



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Rector Combo
Sale 341-15-32

District: Astoria

Date: November 13, 2014

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$720,165.50	\$9,521.28	\$729,686.78
		Project Work:	\$(83,039.00)
		Advertised Value:	\$646,647.78



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timber description

Location: Portions of Sections 4 and 5, T3N, R8W, W. M., Clatsop County, Oregon.

Stand Stocking: 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	19	0	97
Western Hemlock / Fir	16	0	96
Sitka Spruce	22	0	95
Alder (Red)	12	0	95

Volume by Grade	2S	3S	4S	Camprun	Total
Douglas - Fir	419	153	19	0	591
Western Hemlock / Fir	786	665	96	0	1,547
Sitka Spruce	26	12	0	0	38
Alder (Red)	0	0	0	27	27
Total	1,231	830	115	27	2,203



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comments: Pond Values Used: 3rd Quarter Calendar Year 2014.

Expected Log Markets: Tillamook, Garibaldi, Warrenton, Mist, Banks.

Western redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Cost:
 $\$934.65/\text{MBF} = \$1,140/\text{MBF} - \$205.35/\text{MBF}$

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$4.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$780 daily truck cost.

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

100% Brand and Paint: $\$1/\text{MBF} \times 2,203 \text{ MBF} = \$2,203$

Additional Bucking for Blowdown Areas: 4 days of one faller @
\$400/day = \$1,600

Slash & Landing Piling (includes Move-In and Pile Materials) =
\$6,669 (see attached appraisal)

TOTAL Other Costs (with Profit & Risk to be added) = \$10,472

Other Costs (No Profit & Risk added):

Machine Washing for Invasive Weed Control = \$2,000

TOTAL Other Costs (No Profit & Risk added) = \$2,000



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logging conditions

combination#: 1	Douglas - Fir	50.00%	
	Western Hemlock / Fir	50.00%	
	Sitka Spruce	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 / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	10.0	bd. ft / load:	4,800
cost / mbf:	\$69.67		
machines:	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)		
combination#: 2	Douglas - Fir	9.00%	
	Western Hemlock / Fir	9.00%	
	Sitka Spruce	9.00%	
	Alder (Red)	9.00%	
yarding distance:	Short (400 ft)	downhill yarding:	No
logging system:	Shovel	Process:	Stroke Delimber
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	12.0	bd. ft / load:	4,800
cost / mbf:	\$24.97		
machines:	Stroke Delimber (B)		
combination#: 3	Douglas - Fir	36.00%	
	Western Hemlock / Fir	36.00%	
	Sitka Spruce	36.00%	
	Alder (Red)	36.00%	
yarding distance:	Medium (800 ft)	downhill yarding:	No
logging system:	Cable: Medium Tower >40 - <70	Process:	Manual Delimbing
tree size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	5.0	bd. ft / load:	4,000
cost / mbf:	\$173.00		
machines:	Log Loader (A) Tower Yarder (Medium)		
combination#: 4	Douglas - Fir	5.00%	
	Western Hemlock / Fir	5.00%	
	Sitka Spruce	5.00%	
	Alder (Red)	5.00%	



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yarding distance:	Short (400 ft)	downhill yarding:	No
logging system:	Shovel	Process:	Manual Falling/Delimbing
tree size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	6.0	bd. ft / load:	4,500
cost / mbf:	\$92.76		
machines:	Shovel Logger		



"STEWARDSHIP IN FORESTRY"

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logging costs

Operating Seasons:	2.00	Profit Risk:	14.00%
Project Costs:	\$83,039.00	Other Costs (P/R):	\$10,472.00
Slash Disposal:	\$0.00	Other Costs:	\$2,000.00

Miles of Road

Road Maintenance: \$9.14

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	2.0	5.0
Western Hemlock / Fir	\$0.00	3.0	4.5
Sitka Spruce	\$0.00	1.0	5.0
Alder (Red)	\$0.00	2.0	3.5



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District: Astoria

Date: November 13, 2014

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$104.00	\$9.41	\$3.98	\$70.47	\$4.75	\$26.97	\$0.00	\$5.00	\$0.91	\$225.49
Western Hemlock / Fir									
\$104.00	\$9.51	\$3.98	\$52.71	\$4.75	\$24.49	\$0.00	\$5.00	\$0.91	\$205.35
Sitka Spruce									
\$104.00	\$9.60	\$3.98	\$143.68	\$4.75	\$37.24	\$0.00	\$5.00	\$0.91	\$309.16
Alder (Red)									
\$104.00	\$9.60	\$3.98	\$102.63	\$4.75	\$31.49	\$0.00	\$5.00	\$0.91	\$262.36

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$636.25	\$410.76	\$0.00
Western Hemlock / Fir	\$0.00	\$508.85	\$303.50	\$0.00
Sitka Spruce	\$0.00	\$516.84	\$207.68	\$0.00
Alder (Red)	\$0.00	\$615.00	\$352.64	\$0.00



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summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	591	\$410.76	\$242,759.16
Western Hemlock / Fir	1,547	\$303.50	\$469,514.50
Sitka Spruce	38	\$207.68	\$7,891.84
Alder (Red)	27	\$352.64	\$9,521.28

Gross Timber Sale Value

Recovery: \$729,686.78

Prepared by: Jon Long

Phone: 503-325-5451

Final Road Maintenance Cost Summary

Sale: Rector Combo
Date: 04-Oct-14
By: J. Choate

MBF: 2,203
\$/MBF: \$9.14

Note: Sale Area -> Fry Creek -> Sweet Home -> North Fork -> Hwy 53

Type	Equipment/Rationale	Move In	Times	Hours	Rate	Cost
Progressive Operations 1st Entry	Grader 14G	\$778	1	16	\$100	\$2,378
	Dump Truck 12CY x 2	\$163	1	8	\$79	\$795
	FE Loader C966	\$778	1	4	\$83	\$1,110
Final Haul Maintenance Haul Route	Grader 14G	\$778	1	56	\$100	\$6,378
	Dump Truck 12CY	\$163	2	16	\$79	\$2,854
	Vibratory Roller	\$778	1	32	\$77	\$3,242
	Water Truck 2,500 gallon	\$190	1	16	\$89	\$1,614
	FE Loader C966	\$778	1	8	\$83	\$1,442
	Labor			8	\$40	\$320
Total						\$20,133

Progressive Ops. 1st Entry	Production Rates	Miles/day	Distance(miles)	Days
	Grader	6.0	10.6	1.8

Final Road Maintenance	Production Rates	Miles/day	Distance(miles)	Days
	Grader	1.5	10.6	7.1

Site Prep Appraisal

Sale Number: 341-15-32
Sale Name: Rector Combo
Date: 09/08/2014

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	4.5
Hemlock/Spruce	C	2.0	6.0
Hemlock	D	2.0	6.0
Conifer/Hardwood	E	1.5	4.5
Whole Tree Yarding	F	0.5	0.5

Sale Area	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour	Total Cost/Area
1	MC	B	4.0	6.0	\$129.00	\$774.00
In-unit Piling						Sub Total = \$774
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	7	\$645	\$4,515	18	\$5.00	\$90.00
*Cost includes separating firewood					Materials	Sub Total = \$90
					Landing Piling	Sub Total = \$4,515
Move-In Allowance	Number of Move-In's	Total Move-In Allowance			Move-In	Sub Total = \$1,290
\$1,290	1	\$1,290				
Grand Total =						\$6,669

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Rector Combo

ROAD CONSTRUCTION:

Project No. 1

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Surfaced	1A - 1B	9.0	\$24,231
	TOTALS	9.0	\$24,231
	Miles	0.2	

ROAD IMPROVEMENT:

Project No. 2

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
	I1 - I2	170.7	\$43,553
	TOTALS	170.7	\$43,553
	Miles	3.2	

SPECIAL PROJECTS:

<u>Description</u>	<u>Cost</u>
Project Work Road Maintenance	\$6,524
TOTAL	\$6,524

MOVE IN:

<u>Equipment</u>	<u>Cost</u>
Dump Trucks (12cy x 4 @ \$163/tr.	\$652
Dump Trucks (20cy x 2' @ \$191/tr.	\$382
Dozer (D6)	\$778
Dozer (D8)	\$1,406
F E Loader (C966)	\$778
Grader (14G)	\$778
Vibratory Roller	\$778
Water Truck (2,500 Galloon)	\$190
Excavator (C330)	\$1,406
Excavator (C315)	\$805
Small Hydraulic Drill	\$778
TOTAL	\$8,731

GRAND TOTAL

\$83,039

Compiled By: Ed Holloran/Jon Long

Date: 09/30/2014

SALE NAME:	Rector Combo
ROAD:	1A - 1B (9.0)
POINTS:	A-B & sta. 146+65 on I1-I2

0.17 MILES
MILES

Method	Acres/amount	x	Rate	=	Cost
Clear & scatter per acre	2.5	x	\$1,337.00	=	\$3,342.50
(includes rock source areas A-E		x		=	
and sta. 146+65 on I1-I2)		x		=	

\$3,343

Common drift excavation \$\$/cy	992	x	\$1.80	=	\$1,785.60
Embankment compaction \$\$/cy	867	x	\$0.70	=	\$606.90
Cut Slope Rounding \$\$/Sta	4.0	x	\$43.00	=	\$172.00
Landing Construction \$\$/Ldg	3	x	\$389.00	=	\$1,167.00

\$5,062

[illegible]

	Description	Quantity	Rate	Cost
Other/miscellaneous:				
Culvert stakes & markers:	White fiberglass culvert markers	1	\$20.00	\$20.00

\$606

SURFACING				Stations/ amount	x	Rate/ sta/amt	Cost
Subgrade prep: Description				9.00	x	\$24.83	\$223.47
Grade, Shape, and Ditch 16' Subgrade				9.00	x	\$20.19	\$181.71
Subgrade Compaction				9.00	x		

ROAD SEGMENT 1A-1B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1A-1B		0+00 to 9+00				
				Volume (CY) per		Number of				
Base Rock	6"-0" pit-run	0+00 to 9+00	10	station	63	stations	9.0	567	\$2.20	\$1,247
Traction Rock	1½"-0" crushed	0+00 to 8+00	2	station	13	stations	8.0	104	\$6.47	\$673
Junction Rock	4"-0" pit-run	0+00	N/A	junction	20	junctions	1	20	\$6.47	\$129
Turnouts	6"-0" pit-run	5+00	10	TO	28	TO's	1	28	\$2.20	\$62
Turnarounds	6"-0" pit-run	7+75	N/A	TA	22	TA's	1	22	\$2.20	\$48
Landings	6"-0" pit-run	2+50, 6+60; 9+00	N/A	Landing	80	Landings	3	240	\$2.20	\$528
Total Rock for Road Segment:				1A-1B				981		\$2,688

Processing:				Description	No.sta	Rate/sta	Cost
				Water, Process & Compact:	8.00	\$56.48	\$452
				Compact w/D-6 cat	9.00	\$31.54	\$284
				24"-6" rr	6"-0"pr	4"-0"	1½"-0"
						Total	
				857	20	104	981

SUB TOTAL FOR SURFACING								\$3,829
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SPECIAL PROJECTS				Description	Cost
				Drilling and shooting rock source. 1,200 cy @ \$6.70/cy	\$8,040.00
				Develop/load Pit-run and Riprap rock 1,097 cy @ \$2.70/cy	\$2,961.90
				Mulch for waste areas @ \$10.73/bale 20 bales	\$215.00
				Grass Seed for waste areas @ \$1.60/lb 10 lbs	\$16.00
				Labor for seeding and mulching @ \$40/hr 4 hrs	\$160.00
SUB TOTAL FOR SPECIAL PROJECTS				\$11,393	

				Subtotal of Surfacing & Spec. Proj.		\$15,221
				Subtotal of Clearing, Exc., Culv.		\$9,010
GRAND TOTAL						\$24,231

Compiled By: _____ Ed Holloran/Jon Long

Date: 10/10/2014

SUMMARY OF ROAD IMPROVEMENT CONSTRUCTION COSTS

SALE NAME: Rector Combo

RD. IMP. CONSTRUCTION: 170.70 STATIONS

3.23 MILES

ROAD: 11 - 12

STATIONS

MILES

POINTS:

CLEARING & GRUBBING

Method		Acres/amount	x	Rate	=	Cost
	None					
I1 - I2	Junction Reconstruction (57+25)	0.1	x	\$1,337.00	=	\$133.70
I1 - I2	Extra landing Construction cost	0.40	x	\$1,337.00	=	\$534.80

SUB TOTAL FOR CLEARING & GRUBBING

\$669

EXCAVATION

Material		Cyl/amount	x	Rate	=	Cost
11 - 12	Ditchout Const. & clean out (C315) (20) per hour	8.00	x	\$101.00	=	\$808.00
11 - 12	Catch Basin Const.& clean out (C315) (4) per hour	2.00	x	\$101.00	=	\$202.00
11 - 12	Ditch Reconstruction (C315) (50 st.) per hr	12.00	x	\$101.00	=	\$1,212.00
11 - 12	Load & Haul Ditch Material per hour	6.00	x	\$79.00	=	\$474.00
11 - 12	Junction Reconstruction (C-315) (4) per hour	2.00	x	\$101.00	=	\$202.00
11 - 12	Dissipator Rock placement(C315) per hour	9.00	x	\$101.00	=	\$909.00
	Compact waste material (C315) per hour	3.00	x	\$101.00	=	\$303.00
11 - 12	Construct Turnouts (C315) (1) per hour	2.00	x	\$101.00	=	\$202.00
11 - 12	Construct T/O Grader (14 G) per hour	1.00	x	\$100.00	=	\$100.00
11 - 12	Construct Landings	2.00	x	\$389.00	=	\$778.00

SUB TOTAL FOR EXCAVATION

• \$4,412

CULVERT MATERIALS AND INSTALLATION

[illegible]

* = disconnect culvert

	Description	Quantity	Rate	Cost
Other/miscellaneous:				
Culvert stakes & markers:	White fiberglass culvert markers 6' x 2½" (3 on new pipes & 21 for replacements)	24	\$20.00	\$480.00

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION		100.00
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\$4,777

Subtotal of Clearing, Exc., Culv.

\$9,857

Compiled By: Ed Holloran/ J. Long

Date: 10/10/2014

SURFACING		Stations/ amount	x	Rate/ sta/amt	Cost
Subgrade prep: Description					
Grade, Shape and Ditch 16'		(Sta.) 170.70	x	\$24.83	\$4,238.48
Subgrade Compaction		(Sta.) 170.70	x	\$20.19	\$3,446.43

ROAD SEGMENT			I1-I2		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I1-I2		0+00 to 170+70					
				Volume (CY) per	Number of						
Leveling Rock	4"-0" crushed		N/A					242	\$6.47	\$1,566	
Surface Rock	1½"-0" crushed	0+00 - 170+00	2	station	13	stations	170.00	2,210	\$6.47	\$14,299	
Junctions	1½"-0" crushed	5+60; 42+85; 109+80; 124+80; 131+50; 132+30	N/A	junction	22	junctions	6	132	\$6.47	\$854	
Junctions	4"-0" crushed	57+25	N/A	junction	44	junctions	1	44	\$6.47	\$285	
Junctions	1½"-0" crushed	57+25	N/A	junction	44	junctions	1	44	\$6.47	\$285	
Curve Widening	1½"-0" crushed		N/A	station	3	stations	5.00	15	\$6.47	\$97	
Turnouts	4"-0" crushed	76+30-77+30; 114+60-115+60	N/A	TO	22	TO's	2	44	\$6.47	\$285	
Turnouts	1½"-0" crushed		N/A	TO	11	TO's	15	165	\$6.47	\$1,068	
Culvert Bedding	1½"-0" crushed or reject crushed rock	0+40; 1+55; 13+15; 19+90; 28+40; 45+45; 54+20	N/A	culvert	22	culverts	7	154	\$6.47	\$996	
Surface rock over Culvert	1½"-0" crushed	0+40; 1+55; 13+15; 19+90; 28+40; 45+45; 54+20	N/A	culvert	11	culverts	7	77	\$6.47	\$498	
Dissipator Rock	24'-6" riprap	0+40; 11+90; 13+15; 19+90; 27+25; 28+40; 40+20; 45+45; 95+15; 139+10; 145+70	N/A	load	10	loads	14	140	\$2.69	\$377	
Landing Rock	6"-0" pit-run	140+65, 146+65	N/A	landing	50	landings	2	100	\$2.20	\$220	
Total Rock for Road Segment:			I1-I2				3,367				
Processing:											
Description								No.sta	Rate/sta	Cost	
Water, Process & Compact:								170.70	\$56.48	\$9,641	

CRUSHED ROCK COST

SALE NAME:	Rector Combo
PROJECT:	Nos. 1 & 2
QUARRY:	Sweethome Stockpile

MATERIAL: Crushed
1½" - 0" & 4"-0"

DATE: 10/10/2014
BY: EMH/ JL

[illegible]

ROCK HAUL:

Truck type: D20 No. trucks: 2
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$4.97	/cy
Load:	\$0.54	/cy
Spread:	\$0.96	/cy

Truck type: D12 No. trucks: 4
 Delay min.: 6 Efficiency: 85%

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 830

CRUSHED ROCK HAUL COSTS 3,251 cy @ \$6.47 /cy

PIT RUN ROCK COST

SALE NAME:	Rector Combo
PROJECT:	Nos. 1 & 2
QUARRY:	Rector Landing site

MATERIAL: Pit-run
6" - 0"

DATE: 10/10/2014
BY: Ed Holloran/Andrew Arvi

[illegible]

ROCK HAUL:

Truck type: D20 No. trucks:
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$1.42	/cy
Load:		/cy
Spread:	\$0.78	/cy

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

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 1,336

PIT RUN ROCK HAUL COSTS

957 cy @ \$2.20 /cy

RIP RAP ROCK COST

SALE NAME:	Rector Combo
PROJECT:	Nos. 1 & 2
QUARRY:	Rector Landing site

MATERIAL: Riprap
24" - 6"

DATE: 10/10/2014
BY: Ed Holloran

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES							Total Haul
			50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	
1A-1B										1.39
I1-I2		140			0.20	0.30	0.30	0.30	0.29	

ROCK HAUL:

Truck type: D12 No. trucks: 2
 Delay min.: 6 Efficiency: 85%

Ave haul: \$2.69 /cy
Load: /cy
Develop: _____/cy

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 470

RIP RAP ROCK HAUL COSTS

140 cy @ \$2.69 /cy

Projects Road Maintenance Cost Summary

Sale: Rector Combo
Date: 9/17/14
By: John Choate

Note: Fry Creek -> Sweethome Stockpile site

Type	Equipment/Rationale			Hours	Rate	Cost
Final Project Haul Road Maintenance	Grader 14G			20.0	\$100	\$2,000
	Dump Truck 12CY			16.0	\$79	\$1,264
	FE Loader C966			10.0	\$83	\$830
	Vibratory Roller			20.0	\$77	\$1,540
	Water Truck 2,500 gallon			10.0	\$89	\$890
Total						\$6,524

Production Rates

Grader

Vibratory Roller

Miles/day	Distance(miles)	Days
1.5	3.66	2.4
1.5	3.66	2.4

**Rector Combo
FY 2015
TIMBER CRUISE REPORT**

1. **Sale Area Location:** Areas 1, 2, and 3 are located in portions of Sections 4 and 5 T3N, R8W; W.M., Tillamook County, Oregon.

All timber sale areas are posted with ODF "Timber Sale Boundary", signs and pink ribbon. Area 3 R/W is posted with ODF "Right-of-Way Boundary" signs.

- 2. Fund Distribution:**
- | | |
|------------------|-------------|
| Fund: | BOF (100%) |
| Tax Code: | 56-1 (100%) |

3. Sale Acreage by Area:

Area	Harvest Type	Gross Acres	New R/W Acres	Stream Buffer Acres	GTRA	Existing R/W Acres	Blowdown	Net Acreage
1	MC	55	1	10	1	1	5	37
2	PC	24	0	2.5	0	0	0.5	21
3	R/W	-	1	-	-	-	-	1
TOTALS		79		12.5	1	1	5.5	59

4. **Cruisers and Cruise Dates:** Area 1 was cruised by Andrew Arvin and Jon Long. Area 2 was cruised by Andrew Arvin, Ed Holloran, and John Tillotson. All areas were cruised in April, 2014.

- 5. Cruise Method and Computation:** Cruises used Corvallis MicroTechnology (CMT) and Juniper 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 1 (Modified Clear Cut), was variable plot cruised with a 54.4 BAF. 25 plots were sampled on a cruise grid of 2 chains by 5 chains, with a count/cruise ratio of 1:1. Plots which landed in blowdown patches were dropped. Five acres of blowdown were mapped out and removed from Area 1.

Area 2 (Partial Cut), was variable plot cruised with a 40 BAF. 27 plots were sampled on a cruise grid of 2 chains by 5 chains, with a count/cruise ratio of 2:1. One half acre of blowdown (non-thinnable) was mapped out and removed from Area 2.

Area 3 R/W. was calculated applying road R/W acreage using cruise per acre volumes for total harvest in Area 1.

<u>AREAS</u>	<u>PROJECT</u>	<u>TRACT</u>	<u>CRUISE TYPE</u>
1	RECTOR	AREA1	00CC, TAKE
2	RECTOR	AREA2	00PC, TAKE, LEAV
3 RW	RECTOR	AREA1	R/W

6. Timber Description:

Area 1 (Modified Clearcut) – This stand is approximately 73 years old, consisting of mixed conifer stands with patches of blowdown. This stand averages 17 inches in DBH, with an average height of 61 feet to a merchantable top (6" D.I.B. or 40% of the diameter at 16 feet). The average (net) volume to be harvested is 48 MBF/acre.

Area 2 (Partial Cut) – This stand is approximately 73 years old, consisting of mixed conifer stands with scattered blowdown. This stand averages 17 inches in DBH, with an average height of 65 feet to a

merchantable top (6" D.I.B. or 40% of the diameter at 16 feet). The take volume averages 15 inches in DBH with an average merchantable height of 60 feet. This stand will be harvested to an SDI of approximately 33, with a basal area target of 170 ft², while retaining approximately 78 trees per acre. The average (net) volume to be harvested is 18 MBF/acre.

Area 3 R/W – The R/W is the same type timber as Area 1. The average volume to remove from Area 3 is 51 MBF per acre. There is 1 acres of R/W total within Area 1.

7. Statistical Analysis: (See also "Statistics Reports," attached.)

Area	Target CV	Target SE%	Actual CV	Actual SE%
1	55	10	40.7	8.3
2	55	12	34.3	6.7

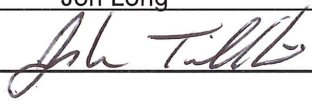
The statistics for all areas are "Take" and "Leave" stands combined.

8. Take Volumes by Species and Log Grades for All Sale Areas by MBF: (See "Species, Sort Grade-Board Feet Volumes (Project)" and the "Stand Table Summary" attached, of the thinning and regeneration harvest areas combined.) Volumes do not include "ingrowth." The majority of defect and breakage was culled out during the cruise.

Species	DBH	Net Vol.	2 Saw	3Saw	4 Saw	Camp Run	% D & B	% Sale
Douglas-fir	19	591	419	153	19	-	3	27
Hemlock	16	1,449	708	647	94	-	2	66
Spruce	22	38	26	12	-	-	5	2
Noble Fir	24	98	78	18	2		10	4
Alder	12	27				27	10	1
TOTAL		2,203					4	100

9. Prepared by: Jon Long

Date: August 13, 2014

10. Approved by: 

Date: 10/6/2014

11. Attachments: Cruise Plans & Maps (4 pages)
Species, Sort, Grade Reports (4 pages)
Statistics Reports (6 pages)
Stand Table Summary Reports (3 pages)
Take - Log Stock Table Reports (5 pages)

X:\Sunset Unit\2014 FY Sales\Rector Combo\Sale Prep\Cruise Report Rector Combo.doc

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Rector Combo **Area** 1

Harvest Type: (MC) Clearcut

Approx. Cruise Acres: 41 **Estimated CV%** 55 Net BF/Acre **SE% Objective** 10

Planned Sale Volume : 1,800 MBF **Estimated Sale Area Value/Acre:** \$14,000/Ac
(40 MBF/Ac.)

A. Cruise Goals: (a) Grade minimum 80 conifer and 10 hardwood trees:
(b) Sample 36 cruise plots (1 grade/ 1 count); (c) Other goals (X Determine volume and quality)

B. Cruise Design:

1. Plot Cruises: BAF 54.6 (Full point; Half point) (circle one) sighting at 4.5 feet.

Cruise Line Direction(s) E- W
Cruise Line Spacing 5 (chains)
Cruise Plot Spacing 2 (chains)
Grade/Count Ratio 1:1

Take plots as marked on map. All cedar are leave trees. Record all snags as SN. Grade all hardwoods as CampRun.

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".
- 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 merchantable segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

6. Species, Sort, and Grade Codes:

- A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
- B. Sort: Use code "1" (Domestic).
- C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull
Hardwoods: R = CampRun

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

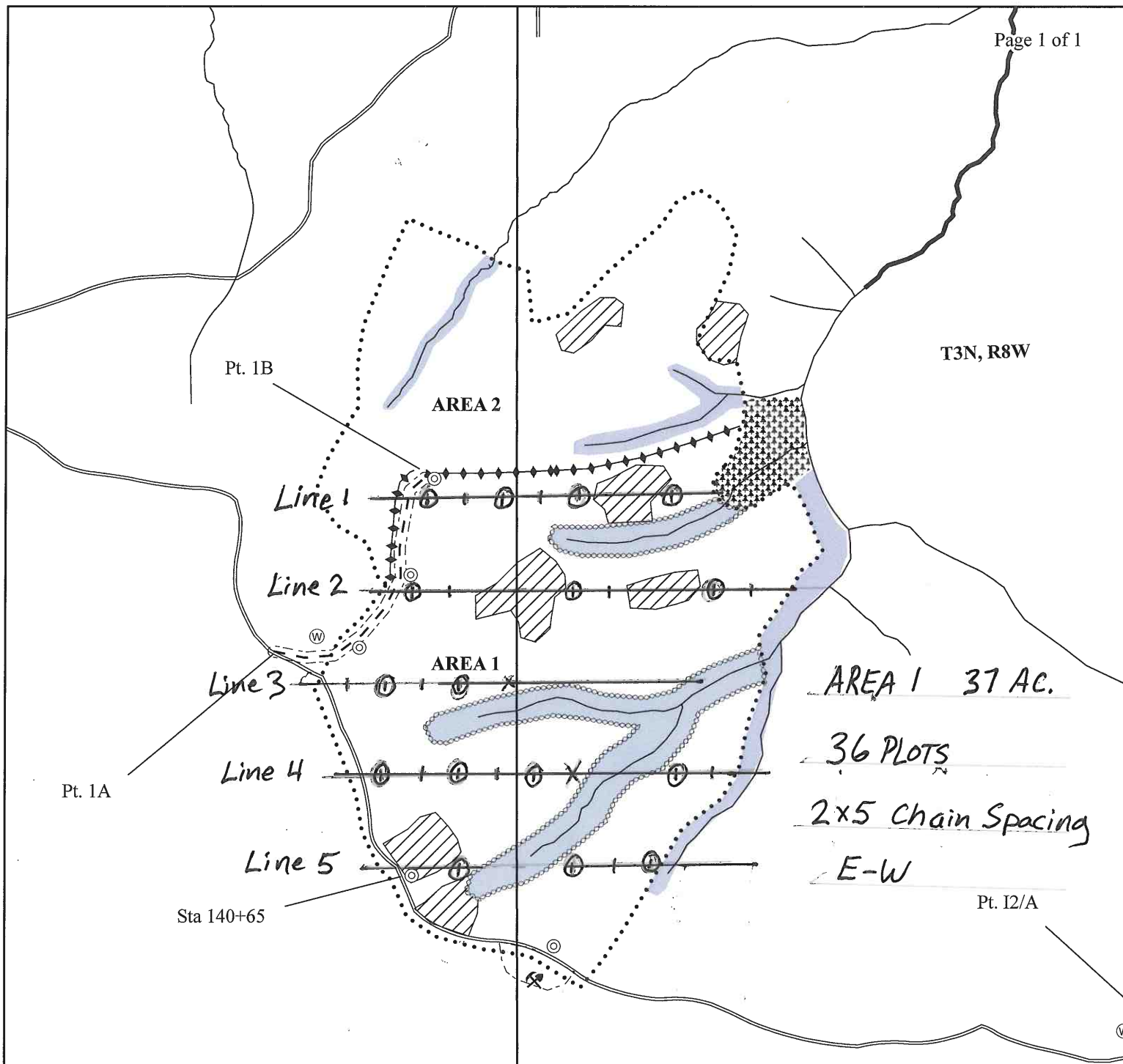
8. **Standard Field Procedures: Plot Type Cruises**: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy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

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

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

Cruise Design by: Jon Long Approved by: *John Till* Date: 4/1/14

W/L *Long*



Cruise Map

OF TIMBER SALE CONTRACT NO. 341-15-32
RECTOR COMBO

PORTIONS OF SECTIONS 4 AND 5, T3N, R8W,
W.M., TILLAMOOK COUNTY, OREGON

Approximate Net Acreage	MC Acres	PC Acres
Area 1 (MC) -	37	
Area 2 (PC) -		21
Area 3 R/W	1	
Total=	39	21
Total Sale Acreage = 59		

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



**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Rector Combo **Area** 2

Harvest Type: (PC) Thinning

Approx. Cruise Acres: 35 **Estimated CV%** 55 Net BF/Acre **SE% Objective** 12

Planned Sale Volume : 420 MBF **Estimated Sale Area Value/Acre:** \$4,000/Ac
(12 MBF/Ac.)

A. Cruise Goals: (a) Grade minimum 50 conifer and hardwood trees:
(b) Sample 30 cruise plots (1 grade/ 2 count); (c) Other goals (X Determine
volume and quality)

B. Cruise Design:

1. Plot Cruises: BAF 40 (Full point; Half point) (circle one) sighting at 4.5 feet.

Cruise Line Direction(s) 10 degrees
Cruise Line Spacing 5 (chains)
Cruise Plot Spacing 2 (chains)
Grade/Count Ratio 1:2

Take plots as marked on map. All cedar are leave trees. Cruise through blowdown
patches and mark on map. Record all snags as SN. Grade all hardwoods as CampRun.

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".
- 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 merchantable segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

6. Species, Sort, and Grade Codes:

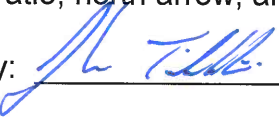
- A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
- B. Sort: Use code "1" (Domestic).
- C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull
Hardwoods: R = CampRun

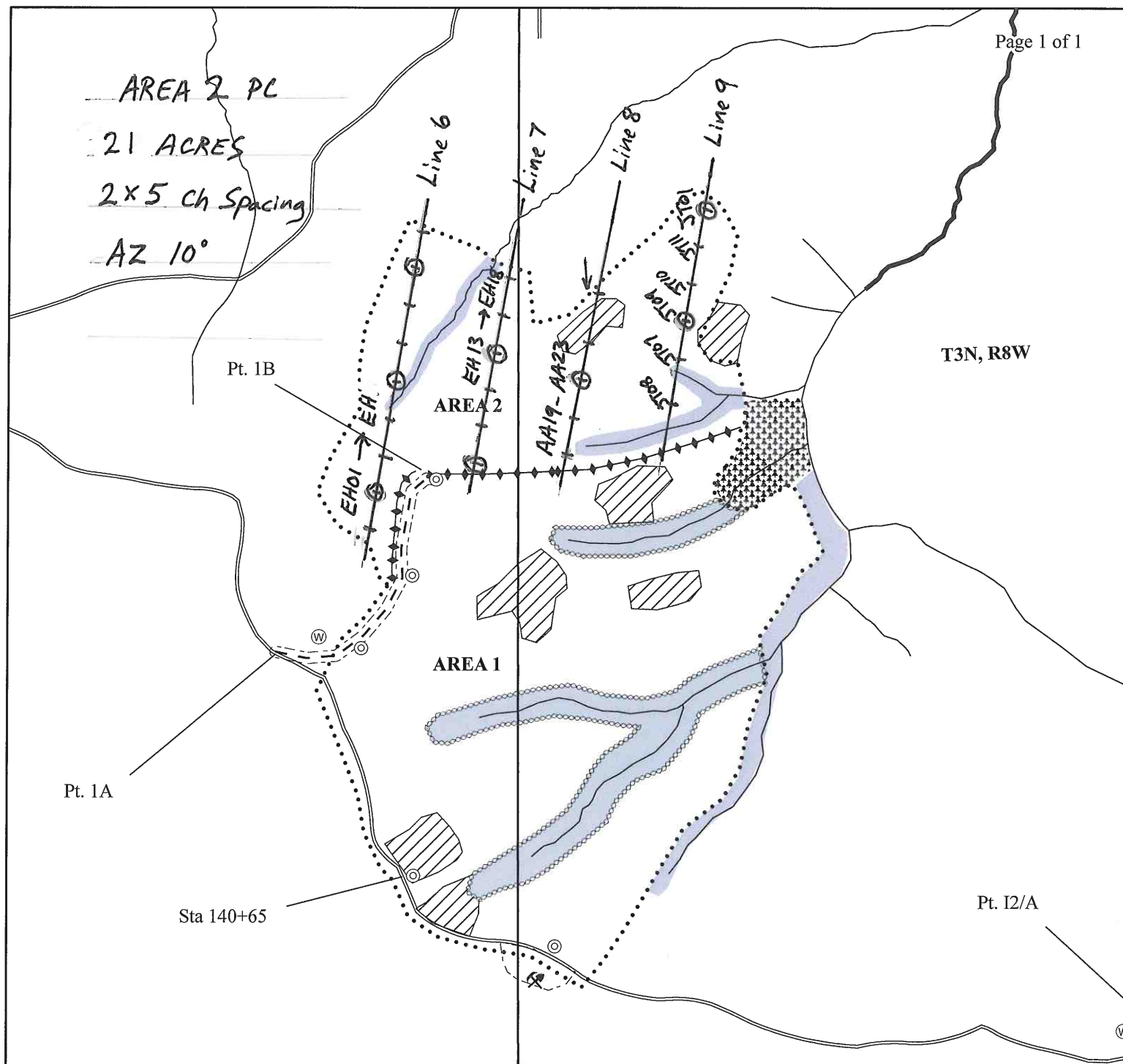
7. **Deductions**: Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally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

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

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

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

Cruise Design by: Jon Long Approved by:  Date: 4/1/14



Cruise Map

OF TIMBER SALE CONTRACT NO. 341-15-32
RECTOR COMBO

PORTIONS OF SECTIONS 4 AND 5, T3N, R8W,
W.M., TILLAMOOK COUNTY, OREGON

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

Legend

- Type F Stream
- Type N Stream
- Existing Surfaced Road
- Timber Sale Boundary
- ◆◆ Area Boundary
- ▨ Windthrown Timber
- Non-Posted Stream Buffer
- ◆ Survey Corner
- ▨ Posted Stream Buffer
- ⊙ New Landing Construction
- - New Road Construction
- ▭ Right of Way Boundary
- ✂ Pit-Run Rock Source
- ⊙ Waste Area
- Pt. "A" Project Point

Approximate Net Acreage	MC Acres	PC Acres
Area 1 (MC) -	37	
Area 2 (PC) -		21
Area 3 R/W	1	
Total=	39	21
Total Sale Acreage = 59		

TC		PSPCSTGR Species, Sort Grade - Board Foot Volumes (Project)																			
T03N R08W S04 TyR/W1.00 T03N R08W S04 TyTAKE37.00 T03N R08W S04 TyTAKE21.00				Project: RECTOR				Acres 59.00				Page 1				Date 10/2/2014				Time 3:08:52PM	
Spp	So Gr	T rt 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			100.0	120											7		0.00	2.9		
D	DO2S	70		1.6	7,209	7,094	419		6	72	21		3	14	83	38	275	1.79	25.8		
D	DO3S	26		2.9	2,672	2,593	153		96	4			3	40	58	36	80	0.70	32.3		
D	DO4S	4			335	335	20		100				80	20		19	25	0.48	13.5		
D Totals			27		3.0	10,336	10,023	591		33	52	15	3	3	20	74	33	135	1.11	74.5	
H	DOCU			100.0	208											5		0.00	6.6		
H	DO2S	48		1.5	12,183	12,004	708		9	61	30		1		19	80	37	266	1.70	45.1	
H	DO3S	45		1.4	11,118	10,962	647		99	1			0	1	39	60	35	85	0.69	128.5	
H	DO4S	7		3.7	1,664	1,602	95		100				33	65		3	21	30	0.49	54.0	
H Totals			66		2.4	25,172	24,567	1,449		55	30	15	3	5	27	66	32	105	0.89	234.2	
M	DOCR		100		40	40	2		100				100				20	40	0.90	1.0	
M Totals			0			40	40	2		100			100				20	40	0.90	1.0	
S	DO2S	68			436	436	26				100					100	40	530	2.65	.8	
S	DO3S	32			199	199	12		52	48					100		32	99	1.09	2.0	
S Totals			2			636	636	38		16	15	69			31	69	34	224	1.61	2.8	
NF	DOCU			100.0	173												6		0.00	.8	
NF	DO2S	80		1.4	1,345	1,326	78			23	77				19	81	38	619	3.15	2.1	
NF	DO3S	18			298	298	18		100				20	4	11	65	30	99	0.86	3.0	
NF	DO4S	2			32	32	2		100						100		32	50	0.44	.6	
NF Totals			4		10.4	1,848	1,656	98		20	19	61	4	1	19	76	30	253	1.74	6.5	
A	DOCU			100.0	51												5		0.00	2.5	
A	DOCR	100			421	421	25		100					34	66		31	49	0.51	8.6	
A Totals			1		10.8	471	421	25		100				34	66		25	38	0.49	11.2	
Totals					3.0	38,504	37,343	2,203		47	35	18	3	4	25	68	32	113	0.95	330.3	

T	Species, Sort Grade - Board Foot Volumes (Type)															Page 1					
Project: RECTOR																	Date 5/5/2014	Time 10:59:16AM			
T03N R08W S04 TTAKE										T03N R08W S04 TTAKE											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
03N	08W	04	AREA1	TAKE	37.00	25	85	1	W												
S So Gr T rt ad			% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre		
								Log Scale Dia.				Log Length				Ln	Bd	CF/ Lf			
										4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	Ft		
H	DO	CU		100.0	226													5		0.00	7.9
H	DO	2S	54	1.5	16,874	16,621	615			10	56	34			18	82		38	275	1.74	60.4
H	DO	3S	39	1.5	12,205	12,023	445			100				0	1	37	62	36	86	0.70	139.2
H	DO	4S	7	2.8	2,192	2,132	79			100				30	70			21	30	0.50	70.5
H Totals			64	2.3	31,498	30,776	1,139			51	30	18		2	5	24	68	32	111	0.93	277.9
D	DO	CU		100.0	83													6		0.00	1.0
D	DO	2S	74	1.6	10,818	10,641	394			7	71	22			3	11	86	38	282	1.82	37.7
D	DO	3S	23		3,209	3,209	119			94	6				3	29	68	37	84	0.70	38.3
D	DO	4S	3		365	365	13			100				100				17	25	0.47	14.8
D Totals			30	1.8	14,475	14,215	526			29	55	17		3	3	15	79	34	155	1.20	92.0
A	DO	CU		100.0	79													5		0.00	3.9
A	DO	CR	100		653	653	24			100					34	66		31	49	0.51	13.4
A Totals			1	10.8	732	653	24			100					34	66		25	38	0.49	17.3
NF	DO	CU		100.0	269													6		0.00	1.2
NF	DO	2S	94	1.6	1,497	1,474	55				27	73				27	73	37	630	3.23	2.3
NF	DO	3S	6		82	82	3			100				100				16	70	1.19	1.2
NF Totals			3	15.8	1,848	1,556	58			5	26	69		5		26	69	24	333	2.69	4.7
S	DO	2S	85		677	677	25				100					100		40	530	2.65	1.3
S	DO	3S	15		115	115	4			100						100		32	90	1.19	1.3
S Totals			2		792	792	29			15		85				15	85	36	310	2.00	2.6
M	DO	CR	100		62	62	2			100				100				20	40	0.90	1.6
M Totals			0		62	62	2			100				100				20	40	0.90	1.6
Type Totals					2.7	49,408	48,055	1,778		43	36	20		3	5	22	71	32	121	1.01	396.0

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1								
		Project: RECTOR										Date 10/2/2014								
												Time 3:01:32PM								
T03N R08W S04 TTAKE										T03N R08W S04 TTAKE										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
03N	08W	04	AREA2	TAKE	21.00	27	36	1	W											
S Spp	So T	Gr rt	%	Bd. Ft. per Acre	Total	Percent Net Board Foot Volume								Average Log			Logs Per /Acre			
						Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf
H	DO	CU		100.0	177										4		0.00	4.3		
H	DO	2S	27	1.2	3,693	3,648	77		100			8		26	66	35	209	1.46	17.5	
H	DO	3S	68	1.2	9,149	9,041	190		96	4			2	44	54	35	83	0.66	109.1	
H	DO	4S	5	9.1	707	643	13		100			45	35		20	22	26	0.44	24.3	
H Totals			74	2.9	13,727	13,332	280		70	30		4	3	37	56	32	86	0.73	155.1	
D	DO	CU		100.0	187											7		0.00	6.2	
D	DO	2S	27		677	677	14		100					100		32	160	1.22	4.2	
D	DO	3S	61	13.0	1,700	1,480	31		100					83	17	33	69	0.69	21.5	
D	DO	4S	12		283	283	6		100			34	66			23	26	0.51	11.0	
D Totals			14	14.3	2,846	2,439	51		72	28		4	8	78	10	27	57	0.69	43.0	
NF	DO	2S	57	1.0	1,069	1,059	22		14	86					100	40	592	2.97	1.8	
NF	DO	3S	38		688	688	14		100			3	5	13	79	35	109	0.81	6.3	
NF	DO	4S	5		91	91	2		100					100		32	50	0.44	1.8	
NF Totals			10	.6	1,848	1,838	39		42	8	49	1	2	10	87	35	185	1.19	9.9	
S	DO	3S	100		352	352	7		24	76				100		32	105	1.02	3.4	
S Totals			2		352	352	7		24	76				100		32	105	1.02	3.4	
Type Totals					4.3	18,773	17,961	377		66	29	5	4	3	41	52	31	85	0.75	211.4

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1								
Project: RECTOR										Date 10/2/2014										
										Time 3:07:44PM										
T03N R08W S04 TR/W										T03N R08W S04 TR/W										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
03N	08W	04	AREA1	R/W	1.00	25	87	1	W											
S So Gr T rt ad Spp			% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
								Log Scale Dia.				Log Length				Ln	Bd	CF/ Lf		
H DO CU				100.0	226										5		0.00		7.9	
H DO 2S			54	1.5	16,874	16,621	17	10	56	34			18	82	38	275	1.74		60.4	
H DO 3S			39	1.5	12,205	12,023	12	100				0	1	37	62	36	86	0.70	139.2	
H DO 4S			7	2.8	2,192	2,132	2	100				30	70			21	30	0.50	70.5	
H Totals			64	2.3	31,498	30,776	31	51	30	18		2	5	24	68	32	111	0.93	277.9	
D DO CU				100.0	83										6		0.00		1.0	
D DO 2S			74	1.6	10,818	10,641	11	7	71	22			3	11	86	38	282	1.82	37.7	
D DO 3S			23		3,209	3,209	3	94	6				3	29	68	37	84	0.70	38.3	
D DO 4S			3		365	365	0	100				100				17	25	0.47	14.8	
D Totals			30	1.8	14,475	14,215	14	29	55	17		3	3	15	79	34	155	1.20	92.0	
A DO CU				100.0	79										5		0.00		3.9	
A DO CR			100		653	653	1	100					34	66		31	49	0.51	13.4	
A Totals			1	10.8	732	653	1	100					34	66		25	38	0.49	17.3	
NF DO CU				100.0	269										6		0.00		1.2	
NF DO 2S			94	1.6	1,497	1,474	1		27	73				27	73	37	630	3.23	2.3	
NF DO 3S			6		82	82	0	100				100				16	70	1.19	1.2	
NF Totals			3	15.8	1,848	1,556	2	5	26	69		5		26	69	24	333	2.69	4.7	
S DO 2S			85		677	677	1			100				100		40	530	2.65	1.3	
S DO 3S			15		115	115	0	100						100		32	90	1.19	1.3	
S Totals			2		792	792	1	15		85				15	85	36	310	2.00	2.6	
M DO CR			100		62	62	0	100				100				20	40	0.90	1.6	
M Totals			0		62	62	0	100				100				20	40	0.90	1.6	
Type Totals					2.7	49,408	48,055	48	43	36	20		3	5	22	71	32	121	1.01	396.0

TC PSTATS				PROJECT STATISTICS				PAGE	1			
				PROJECT	RECTOR	DATE 10/2/2014						
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
03N	08	04	AREA1	R/W	59.00	77	402	1	W			
03N	08W	04	AREA1	TAKE								
03N	08W	04	AREA2	TAKE								
				TREES	ESTIMATED		PERCENT					
				PER PLOT	TOTAL		SAMPLE					
				PLOTS	TREES	TREES	TREES					
TOTAL			77	402	5.2							
CRUISE			38	207	5.4	10,569	2.0					
DBH COUNT												
REFOREST												
COUNT			36	181	5.0							
BLANKS			3									
100 %												
STAND SUMMARY												
			SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
			TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK			136	133.9	15.6	58		178.1	25,172	24,567	6,624	6,581
DOUG FIR			52	31.8	19.2	79		64.2	10,336	10,023	2,713	2,689
NOB FIR			6	2.4	23.9	85	2	7.4	1,848	1,656	368	343
R ALDER			6	8.6	12.2	34		7.0	471	421	150	137
S SPRUCE			3	1.4	22.3	71		3.9	636	636	157	157
SNAG			2	.1	24.6	52		.2				
BL MAPLE			2	1.0	16.0	22		1.4	40	40	18	18
TOTAL			207	179.1	16.4	61		262.1	38,504	37,343	10,030	9,925
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			
WHEMLOCK		75.0	6.4	250	267	285						
DOUG FIR		61.8	8.6	407	445	483						
NOB FIR		62.6	27.9	676	937	1,198						
R ALDER		17.9	8.0	46	50	54						
S SPRUCE		49.0	33.9	320	483	647						
SNAG												
BL MAPLE				40	40	40						
TOTAL		84.7	5.9	304	323	342	286 72		32			
CL	68.1	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
WHEMLOCK		120.1	13.7	116	134	152						
DOUG FIR		192.1	21.9	25	32	39						
NOB FIR		344.4	39.2	1	2	3						
R ALDER		561.7	64.0	3	9	14						
S SPRUCE		427.9	48.7	1	1	2						
SNAG		456.4	52.0	0	0	0						
BL MAPLE		854.4	97.3	0	1	2						
TOTAL		108.4	12.3	157	179	201	469 117		52			
CL	68.1	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
WHEMLOCK		120.7	13.7	154	178	203						
DOUG FIR		193.9	22.1	50	64	78						
NOB FIR		343.7	39.1	4	7	10						
R ALDER		561.7	64.0	3	7	11						
S SPRUCE		463.1	52.7	2	4	6						
SNAG		456.4	52.0	0	0	0						
BL MAPLE		854.4	97.3	0	1	3						
TOTAL		112.5	12.8	229	262	296	505 126		56			

PROJECT STATISTICS

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	08	04	AREA1	R/W	59.00	77	402	1	W
03N	08W	04	AREA1	TAKE					
03N	08W	04	AREA2	TAKE					

CL	68.1	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK		127.4	14.5	21,003	24,567	28,132			
DOUG FIR		208.1	23.7	7,649	10,023	12,398			
NOB FIR		352.0	40.1	992	1,656	2,320			
R ALDER		561.7	64.0	152	421	690			
S SPRUCE		493.5	56.2	278	636	993			
SNAG									
BL MAPLE		854.4	97.3	1	40	79			
TOTAL		121.9	13.9	32,161	37,343	42,526	593	148	66

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT	RECTOR	DATE 5/5/2014				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
03N	08W	04	AREA1	00CC	37.00	25	163	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	25	163	6.5							
CRUISE	15	93	6.2		8,071		1.2			
DBH COUNT										
REFOREST										
COUNT	10	59	5.9							
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
WHEMLOCK	55	159.1	15.9	57		220.0	31,498	30,776	8,239	8,193
DOUG FIR	24	37.5	20.4	86		84.9	14,475	14,215	3,752	3,738
SNAG	4	2.6	32.5	52		15.2	324		85	
R ALDER	3	13.4	12.2	34		10.9	732	653	233	213
NFIRLEAV	2	1.1	33.0	111	1	6.5	1,929	1,821	359	359
NOB FIR	1	1.2	32.0	98	1	6.5	1,848	1,556	340	302
S SPRUCE	1	1.3	25.0	75		4.4	792	792	184	184
BL MAPLE	1	1.6	16.0	22		2.2	62	62	28	28
DOUGLEAV	1	.1	52.0	122		2.2	660	660	122	122
HEMLEAV	1	.2	40.0	100		2.2	614	582	113	113
TOTAL	93	218.1	17.3	61		355.0	52,935	51,117	13,454	13,252
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		
WHEMLOCK	74.2	10.0	259	288	317					
DOUG FIR	57.5	12.0	415	472	528					
SNAG										
R ALDER	20.0	13.8	43	50	57					
NFIRLEAV	40.7	38.1	1,086	1,755	2,424					
NOB FIR										
S SPRUCE										
BL MAPLE										
DOUGLEAV										
HEMLEAV										
TOTAL	137.2	14.2	365	426	487	752	188	84		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	53.6	10.9	142	159	176					
DOUG FIR	117.0	23.8	29	37	46					
SNAG	266.5	54.3	1	3	4					
R ALDER	322.7	65.8	5	13	22					
NFIRLEAV	280.8	57.3	0	1	2					
NOB FIR	276.4	56.4	1	1	2					
S SPRUCE	346.1	70.6	0	1	2					
BL MAPLE	500.0	102.0		2	3					
DOUGLEAV	500.0	102.0		0	0					
HEMLEAV	500.0	102.0		0	1					
TOTAL	33.8	6.9	203	218	233	48	12	5		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	48.2	9.8	198	220	242					
DOUG FIR	106.4	21.7	67	85	103					

TC TSTATS				STATISTICS				PAGE	2
				PROJECT	RECTOR	DATE 5/5/2014			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	08W	04	AREA1	00CC	37.00	25	163	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
SNAG		193.4	39.4	9	15	21			
R ALDER		322.7	65.8	4	11	18			
NFIRLEAV		276.4	56.4	3	7	10			
NOB FIR		276.4	56.4	3	7	10			
S SPRUCE		346.1	70.6	1	4	7			
BL MAPLE		500.0	102.0		2	4			
DOUGLEAV		500.0	102.0		2	4			
HEMLEAV		500.0	102.0		2	4			
TOTAL		27.0	5.5	335	355	375	30	8	3
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK		54.2	11.1	27,372	30,776	34,180			
DOUG FIR		108.2	22.1	11,080	14,215	17,350			
SNAG									
R ALDER		322.7	65.8	223	653	1,083			
NFIRLEAV		277.2	56.5	792	1,821	2,850			
NOB FIR		276.4	56.4	679	1,556	2,433			
S SPRUCE		346.1	70.6	233	792	1,351			
BL MAPLE		500.0	102.0		62	126			
DOUGLEAV		500.0	102.0		660	1,333			
HEMLEAV		500.0	102.0		582	1,174			
TOTAL		40.7	8.3	46,872	51,117	55,362	69	17	8

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT	RECTOR	DATE 5/5/2014				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
03N	08W	04	AREA1	TAKE	37.00	25	151	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	25	151	6.0							
CRUISE	14	85	6.1		7,917		1.1			
DBH COUNT										
REFOREST										
COUNT	11	63	5.7							
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
WHEMLOCK	55	159.1	15.9	57		220.0	31,498	30,776	8,239	8,193
DOUG FIR	24	37.5	20.4	86		84.9	14,475	14,215	3,752	3,738
R ALDER	3	13.4	12.2	34		10.9	732	653	233	213
NOB FIR	1	1.2	32.0	98	1	6.5	1,848	1,556	340	302
S SPRUCE	1	1.3	25.0	75		4.4	792	792	184	184
BL MAPLE	1	1.6	16.0	22		2.2	62	62	28	28
TOTAL	85	214.0	16.8	61		328.9	49,408	48,055	12,776	12,658
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	
WHEMLOCK	74.2	10.0	259	288	317					
DOUG FIR	57.5	12.0	415	472	528					
R ALDER	20.0	13.8	43	50	57					
NOB FIR										
S SPRUCE										
BL MAPLE										
TOTAL	78.3	8.5	316	345	374		245	61	27	
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
WHEMLOCK	53.6	10.9	142	159	176					
DOUG FIR	117.0	23.8	29	37	46					
R ALDER	322.7	65.8	5	13	22					
NOB FIR	276.4	56.4	1	1	2					
S SPRUCE	346.1	70.6	0	1	2					
BL MAPLE	500.0	102.0		2	3					
TOTAL	36.8	7.5	198	214	230		56	14	6	
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
WHEMLOCK	48.2	9.8	198	220	242					
DOUG FIR	106.4	21.7	67	85	103					
R ALDER	322.7	65.8	4	11	18					
NOB FIR	276.4	56.4	3	7	10					
S SPRUCE	346.1	70.6	1	4	7					
BL MAPLE	500.0	102.0		2	4					
TOTAL	33.3	6.8	307	329	351		46	12	5	
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
WHEMLOCK	54.2	11.1	27,372	30,776	34,180					
DOUG FIR	108.2	22.1	11,080	14,215	17,350					
R ALDER	322.7	65.8	223	653	1,083					
NOB FIR	276.4	56.4	679	1,556	2,433					

TC TSTATS				STATISTICS				PAGE	2
				PROJECT	RECTOR				
								DATE	5/5/2014
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	08W	04	AREA1	TAKE	37.00	25	151	1	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
S SPRUCE		346.1	70.6	233	792	1,351			
BL MAPLE		500.0	102.0		62	126			
TOTAL		42.4	8.6	43,903	48,055	52,206	75	19	8

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT	RECTOR	DATE 10/2/2014				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
03N	08W	04	AREA2	00PC	21.00	27	232	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
PLOTS		TREES								
TOTAL		27		232		8.6				
CRUISE		11		85		7.7				
DBH COUNT						4,211				
REFOREST						2.0				
COUNT		16		128		8.0				
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
WHEMLOCK		26	88.2	14.6	59	102.2	13,727	13,332	3,701	3,663
HEMLEAV		21	34.8	20.2	83	77.0	13,895	13,830	3,547	3,547
DOUGLEAV		14	22.8	22.6	86	63.7	10,673	10,562	2,727	2,727
DOUG FIR		4	21.5	15.1	56	26.7	2,846	2,439	833	790
NFIRLEAV		5	3.4	34.5	114	4	22.2	6,604	6,587	1,243
SNAG		6	6.9	24.3	49	22.2	123		48	
NOB FIR		4	4.5	19.0	80	2	8.9	1,848	1,838	417
ALDRLEAV		1	9.4	12.0	41	7.4	566	566	207	207
SPRUCELV		2	6.5	13.0	29	5.9	704	684	180	176
CEDLEAV		1	.8	31.0	66	4.4	390		151	
S SPRUCE		1	1.7	18.0	66	3.0	352	352	109	109
TOTAL		85	200.5	17.7	65	343.7	51,728	50,189	13,163	12,879
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		
WHEMLOCK		54.0	10.8	160	179	199				
HEMLEAV		53.1	11.9	407	461	516				
DOUGLEAV		37.3	10.3	450	501	553				
DOUG FIR		63.4	36.2	78	123	167				
NFIRLEAV		22.1	11.0	1,757	1,974	2,191				
SNAG										
NOB FIR		87.4	49.9	371	740	1,109				
ALDRLEAV										
SPRUCELV		131.7	123.3		290	648				
CEDLEAV										
S SPRUCE										
TOTAL		116.7	12.6	365	418	471	543	136	60	
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK		73.9	14.5	75	88	101				
HEMLEAV		88.6	17.4	29	35	41				
DOUGLEAV		105.5	20.7	18	23	28				
DOUG FIR		190.9	37.4	13	21	30				
NFIRLEAV		246.3	48.3	2	3	5				
SNAG		165.2	32.4	5	7	9				
NOB FIR		264.5	51.8	2	5	7				
ALDRLEAV		336.1	65.9	3	9	16				
SPRUCELV		275.7	54.0	3	6	10				
CEDLEAV		381.3	74.7	0	1	1				
S SPRUCE		360.3	70.6	0	2	3				
TOTAL		36.1	7.1	186	201	215	54	14	6	

TC TSTATS				STATISTICS				PAGE	2
				PROJECT		RECTOR		DATE	10/2/2014
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	08W	04	AREA2	00PC	21.00	27	232	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
CL: 68.1 %		COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0		VAR.% S.E.%		LOW	AVG	HIGH	5	10	15
WHEMLOCK		70.6 13.8		88	102	116			
HEMLEAV		92.1 18.1		63	77	91			
DOUGLEAV		104.9 20.6		51	64	77			
DOUG FIR		190.6 37.4		17	27	37			
NFIRLEAV		246.3 48.3		11	22	33			
SNAG		152.5 29.9		16	22	29			
NOB FIR		288.2 56.5		4	9	14			
ALDRLEAV		336.1 65.9		3	7	12			
SPRUCELV		244.4 47.9		3	6	9			
CEDLEAV		381.3 74.7		1	4	8			
S SPRUCE		360.3 70.6		1	3	5			
TOTAL		24.2 4.7		327	344	360	24	6	3
CL: 68.1 %		COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0		VAR.% S.E.%		LOW	AVG	HIGH	5	10	15
WHEMLOCK		74.5 14.6		11,384	13,332	15,280			
HEMLEAV		93.8 18.4		11,286	13,830	16,373			
DOUGLEAV		107.6 21.1		8,334	10,562	12,790			
DOUG FIR		192.5 37.7		1,519	2,439	3,359			
NFIRLEAV		246.3 48.3		3,407	6,587	9,766			
SNAG									
NOB FIR		300.6 58.9		755	1,838	2,921			
ALDRLEAV		336.1 65.9		193	566	939			
SPRUCELV		275.7 54.1		314	684	1,053			
CEDLEAV									
S SPRUCE		360.3 70.6		103	352	601			
TOTAL		34.3 6.7		46,811	50,189	53,567	49	12	5

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	RECTOR	DATE 10/2/2014					
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
03N	08W	04	AREA2	TAKE	21.00	27	95	1	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
TOTAL				27	95	3.5					
CRUISE				10	35	3.5	2,434	1.4			
DBH COUNT											
REFOREST											
COUNT				14	52	3.7					
BLANKS				3							
100 %											
STAND SUMMARY											
SAMPLE				TREES	AVG	BOLE	REL	BASAL	GROSS	NET	
TREES				/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	
									GROSS	NET	
									CF/AC	CF/AC	
WHEMLOCK				26	88.2	14.6	59	102.2	13,727	13,332	3,701
DOUG FIR				4	21.5	15.1	56	26.7	2,846	2,439	833
NOB FIR				4	4.5	19.0	80	2	8.9	1,848	1,838
S SPRUCE				1	1.7	18.0	66	3.0	352	352	109
TOTAL				35	115.9	14.9	59	140.7	18,773	17,961	5,060
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.		
SD: 1.0				VAR.%	S.E.%	LOW	AVG	HIGH	5	10	
WHEMLOCK				54.0	10.8	160	179	199			
DOUG FIR				63.4	36.2	78	123	167			
NOB FIR				87.4	49.9	371	740	1,109			
S SPRUCE											
TOTAL				117.6	19.9	190	238	285	553	138	
CL: 68.1 %				COEFF	TREES/ACRE				# OF PLOTS REQ.		
SD: 1.0				VAR.%	S.E.%	LOW	AVG	HIGH	5	10	
WHEMLOCK				73.9	14.5	75	88	101			
DOUG FIR				190.9	37.4	13	21	30			
NOB FIR				264.5	51.8	2	5	7			
S SPRUCE				360.3	70.6	0	2	3			
TOTAL				61.0	12.0	102	116	130	155	39	
CL: 68.1 %				COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		
SD: 1.0				VAR.%	S.E.%	LOW	AVG	HIGH	5	10	
WHEMLOCK				70.6	13.8	88	102	116			
DOUG FIR				190.6	37.4	17	27	37			
NOB FIR				288.2	56.5	4	9	14			
S SPRUCE				360.3	70.6	1	3	5			
TOTAL				57.0	11.2	125	141	156	135	34	
CL: 68.1 %				COEFF	NET BF/ACRE				# OF PLOTS REQ.		
SD: 1.0				VAR.%	S.E.%	LOW	AVG	HIGH	5	10	
WHEMLOCK				74.5	14.6	11,384	13,332	15,280			
DOUG FIR				192.5	37.7	1,519	2,439	3,359			
NOB FIR				300.6	58.9	755	1,838	2,921			
S SPRUCE				360.3	70.6	103	352	601			
TOTAL				60.6	11.9	15,827	17,961	20,095	152	38	
							</				

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	RECTOR	DATE				10/2/2014
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
03N	08W	04	AREA2	LEAV	21.00	27	138	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		27	138	5.1						
CRUISE		11	51	4.6	1,895		2.7			
DBH COUNT										
REFOREST										
COUNT		16	78	4.9						
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
HEMLEAV		21	34.8	20.2	83	77.0	13,895	13,830	3,547	3,547
DOUGLEAV		14	22.8	22.6	86	63.7	10,673	10,562	2,727	2,727
SNAG		7	12.5	18.6	33	23.7	299		93	
NFIRLEAV		5	3.4	34.5	114	22.2	6,604	6,587	1,243	1,243
ALDRLEAV		1	9.4	12.0	41	7.4	566	566	207	207
SPRUCELV		2	6.5	13.0	29	5.9	704	684	180	176
CEDLEAV		1	.8	31.0	66	4.4	390		151	
TOTAL		51	90.3	20.4	70	204.4	33,130	32,228	8,149	7,900
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	
HEMLEAV		53.1	11.9	407	461	516				
DOUGLEAV		37.3	10.3	450	501	553				
SNAG										
NFIRLEAV		22.1	11.0	1,757	1,974	2,191				
ALDRLEAV										
SPRUCELV		131.7	123.3		290	648				
CEDLEAV										
TOTAL		104.9	14.7	455	534	612	440	110	49	
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
HEMLEAV		88.6	17.4	29	35	41				
DOUGLEAV		105.5	20.7	18	23	28				
SNAG		158.1	31.0	9	13	16				
NFIRLEAV		246.3	48.3	2	3	5				
ALDRLEAV		336.1	65.9	3	9	16				
SPRUCELV		275.7	54.0	3	6	10				
CEDLEAV		381.3	74.7	0	1	1				
TOTAL		35.8	7.0	84	90	97	53	13	6	
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
HEMLEAV		92.1	18.1	63	77	91				
DOUGLEAV		104.9	20.6	51	64	77				
SNAG		142.4	27.9	17	24	30				
NFIRLEAV		246.3	48.3	11	22	33				
ALDRLEAV		336.1	65.9	3	7	12				
SPRUCELV		244.4	47.9	3	6	9				
CEDLEAV		381.3	74.7	1	4	8				
TOTAL		9.9	1.9	200	204	208	4	1	0	
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	

TC TSTATS				STATISTICS				PAGE	2
				PROJECT	RECTOR	DATE 10/2/2014			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	08W	04	AREA2	LEAV	21.00	27	138	1	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
HEMLEAV		93.8	18.4	11,286	13,830	16,373			
DOUGLEAV		107.6	21.1	8,334	10,562	12,790			
SNAG									
NFIRLEAV		246.3	48.3	3,407	6,587	9,766			
ALDRLEAV		336.1	65.9	193	566	939			
SPRUCELV		275.7	54.1	314	684	1,053			
CEDLEAV									
TOTAL		28.0	5.5	30,462	32,228	33,994	32	8	4

TC		PSTNDSUM										Stand Table Summary			Page		1	
												Date:		11/17/2014				
T03N R08W S04 TyR/W1.00 T03N R08W S04 TyTAKE37.00 T03N R08W S04 TyTAKE21.00					Project					RECTOR					Time:		1:19:07PM	
					Acres					59.00					Grown Year:			
S SpC	T	Tot							Average Log		Net		Net		Totals			
		DBH	Sample Trees	FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF		
H		9	1	94	80	3.168	1.40	3.17	13.0	60.0		41	190		24	11		
H		11	10	89	49	19.517	12.88	19.52	13.8	44.0		269	859		159	51		
H		12	13	90	62	21.461	16.86	29.80	15.3	52.7		456	1,571		269	93		
H		13	7	89	70	10.386	9.57	13.42	21.2	69.0		285	927		168	55		
H		14	9	89	77	11.365	12.15	21.42	19.3	73.9		414	1,583		244	93		
H		15	18	92	85	19.255	23.63	36.41	24.9	93.9		906	3,420		535	202		
H		16	14	89	88	13.074	18.25	26.15	26.8	103.0		701	2,692		413	159		
H		17	9	88	79	7.425	11.70	12.33	33.1	113.4		408	1,398		241	82		
H		18	8	91	99	6.083	10.75	14.42	33.9	132.0		489	1,903		289	112		
H		19	4	92	110	2.617	5.15	6.54	39.6	166.0		259	1,086		153	64		
H		20	9	88	102	5.364	11.70	13.09	38.5	134.0		505	1,754		298	103		
H		21	4	88	92	2.142	5.15	4.28	48.7	182.5		209	782		123	46		
H		22	6	89	83	3.012	7.95	6.02	47.2	176.1		284	1,061		168	63		
H		23	4	84	93	1.786	5.15	3.57	59.5	207.5		212	741		125	44		
H		24	6	87	92	2.460	7.73	5.74	56.1	224.3		322	1,287		190	76		
H		25	4	87	115	1.511	5.15	4.53	56.0	228.3		254	1,035		150	61		
H		26	4	86	112	1.397	5.15	3.49	69.2	280.0		242	978		143	58		
H		27	2	91	84	.648	2.58	1.30	78.5	330.0		102	428		60	25		
H		28	4	88	95	1.205	5.15	2.41	92.2	362.5		222	874		131	52		
H		Totals	136	90	77	133.875	178.06	227.62	28.9	107.9		6,581	24,567		3,883	1,449		
D		14	6	85	86	8.704	9.30	13.06	21.3	66.3		278	866		164	51		
D		16	3	85	87	3.332	4.65	6.66	23.9	79.6		160	530		94	31		
D		17	1	87	96	1.505	2.37	3.01	30.0	110.0		90	331		53	20		
D		18	6	87	113	3.870	6.84	9.03	33.6	115.7		303	1,045		179	62		
D		19	2	82	118	1.158	2.28	3.47	29.7	103.3		103	359		61	21		
D		20	6	86	112	3.135	6.84	8.36	35.8	127.5		299	1,066		176	63		
D		21	4	86	122	1.895	4.56	5.69	37.0	136.7		210	777		124	46		
D		22	4	85	125	1.727	4.56	5.18	41.8	166.7		217	864		128	51		
D		23	2	86	107	.790	2.28	1.58	58.5	225.0		92	356		55	21		
D		24	8	86	115	2.902	9.12	7.26	54.6	208.0		396	1,509		234	89		
D		25	2	85	105	.669	2.28	2.01	41.3	173.3		83	348		49	21		
D		26	4	87	144	1.237	4.56	3.71	64.2	271.7		238	1,008		140	59		
D		30	2	85	124	.464	2.28	1.39	76.7	326.7		107	455		63	27		
D		32	2	86	129	.408	2.28	1.22	92.0	416.7		113	510		66	30		
D		Totals	52	86	105	31.796	64.20	71.63	37.5	139.9		2,689	10,023		1,586	591		
NF		15	2	87	101	1.289	1.58	2.58	25.8	100.0		66	258		39	15		
NF		28	1	91	121	.185	.79	.55	73.3	356.7		41	198		24	12		
NF		32	2	93	120	.754	4.21	2.26	86.0	443.3		194	1,002		115	59		
NF		33	1	86	131	.133	.79	.40	103.3	496.7		41	198		24	12		
NF		Totals	6	89	110	2.361	7.37	5.79	59.2	285.9		343	1,656		202	98		
S		18	1	83	83	.597	1.05	1.19	32.5	105.0		39	125		23	7		
S		25	2	92	91	.823	2.81	1.65	72.0	310.0		119	510		70	30		
S		Totals	3	88	88	1.420	3.86	2.84	55.4	223.8		157	636		93	38		
A		11	2	86	47	3.543	2.34	3.54	13.0	40.0		46	142		27	8		
A		13	4	87	50	5.073	4.68	5.07	18.0	55.0		91	279		54	16		
A		Totals	6	87	48	8.616	7.01	8.62	15.9	48.8		137	421		81	25		
M		16	2	86	24	1.005	1.40	1.00	18.0	40.0		18	40		11	2		
M		Totals	2	86	24	1.005	1.40	1.00	18.0	40.0		18	40		11	2		

TC		PSTNDSUM		Stand Table Summary										Page 2	
														Date: 11/17/2014	
				T03N R08W S04 TyR/W		1.00		Project		RECTOR		Time: 1:19:07PM			
				T03N R08W S04 TyTAKE		37.00		Acres		59.00		Grown Year:			
				T03N R08W S04 TyTAKE		21.00									
S				Tot				Average Log		Net		Net			
Spc T		DBH		Sample Trees		FF 16'		Av Ht		Trees/ Acre		BA/ Acre		Logs Acre	
										Net Cu.Ft.		Net Bd.Ft.		Tons/ Acre	
SN		21		1		81		41		.038		.09			
SN		31		1		82		113		.018		.09			
SN		Totals		2		81		64		.056		.18			
Totals				207		89		81		179.128		262.10		317.50	
										31.3		117.6		9,925 37,343	
														5,856 2,203	

TC TSTNDSUM				Stand Table Summary												
				Project				RECTOR								
T03N R08W S04 TLEAV												T03N R08W S04 TLEA				
Twp	Rge	Sec	Tract	Type				Acres	Plots	Sample Trees		Page:	1			
03N	08W	04	AREA2	LEAV				21.00	27	52		Date:	10/02/20			
												Time:	3:00:34PM			
S Spc	T	Sample		FF	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s		
		DBH	Trees	16'	Tot				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
HL		17	2	92	100	4.655	7.34	9.31	34.5	135.0		321	1,257		67	26
HL		18	6	88	101	12.455	22.01	26.99	36.8	135.4		992	3,654		208	77
HL		19	4	89	97	7.453	14.67	16.77	38.6	144.4		647	2,422		136	51
HL		20	1	88	90	1.681	3.67	3.36	44.0	150.0		148	504		31	11
HL		22	1	88	121	1.390	3.67	4.17	47.3	203.3		197	848		41	18
HL		24	1	86	111	1.168	3.67	3.50	51.3	210.0		180	736		38	15
HL		25	4	85	113	4.305	14.67	11.84	59.5	239.1		704	2,830		148	59
HL		28	1	86	103	.858	3.67	1.72	92.5	375.0		159	643		33	14
HL		29	1	85	129	.800	3.67	2.40	83.0	390.0		199	936		42	20
HL		Totals	21	88	103	34.764	77.04	80.05	44.3	172.8		3,547	13,830		745	290
DL		19	2	84	103	4.622	9.10	9.24	37.5	117.5		347	1,086		73	23
DL		20	1	89	112	2.086	4.55	6.26	32.7	126.7		204	793		43	17
DL		21	2	87	114	3.784	9.10	11.35	35.5	143.3		403	1,627		85	34
DL		22	1	82	92	1.724	4.55	3.45	45.5	145.0		157	500		33	10
DL		23	1	88	108	1.577	4.55	4.73	41.3	163.3		196	773		41	16
DL		24	3	87	112	4.345	13.65	11.59	51.2	208.7		594	2,419		125	51
DL		25	2	88	132	2.670	9.10	8.01	58.3	256.7		467	2,056		98	43
DL		29	2	84	103	1.984	9.10	3.97	90.5	330.0		359	1,309		75	27
DL		Totals	14	86	110	22.791	63.70	58.59	46.5	180.3		2,727	10,562		573	222
NFL		31	1	88	153	.848	4.44	2.54	105.7	533.3		269	1,357		56	28
NFL		33	1	92	121	.748	4.44	2.24	98.3	493.3		221	1,107		46	23
NFL		36	1	92	153	.629	4.44	1.89	144.3	803.3		272	1,515		57	32
NFL		37	2	90	137	1.190	8.89	3.57	134.8	730.0		482	2,607		101	55
NFL		Totals	5	90	140	3.415	22.22	10.25	121.3	642.8		1,243	6,587		261	138
SL		10	1	83	17	5.432	2.96	5.43	6.0	20.0		33	109		7	2
SL		23	1	86	111	1.027	2.96	3.08	46.7	186.7		144	575		30	12
SL		Totals	2	83	32	6.459	5.93	8.51	20.7	80.3		176	684		37	14
AL		12	1	86	61	9.431	7.41	9.43	22.0	60.0		207	566		44	12
AL		Totals	1	86	61	9.431	7.41	9.43	22.0	60.0		207	566		44	12
CL		31	1	75	88	.848	4.44									
CL		Totals	1	75	88	.848	4.44									
SN		10	1	91	26	6.209	3.39									
SN		18	1	85	56	1.916	3.39									
SN		19	1	83	62	1.720	3.39									
SN		21	1	89	23	1.408	3.39									
SN		26	1	86	60	.918	3.39									
SN		56	1	80	25	.198	3.39									
SN		60	1	89	36	.172	3.39									
SN		Totals	7	88	38	12.541	23.70									
Totals			51	87	87	90.250	204.44	166.84	47.4	193.2		7900	32,228		1,659	677

Log Stock Table - MBF
Project: RECTOR

T03N R08W S04 TTAKE

T03N R08W S04 TTAK

Twp Rge Sec Tract Type Acres Plots Sample Trees
03N 08W 04 AREA1 TAKE 37.00 25 85
Page 1
Date 10/2/2014
Time 3:09:56PM

Spp	T	S	So	Gr	Log	Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
											2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
H		DO	CU	4			2	100.0														
H		DO	CU	7			6	100.0														
H		DO	2S	32			114	.9	113	9.9				43	31			38				
H		DO	2S	40			511	1.6	502	44.1				19	137	137	185	24				
H		DO	3S	20			2		2	.2					2							
H		DO	3S	28			3		3	.2			3									
H		DO	3S	32			151	3.9	145	12.7			59	38	48							
H		DO	3S	34			20		20	1.7			16	3								
H		DO	3S	36			56		56	4.9			33		22							
H		DO	3S	40			221	.4	220	19.3			53	28	139							
H		DO	4S	15			1		1	.1				1								
H		DO	4S	16			14		14	1.3			12	3								
H		DO	4S	18			2		2	.2			2									
H		DO	4S	20			6		6	.6			6									
H		DO	4S	22			22		22	2.0			22									
H		DO	4S	23			3		3	.2			3									
H		DO	4S	24			23		23	2.0			16	2	6							
H		DO	4S	30			9	25.0	7	.6			7									
H		Totals					1,165	2.3	1,139	64.0			233	77	277	168	137	223	24			
D		DO	CU	6			3	100.0														
D		DO	2S	24			12		12	2.3								12				
D		DO	2S	32			44		44	8.4				19	9			16				
D		DO	2S	40			344	1.9	337	64.1				8	123	83	85	38				
D		DO	3S	23			2		2	.4				2								
D		DO	3S	26			2		2	.3			2									
D		DO	3S	32			18		18	3.4				18								
D		DO	3S	34			16		16	3.0			3		6	7						
D		DO	3S	36			8		8	1.6				8								
D		DO	3S	38			3		3	.6			3									
D		DO	3S	40			70		70	13.2			33	36								
D		DO	4S	16			8		8	1.5			6	2								
D		DO	4S	20			5		5	1.0			4		2							
D		Totals					536	1.8	526	29.6			51	67	35	139	83	114	38			
A		DO	CU	5			3	100.0														
A		DO	CR	30			8		8	33.7			8									
A		DO	CR	32			16		16	66.3			16									
A		Totals					27	10.8	24	1.4			24									
NF		DO	CU	6			10	100.0														
NF		DO	2S	34			15		15	25.6							15					
NF		DO	2S	40			41	2.1	40	69.2								40				
NF		DO	3S	16			3		3	5.3				3								
NF		Totals					68	15.8	58	3.2				3			15	40				
S		DO	2S	40			25		25	85.5							25					
S		DO	3S	32			4		4	14.5				4								

TC TLOGSTVB

Log Stock Table - MBFProject: **RECTOR****T03N R08W S04 TTAKE****T03N R08W S04 TTAK****Twp****Rge****Sec****Tract****Type****Acres****Plots****Sample Trees****Page** 2**03N****08W****04****AREA1****TAKE****37.00****25****85****Date** 10/2/2014**Time** 3:09:56PM

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
S			Totals	29		29	1.6			4			25					
M		DO	CR 20	2		2	100.0			2								
M			Totals	2		2	.1			2								
Total All Species				1,828	2.7	1,778	100.0			307	150	314	307	221	377	102		

TC		PLOGSTVB		Log Stock Table - MBF																	
T03N R08W S04 TyR/W1.00 T03N R08W S04 TyTAKE37.00 T03N R08W S04 TyTAKE21.00				Project:		RECTOR												Page		1	
																		Date		11/17/2014	
																		Time		1:20:31PM	
S		So Gr		Log		Gross	Def	Net	%	Net Volume by Scaling Diameter in Inches											
T		rt de		Len						MBF	%	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19
D		DO	CU	6	3	100.0															
D		DO	CU	7	4	100.0															
D		DO	2S	24	13		13	2.1								13					
D		DO	2S	32	60		60	10.1				19	24		16						
D		DO	2S	40	353	1.9	346	58.6				8	126		86	88	39				
D		DO	3S	23	2		2	.4			2										
D		DO	3S	26	2		2	.3		2											
D		DO	3S	32	49	9.5	44	7.5		7	28	10									
D		DO	3S	34	16		16	2.8		3		7	7								
D		DO	3S	36	9		9	1.4			9										
D		DO	3S	38	8		8	1.4		8											
D		DO	3S	40	72		72	12.1		34	37										
D		DO	4S	16	8		8	1.4		6	2										
D		DO	4S	20	8		8	1.3		6		2									
D		DO	4S	26	4		4	.7		4											
D		Totals			610	3.0	591	26.8		70	78	46	157	86	117	39					
H		DO	CU	3	1	100.0															
H		DO	CU	4	2	100.0															
H		DO	CU	7	9	100.0															
H		DO	2S	20	6		6	.4				6									
H		DO	2S	32	137	1.5	135	9.3				45	43		48						
H		DO	2S	40	575	1.5	567	39.1				20	181		152	190	24				
H		DO	3S	20	2		2	.1			2										
H		DO	3S	22	2		2	.2		2											
H		DO	3S	28	3		3	.2		3											
H		DO	3S	30	1		1	.1		1											
H		DO	3S	32	241	3.4	232	16.0		85	66	74	8								
H		DO	3S	34	20		20	1.4		17	3										
H		DO	3S	36	73		73	5.1		40		34									
H		DO	3S	40	314		313	21.6		90	58	165									
H		DO	4S	15	1		1	.1			1										
H		DO	4S	16	19		19	1.3		16	3										
H		DO	4S	18	4		4	.3		4											
H		DO	4S	20	6		6	.4		6											

Log Stock Table - MBF
Project: RECTOR

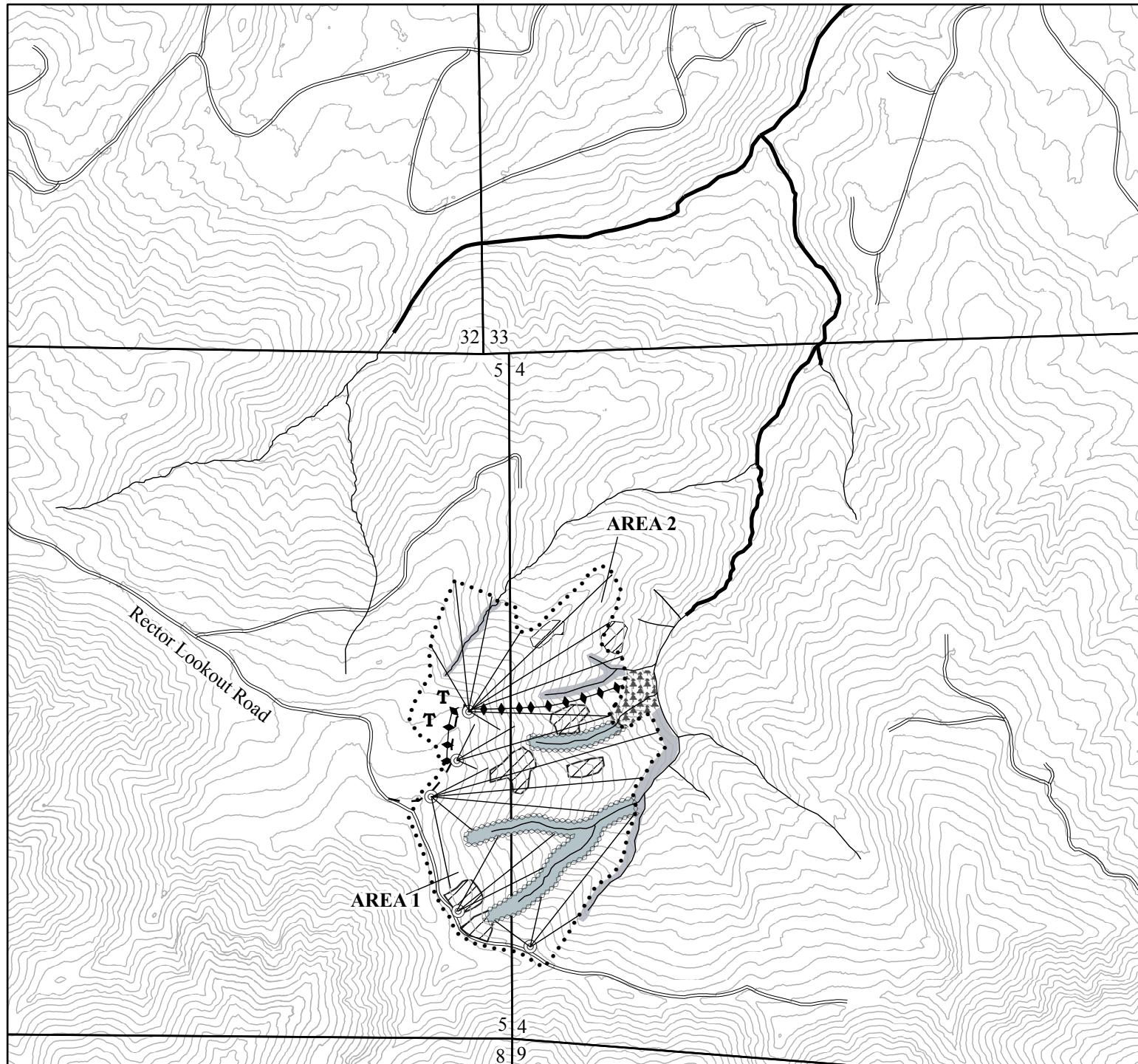
T03N R08W S04 TTAKE

T03N R08W S04 TTAK

Twp Rge Sec Tract Type Acres Plots Sample Trees
03N 08W 04 AREA2 TAKE 21.00 27 36
Page 1
Date 10/2/2014
Time 3:01:10PM

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+
H		DO	CU	3	1	100.0													
H		DO	CU	7	3	100.0													
H		DO	2S	20	6		6	2.1				6							
H		DO	2S	32	21	4.5	20	7.1				11		9					
H		DO	2S	40	51		51	18.2				40	11						
H		DO	3S	22	2		2	.8		2									
H		DO	3S	30	1		1	.4		1									
H		DO	3S	32	86	2.7	84	29.9		24	27	25	8						
H		DO	3S	36	16		16	5.8		5		11							
H		DO	3S	40	86		86	30.9		35	29	22							
H		DO	4S	16	5		5	1.6		5									
H		DO	4S	18	2		2	.6		2									
H		DO	4S	24	5		5	1.7		5									
H		DO	4S	40	4	33.3	3	1.0		3									
H Totals				288	2.9	280	74.2			82	56	58	65	11	9				
D		DO	CU	7	4	100.0													
D		DO	2S	32	14		14	27.7				14							
D		DO	3S	32	30	15.2	26	50.3		7	9	10							
D		DO	3S	38	5		5	10.4		5									
D		DO	4S	20	2		2	3.9		2									
D		DO	4S	26	4		4	7.7		4									
D Totals				60	14.3	51	13.6			18	9	10	14						
NF		DO	2S	40	22	1.0	22	57.6					3	4	15				
NF		DO	3S	16	0		0	1.1			0								
NF		DO	3S	24	1		1	1.8				1							
NF		DO	3S	32	2		2	4.9		2									
NF		DO	3S	40	11		11	29.6				11							
NF		DO	4S	32	2		2	4.9		2									
NF Totals				39		39	10.2			4	0	12	3	4	15				
S		DO	3S	32	7		7	100.0		2		6							
S Totals				7		7	2.0			2		6							
Total All Species				394	4.3	377	100.0			105	65	80	84	14	13	15			

TC		PLOGSTVB																		Log Stock Table - MBF									
T03N R08W S04 TyR/W					1.00		Project: RECTOR Acres 59.00										Page 2												
T03N R08W S04 TyTAKE					37.00												Date 11/17/2014												
T03N R08W S04 TyTAKE					21.00												Time 1:20:31PM												
Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches																				
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+									
H		DO	4S	22	23		23	1.6			23																		
H		DO	4S	23	3		3	.2			3																		
H		DO	4S	24	28		28	2.0			21	2	6																
H		DO	4S	30	9	25.0	7	.5			7																		
H		DO	4S	40	4	33.3	3	.2			3																		
H		Totals			1,485	2.4	1,449	65.8			321	135	342	237	152	238	24												
M		DO	CR	20	2		2	100.0			2																		
M		Totals			2		2	.1			2																		
S		DO	2S	40	26		26	68.6							26														
S		DO	3S	32	12		12	31.4			2	4	6																
S		Totals			38		38	1.7			2	4	6		26														
NF		DO	CU	6	10	100.0																							
NF		DO	2S	34	15		15	15.5							15														
NF		DO	2S	40	64	1.7	63	64.6							3	4	56												
NF		DO	3S	16	4		4	3.6				0	3																
NF		DO	3S	24	1		1	.7					1																
NF		DO	3S	32	2		2	1.9			2																		
NF		DO	3S	40	11		11	11.7					11																
NF		DO	4S	32	2		2	1.9			2																		
NF		Totals			109	10.4	98	4.4			4	0	15		3	19	56												
A		DO	CU	5	3	100.0																							
A		DO	CR	30	8		8	33.7			8																		
A		DO	CR	32	16		16	66.3			16																		
A		Totals			28	10.8	25	1.1			25																		
Total		All Species			2,272	3.0	2,203	100.0			421	220	403	400	241	400	120												



LOGGING PLAN

OF TIMBER SALE CONTRACT NO. 341-15-32
RECTOR COMBO
PORTIONS OF SECTIONS 4 AND 5, T3N, R8W,
W.M., TILLAMOOK COUNTY, OREGON



Legend

- Type F Stream
- Type N Stream
- Surfaced Road
- Timber Sale Boundary
- ◆◆ Area Boundary
- ▨ Windthrown Timber
- Green Tree Retention Area
- Non-Posted Stream Buffer
- ▨ Posted Stream Buffer
- ⊙ New Landing Construction
- - New Construction
- Cable Yarding Area
- τ Ground Yarding Area

Approximate Net Acreage	MC Acres	PC Acres
Area 1 (MC) -	37	
Area 2 (PC) -		21
Area 3 R/W	1	
Total=	39	21
Total Sale Acreage = 59		

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

Logging Breakdown	Tractor	Cable
Area 1 (MC) -	10%	90%
Area 2 (PC) -	10%	90%
Area 3 R/W	100%	
Total=	14%	86%