90	17	3.274	5.16										
WH	18	5	91	17	3.651	6.45										
WH	19	3	91	17	1.980	3.87										
WH	20	3	90	17	1.786	3.87										
WH	21	1	90	17	.536	1.29										
WH	23	1	90	17	.447	1.29										
WH	27	1	91	17	.325	1.29										
WH	30	1	90	17	.263	1.29										
WH	Totals	48	91	17	49.369	61.94										
Totals		184	87	17	229.283	237.42										

CONIFER LEAVE TREES - 70 tpa
109.7 ft² BA

TOTAL LEAVE TREES - 100.6 tpa
129.0 ft² BA



"STEWARDSHIP IN FORESTRY"

Miami High

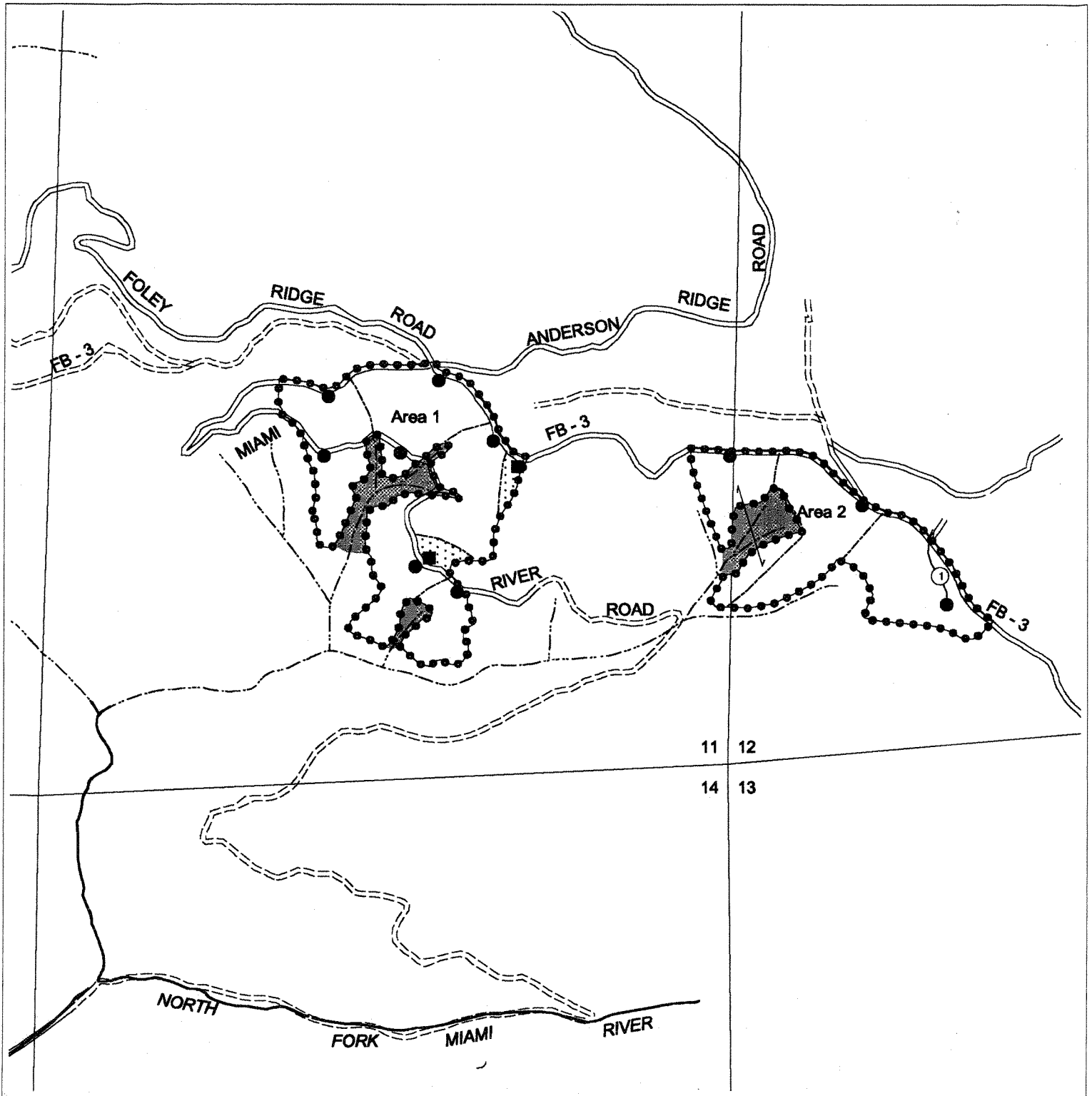
Volume Summary

Area 1						
						Acres: 48
Species	Basal Area Per Acre	VBAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	149	106.5	15.87	761.76	5%	724
W. Hemlock	34	78.1	2.66	127.68	5%	121
Alder	29	52.7	1.53	73.44	5%	70
TOTAL				962.88		915

Area 2						
						Acres: 33
Species	Basal Area Per Acre	VBAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	66	102.4	6.76	223.08	5%	212
W. Hemlock	131	85.7	11.23	370.59	5%	352
Noble fir	9	120	1.08	35.64	5%	34
Alder	11	58.1	0.64	21.12	5%	20
TOTAL				650.43		618

Area 3						
						Acres: 73
Species	Basal Area Per Acre	VBAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	55	89.4	4.92	359.16	5%	341
W. Hemlock	52	107.7	5.60	408.80	5%	388
Noble fir	1	133.3	0.13	9.49	5%	9
TOTAL				777.45		738

TOTAL SALE VOLUME			
			Total Acres: 154
SPECIES	MBF	NET VOL (MBF)	NET MBF/ACRE
Douglas-fir	1344	1277	8.3
W. Hemlock	907	861	5.6
Noble fir	45	43	0.3
Alder	95	90	0.6
TOTAL	2391	2271	14.7

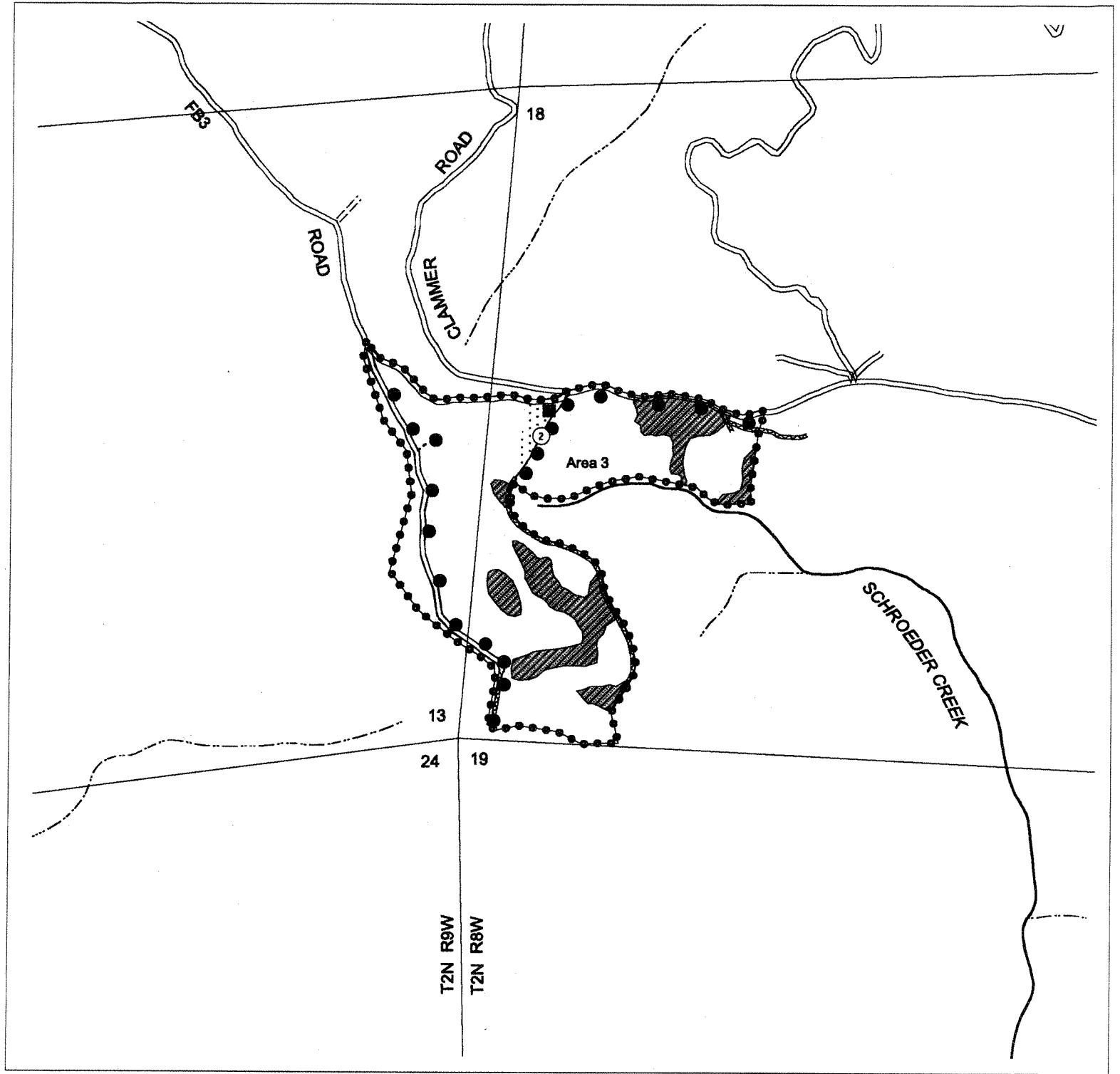


- Tractor landing
- Cable landing
- ▲ Domestic water supply
- ⊗ Block
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- ▧ Buffer zone
- ▨ Non-required thinning
- ▩ Green tree retention area
- Setting boundary
- - - Area boundary
- Sale boundary
- - - Ownership boundary
- Type-F stream
- - - Type-N stream
- == Surfacd road
- Unsurfaced road
- == State highway
- County road
- ② Non-project road
- - - Swing road
- - - Abandoned road
- ○ ○ OHV trail
- - - Non-motorized trail

LOGGING PLAN
Timber Sale Contract No. 341-04-55
Miami High
Areas 1 & 2
Sections 11, 12, & 13, T2N, R9W, and Section 18, T2N, R8W, W.M.,
Tillamook County, Oregon

Area	Type of Operation	Acres	
		Sale	Net
1	Clearcut	48	48
2	Clearcut	33	33
3	Partial Cut	88	73
Total		169	154





- Tractor landing
- Cable landing
- ▲ Domestic water supply
- ⊗ Block
- Cable yarding
- Ground yarding
- ▨ Helicopter yarding
- ▨ Buffer zone
- ▨ 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

LOGGING PLAN
Timber Sale Contract No. 341-04-55
Miami High
Area 3
Sections 11, 12, & 13, T2N, R9W,
and Section 18, T2N, R8W, W.M.,
Tillamook County, Oregon



Area	Type of Operation	Acres	
		Sale	Net
1	Clearcut	48	48
2	Clearcut	33	33
3	Partial Cut	88	73
Total		169	154





Oregon Department of Forestry

WRITTEN PLAN

"STEWARDSHIP IN FORESTRY"

SALE NAME: Miami High

PROTECTED WATERS: Schroeder Creek, a small Type F stream.

Definitions: Riparian Management Areas (RMA): The area between the stream buffer and 50 feet horizontal distance from the high water mark of Type F streams.

LOCATION: Portions of Section 18, T2N, R8W, W.M., Tillamook County, Oregon.

Activity: Logging cables strung across Type F stream for deflection and felling within 100 feet of Type F stream.

Protection measures:

- Trees within the RMA are reserved from cutting, except as approved by ODF to facilitate logging operations. Trees felled within this zone will be incidental and will be left for down wood.
- Trees adjacent to the RMA will be felled away from or parallel to the RMA.
- Trees that enter Type F streams will be left for down wood.
- The timber sale boundary is posted over 50 feet from the Type F stream.
- Cable yarding lines strung across RMA's will average at least 100 feet apart and be pulled out prior to rigging the next yarding road.

Date: August 29, 2003

Prepared by: Timothy Lieske, Forester