



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Sweeping Corners Sale 341-07-07

District: Astoria

Date: 10/12/06

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$668,848.31	\$192,146.97	\$860,995.28
		<b>Project Work</b>	(\$24,446.00)
		<b>Advertised Value</b>	\$836,549.28



# Timber Sale Appraisal Timber Description Sweeping Corners Sale 341-07-07

"STEWARDSHIP IN FORESTRY"

**District:** Astoria

**Location:** Portions of Sections 1, 11, and 14, T4N, R7W, W.M., Clatsop County, Oregon.

**Date:** 10/12/06

**Stand Stocking:** 80%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	22	0	97
Western Hemlock / Fir	16	0	97
Alder (Red)	15	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Alder (Red)	Total
2S	1,378	377	0	1,755
3S	260	206	0	466
4S	37	36	0	73
Camprun	0	0	541	541
<b>Total</b>	<b>1,675</b>	<b>619</b>	<b>541</b>	<b>2,835</b>

**Comments:** Pond Values Used: 2nd Quarter Calendar Year 2006.

Log Markets: Mist, Clatskanie, Tillamook, Forest Grove

Western Red Cedar Price = Pond Value minus logging cost.

\$660/MBF = \$1,000/MBF - \$340/MBF

Hauling costs adjusted to make equivalent to \$700 daily truck cost.

Hauling Cost Calculation Douglas-fir:

\$700 - % Profit & Risk ( $\$700 / 1.16$ ) = \$603 Daily Truck Cost.

\$603 Daily Truck Cost / (3 trips per day x 4.5 MBF per load) = \$44.67/MBF Hauling Cost.

Hauling Cost Calculation Western Hemlock:

\$700 - % Profit & Risk ( $\$700 / 1.16$ ) = \$603 Daily Truck Cost.

\$603 Daily Truck Cost / (3 trips per day x 4.0 MBF per load) = \$50.25/MBF Hauling Cost.

Hauling Cost Calculation Red Alder:

\$700 - % Profit & Risk ( $\$700 / 1.16$ ) = \$603 Daily Truck Cost.

\$603 Daily Truck Cost / (3 trips per day x 3.5 MBF per load) = \$57.43/MBF Hauling Cost.

Additional Costs with P&R

100% Branding and Painting \$1MBF x 2,835 = \$2,835

Additional felling costs for directional felling for 11 acres along power line = \$3,850

Additional cost for topping and rigging lift trees along power lines and line pulling = \$1,225

Ripping/Tilling Dirt Roads (1A-1B, 1C-1D, 1G-1H, 2A-2B, 2C-2D) 18 stations @ \$50/station = \$900

Total Costs w/P&R = \$8,810

Additional Costs without P&R:

Additional Slash Piling with Log Loader at Landing 6 Landings

@ 3 hrs. each = 18hrs. x \$65.00 hr. = \$1,170

Excavator Slash Piling: 65.3 hrs x \$120.00 = \$7,836

Excavator Move-in: 2 move-ins x \$945/move-in = \$1,890

Snag Creation: 40 snags x \$45/snag = \$1,800

Purchaser to pay Stimson \$483.00 for private R/W timber

Total cost no P&R = \$13,179



# Timber Sale Appraisal Logging Conditions Sweeping Corners Sale 341-07-07

"STEWARDSHIP IN FORESTRY"

---

<b>Combination#: 1</b>	Douglas - Fir	67.00%	
	Western Hemlock / Fir	67.00%	
	Alder (Red)	67.00%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Large Tower >=70		<b>Process:</b> Stroke Delimber
<b>Tree Size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
<b>Loads/Day:</b>	6		<b>Bd. Ft./Load:</b> 4,500
<b>Cost/MBF:</b>	\$151.30		
<b>Machines:</b>			
	Log Loader (A)		
	Stroke Delimber (A)		
	Tower Yarder (Large)		
<b>Combination#: 2</b>	Douglas - Fir	33.00%	
	Western Hemlock / Fir	33.00%	
	Alder (Red)	33.00%	
<b>Yarding Distance:</b>	Short (400 ft)		<b>Downhill Yarding:</b> Yes
<b>Logging System:</b>	Shovel		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
<b>Loads/Day:</b>	6		<b>Bd. Ft./Load:</b> 4,500
<b>Cost/MBF:</b>	\$95.14		
<b>Machines:</b>			
	Shovel Logger		



# Timber Sale Appraisal

## Logging Costs

### Sweeping Corners

### Sale 341-07-07

"STEWARDSHIP IN FORESTRY"

Date: 10/12/06

Operating Seasons: 2.0

Profit & Risk: 16%

Project Costs: \$24,446

Other Costs (P/R): \$8,810

Slash Disposal: \$0

Other Costs: \$13,179

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

Road Maintenance: \$2.64

#### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$44.67	3.0	4.5
Western Hemlock / Fir	\$50.25	3.0	4.0
Alder (Red)	\$57.43	3.0	3.5



# Timber Sale Appraisal Logging Costs Breakdown Sweeping Corners Sale 341-07-07

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Westem Hemlock / Fir	Alder (Red)
<b>Logging</b>	132.77	132.77	132.77
<b>Road Maintenance</b>	2.72	2.72	2.78
<b>Fire Protection</b>	1.91	1.91	1.91
<b>Hauling</b>	46.05	51.80	60.45
<b>Other (P/R appl.)</b>	3.11	3.11	3.11
<b>Profit &amp; Risk</b>	29.85	30.77	32.16
<b>Slash Disposal</b>	0.00	0.00	0.00
<b>Scaling</b>	2.00	2.00	2.00
<b>Other</b>	4.65	4.65	4.65
<b>Total</b>	223.06	229.73	239.83

<b>Amortization</b>	0.00	0.00	0.00
<b>Pond Value</b>	567.59	377.97	595.00
<b>Stumpage</b>	344.53	148.24	355.17
<b>Amortized</b>	0.00	0.00	0.00



# Timber Sale Appraisal Summary Sweeping Corners Sale 341-07-07

"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	1,675.00	619.00	541.00
Value	344.53	148.24	355.17
Total	577,087.75	91,760.56	192,146.97

## Gross Timber Sale Value

**Recovery \$860,995.28**

Prepared by: Lanny Freeman

Date: 10/12/06

District: Astoria

Phone: (503) 325-5451

**Final Road Maintenance Cost Summary**

Sale: Sweeping Corners  
 Date: 09-May-06  
 By: Ty Williams

MBF: 2,835  
 \$\$/MBF: \$2.64

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost	Production Rates			
							Production Rates	Miles/day	Distance(miles)	Days
Progressive Operations One Entry(2.25 mi.)	Grader 14G	\$570	1	8	\$84	\$1,242	Grader	2.5	2.3	0.9
	Dump Truck 12CY	\$119	1	8	\$59	\$591				
	FE Loader C966	\$570	1	8	\$79	\$1,202				
Final Road Maintenance (4.5 mi.)	Grader 14G	\$570	1	16	\$84	\$1,914	Grader	2.5	4.5	1.8
	Dump Truck 12CY x 2	\$119	2	16	\$59	\$1,182				
	FE Loader C966	\$570	1	8	\$79	\$1,202				
	Labor			8	\$18	\$144				
<b>Total</b>						<b>\$7,477</b>				

\*Final Road Maintenance Only



**SUMMARY OF ALL PROJECT COSTS**

**SALE NAME:** Sweeping Corners

**NEW CONSTRUCTION:**

Project No. 1	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
	1A-1B, 1C-1D, 1E-1F, 1G1H, 2A-2B, & 2C-2D	49.35	\$15,886
	<b>TOTALS</b>	49.35	<b>\$15,886</b>

**ROAD IMPROVEMENT:**

Project No. 1	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
	11-12, 13-14, & 15-16	232.10	\$5,080
	<b>TOTALS</b>	232.10	<b>\$5,080</b>

**MOVE IN:**

	<u>Equipment</u>	<u>Cost</u>
	Dozer (D8)	\$1,030
	Dump Trucks (20 cy) X 2	\$280
	F E Loader (C966)	\$570
	Grader (14G)	\$570
	Excavator (C330)	\$1,030
	<b>TOTAL</b>	<b>\$3,480</b>

**GRAND TOTAL** **\$24,446**

Compiled By: L. Freeman

Date: 09/14/2006



**SUMMARY OF CONSTRUCTION COSTS**

**SALE NAME:** Sweeping Corners  
**ROAD:** 11-12 (151.8), 13-14(53.0), & 15-16 (27.3)

**NEW CONSTRUCTION:** 0.00 STATIONS  
**IMPROVEMENT:** 232.10 STATIONS

0.00 MILES  
 4.40 MILES

SURFACING	Subgrade prep:	Description	POINT TO POINT		Sta. to Sta. 0+00 to 151+81 Number of stations	Rate/ Cy/ amt.	Cost
			11 to 12	13 to 14			
Application	Rock Size and Type	Depth of Rock (inches)	Location	Volume (CY) per station	N/A	151.81	\$728
Leveling Rock	1 1/2"-0" Crushed	N/A	11-12	N/A	151.81	\$4.28	\$728
Total Rock for Road Segment: 170							
ROAD SEGMENT	13 to 14	POINT TO POINT	Sta. to Sta. 0+00 to 53.0 Number of stations	Rate/ Cy/ amt.	Cost		
Application	Rock Size and Type	Depth of Rock (inches)	Location	Volume (CY) per station	N/A	151.81	\$128
Leveling Rock	1 1/2"-0" Crushed	N/A	13-14	N/A	151.81	\$4.28	\$128
Total Rock for Road Segment: 30							

1 1/2"-0" TOTAL	200	200
-----------------	-----	-----

Processing:	Description	No. sta/Jct	Rate/sta	Cost
	Water, Process & Compact Crushed Rock			\$0
				\$5,080

SPECIAL PROJECTS	Description	Cost

**SUB TOTAL FOR SPECIAL PROJECTS**

**GRAND TOTAL** Cost per Mile \$3,613 \$5,080.22

Compiled By: L. Freeman Date: 09/14/2006





**TIMBER CRUISE REPORT**  
**Sweeping Corners**  
**FY 2007**

1. **Sale Area Location:** Areas 1, 2, and 3 (R/W) are located in Portions of Sections 1, 11, and 14, T4N, R7W; W.M., Clatsop County, Oregon.
2. **Fund Distribution:** BOF 100% LCR of \$1,486.06 for portions along the highway  
 Tax Code 8-01 (100%) right-of-way acquired from Parks under Deed #594.
3. **Sale Acreage by Area:**

Area	Treatment	Gross Acres	Existing R/W	New R/W	Stream Buffer	GTRA	Net Acres	Survey Method
1	Modified Clearcut	64	--	2	3	5	54	GIS
2	Modified Clearcut	26	--	1	--	1	24	GIS
3 In-Sale (R/W)	New Roads	--	--	--	--	--	3	L x W
<b>TOTALS</b>		<b>93</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>81</b>	

4. **Cruisers and Cruise Dates:** Areas 1 - 3 were cruised by Derek Bangs, Lanny Freeman, Jay Morey, Dave Wolfgram, and Jason McCoy in April, 2006.

**5. Cruise Method and Computation:**

AREAS 1 and 2 are modified clearcut units and were variable plot cruised using a 40 BAF. The plots in Areas 1 and 2 are located on a 3 chain by 3 chain grid, with every third plot measured and graded. A total of 83 plots were sampled, with 32 graded plots and 51 count plots. Cedar and marked wildlife trees were recorded as "leave" trees.

AREA 3 In-Sale R/W. The Right-of-Way volume was calculated by multiplying the R/W acreage from the new road construction in the sale areas and the average volume per acre from the plots in Areas 1 and 2. In-sale right-of-way totals 3 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	Modified Clearcut	04N07W SEC01 TYPE: 0ALL
3 R/W	Right-of-Way	04N07W SEC01 TYPE: R/W

**6. Timber Description:**

Areas 1 and 2 are modified clearcut units, approximately 50 to 60 years old, consisting of Douglas-fir and western hemlock with scattered clumps of red alder and occasional western red cedar and noble fir. Approximately 120.8 trees per acre and 35 MBF/acre will be harvested. The Douglas-fir averages 22.3" DBH, with an average bole height of 78 feet to a merchantable top (6" d.i.b.). The average hemlock tree size is 16.4" DBH, with an average bole height of 55 feet to a merchantable top (6" d.i.b.). The alder averages 15.2" DBH with an average bole height of 54 feet to a merchantable top (7" d.i.b.). The average noble fir tree size is 19.4" DBH, with an average bole height of 74 feet to a merchantable top (6" d.i.b.). The average spruce tree is 14" DBH, with an average bole height of 25 feet to a merchantable top of (7" d.i.b.). In Area 2, it was noted that there are quite a few trees with lower bole scars due to former logging practices, as well as a number of mostly True fir with spiral frost checks running most of the way up the trees. For the most part, the frost check trees were targeted for wildlife trees.

Area 3 In-Sale R/W is similar to the timber description mentioned above for Areas 1 & 2. 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 and 2	60%	9%	43.2%	4.7%

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

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

Species	DBH	Net Vol.	Camp Run	2 Saw	3Saw	4 Saw	% D & B	% Sale
Douglas-fir	22"	1,675	--	1,378	260	37	1.9	59
Hem/fir	16"	619	--	377	206	36	2.5	22
Alder	15"	541	541	--	--	--	0.4	19
<b>TOTALS</b>		<b>2,835</b>	<b>541</b>	<b>1,755</b>	<b>466</b>	<b>73</b>		

**9. Approvals:**

Prepared by: Lanny Freeman Date: May 9, 2006

Reviewed by: *Jon Long* Date: 8-24-06

**10. Attachments:**

- Cruise Designs/map - 3 pages
- Volume Reports - 3 pages
- Statistics Reports - 4 pages
- Log Stock Table (MBF) - 3 pages

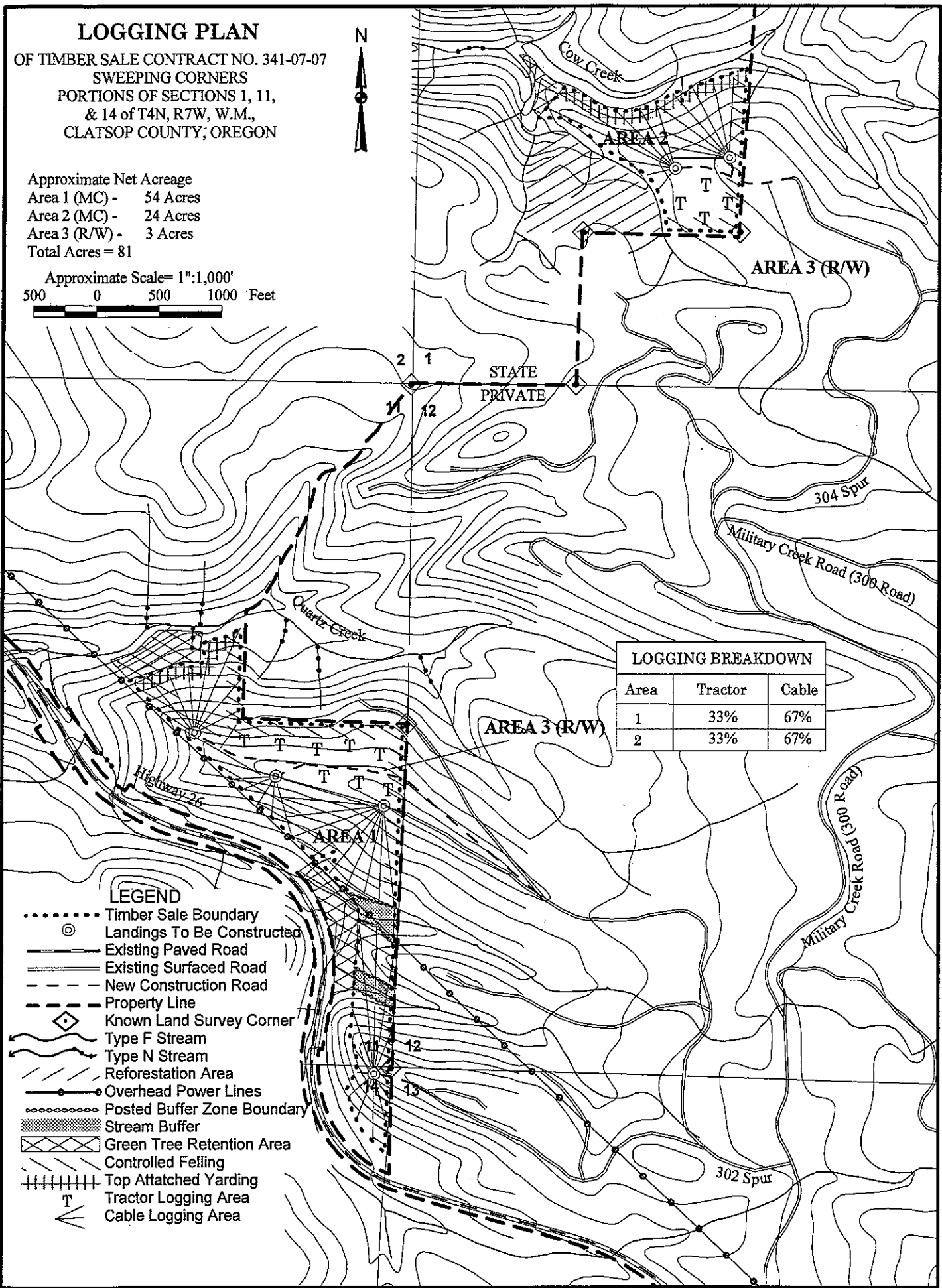
# LOGGING PLAN

OF TIMBER SALE CONTRACT NO. 341-07-07  
 SWEEPING CORNERS  
 PORTIONS OF SECTIONS 1, 11,  
 & 14 of T4N, R7W, W.M.,  
 CLATSOP COUNTY, OREGON



Approximate Net Acreage  
 Area 1 (MC) - 54 Acres  
 Area 2 (MC) - 24 Acres  
 Area 3 (R/W) - 3 Acres  
 Total Acres = 81

Approximate Scale= 1":1,000'  
 500 0 500 1000 Feet



Area	Tractor	Cable
1	33%	67%
2	33%	67%

## LEGEND

- ..... Timber Sale Boundary
- ⊙ Landings To Be Constructed
- Existing Paved Road
- Existing Surfaced Road
- - - New Construction Road
- - - Property Line
- ◊ Known Land Survey Corner
- ~ Type F Stream
- ~ Type N Stream
- /// Reforestation Area
- Overhead Power Lines
- Posted Buffer Zone Boundary
- ▨ Stream Buffer
- ▧ Green Tree Retention Area
- ▨ Controlled Felling
- ||||| Top Attached Yarding
- T Tractor Logging Area
- < Cable Logging Area



**CRUISE DESIGN  
ASTORIA DISTRICT**

Sale Name: SWEEPING CORNERS Area(s) 1, & 2

Harvest Type: CC

Approx. Cruise Acres: 87 Estimated CV% 60 Net BF SE% Objective 9 Net BF

Planned Sale Volume: 2.5 MMBF Estimated Sale Area Value/Acre: \$16,000

**A. Cruise Goals:** (a) Grade minimum 100 conifer and 30 hardwood trees: Sample 33 grade plots, 56 count plots. Grade all hardwoods as CAMP RUN. All cedar are leave trees, all trees under 10" DBH don't cruise, True Fir – look for spiral scars, paint blue W on these cruise as Leave Tree, if scars are vertical allow for deductions. Lots of school marms, crooks, broken tops, old scars on lower bole, and old broken limb scars – especially in Area 2. Try for plots as shown on exhibit. Some plots may be dropped for amoeba shaped units.

**B. Cruise Design:**

**1. Plot Cruises:** BAF 40 (Full point)

Cruise Line Direction(s) Areas 1, & 2 East and West except for southern portion of Area 1 North and South

Cruise Line Spacing 3 chains

Cruise Plot Spacing 3 chains

Grade/Count Ratio All Areas 1:3 grade one : count two

**C. Tree Measurements:**

**1. Diameter:** Minimum DBH to cruise is 10" 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.

**3. Top Cruise Diameter (TCD):** Minimum top outside bark is 7" or 40% of dob at 16' form point for conifers. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh. Minimum top outside bark is 8" for hardwoods. Allow for mossy TCD on hardwoods.

**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'. 37 feet is a popular hardwood log length. 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

**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 Biltmore Stick Compass Cruise Cards in Tatum OR Data Recorder Cruise Design Cruise Map Yellow Flagging Blue Flagging Machete and Gloves. Carry at least ½ can of blue 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).  
B. Data Recorder Instructions  
C. Other

Cruise Design by: L. Freeman

Approved by: J. Long

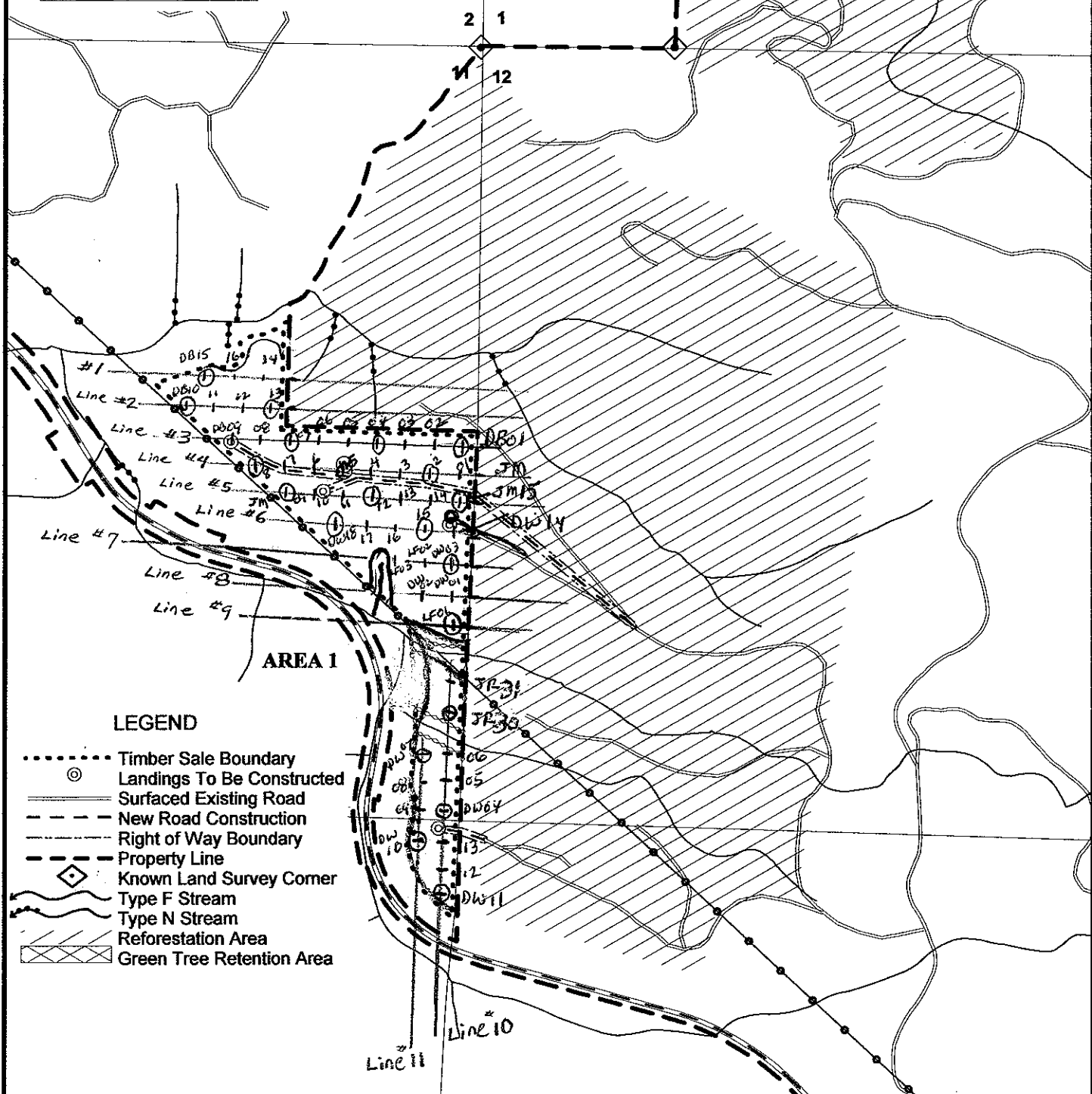
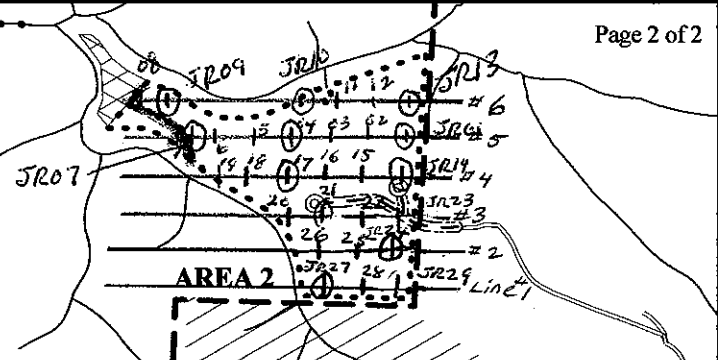
Date: 4-7-06

# CRUISE MAP

OF TIMBER SALE CONTRACT NO. 341-07-07  
SWEEPING CORNERS  
PORTIONS OF SECTIONS 1, 11, 12, 13,  
& 14 of T4N, R7W, W.M.,  
CLATSOP COUNTY, OREGON

Approximate Net Acreage  
Area 1 (MC) - 54 Acres  
Area 2 (MC) - 24 Acres  
Area 5 (R/W) - 3 Acres  
Area 6 (R/W) - 2 Acres  
Total Acres = 83

Approximate Scale= 1":1,000'  
500 0 500 1000 Feet



## LEGEND

- ..... Timber Sale Boundary
- ⊙ Landings To Be Constructed
- Surfaced Existing Road
- - - - New Road Construction
- · - · Right of Way Boundary
- - - - Property Line
- ◇ Known Land Survey Corner
- ~~~~~ Type F Stream
- ~~~~~ Type N Stream
- ▨ Reforestation Area
- ▩ Green Tree Retention Area

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

T04N R07W S01 TyR/W 3.00	<b>Project: SWEEPING</b>	<b>Page 1</b>
T04N R07W S01 TyTAKE 78.00	<b>Acres 81.00</b>	<b>Date 5/9/2006</b>
		<b>Time 1:34:09PM</b>

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log			Logs Per /Acre				
									Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf					
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99								
D	DOCU																							
D	DO2S	49			2.2	17,394	17,018	1,378			1	40	59		1	2	50	48	34	346	2.20			49.2
D	DO3S	9			.8	3,232	3,207	260		1	90	9		2	14	39	45	33	86	0.84				37.3
D	DO4S	1				451	451	37		24	76			28	52	13	7	26	28	0.48				16.4
<b>D</b>	<b>Totals</b>			59	1.9	21,077	20,677	1,675		1	16	35	48	2	5	47	46	30	177	1.41				116.5
H	DOCU																	18		0.00				2.4
H	DO2S	8			1.4	2,720	2,682	217				63	37				32	68	37	299	1.94			9.0
H	DO3S	6			3.4	2,009	1,941	157			94	6					66	34	35	87	0.80			22.2
H	DO4S	1				380	380	31		28	72			16	78	6		24	29	0.44				13.1
<b>H</b>	<b>Totals</b>			14	2.1	5,109	5,004	405		2	42	36	20	1	6	43	49	31	107	0.96				46.7
A	DOCU																	20		0.00				2.6
A	DOCR	19			.4	6,707	6,683	541			61	36	2	2	36	36	26	31	102	0.89				65.5
<b>A</b>	<b>Totals</b>			19	.4	6,707	6,683	541			61	36	2	2	36	36	26	31	98	0.87				68.1
S	DO4S	0				1	1	0		100					100			24	30	0.63				.0
<b>S</b>	<b>Totals</b>			0		1	1	0		100					100			24	30	0.63				.0
NF	DOCU																	5		0.00				.4
NF	DO2S	6			4.0	2,058	1,974	160				16	84		1	37	62	36	540	3.03				3.7
NF	DO3S	2				605	605	49			100			3		55	42	34	75	0.62				8.0
NF	DO4S	0				63	63	5		2	98				100			23	30	0.35				2.1
<b>NF</b>	<b>Totals</b>			8	3.1	2,726	2,643	214		0	25	12	62	1	3	40	56	32	185	1.29				14.2
<b>Totals</b>					1.7	35,620	35,007	2,836		1	29	34	37	2	11	44	44	31	143	1.17				245.5

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

Project: SWEEPING

T04N R07W S01 TTAKE										T04N R07W S01 TTAKE			
Twp	Rge	Sec	Tract	Type	Acre	Plots	Sample Trees	CuFt	BdFt				
04N	07W	01	CC	TAKE	78.00	83	161	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													13		0.00	13.6		
D	DO	2S	82	2.2	17,368	16,993	1,325		1	40	59		1	2	50	48	34	346	2.20	49.2
D	DO	3S	15	.8	3,223	3,198	249		1	90	9		2	14	39	45	33	86	0.84	37.2
D	DO	4S	2		450	450	35		24	76			27	52	13	7	26	28	0.48	16.3
<b>D</b>	<b>Totals</b>		59	1.9	21,041	20,641	1,610		1	16	35	49	2	5	47	46	30	178	1.41	116.3
A	DO	CU															20		0.00	2.6
A	DO	CR	100	.4	6,707	6,683	521		61	36	2		2	36	36	26	31	102	0.89	65.5
<b>A</b>	<b>Totals</b>		19	.4	6,707	6,683	521		61	36	2		2	36	36	26	31	98	0.87	68.1
H	DO	CU															18		0.00	2.4
H	DO	2S	54	1.4	2,719	2,681	209			63	37				32	68	37	299	1.94	9.0
H	DO	3S	39	3.4	2,008	1,941	151		94	6					66	34	35	87	0.80	22.2
H	DO	4S	8		380	380	30		28	72			16	78	6		24	29	0.44	13.1
<b>H</b>	<b>Totals</b>		14	2.1	5,107	5,002	390		2	42	36	20	1	6	43	49	31	107	0.96	46.6
NF	DO	CU															4		0.00	.4
NF	DO	2S	75	4.1	2,064	1,980	154			17	83			1	36	62	36	540	3.04	3.7
NF	DO	3S	23		601	601	47		100				3		55	42	35	75	0.62	8.0
NF	DO	4S	2		62	62	5		100					100			23	30	0.35	2.1
<b>NF</b>	<b>Totals</b>		8	3.1	2,727	2,643	206		25	12	63		1	3	40	56	32	186	1.29	14.2
<b>Type Totals</b>				1.7	35,582	34,969	2,728		1	29	34	37	2	11	44	44	31	143	1.17	245.2

Species, Sort Grade - Board Foot Volumes (Type)

Project: SWEEPING

T04N R07W S01 TR/W

T04N R07W S01 TR/W

Twp	Rge	Sec	Tract	Type	Acre	Plots	Sample Trees	CuFt	BdFt													
04N	07W	01	CC	R/W	3.00	83	168	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				
D	DO	CU																				
D	DO	2S	82	2.2	18,054	17,662	53			1	41	58		1	2	50	48	34	345	2.19		51.2
D	DO	3S	16	.7	3,478	3,453	10		0	91	9			2	13	42	44	33	86	0.84		40.1
D	DO	4S	2		491	491	1		22	78				33	48	12	7	25	27	0.47		18.1
<b>D</b>	<b>Totals</b>		60	1.9	22,023	21,606	65		1	17	35	47		2	4	48	46	30	176	1.40		123.0
A	DO	CU																20		0.00		2.6
A	DO	CR	100	.4	6,707	6,683	20			61	36	2		2	36	36	26	31	102	0.89		65.5
<b>A</b>	<b>Totals</b>		19	.4	6,707	6,683	20			61	36	2		2	36	36	26	31	98	0.87		68.1
H	DO	CU																18		0.00		2.4
H	DO	2S	54	1.4	2,751	2,713	8				63	37				32	68	37	299	1.94		9.1
H	DO	3S	39	3.4	2,032	1,964	6			94	6					66	34	35	87	0.80		22.5
H	DO	4S	8		385	385	1		28	72				16	78	6		24	29	0.44		13.2
<b>H</b>	<b>Totals</b>		14	2.1	5,168	5,061	15		2	42	36	20		1	6	43	49	31	107	0.96		47.2
NF	DO	CU																19		0.00		.6
NF	DO	2S	69	3.8	1,901	1,829	5				15	85			1	41	58	36	536	3.01		3.4
NF	DO	3S	27		720	720	2			100				2		59	39	34	87	0.68		8.3
NF	DO	4S	3		88	88	0		39	61					100			23	30	0.36		2.9
<b>NF</b>	<b>Totals</b>		7	2.7	2,708	2,636	8		1	29	11	59		1	4	44	51	32	172	1.21		15.3
S	DO	4S	100		14	14	0		100						100			24	30	0.63		.5
<b>S</b>	<b>Totals</b>		0		14	14	0		100						100			24	30	0.63		.5
<b>Type Totals</b>				1.7	36,620	36,000	108		1	30	34	36		2	11	45	43	31	142	1.16		254.0

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT SWEEPING				DATE	5/9/2006	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	07W	01	CC	TAKE	78.00	83	477	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	83	477	5.7							
CRUISE	32	161	5.0	9,417		1.7				
DBH COUNT										
REFOREST										
COUNT	51	316	6.2							
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	85	46.4	22.3	78		125.3	21,041	20,641	4,984	4,949
R ALDER	35	40.5	15.2	54		51.1	6,707	6,683	1,811	1,811
WHEMLOCK	33	27.5	16.4	55		40.5	5,107	5,002	1,398	1,390
NOB FIR	8	6.4	19.4	74	3	13.0	2,727	2,643	599	594
<b>TOTAL</b>	<i>161</i>	<i>120.7</i>	<i>18.7</i>	<i>65</i>		<i>229.9</i>	<i>35,582</i>	<i>34,969</i>	<i>8,793</i>	<i>8,744</i>
	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	131.2	10.3	297	332	366					
R ALDER	217.2	17.1	36	43	50					
WHEMLOCK	258.3	20.4	46	58	70					
NOB FIR	568.1	44.8	28	50	72					
<b>TOTAL</b>	<i>89.1</i>	<i>7.0</i>	<i>449</i>	<i>482</i>	<i>516</i>	<i>317</i>	<i>79</i>	<i>35</i>		
	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	72.4	7.9	43	46	50					
R ALDER	147.4	16.2	34	41	47					
WHEMLOCK	155.0	17.0	23	27	32					
NOB FIR	233.0	25.6	5	6	8					
<b>TOTAL</b>	<i>48.6</i>	<i>5.3</i>	<i>114</i>	<i>121</i>	<i>127</i>	<i>94</i>	<i>24</i>	<i>10</i>		
	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	69.8	7.7	116	125	135					
R ALDER	141.7	15.6	43	51	59					
WHEMLOCK	150.0	16.5	34	40	47					
NOB FIR	215.3	23.6	10	13	16					
<b>TOTAL</b>	<i>39.0</i>	<i>4.3</i>	<i>220</i>	<i>230</i>	<i>240</i>	<i>61</i>	<i>15</i>	<i>7</i>		
	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	69.7	7.7	19,061	20,641	22,221					
R ALDER	144.2	15.8	5,625	6,683	7,741					
WHEMLOCK	153.3	16.8	4,160	5,002	5,843					
NOB FIR	218.7	24.0	2,008	2,643	3,277					
<b>TOTAL</b>	<i>43.2</i>	<i>4.7</i>	<i>33,311</i>	<i>34,969</i>	<i>36,627</i>	<i>75</i>	<i>19</i>	<i>8</i>		

**STATISTICS**  
**PROJECT SWEEPING**

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	07W	01	CC	R/W	3.00	83	494	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	83	494	6.0		
CRUISE	32	168	5.3	375	44.8
DBH COUNT					
REFOREST					
COUNT	51	326	6.4		
BLANKS					
100 %					

**STAND SUMMARY**

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	89	49.3	22.1	78		131.6	22,023	21,606	5,227	5,192
R ALDER	35	40.5	15.2	54		51.1	6,707	6,683	1,811	1,811
WHEMLOCK	33	27.8	16.4	55		41.0	5,168	5,061	1,415	1,407
NOB FIR	10	6.9	19.3	73	3	14.0	2,708	2,636	595	590
S SPRUCE	1	.5	14.0	25		.5	14	14	7	7
<b>TOTAL</b>	<i>168</i>	<i>125.0</i>	<i>18.7</i>	<i>65</i>		<i>238.1</i>	<i>36,620</i>	<i>36,000</i>	<i>9,056</i>	<i>9,007</i>

SD:	COEFF VAR. %	S.E. %	SAMPLE TREES - BF			LOW	AVG	HIGH	# OF TREES REQ.	INF. POP.
1								5	10	15
DOUG FIR	131.3	10.1	296	330	363					
R ALDER	222.8	17.2	34	41	48					
WHEMLOCK	264.6	20.4	44	55	67					
NOB FIR	532.6	41.1	31	53	75					
S SPRUCE	1296.1	100.0		0	0					
<b>TOTAL</b>	<i>89.1</i>	<i>6.9</i>	<i>447</i>	<i>480</i>	<i>513</i>			<i>318</i>	<i>79</i>	<i>35</i>

SD:	COEFF VAR. %	S.E. %	TREES/ACRE			LOW	AVG	HIGH	# OF PLOTS REQ.	INF. POP.
1								5	10	15
DOUG FIR	71.9	7.9	45	49	53					
R ALDER	147.4	16.2	34	41	47					
WHEMLOCK	153.5	16.9	23	28	32					
NOB FIR	224.5	24.6	5	7	9					
S SPRUCE	911.0	100.0	0	0	1					
<b>TOTAL</b>	<i>46.2</i>	<i>5.1</i>	<i>119</i>	<i>125</i>	<i>131</i>			<i>85</i>	<i>21</i>	<i>9</i>

SD:	COEFF VAR. %	S.E. %	BASAL AREA/ACRE			LOW	AVG	HIGH	# OF PLOTS REQ.	INF. POP.
1								5	10	15
DOUG FIR	70.0	7.7	121	132	142					
R ALDER	141.7	15.6	43	51	59					
WHEMLOCK	148.6	16.3	34	41	48					
NOB FIR	206.9	22.7	11	14	17					
S SPRUCE	911.0	100.0		0	1					
<b>TOTAL</b>	<i>38.1</i>	<i>4.2</i>	<i>228</i>	<i>238</i>	<i>248</i>			<i>58</i>	<i>15</i>	<i>6</i>

SD:	COEFF VAR. %	S.E. %	NET BF/ACRE			LOW	AVG	HIGH	# OF PLOTS REQ.	INF. POP.
1								5	10	15
DOUG FIR	70.4	7.7	19,936	21,606	23,275					
R ALDER	144.2	15.8	5,625	6,683	7,741					
WHEMLOCK	151.9	16.7	4,217	5,061	5,905					
NOB FIR	210.7	23.1	2,027	2,636	3,246					
S SPRUCE	911.0	100.0		14	27					
<b>TOTAL</b>	<i>42.5</i>	<i>4.7</i>	<i>34,321</i>	<i>36,000</i>	<i>37,680</i>			<i>72</i>	<i>18</i>	<i>8</i>



TC TSTATS				STATISTICS				PAGE 1		
				PROJECT SWEEPING				DATE 5/9/2006		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	07W	01	CC	STAN	78.00	83	496	1	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		83	496	6.0						
CRUISE		32	170	5.3	9,728	1.7				
DBH COUNT										
REFOREST										
COUNT		51	326	6.4						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	85	46.4	22.3	78		125.3	21,041	20,641	4,984	4,949
R ALDER	35	40.5	15.2	54		51.1	6,707	6,683	1,811	1,811
WHEMLOCK	33	27.5	16.4	55		40.5	5,107	5,002	1,398	1,390
NOB FIR	8	6.4	19.4	74	3	13.0	2,727	2,643	599	594
DOUGLEAV	4	3.0	19.6	70		6.3	978	961	242	242
NFIRLEAV	2	.5	19.1	69	0	1.0	118	118	27	27
SNAG	2	.1	52.3	10		1.0				
S SPRUCE	1	.5	14.0	25		.5	14	14	7	7
<b>TOTAL</b>	<b>170</b>	<b>124.7</b>	<b>18.7</b>	<b>65</b>		<b>238.6</b>	<b>36,691</b>	<b>36,061</b>	<b>9,069</b>	<b>9,020</b>
		COEFF VAR.%	S.E.%	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.	
SD:	1			LOW	AVG	HIGH	5	10	15	
DOUG FIR		136.8	10.5	281	314	347				
R ALDER		224.4	17.2	34	41	48				
WHEMLOCK		266.4	20.4	44	55	66				
NOB FIR		584.2	44.8	26	47	68				
DOUGLEAV		817.7	62.7	4	12	19				
NFIRLEAV		1083.5	83.1	1	5	9				
SNAG										
S SPRUCE		1303.8	100.0	0	0	0				
<b>TOTAL</b>		<b>90.3</b>	<b>6.9</b>	<b>441</b>	<b>473</b>	<b>506</b>	<b>326</b>	<b>82</b>	<b>36</b>	
		COEFF VAR.%	S.E.%	TREES/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1			LOW	AVG	HIGH	5	10	15	
DOUG FIR		72.4	7.9	43	46	50				
R ALDER		147.4	16.2	34	41	47				
WHEMLOCK		155.0	17.0	23	27	32				
NOB FIR		233.0	25.6	5	6	8				
DOUGLEAV		281.7	30.9	2	3	4				
NFIRLEAV		756.1	83.0	0	0	1				
SNAG		911.0	100.0	0	0	0				
S SPRUCE		911.0	100.0	0	0	1				
<b>TOTAL</b>		<b>45.2</b>	<b>5.0</b>	<b>119</b>	<b>125</b>	<b>131</b>	<b>82</b>	<b>20</b>	<b>9</b>	
		COEFF VAR.%	S.E.%	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1			LOW	AVG	HIGH	5	10	15	
DOUG FIR		69.8	7.7	116	125	135				
R ALDER		141.7	15.6	43	51	59				
WHEMLOCK		150.0	16.5	34	40	47				
NOB FIR		215.3	23.6	10	13	16				
DOUGLEAV		272.7	29.9	4	6	8				
NFIRLEAV		640.3	70.3	0	1	2				
SNAG		911.0	100.0	0	1	2				
S SPRUCE		911.0	100.0	0	0	1				
<b>TOTAL</b>		<b>36.4</b>	<b>4.0</b>	<b>229</b>	<b>239</b>	<b>248</b>	<b>53</b>	<b>13</b>	<b>6</b>	

**STATISTICS**  
**PROJECT SWEEPING**

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	07W	01	CC	STAN	78.00	83	496	1	W
SD: 1		COEFF VAR.		NET BF/ACRE		# OF PLOTS REQ.		INF. POP.	
		S.E.%	LOW	AVG	HIGH	5	10	15	
SD: 1		COEFF VAR.%		NET BF/ACRE		# OF PLOTS REQ.		INF. POP.	
		S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		69.7	7.7	19,061	20,641	22,221			
R ALDER		144.2	15.8	5,625	6,683	7,741			
WHEMLOCK		153.3	16.8	4,160	5,002	5,843			
NOB FIR		218.7	24.0	2,008	2,643	3,277			
DOUGLEAV		275.5	30.2	670	961	1,252			
NFIRLEAV		640.3	70.3	35	118	201			
SNAG									
S SPRUCE		911.0	100.0		14	27			
<b>TOTAL</b>		42.0	4.6	34,400	36,061	37,722	70	18	8

Log Stock Table - MBF

T04N R07W S01 TyR/W 3.00  
 T04N R07W S01 TyTAKE 78.00

Project: SWEEPING  
 Acres 81.00

Page 1  
 Date 5/9/2006  
 Time 1:34:38PM

S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches										
							2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
D	DO 2S	16	8	57.1	4	.2						4					
D	DO 2S	20	11	10.0	9	.6							9				
D	DO 2S	22	7		7	.4					7						
D	DO 2S	24	17		17	1.0			1			8	8				
D	DO 2S	32	680		676	40.4				9	128	74	247	167	51		
D	DO 2S	33	8		8	.5					8						
D	DO 2S	38	3		3	.2					3						
D	DO 2S	40	675	3.0	655	39.1					81	137	225	212			
D	DO 3S	17	0		0	.0				0							
D	DO 3S	19	2		2	.1				2							
D	DO 3S	20	3		3	.2				3							
D	DO 3S	21	6		6	.3					1			4			
D	DO 3S	22	1		1	.1		1									
D	DO 3S	23	2		2	.1			2								
D	DO 3S	24	4		4	.2			2		2						
D	DO 3S	25	4		4	.2				2	2						
D	DO 3S	26	1		1	.1				1							
D	DO 3S	27	2		2	.1				2							
D	DO 3S	28	7		7	.4			3	4							
D	DO 3S	29	5		5	.3					5						
D	DO 3S	30	4		4	.2				4							
D	DO 3S	31	3		3	.2				3							
D	DO 3S	32	76	1.6	75	4.5			13	28	28		7				
D	DO 3S	33	6		6	.4				6							
D	DO 3S	34	15		15	.9				6	8						
D	DO 3S	35	2		2	.1				2							
D	DO 3S	36	14		14	.8				8	3	3					
D	DO 3S	37	5	9.8	5	.3				5							
D	DO 3S	38	13		13	.7				10		3					
D	DO 3S	40	87		87	5.2				8	22	44		13			
D	DO 4S	13	1		1	.0					1						
D	DO 4S	15	1		1	.0				1							
D	DO 4S	17	1		1	.1					1						
D	DO 4S	18	1		1	.1				0	1						
D	DO 4S	19	4		4	.2				4							
D	DO 4S	20	3		3	.2				2	1						
D	DO 4S	22	2		2	.1		1		1							



Log Stock Table - MBF

T04N R07W S01 TyR/W 3.00  
 T04N R07W S01 TyTAKE 78.00

Project: SWEEPING  
 Acres 81.00

Page 3  
 Date 5/9/2006  
 Time 1:34:38PM

Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
A		DO CR	35	2		2	.4			2									
A		DO CR	36	10		10	1.9			10									
A		DO CR	40	130		130	24.1			5	19	19	71	16					
A		Totals		543		541	19.1			55	118	160	148	28	33				
S		DO 4S	24	0		0	100.0		0										
S		Totals		0		0	.0		0										
NF		DO 2S	21	2		2	.9					2							
NF		DO 2S	32	42	3.6	40	18.9							10	10	20			
NF		DO 2S	34	18		18	8.5							18					
NF		DO 2S	40	105	5.0	100	46.5					17	7	33	42				
NF		DO 3S	16	1		1	.6					1							
NF		DO 3S	32	27		27	12.7				27	0							
NF		DO 3S	36	3		3	1.3				3								
NF		DO 3S	37	7		7	3.5			4		4							
NF		DO 3S	40	10		10	4.7			10									
NF		DO 3S	41	0		0	.1					0							
NF		DO 4S	23	5		5	2.3			5									
NF		DO 4S	24	0		0	.0		0										
NF		Totals		221	3.1	214	7.5		0	19	30	5	19	7	28	43	63		
Total		All Species		2,885	1.7	2,836	100.0		2	17	236	260	331	471	337	619	447	114	