



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary East Anderson Sale 341-05-17

District: Tillamook

Date: 1/7/05

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$434,915.16	\$63,960.00	\$498,875.16
		<b>Project Work</b>	(\$225,332.00)
		<b>Advertised Value</b>	\$273,543.16



# Timber Sale Appraisal

## Timber Description

### East Anderson

### Sale 341-05-17

"STEWARDSHIP IN FORESTRY"

**District:** Tillamook

**Location:** Portions of Sections 9 and 10, T2N, R9W, W.M., Tillamook County, Oregon.

**Date:** 1/7/05

**Stand Stocking:** 20%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	16	0	95
Western Hemlock / Fir	14	0	95
Alder (Red)	14	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Alder (Red)	Total
2S	705	375	0	1,080
3S	597	427	0	1,024
4S	54	70	0	124
Camprun	0	0	240	240
<b>Total</b>	<b>1,356</b>	<b>872</b>	<b>240</b>	<b>2,468</b>

**Comments:** Pond Values Used: 4th Quarter 2004.

Cedar Stumpage =  $\$875.00 - \$316.26 = \$558.74$ .

ADDITIONAL COSTS (Profit and Risk to be added)

Brand and Paint -  $\$2/\text{MBF} \times 2468\text{MBF} = \$ 4936$

Snag Creation -  $\$40/\text{Snag} \times 100 \text{ snags} = \$ 4000$

TOTAL OTHER COSTS + (P/R) =  $\$8936$

ADDITIONAL COSTS (Profit and Risk Included)

Non-Project Roads - (Seeding included)

Road 1: 11 Stations x  $\$130/\text{Station} = \$1430$

Road 2: 4 Stations x  $\$180/\text{Station} = \$ 720$

Non-Project Road Rock

Road 2: 4 Stations x 50 cu. Yards/Station x  $\$5.50 = \$1100$

TOTAL OTHER COSTS =  $\$3250$

ROAD MAINTENANCE

Grading - once per 2 MMBF

Maintenance  $\$500/\text{Mile} \times 8 \text{ miles} / (2468) = \$1.62$

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

$25 \text{ cu. yds.} \times 8 \text{ miles} \times \$5.5/\text{yard} \times 2.468 / (2468) = \$1.10$

Reprocessing with final maintenance (including water cost)

$415 \text{ stations} \times \$17.76/\text{station} / (2468) \text{ MMBF} = \$ 2.99$

TOTAL MAINTENANCE COST =  $\$5.71$



# Timber Sale Appraisal

## Logging Conditions

### East Anderson

### Sale 341-05-17

"STEWARDSHIP IN FORESTRY"

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<b>Combination#: 1</b>	Douglas - Fir	90.00%	
	Western Hemlock / Fir	90.00%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Medium Tower >40 - <70		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
<b>Loads/Day:</b>	4		<b>Bd. Ft./Load:</b> 3,600
<b>Cost/MBF:</b>	\$209.38		
<b>Machines:</b>	Log Loader (A) Tower Yarder (Medium)		
<b>Combination#: 2</b>	Douglas - Fir	10.00%	
	Western Hemlock / Fir	10.00%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding:</b> Yes
<b>Logging System:</b>	Track Skidder		<b>Process:</b> Manual Felling/Delimiting
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
<b>Loads/Day:</b>	6		<b>Bd. Ft./Load:</b> 3,600
<b>Cost/MBF:</b>	\$143.98		
<b>Machines:</b>	Log Loader (B) Track Skidder		
<b>Combination#: 3</b>	Alder (Red)	100.00%	
<b>Yarding Distance:</b>	Short (400 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Medium Tower >40 - <70		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
<b>Loads/Day:</b>	4		<b>Bd. Ft./Load:</b> 3,200
<b>Cost/MBF:</b>	\$232.91		
<b>Machines:</b>	Log Loader (A) Tower Yarder (Medium)		



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal

## Logging Costs

### East Anderson

### Sale 341-05-17

Date: 1/7/05

Operating Seasons: 2.0

Profit & Risk: 20%

Project Costs: \$225,332

Other Costs (P/R): \$8,936

Slash Disposal: \$0

Other Costs: \$3,250

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

Road Maintenance: \$5.71

#### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	3.7
Western Hemlock / Fir	\$0.00	3.0	3.5
Alder (Red)	\$0.00	4.0	3.2



# Timber Sale Appraisal Logging Costs Breakdown East Anderson Sale 341-05-17

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Westem Hemlock / Fir	Alder (Red)
<b>Logging</b>	202.84	202.84	232.91
<b>Road Maintenance</b>	6.01	6.01	6.01
<b>Fire Protection</b>	2.20	2.20	2.20
<b>Hauling</b>	60.53	46.11	34.58
<b>Other (P/R appl.)</b>	3.62	3.62	3.62
<b>Profit &amp; Risk</b>	55.04	52.16	55.86
<b>Slash Disposal</b>	0.00	0.00	0.00
<b>Scaling</b>	2.00	2.00	2.00
<b>Other</b>	1.32	1.32	1.32
<b>Total</b>	333.56	316.26	338.50

<b>Amortization</b>	0.00	0.00	0.00
<b>Pond Value</b>	598.81	402.54	605.00
<b>Stumpage</b>	265.25	86.28	266.50
<b>Amortized</b>	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary East Anderson Sale 341-05-17

**Amortized**

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
<b>MBF</b>	0.00	0.00	0.00
<b>Value</b>	0.00	0.00	0.00
<b>Total</b>	0.00	0.00	0.00

**Unamortized**

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
<b>MBF</b>	1,356.00	872.00	240.00
<b>Value</b>	265.25	86.28	266.50
<b>Total</b>	359,679.00	75,236.16	63,960.00

### Gross Timber Sale Value

**Recovery \$498,875.16**

Prepared by: Colleen Kiser

Date: 1/7/05

District: Tillamook

Phone: (503) 842-2545



## PROJECT SUMMARY SHEET

Sale: East Anderson

### IMPROVEMENT

Point	A to B	27+20	stations =	\$12,013.53
Point	C to D	59+50	stations =	\$33,153.07
Point	E to F	302+80	stations =	\$134,477.17
<b>SUBTOTAL IMPROVEMENT</b>				<b>\$179,643.77</b>

### CONSTRUCTION

Point	A to B	29+25	stations =	\$17,186.75
<b>SUBTOTAL CONSTRUCTION</b>				<b>\$17,186.75</b>

**MOVE IN** **\$1,500.42**

### STOCKPILE

<u>2" - 0" Crushed Rock Stockpile on Fire Break # 3 Road</u>				<u>\$27,001.24</u>
<b>SUBTOTAL STOCKPILE</b>				<b>\$27,001.24</b>

**GRAND TOTAL** **\$225,332.18**



## SUMMARY OF CONSTRUCTION COST

Sale:	<u>East Anderson</u>	Road:	<u>A to B</u>
Construction -	<u>29+25</u> stations <u>0.55</u> miles	Improvement -	<u>27+20</u> stations <u>0.52</u> miles
<b>CLEARING AND GRUBBING -</b>			
Scattering	3.89 acres @	\$815.00 per acre =	\$3,170.35
Piling - waste area	0.15 acres @	\$905.00 per acre =	\$135.75
		<b>TOTAL CLEARING AND GRUBBING</b>	<b>\$3,306.10</b>
<b>EXCAVATION -</b>			
New construction	0+00 to 3+50      3.50    sta. @	\$350.00 per sta. =	\$1,225.00
Improvement	3+50 to 5+00      1.50    sta. @	\$250.00 per sta. =	\$375.00
Improvement	5+00 to 30+70    25.70   sta. @	\$125.00 per sta. =	\$3,212.50
New construction	30+70 to 39+00    8.00    sta. @	\$300.00 per sta. =	\$2,400.00
New construction	39+00 to 42+45   2,812   cy. @	\$1.15 per c.y. =	\$3,233.80
New construction - rip - rock	42+45 to 56+45   14.00   sta. @	\$200.00 per sta. =	\$2,800.00
		<b>TOTAL EXCAVATION</b>	<b>\$13,246.30</b>
<b>ENDHAUL -</b>			
To waste area @ on A to B	39+00 to 42+45      2,812    cy. @	\$0.74 per c.y. =	\$2,080.88
Spread & compact waste area	2,812    cy. @	\$0.20 per c.y. =	\$562.40
		<b>TOTAL ENDHAUL</b>	<b>\$2,643.28</b>
<b>CULVERTS - MATERIALS &amp; INSTALLATION</b>			
	<u>Culverts</u>		
	212    LF of 18"      \$3,392.00	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"      \$0.00	0    LF of 72"      \$0.00	
	<u>\$3,392.00</u>	<u>\$0.00</u>	
	<u>Half Rounds</u>		
	40    LF of 21"      \$456.00	0    LF of 30"      \$0.00	
	0    LF of 36"      \$0.00	0    LF of 42"      \$0.00	
	<u>\$456.00</u>	<u>\$0.00</u>	
	<u>Culvert Stakes &amp; Markers</u>		
	8 stakes      \$64.00		
	5 markers     \$40.00		
	<u>\$104.00</u>		
		<b>TOTAL CULVERTS</b>	<b>\$3,952.00</b>
<b>ROCK-</b>			
0+00 to      14+75      882    cy. of    3"-0"      @		\$4.11 per c.y. =	\$3,625.02
		<b>TOTAL ROCK</b>	<b>\$3,625.02</b>
<b>SPECIAL PROJECTS</b>			
Construct waste area, turnouts, turnarounds, and ditchouts -	5.0    hours @	\$130.00 per hour	\$650.00
Grade and shape road - ditch	14.75   stations @	\$14.20 per station	\$209.45
Grade and shape road - outslope	41.70   stations @	\$9.75 per station	\$406.58
Roll subgrade w/ vibratory roller prior to rocking -	56.45   stations @	\$11.00 per station	\$620.95
Grass seed and fertilize -	1.83    acres @	\$220.00 per acre	\$402.60
Mulching - ditches within 50 feet of culverts	0.23    acres @	\$600.00 per acre	\$138.00
		<b>TOTAL SPECIAL PROJECTS</b>	<b>\$2,427.58</b>
<b>GRAND TOTAL</b>			<b>\$29,200.28</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>East Anderson</u>	Road:	<u>C to D</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles	Improvement -	<u>59+50</u> stations <u>1.13</u> miles
<b>CLEARING AND GRUBBING -</b>			
Scattering		1.50 acres @	\$815.00 per acre = \$1,222.50
Piling - waste area		0.10 acres @	\$905.00 per acre = \$90.50
			<b>TOTAL CLEARING AND GRUBBING</b>
			<b>\$1,313.00</b>
<b>EXCAVATION -</b>			
Improvement	0+00 to 3+00	3.00 sta. @	\$45.00 per sta. = \$135.00
Berm removal	3+00 to 10+80	149 cy. @	\$4.55 per c.y. = \$677.95
Widening	6+50 to 8+20	346 cy. @	\$4.55 per c.y. = \$1,574.30
Improvement	10+80 to 59+50	48.70 sta. @	\$45.00 per sta. = \$2,191.50
			<b>TOTAL EXCAVATION</b>
			<b>\$2,252.25</b>
<b>ENDHAUL -</b>			
To waste area @ on FB#3	3+00 to 10+80	495 cy. @	\$2.11 per c.y. = \$1,044.45
Spread & compact waste area		495 cy. @	\$0.20 per c.y. = \$99.00
			<b>TOTAL ENDHAUL</b>
			<b>\$1,143.45</b>
<b>CULVERTS - MATERIALS &amp; INSTALLATION</b>			
	<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"	\$0.00	0 LF of 72" \$0.00
		<u>\$0.00</u>	<u>\$0.00</u>
	<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
		<u>\$0.00</u>	<u>\$0.00</u>
	<u>Culvert Stakes &amp; Markers</u>		
	0 stakes	\$0.00	
	0 markers	\$0.00	
		<u>\$0.00</u>	
			<b>TOTAL CULVERTS</b>
			<b>\$0.00</b>
<b>ROCK-</b>			
0+00 to	59+50	2,151 cy. of	3"-0" road @ \$9.62 per c.y. = \$20,692.62
18+80 to	19+60	178 cy. of	3"-0" fill @ \$9.46 per c.y. = \$1,683.88
34+60 to	35+60	244 cy. of	3"-0" fill @ \$9.71 per c.y. = \$2,369.24
45+85 to	46+80	190 cy. of	3"-0" fill @ \$9.88 per c.y. = \$1,877.20
			<b>TOTAL ROCK</b>
			<b>\$26,622.94</b>
<b>SPECIAL PROJECTS</b>			
Construct waste area, turnouts, and ditchouts -		2.5 hours @	\$130.00 per hour = \$325.00
Grade and shape road - outslope		59.50 stations @	\$9.75 per station = \$580.13
Roll subgrade w/ vibratory roller prior to rocking -		59.50 stations @	\$11.00 per station = \$654.50
Grass seed and fertilize -		1.19 acres @	\$220.00 per acre = \$261.80
			<b>TOTAL SPECIAL PROJECTS</b>
			<b>\$1,821.43</b>
			<b>GRAND TOTAL</b>
			<b>\$33,153.07</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<b>East Anderson</b>								Road: <b>E to F</b>
Construction -	0+00 stations 0.00 miles				Improvement -	302+80 stations 5.73 miles			
<b>CLEARING AND GRUBBING -</b>									
Piling - waste areas		0.10 acres @			\$905.00 per acre =	\$90.50			
						TOTAL CLEARING AND GRUBBING			<b>\$90.50</b>
<b>EXCAVATION -</b>									
Ditchline excavation	0+00 to 302+80	605 cy. @			\$4.55 per c.y. =	\$2,752.75			
						TOTAL EXCAVATION			<b>\$2,752.75</b>
<b>ENDHAUL -</b>									
To waste area @ on A to B	0+00 to 302+80	605 cy. @			\$1.79 per c.y. =	\$1,082.95			
Spread & compact waste areas		605 cy. @			\$0.20 per c.y. =	\$121.00			
						TOTAL ENDHAUL			<b>\$1,203.95</b>
<b>CULVERTS - MATERIALS &amp; INSTALLATION</b>									
		<u>Culverts</u>							
		0 LF of 54"	\$0.00			0 LF of 60"	\$0.00		
		0 LF of 66"	\$0.00			0 LF of 72"	\$0.00		
			\$0.00				\$0.00		
		<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 &amp; Markers</u>							
		0 stakes	\$0.00						
		0 markers	\$0.00						
			\$0.00						
						TOTAL CULVERTS			<b>\$0.00</b>
<b>ROCK</b>									
E to F - 0+00 to 198+15	7,126 cy. of	2"-0" Road 6" lift		@	\$12.09 per c.y. =	\$86,153.34			
E to F - 198+15 to 302+80	2,603 cy. of	2"-0" Road 4" lift		@	\$12.09 per c.y. =	\$31,470.27			
E to F - 0+00 to 61+60 leveling rock	300 cy. of	2"-0" marked in field		@	\$13.45 per c.y. =	\$4,035.00			
						TOTAL ROCK			<b>\$121,658.61</b>
<b>SPECIAL PROJECTS</b>									
Construct waste area, turnouts, and ditchouts -		3.5 hours @			\$130.00 per hour	\$455.00			
Grade and shape road- ditch		302.80 stations @			\$14.20 per station	\$4,299.76			
Roll subgrade w/ vibratory -		302.80 stations @			\$11.00 per station	\$3,330.80			
Grass seed and fertilize -		2.19 acres @			\$220.00 per acre	\$481.80			
Mulching - ditches within 50 feet of culverts		0.34 acres @			\$600.00 per acre	\$204.00			
						TOTAL SPECIAL PROJECTS			<b>\$8,771.36</b>
						<b>GRAND TOTAL</b>			<b>\$134,477.17</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>East Anderson</u>	Road:	<u>Stockpile on Firebreak #3 Road</u>	at Sta. 3+00 on C to D.
Construction -	0+00 stations 0.00 miles	Improvement -	+00 stations 0.00 miles	
CLEARING AND GRUBBING - Piling -	0.00 acres @	\$905.00 per acre =	\$0.00	TOTAL CLEARING AND GRUBBING \$0.00
EXCAVATION - Leveling existing stockpile site	1.50 hr. @	\$130.00 hrs. =	\$195.00	TOTAL EXCAVATION \$195.00
ENDHAUL -			TOTAL ENDHAUL	\$0.00
<b>CULVERTS - MATERIALS &amp; INSTALLATION</b>				
	<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" \$0.00		0 LF of 72" \$0.00	
	\$0.00		\$0.00	
	<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 &amp; Markers</u>			
	0 stakes \$0.00			
	0 markers \$0.00			
	\$0.00			
ROCK- Stockpile	2,996 cy. of 2'-0"	@	\$8.94 per c.y. =	\$26,784.24
				TOTAL ROCK \$26,784.24
				TOTAL CULVERTS \$0.00
SPECIAL PROJECTS Grass seed and fertilize -	0.10 acres @	\$220.00 per acre	\$22.00	TOTAL SPECIAL PROJECTS \$22.00
			<b>GRAND TOTAL</b>	<b>\$27,001.24</b>

## ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Upper Miami Pit - 2'-0" & 3'-0"	Location:	W1/2 SE1/4 Sec. 11, T2N, R9W, W.M.
Sale:	<b>East Anderson</b>	Road:	12,792 c.y.
Swell:	1.40	Stockpile:	2,996 c.y.
Shrinkage	1.16	Total Truck Loads:	15,788 c.y.
Drill Pct.:	100%	In Place Total:	11,277 c.y.

Pit Development & cleanup for the development area on Exhibit A including the following: \$7,927.92  
 clearing and grubbing, access road construction, end-hauling overburden and other waste,  
 placing and compacting overburden and waste in Waste Area.

Drill & Shoot - down holes:	\$2.10	/cu.yd.	x	11,277	cu.yds.	=	\$23,681.70
Push Rock:	\$0.60	/cu.yd.	x	15,788	cu.yds.	=	\$9,472.80
Load Crusher:	\$0.60	/cu.yd.	x	15,788	cu.yds.	=	\$9,472.80
Crush 2'-0" Rock	\$2.30	/cu.yd.	x	13,025	cu.yds.	=	\$29,957.50
Crush 3'-0" Rock	\$2.10	/cu.yd.	x	2,763	cu.yds.	=	\$5,802.30
Load Truck - Crushed:	\$0.60	/cu.yd.	x	15,788	cu.yds.	=	\$9,472.80
Change Gradation							\$210.00

Subtotal \$95,997.82

Move In/Set-up Crusher							\$4,160.00
Move In and set up Drill and Compressor	3		@	\$330.40		=	\$991.20
Move in Roller	1		@	\$330.40		=	\$330.40
Move in Grader	1		@	\$200.75		=	\$200.75
Move in D-8 from Pt. E	1		@	\$33.22		=	\$33.22
Move in Loader	1		@	\$453.61		=	\$453.61
Move in Excavator from Pt. E	1		@	\$98.56		=	\$98.56
Move in Trucks	5		@	\$111.72		=	\$558.60
Move in Water Truck	1		@	\$131.32		=	\$131.32

Subtotal \$6,957.66

**TOTAL PRODUCTION COSTS \$102,955.48**

Base Cost= \$6.52 Per Cu.Yd.

Crushed Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
C to D - 3'-0" road	1.80	1.30	6.52	9.62	2,151	\$20,692.62
C to D - 3'-0" fill 18+80-19+60	1.64	1.30	6.52	9.46	178	\$1,683.88
C to D - 3'-0" fill 34+60-35+60	1.89	1.30	6.52	9.71	244	\$2,369.24
C to D - 3'-0" fill 45+85-46+80	2.06	1.30	6.52	9.88	190	\$1,877.20
E to F- 2'-0" road	4.27	1.30	6.52	12.09	9,729	\$117,623.61
E to F- 2'-0"	5.63	1.30	6.52	13.45	300	\$4,035.00
Leveling Rock 0+00-61+60						

Total C.Y. 12,792      Sub Total \$148,281.55

2'-0" Crushed Stockpile	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
Firebreak # 3	1.82	0.60	6.52	8.94	2,996	\$26,784.24

Total C.Y. 2,996      Sub Total \$26,784.24

**TOTAL ROCKING COSTS \$175,065.79**

**ROCK SUMMARY FOR HAUL AND PLACEMENT FROM STOCKPILE**

Sale: East Anderson

Stockpile: E. Foley Ridge Stockpile

Location: NE1/4 SEC8 T2N R9W W. M.

Rock: 3"-0"

Road: 882 c.y.

Swell: 0.00

Stockpile: 000 c.y.

Shrinkage: 0.00

Total Truck Loads: 882 c.y.

Drill Pct.: 0%

In Place Total: 882 c.y.

Load Rock: \$0.60 /cu.yd. x 882 cu.yds. = \$529.20  
 Subtotal \$529.20

Move in loader from crushing site \$45.90  
 Subtotal \$45.90

**TOTAL PRODUCTION COSTS \$575.10**

Base Cost: \$0.65 Per Cu.Yd.

Road	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A to B	\$2.16	\$1.30	\$0.65	\$4.11	882	\$3,625.02
Sta. 0+00 to 14+75						
				Total C.Y.	882	Sub Total \$3,625.02

**TOTAL ROCKING COSTS \$3,625.02**

## MOVE-IN CALCULATIONS

Sale: East Anderson

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
42.0	Highway	50
8.4	Main Lines	15
2.3	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
0	Drill & Compressor	\$0.00		\$46.00	0.00	0.00	0	\$0.00	\$0.00
0	Brush Cutter	\$0.00		\$4.00	0.00	0.00	0	\$0.00	\$0.00
0	Graders	\$0.00		\$3.65	0.00	0.00	0	\$0.00	\$0.00
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
0	Rollers & Compactors	\$0.00		\$5.00	0.00	0.00	0	\$0.00	\$0.00
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
1	Excavators (Large)	\$428.02	1	\$44.80	0.00	4.00	4	\$179.20	\$607.22
0	Tired Backhoes/Skidlers	\$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
1	Tractor (D8)	\$413.33	2	\$15.10	0.00	6.06	6.1	\$91.51	\$504.84
3	Dump Truck (10 cy +)	\$265.62		\$2.85	0.00	4.00	4	\$34.20	\$299.82
0	Dump Truck (Off Hiway)	\$0.00	1	\$4.75	0.00	0.00	0	\$0.00	\$0.00
1	Water Truck (1500 Gal)	\$88.54		\$2.85	0.00	0.00	0	\$0.00	\$88.54
0	Water Truck (2500 Gal)	\$0.00		\$2.85	0.00	0.00	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:	\$1,500.42
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**OREGON DEPARTMENT OF FORESTRY**  
**CRUISE REPORT**  
*East Anderson*

**1. Type of Sale**

Partial Cut and Clear Cut – Recovery conifer and red alder

**2. Legal Description**

Section 9 and 10, T2N, R9W, W.M., Tillamook County, Oregon.

**3. Sale Acreage**

	<b>ACRES</b>		
	<u>Sale</u>	<u>Total</u>	<u>Net</u>
<b>Area 1—Partial Cut</b>	310	298	164
<b>Area 2 – Clear Cut</b>	17	17	17
<b>Total</b>	327	315	181

**Sale Acres**

Area within the Timber Sale Boundary signs

**Total acres**

*For accomplishment reporting*

**Clearcut harvest** - Sale acres; plus green tree retention acres outside the sale boundary; less roads and riparian areas classified as Special Stewardship inside the sale boundary.

**Partial Cut** - Sale acres less roads and riparian areas classified as Special Stewardship inside the sale boundary.

**Net acres**

*Used for calculating the advertised volume.*

**Clearcut** - Sale acres, less green tree retention, roads, riparian areas and void areas inside the sale boundary.

**Partial Cut** - Sale acres less roads, riparian areas, void areas, and non-required thinning areas.

**4. Cruising Procedures**

**A. Cruise Method**

A total of 44 variable radius plots were taken across Area 1 and a total of 5 variable radius plots were taken in Area 2. Cruise lines and plots were placed on transects in the required areas to obtain a representative sample of the stand. In Area 1, trees were recorded by diameter and species on all plots. In addition, conifer trees on every third plot were measured for merchantable height and graded to calculate the volume to basal area ratio (VBAR) and grade information. In Area 2, all conifers and all hardwood trees were measured and graded on all plots to calculate the volume to basal area ratio (VBAR) and grade information. Diameters were measured to the nearest inch, heights to the nearest foot. Conifers less than 8" and hardwoods less than 10" DBH were not sampled.







"STEWARDSHIP IN FORESTRY"

## East Anderson

### Volume Summary

Area 1						
164 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	57	153	8.7	1427	5%	1356
Hemlock	37	150	5.6	918	5%	872
Alder	0	0	0.0	0	10%	0
<b>TOTAL</b>				2345		2228

Area 2						
17 acres						
SPECIES	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
Hemlock	0	0	0.0	0	5%	0
Alder	224	70	15.7	267	10%	240
<b>TOTAL</b>				267		240

TOTAL SALE VOLUME			
SPECIES	Gross Vol. (MBF)		Net Vol. (MBF)
Douglas-fir	1427		1356
Hemlock	918		872
Alder	267		240
<b>TOTAL</b>	2612		<b>2468</b>

Table Summary East Anderson-Area 1

DBH	Total TK tr/acre	Total LV tr/acre	Doug-fir TK tr/acre	Doug-fir LV tr/acre	Hemlock TK tr/acre	Hemlock LV tr/acre	Sprce/Cdr TK tr/acre	Sprce/Cdr LV tr/acre	Red Alder TK tr/acre	Red Alder LV tr/acre
8"	5.3	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0
9"	2.1	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0
10"	6.8	3.4	5.1	0.0	1.7	0.0	0.0	0.0	0.0	3.4
11"	7.0	7.0	5.6	0.0	1.4	0.0	0.0	1.4	0.0	5.6
12"	4.8	5.9	3.6	0.0	1.2	0.0	0.0	0.0	0.0	5.9
13"	4.0	7.0	2.0	2.0	2.0	1.0	0.0	0.0	0.0	4.0
14"	5.2	6.1	1.7	0.0	3.5	0.9	0.0	0.0	0.0	5.2
15"	5.3	3.1	3.0	0.8	2.3	0.0	0.0	0.0	0.0	2.3
16"	6.7	3.4	4.0	0.0	2.7	0.0	0.0	0.7	0.0	2.7
17"	10.0	4.2	6.5	0.6	3.5	0.6	0.0	0.0	0.0	3.0
18"	5.8	7.4	2.1	1.6	3.7	2.6	0.0	0.0	0.0	3.2
19"	3.3	5.1	2.4	2.8	0.9	0.5	0.0	0.9	0.0	0.9
20"	3.0	4.3	2.1	3.0	0.9	0.4	0.0	0.0	0.0	0.9
21"	2.0	6.9	1.2	3.5	0.8	1.5	0.0	0.0	0.0	1.9
22"	2.5	7.5	1.8	4.6	0.7	2.5	0.0	0.4	0.0	0.0
24"	0.9	6.5	0.9	4.4	0.0	2.1	0.0	0.0	0.0	0.0
26"	0.0	5.8	0.0	5.3	0.0	0.5	0.0	0.0	0.0	0.0
28"	0.0	4.4	0.0	3.5	0.0	0.7	0.0	0.2	0.0	0.0
30"	0.0	1.0	0.0	0.6	0.0	0.4	0.0	0.0	0.0	0.0
32"	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
34"	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
36"	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
38"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Trees/acre**

	All Spec	Doug-fir	Hemlock	Sprce/Cdr	Red Alder
Current	164	75	46	4	39
Residual	90	33	14	4	39
Take	75	42	33	0	0

**Basal Area/acre**

	All Spec	Doug-fir	Hemlock	Sprce/Cdr	Red Alder
Current	271	152	70	4	45
Residual	177	95	33	4	45
Take	94	57	37	0	0

**Quadratic Mean Diameter**

	All Spec	Doug-fir	Hemlock	Sprce/Cdr	Red Alder
Current	17.4	19.3	16.7	13.5	14.5
Residual	19.0	23.0	20.8	13.5	14.5
Take	15.2	15.8	14.3	0.0	0.0

**Stand Density Index (%)**

	Doug-fir	Hemlock	Sprce/Cdr
Current	66	50	57
Residual	42	31	36

Oregon Department of Forestry  
Stand Table

East Anderson - Area 2 Alder

Table 1

DBH	Total TK tr/acre	Total LV tr/acre	Doug-fir TK tr/acre	Doug-fir LV tr/acre	Hemlock TK tr/acre	Hemlock LV tr/acre	Sprce/Cdr TK tr/acre	Sprce/Cdr LV tr/acre	Red Alder TK tr/acre	Red Alder LV tr/acre
8"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10"	14.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.7	0.0
11"	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0.0
12"	20.4	10.2	0.0	10.2	0.0	0.0	0.0	0.0	20.4	0.0
13"	26.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.0	0.0
14"	22.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.5	0.0
15"	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	0.0
16"	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	0.0
17"	20.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.3	0.0
18"	18.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1	0.0
19"	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0
20"	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0
21"	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0
22"	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
24"	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0
26"	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0
28"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trees/acre

	All Spec	Doug-fir	Hemlock	Sprce/Cdr	Red Alder
Current	187	10	0	0	177
Residual	10	10	0	0	0
Take	177	0	0	0	177

Basal Area/acre

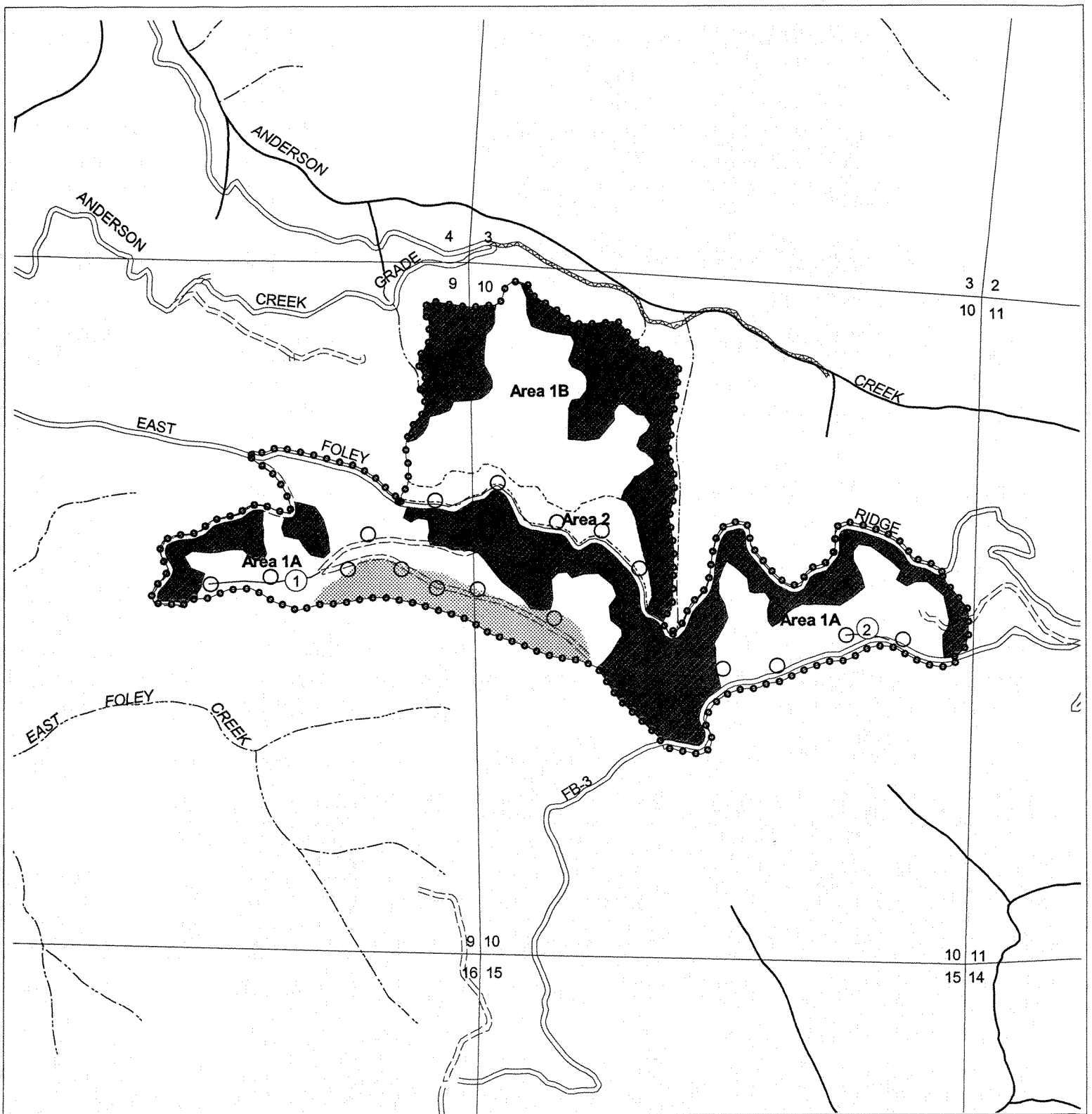
	All Spec	Doug-fir	Hemlock	Sprce/Cdr	Red Alder
Current	232	8	0	0	224
Residual	8	8	0	0	0
Take	224	0	0	0	224

Quadratic Mean Diameter

	All Spec	Doug-fir	Hemlock	Sprce/Cdr	Red Alder
Current	15.1	12.1	0.0	0.0	15.2
Residual	12.1	12.1	0.0	0.0	0.0
Take	15.2	0.0	0.0	0.0	15.2

Stand Density Index (%)

	Doug-fir	Hemlock	Sprce/Cdr
Current	60	45	52
Residual	2	2	2



- Landing
- ▲ Domestic water supply
- ⊗ Blocked
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- ▧ Downhill yarding
- Buffer
- ▨ Non-required thinning
- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream
- Perennial Type-N stream
- Surfaced road
- Unsurfaced road
- State highway
- County road
- ② Non-project road
- Swing road
- Abandoned road
- OHV trail
- Non-motorized trail
- T T Transmission line

**LOGGING PLAN**  
 Timber Sale Contract No. 341-05-17  
 East Anderson  
 Portions of Sections 9 and 10,  
 T2N, R9W, W. M.  
 Tillamook County, Oregon

1000 0 1000 Feet

Tillamook District GIS  
 12-10-04  
 This product is for informational use and  
 may not have been prepared for, or suitable  
 for legal, engineering, or surveying purposes.

Area	Type of Operation	Acres	
		Sale	Net
1	Partial Cut	310	164
2	Modified Cut	17	17
<b>Total</b>		<b>327</b>	<b>181</b>

