



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Crymini Sale 341-04-14

District: Tillamook

Date: 10/9/03

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$273,100.30	\$0.00	\$273,100.30
		Project Work	(\$187,469.00)
		Advertised Value	\$85,631.30



Timber Sale Appraisal Timber Description Crymini Sale 341-04-14

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Sec. 11, 14, and 15 T1N, R10W; Sec. 13 and 24, T2N, R10W; Sec. 18 and 19 T2N R9W; WM, Tillamook County, OR

Date: 10/9/03

Stand Stocking: 20%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	13	0	95
Western Hemlock / Fir	12	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Total
2S	80	249	329
3S	982	622	1,604
4S	190	62	252
Total	1,252	933	2,185

Comments: Pond Values Used: 3rd Quarter 2003

Hardwood stumpage=Pond Value - Logging Costs
Red Alder pond value =\$520.00
Logging Cost =\$250.71
Hardwood Stumpage =\$269.29

Additional Costs (Profit and Risk to be added)

Brand and Paint: \$2/MBF x 2,185 MBF = \$ 4,370

Total Other Costs plus P&R = \$ 4,370

Additional Costs (Profit and Risk Included)

Non-Project Roads: (Seeding included)
(Area 1) Road 1: 7 Stations x \$ 65/Station = \$ 455
(Area 2) Road 2: 13 Stations x \$ 65/Station = \$ 845

Additional Move-In Cost: = \$ 700

Total Other Costs = \$ 2,000

Road Maintenance

Grading: Once per MMBF
\$ 500/mile x 7 miles x 2.19 gradings/2185 MBF = \$ 1.75/MBF

Maintenance Rock: approx. 10 cu.yds /MMBF/mile
Rock is purchased from a commercial source
10 cu.yds/mile x 7 miles x \$ 18.00/cu.yds/2185 MBF = \$ 1.26/MBF

Total Maintenance Cost = \$ 3.01



Timber Sale Appraisal

Logging Conditions

Crymini

Sale 341-04-14

"STEWARDSHIP IN FORESTRY"

Combination#: 1 Douglas - Fir 68.56%
 Western Hemlock / Fir 67.24%

Yarding Distance: Medium (800 ft) **Downhill Yarding:** No
Logging System: Cable: Small Tower <=40 **Process:** Manual Delimiting
Tree Size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
Loads/Day: 5 **Bd. Ft./Load:** 3,200
Cost/MBF: \$161.13
Machines:
 Log Loader (A)
 Tower Yarder (Small)

Combination#: 2 Douglas - Fir 31.44%
 Western Hemlock / Fir 32.76%

Yarding Distance: Short (400 ft) **Downhill Yarding:** Yes
Logging System: Wheel Skidder **Process:** Manual Falling/Delimiting
Tree Size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
Loads/Day: 7 **Bd. Ft./Load:** 3,200
Cost/MBF: \$133.96
Machines:
 Log Loader (B)
 Tire Skidder



Timber Sale Appraisal

Logging Costs

Crymini

Sale 341-04-14

"STEWARDSHIP IN FORESTRY"

Date: 10/9/03

Operating Seasons: 2.4

Profit & Risk: 20%

Project Costs: \$187,469

Other Costs (P/R): \$4,370

Slash Disposal: \$0

Other Costs: \$2,000

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

Road Maintenance: \$3.01

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	3.2
Western Hemlock / Fir	\$0.00	3.0	3.2



Timber Sale Appraisal Logging Costs Breakdown Crymini Sale 341-04-14

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Western Hemlock / Fir
Logging	152.59	152.23
Road Maintenance	3.17	3.17
Fire Protection	2.98	2.98
Hauling	69.16	46.11
Other (P/R appl.)	2.00	2.00
Profit & Risk	45.98	41.30
Slash Disposal	0.00	0.00
Scaling	2.00	2.00
Other	0.92	0.92
Total	278.80	250.71

Amortization	0.00	0.00
Pond Value	451.25	312.01
Stumpage	172.45	61.30
Amortized	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Crymini Sale 341-04-14

Amortized

	Douglas - Fir	Western Hemlock / Fir
MBF	0.00	0.00
Value	0.00	0.00
Total	0.00	0.00

Unamortized

	Douglas - Fir	Western Hemlock / Fir
MBF	1,252.00	933.00
Value	172.45	61.30
Total	215,907.40	57,192.90

Gross Timber Sale Value

Recovery \$273,100.30

Prepared by: Neal Bond

Date: 10/9/03

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: Crymini Date: Aug. 22 2003

Improvement -

Point	A - B	stations =	147+00	\$35,080.85
Point	C - D	stations =	36+10	\$4,673.47
Point	E - F	stations =	219+00	\$106,892.66
Point	G - H	stations =	48+00	\$37,961.00
Point		stations =		\$0.00
SUB TOTAL				\$184,607.98

Special Projects -

<u>Seed and Fertilize Waste Areas</u>	\$180.00
	\$0.00
SUB TOTAL	\$180.00

Move - In -

<u>Drill, Grader, Excavator, Dump Trucks, D-7, Roller</u>	\$2,680.90
	\$0.00
	\$0.00
	\$0.00
	\$0.00
	\$0.00
SUB TOTAL	\$2,680.90

GRAND TOTAL \$187,468.88

SUMMARY OF CONSTRUCTION COST

Sale: Crymini Road: Minich Creek Points A - B

Construction - 0.00 stations miles Improvement - 147+00 stations miles
0.00 miles 2.78 miles

EXCAVATION -

Excavator	2 hr.s @	\$115.00 per hr. =	\$230.00	
	0 cys. @	\$0.00 per c.y. =	\$0.00	
		TOTAL EXCAVATION		\$230.00

CULVERT MATERIALS -

Culverts

126 LF of 18"	\$1,858.50	82 LF of 24"	\$1,455.50
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>\$1,858.50</u>		<u>\$1,455.50</u>

Half Rounds

10 LF of 21"	\$114.00	10 LF of 30"	\$145.00
0 LF of 36"	\$0.00	0 LF of 42"	\$145.00
0 LF of 48"	\$0.00	0 LF of 54"	\$0.00
0 LF of 60"	\$0.00	0 LF of 66"	\$0.00
	<u>\$114.00</u>		<u>\$290.00</u>

Culvert Stakes

4 1/2 round stakes @	\$8.00 per stake=	\$32.00
6 marker stakes @	\$6.00 per stake=	\$36.00

TOTAL CULVERT MATERIALS \$3,786.00

SURFACING- 0+00 - 37+70

4" Depth	829 cy. of	Crushed @	\$18.02 per c.y.=	\$14,938.58
CrvWiden	30 cy. of	Crushed @	\$18.02 per c.y.=	\$540.60
5Trnouts	35 cy. of	Crushed @	\$18.02 per c.y.=	\$630.70
			TOTAL SURFACING	\$16,109.88

Spot Rock	516 cy. of	Crushed @	\$18.02 per c.y.=	\$9,298.32
			TOTAL SPOT ROCK	\$9,298.32

MISCELLANEOUS-Sta. 19+50 to 20+00

Riprap	55 cy. of	48"-36" @	\$3.80 per c.y.=	\$209.00
Riprap	115 cy. of	24"-12" @	\$3.80 per c.y.=	\$437.00
			TOTAL MISCELLANEOUS	\$646.00

SPECIAL PROJECTS

Grade Road: 147+00 Stations @ \$14.20/sta.	\$2,087.40
Water Subgrade/Existing Surfacing: 147+00 stations @ \$6.75/sta.	\$992.25
Roll Subgrade/Existing Surface: 147+00 Stations @ \$11/sta.	\$1,617.00
Grass Seed & Fertilize Culvert Catch Basins and Waste Area	\$60.00
Remove Existing Culverts From State Land	\$204.00
Straw Mulch Catch Basins of Culvert No.s 1 and 4.	\$50.00
TOTAL SPECIAL PROJECTS	\$5,010.65

GRAND TOTAL \$35,080.85

SUMMARY OF CONSTRUCTION COST

Sale: Crymini Road: Points C - D

Construction - 0.00 stations miles Improvement - 36+10 stations miles
0.68 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00	
Scattering	1.66 acres @	\$815.00 per acre =	\$1,352.90	
Piling	0.00 acres @	\$905.00 per acre =	\$0.00	
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00	
TOTAL CLEARING AND GRUBBING				\$1,352.90

EXCAVATION -

36.10 sta. @	\$65.00 per sta. =	\$2,346.50
0 cys. @	\$0.00 per c.y. =	\$0.00
0 cys. @	\$0.00 per c.y. =	\$0.00
0 cys. @	\$0.00 per c.y. =	\$0.00
TOTAL EXCAVATION		\$2,346.50

SPECIAL PROJECTS

Grade Road: 36+10 Stations @ \$9.75/sta.	\$351.97
Roll Subgrade: 36+10 Stations @ \$11/sta.	\$397.10
Grass Seed & Fertilize Areas of Disturbed Soil: 1.25 Acre @ \$180/ac.	\$225.00
	\$0.00
TOTAL SPECIAL PROJECTS	\$974.07

GRAND TOTAL \$4,673.47

SUMMARY OF CONSTRUCTION COST

Sale: Crymini Road: Crystal Creek Points E - F

Construction - 0.00 stations miles Improvement - 219+00 stations miles
0.00 miles 4.15 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00	
Scattering	5.44 acres @	\$815.00 per acre =	\$4,433.60	
Piling	1.30 acres @	\$905.00 per acre =	\$1,176.50	
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00	
TOTAL CLEARING AND GRUBBING				\$5,610.10

EXCAVATION -

Sta. 29+00 - 30+00				
Rd. Widening	273 cys. @	\$3.39 per c.y. =	\$925.47	
Shoot Ditch	30 cys. @	\$4.90 per c.y. =	\$147.00	
SIDECAST PULLBACK				
76+30 - 140+50	12103 cys. @	\$3.85 per c.y. =	\$46,596.55	
143+80 - 149+65	954 cys. @	\$4.00 per c.y. =	\$3,816.00	
152+05 - 175+10	4396 cys. @	\$4.21 per c.y. =	\$18,507.16	
208+90 - 219+00	2433 cys. @	\$2.36 per c.y. =	\$5,741.88	
28+30 - 76+60	2693 cys. @	\$4.36 per c.y. =	\$11,741.48	
	0 cys. @	\$0.00 per c.y. =	\$0.00	
TOTAL EXCAVATION				\$87,475.54

CULVERT MATERIALS -

Culverts				
256	LF of 18"	\$3,776.00	34	LF of 24" \$603.50
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>\$3,776.00</u>		<u>\$603.50</u>
Half Rounds				
40	LF of 21"	\$456.00	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	0	LF of 66" \$0.00
		<u>\$456.00</u>		<u>\$0.00</u>
Culvert Stakes				
8	1/2 round stakes @	\$8.00 per stake=	\$64.00	
9	marker stakes @	\$6.00 per stake=	\$54.00	
TOTAL CULVERT MATERIALS				\$4,953.50

SURFACING-

6" Depth	213 cy. of	Crshd Rock @	\$16.17 per c.y.=	<u>\$3,444.21</u>
TOTAL SURFACING				\$3,444.21

SPECIAL PROJECTS

Grade Road: 104+00 Stations @ \$14.20/sta.	\$1,497.60	
Water Subgrade and New Rock: 104+00 stations @ \$6.75/sta.	\$702.00	
Roll Subgrade/Existing Surface: 104+00 Stations @ \$11/sta.	\$1,144.00	
Remove Old Culverts From State Land	\$584.71	
Remove Old Gate From State Land	\$200.00	
Grass Seed & Fertilize Culvert Inlets, Sidcast Pullback, Waste Areas & Other Disturbed Soil	\$1,231.00	
Straw Much Culverts No. 1, 4, 6	\$50.00	
TOTAL SPECIAL PROJECTS		\$5,409.31

GRAND TOTAL **\$106,892.66**

SUMMARY OF CONSTRUCTION COST

Sale: Crymini Road: Points G - H

Construction - 0.00 stations miles Improvement - 48+00 stations miles
0.91 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00	
Scattering	2.20 acres @	\$815.00 per acre =	\$1,793.00	
Piling	0.00 acres @	\$905.00 per acre =	\$0.00	
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00	
TOTAL CLEARING AND GRUBBING				\$1,793.00

EXCAVATION -

	0 hr.s @	\$0.00 per hr. =	\$0.00	
	47.40 sta. @	\$65.00 per sta. =	\$3,081.00	
Pullback/Widening	400 cys. @	\$3.26 per c.y. =	\$1,304.00	
	0 cys. @	\$0.00 per c.y. =	\$0.00	
	0 cys. @	\$0.00 per c.y. =	\$0.00	
TOTAL EXCAVATION				\$4,385.00

CULVERT MATERIALS -

Culverts					
30	LF of 18"	\$442.50	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
		<u>\$442.50</u>			<u>\$0.00</u>
Half Rounds					
0	LF of 21"	\$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	0	LF of 66"	\$0.00
		<u>\$0.00</u>			<u>\$0.00</u>
Culvert Stakes					
0	1/2 round stakes @	\$8.00 per stake =	\$0.00		
1	marker stakes @	\$6.00 per stake =	\$6.00		
TOTAL CULVERT MATERIALS				\$448.50	

SURFACING-

9" Depth	2,400	cy. of	Jaw Run @	\$11.65 per c.y. =	\$27,960.00
CrvWiden	51	cy. of	Jaw Run @	\$11.65 per c.y. =	\$594.15
6Trnouts	102	cy. of	Jaw Run @	\$11.65 per c.y. =	\$1,188.30
SmTurnrnd	17	cy. of	Jaw Run @	\$11.65 per c.y. =	\$198.05
TOTAL SURFACING					\$29,940.50

SPECIAL PROJECTS

Grade Road: 48+00 Stations @ \$9.75/sta.	\$468.00	
Roll Subgrade: 48+00 Stations @ \$11/sta.	\$528.00	
Grass Seed & Fertilize Areas of Disturbed Soil: 1.1 Acre @ \$180/ac.	\$198.00	
Waste Area Development	\$200.00	
TOTAL SPECIAL PROJECTS		\$1,394.00

GRAND TOTAL \$37,961.00



**OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT**

Crymini

"STEWARDSHIP IN FORESTRY"

1. **Type of Sale:** Partial Cut and Clearcut, Recovery
2. **Legal Description:** Portions of Sections 11, 14, and 15, T1N, R10W, Portions of Sections 13 and 24, T2N, R10W, and Portions of Sections 18 and 19, T2N, R9W, 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	Net CC	Net PC
1	107	72	15
2	106	35	54
Total	213	107	69

Sale acres: Area within the Timber Sale Boundary signs.

Net acres: Used for accomplishment reporting and calculating the advertised volume.

Sale acres less; roads, stream buffers inside the sale boundary and non required acres (Non-required only in partial cut areas).

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; less areas of low stocking, non-required areas, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. **Cruising Procedures:**

A. Cruise Method:

In Area 1, a total of 34 variable radius full point plots were established. On 17 of these plots, sample trees were measured and graded. On half of the plots, tree count by species was recorded. Cruise lines were established on transects with plots spaced 400 feet apart. In Area 2, a total of 36 variable radius full point plots were established. All sample trees were measured and graded on these plots. Cruise lines were established in a grid pattern with plots spaced 400 feet apart.

Diameters were measured to the nearest inch and heights were measured to the nearest foot. Conifer trees less than 8 inches DBH were not recorded. V-BAR (volume to basal area ratio) was calculated for each species.

B. Plot size

A 40 BAF was used to select sample trees in Area 1. A 33 BAF was used to select sample trees in Area 2. The point of observation was at 4.5 feet.

C. Grading System:

Merchantable heights were measured to six inches for conifer favoring 40 foot log lengths using Columbia River Official Log Scaling and Grading Bureau rules. Conifers less than 20 board feet were not recorded.

5. **Computation Procedure:**

Plot data was entered into SuperAce for computation of basal area, V-BAR, stand tables and diameters. These data were 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:**

Area 1 was planted in 1966 and Area 2 was planted in 1971. The current stand condition is CSC and is comprised of predominately Douglas fir. There are also patches of 45-55 year old natural hemlock in both of these areas. There is Sitka spruce and western red cedar scattered throughout the sale area. Red alder is present in draws and on abandoned roads, skid trails, and landings. The Douglas-fir trees have severe symptoms of Swiss needle cast with less than 2 full years of needle retention. There are some hard snags created from wind, snow, and bear damage.

8. **Cruiser Names/Dates:**

Matt Frison, Dave Wells, and Neal Bond. January-February, 2003.

9. **Revenue Distribution:**

100% FDF

Tax Code: 42% = 56

12% = 56 -18

3% = 56-1

43% = 56-8

Deed Numbers: 15, 441, 186

0% Rehabilitation Obligated.

10. **Attachments:**

Volume Summary

Stand Tables

Logging Plan

TC TSTNDSUM		Stand Table Summary													
Project CRYMINI3															
T02N R09W S18 T1				AREA 1				T02N R09W S18 T1							
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:							
02N	09W	18	AREA1-FINAL	1	1.00	22	96	1	Date:	3/24/03					
								Time:	10:29:21AM						
Spc	T	Sample		Av	Trees/ BA/		Average Log		Net		Net	Totals			
		DBH	FF	Ht	Acres	Acres	Logs	Net	Net	Tons/		Cu.Ft.	Bd.Ft	Tons	Cunits
DX	9	4	44	19.630	8.83	19.63	9.2	27.5	5.94	180	539	6	2	1	
DX	10	4	49	16.173	8.83	16.17	11.2	37.2	5.88	181	602	6	2	1	
DX	11	2	65	7.210	4.42	7.21	16.5	49.8	3.82	119	359	4	1	0	
DX	12	3	39	8.356	6.63	8.36	13.6	36.3	3.57	113	303	4	1	0	
DX	13	6	62	14.616	13.25	21.88	16.4	47.9	11.15	358	1,048	11	4	1	
DX	14	4	76	8.183	8.83	10.31	21.2	49.7	6.73	219	512	7	2	1	
DX	15	8	85	14.560	17.67	25.52	19.6	60.7	15.23	499	1,549	15	5	2	
DX	16	5	76	7.876	10.91	15.75	21.2	65.8	10.10	334	1,036	10	3	1	
DX	17	3	80	4.162	6.56	6.92	25.8	68.0	5.37	179	471	5	2	0	
DX	18	3	86	3.727	6.56	7.45	28.5	94.9	6.33	212	707	6	2	1	
DX	19	2	78	2.176	4.35	4.35	33.8	107.5	4.35	147	468	4	1	0	
DX	20	1	74	1.065	2.21	2.13	35.0	90.0	2.20	75	192	2	1	0	
DX	21	1	80	.918	2.21	1.84	32.5	75.0	1.75	60	138	2	1	0	
DX	Totals	46	81	57	108.652	101.27	147.52	18.1	53.7	82.44	2,674	7,923	82	27	8
WH	6	1	16	8.636	1.70										
WH	11	1	80	2.478	1.70	4.96	11.0	45.0	1.74	55	223	2	1	0	
WH	12	1	72	2.233	1.70	4.47	11.5	35.0	1.62	51	156	2	1	0	
WH	13	5	89	9.182	8.48	16.41	15.4	48.8	7.84	252	801	8	3	1	
WH	14	5	88	8.125	8.48	13.12	18.0	54.9	7.29	236	721	7	2	1	
WH	15	2	64	2.840	3.39	5.68	17.3	57.8	3.00	98	329	3	1	0	
WH	16	2	90	2.523	3.39	3.80	24.6	63.3	2.84	94	240	3	1	0	
WH	17	3	82	3.228	5.09	5.41	28.3	70.0	4.60	153	378	5	2	0	
WH	18	1	72	.949	1.70	1.90	28.5	100.0	1.61	54	190	2	1	0	
WH	19	1	78	.826	1.70	1.65	35.0	125.0	1.71	58	207	2	1	0	
WH	21	2	83	1.430	3.39	2.86	44.3	127.8	3.72	127	365	4	1	0	
WH	22	2	89	1.260	3.34	2.52	44.2	147.3	3.26	111	371	3	1	0	
WH	23	2	93	1.176	3.39	2.38	50.6	196.1	3.51	121	467	4	1	0	
WH	25	1	88	.486	1.70	.97	82.0	340.0	2.30	80	330	2	1	0	
WH	31	1	113	.330	1.70	.66	118.5	475.0	2.22	78	313	2	1	0	
WH	Totals	30	87	61	45.702	50.82	66.78	23.5	76.3	47.26	1,568	5,092	47	16	5
HX	8	1	23	4.779	1.55	4.78	5.0	20.0		24	96		0	0	
HX	9	1	29	3.498	1.55	1.75	14.0	60.0		24	105		0	0	
HX	10	1	79	2.834	1.55	1.42	32.0	160.0		45	227		0	0	
HX	11	2	59	4.870	3.09	2.43	30.7	128.3		75	312		1	0	
HX	13	1	74	1.626	1.55	2.44	19.3	80.0		47	195		0	0	
HX	Totals	6	48	17.607	9.27	12.82	16.8	72.9		216	935		2	1	
RC	8	1	21	4.319	1.55	4.32	4.0	20.0		17	86		0	0	
RC	Totals	1	21	4.319	1.55	4.32	4.0	20.0		17	86		0	0	
SS	11	1	17	2.219	1.55										
SS	Totals	1	17	2.219	1.55										
Totals		84	83	56	178.499	164.45	231.44	19.3	60.6	129.70	4475	14,037	130	45	14

DX = Douglas fir take trees
 HX = Hemlock take trees
 WH = Hemlock residual trees
 RC = Red cedar residual trees
 SS = Sitka spruce residual trees
 RA = Red alder residual trees

Leaf trees : 52.2/acre

Stand Table Summary

Project **CRYMINI3**

T01N R10W S14 T00A2

Area 2

T01N R10W S14 T00A2

Twp Rge Sec Tract
01N 10W 14 AREA2-FINAL

Type
00A2

Acres
1.00

Plots
31

Sample Trees
190

Page: 1

Date: 3/24/03

Time: 10:29:56AM

S Spc	T	Sample		Av	Trees/ BA/ Logs			Average Log		Net	Net	Totals	Tons	Cunits	MBF	
		DBH	FF	Ht	Trees/	BA/	Logs	Net	Net	Tons/	Cu.Ft.					Net
		Trees	16'	Tot	Acres	Acres	Acres	Cu.Ft.	Bd.Ft.	Acres	Acres	Acres				
WH		11	1	90	73	2.146	1.29	2.15	17.0	60.0	1.18	36	129	1	0	0
WH		13	3	90	52	4.404	3.87	5.80	15.6	50.0	2.82	90	290	3	1	0
WH		14	4	90	60	4.834	5.16	7.18	19.2	60.1	4.25	138	432	4	1	0
WH		15	5	89	74	5.176	6.45	10.35	20.1	63.9	6.34	208	662	6	2	1
WH		16	4	91	72	3.722	5.16	6.47	24.4	82.8	4.77	158	536	5	2	1
WH		17	9	90	79	7.518	11.61	14.18	28.0	90.5	11.94	397	1,284	12	4	1
WH		18	6	89	70	4.400	7.74	8.07	30.0	96.1	7.23	242	775	7	2	1
WH		19	9	90	82	5.962	11.61	11.92	34.3	111.7	12.15	409	1,332	12	4	1
WH		20	2	91	84	1.214	2.58	2.43	39.5	132.4	2.83	96	321	3	1	0
WH		21	2	91	88	1.089	2.58	2.18	46.0	162.4	2.94	100	354	3	1	0
WH		22	2	92	88	.987	2.58	1.97	51.5	192.4	2.97	102	380	3	1	0
WH		23	2	88	72	.907	2.58	1.81	44.3	145.6	2.34	80	264	2	1	0
WH		24	2	91	103	.821	2.58	2.05	54.8	224.0	3.26	113	460	3	1	0
WH		25	5	90	101	1.896	6.45	4.17	65.7	252.7	7.92	274	1,054	8	3	1
WH		26	4	90	108	1.414	5.16	3.19	74.4	293.4	6.84	237	937	7	2	1
WH		27	2	91	108	.640	2.58	1.60	74.5	319.1	3.43	120	512	3	1	1
WH		28	2	91	102	.595	2.58	1.19	92.7	365.0	3.16	110	434	3	1	0
WH		29	1	91	88	.289	1.29	.58	85.0	320.0	1.41	49	185	1	0	0
WH		33	2	92	105	.441	2.58	.88	126.0	480.0	3.15	111	424	3	1	0
WH		37	1	91	74	.173	1.29	.35	122.5	415.0	1.19	42	143	1	0	0
WH	Totals	68	90	76		48.627	87.74	88.54	35.2	123.2	92.14	3,114	10,906	92	31	11
HX		8	1	90	21	3.518	1.29	3.52	4.0	20.0		14	70		0	0
HX		9	2	91	58	5.841	2.58	2.92	20.0	110.0		58	321		1	0
HX		10	3	91	44	6.961	3.87	4.66	16.3	69.0		76	322		1	0
HX		11	3	89	55	6.129	3.87	3.06	30.0	126.8		92	388		1	0
HX		12	5	91	69	8.110	6.45	6.47	29.4	126.8		190	820		2	1
HX		13	4	90	61	5.601	5.16	5.64	24.4	92.3		137	521		1	1
HX		14	6	90	72	7.247	7.74	7.87	24.6	105.8		194	832		2	1
HX		15	7	87	83	7.396	9.03	9.54	32.7	144.0		312	1,374		3	1
HX		16	1	90	69	.890	1.29	1.34	28.7	120.0		38	160		0	0
HX		17	2	90	87	1.677	2.58	2.09	47.0	209.0		98	437		1	0
HX		18	3	91	95	2.283	3.87	2.28	68.0	353.3		155	806		2	1
HX		19	3	91	89	1.966	3.87	1.64	84.8	380.0		139	623		1	1
HX		20	6	90	101	3.604	7.74	4.23	76.6	375.2		324	1,586		3	2
HX		21	1	91	89	.547	1.29	.55	90.0	410.0		49	224		0	0
HX		22	4	89	104	1.933	5.16	2.18	97.4	442.2		213	965		2	1
HX		23	2	86	95	.903	2.58	.90	111.0	466.9		100	422		1	0
HX		25	1	91	97	.394	1.29	.59	54.0	220.0		32	130		0	0
HX		29	1	91	75	.289	1.29	.43	94.0	346.7		41	150		0	0
HX	Totals	55	90	68		65.291	70.97	59.92	37.8	169.4		2,264	10,153		23	10
DX		8	3		21	10.565	3.87	7.13	4.5	20.0	1.08	32	143	1	0	0
DX		9	2		51	5.841	2.58	5.84	8.5	30.0	1.65	50	175	2	0	0
DX		11	4	80	54	7.579	5.16	7.58	15.0	35.0	3.62	114	265	4	1	0
DX		12	7	83	57	11.488	9.03	16.48	13.1	37.0	6.79	216	610	7	2	1
DX		14	4	80	72	4.828	5.16	8.45	17.9	58.6	4.64	151	495	5	2	0
DX		15	5	86	77	5.288	6.45	10.58	20.4	71.9	6.57	215	760	7	2	1
DX		16	5	80	81	4.553	6.45	9.11	24.9	86.9	6.84	226	791	7	2	1
DX		17	9	87	79	7.401	11.61	14.80	27.0	89.8	12.00	400	1,330	12	4	1
DX		18	4	86	89	2.948	5.16	6.59	30.1	95.4	5.93	199	629	6	2	1
DX		19	3	89	88	1.980	3.87	3.96	35.8	113.3	4.21	142	449	4	1	0
DX		20	6	81	75	3.580	7.74	6.54	37.2	105.0	7.18	243	686	7	2	1

TC TSTNDSUM		Stand Table Summary													
Project CRYMINI3											T01N R10W S14 T00A2				
T01N R10W S14 T00A2											T01N R10W S14 T00A2				
Area 2											Page: 2				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Date:							
01N	10W	14	AREA2-FINAL	00A2	1.00	31	190	3/24/03	Time: 10:29:56AM						
S Spc	T	Av			Trees/ BA/ Logs			Average Log		Net Net			Totals		
		DBH	Trees	16' Tot	Acres	Acres	Acres	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acres	Cu.Ft. Acres	Bd.Ft. Acres	Tons	Cunits	MBF
DX		21	4	82	2.183	5.16	4.92	38.4	132.2	5.56	189	651	6	2	1
DX		22	1	69	.489	1.29	.98	40.0	80.0	1.14	39	78	1	0	0
DX	Totals	57	83	61	68.724	73.55	102.96	21.5	68.6	67.23	2,215	7,063	67	22	7
RA		13	3	87	4.358	3.87	4.36	19.9	72.6	87	317		1	0	0
RA		14	1	87	1.260	1.29	1.26	24.8	90.0	31	113		0	0	0
RA		15	1	87	1.095	1.29	2.19	17.4	70.0	38	153		0	0	0
RA	Totals	5	87	69	6.713	6.45	7.81	20.0	74.7	156	583		2	1	1
SS		13	1	80	1.422	1.29	.71	34.0	100.0	24	71		0	0	0
SS		15	1	83	1.051	1.29	.53	52.0	100.0	27	53		0	0	0
SS		16	1	79	.924	1.29	.46	68.0	140.0	31	65		0	0	0
SS		18	1	83	.730	1.29	.37	74.0	160.0	27	58		0	0	0
SS		34	1	89	.205	1.29	.31	130.7	500.0	40	153		0	0	0
SS	Totals	5	81	52	4.332	6.45	2.37	63.3	168.8	150	400		2	0	0
Totals		190	88	67	193.687	245.16	261.60	30.2	111.3	159.37	7900	29,105	159	79	29

Leave Trees: 52.9/acre



"STEWARDSHIP IN FORESTRY"

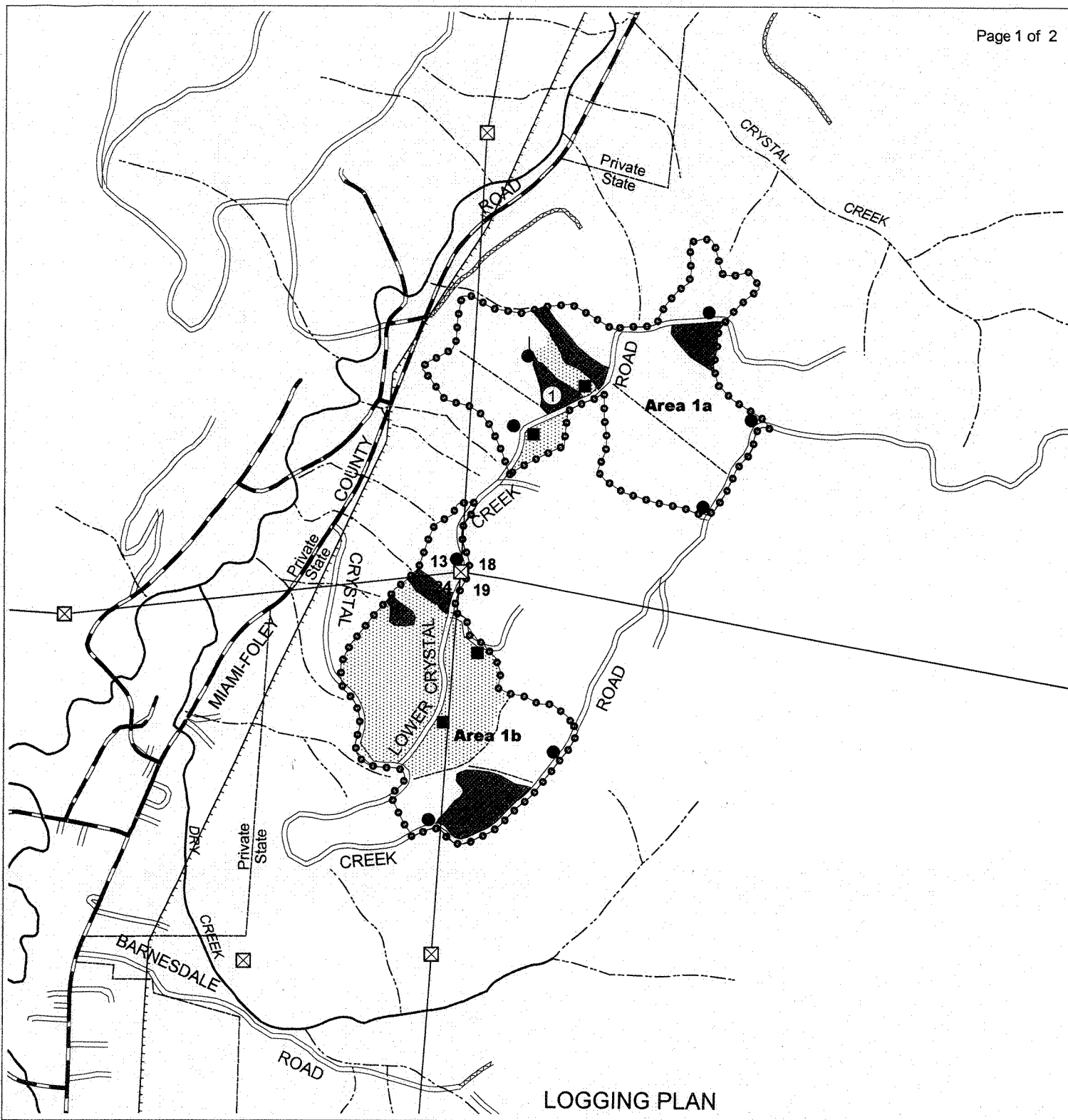
Crymini

Volume Summary

Area 1						
87 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	101	78	7.88	685.6	5%	651
Hemlock	9	101	0.91	79.2	5%	75
TOTAL			8.7900	764.8		709

Area 2						
89 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	74	96	7.10	632	5%	601
Hemlock	71	143	10.15	903	5%	858
TOTAL			17.250	1535		1459

TOTAL SALE VOLUME		
176 acres		
SPECIES	MBF	Net Vol. (MBF)
Douglas-fir	1318	1252
Hemlock	982	933
TOTAL	2300	2185

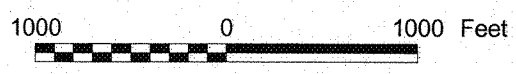


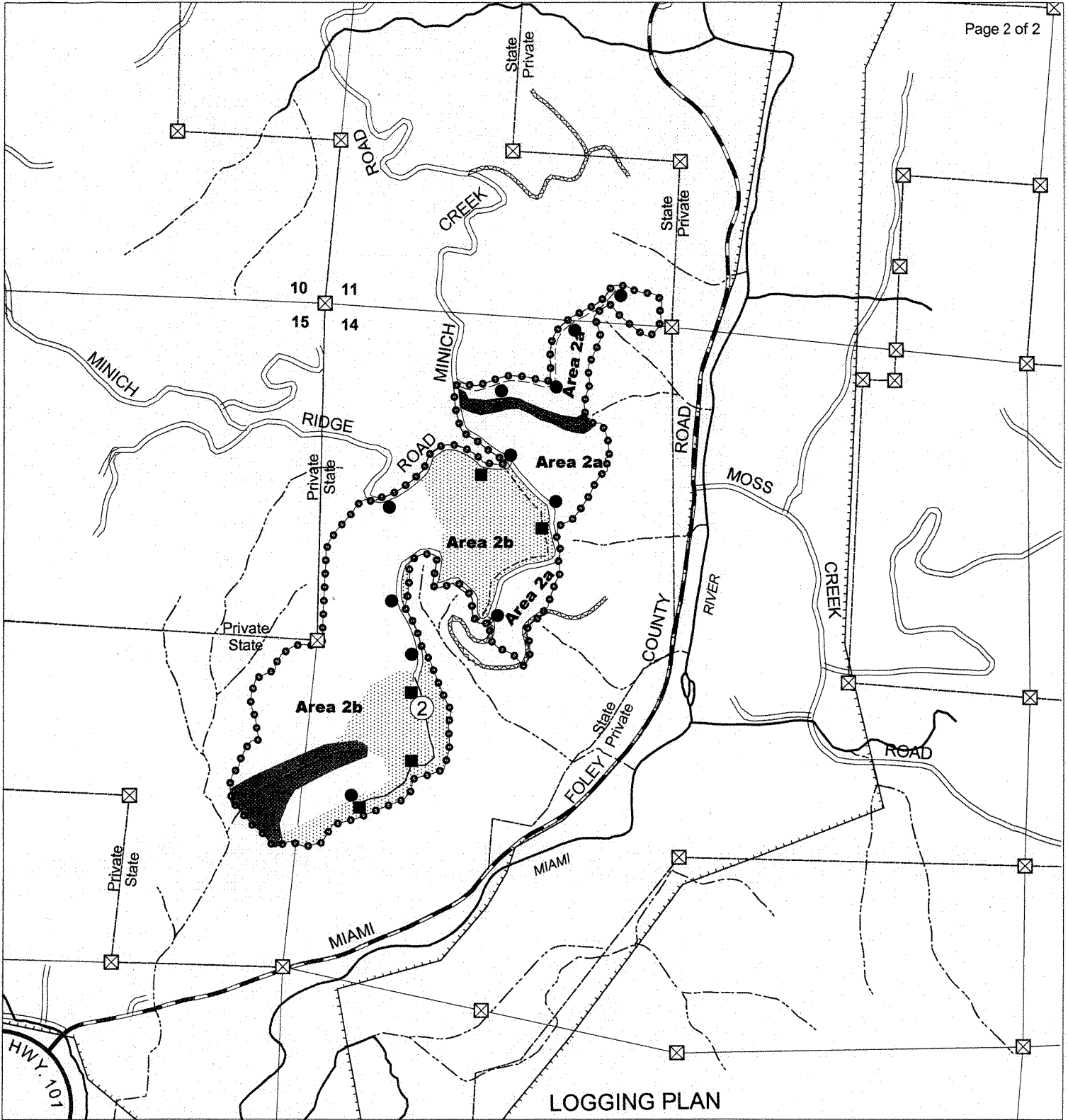
- Tractor landing
- Cable landing
- ▲ Domestic water supply
- ⊗ Block
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- Buffer zone
- Non-required thinning
- ⊂ Green tree retention area
- Setting boundary
- - - Area boundary
- Sale boundary
- Ownership boundary
- Type-F stream
- - - Type-N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

EXHIBIT A
 Timber Sale Contract No. 341-04-14
 Crymini - Area 1

Portions of sections 13 and 24,
 T2N, R10W, portions of sections
 18 and 19, T2N, R9W, and
 portions of 11, 14, and 15, T1N, R10W, W. M.
 Tillamook County, Oregon

Area	ACRES		
	Sale	Net CC	Net PC
1	107	72	15
2	106	35	54
Total	213	107	69





- 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

EXHIBIT A
Timber Sale Contract No. 341-04-14
Crymini - Area 2

Portions of sections 13 and 24,
 T2N, R10W, portions of sections
 18 and 19, T2N, R9W, and
 portions of 11, 14, and 15, T1N, R10W, W. M.
 Tillamook County, Oregon

Area	ACRES		
	Sale	Net CC	Net PC
1	107	72	15
2	106	35	54
Total	213	107	69



OREGON DEPARTMENT OF FORESTRY
WRITTEN PLAN

SALE NAME: Crymini

PROTECTED RESOURCES: Miami-Foley County Road (Area 1)

LOCATION: Portions of Sections 13 and 24, T2N, R10W, portions of sections 18 and 19, T2N, R9W, W.M., Tillamook Country, Oregon.

ACTIVITIES: Cable yarding and road improvement and construction.

High Landslide Hazard Locations (HLHL): Slopes steeper than 80% and headwalls or draws steeper than 70%.

PROTECTION MEASURES:

SILVICULTURAL PRESCRIPTION:

- Long term target of full evergreen canopy cover will be reached by harvesting the Swiss needle cast infected Douglas-fir trees with receding root strength/mass and replacing them with healthy conifer stands of hemlock and cedar.
- Draws with slopes 70% and greater and a windfirm buffer were posted out of the harvest areas.
- Residual stand will be a partial cut with an average of 52 trees per acre.

YARDING and FELLING:

- Thin hemlock to 140 – 160 square feet of basal area.
- A maximum of 50% of acreage within High Landslide Hazard Locations in basins or hillslope areas with intermediate downslope public safety risk (Miami-Foley County Road) may be harvested.
- Trees will be felled to lead.
- Cable yarding will be used when harvesting High Landslide Hazard Locations.
- Logs will have at least one end suspended when yarded.
- Soil gouging will be incidental and limited to a depth of 1 vertical foot.
- Slash will be placed in a stable location prior to moving to another landing.

PROJECT WORK:

- Waste material will be end-hauled to stable locations marked in the field.
- Sidecast material will be pulled back and hauled to a stable location marked in the field.
- Areas of disturbed soil from road improvement will be (mulched and) seeded to minimize erosion.

PREPARED BY: C. Kiser, Barb Moore
Forester, North Unit
April 2003