



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Cook East Sale 341-03-86

District: Tillamook

Date: 5/20/03

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$561,582.90	\$0.00	\$561,582.90
		<b>Project Work</b>	(\$369,937.00)
		<b>Advertised Value</b>	\$191,645.90



# Timber Sale Appraisal Timber Description Cook East Sale 341-03-86

"STEWARDSHIP IN FORESTRY"

**District:** Tillamook

**Location:** Portions of sections 9, 10, 14, 15, and 23, T2N, R8W, W.M., Tillamook County, Oregon

**Date:** 5/20/03

**Stand Stocking:** 20%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	14	0	100

Volume by Grade	Douglas - Fir	Total
2S	129	129
3S	2,433	2,433
4S	373	373
<b>Total</b>	<b>2,935</b>	<b>2,935</b>

**Comments:** Pond Values Used: 1st Quarter 2003 + Local Pond Values

Hardwood stumpage = Pond value-logging costs

Red Alder pond value =\$515.00

Logging Cost =\$308.40

Hardwood Stumpage =\$206.60



# Timber Sale Appraisal Logging Conditions Cook East Sale 341-03-86

"STEWARDSHIP IN FORESTRY"

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**Combination#:** 1      Douglas - Fir      46.71%  
**Yarding Distance:** Long (1,500 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:** 4      **Bd. Ft./Load:** 3,600  
**Cost/MBF:** \$230.32

**Machines:**

Log Loader (A)  
Tower Yarder (Medium)

**Combination#:** 2      Douglas - Fir      44.51%  
**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:** 6      **Bd. Ft./Load:** 3,600  
**Cost/MBF:** \$153.55

**Machines:**

Log Loader (A)  
Tower Yarder (Medium)

**Combination#:** 3      Douglas - Fir      8.78%  
**Yarding Distance:** Medium (800 ft)      **Downhill Yarding:** Yes  
**Logging System:** Track Skidder      **Process:** Manual Falling/Delimiting  
**Tree Size:** Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF  
**Loads/Day:** 10      **Bd. Ft./Load:** 3,600  
**Cost/MBF:** \$90.71

**Machines:**

Log Loader (B)  
Track Skidder



# Timber Sale Appraisal Logging Costs Cook East Sale 341-03-86

"STEWARDSHIP IN FORESTRY"

Date: 5/20/03

Operating Seasons: 2.4

Profit & Risk: 15%

Project Costs: \$369,937

Other Costs (P/R): \$11,740

Slash Disposal: \$0

Other Costs: \$6,450

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

Road Maintenance: \$8.71

### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	3.3

### Local Pond Values

Date	Species	Grade	Value
5/20/03	Douglas - Fir	2S	\$530.00
5/20/03	Douglas - Fir	3S	\$505.00
5/20/03	Douglas - Fir	4S	\$455.00



# Timber Sale Appraisal Logging Costs Breakdown Cook East Sale 341-03-86

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir
<b>Logging</b>	183.89
<b>Road Maintenance</b>	8.71
<b>Fire Protection</b>	2.22
<b>Hauling</b>	65.70
<b>Other (P/R appl.)</b>	4.00
<b>Profit &amp; Risk</b>	39.68
<b>Slash Disposal</b>	0.00
<b>Scaling</b>	2.00
<b>Other</b>	2.20
<b>Total</b>	308.40

<b>Amortization</b>	0.00
<b>Pond Value</b>	-499.74
<b>Stumpage</b>	191.34
<b>Amortized</b>	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary Cook East Sale 341-03-86

## Amortized

	Douglas - Fir
MBF	0.00
Value	0.00
Total	0.00

## Unamortized

	Douglas - Fir
MBF	2,935.00
Value	191.34
Total	561,582.90

## Gross Timber Sale Value

**Recovery \$561,582.90**

Prepared by: Matt Frison

Date: 5/20/03

District: Tillamook

Phone: (503) 842-2545

## Additional Costs

## Cook East



Cable Yarding Volume:	2645	MBF
Ground Yarding Volume:	290	MBF
<b>Total Sale Volume:</b>	<b>2935</b>	<b>MBF</b>

ADDITIONAL COSTS - PROFIT & RISK TO BE ADDED						
Yarding & Loading:		\$ / MBF		Volume (MBF)		
Rigging Long Corridors:		9.00		430	=	\$3,870.00
Brand & Paint:		2.00	x	2935	=	\$5,870.00
		\$/unit		# units		
Intermediate Supports ( per support)		\$100.00	x	20	=	\$2,000.00
<b>OTHER COSTS TOTAL</b>						<b>\$11,740.00</b>
ADDITIONAL COSTS - PROFIT & RISK INCLUDED						
*Non-Project Roads						
Road 1:	7	stations	x	\$150.00	=	1,050.00
Road 2:	36	stations	x	\$65.00	=	2,340.00
Road 3:	3	stations	x	\$130.00	=	390.00
	43					
		Stations	x	Yrd <sup>3</sup>	x	\$/Yard
Pit Run Rock*	20	x	20	x	\$6.75	2,700.00
Grass seeding exposed soil	2	acres	x	\$180.00	=	360.00
Additional Move In to Area 5 & 6:				\$700.00	=	700.00
<b>OTHER COSTS TOTAL</b>						<b>6,450.00</b>
ROAD MAINTENANCE						
		\$/Mile	Miles	MBF		\$/MBF
**Grading:						
Mainline:		\$500	17	2935		\$4.34
Sale Area Rd:		\$500	3	2935		\$1.02
***Compaction Roller:		\$580	3	2935		\$0.59
<b>Subtotal:</b>						<b>\$5.95</b>
****Maintenance rock		\$/Yd	CuYd			
Load - Haul - Spread - Move-in		\$6.75	1200	2935		\$2.76
<b>TOTAL ROAD MAINTENANCE COST / MBF:</b>						<b>\$8.71</b>
*The first 100 feet of a non-project road must be rocked with pit run rock.						
**Assumes grading the road once per 2 MMBF						
***Compaction after grading after completion of hauling. -- E. Fork Rd.						
****Assumes roughly 50 cy for normal maintenance /2MMBF/mile						

## PROJECT SUMMARY SHEET

Sale: Cook East

### CONSTRUCTION

Point	E to G	17+10	stations =	\$27,867.40
<b>SUBTOTAL CONSTRUCTION</b>				<b>\$27,867.40</b>

### IMPROVEMENT

Point	A to B	63+50	stations =	\$32,362.46
Point	C to D	153+90	stations =	\$279,563.88
Point	E to F	15+70	stations =	\$13,143.90
Point	E to G	30+00	stations =	\$24,824.70
Point	H to I	3+40	stations =	\$3,487.55
<b>SUBTOTAL IMPROVEMENT</b>				<b>\$321,020.04</b>

### STOCKPILE

2 1/2"-0" Crushed Rock Stockpile at MP 6.82 on Cook Creek Roac				\$18,127.89
<b>SUBTOTAL STOCKPILE</b>				<b>\$18,127.89</b>

### MOVE IN

**\$2,922.15**

**GRAND TOTAL**

**\$369,937**



## SUMMARY OF CONSTRUCTION COST

Sale: Cook East

Road: A to B

Construction - 0+00 stations  
0.00 miles

Improvement - 63+50 stations  
1.20 miles

**CLEARING AND GRUBBING -**

Scattering	2.92 acres @	\$815.00 per acre =	\$2,379.80	
Piling - waste area for pit overburden	0.15 acres @	\$905.00 per acre =	\$135.75	
<b>TOTAL CLEARING AND GRUBBING</b>				<b>\$2,515.55</b>

EXCAVATION -				
Improvement	0+00 to 38+90	38.90 sta. @	\$65.00 per sta. =	\$2,528.50
Improvement	38+90 to 63+50	24.60 sta. @	\$150.00 per sta. =	\$3,690.00
Widening	2+00 to 3+00	693 cys. @	\$1.15 per cy. =	\$796.95
<b>TOTAL EXCAVATION</b>				<b>\$7,015.45</b>

ENDHAUL & COMPACTION-				
Endhaul fill - to Sta.18+80-21+80 from	2+00 to 3+00	693 cys. @	\$0.58 per cy. =	\$401.94
Compact fill between Sta.19+80-21+80		693 cys. @	\$0.35 per cy. =	\$242.55
<b>TOTAL ENDHAUL</b>				<b>\$644.49</b>

**CULVERTS - MATERIALS & INSTALLATION**

Culverts				
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
		<u>\$0.00</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
		<u>\$0.00</u>		<u>\$0.00</u>
Culvert Stakes & Markers				
0 stakes		\$0.00		
0 markers		\$0.00		
		<u>\$0.00</u>		
<b>TOTAL CULVERTS</b>				<b>\$0.00</b>

SURFACING-				
	0+00 to 63+50	3,671 cy. of Pit Run	@ \$4.99 per c.y. =	\$18,317.04
<b>TOTAL SURFACING</b>				<b>\$18,317.04</b>

SPECIAL PROJECTS-				
Grade and shape road with outslope		63.50 stations @	\$9.75 per station	\$619.13
Roll subgrade w/ vibratory roller prior to rocking		63.50 stations @	\$11.00 per station	\$698.50
Install waterbars		4 waterbars @	\$25.00 per waterbar	\$100.00
Turnouts, turnarounds and ditchouts		2.75 hour @	\$130.00 per hour	\$357.50
Remove large stumps		1.50 hour @	\$130.00 per hour	\$195.00
Grass seed and fertilize - road and waste area		1.61 acres @	\$180.00 per acre	\$289.80
Mulch - road and waste area		1.61 acres @	\$1,000.00 per acre	\$1,610.00
<b>TOTAL SPECIAL PROJECTS</b>				<b>\$3,869.93</b>

**GRAND TOTAL** **\$32,362.46**

**SUMMARY OF CONSTRUCTION COST**

Sale: Cook East

Road: C to D

Construction -		0+00	stations	Improvement -		153+90	stations
		0.00	miles			2.91	miles
<b>CLEARING AND GRUBBING -</b>							
Scattering - road		4.50	acres @	\$815.00	per acre =	\$3,667.50	
Piling - waste areas		1.40	acres @	\$905.00	per acre =	\$1,267.00	
						<b>TOTAL CLEARING AND GRUBBING</b>	<b>\$4,934.50</b>
<b>EXCAVATION -</b>							
Improvement		153.90	sta. @	\$30.00	per sta. =	\$4,617.00	
Widening - through-cut removal left side of Rd	13+10 to 13+50	244	cys. @	\$1.15	per cy. =	\$280.60	
Widening - rock slough - use for ditches & fill slopes	32+50 to 33+75	155	cys. @	\$1.15	per cy. =	\$178.25	
Widening	34+10 to 35+70	98	cys. @	\$1.15	per cy. =	\$112.70	
Widening - rock	41+65 to 43+00	650	cys. @	\$3.20	per cy. =	\$2,080.00	
Widening	41+65 to 43+00	550	cys. @	\$1.15	per cy. =	\$632.50	
Widening - rock	59+80 to 62+30	482	cys. @	\$3.20	per cy. =	\$1,542.40	
Widening	59+80 to 62+30	408	cys. @	\$1.15	per cy. =	\$469.20	
Widening - rock	63+10 to 78+10	16178	cys. @	\$3.20	per cy. =	\$51,769.60	
Widening	63+10 to 78+10	3423	cys. @	\$1.15	per cy. =	\$3,936.45	
Widening	98+90 to 100+80	620	cys. @	\$1.15	per cy. =	\$713.00	
Widening	100+80 to 102+25	709	cys. @	\$1.15	per cy. =	\$815.35	
Widening	115+80 to 116+25	264	cys. @	\$1.15	per cy. =	\$301.60	
Widening	116+25 to 118+50	1155	cys. @	\$1.15	per cy. =	\$1,328.25	
Widening	123+10 to 123+75	106	cys. @	\$1.15	per cy. =	\$121.90	
Widening	123+75 to 125+60	905	cys. @	\$1.15	per cy. =	\$1,040.75	
Widening	127+80 to 128+90	180	cys. @	\$1.15	per cy. =	\$207.00	
Widening	128+90 to 130+60	832	cys. @	\$1.15	per cy. =	\$956.80	
Widening	131+65 to 133+00	330	cys. @	\$1.15	per cy. =	\$379.50	
Widening	140+80 to 142+20	599	cys. @	\$1.15	per cy. =	\$688.85	
Berm	5+50 to 9+00	43	cys. @	\$1.15	per cy. =	\$49.45	
Berm	11+90 to 12+20	5	cys. @	\$1.15	per cy. =	\$5.75	
Berm - scatter outside of the right-of-way	14+50 to 16+90	44	cys. @	\$1.15	per cy. =	\$50.60	
Berm - scatter outside of the right-of-way	27+45 to 29+00	10	cys. @	\$1.15	per cy. =	\$11.50	
Berm	79+40 to 81+30	16	cys. @	\$1.15	per cy. =	\$18.40	
Berm	93+25 to 94+25	7	cys. @	\$1.15	per cy. =	\$8.05	
Berm	93+25 to 94+25	7	cys. @	\$1.15	per cy. =	\$8.05	
Pullback	29+00 to 34+10	624	cys. @	\$1.40	per cy. =	\$873.60	
Pullback	38+10 to 78+10	5,636	cys. @	\$1.40	per cy. =	\$7,890.40	
Pullback	78+10 to 104+00	1,248	cys. @	\$1.40	per cy. =	\$1,747.20	
Pullback	106+90 to 113+40	795	cys. @	\$1.40	per cy. =	\$1,113.00	
Pullback	114+65 to 138+05	4,348	cys. @	\$1.40	per cy. =	\$6,087.20	
Pullback	140+80 to 143+15	288	cys. @	\$1.40	per cy. =	\$403.20	
						<b>TOTAL EXCAVATION</b>	<b>\$90,440.10</b>
<b>ENDHAUL &amp; COMPACTION-</b>							
Endhaul - truck to waste area Sta. 9+00 from	5+50 to 9+00	43	cys. @	\$0.41	per cy. =	\$17.63	
Endhaul - truck to waste area Sta. 14+50 from	11+90 to 78+10	28298	cys. @	\$0.93	per cy. =	\$26,317.14	
Endhaul - truck to waste area Sta. 146+50 from	114+65 to 143+15	9,007	cys. @	\$0.57	per cy. =	\$5,133.99	
Endhaul - truck to waste area Sta. 3+40 H to I from	78+10 to 113+20	3,402	cys. @	\$0.61	per cy. =	\$2,075.22	
Compact waste area Sta. 9+00		43	cys. @	\$0.35	per cy. =	\$15.05	
Compact waste area Sta. 36+50 14+50		28,298	cys. @	\$0.35	per cy. =	\$9,904.30	
Compact waste area Sta. 146+50		9,007	cys. @	\$0.35	per cy. =	\$3,152.45	
Compact waste area Sta. 3+40 H to I		3,402	cys. @	\$0.35	per cy. =	\$1,190.70	
						<b>TOTAL ENDHAUL</b>	<b>\$47,806.48</b>
<b>CULVERTS - MATERIALS &amp; INSTALLATION</b>							
<b>Culverts</b>							
	784	LF of 18"	\$11,564.00	244	LF of 24"	\$4,331.00	
	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	
						<b>\$11,564.00</b>	<b>\$4,331.00</b>
<b>Half Rounds</b>							
	370	LF of 21"	\$4,218.00	20	LF of 30"	\$290.00	
	0	LF of 36"	\$0.00	0	LF of 42"	\$0.00	
						<b>\$4,218.00</b>	<b>\$290.00</b>
<b>Culvert Stakes &amp; Markers</b>							
	78	stakes	\$624.00				
	43	markers	\$258.00				
						<b>\$882.00</b>	
						<b>TOTAL CULVERTS</b>	<b>\$21,285.00</b>
<b>SURFACING-</b>							
0+00 to 153+90 Road	7,565	cy. of	2 1/2" - 0"	@	\$11.44	per c.y. =	\$86,545.66
9+00 Block access	50	cy. of	Riprap	@	\$11.29	per c.y. =	\$564.41
10+75 Block access	30	cy. of	Riprap	@	\$11.32	per c.y. =	\$339.55
14+40 Block access	30	cy. of	Riprap	@	\$11.39	per c.y. =	\$341.65
36+30-36+70 Stabilization	70	cy. of	Riprap	@	\$11.79	per c.y. =	\$825.18
36+80 Armor Inlet	5	cy. of	Riprap	@	\$11.79	per c.y. =	\$58.94
36+84 Armor Inlet	10	cy. of	Riprap	@	\$11.79	per c.y. =	\$117.88
67+00 Energy dissipater @ outlet	30	cy. of	Riprap	@	\$12.74	per c.y. =	\$382.15
73+00 Energy dissipater @ outlet	30	cy. of	Riprap	@	\$12.88	per c.y. =	\$386.35
85+55 Energy dissipater @ outlet	10	cy. of	Riprap	@	\$13.16	per c.y. =	\$131.58
118+50 Energy dissipater @ outlet	20	cy. of	Riprap	@	\$13.90	per c.y. =	\$277.96
119+75 Energy dissipater @ outlet	40	cy. of	Riprap	@	\$13.93	per c.y. =	\$557.13
124+40-125+60 Stabilization	335	cy. of	Riprap	@	\$14.05	per c.y. =	\$4,706.16
125+05 Energy dissipater @ outlet	70	cy. of	Riprap	@	\$14.05	per c.y. =	\$983.38
130+60 Energy dissipater @ outlet	80	cy. of	Riprap	@	\$14.17	per c.y. =	\$1,133.46
131+65 Energy dissipater @ outlet	30	cy. of	Riprap	@	\$14.20	per c.y. =	\$425.95
10+25 to 11+50 Armor ditchline both sides of road	30	cy. of	Pit-run	@	\$1.76	per c.y. =	\$52.80
11+00 to 11+50 Armor fill slope both side of road	35	cy. of	Pit-run	@	\$1.74	per c.y. =	\$60.90
11+90 to 13+30 Armor ditchline both sides of road	35	cy. of	Pit-run	@	\$1.70	per c.y. =	\$59.50
11+90 to 12+40 Armor fill slope both side of road	40	cy. of	Pit-run	@	\$1.71	per c.y. =	\$68.40
34+35 Fill @ outlet fill slope	15	cy. of	Pit-run	@	\$1.00	per c.y. =	\$15.00
						<b>TOTAL SURFACING</b>	<b>\$98,033.98</b>
<b>SPECIAL PROJECTS-</b>							
Grade and shape road with a ditch	153.90	stations @	\$14.20	per station	\$2,185.38		
Roll subgrade w/ vibratory roller prior to rocking	153.90	stations @	\$11.00	per station	\$1,692.90		
Remove 6 old culverts form State Land					\$386.84		
Construct vertical road dip between Sta. 10+25 and 11+50	2.00	hour @	\$130.00	per hour	\$260.00		
Construct a 8' wide x 8' long x 4' deep culvert catch basin @ Sta. 0+50	0.75	hour @	\$130.00	per hour	\$97.50		
Remove large stumps	5.00	hours @	\$130.00	per hour	\$650.00		
Excavate 5 sediment catch basins and install 1 strawbale per basin					\$252.50		
Turnouts, turnarounds, lead off ditches and ditchouts	6.25	hours @	\$130.00	per hour	\$812.50		
Grass seed and fertilize - road & waste areas	9.09	acres @	\$180.00	per acre	\$1,636.20		
Mulch - road & waste areas	9.09	acres @	\$1,000.00	per acre	\$9,090.00		
						<b>TOTAL SPECIAL PROJECTS</b>	<b>\$17,063.82</b>
<b>GRAND TOTAL</b>						<b>\$279,563.88</b>	

## SUMMARY OF CONSTRUCTION COST

Sale: Cook East

Road: E to F

Construction - 0+00 stations  
0.00 miles

Improvement - 15+70 stations  
0.30 miles

**CLEARING AND GRUBBING -**

Scattering	0.72 acres @	\$815.00 per acre =	<u>\$586.80</u>	
TOTAL CLEARING AND GRUBBING				<b>\$586.80</b>

EXCAVATION - Improvement	0+00 to 15+70	15.70 sta. @	\$130.00 per sta. =	\$2,041.00
Berm - scatter outside of right-of-way	7+65 to 15+70	142 cys. @	\$1.15 per cy. =	<u>\$163.30</u>
TOTAL EXCAVATION				<b>\$2,041.00</b>

**ENDHAUL & COMPACTION-**

Drift & Compact fill - to Sta. 4+60 - 5+10 from	5+10 to 7+00	1.90 sta. @	\$50.00 per sta. =	\$95.00
Drift & Compact fill - to Sta. 7+00 - 7+65 from	7+65 to 8+80	1.15 sta. @	\$50.00 per sta. =	\$57.50
Drift & Compact	0+00 to 15+70	15.70 sta. @	\$30.00 per sta. =	<u>\$471.00</u>
TOTAL ENDHAUL				<b>\$471.00</b>

**CULVERTS - MATERIALS & INSTALLATION**

Culverts	40 LF of 18"	\$590.00	0 LF of 24"	\$0.00
	0 LF of 30"	\$0.00	0 LF of 36"	\$0.00
	0 LF of 42"	\$0.00	0 LF of 48"	\$0.00
	0 LF of 54"	<u>\$0.00</u>	0 LF of 60"	<u>\$0.00</u>
		\$590.00		\$0.00
Half Rounds	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
Culvert Stakes & Markers	0 stakes	\$0.00		
	1 marker	<u>\$6.00</u>		
		\$6.00		
TOTAL CULVERTS				<b>\$596.00</b>

SURFACING-	0+00 to 15+70	1,222 cy. of Pit-Run	@	\$6.75 per c.y. =	<u>\$8,251.84</u>
TOTAL SURFACING					<b>\$8,251.84</b>

**SPECIAL PROJECTS**

Grade and shape road with a ditch	10.35 stations @	\$14.20 per station		\$146.97
Grade and shape road with outslope	5.35 stations @	\$9.75 per station		\$52.16
Roll subgrade w/ vibratory roller prior to rocking	15.70 stations @	\$11.00 per station		\$172.70
Install waterbars	3 waterbars @	\$25.00 per waterbar		\$75.00
Turnouts, turnaround and ditchouts	1.00 hour @	\$130.00 per hour		\$130.00
Remove large stumps	2.00 hour @	\$130.00 per hour		\$260.00
Grass seed and fertilize - road and waste area	0.43 acres @	\$180.00 per acre		\$77.40
Mulch - road and waste area	0.43 acres @	\$1,000.00 per acre		\$430.00
TOTAL SPECIAL PROJECTS				<b>\$1,197.26</b>

**GRAND TOTAL** **\$13,143.90**

## SUMMARY OF CONSTRUCTION COST

Sale: Cook East

Road: E to G

Construction - 17+10 stations  
0.32 miles

Improvement - 30+00 stations  
0.57 miles

**CLEARING AND GRUBBING -**

Scattering - road				3.68 acres @	\$815.00 per acre =	\$2,999.20	
Piling - waste area				0.20 acres @	\$905.00 per acre =	\$181.00	
TOTAL CLEARING AND GRUBBING							<b>\$3,180.20</b>

**EXCAVATION -**

Improvement	0+00	to	10+00	10.00 sta. @	\$65.00 per sta. =	\$650.00	
Construction	10+00	to	27+10	7932 cys. @	\$1.15 per cy. =	\$9,121.80	
Improvement	27+10	to	47+10	20.00 sta. @	\$65.00 per sta. =	\$1,300.00	
Widening	1+40	to	3+50	316 cys. @	\$3.20 per cy. =	\$1,011.20	
Berm	1+40	to	10+20	150 cys. @	\$1.15 per cy. =	\$172.50	
Berm	27+10	to	31+85	61 cys. @	\$1.15 per cy. =	\$70.15	
TOTAL EXCAVATION							<b>\$12,325.65</b>

**ENDHAUL & COMPACTION-**

Endhaul - truck to waste area Sta. 3+40 H to I from	0+00	to	10+20	466 cys. @	\$0.63 per cy. =	\$293.58	
Drift & Compact - fill	10+00	to	27+10	7262 cys. @	\$0.35 per cy. =	\$2,541.70	
Drift to waste area @ 17+00	17+00	to	22+50	670 cys. @	\$0.35 per cy. =	\$234.50	
Endhaul - truck to waste area Sta. 17+00 from	27+10	to	31+85	61 cys. @	\$0.58 per cy. =	\$35.38	
Compact waste area Sta. 17+00				731 cys. @	\$0.35 per cy. =	\$255.85	
Compact waste area Sta. 3+40 H to I				466 cys. @	\$0.35 per cy. =	\$163.10	
TOTAL ENDHAUL							<b>\$3,524.11</b>

**CULVERTS - MATERIALS & INSTALLATION**

Culverts							
	314	LF of 18"	\$4,631.50		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>\$4,631.50</u>				
Half Rounds							
	90	LF of 21"	\$1,026.00		0	LF of 30"	\$0.00
	0	LF of 36"	\$0.00		0	LF of 42"	\$0.00
			<u>\$1,026.00</u>				
Culvert Stakes & Markers							
	18	stakes	\$144.00				
	9	marker	\$54.00				
			<u>\$198.00</u>				
TOTAL CULVERTS							<b>\$5,855.50</b>

**SURFACING-**

0+00	to	47+10	2,730	cy. of	Pit Run	@	\$6.28	per c.y. =	\$17,142.83
0+00	to	32+00	825	cy. of	2 1/2" - 0"	@	\$11.23	per c.y. =	<u>\$9,267.00</u>
TOTAL SURFACING									<b>\$26,409.83</b>

**SPECIAL PROJECTS-**

Grade and shape road with a ditch	32.00	stations @	\$14.20	per station	\$454.40	
Grade and shape road with outslope	15.10	stations @	\$9.75	per station	\$147.23	
Roll subgrade w/ vibratory roller prior to rocking	47.10	stations @	\$11.00	per station	\$518.10	
Construct a 15' wide x 15' long x 4' deep culvert catch basin @ Sta. 0+50	1.00	hour @	\$130.00	per hour	\$130.00	
Remove debris from behind new culvert catch basin @ Sta. 0+50	0.50	hour @	\$130.00	per hour	\$65.00	
Remove buried logs	1.00	hour @	\$130.00	per hour	\$130.00	
Turnouts, turnarounds and ditchouts	3.00	hour @	\$130.00	per hour	\$390.00	
Remove large stumps	5.00	hour @	\$130.00	per hour	\$650.00	
Grass seed and fertilize - road and waste area	2.04	acres @	\$180.00	per acre	\$367.20	
Mulch - road and waste area	2.04	acres @	\$1,000.00	per acre	\$2,040.00	
TOTAL SPECIAL PROJECTS						<b>\$4,891.93</b>

**GRAND TOTAL** **\$52,692.10**

## SUMMARY OF CONSTRUCTION COST

Sale: Cook East

Road: H to I

Construction - 0+00 stations  
0.00 miles

Improvement - 3+40 stations  
0.06 miles

**CLEARING AND GRUBBING -**

Scattering	0.35 acres @	\$815.00 per acre =	\$285.25	
Piling - waste area	0.40 acres @	\$905.00 per acre =	\$362.00	
TOTAL CLEARING AND GRUBBING				<b>\$285.25</b>

EXCAVATION - Improvement	0+00 to 3+40	3.40 sta. @	\$65.00 per sta. =	\$221.00
TOTAL EXCAVATION				<b>\$221.00</b>

ENDHAUL & COMPACTION-	to	0 cys. @	\$0.00 per cy. =	\$0.00
TOTAL ENDHAUL				<b>\$0.00</b>

**CULVERTS - MATERIALS & INSTALLATION**

Culverts	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
		\$0.00		\$0.00
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
		\$0.00		\$0.00
Culvert Stakes & Markers	0 stakes	\$0.00		
	0 markers	\$0.00		
		\$0.00		
TOTAL CULVERTS				<b>\$0.00</b>

SURFACING-	0+00 to 3+40	333 cy. of Pit Run	@	\$6.38 per c.y. =	\$2,125.75
TOTAL SURFACING					<b>\$2,125.75</b>

SPECIAL PROJECTS-	3.40 stations @	\$9.75 per station		\$33.15
Grade and shape road with outslope	3.40 stations @	\$11.00 per station		\$37.40
Roll subgrade w/ vibratory roller prior to rocking	0.50 hour @	\$130.00 per hour		\$65.00
Turnout and turnaround	1.00 hour @	\$130.00 per hour		\$130.00
Remove large stumps	0.50 acres @	\$180.00 per acre		\$90.00
Grass seed and fertilize - road and waste area	0.50 acres @	\$1,000.00 per acre		\$500.00
Mulch - road and waste area				
TOTAL SPECIAL PROJECTS				<b>\$855.55</b>

**GRAND TOTAL** **\$3,487.55**

## SUMMARY OF CONSTRUCTION COST

Sale: Cook East

Road: Stockpile at 6.82 mile on Cook Creek Road

Construction - 0 stations  
0.00 miles

Improvement - 0 stations  
0.00 miles

CLEARING AND GRUBBING -  
Sidecast - stockpile location

0.15 acres @ \$540.00 per acre = \$81.00  
TOTAL CLEARING AND GRUBBING

**\$81.00**

EXCAVATION -  
Level stockpile location - D-8 cat

1 hrs. @ \$130.00 per hr. = \$130.00  
TOTAL EXCAVATION

**\$130.00**

Stockpile Rock-  
Cook Creek Rd MP 6.82

1,998 cy. of 2 1/2"-0" @ \$8.97 per c.y. = \$17,916.89  
TOTAL SURFACING

**\$17,916.89**

SPECIAL PROJECTS

\$0.00  
TOTAL SPECIAL PROJECTS

**\$0.00**

**GRAND TOTAL** **\$18,127.89**

MOVE-IN CALCULATIONS

Sale: Cook East

LOWBOY HAUL (One Way)		
DISTANCE	ROADWAY	AVE SPEED (MPH)
30.0	Highway	40
6.3	Main Lines (Off Road)	15
0.0	Pulling Steep Grades	5

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
0	Drill & Compressor	\$0.00		\$46.00	0	0	0	\$0.00	\$0.00
0	Rock Breaker	\$0.00		\$4.00	0	0	0	\$0.00	\$0.00
1	Graders	\$96.00		\$3.65	0	15.8	15.8	\$57.67	\$153.67
0	Loader (Small)	\$0.00	1	\$3.55	0	0	0	\$0.00	\$0.00
0	Loader (Med. & Large)	\$0.00	1	\$9.00	0	1	1	\$0.00	\$0.00
1	Rollers & Compactors	\$212.29		\$5.00	0	15.8	15.8	\$79.00	\$291.29
0	Excavators (Small)	\$0.00		\$22.00	0	0	0	\$0.00	\$0.00
0	Excavators (Med.)	\$0.00		\$35.50	0	0	0	\$0.00	\$0.00
1	Excavators (Large)	\$317.27	1	\$44.80	0	15.8	15.8	\$707.84	\$1,025.11
0	Rubber Tired Backhoes/Skidlers	\$0.00		\$3.00	0	0	0	\$0.00	\$0.00
0	Tractors (D6)	\$0.00	2	\$7.10	0	0	0	\$0.00	\$0.00
1	Tractors (D7)	\$299.16	2	\$11.30	0	10.5	10.5	\$118.65	\$417.81
1	Tractor (D8)	\$312.62	2	\$15.10	0	15.8	15.8	\$238.58	\$551.20
5	Dump Truck (10 cy +)	\$333.45		\$2.85	0	10.5	10.5	\$149.63	\$483.08
0	Dump Truck (Off Hiway)	\$0.00	1	\$4.75	0	0	0	\$0.00	\$0.00
0	Water Truck (1500 Gal)	\$0.00		\$2.85	0	0	0	\$0.00	\$0.00
0	Water Truck (2500 Gal)	\$0.00		\$2.85	0	0	0	\$0.00	\$0.00
0	Jaw	\$1,066.00							
0	2-Stage Crusher	\$1,597.00							
0	3-Stage Crusher	\$2,489.00							

<b>TOTAL MOVE-IN COSTS:</b>	<b>\$2,922.15</b>
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## ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

**Sale: Cook East**

Pit:	Cook Creek Blue
Rock:	2 1/2"-0"
Swell:	1.40
Shrinkage:	1.16
Drill Pct.:	100%

**Blue Pit is at the 6.75 mile on Cook Creel**

Location:	SE 1/4, SW 1/4, Sec 4, T2N, R8W, W.M.
Road & Riprap:	9,230 c.y.
Stockpile:	1,998 c.y.
Total Truck Loads:	11,228 c.y.
In Place Total:	8,020 c.y.

Clear, scalp, load & compact overburden; construct access road:	
D-8 Cat and excavator - 60 Hrs. @ \$260.00/Hr	\$15,600.00
End-haul overburden to waste area at 6.82 mile on Cook Creek Road:	
Dump Truck-150 Hrs. @ \$57.00/Hr	\$8,550.00
Grass seed, fertilize and mulch waste area and access road :	
0.75 acres @ \$1180.00/acre	\$885.00
Drill & shoot access road: \$2.50 /cu.yd. x 2,500 cu.yds. =	\$6,250.00
Drill & Shoot: \$2.10 /cu.yd. x 5,520 cu.yds. =	\$11,591.72
Push Rock: \$0.60 /cu.yd. x 11,228 cu.yds. =	\$6,736.69
Load Crusher: \$0.60 /cu.yd. x 10,388 cu.yds. =	\$6,232.69
Crushing: 2 1/2"-0" \$2.25 /cu.yd. x 10,388 cu.yds. =	\$23,372.59
Load truck - crushed: \$0.60 /cu.yd. x 10,388 cu.yds. =	\$6,232.69
Load truck- riprap: \$1.40 /cu.yd. x 840 cu.yds. =	\$1,176.00
Oversize Reduction: \$4.50 /cu.yd. x 561 cu.yds. =	\$2,526.26
Subtotal	\$89,153.64

Move in and set up crusher	\$2,907.54
Move in and set up drill and compressor	\$233.59
Move in D-8	\$337.53
Move in loader	\$306.91
Move in grader	\$97.64
Move in roller	\$233.59
Move in water truck	\$87.98
Move in 5 dump trucks	\$374.06
Subtotal	\$4,578.84

**TOTAL PRODUCTION COSTS \$93,732.48**

Base Cost= \$8.35 Per Cu.Yd.

2 1/2"-0" 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	\$1.79	\$1.30	\$8.35	\$11.44	7,565	\$86,543.60
0+00 to 153+90						
E to G	\$1.58	\$1.30	\$8.35	\$11.23	825	\$9,264.75
0+00 to 32+00						
Total C.Y.					8,390	Sub Total \$95,808.35

2 1/2"-0" Crushed Stockpile	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu.Yds.	ROCK COST
6.82 mile on Cook Cr Rd	\$0.32	\$0.30	\$8.35	\$8.97	1,998	\$17,916.89
Total C.Y.					1,998	Sub Total \$17,916.89

Riprap 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 9+00	\$1.54	\$1.40	\$8.35	\$11.29	50	\$564.41
C to D 10+75	\$1.57	\$1.40	\$8.35	\$11.32	30	\$339.55
C to D 14+40	\$1.64	\$1.40	\$8.35	\$11.39	30	\$341.65
C to D 36+30-36+70	\$2.04	\$1.40	\$8.35	\$11.79	70	\$825.18
C to D 36+80	\$2.04	\$1.40	\$8.35	\$11.79	5	\$58.94
C to D 36+84	\$2.04	\$1.40	\$8.35	\$11.79	10	\$117.88
C to D 67+00	\$2.99	\$1.40	\$8.35	\$12.74	30	\$382.15
C to D 73+00	\$3.13	\$1.40	\$8.35	\$12.88	30	\$386.35
C to D 85+55	\$3.41	\$1.40	\$8.35	\$13.16	10	\$131.58
C to D 118+50	\$4.15	\$1.40	\$8.35	\$13.90	20	\$277.96
C to D 119+75	\$4.18	\$1.40	\$8.35	\$13.93	40	\$557.13
C to D 124+40-125+60	\$4.30	\$1.40	\$8.35	\$14.05	335	\$4,706.16
C to D 125+05	\$4.30	\$1.40	\$8.35	\$14.05	70	\$983.38
C to D 130+60	\$4.42	\$1.40	\$8.35	\$14.17	80	\$1,133.46
C to D 131+65	\$4.45	\$1.40	\$8.35	\$14.20	30	\$425.95
Total C.Y.					840	Sub Total \$11,231.72

**TOTAL ROCKING COSTS \$124,956.96**



## PIT RUN ROCK DEVELOPMENT COST SUMMARY

**Sale: Cook East**

**23+15 Sta. south of 31+85 on E to G**

Pit: Water Tank  
 Rock: Pit-run  
 Swell: 1.40  
 Shrinkage: 1.16  
 Drill Pct.: 80%

Location: S 1/2, SE 1/4, Sec 10, T2N, R8W, W.M.  
 Road: 4285 c.y.  
 Stockpile Base: c.y.  
 Total Truck Loads: 4285 c.y.  
 In Place Total: 3061 c.y.

Clear, scalp, load & compact overburden; construct access road:  
 D-8 Cat and excavator - 20 Hrs. @ \$260.00/Hr \$5,200.00  
 End-haul overburden to waste area:  
 Dump Truck- 50 Hrs. @ \$57.00/Hr \$2,850.00  
 Grass seed, fertilize and mulch waste area and access road :  
 0.20 acres @ \$1180.00/acre \$236.00  
 Drill and Shoot \$2.10 /cu.yd. : 2449 cu.yds. = \$5,142.52  
 Strip \$1.75 /cu.yd. : 612 cu.yds. = \$1,071.36  
 Push Rock \$0.60 /cu.yd. : 4285 cu.yds. = \$2,571.26  
 Load Dump Truck: \$0.60 /cu.yd. : 4285 cu.yds. = \$2,571.26  
Subtotal \$19,642.40

Move in Drill from East Fork Ridge Pit 139.00  
 Move in Loader from East Fork Ridge Pit 179.00  
 Move in D8 from East Fork Ridge Pit 193.00  
 Move in Excavator from East Fork Ridge Pit 235.00  
 Move-in Trucks from East Fork Ridge Pit 120.00  
Subtotal \$866.00

TOTAL PRODUCTION COSTS	\$20,508.40
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Base Cost= \$4.79 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
E to F	\$1.06	\$0.90	\$4.79	\$6.75	1222	\$8,251.84
E to G	\$0.59	\$0.90	\$4.79	\$6.28	2730	\$17,142.83
H ot I	\$0.69	\$0.90	\$4.79	\$6.38	333	\$2,125.75
Total C.Y.					4285	Sub Total \$27,520.42

TOTAL ROCKING COSTS	\$27,520.42
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## PIT RUN ROCK DEVELOPMENT COST SUMMARY

**Sale: Cook East**

Pit: East Fork Ridge  
 Rock: Pit-run  
 Swell: 1.40  
 Shrinkage: 1.16  
 Drill Pct.: 100%

**5 Stations past Station 38+90 on A to B on East Fork Ridge Road**

Location: NW 1/4, SW 1/4, Sec 14, T2N, R8W, W.M.  
 Road: 3671 c.y.  
 Stockpile Base: c.y.  
 Total Truck Loads: 3671 c.y.  
 In Place Total: 2622 c.y.

Clear, scalp, load & compact overburden; construct access road:  
 D-8 Cat and excavator - 6 Hrs. @ \$260.00/Hr \$1,560.00  
 End-haul overburden to waste area:  
 Dump Truck-8 Hrs. @ \$57.00/Hr \$456.00  
 Grass seed, fertilize and mulch waste area and access road :  
 0.10 acres @ \$1180.00/acre \$118.00  
 Drill and Shoot \$2.10 /cu.yd. : 2622 cu.yds. = \$5,506.13  
 Push Rock \$0.60 /cu.yd. : 3671 cu.yds. = \$2,202.45  
 Load Dump Truck: \$0.60 /cu.yd. : 3671 cu.yds. = \$2,202.45  
Subtotal \$12,045.03

Move in Drill from Crushed Rock Pit 276.00  
 Move in Loader from Crushed Rock Pit 54.00  
 Move in D8 from Crushed Rock Pit 91.00  
 Move in Excavator from Crushed Rock Pit 269.00  
 Move-in Trucks from Crushed Rock Pit 86.00  
Subtotal \$776.00

<b>TOTAL PRODUCTION COSTS</b>	<b>\$12,821.03</b>
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Base Cost= \$3.49 Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A to B	\$0.60	\$0.90	\$3.49	\$4.99	3671	<u>\$18,317.04</u>
Total C.Y.					3671	Sub Total \$18,317.04

<b>TOTAL ROCKING COSTS</b>	<b>\$18,317.04</b>
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## OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

### *Cook East*

#### 1. Type of Sale

Partial cut and Clear cut -- Recovery

#### 2. Legal Description

Portions of Sections 9, 10, 14, 15, & 23, T2N, R8W, WM, Tillamook County, Oregon.

#### 3. Sale Acreage

	ACRES	
	<u>Sale</u>	<u>Net</u>
Area 1 (Clearcut)	18	16
Area 2 (Partial Cut)	39	31
Area 3 (Partial Cut)	98	66
Area 4 (Clearcut)	78	70
Area 5 (Clearcut)	118	108
Area 6 (Clearcut)	14	13
<b>Total</b>	<b>365</b>	<b>304</b>

#### Sale Acres

Area within the Timber Sale Boundary signs

#### Net acres

*Used for calculating the advertised volume.*

**Clearcut** - Sale acres, less green tree retention, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

**Partial Cut** - Sale acres less 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 116 variable radius full point plots were established for on the sale areas. On Areas 1, 2, 3, 4, 5, and 6 the following plots were taken 7, 16, 27, 19, 38, and 9 respectively. Diameters and species were recorded and a minimum of two trees per plot were graded and measured for merchantable height and form factor. Areas 1 and 2 cruise lines and plots were spaced 350 and 200 feet apart on a grid pattern. In Areas 3, 4, 5, and 6 cruise lines were established to sample areas to be harvested. Plots were spaced 132 feet apart along cruise lines. Conifer 8 inches DBH and greater and hardwoods 10 inches DBH and greater were recorded on all plots.

### **B. Plot size**

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

### **C. Grading System**

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

### **5. Computation Procedure**

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

### **6. Hidden Defect and Breakage**

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

### **7. Timber Description**

This area was burned in the 1933 Tillamook Fire and 1945 Wilson River/Salmonberry Fire. The sale consists of six areas of approximately 45-50 year old planted Douglas-fir with scattered other conifer from natural regeneration. All areas have dense conifer on the upper slopes and scattered alder and conifer in the draws. All areas were pre-commercially thinned in 1987. The current stand condition is closed-single canopy. Douglas-fir has moderate to severe symptoms of Swiss needle cast.

### **8. Cruiser Names/Dates**

Frison/Bond/Wells; December 2002.

### **9. Revenue Distribution**

FDF: 100%

Tax Code: 56 – 3%,

and 56-1 – 97%

Deed Numbers: 70, 76, 77, 88, 469

96% Rehabilitation Obligated

### **10. Attachments**

Stand Tables

Volume Summary

Logging Plan



## Cook East

### Volume Summary

Area 1						
16 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	145	88.6	12.85	206	5%	196
<b>TOTAL</b>				206		196

Area 2						
31 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	64	77.8	4.98	154	5%	146
<b>TOTAL</b>				154		146

Area 3						
66 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	59	94.9	5.60	370	5%	352
<b>TOTAL</b>				370		352

Area 4						
70 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	161	104.9	16.89	1182	5%	1123
<b>TOTAL</b>				1182		1123

Area 5						
108 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	125	79.4	9.93	1072	5%	1018
<b>TOTAL</b>				1072		1018

Area 6						
13 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	122	66.3	8.09	105	5%	100
<b>TOTAL</b>			8.09	105		100

TOTAL SALE VOLUME			
304 acres			
SPECIES	MBF	Net Vol. (MBF)	Net MBF/Ac.
Douglas-fir	3089	2935	9.7
<b>TOTAL</b>	<b>3089</b>	<b>2935</b>	<b>9.7</b>

TC TSTNDSUM

**Stand Table Summary**

Project **COOKEAST**

**T02N R08W S10 T100**

**T02N R08W S10 T100**

**Twp Rge Sec Tract**  
**02N 08W 10 AREA 1**

**Type Acres Plots Sample Trees**  
**100 1.00 11 90**

**Page: 1**  
**Date: 4/22/03**  
**Time: 4:27:36PM**

Spc	T	Sample			Av Ht	Trees/ BA/ Logs			Average Log		Net Cu.Ft. Acres	Net Bd.Ft. Acres	Totals			
		DBH	Trees	16'		Tot	Trees/ Acres	BA/ Acres	Logs Acres	Net Cu.Ft.			Net Bd.Ft.	Tons	Cunits	MBF
DF		8	1	88	44	5.209	1.82									
DF		9	1	89	33	4.116	1.82									
DF		10	6	89	41	20.154	10.91	13.33	6.9	32.5	3.00	92	433	3	1	0
DF		11	7	89	53	19.138	12.73	19.14	11.8	43.0	7.22	226	822	7	2	1
DF		12	7	88	74	16.093	12.73	21.88	13.6	54.7	9.37	298	1,196	9	3	1
DF		13	10	87	76	19.885	18.18	25.86	16.5	60.8	13.25	426	1,574	13	4	2
DF		14	18	86	78	30.418	32.73	43.10	18.8	72.5	24.88	809	3,124	25	8	3
DF		15	17	86	84	25.332	30.91	37.35	21.8	83.3	24.79	812	3,110	25	8	3
DF		16	7	88	85	9.118	12.73	11.67	29.5	113.3	10.41	344	1,323	10	3	1
DF		17	3	83	79	3.503	5.45	6.43	23.1	86.9	4.47	149	559	4	1	1
DF		18	1	89	87	1.029	1.82	2.06	28.1	95.0	1.72	58	195	2	1	0
DF		19	2	79	93	1.847	3.64	3.69	32.7	90.0	3.58	121	332	4	1	0
DF		20	1	88	60	.833	1.82	1.67	25.8	95.0	1.27	43	158	1	0	0
DF		22	1	80	91	.701	1.82	1.40	44.2	135.0	1.81	62	189	2	1	0
DF		23	2	88	75	1.260	3.64	2.52	41.0	152.5	3.01	103	384	3	1	0
DF		25	1	88	98	.533	1.82	1.07	59.1	230.0	1.82	63	245	2	1	0
DF		26	1	89	113	.493	1.82	.74	100.6	493.3	2.14	74	365	2	1	0
DF	Totals		86	87	69	159.663	156.36	191.92	19.2	73.0	112.74	3,680	14,011	113	37	14
WH		16	1	85	90	1.302	1.82	2.60	27.0	85.0	2.13	70	221	2	1	0
WH	Totals		1	85	90	1.302	1.82	2.60	27.0	85.0	2.13	70	221	2	1	0
RA		15	1	86	40	1.482	1.82	1.48	19.6	40.0		29	59		0	0
RA		16	1	86	39	1.302	1.82	1.30	22.1	40.0		29	52		0	0
RA		20	1	87	17	.833	1.82									
RA	Totals		3	86	34	3.617	5.45	2.78	20.8	40.0		58	111		1	0
Totals			90	87	69	164.582	163.64	197.31	19.3	72.7	114.87	3808	14,344	115	38	14

TC TSTNDSUM

**Stand Table Summary**

**Project COOKEAST**

**T02N R08W S10 T120**

**T02N R08W S10 T120**

**Twp Rge Sec Tract**  
**02N 08W 10 AREA 2**

**Type Acres Plots Sample Trees**  
**120 1.00 16 155**

**Page: 1**  
**Date: 4/22/03**  
**Time: 4:28:35PM**

S SpC	T	Sample FF			Av	Trees/ BA/ Logs			Average Log		Net	Net	Totals		
		DBH	Trees	16'	Tot	Acres	Acres	Acres	Net	Net	Tons/	Cu.Ft.	Bd.Ft	Tons	Cunits
DF	11	3	89	72	5.682	3.75	4.74	17.9	72.0	2.70	85	341	3	1	0
DF	12	6	87	71	9.473	7.50	11.06	15.1	61.4	5.28	168	679	5	2	1
DF	13	9	88	73	12.184	11.25	14.90	16.6	60.0	7.71	248	894	8	2	1
DF	14	19	87	76	22.012	23.75	31.90	18.3	70.8	17.92	582	2,258	18	6	2
DF	15	21	86	82	21.490	26.25	29.75	22.5	86.9	20.42	669	2,587	20	7	3
DF	16	10	88	85	8.954	12.50	12.50	27.8	109.3	10.50	347	1,366	10	3	1
DF	17	6	85	82	4.788	7.50	8.39	25.5	94.0	6.41	214	788	6	2	1
DF	18	4	89	83	2.829	5.00	4.95	29.9	108.6	4.42	148	538	4	1	1
DF	19	3	82	91	1.905	3.75	3.17	36.4	112.0	3.42	115	356	3	1	0
DF	20	3	87	77	1.719	3.75	3.44	32.2	113.3	3.26	111	390	3	1	0
DF	21	1	75	88	.520	1.25	1.04	38.6	105.0	1.18	40	109	1	0	0
DF	22	1	81	91	.482	1.25	.96	44.2	135.0	1.25	43	130	1	0	0
DF	23	2	89	75	.866	2.50	1.73	41.0	152.5	2.07	71	264	2	1	0
DF	25	1	89	98	.367	1.25	.73	59.1	230.0	1.25	43	169	1	0	0
DF	26	2	89	86	.678	2.50	1.19	68.1	320.0	2.33	81	380	2	1	0
DF	Totals	91	87	78	93.949	113.75	130.46	22.7	86.2	90.11	2,964	11,248	90	30	11
DX	8	2	86	50	7.162	2.50									
DX	9	5	88	54	14.147	6.25	8.49	9.1	50.0	2.56	77	424	3	1	0
DX	10	10	89	49	23.023	12.50	16.04	8.7	41.4	4.55	140	665	5	1	1
DX	11	11	88	56	20.734	13.75	22.63	11.3	43.4	8.14	255	982	8	3	1
DX	12	12	88	74	19.099	15.00	31.04	11.6	48.2	11.34	360	1,496	11	4	1
DX	13	7	88	81	9.623	8.75	12.38	16.3	66.7	6.29	202	825	6	2	1
DX	14	2	85	93	2.408	2.50	2.41	26.2	99.7	1.95	63	240	2	1	0
DX	15	2	88	91	2.037	2.50	3.06	24.5	103.3	2.29	75	316	2	1	0
DX	Totals	51	88	61	98.233	63.75	96.04	12.2	51.5	37.12	1,172	4,948	37	12	5
RA	12	2	87	300	3.183	2.50	3.18	18.4	70.0		59	223		1	0
RA	13	1	87	300	1.356	1.25	1.36	22.0	110.0		30	149		0	0
RA	14	2	87	300	2.339	2.50	2.34	25.9	130.0		61	304		1	0
RA	15	3	86	40	3.056	3.75	3.06	19.6	40.0		60	122		1	0
RA	16	2	86	39	1.790	2.50	1.79	22.1	40.0		40	72		0	0
RA	20	1	87	17	.573	1.25									
RA	21	1	86	300	.520	1.25									
RA	Totals	12	87	189	12.817	15.00	11.72	21.2	74.2		249	870		2	1
WH	16	1	85	90	.895	1.25	1.79	27.0	85.0	1.46	48	152	1	0	0
WH	Totals	1	85	90	.895	1.25	1.79	27.0	85.0	1.46	48	152	1	0	0
Totals		155	87	77	205.894	193.75	240.01	18.5	71.7	128.69	4433	17,218	129	44	17







TC TSTNDSUM

**Stand Table Summary**

**Project COOKEAST**

**T02N R08W S15 T100**

**T02N R08W S15 T100**

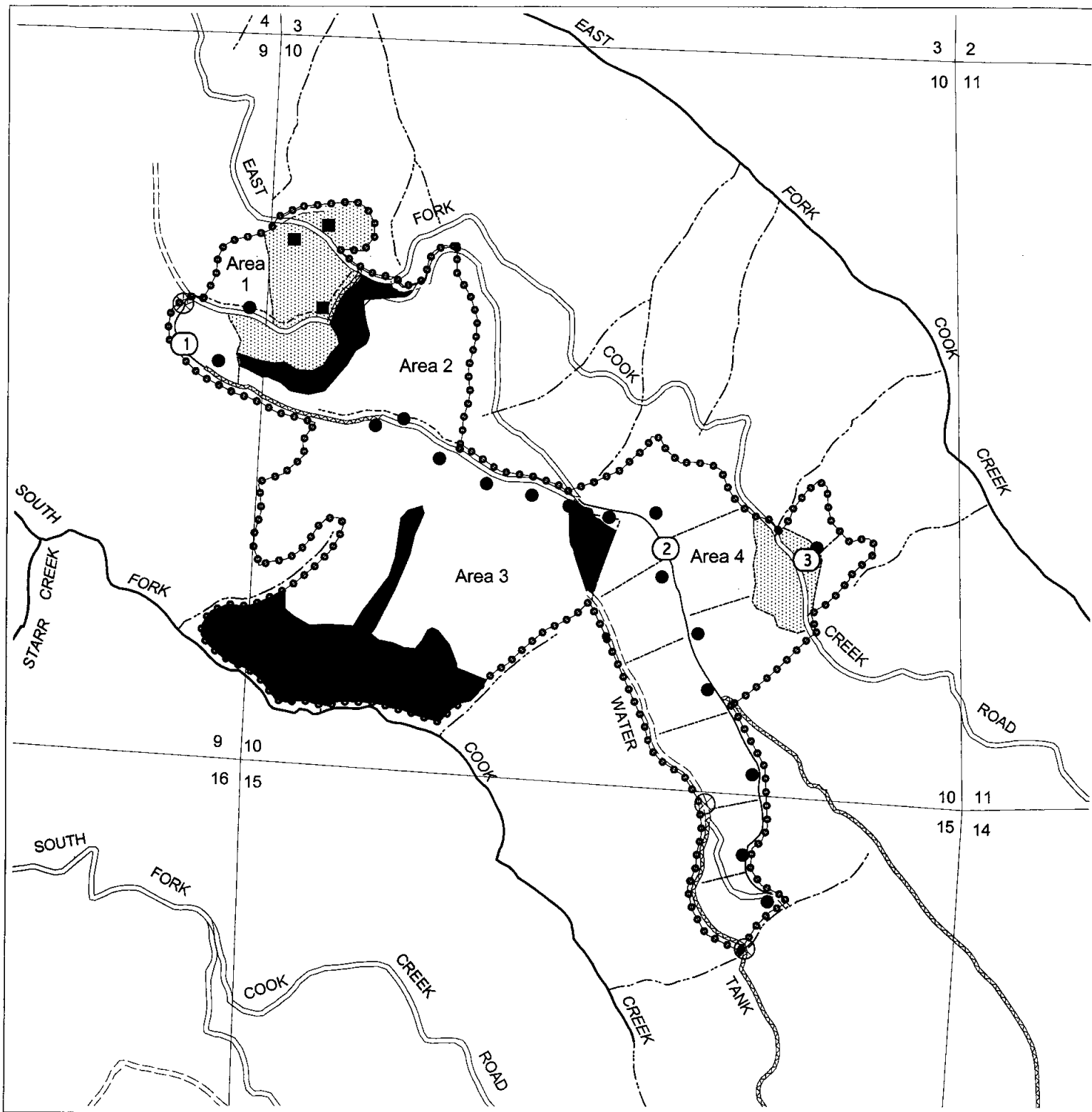
**Twp Rge Sec Tract**  
**02N 08W 15 AREA 5**

**Type Acres Plots Sample Trees**  
**100 1.00 38 263**

**Page: 1**  
**Date: 4/22/03**  
**Time: 4:32:51PM**

Spc	S T	Sample			Av Ht	Trees/ BA/	Logs	Average Log		Net Tons/	Net Cu.Ft.	Net Bd.Ft	Totals			
		DBH	Trees	16'				Acres	Acres				Acres	Tons	Cunits	MBF
DF		8	2	89	17	3.016	1.05									
DF		10	8	89	17	7.720	4.21									
DF		11	10	89	17	7.975	5.26									
DF		12	17	88	17	11.392	8.95									
DF		13	15	89	17	8.565	7.89									
DF		14	21	88	17	10.339	11.05									
DF		15	43	89	17	18.442	22.63									
DF		16	38	88	17	14.324	20.00									
DF		17	36	88	17	12.021	18.95									
DF		18	28	88	18	8.357	14.74	.32	27.0	30.0	.25	9	9	0	0	0
DF		19	19	88	17	5.079	10.00									
DF		20	3	89	17	.724	1.58									
DF		21	3	88	17	.656	1.58									
DF		22	3	88	17	.598	1.58									
DF		24	1	88	17	.168	.53									
DF		25	1	89	17	.154	.53									
DF	Totals	248	88	17		109.529	130.53	.32	27.0	30.0	0.25	9	9	0	0	0
OH		8	1	88	17	1.508	.53									
OH	Totals	1	88	17		1.508	.53									
RA		10	1	87	17	.965	.53									
RA		21	1	86	17	.219	.53									
RA	Totals	2	87	17		1.184	1.05									
WH		12	1	91	17	.670	.53									
WH		15	1	91	17	.429	.53									
WH		17	2	91	17	.668	1.05									
WH		18	2	91	17	.596	1.05									
WH		19	2	91	17	.535	1.05									
WH		20	2	90	17	.482	1.05									
WH		21	1	91	17	.219	.53									
WH		22	1	91	17	.199	.53									
WH	Totals	12	91	17		3.798	6.32									
Totals		263	88	17		116.018	138.42	.32	27.0	30.0	.25	9	9	0	0	0



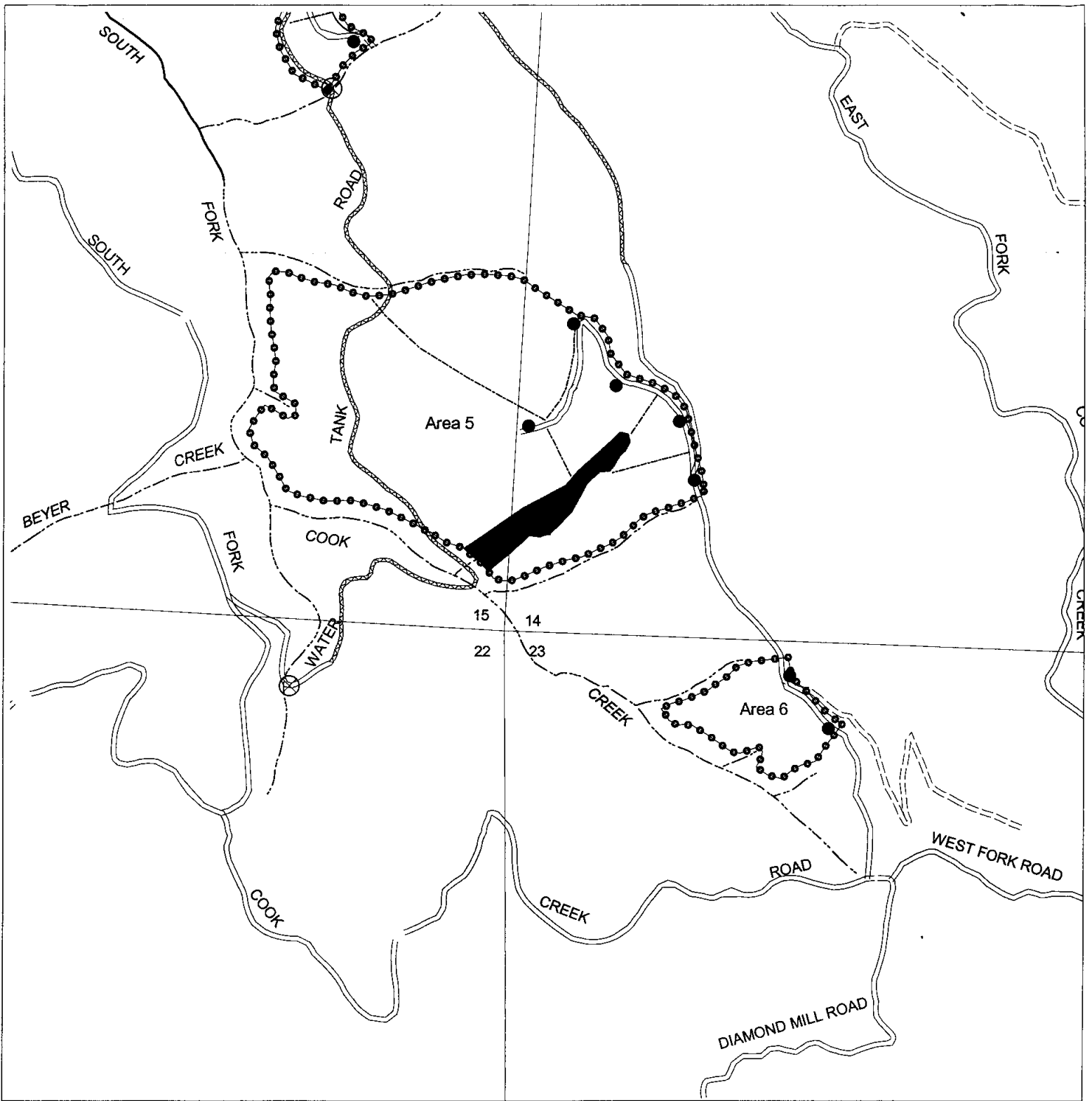


- Tractor landing
- Cable landing
- ▲ Domestic water supply
- ⊗ Block
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- Buffer
- Non-required thinning
- ▭ Green tree retention area
- Setting boundary
- - - Area boundary
- Sale boundary
- Ownership boundary
- Type-F stream
- - - Type-N stream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

**LOGGING PLAN**  
 Timber Sale Contract No. 341-03-86  
 Cook East  
 Portions of sections 9, 10, 14,  
 15, and 23, T2N, R8W, W. M.  
 Tillamook County, Oregon

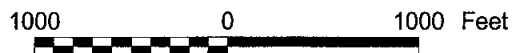
Area	Type of Operation	Acres	
		Sale	Net
1	Clearcut	18	16
2	Partial Cut	39	31
3	Partial Cut	98	66
4	Clearcut	78	70
5	Clearcut	118	108
6	Clearcut	14	13
<b>Total</b>		<b>365</b>	<b>304</b>





**LOGGING PLAN**  
 Timber Sale Contract No. 341-03-86  
 Cook East  
 Portions of sections 9, 10, 14,  
 15, and 23, T2N, R8W, W. M.  
 Tillamook County, Oregon

Area	Type of Operation	Acres Sale	Acres Net
1	Clearcut	18	16
2	Partial Cut	39	31
3	Partial Cut	98	66
4	Clearcut	78	70
5	Clearcut	118	108
6	Clearcut	14	13
<b>Total</b>		<b>365</b>	<b>304</b>



**OREGON DEPARTMENT OF FORESTRY  
WRITTEN PLAN**

**SALE NAME:** Cook East

**PROTECTED RESOURCES:** South Fork of Cook Creek

**LOCATION:** Portions of Sections 4, 8, 9, 10, 15, Township 2 North, Range 8 West, W.M., Tillamook County, Oregon.

**ACTIVITIES:** Logging cables strung across Type F streams for deflection: Right-of-way clearing, culvert replacement, road grading, and rocking within 100 feet of South Fork Cook Creek.

**Riparian Management Area (RMA):** The area within 100 feet horizontal distance from the high water mark on each side of the protected small Type F stream.

**PROTECTION MEASURES:**

**YARDING and FELLING:**

- Trees within the stream buffer are reserved from cutting, except as approved by ODF to facilitate logging operations. Trees felled within this zone will be incidental and will be left for down wood.
- Felling of trees into the stream buffer will be avoided and incidental.
- Trees or logs that fall or slide into a type F stream will not be limbed, bucked or removed without approval from ODF.
- When cable yarding lines are strung across RMA's they will be a minimum of 150 feet apart and pulled out prior to rigging the next yarding road.
- Logs will have at least one end suspended when yarded.
- Soil gouging will be incidental and limited to a depth of 1 foot (measured vertically).

**PROJECT WORK**

- Instream activity will be limited to the period between July 1 and September 15 without prior approval from ODFW.
- All necessary measures will be taken to prevent sediment from entering "live" streams, including but not limited to:
  - ✓ Work will be performed during dry weather and periods of low stream flows.
  - ✓ Operations will cease when rain or periods of high stream flows result in a visual increase in turbidity.
  - ✓ Machine activity in streams will be kept to a minimum and water will be diverted around work areas as necessary.
  - ✓ Ditchouts and culvert leadoff ditches will be constructed to direct water with sediment away from streams.
  - ✓ Fill material will be placed and compacted in 8 inch lifts. Fill slopes will be constructed at a 1½ : 1 fill width to height ratio.
  - ✓ Riprap rock will be placed by a track-mounted excavator to minimize erosion.
  - ✓ Ditches and fill slopes along the South Fork Cook Creek are being lined with pit-run rock to reduce sedimentation.
  - ✓ Disturbance of existing vegetation will be kept to a minimum.
  - ✓ All disturbed areas will be grass seeded, fertilized, and mulched to minimize erosion.

**PREPARED BY:** Matt Frison, Forester, North Unit  
David L. Stone, Road Specialist  
4/30/03