



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Goose Pit Combination Sale 341-06-30

District: Astoria

Date: 1/9/06

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$4,501,103.56	\$74,064.83	\$4,575,168.39
		<b>Project Work</b>	(\$183,299.00)
		<b>Advertised Value</b>	\$4,391,869.39



# Timber Sale Appraisal Timber Description Goose Pit Combination Sale 341-06-30

"STEWARDSHIP IN FORESTRY"

**District:** Astoria

**Location:** Portions of Sections 1, 2, 11, 12, 13, and 14, T6N, R7W, and Section 6, T6N, R6W, W.M., Clatsop County, Oregon

**Date:** 1/9/06

**Stand Stocking:** 80%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	20	0	97
Western Hemlock / Fir	15	0	96
Alder (Red)	13	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Alder (Red)	Total
2S	6,965	1,618	0	8,583
3S	3,027	2,250	149	5,426
4S	343	493	108	944
<b>Total</b>	<b>10,335</b>	<b>4,361</b>	<b>257</b>	<b>14,953</b>

**Comments:** Pond Values Used: 4th Quarter Calendar Year 2005 + Local Pond Values

Log Markets: Mist, Clatskanie, Tillamook, Forest Grove

Hauling Costs Used: System currently uses hauling costs of \$460 daily truck cost. Additional hauling costs added in Other Costs (No P&R) to make equivalent to \$700 daily truck cost.

Additional Other Costs (with Profit & Risk added):

100% branding and painting:  $\$1/\text{MBF} \times 14,953 \text{ MBF} = \$14,953$

Snag Creation in Areas 1, 3, and 4: Create 20 snags per area x 3 areas x  $\$45/\text{snag} = \$2,700$

TOTAL Other Costs (with P&R added) = \$17,653

Other Costs (No Profit & Risk added):

Additional Hauling Costs =  $\$30.15/\text{MBF} \times 14,953 \text{ MBF} = \$450,833$

Vacating dirt road segments 2E to 2F, 2K to 2L, 3A to 3B, & 3C to 3D after harvest:  
 $\$50/\text{station} \times 52 \text{ stations} = \$2,600$

Pile Slash at Cable Landings in Areas 1, 3, and 4:  $12 \text{ landings} \times \$262.50 = \$3,150$

Excavator Slash Piling:  $138.5 \text{ hrs.} \times \$120 = \$16,620$

Excavator Move in:  $2 @ \$945 = \$1,890$

TOTAL Other Costs (No P&R added) = \$475,093

Western Red Cedar Stumpage Price = Pond Value minus Logging Cost  
 $\$550/\text{MBF} = \$825/\text{MBF} - \$275/\text{MBF}$



# Timber Sale Appraisal Logging Conditions Goose Pit Combination Sale 341-06-30

"STEWARDSHIP IN FORESTRY"

<b>Combination#:</b> 1	Douglas - Fir	41.00%
	Western Hemlock / Fir	41.00%
	Alder (Red)	41.00%
<b>Yarding Distance:</b>	Medium (800 ft)	<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Small Tower <=40	<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF	
<b>Loads/Day:</b>	4	<b>Bd. Ft./Load:</b> 3,700
<b>Cost/MBF:</b>	\$174.19	
<b>Machines:</b>		
	Log Loader (A)	
	Tower Yarder (Small)	
<b>Combination#:</b> 2	Douglas - Fir	19.00%
	Western Hemlock / Fir	19.00%
	Alder (Red)	19.00%
<b>Yarding Distance:</b>	Medium (800 ft)	<b>Downhill Yarding:</b> Yes
<b>Logging System:</b>	Track Skidder	<b>Process:</b> Manual Felling/Delimiting
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF	
<b>Loads/Day:</b>	6	<b>Bd. Ft./Load:</b> 3,700
<b>Cost/MBF:</b>	\$147.09	
<b>Machines:</b>		
	Log Loader (B)	
	Track Skidder	
<b>Combination#:</b> 3	Douglas - Fir	28.00%
	Western Hemlock / Fir	28.00%
	Alder (Red)	28.00%
<b>Yarding Distance:</b>	Long (1,500 ft)	<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Medium Tower >40 - <70	<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
<b>Loads/Day:</b>	7	<b>Bd. Ft./Load:</b> 3,700
<b>Cost/MBF:</b>	\$128.05	
<b>Machines:</b>		
	Log Loader (A)	
	Tower Yarder (Medium)	
<b>Combination#:</b> 4	Douglas - Fir	12.00%
	Western Hemlock / Fir	12.00%
	Alder (Red)	12.00%

**Yarding Distance:** Short (400 ft)

**Logging System:** Shovel

**Tree Size:** Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

**Loads/Day:** 8

**Cost/MBF:** \$79.55

**Machines:**

Shovel Logger

**Downhill Yarding:** Yes

**Process:** Manual Delimiting

**Bd. Ft./Load:** 3,700



# Timber Sale Appraisal Logging Costs Goose Pit Combination Sale 341-06-30

"STEWARDSHIP IN FORESTRY"

Date: 1/9/06

Operating Seasons: 2.5

Profit & Risk: 14%

Project Costs: \$183,299

Other Costs (P/R): \$17,653

Slash Disposal: \$0

Other Costs: \$475,093

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

Road Maintenance: \$2.17

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



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Logging Costs Breakdown Goose Pit Combination Sale 341-06-30

<b>Costs</b>	<b>Douglas - Fir</b>	<b>Western Hemlock / Fir</b>	<b>Alder (Red)</b>
<b>Logging</b>	144.76	144.76	144.76
<b>Road Maintenance</b>	2.24	2.26	2.28
<b>Fire Protection</b>	0.45	0.45	0.45
<b>Hauling</b>	59.28	59.90	69.16
<b>Other (P/R appl.)</b>	1.18	1.18	1.18
<b>Profit &amp; Risk</b>	29.11	29.20	30.50
<b>Slash Disposal</b>	0.00	0.00	0.00
<b>Scaling</b>	2.00	2.00	2.00
<b>Other</b>	31.77	31.77	31.77
<b>Total</b>	270.79	271.52	282.10

<b>Amortization</b>	0.00	0.00	0.00
<b>Pond Value</b>	647.40	411.13	570.29
<b>Stumpage</b>	376.61	139.61	288.19
<b>Amortized</b>	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary Goose Pit Combination Sale 341-06-30

**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>	10,335.00	4,361.00	257.00
<b>Value</b>	376.61	139.61	288.19
<b>Total</b>	3,892,264.35	608,839.21	74,064.83

**Gross Timber Sale Value**

**Recovery \$4,575,168.39**

Prepared by: Erin Wilson

Date: 1/9/06

District: Astoria

Phone: (503) 325-5451



**Road Maintenance Cost Summary**

Sale: Goose Pit Combination  
 Date: 30-Nov-05  
 By: J. Long

MBF: 14,954  
 \$\$/MBF: \$2.17

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost	Production Rates		
							Miles/day	Distance(miles)	Days
Progressive Operations 1st Entry	Grader 14G	\$570	1	30	\$84	\$3,090	2.5	7.0	2.8
	Dump Truck 12CY x 2	\$119	2	10	\$59	\$1,418			
	FE Loader C966	\$570	1	10	\$79	\$1,360			
Progressive Operations 2nd Entry	Grader 14G	\$570	1	30	\$84	\$3,090	2.5	7.0	2.8
	Dump Truck 12CY x 2	\$119	2	10	\$59	\$1,418			
	FE Loader C966	\$570	1	10	\$79	\$1,360			
Final Road Maintenance	Grader 14G	\$570	1	60	\$84	\$5,610	1.5	8.2	5.5
	Dump Truck 12CY x 3	\$119	3	20	\$59	\$3,897			
	FE Loader C966	\$570	1	20	\$79	\$2,150			
	Vibratory Roller	\$570	1	60	\$79	\$5,310			
Total	Water Truck 2,500 gallon Labor	\$139	1	50	\$70	\$3,639			
				8	\$18	\$144			
						<b>\$32,486</b>			

\*Final Road Maintenance Only

**SUMMARY OF ALL PROJECT COSTS**

**SALE NAME:** Goose Pit Combination

**NEW CONSTRUCTION:**

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 1	1A-1B, 1C-1D, 2A-2B, 2C-2D, 2E-2F, 2G-2H, 2I-2J, 2K-2L	143.05	\$82,205
	2M-2N, 2O-2P, 3A-3B, 3C-3D, 3E-3F, & 3G-3H.		
	<b>TOTALS</b>	143.05	<b>\$82,205</b>

**NEW CONSTRUCTION:**

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 2	A-B & C-D.	36.5	\$80,120
	<b>TOTALS</b>	36.50	<b>\$80,120</b>

**ROAD IMPROVEMENT:**

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 2	I1 to I2	10.50	\$4,189
	<b>TOTALS</b>	10.50	<b>\$3,131</b>

**SPECIAL PROJECTS:**

	<u>Description</u>	<u>Cost</u>
Project No. 3	Project Work Road Maintenance	\$3,022
	Stream Enhancement	\$9,000
	<b>TOTALS</b>	<b>\$12,022</b>

**MOVE IN:**

	<u>Equipment</u>	<u>Cost</u>
	Dozer (D8)	\$1,030
	Dump Trucks (12 cy) X 3	\$357
	F E Loader (C966)	\$570
	Grader (14G)	\$570
	Vibratory Roller	\$570
	Water Truck (2,500 gallon)	\$139
	Excavator (C330) X 2	\$2,060
	Skidder	\$525
	<b>TOTAL</b>	<b>\$5,821</b>

**GRAND TOTAL** **\$183,299**

Compiled By: Wilson

Date: 11/4/2005

**SUMMARY OF CONSTRUCTION COSTS**

SALE NAME: Goose Pit Combination (Designed Roads) NEW CONSTRUCTION: 126.55 STATIONS MILES 2.40  
 ROADS: 1A-1B (30.75), 2A-2B (20.6), 2C-2D (23.0), 2E-2F (8.7), IMPROVEMENT: N/A STATIONS MILES N/A  
2G-2H (8.0), 2I-2J (2.5), 3A-3B (21.5), 3C-3D (11.5)

CLEARING & GRUBBING	Method	Acres/amount	X	Rate	=	Cost
Scatter Outside of R/W		15.00	X	\$980.00	=	\$14,700.00
<b>SUB TOTAL FOR CLEARING &amp; GRUBBING</b>						<b>\$14,700</b>

EXCAVATION	Material	Cy/amount/station	X	Rate	=	Cost
Common Excavation		9,900	X	\$1.28	=	\$12,672.00
Truck End Haul 1A to 1B; 14+00 to 15+60		820	X	\$2.90	=	\$2,378.00
Truck End Haul 2A to 2B; 13+80 to 20+65		400	X	\$2.90	=	\$1,160.00
Truck End Haul 3A to 3B; 6+40 to 21+90		1,080	X	\$2.90	=	\$3,132.00
Embankment Compaction		11,614	X	\$0.45	=	\$5,226.30
Cut Slope Rounding		47.0	X	\$31.00	=	\$1,457.00
<b>SUB TOTAL FOR EXCAVATION</b>						<b>\$26,025</b>

CULVERT MATERIALS AND INSTALLATION						
Location	Dia/type	Lineal ft.	Rate	Cost	Quantity	Rate
1A-1B	1+50	18"CPP	30	\$12.25	\$367.50	
1A-1B	11+80	18"CPP	40	\$12.25	\$490.00	
2A-2B	2+00	18"CPP	30	\$12.25	\$367.50	
2A-2B	4+20	18"CPP	30	\$12.25	\$367.50	
2A-2B	14+00	18"CPP	34	\$12.25	\$416.50	
2C-2D	2+00	18"CPP	34	\$12.25	\$416.50	
2C-2D	5+00	18"CPP	30	\$12.25	\$367.50	
2C-2D	8+00	18"CPP	40	\$12.25	\$490.00	
2C-2D	10+50	18"CPP	34	\$12.25	\$416.50	
2C-2D	13+50	18"CPP	30	\$12.25	\$367.50	
2C-2D	17+00	18"CPP	40	\$12.25	\$490.00	
2C-2D	21+50	18"CPP	30	\$12.25	\$367.50	
2G-2H	2+50	18"CPP	30	\$12.25	\$367.50	
2G-2H	7+00	18"CPP	30	\$12.25	\$367.50	
2I-2J	0+30	18"CPP	40	\$12.25	\$490.00	
Other/miscellaneous:						
Culvert stakes & markers: 6' FIBERGLASS MARKERS						
					15	\$14.10
<b>SUB TOTAL FOR CULVERT MATERIALS &amp; INSTALLATION</b>						<b>6,361.00</b>
Subtotal						<b>\$47,086</b>

**SUMMARY OF CONSTRUCTION COSTS**

SALE NAME: Goose Pit Combination      NEW CONSTRUCTION: 16.50 STATIONS      0.31 MILES  
 ROAD: 1C-1D (1.25), 2K-2L (8.5), 2M-2N (3.15), 2O-2P (1.0)      IMPROVEMENT: 0.00 STATIONS      0.00 MILES  
3E-3F (1.15), 3G-3H (1.45)

Method	Acres/amount	X	Rate	=	Cost
Scatter Outside of R/W	1.80	X	\$980.00	=	\$1,764.00
<b>SUB TOTAL FOR CLEARING &amp; GRUBBING</b>					<b>\$1,764</b>

Material	Sta/amount	X	Rate	=	Cost
Common (Reg Standard Design)	16.50	X	\$139.00	=	\$2,293.50
Landing Construction \$\$/landing	6.00	X	\$285.00	=	\$1,710.00
1D, 2L, 2N, 2P, 3F, 3H					
<b>SUB TOTAL FOR EXCAVATION</b>					<b>\$4,004</b>

Location	Dia/type	Lineal ft.	Rate	Cost	
0+00	18"CPP	40	\$12.25	\$490.00	
0+00	18"CPP	40	\$12.25	\$490.00	
<b>CULVERT MATERIALS AND INSTALLATION</b>					
Other/miscellaneous:					
Culvert stakes & markers:					
6' FIBERGLASS MARKERS			2	\$14.10	
				\$0.00	
				\$0.00	
				\$28.20	
				\$0.00	
<b>SUB TOTAL FOR CULVERT MATERIALS &amp; INSTALLATION</b>					<b>\$1,008</b>

Subtotal

**\$6,776**

SURFACING	Subgrade prep:	Description	POINT TO POINT		Stations/ amount	Rate/ sta/amt	Cost
			1A to 1B	1A to 1B			
	Grade, Shape and Ditch 16' (All rocked roads)		0+00 to 30+75	Number of	92.85	x	\$1,689.87
	Subgrade Compaction (All rocked roads)		0+00 to 30+75	Number of	92.85	x	\$1,374.18
	Grade and Shape 14' outside		0+00 to 30+75	Number of	50.20	x	\$675.19
<b>ROAD SEGMENT</b>		<b>POINT TO POINT</b>	<b>1A to 1B</b>	<b>Sta. to Sta.</b>	<b>TOTAL VOLUME (CY)</b>	<b>Rate/ Cy/ amt.</b>	<b>Cost</b>
Application	Rock Size and Type	Location	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	1A to 1B	50 station	30.75 stations	1,538	\$2.47	\$3,798
Curve Widening	4"-0" Crushed		8	curves	70	\$2.47	\$173
Turnouts	4"-0" Crushed		8	turnouts	154	\$2.47	\$380
Turnaround	4"-0" Crushed		N/A	TA	2	\$2.47	\$119
Junctions	4"-0" Crushed		8	junctions	48	\$2.47	\$119
Traction Rock	3/4"-0" Crushed	14+00-15+00,	2	stations	3	\$2.47	\$96
Turnouts	3/4"-0" Crushed	25+00-27+00	2	turnouts	1	\$2.47	\$25
Landing Rock	6"-0" Pit-run	21+75, 1B	N/A	Landings	2	\$2.65	\$424
Landing Rock	6"-0" Pit-run	1+00, 5+50,	N/A	Landings	4	\$2.65	\$530
		12+50, 16+00			200		\$530
Total Rock for Road Segment:			1A to 1B		2,267		\$5,663
<b>ROAD SEGMENT</b>		<b>POINT TO POINT</b>	<b>1C to 1D</b>	<b>Sta. to Sta.</b>	<b>TOTAL VOLUME (CY)</b>	<b>Rate/ Cy/ amt.</b>	<b>Cost</b>
Application	Rock Size and Type	Location	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	1C-1D	50 station	1.25 stations	63	\$2.47	\$154
Landings	6"-0" Pit-run	1D	N/A	Landings	1	\$2.65	\$133
Total Rock for Road Segment:			1C to 1D		113		\$287
<b>ROAD SEGMENT</b>		<b>POINT TO POINT</b>	<b>2A to 2B</b>	<b>Sta. to Sta.</b>	<b>TOTAL VOLUME (CY)</b>	<b>Rate/ Cy/ amt.</b>	<b>Cost</b>
Application	Rock Size and Type	Location	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	2A to 2B	50 station	20.60 stations	1,030	\$2.47	\$2,544
Curve Widening	4"-0" Crushed		8	curves	22	\$2.47	\$54
Turnouts	4"-0" Crushed		8	turnouts	66	\$2.47	\$163
Turnaround	4"-0" Crushed	18+80	N/A	TA	1	\$2.47	\$59
Junctions	4"-0" Crushed		8	junctions	72	\$2.47	\$178
Traction Rock	3/4"-0" Crushed	12+00 - 14+50	2	stations	33	\$2.47	\$80
Landings	6"-0" Pit-run	19+50, 2B	N/A	Landings	2	\$2.65	\$265
Landings	6"-0" Pit-run	6+70, 10+50	N/A	Landings	80	\$2.65	\$212
Total Rock for Road Segment:			2A to 2B		1,427		\$3,556
<b>ROAD SEGMENT</b>		<b>POINT TO POINT</b>	<b>2C to 2D</b>	<b>Sta. to Sta.</b>	<b>TOTAL VOLUME (CY)</b>	<b>Rate/ Cy/ amt.</b>	<b>Cost</b>
Application	Rock Size and Type	Location	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	2C to 2D	50 station	23.00 stations	1,150	\$2.47	\$2,841
Curve Widening	4"-0" Crushed		8	curves	164	\$2.47	\$405
Turnouts	4"-0" Crushed		8	turnouts	44	\$2.47	\$109
Turnaround	4"-0" Crushed		N/A	TA	3	\$2.47	\$178
Traction Rock	3/4"-0" Crushed	1+50-5+00,	2	stations	111	\$2.47	\$273
Curve Widening	3/4"-0" Crushed	6+50-11+50	2	curves	60	\$2.47	\$148
Turnouts	3/4"-0" Crushed	1+20, 11+50	2	turnouts	50	\$2.47	\$124
Energy Dissipator	24"-6" Riprap	8+00	N/A	dissipator	1	\$2.65	\$27
Landings	6"-0" Pit-run	5+80, 15+50,	N/A	Landings	200	\$2.65	\$530
		18+20, 2D			1,861		\$4,633
Total Rock for Road Segment:			2C to 2D		1,861		\$4,633

ROAD SEGMENT	2G to 2H		Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost	
	Rock Size and Type	Location		2G to 2H Volume (CY) per	2G to 2H	0+00 to 8+00	Number of				
Base Rock	4'-0" Crushed	2G to 2H	8	station	50	stations	8.00	400	\$2.47	\$988	
Turnouts	4'-0" Crushed	3+75	8	turnout	22	turnouts	1	22	\$2.47	\$54	
Turnaround	4'-0" Crushed	7+50	N/A	TA	24	TA	1	24	\$2.47	\$59	
Landings	6'-0" Pit-run	2H	N/A	Landing	80	Landings	1	80	\$2.65	\$212	
Total Rock for Road Segment:								526			\$1,314
ROAD SEGMENT	2I to 2J		Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost	
	Rock Size and Type	Location		2I to 2J Volume (CY) per	2I to 2J	0+00 to 2+50	Number of				
Base Rock	4'-0" Crushed	2I to 2J	8	station	50	stations	2.50	125	\$2.47	\$309	
Junctions	4'-0" Crushed	2I to 2J	8	junction	24	junctions	1	24	\$2.47	\$59	
Landings	6'-0" Pit-run	2J	N/A	landing	50	landings	1	50	\$2.65	\$133	
Total Rock for Road Segment:								199			\$501
ROAD SEGMENT	2M to 2N		Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost	
	Rock Size and Type	Location		2M to 2N Volume (CY) per	2M to 2N	0+00 to 3+15	Number of				
Base Rock	4'-0" Crushed	2M to 2N	8	station	50	stations	3.15	158	\$2.47	\$389	
Junctions	4'-0" Crushed	2M to 2N	8	junction	24	junctions	1	24	\$2.47	\$59	
Landings	6'-0" Pit-run	2N	N/A	landing	50	landings	1	50	\$2.65	\$133	
Total Rock for Road Segment:								232			\$581
ROAD SEGMENT	2O to 2P		Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost	
	Rock Size and Type	Location		2O to 2P Volume (CY) per	2O to 2P	0+00 to 1+00	Number of				
Base Rock	4'-0" Crushed	2O to 2P	8	station	50	stations	1.00	50	\$2.47	\$124	
Junctions	4'-0" Crushed	2O to 2P	8	junction	40	junctions	1	40	\$2.47	\$99	
Junction Rock	3/4"-0" Crushed	2O to 2P	2	junction	10	junctions	1	10	\$2.47	\$25	
Landings	6'-0" Pit-run	2P	N/A	landing	50	landings	1	50	\$2.65	\$133	
Total Rock for Road Segment:								150			\$380
ROAD SEGMENT	3E to 3F		Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost	
	Rock Size and Type	Location		3E to 3F Volume (CY) per	3E to 3F	0+00 to 1+15	Number of				
Base Rock	4'-0" Crushed	3E to 3F	8	station	50	stations	1.15	58	\$2.47	\$142	
Junctions	4'-0" Crushed	3E to 3F	8	junction	24	junctions	1	24	\$2.47	\$59	
Junction Rock	3/4"-0" Crushed	3E to 3F	2	junction	10	junctions	1	10	\$2.47	\$25	
Landings	6'-0" Pit-run	3F	N/A	landing	50	landings	1	50	\$2.65	\$133	
Total Rock for Road Segment:								142			\$359
ROAD SEGMENT	3G to 3H		Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost	
	Rock Size and Type	Location		3G to 3H Volume (CY) per	3G to 3H	0+00 to 1+45	Number of				
Base Rock	4'-0" Crushed	3G to 3H	8	station	50	stations	1.45	73	\$2.47	\$179	
Curve Widening	4'-0" Crushed	3G to 3H	8	curves		curves		22	\$2.47	\$54	
Junctions	4'-0" Crushed	3G to 3H	8	junction	24	junctions	1	24	\$2.47	\$59	
Junction Rock	3/4"-0" Crushed	3G to 3H	2	junction	10	junctions	1	10	\$2.47	\$25	
Landings	6'-0" Pit-run	3H	N/A	landing	50	landings	1	50	\$2.65	\$133	
Total Rock for Road Segment:								179			\$450

Processing:

Description	No. sta./Jct	Rate/sta	Cost
Water, Process & Compact Crushed Rock:(8" roads in one lift)	92.85	\$41.10	\$3,816
3/4"-0" Traction Rock Water Process & Compaction	14.00	\$41.10	\$575

24'-6"	6'-0"	4'-0"	3/4'-0"	Total
10	1,120	5,631	332	7,093

\$25,653

**SPECIAL PROJECTS**

Description	Cost
Development of Pit Run rock 1,120 cy @ \$1.90/ cy	\$2,128.00
Development of Riprap rock 10cy @ \$3.10/cy	\$31.00
Placement of 24'-6" Dissipator rock on surface culverts 1 hr x \$68/hr	\$68.00
Seeding and mulching of all exposed soil due to road construction (0.2 ac x \$1,315/ac)	\$263.00

**SUB TOTAL FOR SPECIAL PROJECTS**

\$2,490

**GRAND TOTAL**

Cost per Mile \$30,342

\$82,204.65

Compiled By: E. Wilson

Date: 11/4/2005

**SUMMARY OF CONSTRUCTION COSTS**

SALE NAME: Goose Pit Combination  
 ROADS: A - B (34.0), C - D (2.5)

NEW CONSTRUCTION: 36.5 STATIONS      0.69 MILES  
 IMPROVEMENT: 10.50 STATIONS      0.20 MILES

Method	Acres/amount	x	Rate	=	Cost
Scatter Outside of R/W	4.5	x	\$980.00	=	\$4,401.72
<b>SUB TOTAL FOR CLEARING &amp; GRUBBING</b>					<b>\$4,402</b>

Material	Cy/amount/station	x	Rate	=	Cost
Common Drift (<= 50% slopes)	5,656	x	\$1.28	=	\$7,239.68
Truck End Haul from 1+80 to 6+80	3,800	x	\$2.90	=	\$11,020.00
Truck End Haul from 19+00 to 26+00	4,880	x	\$2.90	=	\$14,152.00
Truck End Haul from 27+00 to 29+80	2,090	x	\$0.45	=	\$6,061.00
Embankment Compaction A to B	4,627	x	\$0.45	=	\$2,082.15
Embankment Compaction C to D	2,340	x	\$0.45	=	\$1,053.00
Cut Slope Rounding (\$/sta)	20	x	\$31.00	=	\$620.00
Drilling & Shooting (17+00 to 18+50)	970	x	\$4.90	=	\$4,753.00
Quarry Rehabilitation (spreading and compacting)	7,566	x	\$1.28	=	\$9,684.48
<b>SUB TOTAL FOR EXCAVATION</b>					<b>\$56,665.31</b>

Location	Dia/type	Lineal ft.	Rate	Cost
A to B	18"CPP	40	\$490.00	\$490.00
A to B	18"CPP	40	\$490.00	\$490.00
A to B	18"CPP	40	\$490.00	\$490.00
A to B	18"CPP	40	\$490.00	\$490.00
A to B	18"CPP	40	\$490.00	\$490.00
A to B	18"CPP	34	\$416.50	\$416.50
A to B	18"CPP	40	\$490.00	\$490.00
A to B	24"CPP*	34	\$714.00	\$714.00
A to B	18"CPP	34	\$416.50	\$416.50
C to D	18"CPP	70	\$857.50	\$857.50
<b>CULVERT MATERIALS AND INSTALLATION</b>				
Other/miscellaneous:				
	Bevel culvert inlet on 24" culvert	1	\$24.00	\$24.00
	6' FIBERGLASS MARKERS	10	\$14.10	\$141.00
<b>SUB TOTAL FOR CULVERT MATERIALS &amp; INSTALLATION</b>				<b>5,509.50</b>
Subtotal				<b>\$66,576.53</b>



SURFACING	Subgrade prep:	Description	POINT TO POINT		Stations/amount	Rate/sta/amt	Cost
			A to B	0+00 to 34+00			
ROAD SEGMENT	A to B	POINT TO POINT	Sta. to Sta.	Number of	TOTAL VOLUME (CY)	Rate/Cy/amt.	Cost
Application	Rock Size and Type	Location	Volume (CY) per	of			
Base Rock	4'-0" Crushed	A to B	station	stations	34.00	\$1.53	\$4,786
Curve Widening	4'-0" Crushed		curve	curves		\$1.53	\$306
Turnouts	4'-0" Crushed		turnout	turnouts	8	\$1.53	\$404
Turnaround	4'-0" Crushed	7+80	TA	TA	1	\$1.53	\$46
Surfacing	3/4"-0" Crushed	A to B	station	stations	34.0	\$1.53	\$1,144
Turnouts	3/4"-0" Crushed		turnout	turnouts	8	\$1.53	\$122
Curve Widening	3/4"-0" Crushed		curve	curves	35	\$1.53	\$54
Energy Dissipater	24"-6" Riprap	20+80, 23+80, 30+90	dissipators	dissipators	3	\$2.65	\$80
Blockade	36"-24"	15+50 to 18+80	boulder	boulders	34	\$2.65	\$68
Total Rock for Road Segment:					4,541		\$7,009
ROAD SEGMENT	G to D	POINT TO POINT	Sta. to Sta.	Number of	TOTAL VOLUME (CY)	Rate/Cy/amt.	Cost
Application	Rock Size and Type	Location	Volume (CY) per	of			
Base Rock	4'-0" Crushed	C to D	station	stations	2.50	\$1.53	\$329
Curve Widening	4'-0" Crushed		curve	curves		\$1.53	\$191
Fill Widening	4'-0" Crushed		fill	fills	100	\$1.53	\$153
Junction Rock	4'-0" Crushed	19+00	junction	junctions	1	\$1.53	\$92
Junctions	3/4"-0" Crushed	19+00	junction	junctions	1	\$1.53	\$46
Surfacing	3/4"-0" Crushed	C to D	station	stations	2.5	\$1.53	\$84
Total Rock for Road Segment:					585		\$895

Processing: Water, Process & Compact Crushed Rock: (12" roads in two lifts)

No. Sta./Jct	Rate/sta	Cost
36.5	\$82.80	\$3,022

\$12,350

**SPECIAL PROJECTS**

Description	Cost
Development of 24"-6" Riprap rock 40 cy @ \$3.10/cy	\$124.00
Placement of 24"-6" Dissipator rock on surface culverts 2 hr x \$68/hr	\$136.00
Placement of boulders along Quarry edge (2hr. X \$138/hr.)	\$276.00
Seeding and mulching of all exposed soil due to road construction (0.5 ac x \$1,315/ac)	\$657.50

**SUB TOTAL FOR SPECIAL PROJECTS \$1,194**

**GRAND TOTAL Cost per Mile \$115,899 \$80,119.90**

Compiled By: E. Wilson

Date: 11/4/2005

**CRUSHED ROCK COST**

SALE NAME:	<u>Goose Pit Combination</u>	DATE:	<u>11/4/2005</u>
PROJECT:	<u>No. 1 New Road Construction</u>	ROCK TYPE:	<u>3/4" and 4" Crushed</u>
QUARRY:	<u>Wild Goose Quarry &amp; Stockpile</u>	BY:	<u>E. Wilson</u>

		Cubic Yards							
Segment	Stations	Base	Traction	Turnout	Turnaround	Junction	Curves	Misc	Total
1A-1B	30.75	1,538	39	164	48	48	70		1,907
1C-1D	1.25	63							63
2A-2B	20.60	1,030	33	66	24	72	22		1,247
2C-2D	23.00	1,150	111	94	72		224		1,651
2G-2H	8.00	400		22	24				446
2I-2J	2.50	125				24			149
2M-2N	3.15	158				24			182
2O-2P	1.00	50				50			100
3E-3F	1.15	58				34			92
3G-3H	1.45	73				34	22		129
<b>Grand Total</b>	<b>92.85</b>	<b>4,643</b>	<b>182</b>	<b>346</b>	<b>168</b>	<b>286</b>	<b>338</b>		<b>5,963</b>

		ONE WAY HAUL IN MILES									Total Haul
Road Segment	Stations	Cubic Yards	50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH		
1A-1B	30.75	1,907			0.30	1.00	0.30	0.20	0.05	1.85	
1C-1D	1.25	63			0.30	1.00	0.35	0.20	0.05	1.90	
2A-2B	20.60	1,247						0.15	0.05	0.20	
2C-2D	23.00	1,651					0.25	0.20	0.05	0.50	
2G-2H	8.00	446						0.05	0.05	0.10	
2I-2J	2.50	149					0.40	0.45	0.05	0.90	
2M-2N	3.15	182					0.25	0.50	0.05	0.80	
2O-2P	1.00	100				0.50	0.40	0.25	0.05	1.20	
3E-3F	1.15	92				0.65	0.50	0.30	0.05	1.50	
3G-3H	1.45	129				0.65	0.50	0.40	0.05	1.60	
<b>TOTAL</b>	<b>92.85</b>	<b>5,963</b>									
	<b>STA./NO.</b>	<b>CU. YD.</b>								<b>AVERAGE HAUL</b>	
<b>CUBIC YARD WEIGHTED HAUL</b>					<b>0.10</b>	<b>0.36</b>	<b>0.21</b>	<b>0.20</b>	<b>0.05</b>	<b>0.92</b>	
Average Round Trip Distance (miles)										<b>1.85</b>	

**ROCK HAUL:**

Truck type:	<u>D20</u>	No. trucks:	<u>          </u>	Ave haul:	\$1.22 /cy
Delay min.:	<u>8</u>	Efficiency:	<u>85%</u>	Load:	\$0.45 /cy
Truck type:	<u>D12</u>	No. trucks:	<u>3</u>	Spread:	\$0.80 /cy
Delay min.:	<u>6</u>	Efficiency:	<u>85%</u>		
Truck type:	<u>D10</u>	No. trucks:	<u>          </u>	Production: cy/day =	<u>1,125</u>
Delay min.:	<u>5</u>	Efficiency:	<u>85%</u>		

**CRUSHED ROCK HAUL COSTS                    5,963 cy @    \$2.47 /cy**

## CRUSHED ROCK COST

SALE NAME:	Goose Pit Combination	DATE:	11/4/2005
PROJECT:	No. 1 & 2	ROCK TYPE:	Pit and Riprap
QUARRY:	Wild Goose Quarry & Stockpile	BY:	E. Wilson

Segment	Stations	Cubic Yards							
		Landing	Running	Turnout	Turnaround	Junction	Curves	Misc	Total
1A-1B	30.75	360							360
1C-1D	1.25	50							50
2A-2B	20.60	180							180
2C-2D	23.00	200						10	210
2G-2H	8.00	80							80
2I-2J	2.50	50							50
2M-2N	3.15	50							50
2O-2P	1.00	50							50
3E-3F	1.15	50							50
3G-3H	1.45	50							50
A - B	33.9							56	56
I1-I2	10.50							30	30
<b>Grand Total</b>	<b>137.2</b>	<b>1,120</b>						<b>96</b>	<b>1,216</b>

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES							Total Haul
			50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	
1A-1B	30.75	360			0.40	1.00	0.50	0.20	0.05	2.15
1C-1D	1.25	50			0.30	1.00	0.35	0.20	0.05	1.90
2A-2B	20.60	180					0.10	0.25	0.05	0.40
2C-2D	23.00	210					0.40	0.25	0.05	0.70
2G-2H	8.00	80						0.15	0.05	0.20
2I-2J	2.50	50					0.40	0.45	0.05	0.90
2M-2N	3.15	50					0.30	0.50	0.05	0.85
2O-2P	1.00	50				0.50	0.40	0.25	0.05	1.20
3E-3F	1.15	50				0.50	0.65	0.30	0.05	1.50
3G-3H	1.45	50				0.50	0.65	0.40	0.05	1.60
A - B	33.9	56					0.15	0.20	0.05	2.14
I1-I2	10.50	30					0.15	0.20	0.05	2.18
<b>TOTAL</b>	<b>137.2</b>	<b>1,216</b>								
		STA./NO.	CU. YD.							<b>AVERAGE HAUL</b>
		<b>CUBIC YARD WEIGHTED HAUL</b>			<b>0.13</b>	<b>0.40</b>	<b>0.35</b>	<b>0.24</b>	<b>0.05</b>	<b>1.18</b>
Average Round Trip Distance (miles) 2.35										

**ROCK HAUL:**

Truck type: <u>D20</u>	No. trucks: _____	
Delay min.: <u>8</u>	Efficiency: <u>85%</u>	Ave haul: \$1.40 /cy
		Load: \$1.05 /cy
Truck type: <u>D12</u>	No. trucks: <u>3</u>	Spread: \$0.20 /cy
Delay min.: <u>6</u>	Efficiency: <u>85%</u>	
Truck type: <u>D10</u>	No. trucks: _____	Production: cy/day = 974
Delay min.: <u>5</u>	Efficiency: <u>85%</u>	

CRUSHED ROCK HAUL COSTS      1,216 cy @      **\$2.65 /cy**

**SUMMARY OF CONSTRUCTION COSTS**

SALE NAME: Goose Pit Combination Road Improvement NEW CONSTRUCTION: 0.0 STATIONS 0.0 MILES  
 ROADS: I-12 IMPROVEMENT: 10.5 STATIONS 0.2 MILES

CLEANING & GRUBBING					
Method	Acres/amount	X	Rate	=	Cost
Scatter Outside of RW	0.00	X	\$980.00	=	\$0.00
		X		=	
<b>SUB TOTAL FOR CLEANING &amp; GRUBBING</b>					<b>\$0</b>

EXCAVATION					
Material	Quantity (hrs)	X	Rate	=	Cost
C330 excavator for fill reconstruction	4	X	\$138.00	=	\$552.00
Mechanical tamper w/operator	2	X	\$25.00	=	\$50.00
<b>SUB TOTAL FOR EXCAVATION</b>					<b>\$602</b>

CULVERT MATERIALS AND INSTALLATION					
Location	Dia/type	Lineal ft.	Rate	Cost	
I-12	18"CPP	36	\$12.25	\$441.00	
Other/miscellaneous:					
Culvert stakes & markers: 6' FIBERGLASS MARKERS					
			Quantity	Rate	Cost
			1	\$14.10	\$14.10
<b>SUB TOTAL FOR CULVERT MATERIALS &amp; INSTALLATION</b>					<b>455.10</b>

Subtotal **\$1,057**

SURFACING	Subgrade prep:	Description	Stations/ amount	Rate/ sta/amt	Cost
	Surfacing Rock Processing & Compaction (Subgrade Leveling)		10.50	\$17.80	\$186.90

ROAD SEGMENT	POINT TO POINT		Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost					
	11 to 12	11 to 12					0+00 to 10+50				
Application	Rock Size and Type	Depth of Rock (inches)	Location	Volume (CY) per	Number of						
Culvert Backfill	1 1/2"-0" Recycled	N/A	5+00	culvert	20	1	culverts	1	20	\$2.16	\$43
Subgrade Leveling	3/4"-0" Crushed	N/A	5+00						50	\$2.46	\$123
Fill Base Replacement	4"-0"								40	\$2.46	\$98
Surfacing	3/4"-0" Crushed	3		station	22	11	stations	11	231	\$2.46	\$568
Energy dissipator	24"-6" Riprap	N/A	5+00	dissipator	10	1	dissipators	1	10	\$2.66	\$27
Fill Armor	24"-6" Riprap	N/A	5+00		10	2		2	20	\$2.66	\$53
Total Rock for Road Segment:				11 to 12					371		\$913

Processing:		Description	No. sta./Jct	Rate/sta	Cost
		Water, Process & Compact Crushed Rock	10.50	\$41.40	\$435
24"-6"	30	6"-0"	40	112"-0"	3/4"-0"
4"-0"	40	4"-0"	20	321	Total
			411		\$1,725

SPECIAL PROJECTS		Description	Cost
		Development of 24"-6" riprap rock. 30 cy x \$3.10/cy.	\$93.00
		Clean-up of trees and snags on Trallover Rd. below 11 to 12 (C330x1hr)	\$138.00
		Haul away old culvert. 2 Hrs. x \$59/Hr.	\$118.00

**SUB TOTAL FOR SPECIAL PROJECTS** \$349.00

**GRAND TOTAL** \$3,131

Compiled By: E. Wilson Date: 11/4/2005

## CRUSHED ROCK COST

SALE NAME:	Goose Pit Combination	ROCK TYPE:	3/4" and 4" Crushed	DATE:	11/4/2005
PROJECT:	No.2 Trailover Ridge Road	BY:	E. Wilson		
QUARRY:	Trailover Quarry & Stockpile				

		Cubic Yards								
Segment	Stations	Base	Traction	Turnout	Turnaround	Junction	Curves	Surfacing	Total	
A - B	34.00	3,128		344	30		235	748	4,485	
C - D	2.50	315				90	125	55	585	
<b>Grand Total</b>	<b>36.50</b>	<b>3,443</b>		<b>344</b>	<b>30</b>	<b>90</b>	<b>360</b>	<b>803</b>	<b>5,070</b>	

		ONE WAY HAUL IN MILES								
Road Segment	Stations	Cubic Yards	50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Total Haul
A - B	34.00	4,485					0.15	0.20	0.05	0.40
C - D	2.50	585							0.05	0.05
<b>TOTAL</b>	<b>36.50</b>	<b>5,070</b>								
	STA./NO.	CU. YD.					<b>0.13</b>	<b>0.18</b>	<b>0.05</b>	<b>AVERAGE HAUL</b>
<b>CUBIC YARD WEIGHTED HAUL</b>										<b>0.36</b>
Average Round Trip Distance (miles)										0.72

**ROCK HAUL:**

Truck type:	D20	No. trucks:	_____	
Delay min.:	8	Efficiency:	85%	Ave haul: \$0.88 /cy
				Load: \$0.25 /cy
Truck type:	D12	No. trucks:	3	Spread: \$0.40 /cy
Delay min.:	6	Efficiency:	85%	
Truck type:	D10	No. trucks:	_____	Production: cy/day = 1,548
Delay min.:	5	Efficiency:	85%	

CRUSHED ROCK HAUL COSTS      5,070 cy @      **\$1.53 /cy**

Goose Pit Combination  
Project No. 3 Stream Enhancement

<b>Location</b>	<b># of Structures</b>	<b>Number of Trees / Structure</b>	<b>\$/Tree*</b>	<b>Location Cost</b>
SE1 to SE2	3	5	\$225.00	\$3,375.00
SE3 to SE4	5	5	\$225.00	\$5,625.00
<b>Project Total</b>				<b>\$9,000.00</b>

\*\$/Tree includes transportation cost of tree up to 0.5 miles.

**Road Maintenance after completion of Projects 1 and 2 (New Construction, Improvement & Rock Haul)**

**Sale:** Goose Pit Combination  
**Date:** November 4, 2005  
**By:** E. Wilson

Type	Equipment/Rationale	Hours	Rate	Cost
Final Haul	Grader 14G	10	\$84	\$840
Road	Dump Truck 12CY	8	\$59	\$472
Maintenance	FE Loader C944	8	\$45	\$360
Rock Haul	Vibratory Roller	10	\$79	\$790
	Water Truck 2,500 gallon	8	\$70	\$560
<b>Total</b>				<b>\$3,022</b>

Miles/day	Distance(miles)	Days
1.5	1.5	1.0
1.5	1.5	1.0

Production Rates  
 Grader  
 Vibratory Roller



**TIMBER CRUISE REPORT  
Goose Pit Combination  
FY 2006**

1. **Sale Area Location:** Areas 1, 2, 3, 4, and 5 (R/W) are located in Portions of Sections 1, 2, and 12, T6N, R7W; and Portions of Section 6, T6N, R6W, W.M., Clatsop County, Oregon. The Trailover Ridge Road Right-of-Way (6R/W) is located in Portions of Sections 11, 12, 13, and 14, T6N, R7W, W.M., Clatsop County, Oregon.
2. **Fund Distribution:** BOF 100%  
Tax Code 8-01 (100%)

3. **Sale Acreage by Area:**

Area	Treatment	Gross Acres	Existing R/W	New R/W	Stream Buffer	Net Acres	Survey Method
1	Modified Clearcut	72.5	0	3	3.5	66	GIS
2	Partial Cut	323.6	3.2	6.4	10	304	GIS
3	Modified Clearcut	96.9	0	3	11.9	82	GIS
4	Modified Clearcut	44.2	0	1.6	6.6	36	GIS
5 In-Sale (R/W)	New Roads	14	0	0	0	14	RoadEng / LxW
6 Outside-Sale (R/W)	New Roads	4	0	0	0	4	RoadEng
<b>TOTALS</b>		<b>555.2</b>	<b>3.2</b>	<b>14</b>	<b>32</b>	<b>506</b>	

4. **Cruisers and Cruise Dates:** Areas 1 - 6 were cruised by Derek Bangs, Lanny Freeman, Jon Long, Jay Morey, Ty Williams, Dave Wolfgram, Tara Carlson, and Erin Wilson in May, 2005. Trailover Ridge Road was cruised by Lanny Freeman on September 29, 2005.

5. **Cruise Method and Computation:**

AREAS 1, 3, and 4 are modified clearcut units and were variable plot cruised using a 54.44 BAF. The plots in Areas 1 and 4 are located on a 4 chain by 7 chain grid, with every third plot measured and graded. The plots in Area 3 are located on a 4 chain by 9 chain grid, with every third plot measured and graded. A total of 59 plots were sampled, with 19 graded plots and 40 count plots. Cedar and marked wildlife trees were recorded as "leave" trees.

AREA 2 is an "auto-mark" thinning unit, and was variable plot cruised using a 40 BAF. These plots are located on a 4.5 chain by 11 chain grid, with every third plot graded. A total of 61 plots were sampled, with 19 graded plots and 42 count plots. Cedar and alder are reserve species, and were recorded as "leave" trees. The "biggest and best" trees were recorded as "leave" trees to meet a target residual basal area of 160 ft<sup>2</sup>/acre. Hardwoods do not count towards the residual basal area.

AREA 5 In-Sale R/W. The Right-of-Way volume was calculated by multiplying the R/W acreage from the new road construction in the sale areas and the average volume per acre from the plots in Areas 1-4. In-sale right-of-way totals 14 acres.

AREA 6 Outside-Sale R/W was cruised using a 54.44 BAF and a plot spacing of 4 chains. Plot center was located along the centerline of the road. A total of 13 plots were sampled, with 6 grade plots and 5 count plots.

All cruises used Corvallis MicroTechnology (CMT) data collectors, and were downloaded to the Atterbury Super A.C.E. program in District for computing. See the attached Cruise Design for more details on the cruise method. The cruise calculations were processed in the Astoria district office.

<u>AREA</u>	<u>CRUISE</u>	<u>CRUISE TYPE</u>
1, 3, & 4	Modified Clearcut	06N07W SEC01 TYPE: 0001
2	Automark Thinning	06N07W SEC01 TYPE: TAKE
5	In-Sale Right-of-way	06N07W SEC01 TYPE: R/W5
6	Outside-Sale Right-of-way	06N07W SEC01 TYPE: R/W6

**6. Timber Description:**

Areas 1, 3, and 4 are modified clearcut units, approximately 60 years old, consisting of Douglas-fir and western hemlock with scattered clumps of red alder and occasional western red cedar. Approximately 147 trees per acre and 47 MBF/acre will be harvested. The Douglas-fir averages 23.3" DBH, with an average bole height of 81 feet to a merchantable top (6" d.i.b.). The average hemlock tree size is 16.5" DBH and 52 feet to a merchantable top (6" d.i.b.). The average alder tree size is 13.1" DBH and 29 feet to a merchantable top (7" d.i.b.).

Area 2 is an "auto-mark" thinning unit, approximately 60 years old, consisting of Douglas-fir stands mixed with western hemlock, red alder, with an occasional western red cedar. Area 2 will be thinned to 160 ft<sup>2</sup>/acre, removing approximately 102 trees per acre and 18 MBF/acre. The average conifer "take" tree size is 15.0" DBH and 64 feet to a merchantable top (6" d.i.b.).

Area 5 In-Sale R/W is similar to the timber description mentioned above for Areas 1-4. The average volume (net) is 45.9 MBF/acre.

Area 6 Outside-Sale R/W is made up of approximately 60 year old Douglas-fir and red alder. A portion of the right-of-way runs through approximately 10 year old alder where the road parallels Trailover Quarry. This section of right-of-way was not included in the volume calculations. The average volume (net) is 37.5 MBF/acre.

**7. Statistical Analysis and Stand Summary:** (See "Statistics" - Type Reports, attached)

Statistics for Stand B.F. volumes

Area	Estimated CV	Target SE%	Actual CV	Actual SE%
1, 3, and 4	55%	10%	35.7%	4.7%
2	40%	7%	31.5%	4.0%

\* Statistics for the thinning units are for the current stand (Take and leave trees combined).


**8. Volumes by Species and Log Grade:** (See "Species, Sort, Grade - Type and Project Reports, attached, of individual sale areas and combined areas and five cruise types).

Volumes by Species and Grade for All Sale Areas: (MBF) Volumes do not include "in-growth."

Species	DBH	Net Vol.	2 Saw	3Saw	4 Saw	% D & B	% Sale
Douglas-fir	20"	10,335	6,965	3,027	343	1.4	69
Hemlock	15"	4,361	1,618	2,250	493	1.9	29
Alder	13"	257	0	149	108	0.4	2
<b>TOTALS</b>		<b>14,953</b>	<b>8,583</b>	<b>5,426</b>	<b>944</b>		

**9. Approvals:**

Prepared by: Erin Wilson Date: November 4, 2005

Reviewed by:  Date: 11/4/05

**10. Attachments:**

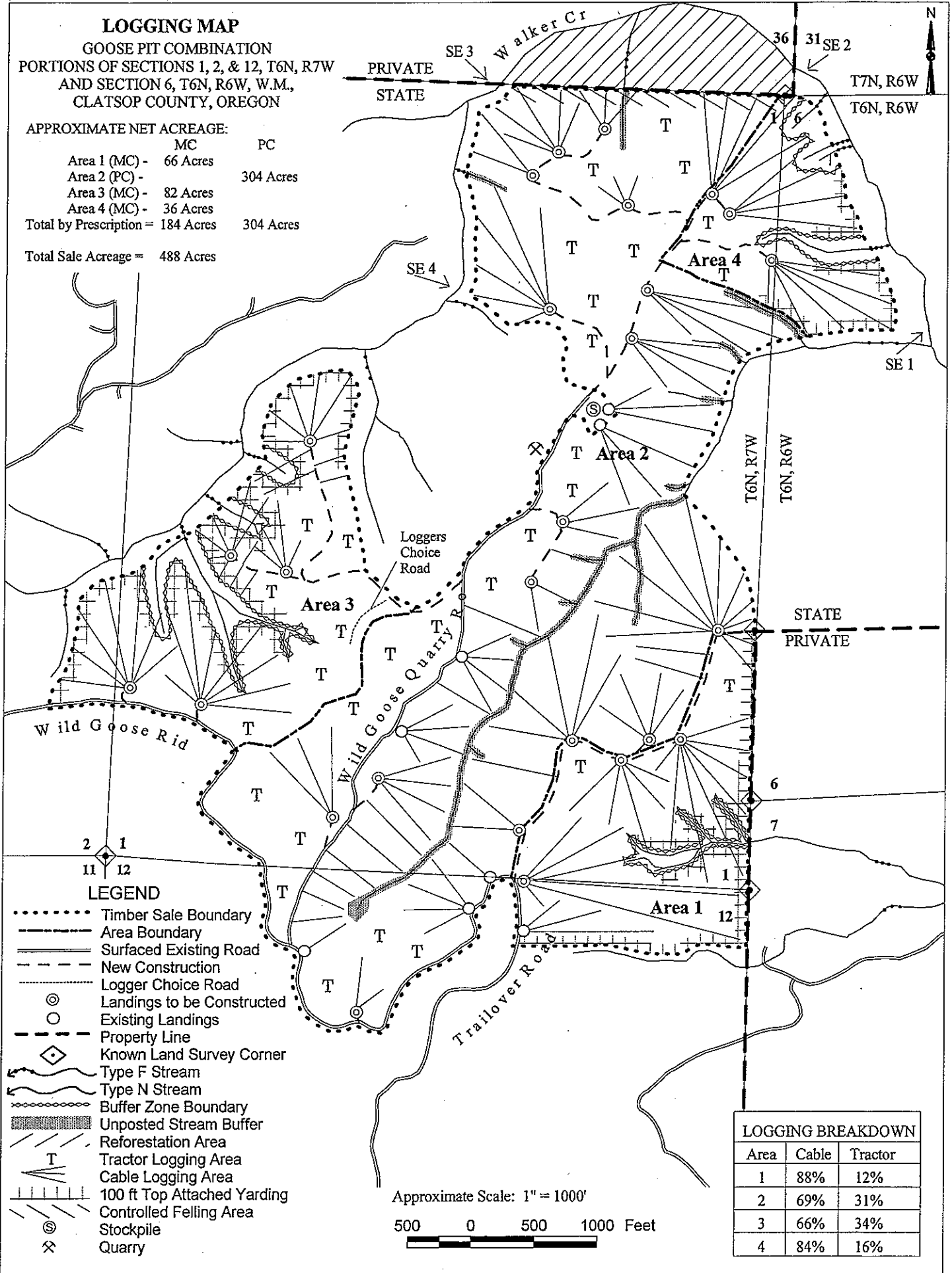
- Cruise Designs/maps - 9 pages
- Volume Reports - 5 pages
- Statistics Reports - 6 pages
- Stand Tables - 1 page
- Log Stock Table (MBF) - 3 pages

# LOGGING MAP

GOOSE PIT COMBINATION  
 PORTIONS OF SECTIONS 1, 2, & 12, T6N, R7W  
 AND SECTION 6, T6N, R6W, W.M.,  
 CLATSOP COUNTY, OREGON

APPROXIMATE NET ACREAGE:

	MC	PC
Area 1 (MC) -	66 Acres	
Area 2 (PC) -		304 Acres
Area 3 (MC) -	82 Acres	
Area 4 (MC) -	36 Acres	
Total by Prescription =	184 Acres	304 Acres
Total Sale Acreage =	488 Acres	



**LEGEND**

- ..... Timber Sale Boundary
- Area Boundary
- ===== Surfaced Existing Road
- New Construction
- Logger Choice Road
- ⊙ Landings to be Constructed
- Existing Landings
- Property Line
- ◇ Known Land Survey Corner
- ~ Type F Stream
- ~ Type N Stream
- Buffer Zone Boundary
- ▨ Unposted Stream Buffer
- ▨ Reforestation Area
- T Tractor Logging Area
- ▨ Cable Logging Area
- ▨ 100 ft Top Attached Yarding
- ▨ Controlled Felling Area
- ⊙ Stockpile
- ⊗ Quarry

**LOGGING BREAKDOWN**

Area	Cable	Tractor
1	88%	12%
2	69%	31%
3	66%	34%
4	84%	16%

Approximate Scale: 1" = 1000'  
 500 0 500 1000 Feet

**CRUISE DESIGN  
ASTORIA DISTRICT**

Sale Name: Goose Pit Combination Area(s) 1, 3, 4

Harvest Type: CC PC CT "Automark Thinning" (circle one)

Approx. Cruise Acres: 184 Estimated CV% 55 <sup>Net BF or</sup> BA/Acre SE% Objective 10 <sup>Net BF or</sup> BA/Acre

Planned Sale Volume: 7,360 MMBF (Areas 1, 3, 4) Estimated Sale Area Value/Acre: \$ 10,000/Ac (40 MBF/Ac)

- A. **Cruise Goals:** (a) Grade minimum 100 conifer and 50 hardwood trees;
- (b) Sample 58 cruise plots (1 grade/ 2 count); (c) Other goals (     Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes.

**B. Cruise Design:**

- 1. **Plot Cruises:** BAF 54.44 (Full point) Half point (circle one)
- Cruise Line Direction(s) See Map
- Cruise Line Spacing 7 (areas 1 & 4); 9 (area 3) (chains) (~~feet~~)
- Cruise Plot Spacing 4 (chains) (~~feet~~)
- Grade/Count Ratio 1/2

Do not take plots in stream buffers shown on cruise map. All cedar and marked wildlife trees are leave trees and are recorded as leave trees.

**C. Tree Measurements:**

- 1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 10" for hardwoods. Record dbh to nearest 1/2" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- 2. **Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. **Top Cruise Diameter (TCD):** Minimum top outside bark is 7" for conifers and 8" hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh.
- 4. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.
- 5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum

merchable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

**6. Species, Sort, and Grade Codes:**

- A. **Species:** Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
- B. **Sort:** Use code "1" (Domestic).
- C. **Grade:** A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull  
Hardwoods: #2 Sawmill = 12" + scaling diameter; #3 Sawmill = 10 and 11"; #4 Sawmill = 8 and 9"

7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. **Standard Field Procedures: Plot Type Cruises:** Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at intervisible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.

9. **Cruising Equipment:** Relaskop, Rangefinder, Logger's Tape (with dbh on back) Biltmore Stick, Compass, Cruise Cards in Tatum OR Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.

10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Erin Wilson  
Approved by: [Signature]  
Date: 4/28/05

**CRUISE DESIGN  
ASTORIA DISTRICT**

Sale Name: Goose Pit Combination Area(s) 2

Harvest Type: CC PC CT "Automark Thinning" (circle one)

Approx. Cruise Acres: 312 Estimated CV% 40 <sup>Net BF or</sup> BA/Acre SE% Objective 7 <sup>Net BF or</sup> BA/Acre

Planned Sale Volume : 4,680 MMBF (Area 2) Estimated Sale Area Value/Acre: \$3,750/Ac (15 MBF/Ac.)

A. **Cruise Goals:** (a) Grade minimum 100 conifer and ~~50~~<sup>N/A</sup> hardwood trees:  
 (b) Sample 59 cruise plots (1 grade/ 2 count); (c) Other goals (     Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes.

**B. Cruise Design:**

1. **Plot Cruises:** BAF 40 (Full point; Half point) (circle one)  
 Cruise Line Direction(s) See Map  
 Cruise Line Spacing 11 (chains) (feet)  
 Cruise Plot Spacing 4.5 (chains) (feet)  
 Grade/Count Ratio 1/2

Basal Area leave target 160 sq. ft. Cruiser needs to select 4 leave trees per plot. Cruise all take and leave trees. Alder will not be thinned; Record alder as leave trees. All cedar are leave trees and count towards the leave tree basal area. Alder will not count towards the leave tree BA.

**C. Tree Measurements:**

1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 10" for hardwoods. Record dbh to nearest 1/2" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
2. **Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
3. **Top Cruise Diameter (TCD):** Minimum top outside bark is 7" for conifers and 8" hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh.
4. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

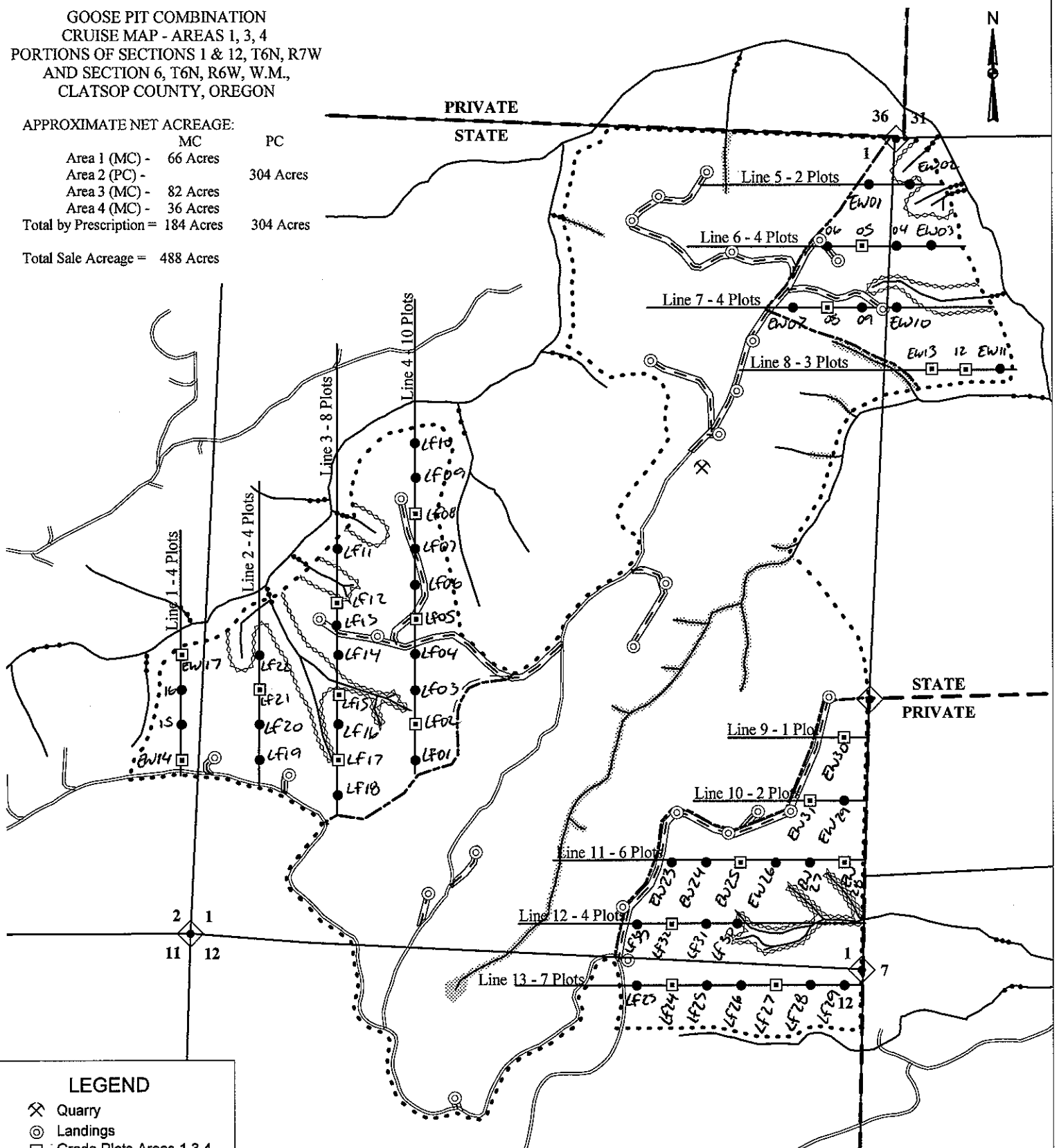
5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.
6. **Species, Sort, and Grade Codes:**
- A. **Species:** Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
- B. **Sort:** Use code "1" (Domestic).
- C. **Grade:** A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull  
Hardwoods: #2 Sawmill = 12" + scaling diameter; #3 Sawmill = 10 and 11"; #4 Sawmill = 8 and 9"
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.
8. **Standard Field Procedures: Plot Type Cruises:** Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at intervisible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.
9. **Cruising Equipment:** Relaskop, Rangefinder, Logger's Tape (with dbh on back) Biltmore Stick, Compass, Cruise Cards in Tatum OR Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.
10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Erin Wilson  
 Approved by: Jon Long  
 Date: 4/28/05

GOOSE PIT COMBINATION  
 CRUISE MAP - AREAS 1, 3, 4  
 PORTIONS OF SECTIONS 1 & 12, T6N, R7W  
 AND SECTION 6, T6N, R6W, W.M.,  
 CLATSOP COUNTY, OREGON

APPROXIMATE NET ACREAGE:

	MC	PC
Area 1 (MC) -	66 Acres	
Area 2 (PC) -		304 Acres
Area 3 (MC) -	82 Acres	
Area 4 (MC) -	36 Acres	
Total by Prescription =	184 Acres	304 Acres
Total Sale Acreage =	488 Acres	



**LEGEND**

- Quarry
- Landings
- Grade Plots Areas 1,3,4
- Count Plots Areas 1,3,4
- Sale Boundary
- Area Boundary
- Streams
- Unposted Stream Buffers
- Posted Buffers
- New Road Construction
- New Road RW
- Roads
- Paved
- Rocked
- Vacated
- Dirt
- ODF Ownership

Area 1 Spacing: 4 chains x 7 chains  
 Bearing: East - West

Area 3 Spacing: 4 chains x 9 chains  
 Bearing: North - South

Area 4 Spacing: 4 chains x 7 chains  
 Bearing: East - West

Scale: 1" = 1000'

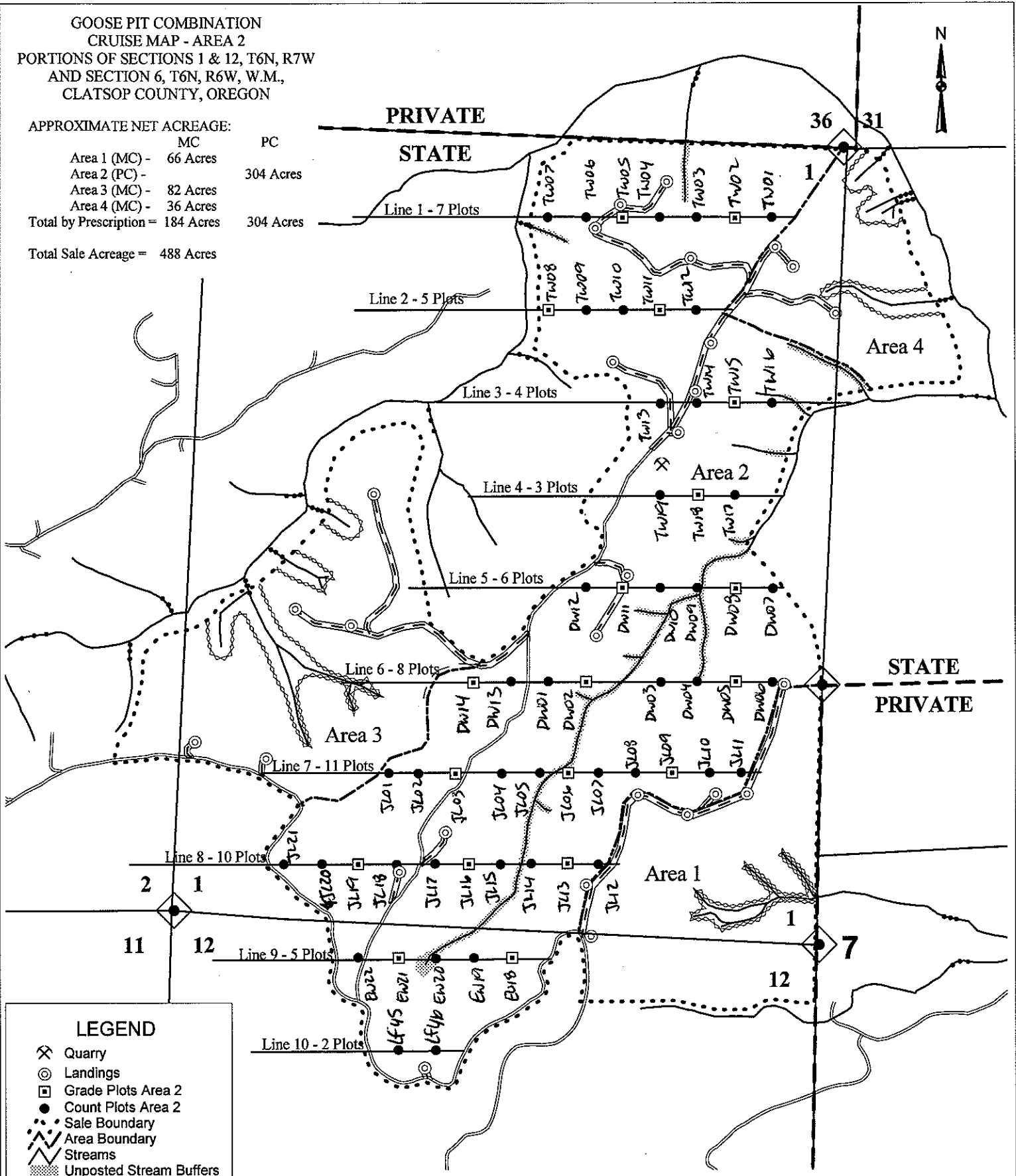




GOOSE PIT COMBINATION  
 CRUISE MAP - AREA 2  
 PORTIONS OF SECTIONS 1 & 12, T6N, R7W  
 AND SECTION 6, T6N, R6W, W.M.,  
 CLATSOP COUNTY, OREGON

APPROXIMATE NET ACREAGE:

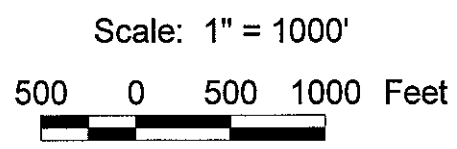
	MC	PC
Area 1 (MC) -	66 Acres	
Area 2 (PC) -		304 Acres
Area 3 (MC) -	82 Acres	
Area 4 (MC) -	36 Acres	
Total by Prescription =	184 Acres	304 Acres
Total Sale Acreage =	488 Acres	



**LEGEND**

- ⊗ Quarry
- ⊙ Landings
- Grade Plots Area 2
- Count Plots Area 2
- Sale Boundary
- - - Area Boundary
- ~ ~ ~ Streams
- ▨ Unposted Stream Buffers
- ▧ Posted Buffers
- ▬ New Road Construction
- ▬ Newroad\_rw2.shp
- ▬ Roads
- ▬ Paved
- ▬ Rocked
- ▬ Vacated
- ▬ Dirt
- ▬ ODF Ownership

Area 2: PC to 160 BA  
 Spacing: 4.5 chains x 11 chains  
 Bearing: East - West



**CRUISE DESIGN  
ASTORIA DISTRICT**

**Sale Name:** Goose Pit Combination – Trailover Ridge Road **Area(s)** R/W

**Harvest Type:** CC PC CT “Automark Thinning” (circle one)

**Approx. Cruise Acres:** 4.8 **Estimated CV%** 55 Net BF or **SE% Objective** 12 Net BF or **BA/Acre** **BA/Acre**

**Planned Sale Volume:** 800 MBF **Estimated Sale Area Value/Acre:** \$ 8,000/Ac  
(R/W) (32 MBF/Ac)

**A. Cruise Goals:** (a) Grade minimum 25 conifer and 5 hardwood trees:  
(b) Sample 6 cruise plots (1 grade/ 1 count); (c) Other goals (     Determine  
“automark” thinning standards; X Determine log grades for sale value;       
Determine snag and leave tree species and sizes.

**B. Cruise Design:**

**1. Plot Cruises:** BAF 54.44 (Full point; Half point) (circle one)  
Cruise Line Direction(s) Along R/W  
Cruise Line Spacing N/A chains  
Cruise Plot Spacing 4 chains  
Grade/Count Ratio 1:1

Do not take plots in stream buffers shown on cruise map. All cedar and marked wildlife trees are leave trees and are recorded as leave trees.

**C. Tree Measurements:**

- 1. Diameter:** Minimum DBH to cruise is 8” for conifers and 10” for hardwoods. Record dbh to nearest 1/2” for trees < 16”, to nearest 1” for trees 16-24”, and to nearest 2” for trees > 24”. If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- 2. Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. Top Cruise Diameter (TCD):** Minimum top outside bark is 7” for conifers and 8” hardwoods or 40 % of dob at 16’ form point. Generally, use 7” outside bark for trees < 18” dbh and 40% of dob @ FP for trees > 18” dbh.
- 4. Form Factors:** (1) Measure or estimate a 16’ form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.
- 5. Tree Segments:** Record log segments in “standard” log lengths in general use, such as 32’ and 40’ lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum

merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

**6. Species, Sort, and Grade Codes:**

- A. **Species:** Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
- B. **Sort:** Use code "1" (Domestic).
- C. **Grade:** A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull  
Hardwoods: #2 Sawmill = 12" + scaling diameter; #3 Sawmill = 10 and 11"; #4 Sawmill = 8 and 9"

7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

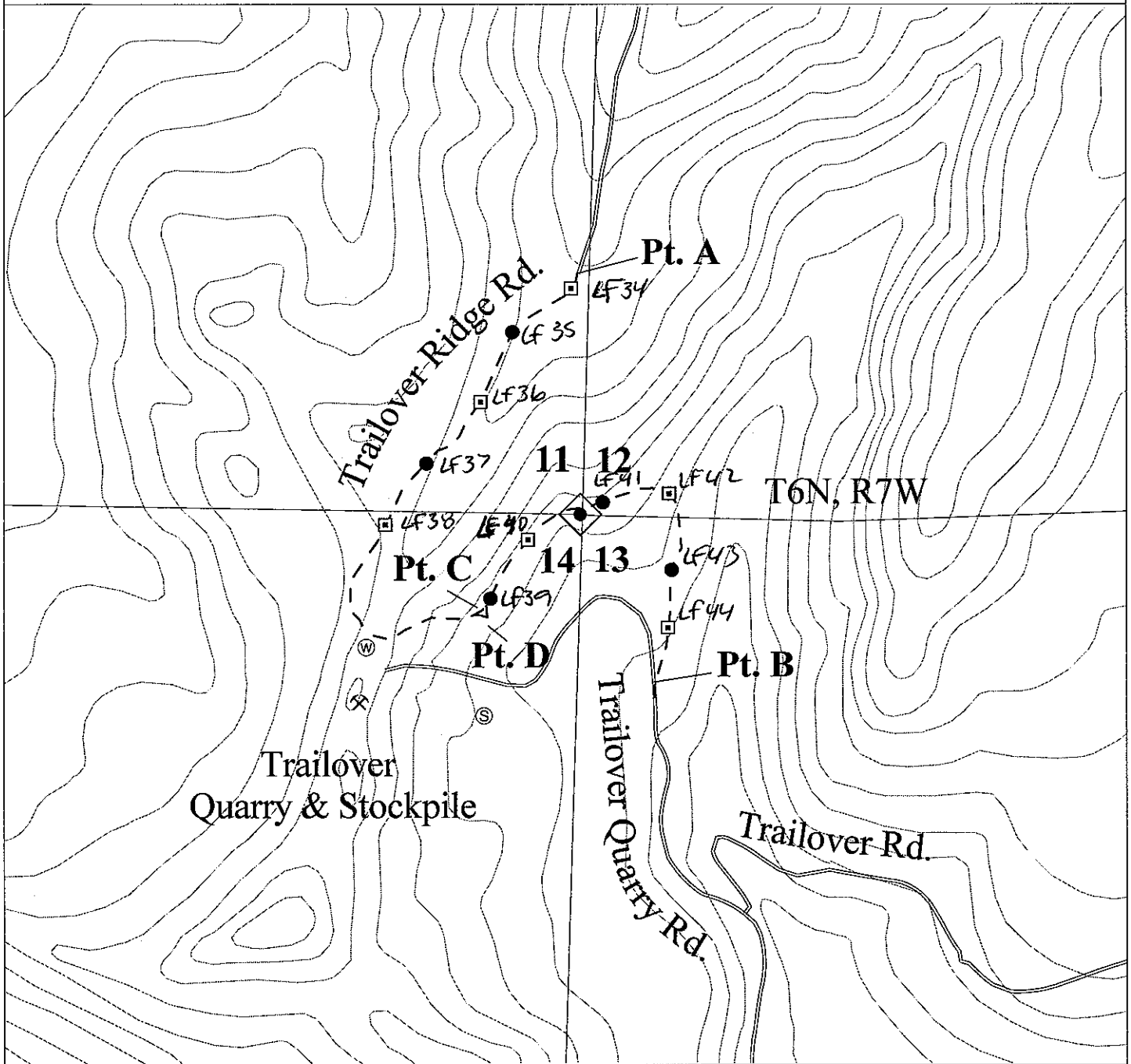
8. **Standard Field Procedures: Plot Type Cruises:** Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at intervisible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.

9. **Cruising Equipment:** Relaskop, Rangefinder, Logger's Tape (with dbh on back) Biltmore Stick, Compass, Cruise Cards in Tatum OR Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.

10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

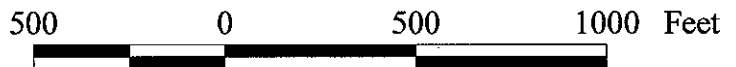
Cruise Design by: Erjn Wilson  
Approved by: *Jon Long* 9/28/05  
Date: 4/26/05

GOOSE PIT COMBINATION  
 TRAILOVER RIDGE ROAD  
 PORTIONS OF SECTIONS 11, 12, 13, AND 14  
 OF T6N, R7W, W.M., CLATSOP COUNTY, OREGON



LEGEND

- Count Plots
- Grade Plots
- ⊙ Waste Areas
- Quarries/Stockpiles
- ⊗ Quarry
- Ⓢ Stockpile
- - - New Road Construction
- Existing Roads
- /// ODF Ownership



**Species, Sort Grade - Board Foot Volumes (Project)**

T06N R07W S01 Ty0001  
 THRU  
 T06N R07W S14 TyR/W6

**Project: DEMO**  
**Acres 506.00**

**Page 1**  
**Date 10/14/2005**  
**Time 10:28:44AM**

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	
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99				
D	DOCU															10		0.00	8.5	
D	DO2S	67	1.2	13,937	13,765		6,965		3	53	44	0	1	37	62	36	325	2.11	42.4	
D	DO3S	29	1.7	6,087	5,982		3,027		96	2	2	1	6	31	63	36	94	0.76	63.5	
D	DO4S	4	2.7	697	678		343		100			28	46	18	8	20	32	0.52	21.4	
<b>D</b>	<b>Totals</b>	<b>69</b>	<b>1.4</b>	<b>20,722</b>	<b>20,425</b>		<b>10,335</b>		<b>33</b>	<b>36</b>	<b>30</b>	<b>1</b>	<b>4</b>	<b>35</b>	<b>61</b>	<b>32</b>	<b>150</b>	<b>1.20</b>	<b>135.7</b>	
H	DOCU															6		0.00	4.7	
H	DO2S	37	1.8	3,257	3,198		1,618				67	33	0		32	68	36	273	1.80	11.7
H	DO3S	51	1.4	4,511	4,447		2,250		87	13			1	41	58	36	99	0.75	45.0	
H	DO4S	12	4.3	1,018	974		493		100			38	42	11	9	23	30	0.46	32.5	
<b>H</b>	<b>Totals</b>	<b>29</b>	<b>1.9</b>	<b>8,786</b>	<b>8,619</b>		<b>4,361</b>		<b>56</b>	<b>32</b>	<b>12</b>	<b>4</b>	<b>5</b>	<b>34</b>	<b>56</b>	<b>30</b>	<b>92</b>	<b>0.82</b>	<b>93.9</b>	
A	DOCU															17		0.00	.6	
A	DO3S	57		295	295		149		97	3		3	12	42	44	34	94	0.93	3.1	
A	DO4S	43	1.0	216	214		108		100			73	19		7	20	31	0.51	6.8	
<b>A</b>	<b>Totals</b>	<b>2</b>	<b>.4</b>	<b>511</b>	<b>509</b>		<b>257</b>		<b>98</b>	<b>2</b>		<b>32</b>	<b>15</b>	<b>24</b>	<b>28</b>	<b>24</b>	<b>48</b>	<b>0.67</b>	<b>10.5</b>	
<b>Totals</b>			<b>1.6</b>	<b>30,019</b>	<b>29,553</b>		<b>14,954</b>		<b>41</b>	<b>34</b>	<b>25</b>	<b>3</b>	<b>4</b>	<b>34</b>	<b>59</b>	<b>31</b>	<b>123</b>	<b>1.04</b>	<b>240.1</b>	

T06N R07W S01 T0001	T06N R07W S01 T0001
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt	BdFt
06N 07W 01 AREA134 0001 184.00 1	W

Spp	S T	So rt	Gr ad	% Net Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
				Net BdFt	Def%	Gross		Net	Log Scale Dia.				Log Length				Ln Ft	Bd Ft		CF/ Lf
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99				
D		DO	CU														7		0.00	12.1
D		DO	2S	81	1.3	30,121	29,730	5,470	3	47	49		1	36	63		36	345	2.23	86.2
D		DO	3S	16	1.6	5,743	5,650	1,040	89	6	6	2	12	34	52		34	93	0.89	60.6
D		DO	4S	3		1,085	1,085	200	100			23	56	21			24	41	0.58	26.3
<b>D</b>	<b>Totals</b>			77	1.3	36,949	36,465	6,709	19	39	41	1	4	35	60		32	197	1.55	185.2
H		DO	CU														8		0.00	4.3
H		DO	2S	59	.8	5,674	5,627	1,035		59	41			25	75		38	318	1.97	17.7
H		DO	3S	30	.5	2,821	2,808	517	92	8			3	61	36		34	101	0.88	27.8
H		DO	4S	11		972	972	179	100			32	58	7	3		24	29	0.47	33.6
<b>H</b>	<b>Totals</b>			20	.6	9,466	9,407	1,731	38	38	24	3	7	34	56		29	113	1.04	83.4
A		DO	CU														19		0.00	1.3
A		DO	3S	60		741	741	136	100				13	42	45		34	94	0.92	7.9
A		DO	4S	40		479	479	88	100			84	16				19	30	0.49	16.0
<b>A</b>	<b>Totals</b>			3		1,220	1,220	224	100			33	14	26	27		24	49	0.66	25.1
<b>Type Totals</b>					1.1	47,635	47,091	8,665	25	38	37	2	5	35	58		30	160	1.35	293.7

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)							Page 1										
		Project: DEMO					Date 10/6/2005		Time 8:56:31AM										
T06N R07W S01 TTAKE							T06N R07W S01 TTAKE												
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt										
06N	07W	01	AREA2	TAKE	304.00			1	W										
Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log			Logs Per /Acre
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Bd	CF/Lf	
			Net BdFt				Net MBF	4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	Ft	Lf	
D	DO	CU														15		0.00	6.2
D	DO	2S	35	1.0	3,647	3,610	1,097		83	17			45	55		36	249	1.64	14.5
D	DO	3S	60	1.8	6,207	6,095	1,853	100					2	29	69	37	95	0.69	64.1
D	DO	4S	5	6.5	464	434	132	100				34	31	15	20	17	24	0.46	18.3
<b>D</b>	<b>Totals</b>		56	1.7	10,319	10,138	3,082	64	30	6		1	3	34	62	32	98	0.80	103.0
H	DO	CU														5		0.00	4.9
H	DO	2S	20	3.8	1,683	1,619	492		79	21			49	51		34	212	1.54	7.6
H	DO	3S	67	1.7	5,439	5,345	1,625	85	15				35	65		36	98	0.71	54.3
H	DO	4S	13	6.6	1,048	978	297	100				41	32	14	13	23	31	0.45	32.0
<b>H</b>	<b>Totals</b>		44	2.8	8,170	7,942	2,414	70	26	4		5	4	35	56	30	80	0.72	98.8
<b>Type Totals</b>				2.2	18,488	18,080	5,496	67	28	5		3	3	35	59	31	90	0.76	201.8

T06N R07W S01 TR/W5		T06N R07W S01 TR/W5
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt		BdFt
06N 07W 01 AREA2 R/W5 14.00 1		W

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre		
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf			
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
D		DO	CU															9		0.00	14.4	
D		DO	2S	69	1.1	20,918	20,694	290			58	42		1	1	32	66	36	318	2.04	65.0	
D		DO	3S	28	1.3	8,447	8,340	117		97	3			2	6	27	65	36	91	0.73	91.4	
D		DO	4S	3	4.2	742	710	10		100				44	38	8	10	18	26	0.49	27.6	
<b>D</b>	<b>Totals</b>			65	1.2	30,107	29,744	416		29	42	29		2	4	30	64	31	150	1.19	198.4	
H		DO	CU															6		0.00	6.9	
H		DO	2S	41	2.0	6,594	6,462	90			81	19		4		17	80	37	266	1.74	24.3	
H		DO	3S	51	1.4	7,881	7,773	109		88	12				0	33	66	36	97	0.74	80.5	
H		DO	4S	8	6.3	1,278	1,198	17		100				41	34	13	12	23	31	0.46	39.0	
<b>H</b>	<b>Totals</b>			34	2.0	15,754	15,434	216		52	40	8		5	3	25	68	31	102	0.87	150.8	
A		DO	3S	87		625	625	9		47	53					53	47	37	125	1.22	5.0	
A		DO	4S	13		87	87	1		100					100			26	50	0.73	1.7	
<b>A</b>	<b>Totals</b>			2		711	711	10		54	46				12	46	42	34	105	1.12	6.7	
<b>Type Totals</b>						1.5	46,572	45,890	642		38	41	21		3	3	29	65	31	129	1.05	355.9



T06N R07W S14 TR/W6 T06N R07W S14 TR/W6  
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt  
 06N 07W 14 TRAILOVER R/W6 4.00 1 W

S Twp	So Rge	Gr Sec	%	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre				
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf					
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99								
D	DO	CU																					
D	DO	2S	84	.6	27,073	26,904	108			34	66				36	64			36	427	2.53		63.0
D	DO	3S	14	1.9	4,513	4,428	18		94	6			4	20	35	42			32	84	0.94		52.8
D	DO	4S	2		426	426	2		100				25	30		44			23	33	0.55		12.8
<b>D</b>	<b>Totals</b>		85	.8	32,012	31,758	127		14	29	56		1	3	35	61			33	245	1.75		129.5
A	DO	CU																	9		0.00		14.5
A	DO	3S	17		1,018	1,018	4		100				100						16	70	1.00		14.5
A	DO	4S	83	5.7	5,037	4,752	19		100				27	30		43			26	40	0.57		119.8
<b>A</b>	<b>Totals</b>		15	4.7	6,055	5,770	23		100				40	25		35			23	39	0.58		148.9
<b>Type Totals</b>				1.4	38,067	37,527	150		28	25	48		7	6	30	57			28	135	1.23		278.4

TC TSTATS		STATISTICS					PAGE 1			
		PROJECT DEMO					DATE 10/6/2005			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	07W	01	AREA134	0001	184.00	59	346	1	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		59	346	5.9						
CRUISE DBH COUNT REFOREST COUNT		19	118	6.2	26,969	4				
BLANKS 100 %		40	228	5.7						
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	72	76.1	23.3	81		226.1	36,949	36,465	9,125	9,125
WHEMLOCK	36	48.8	16.5	52		72.9	9,466	9,407	2,537	2,537
R ALDER	10	21.6	13.1	29		20.3	1,220	1,220	400	400
<b>TOTAL</b>	<b>118</b>	<b>146.6</b>	<b>20.0</b>	<b>64</b>		<b>319.3</b>	<b>47,635</b>	<b>47,091</b>	<b>12,062</b>	<b>12,062</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	69.3	8.2	578	629	681					
WHEMLOCK	72.0	12.0	277	315	352					
R ALDER	77.5	25.8	48	65	82					
<b>TOTAL</b>	<b>84.3</b>	<b>7.8</b>	<b>448</b>	<b>486</b>	<b>523</b>	<b>285</b>	<b>71</b>	<b>32</b>		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	50.3	6.5	71	76	81					
WHEMLOCK	114.4	14.9	42	49	56					
R ALDER	207.0	27.0	16	22	27					
<b>TOTAL</b>	<b>45.4</b>	<b>5.9</b>	<b>138</b>	<b>147</b>	<b>155</b>	<b>82</b>	<b>21</b>	<b>9</b>		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	49.4	6.4	212	226	241					
WHEMLOCK	114.0	14.8	62	73	84					
R ALDER	198.6	25.9	15	20	26					
<b>TOTAL</b>	<b>31.7</b>	<b>4.1</b>	<b>306</b>	<b>319</b>	<b>332</b>	<b>40</b>	<b>10</b>	<b>4</b>		
CL: 68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	50.6	6.6	34,065	36,465	38,864					
WHEMLOCK	123.0	16.0	7,900	9,407	10,913					
R ALDER	226.6	29.5	860	1,220	1,580					
<b>TOTAL</b>	<b>35.7</b>	<b>4.7</b>	<b>44,900</b>	<b>47,091</b>	<b>49,283</b>	<b>51</b>	<b>13</b>	<b>6</b>		

TC TSTATS		STATISTICS								PAGE	1
		PROJECT				DEMO				DATE	10/14/2005
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
06N	07W	01	AREA2	LEAV	304.00	61	252	1	W		
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL		61	252	4.1							
CRUISE		19	80	4.2	18,613	4					
DBH COUNT											
REFOREST											
COUNT		42	172	4.1							
BLANKS											
100 %											
STAND SUMMARY											
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC	
DOUGLEAV	60	34.5	23.8	94		106.2	19,493	19,302	4,727	4,725	
HEMLEAV	15	21.3	20.0	79		46.6	7,851	7,780	2,032	2,032	
ALDRLEAV	3	5.0	18.3	49		9.2	711	711	261	261	
SNAG	2	.4	28.4	60		2.0	200	200	51	51	
<b>TOTAL</b>	<b>80</b>	<b>61.2</b>	<b>22.2</b>	<b>85</b>		<b>163.9</b>	<b>28,256</b>	<b>27,993</b>	<b>7,070</b>	<b>7,069</b>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUGLEAV	47.1	6.1	600	639	678						
HEMLEAV	52.1	13.9	348	404	460						
ALDRLEAV	61.9	42.8	80	140	200						
SNAG	128.5	120.5		1,860	4,100						
<b>TOTAL</b>	<b>74.6</b>	<b>8.3</b>	<b>556</b>	<b>607</b>	<b>658</b>	<b>222</b>	<b>56</b>	<b>25</b>			
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUGLEAV	51.2	6.6	32	35	37						
HEMLEAV	103.9	13.3	18	21	24						
ALDRLEAV	466.6	59.7	2	5	8						
SNAG	540.9	69.3	0	0	1						
<b>TOTAL</b>	<b>30.8</b>	<b>3.9</b>	<b>59</b>	<b>61</b>	<b>64</b>	<b>38</b>	<b>9</b>	<b>4</b>			
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUGLEAV	48.6	6.2	100	106	113						
HEMLEAV	104.3	13.3	40	47	53						
ALDRLEAV	466.5	59.7	4	9	15						
SNAG	443.3	56.8	1	2	3						
<b>TOTAL</b>	<b>19.3</b>	<b>2.5</b>	<b>160</b>	<b>164</b>	<b>168</b>	<b>15</b>	<b>4</b>	<b>2</b>			
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUGLEAV	52.5	6.7	18,004	19,302	20,600						
HEMLEAV	104.9	13.4	6,735	7,780	8,824						
ALDRLEAV	469.4	60.1	284	711	1,139						
SNAG	457.6	58.6	83	200	317						
<b>TOTAL</b>	<b>19.6</b>	<b>2.5</b>	<b>27,289</b>	<b>27,993</b>	<b>28,697</b>	<b>15</b>	<b>4</b>	<b>2</b>			

TC TSTATS	<b>STATISTICS</b>						PAGE 1		
	<b>PROJECT DEMO</b>						DATE 10/14/2005		
<b>TWP</b>	<b>RGE</b>	<b>SECT</b>	<b>TRACT</b>	<b>TYPE</b>	<b>ACRES</b>	<b>PLOTS</b>	<b>TREES</b>	<b>CuFt</b>	<b>BdFt</b>
06N	07W	01	AREA2	TAKE	304.00	61	193	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	61	193	3.2		
CRUISE	17	57	3.4	31,186	.2
DBH COUNT					
REFOREST					
COUNT	35	136	3.9		
BLANKS	9				
100 %					

STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	30	47.6	16.1	73		67.5	10,319	10,138	2,625	2,625
WHEMLOCK	27	55.0	14.0	57		59.0	8,170	7,942	2,141	2,141
<b>TOTAL</b>	<b>57</b>	<b>102.6</b>	<b>15.0</b>	<b>64</b>		<b>126.6</b>	<b>18,488</b>	<b>18,080</b>	<b>4,765</b>	<b>4,765</b>

CONFIDENCE LIMITS OF THE SAMPLE  
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	67.4	12.5	234	268	301				
WHEMLOCK	82.2	16.1	166	198	230				
<b>TOTAL</b>	<b>74.3</b>	<b>9.8</b>	<b>211</b>	<b>235</b>	<b>258</b>	<b>221</b>	<b>55</b>	<b>25</b>	

CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	99.9	12.8	42	48	54				
WHEMLOCK	115.5	14.8	47	55	63				
<b>TOTAL</b>	<b>71.6</b>	<b>9.2</b>	<b>93</b>	<b>103</b>	<b>112</b>	<b>205</b>	<b>51</b>	<b>23</b>	

CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	97.0	12.4	59	68	76				
WHEMLOCK	109.7	14.0	51	59	67				
<b>TOTAL</b>	<b>66.1</b>	<b>8.5</b>	<b>116</b>	<b>127</b>	<b>137</b>	<b>175</b>	<b>44</b>	<b>19</b>	

CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	100.1	12.8	8,839	10,138	11,438				
WHEMLOCK	110.5	14.1	6,819	7,942	9,066				
<b>TOTAL</b>	<b>67.1</b>	<b>8.6</b>	<b>16,527</b>	<b>18,080</b>	<b>19,634</b>	<b>180</b>	<b>45</b>	<b>20</b>	

**STATISTICS**  
**PROJECT DEMO**

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	07W	01	AREA2	0002	304.00	61	445	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	61	445	7.3		
CRUISE	19	137	7.2	49,951	.3
DBH COUNT REFOREST COUNT	42	308	7.3		
BLANKS					
100 %					

**STAND SUMMARY**

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUGLEAV	60	34.1	23.8	94		104.9	19,252	19,064	4,668	4,667
DOUG FIR	30	48.6	16.1	73		68.9	10,519	10,335	2,675	2,675
WHEMLOCK	27	55.0	14.0	57		59.0	8,170	7,942	2,141	2,141
HEMLEAV	15	21.3	20.0	79		46.6	7,851	7,780	2,032	2,032
ALDRLEAV	3	5.0	18.3	49		9.2	711	711	261	261
SNAG	2	.4	28.4	60		2.0	200	200	51	51
<b>TOTAL</b>	<b>137</b>	<b>164.3</b>	<b>18.0</b>	<b>72</b>		<b>290.5</b>	<b>46,704</b>	<b>46,032</b>	<b>11,828</b>	<b>11,827</b>

**CONFIDENCE LIMITS OF THE SAMPLE**

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL:	68.1 %	COEFF	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV		47.1	6.1	600	639	678			
DOUG FIR		67.4	12.5	234	268	301			
WHEMLOCK		82.2	16.1	166	198	230			
HEMLEAV		52.1	13.9	348	404	460			
ALDRLEAV		61.9	42.8	80	140	200			
SNAG		128.5	120.5		1,860	4,100			
<b>TOTAL</b>		<b>90.0</b>	<b>7.7</b>	<b>417</b>	<b>452</b>	<b>487</b>	<b>324</b>	<b>81</b>	<b>36</b>

CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV		53.4	6.8	32	34	36			
DOUG FIR		98.4	12.6	42	49	55			
WHEMLOCK		115.5	14.8	47	55	63			
HEMLEAV		103.9	13.3	18	21	24			
ALDRLEAV		466.6	59.7	2	5	8			
SNAG		540.9	69.3	0	0	1			
<b>TOTAL</b>		<b>44.2</b>	<b>5.7</b>	<b>155</b>	<b>164</b>	<b>174</b>	<b>78</b>	<b>20</b>	<b>9</b>

CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV		50.8	6.5	98	105	112			
DOUG FIR		95.5	12.2	60	69	77			
WHEMLOCK		109.7	14.0	51	59	67			
HEMLEAV		104.3	13.3	40	47	53			
ALDRLEAV		466.5	59.7	4	9	15			
SNAG		443.3	56.8	1	2	3			
<b>TOTAL</b>		<b>29.5</b>	<b>3.8</b>	<b>280</b>	<b>290</b>	<b>301</b>	<b>35</b>	<b>9</b>	<b>4</b>

CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV		54.6	7.0	17,730	19,064	20,398			
DOUG FIR		98.5	12.6	9,031	10,335	11,639			
WHEMLOCK		110.5	14.1	6,819	7,942	9,066			
HEMLEAV		104.9	13.4	6,735	7,780	8,824			

**STATISTICS**  
**PROJECT DEMO**

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	07W	01	AREA2	0002	304.00	61	445	1	W
CL: 68.1%		COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
ALDRLEAV		469.4	60.1	284	711	1,139			
SNAG		457.6	58.6	83	200	317			
<b>TOTAL</b>		31.5	4.0	44,174	46,032	47,891	40	10	4

TC TSTATS		STATISTICS						PAGE	1	
		PROJECT DEMO						DATE	10/6/2005	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	07W	14	TRAILOVER	R/W6	4.00	11	56	1	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		11	56	5.1						
CRUISE		6	30	5.0	703		4.3			
DBH COUNT										
REFOREST										
COUNT		5	26	5.2						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	24	55.9	24.4	79		181.6	32,012	31,758	7,511	7,511
R ALDER	6	119.8	11.9	30		93.3	6,055	5,770	1,990	1,990
<b>TOTAL</b>	<b>30</b>	<b>175.7</b>	<b>16.9</b>	<b>46</b>		<b>274.9</b>	<b>38,067</b>	<b>37,527</b>	<b>9,501</b>	<b>9,501</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		62.3	13.0	644	740	836				
R ALDER		49.8	22.2	41	53	65				
<b>TOTAL</b>		<b>82.4</b>	<b>15.3</b>	<b>510</b>	<b>603</b>	<b>695</b>	<b>282</b>	<b>70</b>	<b>31</b>	
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		96.0	30.4	39	56	73				
R ALDER		124.5	39.4	73	120	167				
<b>TOTAL</b>		<b>66.0</b>	<b>20.9</b>	<b>139</b>	<b>176</b>	<b>212</b>	<b>192</b>	<b>48</b>	<b>21</b>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		87.5	27.7	131	182	232				
R ALDER		127.1	40.2	56	93	131				
<b>TOTAL</b>		<b>36.7</b>	<b>11.6</b>	<b>243</b>	<b>275</b>	<b>307</b>	<b>59</b>	<b>15</b>	<b>7</b>	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		81.8	25.9	23,542	31,758	39,973				
R ALDER		128.4	40.6	3,428	5,770	8,112				
<b>TOTAL</b>		<b>54.5</b>	<b>17.2</b>	<b>31,064</b>	<b>37,527</b>	<b>43,991</b>	<b>131</b>	<b>33</b>	<b>15</b>	

Stand Table Summary

Project DEMO

T06N R07W S01 TLEAV

T06N R07W S01 TLEA

Twp Rge Sec Tract  
06N 07W 01 AREA2

Type Acres Plots Sample Trees  
LEAV 304.00

Page: 1  
Date: 10/14/2001  
Time: 10:32:35AM

Spc	T	DBH	Sample Trees	FF	Av Ht 16' Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DL		16	1	92	129	1.268	1.77	3.80	23.7	100.0		90	380		274	116
DL		17	1	87	128	1.123	1.77	3.37	25.0	100.0		84	337		256	102
DL		18	2	87	132	2.004	3.54	6.01	30.2	116.7		181	701		551	213
DL		19	1	88	66	.899	1.77	.90	35.0	70.0		31	63		96	19
DL		20	6	88	115	4.869	10.62	12.98	35.9	135.6		466	1,761		1,416	535
DL		21	3	87	128	2.208	5.31	6.62	37.2	155.6		247	1,031		750	313
DL		22	1	86	104	.671	1.77	1.34	52.0	175.0		70	235		212	71
DL		23	7	86	117	4.295	12.39	11.66	46.5	187.9		542	2,191		1,647	666
DL		24	7	85	120	3.945	12.39	10.14	55.6	216.7		564	2,198		1,715	668
DL		25	5	86	123	2.597	8.85	7.79	52.9	220.7		412	1,719		1,254	523
DL		26	6	85	113	2.881	10.62	7.68	57.6	225.6		442	1,734		1,344	527
DL		27	4	86	105	1.781	7.08	3.56	71.4	288.8		254	1,029		773	313
DL		28	8	86	126	3.312	14.16	9.52	70.8	306.1		674	2,915		2,049	886
DL		29	1	83	124	.386	1.77	1.16	69.7	273.3		81	317		245	96
DL		30	3	85	123	1.082	5.31	3.25	74.2	325.6		241	1,057		732	321
DL		32	1	83	146	.317	1.77	.95	92.0	430.0		87	409		266	124
DL		33	2	87	125	.596	3.54	1.79	94.8	455.0		170	814		516	247
DL		35	1	86	133	.265	1.77	.79	111.3	520.0		89	413		269	126
DL	Totals		60	86	119	34.501	106.23	93.34	50.6	206.8		4,725	19,302		14,365	5,868
HL		16	1	88	99	2.223	3.10	4.45	31.5	120.0		140	534		426	162
HL		18	2	87	83	3.513	6.21	5.27	43.7	150.0		230	790		699	240
HL		19	3	88	98	4.729	9.31	11.03	34.7	131.4		383	1,450		1,165	441
HL		20	3	88	102	4.268	9.31	8.54	49.0	183.3		418	1,565		1,272	476
HL		21	1	89	101	1.290	3.10	2.58	55.5	215.0		143	555		435	169
HL		22	3	87	101	3.527	9.31	8.23	50.6	200.0		416	1,646		1,265	500
HL		24	1	86	103	.988	3.10	1.98	68.5	260.0		135	514		411	156
HL		28	1	85	129	.726	3.10	2.18	76.0	333.3		165	726		503	221
HL	Totals		15	88	98	21.265	46.56	44.25	45.9	175.8		2,032	7,780		6,177	2,365
AL		18	2	87	66	3.463	6.12	5.20	37.0	110.0		192	571		584	174
AL		19	1	86	50	1.554	3.06	1.55	44.0	90.0		68	140		208	43
AL	Totals		3	87	61	5.018	9.18	6.75	38.6	105.4		261	711		792	216
SNL		21	1	85	60	.409	.98	.82	29.5	85.0		24	70		73	21
SNL		70	1	86	67	.037	.98	.07	367.5	1775.0		27	131		82	40
SNL	Totals		2	85	61	.446	1.97	.89	57.4	224.5		51	200		156	61
Totals			80	87	107	61.228	163.93	145.23	48.7	192.8		7069	27,993		21,490	8,510





Log Stock Table - MBF

T06N R07W S01 Ty0001  
 THRU  
 T06N R07W S14 TyR/W6

Project: DEMO  
 Acres 188.00

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 Date 10/14/2005  
 Time 10:28:43AM

Spp	S 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+
D		DO 4S	18	18		18	.2				13	5							
D		DO 4S	19	0		0	.0				0								
D		DO 4S	20	34		34	.3				17	17							
D		DO 4S	21	8		8	.1				8	0							
D		DO 4S	22	17		17	.2				9	8							
D		DO 4S	23	62		62	.6				23	9	29						
D		DO 4S	24	37		37	.4				37								
D		DO 4S	25	9		9	.1				9								
D		DO 4S	26	0	20.0	0	.0					0							
D		DO 4S	28	24		24	.2				24								
D		DO 4S	32	67	7.6	62	.6				62								
D		DO 4S	36	27		27	.3				27								
D		DO 4S	40	1		1	.0				1								
D		Totals		10,485	1.4	10,335	69.1				1114	901	1407	1311	1777	2387	1083	356	
H		DO 2S	20	3		3	.1							3					
H		DO 2S	32	469	1.9	460	10.6						293	120	48				
H		DO 2S	33	55		55	1.3									55			
H		DO 2S	36	64		64	1.5						64						
H		DO 2S	40	1,057	2.0	1,036	23.7						193	300	480	62			
H		DO 3S	22	0		0	.0					0							
H		DO 3S	28	8		8	.2				8								
H		DO 3S	30	8		8	.2				8								
H		DO 3S	32	913	2.2	893	20.5				263	142	351	137					
H		DO 3S	33	26	19.4	21	.5				21								
H		DO 3S	34	9		9	.2					9							
H		DO 3S	36	77		77	1.8				1	76							
H		DO 3S	37	23		23	.5				10	10	3						
H		DO 3S	38	1		1	.0				1								
H		DO 3S	39	11		11	.3				11								
H		DO 3S	40	1,206		1,199	27.5				221	258	560	64	97				
H		DO 4S	15	10		10	.2				10								
H		DO 4S	16	58		58	1.3				58								
H		DO 4S	17	7		7	.2				7								
H		DO 4S	18	5		5	.1				5								
H		DO 4S	19	10		10	.2				10								
H		DO 4S	20	96		96	2.2				88	8							
H		DO 4S	22	7		7	.2				7								

Log Stock Table - MBF

T06N R07W S01 Ty0001  
THRU  
T06N R07W S14 TyR/W6

Project: DEMO  
Acres 188.00

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Date 10/14/2005  
Time 10:28:43AM

Spp	S 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+
H		DO 4S	24	25		25	.6			20	4								
H		DO 4S	25	10		10	.2			9	1								
H		DO 4S	26	15		15	.3			15									
H		DO 4S	27	15		15	.3			15									
H		DO 4S	28	29		29	.7			29									
H		DO 4S	29	98	11.9	86	2.0			86									
H		DO 4S	30	19		19	.4			19									
H		DO 4S	32	65	16.4	54	1.2			54									
H		DO 4S	36	6		6	.1			6									
H		DO 4S	40	40		40	.9				40								
H		Totals		4,446	1.9	4,361	29.2			984	549	913	751	423	625	117			
A		DO 3S	16	4		4	1.6					4							
A		DO 3S	28	17		17	6.8				17								
A		DO 3S	32	62		62	24.3				21	37	5						
A		DO 3S	40	65		65	25.3				65								
A		DO 4S	16	37		37	14.2			16	21								
A		DO 4S	19	2		2	.7			2									
A		DO 4S	20	41		41	15.9			41									
A		DO 4S	24	7	16.6	6	2.2			6									
A		DO 4S	26	1		1	.5				1								
A		DO 4S	30	14		14	5.4			14									
A		DO 4S	36	8		8	3.1			8									
A		Totals		259		257	1.7			87	126	41	5						
Total		All Species		15,190	1.6	14,954	100.0			2184	1576	2361	2066	2200	3012	1200	356		