



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Miami Combo Sale 341-05-23

District: Tillamook

Date: 5/17/04

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$558,535.46	\$136,837.81	\$695,373.27
		Project Work	(\$233,307.23)
		Advertised Value	\$462,066.04



Timber Sale Appraisal Timber Description Miami Combo Sale 341-05-23

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Sec 14,15,16,22,23, T 2N, R9W, WM

Date: 5/17/04

Stand Stocking: 20%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	15	0	95
Alder (Red)	14	0	95

Volume by Grade	Douglas - Fir	Alder (Red)	Total
2S	798	0	798
3S	972	0	972
4S	113	0	113
Camprun	0	437	437
Total	1,883	437	2,320

Comments: Pond Values USed: 1st Quarter 2004.

Cedar Stumpage = \$1000 - \$266.87 = \$ 733.13

ADDITIONAL COSTS (Profit and Risk to be added)

Brand and Paint - \$2/MBF x 2320 MBF = \$4,640

Slash piling - 150 acres x \$2.20/acre = \$ 330

TOTAL OTHER COSTS + (P/R) = \$4,970.00

ADDITIONAL COSTS (Profit and Risk Included)

Non-Project Roads-(Seeding included)

Road 1-10 Stations x \$130 = \$1300.00

Road 2- 4 Stations x \$150 = \$ 600.00

Road 3- 4 Stations x \$90 = \$ 360.00

Road 4- 5 Stations x \$130 = \$ 650.00

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

4 Stations x 50 cu. yards x \$4.50/yd. = \$900.00

TOTAL OTHER COSTS = \$3810.00

ROAD MAINTENANCE

Grading - once per MMBF

Maintenance \$500/Mile x 2 Grading x 8 miles / 2320 = \$3.45

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

63 cu. yds. x 8 miles x \$3.85/yard / 2320 = \$.77

TOTAL MAINTENANCE COST = \$4.22



Timber Sale Appraisal

Logging Conditions

Miami Combo

Sale 341-05-23

"STEWARDSHIP IN FORESTRY"

Combination#: 1	Douglas - Fir	55.98%	
	Alder (Red)	52.57%	
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:	7		Bd. Ft./Load: 3,500
Cost/MBF:	\$135.37		
Machines:	Log Loader (A) Tower Yarder (Medium)		
Combination#: 2	Douglas - Fir	16.81%	
	Alder (Red)	18.56%	
Yarding Distance:	Short (400 ft)		Downhill Yarding: No
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		
Combination#: 3	Douglas - Fir	27.21%	
	Alder (Red)	28.86%	
Yarding Distance:	Medium (800 ft)		Downhill Yarding: Yes
Logging System:	Cable: Medium Tower >40 - <70		Process: Manual Delimiting
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
Loads/Day:	4		Bd. Ft./Load: 3,500
Cost/MBF:	\$249.37		
Machines:	Log Loader (A) Tower Yarder (Medium)		



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal

Logging Costs

Miami Combo

Sale 341-05-23

Date: 5/17/04

Operating Seasons: 1.6

Profit & Risk: 20%

Project Costs: \$233,307

Other Costs (P/R): \$4,970

Slash Disposal: \$0

Other Costs: \$3,810

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

Road Maintenance: \$4.22

Hauling Costs

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



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Breakdown Miami Combo Sale 341-05-23

Costs	Douglas - Fir	Alder (Red)
Logging	163.24	164.80
Road Maintenance	4.44	4.44
Fire Protection	1.87	1.87
Hauling	69.16	46.11
Other (P/R appl.)	2.14	2.14
Profit & Risk	48.17	43.87
Slash Disposal	0.00	0.00
Scaling	2.00	2.00
Other	1.64	1.64
Total	292.66	266.87

Amortization	0.00	0.00
Pond Value	589.28	580.00
Stumpage	296.62	313.13
Amortized	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Miami Combo Sale 341-05-23

Amortized

	Douglas - Fir	Alder (Red)
MBF	0.00	0.00
Value	0.00	0.00
Total	0.00	0.00

Unamortized

	Douglas - Fir	Alder (Red)
MBF	1,883.00	437.00
Value	296.62	313.13
Total	558,535.46	136,837.81

Gross Timber Sale Value

Recovery \$695,373.27

Prepared by: Neal Bond

Date: 5/17/04

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: Miami Combo

CONSTRUCTION

Point	A to B (SF Miami River Rd.)	8+35	stations =	\$11,518.30
SUBTOTAL CONSTRUCTION				\$11,518.30

IMPROVEMENT

Point	A to B (SF Miami River Rd.)	96+90	stations =	\$133,667.43
Point	C to D (FB 3)	97+95	stations =	\$71,908.18
Point	A to E (Miami Forest Road)	32+90	stations =	\$13,049.88
SUBTOTAL IMPROVEMENT				\$218,625.48

SPECIAL PROJECTS

Remove Culverts from State Lands				\$518.87
Brush	0.0	miles of road		\$0.00
SUBTOTAL SPECIAL PROJECTS				\$518.87

MOVE IN

\$2,644.59

GRAND TOTAL **\$233,307.23**

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Miami Combo</u>		Road:	<u>A to B (SF Miami River Rd.)</u>
Construction -	8+35 stations <u>0.16</u> miles		Improvement -	96+90 stations <u>1.84</u> miles
CLEARING AND GRUBBING -				
Roadside Brushing	0.00 miles @		\$800.00 per mile =	\$0.00
Side cast	0.000 acres @		\$540.00 per acre =	\$0.00
Scattering	5.020 acres @		\$815.00 per acre =	\$4,091.30
			TOTAL CLEARING AND GRUBBING	\$4,091.30
EXCAVATION -				
Road Earthwork: 0+00 - 40+00 & 48+35 - 105+25	96.90 sta. @		\$65.00 per sta. =	\$6,298.50
Pullback	1039 cy. @		\$1.40 per c.y.=	\$1,454.60
Common	4680 cy. @		\$1.15 per c.y.=	\$5,382.00
Rippable	1325 cy. @		\$2.25 per c.y.=	\$2,981.25
Solid	1325 cy. @		\$4.90 per c.y.=	\$6,492.50
Log Fill Removals (Excavator)	46 hrs. @		\$130.00 per hour =	\$5,980.00
Log Fill Removals (Dozer)	22 hrs. @		\$140.00 per hour =	\$3,080.00
Ditchout Construction and Catch Basins	4.5 hrs. @		\$130.00 per hour =	\$585.00
Sta. 17+60 (Fish Pipe) - Removal and Replacement of Fill Material				
w/ Excavator	6 hrs. @		\$130.00 per hour =	\$780.00
w/ Dozer	8 hrs. @		\$140.00 per hour =	\$1,120.00
			TOTAL EXCAVATION	\$34,153.85
ENDHAUL -				
Sta. 17+60: Fill/Countersinking Material for culvert	6 hrs. @		\$60.00 per hour =	\$360.00
Waste Area #2 & 3	1035 cy. @		\$1.09 per c.y.=	\$1,128.15
Waste Area #3a	518 cy. @		\$1.19 per c.y.=	\$616.42
Waste Area #4	985 cy. @		\$1.03 per c.y.=	\$1,014.55
Waste Area #5	4260 cy. @		\$1.40 per c.y.=	\$5,964.00
Spread & compact	6804 cy. @		\$0.20 per c.y.=	\$1,360.80
			TOTAL ENDHAUL	\$10,443.92
CULVERTS - MATERIALS & INSTALLATION				
<u>Culverts</u>				
240 LF of 18"	\$3,540.00	256 LF of 24"	\$4,544.00	
0 LF of 30"	\$0.00	66 LF of 36"	\$1,214.40	
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	0 LF of 72"	\$0.00	
	\$3,540.00			
<u>Half Rounds</u>		Installation, Bands, bevel for 36" culvert		\$5,758.40
30 LF of 21"	\$342.00	30 LF of 30"	\$435.00	\$1,684.55
0 LF of 36"	\$0.00	0 LF of 42"	\$0.00	\$435.00
	\$342.00			
Aluminized: 103"x 71", 14 gage Pipe Arch, 3"x1" Cor.				\$4,824.00
60 Feet @ \$80.40/foot =				
2' Connecting Bands & Gaskets for 103"x 71" Pipe Arch				\$482.40
2 Bands & Gaskets @ \$241.20/Each				\$90.00
1:1 Bevel Cut				
Assembly Time and Cost:				\$520.00
4 Hours @ \$130/Hour/Excavator =				\$336.00
4 Hours @ \$28/Hour/Person (3 person crew) =				\$6,252.40
<u>Culvert Stakes & Markers</u>				
12 stakes	\$96.00			
17 markers	\$136.00			
	\$232.00			
			TOTAL CULVERTS	\$18,244.35
SURFACING-				
0+00 to 105+25	5,164 cy. of	Crushed	@ \$12.57 per c.y.=	\$64,936.80
Fill Armor	50 cy. of	Riprap	@ \$4.60 per c.y.=	\$230.00
Fill/Energy Dissipator	90 cy. of	Riprap	@ \$4.60 per c.y.=	\$414.00
Bedding/Backfill	400 cy. of	Crushed	@ \$12.40 per c.y.=	\$4,958.60
				TOTAL SURFACING
				\$70,539.40
SPECIAL PROJECTS				
Straw Bales for Sediment Catch Basins	10.00 bales @		\$6.00 per bale	\$60.00
Construct waste areas -	8.00 hours @		\$130.00 per hour	\$1,040.00
Grade and shape road -	105.25 stations @		\$14.20 per station	\$1,494.55
Roll subgrade w/ vibratory roller prior to rocking -	105.25 stations @		\$11.00 per station	\$1,157.75
Grass seed and fertilize -	4.83 acres @		\$220.00 per acre	\$1,062.60
Mulching -	4.830 acres @		\$600.00 per acre	\$2,898.00
			TOTAL SPECIAL PROJECTS	\$7,712.90
GRAND TOTAL				\$145,185.72

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Miami Combo</u>		Road:	<u>C to D (FB 3)</u>
Construction -	0+00 stations <u>0.00</u> miles		Improvement -	97+95 stations <u>1.86</u> miles
CLEARING AND GRUBBING -				
Roadside Brushing	0.00 miles @		\$1,000.00 per mile =	\$0.00
Scattering	4.500 acres @		\$815.00 per acre =	\$3,667.50
Endhaul	0.00 acres @		\$1,500.00 per acre =	<u>\$0.00</u>
			TOTAL CLEARING AND GRUBBING	\$3,667.50
EXCAVATION -				
Fill Removal & Replacement of Culvert Fill Material (32+95, 47+25, 48+40) w/ Excavator	27.00 hrs. @		\$130.00 per hour =	\$3,510.00
w/ Dozer	14 hrs. @		\$140.00 per hour =	\$1,960.00
Widening (Rippable)	600 cy. @		\$2.25 per c.y. =	\$1,350.00
Widening (Solid)	1800 cy. @		\$4.90 per c.y. =	\$8,820.00
Remove Ditchline Slough	50 cy. @		\$1.40 per c.y. =	\$70.00
Construct Sediment Catch Basins	3 hrs. @		\$130.00 per hour =	<u>\$390.00</u>
			TOTAL EXCAVATION	\$16,100.00
ENDHAUL -				
Sta. 90+30 - 96+75	2450 cy. @		\$1.35 per c.y. =	\$3,307.50
Sta. 32+95	2 hrs. @		\$60.00 per hour =	\$120.00
Spread & compact	2452 cy. @		\$0.20 per c.y. =	<u>\$490.40</u>
			TOTAL ENDHAUL	\$3,917.90
CULVERTS - MATERIALS & INSTALLATION				
<u>Culverts</u>				
294	LF of 18"	\$4,336.50	128	LF of 24" \$2,272.00
0	LF of 30"	\$0.00	82	LF of 36" \$1,508.80
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"	<u>\$0.00</u>	0	LF of 72" \$0.00
		\$4,336.50		<u>\$3,780.80</u>
<u>Half Rounds</u>				
140	LF of 21"	\$1,596.00	60	LF of 30" \$870.00
0	LF of 36"	<u>\$0.00</u>	0	LF of 42" \$0.00
		\$1,596.00		<u>\$870.00</u>
<u>Culvert Stakes & Markers</u>				
40 stakes		\$320.00	Installation, Bands, bevel for 36" culvert	
15 markers		<u>\$120.00</u>	\$2,098.00	
		\$440.00		
			TOTAL CULVERTS	
			\$13,121.30	
SURFACING-				
0+00 to 97+95	2,353 cy. of	Crushed	@ \$9.94 per c.y. =	\$23,380.59
Fill Armor	25 cy. of	Riprap	@ \$5.25 per c.y. =	\$131.25
Fill/Energy Dissipator	60 cy. of	Riprap	@ \$5.25 per c.y. =	\$315.00
Base Rock/Backfill	250 cy. of	Crushed	@ \$9.41 per c.y. =	\$2,353.73
Bedding/Backfill	180 cy. of	Crushed	@ \$9.24 per c.y. =	<u>\$1,662.57</u>
				TOTAL SURFACING
				\$27,843.14
SPECIAL PROJECTS				
Straw Bales for Sediment Catch Basins	10.00 bales @		\$6.00 per bale	\$60.00
Construct waste areas -	8.00 hours @		\$130.00 per hour	\$1,040.00
Grade and shape road -	97.95 stations @		\$14.20 per station	\$1,390.89
Roll subgrade w/ vibratory roller prior to rocking -	97.95 stations @		\$11.00 per station	\$1,077.45
Grass seed and fertilize -	4.50 acres @		\$220.00 per acre	\$990.00
Mulching -	4.500 acres @		\$600.00 per acre	<u>\$2,700.00</u>
			TOTAL SPECIAL PROJECTS	\$7,258.34
GRAND TOTAL				\$71,908.18

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Miami Combo</u>			Road:	<u>A to E (Miami Forest Road)</u>			
Construction	0+00 stations 0.00 miles			Improvement	32+90 stations 0.62 miles			
CLEARING AND GRUBBING								
Roadside Brushing		0.00 miles @		\$1,000.00 per mile =			\$0.00	
Side cast		0.000 acres @		\$540.00 per acre =			\$0.00	
Widening		0.000 acres @		\$540.00 per acre =			\$0.00	
Scattering		0.300 acres @		\$815.00 per acre =			\$244.50	
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			\$244.50	
EXCAVATION								
Excavate ditchline and haul material <1000'		32.90 sta. @		\$22.00 per sta. =			\$723.80	
Construct Sediment Catch Basins		1 hrs. @		\$130.00 per hour =			\$162.50	
				TOTAL EXCAVATION			\$886.30	
ENDHAUL								
Widening/Full Bench		0 cy. @		\$0.86 per c.y. =			\$0.00	
Spread & compact		2 hrs. @		\$140.00 per hour =			\$280.00	
				TOTAL ENDHAUL			\$280.00	
CULVERTS - MATERIALS & INSTALLATION								
		<u>Culverts</u>						
		94	LF of 18"	\$1,386.50		90	LF of 24"	\$1,597.50
		70	LF of 30"	\$1,452.50		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		0	LF of 72"	\$0.00
				\$2,839.00				\$1,597.50
		<u>Half Rounds</u>						
		0	LF of 21"	\$0.00		0	LF of 30"	\$0.00
		0	LF of 36"	\$0.00		0	LF of 42"	\$0.00
				\$0.00				\$0.00
		<u>Culvert Stakes & Markers</u>						
		0	stakes	\$0.00				
		8	markers	\$64.00				
				\$64.00				TOTAL CULVERTS
								\$4,500.50
SURFACING								
0+00 to	32+90	774	cy. of	Crushed	@	\$4.14 per c.y. =	\$3,207.08	
Roadway Fill Armor	9+35 to 11+00	200	cy. of	Riprap	@	\$6.32 per c.y. =	\$1,264.10	
Bedding/Backfill	7+45, 13+85, 21+30, 22+65, & 29+45	95	cy. of	Crushed	@	\$3.44 per c.y. =	\$327.13	
Base Rock/Backfill	7+45, 12+40, 13+85, 16+00, 21+30,	80	cy. of	Crushed	@	\$11.06 per c.y. =	\$885.19	
						TOTAL SURFACING		\$5,683.50
SPECIAL PROJECTS								
Construct waste areas -		2.00	hours @	\$130.00	per hour		\$260.00	
Construct ditchouts & lead-off ditches-		2.00	@	\$60.00	each		\$120.00	
Grade and shape road -		32.90	stations @	\$14.20	per station		\$467.18	
Roll subgrade w/ vibratory -		32.90	stations @	\$11.00	per station		\$361.90	
Grass seed and fertilize -		0.30	acres @	\$220.00	per acre		\$66.00	
Mulching -		0.300	acres @	\$600.00	per acre		\$180.00	
						TOTAL SPECIAL PROJECTS		\$1,455.08
						GRAND TOTAL		\$13,049.88

MOVE-IN CALCULATIONS

Sale: **Miami Combo**

LOWBOY HAUL (Round Trip)		
DISTANCE	ROADWAY	AVE SPEED (MPH)
16.5	Highway	37
5.5	Main Lines (Off Road)	15
0.0	Pulling Steep Grades	4

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	\$158.86		\$46.00	0.00	8.20	8.2	\$377.20	\$536.06
0	Brush Cutter	\$0.00		\$4.00	0.00	0.00	0	\$0.00	\$0.00
1	Graders	\$60.23		\$3.65	0.00	0.00	7.56	\$27.59	\$87.82
0	Loader (Small)	\$0.00	1	\$3.55	0.00	0.00	0	\$0.00	\$0.00
0	Loader (Med. & Large)	\$0.00	1	\$9.00	0.00	0.00	0	\$0.00	\$0.00
1	Rollers & Compactors	\$158.86		\$5.00	0.00	0.00	7.56	\$37.80	\$196.66
0	Excavators (Small)	\$0.00		\$22.00	0.00	0.00	0	\$0.00	\$0.00
0	Excavators (Med.)	\$0.00		\$35.50	0.00	0.00	0	\$0.00	\$0.00
2	Excavators (Large)	\$484.69	1	\$44.80	0.00	0.00	4.1	\$367.36	\$852.05
0	Rubber Tired Backhoes/Skidders	\$0.00		\$3.00	0.00	0.00	0	\$0.00	\$0.00
0	Tractors (D6)	\$0.00	2	\$7.10	0.00	0.00	0	\$0.00	\$0.00
0	Tractors (D7)	\$0.00	2	\$11.30	0.00	0.00	0	\$0.00	\$0.00
2	Tractor (D8)	\$475.11	2	\$15.10	0.00	0.00	4.1	\$123.82	\$598.93
3	Dump Truck (10 cy +)	\$138.96		\$2.85	0.00	0.00	15.76	\$134.75	\$273.70
0	Dump Truck (Off Hiway)	\$0.00	1	\$4.75	0.00	0.00	0	\$0.00	\$0.00
0	Water Truck (1500 Gal)	\$0.00		\$2.85	0.00	0.00	0	\$0.00	\$0.00
1	Water Truck (2500 Gal)	\$54.45		\$2.85	0.00	0.00	15.76	\$44.92	\$99.36
0	Jaw	\$1,066.00							
0	2-Stage Crusher	\$1,597.00							
0	3-Stage Crusher	\$2,489.00							

TOTAL MOVE-IN COSTS:	\$2,644.59
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REMOVE CULVERTS FROM STATE LANDS COST SHEET

SALE: Miami Combo

<u>Point to Point</u>	<u>Number of Culverts</u>
A to B	1
C to D	2
A to E	6
TOTAL CULVERTS	9

Load culverts @ 0.25 hrs/culvert =	2.25 hrs
Move Backhoe between culverts =	2.25 hrs
Subtotal loading time =	4.50 hrs
Driving and unloading time =	1.50 hrs
Total project time =	6.00 hrs

6.00 hours labor @ \$33.07/hour =	\$198.42
6.00 hours with Dump Truck @ \$24.46/hour =	\$146.76
6.00 hours with trailer @ \$5.00/hour =	\$30.00
4.50 hours with Backhoe @ \$31.93/hour =	\$143.69

Grand Total

\$518.87

ROCK DEVELOPMENT COST SUMMARY

Pit:	<u>RipRap</u>	Location:	<u>Miami Road</u>
Sale:	<u>Miami Combo</u>	Road:	<u>200 c.y.</u>
Swell:	<u>1.40</u>	Stockpile:	<u> c.y.</u>
Shrinkage	<u>1.16</u>	Total Truck Loads:	<u>200 c.y.</u>
Drill Pct.:	<u>25%</u>	In Place Total:	<u>143 c.y.</u>

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.					\$0.00
Drill & Shoot:	\$2.10 /cu.yd.	x	36 cu.yds.	=	\$75.00
Rip Rock	\$1.75 /cu.yd.	x	107 cu.yds.	=	\$187.50
Load Dump Truck:	\$1.40 /cu.yd.	x	200 cu.yds.	=	\$280.00

Subtotal \$542.50

Move In and set up Drill and Compressor	Within Area: 2 Miles	@	\$46/Mile	=	\$92.00
Move in Excavator	Within area: 2 Miles	@	\$44.80/Mile	=	\$89.60
				Subtotal	<u>\$181.60</u>

TOTAL PRODUCTION COSTS \$724.10

Base Cost= \$3.62 Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Place Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A to E (Miami Forest Road) Roadway Fill Armor	\$1.30	\$1.40	\$3.62	\$6.32	200	\$1,264.10
			Total C.Y.		200	Sub Total <u>\$1,264.10</u>

TOTAL ROCKING COSTS \$1,264.10

ROCK DEVELOPMENT COST SUMMARY

Pit:	RipRap	Location:	SF Miami Road
Sale:	Miami Combo	Road:	225 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage:	1.16	Total Truck Loads:	225 c.y.
Drill Pct.:	0%	In Place Total:	161 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.				\$0.00
Drill & Shoot:	\$2.10 /cu.yd.	x	0 cu.yds.	= \$0.00
Rip Rock	\$1.75 /cu.yd.	x	0 cu.yds.	= \$0.00
Load Dump Truck:	\$1.40 /cu.yd.	x	225 cu.yds.	= \$315.00

Subtotal \$315.00

Move In and set up Drill and Compressor	0	@	\$158.86	=	\$0.00
Move in Roller and Compactor	0	@	\$158.86	=	\$0.00
Move in Grader	0	@	\$60.23	=	\$0.00
Move in D-8	0	@	\$219.09	=	\$0.00
Move in Loader	0	@	\$132.70	=	\$0.00
Move in Excavator	0	@	\$233.11	=	\$0.00
Move in Trucks	0	@	\$46.32	=	\$0.00
Move in Water Truck	0	@	\$54.45	=	\$0.00
			Subtotal		\$0.00

TOTAL PRODUCTION COSTS \$315.00

Base Cost= \$1.40 Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Place Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A to B (SF Miami River Rd.) Fill Armor	\$1.80	\$1.40	\$1.40	\$4.60	50	\$230.00
A to B (SF Miami River Rd.) Fill/Energy Dissipator	\$1.80	\$1.40	\$1.40	\$4.60	90	\$414.00
C to D (FB 3) Fill/Energy Dissipator	\$2.45	\$1.40	\$1.40	\$5.25	60	\$315.00
C to D (FB 3) Fill Armor	\$2.45	\$1.40	\$1.40	\$5.25	25	\$131.25
Total C.Y.					225	Sub Total \$1,090.25

TOTAL ROCKING COSTS \$1,090.25

ROCK DEVELOPMENT COST SUMMARY

Pit:	Crushed Stockpile (Powderhouse)	Location:	Miami Forest Road
Sale:	Miami Combo	Road:	869 c.y.
Swell:	1.40	Culvert Bedding:	c.y.
Shrinkage:	1.16	Total Truck Loads:	869 c.y.
Drill Pct.:	0%	In Place Total:	621 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.				\$0.00	
Drill & Shoot:	\$2.10 /cu.yd.	x	0 cu.yds.	=	\$0.00
Rip Rock	\$1.75 /cu.yd.	x	0 cu.yds.	=	\$0.00
Load Dump Truck:	\$0.60 /cu.yd.	x	869 cu.yds.	=	\$521.28

Subtotal \$521.28

Move in D-8	0	@	\$219.09	=	\$0.00
Move in Loader	Within Area Move: 6.11 Miles	@	\$9.00/Mile	=	\$54.99
Move in Excavator	0	@	\$233.11	=	\$0.00
Move in Trucks	Within Area Move: 6.11 Miles	@	\$4.75/Mile	=	\$87.07
Move in Water Truck	0	@	\$54.45	=	\$0.00
Subtotal					\$142.06

TOTAL PRODUCTION COSTS \$663.34

Base Cost= \$0.76 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 E (Miami Forest Road)	\$2.08	\$1.30	\$0.76	\$4.14	774	\$3,206.25
A to E (Miami Forest Road) Bedding/Backfill	\$2.08	\$0.60	\$0.76	\$3.44	95	\$327.13
Total C.Y.					869	Sub Total \$3,533.38

TOTAL ROCKING COSTS \$3,533.38

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Miami Road Crushed Pit	Location:	Sec. 14, T3N, R10W, W.M.
Sale:	Miami Combo	2'-0"	2933 c.y.
Swell:	1.40	4'-0"	5494 c.y.
Shrinkage	1.16	Total Truck Loads:	8427 c.y.
Drill Pct.:	100%	In Place Total:	6019 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area, place overburden					\$2,904.48
in Waste Area, spread and compact:	1267 CY	@	\$0.20/cu.yd.	=	\$253.40
Drill & Shoot:	\$2.10 /cu.yd.	x	6019 cu.yds.	=	\$12,640.50
Rip Rock	\$1.75 /cu.yd.	x	0 cu.yds.	=	\$0.00
Load Dump Truck:	\$0.60 /cu.yd.	x	8427 cu.yds.	=	\$5,056.20
Load RipRap:	\$1.40 /cu.yd.	x	0 cu.yds.	=	\$0.00
Push Rock:	\$0.60 /cu.yd.	x	8427 cu.yds.	=	\$5,056.20
Crush 4'-0":	\$1.85 /cu.yd.	x	5494 cu.yds.	=	\$10,163.90
Crush 2'-0":	\$2.30 /cu.yd.	x	2933 cu.yds.	=	\$6,745.90
Load Crusher:	\$0.60 /cu.yd.	x	8427 cu.yds.	=	\$5,056.20
Oversize Reduction:	\$4.50 /cu.yd.	x	602 cu.yds.	=	\$2,708.68
Change Gradation:					\$210.00
				Subtotal	\$50,795.46

Move In and set up Drill and Compressor (within area)	5.4	@	\$46.00	=	\$248.40
Move in D-8 (within area)	5.4	@	\$35.50	=	\$191.70
Move in Loader					\$219.98
Move in Excavator (within area)	5.4	@	\$44.80	=	\$241.92
Move in 3 Trucks (within area)	5.4	@	\$2.85	=	\$46.17
Move in Water Truck (within area)	5.4	@	\$2.85	=	\$15.39
Move in 3 stage crusher					\$2,489.00
Set up 3 stage crusher					\$2,520.00
				Subtotal	\$5,972.56

TOTAL PRODUCTION COSTS \$56,768.02

Base Cost 2'-0" =	\$7.08	Per Cu.Yd.
Base Cost 4'-0" =	\$6.55	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 (SF Miami River Rd.)	4.72	1.30	6.55	12.57	5164	64,936.80	
A to B (SF Miami River Rd.) Bedding/Backfill	4.72	0.60	7.08	12.40	400	4,958.60	
C to D (FB 3)	1.56	1.30	7.08	9.94	2353	23,380.59	
C to D (FB 3) Bedding/Backfill	1.56	0.60	7.08	9.24	180	1,662.57	
C to D (FB 3) Base Rock/Backfill	1.56	1.30	6.55	9.41	250	2,353.73	
A to E (Miami Forest Road) Base Rock/Backfill	3.21	1.30	6.55	11.06	80	885.19	
				Total C.Y.	8427	Sub Total	98,177.48

TOTAL ROCKING COSTS 98,177.48



OREGON DEPARTMENT OF FORESTRY

CRUISE REPORT

Miami Combo

1. Type of Sale

Clearcut/Retention Cut – Recovery conifer and red alder

2. Legal Description

Portions of Sections 14, 15, 16, 22, and 23, T2N, R9W, W.M., Tillamook County, Oregon.

3. Sale Acreage

	ACRES		
	<u>Sale</u>	<u>Total</u>	<u>Net</u>
Area 1a (Clearcut)	46	39	30
Area 1b (Retention cut)	55	54	54
Area 2a (Clearcut)	96	89	81
Area 2b (Retention cut)	12	11	11
Total	209	193	176

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.

Net acres: Used for calculating the advertised volume.

Clearcut/Retention cut - 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

A total of 67 variable radius plots were taken across the sale areas. Twenty-six were used to evaluate Areas 1a and 1b, and 41 plots were used to evaluate Areas 2a and 2b. Cruise lines in Area 1 were established approximately 600 feet apart and approximately 500 feet apart in Area 2. All plots were spaced 200 feet apart. All conifers 8 inches DBH and greater and all hardwoods 10 inches DBH and greater were recorded on all plots. The first Douglas-fir take tree on each plot was measured for merchantable height and grade. Red alders were measured and graded.

B. Plot size

A basal area factor of 20 was used. The point of observation was at 4.5 feet.

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Conifer trees were measured to a 6-inch top and hardwood trees were measured to an 8-inch top, both favoring 40-foot lengths. All heights were measured to the nearest foot. All diameters were measured at a height of 4.5 feet to the nearest 1-inch. Conifers less than 20 board feet and hardwoods less than 30 board feet were not recorded.

5. Computation Procedure

Grade trees were used to develop a volume-basal area ration (VBAR) for each species. Volumes for grade trees were computed using the Atterbury Super A.C.E. 98 program. Residual and surplus conifer trees were designated and the VBAR was used to expand the volume the sale areas shown on the volume summary attachment. The appraisal volume is the actual volume to be removed and does not include reserved trees located within the clearcut or leave trees in the retention cut.

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. The hemlock, spruce, cedar, and hardwoods naturally regenerated and the Douglas-fir was planted on the sale areas. Sale areas were planted in the early 60's and 70's. The alder was aerially sprayed in the 1970's resulting in short boles and multiple tops. The current stand condition is closed single canopy. The Douglas-fir has moderate to severe symptoms of Swiss needle Cast.

8. Cruiser Names/Dates

Clough, Kiser, Moore, Travers, Wells, Wilfong, Winter 2000.

9. Revenue Distribution

FDF: 100% Tax Code: 56 – 100%
Deed Number: 15, 35
Rehabilitation Obligated - 75%

10. Attachments

Stand Tables
Volume Summary
Logging Plan

Area 1

TC		Stand Table Summary											Page		
PSTNDSUM													1		
T02N R09W S15 Ty00A1		104.00		Project MIAMICO				Time: 1:21:42PM							
				Acres 104.00				Grown Year:							
S Spc T	DBH	Sample Trees	Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
			FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DF	8	2	91	200	3.472	1.21	3.47	7.3	45.0	.72	25	156	75	26	16
DF	9	6	91	200	8.231	3.64	10.97	7.2	40.0	2.26	79	439	235	82	46
DF	10	5	90	200	5.556	3.03	6.67	10.1	48.3	1.92	67	322	200	70	34
DF	11	5	90	59	4.592	3.03	5.51	10.5	41.7	1.65	58	230	171	60	24
DF	12	17	91	61	13.118	10.30	13.12	16.0	59.4	5.97	210	779	621	218	81
DF	13	19	90	63	12.493	11.52	18.41	13.7	51.8	7.18	252	953	746	262	99
DF	14	14	90	45	7.937	8.48	7.94	18.0	50.0	4.08	143	397	424	149	41
DF	15	10	90	99	4.939	6.06	9.88	19.6	85.0	5.51	193	840	573	201	87
DF	16	13	90	69	5.643	7.88	5.64	33.4	120.0	5.37	188	677	558	196	70
DF	17	8	90	199	3.076	4.85	3.08	46.4	240.0	4.06	143	738	423	148	77
DF	18	10	91	85	3.430	6.06	6.86	27.7	105.0	5.42	190	720	563	198	75
DF	19	10	91	92	3.078	6.06	6.16	33.1	120.0	5.81	204	739	605	212	77
DF	20	14	90	200	3.917	8.55	7.83	48.6	275.0	10.85	381	2,154	1,129	396	224
DF	21	3	91	200	.756	1.82	1.51	54.9	310.0	2.36	83	469	246	86	49
DF	22	7	90	200	1.607	4.24	3.21	61.5	370.0	5.64	198	1,189	586	206	124
DF	24	9	90	200	1.736	5.45	3.47	71.0	420.0	7.03	247	1,458	731	257	152
DF	25	2	91	200	.356	1.21	.71	78.6	480.0	1.59	56	341	166	58	36
DF	26	2	90	200	.329	1.21	.66	85.0	530.0	1.59	56	348	166	58	36
DF	27	1	90	200	.152	.61	.30	89.3	555.0	.78	27	169	81	28	18
DF	28	1	90	199	.142	.61	.28	97.7	610.0	.79	28	173	82	29	18
DF	30	2	91	200	.247	1.21	.49	114.0	740.0	1.60	56	365	167	59	38
DF	32	2	91	200	.217	1.21	.43	126.8	800.0	1.57	55	347	163	57	36
DF	33	1	91	200	.102	.61	.20	136.8	900.0	.80	28	184	83	29	19
DF	39	1	90	200	.073	.61	.15	190.4	1305.0	.79	28	191	82	29	20
DF	42	1	91	200	.063	.61	.13	219.5	1485.0	.79	28	187	82	29	19
DF	Totals	165	90	114	85.261	100.06	117.09	25.8	124.4	86.15	3,023	14,567	8,959	3,144	1,515
RA	10	4	94	33	4.445	2.42	4.44	7.2	37.5	.88	32	167	92	33	17
RA	11	4	93	42	3.673	2.42	3.67	9.8	40.0	.99	36	147	103	38	15
RA	12	19	94	53	14.662	11.52	14.66	14.6	55.8	5.87	213	818	610	222	85
RA	13	18	93	49	11.835	10.91	11.84	16.9	60.6	5.49	200	717	571	208	75
RA	14	12	94	49	6.803	7.27	6.24	21.2	78.2	3.63	132	488	378	137	51
RA	15	7	93	57	3.457	4.24	4.94	18.5	68.0	2.51	91	336	261	95	35
RA	16	8	94	53	3.472	4.85	4.77	21.8	79.1	2.86	104	378	298	108	39
RA	17	5	93	46	1.922	3.03	2.31	26.0	100.0	1.65	60	231	172	62	24
RA	18	11	94	51	3.773	6.67	4.46	31.0	97.7	3.80	138	436	395	144	45
RA	19	2	93	67	.616	1.21	1.23	27.8	117.5	.94	34	145	98	36	15
RA	20	9	94	47	2.500	5.45	3.61	30.4	112.3	3.02	110	406	314	114	42
RA	21	3	94	48	.756	1.82	1.01	38.2	130.0	1.06	38	131	110	40	14
RA	22	4	93	53	.918	2.42	1.38	39.1	116.7	1.48	54	161	154	56	17
RA	23	2	94	63	.420	1.21	.84	40.2	180.0	.93	34	151	97	35	16
RA	25	1	93	28	.178	.61	.18	43.6	50.0	.21	8	9	22	8	1
RA	28	1	94	92	.142	.61	.28	84.4	390.0	.66	24	111	68	25	11
RA	Totals	110	94	50	59.572	66.67	65.86	19.9	73.3	35.99	1,309	4,828	3,743	1,361	502
WH	14	1	94	127	.567	.61	1.70	15.2	73.3	.83	26	125	86	27	13
WH	16	1	94	150	.434	.61	.43	40.3	200.0	.56	17	87	58	18	9
WH	18	2	93	114	.686	1.21	2.06	25.1	110.0	1.65	52	226	172	54	24
WH	19	2	93	150	.616	1.21	1.85	32.5	180.0	1.92	60	332	200	63	35
WH	Totals	6	93	134	2.303	3.64	6.04	25.7	127.5	4.96	155	770	516	161	80
Totals		281	92	88	147.136	170.36	188.99	23.7	106.7	127.11	4,487	20,166	13,219	4,666	2,097

Retention Cut - Leave 40ft²

Retention cut Leave

All Leave

CC TAKE

CC Leave

CC Take

Area 2

TC		PSTNDSUM		Stand Table Summary										Page Date:		1 4/23/2004	
T02N R09W S23 Ty00A2 120.00				Project MIAMICO						Time: 1:22:13PM							
				Acres 120.00						Grown Year:							
S Spc T	DBH	Sample Trees	Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals				
			FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF		
DF	8	5	91	200	6.987	2.44	6.99	4.9	24.0	.97	34	168	116	41	20		
DF	9	4	90	41	4.417	1.95	4.42	5.9	25.0	.74	26	110	89	31	13		
DF	10	13	91	72	11.627	6.34	11.63	11.8	60.0	3.92	138	698	470	165	84		
DF	11	10	90	56	7.392	4.88	7.39	12.3	48.0	2.59	91	355	311	109	43		
DF	12	8	91	97	4.969	3.90	9.94	12.4	55.0	3.51	123	547	422	148	66		
DF	13	10	90	67	5.292	4.88	5.29	21.1	70.0	3.18	111	370	381	134	44		
DF	14	18	91	81	8.214	8.78	16.43	14.6	56.7	6.82	239	931	818	287	112		
DF	15	4	91	92	1.590	1.95	3.18	18.9	75.0	1.71	60	238	205	72	29		
DF	16	11	91	89	3.843	5.37	5.94	28.6	111.2	4.85	170	660	582	204	79		
DF	17	11	91	92	3.404	5.37	6.81	26.6	105.0	5.15	181	715	618	217	86		
DF	18	7	90	82	1.932	3.41	3.86	27.2	102.1	3.00	105	395	359	126	47		
DF	19	13	90	92	3.221	6.34	6.44	33.2	122.3	6.10	214	788	732	257	95		
DF	20	12	90	93	2.683	5.85	5.37	38.1	145.0	5.83	205	778	700	246	93		
DF	21	9	91	200	1.825	4.39	3.65	55.5	315.0	5.77	203	1,150	693	243	138		
DF	22	17	91	103	3.141	8.29	9.42	34.2	143.3	9.18	322	1,351	1,102	387	162		
DF	23	13	90	200	2.198	6.34	6.59	46.8	273.3	8.79	309	1,802	1,055	370	216		
DF	24	11	90	200	1.708	5.37	5.12	51.0	296.7	7.44	261	1,520	893	313	182		
DF	25	10	90	200	1.431	4.88	4.29	56.5	333.3	6.91	243	1,431	830	291	172		
DF	26	4	90	200	.529	1.95	1.59	62.3	386.7	2.82	99	614	338	119	74		
DF	28	2	90	199	.228	.98	.68	70.4	430.0	1.37	48	294	165	58	35		
DF	29	2	91	200	.213	.98	.64	76.8	480.0	1.40	49	306	168	59	37		
DF	31	1	91	200	.093	.49	.28	89.2	570.0	.71	25	159	85	30	19		
DF	34	1	91	199	.077	.49	.23	106.4	696.7	.70	25	162	84	30	19		
DF	Totals	196	91	102	77.014	95.61	126.19	26.0	123.2	93.47	3,280	15,542	11,217	3,936	1,865		
RA	10	10	93	37	8.944	4.88	8.94	7.7	40.0	1.90	69	358	228	83	43		
RA	11	7	93	35	5.174	3.41	5.17	8.8	40.0	1.25	46	207	151	55	25		
RA	12	21	94	44	13.043	10.24	13.04	12.7	52.9	4.54	165	689	545	198	83		
RA	13	11	93	34	5.821	5.37	5.82	12.8	51.8	2.05	74	302	246	89	36		
RA	14	11	93	34	5.019	5.37	5.02	15.4	57.3	2.12	77	287	254	92	34		
RA	15	17	93	46	6.757	8.29	6.76	21.8	84.1	4.06	148	568	487	177	68		
RA	16	18	94	39	6.289	8.78	6.29	22.5	75.6	3.90	142	475	468	170	57		
RA	17	8	94	46	2.476	3.90	2.48	28.9	112.5	1.97	72	279	236	86	33		
RA	18	14	93	46	3.865	6.83	4.42	29.0	98.1	3.52	128	433	423	154	52		
RA	19	6	93	41	1.486	2.93	1.73	30.6	110.0	1.46	53	191	175	64	23		
RA	20	5	93	47	1.118	2.44	1.34	36.2	115.0	1.33	49	154	160	58	19		
RA	22	4	93	48	.739	1.95	.92	42.8	108.0	1.09	40	100	131	47	12		
RA	24	1	94	65	.155	.49	.31	43.8	155.0	.37	14	48	45	16	6		
RA	25	1	93	33	.143	.49	.14	52.2	230.0	.21	7	33	25	9	4		
RA	26	1	94	50	.132	.49	.13	79.1	150.0	.29	10	20	35	13	2		
RA	Totals	135	93	40	61.162	65.85	62.53	17.5	66.3	30.05	1,093	4,144	3,606	1,311	497		
WH	16	2	93	150	.699	.98	1.40	25.9	140.0	1.16	36	196	139	43	23		
WH	19	1	94	68	.248	.49	.50	27.7	110.0	.44	14	55	53	16	7		
WH	26	1	94	150	.132	.49	.26	70.6	470.0	.60	19	124	72	22	15		
WH	Totals	4	93	131	1.079	1.95	2.16	31.8	173.6	2.19	69	375	263	82	45		
Totals		335	92	75	139.255	163.41	190.87	23.3	105.1	125.72	4,441	20,061	15,086	5,329	2,407		

Retention Cut leave 40ftz
CC take

CC leave

Retention Cut leave
CC take

All leave



"STEWARDSHIP IN FORESTRY"

Miami Combo

Volume Summary

Area 1a -- Clearcut						
30 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	92	132	12.1	363	5%	345
Hemlock	0	0	0.0	0	5%	0
Alder	67	69	4.62	139	5%	132
TOTAL				502		477

Area 1b -- Retention Cut						
54 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	60	132	7.92	428	5%	407
Hemlock	0	0	0.0	0	5%	0
Alder	0	0	0.00	0	5%	0
TOTAL				428		407

Area 2a -- Clearcut						
81 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	86	157	13.50	1094	5%	1039
Hemlock	0	0	0.0	0	5%	0
Alder	66	60	3.96	321	5%	305
TOTAL				1415		1344

Area 2b -- Retention Cut						
11 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	56	157	8.8	97	5%	92
Hemlock	0	0	0.0	0	5%	0
Alder	0	0	0.00	0	5%	0
TOTAL				97		92

TOTAL SALE VOLUME		
176 acres		
SPECIES	MBF	Net Vol. (MBF)
Douglas-fir	1982	1883
Hemlock	0	0
Alder	460	437
TOTAL	2442	2320



LOGGING PLAN
 Timber Sale Contract No. 341-05-23
 Miami Combo
 Portions of Sections 14, 15, 16, 22, and 23,
 T2N, R9W, W. M.
 Tillamook County, Oregon

Area	Type of Operation	Acres Sale	Acres Net
1a	Clearcut	46	30
1b	Retention Cut	55	54
2a	Clearcut	96	81
2b	Retention Cut	12	11
Total		209	176

- | | |
|-------------------------|-----------------------|
| ■ Tractor landing | — Setting boundary |
| ● Cable landing | - - - Area boundary |
| ▲ Domestic water supply | ●●● Sale boundary |
| ⊗ Blocked | — Ownership boundary |
| □ Cable yarding | — Type-F stream |
| ▨ Ground yarding | — Type-N stream |
| ⊠ Downhill yarding | — Surfaced road |
| ■ Buffer | — Unsurfaced road |
| ■ Non-required thinning | — State highway |
| | — County road |
| | — Non-project road |
| | — Swing road |
| | — Abandoned road |
| | — OHV trail |
| | — Non-motorized trail |

1000 0 1000 Feet

Tillamook District GIS
03-23-2004

This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.



OREGON DEPARTMENT OF FORESTRY

WRITTEN PLAN

MIAMI COMBO TIMBER SALE

Protected Waters: Unnamed tributaries of Miami River and South Fork Miami River.

Location: NE 1/4 of Sec. 22, 15, 14, and 11 of T2N, R9W, W.M.

Activities: Placement of a fish passable structure on an unnamed tributary of South Fork Miami River with an arch pipe to allow fish passage. Log culvert removals, steel culvert installations, riprap placement, road vacating, and road reconstruction will occur within 500 feet of a Large Type F stream. Road reconstruction will occur within 100 feet of a large Type F stream (Miami River).

Protection Measures: 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.

A 103" x 71" by 60 foot arch pipe has been sized for a 100-year event using Peak Flow. Fill material will be placed in 8-inch lifts and compacted with a tamper. Fill slopes will be constructed at a 1½ to 1 fill width-to-height ratio. Pipe shall be countersunk and filled with granular material, as designed, to simulate stream bed.

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

Work will be performed only during dry weather periods and low water stream flows. Operations will cease when rain or periods of high stream flows result in a visual increase in turbidity. Stream water will be diverted around the work areas when water quality is likely to be jeopardized.

Riprap rock will be placed by a track mount excavator to minimize erosion.

Log fills will be removed and placed on stable locations on existing road prism.

Prepared By: Vanessa M. Stone
Road Specialist

Date: May 3, 2004



"STEWARDSHIP IN FORESTRY"

Oregon Department of Forestry

WRITTEN PLAN

SALE NAME: Miami Combo

PROTECTED WATERS: The Miami River and the N. FK. Miami River, and two unnamed, medium Type F streams, tributaries to the Miami River.

Definitions: Stream buffer: 100 feet horizontal distance from the stream bank of Type F.

LOCATION: Portions of Sections 14, 15, 16, 22, and 23, T2N, R9W, W.M., Tillamook County.

Activity: Cable lines across stream

Protection measures:

- Trees within the stream buffer or outside the timber sale boundary are reserved from cutting, except as approved by ODF to facilitate logging operations. Trees felled within these zones will be left for down wood.
- Trees that enter Type F streams will be left for down wood.
- Cable corridors will be at least of 150 feet apart where they extend over or through the Type F stream and buffer.

Date: February 9, 2004

Prepared by: Neal Bond, Forester