



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Sheep Shack Sale 341-05-27

District: Astoria

Date: 3/11/05

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,609,189.23	\$1,128.16	\$1,610,317.39
		Project Work	(\$229,389.00)
		Advertised Value	\$1,380,928.39



Timber Sale Appraisal

Timber Description

Sheep Shack

Sale 341-05-27

"STEWARDSHIP IN FORESTRY"

District: Astoria

Location: Portions of Section 25, T4N, R7W, and portions of Section 30, T4N, R6W, W.M., Clatsop County, Oregon.

Date: 3/11/05

Stand Stocking: 80%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	16	0	97
Western Hemlock / Fir	15	0	97
Alder (Red)	15	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Alder (Red)	Total
2S	1,897	331	0	2,228
3S	2,163	297	2	2,462
4S	241	46	2	289
Total	4,301	674	4	4,979

Comments: Pond Values Used: 4th Quarter 2004.

Log Markets: Mist, Clatskanie, Tillamook, Forest Grove

Cedar Stumpage: \$875/MBF (pond value) - \$242/MBF (logging cost)
= \$633/MBF.

Additional Costs for Areas 1-4

Costs with P & R

100% branding and painting: \$1/MBF x 4,979 = \$4,979

Additional cutting costs (bucking tops, topping/girdling tail lift trees, etc.) \$5/MBF x 4,674 =
\$23,370

Additional costs for cable corridor and skid trail layout: \$3/MBF x 4,674 = \$14,022

Traffic control for portion of Area 1 harvesting, \$24.50 x 16 hours x 2 flaggers = \$784

Total Cost w/P&R = \$43,155

Cost without P&R:

Vacating Dirt Spurs Station 6+50 to 11+70 of 1A to 1B (5.2 Sta.) and 3A-3B (3.9 Sta.) = 9.1 Sta.
x \$45/Sta. = \$410

Snag Creation for Area 1 - 150 snags x \$45/snag = \$6,750

Total Non-P&R Costs = \$7,160



Timber Sale Appraisal

Logging Conditions

Sheep Shack

Sale 341-05-27

"STEWARDSHIP IN FORESTRY"

Combination#: 1	Douglas - Fir	64.00%	
	Western Hemlock / Fir	64.00%	
	Alder (Red)	64.00%	
Yarding Distance:	Medium (800 ft)		Downhill Yarding: No
Logging System:	Cable: Medium Tower >40 - <70		Process: Manual Delimiting
Tree Size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF		
Loads/Day:	5		Bd. Ft./Load: 4,000
Cost/MBF:	\$165.83		
Machines:			
	Log Loader (A)		
	Tower Yarder (Medium)		
Combination#: 2	Douglas - Fir	11.00%	
	Western Hemlock / Fir	11.00%	
	Alder (Red)	11.00%	
Yarding Distance:	Medium (800 ft)		Downhill Yarding: Yes
Logging System:	Track Skidder		Process: Manual Falling/Delimiting
Tree Size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF		
Loads/Day:	6		Bd. Ft./Load: 4,000
Cost/MBF:	\$136.06		
Machines:			
	Log Loader (B)		
	Track Skidder		
Combination#: 3	Douglas - Fir	22.00%	
	Western Hemlock / Fir	22.00%	
	Alder (Red)	22.00%	
Yarding Distance:	Short (400 ft)		Downhill Yarding: Yes
Logging System:	Track Skidder		Process: Manual Falling/Delimiting
Tree Size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF		
Loads/Day:	5		Bd. Ft./Load: 4,000
Cost/MBF:	\$163.27		
Machines:			
	Log Loader (B)		
	Track Skidder		
Combination#: 4	Douglas - Fir	3.00%	
	Western Hemlock / Fir	3.00%	
	Alder (Red)	3.00%	

Yarding Distance: Short (400 ft)
Logging System: Shovel
Tree Size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
Loads/Day: 8
Cost/MBF: \$72.55
Machines:
Shovel Logger

Downhill Yarding: Yes
Process: Manual Delimiting
Bd. Ft./Load: 4,000



Timber Sale Appraisal

Logging Costs

Sheep Shack

Sale 341-05-27

"STEWARDSHIP IN FORESTRY"

Date: 3/11/05

Operating Seasons: 3.0

Profit & Risk: 12%

Project Costs: \$229,389

Other Costs (P/R): \$43,155

Slash Disposal: \$0

Other Costs: \$7,160

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

Road Maintenance: \$3.92

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	3.0	4.0
Western Hemlock / Fir	\$0.00	2.0	3.5
Alder (Red)	\$0.00	2.0	3.0



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Breakdown Sheep Shack Sale 341-05-27

Costs	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
Logging	159.19	159.19	159.19
Road Maintenance	4.04	4.04	4.13
Fire Protection	1.63	1.63	0.00
Hauling	39.54	67.73	80.84
Other (P/R appl.)	8.67	8.67	0.00
Profit & Risk	25.57	28.95	29.30
Slash Disposal	0.00	0.00	0.00
Scaling	2.00	2.00	2.00
Other	1.44	1.44	0.00
Total	242.08	273.65	275.46

Amortization	0.00	0.00	0.00
Pond Value	595.71	404.55	557.50
Stumpage	353.63	130.90	282.04
Amortized	0.00	0.00	0.00



Timber Sale Appraisal Summary Sheep Shack Sale 341-05-27

"STEWARDSHIP IN FORESTRY"

Amortized

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
MBF	0.00	0.00	0.00
Value	0.00	0.00	0.00
Total	0.00	0.00	0.00

Unamortized

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
MBF	4,301.00	674.00	4.00
Value	353.63	130.90	282.04
Total	1,520,962.63	88,226.60	1,128.16

Gross Timber Sale Value

Recovery \$1,610,317.39

Prepared by: Josh Barnard

Date: 3/11/05

District: Astoria

Phone: (503) 325-5451

Road Maintenance Cost Summary

Sale: Sheep Shack
 Date: 23-Jul-04
 By: J. Barnard

MBF: 4,979
 \$\$/MBF: \$3.92

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost	Production Rates			
							Production Rates	Miles/day	Distance(miles)	Days
Progressive Operations One Entry(2.9 mi.)	Grader 14G	\$540	1	20	\$80	\$2,140	Production Rates	Miles/day	Distance(miles)	Days
	Dump Truck 12CY x 2	\$114	2	10	\$57	\$798	Grader	1.5	2.9	2
	FE Loader C966	\$540	1	10	\$48	\$1,020				
ODF										
Final Road Maintenance ODF (5.9 mi.)	Grader 14G	\$540	1	40	\$80	\$3,740	Production Rates	Miles/day	Distance(miles)	Days
	Dump Truck 12CY x 3	\$114	3	30	\$57	\$2,052	Grader	1.5	5.9	4
	FE Loader C966	\$540	1	10	\$48	\$1,020	Vibratory Roller*	1.5	5.9	4
	Vibratory Roller	\$540	1	40	\$75	\$3,540				
	Water Truck 2,500 gallon Labor	\$132	1	40	\$67	\$2,812				
				10	\$25	\$250				
Final Road Maintenance Private (3.9 mi.)	Grader 14G	\$540	1	20	\$80	\$2,140	Production Rates	Miles/day	Distance(miles)	Days
							Grader	1.5	3.9	2
Total										\$19,512

*Final Road Maintenance Only

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Sheep Shack

NEW CONSTRUCTION:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 1	1A-1B, 1C-1D, 1E-1F, 1G-1H, 1I-1J, 1K-1L, 2A-2B 2C-2D, 3A-3B, 4A-4B 4C-4D, 4E-4F, 4G-4H	66.65	\$52,811
	TOTALS	66.65	\$52,811

ROAD IMPROVEMENT:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 1	11-12 & 13-14	95.00	\$7,192
	TOTALS	95.00	\$7,192

SPECIAL PROJECTS:

	<u>Description</u>	<u>Cost</u>
Project No. 2	Sterling Ridge Rock Crushing	\$142,668
Project No. 3	Fill Vacating	\$2,187
Project No. 4	Stream Enhancement	\$5,625
	Road Maintenance for project No. 1	\$14,340
	TOTALS	\$164,820

MOVE IN:

	<u>Equipment</u>	<u>Cost</u>
	Dozer (D8)	\$980
	Dump Trucks (12 cy x 4)	\$456
	Dump Trucks (20 cy x 2)	\$268
	F E Loader (C966)	\$540
	Grader (14G)	\$540
	Vibratory Roller	\$540
	Water Truck (2,500 gallon)	\$132
	Excavator (C330)	\$980
	Mulch Chopper/Blower	\$130
	TOTAL	\$4,566

GRAND TOTAL **\$229,389**

Compiled By: J. Barnard *JB*

Date: 10/27/2004

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Sheep Shack (Designed Roads)
ROADS: 1A-1B (6.5), 1C-1D (17.1), 1E-1F(3.9), 2A-2B(9.35), 4A-4B(9.85)

NEW CONSTRUCTION: 46.70 STATIONS 0.88 MILES
IMPROVEMENT: STATIONS 0.00 MILES

CLEARING & GRUBBING					
Method	Acres/amount	x	Rate	=	Cost
Scatter Outside of R/W	6.26	x	\$840.00	=	\$5,258.40
		x		=	\$0.00
SUB TOTAL FOR CLEARING & GRUBBING					\$5,258

EXCAVATION					
Material	Cy/amount/station	x	Rate	=	Cost
Common excavation \$\$/cy	3,914.00	x	\$1.35	=	\$5,283.90
Endhaul excavation \$\$/cy	410.00	x	\$2.75	=	\$1,127.50
Embankment compaction \$\$/cy	4,092.00	x	\$0.40	=	\$1,636.80
Cut Slope Rounding \$\$/sta.	10.00	x	\$27.00	=	\$270.00
Landing Construction \$\$/landing 1D,1F, 4B	3.00	x	\$270.00	=	\$810.00
		x		=	\$0.00
		x		=	\$0.00
		x		=	\$0.00
		x		=	\$0.00
		x		=	\$0.00
		x		=	\$0.00
		x		=	\$0.00
		x		=	\$0.00
SUB TOTAL FOR EXCAVATION					\$9,128

CULVERT MATERIALS AND INSTALLATION								
	Location	Dia/type	Lineal ft.	Rate	Cost	No. bands	Rate	Cost
1A-1B	0+00	18"CPP	40	\$11.00	\$440.00			\$0.00
1C-1D	0+00	18"CPP	30	\$11.00	\$330.00			\$0.00
1C-1D	3+95	18"CPP	40	\$11.00	\$440.00			\$0.00
1C-1D	7+55	18"CPP	30	\$11.00	\$330.00			\$0.00
1C-1D	11+25	18"CPP	30	\$11.00	\$330.00			\$0.00
1K-1L	3+80	24"CPP	34	\$16.30	\$554.20			\$0.00
2A-2B	9+30	18"CPP	30	\$11.00	\$330.00			\$0.00
4A-4B	1+60	18"CPP	40	\$11.00	\$440.00			\$0.00
4A-4B	9+50	18"CPP	34	\$11.00	\$374.00			\$0.00
				Description	Quantity	Rate	Cost	
Other/miscellaneous:								\$0.00
Culvert stakes & markers:				6' FIBERGLASS MARKERS	9	\$14.10	\$126.90	
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION								3,695.10

Subtotal **\$18,082**

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Sheep Shack NEW CONSTRUCTION: 19.95 STATIONS 0.38 MILES
 ROAD: 1A-1B (5.2), 1G-1H(1.0), 2C-2D(1.2), 4C-4D (3.65), 4E-4F(6.55), 4G-4H (2.35) IMPROVEMENT: _____ STATIONS _____ MILES

CLEARING & GRUBBING						
Method	Acres/amount	x	Rate	=	Cost	
Scatter Outside of R/W	1.74	x	\$840.00	=	\$1,461.60	
SUB TOTAL FOR CLEARING & GRUBBING					\$1,462	

EXCAVATION						
Material	Sta/amount	x	Rate	=	Cost	
Common (Reg Standard Design) \$\$/sta.	19.95	x	\$117.00	=	\$2,334.15	
Landing Construction \$\$/landing	7.00	x	\$270.00	=	\$1,890.00	
1B, 1H, 2D, 3B, 4D, 4F, 4H						
SUB TOTAL FOR EXCAVATION					\$4,224	

CULVERT MATERIALS AND INSTALLATION								
	Location	Dia/type	Lineal ft.	Rate	Cost	No. bands	Rate	Cost
4E to 4F	4+90	18"CPP	30	\$11.00	\$330.00			
4G to 4H	1+90	18"CPP	40	\$11.00	\$440.00			

	Description	Quantity	Rate	Cost
Other/miscellaneous:				\$0.00
				\$0.00
Culvert stakes & markers:	6' FIBERGLASS MARKERS	2	\$14.10	\$28.20
				\$0.00

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION \$798

Subtotal **\$6,484**

SURFACING		Subgrade prep: Description		Stations/amount	x	Rate/sta/amt	Cost				
		Grade, Shape and Ditch 16'		57.55	x	\$15.20	\$874.76				
		Subgrade Compaction		57.55	x	\$12.50	\$719.38				
		(dirt) Grade and Shape 14' outslope 1A-1B, 3A-3B		9.10	x	\$11.20	\$101.92				
ROAD SEGMENT		1A to 1B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost	
Application		Rock Size and Type		1A to 1B		0+00 to 6+50					
		Location		Volume (CY) per		Number of					
		Depth of Rock (inches)									
Base Rock		4"-0" Crushed		8 station 50		stations 6.50		325		\$3.72 \$1,208	
Traction Rock		3/4"-0" Crushed		2 station 13		stations 6.50		85		\$3.72 \$314	
Curve Widening		4"-0" Crushed		N/A		N/A		30		\$3.72 \$112	
Curve Wid. Traction		3/4"-0" Crushed		N/A		N/A		10		\$3.72 \$37	
Junctions		3/4"-0" Crushed		2 junction 10		junctions 1		10		\$3.72 \$37	
Junctions		4"-0" Crushed		8 junction 24		junctions 1		24		\$3.72 \$89	
Total Rock for Road Segment:		1A to 1B						484		\$1,798	
ROAD SEGMENT		1C to 1D		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost	
Application		Rock Size and Type		1C to 1D		0+00 to 17+10					
		Location		Volume (CY) per		Number of					
		Depth of Rock (inches)									
Base Rock		4"-0" Crushed		8 station 50		stations 17.10		855		\$3.72 \$3,179	
Turn Outs		4"-0" Crushed		8 turnout 22		turnouts 2		44		\$3.72 \$164	
Landings		6"-0" Pit-run		N/A Landing 80		Landings 1		80		\$5.35 \$428	
Turn-Around		4"-0" Crushed		N/A TA 24		TA 1		24		\$3.72 \$89	
Traction Rock		3/4"-0" Crushed		2 station 13		stations 9.10		118		\$3.72 \$440	
Turnouts		3/4"-0" Crushed		2 turnout 10		turnouts 2		20		\$3.72 \$74	
Junctions		3/4"-0" Crushed		2 junction 10		junctions 1		10		\$3.72 \$37	
Junctions		4"-0" Crushed		8 junction 24		junctions 1		24		\$3.72 \$89	
Total Rock for Road Segment:		1C to 1D						1,175		\$4,501	
ROAD SEGMENT		1E to 1F		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost	
Application		Rock Size and Type		1E to 1F		0+00 to 3+90					
		Location		Volume (CY) per		Number of					
		Depth of Rock (inches)									
Base Rock		4"-0" Crushed		8 station 50		stations 3.90		195		\$3.72 \$725	
Turn Outs		4"-0" Crushed		8 turnout 22		turnouts 1		22		\$3.72 \$82	
Landings		6"-0" Pit-run		N/A Landing 80		Landings 1		80		\$5.35 \$428	
Turn-Around		4"-0" Crushed		N/A TA 24		TA 1		24		\$3.72 \$89	
Curve Widening		4"-0" Crushed		N/A		N/A		80		\$3.72 \$297	
Junctions		3/4"-0" Crushed		2 junction 10		junctions 1		10		\$3.72 \$37	
Junctions		4"-0" Crushed		8 junction 24		junctions 1		24		\$3.72 \$89	
Total Rock for Road Segment:		1E to 1F						435		\$1,748	
ROAD SEGMENT		1G to 1H		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost	
Application		Rock Size and Type		1G to 1H		0+00 to 1+00					
		Location		Volume (CY) per		Number of					
		Depth of Rock (inches)									
Base Rock		4"-0" Crushed		8 station 50		stations 1.00		50		\$3.72 \$186	
Junctions		4"-0" Crushed		8 junction 24		junctions 1.00		24		\$3.72 \$89	
Landings		6"-0" Pit-run		N/A Landing 80		Landings 1		80		\$5.35 \$428	
Total Rock for Road Segment:		1G to 1H						154		\$186	

ROAD SEGMENT	2A to 2B			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2A to 2B Volume (CY) per		9+35 Number of				
Base Rock	4"-0" Crushed		10	station	63	stations	9.35	589	\$3.72	\$2,190
Traction Rock	3/4"-0" Crushed		4	station	23	stations	9.35	215	\$3.72	\$800
Junctions	4"-0" Crushed			junction	30	junctions	3	90	\$3.72	\$335
Junctions	3/4"-0" Crushed			junction	10	junctions	3	30	\$3.72	\$112
Culvert Bedding/Backfill	3/4"-0" Crushed	9+30		culvert	20	culvert	1.00	20	\$3.72	\$74
Curve Widening	4"-0" Crushed			N/A		N/A		80	\$3.72	\$297
Curve Wid. Traction	3/4"-0" Crushed			N/A		N/A		30	\$3.72	\$112
Total Rock for Road Segment: 2A to 2B								1,054		
ROAD SEGMENT	2C to 2D			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2C to 2D Volume (CY) per		0+00 to 1+20 Number of				
Base Rock	4"-0" Crushed		8	station	50	stations	1.20	60	\$3.72	\$223
Landings	6"-0" Pit-run		N/A	Landing	80	Landings	1	80	\$5.35	\$428
Junctions	3/4"-0" Crushed		2	junction	10	junctions	1	10	\$3.72	\$37
Junctions	4"-0" Crushed		8	junction	24	junctions	1	24	\$3.72	\$89
Total Rock for Road Segment: 2C to 2D								174		
ROAD SEGMENT	3A to 3B			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	3A to 3B Volume (CY) per		0+00 to 3+90 Number of				
Junctions	4"-0" Crushed		8	junction	24	junctions	1	24	\$3.72	\$89
Total Rock for Road Segment: 3A to 3B								24		
ROAD SEGMENT	4A to 4B			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	4A to 4B Volume (CY) per		0+00 to 9+85 Number of				
Base Rock	4"-0" Crushed		8	station	50	stations	9.85	493	\$3.72	\$1,831
Turn Outs	4"-0" Crushed		8	turnout	22	turnouts	1	22	\$3.72	\$82
Landings	6"-0" Pit-run		N/A	Landing	80	Landings	1	80	\$5.35	\$428
Turn-Around	4"-0" Crushed		N/A	TA	24	TA	1	24	\$3.72	\$89
Curve Widening	4"-0" Crushed			N/A		N/A		30	\$3.72	\$112
Junctions	3/4"-0" Crushed		2	junction	10	junctions	1	10	\$3.72	\$37
Junctions	4"-0" Crushed		8	junction	24	junctions	1	24	\$3.72	\$89
Total Rock for Road Segment: 4A to 4B								683		
ROAD SEGMENT	4C to 4D			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	4C to 4D Volume (CY) per		0+00 to 3+65 Number of				
Base Rock	4"-0" Crushed		8	station	50	stations	3.65	183	\$3.72	\$679
Landings	6"-0" Pit-run		N/A	Landing	80	Landings	1	80	\$5.35	\$428
Curve Widening	4"-0" Crushed			N/A		N/A		30	\$3.72	\$112
Junctions	3/4"-0" Crushed		2	junction	10	junctions	1	10	\$3.72	\$37
Junctions	4"-0" Crushed		8	junction	24	junctions	1	24	\$3.72	\$89
Total Rock for Road Segment: 4C to 4D								327		

\$3,919

\$778

\$89

\$2,668

\$1,345

ROAD SEGMENT	4E to 4F			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost			
Application	Rock Size and Type	Location	Depth of Rock (inches)	4E to 4F		0+00 to 6+55							
				Volume (CY) per	Number of	Volume (CY) per	Number of						
Base Rock	4"-0" Crushed		8	station	50	stations	6.55	328	\$3.72	\$1,218			
Landings	6"-0" Pit-run		N/A	Landing	80	Landings	1	80	\$5.35	\$428			
Junctions	4"-0" Crushed		8	junction	24	junctions	1	24	\$3.72	\$89			
Total Rock for Road Segment:				4E to 4F				432		\$1,735			
ROAD SEGMENT	4G to 4H			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cy/ amt.	Cost			
Application	Rock Size and Type	Location	Depth of Rock (inches)	4G to 4H		0+00 to 2+35							
				Volume (CY) per	Number of	Volume (CY) per	Number of						
Base Rock	4"-0" Crushed		8	station	50	stations	2.35	118	\$3.72	\$437			
Landings	6"-0" Pit-run		N/A	Landing	80	Landings	1	80	\$5.35	\$428			
Junctions	4"-0" Crushed		8	junction	24	junctions	1	24	\$3.72	\$89			
Total Rock for Road Segment:				4G to 4H				222		\$954			
Total								5,162					
Processing:													
Description							No. sta	Rate/sta	Cost				
Water, Process & Compact Crushed Rock:(4"-0" rock, 8" depth roads in 1 lift)							48.20	\$37.00	\$1,783				
Water, Process & Compact (4"-0" rock, 2 lifts, Road 2A-2B)							18.70	\$37.00	\$692				
Water, Process & Compact Crushed Rock (3/4"-0" rock)							24.95	\$37.00	\$923				
							24"-5"rr	6"-0"pr	4"-0"	1 1/2"-0"	3/4"-0"	Total	
SUB TOTAL FOR SURFACING							0	640	3,935	0	588	5,163	\$24,815
SPECIAL PROJECTS													
Description							Cost						
Ditchout Construction 2hrs. @\$115/hr (Road 2A-2B)							\$230.00						
Seeding of all exposed soil due to road construction (8.0 acres x \$400/acre)							\$3,200.00						
SUB TOTAL FOR SPECIAL PROJECTS										\$3,430			
GRAND TOTAL				Cost per Mile		\$139,769		\$52,811					
Compiled By:		J. Barnard				Date:		9/7/2004					

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Sheep Shack
 ROAD: 11-12 (79.0), 13-14 (16.0)

NEW CONSTRUCTION: 0.00 STATIONS 0.00 MILES
 IMPROVEMENT: 95.00 STATIONS 1.80 MILES

CLEARING & GRUBBING					
Method	Acres/amount	x	Rate	=	Cost
		x		=	
		x		=	
SUB TOTAL FOR CLEARING & GRUBBING					\$0

CULVERT MATERIALS AND INSTALLATION							
Location	Dia/type	Lineal ft.	Rate	Cost	No. bands	Rate	Cost
Other/miscellaneous:							
Culvert stakes & markers:							
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION					\$56		
Subtotal						\$56	

SURFACING		11-12 and 13-14		Description		Stations/amount	x	Rate/sta/amt	Cost
Subgrade prep:				Grade, Shape and Ditch 16'		95.00	x	\$15.20	\$1,444.00

ROAD SEGMENT		11 to 12		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	0+00 to 79+00 Number of					
Subgrade Leveling	1 1/2"-0" Crushed		N/A					400	\$4.63	\$1,852
Total Rock for Road Segment:				11 to 12				400		\$1,852
ROAD SEGMENT		13 to 14		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (Inches)	I3 to I4 Volume (CY) per	0+00 to 16+00 Number of					
Subgrade Leveling	1 1/2"-0" Crushed		N/A					70	\$4.63	\$324
Total Rock for Road Segment:				13 to 14				70		\$324

Processing:		Description		No. sta	Rate/sta	Cost
		Water, Process & Compact Crushed Rock:		95.00	\$37.00	\$3,515

SUB TOTAL FOR SURFACING	24"-6" pr	6"-0" pr	4"-0"	1 1/2"-0"	3/4"-0"	Total		\$7,135
	0	0	0	470	0	470		

SPECIAL PROJECTS		Description	Cost
SUB TOTAL FOR SPECIAL PROJECTS			\$0

GRAND TOTAL	Cost per Mile	\$19,033	\$7,192
--------------------	---------------	----------	----------------

Compiled By: J. Long Date: 7/9/2004

SALE NAME: Sheep Shack DATE: 7/9/2004
 PROJECT: No. 1 - Road Improvement ROCK TYPE: crushed
 QUARRY: Sterling Ridge Quarry 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 to I2	79	400				3.00	1.00	0.40	0.10	4.50
I3 to I4	16	70				2.90	1.00	0.40	0.10	4.40
TOTAL	0.00	470								
	STA./NO.	CU. YD.								AVERAGE HAUL
CUBIC YARD WEIGHTED HAUL			0.00	0.00	0.00	2.99	1.00	0.40	0.10	4.49
Average Round Trip Distance (miles)										8.97

ROCK HAUL:

Truck type: D20 No. trucks: 2
 Delay min. 8 Efficiency: 85% Ave haul: \$2.98 /cy
 Load: \$0.60 /cy

Truck type: D12 No. trucks: 2
 Delay min. 6 Efficiency: 85% Spread: \$1.05 /cy

Truck type: D10 No. trucks: 0 Production: cy/day = 665
 Delay min. 5 Efficiency: 85%

CRUSHED ROCK HAUL COSTS 470 cy @ \$4.63 /cy

SALE NAME: Sheep Shack
 PROJECT: No. 1 - New Roads
 QUARRY: Sterling Ridge Quarry

ROCK TYPE: Crushed 4" and 3/4"

DATE: 7/23/2004
 BY: J. Barnard

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES							Total Haul
			50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	
1A-1B	6.50	484				3.50	0.10	0.10	0.10	3.80
1C-1D	17.10	1,095				3.50	0.25	0.10	0.10	3.95
1E-1F	11.00	355				3.50	0.15	0.10	0.10	3.85
1G-1H	8.90	74				3.50	0.15	0.10	0.10	3.85
2A-2B	9.30	1,054				3.50	0.15	0.10	0.10	3.85
2C-2D	1.20	94				3.50	0.15	0.10	0.10	3.85
3A-3B	3.90	24				3.50	0.15	0.05	0.05	3.75
4A-4B	9.85	603				3.65	0.15	0.10	0.10	4.00
4C-4D	3.65	247				3.65	0.15	0.10	0.10	4.00
4E-4F	6.55	352		1.00		6.40	0.50	0.40	0.10	8.40
4G-4H	2.35	142		1.00		6.40	0.50	0.40	0.10	8.40
TOTAL	80.30	4,522								
	STA./NO.	CU. YD.								
CUBIC YARD WEIGHTED HAUL			0.00	0.11	0.00	3.49	0.19	0.12	0.09	AVERAGE HAUL 4.01
Average Round Trip Distance (miles)									8.01	

ROCK HAUL:

Truck type: D20 No. trucks: 2
 Delay min.: 8 Efficiency: 85%
 Ave haul: \$2.67 /cy
 Load: \$0.40 /cy
 Spread: \$0.65 /cy

Truck type: D12 No. trucks: 3
 Delay min.: 6 Efficiency: 85%

Truck type: D10 No. trucks: 1
 Delay min.: 5 Efficiency: 85%
 Production: cy/day = 1,085

Haul min:	39.25	Yd/hr:	61.14
Haul \$/cy	\$2.19	Truck wt:	45%
Haul min:	37.25	Yd/hr:	57.98
Haul \$/cy	\$2.95	Truck wt:	43%
Haul min:	36.25	Yd/hr:	16.55
Haul \$/cy	\$3.44	Truck wt:	12%

CRUSHED ROCK HAUL COSTS 4,522 cy @ \$3.72 /cy

SALE NAME: Sheep Shack DATE: 7/23/2004
 PROJECT: No. 1 - New Roads ROCK TYPE: Pit-Run 6" BY: J. Barnard
 QUARRY: Sterling Ridge Quarry

Landings	Volume	Cubic Yards	ONE WAY HAUL IN MILES							Total Haul
			50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	
1D,1F, 1H	80 cy. Ea.	160				3.50	0.25	0.10	0.10	3.95
2D	80 cy. Ea.	80				3.65	0.15	0.10	0.10	4.00
4B,4D	80 cy. Ea.	160				3.65	0.25	0.10	0.10	4.10
4F, 4H	80 cy. Ea.	160		1.00		6.40	0.50	0.40	0.10	
TOTAL	0.00	560								
CUBIC YARD WEIGHTED HAUL	STA./NO.	CU. YD.	0.00	0.29	0.00	4.39	0.31	0.19	0.10	AVERAGE HAUL 5.27
Average Round Trip Distance (miles) 10.54										

ROCK HAUL:

Truck type: D20 No. trucks: 0
 Delay min.: 8 Efficiency: 85%
 Truck type: D12 No. trucks: 4
 Delay min.: 6 Efficiency: 85%
 Truck type: D10 No. trucks: 0
 Delay min.: 5 Efficiency: 85%

Ave haul: \$3.70 /cy
 Load: \$0.90 /cy
 Spread: \$0.75 /cy
 Production: cy/day = 493

Haul min:	48.69	Yd/hr:	0.00
Haul \$/cy	\$2.72	Truck wt:	0%
Haul min:	46.69	Yd/hr:	61.68
Haul \$/cy	\$3.70	Truck wt:	100%
Haul min:	45.69	Yd/hr:	0.00
Haul \$/cy	\$4.34	Truck wt:	0%

ROCK HAUL COSTS 560 cy @ \$5.35 /cy

SUMMARY OF ROCK DEVELOPMENT AND CRUSHING COSTS

PROJECT NO. 2

Timber Sale Name: **Sheep Shack**

Quarry: Sterling Ridge Quarry
 Location: T4N, R7W, Sec. 23, WM
 County: Clatsop
 By: C. Bangs
 Date: 6/4/2004

Swell: _____
 Shrink: 16%

ROCK SIZE	REJECT	GRADATION	STOCKPILE CU. YDS.	TRUCK MEAS CU. YDS.	TOTAL CU. YDS.
3/4"-0"	5%	CR	_____	2,588	2,588
2"-0"	5%	CR	_____	500	500
4"-0"		CR	10,000	3,932	15,532
6"-0"		PR	_____	560	560
24"-6"		RR	_____	_____	_____
36"		RR	_____	_____	_____
TOTAL CUBIC YARDS OF ROCK:			10,000	7,580	19,180

1) MOBILIZATION & SET UP:

EQUIPMENT MOBILIZATION	DISTANCE IN MILES	DIST. FACTOR	BASE RATE	COST
3 Stage Crusher	75	1.40	\$2,220	\$3,108
Screening Plants (2)	75	1.40	\$900	\$1,260
D8 Cat & D6 Cat	75	1.40	\$1,540	\$2,156
Loader	75	1.40	\$560	\$784
Drill & Compressor	75	1.40	\$1,080	\$1,512
Powder	75	1.40	\$270	\$378
4 Dump Truck	75	1.40	\$2,220	\$3,108
Excavator	75	1.40	\$500	\$700
SUB TOTAL FOR MOBILIZATION				\$13,006

EQUIPMENT SET UP	TIMES	RATE	COST
3 Stage Crusher	1	\$2,530	\$2,530
Screening Plants (2)	1	\$425	\$425
Change Gradation	2	\$400	\$800
SUB TOTAL FOR SET UP COSTS			\$3,755

TOTAL MOBILIZATION & SET UP COSTS \$16,761

2) CLEARING & GRUBBING

DESCRIPTION	QUANTITY	UNIT	RATE	COST
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

TOTAL CLEARING & GRUBBING COSTS

3) EXCAVATION

MATERIAL DESCRIPTION	QUANTITY	UNIT	RATE	COST
Overburden Removal	4,000	bcy	\$1.35	\$5,400

TOTAL EXCAVATION COSTS \$5,400

4) DEVELOP ROCK

ROCK SUMMARY			METHOD	%	QUANTITY	RATE	COST
Type	Cu. yd. Vol.	Weight	Ripping	20%	3,836	\$1.85	\$7,097
crushed	18,620	97%	Drill & shoot	80%	15,468	\$1.90	\$29,388
pit run	560	3%	Oversize red	3%	575	\$5.04	\$2,900
rip rap	0	0	Other				
Total	19,180						
reject	154	0.8%					

TOTAL ROCK DEVELOPMENT COSTS \$39,385

5) CALIBRATION & TESTING

DESCRIPTION	NO.	\$/TEST	COST
Calibrate	3	\$400	\$1,200
Calibrate			
Test	8	\$50	\$400
Test			

TOTAL CALIBRATION & TESTING COSTS \$1,600

6) FEEDING & LOADING

DESCRIPTION	CU. YD. QUANTITY	COST CU. YD.	TOTAL COST
Dig & Feed Rock	18,774	\$0.65	\$12,203

TOTAL FEEDING & LOADING COSTS \$12,203

7) ROCK CRUSHING

ROCK SIZE	ROCK TYPE	CU. YD. QUANTITY	CRUSHER TYPE	HOURLY PRODUCTIO	RATE CU. YD.	TOTAL COST
3/4"-0"	crushed	2,588	3 stage w/s	110	\$2.95	\$7,646
2"-0"	crushed	500	3 stage w/s	120	\$2.71	\$1,354
4"-0"	crushed	15,532	2 stage	140	\$1.71	\$26,626

TOTAL ROCK CRUSHING COSTS \$35,627

8) STOCKPILING

STOCKPILE PREPARATION OR CONST	COST
Clear, Level, Grade Stockpile Floors	\$240
SUB TOTAL	\$240

HAUL & STOCKPILE		# of			
STOCKPILE LOCATION	SIZE	TRUCKS	CU. YDS.	RATE	COST
1. Sterling	2"-1"	1	500	\$0.65	\$323
2. Flat Iron	3/4"-0"	4	2,000	\$1.57	\$3,133
3. Quartz Creek	4"-0"	4	11,600	\$2.33	\$27,010
4. _____					
5. _____					
6. _____					
SUB TOTAL					\$30,466

TOTAL STOCKPILING COSTS **\$30,706**

9) MISCELLANEOUS COSTS

DESCRIPTION	COST
Load, Haul, and Spread the reject material at the waste area.	\$386
\$2.50/CY 154 CY	
Final quarry development, block access roads, waterbarring, drainage.	\$600
TOTAL MISCELLANEOUS COSTS	\$986

TOTAL FIXED COSTS (mobilization, clearing and grubbing, stockpiling prep, drainage) **\$17,601**

TOTAL VARIABLE COSTS (excavation, rock development, calibration/testing, feeding/loading, crushing cost, haul/stockpile, Load/Haul/Spread reject material) **\$125,067**

10) GRAND TOTAL: **\$142,668**

Total \$/Cubic Yard	\$7.66
Fixed \$/Cubic Yard	\$0.92
Ave. Variable \$/Cubic Yard	\$6.52
4"-0" Ave. Variable \$/Cubic Yard	\$ 6.48
2"-1" Ave. Variable \$/Cubic Yard	\$ 7.25
3/4"-0" Ave. Variable \$/Cubic Yard	\$ 7.44

Sheep Shack

Project No. 3. Point V1

Location/Description	C330 #1	Truck	Seeding and Mulching	De-watering	Total
Point V1 Type F Fill Removal Develop 20' stream channel	12		\$239.00		
Point V1 Haul away pipe to dump		4			
Point V1 De-watering Pump (10 hrs. @ \$6.00/hr.) Laborer (4 hrs. @ \$25.00/hr)				\$160	
Total	12 hr	4 hr			
Rate	\$130 /hr	\$57 /hr			
Cost	\$1,560	\$228	\$239	\$160	\$2,187

Sheep Shack
Project No. 4 Stream Enhancement

Location	Site	Number of Trees	\$/Tree*	Location Cost
SE1 to SE2	1	5	\$225.00	\$1,125.00
SE1 to SE2	2	5	\$225.00	\$1,125.00
SE1 to SE2	3	5	\$225.00	\$1,125.00
SE1 to SE2	4	5	\$225.00	\$1,125.00
SE1 to SE2	5	5	\$225.00	\$1,125.00
			Project Total	\$5,625.00

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

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

Sale: Sheep Shack
Date: 9-Jul-04
By: J. Long

Type	Equipment/Rationale			Hours	Rate	Cost
	Grader 14G			50	\$80	\$4,000
Final Haul	Dump Truck 12CY x 2			40	\$57	\$2,280
Road	FE Loader C966			20	\$48	\$960
Maintenance	Vibratory Roller			50	\$75	\$3,750
Haul Route	Water Truck 2,500 gallon			50	\$67	\$3,350
Total						\$14,340

Production Rates	Miles/day	Distance(miles)	Days
Grader	1.5	7.2	4.8
Vibratory Roller	1.5	7.2	4.8

TIMBER CRUISE REPORT

Sheep Shack FY 2005

1. **Sale Area Location:** Areas 1 - 5 (R/W) are located in portions of Section 25 of T4N, R7W, and portions of Section 30, T4N, R6W, W.M., Clatsop County, Oregon.

2. **Fund Distribution:** BOF 100%
Tax Code 8-01 (100%)

3. **Sale Acreage by Area:**

Area	Treatment	Gross Acres	Existing R/W	New R/W	Stream Buffer	Net Acres	Survey Method	Closure
1	SDI 25 Thinning	76.0	0.1	5.0	1.9	69.0	GIS	N/A
1A	SDI 25 Thinning	12.0	0.0	0.0	0.0	12.0	GIS	N/A
2	SDI 30 Thinning	78.0	5.3	1.3	3.4	68.0	GIS	N/A
3	SDI 25 Thinning	90.0	3.7	0.7	6.6	79.0	GIS	N/A
4	SDI 25 Thinning	69.0	2.0	1.0	3.0	63.0	GIS	N/A
5 (R/W)	New Roads	0.0	0.0	0.0	0.0	8.0	Road Eng	N/A
TOTALS		325.0	11.1	8.0	14.9	299.0		

4. **Cruisers and Cruise Dates:** Areas 1 – 5 (R/W) were cruised by Derek Bangs, Josh Barnard, Lanny Freeman, Ed Holloran, Alan Kelso, Jon Long, and Ty Williams on June 3, 2004.

5. **Cruise Method and Computation:** AREAS 1, 1A, 3, and 4 are "auto-mark" thinning units (SDI 25), and were variable plot cruised using a 33.6 BAF. A total of 70 plots were sampled, with 25 measured and graded plots, and 45 count plots. These plots are located on a 8 chain by 4 chain grid with every third plot being measured and graded. All red alder and western redcedar are "Reserved Timber," and were recorded as leave trees. Areas 1, 3, and 4 were combined because of similarities in timber types and prescription.

AREA 2 is an "auto-mark" thinning unit (SDI 30), and was variable plot cruised using a 33.6 BAF. These plots are located on a 6 chain by 4 chain grid, with every other plot measured and graded. A total of 29 plots were sampled, with 14 measured and graded, and 15 count. Red alder and western redcedar are "Reserved Timber," and were recorded as leave trees.

AREA 5 R/W, in-sale Right-of Way, volume was calculated by multiplying R/W acreage and the average volume per acre from the plots in Areas 1– 4.

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

<u>AREA</u>	<u>CRUISE</u>	<u>CRUISE TYPE</u>
1, 1A, 3, & 4	RD 25 Auto-mark Thinning	4N 7W SEC 25 TRACT:1 3 4 TYPE:0PCH
2	RD 30 Auto-mark Thinning	4N 7W SEC 25 TRACT:2 TYPE:0PCL
5 R/W	In-Sale Right-of-way	4N 7W SEC 25 TRACT:RW TYPE:RW

6. Timber Description: Areas 1, 1A, 3, & 4 consist of dense, overstocked Douglas-fir and mixed conifer stands with small patches of red alder. Douglas-fir is the dominant tree species with western hemlock, Pacific silver fir, and western redcedar being minor components. The trees range from 50 to 64 years old. The conifer in these stands will be thinned to an SDI of 25, with a target basal area of 120 ft². Hardwoods and cedar will not be harvested. Approximately 81 trees per acre and 16.8 MBF/acre (net) will be harvested from these stands. The average Douglas-fir "take" tree size is 16.5" DBH and 75 feet to a merchantable top (6" d.i.b.). Areas 2 consists of dense Douglas-fir and mixed conifer stands with small patches of red alder. Douglas-fir is the dominant tree species with a mix of Pacific silver fir and western hemlock and a smaller component of alder near streams and in scattered patches. The conifer in these stands will be thinned to an SDI of 30, with a target basal area of 140 ft². Approximately 75 trees per acre and 13.7 MBF/acre (net) will be harvested from these stands. The average Douglas-fir "take" tree size is 15" DBH and 65 feet to a merchantable top (6" d.i.b.). Area 5 R/W (In-sale R/W) is similar to the timber description mentioned above for Areas 1-4. The average volume (net) is 38.2 MBF/acre.

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

Statistics for total stand (Take and Leave trees combined) B.F. volumes

Area	Estimated CV	Target SE%	Actual CV*	Actual SE%*
1, 1A, 3, and 4	35%	7%	33.5%	4.0%
2	35%	7%	31.6%	5.9%

*Based on Net Board Feet Per Acre.

8. Volumes by Species and Log Grade: (See "Species, Sort, Grade - Type and Project Reports, attached, of individual sale areas and combined areas and three cruise types)
 Volumes by Species and Grade for All Sale Areas: (MBF) Volumes do not include "in-growth."

Species	DBH	Net Vol.	2 Saw	3Saw	4 Saw	D & B	% Sale
Douglas-fir	16	4,301	1,897	2,163	241	159	86
W. Hemlock/Fir	15	674	331	297	46	39	14
Alder	15	4	0	2	2	0	<1
Cedar	10	<1	0	0	<1	0	<1
TOTALS		4,979	2,228	2,462	287	198	100

9. Approvals:

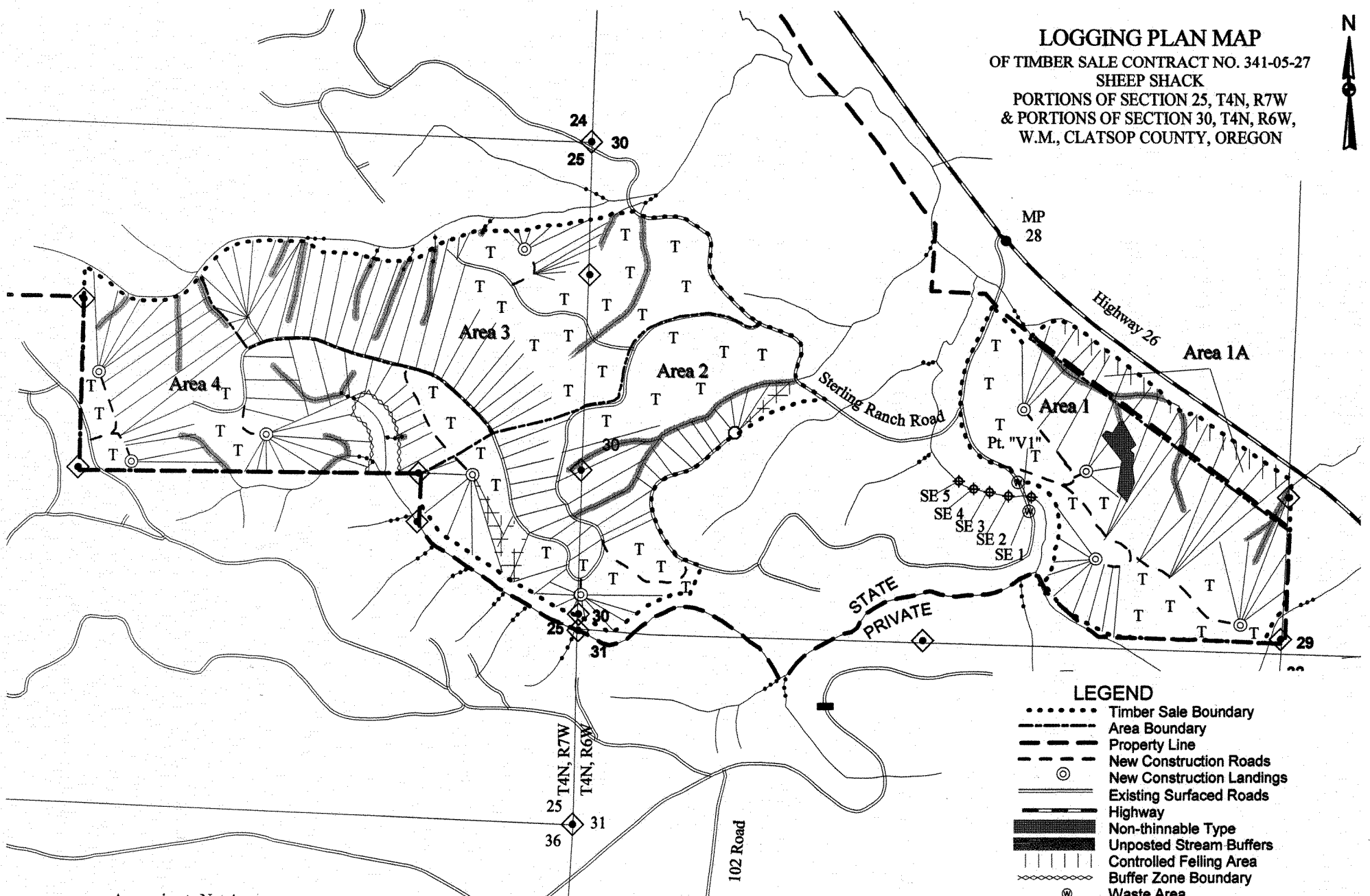
Prepared by: Josh Barnard Date: July 23, 2004

Reviewed by: _____ Date: _____

10. Attachments:

- Cruise Designs (2)
- Cruise Maps (2)
- Volume Reports - 4 pages
- Statistics Reports - 7 pages
- Stand Tables - 2 pages
- Log Stock Table (MBF) – 3 pages

LOGGING PLAN MAP
 OF TIMBER SALE CONTRACT NO. 341-05-27
 SHEEP SHACK
 PORTIONS OF SECTION 25, T4N, R7W
 & PORTIONS OF SECTION 30, T4N, R6W,
 W.M., CLATSOP COUNTY, OREGON

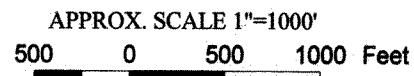


Approximate Net Acreages:
 Area 1 (PC) - 69 Acres
 Area 1A (PC) - 12 Acres
 Area 2 (PC) - 68 Acres
 Area 3 (PC) - 79 Acres
 Area 4 (PC) - 63 Acres
 Area 5 (R/W) - 8 Acres
 Total Acres = 299

LOGGING BREAKDOWN		
AREA	TRACTOR	CABLE
1	35%	65%
1A	0%	100%
2	44%	56%
3	42%	58%
4	20%	80%
5 (R/W)	100%	0%

LEGEND

- Timber Sale Boundary
- Area Boundary
- Property Line
- New Construction Roads
- New Construction Landings
- Existing Surfaced Roads
- Highway
- ▨ Non-thinnable Type
- ▨ Unposted Stream Buffers
- ▨ Controlled Felling Area
- ▨ Buffer Zone Boundary
- ⊗ Waste Area
- ⊕ Stream Enhancement Point
- ⊕ Known Land Survey Corner
- ~ Type F Stream
- ~ Type N Stream
- ++ Intermediate Supports Recommended
- T Tractor Logging Area
- ▨ Cable Logging Area
- ▨ Road Blocked



Revised August, 2002

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Sheep Shack Area(s) 1, 3, & 4

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

Approx. Cruise Acres: 247 Estimated CV% 35 Net BF or BAI/Acre SE% Objective 7 Net BF or BAI/Acre

Planned Sale Volume: 3952 MMBF Estimated Sale Area Value/Acre: \$ 3,800

A. **Cruise Goals:** (a) Grade minimum 158 conifer and 10 hardwood trees;
(b) Sample 70 cruise plots; (c) Other goals (Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes; Determine LWD (down wood) cubic feet and decay classes; Determine "diameter limit" harvest parameters;)
Basal Area leave target 110 to 130 sq. ft. Cruiser needs to select 3 or 4 leave trees per plot.

B. Cruise Design:

1. **Plot Cruises:** BAF 33.6 (Full point; Half point) (circle one)

Fixed Plot Size Plot Radius feet

Cruise Line Direction(s) North/South

Cruise Line Spacing 8 (chains) (feet)

Cruise Plot Spacing 4 (chains) (feet)

Grade/Count Ratio 1:2

2. **ITS (Sample Tree) Cruises:** Measure-grade ratios: D-fir Hemlock
Spruce True Fir Cedar Hardwood

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 for conifer is 7", 9" 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: #2 Sawmill = 12" + scaling diameter; #3 Sawmill = 10 and 11"; #4 Sawmill = 8 and 9"

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

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

ITS and 100% Cruises: Mark cruise "strips" with various colored flagging (not pink). Mark trees measured and graded with yellow paint.

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.

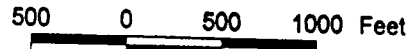
10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Josh Barnard
Approved by: Jon Long
Date: 6-2-04

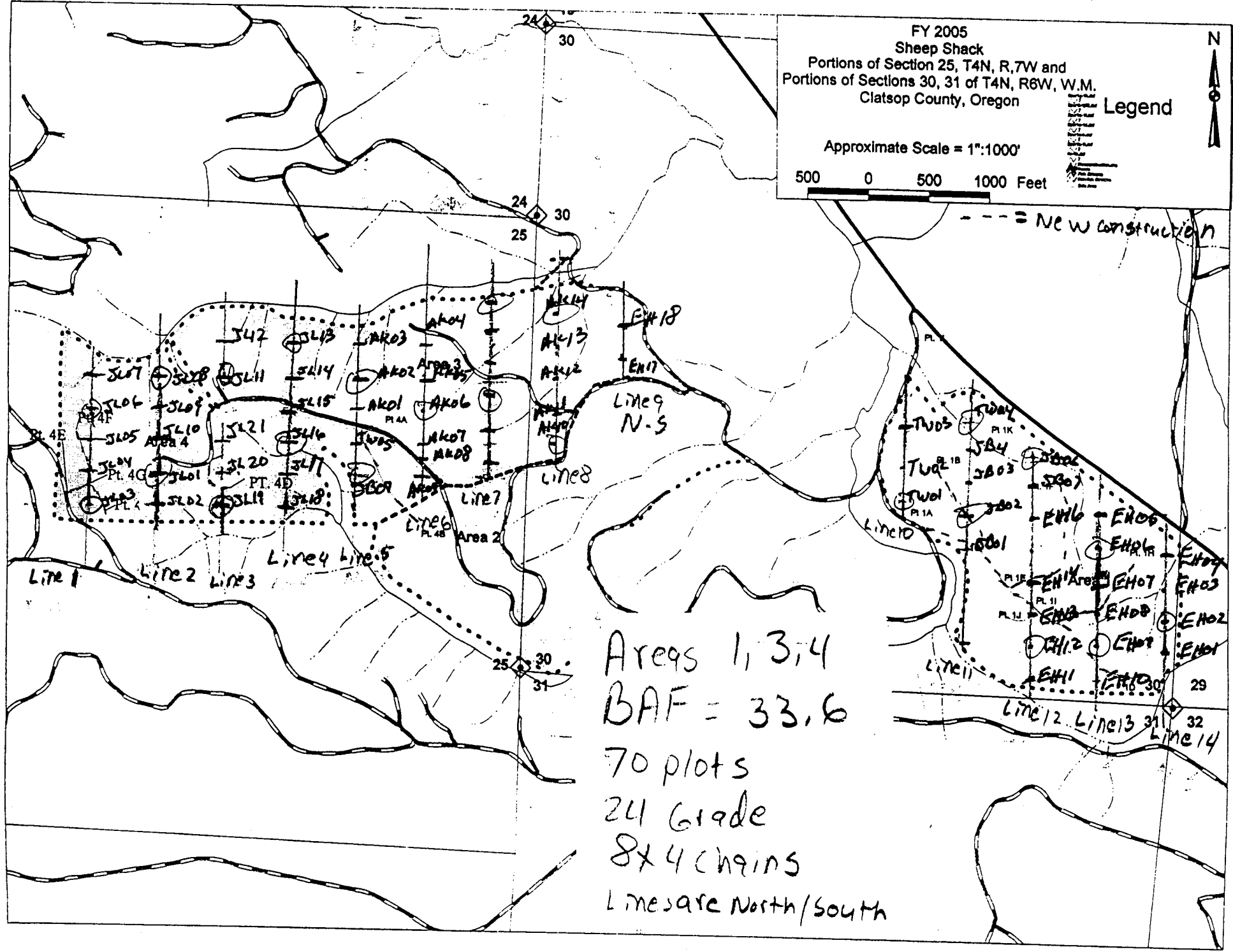
FY 2005
 Sheep Shack
 Portions of Section 25, T4N, R,7W and
 Portions of Sections 30, 31 of T4N, R6W, W.M.
 Clatsop County, Oregon

Legend

Approximate Scale = 1":1000'



--- = New Construction



Areas 1, 3, 4
 BAF = 33.6

70 plots
 24 Grade
 8x4 chains
 Lines are North/South

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Sheep Shack **Area(s)** 2

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

Approx. Cruise Acres: 78 **Estimated CV%** 35 Net BF or **SE% Objective** 7 Net BF or **BA/Acre** **BA/Acre**

Planned Sale Volume: 1248 **MMBF** **Estimated Sale Area Value/Acre:** \$ 3,800

A. Cruise Goals: (a) Grade minimum 85 conifer and 5 hardwood trees:
(b) Sample 26 cruise plots; (c) Other goals (Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes; Determine LWD (down wood) cubic feet and decay classes; Determine "diameter limit" harvest parameters;)
Basal Area leave target 130 to 160 sq. ft. Cruiser needs to select 4 or 5 leave trees per plot.

B. Cruise Design:

1. Plot Cruises: BAF 33.6 (Full point; Half point) (circle one)
Fixed Plot Size Plot Radius feet
Cruise Line Direction(s) North/South
Cruise Line Spacing 6 (chains) (feet)
Cruise Plot Spacing 4 (chains) (feet)
Grade/Count Ratio 1:1

2. ITS (Sample Tree) Cruises: Measure-grade ratios: D-fir Hemlock
Spruce True Fir Cedar Hardwood

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 for conifer is 7" , 9" 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 = Cul
Hardwoods: #2 Sawmill = 12" + scaling diameter; #3 Sawmill = 10 and 11"; #4 Sawmill = 8 and 9"

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

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

ITS and 100% Cruises: Mark cruise "strips" with various colored flagging (not pink). Mark trees measured and graded with yellow paint.

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.

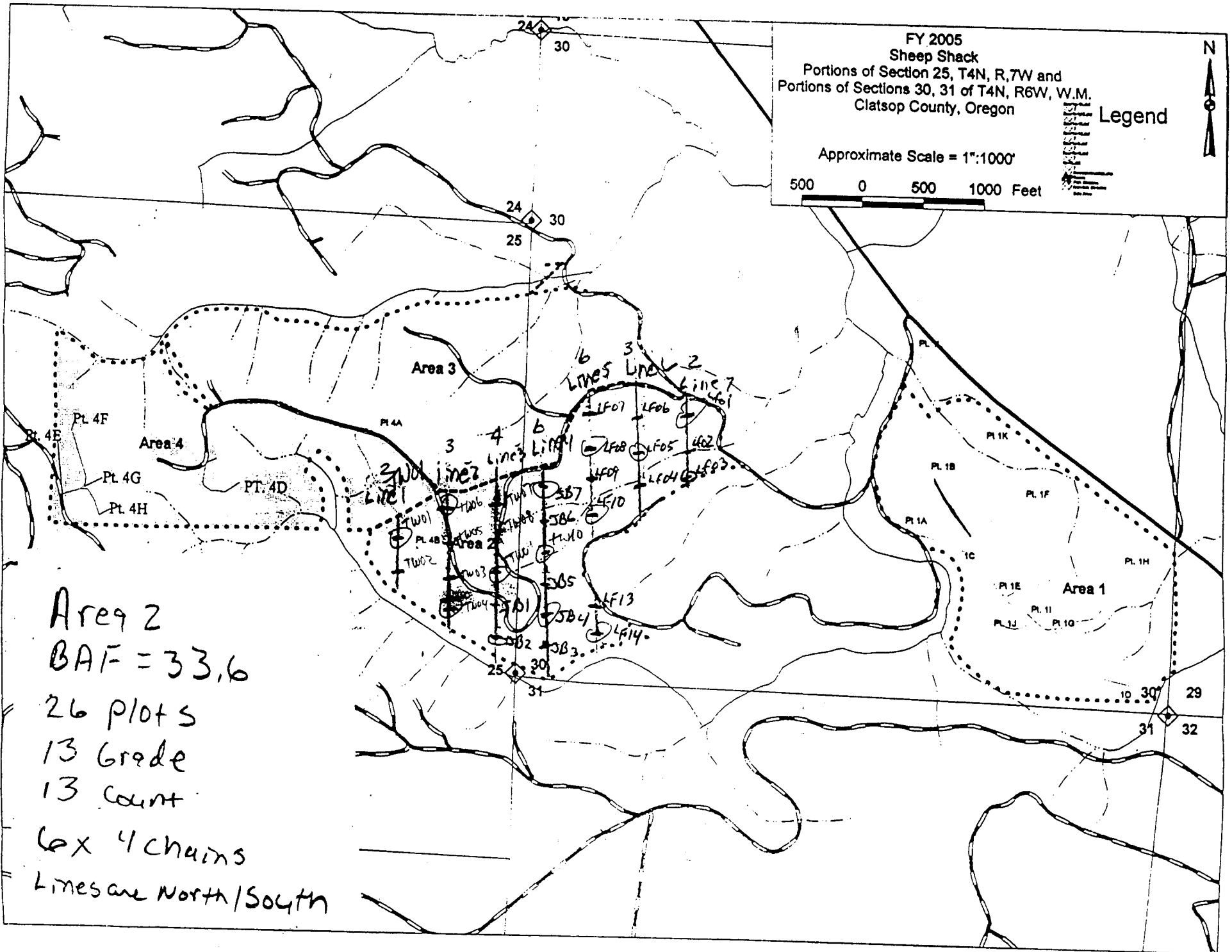
Cruise Design by: W. H. Darnard
Approved by: Jon Long
Date: 6-2-64

FY 2005
 Sheep Shack
 Portions of Section 25, T4N, R,7W and
 Portions of Sections 30, 31 of T4N, R6W, W.M.
 Clatsop County, Oregon

Legend

Approximate Scale = 1":1000'

500 0 500 1000 Feet



Area 2
 BAF = 33.6
 26 plots
 13 Grade
 13 Count
 6 x 4 chains
 Lines are North/South

Species, Sort Grade - Board Foot Volumes (Project)

T04N R07W S25 TyPCHT 223.00
 T04N R07W S25 TyPCLT 68.00
 T04N R07W S25 Ty5RW 8.00

Project: SHEEP
Acres 299.00

Page 1
Date 10/26/2004
Time 10:30:33AM

Spp	So Gr	T rt 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	?	CU		100.0	389												5		0.00	9.0
D	?	2S	38	.7	6,388	6,345	1,897		15	69	16		4	2	36	58	34	218	1.54	29.0
D	?	3S	43	1.4	7,332	7,233	2,163			93	6	1		1	5	38	36	86	0.68	83.9
D	?	4S	5	.0	806	806	241		1	98		0		48	44	8	20	26	0.41	30.6
D Totals			86	3.6	14,915	14,384	4,301	0	59	33	8	5	6	35	54	30	94	0.82	152.5	
H	?	CU		100.0	38												2		0.00	3.0
H	?	2S	3	2.1	442	433	129				99	1				18	38	278	1.71	1.6
H	?	3S	4	5.5	651	615	184		100						14	46	34	91	0.80	6.8
H	?	4S	1		133	133	40		100				55	45			17	25	0.51	5.3
H Totals			7	6.6	1,264	1,181	353	63	36	0	6	12	30	51	23	71	0.86	16.6		
SF	?	CU		100.0	48												36		0.00	.3
SF	?	2S	4	.2	677	675	202				21	79	14	22	4	59	31	462	2.76	1.5
SF	?	3S	2	.8	382	379	113		61	39				6	61	32	35	90	0.68	4.2
SF		DO4S	0		19	19	6		100				99	1			18	20	0.39	1.0
SF Totals			6	4.7	1,127	1,074	321	23	27	50	11	16	24	49	32	154	1.05	7.0		
A	?	CU		100.0	0												2		0.00	.0
A	?	3S	0		7	7	2		35	65			32	45	23		23	90	1.06	.1
A	?	4S	0		5	5	2		74	26			35	18	47		26	66	0.79	.1
A Totals			0	1.0	13	13	4	52	48	33	34	33	23	72	0.91	.2				
C		DO4S	0		0	0	0		100				100				16	30	0.50	.0
C Totals			0	0	0	0	0	100	100	16	30	0.50	.0							
Totals				3.9	17,319	16,652	4,979	0	57	33	10	5	7	34	53	30	94	0.83	176.3	

Species, Sort Grade - Board Foot Volumes (Type)

Project: SHEEP

Date 10/26/2004

Areas 1, 1A3, & 4 Take

Time 10:30:34AM

T04N R07W S25 TPCHT										T04N R07W S25 TPCHT			
Twp	Rge	Sec	Tract	Type	Acre	Plots	Sample Trees	CuFt	BdFt				
04N	07W	25	134	PCHT	223.00	70	83	1	W				

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
D		DO	CU		00.0	485										5		0.00	10.7	
D		DO	2S	41	.7	5,927	5,883	1,312	10	74	16	5	2	31	61	34	217	1.55	27.1	
D		DO	3S	54	1.7	7,750	7,621	1,699	92	7	2	1	4	34	60	36	88	0.70	86.2	
D		DO	4S	5		691	691	154	2	98		50	50			19	26	0.42	26.8	
D	Totals			85	4.4	14,853	14,195	3,166	0	58	34	7	5	6	31	58	30	94	0.83	150.8
H		DO	CU		00.0	50										2		0.00	3.9	
H		DO	2S	35	2.4	471	459	102		100				100		40	327	1.87	1.4	
H		DO	3S	53	6.4	735	688	153	100				53	47		35	92	0.80	7.5	
H		DO	4S	12		157	157	35	100			61	39			16	25	0.51	6.3	
H	Totals			8	7.7	1,412	1,304	291	65	35			7	5	28	60	22	68	0.85	19.1
SF		DO	CU		00.0	59										37		0.00	.4	
SF		DO	2S	60		761	761	170		19	81	17	26		58	30	467	2.83	1.6	
SF		DO	3S	38	.8	485	481	107	60	40			6	63	32	35	90	0.67	5.3	
SF		DO	4S	2		24	24	5	100			100				18	20	0.39	1.2	
SF	Totals			8	4.7	1,330	1,267	282	25	26	49	12	18	24	47	32	147	1.00	8.6	
Type Totals					4.7	17,595	16,766	3,739	0	56	34	10	6	6	31	57	29	94	0.84	178.5

Species, Sort Grade - Board Foot Volumes (Type)

Project: SHEEP

Area 2 Take

T04N R07W S25 TPCLT										T04N R07W S25 TPCLT			
Twp	Rge	Sec	Tract	Type	Acre	Plots	Sample Trees	CuFt	BdFt				
04N	07W	25	2	PCLT	68.00	29	33	1	W				

Spp	So	Gr	% 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	
	Tr	ad						4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99				
D	DO	CU		100.0	61											6		0.00	3.0
D	DO	2S	49	.4	6,399	6,372	433	32	57	12		4	49	47		35	208	1.44	30.6
D	DO	3S	43		5,551	5,551	377	100				7	55	38		34	77	0.61	71.7
D	DO	4S	9		1,124	1,124	76	100				43	34	23		21	27	0.39	40.9
D	Totals		95	.7	13,135	13,048	887	67	28	6		4	8	49	39	30	89	0.76	146.3
H	DO	2S	42		294	294	20		100				100			32	160	1.22	1.8
H	DO	3S	50		353	353	24	100					100			30	85	0.82	4.1
H	DO	4S	8		55	55	4	100					100			28	30	0.54	1.8
H	Totals		5		702	702	48	58	42			58	42			30	90	0.86	7.8
Type Totals				.6	13,837	13,749	935	66	28	5		3	10	49	37	30	89	0.77	154.1

Area 5 (R/W) Take

T04N R07W S25 T5RW										T04N R07W S25 T5RW			
Twp	Rge	Sec	Tract	Type	Acre	Plots	Sample Trees	CuFt	BdFt				
04N	07W	25	5RW	5RW	8.00	99	255	1	W				

Spp	So	Gr	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	?0	CU		100.0	532											4		0.00	13.0	
D	?0	2S	61	.7	19,121	18,981	152		6	64	30		2	1	37	60	35	269	1.78	70.4
D	?0	3S	35	.9	10,824	10,727	86		93	6	1		1	5	39	55	35	88	0.71	122.1
D	?0	4S	4	.4	1,307	1,301	10		1	95		5	58	36	6		19	27	0.44	48.4
D	Totals		81	2.4	31,783	31,009	248		0	40	41	19	4	4	37	56	31	122	1.01	254.0
SF	?0	CU		100.0	157												23		0.00	1.0
SF	?0	2S	83	1.2	4,071	4,023	32			32	68		1	2	28	68	36	441	2.43	9.1
SF	?0	3S	16	.4	771	767	6		87	13				17	39	44	34	93	0.81	8.3
SF	DO	4S	1		51	51	0		100				79	21			17	25	0.50	2.0
SF	Totals		13	4.1	5,050	4,842	39		15	29	56		2	5	29	64	33	237	1.57	20.4
H	?0	CU		100.0	36												2		0.00	2.8
H	?0	2S	48	2.7	897	872	7			84	16				46	54	36	265	1.75	3.3
H	?0	3S	44	4.1	839	805	6		100					18	36	46	34	93	0.82	8.6
H	?0	4S	7		136	136	1		100				51	49			18	26	0.51	5.3
H	Totals		5	5.0	1,908	1,813	15		52	40	8		4	12	38	46	26	90	0.96	20.1
A	?0	CU		100.0	5												2		0.00	.5
A	?0	3S	57		270	270	2		35	65			32	45	23		23	90	1.06	3.0
A	?0	4S	43		203	203	2		74	26			35	18	47		26	66	0.79	3.1
A	Totals		1	1.0	478	473	4		52	48			33	34	33		23	72	0.91	6.6
C	DO	4S	100		19	19	0		100				100				16	30	0.50	.6
C	Totals		0		19	19	0		100				100				16	30	0.50	.6
Type Totals				2.8	39,237	38,156	305		0	38	40	23	4	5	36	55	30	126	1.05	301.6

Areas WA3, & 4 Take & Leave Combined

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	SHEEP		DATE	10/26/2004		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	07W	25	134	0PCH	223.00	70	484	1	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		70	484	6.9						
CRUISE		25	166	6.6	28,399	.6				
DBH COUNT										
REFOREST										
COUNT		45	314	7.0						
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	72	64.1	16.5	75		95.1	14,853	14,195	3,865	3,772
DOUGLEAV	57	37.4	21.4	89		93.6	16,280	16,018	4,062	4,034
SFIRLEAV	19	5.5	24.9	103	3	18.7	4,436	4,225	957	917
WHEMLOCK	7	10.2	14.4	42		11.5	1,412	1,304	378	366
PS FIR	5	5.1	16.1	68	1	7.2	1,457	1,403	330	313
SNAG	2	2.1	14.3	43		2.4	67		40	
HEMLEAV	1	.6	24.0	66		1.9	269	269	68	68
ALDRLEAV	2	1.4	13.9	38		1.4	146	146	42	42
CEDLEAV	1	.9	10.0	17		.5	26	26	7	7
TOTAL	166	127.3	18.3	76		232.4	38,947	37,587	9,750	9,520
SD: 1		COEFF VAR.%	S.E.%	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.	
				LOW	AVG	HIGH	5	10	15	
DOUG FIR		146.3	11.4	108	121	135				
DOUGLEAV		161.1	12.5	148	169	190				
SFIRLEAV		315.3	24.5	77	102	127				
WHEMLOCK		595.1	46.2	4	8	12				
PS FIR		735.1	57.1	7	15	24				
SNAG										
HEMLEAV		1288.4	100.0		3	5				
ALDRLEAV		993.3	77.1	0	2	3				
CEDLEAV		1288.4	100.0		0	0				
TOTAL		76.0	5.9	395	420	445	231	58	26	
SD: 1		COEFF VAR.%	S.E.%	TREES/ACRE			# OF PLOTS REQ.		INF. POP.	
				LOW	AVG	HIGH	5	10	15	
DOUG FIR		68.7	8.2	59	64	69				
DOUGLEAV		41.3	4.9	36	37	39				
SFIRLEAV		162.7	19.4	4	6	7				
WHEMLOCK		263.6	31.5	7	10	13				
PS FIR		291.6	34.8	3	5	7				
SNAG		377.3	45.1	1	2	3				
HEMLEAV		409.1	48.9	0	1	1				
ALDRLEAV		620.0	74.1	0	1	2				
CEDLEAV		836.7	100.0		1	2				
TOTAL		43.1	5.2	121	127	134	74	19	8	
SD: 1		COEFF VAR.%	S.E.%	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.	
				LOW	AVG	HIGH	5	10	15	
DOUG FIR		59.9	7.2	88	95	102				
DOUGLEAV		39.6	4.7	89	94	98				
SFIRLEAV		166.4	19.9	15	19	22				
WHEMLOCK		257.5	30.8	8	12	15				
PS FIR		262.2	31.3	5	7	9				
SNAG		363.2	43.4	1	2	3				
HEMLEAV		409.1	48.9	1	2	3				

TC TSTATS				STATISTICS				PAGE 2	
				PROJECT SHEEP		DATE 10/26/2004			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	07W	25	134	0PCH	223.00	70	484	1	W
SD: 1		COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
ALDRLEAV		620.0	74.1	0	1	3			
CEDLEAV		836.7	100.0	0	0	1			
TOTAL		31.2	3.7	224	232	241	39	10	4
SD: 1		COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
		VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR		62.4	7.5	13,136	14,195	15,254			
DOUGLEAV		39.9	4.8	15,255	16,018	16,782			
SFIRLEAV		173.1	20.7	3,351	4,225	5,099			
WHEMLOCK		257.6	30.8	902	1,304	1,705			
PS FIR		259.4	31.0	968	1,403	1,838			
SNAG									
HEMLEAV		409.1	48.9	137	269	401			
ALDRLEAV		620.0	74.1	38	146	255			
CEDLEAV		836.7	100.0	0	26	53			
TOTAL		33.5	4.0	36,082	37,587	39,091	45	11	5

Areas 1, 3, & 4 Take

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT SHEEP		DATE 10/26/2004				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	07W	25	134	PCHT	223.00	70	241	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		70	241	3.4						
CRUISE		22	85	3.9	18,071		.5			
DBH COUNT										
REFOREST										
COUNT		44	156	3.5						
BLANKS		4								
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	72	64.1	16.5	75		95.1	14,853	14,195	3,865	3,772
WHEMLOCK	7	10.2	14.4	42		11.5	1,412	1,304	378	366
PS FIR	4	4.6	16.4	62	1	6.7	1,330	1,267	295	274
SNAG	2	2.1	14.3	43		2.4	67		40	
TOTAL	85	81.0	16.2	69		115.7	17,662	16,766	4,578	4,413
	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	78.0	8.5	217	237	257					
WHEMLOCK	421.2	45.7	9	16	23					
PS FIR	576.6	62.5	10	27	44					
SNAG										
TOTAL	72.5	7.9	258	280	302	210	53	23		
	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	68.7	8.2	59	64	69					
WHEMLOCK	263.6	31.5	7	10	13					
PS FIR	279.4	33.4	3	5	6					
SNAG	377.3	45.1	1	2	3					
TOTAL	66.0	7.9	75	81	87	174	44	19		
	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	59.9	7.2	88	95	102					
WHEMLOCK	257.5	30.8	8	12	15					
PS FIR	263.8	31.5	5	7	9					
SNAG	363.2	43.4	1	2	3					
TOTAL	57.8	6.9	108	116	124	134	33	15		
	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	62.4	7.5	13,136	14,195	15,254					
WHEMLOCK	257.6	30.8	902	1,304	1,705					
PS FIR	267.1	31.9	862	1,267	1,671					
SNAG										
TOTAL	60.2	7.2	15,560	16,766	17,971	145	36	16		

Areas 1, 1A, 3, & 4 Leave

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT SHEEP		DATE 10/26/2004				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	07W	25	134	PCHL	223.00	70	247	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		70	247	3.5						
CRUISE		25	82	3.3	10,689		.8			
DBH COUNT										
REFOREST										
COUNT		45	162	3.6						
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	57	37.4	21.4	89		93.6	16,280	16,018	4,062	4,034
SFIRLEAV	19	5.5	24.9	103	3	18.7	4,436	4,225	957	917
SNAG	2	2.1	14.3	43		2.4	67		40	
HEMLEAV	1	.6	24.0	66		1.9	269	269	68	68
ALDRLEAV	2	1.4	13.9	38		1.4	146	146	42	42
CEDLEAV	1	.9	10.0	17		.5	26	26	7	7
TOTAL	82	47.9	21.3	85		118.6	21,225	20,685	5,176	5,068
	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH		5	10		15
DOUGLEAV	88.2	9.7	309	342	375					
SFIRLEAV	210.5	23.2	158	206	254					
SNAG										
HEMLEAV	905.5	100.0		5	11					
ALDRLEAV	696.6	76.9	1	3	5					
CEDLEAV	905.5	100.0	0	0	1					
TOTAL	64.7	7.1	517	557	597		167	42		19
	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH		5	10		15
DOUGLEAV	41.3	4.9	36	37	39					
SFIRLEAV	162.7	19.4	4	6	7					
SNAG	377.3	45.1	1	2	3					
HEMLEAV	409.1	48.9	0	1	1					
ALDRLEAV	620.0	74.1	0	1	2					
CEDLEAV	836.7	100.0		1	2					
TOTAL	26.5	3.2	46	48	49		28	7		3
	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH		5	10		15
DOUGLEAV	39.6	4.7	89	94	98					
SFIRLEAV	166.4	19.9	15	19	22					
SNAG	363.2	43.4	1	2	3					
HEMLEAV	409.1	48.9	1	2	3					
ALDRLEAV	620.0	74.1	0	1	3					
CEDLEAV	836.7	100.0	0	0	1					
TOTAL	15.8	1.9	116	119	121		10	2		1
	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH		5	10		15
DOUGLEAV	39.9	4.8	15,255	16,018	16,782					
SFIRLEAV	173.1	20.7	3,351	4,225	5,099					
SNAG										
HEMLEAV	409.1	48.9	137	269	401					
ALDRLEAV	620.0	74.1	38	146	255					
CEDLEAV	836.7	100.0	0	26	53					
TOTAL	22.0	2.6	20,140	20,685	21,230		19	5		2

Area C Take & Leave Combined

TC TSTATS		STATISTICS								PAGE	1
		PROJECT				SHEEP				DATE	10/26/2004
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
04N	07W	25	2	0PCL	68.00	29	203	1	W		
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL		29	203	7.0							
CRUISE		14	91	6.5	9,001	1.0					
DBH COUNT											
REFOREST											
COUNT		15	112	7.5							
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	48	40.3	22.3	90		108.9	20,061	19,696	4,767	4,723	
DOUG FIR	31	70.8	15.0	65		86.9	13,135	13,048	3,386	3,367	
ALDRLEAV	5	9.9	16.0	44		13.9	1,391	1,371	397	393	
HEMLEAV	2	5.0	19.5	90		10.4	1,907	1,835	484	484	
SFIRLEAV	3	2.4	25.0	97	1	8.1	1,846	1,828	397	393	
WHEMLOCK	2	3.9	16.5	62		5.8	702	702	201	201	
TOTAL	<i>91</i>	<i>132.4</i>	<i>18.0</i>	<i>73</i>		<i>234.0</i>	<i>39,042</i>	<i>38,479</i>	<i>9,631</i>	<i>9,562</i>	
SD: 1		COEFF VAR.%	S.E.%	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.		
				LOW	AVG	HIGH	5	10	15		
DOUGLEAV		112.1	11.7	263	298	333					
DOUG FIR		183.2	19.2	71	88	105					
ALDRLEAV		437.3	45.8	4	8	11					
HEMLEAV		671.4	70.4	2	8	14					
SFIRLEAV		575.0	60.3	11	27	43					
WHEMLOCK		671.8	70.4	1	4	7					
TOTAL		<i>63.4</i>	<i>6.6</i>	<i>404</i>	<i>433</i>	<i>462</i>	<i>161</i>	<i>40</i>	<i>18</i>		
SD: 1		COEFF VAR.%	S.E.%	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
				LOW	AVG	HIGH	5	10	15		
DOUGLEAV		40.6	7.5	37	40	43					
DOUG FIR		86.7	16.1	59	71	82					
ALDRLEAV		285.3	53.0	5	10	15					
HEMLEAV		174.5	32.4	3	5	7					
SFIRLEAV		213.2	39.6	1	2	3					
WHEMLOCK		223.2	41.4	2	4	6					
TOTAL		<i>47.7</i>	<i>8.9</i>	<i>121</i>	<i>132</i>	<i>144</i>	<i>91</i>	<i>23</i>	<i>10</i>		
SD: 1		COEFF VAR.%	S.E.%	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
				LOW	AVG	HIGH	5	10	15		
DOUGLEAV		32.6	6.1	102	109	116					
DOUG FIR		80.4	14.9	74	87	100					
ALDRLEAV		285.3	53.0	7	14	21					
HEMLEAV		174.4	32.4	7	10	14					
SFIRLEAV		211.7	39.3	5	8	11					
WHEMLOCK		223.0	41.4	3	6	8					
TOTAL		<i>31.8</i>	<i>5.9</i>	<i>220</i>	<i>234</i>	<i>248</i>	<i>40</i>	<i>10</i>	<i>4</i>		
SD: 1		COEFF VAR.%	S.E.%	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
				LOW	AVG	HIGH	5	10	15		
DOUGLEAV		32.4	6.0	18,510	19,696	20,882					
DOUG FIR		83.0	15.4	11,037	13,048	15,059					
ALDRLEAV		297.6	55.3	613	1,371	2,129					
HEMLEAV		174.5	32.4	1,241	1,835	2,429					
SFIRLEAV		212.4	39.4	1,107	1,828	2,548					
WHEMLOCK		223.0	41.4	411	702	992					
TOTAL		<i>31.6</i>	<i>5.9</i>	<i>36,218</i>	<i>38,479</i>	<i>40,741</i>	<i>40</i>	<i>10</i>	<i>4</i>		

Area 2 Take

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	SHEEP		DATE	10/26/2004		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	07W	25	2	PCLT	68.00	29	81	1	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		29	81	2.8						
CRUISE		12	33	2.8	5,081	.6				
DBH COUNT										
REFOREST										
COUNT		14	48	3.4						
BLANKS		3								
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	31	70.8	15.0	65		86.9	13,135	13,048	3,386	3,367
WHEMLOCK	2	3.9	16.5	62		5.8	702	702	201	201
TOTAL	33	74.7	15.1	65		92.7	13,837	13,749	3,587	3,568
	COEFF VAR.%	S.E.%	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.		
SD: 1			LOW	AVG	HIGH	5	10	15		
DOUG FIR	76.4	13.3	211	244	276					
WHEMLOCK	400.5	69.7	3	11	19					
TOTAL	69.3	12.1	224	255	285	192	48	21		
	COEFF VAR.%	S.E.%	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD: 1			LOW	AVG	HIGH	5	10	15		
DOUG FIR	86.7	16.1	59	71	82					
WHEMLOCK	223.2	41.4	2	4	6					
TOTAL	80.6	15.0	64	75	86	260	65	29		
	COEFF VAR.%	S.E.%	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD: 1			LOW	AVG	HIGH	5	10	15		
DOUG FIR	80.4	14.9	74	87	100					
WHEMLOCK	223.0	41.4	3	6	8					
TOTAL	73.6	13.7	80	93	105	216	54	24		
	COEFF VAR.%	S.E.%	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD: 1			LOW	AVG	HIGH	5	10	15		
DOUG FIR	83.0	15.4	11,037	13,048	15,059					
WHEMLOCK	223.0	41.4	411	702	992					
TOTAL	77.0	14.3	11,785	13,749	15,714	237	59	26		

Area 6 Leave

TC TSTATS				STATISTICS			PAGE	1		
				PROJECT	SHEEP		DATE	10/26/2004		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	07W	25	2	PCLL	68.00	29	122	1	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		29	122	4.2						
CRUISE		14	58	4.1	3,920	1.5				
DBH COUNT										
REFOREST										
COUNT		15	64	4.3						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUGLEAV	48	40.3	22.3	90		108.9	20,061	19,696	4,767	4,723
ALDRLEAV	5	9.9	16.0	44		13.9	1,391	1,371	397	393
HEMLEAV	2	5.0	19.5	90		10.4	1,907	1,835	484	484
SFIRLEAV	3	2.4	25.0	97	1	8.1	1,846	1,828	397	393
TOTAL	58	57.6	21.2	83		141.4	25,205	24,730	6,044	5,993
		COEFF	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.		
SD:	1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUGLEAV		66.1	8.7	427	468	509				
ALDRLEAV		344.9	45.3	7	12	18				
HEMLEAV		534.2	70.1	4	13	21				
SFIRLEAV		456.5	59.9	17	42	68				
TOTAL		50.4	6.6	500	535	570	102	25	11	
		COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUGLEAV		40.6	7.5	37	40	43				
ALDRLEAV		285.3	53.0	5	10	15				
HEMLEAV		174.5	32.4	3	5	7				
SFIRLEAV		213.2	39.6	1	2	3				
TOTAL		34.5	6.4	54	58	61	48	12	5	
		COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUGLEAV		32.6	6.1	102	109	116				
ALDRLEAV		285.3	53.0	7	14	21				
HEMLEAV		174.4	32.4	7	10	14				
SFIRLEAV		211.7	39.3	5	8	11				
TOTAL		13.3	2.5	138	141	145	7	2	1	
		COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUGLEAV		32.4	6.0	18,510	19,696	20,882				
ALDRLEAV		297.6	55.3	613	1,371	2,129				
HEMLEAV		174.5	32.4	1,241	1,835	2,429				
SFIRLEAV		212.4	39.4	1,107	1,828	2,548				
TOTAL		17.8	3.3	23,911	24,730	25,549	13	3	1	

Arcas HA 3, 4 Leave

Stand Table Summary															
TC TSTNDSUM															
Project SHEEP															
T04N R07W S25 TPCHL										T04N R07W S25					
Twp Rge Sec Tract				Type		Acres		Plots	Sample Trees			Page: 1			
04N 07W 25 134				PCHL		223.00		70	82			Date: 10/26/200			
Time: 10:25:20AM															
S Spc	T	Sample		Av	Trees/ BA/ Logs			Average Log		Net		Totals			
		DBH	Trees	FF 16'	Ht Tot	Acres	Acres	Acres	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acres	Cu.Ft. Acres	Bd.Ft. Acres	Tons	Cunits
DL		14	1	84	121	1.537	1.64	3.07	24.0	90.0	74	277		164	62
DL		15	1	89	92	1.339	1.64	2.68	21.5	80.0	58	214		128	48
DL		16	1	87	107	1.176	1.64	2.35	27.0	105.0	64	247		142	55
DL		17	3	88	110	3.126	4.93	8.34	24.7	93.8	206	782		460	174
DL		18	2	86	108	1.859	3.29	4.65	28.6	106.0	133	493		296	110
DL		19	5	87	117	4.171	8.21	10.85	33.6	125.4	365	1,360		813	303
DL		20	5	87	112	3.765	8.21	9.79	36.2	133.8	355	1,310		791	292
DL		21	3	88	108	2.049	4.93	4.78	43.7	162.9	209	779		466	174
DL		22	7	87	120	4.356	11.50	11.20	46.6	186.1	521	2,085		1,163	465
DL		23	7	87	115	3.985	11.50	10.82	47.3	192.1	512	2,078		1,141	463
DL		24	7	85	113	3.660	11.50	9.93	49.5	198.9	492	1,976		1,097	441
DL		25	6	85	112	2.891	9.86	6.26	55.9	230.0	350	1,441		781	321
DL		26	3	86	120	1.337	4.93	4.01	56.6	238.9	227	958		506	214
DL		27	2	86	129	.826	3.29	2.48	64.0	256.7	159	636		354	142
DL		29	1	84	118	.358	1.64	1.07	68.0	273.3	73	294		163	65
DL		30	1	82	120	.335	1.64	1.00	71.7	293.3	72	294		160	66
DL		31	2	88	132	.627	3.29	1.88	88.3	423.3	166	796		370	178
DL	Totals		57	87	114	37.396	93.63	95.16	42.4	168.3	4,034	16,018		8,997	3,572
SFL		19	2	90	123	1.001	1.97	3.00	33.3	138.3	100	415		223	93
SFL		21	1	89	132	.410	.99	1.23	43.7	193.3	54	238		120	53
SFL		22	1	88	119	.373	.99	1.12	41.3	176.7	46	198		103	44
SFL		23	2	92	120	.683	1.97	2.05	47.5	218.3	97	447		217	100
SFL		24	2	88	118	.627	1.97	1.57	58.8	244.0	92	383		206	85
SFL		25	2	88	130	.578	1.97	1.16	54.8	232.5	63	269		141	60
SFL		26	1	88	129	.267	.99	.80	62.0	270.0	50	217		111	48
SFL		27	3	91	130	.744	2.96	2.23	70.3	347.8	157	776		350	173
SFL		31	1	92	122	.188	.99	.56	89.0	466.7	50	263		112	59
SFL		32	3	91	131	.529	2.96	1.59	99.4	505.6	158	803		352	179
SFL		37	1	86	129	.132	.99	.40	124.7	546.7	49	216		110	48
SFL	Totals		19	90	125	5.533	18.73	15.71	58.4	269.0	917	4,225		2,045	942
HL		24	1	88	79	.611	1.92	1.22	55.5	220.0	68	269		151	60
HL	Totals		1	88	79	.611	1.92	1.22	55.5	220.0	68	269		151	60
AL		12	1	87	66	.917	.72	.92	21.0	70.0	19	64		43	14
AL		17	1	87	68	.457	.72	.91	25.0	90.0	23	82		51	18
AL	Totals		2	87	67	1.374	1.44	1.83	23.0	80.0	42	146		94	33
CL		10	1	83	20	.880	.48	.88	8.0	30.0	7	26		16	6
CL	Totals		1	83	20	.880	.48	.88	8.0	30.0	7	26		16	6
SN		12	1	82	48	1.528	1.20								
SN		19	1	80	30	.610	1.20								
SN	Totals		2	81	43	2.138	2.40								
Totals			82	87	109	47.933	118.60	114.81	44.1	180.2	5068	20,685		11,303	4,613

Area 2 Leave

TC TSTNDSUM		Stand Table Summary															
Project SHEEP											T04N R07W S25 TPCLL						
Twp Rge Sec Tract		Type		Acres		Plots		Sample Trees		Page: 1							
04N 07W 25 2		PCLL		68.00		29		58		Date: 10/26/2001							
										Time: 10:25:20AM							
Spc	S T	Sample		Av		Trees/ BA/		Logs		Average Log		Net		Net		Totals	
		DBH	Trees	FF	Ht	Acres	Acres	Acres	Net	Net	Tons/	Cu.Ft.	Bd.Ft.	Tons	Cunits	MBF	
DL		12	1	85	167	2.889	2.27	8.67	14.0	56.7		121	491			83	33
DL		16	1	88	115	1.625	2.27	3.25	30.5	120.0		99	390			67	27
DL		17	2	85	101	2.879	4.54	5.76	29.5	107.5		170	619			116	42
DL		18	1	88	125	1.284	2.27	3.85	27.7	103.3		107	398			72	27
DL		19	2	90	109	2.305	4.54	5.76	34.4	124.0		198	714			135	49
DL		20	3	89	106	3.120	6.81	8.32	34.3	132.5		285	1,102			194	75
DL		21	4	87	114	3.773	9.08	10.38	38.4	146.4		398	1,519			271	103
DL		22	6	88	117	5.157	13.61	15.47	40.1	169.4		621	2,622			422	178
DL		23	4	88	117	3.146	9.08	8.65	47.8	199.1		414	1,722			281	117
DL		24	5	88	123	3.611	11.34	10.83	48.9	214.0		529	2,318			360	158
DL		25	3	87	122	1.997	6.81	5.32	55.5	245.0		296	1,305			201	89
DL		26	6	85	118	3.692	13.61	11.08	54.7	232.2		606	2,572			412	175
DL		27	1	87	120	.571	2.27	1.14	81.0	380.0		92	434			63	29
DL		28	3	86	113	1.592	6.81	4.24	67.7	291.2		288	1,236			196	84
DL		29	1	84	111	.495	2.27	1.48	62.0	286.7		92	425			63	29
DL		30	1	84	116	.462	2.27	1.39	74.0	310.0		103	430			70	29
DL		31	3	84	126	1.299	6.81	3.90	78.3	358.9		305	1,398			208	95
DL		32	1	86	105	.406	2.27										
DL	Totals		48	87	119	40.302	108.91	109.50	43.1	179.9		4,723	19,696			3,212	1,339
HL		19	1	89	104	2.648	5.21	5.30	44.0	175.0		233	927			158	63
HL		20	1	88	116	2.390	5.21	4.78	52.5	190.0		251	908			171	62
HL	Totals		2	89	110	5.038	10.43	10.08	48.0	182.1		484	1,835			329	125
SFL		23	1	89	116	.937	2.70	1.87	65.0	275.0		122	515			83	35
SFL		24	1	89	116	.861	2.70	2.58	51.0	236.7		132	611			90	42
SFL		29	1	92	127	.589	2.70	1.77	79.0	396.7		140	701			95	48
SFL	Totals		3	90	119	2.387	8.11	6.22	63.2	293.7		393	1,828			267	124
AL		14	1	87	74	2.601	2.78	5.20	16.5	65.0		86	338			58	23
AL		16	2	86	55	3.983	5.56	5.97	22.0	70.0		131	418			89	28
AL		17	1	86	66	1.764	2.78	3.53	23.0	85.0		81	300			55	20
AL		18	1	87	78	1.574	2.78	3.15	30.0	100.0		94	315			64	21
AL	Totals		5	86	65	9.922	13.90	17.85	22.0	76.8		393	1,371			267	93
Totals			58	87	109	57.649	141.35	143.65	41.7	172.2		5993	24,730			4,075	1,682

Log Stock Table - MBF

T04N R07W S25 TyPCHT	223.00
T04N R07W S25 TyPCLT	68.00
T04N R07W S25 Ty5RW	8.00

Project: SHEEP
Acres 299.00

Spp	S T	So Gr	Log rt	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		?0	4S	15	23		23	.5			23	0								
D		?0	4S	16	7		7	.2			7					0				
D		?0	4S	17	10		10	.2			10	0								
D		DO	4S	18	20		20	.5		3	16									
D		?0	4S	20	35		35	.8			31	4								
D		?0	4S	21	27		27	.6			22	4								
D		DO	4S	22	26		26	.6			16	10								
D		?0	4S	23	9		9	.2			9									
D		DO	4S	24	3		3	.1			3	0								
D		?0	4S	25	7		7	.2			7									
D		?0	4S	26	4		4	.1			4									
D		DO	4S	27	8		8	.2			8									
D		DO	4S	28	7		7	.2			7									
D		DO	4S	30	15		15	.4				15								
D		?0	4S	32	18		18	.4			18									
D		Totals			4,343		4,301	86.4		3	857	755	921	855	404	497	8			
H		?0	2S	32	23		23	6.6					21	1	1					
H		?0	2S	40	109	2.5	106	30.1						57	50					
H		DO	3S	30	25		25	7.1			6		19							
H		?0	3S	32	92	8.8	84	23.9			11	0	73							
H		DO	3S	36	50	5.4	47	13.3			13		33							
H		DO	3S	38	8		8	2.2			8									
H		?0	3S	39	18		18	5.2			18									
H		?0	3S	40	1		1	.3				1								
H		?0	4S	15	22		22	6.2			22									
H		DO	4S	21	14		14	4.0				14								
H		?0	4S	28	4		4	1.1			4									
H		Totals			367	3.7	353	7.1			83	15	125	21	58	51				
SF		?0	2S	20	29		29	9.0							29					
SF		?0	2S	22	44		44	13.7								44				
SF		DO	2S	32	9	1.8	9	2.8					1	2	2	3				
SF		?0	2S	40	120		120	37.4						36	8	71	4			
SF		?0	3S	21	0		0	.0					0							
SF		DO	3S	22	7	12.0	7	2.0					6	0						
SF		DO	3S	23	0		0	.0				0								
SF		DO	3S	25	0		0	.0					0							

Log Stock Table - MBF

T04N R07W S25 TyPCHT	223.00
T04N R07W S25 TyPCLT	68.00
T04N R07W S25 Ty5RW	8.00

Project: SHEEP
Acres 299.00

Spp	S T	So Gr	Log rt de	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+	
SF		DO	3S	27	0	9.1	0	.0				0									
SF		DO	3S	28	0		0	.0				0									
SF		DO	3S	30	0		0	.0				0									
SF		DO	3S	32	69		69	21.4				25	0	44							
SF		DO	3S	33	0		0	.0			0										
SF		DO	3S	34	0		0	.1				0									
SF		DO	3S	35	0		0	.1			0	0									
SF		DO	3S	37	0		0	.1				0									
SF		DO	3S	38	0		0	.1			0										
SF		?0	3S	40	36		36	11.3			35	0	2								
SF		DO	4S	13	0		0	.0			0										
SF		DO	4S	17	0		0	.0				0									
SF		DO	4S	18	5		5	1.7			5										
SF		DO	4S	20	0		0	.0			0										
SF		DO	4S	22	0		0	.0				0									
SF		Totals			322		321	6.5			41	26	9	45	38	39	118	4			
C		DO	4S	16	0		0	100.0			0										
C		Totals			0		0	.0			0										
A		DO	3S	16	0		0	2.7			0										
A		?0	3S	20	1		1	15.7			0		0								
A		?0	3S	21	0		0	12.1				0									
A		DO	3S	30	1		1	13.7						1							
A		?0	3S	32	0		0	13.0						0							
A		?0	4S	20	1		1	15.0			0		0								
A		?0	4S	22	0		0	3.3				0									
A		?0	4S	25	0		0	4.6				0									
A		?0	4S	32	1		1	20.0			1										
A		Totals			4		4	.1			2	0	2								
Total		All Species			5,036	1.1	4,979	100.0		3	981	798	1056	923	501	587	127	4			