



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Steeple Chase Sale 341-06-53

District: Astoria

Date: 1/30/06

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,609,834.24	\$99,252.52	\$1,709,086.76
		Project Work	(\$282,298.00)
		Advertised Value	\$1,426,788.76



Timber Sale Appraisal

Timber Description

Steeple Chase

Sale 341-06-53

"STEWARDSHIP IN FORESTRY"

District: Astoria

Location: Portions of Sections 11, 13, 14, and 24 of T6N, R6W, W.M., Clatsop County, Oregon

Date: 1/30/06

Stand Stocking: 60%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	19	0	99
Western Hemlock / Fir	13	0	100
Red Cedar	28	0	100
Alder (Red)	17	0	99
Maple	20	0	100

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Red Cedar	Alder (Red)	Maple	Total
SM	2	0	0	0	0	2
2S	2,897	54	1	0	0	2,952
3S	798	6	0	227	1	1,032
4S	221	28	0	111	0	360
Total	3,918	88	1	338	1	4,346

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

Log Markets: Mist, Clatskanie, Tillamook, Forest Grove

Hauling costs adjusted in Other Costs (No P&R) to make equivalent to \$700 daily truck costs.

Other Costs with Profit and Risk (P&R):

100% branding and painting: $\$1/\text{MBF} \times 4,346 = \$4,346$

Top 50 residual trees @50+', girdle 20 trees @ 50+' and girdle 12 residual trees @ d.b.h.:
 $\$35/\text{tree} \times 82 \text{ trees} = \$2,870$

TOTAL Other Costs (with P&R) = \$7,216

Other Costs (No P&R):

Additional Hauling Costs = $\$11.13/\text{MBF} \times 4,346\text{MBF} = \$48,367$

Hauling:

DF [$\$700/\text{day} - (\$460/\text{day} \times 1.14\%)$] / 18MBF/day = $\$9 \text{ MBF} \times 3,918 = \$35,262$

HF [$\$700/\text{day} - (\$460/\text{day} \times 1.14\%)$] / 12MBF/day = $\$14 \text{ MBF} \times 88 = \$1,232$

RC [$\$700/\text{day} - (\$460/\text{day} \times 1.14\%)$] / 12MBF/day = $\$14 \text{ MBF} \times 1 = \14

RA [$\$700/\text{day} - (\$460/\text{day} \times 1.14\%)$] / 5MBF/day = $\$35 \text{ MBF} \times 338 = \$11,830$

BM [$\$700/\text{day} - (\$460/\text{day} \times 1.14\%)$] / 6MBF/day = $\$29 \text{ MBF} \times 1 = \29

Pile Slash at Cable Landings in Area 4: 4 landings x \$262.5 per landing = \$1,050

Excavator Slash Piling in Area 4: 40hrs x \$120 = \$4,800

Excavator Move in: \$945

Close and rip dirt road segments 1A to 1B, 1C to 1D, 3A to 3B, 3C to 3D, 3E to 3F and
3G to 3H after harvest: $\$120/\text{hr} \times 42.5 \text{ stations} = \$5,100$

TOTAL Other Costs (No P&R): \$60,262



Timber Sale Appraisal

Logging Conditions

Steeple Chase

Sale 341-06-53

"STEWARDSHIP IN FORESTRY"

Combination#: 1	Douglas - Fir	72.00%	
	Western Hemlock / Fir	72.00%	
	Red Cedar	72.00%	
	Alder (Red)	72.00%	
	Maple	72.00%	
Yarding Distance:	Medium (800 ft)		Downhill Yarding: No
Logging System:	Cable: Large Tower >=70		Process: Stroke Delimber
Tree Size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF		
Loads/Day:	4		Bd. Ft./Load: 4,800
Cost/MBF:	\$195.04		
Machines:			
	Log Loader (A)		
	Stroke Delimber (A)		
	Tower Yarder (Large)		
Combination#: 2	Douglas - Fir	5.00%	
	Western Hemlock / Fir	5.00%	
	Red Cedar	5.00%	
	Alder (Red)	5.00%	
	Maple	5.00%	
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:	8		Bd. Ft./Load: 4,800
Cost/MBF:	\$85.04		
Machines:			
	Log Loader (B)		
	Track Skidder		
Combination#: 3	Douglas - Fir	18.00%	
	Western Hemlock / Fir	18.00%	
	Red Cedar	18.00%	
	Alder (Red)	18.00%	
	Maple	18.00%	
Yarding Distance:	Medium (800 ft)		Downhill Yarding: No
Logging System:	Cable: Large Tower >=70		Process: Manual Delimiting
Tree Size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
Loads/Day:	9		Bd. Ft./Load: 4,800
Cost/MBF:	\$82.18		
Machines:			
	Log Loader (A)		
	Tower Yarder (Large)		

Combination#: 4	Douglas - Fir	5.00%	
	Western Hemlock / Fir	5.00%	
	Red Cedar	5.00%	
	Alder (Red)	5.00%	
	Maple	5.00%	
Yarding Distance:	Short (400 ft)		Downhill Yarding: Yes
Logging System:	Track Skidder		Process: Manual Falling/Delimiting
Tree Size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
Loads/Day:	10		Bd. Ft./Load: 4,800
Cost/MBF:	\$68.03		
Machines:			
	Log Loader (B)		
	Track Skidder		



Timber Sale Appraisal

Logging Costs

Steeple Chase

Sale 341-06-53

"STEWARDSHIP IN FORESTRY"

Date: 1/30/06

Operating Seasons: 2.5

Profit & Risk: 14%

Project Costs: \$282,298

Other Costs (P/R): \$7,216

Slash Disposal: \$0

Other Costs: \$60,262

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

Road Maintenance: \$3.75

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	4.0	4.5
Western Hemlock / Fir	\$0.00	3.0	4.0
Red Cedar	\$0.00	3.0	4.0
Alder (Red)	\$0.00	2.0	2.5
Maple	\$0.00	2.0	3.0



Timber Sale Appraisal Logging Costs Breakdown Steeple Chase Sale 341-06-53

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Western Hemlock / Fir	Red Cedar	Alder (Red)	Maple
Logging	162.87	162.87	162.87	162.87	162.87
Road Maintenance	3.79	3.75	3.75	3.79	3.75
Fire Protection	1.69	1.69	1.69	0.00	1.69
Hauling	25.81	38.35	38.35	77.58	76.80
Other (P/R appl.)	1.80	1.80	1.80	0.00	1.80
Profit & Risk	27.43	29.18	29.18	34.19	34.57
Slash Disposal	0.00	0.00	0.00	0.00	0.00
Scaling	2.00	2.00	2.00	2.00	2.00
Other	15.04	15.04	15.04	0.00	15.04
Total	240.43	254.68	254.68	280.43	298.52

Amortization	0.00	0.00	0.00	0.00	0.00
Pond Value	647.43	421.02	825.00	573.51	490.00
Stumpage	407.00	166.34	570.32	293.08	191.48
Amortized	0.00	0.00	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Steeple Chase Sale 341-06-53

Amortized

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

Unamortized

	Douglas - Fir	Western Hemlock / Fir	Red Cedar	Alder (Red)	Maple
MBF	3,918.00	88.00	1.00	338.00	1.00
Value	407.00	166.34	570.32	293.08	191.48
Total	1,594,626.00	14,637.92	570.32	99,061.04	191.48

Gross Timber Sale Value

Recovery \$1,709,086.76

Prepared by: Derek Bangs

Date: 1/30/06

District: Astoria

Phone: (503) 325-5451

Final Road Maintenance Cost Summary

Sale: Steeple Chase
 Date: 28-Nov-05
 By: D.Bangs

MBF: 4,345
 \$/MBF: \$3.75

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost	Production Rates			
							Miles/day	Distance(miles)	Days	
Progressive Operations 1st Entry(4 mi.)	Grader 14G	\$570	1	16	\$84	\$1,914	Production Rates	Miles/day	Distance(miles)	Days
	Dump Truck 12CY	\$119	1	8	\$59	\$591	Grader	2.5	4.0	1.6
	FE Loader C966	\$570	1	8	\$79	\$1,202				
Progressive Operations 2nd Entry(2.2 mi.)	Grader 14G	\$570	1	8	\$84	\$1,242	Production Rates	Miles/day	Distance(miles)	Days
	Dump Truck 12CY	\$119	1	8	\$59	\$591	Grader	2.5	2.2	0.9
	FE Loader C966	\$570	1	8	\$79	\$1,202				
Final Road Maintenance (4mi.)	Grader 14G	\$570	1	24	\$84	\$2,586	Production Rates	Miles/day	Distance(miles)	Days
	Dump Truck 12CY x 3	\$119	4	24	\$59	\$1,892	Grader	1.5	4.0	2.7
	FE Loader C966	\$570	1	8	\$79	\$1,202	Vibratory Roller*	1.5	4.0	2.7
	Vibratory Roller Water Truck 2,500 gallon Labor	\$570 \$139	1	24 16 8	\$79 \$70 \$18	\$2,466 \$1,259 \$144				
Total										\$16,291

*Final Road Maintenance Only

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Steeple Chase

NEW CONSTRUCTION:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 1	1A-1B, 1C-1D, 2A-2B, 3A-3B,	58.55	\$45,730
	3C-3D, 3E-3F, 3G-3H,		
	4B-4C, & 4D-4E		
	TOTALS	58.55	\$45,730

ROAD IMPROVEMENT:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 1	I1-I2 and I3-I4,	134.93	\$18,420
	TOTALS	134.93	\$18,420

SPECIAL PROJECTS:

	<u>Description</u>	<u>Cost</u>
Project No. 2	Viewpoint Quarry Development & Rock Crushing	\$118,638
Project No. 3	Fish Culvert Installation	\$35,780
Project No. 4	Road, Fill, & Landing Vacating	\$2,378
Project No. 5	Stream Enhancement	\$3,375
Project No. 6	Roadside Brushing	\$28,376
	Project Work Road Maintenance	\$22,630
	TOTALS	\$211,177

MOVE IN:

	<u>Equipment</u>	<u>Cost</u>
	Dozer (D8)	\$1,030
	Dump Trucks (12 cy) X 4	\$476
	Dump Trucks (20 cy) X 4	\$560
	F E Loader (C966)	\$570
	Grader (14G)	\$570
	Vibratory Roller	\$570
	Water Truck (2,500 gallon)	\$139
	Excavator (C330) X 2	\$2,060
	Rubber Tired Skidder	\$525
	Brush Cutter 15' Vertical Reach X 2	\$470
	TOTAL	\$6,970

GRAND TOTAL **\$282,298**

Compiled By: D. Bangs

Date: 12/21/2005

SURFACING	Subgrade prep:	Description	Stations/ amount	Rate/ sta/amt	Cost
		Subgrade Compaction (All rocked roads) 2A-2B, 4B-4C, 4D-4E	3.00		
		(dirt) Grade and Shape 14' outslope	3.00		\$44.40
		1A-1B, 1C-1D, 3C-3D, 3E-3F, 3G-3H	52.80		\$710.16
ROAD SEGMENT	1A to 1B	POINT TO POINT	TOTAL VOLUME (CY)	Rate/ Cyl/ amt.	Cost
Application	Rock Size and Type	1A to 1B Volume (CY) per	Sta. to Sta. 0+00 to 24+90 Number of		
Base Rock Junctions	4"-0" Crushed 3/4"-0" Crushed	8 8 station junction	48 24 stations junctions	\$6.26 \$6.26	\$150 \$150
Total Rock for Road Segment: 48 \$150.24					
ROAD SEGMENT	1C to 1D	POINT TO POINT	TOTAL VOLUME (CY)	Rate/ Cyl/ amt.	Cost
Application	Rock Size and Type	1C to 1D Volume (CY) per	Sta. to Sta. 0+00 to 7+75 Number of		
Base Rock Junctions	4"-0" Crushed 3/4"-0" Crushed	8 8 station junction	48 24 stations junctions	\$6.26 \$6.26	\$150 \$150
Total Rock for Road Segment: 48 \$300.48					
ROAD SEGMENT	2A to 2B	POINT TO POINT	TOTAL VOLUME (CY)	Rate/ Cyl/ amt.	Cost
Application	Rock Size and Type	2A to 2B Volume (CY) per	Sta. to Sta. 0+00 to 1+00 Number of		
Base Rock Junctions Landings	4"-0" Crushed 4"-0" Crushed 6"-0" Pit-run	8 8 N/A	50 24 landings landings	\$6.26 \$6.26 \$6.59	\$313 \$150 \$330
Total Rock for Road Segment: 124 \$792.74					
ROAD SEGMENT	3E to 3F	POINT TO POINT	TOTAL VOLUME (CY)	Rate/ Cyl/ amt.	Cost
Application	Rock Size and Type	3E to 3F Volume (CY) per	Sta. to Sta. 0+00 to 13+00 Number of		
Base Rock Junctions	4"-0" Crushed	8 station junction	50 24 stations junctions	\$6.26 \$6.26	\$150 \$150
Total Rock for Road Segment: 48 \$150.24					
ROAD SEGMENT	4B to 4C	POINT TO POINT	TOTAL VOLUME (CY)	Rate/ Cyl/ amt.	Cost
Application	Rock Size and Type	4B to 4C Volume (CY) per	Sta. to Sta. 0+00 to 1+10 Number of		
Base Rock Junctions Landings	4"-0" Crushed 4"-0" Crushed 6"-0" Pit-run	8 6 N/A	50 24 landings landings	\$6.26 \$6.26 \$6.59	\$344 \$150 \$330
Total Rock for Road Segment: 129 \$824.04					

\$3,026.90

ROAD SEGMENT	4D to 4E		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cyl/ amt.	Cost
	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY)	4D to 4E	0+00 to 0+90			
Application				per	Number of				
Base Rock	4"-0" Crushed	4D-4E	8	station	stations	0.90	45	\$6.26	\$282
Junctions	4"-0" Crushed		8	junction	junctions	1	24	\$6.26	\$150
Landings	6"-0" Pit-run		N/A	landing	landings	1	50	\$6.59	\$330
Total Rock for Road Segment: 119 \$761									
ROAD SEGMENT	2C, 4A, and 4F		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Cyl/ amt.	Cost
	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY)	4F	N/A			
Application				per	Number of				
Landings	6"-0" Pit-run	2C, 4A, and 4F	N/A	landing	stations	3	150	\$6.59	\$989
Total Rock for Road Segment: 150 \$989									

24'-6"	6'-0"	4'-0"	3'-4'-0"	Total
0	300	318	48	666

Processing: Description: Water, Process & Compact Crushed Rock:(6" roads in one lift)

No.sta/Jct	Rate/sta	Cost
3.00	\$41.40	\$124
		\$0
		\$0
		\$4,901

SPECIAL PROJECTS	Description	Cost
		\$25,316

SUB TOTAL FOR SPECIAL PROJECTS

GRAND TOTAL Cost per Mile \$22,829

Compiled By: D. Bangs Date: 12/21/2005

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Steeple Chase
 ROAD: I1-I2 (118.68), I3-I4 (16.25)

NEW CONSTRUCTION: 0.00
 IMPROVEMENT: 134.93

STATIONS: 0.00
 MILES: 2.56

SURFACING	Subgrade prep:	Description	Stations/amount	Rate/amt	Cost
ROAD SEGMENT					
Application					
Leveling Rock					
Total Rock for Road Segment:			600	\$4,062	
ROAD SEGMENT					
Application					
Surfacing					
Turn Around					
Total Rock for Road Segment:			638	\$4,319	

4'-0"	3/4'-0"	Total
638	600	1,238

Processing:	Description	No. sta./Jct	Rate/sta	Cost
	Water, Process & Compact Crushed Rock	134.93	\$41.40	\$5,586
				\$18,420

SPECIAL PROJECTS	Description	Cost

SUB TOTAL FOR SPECIAL PROJECTS

GRAND TOTAL Cost per Mile \$16,611 **\$18,420.19**

Compiled By: D. Bangs Date: 12/21/2005

CRUSHED ROCK COST

SALE NAME: Steeple Chase
 PROJECT: No. 1
 QUARRY: Viewpoint

ROCK TYPE: Pit-run

DATE: 10/26/2005
 BY: D. Bangs

		Cubic Yards							
Segment	Stations	Landing	Running	Turnout	Turnaround	Junction	Curves	Misc	Total
1E	n/a	50							50
2A-2B	1.00	50							50
2C	n/a	50							50
4A	n/a	50							50
4B-4C	1.10	50							50
4D-4E	0.90	50							50
4F	n/a	50							50
Grand Total	3.00	350							350

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	
1E	n/a	50		4.72	1.42	3.89	1.00	2.00	0.01	13.04
2A-2B	1.00	50		4.72	1.42	1.61	1.00	2.00	0.02	10.77
2C	n/a	50		4.72	1.42	1.84	1.00	2.00	0.02	11.00
4B-4C	1.10	50		4.72	1.42	0.57	1.00	2.00	0.02	9.73
4D-4E	0.90	50		4.72	1.42	0.66	1.00	2.00	0.02	9.82
4F	n/a	50		4.72	1.42	0.30	1.00	2.00	0.02	9.46
TOTAL	3.00	300		4.72	1.42	1.48	1.00	2.00	0.02	
	STA./NO.	CU. YD.								AVERAGE HAUL
CUBIC YARD WEIGHTED HAUL				4.72	1.42	1.48	1.00	2.00	0.02	10.64

Average Round Trip Distance (miles) **21.27**

ROCK HAUL:

Truck type	<u>D20</u>	No. trucks:	<u>4</u>
Delay min.	<u>8</u>	Efficiency:	<u>85%</u>
Truck type	<u>D12</u>	No. trucks:	<u>4</u>
Delay min.	<u>6</u>	Efficiency:	<u>85%</u>
Truck type	<u>D10</u>	No. trucks:	_____
Delay min.	<u>5</u>	Efficiency:	<u>85%</u>

Ave haul: \$5.56 /cy
 Load: \$0.50 /cy
 Spread: \$0.20 /cy

 Production: cy/day = 713

CRUSHED ROCK HAUL COSTS 350 cy @ \$6.26 /cy

CRUSHED ROCK COST

SALE NAME: Steeple Chase
 PROJECT: No. 1
 QUARRY: Viewpoint

ROCK TYPE: 3/4"and 4" Crushed

DATE: 10/26/2005
 BY: D. Bangs

		Cubic Yards								
Segment	Stations	Landing	Running	Turnout	Turnaround	Junction	Curves	Misc	Total	
I1 to I2	118.68							600	600	
I3 to I4	16.25		618		20				638	
Grand Total	134.93		618		20			600	1,238	

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	118.68	600		4.72	1.42	2.78	1.00	2.00		11.92
I3 to I4	16.25	638		4.72	1.42	0.51	1.00	2.00	0.16	9.81
TOTAL	134.93	1,238								
CUBIC YARD WEIGHTED HAUL		STA./NO.	CU. YD.	4.72	1.42	1.61	1.00	2.00	0.08	AVERAGE HAUL
Average Round Trip Distance (miles) 21.67										

3/4"-0"
4"-0"

ROCK HAUL:

Truck type	<u>D20</u>	No. trucks:	<u>4</u>	Ave haul:	\$5.74 /cy
Delay min.	<u>8</u>	Efficiency:	<u>85%</u>	Load:	\$0.60 /cy
Truck type	<u>D12</u>	No. trucks:	<u>4</u>	Spread:	\$0.20 /cy
Delay min.	<u>6</u>	Efficiency:	<u>85%</u>		
Truck type	<u>D10</u>	No. trucks:		Production: cy/day =	691
Delay min.	<u>5</u>	Efficiency:	<u>85%</u>		

CRUSHED ROCK HAUL COSTS 1,238 cy @ \$6.54 /cy

Project Work Road Maintenance

Sale: Steeple Chase
Date: 26-Oct-05
By: D. Bangs

Type	Equipment/Rationale	Hours	Rate	Cost
Final Haul	Grader 14G	90	\$84	\$7,560
Road	Dump Truck 12CY x 4	40	\$59	\$2,360
Maintenance	FE Loader C966	10	\$79	\$790
Haul Route	Vibratory Roller	80	\$79	\$6,320
	Water Truck 2,500 gallon	80	\$70	\$5,600
Total				\$22,630

Miles/day	Distance(miles)	Days
1.5	11.7	7.8
1.5	11.7	7.8

Production Rates
 Grader
 Vibratory Roller

Final Road Maintenance Cost Summary

Sale: Steeple Chase
 Date: 28-Nov-05
 By: D.Bangs

MBF: 4,345
 \$\$/MBF: \$3.75

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost	Production Rates		
							Miles/day	Distance(miles)	Days
Progressive Operations 1st Entry(4 mi.)	Grader 14G	\$570	1	16	\$84	\$1,914	2.5	4.0	1.6
	Dump Truck 12CY	\$119	1	8	\$59	\$591			
	FE Loader C966	\$570	1	8	\$79	\$1,202			
Progressive Operations 2nd Entry(2.2 mi.)	Grader 14G	\$570	1	8	\$84	\$1,242	2.5	2.2	0.9
	Dump Truck 12CY	\$119	1	8	\$59	\$591			
	FE Loader C966	\$570	1	8	\$79	\$1,202			
Final Road Maintenance (4mi.)	Grader 14G	\$570	1	24	\$84	\$2,586	1.5	4.0	2.7
	Dump Truck 12CY x 3	\$119	4	24	\$59	\$1,892			
	FE Loader C966	\$570	1	8	\$79	\$1,202			
	Vibratory Roller	\$570	1	24	\$79	\$2,466	1.5	4.0	2.7
	Water Truck 2,500 gallon Labor	\$139	1	16	\$70	\$1,259			
Total									\$16,291

*Final Road Maintenance Only

TIMBER CRUISE REPORT
Steeple Chase
FY 2006

1. **Sale Area Location:** Areas 1, 2, 3, and 4 are located in Portions of Sections 11, 13, 14, and 24 of T6N, 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	Non-Thinnable	Stream Buffer	Net Acres	Survey Method
1	Partial Cut	83	4.2	3.0	6.7	2.1	67	GIS
2	Partial Cut	65	1.2	0	0	1.8	62	GIS
3	Partial Cut	67	4.5	1.5	0	5.0	56	GIS
4	Modified Clearcut	63	5.5	0.5	0	0	57	GIS
5 (R/W)	New Roads	5	0		0	0	5	GIS
TOTALS		283	15.4	5.0	6.7	8.9	247	

4. **Cruisers and Cruise Dates:** Areas 1 - 5 were cruised by Derek Bangs, Lanny Freeman, Jon Long, Jay Morey, Ty Williams, Jasen McCoy and Erin Wilson in September, 2005.

5. Cruise Method and Computation:

AREAS 1, 2, and 3 are "auto-mark" thinning units, and were variable plot cruised using a 33.6 BAF. These plots were located on a 3 chain by 9 chain grid, with every third plot graded. A total of 79 plots were sampled, with 29 graded plots and 50 count plots. Cedar and hardwoods 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 120 ft²/acre. Hardwoods do not count towards the residual basal area. All trees over 30 inches DBH in Area 1 were also considered reserve trees.

AREA 4 was a "modified clearcut" unit and was variable plot cruised using a 40 BAF. The plots in Area 4 are located on a 3 chain by 6 chain grid, with every third plot measured and graded. A total of 32 plots were sampled, with 12 graded plots and 20 count plots. Cedar and big leaf maple were considered reserve species, and recorded as a "leave" tree.

AREA 5 R/W. The new road 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 and 3. The in-sale right-of-way totals 5 acres.

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, 2 & 3	Automark Thinning	06N06W SEC13 TRACT: PC TYPE: TAKE
4	Modified Clearcut	06N06W SEC14 TRACT: CC TYPE: TAKE
5 (R/W)	Right-of-way	06N06W SEC13 TRACT: PC TYPE: R/W

6. Timber Description:

Areas 1, 2, and 3 are "auto-mark" thinning units, approximately 70 years old, consisting of Douglas-fir stands mixed with western hemlock, red alder, with an occasional western red cedar. Areas 1, 2, and 3 will be thinned to 120 ft²/acre, removing approximately 48 trees per acre and 11.8 MBF/acre. The average conifer "take" tree size is 17" DBH and 59 feet to a merchantable top (6" d.i.b.). Area 1 has patches of larger remnant Douglas-fir trees which will be left unthinned, as well as several large pockets of vine maple and hardwoods which were considered non-thinnable and were taken out of the cruise.

Area 4 is a "modified clearcut" unit, approximately 70 years old, consisting of Douglas-fir and western hemlock with scattered clumps of red alder and occasional western red cedar. Approximately 80 trees per acre and 34.5

MBF/acre will be harvested. The Douglas-fir averages 23" DBH, with an average bole height of 77 feet to a merchantable top (6" d.i.b.). The average alder tree size is 16.5" DBH and 56 feet to a merchantable top (8" d.o.b.).

Area 5 R/W is similar to the timber description mentioned above for Areas 1-4. The average volume (net) is 35 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, 2, and 3	50%	7%	68%	7.6%
4	50%	12%	66%	11.6%

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

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

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

Species	DBH	Net Vol.	Special Mill	2 Saw	3Saw	4 Saw	% D & B	% Sale
Douglas-fir	19"	3,918	2	2,897	798	221	.01	89
Hemlock/Noble fir	13"	88	0	54	6	28	0	1
Cedar	28"	1	0	1	0	0	0	1
Alder	17"	338	0	0	227	111	.01	7
Maple	20"	1	0	0	1	0	0	1
TOTALS		4,346	2	2,952	1,032	360		

9. Approvals:

Prepared by: Derek Bangs

Date: October 24, 2005

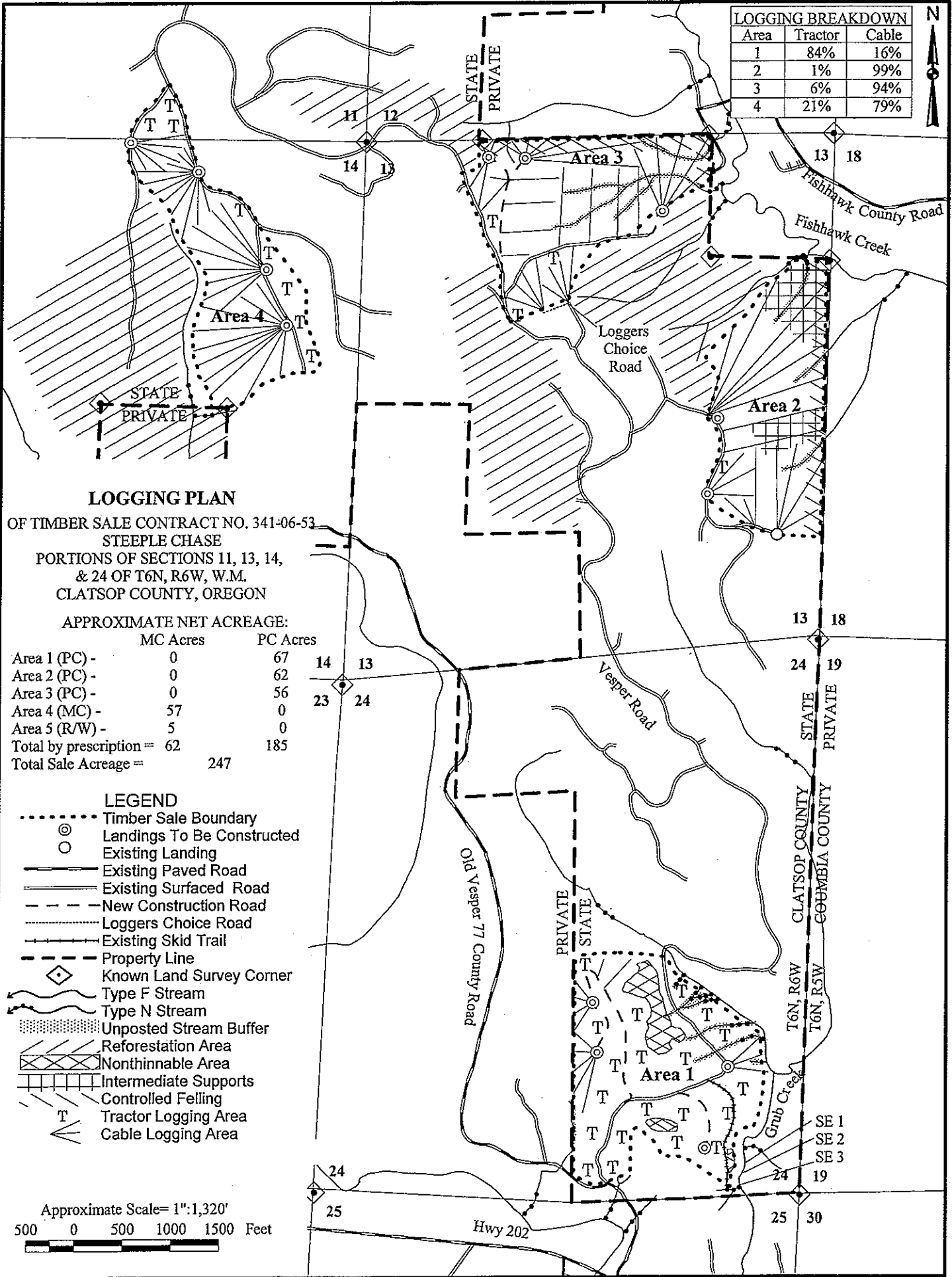
Reviewed by: 

Date: December 16, 2005

10. Attachments:

Cruise Designs (4)
Cruise Maps (2)
Volume Reports - 4 pages
Statistics Reports - 6 pages
Stand Tables - 4 pages
Log Stock Tables - 2 pages

LOGGING BREAKDOWN		
Area	Tractor	Cable
1	84%	16%
2	1%	99%
3	6%	94%
4	21%	79%



LOGGING PLAN

OF TIMBER SALE CONTRACT NO. 341-06-53
 STEEPLE CHASE
 PORTIONS OF SECTIONS 11, 13, 14,
 & 24 OF T6N, R6W, W.M.
 CLATSOP COUNTY, OREGON

APPROXIMATE NET ACREAGE:

	MC Acres	PC Acres
Area 1 (PC) -	0	67
Area 2 (PC) -	0	62
Area 3 (PC) -	0	56
Area 4 (MC) -	57	0
Area 5 (R/W) -	5	0
Total by prescription =	62	185
Total Sale Acreage =	247	

LEGEND

- Timber Sale Boundary
- ⊙ Landings To Be Constructed
- Existing Landing
- Existing Paved Road
- Existing Surfaced Road
- - - New Construction Road
- Loggers Choice Road
- Existing Skid Trail
- - - Property Line
- ◆ Known Land Survey Corner
- ~ Type F Stream
- ~ Type N Stream
- ▨ Unposted Stream Buffer
- ▨ Reforestation Area
- ▨ Nonthinnable Area
- ▨ Intermediate Supports
- ▨ Controlled Felling
- T Tractor Logging Area
- ▨ Cable Logging Area

Approximate Scale= 1":1,320'

500 0 500 1000 1500 Feet



**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Steeple Chase **Area(s)** 4

Harvest Type: CC PC CT (circle one)

Approx. Cruise Acres: 58 **Estimated CV%** 50 BA/Acre **SE% Objective** 12 BA/Acre

Planned Sale Volume : 5.1 MMBF **Estimated Sale Area Value/Acre:** \$7,400

A. Cruise Goals: (a) Grade minimum 60 conifer and 10 hardwood trees:
(b) Sample 34 cruise plots (12 grade/22count); (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) E - W
Cruise Line Spacing 6 (chains) (feet)
Cruise Plot Spacing 3 (chains) (feet)
Grade/Count Ratio 1:2

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 10'. 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: #3 Sawmill = 10" + scaling diameter; #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: Derek Bangs

Approved by: _____

Date: 9/20/05

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Steeple Chase **Area(s)** 1, 2, & 3

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

Net BF or

Net BF or

Approx. Cruise Acres: 209 **Estimated CV%** 50 BA/Acre **SE% Objective** 7 BA/Acre

Planned Sale Volume : 5.1 MMBF **Estimated Sale Area Value/Acre:** \$7,400

A. Cruise Goals: (a) Grade minimum 100 conifer and _____ hardwood trees:
(b) Sample 86 cruise plots (30 grade/56count); (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 33.6 (Full point; Half point) (circle one)

Cruise Line Direction(s) See Map

Cruise Line Spacing 9 (chains) (feet)

Cruise Plot Spacing 3 (chains) (feet)

Grade/Count Ratio 1:2

Basal Area leave target 120 sq. ft. Cruiser needs to select 3 to 4 leave trees per plot.
Cruise all take and leave trees. Do not take plots in stream buffers (within 25' of streams).
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. Record
all trees over 30" DBH in Area 1 as leave trees.

C. Tree Measurements:

- 1. Diameter:** Minimum DBH to cruise is 8" for conifers and 10" for hardwoods.
Record dbh to nearest 1/2" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- 2. Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. Top Cruise Diameter (TCD):** Minimum top outside bark is 7" for conifers and 8" 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: #3 Sawmill = 12" + scaling diameter; #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.
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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.

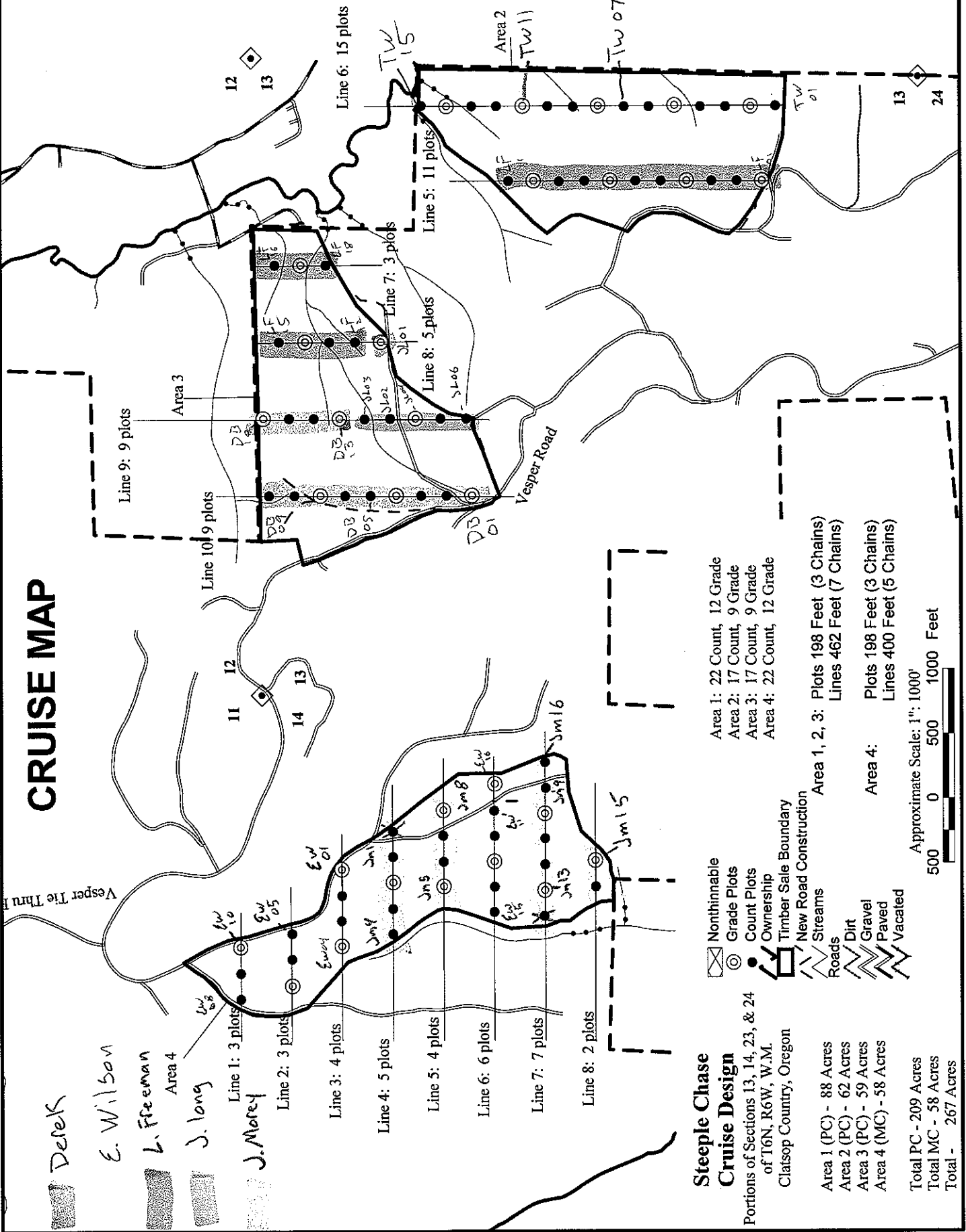
Cruise Design by: Jon Long

Approved by: _____

Date: 9/20/05



CRUISE MAP



Derek
 E. Wilson
 L. Freeman
 J. Long
 J. Morey

Line 1: 3 plots
 Line 2: 3 plots
 Line 3: 4 plots
 Line 4: 5 plots
 Line 5: 4 plots
 Line 6: 6 plots
 Line 7: 7 plots
 Line 8: 2 plots

Line 9: 9 plots

Line 10: 9 plots

Line 6: 15 plots

Line 5: 11 plots

Line 7: 3 plots

Line 8: 5 plots

Area 1: 22 Count, 12 Grade
 Area 2: 17 Count, 9 Grade
 Area 3: 17 Count, 9 Grade
 Area 4: 22 Count, 12 Grade

Area 1, 2, 3: Plots 198 Feet (3 Chains)
 Lines 462 Feet (7 Chains)
 Area 4: Plots 198 Feet (3 Chains)
 Lines 400 Feet (5 Chains)

Approximate Scale: 1" = 1000'



Steeple Chase Cruise Design

Portions of Sections 13, 14, 23, & 24
 of T6N, R6W, W.M.
 Clatsop County, Oregon

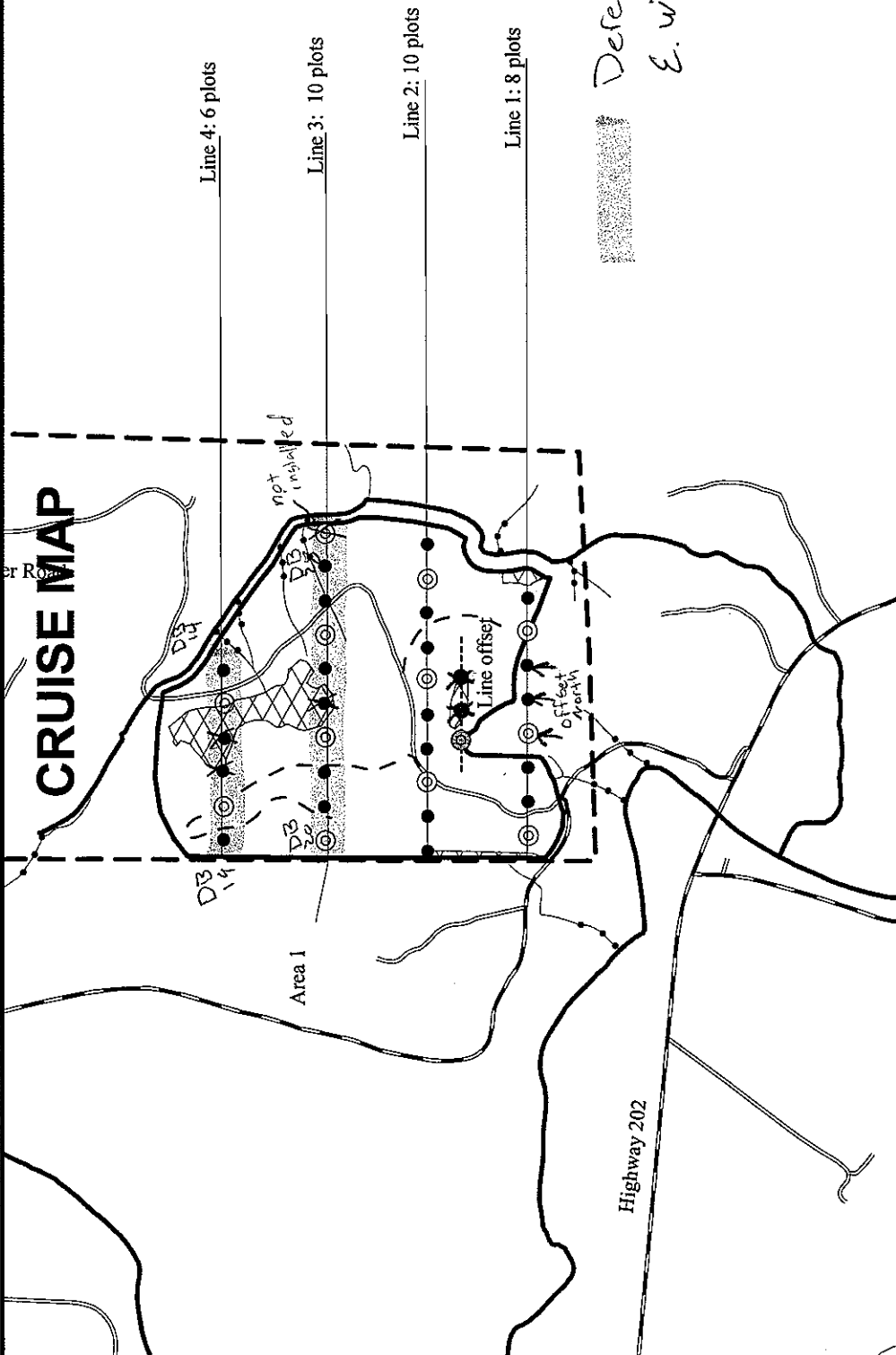
Area 1 (PC) - 88 Acres
 Area 2 (PC) - 62 Acres
 Area 3 (PC) - 59 Acres
 Area 4 (MC) - 58 Acres

Total PC - 209 Acres
 Total MC - 58 Acres
 Total - 267 Acres

- Nonthinnable
- Grade Plots
- Count Plots
- Ownership
- Timber Sale Boundary
- New Road Construction
- Streams
- Roads
- Dirt
- Gravel
- Paved
- Vacated



CRUISE MAP



Derek
E. Wilson

Steeple Chase Cruise Design

Portions of Sections 13, 14, 23, & 24
of T6N, R6W, W.M.
Clatsop County, Oregon

Area 1 (PC) - 88 Acres
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- Area 1: 22 Count, 12 Grade
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Lines 462 Feet (7 Chains)
- Area 4: Plots 198 Feet (3 Chains)
Lines 400 Feet (5 Chains)
- Approximate Scale: 1" = 1000'
- 500 0 500 1000 Feet

Species, Sort Grade - Board Foot Volumes (Project)

T06N R06W S13 TyR/W	5.00
T06N R06W S13 TyTAKE	185.00
T06N R06W S14 TyTAKE	57.00

Project: DEMO
Acres 247.00

Page 1
Date 10/27/2005
Time 7:20:07AM

S 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					
A	DOCU																		
A	DO3S	67	.6	926	920	227		39	50	11		3	0	59	38	34	182	1.18	5.1
A	DO4S	33	.0	451	451	111	2	98				3	31	50	17	29	52	0.55	8.7
A Totals		8	.4	1,376	1,371	339	1	59	33	7	3	10	56	31	29	95	0.80	14.4	
D	DOCU																		
D	DO2S	73	.4	11,770	11,728	2,897		0	41	59	1	2	39	58	36	379	2.25	30.9	
D	DO3S	21	.8	3,255	3,229	798		82	18	0	1	4	37	58	35	101	0.84	32.0	
D	DO4S	5	1.2	903	893	221		93	0	7	58	25	14	2	21	38	0.58	23.5	
D	DOSM	1		8	8	2				100				100	40	1781	8.13	.0	
D Totals		90	.5	15,937	15,857	3,917		22	34	44	4	3	37	55	31	178	1.35	89.2	
H	DO2S	58		175	175	43				100			28	72	36	655	3.57	.3	
H	DO3S	4		11	11	3		100			100				20	80	1.25	.1	
H	DO4S	38		112	112	28		100			61	39			20	30	0.47	3.7	
H Totals		2		298	298	74		41	59		27	15	17	42	21	72	0.83	4.1	
C	DO2S	72		3	3	1			11	89			50	50	34	478	3.83	.0	
C	DO3S	24	4.7	1	1	0		100					100		39	132	1.46	.0	
C	DO4S	4		0	0	0		100			100				14	20	0.54	.0	
C Totals		0	1.2	4	4	1		28	8	64	3		36	61	29	199	2.16	.0	
M	DOCU																		
M	DO3S	67		2	2	1			100				100		32	198	2.82	.0	
M	DO4S	33		1	1	0		100			97	3			20	40	0.77	.0	
M Totals		0		3	3	1		33	67		32	1	67		23	83	1.57	.0	
NF	DO2S	74		43	43	11			100				100		40	205	1.08	.2	
NF	DO3S	26		15	15	3		100					100		40	72	0.61	.2	
NF Totals		0		58	58	14		26	74				100		40	138	0.85	.4	
Totals			0.5	17,676	17,591	4,345		0	25	33	41	4	4	38	53	30	162	1.26	108.3

T06N R06W S14 TTAKE T06N R06W S14 TTAKE
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 06N 06W 14 CC TAKE 57.00 32 51 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														11		0.00	3.7		
D		DO	2S	81	.7	23,489	23,320	1,329			20	80			0		49	51	36	507	2.74	46.0
D		DO	3S	14	.4	3,900	3,884	221		56	44			3	1	22	74	35	129	1.01	30.1	
D		DO	4S	5	3.5	1,330	1,284	73		79	21			69	15	10	6	23	54	0.83	23.7	
D		Totals		82	.8	28,719	28,487	1,624		11	22	67		4	1	44	52	32	275	1.84	103.6	
A		DO	CU															3		0.00	3.0	
A		DO	3S	66	.6	3,931	3,908	223		39	50	11		3		60	37	34	183	1.18	21.3	
A		DO	4S	34		1,943	1,943	111	2	98				2	31	50	17	29	52	0.54	37.3	
A		Totals		17	.4	5,874	5,851	334	1	59	33	7		3	10	56	31	29	95	0.80	61.6	
NF		DO	2S	74		175	175	10			100					100		40	200	1.05	.9	
NF		DO	3S	26		61	61	3		100						100		40	70	0.60	.9	
NF		Totals		1		236	236	13		26	74					100		40	135	0.82	1.7	
Type Totals					.7	34,829	34,574	1,971		0	19	24	56		3	2	45	49	31	207	1.46	166.9

T06N R06W S13 TTAKE **T06N R06W S13 TTAKE**
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 06N 06W 13 PC TAKE 185.00 79 79 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													6		0.00	2.6	
D		DO	2S	67	.0	7,742	7,740	1,432		1	61	38	2	3	30	65	35	304	1.95	25.5
D		DO	3S	26	1.0	3,018	2,989	553		93	7		1	5	42	52	35	93	0.79	32.1
D		DO	4S	7		772	772	143		100			53	30	16		21	33	0.50	23.3
D	Totals			97	.3	11,533	11,501	2,128		31	43	25	5	6	32	57	30	138	1.14	83.5
H		DO	2S	59		225	225	42			100				28	72	36	655	3.57	.3
H		DO	3S	4		14	14	3		100			100				20	80	1.25	.2
H		DO	4S	37		140	140	26		100			62	38			20	30	0.47	4.7
H	Totals			3		378	378	70		41	59		27	14	17	43	21	73	0.84	5.2
Type Totals					.3	11,911	11,879	2,198		32	42	26	5	6	32	57	30	134	1.13	88.7

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1								
Project: STEEPLE												Date 10/25/2005								
												Time 1:08:28PM								
T06N R06W S13 TR/W										T06N R06W S13 TR/W										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
06N	06W	13	PC	R/W	5.00	79	198	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	DO	CU														6		0.00		3.6
D	DO	2S	82	.3	27,205	27,131	136		0	30	69	1	2	36	62	36	452	2.59		60.0
D	DO	3S	14	.6	4,660	4,633	23		83	13	4	1	8	47	44	34	100	0.89		46.4
D	DO	4S	2		892	892	4		99	1		55	32	13		20	33	0.53		26.7
D	DO	SM	2		402	402	2				100					40	1781	8.13		.2
D	Totals		94	.3	33,158	33,058	165		15	27	59	2	3	36	58	32	241	1.70		137.0
A	DO	3S	87	.1	907	906	5		43	46	11	1	5	27	66	35	133	1.17		6.8
A	DO	4S	13	.9	126	125	1		100			71	1	28		21	37	0.67		3.4
A	Totals		3	.2	1,034	1,032	5		50	41	10	9	5	27	58	30	101	1.05		10.2
H	DO	2S	45		335	335	2			100				28	72	36	655	3.57		.5
H	DO	3S	3		20	20	0		100			100				20	80	1.25		.3
H	DO	4S	52		377	377	2		100			47	53			22	30	0.42		12.6
H	Totals		2		732	732	4		54	46		27	27	13	33	22	55	0.63		13.3
M	DO	CU														3		0.00		.1
M	DO	3S	67		109	109	1			100				100		32	198	2.82		.5
M	DO	4S	33		54	54	0		100			97	3			20	40	0.77		1.4
M	Totals		0		162	162	1		33	67		32	1	67		23	83	1.57		2.0
C	DO	2S	72		136	136	1			11	89			50	50	34	478	3.83		.3
C	DO	3S	24	4.7	48	46	0		100					100		39	132	1.46		.4
C	DO	4S	4		6	6	0		100			100				14	20	0.54		.3
C	Totals		1	1.2	190	188	1		28	8	64	3		36	61	29	199	2.16		.9
NF	DO	2S	75		116	116	1			100				100		40	360	2.07		.3
NF	DO	3S	25		39	39	0		100					100		40	120	0.93		.3
NF	Totals		0		155	155	1		25	75				100		40	240	1.50		.6
Type Totals				.3	35,432	35,327	177		17	27	56	3	4	35	58	31	215	1.60		164.0

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT STEEPLE				DATE 10/25/2005		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	06W	14	CC	TAKE	57.00	32	135	1	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		32	135	4.2						
CRUISE		12	51	4.3	4,558	1.1				
DBH COUNT										
REFOREST										
COUNT		19	84	4.4						
BLANKS		1								
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	37	45.3	22.9	77		129.5	28,719	28,487	6,063	6,063
R ALDER	13	33.7	16.5	56		50.2	5,874	5,851	1,433	1,433
NOB FIR	1	.9	18.0	84	0	1.5	236	236	58	58
TOTAL	<i>51</i>	<i>80.0</i>	<i>20.4</i>	<i>69</i>		<i>181.3</i>	<i>34,829</i>	<i>34,574</i>	<i>7,553</i>	<i>7,553</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	82.2	13.5	938	1,085	1,231					
R ALDER	58.9	17.0	184	222	259					
NOB FIR										
TOTAL	<i>100.5</i>	<i>14.1</i>	<i>729</i>	<i>849</i>	<i>968</i>	<i>403</i>	<i>101</i>	<i>45</i>		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	87.9	15.5	38	45	52					
R ALDER	174.7	30.8	23	34	44					
NOB FIR	565.7	99.9	0	1	2					
TOTAL	<i>66.7</i>	<i>11.8</i>	<i>71</i>	<i>80</i>	<i>89</i>	<i>178</i>	<i>44</i>	<i>20</i>		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	86.7	15.3	110	129	149					
R ALDER	165.9	29.3	36	50	65					
NOB FIR	565.7	99.9	0	2	3					
TOTAL	<i>57.7</i>	<i>10.2</i>	<i>163</i>	<i>181</i>	<i>200</i>	<i>133</i>	<i>33</i>	<i>15</i>		
CL: 68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	86.0	15.2	24,158	28,487	32,816					
R ALDER	164.7	29.1	4,149	5,851	7,553					
NOB FIR	565.7	99.9	0	236	471					
TOTAL	<i>65.9</i>	<i>11.6</i>	<i>30,547</i>	<i>34,574</i>	<i>38,600</i>	<i>174</i>	<i>43</i>	<i>19</i>		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	STEEPLE			DATE	10/25/2005	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	06W	13	PC	TAKE	185.00	79	236	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	79	236	3.0							
CRUISE	19	79	4.2	8,909	.9					
DBH COUNT										
REFOREST										
COUNT	37	157	4.2							
BLANKS	23									
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	75	43.3	17.8	62		75.2	11,533	11,501	2,887	2,887
WHEMLOCK	4	4.8	12.1	24		3.8	378	378	93	93
TOTAL	79	48.2	17.3	59		79.0	11,911	11,879	2,980	2,980
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	73.4	8.5	380	415	450					
WHEMLOCK	183.8	105.0		370	759					
TOTAL	78.8	8.9	376	413	449	248	62	28		
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	118.3	13.3	38	43	49					
WHEMLOCK	443.2	49.8	2	5	7					
TOTAL	111.2	12.5	42	48	54	494	124	55		
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	115.1	12.9	65	75	85					
WHEMLOCK	421.4	47.4	2	4	6					
TOTAL	109.0	12.3	69	79	89	475	119	53		
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	116.1	13.1	10,000	11,501	13,002					
WHEMLOCK	438.8	49.3	192	378	564					
TOTAL	111.6	12.5	10,389	11,879	13,369	497	124	55		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT		STEEPLE		DATE	10/25/2005	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	06W	13	PC	0001	185.00	79	548	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		79	548	6.9						
CRUISE		29	198	6.8	15,885		1.2			
DBH COUNT										
REFOREST										
COUNT		50	350	7.0						
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	90	18.3	29.1	106		84.7	21,020	20,954	4,387	4,387
DOUG FIR	75	43.3	17.8	62		75.2	11,533	11,501	2,887	2,887
ALDRLEAV	19	7.4	16.7	44		11.2	1,034	1,032	322	322
HEMLEAV	2	9.3	9.6	24		4.7	280	280	78	78
MAPLELV	4	1.9	20.4	25		4.3	162	162	71	71
WHEMLOCK	4	4.8	12.1	24		3.8	378	378	93	93
CEDLEAV	3	.4	27.7	66		1.8	190	188	59	59
NFIRLEAV	1	.3	22.0	89	0	.9	155	155	37	37
TOTAL	198	85.9	20.0	63		186.7	34,752	34,650	7,935	7,935
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	77.7	8.2	1,376	1,499	1,622					
DOUG FIR	73.4	8.5	380	415	450					
ALDRLEAV	62.5	14.7	158	185	212					
HEMLEAV			30	30	30					
MAPLELV	92.2	52.7	60	128	195					
WHEMLOCK	183.8	105.0		370	759					
CEDLEAV	75.7	52.4	275	577	879					
NFIRLEAV										
TOTAL	113.3	8.0	807	878	948	512	128	57		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	62.9	7.1	17	18	20					
DOUG FIR	118.3	13.3	38	43	49					
ALDRLEAV	315.2	35.4	5	7	10					
HEMLEAV	376.1	42.3	5	9	13					
MAPLELV	314.4	35.3	1	2	3					
WHEMLOCK	443.2	49.8	2	5	7					
CEDLEAV	561.0	63.1	0	0	1					
NFIRLEAV	624.4	70.2	0	0	1					
TOTAL	81.3	9.1	78	86	94	264	66	29		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	62.4	7.0	79	85	91					
DOUG FIR	115.1	12.9	65	75	85					
ALDRLEAV	306.0	34.4	7	11	15					
HEMLEAV	372.6	41.9	3	5	7					
MAPLELV	289.4	32.5	3	4	6					
WHEMLOCK	421.4	47.4	2	4	6					
CEDLEAV	508.4	57.1	1	2	3					

TC TSTATS				STATISTICS			PAGE	2			
				PROJECT			DATE	10/25/2005			
				STEEPLE							
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
06N	06W	13	PC	0001	185.00	79	548	1	W		
CL:	68.1%	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15		
NFIRLEAV		624.4	70.2	0	1	1					
TOTAL		65.0	7.3	173	187	200	169	42	19		
CL:	68.1%	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV		70.8	8.0	19,287	20,954	22,622					
DOUG FIR		116.1	13.1	10,000	11,501	13,002					
ALDRLEAV		308.5	34.7	674	1,032	1,389					
HEMLEAV		376.1	42.3	162	280	399					
MAPLELV		291.8	32.8	109	162	216					
WHEMLOCK		438.8	49.3	192	378	564					
CEDLEAV		488.0	54.9	85	188	291					
NFIRLEAV		624.4	70.2	46	155	263					
TOTAL		67.7	7.6	32,012	34,650	37,289	183	46	20		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	STEEPLE		DATE	10/25/2005		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	06W	13	PC	LEAV	185.00	79	312	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		79	312	3.9						
CRUISE		29	119	4.1	6,976		1.7			
DBH COUNT										
REFOREST										
COUNT		50	193	3.9						
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
DOUGLEAV	90	18.3	29.1	106		84.7	21,020	20,954	4,387	4,387
ALDRLEAV	19	7.4	16.7	44		11.2	1,034	1,032	322	322
HEMLEAV	2	9.3	9.6	24		4.7	280	280	78	78
MAPLELV	4	1.9	20.4	25		4.3	162	162	71	71
CEDLEAV	3	.4	27.7	66		1.8	190	188	59	59
NFIRLEAV	1	.3	22.0	89	0	.9	155	155	37	37
TOTAL	119	37.7	22.9	69		107.6	22,842	22,771	4,955	4,955
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	77.7	8.2	1,376	1,499	1,622					
ALDRLEAV	62.5	14.7	158	185	212					
HEMLEAV			30	30	30					
MAPLELV	92.2	52.7	60	128	195					
CEDLEAV	75.7	52.4	275	577	879					
NFIRLEAV										
TOTAL	97.5	8.9	1,081	1,187	1,293	380	95	42		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	62.9	7.1	17	18	20					
ALDRLEAV	315.2	35.4	5	7	10					
HEMLEAV	376.1	42.3	5	9	13					
MAPLELV	314.4	35.3	1	2	3					
CEDLEAV	561.0	63.1	0	0	1					
NFIRLEAV	624.4	70.2	0	0	1					
TOTAL	111.1	12.5	33	38	42	493	123	55		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	62.4	7.0	79	85	91					
ALDRLEAV	306.0	34.4	7	11	15					
HEMLEAV	372.6	41.9	3	5	7					
MAPLELV	289.4	32.5	3	4	6					
CEDLEAV	508.4	57.1	1	2	3					
NFIRLEAV	624.4	70.2	0	1	1					
TOTAL	57.1	6.4	101	108	115	130	33	14		
CL: 68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV	70.8	8.0	19,287	20,954	22,622					
ALDRLEAV	308.5	34.7	674	1,032	1,389					
HEMLEAV	376.1	42.3	162	280	399					

TC		Stand Table Summary															
TSTNDSUM		Project STEEPLE															
T06N R06W S13 TLEAV												T06N R06W S13 TLEA					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees		Page:	1		Date:	10/25/200				
06N	06W	13	PC	LEAV	185.00	79	119		Time:	1:11:44PM							
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.
DL		17	1	89	77	.700	1.10	1.40	24.5	90.0			34	126		63	23
DL		19	1	86	118	.561	1.10	1.12	44.0	165.0			49	185		91	34
DL		21	1	86	126	.459	1.10	1.38	39.0	163.3			54	225		99	42
DL		22	2	85	138	.836	2.21	2.51	45.2	188.3			113	472		210	87
DL		24	6	87	121	1.798	5.65	5.39	49.2	204.0			265	1,100		491	204
DL		25	5	86	120	.763	2.60	2.29	51.9	220.8			119	505		220	94
DL		26	12	86	125	3.065	11.30	8.60	61.9	259.0			532	2,226		985	412
DL		27	3	89	130	.833	3.31	2.50	66.6	294.4			166	736		308	136
DL		28	11	86	129	2.157	9.22	6.47	69.6	301.4			450	1,950		833	361
DL		29	7	86	139	1.260	5.78	3.78	77.6	364.3			293	1,377		543	255
DL		30	4	88	142	.701	3.44	2.33	77.2	371.6			180	865		333	160
DL		31	4	85	138	.842	4.41	2.53	89.4	407.5			226	1,030		418	190
DL		32	6	86	159	1.012	5.65	3.65	89.1	436.6			325	1,594		602	295
DL		33	3	87	128	.394	2.34	1.18	90.3	448.2			107	529		197	98
DL		34	4	86	150	.700	4.41	2.28	106.9	538.5			243	1,225		450	227
DL		35	1	80	146	.165	1.10	.50	113.3	506.7			56	251		104	46
DL		36	2	86	153	.312	2.21	.94	125.5	631.7			118	592		218	109
DL		37	1	88	146	.148	1.10	.44	138.7	743.3			61	330		114	61
DL		38	1	89	166	.140	1.10	.56	120.8	692.5			68	388		125	72
DL		39	1	85	169	.133	1.10	.40	165.0	886.7			66	354		122	65
DL		40	5	89	151	.521	4.55	1.83	143.3	799.9			262	1,464		485	271
DL		42	1	91	173	.115	1.10	.46	157.8	955.0			72	438		134	81
DL		45	1	83	166	.100	1.10	.40	161.3	862.5			64	345		119	64
DL		48	4	87	161	.351	4.41	1.41	185.6	1051.9			261	1,478		482	273
DL		49	1	92	173	.084	1.10	.34	214.0	1335.0			72	450		133	83
DL		50	2	88	159	.162	2.21	.65	197.8	1107.5			128	717		237	133
DL	Totals	90	86	133		18.312	84.74	55.31	79.3	378.8			4,387	20,954		8,115	3,877
AL		12	1	87	25	1.039	.82	1.04	11.0	30.0			11	31		21	6
AL		14	2	86	42	1.527	1.63	1.53	22.0	55.0			34	84		62	16
AL		15	1	87	73	.665	.82	1.33	20.5	75.0			27	100		50	18
AL		16	2	86	45	1.169	1.63	1.17	28.0	75.0			33	88		61	16
AL		17	1	86	50	.062	.10	.12	20.0	70.0			2	9		5	2
AL		18	4	86	81	1.441	2.55	2.42	38.0	124.4			92	301		170	56
AL		19	4	86	60	.563	1.11	.71	42.6	111.7			30	79		56	15
AL		20	1	85	76	.045	.10	.09	38.0	130.0			3	12		6	2
AL		21	1	85	78	.339	.82	.68	43.5	150.0			30	102		55	19
AL		22	1	85	80	.309	.82	.62	48.5	185.0			30	114		55	21
AL		25	1	85	80	.239	.82	.48	62.5	235.0			30	113		55	21
AL	Totals	19	86	56		7.397	11.19	10.18	31.7	101.3			322	1,032		597	191
HL		8	1	94	50	6.776	2.37	6.78	7.0	30.0			47	203		88	38
HL		13	1	89	24	2.566	2.37	2.57	12.0	30.0			31	77		57	14
HL	Totals	2	93	43		9.342	4.73	9.34	8.4	30.0			78	280		145	52
CL		22	1	82	71	.228	.60	.46	37.0	95.0			17	43		31	8
CL		30	1	79	84	.122	.60	.24	76.0	245.0			19	60		34	11
CL		37	1	79	108	.080	.60	.24	98.3	350.0			24	85		44	16
CL	Totals	3	81	82		.431	1.80	.94	62.9	199.4			59	188		110	35
ML		14	1	87	23	1.291	1.38	1.29	15.0	40.0			19	52		36	10
ML		22	1	85	25	.062	.16	.06	26.0	30.0			2	2		3	0
ML		26	1	86	40	.374	1.38	.37	69.0	160.0			26	60		48	11

Stand Table Summary

Project **STEEPLE**

T06N R06W S13 TLEAV

T06N R06W S13 TLEA

Twp Rge Sec Tract
06N 06W 13 PC

Type Acres Plots Sample Trees
LEAV 185.00 79 119

Page: 2
Date: 10/25/201
Time: 1:11:44PM

S Spc T	Sample DBH	FF Trees	Av Ht 16'	Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
								Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
ML	38	1	86	38	.175	1.38	.18	136.0	280.0	24	49		44	9	
ML	Totals	4	87	28	1.903	4.31	1.90	37.1	85.4	71	162		131	30	
NFL	22	1	86	110	.322	.85	.64	58.0	240.0	37	155		69	29	
NFL	Totals	1	86	110	.322	.85	.64	58.0	240.0	37	155		69	29	
Totals		119	88	89	37.707	107.63	78.33	63.3	290.7	4955	22,771		9,166	4,213	

TC		Stand Table Summary													
Project													STEEPLE		
T06N R06W S14 T0002										T06N R06W S14 T0002					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees			Page:	1				
06N	06W	14	CC	0002	57.00	32	66			Date:	10/25/201				
										Time:	1:13:06PM				
S Spc	T	Sample		Av	Trees/ Acres	BA/ Acres	Logs Acres	Average Log		Net Tons/ Acres	Net Cu.Ft. Acres	Net Bd.Ft. Acres	Totals		
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits
D		10	1	90	76	7.704	4.20	7.70	11.0	50.0	85	385		48	22
D		12	1	88	42	4.431	3.48	4.43	12.0	40.0	53	177		30	10
D		19	2	89	68	3.535	6.96	5.30	36.7	110.0	194	583		111	33
D		20	2	88	68	3.190	6.96	4.78	31.7	93.3	152	447		86	25
D		22	4	90	105	5.273	13.92	10.55	53.7	217.5	567	2,294		323	131
D		23	2	87	144	2.412	6.96	8.44	43.6	195.7	368	1,652		210	94
D		24	1	88	128	1.108	3.48	3.32	52.0	226.7	173	753		98	43
D		25	4	89	110	4.083	13.92	10.21	58.8	242.0	600	2,470		342	141
D		26	3	89	121	2.831	10.44	8.49	58.2	255.6	495	2,171		282	124
D		27	4	88	124	3.501	13.92	9.63	68.1	292.7	656	2,818		374	161
D		28	1	89	124	.814	3.48	2.44	69.3	320.0	169	781		96	45
D		30	1	88	186	.709	3.48	2.84	81.0	445.0	230	1,262		131	72
D		31	1	87	186	.664	3.48	2.66	84.5	465.0	224	1,235		128	70
D		32	2	87	188	1.246	6.96	4.98	90.6	492.5	452	2,455		257	140
D		34	3	88	171	1.656	10.44	6.07	101.5	553.6	616	3,361		351	192
D		35	2	86	190	1.042	6.96	4.17	108.5	607.5	452	2,531		258	144
D		39	1	88	120	.419	3.48	1.26	129.7	683.3	163	860		93	49
D		41	1	88	200	.380	3.48	1.52	158.0	915.0	240	1,389		137	79
D		43	1	86	133	.345	3.48	1.04	168.7	833.3	175	863		100	49
D		Totals	37	89	104	45.341	129.47	99.83	60.7	285.4	6,063	28,487		3,456	1,624
A		12	1	87	76	5.014	3.94	5.01	15.0	70.0	75	351		43	20
A		13	2	87	60	8.545	7.88	12.82	11.0	36.7	141	470		80	27
A		15	1	86	114	3.209	3.94	6.42	19.0	80.0	122	513		70	29
A		16	1	86	104	2.820	3.94	5.64	22.0	95.0	124	536		71	31
A		17	1	86	102	2.498	3.94	5.00	24.0	95.0	120	475		68	27
A		18	2	86	99	4.457	7.88	8.91	27.5	115.0	245	1,025		140	58
A		19	1	87	121	2.000	3.94	4.00	38.5	165.0	154	660		88	38
A		20	1	87	107	1.805	3.94	3.61	35.5	155.0	128	560		73	32
A		22	1	86	95	1.492	3.94	2.98	43.0	175.0	128	522		73	30
A		25	1	87	96	1.155	3.94	3.47	35.7	170.0	124	589		70	34
A		27	1	87	52	.750	2.98	.75	95.0	200.0	71	150		41	9
A		Totals	13	87	88	33.746	50.24	58.61	24.4	99.8	1,433	5,851		817	334
DL		10	1	89	29	3.724	2.03	3.72	8.0	20.0	30	74		17	4
DL		12	1	88	56	2.586	2.03	2.59	18.0	60.0	47	155		27	9
DL		15	1	88	83	1.655	2.03	3.31	21.5	85.0	71	281		41	16
DL		17	1	89	91	1.289	2.03	2.58	28.5	105.0	73	271		42	15
DL		32	2	87	189	.727	4.06	2.91	91.4	502.5	266	1,462		152	83
DL		35	1	87	188	.304	2.03	1.22	109.5	617.5	133	751		76	43
DL		50	1	83	159	.149	2.03	.45	253.3	1313.3	113	587		65	33
DL		Totals	8	88	70	10.435	16.25	16.77	43.7	213.6	733	3,582		418	204
ML		16	1	86	74	7.333	10.24	7.33	27.0	120.0	198	880		113	50
ML		17	1	87	26	4.917	7.75								
ML		25	1	86	59	2.273	7.75	2.27	89.0	240.0	202	546		115	31
ML		30	1	87	33	1.579	7.75								
ML		36	1	86	59	1.096	7.75	1.10	183.0	600.0	201	658		114	37
ML		Totals	5	86	54	17.199	41.24	10.70	56.1	194.7	601	2,083		343	119
CL		21	1	79	123	2.436	5.86	4.87	31.5	125.0	153	609		87	35
CL		Totals	1	79	123	2.436	5.86	4.87	31.5	125.0	153	609		87	35

TC TSTNDSUM

Stand Table Summary

Project **STEEPLE**

T06N R06W S14 T0002

T06N R06W S14 T0002

Twp Rge Sec Tract
06N 06W 14 CC

Type Acres Plots Sample Trees
0002 57.00 32 66

Page: 2
 Date: 10/25/201
 Time: 1:13:06PM

Spc	T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
NF		18	1	90	110	.873	1.54	1.75	33.0	135.0	58	236	33	13		
NF		Totals	1	90	110	.873	1.54	1.75	33.0	135.0	58	236	33	13		
SN		52	1	89	47	.085	1.25									
SN		Totals	1	89	47	.085	1.25									
Totals			66	87	89	110.115	245.85	192.53	47.0	212.2	9041	40,848	5,153	2,328		

Log Stock Table - MBF
Project: STEEPLE

T06N R06W S13 TTAK

T06N R06W S13 TTAK

Twp Rge Sec Tract Type Acres Plots Sample Trees Page
06N 06W 13 PC TAKE 185.00 79 79 Date 10/25/2005
Time 1:13:43PM

S Spp	So T	Gr rt	Log 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+
D	DO	CU	3																	
D	DO	CU	5																	
D	DO	CU	6																	
D	DO	CU	10																	
D	DO	2S	16		23		23	1.1					6			17				
D	DO	2S	24		21		21	1.0						21						
D	DO	2S	28		26		26	1.2							26					
D	DO	2S	32		430	.0	430	20.2						261	70	99				
D	DO	2S	36		40		40	1.9				12				28				
D	DO	2S	40		892	.0	892	41.9						58	262	454	118			
D	DO	3S	20		3		3	.1												
D	DO	3S	21		0		0	.0												
D	DO	3S	24		3		3	.2				3								
D	DO	3S	25		3		3	.2												
D	DO	3S	27		9		9	.4						4						
D	DO	3S	28		6		6	.3				6								
D	DO	3S	29		0		0	.0												
D	DO	3S	30		4		4	.2				4								
D	DO	3S	32		206	1.2	203	9.6				14	43	106	19	21				
D	DO	3S	33		27		27	1.3				22	5							
D	DO	3S	35		5		5	.2				5								
D	DO	3S	36		25	8.1	23	1.1				23								
D	DO	3S	37		17		17	.8				12	5							
D	DO	3S	38		1		1	.0				1								
D	DO	3S	40		248	.4	247	11.6				27	149	71						
D	DO	4S	15		11		11	.5				11								
D	DO	4S	16		9		9	.4				5	4							
D	DO	4S	18		4		4	.2				4								
D	DO	4S	19		31		31	1.5				31								
D	DO	4S	20		21		21	1.0				21								
D	DO	4S	22		14		14	.7				3		11						
D	DO	4S	23		7		7	.3				7								
D	DO	4S	24		5		5	.2				5								
D	DO	4S	25		5		5	.3				5								
D	DO	4S	27		12		12	.6				12								
D	DO	4S	32		24		24	1.1				24								
D	Totals					2,134		2,128	96.8			245	218	205	343	374	624	118		
H	DO	2S	32		12		12	16.8							12					
H	DO	2S	40		30		30	42.6								30				
H	DO	3S	20		3		3	3.6					3							
H	DO	4S	20		16		16	23.0				16								
H	DO	4S	21		10		10	13.9				10								
H	Totals					70		70	3.2			26		3		12		30		
Total All Species						2,203		2,198	100.0			271	218	207	343	374	636	148		

Log Stock Table - MBF
Project: **STEEPLE**

T06N R06W S14 TTAK

T06N R06W S14 TTAK

Twp Rge Sec Tract Type Acres Plots Sample Trees
06N 06W 14 CC TAKE 57.00 32 51

Page 1
Date 10/28/2005
Time 11:37:25AM

Spp	T	S	So	Gr	Log	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
D		DO	CU		8															
D		DO	CU		10															
D		DO	CU		15															
D		DO	2S		20	3		3	.2					3						
D		DO	2S		32	658	.6	654	40.3					26	121	247	229	31		
D		DO	2S		36	106	1.6	105	6.4					22	82					
D		DO	2S		40	572	.7	568	35.0					56	103	281	63	33	32	
D		DO	3S		20	6		6	.4					3	3					
D		DO	3S		22	2		2	.2				2							
D		DO	3S		32	48		48	2.9			28		10	10					
D		DO	3S		36	45		45	2.8					11	34					
D		DO	3S		40	121	.8	120	7.4				23	46	43	8				
D		DO	4S		16	2		2	.1				2							
D		DO	4S		17	2		2	.1					2						
D		DO	4S		18	2		2	.1				2							
D		DO	4S		20	48	5.6	45	2.8			2	22	5		16				
D		DO	4S		21	3		3	.2				3							
D		DO	4S		22	2		2	.1					2						
D		DO	4S		26	3		3	.2				3							
D		DO	4S		30	3		3	.2				3							
D		DO	4S		32	7		7	.4				7							
D		DO	4S		40	5		5	.3				5							
D		Totals				1,637		1,624	82.4			43	60	77	169	140	500	310	262	63
A		DO	CU		3															
A		DO	3S		20	8	16.7	7	2.0					7						
A		DO	3S		32	133		133	39.8				64	20	24	24				
A		DO	3S		40	83		83	25.0				23	36	25					
A		DO	4S		16	3		3	.8					3						
A		DO	4S		21	2		2	.7		2									
A		DO	4S		24	17		17	5.1					17						
A		DO	4S		26	8		8	2.4					8						
A		DO	4S		28	7		7	2.1					7						
A		DO	4S		32	55		55	16.5			26	29							
A		DO	4S		38	8		8	2.5					8						
A		DO	4S		40	10		10	3.1					10						
A		Totals				335		334	16.9		2	26	82	87	63	48	24			
NF		DO	2S		40	10		10	74.1					10						
NF		DO	3S		40	3		3	25.9			3								
NF		Totals				13		13	.7			3		10						
Total All Species						1,985		1,971	100.0		2	73	142	165	242	188	524	310	262	63