



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary North Quarry Alder Sale 341-05-13

District: Tillamook

Date: 10/8/04

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$137,196.24	\$409,929.16	\$547,125.40
		Project Work	(\$66,265.00)
		Advertised Value	\$480,860.40



Timber Sale Appraisal Timber Description North Quarry Alder Sale 341-05-13

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: North Fork Trask River Road, Bark Shanty, Quarry Roads. Portions of Sections 27, 28, 33, and 34, T1S, R7W, W.M., Tillamook County, Oregon.

Date: 10/8/04

Stand Stocking: 20%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	14	0	95
Alder (Red)	13	0	95

Volume by Grade	Douglas - Fir	Alder (Red)	Total
2S	30	0	30
3S	364	0	364
4S	78	0	78
Camprun	0	1,156	1,156
Total	472	1,156	1,628

Comments: Pond Values Used: 3rd Quarter 2004 + Local Pond Values.

Maintenance of North Fork Trask, Bark Shanty: \$2.73

Grading: $\$500/\text{mile} \times 6.5 \text{ miles} \times 1 \text{ time} / 1628\text{mbf} = \2.00

Surfacing: $20\text{cy}/\text{mile} \times \$5.75/\text{cy} \times 1.6\text{mmbf} \times 6.5 \text{ miles} / 1628 \text{ mbf} = \0.73

Other costs (add profit and risk): \$3256

Brand and Paint: $\$2.00/\text{mbf} \times 1628\text{mbf} = \3256

Other (profit and risk included): \$45,964

Slash piling and sorting: $(120 \text{ acres cable harvest} / 50 \text{ acres}/\text{hour}) \times \$110/\text{hr} = \$264$

Swing Road: $200\text{mbf} \times \$25/\text{mbf} = \5000

Trask Public Safety Road Fee: $\$25/\text{mbf} \times 1628\text{mbf} = \$40,700$

Alder pond value of \$625/MBF is used.

Cedar stumpage value: $\$1050/\text{MBF} \text{ pond value} - \$306/\text{MBF} \text{ logging costs} = \$744/\text{MBF}$.



Timber Sale Appraisal Logging Conditions North Quarry Alder Sale 341-05-13

"STEWARDSHIP IN FORESTRY"

Combination#: 1	Douglas - Fir	100.00%	
	Alder (Red)	100.00%	
Yarding Distance:	Short (400 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:	6		Bd. Ft./Load: 3,000
Cost/MBF:	\$143.23		
Machines:			
	Log Loader (A)		
	Tower Yarder (Small)		



Timber Sale Appraisal

Logging Costs

North Quarry Alder

Sale 341-05-13

"STEWARDSHIP IN FORESTRY"

Date: 10/8/04

Operating Seasons: 2.0

Profit & Risk: 18%

Project Costs: \$66,265

Other Costs (P/R): \$3,256

Slash Disposal: \$0

Other Costs: \$45,964

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

Road Maintenance: \$2.73

Hauling Costs

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

Local Pond Values

Date	Species	Grade	Value
10/8/04	Alder (Red)	Camprun	\$625.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Breakdown North Quarry Alder Sale 341-05-13

Costs	Douglas - Fir	Alder (Red)
Logging	143.23	143.23
Road Maintenance	2.87	2.87
Fire Protection	3.33	3.33
Hauling	80.84	53.79
Other (P/R appl.)	2.00	2.00
Profit & Risk	41.81	36.94
Slash Disposal	0.00	0.00
Scaling	2.00	0.00
Other	28.23	28.23
Total	304.31	270.39

Amortization	0.00	0.00
Pond Value	594.98	625.00
Stumpage	290.67	354.61
Amortized	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary North Quarry Alder Sale 341-05-13

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	472.00	1,156.00
Value	290.67	354.61
Total	137,196.24	409,929.16

Gross Timber Sale Value

Cash \$547,125.40

Prepared by: John Pine

Date: 10/8/04

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: North Quarry Alder

CONSTRUCTION

Point	E to F	9+70	stations =	\$5,088.93
SUBTOTAL CONSTRUCTION				\$5,088.93

IMPROVEMENT

Point	A to B	98+65	stations =	\$44,877.33
Point	C to D	33+80	stations =	\$14,410.49
SUBTOTAL IMPROVEMENT				\$59,287.82

SPECIAL PROJECTS

Remove Culverts from State Lands				\$252.09
SUBTOTAL SPECIAL PROJECTS				\$252.09

MOVE IN

\$1,637.80

GRAND TOTAL

\$66,266.65

SUMMARY OF CONSTRUCTION COST

Sale:	<u>North Quarry Aider</u>			Road:	<u>A to B</u>		
Construction -	0+00 stations 0.00 miles			Improvement -	98+65 stations 1.87 miles		
CLEARING AND GRUBBING -							
Roadside Brushing		1.87 miles @		\$1,000.00 per mile =		\$1,868.37	
Side cast areas		0.211 acres @		\$815.00 per acre =		\$172.13	
Scattering		0.250 acres @		\$815.00 per acre =		\$203.75	
						TOTAL CLEARING AND GRUBBING	\$2,244.25
EXCAVATION -							
Pullback		512 cy @		\$1.40 per c.y. =		\$716.80	
Remove Log Fills (Sta. 53+25, 58+75, 60+65, 63+25, 71+85, 79+30, & 82+55)		20 Hours @		\$130.00 per Hour =		\$2,600.00	
Clean Ditchlines and End-haul material to waste area		98.65 Stations @		\$17.50 per station =		\$1,726.38	
Berm Removal Sta. 13+45 - 14+00, 73+73 - 76+30, & 83+85 - 85+95		98 cy @		\$1.15 per c.y. =		\$112.70	
Remove Large Fill and Existing culvert (Station 16+35)		4 Hours @		\$130.00 per Hour =		\$520.00	
						TOTAL EXCAVATION	\$5,675.88
ENDHAUL -							
Waste Areas (For Fill Removals)	Two Trucks	24 Hours @		\$114.00 per Hour =		\$2,736.00	
Waste Area (Berm Removals)	13+45 - 14+00 & 73+70 - 76+30	60 cy @		\$1.07 per c.y. =		\$64.20	
Waste Area (Sidecast Pullback)	26+90 to 31+50	512 cy @		\$1.04 per c.y. =		\$532.48	
Spread & compact Berm material and Sidecast		610 cy @		\$0.20 per c.y. =		\$122.00	
Spread & compact One Dozer		6 Hours @		\$130.00 per Hour =		\$780.00	
						TOTAL ENDHAUL	\$4,234.68
CULVERTS - MATERIALS & INSTALLATION							
	Culverts						
	198 LF of 18"	\$2,920.50		196 LF of 24"	\$3,479.00		
	122 LF of 30"	\$2,531.50		42 LF of 36"	\$772.80		
	0 LF of 42"	\$0.00		50 LF of 48"	\$1,485.00		
	0 LF of 54"	\$0.00		0 LF of 60"	\$0.00		
	0 LF of 66"	\$0.00		0 LF of 72"	\$0.00		
		\$5,452.00			\$5,736.80		
	Half Rounds						
	10 LF of 21"	\$114.00		0 LF of 30"	\$0.00		
	0 LF of 36"	\$0.00		0 LF of 42"	\$0.00		
		\$114.00			\$0.00		
	Culvert Slakes & Markers						
	2 stakes	\$16.00					
	16 markers	\$128.00					
		\$144.00					
						TOTAL CULVERTS	\$11,446.80
SURFACING-							
A to B:	Sta. 41+20 to 58+25	456 cy. of Crushed @		\$4.37 per c.y. =		\$1,995.36	
A to B:	Sta. 58+25 to 98+65	946 cy. of Crushed @		\$9.69 per c.y. =		\$9,187.67	
A to B: (Junctions)	Sta. 0+00 & 41+20	14 cy. of Crushed @		\$3.86 per c.y. =		\$54.11	
Culvert Backfill/Bedding	6+40, 16+35, 53+25, 58+75, 60+65, 63+25	135 cy. of Crushed @		\$3.85 per c.y. =		\$520.40	
A to B: (Turnouts)	Sta. 0+00 to 41+20	62 cy. of Crushed @		\$3.86 per c.y. =		\$239.62	
A to B: (Spot Rock)	Sta. 0+00 to 41+20	30 cy. of Crushed @		\$3.95 per c.y. =		\$118.65	
A to B: (Spot Rock)	Sta. 0+00 to 41+20	305 cy. of Pit-Run @		\$6.31 per c.y. =		\$1,925.50	
Ditchline Armor	Sta. 60+45 to 60+65	2 cy. of Pit-Run @		\$6.01 per c.y. =		\$12.03	
Fill/Energy Dissipator	0+00 to 98+65	315 cy. of Riprap @		\$9.05 per c.y. =		\$2,850.78	
Fill Armor	16+35 to 16+65	30 cy. of Riprap @		\$8.84 per c.y. =		\$265.20	
						TOTAL SURFACING	\$17,169.32
SPECIAL PROJECTS							
Repair existing culvert inlet -		1.00 hours @		\$28.00 per hour =		\$28.00	
Construct 3' wide x 2' deep ditchline		1.00 hours @		\$130.00 per hour =		\$130.00	
Construct waste areas -		2.00 hours @		\$130.00 per hour =		\$260.00	
Grade and shape road (Ditched)-		81.90 stations @		\$17.40 per station =		\$1,425.06	
Grade and shape road (Outsloped)-		16.75 stations @		\$13.70 per station =		\$228.48	
Construct Sediment Catch Basins -		6.00 @		\$100.00 each =		\$600.00	
Roll subgrade w/ vibratory roller prior to rocking -		57.45 stations @		\$11.00 per station =		\$631.95	
Grass seed and fertilize -		2.26 acres @		\$220.00 per acre =		\$497.20	
Mulching -		0.461 acres @		\$600.00 per acre =		\$276.72	
						TOTAL SPECIAL PROJECTS	\$4,106.41
						GRAND TOTAL	\$44,877.33

SUMMARY OF CONSTRUCTION COST

Sale:	<u>North Quarry Alder</u>		Road:	<u>C to D</u>		
Construction -	<u>0+00</u> stations <u>0.00</u> miles		Improvement -	<u>33+80</u> stations <u>0.64</u> miles		
CLEARING AND GRUBBING -						
Roadside Brushing	Sta. 0+00 to 12+00	0.23 miles @	\$800.00 per mile =	\$184.00		
Scattering	Sta. 12+00 to 33+80	1.250 acres @	\$815.00 per acre =	\$1,018.75		
				TOTAL CLEARING AND GRUBBING		
				\$1,202.75		
EXCAVATION -						
Road Earthwork	Sta. 12+00 to 15+70	3.70 sta. @	\$65.00 per sta. =	\$240.50		
Road Earthwork	Sta. 15+70 to 33+80	18.10 cy. @	\$100.00 per c.y. =	\$1,810.00		
Widening: Common		329 cy. @	\$1.15 per c.y. =	\$378.64		
Widening: Ripplable		110 cy. @	\$2.25 per c.y. =	\$246.94		
Clean and End-haul ditchlines: Sta. 0+00 to 12+00		12 sta. @	\$17.50 per sta. =	\$210.00		
Remove outside berm	Sta. 15+70 to 33+80	121 cy. @	\$1.15 per c.y. =	\$139.15		
				TOTAL EXCAVATION		
				\$3,025.23		
ENDHAUL -						
Widening	23+00 to 24+75	140 cy. @	\$1.01 per c.y. =	\$141.40		
Widening	28+70 to 31+95	299 cy. @	\$0.98 per c.y. =	\$293.02		
Spread & compact		439 cy. @	\$0.20 per c.y. =	\$87.80		
				TOTAL ENDHAUL		
				\$836.12		
CULVERTS - MATERIALS & INSTALLATION						
<u>Culverts</u>						
0	LF of 18"	\$0.00	0	LF of 24"	\$0.00	
0	LF of 30"	\$0.00	0	LF of 36"	\$0.00	
0	LF of 42"	\$0.00	0	LF of 48"	\$0.00	
0	LF of 54"	\$0.00	0	LF of 60"	\$0.00	
0	LF of 66"	<u>\$0.00</u>	0	LF of 72"	<u>\$0.00</u>	
		\$0.00			\$0.00	
<u>Half Rounds</u>						
0	LF of 21"	\$0.00	0	LF of 30"	\$0.00	
0	LF of 36"	<u>\$0.00</u>	0	LF of 42"	<u>\$0.00</u>	
		\$0.00			\$0.00	
<u>Culvert Stakes & Markers</u>						
0	stakes	\$0.00				
0	markers	<u>\$0.00</u>				
		\$0.00				
				TOTAL CULVERTS	\$0.00	
SURFACING:						
C to D	12+00 to 33+80	1,196 cy. of	Pit-Run	@	\$6.54 per c.y. =	\$7,825.56
C to D (turnout)	Sta. 12+00	11 cy. of	Crushed	@	\$4.27 per c.y. =	\$47.02
				TOTAL SURFACING	\$7,872.58	
SPECIAL PROJECTS						
Construct waste areas -		1.00 hours @	\$130.00 per hour	\$130.00		
Grade and Shape road (ditched)-	Sta. 12+00 to 15+70	3.70 stations @	\$14.20 per station	\$52.54		
Grade and Shape road (outsloped)-	Sta. 15+70 to 33+80	18.10 stations @	\$9.75 per station	\$176.48		
Construct Road Dips -		4.00 @	\$150.00 each	\$600.00		
Roll subgrade w/ vibratory roller prior to rocking -		21.80 stations @	\$11.00 per station	\$239.80		
Grass seed and fertilize -		1.25 acres @	\$220.00 per acre	\$275.00		
Mulching -		0.000 acres @	\$600.00 per acre	\$0.00		
				TOTAL SPECIAL PROJECTS	\$1,473.82	
GRAND TOTAL				\$14,410.49		

SUMMARY OF CONSTRUCTION COST

Sale:	<u>North Quarry Alder</u>					Road: <u>E to F</u>
Construction -	<u>9+70</u> stations <u>0.18</u> miles					<u>+00</u> stations <u>0.00</u> miles
CLEARING AND GRUBBING -						
Scattering		0.440	acres @	\$815.00	per acre =	\$358.60
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	\$358.60
EXCAVATION -						
Road Earthwork		0.00	sta. @	\$100.00	per sta. =	\$0.00
					TOTAL EXCAVATION	\$0.00
ENDHAUL -						
					TOTAL ENDHAUL	\$0.00
CULVERTS - MATERIALS & INSTALLATION						
		<u>Culverts</u>				
		0	LF of 18"	\$0.00		
		0	LF of 30"	\$0.00	28	LF of 24" \$497.00
		0	LF of 42"	\$0.00	0	LF of 36" \$0.00
		0	LF of 54"	\$0.00	0	LF of 48" \$0.00
		0	LF of 66"	\$0.00	0	LF of 60" \$0.00
		0	LF of 66"	\$0.00	0	LF of 72" \$0.00
				\$0.00		\$497.00
		<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		
		1	markers	\$8.00		
				\$8.00		TOTAL CULVERTS
						\$505.00
SURFACING-						
E to F	0+00 to 9+70	529	cy. of	Pit-Run	@	\$6.89 per c.y.= \$3,646.46
Culvert Backfill/Spot Rock	4+40	10	cy. of	Crushed	@	\$4.21 per c.y.= \$42.15
Junction (0+00)	0+00	7	cy. of	Crushed	@	\$3.86 per c.y.= \$27.05
						TOTAL SURFACING
						\$3,715.66
SPECIAL PROJECTS						
Grade and shape road (outsloped) -		9.70	stations @	\$9.75	per station	\$94.58
Roll subgrade w/ vibratory -		9.70	stations @	\$11.00	per station	\$106.70
Remove large stumps -			lump sum @			\$200.00
Grass seed and fertilize -		0.22	acres @	\$220.00	per acre	\$48.40
Mulching -		0.100	acres @	\$600.00	per acre	\$60.00
						TOTAL SPECIAL PROJECTS
						\$509.68
GRAND TOTAL						\$5,088.93

ROCK DEVELOPMENT COST SUMMARY

Pit:	Rimrock Road Pit	Location:	Rimrock Road
Sale:	North Quarry Alder	Road:	2032 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage:	1.16	Total Truck Loads:	2032 c.y.
Drill Pct.:	25%	In Place Total:	1451 c.y.

Pit Development & Cleanup including Clearing and grubbing of				\$580.81
Waste Area @ adjacent to pit, place overburden				
in Waste Area, spread and compact.				
Drill & Shoot:	\$3.85 /cu.yd.	x	363 cu.yds.	= \$1,397.00
Rip Rock	\$1.75 /cu.yd.	x	1089 cu.yds.	= \$1,905.00
Load Dump Truck:	\$0.60 /cu.yd.	x	2032 cu.yds.	= \$1,219.20
			Subtotal	\$5,102.01

Move In and set up Drill and Compressor	1	@	\$121.54	=	\$121.54
Move in Excavator			(Within Area: 2.76 Miles @ \$44.80/Mile)	=	\$123.65
Move in Trucks			(Within Area: 3 Trucks @ 2.76 Miles @ \$2.85/Truck/Mile)	=	\$23.60
				Subtotal	\$268.79

Pit-Run Base Cost=	\$2.64	Per Cu.Yd.	TOTAL PRODUCTION COSTS	\$5,370.80
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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: Ditchline armor: Stations 60+45 to 60+65	\$2.77	\$0.60	\$2.64	\$6.01	2	\$12.03
A to B: Spot Rock	\$2.77	\$0.90	\$2.64	\$6.31	305	\$1,925.50
C to D: Sta. 12+00 to 33+80	\$3.00	\$0.90	\$2.64	\$6.54	1196	\$7,825.56
E to F	\$3.35	\$0.90	\$2.64	\$6.89	529	\$3,646.46
Total C.Y.					2032	Sub Total \$13,409.54
						TOTAL ROCKING COSTS \$13,409.54

ROCK DEVELOPMENT COST SUMMARY

Pit:	Toll Pit Stockpile	Location:	Toll Road
Sale:	North Quarry Aider	Road:	948 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	948 c.y.
Drill Pct.:	0%	In Place Total:	677 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	948 cu.yds.	= \$568.68
Subtotal				\$568.68

Move in Loader	(Within Area: 11 Miles @ \$9/Mile)	=	\$99.00
Move in Trucks	(Within Area: 11 Miles @ \$2.85/Truck/Mile)	=	\$94.05
Subtotal			\$193.05

3" Crushed Base Cost=	\$0.80	Per Cu.Yd.		TOTAL PRODUCTION COSTS	\$761.73
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Road Segment	Haul Cost /cu.yd.	Processing Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A to B: 58+25 to 98+65	\$7.59	\$1.30	\$0.80	\$9.69	948	\$9,187.67
				Total C.Y.	948	Sub Total
						\$9,187.67

TOTAL ROCKING COSTS	\$9,187.67
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ROCK DEVELOPMENT COST SUMMARY

Pit:	Bark Shanty Stockpile	Location:	Base of Eagle Hill Road
Sale:	North Quarry Alder	Road:	725 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage:	1.16	Total Truck Loads:	725 c.y.
Drill Pct.:	0%	In Place Total:	518 c.y.

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	725	cu.yds.	=	\$435.06
Load Crusher:	\$0.60	/cu.yd.	x	0	cu.yds.	=	\$0.00
Crush 1-1/2"-0":	\$2.50	/cu.yd.	x	0	cu.yds.	=	\$0.00

Subtotal \$435.06

Move in Loader	1	@	\$177.58	=	\$177.58
Move in Trucks	(Within Area: 3 trucks, 1.69 Miles @ \$2.85/Truck/Mile)			=	\$14.45
					Subtotal \$192.03

2" Crushed Base Cost= \$0.86 Per Cu.Yd.

TOTAL PRODUCTION COSTS \$627.09

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: Stations 41+20 to 58+25	\$2.21	\$1.30	\$0.86	\$4.37	456	\$1,995.36
A to B: Sta. 0+00 to 41+20 (Turnouts)	\$1.70	\$1.30	\$0.86	\$3.86	62	\$239.62
A to B: Sta. 0+00, 41+20, & 80+15 (Junc.)	\$1.70	\$1.30	\$0.86	\$3.86	14	\$54.11
A to B: Culvert backfill	\$2.09	\$0.90	\$0.86	\$3.85	135	\$520.40
A to B: Spot Rock (Sta. 0+00 to 41+20)	\$1.79	\$1.30	\$0.86	\$3.95	30	\$118.65
C to D: Sta. 12+00 (Turnout)	\$2.11	\$1.30	\$0.86	\$4.27	11	\$47.02
E to F: Culvert backfill	\$2.45	\$0.90	\$0.86	\$4.21	10	\$42.15
E to F: 0+00 (Junc.)	\$1.70	\$1.30	\$0.86	\$3.86	7	\$27.05
				Total C.Y.	725	Sub Total
						\$3,044.36

TOTAL ROCKING COSTS \$3,044.36

ROCK DEVELOPMENT COST SUMMARY

Pit:	N.F. Trask (1/2 mile) Pit	Location:	N.F. Trask River Road
Sale:	North Quarry Alder	Road:	345 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	345 c.y.
Drill Pct.:	0%	In Place Total:	246 c.y.

Load Dump Truck: \$1.40 /cu.yd. x 345 cu.yds. = \$483.00
Subtotal \$483.00

Move in Excavator (Within Area: 5.95 Miles @ \$44.80/Mile) = \$266.56
 Move in Trucks (Within Area: 5.95 Miles @ \$2.85/Truck/Mile) = \$50.87
Subtotal \$317.43

TOTAL PRODUCTION COSTS \$800.43

RipRap Base Cost= \$2.32 Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Placement Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A to B: Fill Armor	\$5.12	\$1.40	\$2.32	\$8.84	30	\$265.20
A to B: Fill/Energy Dissipator	\$5.33	\$1.40	\$2.32	\$9.05	315	\$2,850.78
				Total C.Y.	345	Sub Total
						\$3,115.98
						TOTAL ROCKING COSTS \$3,115.98

MOVE-IN CALCULATIONS

Sale: North Quarry Alder

LOWBOY HAUL (Round Trip)		
DISTANCE	ROADWAY	AVE SPEED (MPH)
12.2	Highway	40
4.8	Main Lines (Off Road)	25
1.7	Pulling Steep Grades	18

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
0	Drill & Compressor	\$0.00		\$46.00	0.00	0.00	0	\$0.00	\$0.00
1	Brush Cutter	\$121.54		\$4.00	0.00	0.00	0	\$0.00	\$121.54
1	Graders	\$71.84		\$3.65	0.00	4.00	4	\$14.60	\$86.44
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	6.00	6	\$0.00	\$0.00
1	Rollers & Compactors	\$121.54		\$5.00	0.00	4.00	4	\$20.00	\$141.54
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)	\$389.06	1	\$44.80	0.00	4.00	4	\$358.40	\$747.46
1	Rubber Tired Backhoes/Skidders	\$121.54		\$3.00	0.00	0.00	0	\$0.00	\$121.54
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
1	Tractor (D8)	\$190.67	2	\$15.10	0.00	4.00	4	\$60.40	\$251.07
3	Dump Truck (10 cy +)	\$96.27		\$2.85	0.00	4.00	4	\$34.20	\$130.47
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)	\$37.72		\$2.85	0.00	0.00	0	\$0.00	\$37.72
0	Jaw	\$1,066.00							
0	2-Stage Crusher	\$1,597.00							
0	3-Stage Crusher	\$2,489.00							

TOTAL MOVE-IN COSTS:	\$1,637.80
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REMOVE CULVERTS FROM STATE LANDS COST SHEET

SALE: North Quarry Alder

<u>Point to Point</u>	<u>Number of Culverts</u>
A to B	2
C to D	0
TOTAL CULVERTS	2

Load culverts @ 0.25 hrs/culvert =	0.50 hrs
Move Backhoe between culverts =	0.50 hrs
Subtotal loading time =	1.00 hrs
Driving and unloading time =	1.50 hrs
Total project time =	2.50 hrs

5.00 hours labor @ \$33.07/hour =	\$165.35
2.50 hours with Dump Truck @ \$24.46/hour =	\$61.15
2.50 hours with trailer @ \$5.00/hour =	\$12.50
1.00 hours with Backhoe @ \$13.09/hour =	\$13.09

Grand Total

\$252.09

OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT



North Quarry Alder

"STEWARDSHIP IN FORESTRY"

1. **Type of Sale:**
Modified clearcut harvest; Lump sum alder and Recovery Douglas-fir.
2. **Legal Description:**
Section 27, 28, 33, and 34, T1S, R7W, W.M., Tillamook County, Oregon.
3. **Sale Acreage:**
The sale boundaries were plotted on a digital orthophoto and the acreage was calculated with GIS.

ACRES				
Area	Harvest Type	Sale	Total	Net
1	Clearcut	14	12	11
2	Clearcut	19	17	17
3	Clearcut	7	11	7
4	Clearcut	22	22	22
5	Clearcut	21	21	21
6	Clearcut	27	33	25
7	Clearcut	11	9	9
8	Clearcut	7	7	7
Total		128	132	119

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

60 variable-radius plots were installed with proportional numbers of count and grade plots in each sale area. Cruise lines were run by a North-South grid and spaced at 250-foot intervals. On all plots, tree count by diameter and species was recorded. On 30 plots, all merchantable live trees 9-inches DBH and greater were measured to obtain volume. Diameters were measured to the nearest inch, heights were measured to the nearest foot. The cruise had a coefficient of variation of 48.8 and a SE of 6.3% for net board feet/acre.

B: Plot size

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

C: Grading System:

Conifers were measured and graded to a 6" top favoring 40 foot log lengths using Columbia River rules. Hardwoods were 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 and 1939 Tillamook fires. The areas were seeded in 1963, 1972, 1973, and 1974 and met with limited success. Red alder regenerated naturally. The sale areas have received no prior stand management.

8. **Cruiser Names/Dates:**

Pine, Neuman, Walmark: Feb and April 2004

9. **Revenue Distribution:**

100% FDF

Tax Code: 9-2 (100%)

Deed Number: 161, 230

10% Rehabilitation Obligated

10. **Attachments:**

Volume Summary

Logging Plan



"STEWARDSHIP IN FORESTRY"

North Quarry Alder

Volume Summary

Area I							
11 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir		0	0	0.0	0	5%	0
Alder	13	180	106	19.1	210	5%	200
TOTAL					210		200

Area II							
17 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	12	64	78	5.0	85	5%	81
Alder	12	73	92	6.7	114	5%	108
TOTAL					199		189

Area III							
7 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir		0	0	0.0	0	5%	0
Alder	12	92	145	13.3	93	5%	88
TOTAL					93		88

Area IV							
22 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	16	8	135	1.1	24	5%	23
Alder	13	136	118	16.0	352	5%	334
TOTAL					376		357

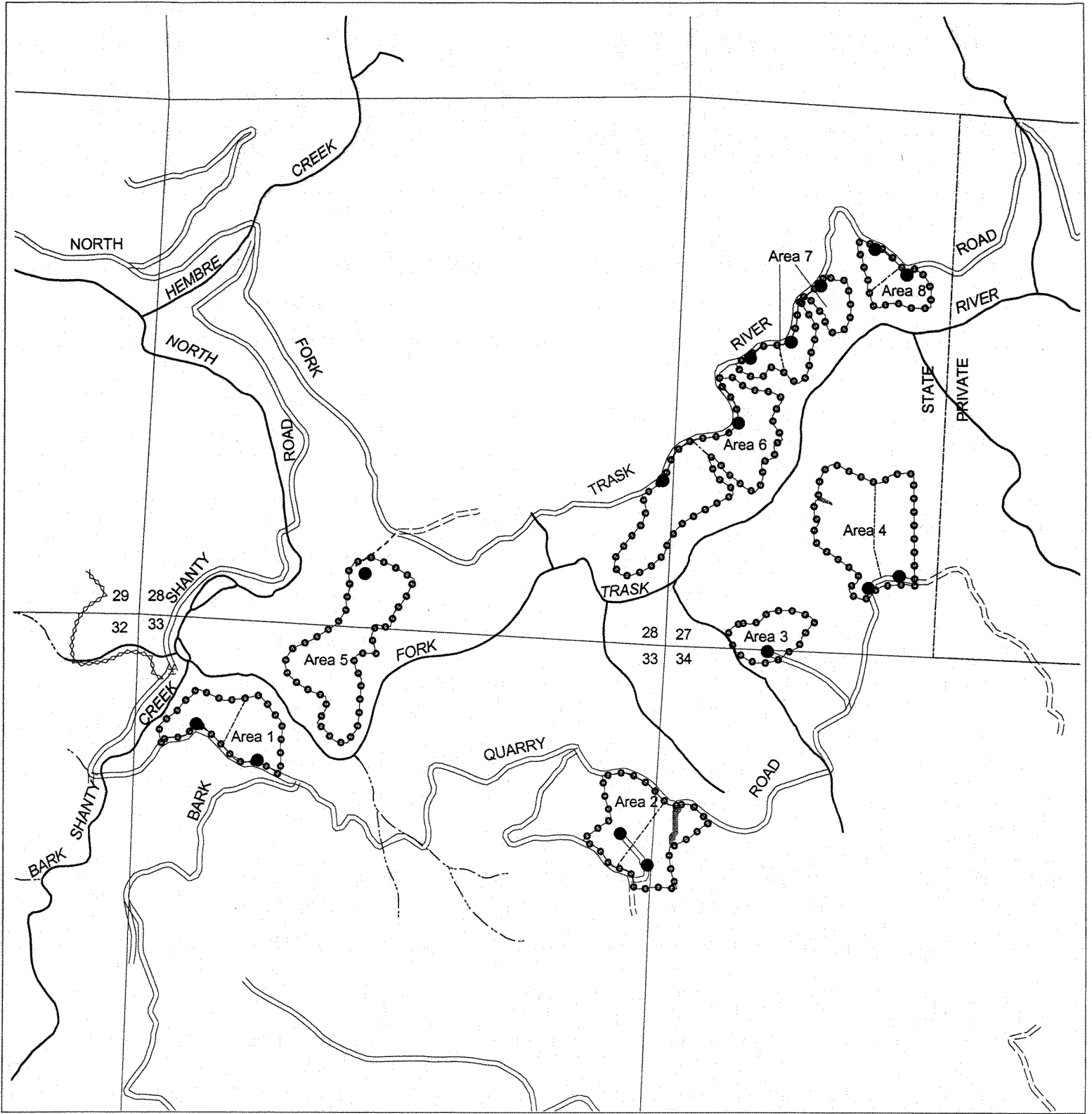
Area V							
21 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	14	44	117	5.1	107	5%	102
Alder	14	98	108	10.6	223	5%	212
TOTAL					330		314

Area VI							
25 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	14	33	99	3.3	83	5%	79
Alder	13	56	94	5.3	133	5%	126
TOTAL					216		205

Area VII							
9 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	15	65	119	7.7	69	5%	66
Alder	14	65	106	6.9	62	5%	59
TOTAL					131		125

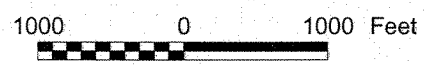
Area VIII							
7 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	15	133	137	18.2	127	5%	121
Alder	14	33	132	4.4	31	5%	29
TOTAL					158		150

TOTAL SALE VOLUME				
SPECIES	QMD	MBF	D&B	Net Vol. (MBF)
Douglas-fir	14	495	5%	472
Alder	13	1218	5%	1156
TOTAL		1713		1628



- Tractor landing
- Cable landing
- ▲ Domestic water supply
- ⊗ Blocked
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- Buffer
- ▨ Non-required thinning
- 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. 341-05-13
 North Quarry Alder
 Portions of Sections 27, 28, 33,
 and 34, T1S, R7W, W. M.
 Tillamook County, Oregon



Area	Type of Operation	Acres	
		Sale	Net
1	Clearcut	14	11
2	Clearcut	19	17
3	Clearcut	7	7
4	Clearcut	22	22
5	Clearcut	21	21
6	Clearcut	27	25
7	Clearcut	11	9
8	Clearcut	7	7
Total		128	119



Oregon Department of Forestry

WRITTEN PLAN

SALE NAME: North Quarry Alder

PROTECTED WATERS: North Fork Trask River

LOCATION: Portions of Sections 27, 28, and 33 T1S, R7W, W.M.,
Tillamook County, Oregon.

Riparian Management Area:

The area measured 100 feet slope distance from the high water mark on the North Fork Trask, a Type F stream.

Protection Measures:

Yarding Systems, Layout, and Stream Protection

When yarding with cables hanging within or across the streams, cables will be pulled 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.

Date: April 20, 2004
By: John Pine