



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Welcomb Ridge Sale 341-03-17

District: Tillamook

Date: 6/28/02

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$324,281.25	\$69,082.86	\$393,364.11
		Project Work	(\$81,714.46)
		Advertised Value	\$311,649.65



Timber Sale Appraisal Timber Description Welcomb Ridge Sale 341-03-17

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Sections 1, 2, 11 and 12, T1S, R8W, WM, Tillamook County, Oregon

Date: 6/28/02

Stand Stocking: 20%

Species	Avg. DBH	Amortized %	Recovery %
Douglas - Fir	15	0	100
Alder (Red)	13	0	100

Volume by Grade	Douglas - Fir	Alder (Red)	Total
2S	249	0	249
3S	744	0	744
4S	160	0	160
Camprun	0	266	266
Total	1,153	266	1,419

Comments: Pond Values Used: 2nd Quarter 2002 + Local Pond Values

Other Cost (plus profit & risk): Total \$2,838
Brand and paint: $\$2.00/\text{mbf} \times 1419\text{MBF} = \$2,838$

Maintenance: Total \$1.97/MBF

Coast Range Road

Grading: $\$500/\text{mile} \times 1.6 \text{ miles} \times 1 \text{ time} / 1419 \text{ MBF} = \$0.56/\text{MBF}$

Surfacing: $50\text{cy}/\text{mile} \times \$5/\text{cy} \times 1.5\text{MMBF} \times 1.6 \text{ miles} / 1419\text{MBF} = \$0.42/\text{MBF}$

Compacting: $84 \text{ sta} \times \$11/\text{sta} \times 1 \text{ time} + \$280 \text{ move-in} / 1419\text{MBF} = \$0.85/\text{MBF}$

On Unit Roads: $40\text{cy pit run} \times \$5/\text{cy} / 1419\text{MBF} = \$0.14/\text{MBF}$

Alder pond value of \$448.25/MBF was calculated using log prices obtained from Northwest Hardwoods on April 26, 2002.



Timber Sale Appraisal Logging Conditions Welcomb Ridge Sale 341-03-17

"STEWARDSHIP IN FORESTRY"

Combination#: 1	Douglas - Fir	68.78%	
	Alder (Red)	68.87%	
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:	8		Bd. Ft./Load: 3,300
Cost/MBF:	\$125.63		
Machines:			
	Log Loader (A)		
	Tower Yarder (Medium)		
Combination#: 2	Douglas - Fir	31.22%	
	Alder (Red)	31.13%	
Yarding Distance:	Short (400 ft)		Downhill Yarding: Yes
Logging System:	Track Skidder		Process: Feller Buncher
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
Loads/Day:	10		Bd. Ft./Load: 3,300
Cost/MBF:	\$106.63		
Machines:			
	Feller Buncher w/ Delimber		
	Log Loader (B)		
	Stroke Delimber (B)		
	Track Skidder		



Timber Sale Appraisal

Logging Costs

Welcomb Ridge

Sale 341-03-17

"STEWARDSHIP IN FORESTRY"

Date: 6/28/02

Operating Seasons: 1.0

Profit & Risk: 15%

Project Costs: \$81,714

Other Costs (P/R): \$2,838

Slash Disposal: \$0

Other Costs: \$0

Road Maintenance: \$1.97

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

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	3.5
Alder (Red)	\$0.00	4.0	2.5

Local Pond Values

Date	Species	Grade	Value
4/26/02	Alder (Red)	Camprun	\$448.25



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Breakdown Welcomb Ridge Sale 341-03-17

Costs	Douglas - Fir	Alder (Red)
Logging	119.70	119.72
Road Maintenance	1.97	1.97
Fire Protection	1.91	1.91
Hauling	65.70	38.35
Other (P/R appl.)	2.00	2.00
Profit & Risk	28.69	24.59
Slash Disposal	0.00	0.00
Scaling	2.00	0.00
Other	0.00	0.00
Total	221.97	188.54

Amortization	0.00	0.00
Pond Value	503.22	448.25
Stumpage	281.25	259.71
Amortized	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Welcomb Ridge Sale 341-03-17

Amortized

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

Unamortized

	Douglas - Fir	Alder (Red)
MBF	1,153.00	266.00
Value	281.25	259.71
Total	324,281.25	69,082.86

Gross Timber Sale Value

Recovery \$393,364.11

Prepared by: Bob Gustavson

Date: 6/28/02

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: WELCOMB RIDGE

CONSTRUCTION

Point A to B 13+65 stations = \$13,286.39

SUBTOTAL CONSTRUCTION \$13,286.39

IMPROVEMENT

Point A to B 39+15 stations = \$38,107.12

Point C to D 14+00 stations = \$9,851.66

Point E to F 9+40 stations = \$7,506.42

Point G to H 2+40 stations = \$5,640.14

Point I to J 8+50 stations = \$5,392.38

Point K to L 1+80 stations = \$1,183.44

SUBTOTAL IMPROVEMENT \$67,681.15

SPECIAL PROJECTS

SUBTOTAL SPECIAL PROJECTS \$0.00

MOVE IN \$746.92

GRAND TOTAL **\$81,714.46**

SUMMARY OF CONSTRUCTION COST

Sale:	<u>WELCOMB RIDGE</u>		Road:	<u>A to B</u>
Construction -	<u>13+65</u> stations <u>0.26</u> miles		Improvement -	<u>39+15</u> stations <u>0.74</u> miles
CLEARING AND GRUBBING -				
Side cast	0.00 acres @		\$540.00 per acre =	\$0.00
Widening	0.00 acres @		\$540.00 per acre =	\$0.00
Scattering	4.848 acres @		\$815.00 per acre =	\$3,951.52
Piling	0.00 acres @		\$905.00 per acre =	\$0.00
Endhaul	0.00 acres @		\$1,500.00 per acre =	\$0.00
			TOTAL CLEARING AND GRUBBING	\$3,951.52
EXCAVATION -				
Road Earthwork	0+00 to 52+80	52.80 sta. @	\$100.00 per sta. =	\$5,280.00
				<u>TOTAL EXCAVATION</u>
				\$5,280.00
ENDHAUL -				
				<u>TOTAL ENDHAUL</u>
				\$0.00
CULVERTS - MATERIALS & INSTALLATION				
	Culverts			
	48	LF of 18"	\$708.00	104
	44	LF of 30"	\$913.00	0
	0	LF of 42"	\$0.00	0
	0	LF of 54"	\$0.00	0
			<u>\$1,621.00</u>	<u>\$1,846.00</u>
	Half Rounds			
	0	LF of 21"	\$0.00	0
	0	LF of 36"	\$0.00	0
			<u>\$0.00</u>	<u>\$0.00</u>
	Culvert Stakes & Markers			
	0	stakes	\$0.00	
	5	markers	\$30.00	
			<u>\$30.00</u>	
			TOTAL CULVERTS	\$3,497.00
SURFACING-				
0+00 to 52+80	3,838	cy. of	Jaw run @	\$9.34 per c.y. = \$35,846.92
Place riprap @ outfall (14+75) -	10	cy. of	Riprap A to B @	\$9.73 per c.y. = \$97.30
Place riprap @ outfall (19+55) -	10	cy. of	Riprap A to B @	\$9.73 per c.y. = \$97.30
				<u>TOTAL SURFACING</u>
				\$36,041.52
SPECIAL PROJECTS				
Grade and shape road -	52.80	stations @	\$9.75 per station	\$514.80
Roll subgrade w/ vibratory roller prior to rocking -	52.80	stations @	\$11.00 per station	\$580.80
Remove log culvert @ station 19+55 -	1.00	hour @	\$130.00 per hour	\$130.00
Remove large stumps -	1.00	lump sum @	\$500.00	\$500.00
Grass seed and fertilize -	3.39	acres @	\$180.00 per acre	\$610.91
Mulch (@ culvert areas) -	0.287	acres @	\$1,000.00 per acre	\$286.96
				<u>TOTAL SPECIAL PROJECTS</u>
				\$2,623.47

GRAND TOTAL **\$51,393.50**

SUMMARY OF CONSTRUCTION COST

Sale:	<u>WELCOMB RIDGE</u>				Road: <u>C to D</u>
Construction -	0+00 stations <u>0.00</u> miles				Improvement - <u>14+00</u> stations <u>0.27</u> miles
CLEARING AND GRUBBING -					
Side cast		0.00 acres @	\$540.00 per acre =		\$0.00
Widening		0.00 acres @	\$540.00 per acre =		\$0.00
Scattering		0.964 acres @	\$815.00 per acre =		\$785.81
Piling		0.00 acres @	\$905.00 per acre =		\$0.00
Endhaul		0.00 acres @	\$1,500.00 per acre =		\$0.00
			TOTAL CLEARING AND GRUBBING		\$785.81
EXCAVATION -					
Road Earthwork	0+00 to 14+00	14.0 sta. @	\$65.00 per sta. =		\$910.00
					TOTAL EXCAVATION
					\$910.00
ENDHAUL -					
					TOTAL ENDHAUL
					\$0.00
CULVERTS - MATERIALS & INSTALLATION					
Culverts					
	0	LF of 18"	\$0.00	40	LF of 24" \$710.00
	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>\$710.00</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		
	1	marker	\$6.00		
			<u>\$6.00</u>		
					TOTAL CULVERTS
					\$716.00
SURFACING-					
0+00 to 14+00	679	cy. of	Jaw Run	@	\$9.38 per c.y.= \$6,369.02
Place riprap @ outfall (3+40)-	10	cy. of	Riprap	@	\$9.88 per c.y.= \$98.80
					TOTAL SURFACING
					\$6,467.82
SPECIAL PROJECTS					
Grade and shape road -	14.00	stations @	\$9.75 per station		\$136.50
Remove log culvert @ station 3+40	4.00	hours @	\$130.00 per hour		\$520.00
Roll subgrade w/ vibratory roller prior to rocking -	14.00	stations @	\$11.00 per station		\$154.00
Grass seed and fertilize -	0.58	acres @	\$180.00 per acre		\$104.13
Mulch (@ culvert areas) -	0.057	acres @	\$1,000.00 per acre		\$57.39
					TOTAL SPECIAL PROJECTS
					\$972.02

\$9,851.66

SUMMARY OF CONSTRUCTION COST

Sale:	<u>WELCOMB RIDGE</u>		Road:	<u>E to F</u>
Construction -	0+00 stations <u>0.00</u> miles		Improvement -	9+40 stations <u>0.18</u> miles
CLEARING AND GRUBBING -				
Side cast		0.00 acres @	\$540.00 per acre =	\$0.00
Widening		0.00 acres @	\$540.00 per acre =	\$0.00
Scattering		0.647 acres @	\$815.00 per acre =	\$527.62
Piling		0.00 acres @	\$905.00 per acre =	\$0.00
Endhaul		0.00 acres @	\$1,500.00 per acre =	\$0.00
			TOTAL CLEARING AND GRUBBING	\$527.62
EXCAVATION -				
Road Earthwork	0+00 to 9+40	9.4 sta. @	\$65.00 per sta. =	\$611.00
From borrow source @	9+40	143 cy @	\$1.40 per cy	\$200.54
			TOTAL EXCAVATION	\$811.54
ENDHAUL -				
Fill material from 9+40 to 7+00		143 cy @	\$0.60 per cy	\$85.98
Place and compact		143 cy @	\$0.35 per cy	\$50.13
			TOTAL ENDHAUL	\$136.11
CULVERTS - MATERIALS & INSTALLATION				
	Culverts			
	0	LF of 18"	\$0.00	46 LF of 24" \$816.50
	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>\$816.50</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	
	1	marker	\$6.00	
			<u>\$6.00</u>	
			TOTAL CULVERTS	\$822.50
SURFACING-				
0+00 to 9+40	470	cy. of	Jaw Run	@ \$9.56 per c.y.= \$4,493.20
Place riprap @ outfall (7+00)-	10	cy. of	Riprap	@ \$10.06 per c.y.= \$100.60
				TOTAL SURFACING \$4,593.80
SPECIAL PROJECTS				
Construct waste area @ 9+40		0.25 hour @	\$130.00 per hour	\$32.50
Grade and shape road -		9.40 stations @	\$9.75 per station	\$91.65
Roll subgrade w/ vibratory roller prior to rocking -		9.40 stations @	\$11.00 per station	\$103.40
Grass seed and fertilize -		0.39 acres @	\$180.00 per acre	\$69.92
Remove log culvert @ station 7+00 -		2.00 hour @	\$130.00 per hour	\$260.00
Mulch (@ culvert area) -		0.057 acres @	\$1,000.00 per acre	\$57.39
			TOTAL SPECIAL PROJECTS	\$7,506.42

SUMMARY OF CONSTRUCTION COST

Sale:	WELCOMB RIDGE			Road:	G to H		
Construction -	0+00	stations		Improvement -	2+40	stations	
	0.00	miles			0.05	miles	
CLEARING AND GRUBBING -							
Side cast	0.00	acres @		\$540.00	per acre =	\$0.00	
Widening	0.00	acres @		\$540.00	per acre =	\$0.00	
Scattering	0.220	acres @		\$815.00	per acre =	\$179.61	
Piling	0.00	acres @		\$905.00	per acre =	\$0.00	
Endhaul	0.00	acres @		\$1,500.00	per acre =	\$0.00	
				TOTAL CLEARING AND GRUBBING			\$179.61
EXCAVATION -							
Benched fillslope & cutbank loose material	264	cy @		\$1.40	per cy		\$369.39
				TOTAL EXCAVATION			\$369.39
ENDHAUL -							
Benched fillslope & cutbank loose material	264	cy @		\$1.36	per cy		\$358.90
				TOTAL ENDHAUL			\$358.90
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			\$0.00
SURFACING-							
0+00 to 2+40	117	cy. of	Jaw Run	@	\$8.86	per c.y.=	\$1,036.62
Riprap for slope stabilization	240	cy. of	Riprap	@	\$10.99	per c.y.=	\$2,637.60
Riprap for groundwater drain	30	cy. of	Riprap	@	\$10.99	per c.y.=	\$329.70
					TOTAL SURFACING		\$4,003.92
SPECIAL PROJECTS							
Move equipment to top of cutbank -	1.00	hour @		\$130.00	per hour		\$130.00
Grade and shape road -	2.40	stations @		\$17.40	per station		\$41.76
Roll subgrade w/ vibratory roller prior to rocking -	2.40	stations @		\$11.00	per station		\$26.40
Line trench @ 1+60 with fabric -	56.00	s.y. @		\$1.05	per s.y.		\$58.80
Grass seed and fertilize (all bare soil) -	0.399	acres @		\$180.00	per acre		\$71.90
Mulch (all bare soil) -	0.399	acres @		\$1,000.00	per acre		\$399.45
				TOTAL SPECIAL PROJECTS			\$728.31

GRAND TOTAL

\$5,640.14

SUMMARY OF CONSTRUCTION COST

Sale:	<u>WELCOMB RIDGE</u>		Road:	<u>I to J</u>
Construction -	0+00 stations <u>0.00</u> miles		Improvement -	8+50 stations <u>0.16</u> miles
CLEARING AND GRUBBING -				
Side cast	0.00 acres @	\$540.00 per acre =		\$0.00
Widening	0.00 acres @	\$540.00 per acre =		\$0.00
Scattering	0.781 acres @	\$815.00 per acre =		\$636.13
Piling	0.00 acres @	\$905.00 per acre =		\$0.00
Endhaul	0.00 acres @	\$1,500.00 per acre =		\$0.00
		TOTAL CLEARING AND GRUBBING		\$636.13
EXCAVATION -				
Road Earthwork	0+00 to 8+50	8.50 sta. @	\$65.00 per sta. =	\$552.50
			TOTAL EXCAVATION	\$552.50
ENDHAUL -				
			TOTAL ENDHAUL	\$0.00
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>		
			TOTAL CULVERTS	\$0.00
SURFACING-				
0+00 to 8+50	400 cy. of	Jaw Run @	\$9.41 per c.y.=	\$3,764.00
			TOTAL SURFACING	\$3,764.00
SPECIAL PROJECTS				
Remove large stumps -	1.00 lump sum	\$100.00		\$100.00
Grade and shape road -	8.50 stations @	\$17.40 per station		\$147.90
Roll subgrade w/ vibratory roller prior to rocking -	8.50 stations @	\$11.00 per station		\$93.50
Grass seed and fertilize (all bare soil) -	0.55 acres @	\$180.00 per acre		\$98.35
		TOTAL SPECIAL PROJECTS		\$439.75
		GRAND TOTAL		\$5,392.38

SUMMARY OF CONSTRUCTION COST

Sale:	<u>WELCOMB RIDGE</u>		Road:	<u>K to L</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles		Improvement -	<u>1+80</u> stations <u>0.03</u> miles
CLEARING AND GRUBBING -				
Side cast	0.00 acres	@	\$540.00 per acre =	\$0.00
Widening	0.00 acres	@	\$540.00 per acre =	\$0.00
Scattering	0.165 acres	@	\$815.00 per acre =	\$134.71
Piling	0.00 acres	@	\$905.00 per acre =	\$0.00
Endhaul	0.00 acres	@	\$1,500.00 per acre =	\$0.00
			TOTAL CLEARING AND GRUBBING	\$134.71
EXCAVATION -				
Road Earthwork	0+00 to 1+80	1.80 sta. @	\$65.00 per sta. =	\$117.00
			TOTAL EXCAVATION	\$117.00
ENDHAUL -				
			TOTAL ENDHAUL	\$0.00
CULVERTS - MATERIALS & INSTALLATION				
Culverts				
	0	LF of 18"	\$0.00	
	0	LF of 30"	\$0.00	
	0	LF of 42"	\$0.00	
	0	LF of 54"	\$0.00	
			<u>\$0.00</u>	
				<u>\$0.00</u>
Half Rounds				
	0	LF of 21"	\$0.00	
	0	LF of 36"	\$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>	
				<u>\$0.00</u>
			TOTAL CULVERTS	\$0.00
SURFACING-				
0+00 to 1+80	81 cy. of	Jaw Run	@	\$9.38 per c.y. = \$759.78
				TOTAL SURFACING
				\$759.78
SPECIAL PROJECTS				
Remove large stumps -	1.00	lump sum	\$100.00	\$100.00
Grade and shape road -	1.80	stations @	\$17.40 per station	\$31.32
Roll subgrade w/ vibratory roller prior to rocking -	1.80	stations @	\$11.00 per station	\$19.80
Grass seed and fertilize (all bare soil) -	0.12	acres @	\$180.00 per acre	\$20.83
			TOTAL SPECIAL PROJECTS	\$171.95
			GRAND TOTAL	\$1,183.44

JAW RUN ROCK DEVELOPMENT COST SUMMARY

Pit:	<u>Fishermans Access</u>	Location:	<u>SW 1/4, SW 1/4, 1 S, R8W, W.M.</u>
Sale:	<u>WELCOMB RIDGE</u>	Road:	<u>5895 c.y.</u>
Swell:	<u>1.30</u>	Stockpile Base:	<u>c.y.</u>
Shrinkage:	<u>1.16</u>	Total Truck Loads:	<u>5895 c.y.</u>
Drill Pct.:	<u>100%</u>	In Place Total:	<u>4535 c.y.</u>

Load and haul overburden to waste area and compact:	\$1,124.00
Adverse move-in from Coast Range Road to Quarry:	\$250.00
Drill and Shoot	\$2.10 /cu.yd. x 4535 cu.yds. = \$9,522.69
Crushing Jaw Run	\$1.85 /cu.yd. x 5585 cu.yds. = \$10,332.25
Push Rock	\$0.60 /cu.yd. x 5895 cu.yds. = \$3,537.00
Load Dump Truck:	\$0.60 /cu.yd. x 5895 cu.yds. = \$3,537.00
Oversize Reduction	\$4.00 /cu.yd. x 1179 cu.yds. = \$4,716.00
Subtotal	<u>\$33,018.94</u>

Move in Drill	102.16
Move in and set-up Jaw	1799.00
Move in Loader	172.02
Move in D7	177.54
Move in Roller	114.62
Move-in Trucks -	148.20
Subtotal	<u>\$2,513.54</u>

TOTAL PRODUCTION COSTS	\$35,532.48
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Base Cost= \$6.03 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	\$2.41	\$0.90	\$6.03	\$9.34	3838	<u>\$35,846.92</u>
C to D	\$2.46	\$0.90	\$6.03	\$9.38	679	<u>\$6,369.02</u>
E to F	\$2.63	\$0.90	\$6.03	\$9.56	470	<u>\$4,493.20</u>
I to J	\$2.48	\$0.90	\$6.03	\$9.41	400	<u>\$3,764.00</u>
K to L	\$2.45	\$0.90	\$6.03	\$9.38	81	<u>\$759.78</u>
Riprap A to B	\$2.31	\$1.40	\$6.03	\$9.73	20	<u>\$194.60</u>
Riprap C to D	\$2.46	\$1.40	\$6.03	\$9.88	10	<u>\$98.80</u>
Riprap E to F	\$2.63	\$1.40	\$6.03	\$10.06	10	<u>\$100.60</u>
G to H	\$1.94	\$0.90	\$6.03	\$8.86	117	<u>\$1,036.62</u>
Riprap G to H	\$2.77	\$2.20	\$6.03	\$10.99	270	<u>\$2,967.30</u>
Total C.Y.					5895	Sub Total <u>\$52,663.54</u>

TOTAL ROCKING COSTS	\$52,663.54
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MOVE-IN CALCULATIONS

Sale: WELCOMB RIDGE

LOWBOY HAUL (Round Trip)		
DISTANCE	ROADWAY	AVE SPEED (MPH)
19.6	Highway	40
0.0	Main Lines (Off Road)	10
0.0	Pulling Steep Grades	2

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	Brush Cutter	\$0.00		\$4.00	0	0	0	\$0.00	\$0.00
1	Graders	\$47.69		\$3.65	0	5.7	5.7	\$20.81	\$68.50
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	0	0	\$0.00	\$0.00
0	Rollers & Compactors	\$0.00		\$5.00	0	0	0	\$0.00	\$0.00
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)	\$181.30	1	\$44.80	0	5.7	5.7	\$255.36	\$436.66
0	Rubber Tired Backhoes/Skidders	\$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)	\$177.35	2	\$11.30	0	5.7	5.7	\$64.41	\$241.76
0	Tractor (D8)	\$0.00	2	\$15.10	0	0	0	\$0.00	\$0.00
0	Dump Truck (10 cy +)	\$0.00		\$2.85	0	0	0	\$0.00	\$0.00
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							

TOTAL MOVE-IN COSTS:	\$746.92
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OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT
WELCOMB RIDGE

1. Type of Sale

Regeneration harvest, Recovery

2. Legal Description

Sections 1, 2, 11 and 12, T1S, R8W, W.M., Tillamook County, Oregon

3. Sale Acreage

Sale areas were plotted in GIS on the ortho-photo layer and acres were calculated with GIS tools.

	ACRES		
	<u>Sale</u>	<u>Total</u>	<u>Net</u>
Area 1 (Clearcut)	116	119	112
Area 2 (Clearcut)	31	33	30
Total	147	152	142

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.

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.

4. Cruising Procedures

A. Cruise Method

A total of 102 plots were taken in the sale area, 79 plots in Area 1 and 23 plots in Area 2. Cruise lines were run at NW/SE bearings with 400-foot spacing. Plots were spaced at 150 feet along cruise lines. Diameters were measured to the nearest inch, heights to the nearest foot. Trees less than 9" diameter were not sampled. On every third plot all sample trees were measured and graded. On intervening plots, tree count by diameter and species was recorded. The cruise had a coefficient of variation of 47.1 and a SE% of 4.7 for net board feet/acre.

B. Plot size

A 20 BAF was used for Douglas-fir. A 10 BAF was used for other species and snags. Trees were sighted at 4.5'.

C. Grading System

Douglas-fir was graded to a 6" top using Columbia River rules, alder to an 8" top. Other species were graded camprun.

5. Computation Procedure

Plot data was entered into SuperAce for volume calculations. A preliminary stand table was run and used to determine leave trees. Leave trees were then designated in the data set and computations were completed.

6. Hidden Defect and Breakage

A factor of 5% was applied for hidden defect and breakage.

7. Timber Description

The sale area contains 41 to 47 year old Douglas-fir with scattered hemlock, spruce and patches of alder. This area was burned in the 1933 and 1939 Tillamook fires. The majority of the alder was treated with herbicides about 35 years ago to reduce competition with Douglas-fir. The surviving alder trees have poorly formed crowns and short boles. For appraisal considerations, 77% of the alder logs are estimated to be 8" diameter and 64% to be 24 feet in length of less.

The average stand diameter is 14.7 inches with Douglas-fir averaging 14.7 inches and alder averaging 13.0 inches. Basal area per acre is 152 square feet with 128 trees per acre. The Douglas-fir has severe symptoms of Swiss Needle Cast and tree growth has slowed.

8. Cruiser Names/Dates: Bob Gustavson and Steve Langer, February 2002

9. Revenue Distribution

FDF – 100%

Tax Code: 9-2

Deed Numbers: 169,186, 194

82% Rehabilitation Obligated

10. Attachments:

Volume Summaries

Logging Plan



"STEWARDSHIP IN FORESTRY"

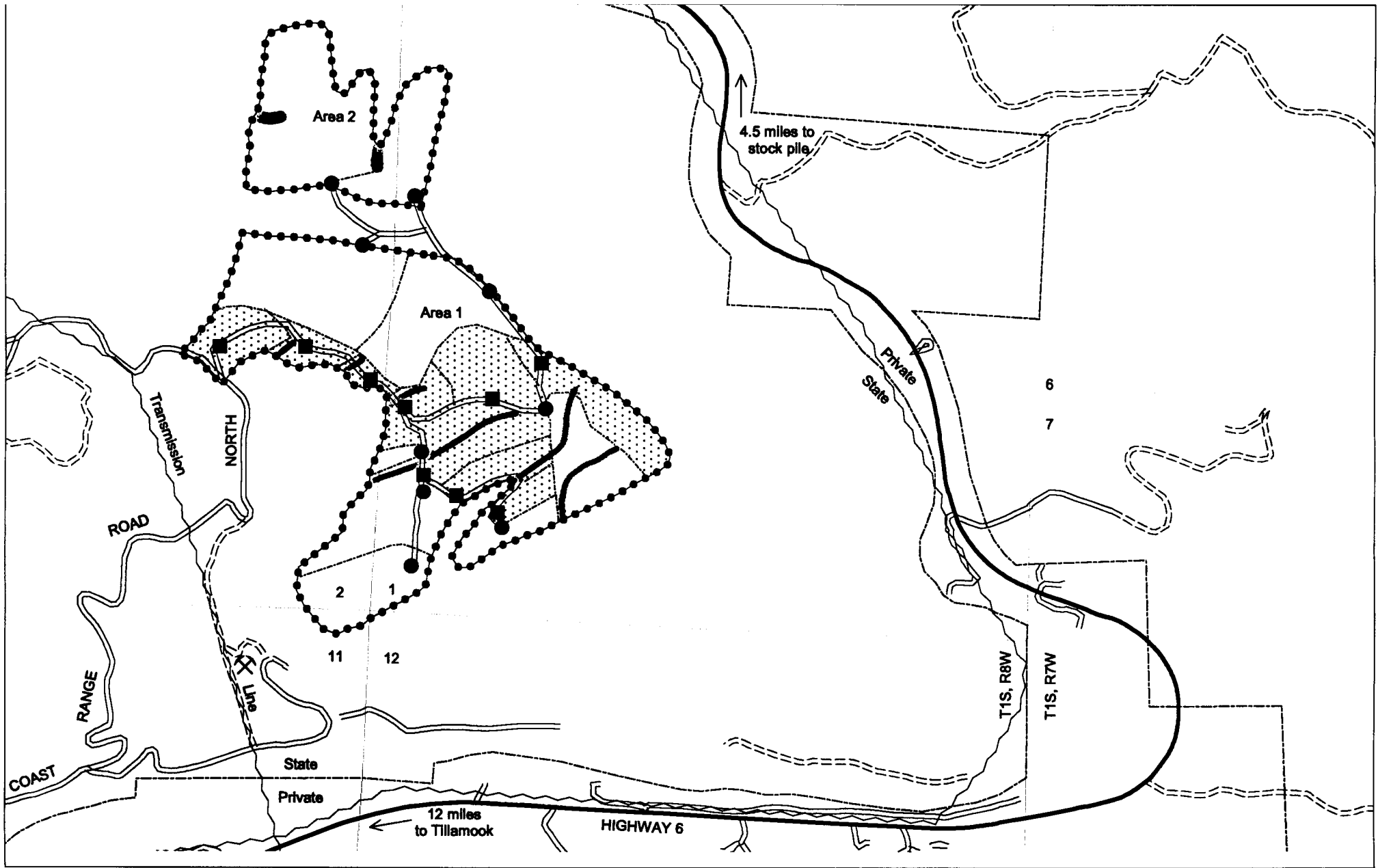
WELCOMB RIDGE
















Volume Summary

Area I						
112 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	94	90	8.5	948	5%	900
Alder	36	54	1.9	218	5%	207
TOTAL				1165		1107

Area II						
30 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	87	102	8.9	266	5%	253
Alder	40	52	2.1	62	5%	59
TOTAL				329		312


TOTAL SALE VOLUME			
SPECIES	MBF		Net Vol. (MBF)
Douglas-fir	1214		1153
Alder	280		266
TOTAL	1494		1419



-  Rock pit
-  Tractor landing
-  Cable landing
-  Cable yarding
-  Ground yarding
-  Buffer zone
-  Green tree area
-  Sale boundary
-  Setting boundary
-  County road
-  Unsurfaced road
-  Surfaced road
-  State highway
-  Abandoned road
-  Road construction

LOGGING PLAN
 Timber sale contract No. 341-03-17
 Welcomb Ridge
 Sections 1, 2, 11 and 12, T1S, R8W, W. M.
 Tillamook County, Oregon

1000 0 1000 Feet



1:12000



Area	Acres	
	Sale	Net
1	116	112
2	31	30
Total	147	142

**OREGON DEPARTMENT OF FORESTRY
WRITTEN PLAN**

SALE NAME: Welcomb Ridge

PROTECTED RESOURCE: No High Risk Sites were identified on the sale areas. If active landslides and slumps; slopes steeper than 80%; headwalls or draws steeper than 70% are found that constitute a High Risk Site the following practices will apply.

LOCATION: Portions of Sections 1, 2, 11, and 12, T1S, R8W, W.M., Tillamook County, Oregon.

ACTIVITY: Cable yarding across or adjacent to High Risk Sites.

PROTECTION MEASURES:

YARDING:

- Logs will have at least one end suspended when yarding through high risk sites.
- Soil gouging will be limited to a depth of 1 foot (measured vertically) when yarding through high risk sites.

**PREPARED BY: Wayne Auble
South Unit Forester
4/8/02**