



Timber Sale Appraisal  
East Butte  
Sale 341-09-48

District: Tillamook

Date: April 16, 2009

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**cost summary**

	<b>Conifer</b>	<b>Hardwood</b>	<b>Total</b>
<b>Gross Timber Sale Value</b>	\$250,976.00	\$19,560.64	\$270,536.64
		<b>Project Work:</b>	\$(51,960.00)
		<b>Advertised Value:</b>	\$218,576.64



"STEWARDSHIP IN FORESTRY"

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**timber description**

**Location:** Portions of Sections 13, 14, 23, and 24, T1N, R8W, W.M., Tillamook County, Oregon.

**Stand Stocking:** 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	14	0	98
Alder (Red)	12	0	80

Volume by Grade	10" - 11"	12"+	2S	3S	4S	6" - 7"	8" - 9"	Total
Douglas - Fir	0	0	460	1,648	620	0	0	2,728
Alder (Red)	4	26	0	0	0	113	33	176
Total	4	26	460	1,648	620	113	33	2,904



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**comments:** Pond Values Used: 1st Quarter Calendar Year 2009 = Local Pond Values.

Western Red Cedar Stumpage Price = Pond Value minus Logging Cost  
 $\$500/\text{MBF} = \$720/\text{MBF} - \$220/\text{MBF}$

Western Hemlock and Other Conifers Stumpage Price = \$50.00

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$700 daily truck cost.

Other Costs (with Profit & Risk to be added):

Brand and Paint:  $\$2/\text{MBF} \times 2,904 = \$5,808$

TOTAL Other Costs (with Profit & Risk to be added) = \$5,808

Other Costs (No Profit & Risk added):

OHV Block:  $16 \text{ Blocks} \times \$75/\text{Block} = \$1,200$

OHV Filters:  $8 \text{ Filters} \times \$75/\text{Filter} = \$600$

TOTAL Other Costs (No Profit & Risk added) = \$1,800

ROAD MAINTENANCE

Interim Maintenance  $\$250/\text{Mile} \times 3.5 \text{ miles} \times 3 \text{ gradings}/2,904 \text{ MBF} =$   
 $\$0.90/\text{MBF}$

Maintenance Rock ( $\$7.30/\text{cu. yd.} \times 3.5 \text{ miles} \times 25 \text{ cu. yd.}/\text{MMBF}/\text{mile}$   
 $\times 2.9 \text{ MMBF})/2,904 \text{ MBF} = \$0.64/\text{MBF}$

Final maintenance  $\$500/\text{Mile} \times 3.5 \text{ miles} \times 1 \text{ grading}/2,904 \text{ MBF} =$   
 $\$0.60/\text{MBF}$

TOTAL Maintenance Cost= \$2.14/MBF



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**logging conditions**

**combination#: 1**                    Douglas - Fir                    67.60%  
   Alder (Red)                    70.76%

**yarding distance:** Short (400 ft)                    **downhill yarding:** No  
**logging system:** Cable: Small Tower <=40                    **Process:** Stroke Delimber  
**tree size:** Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF  
**loads / day:** 6.0 -                    **bd. ft / load:** 3,800  
**cost / mbf:** \$124.31

**machines:** Log Loader (A)  
Stroke Delimber (A)  
Tower Yarder (Small)

**combination#: 2**                    Douglas - Fir                    25.36%  
   Alder (Red)                    17.77%

**yarding distance:** Long (1,500 ft)                    **downhill yarding:** No  
**logging system:** Cable: Medium Tower >40 - <70                    **Process:** Stroke Delimber  
**tree size:** Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF  
**loads / day:** 5.0                    **bd. ft / load:** 3,800  
**cost / mbf:** \$176.01

**machines:** Log Loader (A)  
Stroke Delimber (A)  
Tower Yarder (Medium)

**combination#: 3**                    Douglas - Fir                    7.04%  
   Alder (Red)                    11.47%

**yarding distance:** Short (400 ft)                    **downhill yarding:** No  
**logging system:** Cable: Small Tower <=40                    **Process:** Harvester Head Delimiting  
**tree size:** Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF  
**loads / day:** 7.0                    **bd. ft / load:** 3,800  
**cost / mbf:** \$190.08

**machines:** Log Loader (A)  
Forwarder  
Harvester  
Tower Yarder (Small)



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**logging costs**

Operating Seasons:	2.00	Profit Risk:	10.00%
Project Costs:	\$51,960.00	Other Costs (P/R):	\$5,808.00
Slash Disposal:	\$0.00	Other Costs:	\$1,800.00

**Miles of Road**

Road Maintenance: \$2.14

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	3.0	3.8
Alder (Red)	\$0.00	4.0	3.0

**Local Pond Values**

Date	Specie	Grade	Value
4/16/09	Douglas - Fir	2S	\$324.43
4/16/09	Douglas - Fir	3S	\$324.43
4/16/09	Douglas - Fir	4S	\$324.43



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**logging costs breakdown**

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
<b>Douglas - Fir</b>									
\$142.05	\$2.18	\$3.02	\$56.94	\$2.00	\$20.62	\$0.00	\$5.00	\$0.62	\$232.43
<b>Alder (Red)</b>									
\$141.04	\$2.57	\$3.02	\$63.64	\$2.00	\$21.23	\$0.00	\$5.00	\$0.62	\$239.12

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$324.43	\$92.00	\$0.00
Alder (Red)	\$0.00	\$350.26	\$111.14	\$0.00



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summary

**Amortized**

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	2,728	\$92.00	\$250,976.00
Alder (Red)	176	\$111.14	\$19,560.64

**Gross Timber Sale Value**

Recovery: \$270,536.64

Prepared by: Robert Thurman

Phone: 503-842-2545



PROJECT SUMMARY SHEET

Sale: EAST BUTTE

**CONSTRUCTION**

Point	C to E	3+05	stations =	\$465.42
Point	H to I	9+70	stations =	\$6,661.37
Point	J to K	11+55	stations =	\$9,526.00
<b>SUBTOTAL CONSTRUCTION</b>				<b>\$16,652.79</b>

**IMPROVEMENT**

Point	N to O	1+80	stations =	\$731.86
<b>SUBTOTAL IMPROVEMENT</b>				<b>\$731.86</b>

**RECONSTRUCTION**

Point	A to B	18+30	stations =	\$12,230.74
Point	C to D	21+80	stations =	\$5,708.16
Point	C to E	5+55	stations =	\$8,117.25
Point	F to G	5+00	stations =	\$1,977.90
Point	H to I	6+30	stations =	\$1,483.93
Point	L to M	3+00	stations =	\$805.30
<b>SUBTOTAL RECONSTRUCTION</b>				<b>\$30,323.28</b>

**SPECIAL PROJECTS**

Seed Waste Areas				\$220.00
<b>SUBTOTAL SPECIAL PROJECTS</b>				<b>\$220.00</b>

**MOVE IN**

\$4,032.07

**GRAND TOTAL** \$51,960.00



## SUMMARY OF CONSTRUCTION COST

Sale:	<u>EAST BUTTE</u>				Road:	<u>A to B</u>				
<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	18+30	stations		
	0.00	miles		0.00	miles		0.35	miles		
<b>RECONSTRUCTION: CLEARING AND GRUBBING -</b>										
Widening				0.250	acres @	\$660.00	per acre =	\$165.00		
Scattering				3.020	acres @	\$980.00	per acre =	\$2,959.60		
								<b>TOTAL CLEARING AND GRUBBING</b>	<b>\$3,124.60</b>	
<b>RECONSTRUCTION: EXCAVATION -</b>										
Road Earthwork (Incl. Large rock removal & grade reduction)				18.30	sta. @	\$120.00	per sta. =	\$2,196.00		
Widening				1543	cy. @	\$1.40	per c.y.=	\$2,160.20		
<b>RECONSTRUCTION: ENDHAUL -</b>										
Widening	3+90	to	5+00	530	cy. @	\$0.91	per c.y.=	\$482.30		
Widening	5+00	to	5+80	694	cy. @	\$0.91	per c.y.=	\$631.54		
Widening	6+40	to	7+50	319	cy. @	\$0.91	per c.y.=	\$290.29		
								<b>TOTAL ENDHAUL</b>	<b>\$1,404.13</b>	
<b>CULVERTS - MATERIALS &amp; INSTALLATION</b>										
			<u>Culverts</u>	40	LF of 18"	\$700.00		0	LF of 24"	\$0.00
			<u>Culvert Stakes &amp; Markers</u>							
			1 markers			\$8.00				
			<b>TOTAL</b>			<b>\$8.00</b>				
								<b>TOTAL CULVERTS</b>	<b>\$708.00</b>	
<b>ROCK</b>										
0+00	to		1+00	50	cy. of	Pit-Run	@	\$6.17	per c.y.=	\$308.50
								<b>TOTAL ROCK</b>	<b>\$308.50</b>	
<b>SPECIAL PROJECTS</b>										
Construct waste area -				2.00	hours @	\$130.00	per hour	\$260.00		
Construct Landing @ Pt. B -				1	@	\$250.00	each	\$250.00		
Cut & Fill roadway @ area of 11+97 - 13+00				4.00	hours @	\$130.00	per hour	\$520.00		
Drill & Shoot Rock in Roadway 13+00 to 13+25				105.00	cy.s @	\$4.90	per cy.	\$514.50		
Grade and shape road -				18.30	stations @	\$15.50	per station	\$283.65		
Roll subgrade w/ vibratory roller -				18.30	stations @	\$13.20	per station	\$241.56		
Grass seed and fertilize -				1.18	acres @	\$220.00	per acre	\$259.60		
								<b>TOTAL SPECIAL PROJECTS</b>	<b>\$2,329.31</b>	
								<b>GRAND TOTAL</b>	<b>\$12,230.74</b>	

## SUMMARY OF CONSTRUCTION COST

Sale: **EAST BUTTE** Road: **C to D**

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	21+80	stations
	0.00	miles		0.00	miles		0.41	miles

**RECONSTRUCTION: CLEARING AND GRUBBING -**

Scattering	2.000	acres	@	\$980.00	per acre =	\$1,960.00	
<b>TOTAL CLEARING AND GRUBBING</b>							<b>\$1,960.00</b>

**RECONSTRUCTION: EXCAVATION -**

Road Earthwork	21.80	sta.	@	\$90.00	per sta. =	\$1,962.00	
Remove outside berm	225	cy.	@	\$1.40	per c.y. =	\$315.00	
<b>TOTAL EXCAVATION</b>							<b>\$2,277.00</b>

**ROCK**

0+00 to 1+00	50	cy. of	Pit-Run	@	\$5.75	per c.y. =	\$287.50
<b>TOTAL ROCK</b>							<b>\$287.50</b>

**SPECIAL PROJECTS**

Construct Landing Pt. D -	1	@	\$250.00	each	\$250.00		
Grade and shape road -	21.80	stations @	\$15.50	per station	\$337.90		
Roll subgrade w/ vibratory roller prior to rocking -	21.80	stations @	\$13.20	per station	\$287.76		
Grass seed and fertilize -	1.40	acres @	\$220.00	per acre	\$308.00		
<b>TOTAL SPECIAL PROJECTS</b>							<b>\$1,183.66</b>

<b>GRAND TOTAL</b>	<b>\$5,708.16</b>
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## SUMMARY OF CONSTRUCTION COST

Sale: **EAST BUTTE** Road: **C to E**

Construction -	3+05	stations	Improvement -	0+00	stations	Reconstruction -	5+55	stations
	0.06	miles		0.00	miles		0.11	miles

**CONSTRUCTION:** CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=		
5+55		8+60			Outslope	\$55	=	\$167.75	
								<b>TOTAL</b>	<b>\$167.75</b>

**RECONSTRUCTION:** CLEARING AND GRUBBING -

Scattering	0.150	acres @	\$980.00	per acre =	\$147.00
					<b>TOTAL CLEARING AND GRUBBING</b>
					<b>\$147.00</b>

**RECONSTRUCTION:** EXCAVATION -

Road Earthwork	5.55	sta. @	\$120.00	per sta. =	\$666.00
					<b>TOTAL EXCAVATION</b>
					<b>\$666.00</b>

**RECONSTRUCTION:** ENDHAUL -

Widening	1+05	to	6+05	2210	cy. @	\$2.81	per c.y. =	\$6,210.10
Spread & compact				2210	cy. @	\$0.25	per c.y. =	\$552.50
								<b>TOTAL ENDHAUL</b>
								<b>\$6,762.60</b>

**ROCK**

0+00 to	1+00	50	cy. of	Pit-Run	@	\$5.75	per c.y. =	\$287.50
								<b>TOTAL ROCK</b>
								<b>\$287.50</b>

**SPECIAL PROJECTS**

Construct Landing Pt. E -	1	@	\$250.00	each	\$250.00
Grade and shape road -	8.60	stations @	\$15.50	per station	\$133.30
Roll subgrade w/ vibratory roller	8.60	stations @	\$13.20	per station	\$113.52
Grass seed and fertilize -	0.25	acres @	\$220.00	per acre	\$55.00
					<b>TOTAL SPECIAL PROJECTS</b>
					<b>\$551.82</b>

**GRAND TOTAL** **\$8,582.67**

## SUMMARY OF CONSTRUCTION COST

Sale: **EAST BUTTE** Road: **F to G**

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	5+00	stations
	0.00	miles		0.00	miles		0.09	miles

**RECONSTRUCTION: CLEARING AND GRUBBING -**  
 Scattering 0.600 acres @ \$980.00 per acre = \$588.00  
**TOTAL CLEARING AND GRUBBING \$588.00**

**RECONSTRUCTION: EXCAVATION -**  
 Road Earthwork 5.00 sta. @ \$120.00 per sta. = \$600.00  
**TOTAL EXCAVATION \$600.00**

**ROCK**  
 0+00 to 1+00 60 cy. of Pit-Run @ \$4.92 per c.y. = \$295.20  
**TOTAL ROCK \$295.20**

**SPECIAL PROJECTS**  
 Construct Landing Pt. G - 1 @ \$250.00 each \$250.00  
 Grade and shape road - 5.00 stations @ \$15.50 per station \$77.50  
 Roll subgrade w/ vibratory roller prior to rocking - 5.00 stations @ \$13.20 per station \$66.00  
 Grass seed and fertilize - 0.46 acres @ \$220.00 per acre \$101.20  
**TOTAL SPECIAL PROJECTS \$494.70**

**GRAND TOTAL** **\$1,977.90**

## SUMMARY OF CONSTRUCTION COST

Sale: **EAST BUTTE** Road: **H to I**

Construction -	9+70	stations	Improvement -	0+00	stations	Reconstruction -	6+30	stations
	0.18	miles		0.00	miles		0.12	miles

**CONSTRUCTION:** CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	
6+30		7+55		0.0	Outslope	\$55	=	\$68.75
7+55		9+55	64%	0.65	Outslope	\$1,628	=	\$3,256.00
9+55		10+96	60%	0.66	Outslope	\$1,410	=	\$1,988.10
10+96		11+37	58%	0.67	Outslope	\$560	=	\$229.60
11+37		16+00		0	Outslope	\$55	=	\$254.65
<b>TOTAL</b>								<b>\$5,797.10</b>

**RECONSTRUCTION:** CLEARING AND GRUBBING -  
Scattering

0.170	acres @	\$980.00	per acre =	\$166.60	
<b>TOTAL CLEARING AND GRUBBING</b>					<b>\$166.60</b>

**RECONSTRUCTION:** EXCAVATION -  
Road Earthwork

6.30	sta. @	\$120.00	per sta. =	\$756.00	
<b>TOTAL EXCAVATION</b>					<b>\$756.00</b>

**SPECIAL PROJECTS**

Construct waste area -	1.00	hours @	\$130.00	per hour	\$130.00
Construct Landing Pt. I -	1	@	\$250.00	each	\$250.00
Fill in roadway	0.50	hours @	\$130.00	per hour	\$65.00
Grade and shape road -	16.00	stations @	\$15.50	per station	\$248.00
Roll subgrade w/ vibratory roller prior to rocking -	16.00	stations @	\$13.20	per station	\$211.20
Grass seed and fertilize -	2.37	acres @	\$220.00	per acre	\$521.40
<b>TOTAL SPECIAL PROJECTS</b>					<b>\$1,425.60</b>

**GRAND TOTAL** **\$8,145.30**

## SUMMARY OF CONSTRUCTION COST

Sale:

**EAST BUTTE**

Road:

**J to K**

Construction -	11+55	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.22	miles		0.00	miles		0.00	miles

**CONSTRUCTION:** CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	<u>Avg. Dist.</u> To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	
0+00		2+09		0.0	Outslope	\$55	=	\$114.95
2+09		4+13	61%	0.4	Outslope	\$1,324	=	\$2,700.96
4+13		5+52	51%	0.42	Outslope	\$385	=	\$535.15
5+52		6+33		0	Outslope	\$55	=	\$44.55
6+33		8+00		0	Outslope	\$55	=	\$91.85
8+00		9+86	60%	0.52	Outslope	\$1,367	=	\$2,542.62
9+86		11+55	61%	0.54	Outslope	\$1,367	=	\$2,310.23
<b>TOTAL</b>								<b>\$8,340.31</b>

**SPECIAL PROJECTS**

Construct Landing Pt. K -	1	@	\$250.00	each	\$250.00
Fill roadway @ area of 0+00 -	1.50	hours @	\$130.00	per hour	\$195.00
Grade and shape road -	11.55	stations @	\$15.50	per station	\$179.03
Roll subgrade w/ vibratory roller prior to rocking -	11.55	stations @	\$13.20	per station	\$152.46
Grass seed and fertilize -	1.86	acres @	\$220.00	per acre	\$409.20
<b>TOTAL SPECIAL PROJECTS</b>					<b>\$1,185.69</b>

**GRAND TOTAL** **\$9,526.00**

## SUMMARY OF CONSTRUCTION COST

Sale: **EAST BUTTE** Road: **L to M**

<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>3+00</u>	stations
	0.00	miles		0.00	miles		0.06	miles

<b>RECONSTRUCTION:</b> CLEARING AND GRUBBING - Scattering	0.080	acres @	\$980.00	per acre =	\$78.40	
				<b>TOTAL CLEARING AND GRUBBING</b>	<b>\$78.40</b>	
<b>RECONSTRUCTION:</b> EXCAVATION - Road Earthwork	3.00	sta. @	\$120.00	per sta. =	\$360.00	
				<b>TOTAL EXCAVATION</b>	<b>\$360.00</b>	
<b>SPECIAL PROJECTS</b>						
Construct Landing Pt. M -	1	@	\$250.00	each	\$250.00	
Grade and shape road -	3.00	stations @	\$15.50	per station	\$46.50	
Roll subgrade w/ vibratory roller prior to rocking -	3.00	stations @	\$13.20	per station	\$39.60	
Grass seed and fertilize -	0.14	acres @	\$220.00	per acre	\$30.80	
				<b>TOTAL SPECIAL PROJECTS</b>	<b>\$366.90</b>	
<b>GRAND TOTAL</b>					<b>\$805.30</b>	

## SUMMARY OF CONSTRUCTION COST

Sale: **EAST BUTTE** Road: **N to O**

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	1+80	stations	<u>Reconstruction -</u>	0+00	stations
	0.00	miles		0.03	miles		0.00	miles

**IMPROVEMENT: CLEARING AND GRUBBING -**

Scattering	0.070	acres @	\$980.00 per acre =	\$68.60	
<b>TOTAL CLEARING AND GRUBBING</b>				<b>\$68.60</b>	

**IMPROVEMENT: EXCAVATION -**

Road Earthwork	1.30	sta. @	\$40.00 per sta. =	\$52.00	
<b>TOTAL EXCAVATION</b>				<b>\$52.00</b>	

**IMPROVEMENT: ENDHAUL -**

Widening	0+00	to	0+65	196	cy. @	\$0.93 per c.y. =	\$182.28
Widening		to	1+80	196	cy. @	\$0.93 per c.y. =	\$182.28
Spread & compact	1+15			392	cy. @	\$0.25 per c.y. =	\$98.00
<b>TOTAL ENDHAUL</b>							<b>\$462.56</b>

**ROCK**

0+00	to	0+65	10	cy. of	Pit-Run	@	\$3.96 per c.y. =	\$39.60
1+15	to	1+80	10	cy. of	Pit-Run	@	\$4.31 per c.y. =	\$43.10
<b>TOTAL ROCK</b>								<b>\$82.70</b>

**SPECIAL PROJECTS**

Grass seed and fertilize -	0.30	acres @	\$220.00 per acre =	\$66.00	
<b>TOTAL SPECIAL PROJECTS</b>				<b>\$66.00</b>	

<b>GRAND TOTAL</b>	<b>\$731.86</b>
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## SUMMARY OF CONSTRUCTION COST

Sale: **EAST BUTTE** Road: **Final Maintenance**

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	0+00	stations
	0.00	miles		0.00	miles		0.00	miles

<b>ROCK</b>								
Final_Maintenance	0	cy. of	Crushed	@	\$0.00	per c.y.=	\$0.00	
							<b>TOTAL ROCK</b>	<b>\$0.00</b>

<b>SPECIAL PROJECTS</b>								
Remove Logging Slash From ROW (w/in Area)	0.00	hours @		\$130.00	per hour		\$0.00	
Construct 4 Tank Traps: Pt. A, Pt. F, 2 @ Pt. C	0.00	@		\$60.00	each		\$0.00	
Grade and shape main haul road -	0.00	stations @		\$15.50	per station		\$0.00	
Waterbar Project Roads	0	Waterbars &		\$25.00	per station		\$0.00	
Roll Mainline Subgrade	0.00	stations @		\$13.20	per station		\$0.00	
							TOTAL SPECIAL PROJECTS	<b>\$0.00</b>
							<b>GRAND TOTAL</b>	<b>\$0.00</b>



# OREGON DEPARTMENT OF FORESTRY

## CRUISE REPORT

*East Butte*

1. **Type of Sale**  
Regeneration harvest, Recovery
2. **Legal Description**  
Portions of Sections 13, 14, 23, and 24, T1N, R8W, W.M., Tillamook County, Oregon
3. **Sale Acreage**  
Sale acreage was determined with GPS, orthophotographs, and GIS.

	<b>ACRES</b>	
	<b><u>Gross</u></b>	<b><u>Net</u></b>
<b>Area 1 (Modified Clearcut)</b>	99	93
<b>Area 2 (Modified Clearcut)</b>	86	82
<b>Total</b>	185	175

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

*Used for calculating the advertised volume.*

Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. **Cruising Procedures**

- A. **Cruise Method**

In Area 1, 19 measured plots were installed. Plot and Line Spacing was 250' and 500' respectively; Line Azimuth was 110°. In Area 2, 15 measured plots and 16 count plots were installed. Plot and Line spacing was 165' and 660' and run in cardinal directions perpendicular to the contours in Area 2. BAF is 33.61 in Area 1 and 27.78 in Area 2; the point of observation is at 4.5 feet. All conifers 8 inches DBH and greater and all hardwoods 10 inches DBH and greater were recorded in Area 1. In Area 2 all conifers containing a minimum 5 inch 16 foot log and hardwoods containing a minimum 6 inch 16 foot log were cruised. Species, merchantable height, grade, defect and DBH were recorded on all trees. An average of one form factor per species per plot was measured. The coefficient of variation and standard error for net board feet per acre for the cruise were 72.2% and 10.2%, respectively.

- B. **Grading System**

All trees were graded using Columbia River Log Scaling and Grading Bureau rules. All conifers were graded to a minimum 5" top, inside bark, all hardwoods were graded to a minimum 6" top inside bark, or 30% of DBH for all species, whichever was greater. Log lengths all favored 40 feet. Height and diameter

measurements were to the nearest foot or inch, respectively. All diameters were taken at a height of 4.5 feet, on the uphill side of the tree.

**5. Computation Procedure**

Plot data was entered into SuperACE for computation of basal area, board foot volumes, V-BAR, and project statistics. The final estimated sale volume was computed using the Species Sort Grade reports for each sale area generated from SuperACE.

Following a check cruise on area 1, Douglas-fir net volume was reduced by 20% and alder net volume was increased by 17%, as shown on Volume Summary for Area 1.

**6. Hidden Defect and Breakage**

No breakage and hidden defect was applied to Douglas-fir and 10% D&B applied to hardwoods.

**7. Timber Description**

The stand burned in the Tillamook Fire in 1933 and the Saddle Mountain Fire in 1939. Small portions of alder in the sale were sprayed on the eastern part of the sale. It was planted from 1953-1955. The stand shows light signs of Swiss needle cast infection. There has been no prior management of this stand.

**8. Cruiser Names/Dates**

Allen, Rios, Dwyer, Neuman, Yau, Wells, Thurman, Humphreys; June, July, October 2008

**9. Revenue Distribution**

FDF: 100%

Tax Code: 56, 9-2

Deed Numbers: 161, 162

**10. Attachments**

Volume Summary

Stand Table Summary

Log Stock Tables

Logging Plan

**11. Stand and Log Stock Tables Species Key**

DL – Douglas-fir leave

DF – Douglas-fir take

NL – Noble fir leave

NF – Noble fir take

RL – Red alder leave

RA – Red alder take

RC – Western red cedar (reserved)

SL – Sitka spruce leave

SS – Sitka spruce take

WL – Western hemlock leave

WH – Western hemlock take

East Butte Total Volume Summary

T01N R08W S13 TyMC01 93.00  
 T01N R08W S13 TyMC02 75.00  
 T01N R08W S13 TyRA02 7.00

Project: EAST\_BT  
 Acres 175.00

Page 1  
 Date 3/31/2009  
 Time 8:51:01AM

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log			Logs Per /Acre		
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf			
									6-7	8-9	10-11	12+	12-15	16-25	26-33	34-99						
DF	8	2M		16	10.0	2,921	2,629	460						100		3	8	90	39	230	1.72	11.4
DF	8	3M		61	14.9	11,062	9,416	1,648	20	41	33	5			2	6	91	38	88	0.71	106.8	
DF	8	4M		23	15.4	4,187	3,541	620	98	1	1				3	27	34	36	27	27	0.31	132.4
<b>DF</b>	<b>Totals</b>			90	14.2	18,170	15,586	2,728	34	25	20	20			1	8	13	79	32	62	0.59	250.7
RA	8	3M		22	6.5	239	223	39									100	32	135	1.40	1.7	
RA	8	4M		78	5.5	831	786	137	82	15	3					23	17	59	30	46	0.54	17.2
<b>RA</b>	<b>Totals</b>			6	5.7	1,070	1,009	177	64	19	2	15				18	36	46	30	53	0.62	18.9
DL	8	2M		20		106	106	19									100	40	200	1.18	.5	
DL	8	3M		63	1.7	340	334	58	3	10	55	32					100	40	153	1.11	2.2	
DL	8	4M		17		89	89	16							1		38	61	32	34	0.39	2.6
<b>DL</b>	<b>Totals</b>			3	1.1	535	529	93	18	7	35	40			0		6	93	36	100	0.80	5.3
RC	8	4M				128	128	22								37	63		24	29	0.56	4.3
<b>RC</b>	<b>Totals</b>			1		128	128	22								37	63		24	29	0.56	4.3
<b>Totals</b>					13.3	19,903	17,253	3,019	36	24	20	20			1	9	14	77	32	62	0.60	279.2



**East Butte Area 2 Volume Summary**

TO1N R08W S13 TyMC02 75.00  
 TO1N R08W S13 TyRA02 7.00

**Project: EAST\_BT**  
**Acres 82.00**

**Page 1**  
**Date 3/31/2009**  
**Time 8:49:12AM**

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log			Logs Per /Acre	
									Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf		
									6-7	8-9	10-11	12+	12-15	16-25	26-33	34-99					
DF	8	2M		28	2.1	3,488	3,414	280					100	4	9	87	38	272	1.98	12.5	
DF	8	3M		54	1.7	6,611	6,499	533	29	24	41	6		5	3	92	39	97	0.79	67.0	
DF	8	4M		18	.2	2,065	2,061	169	99	1				5	25	44	26	25	27	0.36	76.1
<b>DF</b>	<b>Totals</b>			85	1.6	12,164	11,974	982	33	13	22	32		1	8	12	79	32	77	0.74	155.6
DL	8	3M		82	3.8	327	315	26	6	24	70					100	40	131	1.01	2.4	
DL	8	4M		18		65	65	5						4		58	38	29	30	0.32	2.1
<b>DL</b>	<b>Totals</b>			3	3.2	392	380	31	22	20	58			1		10	89	35	84	0.74	4.5
RC	8	4M				273	273	22							37	63		24	29	0.56	9.3
<b>RC</b>	<b>Totals</b>			2		273	273	22							37	63		24	29	0.56	9.3
RA	8	3M		21	12.0	363	320	26				100				100	32	167	1.81	1.9	
RA	8	4M		79	10.4	1,270	1,137	93	74	22	4			31	26	43	29	42	0.56	27.3	
<b>RA</b>	<b>Totals</b>			10	10.8	1,633	1,457	119	58	17	3	22		24	42	34	29	50	0.65	29.2	
<b>Totals</b>					2.6	14,463	14,084	1,155	36	14	21	29		1	10	16	73	31	71	0.72	198.6

TC		PSTNDSUM		Stand Table Summary								Page		1			
										Date:		3/31/2009					
T01N R08W S13 TyMC01				93.00		Project				EAST_BT				Time:		9:13:35AM	
T01N R08W S13 TyMC02				75.00		Acres				175.00				Grown Year:			
T01N R08W S13 TyRA02				7.00													
S Spe	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
DF		9	8	85	71	17.544	7.75	21.80	7.2	30.0	4.46	158	655	781	276	115	
DF		10	6	89	75	10.623	5.79	15.79	8.3	35.1	3.72	130	554	651	228	97	
DF		11	15	86	90	21.715	14.33	34.54	11.6	41.4	11.40	400	1,428	1,996	700	250	
DF		12	9	84	72	11.163	8.77	15.95	13.7	40.8	6.25	219	650	1,093	384	114	
DF		13	12	85	79	11.709	10.79	18.77	14.6	45.7	7.80	274	857	1,366	479	150	
DF		14	18	87	89	16.116	17.23	31.28	17.0	55.3	15.19	533	1,731	2,658	932	303	
DF		15	27	86	94	20.535	25.20	39.36	20.6	66.2	23.12	812	2,604	4,046	1,420	456	
DF		16	14	86	93	8.507	11.88	17.01	22.7	73.7	11.00	386	1,254	1,926	676	220	
DF		17	7	85	91	4.272	6.73	8.54	23.5	75.8	5.73	201	648	1,004	352	113	
DF		18	7	84	95	3.854	6.81	8.24	28.1	87.8	6.60	232	724	1,155	405	127	
DF		19	12	85	92	5.443	10.72	11.44	31.7	91.3	10.34	363	1,044	1,809	635	183	
DF		20	5	80	94	1.931	4.21	4.00	33.9	103.4	3.86	136	414	676	237	72	
DF		21	15	81	91	5.819	14.00	12.03	35.8	106.7	12.26	430	1,284	2,145	753	225	
DF		22	3	81	91	1.126	2.97	2.64	37.6	115.7	2.83	99	305	495	174	53	
DF		23	6	80	91	2.061	5.95	4.80	38.6	120.3	5.28	185	578	925	324	101	
DF		24	1	84	91	.324	1.02	.65	56.3	200.0	1.04	36	129	182	64	23	
DF		25	2	83	91	.597	2.03	1.49	46.8	146.0	1.99	70	218	349	122	38	
DF		26	2	82	112	.552	2.03	1.38	56.5	208.0	2.22	78	287	389	136	50	
DF		27	1	77	87	.256	1.02	.51	46.5	165.0	.68	24	84	119	42	15	
DF		28	1	82	110	.238	1.02	.48	78.7	290.0	1.07	37	138	187	65	24	
DF		Totals	171	85	85	144.383	160.25	250.69	19.2	62.2	136.85	4,803	15,586	23,948	8,405	2,728	
RA		9	1	80	80	2.128	.94	2.13	12.4	64.2	.73	26	137	127	46	24	
RA		10	1	80	52	.645	.35	.65	9.3	27.0	.16	6	17	29	10	3	
RA		11	4	81	53	3.285	2.17	3.28	12.6	39.4	1.14	41	129	199	72	23	
RA		12	3	80	40	1.344	1.06	1.34	12.0	33.0	.45	16	44	78	28	8	
RA		13	4	79	71	3.815	3.52	5.02	17.9	50.4	2.48	90	253	434	157	44	
RA		14	1	76	44	.329	.35	.33	17.5	45.0	.16	6	15	28	10	3	
RA		15	3	81	67	1.959	2.40	2.73	23.3	59.7	1.75	63	163	306	111	28	
RA		16	1	80	40	.252	.35	.25	24.1	45.0	.17	6	11	29	11	2	
RA		17	1	72	56	.223	.35	.22	33.9	90.0	.21	8	20	36	13	4	
RA		18	2	76	33	1.161	2.05	1.16	28.0	39.2	.89	33	45	156	57	8	
RA		20	1	81	70	.510	1.11	1.02	31.2	85.5	.87	32	87	153	56	15	
RA		23	1	81	66	.385	1.11	.77	40.5	112.5	.86	31	87	151	55	15	
RA		Totals	23	79	60	16.036	15.77	18.90	18.9	53.4	9.87	358	1,009	1,727	627	177	
DL		17	3	81	94	.872	1.37	1.74	25.9	83.3	1.24	45	145	218	79	25	
DL		18	4	83	98	1.722	3.04	3.57	30.8	107.5	3.02	110	384	529	192	67	
DL		Totals	7	83	97	2.593	4.42	5.31	29.2	99.6	4.27	155	529	747	271	93	
RC		9	1	79	21	1.382	.61	1.38	5.1	20.0	.17	7	28	29	12	5	
RC		13	2	70	37	1.325	1.22	1.32	14.4	30.0	.45	19	40	78	33	7	
RC		14	2	76	46	1.142	1.22	1.14	19.8	40.0	.53	23	46	93	39	8	
RC		15	1	76	41	.498	.61	.50	21.1	30.0	.25	11	15	43	18	3	
RC		Totals	6	75	35	4.347	3.66	4.35	13.6	29.4	1.39	59	128	243	104	22	
Totals			207	84	82	167.359	184.10	279.25	19.2	61.8	152.37	5,375	17,253	26,665	9,406	3,019	







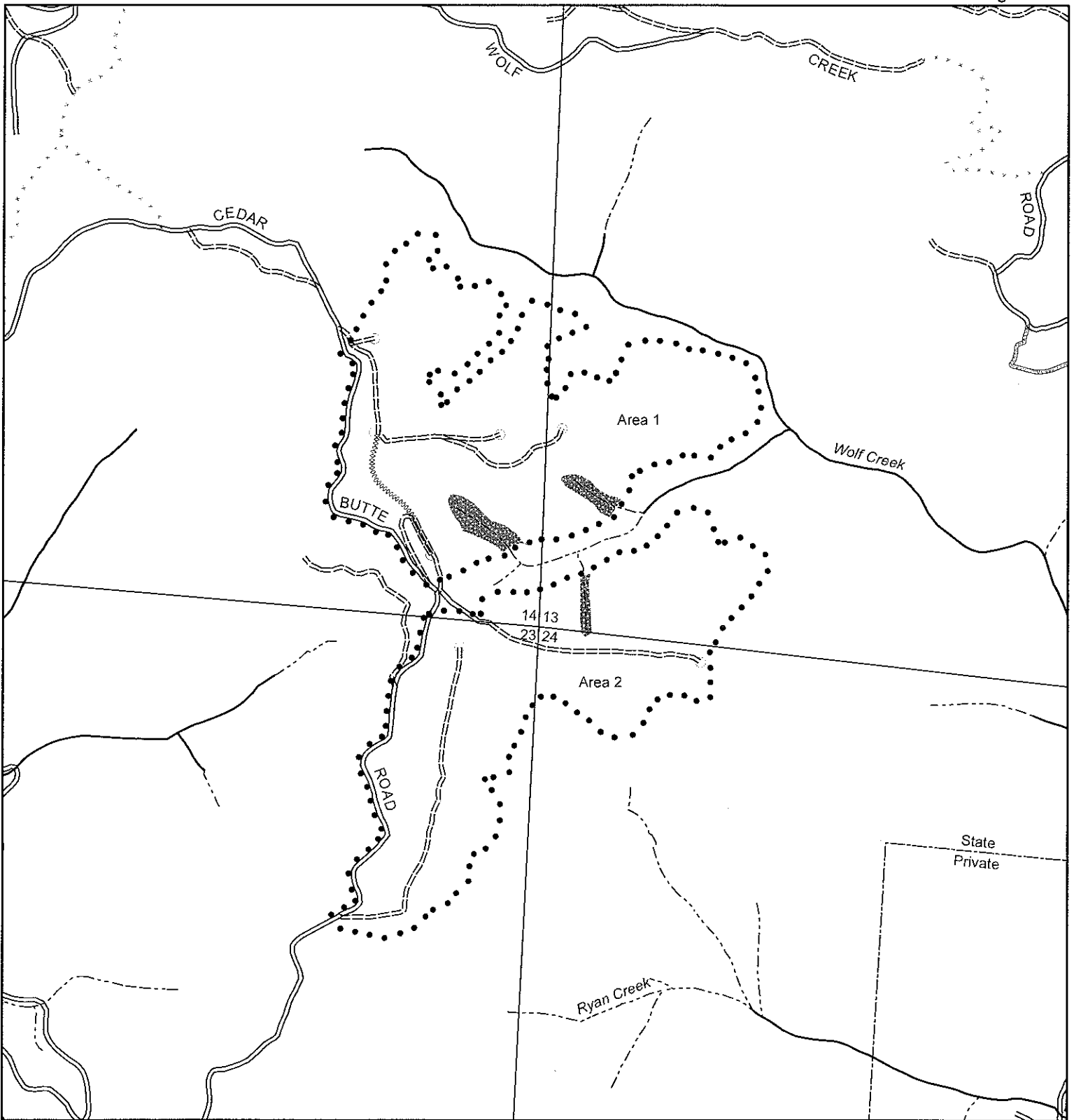
Log Stock Table - MBF

T01N R08W S13 TyMC01	93.00
T01N R08W S13 TyMC02	75.00
T01N R08W S13 TyRA02	7.00

Project: EAST\_BT  
 Acres 175.00

Page 3  
 Date 3/31/2009  
 Time 9:13:34AM

S Spp	T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
Total		All Species		3,483	13.3	3,019	100.0		538	552	723	594	362	179	71				



- Landing
- Domestic water supply intake
- Helicopter landing zone
- Truck turn-around
- Survey corner
- Cable yarding
- Ground yarding
- Helicopter yarding
- Downhill yarding
- Buffer
- Non-required thinning
- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream
- Perennial Type-N stream
- Unsurfaced road
- Surfaced road
- State/Federal highway
- County road
- Non-project road
- Swing road
- Legacy road
- Blocked road
- OHV trail
- Non-motorized trail
- Transmission line

**LOGGING PLAN**

Timber Sale Contract No. 341-09-48  
 East Butte  
 Portions of Sections 13, 14, 23,  
 and 24, T1N, R8W, W.M.,  
 Tillamook County, Oregon

1,000                      0                      1,000 Feet

Tillamook District GIS  
 04/07/2009

This product is for informational use and  
 may not have been prepared for, or suitable  
 for legal, engineering, or surveying purposes.

Area	Type of Operation		Acres	
	Modified Clearcut	Other	Gross	Net
1	Modified Clearcut		99	93
2	Modified Clearcut		86	82
<b>Total</b>			<b>185</b>	<b>175</b>

