



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
South Fork Split
Sale 341-11-03

District: Astoria

Date: March 17, 2011

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$739,678.70	\$93,536.17	\$833,214.87
		Project Work:	\$(21,554.00)
		Advertised Value:	\$811,660.87



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
 South Fork Split
 Sale 341-11-03

District: Astoria

Date: March 17, 2011

timber description

Location: Portions of Sections 13 and 24, T6N, R8W and portions of Sections 18 and 19, T6N, R7W, W.M., Clatsop County, Oregon.

Stand Stocking: 80%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	21	0	97
Western Hemlock / Fir	20	0	97
Sitka Spruce	24	0	97
Red Cedar	15	0	97
Alder (Red)	16	0	95

Volume by Grade	2S	3S	4S	Camprur	Total
Douglas - Fir	578	260	28	0	866
Western Hemlock / Fir	1,221	539	33	0	1,793
Sitka Spruce	117	88	14	0	219
Red Cedar	0	1	1	0	2
Alder (Red)	0	0	0	287	287
Total	1,916	888	76	287	3,167



Timber Sale Appraisal
South Fork Split
Sale 341-11-03

"STEWARDSHIP IN FORESTRY"

District: Astoria

Date: March 17, 2011

comments: Pond Values Used: 4th Quarter Calendar Year 2010.

Expected Log Markets: Astoria, Mist, Clatskanie, Tillamook,
Forest Grove, Longview, and Garibaldi.

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$700 daily truck cost.

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

100% Brand and Paint: \$1/MBF x 3,167 MBF = \$3,167

Log Loader Slash & Landing Piling (includes Move-In and Pile
Materials): = \$13,964 (see attached appraisal)

Machine washing for noxious weed compliance = \$4,000

Additional cutting costs for flush cutting stumps adjacent to
Highway 202 and disposing of stump material:

1 Cutter - 2 days x \$500/day = \$1,000

Dump Truck - 2 days x \$584/day = \$1,168

Log Loader w/brush rake - 2 days x \$1,152/day = \$2,304

Additional logging costs for harvest of Area 1:

2 Flaggers (\$180/flagger/day) - 10 days x \$360/day = \$5,400

TOTAL Other Costs (with Profit & Risk to be added) = \$31,003

Other Costs (No Profit & Risk added):

None.



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal South Fork Split Sale 341-11-03

District: Astoria

Date: March 17, 2011

logging conditions

combination#: 1

Douglas - Fir	50.00%
Western Hemlock / Fir	50.00%
Sitka Spruce	50.00%
Red Cedar	50.00%
Alder (Red)	50.00%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 9.0 **bd. ft / load:** 4,500
cost / mbf: \$82.57

machines: Log Loader (A)
Stroke Delimber (A)
Tower Yarder (Medium)

combination#: 2

Douglas - Fir	46.00%
Western Hemlock / Fir	46.00%
Sitka Spruce	46.00%
Red Cedar	46.00%
Alder (Red)	46.00%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Shovel **Process:** Manual Falling/Delimiting
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 12.0 **bd. ft / load:** 4,500
cost / mbf: \$46.38

machines: Shovel Logger

combination#: 3

Douglas - Fir	4.00%
Western Hemlock / Fir	4.00%
Sitka Spruce	4.00%
Red Cedar	4.00%
Alder (Red)	4.00%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Shovel **Process:** Manual Delimiting
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 3.0 **bd. ft / load:** 4,500
cost / mbf: \$185.53

machines: Shovel Logger



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
 South Fork Split
 Sale 341-11-03

District: Astoria

Date: March 17, 2011

logging costs

Operating Seasons:	2.00	Profit Risk:	12.00%
Project Costs:	\$21,554.00	Other Costs (P/R):	\$31,003.00
Slash Disposal:	\$0.00	Other Costs:	\$0.00

Miles of Road

Road Maintenance: \$4.43

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

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	4.0	4.5
Western Hemlock / Fir	\$0.00	3.0	3.7
Sitka Spruce	\$0.00	1.0	5.0
Red Cedar	\$0.00	2.0	4.0
Alder (Red)	\$0.00	2.0	3.3



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
 South Fork Split
 Sale 341-11-03

District: Astoria

Date: March 17, 2011

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$70.04	\$4.56	\$2.77	\$35.76	\$9.79	\$14.75	\$0.00	\$5.00	\$0.00	\$142.67
Western Hemlock / Fir									
\$70.04	\$4.56	\$2.77	\$58.00	\$9.79	\$17.42	\$0.00	\$5.00	\$0.00	\$167.58
Sitka Spruce									
\$70.04	\$4.56	\$2.77	\$128.75	\$9.79	\$25.91	\$0.00	\$5.00	\$0.00	\$246.82
Red Cedar									
\$70.04	\$4.56	\$2.77	\$80.46	\$9.79	\$20.11	\$0.00	\$5.00	\$0.00	\$192.73
Alder (Red)									
\$70.04	\$4.65	\$2.77	\$99.44	\$9.79	\$22.40	\$0.00	\$5.00	\$0.00	\$214.09

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$474.39	\$331.72	\$0.00
Western Hemlock / Fir	\$0.00	\$401.26	\$233.68	\$0.00
Sitka Spruce	\$0.00	\$392.42	\$145.60	\$0.00
Red Cedar	\$0.00	\$960.00	\$767.27	\$0.00
Alder (Red)	\$0.00	\$540.00	\$325.91	\$0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
South Fork Split
Sale 341-11-03

District: Astoria

Date: March 17, 2011

summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	866	\$331.72	\$287,269.52
Western Hemlock / Fir	1,793	\$233.68	\$418,988.24
Sitka Spruce	219	\$145.60	\$31,886.40
Red Cedar	2	\$767.27	\$1,534.54
Alder (Red)	287	\$325.91	\$93,536.17

Gross Timber Sale Value

Recovery: \$833,214.87

Prepared by: Ty Williams

Phone: 503-325-5451

Site Prep Appraisal

Sale Number: 341-11-03
Sale Name: South Fork Split
Date: 12/17/2010

Vegetation Type/Zone	Vegetation Type/Zone Code	Production Rate (hr/ac)	Estimated Piles/Acre
Doug-fir	A	1.0	3.0
Hemlock/Fir	B	1.5	4.0
Hemlock/Spruce	C	2.0	6.0
Hemlock	D	2.0	6.0
Conifer/Hardwood	E	1.5	3.0

Sale Area	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour	Total Cost/Area
1	MC	B	5	7.5	\$110.00	\$825.00
2	MC	B	24	36	\$110.00	\$3,960.00
3	MC	B	30	45	\$110.00	\$4,950.00

Sub Total = \$9,735.00

Sale Area	Number of Landings to be Piled	Cost/Landing Pile*	Total Cost/Area	Number of In-Unit Piles	Material Cost/Pile	Total Cost/Area
1	0	\$263.00	\$0.00	20	\$5.00	\$100.00
2	3	\$263.00	\$789.00	96	\$5.00	\$480.00
3	5	\$263.00	\$1,315.00	120	\$5.00	\$600.00

*Cost includes separating firewood

Sub Total = \$3,284.00

Move-In Allowance	Number of Move-In's	Total Move-In Allowance
\$945.00	1	\$945.00

Sub Total = \$945.00

Grand Total = \$13,964.00

SUMMARY OF ALL PROJECT COSTS

SALE NAME: South Fork Split

ROAD IMPROVEMENT:

Project No. 1

<u>Road segment</u>		<u>Length/Sta</u>		<u>Cost</u>
I1-I2 and I3-I4		155.20		<u>\$12,253</u>
TOTALS	2.94 miles	155.20		\$12,253

SPECIAL PROJECTS:

Project No. 2

Roadside Brushing	5.15 miles			<u>\$5,662</u>
Project Work Road Maintenance				<u>\$186</u>

MOVE IN:

	<u>Equipment</u>	<u>Cost</u>
Dump Trucks (12 cy x 5)		<u>\$705</u>
F E Loader (C966)		<u>\$675</u>
Grader (14G)		<u>\$675</u>
Vibratory Roller		<u>\$675</u>
Water Truck (2,500 gallon)		<u>\$165</u>
Backhoe (C 580)		<u>\$279</u>
Brush Cutter (Medium) 15' Vertical Reach		<u>\$279</u>
TOTAL		<u>\$3,453</u>

GRAND TOTAL

\$21,554

Compiled By: Ty Williams *FL*

Date: 02/23/2011

x:\Jewell Unit\timbersales\2011\South Fork Split\Sale Prep\Summary of Construction.xls

Project No. 1 Road Improvement

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: South Fork Split
 ROAD: I1-12 (114+50) and I3-14 (40+70)
 NEW CONSTRUCTION: 0.00 STATIONS
 IMPROVEMENT: 155.20 STATIONS
 0.00 MILES
 2.94 MILES

SURFACING		Description		Stations/ amount	Rate/ sta/amt	Cost
Subgrade prep:				155.20		
Grade, Shape and Ditch I1-12 & I3-14				155.20	\$21.55	\$3,344.56
Remove bank sough - I3 to I4 @ 0+00 - 0+75 (2hr C580 x \$72/hr + 10cy Truck x \$73/hr)				40.00	\$290.00	\$290.00
Scatter ditch waste materials				155.20	\$10.78	\$1,673.06
ROAD SEGMENT I1 to I2						
Application	Rock Size and Type	Depth of Rock (inches)	POINT TO POINT I1 to I2 Volume (CY) per	Sta. to Sta. Number of	Rate/ Sta/ amt.	Cost
Subgrade Leveling	3/4"-0" Crushed	N/A		0+00 to 114+50		
Landing Rock	6"-0" Pit Run	N/A		stations	\$5.65	\$1,695
Total Rock for Road Segment:				stations	\$8.98	\$449
ROAD SEGMENT I3 to I4						
Application	Rock Size and Type	Depth of Rock (inches)	POINT TO POINT I3 to I4 Volume (CY) per	Sta. to Sta. Number of	Rate/ Sta/ amt.	Cost
Subgrade Leveling	3/4"-0" Crushed	N/A		0+00 to 40+70		
Total Rock for Road Segment:				stations	\$5.65	\$565
ROAD SEGMENT I5 & I6						
Application	Rock Size and Type	Depth of Rock (inches)	POINT TO POINT I5 & I6 Volume (CY) per	Sta. to Sta. Number of	Rate/ Sta/ amt.	Cost
Landings	6"-0" Pit Run	N/A		0+00 to 85+80		
Total Rock for Landings:				Landings	\$8.98	\$898
Processing:						
Description				No. sta	Rate/sta	Cost
Water, Process & Compact Crushed Rock on I1 to I2 from 0+00 to 85+80				85.8	\$49.02	\$4,206
Water, Process & Compact Crushed Rock on I3 to I4 from 0+00 to 19+00				19.0	\$49.02	\$931
SUB TOTAL FOR SURFACING						\$11,907.91
SPECIAL PROJECTS						
Description				Quantity	Rate	Cost
Develop Pit-run Rock \$2.30/cy				150	\$2.30	\$345.00
SUB TOTAL FOR SPECIAL PROJECTS						\$345
GRAND TOTAL						\$12,252.91

CRUSHED ROCK COST

SALE NAME: South Fork Split
 PROJECT: No. 1
 QUARRY: County Stockpile/W. Tidewater

MATERIAL: Crushed

DATE: 12/14/2010
 BY: Ty Williams

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	
11 to 12	114.50	300	1	1.10		0.50	0.50	0.50	0.10	3.70
12 to 13	40.70	100		1.00		1.20	1.00	0.50	0.10	3.80
TOTAL	155.20	400								
	STA./NO.	CU. YD.								
CUBIC YARD WEIGHTED HAUL			0.75	1.08		0.68	0.63	0.50	0.10	AVERAGE HAUL 3.73
Average Round Trip Distance (miles)									7.45	

ROCK HAUL:

Truck type: <u>D20</u>	No. trucks: _____		
Delay min.: <u>8</u>	Efficiency: <u>85%</u>	Ave haul: \$3.98 /cy	
		Load: \$0.60 /cy	
Truck type: <u>D12</u>	No. trucks: _____	Spread: \$1.08 /cy	
Delay min.: <u>6</u>	Efficiency: <u>85%</u>		
Truck type: <u>D10</u>	No. trucks: <u>5</u>	Production: cy/day =	<u>733</u>
Delay min.: <u>5</u>	Efficiency: <u>85%</u>		
CRUSHED ROCK HAUL COSTS		400 cy @	\$5.65 /cy

PIT RUN ROCK COST

SALE NAME: South Fork Split
 PROJECT: No. 1
 QUARRY: West Tidewater Quarry

MATERIAL: Pit Run

DATE: 12/14/2010
 BY: Ty Williams

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES							Total Haul
			50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	
I2, I5, I6	N/A	150		1	1.00	1.00	1.80	0.50	0.10	5.40
TOTAL		150								
	STA./NO.	CU. YD.								AVERAGE HAUL
CUBIC YARD WEIGHTED HAUL				1.00	1.00	1.00	1.80	0.50	0.10	5.40
									Average Round Trip Distance (miles)	10.80

ROCK HAUL:

Truck type: D20 No. trucks: _____
 Delay min.: 8 Efficiency: 85% Ave haul: \$5.99 /cy
 Load: \$1.08 /cy
 Spread: \$1.91 /cy

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

Truck type: D10 No. trucks: 5 Production: cy/day = 487
 Delay min.: 5 Efficiency: 85%

PIT RUN ROCK HAUL COSTS 150 cy @ \$8.98 /cy

**SOUTH FORK SPLIT
BRUSHING COSTS**

Date: 09\23\10

ROAD "B" POINT	MILES\Hrs	\$/MILE/Hr	TOTAL
B1	0.145	\$1,000	\$145
B2	0.709	\$1,125	\$798
B3	0.033	\$1,125	\$37
B4	0.022	\$600	\$13
B5	0.159	\$1,125	\$179
B6	0.031	\$600	\$19
B7	1.122	\$1,250	\$1,403
B8	0.036	\$600	\$22
B9	1.313	\$1,125	\$1,477
B10	0.106	\$1,125	\$119
B11	0.226	\$1,250	\$283
B12	0.023	\$600	\$14
B13	0.028	\$600	\$17
B14	0.029	\$600	\$17
B15	0.054	\$600	\$32
B16	0.038	\$600	\$23
B17	0.016	\$400	\$6
B18	0.04	\$1,125	\$45
B19	0.042	\$600	\$25
B20	0.288	\$1,250	\$360
B21	0.449	\$400	\$180
B22	0.047	\$400	\$19
B23	0.021	\$1,125	\$24
B24	0.047	\$600	\$28
B25	0.125	\$600	\$75
Chainsaw work	8	\$38	\$304
	5.149	\$1,100	\$5,662

Road Maintenance after completion of Projects

Sale: South Fork Split
Date: 14-Dec-10
By: Ty Williams

Type	Equipment/Rationale	Hours	Rate	Cost
Final Project	Grader 14G	2	\$93	\$186
Total				\$186

Miles/day	Distance(miles)	Days
1.5	1.7	1.1

Production Rates
 Grader

Light grading of Tidewater Mainline and Fishhawk Mainline (WEYCO)

Road Maintenance Cost Summary

Sale: South Fork Split
 Date: 17-Dec-10
 By: Ty Williams

MBF: 2,996
 \$\$/MBF: \$4.43

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost	Production Rates			
							Production Rates	Miles/day	Distance(miles)	Days
Progressive Operations 1nd Entry	Grader 14G	\$675	1	8	\$93	\$1,419	Grader	2.5	2.5	1.0
	Dump Truck 12CY x 1	\$141	1	8	\$73	\$725				
	FE Loader C966	\$675	1	8	\$77	\$1,291				
Final Road Maintenance	Grader 14G	\$675	1	24	\$93	\$2,907	Grader	1.5	3.4	2.3
	Dump Truck 12CY x 2	\$282	2	8	\$73	\$1,450				
	FE Loader C966	\$675	1	8	\$77	\$1,291	Vibratory Roller*	1.5	3.4	2.3
	Vibratory Roller	\$675	1	24	\$72	\$2,403				
	Water Truck 2,500 gallon	\$165	1	16	\$83	\$1,493				
	Labor		1	8	\$38	\$304				
Total										\$13,283

*Final Road Maintenance Only

**South Fork Split
TIMBER CRUISE REPORT
FY 2011**

1. **Sale Area Location:** Areas 1, 2, and 3 are located in portions of Sections 13 and 24, T6N, R8W, and Section 18 and 19, T6N, R7W, W.M., Clatsop County, Oregon.
2. **Fund Distribution:** BOF 100%
Tax Code 8-01 (100%)

3. **Sale Acreage by Area:**

Area	Treatment	Gross Acres	GTRA	Existing R/W	Stream Buffer	Net Acres	Survey Method
1	Modified Clearcut	5.0	0.0	0.0	0.0	5.0	GIS
2	Modified Clearcut	58.0	8.0	1.0	5.0	44.0	GIS
3	Modified Clearcut	78.0	0.0	2.0	8.0	68.0	GIS
TOTALS		141.0	8.0	3.0	13.0	117.0	

4. **Cruisers and Cruise Dates:** Areas 1, 2, and 3 were cruised by Jon Long, Jay Morey, Kevin Berry, Derek Bangs, and Ty Williams, January 27, 2011.

5. **Cruise Method and Computation:** Area 1 is a modified clearcut unit and was variable plot cruised using a 40 BAF. The plots are located on a 7 chain spacing, linearly through the area, with every other plot measured and graded. A total of 10 plots were sampled, with 5 measured and graded plots, and 5 count plots. Cedar is a take species in this sale area. Areas 2 and 3 are modified clearcut units and were variable plot cruised using a 40 BAF. These plots are located on a 3 chain by 6 chain grid, with every third plot measured and graded. A total of 53 plots were sampled, with 20 measured and graded plots, and 33 count plots. No cedar was cruised in Areas 2 and 3, but will be a reserved species in these two areas.

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

AREA	CRUISE	TRACT	TYPE	ACRES
1	T6NR8W13	1	TAKE	5
2 and 3	T6NR8W24	2&3	TAKE	112

6. **Timber Description:** Area 1 is modified clearcut unit, approximately 65 to 85 year-old, consisting of Douglas-fir, western hemlock, Sitka Spruce, red alder, and cedar. The average Douglas-fir tree size to be harvested is 24 inches DBH, with an average height of 99 feet to a merchantable top (6 inch d.i.b.). The average hemlock tree size is 20 inches DBH and 77 feet to a merchantable top (6 inch d.i.b.). The average alder tree size is 18 inches DBH and 57 feet to a merchantable top (6 inch d.i.b.). The average volume per acre to be harvested (net) is 29.0 MBF. Areas 2 and 3 are modified clearcut units, approximately 60 to 65 year-old, consisting of Douglas-fir, western hemlock, Sitka Spruce, red alder, and noble fir. The average Douglas-fir tree size to be harvested is 21 inches DBH, with an average height of 66 feet to a merchantable top (6 inch d.i.b.). The average hemlock tree size is 20 inches DBH and 71 feet to a merchantable top (6 inch d.i.b.). The average Sitka Spruce tree size is 24 inches DBH and 62 feet to a merchantable top (6 inch d.i.b.). The average alder tree size is 16 inches DBH and 70 feet to a merchantable top (6 inch d.i.b.). The average noble fir tree size is 25.4 inches DBH and 90 feet to a merchantable top (6 inch d.i.b.). The average volume per acre to be harvested (net) is 26.9 MBF.

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 (MC)	55%	13%	34.8%	11.6%
2 & 3 (MC)	55%	8%	46.9%	6.4%

8. Volumes by Species and Log Grade: (See "Species, Sort, Grade" - Project Report, attached).

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

Species	DBH	Net Vol.	2 Saw	3Saw	4 Saw	CampRun	% D & B	% Sale
Hemlock/True-fir	20"	1,793	1,221	539	33	0	3%	57%
Douglas-fir	21"	866	578	260	28	0	3%	27%
Alder	16"	287	0	0	0	287	<1%	9%
Sitka Spruce	24"	219	117	88	14	0	5%	7%
Cedar	15"	2	0	1	1	0	<1%	<1%
TOTALS		3,167	2,445	334	49	593		

9. Approvals:

Prepared by: Ty Williams Date: February 1, 2011
 Unit Forester Approval:  Date: 2/4/11

10. Attachments:

Cruise Designs and Maps - 3 pages
 Volume Report - 3 pages
 Statistics Reports - 4 pages
 Log Stock Tables - 6 pages
 Stand Table Summary - 2 pages

X:\Jewell_Unit\Timber Sales\2011\South Fork Split\Sale Prep\CruiseReport.docx

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: South Fork Split **Area(s)** 1

Harvest Type: (MC) "Modified Clearcut"

Approx. Cruise Acres: 5 **Estimated CV%** 55% Net BF **SE% Objective** 13 Net BF

Planned Sale Volume : 150 MBF **Estimated Sale Area Value/Acre:** \$3,000/Ac
(Area 1) (30 MBF/Ac.)

A. Cruise Goals: (a) Grade minimum 25 conifer and 5 Alder:
(b) Sample 10 cruise plots (5 grade/5 count); (c) Other goals (Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes.

B. Cruise Design:

- 1. Plot Cruises:** BAF 40 (Full point; Half point) (circle one)
Cruise Line Direction(s) Parallel to the sale boundary
Cruise Line Spacing n/a (chains)
Cruise Plot Spacing 7 (chains)
Grade/Count Ratio 1/1

Cruise line runs parallel to Highway 202. Plots will be located every 7 chains and between the highway and the eastern sale boundary. Marked wildlife trees are leave trees and are recorded as such. Grade alder as camprun-sawlogs (30 net BF minimum). Additional defect should be added for trees that will be felled onto or across the highway.

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 7" 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 = Camprun; 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 inter-visible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.

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

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

Cruise Design by: Ty Williams

Approved by: _____

Date: 1/3/11

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: South Fork Split **Area(s)** 2 and 3

Harvest Type: (MC) "Modified Clearcut"

Approx. Cruise Acres: 112 **Estimated CV%** 55% Net BF **SE% Objective** 8 Net BF

Planned Sale Volume : 3,277 MBF **Estimated Sale Area Value/Acre:** \$6,525/Ac
(Areas 2&3) (29 MBF/Ac.)

A. Cruise Goals: (a) Grade minimum 75 conifer and 25 Alder:
(b) Sample 53 cruise plots (19 grade/ 34 count); (c) Other goals (Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes.

B. Cruise Design:

- 1. Plot Cruises:** BAF 40 (Full point; Half point) (circle one)
Cruise Line Direction(s) AZ= 90° (West/East)
Cruise Line Spacing 6 (chains)
Cruise Plot Spacing 3 (chains)
Grade/Count Ratio 1/2

If a cruise line ends up paralleling in a buffer offset by 1 chain and continue. Type N seasonal stream buffers are unposted except within 500 feet of the confluence with a Type F stream. Cedar and marked wildlife trees are leave trees and are recorded as such. Record snags as SN and estimate heights and diameters. Grade alder as camprun-sawlogs (30 net BF minimum).

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 7" 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.

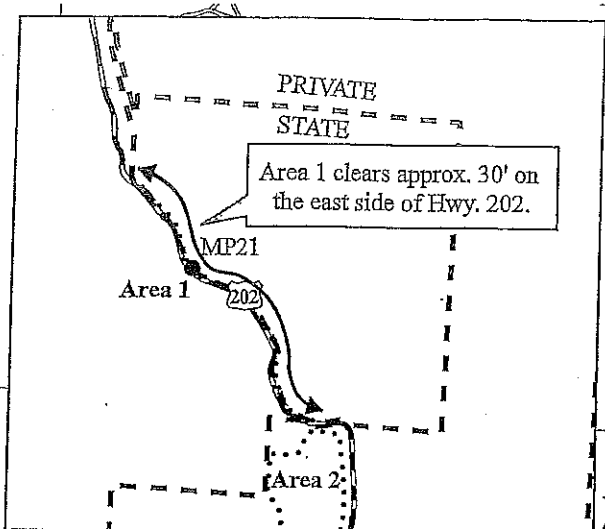
- 5. Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum 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 = Camprun; 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 inter-visible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.
- 9. Cruising Equipment:** Relaskop, Rangefinder, Logger's Tape (with dbh on back) Biltmore Stick, Compass, Cruise Cards in Tatum OR Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.
- 10. Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Ty Williams
 Approved by: _____
 Date: 1/3/11

Exhibit "A"

OF TIMBER SALE CONTRACT NO. 341-11-03
 SOUTH FORK SPLIT
 PORTIONS OF SECTIONS 13, 24, T6N, R8W AND 18,
 19, T6N, R7W, W.M., CLATSOP COUNTY, OR.

Approximate Net Acreage:
 Area 1 (MC) - 5 Ac.
 Area 2 (MC) - 44 Ac.
 Area 3 (MC) - 69 Ac.
 Total MC = 118 Acres

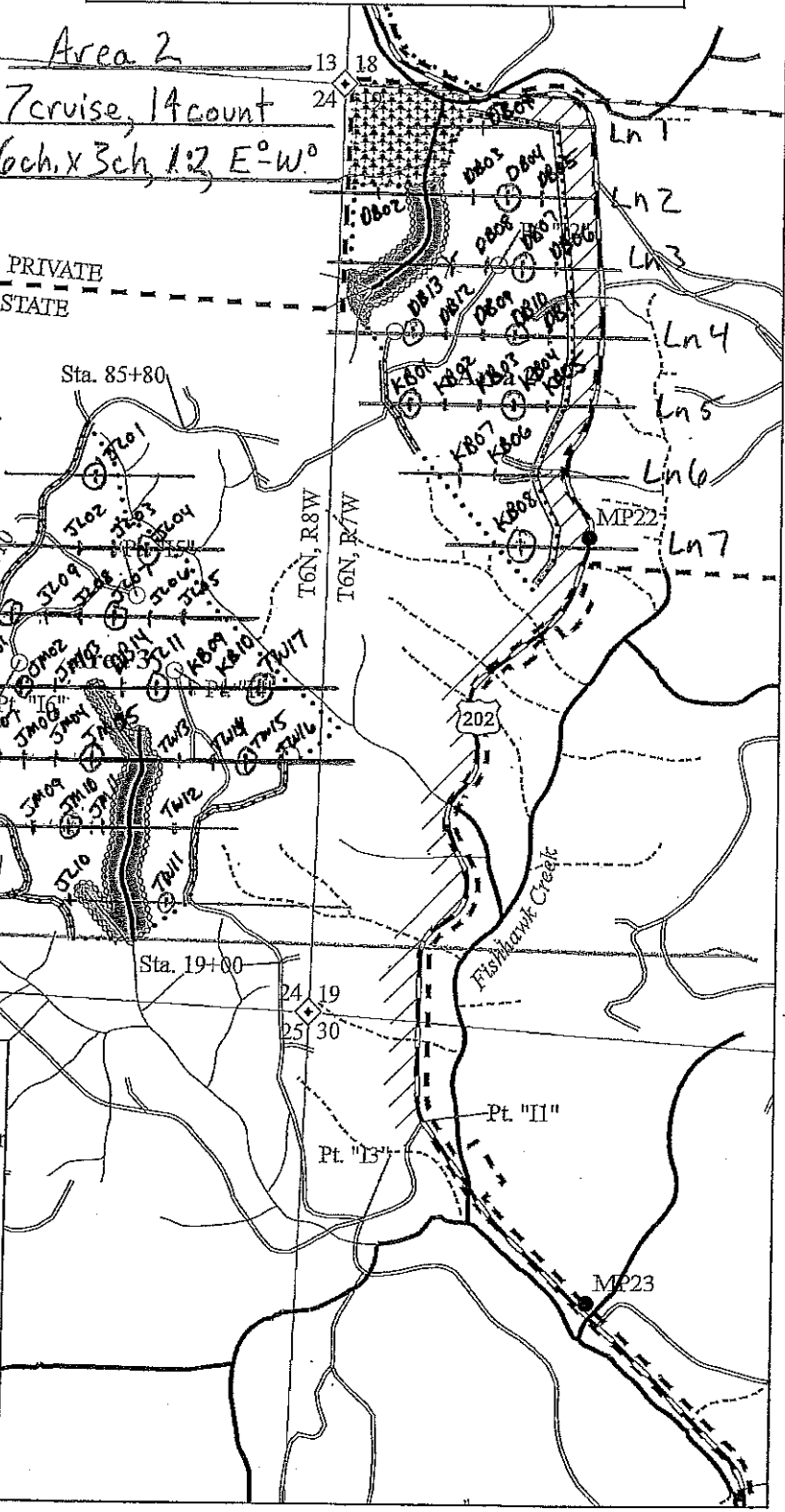


Area 2
 7cruise, 14count
 6ch. x 3ch. 1:2 E-W°

Area 3
 12cruise, 20count
 6ch. x 3ch. 1:2 E-W°

Legend

Streams	Posted Stream Buffer
Fish	Unposted Stream Buffer
Nonfish	Timber Sale Boundary
Unknown	Non Posted TSB
Survey Corners	Green Tree Retention
Landings	Reforestation Area
Existing	ODF Ownership
New Construction	
Paved Road	
Surfaced Road	



TC TSTATS				STATISTICS				PAGE 1		
				PROJECT DEMO		DATE 1/28/2011				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	08W	13	1	TAKE	5.00	10	50	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		10	50	5.0						
CRUISE		6	32	5.3	500		6.4			
DBH COUNT										
REFOREST										
COUNT		4	16	4.0						
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
H	18	42.6	19.9	77		92.0	14,743	14,449	3,412	3,412
A	8	49.9	17.6	57		84.0	10,259	10,259	2,651	2,651
S	4	2.9	31.8	101		16.0	3,118	3,118	650	650
D	1	1.3	24.0	99		4.0	840	840	184	184
C	1	3.3	15.0	50		4.0	391	391	98	98
TOTAL	32	99.9	19.2	67		200.0	29,352	29,057	6,995	6,995
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	
H		71.1	17.2	428	517	606				
A		47.1	17.7	182	221	261				
S		37.1	21.2	945	1,200	1,455				
D										
C										
TOTAL		82.5	14.6	445	520	596	272	68	30	
CL:	68.1 %	COEFF	SAMPLE TREES - CF			# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
H		58.4	14.2	99	115	131				
A		41.5	15.7	48	57	66				
S		37.0	21.2	196	249	301				
D										
C										
TOTAL		71.7	12.7	101	115	130	205	51	23	
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
H		119.7	39.8	26	43	60				
A		115.6	38.5	31	50	69				
S		212.7	70.8	1	3	5				
D		316.2	105.2		1	3				
C		316.2	105.2		3	7				
TOTAL		55.6	18.5	81	100	118	137	34	15	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
H		112.4	37.4	58	92	126				
A		115.4	38.4	52	84	116				
S		241.5	80.4	3	16	29				
D		316.2	105.2		4	8				
C		316.2	105.2		4	8				
TOTAL		35.3	11.7	177	200	223	55	14	6	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	

STATISTICS
PROJECT DEMO

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	08W	13	1	TAKE	5.00	10	50	S	W

CL:	68.1%	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
H		117.4	39.1	8,804	14,449	20,093			
A		118.5	39.4	6,214	10,259	14,304			
S		237.2	78.9	657	3,118	5,579			
D		316.2	105.2		840	1,725			
C		316.2	105.2		391	803			
TOTAL		34.8	11.6	25,691	29,057	32,423	54	13	6

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	DEMO		DATE	1/28/2011		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	08W	24	2&3	TAKE	112.00	53	266	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		53	266	5.0						
CRUISE		20	89	4.4	10,242		.9			
DBH COUNT										
REFOREST										
COUNT		33	172	5.2						
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
H	47	49.7	20.0	71		107.9	15,542	15,149	3,755	3,755
D	25	25.7	20.6	66		59.6	7,907	7,697	1,949	1,949
S	10	5.3	24.0	62		16.6	1,914	1,819	478	478
A	5	10.4	16.3	70		15.1	2,107	2,107	540	540
NOB FIR	2	4	25.4	90	0	1.5	211	211	46	46
TOTAL	89	91.4	20.1	69		200.8	27,680	26,982	6,768	6,768
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		
H	56.7	8.3	366	399	432					
D	74.3	15.2	355	419	482					
S	64.6	21.5	384	489	594					
A	15.4	7.7	187	202	217					
NOB FIR	22.6	21.2	394	500	606					
TOTAL	63.8	6.8	378	406	433	162	41	18		
CL: 68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
H	50.7	7.4	90	98	105					
D	62.8	12.8	89	102	115					
S	61.7	20.5	100	126	151					
A	8.3	4.1	50	52	54					
NOB FIR	14.2	13.3	94	109	124					
TOTAL	57.0	6.0	94	100	106	130	32	14		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
H	82.7	11.3	44	50	55					
D	138.3	19.0	21	26	31					
S	226.0	31.0	4	5	7					
A	374.0	51.3	5	10	16					
NOB FIR	513.4	70.5	0	0	1					
TOTAL	60.0	8.2	84	91	99	144	36	16		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
H	74.0	10.2	97	108	119					
D	126.6	17.4	49	60	70					
S	223.8	30.7	12	17	22					
A	372.0	51.0	7	15	23					
NOB FIR	509.8	70.0	0	2	3					
TOTAL	44.6	6.1	188	201	213	80	20	9		
CL: 68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		

STATISTICS
PROJECT DEMO

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	08W	24	2&3	TAKE	112.00	53	266	S	W

CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.	S.E. %	LOW	AVG	HIGH	5	10	15
H		76.3	10.5	13,563	15,149	16,735			
D		124.2	17.0	6,385	7,697	9,009			
S		229.7	31.5	1,246	1,819	2,392			
A		375.7	51.6	1,020	2,107	3,193			
NOB FIR		510.3	70.0	63	211	359			
TOTAL		46.9	6.4	25,245	26,982	28,720	88	22	10

CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH	5	10	15
H		74.4	10.2	3,371	3,755	4,138			
D		124.6	17.1	1,616	1,949	2,283			
S		231.1	31.7	326	478	629			
A		374.0	51.3	263	540	817			
NOB FIR		509.9	70.0	14	46	79			
TOTAL		46.0	6.3	6,340	6,768	7,195	85	21	9

TC P5PCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T06N R08W S13 TyTAKE 5.00		Project: DEMO												Page 1					
T06N R08W S24 TyTAKE 112.00		Acres 117.00												Date 1/28/2011					
														Time 1:35:40PM					
Spp	So Gr	% 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					
H	OGCU														8		0.00	19.8	
H	OG2M	67	2.5	10,528	10,268	1,201				63	37	0	2	16	82	38	335	1.94	30.6
H	OG3M	31	2.8	4,694	4,565	534			86	13	0	1	10	46	42	33	82	0.74	55.5
H	OG4M	2		286	286	33	2	98				60	32		8	20	23	0.43	12.3
H Totals		56	2.5	15,508	15,119	1,769	0	28	47	25		2	5	25	68	29	128	1.10	118.3
D	OGCU														8		0.00	4.3	
D	OG2M	66	2.0	5,037	4,936	578			59	41			6	31	63	36	320	1.97	15.4
D	OG3M	30	4.3	2,326	2,225	260			54	22	24	3	13	35	49	32	99	0.95	22.5
D	OG4M	4		242	242	28	100					25	75			24	32	0.47	7.6
D Totals		27	2.6	7,605	7,404	866		19	46	35		2	10	31	57	30	149	1.25	49.8
A	OGCU														4		0.00	.3	
A	OGR	100		2,455	2,455	287		92	8			2	7	27	64	34	105	0.79	23.5
A Totals		9		2,455	2,455	287		92	8			2	7	27	64	34	103	0.79	23.8
NF	OGCU														10		0.00	.4	
NF	OG2M	82		166	166	19			50	50					100	40	404	1.89	.4
NF	OG3M	18		36	36	4	100							39	61	37	86	0.87	.4
NF Totals		1		202	202	24		18	41	41				7	93	29	164	1.24	1.2
S	OGCU														17		0.00	2.7	
S	OG2M	53	4.1	1,044	1,001	117			62	38			18	12	70	37	332	2.03	3.0
S	OG3M	40	6.0	806	758	89		23	1	76			2	23	75	35	257	1.99	3.0
S	OG4M	7		116	116	14		97	3			1	72	24	3	26	52	0.92	2.2
S Totals		7	4.6	1,965	1,875	219		15	34	51		0	15	17	68	29	172	1.53	10.9
C	OG3M	75		13	13	1		100					100			24	90	0.89	.1
C	OG4M	25		4	4	0		100					100			24	30	0.37	.1
C Totals		0		17	17	2		100					100			24	60	0.63	.3
Totals			2.5	27,752	27,071	3,167	0	30	42	27		2	7	26	65	30	133	1.12	204.2

T06N R08W S13 TTAKE							T06N R08W S13 TTAKE						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
06N	08W	13	1	TAKE	5.00			S	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					
H	OG	CU														13		0.00	5.1	
H	OG	2M	63	3.1	9,516	9,221	46			47	53		5	5	10	80	38	336	1.96	27.4
H	OG	3M	28		4,003	4,003	20		89	3	7				24	76	38	127	0.84	31.4
H	OG	4M	9		1,224	1,224	6	12	88				20	36		44	27	40	0.46	30.8
H	Totals		50	2.0	14,743	14,449	72	1	32	31	36		5	6	13	76	33	152	1.09	94.8
A	OG	CU															4		0.00	6.7
A	OG	R	100		10,259	10,259	51		56	44			2	23	41	34	32	120	0.95	85.6
A	Totals		35		10,259	10,259	51		56	44			2	23	41	34	30	111	0.94	92.3
S	OG	CU															20		0.00	.5
S	OG	2M	24		764	764	4			38	62				100		32	300	1.84	2.5
S	OG	3M	70		2,175	2,175	11		4	11	85				4	96	37	536	2.93	4.1
S	OG	4M	6		179	179	1		49	51			22	27		51	25	110	1.34	1.6
S	Totals		11		3,118	3,118	16		5	20	75		1	2	27	70	33	359	2.29	8.7
C	OG	3M	75		293	293	1		100						100		24	90	0.89	3.3
C	OG	4M	25		98	98	0		100						100		24	30	0.37	3.3
C	Totals		1		391	391	2		100						100		24	60	0.63	6.5
D	OG	2M	93		789	789	4			26	74				26	74	36	310	1.84	2.5
D	OG	4M	7		51	51	0		100						100		24	40	0.53	1.3
D	Totals		3		840	840	4		6	24	70				6	24	32	220	1.51	3.8
Type Totals				1.0	29,352	29,057	145	1	38	34	28		3	13	24	59	32	141	1.08	206.1

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1							
Project: DEMO												Date 1/28/2011							
												Time 1:35:40PM							
T06N R08W S24 TTAKE										T06N R08W S24 TTAKE									
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt										
06N	08W	24	2&3	TAKE	112.00			S	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				
H	OG	CU														8		0.00	20.5
H	OG	2M	68	2.4	10,573	10,315	1,155			64	36		2	16	82	38	335	1.94	30.8
H	OG	3M	30	2.9	4,725	4,590	514		86	14		1	10	47	41	33	81	0.74	56.5
H	OG	4M	2		244	244	27		100			69	31			19	21	0.42	11.5
H	Totals		56	2.5	15,542	15,149	1,697		28	48	25	2	5	25	68	29	127	1.10	119.3
D	OG	CU														8		0.00	4.5
D	OG	2M	66	2.0	5,226	5,121	574			59	41		6	31	63	36	320	1.97	16.0
D	OG	3M	30	4.3	2,429	2,325	260		54	22	24	3	13	35	49	32	99	0.95	23.5
D	OG	4M	4		251	251	28		100			25	75			24	32	0.47	7.9
D	Totals		29	2.7	7,907	7,697	862		19	46	35	2	10	31	57	30	149	1.25	51.8
S	OG	CU														17		0.00	2.8
S	OG	2M	55	4.2	1,056	1,011	113			63	37		19	9	72	37	333	2.04	3.0
S	OG	3M	38	6.7	745	695	78		25	75		2	25	72	35	239	1.93	2.9	
S	OG	4M	7		113	113	13		100			75	25		26	50	0.91	2.3	
S	Totals		7	5.0	1,914	1,819	204		16	35	49		16	16	68	29	166	1.50	11.0
A	OG	R	100		2,107	2,107	236		100			2	3	25	71	34	102	0.76	20.7
A	Totals		8		2,107	2,107	236		100			2	3	25	71	34	102	0.76	20.7
NF	OG	CU														10		0.00	.4
NF	OG	2M	82		174	174	19			50	50				100	40	404	1.89	.4
NF	OG	3M	18		37	37	4		100					39	61	37	86	0.87	.4
NF	Totals		1		211	211	24		18	41	41		7	93	29	164	1.24	1.3	
Type Totals				2.5	27,680	26,982	3,022		30	43	27	1	7	26	65	30	132	1.12	204.1

Log Stock Table - MBF

T06N R08W S13 TyTAKE	5.00
T06N R08W S24 TyTAKE	112.00

Project: DEMO
Acres 117.00

Page 1
Date 1/28/2011
Time 1:35:39PM

Spp	S T	So Gr rt de Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
							2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
H		OG 2M 16	2		2	.1											2	
H		OG 2M 24	2		2	.1							2					
H		OG 2M 30	29	4.2	28	1.6											28	
H		OG 2M 32	200	5.9	188	10.6						42	50	39			57	
H		OG 2M 40	998	1.7	981	55.5						140	352	447			42	
H		OG 3M 14	2		2	.1			2									
H		OG 3M 16	5		5	.3			5									
H		OG 3M 21	8		8	.5			8									
H		OG 3M 22	15		15	.8			4			11						
H		OG 3M 24	3		3	.2			3									
H		OG 3M 26	3		3	.2				3								
H		OG 3M 28	7		7	.4			7									
H		OG 3M 29	8		8	.4					8							
H		OG 3M 30	8		8	.5			4	4								
H		OG 3M 31	4		4	.2			4									
H		OG 3M 32	227	3.7	218	12.3			17	30	157	14						
H		OG 3M 33	9	6.9	9	.5				9								
H		OG 3M 34	17		17	1.0			16		1							
H		OG 3M 36	16		16	.9			16									
H		OG 3M 38	13	3.3	12	.7				6	7							
H		OG 3M 40	203	2.8	198	11.2			69	51	30	46			1			
H		OG 4M 14	2		2	.1			2									
H		OG 4M 15	2		2	.1			2									
H		OG 4M 16	6		6	.3			5	1								
H		OG 4M 18	0		0	.0				0								
H		OG 4M 20	11		11	.6			11									
H		OG 4M 22	1		1	.0				1								
H		OG 4M 23	1		1	.0			0		0							
H		OG 4M 24	0		0	.0			0									
H		OG 4M 26	8		8	.5			8									
H		OG 4M 28	1		1	.0			1									
H		OG 4M 40	3		3	.2			1	2								
H		Totals	1,814	2.5	1,769	55.8			1	188	103	203	254	402	489	127	2	
D		OG 2M 30	33		33	3.8											33	
D		OG 2M 32	186	3.1	181	20.8						64	39	78				
D		OG 2M 40	370	1.6	364	42.0						69	114	143			38	

Log Stock Table - MBF

T06N R08W S13 TyTAKE 5.00
 T06N R08W S24 TyTAKE 112.00

Project: DEMO
 Acres 117.00

Page 2
 Date 1/28/2011
 Time 1:35:39PM

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
D		OG 3M	17	5		5	.6			5								
D		OG 3M	20	3		3	.3				3							
D		OG 3M	22	20		20	2.3					20						
D		OG 3M	23	4		4	.4			4								
D		OG 3M	24	4		4	.5				4							
D		OG 3M	26	3		3	.4				3							
D		OG 3M	28	4		4	.4				4							
D		OG 3M	31	4		4	.5			4								
D		OG 3M	32	54	9.2	49	5.7			6	22	21						
D		OG 3M	34	38	1.6	37	4.3			6	4			27				
D		OG 3M	36	7		7	.8			7								
D		OG 3M	37	15		15	1.7			15								
D		OG 3M	40	111	5.5	105	12.1			32		38				36		
D		OG 4M	16	2		2	.3				2							
D		OG 4M	20	5		5	.6			5								
D		OG 4M	21	7		7	.9			5	3							
D		OG 4M	24	0		0	.0			0								
D		OG 4M	30	14		14	1.6			14								
D		Totals		890	2.6	866	27.3			102	41	25	171	172	248	107		
A		OG R	16	4		4	1.3			4								
A		OG R	20	1		1	.4			1								
A		OG R	28	7		7	2.5			7								
A		OG R	29	1		1	.5			1								
A		OG R	30	10		10	3.6				5	5						
A		OG R	32	67		67	23.3			17	39	5	6					
A		OG R	35	12		12	4.2			12								
A		OG R	36	15		15	5.1			15								
A		OG R	40	170		170	59.1			4	159		7					
A		Totals		287		287	9.1			61		203	10	13				
NF		OG 2M	40	19		19	82.4						10	10				
NF		OG 3M	34	2		2	6.8			2								
NF		OG 3M	40	3		3	10.8				3							
NF		Totals		24		24	.7			2	3		10	10				
S		OG 2M	30	22		22	9.8									22		
S		OG 2M	32	14	4.6	13	6.1					10	1	2				

Log Stock Table - MBF

T06N R08W S13 TyTAKE 5.00
 T06N R08W S24 TyTAKE 112.00

Project: DEMO
 Acres 117.00

Page 3
 Date 1/28/2011
 Time 1:35:39PM

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+	
S		OG 2M	40	86	5.0	82	37.4					16		66						
S		OG 3M	21	2		2	.9			2										
S		OG 3M	32	21	3.2	20	9.1			0						20				
S		OG 3M	36	5		5	2.1					5								
S		OG 3M	38	4		4	1.6			4										
S		OG 3M	40	63	7.8	59	26.7				4	6			23	23	3			
S		OG 4M	16	0		0	.1					0								
S		OG 4M	22	0		0	.1					0								
S		OG 4M	24	5		5	2.2				5									
S		OG 4M	26	5		5	2.2			2	3									
S		OG 4M	34	3		3	1.5					3								
S		OG 4M	40	0		0	.2						0							
S		Totals		230	4.6	219	6.9			8	11	14	26	1	91	64	3			
C		OG 3M	24	1		1	75.0					1								
C		OG 4M	24	0		0	25.0			0										
C		Totals		2		2	.1			0		1								
Total		All Species		3,247	2.5	3,167	100.0			1	362	158	446	461	597	838	299	5		

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

T06N R08W S13 TTAKE

T06N R08W S13 TTAK

Twp Rge Sec Tract
06N 08W 13 1

Type Acres Plots Sample Trees
TAKE 5.00

Page 1
Date 1/28/2011
Time 1:35:39PM

Spp	S	So	Gr	Log	Gross	% Def	Net	% Spc	Net Volume by Scaling Diameter in Inches												
									MBF	MBF	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
H	OG	CU	6																		
H	OG	CU	12																		
H	OG	CU	20																		
H	OG	CU	40																		
H	OG	2M	16	2		2	3.1													2	
H	OG	2M	24	2		2	3.2													2	
H	OG	2M	32	5		5	6.4						1							3	
H	OG	2M	40	38	3.8	37	51.2						10	10	11					6	
H	OG	3M	32	4		4	5.9						4								
H	OG	3M	34	1		1	.8						1								
H	OG	3M	40	15		15	21.0				2	4	6	1						1	
H	OG	4M	15	0		0	.6				0										
H	OG	4M	16	1		1	.8					1									
H	OG	4M	18	0		0	.3					0									
H	OG	4M	22	1		1	.8					1									
H	OG	4M	23	1		1	.9				0		0								
H	OG	4M	24	0		0	.5				0										
H	OG	4M	28	1		1	.9				1										
H	OG	4M	40	3		3	3.7				1	2									
H	Totals				74	2.0	72	49.7			1	6	6	11	12	10	18			6	2
A	OG	CU	4																		
A	OG	R	20	1		1	2.2				1										
A	OG	R	29	1		1	2.9				1										
A	OG	R	30	10		10	20.0						5	5							
A	OG	R	32	21		21	40.5				5		5	5	6						
A	OG	R	40	18		18	34.4				4		7	7							
A	Totals				51		51	35.3			12		17	10	13						
S	OG	CU	20																		
S	OG	2M	32	4		4	24.5							1	2						
S	OG	3M	32	0		0	2.5			0											
S	OG	3M	40	10		10	67.3								2	5	3				
S	OG	4M	16	0		0	1.3						0								
S	OG	4M	22	0		0	1.5						0								
S	OG	4M	40	0		0	2.9							0							
S	Totals				16		16	10.7			0		0	0	1	5	5	3			
C	OG	3M	24	1		1	75.0						1								
C	OG	4M	24	0		0	25.0				0										
C	Totals				2		2	1.3			0		1								
D	OG	2M	32	1		1	24.2							1							
D	OG	2M	40	3		3	69.7									3					
D	OG	4M	24	0		0	6.1				0										
D	Totals				4		4	2.9			0			1		3					
Total All Species				147	1.0	145	100.0			1	19	6	30	24	24	26	10	5			

Log Stock Table - MBF

Project: DEMO

T06N R08W S24 TTAK

T06N R08W S24 TTAK

Twp Rge Sec Tract
06N 08W 24 2&3

Type Acres Plots Sample Trees
TAKE 112.00

Page 2
Date 1/28/2011
Time 1:35:39PM

Spp	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	40+
D	OG	3M	37		15		15	1.7			15									
D	OG	3M	40		111	5.5	105	12.2			32		38				36			
D	OG	4M	16		2		2	.3				2								
D	OG	4M	20		5		5	.6			5									
D	OG	4M	21		7		7	.9			5	3								
D	OG	4M	30		14		14	1.6			14									
D	Totals				886	2.7	862	28.5			102	41	25	170	172	245	107			
S	OG	CU	6																	
S	OG	CU	12																	
S	OG	CU	35																	
S	OG	2M	30		22		22	10.6									22			
S	OG	2M	32		10	6.3	10	4.7					10							
S	OG	2M	40		86	5.0	82	40.3					16			66				
S	OG	3M	21		2		2	.9			2									
S	OG	3M	32		20	3.3	20	9.6									20			
S	OG	3M	36		5		5	2.3					5							
S	OG	3M	38		4		4	1.7			4									
S	OG	3M	40		53	9.3	48	23.6				4	6			20	18			
S	OG	4M	24		5		5	2.3				5								
S	OG	4M	26		5		5	2.3			2	3								
S	OG	4M	34		3		3	1.6					3							
S	Totals				214	5.0	204	6.7			8	11	14	26		86	59			
A	OG	R	16		4		4	1.6			4									
A	OG	R	28		7		7	3.1			7									
A	OG	R	32		46		46	19.5			12		34							
A	OG	R	35		12		12	5.1			12									
A	OG	R	36		15		15	6.2			15									
A	OG	R	40		152		152	64.5					152							
A	Totals				236		236	7.8			50		186							
NF	OG	CU	6																	
NF	OG	CU	16																	
NF	OG	2M	40		19		19	82.4						10	10					
NF	OG	3M	34		2		2	6.8			2									
NF	OG	3M	40		3		3	10.8				3								
NF	Totals				24		24	.8			2	3			10	10				
Total All Species					3,100	2.5	3,022	100.0			343	152	416	437	573	813	288			

TC		PSINDSUM											Stand Table Summary			Page	1
													Date:	2/2/2011			
		T06N R08W S13 TyTAKE		5.00		Project		DEMO		Time:		8:37:07AM					
		T06N R08W S24 TyTAKE		112.00		Acres		117.00		Grown Year:							
S Spec T	DBH	Sample Trees	Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals				
			FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF		
H	12	2	86	64	3.077	2.42	3.08	13.2	50.9	1.30	41	157	153	48	18		
H	13	2	85	63	4.769	4.40	7.15	12.4	50.0	2.83	88	358	331	103	42		
H	14	2	89	99	2.261	2.42	4.52	16.5	77.7	2.39	75	351	280	87	41		
H	15	3	86	74	3.760	4.61	5.73	20.6	73.4	3.77	118	421	441	138	49		
H	16	3	82	70	3.305	4.61	5.04	20.9	52.8	3.37	105	266	394	123	31		
H	17	2	85	50	1.533	2.42	1.53	32.3	65.4	1.58	50	100	185	58	12		
H	18	2	88	113	2.488	4.40	6.22	27.6	118.0	5.49	172	734	642	201	86		
H	19	3	89	104	3.349	6.59	6.70	36.9	143.3	7.90	247	960	924	289	112		
H	20	5	88	112	2.315	5.05	5.74	37.9	157.9	6.97	218	906	815	255	106		
H	21	7	86	105	5.574	13.41	13.98	37.6	145.9	16.81	525	2,040	1,967	615	239		
H	22	5	89	97	3.413	9.01	7.74	45.0	192.7	11.16	349	1,492	1,305	408	175		
H	23	4	85	104	3.047	8.79	6.86	43.6	181.1	9.56	299	1,242	1,119	350	145		
H	24	7	86	104	4.268	13.41	11.40	42.4	183.9	15.47	484	2,097	1,810	566	245		
H	25	3	88	101	1.354	4.61	2.77	65.5	280.5	5.81	181	777	679	212	91		
H	26	4	86	97	1.848	6.81	3.75	65.9	254.1	7.92	247	954	927	290	112		
H	27	3	85	97	.663	2.63	1.44	71.7	266.9	3.29	103	383	385	120	45		
H	28	1	83	120	.514	2.20	1.54	62.2	250.0	3.07	96	386	359	112	45		
H	29	1	84	115	.479	2.20	1.44	65.6	300.0	3.02	94	431	353	110	50		
H	30	2	85	97	.896	4.40	1.79	94.8	377.5	5.43	170	676	636	199	79		
H	34	1	85	103	.349	2.20	.70	87.4	420.0	1.95	61	293	228	71	34		
H	35	1	86	131	.033	.22	.10	85.5	476.7	.27	8	47	31	10	5		
H	38	2	80	131	.055	.44	.11	87.1	425.0	.31	10	47	36	11	6		
H	Totals	65	86	91	49.350	107.24	99.33	37.7	152.2	119.68	3,740	15,119	14,002	4,376	1,769		
D	12	1	85	44	2.907	2.28	2.91	12.8	40.0	1.19	37	116	140	44	14		
D	14	2	86	62	4.271	4.57	6.41	16.8	50.0	3.44	107	320	402	126	37		
D	18	2	86	92	2.584	4.57	5.17	31.3	120.0	5.18	162	620	606	190	73		
D	19	1	87	110	1.159	2.28	2.32	40.8	155.0	3.03	95	359	354	111	42		
D	20	3	83	74	3.139	6.85	6.28	31.1	100.0	6.24	195	628	730	228	73		
D	21	1	82	121	.949	2.28	.95	59.3	200.0	1.80	56	190	211	66	22		
D	22	1	83	93	.865	2.28	1.73	47.8	175.0	2.64	83	303	309	97	35		
D	23	4	80	86	3.165	9.13	5.54	48.4	202.9	8.58	268	1,124	1,004	314	131		
D	24	2	81	122	.781	2.45	2.34	46.2	201.4	3.46	108	472	405	127	55		
D	26	4	84	108	2.477	9.13	6.19	55.4	237.0	10.98	343	1,467	1,285	401	172		
D	28	2	83	88	1.068	4.57	2.14	65.7	240.0	4.49	140	513	525	164	60		
D	29	1	85	112	.498	2.28	1.49	58.7	300.0	2.80	88	448	328	103	52		
D	31	1	84	91	.436	2.28	.87	98.7	395.0	2.75	86	344	322	101	40		
D	33	1	85	123	.384	2.28	1.15	91.1	433.3	3.36	105	500	393	123	58		
D	Totals	26	84	83	24.683	57.25	45.48	41.2	162.8	59.97	1,874	7,404	7,016	2,193	866		
A	16	7	87	96	9.243	12.91	18.16	26.0	105.3	15.13	473	1,912	1,771	553	224		
A	17	1	86	60	.285	.45	.28	33.3	70.0	.30	9	20	35	11	2		
A	18	3	87	75	2.143	3.79	4.29	26.7	91.5	3.67	115	392	429	134	46		
A	20	1	86	81	.206	.45	.41	36.1	140.0	.48	15	58	56	17	7		
A	22	1	86	102	.170	.45	.34	53.6	215.0	.58	18	73	68	21	9		
A	Totals	13	87	91	12.046	18.04	23.49	26.8	104.5	20.16	630	2,455	2,359	737	287		
S	17	1	83	31	1.008	1.59	1.01	20.9	40.0	.68	21	40	79	25	5		
S	18	1	69	46	.899	1.59											
S	22	1	88	88	.602	1.59	1.20	38.3	130.0	1.48	46	157	173	54	18		
S	23	1	88	119	.551	1.59	1.65	43.9	186.7	2.32	72	308	271	85	36		
S	24	2	88	96	.560	1.76	1.18	56.3	211.4	2.12	66	248	248	77	29		
S	28	1	86	91	.372	1.59	.74	63.0	260.0	1.50	47	193	175	55	23		
S	30	2	81	104	.648	3.18	1.30	92.1	340.0	3.82	119	440	447	140	52		

Stand Table Summary

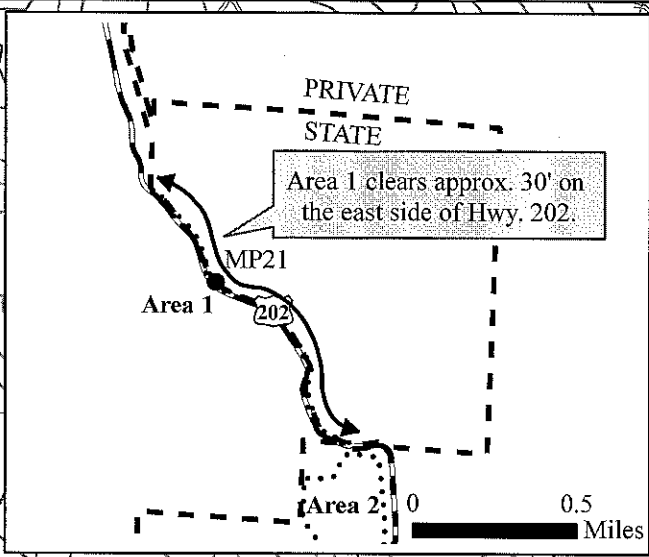
T06N R08W S13 TyTAKE 5.00	Project DEMO	Time: 8:37:07AM
T06N R08W S24 TyTAKE 112.00		
Acres 117.00		Grown Year:

S Spc T	Sample DBH	Trees	Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
			FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
S	32	1	84	93	.285	1.59	.57	82.5	365.0	1.50	47	208	176	55	24
S	35	1	80	131	.026	.17	.08	104.7	473.3	.26	8	36	30	9	4
S	36	1	86	123	.024	.17	.07	111.7	560.0	.26	8	41	30	9	5
S	40	2	78	104	.202	1.76	.40	123.6	501.9	1.60	50	203	187	58	24
S	Totals	14	82	77	5.176	16.58	8.20	59.1	228.6	15.52	485	1,875	1,816	568	219
NF	24	1	85	100	.230	.72	.46	49.0	210.0	.54	23	97	63	26	11
NF	27	1	85	123	.182	.72	.36	60.0	290.0	.52	22	105	61	26	12
NF	Totals	2	85	110	.412	1.44	.82	53.9	245.3	1.06	44	202	125	52	24
C	15	1	81	70	.139	.17	.28	15.1	60.0	.13	4	17	16	5	2
C	Totals	1	81	70	.139	.17	.28	15.1	60.0	.13	4	17	16	5	2
Totals		121	85	88	91.807	200.72	177.60	38.2	152.4	216.53	6,778	27,071	25,334	7,930	3,167

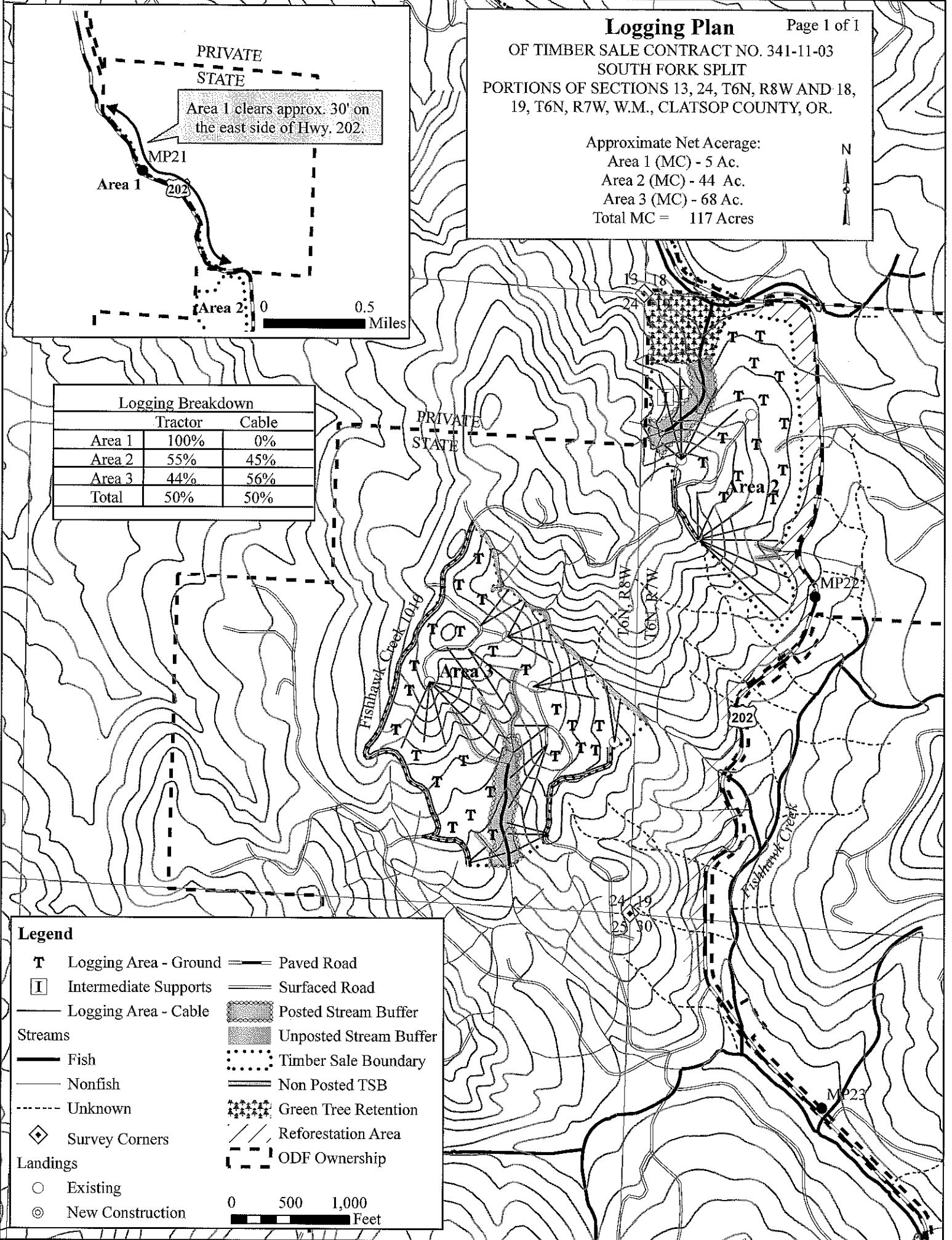
Logging Plan

OF TIMBER SALE CONTRACT NO. 341-11-03
 SOUTH FORK SPLIT
 PORTIONS OF SECTIONS 13, 24, T6N, R8W AND 18,
 19, T6N, R7W, W.M., CLATSOP COUNTY, OR.

Approximate Net Acreage:
 Area 1 (MC) - 5 Ac.
 Area 2 (MC) - 44 Ac.
 Area 3 (MC) - 68 Ac.
 Total MC = 117 Acres



Logging Breakdown		
	Tractor	Cable
Area 1	100%	0%
Area 2	55%	45%
Area 3	44%	56%
Total	50%	50%



Legend

- T** Logging Area - Ground
- I** Intermediate Supports
- Logging Area - Cable
- Streams
 - Fish
 - Nonfish
 - - -** Unknown
- ◇** Survey Corners
- Landings
 - Existing
 - ⊙** New Construction
- Paved Road
- Surfaced Road
- ▨** Posted Stream Buffer
- ▩** Unposted Stream Buffer
- ⋯** Timber Sale Boundary
- Non Posted TSB
- ⊘** Green Tree Retention
- ///** Reforestation Area
- - -** ODF Ownership

