



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Loose Goose
Sale 341-07-43

District: Astoria

Date: April 30, 2007

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sales Value	\$4,114,437.90	\$292,288.88	\$4,406,726.78
		Project Work:	\$(412,980.00)
		Advertised Value:	\$3,993,746.78



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Timber Description

Location: Portions of Sections 2, 3, 4, 10, and 11, T6N, R7W, W.M., Clatsop County, Oregon

Stand Stocking: 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	17	0	97
Western Hemlock / Fir	16	0	96
Noble Fir	23	0	95
Alder (Red)	14	0	95

Volume by Grade	2S	3S	4S	Camprur	Total
Douglas - Fir	6,861	2,010	441	0	9,312
Western Hemlock / Fir	5,136	3,492	762	0	9,390
Noble Fir	128	9	4	0	141
Alder (Red)	0	0	0	676	676
Total	12,125	5,511	1,207	676	19,519



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Comments: Pond Values Used: 1st Quarter Calendar Year 2007 + Local Pond Values

Log Markets: Mist, Clatskanie, Tillamook, Forest Grove

Western Red Cedar Stumpage = Pond Value minus Logging Cost
\$900/MBF = \$1,150/MBF - \$250/MBF

Hauling costs equivalent to \$700 daily truck cost

Hauling Cost Calculation Douglas-fir:

\$700 - % Profit & Risk (\$700 / 1.13) = \$620 Daily Truck Cost
\$620 Daily Truck Cost / (2 trips per day x 4.5 MBF per load) =
\$68.89/ MBF Hauling Cost

Hauling Cost Calculation Western Hemlock:

\$700 - % Profit & Risk (\$700 / 1.13) = \$620 Daily Truck Cost
\$620 Daily Truck Cost / (2 trips per day x 4.0 MBF per load) =
\$77.50/ MBF Hauling Cost.

Hauling Cost Calculation Noble Fir:

\$700 - % Profit & Risk (\$700 / 1.13) = \$620 Daily Truck Cost
\$620 Daily Truck Cost / (2 trips per day x 4.5 MBF per load) =
\$68.89/ MBF Hauling Cost.

Hauling Cost Calculation Red Alder:

\$700 - % Profit & Risk (\$700 - 1.13) = \$620 Daily Truck Cost
\$620 Daily Truck Cost / (2 trips per day x 3.5 MBF per load) =
\$88.57/ MBF Hauling Cost.

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

100% Branding and Painting: \$1MBF x 19,519 = \$19,519

Additional log loader piling: 3 hours x \$65/hr x 13 landings =
\$2,730

TOTAL Other Costs (with Profit & Risk to be added) = \$22,249

Other Costs (No Profit & Risk added):

Excavator Slash Piling: 134 hours x \$120/hr = \$16,080

Excavator move-in: 1 move-in x \$945/move-in = \$945

Vacate and crunch dirt road segments Stations 14+30 to 27+90
on 2C to 2D, 4C to 4D, 5A to 5B, 5C to 5D, 5G to 5H, 5I to 5J, 5K
to 5L, and 6E to 6F after harvest: \$50/ station x 53.30 stations =
\$2,665

TOTAL Other Costs (No Profit & Risk added) = \$19,690



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Logging Conditions

Combination#: 1	Douglas - Fir	51.99%		
	Western Hemlock / Fir	36.09%		
	Noble Fir	60.57%		
	Alder (Red)	63.58%		
Yarding Distance	Long (1,500 ft)		Downhill Yarding:	No
Logging System:	Cable: Large Tower >=70		Process:	Stroke Delimber
Tree Size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF			
Loads / Day:	6.0		Bd. Ft / Load:	4,500
Cost / MBF:	\$141.73			
Machines:	Log Loader (A) Stroke Delimber (A) Tower Yarder (Large)			
Combination#: 2	Douglas - Fir	18.01%		
	Western Hemlock / Fir	33.91%		
	Noble Fir	9.43%		
	Alder (Red)	6.42%		
Yarding Distance	Medium (800 ft)		Downhill Yarding:	No
Logging System:	Cable: Medium Tower >40 - <70		Process:	Manual Delimiting
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF			
Loads / Day:	6.0		Bd. Ft / Load:	4,000
Cost / MBF:	\$144.17			
Machines:	Log Loader (A) Tower Yarder (Medium)			
Combination#: 3	Douglas - Fir	22.28%		
	Western Hemlock / Fir	15.47%		
	Noble Fir	25.96%		
	Alder (Red)	27.25%		
Yarding Distance	Short (400 ft)		Downhill Yarding:	No
Logging System:	Shovel		Process:	Manual Delimiting
Tree Size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF			
Loads / Day:	6.0		Bd. Ft / Load:	4,500
Cost / MBF:	\$92.76			
Machines:	Shovel Logger			
Combination#: 4	Douglas - Fir	7.72%		
	Western Hemlock / Fir	14.53%		
	Noble Fir	4.04%		
	Alder (Red)	2.75%		



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Yarding Distance	Short (400 ft)	Downhill Yarding:	No
Logging System:	Track Skidder	Process:	Manual Falling/Delimiting
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
Loads / Day:	8.0	Bd. Ft / Load:	3,700
Cost / MBF:	\$116.23		
Machines:	Log Loader (B) Track Skidder		



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Logging Costs

Operating Seasons:	3.00	Profit Risk:	13.00%
Project Costs:	\$412,980.00	Other Costs (P/R):	\$22,249.00
Slash Disposal:	\$0.00	Other Costs:	\$19,690.00

Miles of Road

Road Maintenance: \$2.54

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$68.90	2.0	4.5
Western Hemlock / Fir	\$77.50	2.0	4.0
Noble Fir	\$68.90	2.0	4.5
Alder (Red)	\$88.60	2.0	3.5

Local Pond Values

Date	Specie	Grade	Value
4/30/07	Douglas - Fir	2S	\$555.00
4/30/07	Douglas - Fir	3S	\$555.00
4/30/07	Douglas - Fir	4S	\$555.00
4/30/07	Western Hemlock / Fir	2S	\$365.00
4/30/07	Western Hemlock / Fir	3S	\$365.00
4/30/07	Western Hemlock / Fir	4S	\$365.00



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$129.29	\$2.62	\$0.67	\$70.96	\$1.14	\$26.61	\$0.00	\$2.00	\$1.01	\$234.30
Western Hemlock / Fir									
\$131.28	\$2.64	\$0.67	\$80.60	\$1.14	\$28.12	\$0.00	\$2.00	\$1.01	\$247.46
Noble Fir									
\$128.22	\$2.67	\$0.67	\$72.33	\$1.14	\$26.65	\$0.00	\$2.00	\$1.01	\$234.69
Alder (Red)									
\$127.84	\$2.67	\$0.67	\$93.00	\$1.14	\$29.29	\$0.00	\$2.00	\$1.01	\$257.62

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$555.00	\$320.70	\$0.00
Western Hemlock / Fir	\$0.00	\$365.00	\$117.54	\$0.00
Noble Fir	\$0.00	\$407.59	\$172.90	\$0.00
Alder (Red)	\$0.00	\$690.00	\$432.38	\$0.00



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Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00
Noble Fir	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	9,312	\$320.70	\$2,986,358.40
Western Hemlock / Fir	9,390	\$117.54	\$1,103,700.60
Noble Fir	141	\$172.90	\$24,378.90
Alder (Red)	676	\$432.38	\$292,288.88

Gross Timber Sale Value

Recovery: \$4,406,726.78

Prepared by: Jay Morey

Phone: 503-325-5451

Road Maintenance Cost Summary

Sale: Loose Goose
 Date: 26-Feb-07
 By: J. Morey

MBF: 19,519
 \$\$/MBF: \$2.54

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	36	\$84	\$3,594	2.5	9.0	3.6
	Dump Truck 12CY x 2	\$119	2	16	\$59	\$2,126			
	FE Loader C966	\$570	1	8	\$79	\$1,202			
Progressive Operations 2nd Entry	Grader 14G	\$570	1	36	\$84	\$3,594	2.5	9.0	3.6
	Dump Truck 12CY x 2	\$119	2	16	\$59	\$2,126			
	FE Loader C966	\$570	1	8	\$79	\$1,202			
Final Road Maintenance	Grader 14G	\$570	1	120	\$84	\$10,650	1.5	18.0	12.0
	Dump Truck 12CY x 2	\$119	2	48	\$59	\$8,734			
	FE Loader C966	\$570	1	24	\$79	\$2,466			
	Vibratory Roller	\$570	1	120	\$79	\$10,050	1.5	18.0	12.0
	Water Truck 2,500 gallon Labor	\$139	1	48	\$70	\$3,499			
				16	\$18	\$288			
Total						\$49,531			

*Final Road Maintenance Only

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Loose Goose

NEW CONSTRUCTION:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 1	A-B, 1A-1B, 1C-1D, 1G-1H, 1I-1J, 1K-1L, 1M-1N	179.50	\$172,054
	1O-1P, 1Q-1R, 1S-1T, 1U-1V, 1W-1X, 2A-2B,		
	2C-2D, 2E-2F, 2G-2H, 2I-2J, 2K-2L, 3A-3B,		
	3C-3D, 4A-4B, 4C-4D, 5A-5B, 5C-5D, 5E-5F,		
	5G-5H, 5I-5J, 5K-5L, 5M-5N, 6A-6B, 6C-6D,		
	and 6E-6F.		
	TOTALS	179.50 3.4 Miles	\$172,054

ROAD IMPROVEMENT:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 1	I1-I2, I2-I3, I2-I4,	501.80	\$97,947
	I4-I5, I4-I6, I7-I8,		
	I9-I10, I10-I11, W11-W12.		
	TOTALS	501.80 9.5 Miles	\$97,947

Project No. 2	Wild Goose Quarry Development and Rock Crushing (19,937 cy)	\$119,449
Project No. 3	Roadside Brushing (11 Miles)	\$15,140
	Project Work Road Maintenance	\$2,136
	TOTALS	\$136,725

MOVE IN:

	<u>Equipment</u>	<u>Cost</u>
	Dozer (D8)	\$1,030
	Dump Trucks (12 cy x 5)	\$595
	Dump Trucks (20 cy x 2)	\$280
	F E Loader (C966)	\$570
	Grader (14G)	\$570
	Rubber Tire Skidder (C518)	\$525
	Vibratory Roller	\$570
	Water Truck (2,500 gallon)	\$139
	Excavator (C330)	\$1,030
	Excavator (C325)	\$945
	TOTAL	\$6,254

GRAND TOTAL **\$412,980**

Compiled By: J. Morey

Date: 03/27/2007

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Loose Goose (Designed Roads) NEW CONSTRUCTION: 112.00 STATIONS 2.12 MILES
 ROADS: 1A-1B(3.5), 1C-1D(3.5), 1E-1J(3.0), 1K-1L(9.2), 1M-1N(15.1), 2A-2B(24.4), 2C-2D(27.9), IMPROVEMENT: STATIONS 0.00 MILES
 2G-2H(2.5), 5C-5D(4.2), 5G-5H(15.4), and 6C-6D(3.3).

Method	Acres/amount	Rate	=	Cost
Scatter Outside of RW	14.0	\$980.00	x	\$13,671.00
SUB TOTAL FOR CLEARING & GRUBBING				\$13,671

Material	Cyl/amount/station	Rate	=	Cost
Common drift excavation \$\$/cy	11,876	\$1.28	x	\$15,201.28
Embankment compaction \$\$/cy	11,353	\$0.45	x	\$5,108.85
Truck End Haul 1C-1D: 0+50 to 2+50 (Haul to 1A-1B)	270	\$2.90	x	\$783.00
Truck End Haul 1E-1J: 0+50 to 3+00 (Haul to 1A-1B & W/A)	300	\$2.90	x	\$870.00
Truck End Haul from Borrow Pit on 2A-2B to 4+00 to 6+00 on 2A-2B	900	\$2.90	x	\$2,610.00
Truck End Haul from Borrow Pit on 2A-2B to 0+00 to 1+75 on 2G-2H	350	\$2.90	x	\$1,015.00
Truck End Haul 6C-6D: 0+75 to 3+30 (Haul to 5E-5F & W/A)	540	\$2.90	x	\$1,566.00
SUB TOTAL FOR EXCAVATION				\$27,154

Location	Dial/type	Lineal ft.	Rate	Cost	No. bands	Rate	Cost
1I-1J 0+00	18"CPP	40	\$13.60	\$544.00			
1K-1L 3+30	18"CPP	35	\$13.60	\$476.00			
1M-1N 10+10	18"CPP	35	\$13.60	\$476.00			
2A-2B 0+00	18"CPP	40	\$13.60	\$544.00			
2A-2B 12+00	18"CPP	30	\$13.60	\$408.00			
2A-2B 15+00	18"CPP	30	\$13.60	\$408.00			
2A-2B 19+50	18"CPP	35	\$13.60	\$476.00			
2C-2D 2+95	18"CPP	40	\$13.60	\$544.00			
6C-6D 0+15	18"CPP	40	\$13.60	\$544.00			
6C-6D 2+20	18"CPP	35	\$13.60	\$476.00			
Other/miscellaneous:							
Seed & Mulch Waste Areas (1 Acre)						Quantity	Rate
						1	\$1,370.00
Culvert stakes & markers: 6' FIBERGLASS MARKERS						10	\$14.10
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION							\$6,407
Subtotal							\$47,232

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Loose Goose
 ROAD: Bull Goose Tie Thru
 POINTS: 4A to 4B

NEW CONSTRUCTION: 19.48 STATIONS 0.369 MILES
 IMPROVEMENT: STATIONS MILES

CLEARING & GRUBBING					
Method	Acres/amount	x	Rate	=	Cost
Scatter outside of R/W	1.71	x	\$980	=	\$1,675.80
Haul Clearing debris to WA (# stations)	4.00	x	\$300	=	\$1,200.00
		x		=	

SUB TOTAL FOR CLEARING & GRUBBING **\$2,876**

EXCAVATION					
Material	Cy/amount	x	Rate	=	Cost
Common Drift to fills < 50%	970	x	\$1.28	=	\$1,241.60
Common Drift to fills > 50%	3,528	x	\$1.52	=	\$5,362.56
Common haul to fills	818	x	\$1.67	=	\$1,366.06
Enbankment Compaction	5,316	x	\$0.45	=	\$2,392.20
Cut Slope Rounding (stations)	8.15	x	\$31.00	=	\$252.65
Construct Ditchouts (C330 hours)	2.0	x	\$138.00	=	\$276.00
		x		=	
		x		=	
		x		=	
		x		=	

SUB TOTAL FOR EXCAVATION **\$10,891**

CULVERT MATERIALS AND INSTALLATION									
Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
L 0+40	18" CPP	36	\$13.60	\$489.60					
L2+70	18" CPP	40	\$13.60	\$544.00					

Other/miscellaneous:				
	Description	Quantity	Rate	Cost
Culvert stakes & markers:	Carsonite Culvert Marker	2	\$14.10	\$28.20

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION **\$1,062**
 Subtotal of Clearing, Exc., Culv. **\$14,829**

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Loose Goose
 ROAD: Kalina Tie-thru
 POINTS: A - B (9+50), 4C - 4D (4+20)

NEW CONSTRUCTION: 13.70 STATIONS
 IMPROVEMENT: _____ STATIONS
 0.26 MILES
 _____ MILES

CLEARING & GRUBBING

Method	Acres/amount	x	Rate	=	Cost
Pt A - Pt B (scatter outside of R/W)	0.80	x	\$980	=	\$784.00
Pt 4C - Pt 4D	0.23	x	\$980	=	\$225.40

SUB TOTAL FOR CLEARING & GRUBBING \$1,009

EXCAVATION

Material	Cyl/amount	x	Rate	=	Cost
Pt A - Pt B	600	x	\$1.28	=	\$768.00
Pt A - Pt B(D/O, 1 grader hour)	1	x	\$84.00	=	\$84.00
Pt "B" vertical curve(cat 330)	1	x	\$138.00	=	\$138.00
Pt A - Pt B Embankment compaction	471	x	\$0.45	=	\$211.95
Pt 4C - Pt 4D	231	x	\$1.28	=	\$295.68
Pt 4C - Pt 4D(embankment compaction)	204	x	\$0.45	=	\$91.80
Common (Drift Earth up to 200') \$\$/sta. (4C-D)	1.50	x	\$139.00	=	\$208.50
Balanced construction \$\$/sta. (4C-d)	1.50	x	\$89.00	=	\$133.50
Landing Construction \$\$/landing 4C-D (2+50), 4D	2	x	\$285.00	=	\$570.00

SUB TOTAL FOR EXCAVATION \$2,501

CULVERT MATERIALS AND INSTALLATION

Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
(A-B) 0+95	18 CPP	40	\$13.60	\$544.00					

	Description	Quantity	Rate	Cost
Other/miscellaneous:				
Culvert stakes & markers:	carsonite culvert marker	1	\$14.10	\$14.10

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION \$558

Subtotal of Clearing, Exc., Culv. **\$4,069**

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Loose Goose (Field Design) NEW CONSTRUCTION: 53.80 STATIONS
 ROAD: 1G-1H (10.4), 1O-1P (0.8), 1Q-1R (1.1), 1S-1T (2.9), 1U-1V (6.3), IMPROVEMENT: 0.00 STATIONS
 1W-1X (2.5), 2E-2F (1.2), 2I-2J (2.4), 2K-2L (0.5), 3A-3B (1.0),
 3C-3D (5.2), 5A-5B (6.0), 5E-5F (1.0), 5I-5J (3.7), 5K-5L (2.9),
 5M-5N (1.3), 6A-6B (1.3), 6E-6F (3.3), 6G, and 6H

1.02 MILES
0.00 MILES

Method	Acres/amount	X	Rate	=	Cost
Scatter Outside of ROW	6.0	X	\$980.00	=	\$5,880.00
SUB TOTAL FOR CLEARING & GRUBBING					\$5,880

Material	Sta/amount	X	Rate	=	Cost
Common (Drift Earth up to 200') \$\$/sta.	53.80	X	\$139.00	=	\$7,478.20
Balanced construction \$\$/sta.	53.80	X	\$89.00	=	\$4,788.20
Landing Construction \$\$/landing	21	X	\$285.00	=	\$5,985.00
1H, 1P, 1R, 1T, 1V, 1X, 2F, 2J, 2L, 3B, 3D, 5A-5B (4+60), 5B, 5F, 5J, 5L, 5N, 6B, 6F, 6G, and 6H					
SUB TOTAL FOR EXCAVATION					\$18,251

Location	Dialtype	Lineal ft.	Rate	Cost	No. bands	Rate	Cost
1G-1H 0+00	18"CPP	40	\$13.60	\$544.00			
3A-3B 0+00	18"CPP	35	\$13.60	\$476.00			
3C-3D 0+00	18"CPP	35	\$13.60	\$476.00			
5M-5N 0+00	18"CPP	35	\$13.60	\$476.00			
Other/miscellaneous:							
Culvert markers:				Quantity	Rate	Cost	
				4	\$14.10	\$56.40	
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION							\$2,028
Subtotal							\$26,160

Project No. 1 New Road Construction

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Loose Goose NEW CONSTRUCTION: 145.80 STATIONS 2.76 MILES
 ROAD: Surface 1A-1B (3.5), 1C-1D (3.5), 1G-1H (10.4), 1I-1J (3.0), 1K-1L (9.2), 1M-1N (15.1), IMPROVEMENT: 0.00 STATIONS 0.00 MILES
 1O-1P (0.8), 1Q-1R (1.1), 1S-1T (2.9), 1U-1V (6.3), 1W-1X (2.5), 2A-2B (24.4),
 2C-2D (14.3), 2E-2F (1.2), 2G-2H (2.5), 2I-2J (2.4), 2K-2L (0.5), 3A-3B (1.0),
 3C-3D (5.2), 4A-4B (19.5), 5E-5F (1.0), 5M-5N (1.3), 6A-6B (1.3), 6C-6D (3.3), and A-B (9.6).

SURFACING				Stations/amount	x	Rate/ sta/amt	Cost	
Subgrade prep: Description								
Grade, Shape and Ditch 16'				145.80	x	\$18.20	\$2,653.56	
Subgrade Compaction				145.80	x	\$14.80	\$2,157.84	
Grade, 14' Outslope				53.30	x	\$13.45	\$716.89	
Waterber				53.30	x	\$11.70	\$623.61	
ROAD SEGMENT 1A to 1B				POINT TO POINT	Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	1A to 1B	8	station 43	stations 3.50	151	\$3.82	\$575
Turn-Around	4"-0" Crushed		8	TA 12	TA 1	12	\$3.82	\$46
Junction	4"-0" Crushed	1A	8	Junction 24	junctions 1	24	\$3.82	\$92
Junction	3/4"-0" Crushed	1A	2	Junction 11	Junction 1	11	\$3.82	\$42
Traction Rock	3/4"-0" Crushed	0+00 to 3+00	2	station 11	stations 3	33	\$3.82	\$126
Landing	6"-0" Pit-run	1B	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment 1A to 1B						281		\$1,115
ROAD SEGMENT 1C to 1D				POINT TO POINT	Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	1C to 1D	8	station 43	stations 3.50	151	\$3.82	\$575
Turn-Around	4"-0" Crushed		N/A	TA 12	TA 1	12	\$3.82	\$46
Traction Rock	3/4"-0" Crushed	0+00 to 3+00	2	station 11	stations 3	33	\$3.82	\$126
Junction	3/4"-0" Crushed	1C	2	Junction 11	junctions 1	11	\$3.82	\$42
Junction	4"-0" Crushed	1C	8	Junction 24	junctions 1	24	\$3.82	\$92
Landing	6"-0" Pit-run	1D	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment 1C to 1D						281		\$1,115
ROAD SEGMENT 1G to 1H				POINT TO POINT	Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	1G to 1H	8	station 43	stations 10.40	447	\$3.82	\$1,708
Turnouts	4"-0" Crushed		8	turnout 19	turnouts 2	38	\$3.82	\$145
Turn-Around	4"-0" Crushed		N/A	TA 12	TA 1	12	\$3.82	\$46
Junction	4"-0" Crushed	1C	8	Junction 24	junctions 1	24	\$3.82	\$92
Junction	3/4"-0" Crushed	1G	2	Junction 11	junctions 1	11	\$3.82	\$42
Landing	6"-0" Pit-run	1H	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment 1G to 1H						582		\$2,267
ROAD SEGMENT 1I to 1J				POINT TO POINT	Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed		8	station 43	stations 3.00	129	\$3.82	\$493
Turn-Around	4"-0" Crushed		N/A	TA 12	TA 1	12	\$3.82	\$46
Junction	4"-0" Crushed	1I	8	Junction 24	junctions 1	24	\$3.82	\$92
Junction	1/2"-0" Crushed	1I	2	Junction 11	junctions 1	11	\$3.82	\$42
Landing	6"-0" Pit-run	1J	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment 1I to 1J						226		\$906
ROAD SEGMENT 1K to 1L				POINT TO POINT	Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	1K to 1L	8	station 43	stations 9.20	396	\$3.82	\$1,511
Turnouts	4"-0" Crushed		8	turnout 19	turnouts 3	57	\$3.82	\$218
Turn-Around	4"-0" Crushed		N/A	TA 12	TA 1	12	\$3.82	\$46
Junction	4"-0" Crushed	1K	8	Junction 24	junctions 1	24	\$3.82	\$92
Junction	1/2"-0" Crushed	1K	2	Junction 11	junctions 1	11	\$3.82	\$42
Traction Rock	3/4"-0" Crushed	1+50 to 7+00	2	station 11	stations 6	61	\$3.82	\$231
Curve Widening	3/4"-0" Crushed		2			20	\$3.82	\$76
Curve Widening	4"-0" Crushed		8			40	\$3.82	\$153
Landing	6"-0" Pit-run	1L	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment 1K to 1L						670		\$2,603
ROAD SEGMENT 1M to 1N				POINT TO POINT	Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	1M to 1N	8	station 43	stations 15.10	649	\$3.82	\$2,480
Turnouts	4"-0" Crushed		8	turnout 19	turnouts 2	38	\$3.82	\$145
Turn-Around	4"-0" Crushed		N/A	TA 12	TA 1	12	\$3.82	\$46
Junction	4"-0" Crushed	1, 10, 1Q, 1S, 1U,	8	Junction 24	junctions 6	144	\$3.82	\$550
Junction	3/4"-0" Crushed	1M, 1O, 1Q, 1S, 1U	2	Junction 11	junctions 5	55	\$3.82	\$210
Traction Rock	3/4"-0" Crushed	3+50 to 13+50	2	station 11	stations 10	110	\$3.82	\$420
Curve Widening	3/4"-0" Crushed		2			10	\$3.82	\$38
Curve Widening	4"-0" Crushed		8			20	\$3.82	\$76
Landing	6"-0" Pit-run	1N	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment 1M to 1N						1,088		\$4,200
ROAD SEGMENT 1O to 1P				POINT TO POINT	Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	1O to 1P	8	station 43	stations 0.80	34	\$3.82	\$131
Landings	6"-0" Pit-run	1P	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment 1O to 1P						84		\$365
ROAD SEGMENT 1Q to 1R				POINT TO POINT	Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	1Q to 1R	8	station 43	stations 1.10	47	\$3.82	\$181
Landings	6"-0" Pit-run	1R	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment 1Q to 1R						97		\$415

ROAD SEGMENT 1S to 1T				POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1S to 1T Volume (CY) per	Sta. to Sta. Number of 0+00 to 2+90			
Base Rock	4"-0" Crushed	1S to 1T	8	station 43	stations 2.90	125	\$3.82	\$476
Landings	6"-0" Pit-run	1T	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment:				1S to 1T		175		\$710
ROAD SEGMENT 1U to 1V				POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1U to 1V Volume (CY) per	Sta. to Sta. Number of 0+00 to 6+30			
Base Rock	4"-0" Crushed	1U to 1V	8	station 43	stations 6.30	271	\$3.82	\$1,035
Turnouts	4"-0" Crushed		8	turnouts 19	turnouts 1	19	\$3.82	\$73
Turn-Around	4"-0" Crushed		8	TA 12	TA 1	12	\$3.82	\$46
Landings	6"-0" Pit-run	1V	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment:				1U to 1V		352		\$1,387
ROAD SEGMENT 1W to 1X				POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1W to 1X Volume (CY) per	Sta. to Sta. Number of 0+00 to 2+50			
Base Rock	4"-0" Crushed	1W to 1X	8	station 43	stations 2.50	108	\$3.82	\$411
Turnouts	4"-0" Crushed		8	turnouts 19	turnouts 1	19	\$3.82	\$73
Landings	6"-0" Pit-run	1X	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment:				1W to 1X		177		\$717
ROAD SEGMENT 2A to 2B				POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2A to 2B Volume (CY) per	Sta. to Sta. Number of 0+00 to 24+40			
Base Rock	4"-0" Crushed	2A to 2B	8	station 43	stations 24.40	1,049	\$3.82	\$4,008
Turnouts	4"-0" Crushed		8	turnout 19	turnouts 3	57	\$3.82	\$218
Turn-Around	4"-0" Crushed		N/A	TA 12	TA 2	24	\$3.82	\$92
Junction	4"-0" Crushed	2C, 2G, 2I, 2K	8	junction 24	junctions 4	96	\$3.82	\$367
Junction	3/4"-0" Crushed	2A, 2G	2	junction 11	junctions 2	22	\$3.82	\$84
Traction Rock	3/4"-0" Crushed	1+50 to 4+50	2	station 11	stations 3	33	\$3.82	\$126
Traction Rock	3/4"-0" Crushed	16+00 to 22+00	2	station 11	stations 6	66	\$3.82	\$252
Curve Widening	3/4"-0" Crushed		2			20	\$3.82	\$76
Curve Widening	4"-0" Crushed		8			40	\$3.82	\$153
Landings	6"-0" Pit-run	7+30	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Landings	6"-0" Pit-run	2B	N/A	Landing 80	Landings 1	80	\$4.68	\$374
Total Rock for Road Segment:				2A to 2B		1,537		\$5,984
ROAD SEGMENT 2C to 2D				POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2C to 2D Volume (CY) per	Sta. to Sta. Number of 0+00 to 27+90			
Base Rock	4"-0" Crushed	2C to 14+30	8	station 43	stations 14.30	615	\$3.82	\$2,349
Turnouts	4"-0" Crushed		8	turnout 19	turnouts 3	57	\$3.82	\$218
Junction	4"-0" Crushed	2E	8	junction 24	junctions 1	24	\$3.82	\$92
Traction Rock	3/4"-0" Crushed	2C to 6+00	2	station 11	stations 6	66	\$3.82	\$252
Curve Widening	3/4"-0" Crushed		2			10	\$3.82	\$38
Curve Widening	4"-0" Crushed		8			20	\$3.82	\$76
Landings	6"-0" Pit-run	7+50	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment:				2C to 2D		842		\$3,259
ROAD SEGMENT 2E to 2F				POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2E to 2F Volume (CY) per	Sta. to Sta. Number of 0+00 to 1+20			
Base Rock	4"-0" Crushed	2E to 2F	8	station 43	stations 1.20	52	\$3.82	\$197
Landings	6"-0" Pit-run	2F	N/A	Landing 80	Landings 1	80	\$4.68	\$374
Total Rock for Road Segment:				2E to 2F		132		\$572
ROAD SEGMENT 2G to 2H				POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2G to 2H Volume (CY) per	Sta. to Sta. Number of 0+00 to 2+50			
Base Rock	4"-0" Crushed	2G to 2H	8	station 43	stations 2.50	108	\$3.82	\$411
Turn-Around	4"-0" Crushed		8	TA 12	TA 1	12	\$3.82	\$46
Traction Rock	3/4"-0" Crushed	2G to 1+00	2	station 11	stations 1	11	\$3.82	\$42
Curve Widening	3/4"-0" Crushed		2			10	\$3.82	\$38
Curve Widening	4"-0" Crushed		8			20	\$3.82	\$76
Landings	6"-0" Pit-run	2H	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment:				2G to 2H		211		\$847
ROAD SEGMENT 2I to 2J				POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2I to 2J Volume (CY) per	Sta. to Sta. Number of 0+00 to 2+40			
Base Rock	4"-0" Crushed	2I to 2J	8	station 43	stations 2.40	103	\$3.82	\$394
Landings	6"-0" Pit-run	2J	N/A	Landing 80	Landings 1	80	\$4.68	\$374
Total Rock for Road Segment:				2I to 2J		183		\$769
ROAD SEGMENT 2K to 2L				POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2K to 2L Volume (CY) per	Sta. to Sta. Number of 0+00 to 0+50			
Base Rock	4"-0" Crushed	2K to 2L	8	station 43	stations 0.50	22	\$3.82	\$82
Landings	6"-0" Pit-run	2L	N/A	Landing 80	Landings 1	80	\$4.68	\$374
Total Rock for Road Segment:				2K to 2L		102		\$457
ROAD SEGMENT 3A to 3B				POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	3A to 3B Volume (CY) per	Sta. to Sta. Number of 0+00 to 1+00			
Base Rock	4"-0" Crushed	3A to 3B	8	station 43	stations 1.00	43	\$3.82	\$164
Junction	4"-0" Crushed	3A	8	junction 24	junctions 1	24	\$3.82	\$92
Landings	6"-0" Pit-run	3B	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment:				3A to 3B		117		\$490
ROAD SEGMENT 3C to 3D				POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	3C to 3D Volume (CY) per	Sta. to Sta. Number of 0+00 to 5+20			
Base Rock	4"-0" Crushed	3C to 3D	8	station 43	stations 5.20	224	\$3.82	\$854
Turn-Around	4"-0" Crushed		8	TA 12	TA 1	12	\$3.82	\$46
Junction	4"-0" Crushed	3C	8	junction 24	junctions 1	24	\$3.82	\$92
Landings	6"-0" Pit-run	3D	N/A	Landing 50	Landings 1	50	\$4.68	\$234
Total Rock for Road Segment:				3C to 3D		310		\$1,226

ROAD SEGMENT 4A to 4B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of	0+00 to 19+48				
Base Rock	4"-0" Crushed	4A to 4B	9	station	49	stations	19.48	955	\$3.82	\$3,646
Turnouts	4"-0" Crushed		9	turnout	22	turnouts	4	88	\$3.82	\$336
Curve Widening	4"-0" Crushed		9	n/a		n/a		198	\$3.82	\$756
Fill Widening	4"-0" Crushed		9	n/a		n/a		18	\$3.82	\$69
Surface Rock	3/4"-0" Crushed	4A to 4B	4	station	22	stations	19.48	429	\$3.82	\$1,637
Curve Widening	3/4"-0" Crushed		4	n/a		n/a		105	\$3.82	\$401
Fill Widening	3/4"-0" Crushed	17+95-18+45	4	n/a		n/a		8	\$3.82	\$31
Turnouts	3/4"-0" Crushed		4	turnout	11	turnouts	4	44	\$3.82	\$168
Fill Armor	24"-6" Riprap		18	n/a		fills	5	611	\$4.59	\$2,804
Energy Dissipator	24"-6" Riprap			dissipator	12	dissipators	1	12	\$4.59	\$55
Total Rock for Road Segment: 4A to 4B								2,467		\$9,904
ROAD SEGMENT 5E to 5F				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of	0+00 to 1+00				
Base Rock	4"-0" Crushed	5E to 5F	8	station	43	stations	1.00	43	\$3.82	\$164
Junction	4"-0" Crushed	5E	8	junction	24	junctions	1	24	\$3.82	\$92
Junction	3/4"-0" Crushed	5E	2	junction	11	junctions	1	11	\$3.82	\$42
Landings	6"-0" Pit-run	5F	N/A	Landing	50	Landings	1	50	\$4.68	\$234
Total Rock for Road Segment: 5E to 5F								128		\$532
ROAD SEGMENT 5M to 5N				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of	0+00 to 1+30				
Base Rock	4"-0" Crushed	5M to 5N	8	station	43	stations	1.30	56	\$3.82	\$214
Junction	4"-0" Crushed	5M	8	junction	24	junctions	1	24	\$3.82	\$92
Junction	3/4"-0" Crushed	5M	2	junction	11	junctions	1	11	\$3.82	\$42
Landings	6"-0" Pit-run	5N	N/A	Landing	50	Landings	1	50	\$4.68	\$234
Total Rock for Road Segment: 5M to 5N								141		\$581
ROAD SEGMENT 6A to 6B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of	0+00 to 1+30				
Base Rock	4"-0" Crushed	6A to 6B	8	station	43	stations	1.30	56	\$3.82	\$214
Junction	4"-0" Crushed	6A	8	junction	24	junctions	1	24	\$3.82	\$92
Junction	3/4"-0" Crushed	6A	2	junction	11	junctions	1	11	\$3.82	\$42
Landings	6"-0" Pit-run	6B	N/A	Landing	80	Landings	1	80	\$4.68	\$374
Total Rock for Road Segment: 6A to 6B								171		\$722
ROAD SEGMENT 6C to 6D				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of	0+00 to 3+30				
Base Rock	4"-0" Crushed	6C to 6D	8	station	43	stations	3.30	142	\$3.82	\$542
Junction	4"-0" Crushed	6C	8	junction	24	junctions	1	24	\$3.82	\$92
Junction	3/4"-0" Crushed	6C	2	junction	11	junctions	1	11	\$3.82	\$42
Traction Rock	3/4"-0" Crushed	6C to 3+00	2	station	11	stations	3	33	\$3.82	\$126
Landings	6"-0" Pit-run	6D	N/A	Landing	80	Landings	1	80	\$4.68	\$374
Total Rock for Road Segment: 6C to 6D								290		\$1,176
ROAD SEGMENT 6G and 6H				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of	0+00 to 3+30				
Landings	6"-0" Pit-run	6E, 6H	N/A	Landing	80	Landings	2	160	\$4.68	\$749
Total Rock for Road Segment: 6G and 6H								160		\$749
ROAD SEGMENT A to B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of	0+00 to 9+60				
Base Rock	4"-0" Crushed		9	station	49	stations	9.60	470	\$3.82	\$1,797
Turnouts	4"-0" Crushed		9	TO	22	TO's	2	44	\$3.82	\$168
Surface Rock	3/4"-0"		2	station	11	stations	9.6	106	\$3.82	\$403
Total Rock for Road Segment: A to B								620		\$2,368
Processing:										
Description								No. sta	Rate/sta	Cost
Water, Process & Compact Crushed Rock:								145.75	\$41.40	\$6,034
Process second lift on A to B and 4A to 4B.								29.10	\$41.40	\$1,205
Process traction rock								67.60	\$41.40	\$2,799
SUB TOTAL FOR SURFACING										\$10,037
SPECIAL PROJECTS										
Description								Cost		
Hydro seeding on 4A to 4B (one acre)								\$1,275		
Mobilization (1 off hwy D truck (\$140), Hydro seeder (\$189))								\$329		
SUB TOTAL FOR SPECIAL PROJECTS										\$1,604
GRAND TOTAL										\$157,225

Compiled By: J. Morey

Date: 03/27/2007

SUMMARY OF ROAD IMPROVEMENT COSTS

SALE NAME: Loose Goose

ROAD IMPROVEMENT:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 1	<u>I1-I2, I2-I3, I2-I4,</u>	<u>501.80</u>	<u>\$97,947</u>
	<u>I4-I5, I4-I6, I7-I8,</u>	<u> </u>	<u> </u>
	<u>I9-I10, I10-I11, WI1-WI2.</u>	<u> </u>	<u> </u>
	<u>TOTALS</u>	<u>501.80</u>	<u>\$97,947</u>

Compiled By: J. Morey

Date: 03/09/2007

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CULVERT REPLACEMENT COST SUMMARY

SALE NAME: Loose Goose NEW CONSTRUCTION: STATIONS MILES
 ROAD: Project No. 1 Road Improvement IMPROVEMENT: 77.60 STATIONS 1.47 MILES
 POINTS: 12-13(45.4) and 14-15(32.2)

Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost	
12-13 1+45	24"/CMP.AC	60	Fill Sheet	\$5,222.80	14-15 10+50	36"/CMP.AC	10	Fill Sheet	\$2,108.80	
12-13 2+80	18"/CPP	40	\$13.60	\$544.00						
12-13 7+95	18"/CPP	40	\$13.60	\$544.00						
12-13 11+10	24"/CMP.AC	70	Fill Sheet	\$5,507.80						
12-13 21+60	18"/CPP	30	\$13.60	\$408.00						
12-13 25+80	18"/CPP	44	\$13.60	\$598.40						
12-13 29+15	24"/CMP.AC	80	Fill Sheet	\$13,272.70						
12-13 35+30	24"/CMP.AC	60	Fill Sheet	\$5,350.60						
12-13 37+90	24"/CMP.AC	60	Fill Sheet	\$5,541.00						
* Fill re-construction costs are listed on individual fill sheets.										
					Description					
					Other/miscellaneous: Load and haul away old culverts. \$/hr					
					Quantity	Rate	Cost			
					6	\$59.00	\$354.00			
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION										\$39,452

Compiled By: J. Long Date: 02/15/2007

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Loose Goose
 ROAD: _____
 POINTS: WI-1to WI-2 (47+50)

NEW CONSTRUCTION: _____ STATIONS _____ MILES _____
 IMPROVEMENT: 47.50 STATIONS _____ 0.90 MILES _____

Method	Acres/amount	x	Rate	=	Cost
Pt WI-1 to Pt WI-2 (C-330, dtruck - hours)	2.00	x	\$197	=	\$394.00
		x		=	
		x		=	
SUB TOTAL FOR CLEARING & GRUBBING					\$394

Material	Cy/amount	x	Rate	=	Cost
Pt WI-1 to Pt WI-2	100	x	\$2.90	=	\$290.00
WI-1 to WI-2 (embankment compaction)	60	x	\$0.45	=	\$27.00
		x		=	
		x		=	
SUB TOTAL FOR EXCAVATION					\$317

CULVERT MATERIALS AND INSTALLATION									
Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost

	Description	Quantity	Rate	Cost
Other/miscellaneous:				
Culvert stakes & markers:				
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION				

Subtotal of Clearing, Exc., Culv. **\$711**

Project No. 1 Road Improvement

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: **Loose Goose** NEW CONSTRUCTION: 0.00 STATIONS 0.00 MILES
 ROAD: I1-I2(113.9), I2-I3(45.4), I2-I4(62.7), I4-I5(32.2), IMPROVEMENT: 501.80 STATIONS 9.50 MILES
I4-I6(50.0), I7-I8(1.5), I9-10(53.3), I10-I11(85.3), &W11-W12(47.5).

SURFACING		Subgrade prep:	Description	Stations/amount	x	Rate/sta/amt	Cost
			Grade, Shape and Ditch	501.80	x	\$18.20	\$9,132.76
			Compact subgrade w / roller	276.80	x	\$14.80	\$4,096.64

ROAD SEGMENT	I1 to I2	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I1 to I2 Volume (CY) per	I1 to I2 Number of	0+00 to 113+90 Number of		
Subgrade Leveling	3/4"-0" Crushed		N/A			100	\$2.96	\$296
Surfacing	3/4"-0" Crushed	0+00 - 113+90	3	station	16	stations 113.9	1,822	\$2.96 \$5,394
Curve Widening	3/4"-0" Crushed		N/A			130	\$2.96	\$385
Turnouts	3/4"-0" Crushed		3	turnout	10	turnouts 15	150	\$2.96 \$444
Junctions	3/4"-0" Crushed		3	junction	30	junctions 3	90	\$2.96 \$266
Junctions	3/4"-0" Crushed		3	junction	10	junctions 4	40	\$2.96 \$118
Total Rock for Road Segment: I1 to I2						2,332		\$6,904

ROAD SEGMENT	I2 to I3	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I2 to I3 Volume (CY) per	I2 to I3 Number of	0+00 to 45+40 Number of		
Subgrade Leveling	4"-0" Crushed		N/A			100	\$2.96	\$296
Surfacing	1 1/2"-0" Crushed		3	station	16	stations 45.4	726	\$2.96 \$2,150
Curve Widening	1 1/2"-0" Crushed		N/A			50	\$2.96	\$148
Turnouts	1 1/2"-0" Crushed		3	turnout	10	turnouts 6	60	\$2.96 \$178
Junctions	1 1/2"-0" Crushed		3	junction	10	junctions 4	40	\$2.96 \$118
Turnarounds	4"-0" Crushed		N/A	turnaround	10	turnaround 3	30	\$2.96 \$89
Surfacing Rock (Fills)	1 1/2"-0" Crushed	Fills	3				110	
Base Rock (Fills)	4"-0" Crushed	Fills	10				220	On Fill Sheets*
Culvert Bed / Backfill	1 1/2"-0" Crushed	X-drains	N/A	culvert	20	culverts 4	80	\$2.96 \$237
Culvert Bed / Backfill	1 1/2"-0" Crushed	Fills	N/A				270	On Fill Sheets*
Fill Armor/ Dissipator	24"-6" Riprap	Fills	N/A				390	On Fill Sheets*
Energy Dissipator	24"-6" Riprap	X-drains	N/A	culvert	10	culverts 5	50	\$4.59 \$230
Total Rock for Road Segment: I2 to I3						2,126		\$3,445

ROAD SEGMENT	I2 to I4	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I2 to I4 Volume (CY) per	I2 to I4 Number of	0+00 to 62+70 Number of		
Surfacing	1 1/2"-0" Crushed		3	station	16	stations 62.7	1,003	\$2.96 \$2,969
Curve Widening	1 1/2"-0" Crushed		N/A			100	\$2.96	\$296
Turnouts	1 1/2"-0" Crushed		3	turnout	10	turnouts 13	130	\$2.96 \$385
Junctions	1 1/2"-0" Crushed		3	junction	20	junctions 2	40	\$2.96 \$118
Total Rock for Road Segment: I2 to I4						1,273		\$3,769

ROAD SEGMENT	I4 to I5	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I4 to I5 Volume (CY) per	I4 to I5 Number of	0+00 to 32+20 Number of		
Subgrade Leveling	3/4"-0" Crushed		N/A			350	\$2.96	\$1,036
Surfacing Rock (Fills)	3/4"-0" Crushed	10+50	3				10	On Fill Sheets*
Base Rock (Fills)	4"-0" Crushed	10+50	10				20	On Fill Sheets*
Culvert Bed / Backfill	3/4"-0" Crushed	10+50	N/A				30	On Fill Sheets*
Fill Armor/ Dissipator	24"-6" Riprap	10+50	N/A				70	On Fill Sheets*
Total Rock for Road Segment: I4 to I5						480		\$1,036

ROAD SEGMENT	I4 to I6	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I4 to I6 Volume (CY) per	I4 to I6 Number of	0+00 to 50+50 Number of		
Subgrade Leveling	3/4"-0" Crushed		N/A			300	\$2.96	\$888
Landings	6"-0" Pit-run	50+50	N/A	Landing	80	Landings 1	80	\$4.68 \$374
Total Rock for Road Segment: I4 to I6						380		\$1,262

ROAD SEGMENT	I7 to I8	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I7 to I8 Volume (CY) per	I7 to I8 Number of	0+00 to 1+50 Number of		
Surfacing	4"-0" Crushed	17 to 18	8	station	43	stations 1.5	65	\$2.96 \$191
Junctions	4"-0" Crushed	17	8	junction	24	junctions 1	24	\$2.96 \$71
Landings	6"-0" Pit-run	50+50	N/A	Landing	80	Landings 1	80	\$4.68 \$374
Total Rock for Road Segment: I7 to I8						169		\$636

ROAD SEGMENT	I9 to I10	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I9 to I10 Volume (CY) per	I9 to I10 Number of	0+00 to 53+30 Number of		
Subgrade Leveling	1 1/2"-0" Crushed		N/A			100	\$2.96	\$296
Surfacing	1 1/2"-0" Crushed		3	station	16	stations 53.3	853	\$2.96 \$2,524
Curve Widening	1 1/2"-0" Crushed		N/A			70	\$2.96	\$207
Turn Outs	1 1/2"-0" Crushed		3	turnout	10	turnouts 8	80	\$2.96 \$237
Junctions	1 1/2"-0" Crushed		3	junction	10	junctions 5	50	\$2.96 \$148
Total Rock for Road Segment: I9 to I10						1,153		\$3,412

ROAD SEGMENT			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of					
I10 to I11			I10 to I11		0+00 to 95+30					
Subgrade Leveling	1 1/2"-0" Crushed		N/A				350	\$2.96	\$1,036	
Total Rock for Road Segment			I10 to I11				350		\$1,036	
ROAD SEGMENT			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of					
W11 to W12			W11 to W12		0+00 to 47+50					
Subgrade Leveling	4"-0" Crushed		N/A				250	\$2.96	\$740	
Base Rock	4"-0" Crushed		9	station	49	stations	1	49	\$2.96	\$145
Curve Widening	4"-0" Crushed		9		36	curves	1	38	\$2.96	\$107
Subgrade Reinforce	6"-0" Pit-run	39+50	N/A				60	\$2.96	\$178	
Total Rock for Road Segment			W11 to W12				395		\$1,169	
Processing:			Description		No. sta	Rate/sta	Cost			
			Water, Process & Compact Crushed Rock:		501.80	\$41.40	\$20,775			
SUB TOTAL FOR SURFACING							\$56,674			
SPECIAL PROJECTS			Description		Cost					
			Install Culvert Markers 20 Markers x \$14.10		=	\$282				
			Riprap placement for x-drain dissipator 6hr x \$138/hr		=	\$828				
SUB TOTAL FOR SPECIAL PROJECTS							\$1,110			
GRAND TOTAL							\$97,947			

Compiled By: J. Long

Date: 02/23/2007

Fill Reconstruction Cost Estimate

Jon Long
02/15/2007

Segment: I2 to I3 Station: 1+45
 Fill: 1 Height: 8

Materials	Quantity		\$	Total
24"x60", 16ga, AC Beveled inlet	60		\$27.40	\$1,644.00
	1		\$24.00	\$24.00
24"-6" Riprap Armor	40	cy	\$4.59	\$183.60
1 1/2"-0" Crushed Rock for Bedding/Backfill	50	cy	\$2.97	\$148.50
1 1/2"-0" Crushed Rock for Road	20	cy	\$2.97	\$59.40
4"-0" Crushed Rock for Road	40	cy	\$2.97	\$118.80
Erosion Control	0.1	ac	\$1,315.00	\$131.50
Mulch and seed.				

\$2,309.80

Equipment/Labor Costs	Quantity		\$/Hr.	Hours	Total
Excavator C330					
Operating	1		\$138.00	8	\$1,104.00
Dump Truck					
Operating	2		\$59.00	6	\$708.00
Stand-By	2		\$35.40	2	\$141.60
Rubber Tire					
Skidder					
Operating	1		\$62.00	4	\$248.00
Stand-By	1		\$37.20	4	\$148.80
Front-End Loader, Medium					
Operating	1		\$79.00	4	\$316.00
Stand-By	1		\$47.40	4	\$189.60
Hand Held Tamper					
Operating	1		\$7.00	3	\$21.00
Laborer					
	1		\$18.00	2	\$36.00

\$2,913.00

Project Total	\$5,223
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Fill Reconstruction Cost Estimate

J. Long
02/15/2007

Segment: I2 to I3 Station: 11+10
 Fill: 2 Height: 7

Materials	Quantity		\$	Total
24"x70', 16ga, AC Beveled inlet	70		\$27.40	\$1,918.00
24"-6" Riprap Armor	40	cy	\$4.59	\$183.60
1 1/2"-0" Crushed Rock for Bedding/Backfill	50	cy	\$2.97	\$148.50
1 1/2"-0" Crushed Rock for Road	20	cy	\$2.97	\$59.40
4"-0" Crushed Rock for Road	40	cy	\$2.97	\$118.80
Erosion Control	0.1	ac	\$1,315.00	\$131.50
Mulch and seed.				

\$2,583.80

Equipment/Labor Costs	Quantity		\$/Hr.	Hours	Total
Excavator C330					
Operating	1		\$138.00	8	\$1,104.00
Dump Truck					
Operating	2		\$59.00	6	\$708.00
Stand-By	2		\$35.40	2	\$141.60
Rubber Tire					
Skidder					
Operating	1		\$62.00	4	\$248.00
Stand-By	1		\$37.20	4	\$148.80
Front-End Loader, Medium					
Operating	1		\$79.00	4	\$316.00
Stand-By	1		\$47.40	4	\$189.60
Hand Held Tamper					
Operating	1		\$7.00	2	\$14.00
Laborer	1		\$18.00	3	\$54.00

\$2,924.00

Project Total	\$5,508
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Fill Reconstruction Cost Estimate

J. Long
02/15/2007

Segment: I2 to I3 Station: 29+15
 Fill: 3 Height: 18

Materials	Quantity		\$	Total
24"x80', 16ga, AC Beveled inlet	80		\$27.40	\$2,192.00
	1		\$24.00	\$24.00
24"-6" Riprap Armor	210	cy	\$4.59	\$963.90
1 1/2"-0" Crushed Rock for Bedding/Backfill	70	cy	\$2.97	\$207.90
1 1/2"-0" Crushed Rock for Road	30	cy	\$2.97	\$89.10
4"-0" Crushed Rock for Road	60	cy	\$2.97	\$178.20
Erosion Control Mulch	0	ac	\$1,315.00	\$0.00

\$3,655.10

Equipment/Labor Costs	Quantity		\$/Hr.	Hours	Total
Excavator, C330					
Operating	1		\$138.00	20	\$2,760.00
Stand-By	1		\$82.80	2	\$165.60
Excavator, C325					
Operating	1		\$120.00	12	\$1,440.00
Stand-By	1		\$72.00	8	\$576.00
Dump Truck					
Operating	2		\$59.00	16	\$1,888.00
Stand-By	2		\$35.40	4	\$283.20
Rubber Tire					
Skidder					
Operating	1		\$62.00	12	\$744.00
Stand-By	1		\$37.20	8	\$297.60
Front-End Loader, Medium					
Operating	1		\$79.00	12	\$948.00
Stand-By	1		\$47.40	8	\$379.20
Hand Held Tamper					
Operating	1		\$7.00	4	\$28.00
Laborer	1		\$18.00	6	\$108.00

\$9,617.60

Project Total	\$13,273
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Fill Reconstruction Cost Estimate

J. Long
02/15/2007

Segment: I2 to I3 Station: 35+30
 Fill: 4 Height: 7

Materials	Quantity		\$	Total
24"x 60', 16ga, AC	60		\$27.40	\$1,644.00
Beveled inlet	1		\$24.00	\$24.00
24"-6" Riprap Armor	60	cy	\$4.59	\$275.40
1 1/2"-0" Crushed Rock for Bedding/Backfill	50	cy	\$2.97	\$148.50
1 1/2"-0" Crushed Rock for Road	20	cy	\$2.97	\$59.40
4"-0" Crushed Rock for Road	40	cy	\$2.97	\$118.80
Erosion Control	0.1	ac	\$1,315.00	\$131.50
Mulch and seed.				

\$2,401.60

Equipment/Labor Costs	Quantity		\$/Hr.	Hours	Total
Excavator C330					
Operating	1		\$138.00	8	\$1,104.00
Stand-By	0		\$82.80	0	\$0.00
Dump Truck					
Operating	2		\$59.00	6	\$708.00
Stand-By	2		\$35.40	2	\$141.60
Rubber Tire					
Skidder					
Operating	1		\$62.00	4	\$248.00
Stand-By	1		\$37.20	4	\$148.80
Front-End Loader, Medium					
Operating	1		\$79.00	4	\$316.00
Stand-By	1		\$47.40	4	\$189.60
Hand Held Tamper					
Operating	1		\$7.00	3	\$21.00
Laborer	1		\$18.00	4	\$72.00

\$2,949.00

Project Total	\$5,351
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Fill Reconstruction Cost Estimate

J. Long
02/15/2007

Segment: 12 to 13 Station: 37+90
 Fill: 5 Height: 8

Materials	Quantity		\$	Total
24"x 60', 16ga, AC	60		\$27.40	\$1,644.00
Beveled inlet	1		\$24.00	\$24.00
24"-6" Riprap Armor	40	cy	\$4.59	\$183.60
1 1/2"-0" Crushed Rock for Bedding/Backfill	50	cy	\$2.97	\$148.50
1 1/2"-0" Crushed Rock for Road	20	cy	\$2.97	\$59.40
4"-0" Crushed Rock for Road	40	cy	\$2.97	\$118.80
Erosion Control	0.1	ac	\$1,315.00	\$131.50
Mulch and seed.				

\$2,309.80

Equipment/Labor Costs	Quantity		\$/Hr.	Hours	Total
Excavator C330					
Operating	1		\$138.00	8	\$1,104.00
Stand-By	1		\$82.80	2	\$165.60
Dump Truck					
Operating	2		\$59.00	6	\$708.00
Stand-By	2		\$35.40	4	\$283.20
Rubber Tire					
Skidder					
Operating	1		\$62.00	4	\$248.00
Stand-By	1		\$37.20	4	\$148.80
Front-End Loader, Medium					
Operating	1		\$79.00	4	\$316.00
Stand-By	1		\$47.40	4	\$189.60
Hand Held Tamper					
Operating	1		\$7.00	2	\$14.00
Laborer	1		\$18.00	3	\$54.00

\$3,231.20

Project Total	\$5,541
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Fill Reconstruction Cost Estimate

J. Long
02/15/2007

Segment: 14 to 15 Station: 10+50
 Fill: 6 Height: 6

Materials	Quantity		\$	Total
36"x 10', 16ga, AC	10		\$42.15	\$421.50
24"-6" Riprap Armor	70	cy	\$4.59	\$321.30
3/4"-0" Crushed Rock for Bedding/Backfill	30	cy	\$2.97	\$89.10
3/4"-0" Crushed Rock for Road	10	cy	\$2.97	\$29.70
4"-0" Crushed Rock for Road	20	cy	\$2.97	\$59.40
Erosion Control	0	ac	\$1,315.00	\$0.00
Mulch and seed.				

\$921.00

Equipment/Labor Costs	Quantity		\$/Hr.	Hours	Total
Excavator C330					
Operating	1		\$138.00	5	\$690.00
Stand-By	1		\$82.80	0	\$0.00
Dump Truck					
Operating	1		\$59.00	3	\$177.00
Stand-By	1		\$35.40	0	\$0.00
Front-End Loader, Medium					
Operating	1		\$79.00	2	\$158.00
Stand-By	1		\$47.40	2	\$94.80
Hand Held Tamper					
Operating	1		\$7.00	2	\$14.00
Laborer	1		\$18.00	3	\$54.00

\$1,187.80

Project Total	\$2,109
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CRUSHED ROCK COST

SALE NAME: Loose Goose
 PROJECT: Project No. 1 - Road Improvement
 QUARRY: Wild Goose

ROCK TYPE: Crushed

DATE: 02/21/2007
 BY: J. Long

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	
I1-I2	113.90	2,332				1.00	0.70	0.20	0.10	2.00
I2-I3	45.40	1,686			1.00	1.40	1.00	0.20	0.10	3.70
I2-I4	62.70	1,273			1.00	1.50	1.00	0.20	0.10	3.80
I4-I5	32.20	410			2.00	1.40	1.00	0.20	0.10	4.70
I4-I6	50.00	300			2.00	1.60	1.00	0.20	0.10	4.90
I7-I8	1.50	89			2.00	1.70	1.00	0.20	0.10	5.00
I9-I10	53.30	1,153			1.00	1.60	1.00	0.20	0.10	3.90
I10-I11	95.30	350			2.00	1.70	1.00	0.20	0.10	5.00
WI1-WI2	39.50	335			2.00	3.00	1.00	0.20	0.10	6.30
TOTAL	493.80	7,928								AVERAGE HAUL
	STA./NO.	CU. YD.			0.89	1.42	0.91	0.20	0.10	3.52
CUBIC YARD WEIGHTED HAUL										Average Round Trip Distance (miles) 7.05

ROCK HAUL:

Truck type: <u>D20</u>	No. trucks: <u>4</u>		
Delay min. <u>8</u>	Efficiency: <u>85%</u>	Ave haul: <u>\$2.27</u>	<u>/cy</u>
		Load: <u></u>	<u>/cy</u>
Truck type: <u>D12</u>	No. trucks: <u>1</u>	Spread: <u>\$0.69</u>	<u>/cy</u>
Delay min. <u>6</u>	Efficiency: <u>85%</u>		
Truck type: <u>D10</u>	No. trucks: <u></u>	Production: <u>cy/day =</u>	<u>1,192</u>
Delay min. <u>5</u>	Efficiency: <u>85%</u>		

CRUSHED ROCK HAUL COSTS 7,928 cy @ \$2.96 /cy

RIP RAP ROCK COST

SALE NAME: Loose Goose
 PROJECT: No. 1
 QUARRY: Wild Goose

ROCK TYPE: Rip Rap

DATE: 02/21/2007
 BY: J. Long

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	
I2-I3	45.40	440			1.00	1.90	0.50	0.20	0.10	3.70
I4-I5	32.20	70			1.00	2.80	0.50	0.20	0.10	4.60
4A-4B	19.50	489			1.00	2.50	0.50	0.20	0.10	4.30
TOTAL	97.10	999			1.00	2.26	0.50	0.20	0.10	AVERAGE HAUL 4.06
	STA./NO.	CU. YD.								
CUBIC YARD WEIGHTED HAUL					1.00	2.26	0.50	0.20	0.10	AVERAGE HAUL 4.06
Average Round Trip Distance (miles) 8.11										

ROCK HAUL:

Truck type: <u>D12</u>	No. trucks: _____	Ave haul: \$3.63 /cy
Delay min. <u>6</u>	Efficiency: <u>85%</u>	Load: \$0.95 /cy
Truck type: <u>D10</u>	No. trucks: <u>4</u>	Develop: _____ /cy
Delay min. <u>5</u>	Efficiency: <u>85%</u>	

Production: cy/day = 519

RIP RAP ROCK HAUL COSTS 999 cy @ \$4.59 /cy

SUMMARY OF ROCK DEVELOPMENT AND CRUSHING COSTS

PROJECT NO. 2
 Quarry: Wild Goose
 Location: NE 1/4 S1 T6N R7W WM
 County: Clatsop
 By: S Cadman
 Date: 01/11/2007

Timber Sale Name: Loose Goose

Swell: _____
 Shrink: 16%

ROCK SIZE	REJECT	GRADATION	STOCKPILE CU. YDS.	TRUCK MEAS CU. YDS.	TOTAL CU. YDS.
3/4"-0"	5%	CR		4,373	4,373
1-1/2"-0"	5%	CR		4,134	4,134
4"-0"		CR		8,652	8,652
6"-0"		PR		1,760	1,760
24"-6"		RR		1,133	1,133
36"		RR			
TOTAL CUBIC YARDS OF ROCK:				20,052	20,052

1) MOBILIZATION & SET UP:

EQUIPMENT MOBILIZATION	DISTANCE IN MILES	DIST. FACTOR	BASE RATE	COST
3 Stage Crusher	75	1.40	\$2,353	\$3,294
Screening Plants (2)	75	1.40	\$954	\$1,336
D8 Cat & D6 Cat	75	1.40	\$1,600	\$2,240
Loader	75	1.40	\$590	\$826
Drill & Compressor	75	1.40	\$1,030	\$1,442
Powder	75	1.40	\$286	\$400
3 Dump Trucks	75	1.40	\$357	\$500
Excavator	75	1.40	\$1,030	\$1,442
SUB TOTAL FOR MOBILIZATION				\$11,480

EQUIPMENT SET UP	TIMES	RATE	COST
3 Stage Crusher		\$2,682	\$2,682
Screening Plants (2)		\$451	\$451
Change Gradation	3	\$424	\$1,272
SUB TOTAL FOR SET UP COSTS			\$4,405
TOTAL MOBILIZATION & SET UP COSTS			\$15,885

2) CLEARING & GRUBBING

DESCRIPTION	QUANTITY	UNIT	RATE	COST
Clear and Grub (pile and burn)	0.44	acres	\$1,980	\$871
Waste area C & G to quarry floor				
330 excavator	8.0	hours	\$138	\$1,104
dumptruck	8.0	hours	\$59	\$472
mobilize firetruck	1.0		\$119	\$119
TOTAL CLEARING & GRUBBING COSTS				\$2,566

3) EXCAVATION

MATERIAL DESCRIPTION	QUANTITY	UNIT	RATE	COST
Overburden Removal (excavate, load haul, spread)	1,886	bcy	\$2.90	\$5,469
waste material compaction	1,886	bcy	\$0.25	\$472
Safety Berm Construction (C-330)	2	hr	\$138.00	\$276

TOTAL EXCAVATION COSTS

\$6,217

4) DEVELOP ROCK

ROCK SUMMARY			METHOD	%	QUANTITY	RATE	COST
Type	Cu. yd. Vol.	Weight	Ripping	25%	5,013	\$1.85	\$9,274
crushed	17,159	86%	Drill & shoot	75%	15,358	\$1.95	\$29,948
pit run	1,760	9%	Oversize red			\$5.04	
rip rap	1,133	6%	Other				
Total	20,052						
reject	425	2.1%					

TOTAL ROCK DEVELOPMENT COSTS

\$39,222

5) CALIBRATION & TESTING

DESCRIPTION	NO.	\$/TEST	COST
Calibrate	3	\$400	\$1,200
Calibrate			
Test	14	\$50	\$700
Test			

TOTAL CALIBRATION & TESTING COSTS

\$1,900

6) FEEDING & LOADING

DESCRIPTION	CU. YD. QUANTITY	COST CU. YD.	TOTAL COST
Dig & Feed Rock	17,584	\$0.74	\$13,098

TOTAL FEEDING & LOADING COSTS

\$13,098

7) ROCK CRUSHING

ROCK SIZE	ROCK TYPE	CU. YD. QUANTITY	CRUSHER TYPE	HOURLY PRODUCTIO	RATE CU. YD.	TOTAL COST
3/4"-0"	crushed	4,373	3 stage w/s	110	\$2.95	\$12,920
1-1/2"-0"	crushed	4,134	3 stage w/s	120	\$2.71	\$11,196
4"-0"	crushed	8,652	2 stage	140	\$1.71	\$14,832

TOTAL ROCK CRUSHING COSTS

\$38,948

8) STOCKPILING

STOCKPILE PREPARATION OR CONST	COST

SUB TOTAL

HAUL & STOCKPILE STOCKPILE LOCATION	SIZE	# of TRUCKS	CU. YDS.	RATE	COST
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					

SUB TOTAL

TOTAL STOCKPILING COSTS

9) MISCELLANEOUS COSTS

DESCRIPTION	COST
Load, Haul, and Spread the reject material at the waste area.	\$1,234
\$2.90/CY 425 CY	
Final Quarry Dev., Access Road Const., Waterbarring, Drainage, Block Quarry Access	
3 D-8 hours @ \$126 per hour	\$378

TOTAL MISCELLANEOUS COSTS \$1,612

10) GRAND TOTAL: **\$119,449**

\$/Cubic Yard \$6.96

Footnotes:

Construct/Reconstruct Stockpile Floor

Equipment	Hours	Rate	Total
Dozer			
Compactor			
Grader			
Excavator			

Rock for Floor (CY)	\$/CY Haul	Total

Total Construct Stockpile Floor

Project No. 3 Loose Goose Brushing

Segment	Length (Miles)	Brush Type	Cost/Mile	Cost
B1 to I1 "WG &WG20"	2.00	L	\$1,150	\$2,300.00
	0.90	H	\$1,650	\$1,485.00
B2 "WG20.5"	0.10	VH	\$2,300	\$230.00
B3 "WG20.51"	0.10	VH	\$2,300	\$230.00
B4 to B5 "WG2010"	1.40	M	\$1,350	\$1,890.00
B6 "WG201020"	0.35	L	\$1,150	\$402.50
B7 "WG201040"	0.10	H	\$1,650	\$165.00
B8 "WG201050"	0.10	H	\$1,650	\$165.00
B9 "WG201070"	0.10	M	\$1,350	\$135.00
I1 to I2 "WG"	1.10	H	\$1,650	\$1,815.00
	1.10	M	\$1,350	\$1,485.00
I2 to I3 "WG"	0.90	H	\$1,650	\$1,485.00
I2 to I4 "WG60"	1.20	L	\$1,150	\$1,380.00
I4 to I5 "WG60"	0.60	L	\$1,150	\$690.00
I4 to I6 "WG6020"	0.95	M	\$1,350	\$1,282.50
				\$0.00

Total Miles

11.00

Total Project Cost

\$15,140

L = Light Brush \$1,150
M = Medium Brush \$1,350
H = Heavy Brush \$1,650
VH= Very Heavy \$ 2,300
(1-11-05)

Road Maintenance after completion of Project Work (New Construction & Improvement)

Sale: Loose Goose
Date: 22-Feb-07
By: J. Long

Type	Equipment/Rationale	Hours	Rate	Cost
Final Haul	Grader 14G	8	\$84	\$672
Road	Dump Truck 12CY	4	\$59	\$236
Maintenance	FE Loader C966	4	\$79	\$316
Haul Route	Vibratory Roller	8	\$79	\$632
	Water Truck (2,500 gal)	4	\$70	\$280
Total				\$2,136

Miles/day	Distance(miles)	Days
1.5	1.2	0.8

Production Rates
Grader

**Loose Goose
TIMBER CRUISE REPORT
FY 2007**

1. **Sale Area Location:** Areas 1- 7 are located in Portions of Sections 2, 3, 4, 10, and 11, 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	GTRA	Non-Thinnable	Stream Buffer	Net Acres	Survey Method
1	Partial Cut	319	7	12	0	24	15	261	GIS
2	Modified Clearcut	95	0	4	0	0	2	89	GIS
3	Modified Clearcut	69	5	1	0	0	1	62	GIS
4	Partial Cut	49	1	2	0	2	1	43	GIS
5	Partial Cut	159	6	4	0	0	8	141	GIS
6	Modified Clearcut	113	3	1	0	0	6	103	GIS
7 R/W	Right-of-way	24	0	0	0	0	0	24	GIS
TOTALS		828	22	24	0	26	33	723	

4. **Cruisers and Cruise Dates:** Areas 1- 7 were cruised by Derek Bangs, Jon Long, Peter Stone, Jay Morey, Jasen McCoy, Ty Williams, Kyle Smith, Lanny Freeman, and Dave Wolfgram, in January, 2007.

5. **Cruise Method and Computation:** AREA 1 is an "auto-mark" thinning unit and was variable plot cruised using a 40 BAF. These plots are located on a 3 chain by 9 chain grid, with every fourth plot measured and graded. A total of 99 plots were sampled, with 25 measured and graded plots, and 74 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 140 ft²/acre. Hardwoods do not count towards the residual basal area. AREAS 2, 3, and 6 are modified clearcut units and were variable plot cruised using a 40 BAF. These plots are located on a 5 chain by 8 chain grid, with every third plot measured and graded. A total of 70 plots were sampled, with 26 measured and graded plots, and 44 count plots. Cedar is a reserve species. AREAS 4 and 5 are "auto-mark" thinning units and were variable plot cruised using a 40 BAF. These plots are located on a 3 chain by 9 chain grid, with every fourth plot measured and graded. A total of 72 plots were sampled, with 19 measured and graded plots, and 53 count plots. Cedar is a reserve species, and was recorded as a "leave" tree. The "biggest and best" trees were recorded as "leave" trees to meet a target residual basal area of 140 ft²/acre. Hardwoods counted towards the residual basal area. AREA 7 R/W The right-of-way volume was calculated by multiplying the R/W acreage and the average volume per acre from the plots in Areas 1, 2, 3, 4, 5, and 6. In-sale right-of-way totals 24 acres.

All cruisers used Corvallis MicroTechnology (CMT) and/or Allegro 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.

AREA	CRUISE	TRACT	TYPE
1	06N07W SEC 10	A1 TAKE	00PC
2, 3, and 6	06N07W SEC 10	A236 TAKE	00CC
4 and 5	06N07W SEC 10	A45 TAKE	45PC
7 R/W	06N07W SEC 10	A7 RW	RWTK

6. **Timber Description:** Area 1 is an "auto-mark" thinning unit, approximately 60 years old, consisting of Douglas-fir, western hemlock, red alder, and a minor component of cedar. Non-thinnable alder dominated

pockets are scattered throughout the unit. The larger non-thinnable types have been mapped out and were not included in the cruise or net acres. This stand will be thinned to a SDI of 30 (140 Sq.Ft.BA), removing approximately 93 trees per acre and 14 MBF/acre. The average conifer "take" tree size is 14.8 inches DBH and 52 feet to a merchantable top (6 inch d.i.b.).

Area 2, 3, and 6 are modified clearcut units, approximately 60 years old, consisting of Douglas-fir, western hemlock, red alder, and a minor component of cedar. The Douglas-fir averages 21.4 inches DBH, with an average height of 79 feet to a merchantable top (6 inch d.i.b.). The average alder tree size is 13.4 inches DBH and 35 feet to a merchantable top (7 inch d.i.b.). The average volume per acre to be harvested (net) is 45.0 MBF.

Areas 4 and 5 are "auto-mark" thinning units, approximately 60 years old, consisting of Douglas-fir, western hemlock, red alder, and a minor component of cedar. One small, non-thinnable pocket is located in the southern portion of Area 4. This non-thinnable type has been mapped out and was not included in the cruise or net acres. This stand will be thinned to a SDI of 30 (140 Sq.Ft.BA), removing approximately 122 trees per acre and 17.8 MBF/acre. The average conifer "take" tree size is 14.6 inches DBH and 55 feet to a merchantable top (6 inch d.i.b.). The average alder "take" tree size is 14.1 inches DBH and 29 feet to a merchantable top (7 inch d.i.b.).

Area 7 R/W is similar to the timber description mentioned above for Areas 1, 2, 3, 4, 5, and 6. The average volume (net) is approximately 43.9 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 (PC)	45%	7%	37%	4%
2, 3, and 6 (MC)	55%	10%	48%	6%
4 and 5 (PC)	40%	7%	32%	4%

* Statistics for the thinning units (Areas 1, 4, and 5) is 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 two 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	Camp Run	% D & B	% Sale
Hemlock	16"	9,390	5,136	3,492	762	0	2%	48.1%
Douglas-fir	17"	9,312	6,861	2,010	441	0	1%	47.7%
Alder	14"	676	0	0	0	676	4%	3.5%
Noble Fir	23"	141	128	9	4	0	<1%	0.7%
TOTALS		19,519	12,125	5,511	1,207	676		

9. Approvals:

Prepared by: Jay Morey

Date: February 7, 2007

Unit Forester Approval: *[Signature]*

Date: 2/27/07

10. Attachments:

- Cruise Designs (3)
- Cruise Maps (4)
- Volume Reports - 5 pages
- Statistics Reports - 8 pages
- Stand Tables - 4 pages
- Log Stock Tables - 4 pages

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Loose Goose **Area(s)** 1

Harvest Type: (PC) "Automark Thinning"

Approx. Cruise Acres: 291 **Estimated CV%** 45 ^{(Net BF) or} **SE% Objective** 7 ^{(Net BF) or} BA/Acre BA/Acre

Planned Sale Volume : 3,783 MBF **Estimated Sale Area Value/Acre:** \$3,575/Ac
(Area 1) (13 MBF/Ac.)

A. Cruise Goals: (a) Grade minimum 100 conifer:
(b) Sample 99 cruise plots (1 grade/3 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) AZ= 45° / 225° (Northeast/Southwest)
Cruise Line Spacing 9 (chains)
Cruise Plot Spacing 3 (chains)
Grade/Count Ratio 1/3

Basal Area leave target 150 sq. ft. Cruiser needs to select 3.75 leave trees per plot. This means for every five plots, select 4 leave trees on 4 plots and select 3 leave trees on 1 plot to average 3.75 leave trees per plot. Cruise all take and leave trees. If a cruise line ends up paralleling in a buffer offset by 1 or 2 chains and continue. Do not take plots in Non-thinnable areas shown on cruise map. 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" for 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: R = CampRun
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 inter-visible 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: Jay Morey
Approved by: Jon Long 12-28-06
Date: 12/14/06

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Loose Goose **Area(s)** 4 & 5

Harvest Type: (PC) "Automark Thinning"

Approx. Cruise Acres: 193 **Estimated CV%** 45 ^{Net BF or} BA/Acre **SE% Objective** 7 ^{Net BF or} BA/Acre

Planned Sale Volume : 3,088 MBF **Estimated Sale Area Value/Acre:** \$4,400/Ac
(Areas 4 & 5) (16 MBF/Ac.)

A. Cruise Goals: (a) Grade minimum 100 conifer and 20 hardwood trees:
(b) Sample 73 cruise plots (1 grade/3 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) AZ= 0° (North/South) - Area 5
Cruise Line Direction(s) AZ= 315°/ 135° (Northwest/Southeast) - Area 4
Cruise Line Spacing 9 (chains)
Cruise Plot Spacing 3 (chains)
Grade/Count Ratio 1/3

Basal Area leave target 130 sq. ft. Cruiser needs to select 3.25 leave trees per plot. This means for every five plots, select 3 leave trees on 4 plots and select 4 leave trees on 1 plot to average 3.25 leave trees per plot. Cruise all take and leave trees. If a cruise line ends up paralleling in a buffer offset by 1 or 2 chains and continue. Alder will be thinned. All cedar are leave trees and count towards the leave tree basal area. **Alder will 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 $\frac{1}{2}$ " 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" for 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: R = CampRun

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 inter-visible 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: Jay Morey
Approved by: Jon Long
Date: 12/14/06

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Loose Goose **Area(s)** 2, 3, & 6

Harvest Type: CC

Approx. Cruise Acres: 261 ^{Net BF or} **Estimated CV%** 55 BA/Acre **SE% Objective** ^{Net BF or} 10% BA/Acre

Planned Sale Volume: 7,830 MBF **Estimated Sale Area Value/Acre:** \$ 9,000/Ac
(Areas 2, 3 & 6) (30 MBF/Ac)

A. Cruise Goals: (a) Grade minimum 100 conifer and 50 hardwood trees:
(b) Sample 70 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) AZ=207°/27° - Area 2
Cruise Line Direction(s) AZ= 315°/ 135° (Northwest/Southeast) - Areas 3 & 6
Cruise Line Spacing 8
Cruise Plot Spacing 5 (chains) (feet)
Grade/Count Ratio 1/2

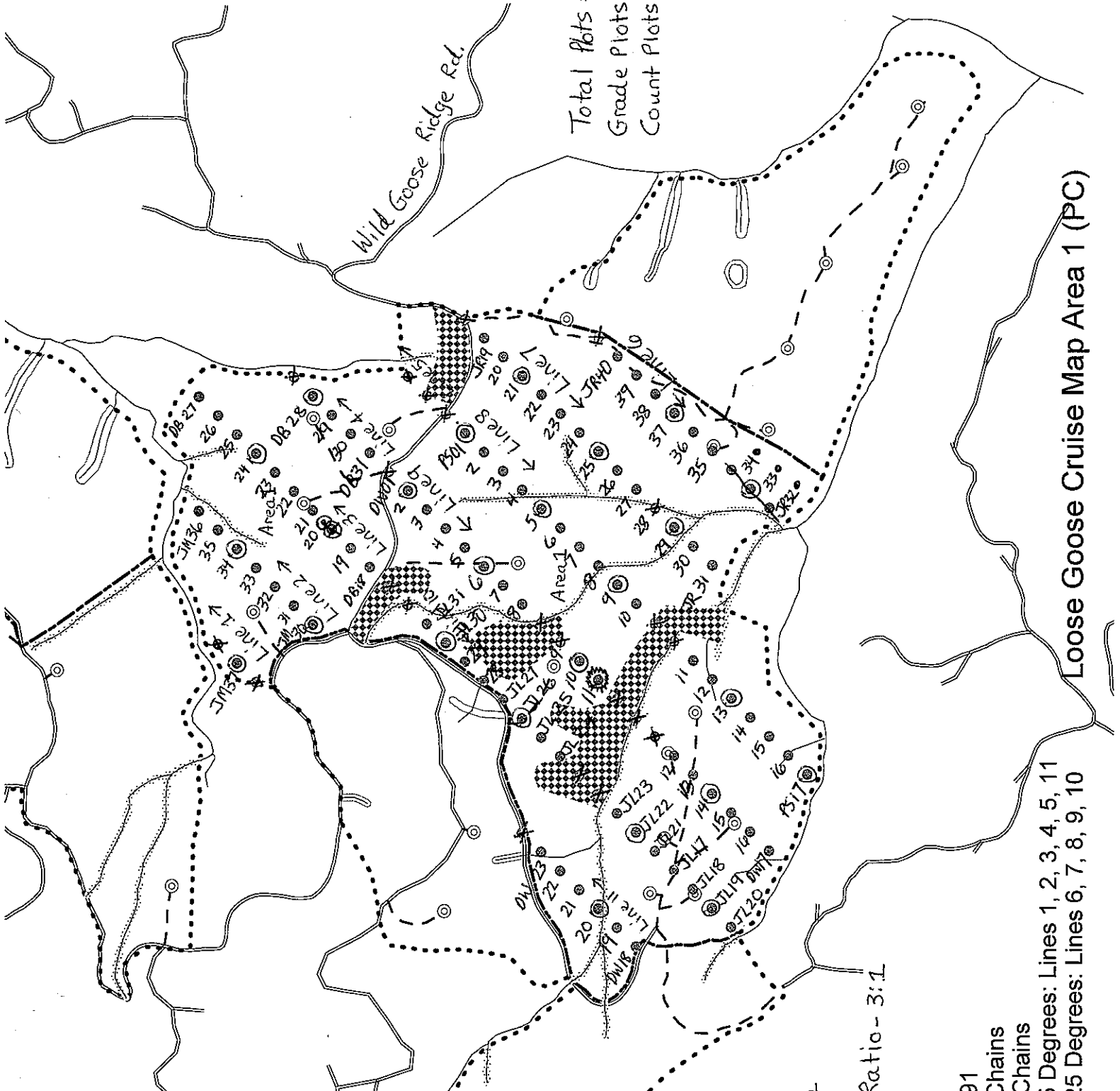
Do not take plots in stream buffers shown on cruise map. If a cruise line ends up paralleling in a buffer offset by 1 or 2 chains and continue. All cedar and marked wildlife trees are leave trees and are recorded as leave trees.

C. Tree Measurements:

- 1. Diameter:** Minimum DBH to cruise is 8" for conifers and 10" for hardwoods.
Record dbh to nearest $\frac{1}{2}$ " 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" for 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: R = CampRun
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 inter-visible 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: Jay Morey
 Approved by: Jon Long 1-3-07
 Date: 12/14/2006



Total plots = 99
 Grade Plots = 25
 Count Plots = 74

- ⊙ Grade Plot
- Count Plot
- ✕ Dropped Plot

Count/Grade Ratio - 3:1

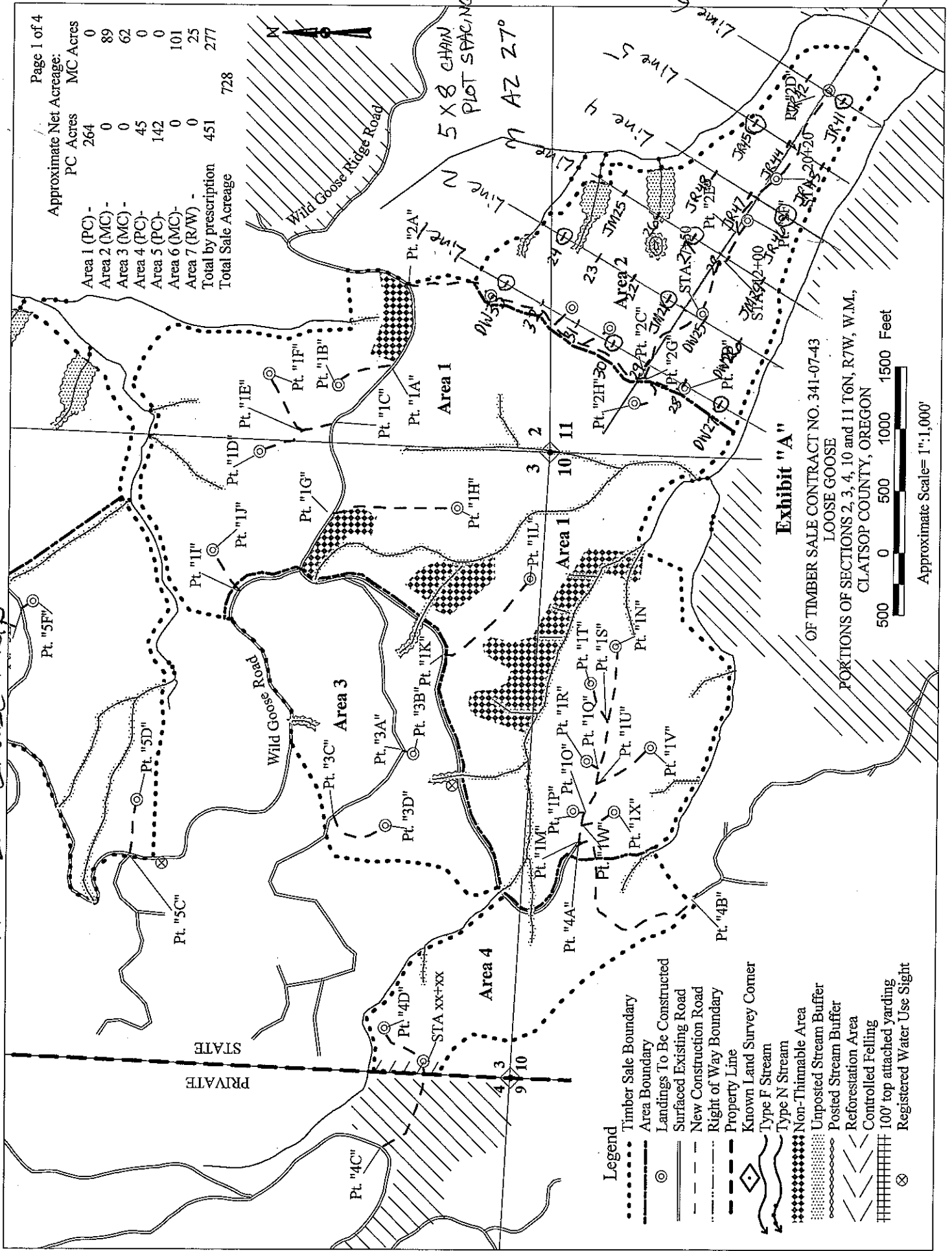
Cruise Acres : 291
 Plot Spacing: 3 Chains
 Line Spacing: 9 Chains
 Line Direction 45 Degrees: Lines 1, 2, 3, 4, 5, 11
 Line Direction 225 Degrees: Lines 6, 7, 8, 9, 10

Loose Goose Cruise Map Area 1 (PC)

Area 2 Cruise Map

Approximate Net Acreage:

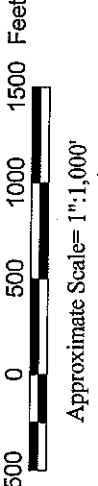
	PC Acres	MC Acres
Area 1 (PC) -	264	0
Area 2 (MC) -	0	89
Area 3 (MC) -	0	62
Area 4 (PC) -	45	0
Area 5 (PC) -	142	0
Area 6 (MC) -	0	101
Area 7 (R/W) -	0	25
Total by prescription	451	277
Total Sale Acreage		728



- Legend**
- Timber Sale Boundary
 - Area Boundary
 - ⊙ Landings To Be Constructed
 - Surfaced Existing Road
 - Right Construction Road
 - Property Line
 - Known Land Survey Corner
 - Type F Stream
 - Type N Stream
 - Non-Thinnable Area
 - Unposted Stream Buffer
 - Posted Stream Buffer
 - Reforestation Area
 - Controlled Felling
 - 100' top attached yarding
 - ⊗ Registered Water Use Sight

Exhibit "A"

OF TIMBER SALE CONTRACT NO. 341-07-43
 LOOSE GOOSE
 PORTIONS OF SECTIONS 2, 3, 4, 10 and 11 T6N, R7W, W.M.,
 CLATSOP COUNTY, OREGON



Loose Goose Cruise Map Areas 3 & 6 (CC)

1" = 1,000'



- ⊙ Grade Plot
- Count Plot
- ✕ Dropped Plot

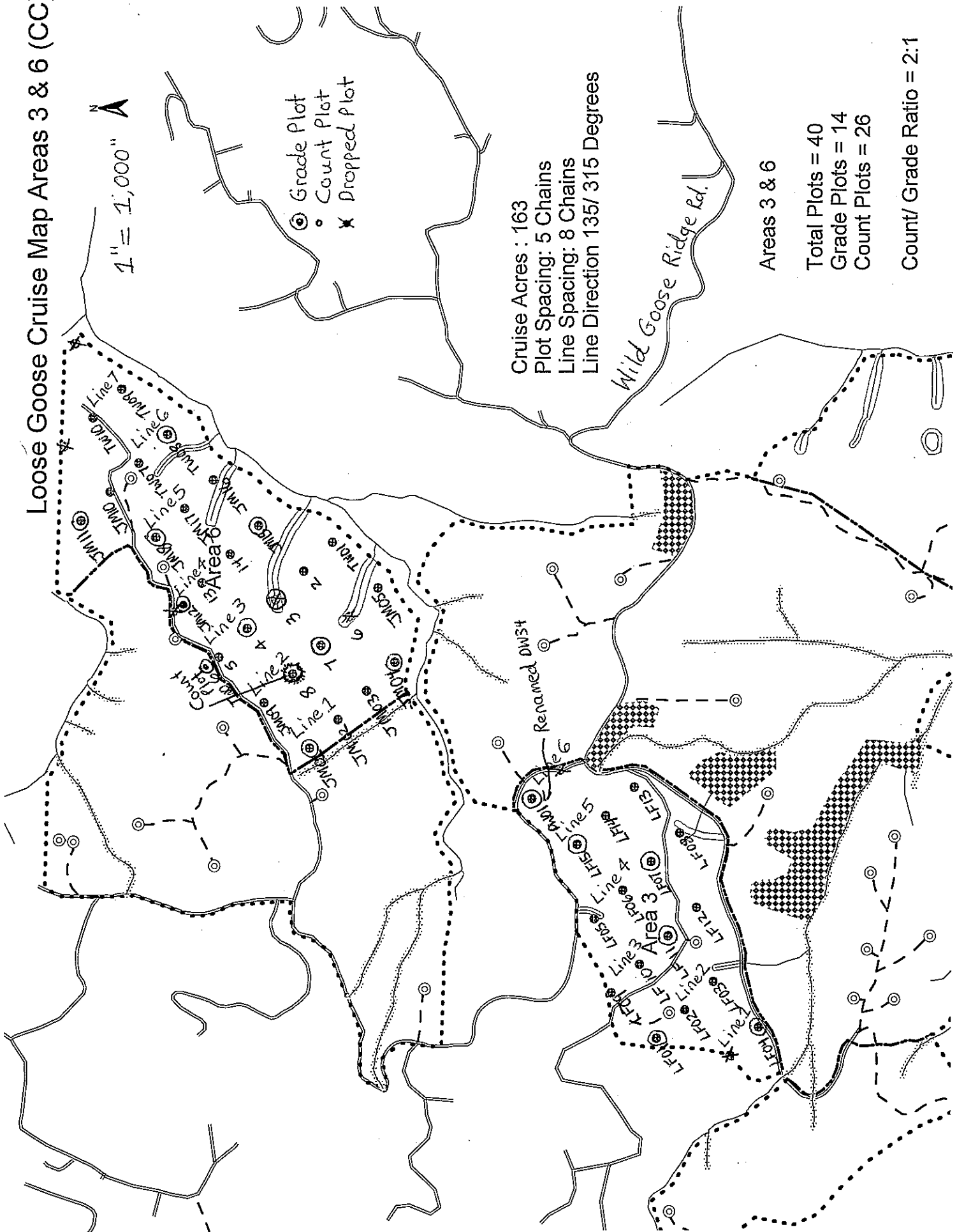
Cruise Acres : 163
 Plot Spacing: 5 Chains
 Line Spacing: 8 Chains
 Line Direction 135/ 315 Degrees

Wild Goose Ridge Rd.

Areas 3 & 6

Total Plots = 40
 Grade Plots = 14
 Count Plots = 26

Count/ Grade Ratio = 2:1



Goose Cruise Map Areas 4 & 5 (PC)

- X Dropped
- ⊙ Grade
- Count

↑ N

1" = 1,000'

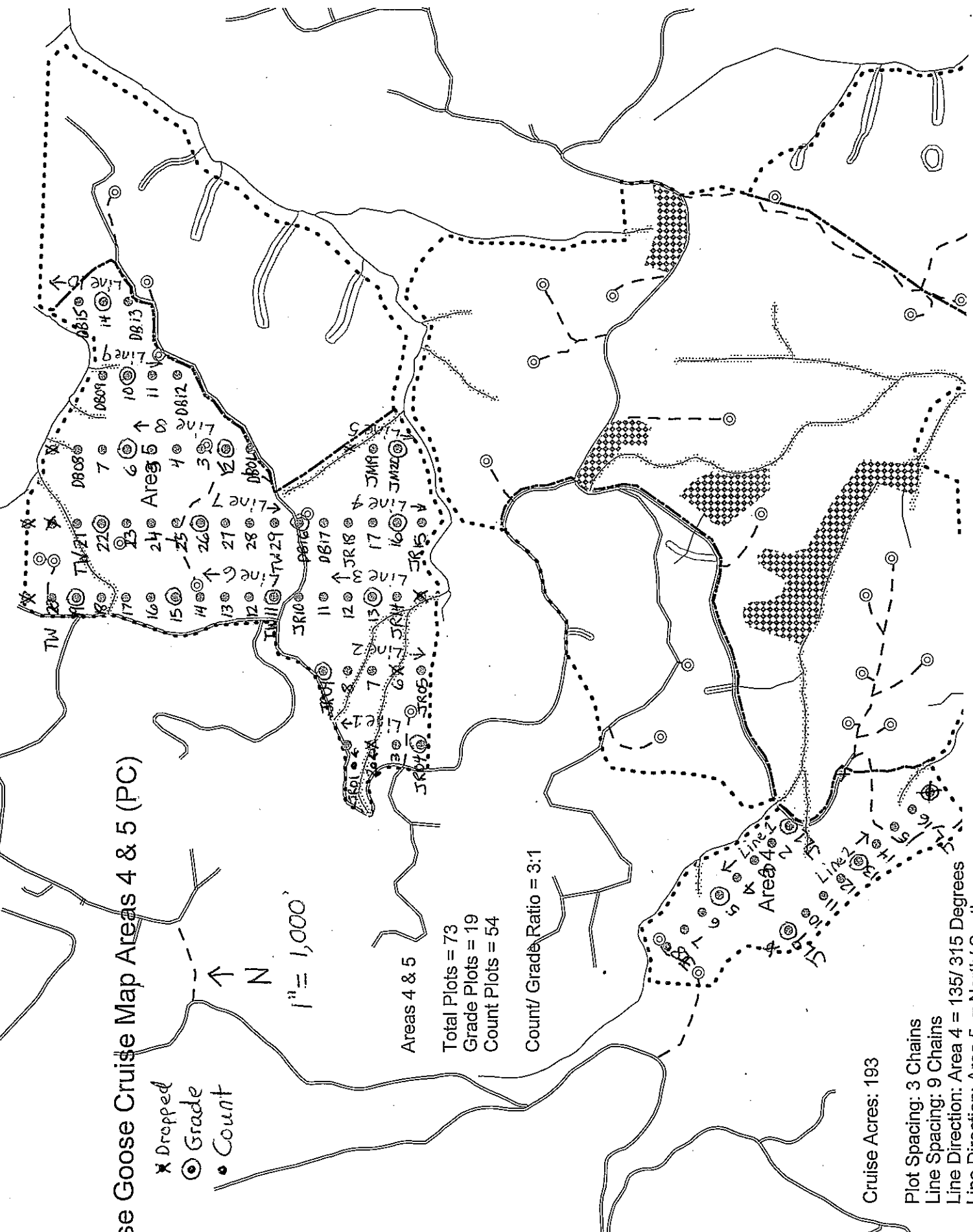
Areas 4 & 5

Total Plots = 73
 Grade Plots = 19
 Count Plots = 54

Count/ Grade Ratio = 3:1

Cruise Acres: 193

Plot Spacing: 3 Chains
 Line Spacing: 9 Chains
 Line Direction: Area 4 = 135/ 315 Degrees
 Line Direction: Area 5 = North/ South



Species, Sort Grade - Board Foot Volumes (Project)

T06N R07W S10 TyTAKE
 THRU
 T06N R07W S10 TyRWTK

Project: LOOSEGOS
Acres 723.00

Page 1
Date 2/14/2007
Time 8:10:44AM

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	
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99				
D		4																0.00	.0	
D		DO0																0.00	4.6	
D		DO2		35	1.1	9,599	9,489	6,861		3	44	53	2	2	28	68	36	364	2.15	26.1
D		DO3		10	.4	2,793	2,780	2,010	0	90	8	1	0	9	46	46	35	87	0.73	32.0
D		DO4		2	3.0	629	610	441	10	87	3		25	59	8	7	24	32	0.49	19.3
D	Totals			48	1.1	13,021	12,880	9,312	1	26	34	39	2	6	31	61	31	157	1.19	82.0
H		DO0																0.00	12.0	
H		DO2		26	2.1	7,253	7,103	5,136		4	65	30	1	1	39	59	36	269	1.78	26.4
H		DO3		18	2.2	4,940	4,830	3,492		94	5	1	1	5	56	39	34	82	0.70	59.0
H		DO4		4		1,053	1,053	762	7	93			40	37	15	7	22	30	0.46	35.2
H	Totals			48	2.0	13,246	12,987	9,390	1	45	38	17	4	5	43	47	29	98	0.89	132.6
A		DO0																0.00	.1	
A		DOCR		3	.8	941	934	676	1	87	12	0	21	23	37	18	25	61	0.75	15.3
A	Totals			3	.8	941	934	676	1	87	12	0	21	23	37	18	25	61	0.75	15.4
NF		DO2		1	.1	178	177	128			41	59			14	86	38	394	2.16	.4
NF		DO3		0		13	13	9		100			1	33	4	62	31	63	0.74	.2
NF		DO4		0		5	5	4		100			2	98			22	77	0.98	.1
NF	Totals			1	.1	196	196	141		9	37	53	0	5	13	82	34	270	1.72	.7
Totals					1.5	27,404	26,997	19,519	1	37	35	27	4	6	37	53	30	117	1.00	230.7

Species, Sort Grade - Board Foot Volumes (Type)

Project: LOOSEGOO

T06N R07W S10 TTAKE

T06N R07W S10 TTAKE

Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
06N 07W 10 AI TAKE 261.00 99 58 1 W

Spp	S	So	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					
H		DO	0														7		0.00	14.8	
H		DO	2		47	1.4	4,279	4,217	1,101	12	71	17			27	73	37	219	1.46	19.3	
H		DO	3		46	1.5	4,141	4,077	1,064	95	5		2	5	55	38	34	78	0.66	52.5	
H		DO	4		7		605	605	158	24	76		72	21	7		20	22	0.39	27.0	
H	Totals				62	1.4	9,025	8,900	2,323	2	54	36	8	6	4	38	52	28	78	0.78	113.6
D		DO	2		63	4.9	3,635	3,455	902	6	44	50			23	77	37	320	1.97	10.8	
D		DO	3		28		1,542	1,542	403	1	80	19			2	48	50	36	80	0.69	19.4
D		DO	4		8		447	447	117		100		23	77			23	30	0.42	15.1	
D	Totals				38	3.2	5,625	5,445	1,421	0	35	33	32	2	7	28	63	32	120	0.98	45.3
Type Totals						2.1	14,650	14,344	3,744	1	47	35	17	4	5	35	56	29	90	0.84	158.9

Species, Sort Grade - Board Foot Volumes (Type)

Project: LOOSEGOO

T06N R07W S10 TTAKE

T06N R07W S10 TTAKE

Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 06N 07W 10 A236 TAKE 254.00 70 169 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	0														11		0.00	10.6	
D		DO	2	79	.4	19,936	19,865	5,046		2	40	58		2	2	29	67	36	392	2.28	50.7
D		DO	3	17	.3	4,271	4,260	1,082		91	7	2			13	43	44	34	106	0.88	40.2
D		DO	4	4	3.5	1,076	1,038	264		3	92	5		27	61	9	3	24	32	0.51	32.0
D	Totals			56	.5	25,284	25,164	6,392		0	21	33	46	3	6	31	60	30	189	1.41	133.4
H		DO	0															11		0.00	14.3
H		DO	2	67	2.1	11,729	11,485	2,917		1	63	36		1	1	38	60	36	304	1.98	37.8
H		DO	3	25	3.0	4,387	4,256	1,081		93	4	3		1	9	62	28	33	85	0.79	50.0
H		DO	4	8		1,414	1,414	359		2	98			39	29	27	5	22	34	0.50	42.0
H	Totals			38	2.1	17,530	17,155	4,357		0	32	43	25	4	5	43	48	29	119	1.08	144.1
A		DO	CR	100	.6	2,296	2,283	580		86	14			21	26	39	14	25	60	0.74	37.8
A	Totals			5	.6	2,296	2,283	580		86	14			21	26	39	14	25	60	0.74	37.8
NF		DO	2	94		403	403	102			30	70				14	86	37	427	2.32	.9
NF		DO	3	3		12	12	3		100					100			24	40	0.71	.3
NF		DO	4	3		14	14	4		100					100			22	80	1.00	.2
NF	Totals			1		428	428	109		6	28	66			6	13	81	33	303	1.96	1.4
Type Totals					1.1	45,539	45,030	11,438		0	28	36	36	4	7	36	53	29	142	1.19	316.7

Species, Sort Grade - Board Foot Volumes (Type)

Project: LOOSEGOO

T06N R07W S10 TTAKE

T06N R07W S10 TTAKE

Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt
 06N 07W 10 A45 TAKE 184.00 72 78 1

BdFt 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				
H		DO	0														8		0.00	4.6
H		DO	2	37	2.7	4,646	4,520	832		3	70	26			62	38	34	239	1.68	18.9
H		DO	3	53	2.2	6,577	6,435	1,184		96	4			1	51	48	35	83	0.65	77.9
H		DO	4	9		1,145	1,145	211	4	96			19	65	16	24	31	0.45	36.5	
H	Totals			68	2.2	12,367	12,099	2,226	0	61	29	10	2	7	50	41	31	88	0.76	137.8
D		DO	0														17		0.00	2.4
D		DO	2	51	1.4	2,725	2,688	495		10	90				24	76	38	233	1.52	11.5
D		DO	3	45	1.2	2,406	2,377	437		100				2	51	47	35	64	0.52	37.4
D		DO	4	4	7.5	255	236	43	75	25			25		24	51	30	32	0.52	7.4
D	Totals			30	1.6	5,386	5,301	975	3	51	46		1	1	36	62	34	90	0.73	58.7
A		DO	CR	100	1.8	342	335	62	8	92			25		21	54	28	65	0.81	5.1
A	Totals			2	1.8	342	335	62	8	92			25		21	54	28	65	0.81	5.1
NF		DO	2	76		82	82	15			100				100		40	290	1.58	.3
NF		DO	3	24		25	25	5			100				100		40	90	0.77	.3
NF	Totals			1		107	107	20		24	76				100		40	190	1.18	.6
Type	Totals				2.0	18,203	17,843	3,283	1	59	33	7	2	5	45	48	32	88	0.75	202.3

T06N R07W S10 TRWTK	T06N R07W S10 TRWTK
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt	
06N 07W 10 A7 RW RWTK 24.00 241 477 1 W	

S Spp	So T	Gr rt	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					
H		DO	0														11		0.00	14.3	
H		DO	2	59	2.2	12,204	11,933	286		3	56	41		2	0	40	57	36	297	1.93	40.2
H		DO	3	34	1.8	6,919	6,795	163		87	11	1		1	7	51	40	34	86	0.74	79.4
H		DO	4	7		1,411	1,411	34	5	95				39	28	24	9	22	32	0.46	43.9
H	Totals			46	1.9	20,534	20,139	483	0	38	37	24		4	5	43	48	29	113	0.99	177.8
D			4																	0.00	.1
D		DO	0															13		0.00	7.1
D		DO	2	80	1.8	17,755	17,439	419		2	33	65		1	1	35	62	36	407	2.39	42.8
D		DO	3	17	.7	3,704	3,677	88	2	82	12	4		1	12	44	43	34	89	0.81	41.5
D		DO	4	3	1.7	732	720	17	6	88	6			26	59	9	6	22	31	0.50	23.1
D	Totals			50	1.6	22,191	21,836	524	1	19	28	53		2	5	36	57	31	191	1.42	114.6
A		DO	0															16		0.00	2.0
A		DO	CR	100	2.0	1,443	1,415	34		85	11	3		24	20	33	23	25	66	0.82	21.3
A	Totals			3	2.0	1,443	1,415	34		85	11	3		24	20	33	23	24	61	0.77	23.3
NF		DO	2	85	.7	461	458	11			66	34				31	69	36	325	1.94	1.4
NF		DO	3	13		71	71	2		100				3	6	23	67	34	75	0.75	1.0
NF		DO	4	2		9	9	0		100				41	59			18	47	0.75	.2
NF	Totals			1	.6	541	538	13		15	56	29		1	2	29	68	34	211	1.45	2.6
Type Totals					1.8	44,710	43,927	1,054	0	30	32	38		4	5	39	52	30	138	1.15	318.2

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT LOOSEGOO				DATE 2/6/2007		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	07W	10	A1	TAKE	261.00	99	274	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	99	274	2.8							
CRUISE	20	58	2.9	24,253		.2				
DBH COUNT										
REFOREST										
COUNT	62	216	3.5							
BLANKS	17									
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	39	63.6	14.4	53		72.3	9,025	8,900	2,428	2,428
DOUG FIR	19	29.3	15.5	51		38.4	5,625	5,445	1,409	1,409
TOTAL	58	92.9	14.8	52		110.7	14,650	14,344	3,838	3,838
	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	123.7	16.2	122	145	169					
DOUG FIR	244.7	32.1	86	127	168					
TOTAL	111.1	14.6	233	273	313	494	123	55		
	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	121.7	12.2	56	64	71					
DOUG FIR	145.0	14.6	25	29	34					
TOTAL	87.7	8.8	85	93	101	307	77	34		
	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	112.2	11.3	64	72	80					
DOUG FIR	145.8	14.7	33	38	44					
TOTAL	80.6	8.1	102	111	120	260	65	29		
	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	111.9	11.2	7,899	8,900	9,900					
DOUG FIR	156.8	15.8	4,587	5,445	6,302					
TOTAL	81.9	8.2	13,164	14,344	15,525	268	67	30		

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	07W	10	A236	TAKE	254.00	70	496	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	70	496	7.1		
CRUISE	26	169	6.5	38,936	.4
DBH COUNT					
REFOREST					
COUNT	44	327	7.4		
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	71	53.8	21.4	79		134.3	25,284	25,164	5,723	5,717
WHEMLOCK	78	69.9	17.6	61		118.3	17,541	17,166	4,437	4,437
R ALDER	18	29.1	13.4	35		28.6	2,296	2,283	705	705
NOB FIR	2	.5	25.8	102	0	1.7	428	428	91	91
TOTAL	169	153.3	18.4	63		282.9	45,550	45,041	10,955	10,950

SD:	1	COEFF VAR.%	S.E.%	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.
				LOW	AVG	HIGH	5	10	15
DOUG FIR		170.6	13.1	274	315	357			
WHEMLOCK		162.8	12.5	160	183	206			
R ALDER		359.6	27.7	7	10	13			
NOB FIR		957.2	73.6	3	12	20			
TOTAL		96.8	7.4	482	521	559	375	94	42

SD:	1	COEFF VAR.%	S.E.%	TREES/ACRE			# OF PLOTS REQ.		INF. POP.
				LOW	AVG	HIGH	5	10	15
DOUG FIR		83.4	10.0	48	54	59			
WHEMLOCK		95.7	11.4	62	70	78			
R ALDER		210.2	25.1	22	29	36			
NOB FIR		487.0	58.2	0	0	1			
TOTAL		49.8	5.9	144	153	162	99	25	11

SD:	1	COEFF VAR.%	S.E.%	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
				LOW	AVG	HIGH	5	10	15
DOUG FIR		75.2	9.0	122	134	146			
WHEMLOCK		89.3	10.7	106	118	131			
R ALDER		203.8	24.4	22	29	36			
NOB FIR		476.0	56.9	1	2	3			
TOTAL		39.5	4.7	269	283	296	62	16	7

SD:	1	COEFF VAR.%	S.E.%	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
				LOW	AVG	HIGH	5	10	15
DOUG FIR		79.6	9.5	22,770	25,164	27,558			
WHEMLOCK		89.6	10.7	15,327	17,166	19,005			
R ALDER		200.8	24.0	1,735	2,283	2,831			
NOB FIR		476.3	56.9	185	428	672			
TOTAL		48.0	5.7	42,457	45,041	47,625	92	23	10

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT LOOSEGOO				DATE 2/6/2007		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	07W	10	A45	TAKE	184.00	72	255	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	72	255	3.5							
CRUISE	19	78	4.1		22,362		.3			
DBH COUNT										
REFOREST										
COUNT	50	177	3.5							
BLANKS	3									
100%										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	52	74.6	14.7	60		88.3	12,367	12,099	3,258	3,258
DOUG FIR	20	41.6	14.4	50		47.2	5,386	5,301	1,459	1,459
R ALDER	5	5.1	14.1	29		5.6	342	335	116	116
NOB FIR	1	.3	19.0	90	0	.6	107	107	27	27
TOTAL	78	121.5	14.6	55		141.7	18,203	17,843	4,860	4,860
	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	118.4	13.4	131	151	171					
DOUG FIR	223.6	25.3	39	53	66					
R ALDER	436.0	49.4	2	5	7					
NOB FIR	883.2	100.0		5	10					
TOTAL	78.3	8.9	194	213	232	245	61	27		
	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	100.2	11.8	66	75	83					
DOUG FIR	127.5	15.0	35	42	48					
R ALDER	339.2	40.0	3	5	7					
NOB FIR	848.5	100.0		0	1					
TOTAL	65.3	7.7	112	122	131	171	43	19		
	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	90.5	10.7	79	88	98					
DOUG FIR	119.2	14.1	41	47	54					
R ALDER	326.6	38.5	3	6	8					
NOB FIR	848.5	100.0		1	1					
TOTAL	60.1	7.1	132	142	152	145	36	16		
	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	94.9	11.2	10,746	12,099	13,453					
DOUG FIR	118.1	13.9	4,564	5,301	6,039					
R ALDER	321.8	37.9	208	335	463					
NOB FIR	848.5	100.0	0	107	214					
TOTAL	65.9	7.8	16,457	17,843	19,229	174	43	19		

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT LOOSEGOO				DATE 2/6/2007		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	07W	10	A1	LEAV	261.00	99	420	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	99	420	4.2							
CRUISE	30	106	3.5		16,304		.7			
DBH COUNT										
REFOREST										
COUNT	69	297	4.3							
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUGLEAV	45	22.3	25.1	83		76.8	16,715	16,328	3,535	3,535
HEMLEAV	41	24.5	22.0	76		64.6	11,040	10,870	2,647	2,647
ALDRLEAV	12	12.7	16.6	41		19.0	1,260	1,226	406	406
SNAG	5	2.6	22.9	43		7.3				
SNAG	2	.2	36.4	23		1.2	48	48	9	9
NFIRLEAV	1	.2	25.0	90	0	.8	152	145	36	36
TOTAL	106	62.5	22.3	70		169.7	29,215	28,616	6,634	6,634
	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	142.3	13.8	385	447	508					
HEMLEAV	162.5	15.8	195	231	268					
ALDRLEAV	428.7	41.6	9	15	21					
SNAG										
SNAG	1029.6	100.0		5	10					
NFIRLEAV	1029.6	100.0	0	6	12					
TOTAL	79.3	7.7	649	703	758	252	63	28		
	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	75.6	7.6	21	22	24					
HEMLEAV	89.3	9.0	22	25	27					
ALDRLEAV	250.1	25.1	10	13	16					
SNAG	266.1	26.7	2	3	3					
SNAG	569.9	57.3	0	0	0					
NFIRLEAV	700.0	70.3	0	0	0					
TOTAL	61.6	6.2	59	62	66	152	38	17		
	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	64.3	6.5	72	77	82					
HEMLEAV	76.9	7.7	60	65	70					
ALDRLEAV	227.9	22.9	15	19	23					
SNAG	252.9	25.4	5	7	9					
SNAG	568.6	57.1	1	1	2					
NFIRLEAV	700.0	70.3	0	1	1					
TOTAL	23.8	2.4	166	170	174	23	6	3		
	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	69.7	7.0	15,184	16,328	17,471					
HEMLEAV	79.1	8.0	10,005	10,870	11,735					
ALDRLEAV	230.2	23.1	942	1,226	1,509					
SNAG										
SNAG	738.6	74.2	12	48	84					
NFIRLEAV	700.0	70.3	43	145	246					
TOTAL	23.0	2.3	27,953	28,616	29,279	21	5	2		

TC TSTATS				STATISTICS PROJECT LOOSEGOO				PAGE 1 DATE 2/6/2007		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	07W	10	A45	LEAV	184.00	72	275	1	W	
				TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
		PLOTS	TREES							
TOTAL		72	275	3.8						
CRUISE		23	81	3.5	12,810	.6				
DBH COUNT										
REFOREST										
COUNT		49	185	3.8						
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	41	21.4	25.0	80		72.8	12,832	12,552	2,929	2,929
HEMLEAV	24	28.8	19.7	85		61.1	11,504	11,377	2,728	2,728
SNAG	7	15.0	11.1	41		10.0	195	195	54	54
NFIRLEAV	5	2.2	21.3	85	1	5.6	1,018	1,007	246	246
CEDLEAV	1	.9	15.0	54		1.1	100	100	34	34
ALDRLEAV	1	1.0	14.0	65		1.1	197	177	49	49
SPRUCELV	1	.1	28.0	99		.6	126	126	28	28
SNAG	1	.1	30.0	70		.6	78	78	19	19
TOTAL	81	69.6	20.1	73		152.8	26,050	25,610	6,086	6,086
		COEFF VAR.%	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.		
SD:	1	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	122.9	13.7	345	400	454					
HEMLEAV	179.5	19.9	123	154	185					
SNAG	900.0	100.0		1	2					
NFIRLEAV	435.6	48.4	16	32	47					
CEDLEAV	900.0	100.0		1	3					
ALDRLEAV	900.0	100.0		2	4					
SPRUCELV	900.0	100.0		12	24					
SNAG	900.0	100.0		9	17					
TOTAL	66.5	7.4	565	610	655	177	44	20		
		COEFF VAR.%	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	78.5	9.3	19	21	23					
HEMLEAV	94.9	11.2	26	29	32					
SNAG	285.4	33.6	10	15	20					
NFIRLEAV	256.3	30.2	2	2	3					
CEDLEAV	595.8	70.2	0	1	2					
ALDRLEAV	595.8	70.2	0	1	2					
SPRUCELV	848.5	100.0	0	0	0					
SNAG	848.5	100.0		0	0					
TOTAL	68.0	8.0	64	70	75	185	46	21		
		COEFF VAR.%	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	66.7	7.9	67	73	79					
HEMLEAV	78.4	9.2	55	61	67					
SNAG	282.8	33.3	7	10	13					
NFIRLEAV	250.7	29.6	4	6	7					
CEDLEAV	595.8	70.2	0	1	2					
ALDRLEAV	595.8	70.2	0	1	2					
SPRUCELV	848.5	100.0		1	1					
SNAG	848.5	100.0		1	1					
TOTAL	14.8	1.7	150	153	155	9	2	1		

TC TSTATS				STATISTICS			PAGE 2		
				PROJECT LOOSEGOO			DATE 2/6/2007		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	07W	10	A45	LEAV	184.00	72	275	1	W
SD: 1		COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
SD: 1		COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
		VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV		67.6	8.0	11,551	12,552	13,552			
HEMLEAV		81.2	9.6	10,288	11,377	12,465			
SNAG		395.8	46.6	104	195	286			
NFIRLEAV		254.2	30.0	705	1,007	1,308			
CEDLEAV		595.8	70.2	30	100	170			
ALDRLEAV		595.8	70.2	53	177	301			
SPRUCELV		848.5	100.0		126	252			
SNAG		848.5	100.0	0	78	156			
TOTAL		12.3	1.5	25,238	25,610	25,983	6	2	1

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT LOOSEGOO				DATE 2/16/2007		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	07W	10	A236	00CC	254.00	70	524	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	70	524	7.5							
CRUISE	27	179	6.6	40,426		4				
DBH COUNT										
REFOREST										
COUNT	43	341	7.9							
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	71	53.8	21.4	79		134.3	25,284	25,164	5,723	5,717
WHEMLOCK	78	69.9	17.6	61		118.3	17,541	17,166	4,437	4,437
R ALDER	18	29.1	13.4	35		28.6	2,296	2,283	705	705
DOUGLEAV	4	1.1	34.0	86		6.9	1,129	1,120	225	225
SNAG	5	3.5	18.2	38		6.3				
HEMLEAV	1	1.3	20.0	82		2.9	458	327	128	128
NOB FIR	2	.5	25.8	102	0	1.7	428	428	91	91
TOTAL	179	159.2	18.6	62		298.9	47,137	46,488	11,308	11,303
COEFF										
SAMPLE TREES - BF										
SD:	1	VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ.		INF. POP.	
							5	10	15	
DOUG FIR	177.2	13.2		258	298	337				
WHEMLOCK	169.2	12.6		151	173	195				
R ALDER	370.8	27.7		7	10	12				
DOUGLEAV	790.3	59.1		10	24	38				
SNAG										
HEMLEAV	1337.9	100.0			1	3				
NOB FIR	985.2	73.6		3	11	19				
TOTAL	99.6	7.4		478	517	555	397	99	44	
COEFF										
TREES/ACRE										
SD:	1	VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ.		INF. POP.	
							5	10	15	
DOUG FIR	83.4	10.0		48	54	59				
WHEMLOCK	95.7	11.4		62	70	78				
R ALDER	210.2	25.1		22	29	36				
DOUGLEAV	244.6	29.2		1	1	1				
SNAG	240.2	28.7		2	3	4				
HEMLEAV	363.2	43.4		1	1	2				
NOB FIR	487.0	58.2		0	0	1				
TOTAL	46.3	5.5		150	159	168	86	21	10	
COEFF										
BASAL AREA/ACRE										
SD:	1	VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ.		INF. POP.	
							5	10	15	
DOUG FIR	75.2	9.0		122	134	146				
WHEMLOCK	89.3	10.7		106	118	131				
R ALDER	203.8	24.4		22	29	36				
DOUGLEAV	242.7	29.0		5	7	9				
SNAG	233.3	27.9		5	6	8				
HEMLEAV	363.2	43.4		2	3	4				
NOB FIR	476.0	56.9		1	2	3				
TOTAL	35.4	4.2		286	299	311	50	12	6	
COEFF										
NET BF/ACRE										
SD:	1	VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ.		INF. POP.	
							5	10	15	
DOUG FIR	79.6	9.5		22,770	25,164	27,558				
WHEMLOCK	89.6	10.7		15,327	17,166	19,005				
R ALDER	200.8	24.0		1,735	2,283	2,831				

TC TSTATS				STATISTICS			PAGE 2		
				PROJECT LOOSEGOO			DATE 2/16/2007		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	07W	10	A236	00CC	254.00	70	524	1	W
SD: 1		COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV		256.0	30.6	777	1,120	1,462			
SNAG									
HEMLEAV		363.2	43.4	185	327	470			
NOB FIR		476.3	56.9	185	428	672			
TOTAL		<i>45.1</i>	<i>5.4</i>	<i>43,983</i>	<i>46,488</i>	<i>48,992</i>	<i>81</i>	<i>20</i>	<i>9</i>

Stand Table Summary

Project **LOOSEGOO**

T06N R07W S10 TLEAV

T06N R07W S10

Twp Rge Sec Tract
06N 07W 10 A1

Type
LEAV

Acres
261.00

Plots
99

Sample Trees
106

Page: 1
Date: 02/06/201
Time: 12:55:04PM

S Spec	T	Av			Trees/ Acres	BA/ Acres	Logs Acres	Average Log		Net Acres	Net Cu.Ft.	Net Bd.Ft.	Totals		
		DBH	Trees	16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits
DL	9	1	86	44	3.861	1.71	3.86	7.0	30.0		27	116		71	30
DL	17	1	90	78	1.082	1.71	2.16	27.0	95.0		58	206		153	54
DL	18	1	89	110	.965	1.71	2.90	25.7	100.0		74	290		194	76
DL	19	1	83	90	.866	1.71	1.73	34.0	100.0		59	173		154	45
DL	23	8	86	116	4.730	13.65	11.23	47.5	202.1		534	2,270		1,394	593
DL	24	1	89	100	.543	1.71	1.09	63.5	235.0		69	255		180	67
DL	25	1	89	111	.500	1.71	1.50	49.3	206.7		74	310		193	81
DL	27	1	88	112	.429	1.71	1.29	52.7	236.7		68	305		177	80
DL	28	3	84	127	1.197	5.12	3.19	76.0	310.0		243	989		633	258
DL	29	3	89	133	1.116	5.12	3.35	79.2	361.1		265	1,209		692	315
DL	30	5	90	141	1.738	8.53	5.56	82.7	408.8		460	2,273		1,200	593
DL	31	3	91	155	.976	5.12	3.58	83.9	440.0		300	1,575		784	411
DL	32	5	88	118	1.527	8.53	4.28	90.3	423.6		386	1,811		1,008	473
DL	33	4	89	152	1.149	6.82	3.73	100.4	520.8		375	1,944		978	508
DL	34	3	88	145	.812	5.12	2.71	102.0	523.0		276	1,415		720	369
DL	36	1	86	126	.241	1.71	.97	81.5	385.0		79	372		205	97
DL	38	1	79	133	.217	1.71	.65	121.3	493.3		79	321		206	84
DL	40	1	88	115	.195	1.71	.39	179.0	810.0		70	317		183	83
DL	48	1	82	88	.136	1.71	.41	96.7	433.3		39	176		103	46
DL	Totals	45	87	108	22.282	76.77	54.57	64.8	299.2		3,535	16,328		9,227	4,261
HL	9	1	85	48	3.569	1.58	3.57	8.0	20.0		29	71		75	19
HL	18	4	85	97	3.569	6.31	8.92	29.9	112.0		267	999		696	261
HL	19	3	88	100	2.402	4.73	5.61	37.7	127.1		211	713		552	186
HL	20	3	88	99	2.168	4.73	5.06	41.0	154.3		207	781		541	204
HL	22	4	87	111	2.389	6.31	7.17	40.5	165.8		290	1,189		758	310
HL	23	3	85	98	1.639	4.73	3.83	53.3	195.7		204	749		532	195
HL	24	2	83	95	1.004	3.15	2.01	45.2	187.5		91	376		237	98
HL	25	5	86	110	2.313	7.88	5.55	52.0	221.7		289	1,230		753	321
HL	26	4	85	109	1.711	6.31	4.28	63.9	274.0		273	1,172		713	306
HL	27	1	86	120	.397	1.58	1.19	67.3	290.0		80	345		209	90
HL	28	2	86	102	.737	3.15	1.84	74.2	322.0		137	594		357	155
HL	30	4	86	104	1.285	6.31	3.21	71.6	345.0		230	1,108		600	289
HL	31	1	88	106	.301	1.58	.60	119.5	520.0		72	313		188	82
HL	32	2	86	102	.565	3.15	1.13	101.2	437.5		114	494		298	129
HL	34	1	82	101	.250	1.58	.75	89.3	416.7		67	313		175	82
HL	36	1	85	129	.223	1.58	.67	128.0	633.3		86	424		224	111
HL	Totals	41	86	95	24.522	64.65	55.38	47.8	196.3		2,647	10,870		6,908	2,837
AL	13	2	86	47	3.434	3.16	1.72	12.0	60.0		21	103		54	27
AL	14	1	86	65	1.480	1.58	1.48	31.0	90.0		46	133		120	35
AL	15	1	87	58	1.290	1.58	2.58	11.0	45.0		28	116		74	30
AL	16	3	87	66	3.400	4.75	4.53	28.5	90.0		129	408		337	106
AL	18	1	86	48	.896	1.58	.90	38.0	60.0		34	54		89	14
AL	20	1	89	68	.725	1.58	1.45	35.0	135.0		51	196		133	51
AL	22	2	86	34	1.199	3.16	1.20	38.5	50.0		46	60		120	16
AL	32	1	87	69	.283	1.58	.57	90.0	275.0		51	156		133	41
AL	Totals	12	87	56	12.707	18.99	14.42	28.2	85.0		406	1,226		1,060	320
NFL	25	1	87	110	.237	.81	.71	51.0	203.3		36	145		95	38
NFL	Totals	1	87	110	.237	.81	.71	51.0	203.3		36	145		95	38
SNL	35	1	85	40	.091	.61	.09	103.0	530.0		9	48		24	13

TC TSTNDSUM

Stand Table Summary

Project **LOOSEGOO**

T06N R07W S10 TLEAV

T06N R07W S10

Twp Rge Sec Tract
06N 07W 10 A1

Type
LEAV

Acres
 261.00

Plots
 99

Sample Trees
 106

Page: **2**
 Date: **02/06/201**
 Time: **12:55:04PM**

S Spc	T	Sample			Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	16'					Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
SNL		38	1	88	27	.077	.61										
SNL		Totals	2	86	34	.168	1.21	.09	103.0	530.0		9	48		24	13	
SN		16	1	89	54	1.042	1.45										
SN		20	1	88	31	.667	1.45										
SN		22	1	89	70	.551	1.45										
SN		40	1	88	17	.167	1.45										
SN		46	1	89	66	.126	1.45										
SN		Totals	5	89	50	2.552	7.27										
Totals			106	87	90	62.467	169.70	125.18	53.0	228.6		6634	28,616		17,314	7,469	

Stand Table Summary

Project **LOOSEGOO**

T06N R07W S10 TLEAV

T06N R07W S10

Twp Rge Sec Tract
06N 07W 10 A45

Type
LEAV

Acres
184.00

Plots
72

Sample Trees
81

Page: 1
Date: 02/06/201
Time: 1:06:16PM

S Spc	T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Cu.Ft.	Net Bd.Ft.	Totals			
									Net Cu.Ft.	Net Bd.Ft.			Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Tons
DL		10	1	89	63	3.255	1.78	3.25	12.0	50.0			39	163	72	30
DL		17	1	86	67	1.126	1.78	2.25	23.0	80.0			52	180	95	33
DL		19	1	89	89	.902	1.78	1.80	36.0	110.0			65	198	119	36
DL		21	3	89	107	2.214	5.33	5.17	43.9	168.6			227	871	417	160
DL		22	2	84	96	1.345	3.55	3.36	39.2	142.0			132	477	243	88
DL		23	1	91	103	.615	1.78	1.23	61.0	235.0			75	289	138	53
DL		25	1	89	126	.521	1.78	1.56	53.7	243.3			84	380	154	70
DL		26	4	86	113	1.926	7.10	4.81	61.9	249.0			298	1,199	548	221
DL		27	3	86	106	1.339	5.33	3.13	62.1	255.7			194	799	357	147
DL		28	6	84	118	2.491	10.65	6.64	65.9	276.9			438	1,839	805	338
DL		29	1	83	112	.387	1.78	.77	97.0	360.0			75	279	138	51
DL		30	3	86	121	1.085	5.33	3.25	75.3	338.9			245	1,103	451	203
DL		31	2	85	110	.677	3.55	1.69	83.6	368.0			142	623	260	115
DL		32	5	85	125	1.589	8.88	4.13	80.9	380.0			334	1,570	615	289
DL		33	2	84	121	.598	3.55	1.49	94.4	444.0			141	663	260	122
DL		34	2	86	132	.563	3.55	1.41	95.0	442.0			134	622	246	114
DL		36	3	87	136	.753	5.33	2.26	112.9	573.3			255	1,296	469	238
DL	Totals		41	87	103	21.385	72.78	48.23	60.7	260.3			2,929	12,552	5,389	2,310
HL		12	2	89	131	6.484	5.09	12.97	21.5	90.0			279	1,167	513	215
HL		14	1	89	127	2.382	2.55	7.15	20.3	86.7			145	619	267	114
HL		15	1	91	94	2.075	2.55	4.15	24.5	100.0			102	415	187	76
HL		16	1	90	118	1.824	2.55	5.47	22.3	90.0			122	492	225	91
HL		18	1	90	112	1.441	2.55	4.32	28.7	126.7			124	548	228	101
HL		19	2	89	104	2.586	5.09	5.17	45.2	170.0			234	879	431	162
HL		20	1	91	110	1.167	2.55	3.50	34.3	143.3			120	502	221	92
HL		22	2	89	106	1.929	5.09	4.82	48.4	194.0			233	936	430	172
HL		23	2	87	85	1.765	5.09	3.53	47.5	177.5			168	627	309	115
HL		24	1	82	91	.811	2.55	2.43	35.0	136.7			85	332	157	61
HL		25	2	85	112	1.494	5.09	4.48	53.0	216.7			238	971	437	179
HL		26	4	88	111	2.762	10.19	7.60	59.1	266.4			449	2,023	826	372
HL		28	2	82	112	1.191	5.09	3.57	66.7	296.7			238	1,060	438	195
HL		30	1	88	102	.519	2.55	1.04	109.5	460.0			114	477	209	88
HL		35	1	74	99	.381	2.55	1.14	67.3	286.7			77	328	142	60
HL	Totals		24	88	113	28.811	61.11	71.35	38.2	159.5			2,728	11,377	5,019	2,093
NFL		19	2	88	90	1.129	2.22	2.26	37.5	135.0			85	305	156	56
NFL		21	1	91	121	.462	1.11	1.39	40.3	180.0			56	249	103	46
NFL		22	1	89	121	.421	1.11	1.26	44.7	193.3			56	244	104	45
NFL		30	1	85	111	.226	1.11	.68	71.7	306.7			49	208	90	38
NFL	Totals		5	89	104	2.238	5.56	5.58	44.0	180.2			246	1,007	452	185
SN		8	1	89	17	4.093	1.43									
SN		9	1	88	152	3.234	1.43									
SN		10	1	89	40	2.619	1.43									
SN		11	1	89	110	2.165	1.43	4.33	12.5	45.0			54	195	100	36
SN		14	1	89	51	1.336	1.43									
SN		15	1	88	46	1.164	1.43									
SN		26	1	89	76	.387	1.43									
SN	Totals		7	89	70	14.998	10.00	4.33	12.5	45.0			54	195	100	36
AL		14	1	86	103	1.039	1.11	2.08	23.5	85.0			49	177	90	33

Stand Table Summary

Project **LOOSEGOO**

T06N R07W S10 TLEAV

T06N R07W S10

Twp Rge Sec Tract
06N 07W 10 A45

Type
LEAV

Acres
 184.00

Plots
 72

Sample Trees
 81

Page: 2
Date: 02/06/201
Time: 1:06:16PM

S Spec	T	Av			Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
		DBH	Sample Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits
AL	Totals	1	86	103	1.039	1.11	2.08	23.5	85.0	49	177	90	33		
SL	28	1	82	121	.130	.56	.39	71.7	323.3	28	126	51	23		
SL	Totals	1	82	121	.130	.56	.39	71.7	323.3	28	126	51	23		
CL	15	1	82	87	.905	1.11	1.81	19.0	55.0	34	100	63	18		
CL	Totals	1	82	87	.905	1.11	1.81	19.0	55.0	34	100	63	18		
SNL	30	1	85	87	.113	.56	.23	84.5	345.0	19	78	35	14		
SNL	Totals	1	85	87	.113	.56	.23	84.5	345.0	19	78	35	14		
Totals		81	88	100	69.620	152.78	134.00	45.4	191.1	6086	25,610	11,199	4,712		

Log Stock Table - MBF

T06N R07W S10 TyTAKE
THRU
T06N R07W S10 TyRWTk

Project: LOOSEGOS
Acres 723.00

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 4	14	10		10	.1			4	6	0							
D	DO 4	15	6		6	.1			3	3								
D	DO 4	16	21		21	.2			16	5	0							
D	DO 4	17	0		0	.0					0							
D	DO 4	18	26		26	.3			18	8								
D	DO 4	19	0		0	.0					0							
D	DO 4	20	30		30	.3			17		13							
D	DO 4	21	7		7	.1		0	7									
D	DO 4	22	8		8	.1			8									
D	DO 4	23	14		14	.1			6		8							
D	DO 4	24	71		71	.8			70		0							
D	DO 4	25	30		30	.3			30									
D	DO 4	26	73		73	.8			73									
D	DO 4	27	9		9	.1		0		8	0							
D	DO 4	28	39		39	.4			39									
D	DO 4	30	18	41.4	11	.1			10	0								
D	DO 4	32	29	8.7	26	.3		0	26		0							
D	DO 4	34	14	25.0	11	.1			11									
D	DO 4	36	10		10	.1			9	1								
D	DO 4	40	22		22	.2			22									
D	Totals		9,414	1.1	9,312	47.7		0	49	1004	423	989	1121	1342	2145	1617	580	43
H	DO 2	12	2	6.7	1	.0									1	1		
H	DO 2	16	31		31	.3								31				
H	DO 2	20	3		3	.0								1	1			
H	DO 2	24	34		34	.4								34				
H	DO 2	32	2,033	3.3	1,966	20.9				22	77	778	312	529	247	2		
H	DO 2	34	59		59	.6					59							
H	DO 2	40	3,082	1.4	3,040	32.4					55	954	743	1000	217	71		
H	DO 3	14	0		0	.0			0	0								
H	DO 3	15	0		0	.0				0	0							
H	DO 3	16	8		8	.1			7	0								
H	DO 3	17	0		0	.0				0								
H	DO 3	18	0		0	.0			0	0								
H	DO 3	19	9		9	.1				9								
H	DO 3	20	16		16	.2			16									
H	DO 3	21	0		0	.0			0									
H	DO 3	22	16		16	.2			6	5	5							

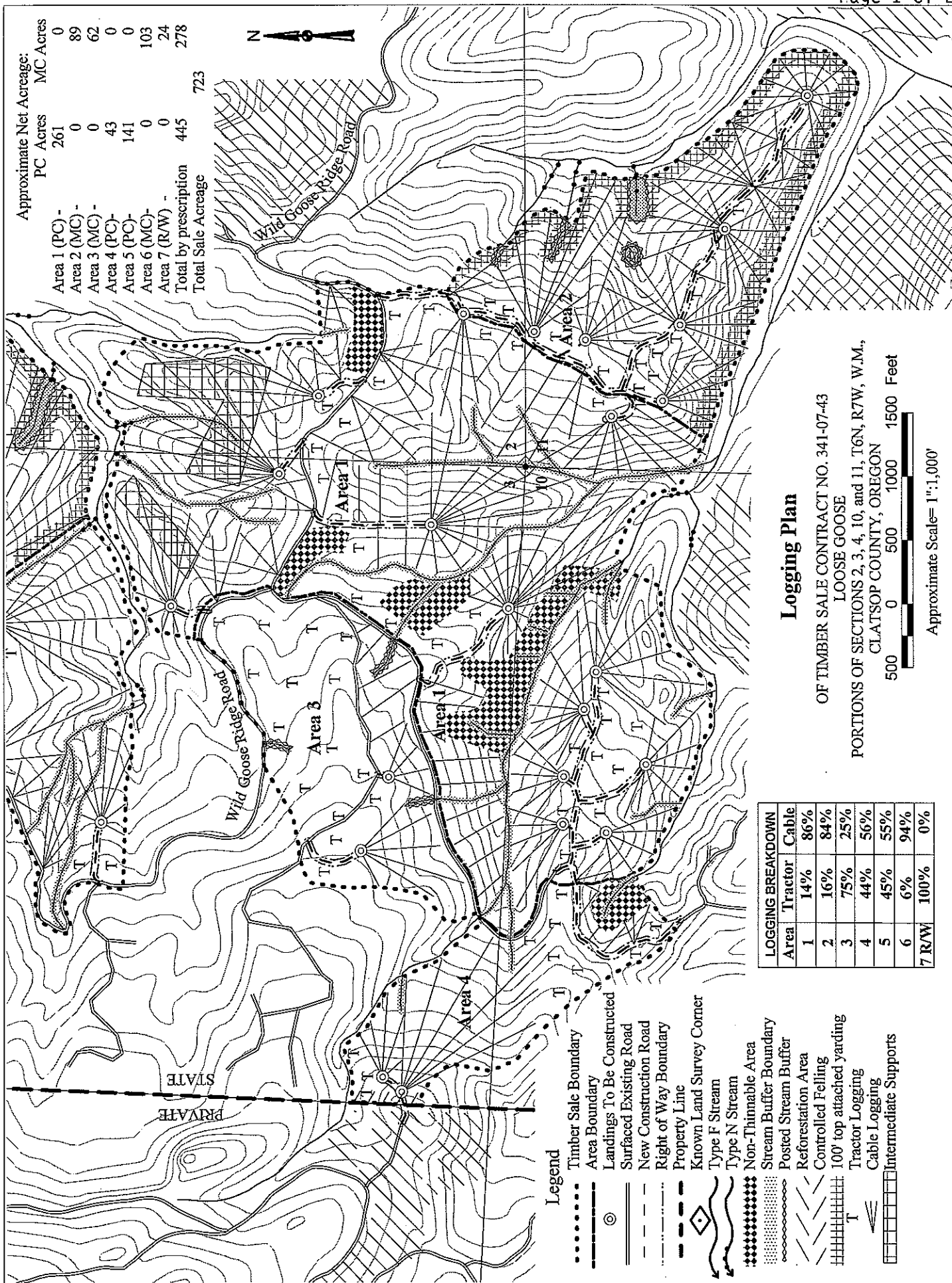
Log Stock Table - MBF

T06N R07W S10 TyTAKE
THRU
T06N R07W S10 TyRWTK

Project: LOOSEGOS
Acres 723.00

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Date 2/14/2007
Time 8:08:57AM

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 4	41	1		1	.0			1									
H	Totals		9,577	2.0	9,390	48.1		55	1747	1083	1374	1822	1169	1600	466	74		
A	DO CR 10		1		1	.1				1								
A	DO CR 14		5		5	.8			5									
A	DO CR 16		89		89	13.2			61	27	1							
A	DO CR 18		33		33	4.8			32	1								
A	DO CR 19		0		0	.0				0								
A	DO CR 20		17		17	2.6		5		12	1							
A	DO CR 24		24		24	3.5				24								
A	DO CR 27		18		18	2.7			18									
A	DO CR 30		116		116	17.1				76	1	38						
A	DO CR 32		250		249	36.8			23	58	122	45	1					
A	DO CR 36		0		0	.0			0									
A	DO CR 37		32		32	4.7			32									
A	DO CR 40		96	4.1	92	13.6				89	2			1				
A	Totals		681		676	3.5		5	171	288	126	83	1	1				
NF	DO 2	32	18		18	12.5					16	0	1					
NF	DO 2	40	111		111	78.2					1	33	37	40				
NF	DO 3	15	0		0	.0				0								
NF	DO 3	24	3		3	2.2				3								
NF	DO 3	32	0		0	.3			0									
NF	DO 3	40	6		6	4.1			0	5	1							
NF	DO 4	16	0		0	.1			0									
NF	DO 4	22	4		4	2.6					4							
NF	Totals		142		141	.7			1	8	4	17	33	38	40			
Total	All Species		19,813	1.5	19,519	100.0		0	109	2923	1803	2493	3043	2545	3785	2123	653	43

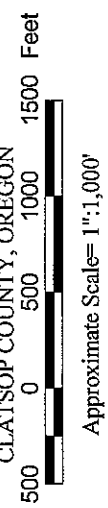


Approximate Net Acreage:

Area	PC Acres	MC Acres
Area 1 (PC) -	261	0
Area 2 (MC) -	0	89
Area 3 (MC) -	0	62
Area 4 (PC) -	43	0
Area 5 (PC) -	141	0
Area 6 (MC) -	0	103
Area 7 (R/W) -	0	24
Total by prescription	445	278
Total Sale Acreage		723

Logging Plan

OF TIMBER SALE CONTRACT NO. 341-07-43
 LOOSE GOOSE
 PORTIONS OF SECTIONS 2, 3, 4, 10, and 11, T6N, R7W, W.M.,
 CLATSOP COUNTY, OREGON



LOGGING BREAKDOWN		
Area	Tractor	Cable
1	14%	86%
2	16%	84%
3	75%	25%
4	44%	56%
5	45%	55%
6	6%	94%
7 R/W	100%	0%

- Legend**
- Timber Sale Boundary
 - Area Boundary
 - ⊙ Landings To Be Constructed
 - ==== Surfaced Existing Road
 - New Construction Road
 - - - Right of Way Boundary
 - - - Property Line
 - ◆ Known Land Survey Corner
 - ~ Type F Stream
 - ~ Type N Stream
 - Non-Thinnable Area
 - Stream Buffer Boundary
 - Posted Stream Buffer
 - Reforestation Area
 - ||||| Controlled Felling
 - ||||| 100' top attached yarding
 - T Tractor Logging
 - ≡ Cable Logging
 - ≡ Intermediate Supports



Approximate Net Acreage:

Area 1 (PC) -	PC Acres	MC Acres
Area 2 (MC) -	261	0
Area 3 (MC) -	0	89
Area 4 (PC) -	0	62
Area 5 (PC) -	43	0
Area 6 (MC) -	141	0
Area 7 (R/W) -	0	103
Total by prescription	445	278
Total Sale Acreage	723	

Logging Plan

OF TIMBER SALE CONTRACT NO. 341-07-43
 LOOSE GOOSE
 PORTIONS OF SECTIONS 2, 3, 4, 10, and 11, T6N, R7W, W.M.,
 CLATSOP COUNTY, OREGON



Approximate Scale= 1":1,000'

LOGGING BREAKDOWN	
Area	Cable
1	86%
2	84%
3	25%
4	56%
5	55%
6	94%
7 R/W	0%

- Legend**
- Timber Sale Boundary
 - Area Boundary
 - ⊙ Landings To Be Constructed
 - Existing Landing
 - Surfaced Existing Road
 - - - New Construction Road
 - · - · - Right of Way Boundary
 - - - Property Line
 - ◇ Known Land Survey Corner
 - ~ Type F Stream
 - ~ Type N Stream
 - ▨ Non-Thinnable Area
 - ▤ Stream Buffer Boundary
 - ▥ Posted Stream Buffer
 - ▧ Reforestation Area
 - ▩ Controlled Felling
 - 100' top attached yarding
 - T Tractor Logging
 - ▧ Cable Logging
 - ▨ Intermediate Supports

