



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Boundary Camp Sale 341-05-54

District: Tillamook

Date: 12/6/04

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$295,267.20	\$38,412.72	\$333,679.92
		<b>Project Work</b>	(\$54,490.00)
		<b>Advertised Value</b>	\$279,189.92



# Timber Sale Appraisal Timber Description Boundary Camp Sale 341-05-54

"STEWARDSHIP IN FORESTRY"

**District:** Tillamook

**Location:** Portions of Sections 1 and 2, T3S, R7W, W.M., Tillamook County, Oregon.

**Date:** 12/6/04

**Stand Stocking:** 60%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	16	0	95
Western Hemlock / Fir	15	0	95
Alder (Red)	15	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Alder (Red)	Total
2S	178	0	0	178
3S	607	0	0	607
4S	175	0	0	175
Camprun	0	240	124	364
<b>Total</b>	960	240	124	1,324

**Comments:** Pond Values Used: 3rd Quarter 2004.

Total: \$11.68/mbf

Maintenance on ODF roads: \$2.59/mbf

Grading: \$500/mile x 6 miles x 1grading/1324 mbf= \$2.26

Surfacing: 20cy/mile x \$2.51/cy x 1.3mmbf x 6.5 miles / 1,324 mbf= \$0.33

Maintenance on BLM roads: \$9.09/mbf

Ginger Crk. 2.52 miles @ 1.97/mbf/mile= \$4.96/mbf

Nestucca Access 7.51 miles @ \$0.55/mbf/mile= \$4.13/mbf

Other Costs (profit and risk added): \$2,648

Brand and Paint: \$2.00/mbf x 1324mbf = \$2,648

Other Costs (profit and risk included): \$35,638

Slash Piling and Sorting: (122 ac. cable harvest/ 50 acres/hour) x \$110/hr=\$268

Trask Public Safety Road Fee: \$25/mbf x 1324 mbf= \$33,100

Weyerhaeuser one time road use fee= \$350

Non-project road construction/improvement: \$1920

Np #1: 3 Stations x \$120/Station= \$360

Np #2: 6 Stations x \$120/Station= \$720

Np #3: 7 Stations x \$120/Station= \$840

Cedar Stumpage Value: \$741.80

\$1050-\$308.20 (Douglas-fir logging cost) =Cedar Stumpage Value



# Timber Sale Appraisal

## Logging Conditions

### Boundary Camp

### Sale 341-05-54

"STEWARDSHIP IN FORESTRY"

<b>Combination#: 1</b>	Douglas - Fir	26.46%	
	Western Hemlock / Fir	50.00%	
	Alder (Red)	42.34%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Medium Tower >40 - <70		<b>Process:</b> Stroke Delimber
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
<b>Loads/Day:</b>	4		<b>Bd. Ft./Load:</b> 3,500
<b>Cost/MBF:</b>	\$234.47		
<b>Machines:</b>	Log Loader (A)		
	Stroke Delimber (A)		
	Tower Yarder (Medium)		
<b>Combination#: 2</b>	Douglas - Fir	43.07%	
	Western Hemlock / Fir	20.00%	
	Alder (Red)	16.94%	
<b>Yarding Distance:</b>	Short (400 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Medium Tower >40 - <70		<b>Process:</b> Stroke Delimber
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
<b>Loads/Day:</b>	5		<b>Bd. Ft./Load:</b> 3,500
<b>Cost/MBF:</b>	\$187.58		
<b>Machines:</b>	Log Loader (A)		
	Stroke Delimber (A)		
	Tower Yarder (Medium)		
<b>Combination#: 3</b>	Douglas - Fir	30.47%	
	Western Hemlock / Fir	30.00%	
	Alder (Red)	40.73%	
<b>Yarding Distance:</b>	Short (400 ft)		<b>Downhill Yarding:</b> Yes
<b>Logging System:</b>	Track Skidder		<b>Process:</b> Manual Falling/Delimiting
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
<b>Loads/Day:</b>	8		<b>Bd. Ft./Load:</b> 3,500
<b>Cost/MBF:</b>	\$116.62		
<b>Machines:</b>	Log Loader (B)		
	Track Skidder		



# Timber Sale Appraisal

## Logging Costs

### Boundary Camp

### Sale 341-05-54

"STEWARDSHIP IN FORESTRY"

Date: 12/6/04

Operating Seasons: 2.0

Profit & Risk: 15%

Project Costs: \$54,490

Other Costs (P/R): \$2,648

Slash Disposal: \$0

Other Costs: \$35,638

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

Road Maintenance: \$11.68

#### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	3.0	3.5
Western Hemlock / Fir	\$0.00	3.0	3.3
Alder (Red)	\$0.00	3.0	3.0



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Logging Costs Breakdown Boundary Camp Sale 341-05-54

<b>Costs</b>	<b>Douglas - Fir</b>	<b>Western Hemlock / Fir</b>	<b>Alder (Red)</b>
<b>Logging</b>	178.36	189.74	178.53
<b>Road Maintenance</b>	12.29	12.29	12.29
<b>Fire Protection</b>	4.09	4.09	4.09
<b>Hauling</b>	46.11	46.11	53.79
<b>Other (P/R appl.)</b>	2.00	2.00	2.00
<b>Profit &amp; Risk</b>	36.43	38.13	37.60
<b>Slash Disposal</b>	0.00	0.00	0.00
<b>Scaling</b>	2.00	2.00	0.00
<b>Other</b>	26.92	26.92	26.92
<b>Total</b>	308.20	321.28	315.22

<b>Amortization</b>	0.00	0.00	0.00
<b>Pond Value</b>	597.34	395.00	625.00
<b>Stumpage</b>	289.14	73.72	309.78
<b>Amortized</b>	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary Boundary Camp Sale 341-05-54

**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>	960.00	240.00	124.00
<b>Value</b>	289.14	73.72	309.78
<b>Total</b>	277,574.40	17,692.80	38,412.72

### Gross Timber Sale Value

**Recovery \$333,679.92**

Prepared by: Ed Wallmark

Date: 12/6/04

District: Tillamook

Phone: (503) 842-2545



## PROJECT SUMMARY SHEET

Sale: Boundary Camp

### CONSTRUCTION

Point	C to D	5+30	stations =	\$8,415.36
Point	I to J	12+00	stations =	\$2,777.09
Point	K to L	3+00	stations =	\$6,408.08
Point	M to N	8+00	stations =	\$3,205.24
<b>SUBTOTAL CONSTRUCTION</b>				<b>\$20,805.77</b>

### IMPROVEMENT

Point	A to B	216+00	stations =	\$1,019.20
Point	E to F	18+95	stations =	\$5,084.68
Point	H to I	17+10	stations =	\$1,201.23
<b>SUBTOTAL IMPROVEMENT</b>				<b>\$7,305.11</b>

### SPECIAL PROJECTS

Road Vacate	C to D	5+30	stations =	\$248.48
Road Vacate	F to G	26+85	stations =	\$1,872.89
Road Vacate	H to I	17+10	stations =	\$814.53
Fill Removal	O			\$838.10
Fill Removal	P			\$1,290.15
Brushing	20.2	miles of road		\$18,365.20
<b>SUBTOTAL SPECIAL PROJECTS</b>				<b>\$23,429.35</b>

<b>MOVE IN</b>				\$2,806.08
<b>MOVE IN BRUSHING</b>				\$143.69
<b>TOTAL MOVEIN</b>				<b>\$2,949.77</b>

**GRAND TOTAL** **\$54,490.00**



# SUMMARY OF CONSTRUCTION COST

Sale: Boundary Camp Road: A to B

Construction - 0+00 stations Improvement - 216+00 stations  
0.00 miles 4.09 miles

ROCK  
Spot Rock 260 cy. of Crushed @ \$3.92 per c.y. = \$1,019.20  
TOTAL ROCK \$1,019.20

GRAND TOTAL **\$1,019.20**

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Boundary Camp</u>		Road:	<u>C to D</u>
Construction -	<u>5+30</u> stations <u>0.10</u> miles		Improvement -	<u>+00</u> stations <u>0.00</u> miles
CLEARING AND GRUBBING -				
Endhaul	0.51 acres @	\$1,500.00 per acre =	<u>\$765.00</u>	
		TOTAL CLEARING AND GRUBBING		<b>\$765.00</b>
EXCAVATION -				
Full Bench	1500 cy. @	\$1.40 per c.y.=	<u>\$2,100.00</u>	
		TOTAL EXCAVATION		<b>\$2,100.00</b>
ENDHAUL -				
Full Bench	0+00 to 2+50 1500 cy. @	\$3.11 per c.y.=	\$4,665.00	
Spread & compact	1500 cy. @	\$0.20 per c.y.=	<u>\$300.00</u>	
		TOTAL ENDHAUL		<b>\$4,965.00</b>
SPECIAL PROJECTS				
Construct waste area -	1.50 hours @	\$130.00 per hour	\$195.00	
Construct ditchout @ 2+50 -	1.00 @	\$60.00 each	\$60.00	
Grade and shape road -	5.30 stations @	\$14.20 per station	\$75.26	
Roll subgrade w/ vibratory roller -	5.30 stations @	\$11.00 per station	\$58.30	
Grass seed and fertilize -	0.26 acres @	\$220.00 per acre	\$57.20	
Mulching -	0.26 acres @	\$600.00 per acre	\$156.00	
		TOTAL SPECIAL PROJECTS		<b>\$601.76</b>
		<b>GRAND TOTAL</b>		<b>\$8,431.76</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Boundary Camp</u>	Road:	<u>E to F</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles	Improvement -	<u>18+95</u> stations <u>0.36</u> miles
CLEARING AND GRUBBING -			
Roadside Brushing	0.36 miles @	\$1,000.00 per mile =	\$360.00
Scattering	0.260 acres @	\$815.00 per acre =	<u>\$211.90</u>
		TOTAL CLEARING AND GRUBBING	<b>\$571.90</b>
CULVERTS - MATERIALS & INSTALLATION			
	<u>Culverts</u>		
	60 LF of 18"	\$2,862.00	
	0 LF of 30"	\$0.00	
	0 LF of 42"	\$0.00	
	0 LF of 54"	\$0.00	
	0 LF of 66"	<u>\$0.00</u>	
		\$2,862.00	
	<u>Half Rounds</u>		
	0 LF of 21"	\$0.00	
	0 LF of 36"	<u>\$0.00</u>	
		\$0.00	
	<u>Culvert Stakes &amp; Markers</u>		
	0 stakes	\$0.00	
	2 markers	<u>\$12.00</u>	
		\$12.00	
		TOTAL CULVERTS	<b>\$2,874.00</b>
SPECIAL PROJECTS			
Grade and shape road -	18.95 stations @	\$17.40 per station	\$329.73
Pull ditch & endhaul waste material (<2000') -	18.95 stations @	\$20.00 per station	\$379.00
Roll subgrade w/ vibratory -	18.95 stations @	\$11.00 per station	\$208.45
Grass seed and fertilize -	0.88 acres @	\$220.00 per acre	\$193.60
Mulching -	0.88 acres @	<u>\$600.00 per acre</u>	<u>\$528.00</u>
		TOTAL SPECIAL PROJECTS	<b>\$1,638.78</b>
		<b>GRAND TOTAL</b>	<b>\$5,084.68</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Boundary Camp</u>	Road:	<u>H to I</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles	Improvement -	<u>17+10</u> stations <u>0.32</u> miles
CLEARING AND GRUBBING -			
Scattering	0.160 acres @	\$815.00 per acre =	<u>\$130.40</u>
		TOTAL CLEARING AND GRUBBING	<b>\$130.40</b>
SPECIAL PROJECTS			
Construct turn out @ 16+15 -	1.00 @	\$60.00 each	\$60.00
Grade and shape road -	17.10 stations @	\$9.75 per station	\$166.73
Roll subgrade w/ vibratory roller -	17.10 stations @	\$11.00 per station	\$188.10
Grass seed and fertilize -	0.80 acres @	\$220.00 per acre	\$176.00
Mulching -	0.80 acres @	\$600.00 per acre	\$480.00
		TOTAL SPECIAL PROJECTS	<b>\$1,070.83</b>
		<b>GRAND TOTAL</b>	<b>\$1,201.23</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Boundary Camp</u>		Road: <u>I to J</u>	
Construction -	<u>12+00</u> stations <u>0.23</u> miles		Improvement -	<u>+00</u> stations <u>0.00</u> miles
CLEARING AND GRUBBING - Scattering	1.160 acres @	\$815.00 per acre =	<u>\$945.40</u>	
		TOTAL CLEARING AND GRUBBING		<b>\$945.40</b>
EXCAVATION - Road Earthwork	12.00 sta. @	\$65.00 per sta. =	<u>\$780.00</u>	
		TOTAL EXCAVATION		<b>\$780.00</b>
SPECIAL PROJECTS				
Construct turn around 10+45 -	1.00 @	\$73.29 each	\$73.29	
Grade and shape road -	12.00 stations @	\$14.20 per station	\$170.40	
Roll subgrade w/ vibratory roller -	12.00 stations @	\$11.00 per station	\$132.00	
Remove large stumps -	3.00 lump sum @	\$75.00 each	\$225.00	
Grass seed and fertilize -	0.55 acres @	\$220.00 per acre	\$121.00	
Mulching -	0.55 acres @	\$600.00 per acre	<u>\$330.00</u>	
		TOTAL SPECIAL PROJECTS		<b>\$1,051.69</b>
<b>GRAND TOTAL</b>				<b>\$2,777.09</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Boundary Camp</u>		Road:	<u>K to L</u>
Construction -	<u>3+00</u> stations <u>0.06</u> miles		Improvement -	<u>+00</u> stations <u>0.00</u> miles
CLEARING AND GRUBBING - Endhaul		0.280 acres @	\$1,500.00 per acre =	<u>\$420.00</u>
			TOTAL CLEARING AND GRUBBING	<b>\$420.00</b>
EXCAVATION - Earthwork (common)		1500 cy. @	\$1.15 per c.y.=	<u>\$1,725.00</u>
			TOTAL EXCAVATION	<b>\$1,725.00</b>
ENDHAUL - Full Bench	0+00	3+00	1500 cy. @	\$1.58 per c.y.=
Spread & compact			1500 cy. @	\$0.20 per c.y.=
				<u>\$2,370.00</u>
				<u>\$300.00</u>
			TOTAL ENDHAUL	<b>\$2,670.00</b>
ROCK 0+00 to	3+00	102 cy. of	Crushed @	\$11.84 per c.y.=
				<u>\$1,207.68</u>
			TOTAL ROCK	<b>\$1,207.68</b>
<b>SPECIAL PROJECTS</b>				
Construct waste area -		1.50 hours @	\$130.00 per hour	\$195.00
Grade and shape road -		3.00 stations @	\$14.20 per station	\$42.60
Roll subgrade w/ vibratory roller -		3.00 stations @	\$11.00 per station	\$33.00
Grass seed and fertilize -		0.14 acres @	\$220.00 per acre	\$30.80
Mulching -		0.14 acres @	\$600.00 per acre	\$84.00
			TOTAL SPECIAL PROJECTS	<b>\$385.40</b>
<b>GRAND TOTAL</b>				<b>\$6,408.08</b>

## SUMMARY OF CONSTRUCTION COST

Sale: Boundary Camp Road: M to N

Construction - 8+00 stations Improvement - +00 stations  
0.15 miles 0.00 miles

CLEARING AND GRUBBING - Scattering	0.730 acres @	\$815.00 per acre =	<u>\$594.95</u>	
		TOTAL CLEARING AND GRUBBING		<b>\$594.95</b>
EXCAVATION - Road Earthwork	8.00 sta. @	\$65.00 per sta. =	<u>\$520.00</u>	
		TOTAL EXCAVATION		<b>\$520.00</b>

**CULVERTS - MATERIALS & INSTALLATION**

<u>Culverts</u>				
30 LF of 18"	\$1,431.00	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>\$1,431.00</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			
1 markers	\$6.00			
	<u>\$6.00</u>			
		TOTAL CULVERTS		<b>\$1,437.00</b>

**SPECIAL PROJECTS**

Construct turn around @ 4+80 -	1.00 @	\$73.29 each	\$73.29	
Grade and shape road -	8.00 stations @	\$14.20 per station	\$113.60	
Roll subgrade w/ vibratory roller -	8.00 stations @	\$11.00 per station	\$88.00	
Remove large stumps -	1.00 lump sum @	\$75.00 each	\$75.00	
Grass seed and fertilize -	0.37 acres @	\$220.00 per acre	\$81.40	
Mulching -	0.37 acres @	\$600.00 per acre	\$222.00	
		TOTAL SPECIAL PROJECTS		<b>\$653.29</b>

**GRAND TOTAL** **\$3,205.24**

## SUMMARY OF VACATING COST

Sale: Boundary Camp Road: C to D

Construction -	<u>0+00</u> stations	Vacating -	<u>5+30</u> stations
	<u>0.00</u> miles		<u>0.10</u> miles

### SPECIAL PROJECTS

Vacate from: Sta. 0+00 to 5+30 -	5.30 stations @	\$9.75 per station	\$51.68
Grass seed and fertilize -	0.24 acres @	\$220.00 per acre	\$52.80
Mulching -	0.24 acres @	\$600.00 per acre	\$144.00
TOTAL SPECIAL PROJECTS			\$248.48
GRAND TOTAL			\$248.48



## SUMMARY OF VACATING COST

Sale: Boundary Camp Road: F to G

Construction -	<u>0+00</u> stations	Vacating -	<u>26+85</u> stations
	<u>0.00</u> miles		<u>0.51</u> miles

**SPECIAL PROJECTS**

Vacate from: Sta. 0+00 to 26+85 -	26.85	stations @	\$9.75	per station	\$261.79
Remove fill @ Sta. 18+70 -	100	c.y. @	\$1.15	per c.y.	\$115.00
Compact excavated fill material -	100	c.y. @	\$0.20	per c.y.	\$20.00
Remove culverts from state lands -	3.00	@	\$467.50	total	\$467.50
Grass seed and fertilize -	1.23	acres @	\$220.00	per acre	\$270.60
Mulching -	1.23	acres @	\$600.00	per acre	\$738.00

TOTAL SPECIAL PROJECTS **\$1,872.89**

**GRAND TOTAL** **\$1,872.89**

## SUMMARY OF VACATING COST

Sale: Boundary Camp

Road: H to I

Construction - 0+00 stations  
0.00 miles

Vacating - 17+10 stations  
0.32 miles

### SPECIAL PROJECTS

Vacate from: Sta. 0+00 to 17+10 -	17.10 stations @	\$9.75 per station	\$166.73
Grass seed and fertilize -	0.79 acres @	\$220.00 per acre	\$173.80
Mulching -	0.79 acres @	\$600.00 per acre	\$474.00

TOTAL SPECIAL PROJECTS **\$814.53**

GRAND TOTAL **\$814.53**

## SUMMARY OF FILL REMOVAL COST

Sale:

Boundary Camp

Road:

Headquarters Grade (Point O)

### SPECIAL PROJECTS

Remove fill @ point O -	296	c.y. @	\$1.15	per c.y.	\$340.40
Compact excavated fill material -	296	c.y. @	\$0.20	per c.y.	\$59.20
Remove culverts from state lands -	1.00	@	\$192.50	total	\$192.50
Grass seed and fertilize -	0.30	acres @	\$220.00	per acre	\$66.00
Mulching -	0.30	acres @	\$600.00	per acre	\$180.00

TOTAL SPECIAL PROJECTS

**\$838.10**

**GRAND TOTAL**

**\$838.10**

## SUMMARY OF FILL REMOVAL COST

Sale:

Boundary Camp

Road:

Headquarters Grade (Point P)

### SPECIAL PROJECTS

Remove fill @ point P -	479	c.y. @	\$1.15	per c.y.	\$550.85
Compact excavated fill material -	479	c.y. @	\$0.20	per c.y.	\$95.80
Remove culverts from state lands -	1.00	@	\$192.50	total	\$192.50
Grass seed and fertilize -	0.55	acres @	\$220.00	per acre	\$121.00
Mulching -	0.55	acres @	\$600.00	per acre	\$330.00

TOTAL SPECIAL PROJECTS

**\$1,290.15**

**GRAND TOTAL**

**\$1,290.15**

### CRUSHED STOCKPILE COST SUMMARY

Stockpile	40
Sale:	<b>Boundary Camp</b>
Swell:	0.00
Shrinkage	0.00
Drill Pct.:	0%

Location:	Sec. 7, T2S, R7W, W.M.
Road:	0
Stockpile:	362 c.y.
Total Truck Loads:	362 c.y.
In Place Total:	c.y.

Move in & Load trucks:	362 cu. yd.	@	\$2.46	Per Cu.Yd.	=	\$890.52
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Base Cost=           \$2.46           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
K to L	\$8.08	\$1.30	\$2.46	\$11.84	102		\$1,207.68
A to B Spot Rock	\$0.86	\$0.60	\$2.46	\$3.92	260		\$1,019.20
Total C.Y.					362	Sub Total	\$2,226.88

<b>TOTAL ROCKING COST</b>	<b>\$2,226.88</b>
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## OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

### *Boundary Camp*

"STEWARDSHIP IN FORESTRY"

1. **Type of Sale:** Partial Cut, Recovery
2. **Legal Description:** Sections 1 and 2, T3S, 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.

ACREAGES				
Area	Harvest Type	Sale	Total	Net
1	Partial Cut	118	101	101
2	Partial Cut	62	58	58
3	Partial Cut	7	6	6
Total		187	165	165

#### **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 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.

#### **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** - Same as total acres.

4. **Cruising Procedures:**

#### **A: Cruise Method:**

A total of 66 variable-radius full point plots were installed with proportional numbers of count and grade plots in each sale area to develop volume computations. Cruise lines and plots were placed by a North-South grid and spaced at 250-foot intervals. On all plots, live merchantable trees 9-inches DBH and greater were measured to obtain volume. Diameters were measured to the nearest inch, heights to the nearest foot. One representative tree on each plot was measured for bole height and grade information to obtain a VBAR for the stand.

**B: Plot size**

A 20 BAF was used for all species. The point of tree observation was 4.5 feet.

**C: Grading System:** Douglas-fir and western hemlock was measured to a 6" top favoring 40 foot log lengths using Columbia River rules. Red alder was measured and to an 8" top favoring 32-foot log lengths, all red alder and western hemlock will receive camprun prices. Grade breakdown for Douglas-fir was determined by using the grade information gathered by measuring VBAR trees.

5. **Computation Procedure:** VBAR trees were entered into Superace to obtain VBAR information, and plot data was entered into spreadsheets to obtain basal areas, stand tables and diameters. These data were entered into the Volume Summary Worksheet to compute sale volumes.
6. **Defect and Breakage:** A 5% reduction for defect and breakage was applied to the volume.
7. **Timber Description:** Most of area 2 burned in the 1933 Tillamook fire and both areas burned in the 1939 Saddle Mountain fire and naturally regenerated. Portions of Area 1 and 3 were commercially thinned during the 1980's and Area 2 has had no prior stand management. The sale area contains 60-year-old Douglas-fir and western hemlock.
8. **Cruiser Names/Dates:** Ed Wallmark, Jay Morey, Dave Stevenson, June and July 2004.
9. **Revenue Distribution:**  
100% FDF  
Tax Code: 8  
Deed Numbers: 809, 810, 312  
Rehabilitation Obligated: 4%
10. **Attachments:**  
Volume Summary  
Logging Plan



"STEWARDSHIP IN FORESTRY"

## Boundary Camp

### Volume Summary

Area 1							
						101 acres	
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	16	40	132	5.3	535	5%	508
Hemlock	15	22	113	2.5	253	5%	240
Alder	15	21	50	1.1	111	5%	105
<b>TOTAL</b>					899		853

Area 2							
						58 acres	
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	14	62	132	8.2	476	5%	452
<b>TOTAL</b>					476		452

Area 3							
						6 acres	
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Alder	15	67	50	3.4	20	5%	19
<b>TOTAL</b>					20		19

TOTAL SALE VOLUME			
SPECIES	MBF		Net Vol. (MBF)
Douglas-fir	1011	5%	960
Hemlock	253	5%	240
Alder	131	5%	124
<b>TOTAL</b>			<b>1324</b>



Boundary Camp - Area 1  
101 acres

DBH	Douglas-fir Tk tr/acre	Douglas-fir Lv tr/acre	Hemlock Tk tr/acre	Hemlock Lv tr/acre	Alder Tk trs/acre	Alder Lv trs/acre
8"	0.0	0.0	0.0	0.0	0.0	0.0
9"	1.5	0.0	0.0	0.0	3.0	0.0
10"	0.0	0.0	2.4	0.0	6.1	0.0
11"	3.0	1.0	2.0	0.0	4.0	0.0
12"	0.0	0.0	4.2	0.0	2.5	0.0
13"	1.4	0.7	0.7	0.0	4.3	0.0
14"	3.7	6.2	2.5	1.9	1.9	0.0
15"	2.7	3.3	2.2	1.1	1.6	0.0
16"	2.4	6.2	1.0	0.5	1.0	0.0
17"	1.7	1.3	0.8	0.0	0.0	0.0
18"	1.9	1.1	0.4	0.0	0.0	0.0
19"	1.4	2.4	0.7	0.7	0.3	0.0
20"	2.1	3.1	0.9	0.9	0.3	0.0
21"	1.4	3.0	0.3	0.3	0.3	0.0
22"	1.0	1.5	1.0	1.0	0.0	0.0
23"	1.4	3.0	0.0	0.7	0.0	0.0
24"	0.6	2.5	0.0	0.6	0.0	0.0
26"	0.0	4.3	0.0	0.2	0.0	0.0
28"	0.0	1.2	0.0	0.0	0.0	0.0
30"	0.0	0.5	0.0	0.0	0.0	0.0
32"	0.0	0.1	0.0	0.0	0.0	0.0
34"	0.0	0.2	0.0	0.0	0.0	0.0
Total	26.3	41.8	19.2	7.8	25.4	0.0

**TOTAL STAND**

BA/AC	Douglas-fir	Hemlock	Alder
Total	130	37	21
Leave	90	15	0
Take	40	22	21

	Douglas-fir	Hemlock
RD Total	30	9
RD Expected	20	4

	Douglas-fir	Hemlock
SDI Total	0.31	0.07
SDI Expected	0.21	0.01

Boundary Camp - Area 2  
58 acres

DBH	Douglas-fir Tk tr/acre	Douglas-fir Lv tr/acre	Hemlock Tk tr/acre	Hemlock Lv tr/acre	Alder Tk trs/acre	Alder Tk trs/acre
8"	0.0	0.0	0.0	0.0	0.0	0.0
9"	9.1	0.0	0.0	0.0	0.0	0.0
10"	7.3	0.0	0.0	1.2	0.0	0.0
11"	5.1	0.0	0.0	1.0	0.0	0.0
12"	5.9	0.0	0.0	0.8	0.8	0.0
13"	6.5	0.0	0.0	0.7	0.0	0.0
14"	6.2	3.1	0.0	2.5	0.0	0.0
15"	3.3	2.7	0.0	0.5	0.0	0.0
16"	4.3	1.9	0.0	0.5	0.5	0.0
17"	2.5	0.8	0.0	0.4	0.0	0.0
18"	1.9	0.8	0.0	0.4	0.0	0.0
19"	2.4	1.0	0.0	0.0	0.0	0.0
20"	1.5	2.4	0.0	0.3	0.0	0.0
21"	0.6	1.9	0.0	0.0	0.0	0.0
22"	0.8	1.8	0.0	0.0	0.0	0.0
23"	0.5	1.4	0.0	0.5	0.0	0.0
24"	0.4	3.0	0.0	0.0	0.0	0.0
26"	0.5	4.2	0.0	0.0	0.0	0.0
28"	0.0	2.0	0.0	0.0	0.0	0.0
30"	0.0	2.4	0.0	0.0	0.0	0.0
32"	0.0	1.1	0.0	0.0	0.0	0.0
34"	0.0	1.0	0.0	0.0	0.0	0.0
Total	58.7	31.5	0.0	8.9	1.3	0.0

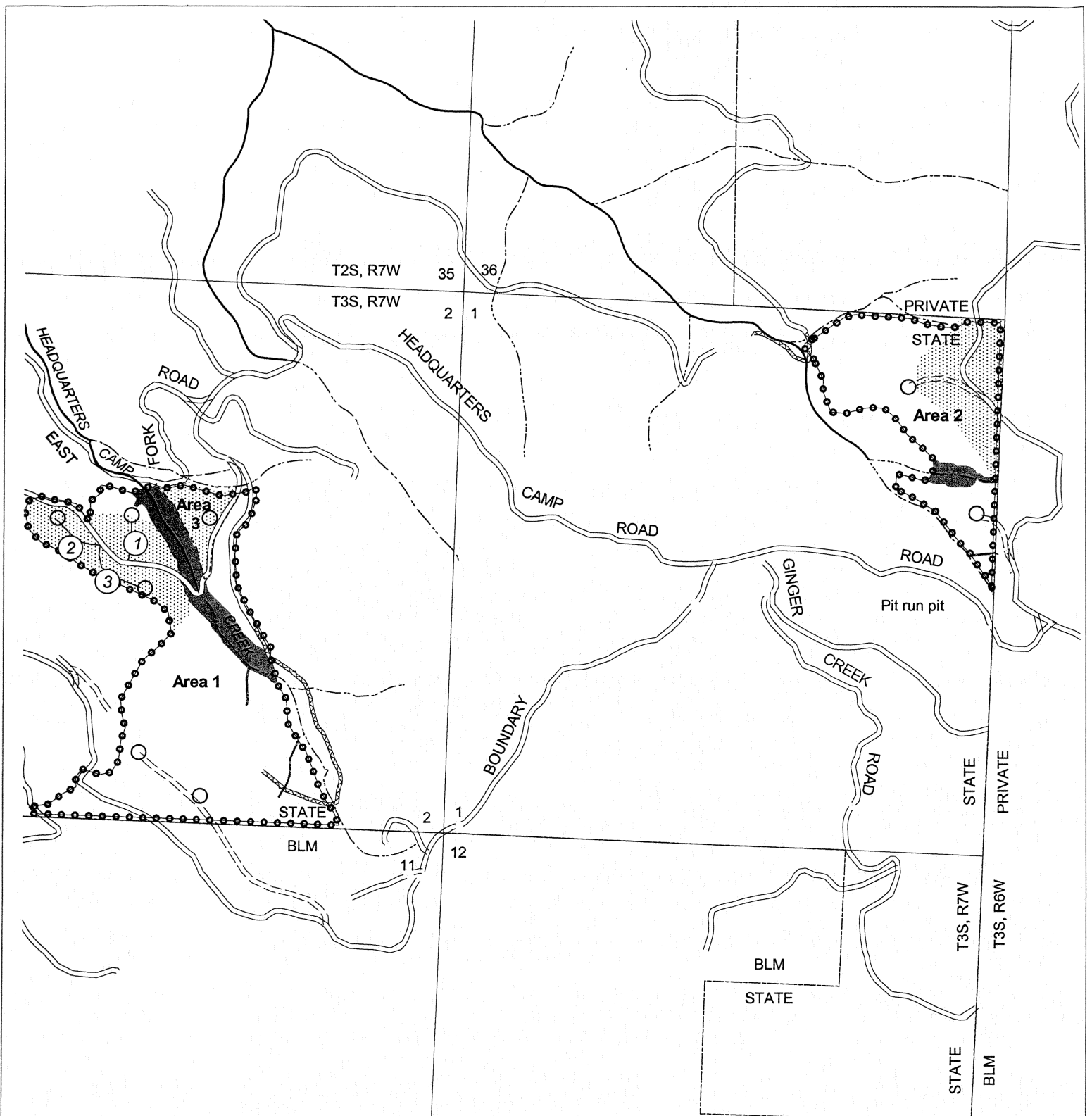
**TOTAL STAND**

BA/AC	Douglas-fir	Hemlock	Alder
Total	152	10	1
Leave	90	10	0
Take	62	0	1

	Douglas-fir	Hemlock
RD Total	36	2.6
RD Expected	19	2.6

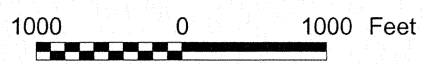
	Douglas-fir	Hemlock
SDI Total	0.37	0.02
SDI Expected	0.20	0.02

QMD	Douglas-fir	Hemlock	Alder
Current QM Diameter	18	0	0
Leave Stand - QM Diameter	23	0	0
Take trees - QM Diameter	0	0	#DIV/0!



- Landing
- ▲ Domestic water supply
- ⊗ Blocked
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter 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

**LOGGING PLAN**  
 Timber Sale Contract No. 341-05-54  
 Boundary Camp  
 Portions of Sections 1 and 2,  
 T3S, R7W, W. M.  
 Tillamook County, Oregon



Area	Type of Operation	Acres	
		Sale	Net
1	Partial Cut	118	101
2	Partial Cut	62	58
3	Partial Cut	7	6
Total		187	165

Tillamook District GIS  
 11-05-04  
 This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.





## Oregon Department of Forestry

### WRITTEN PLAN

**SALE NAME:** Boundary Camp

**PROTECTED WATERS:** Headquarters Camp Creek and associated tributaries, Rock Creek associated tributaries.

**LOCATION:** Portions of Section 1 and 2, T3S, R7W, W.M., Tillamook County, Oregon.

**Riparian Management Area:**

The area measured 100 feet slope distance from the high water mark on Headquarters Camp Creek and Rock Creek associated tributaries.

**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 to a minimum of 150 feet apart where they extend over or through the riparian management area.

**Date:** November 2, 2004  
**By:** Ed Wallmark