



Timber Sale Appraisal
Noisy Thin
Sale AT-341-2017-43-

District: Astoria

Date: November 15, 2016

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$284,725.59	\$220.58	\$284,946.17
		Project Work:	\$0.00
		Advertised Value:	\$284,946.17



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District: Astoria

Date: November 15, 2016

Timber Description

Location: Portions of Sections 23, 24, 25, and 26, T8N, R7W, W.M., Clatsop County, Oregon.

Stand Stocking: 40%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	13	0	95
Western Hemlock / Fir	10	0	95
Alder (Red)	8	0	95

Volume by Grade	2S	3S	4S	Camprun	Total
Douglas - Fir	28	698	175	0	901
Western Hemlock / Fir	3	3	72	0	78
Alder (Red)	0	0	0	1	1
Total	31	701	247	1	980

Comments: Pond Values Used: 3rd Quarter Calendar Year 2016 + September Local Pond Values.

Expected Markets: Warrenton, OR; Tillamook, OR; Willamina, OR; Philomath, OR; Longview, WA.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
\$972.73/MBF = \$1,264.66/MBF - \$311.93/MBF

WEIGHING COSTS = \$2.00/MBF (No Scaling Required)

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE
Hauling costs equivalent to \$780 daily truck cost.

Other Costs (with Profit & Risk to be added):
Branding and Painting: \$1/MBF x 980 MBF = \$980
Firewood Decking at Accessible Landings: 1hr/landing @ \$129/hr x 3 landings = \$387
Line Pull Cost: \$40/MBF x 7.5 acres @ 6 MBF/acre = \$1,800
TOTAL Other Costs (with Profit & Risk to be added) = \$3,167

Other Costs (No Profit & Risk added):
Machine Wash for Invasive Species: \$2,000
Weighing: \$2/MBF x 980 MBF = \$1,960
TOTAL Other Costs (No Profit & Risk added) = \$3,960

ROAD MAINTENANCE
(See attached Road Maintenance Cost Summary sheet)
TOTAL Road Maintenance: \$10,185/980 MBF = \$10.39/MBF



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Logging Conditions

Combination#: 1	Douglas - Fir	100.00%
	Western Hemlock / Fir	100.00%
	Alder (Red)	100.00%
Logging System:	Track Skidder	Process: Harvester Head Delimbing
yarding distance:	Medium (800 ft)	downhill yarding: No
tree size:	Small / Thinning 9in (70 Bft/tree), 20+ logs/MBF	
loads / day:	10	bd. ft / load: 3000
cost / mbf:	\$178.14	
machines:	Forwarder	
	Harvester	



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Logging Costs

Operating Seasons: 1.00	Profit Risk: 7%
Project Costs: \$0.00	Other Costs (P/R): \$3,167.00
Slash Disposal: \$0.00	Other Costs: \$3,960.00

Miles of Road

Road Maintenance: \$10.39

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	3.0	3.0
Western Hemlock / Fir	\$0.00	3.0	4.0
Sitka Spruce	\$0.00	3.0	3.5
Alder (Red)	\$0.00	3.0	3.5



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling / Brand & Paint	Other	Total
Douglas - Fir									
\$178.14	\$10.91	\$4.47	\$91.00	\$3.23	\$20.14	\$0.00	\$0.00	\$4.04	\$311.93
Western Hemlock / Fir									
\$178.14	\$10.91	\$4.47	\$68.25	\$3.23	\$18.55	\$0.00	\$0.00	\$4.04	\$287.59
Alder (Red)									
\$178.14	\$10.91	\$4.47	\$78.00	\$3.23	\$19.23	\$0.00	\$0.00	\$4.04	\$298.02

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$611.90	\$299.97	\$0.00
Western Hemlock / Fir	\$0.00	\$472.88	\$185.29	\$0.00
Alder (Red)	\$0.00	\$518.60	\$220.58	\$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
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	901	\$299.97	\$270,272.97
Western Hemlock / Fir	78	\$185.29	\$14,452.62
Alder (Red)	1	\$220.58	\$220.58

Gross Timber Sale Value

Recovery: \$284,946.17

Prepared By: Edward Holloran

Phone: 503-325-5451

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale: Noisy Thin
Date: May 6, 2016
By: Ed Holloran

MBF: 980
\$/MBF: \$10.39

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
Interim Operations and snow	Grader 14G				\$100	
	Dump Truck 12CY				\$79	
Final Road Maintenance	Grader 14G	\$778	1	28	\$100	\$3,578
	Dump Truck 12CY	\$163	1	8	\$79	\$795
	FE Loader C966	\$778	1	2	\$83	\$944
	Vibratory Roller	\$778	1	28	\$77	\$2,934
	Water Truck 2,500 gallon	\$190	1	16	\$89	\$1,614
	Labor			8	\$40	\$320
Total						\$10,185

Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader				

Final Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Process - Grader	2	6.7	3.4	27
Vibratory Roller	2.0	6.7	3.4	27

Process and compact: All crushed rock roads -

West Big Noise (I7 -Jct. = 2.17miles); East Big Noise (I1-I2 = 2.6 Miles); I9 - I10 (0.7 miles);
 Jct to I8 (0.16 miles); I5 to I6 (0.17 miles); 2B - 2B + 2C - 2D + 2E - 2F (0.9 miles),

Grade & Process Total = 6.7miles

**NOISY THIN
FY 2016
TIMBER CRUISE REPORT**

1. **Sale Area Location:** Area 2 is located in portions of Sections 23, 24, 25, and 26, T8N, R7W, W.M., Clatsop County, Oregon.

2. **Fund Distribution: Fund:** BOF 100% CSL 0%
Tax Code: 1-03 69%
 4-03 31%

3. **Sale Acreage by Area:**

Area	Harvest Type	Gross Acres	Stream Buffer Acres	New R/W Acres	Existing R/W Acres	Net Acreage
1 R/W	R/W	2	-	-	-	2
2	PC	177	10	2	2	163
TOTALS		179	10	2	2	165

4. **Cruisers and Cruise Dates:** Area 2 was cruised by John Choate, Bryce Rodgers, and Norah Young with Ed Holloran. The cruise was completed in one day on **December 15, 2015**.
5. **Cruise Method and Computation:** Area 1 R/W was calculated applying road R/W acreage and using volume per acre from the sale Area the Right-of-Way is located in or adjacent to. One acre of the Right-of-Way is located outside of the timber sale and is all reproduction so no volume was applied to this acre.

Area 2 is a partial cut unit. A variable plot cruise with a 27.78 BAF was used in the Area. These plots were located on a 12 chain by 5 chain grid, with a count/cruise plot ratio of 1 to 2. A total of 32 plots were sampled, with 13 measured plots and 19 count plots.

Cruisers used Allegro 2 data collectors, and were downloaded to the Atterbury Super A.C.E. program at the Astoria District for computing. See the attached Cruise Design for more details on the cruise method. The cruise calculations were processed in the Astoria District office.

<u>AREAS</u>	<u>PROJECT</u>	<u>TRACT</u>	<u>CRUISE TYPE</u>
1 R/W	NoisyT2	AREA1	RW
2	NoisyT2	AREA2	00PC, TAKE, STAY

After calculating the volume the volume was converted to tons for sale by weight using 7.5 pounds per board foot.

6. **Timber Description:** Area 1 R/W. The volume to be removed from the R/W is based on the cruise volumes for Area 2. The average volume per acre to be harvested (net) is approximately 19 MBF. All trees were cruised to a merchantable top of 6 inch DIB or 40% fp.

Area 2 is approximately a 35 to 40 year old plantation of Douglas-fir, with hemlock, some spruce and alder. The average take Douglas-fir tree size for harvest is approximately 13 inches DBH, with an average merchantable tree height of 39 feet. The average take hemlock tree size is approximately 10 inches DBH, with an average merchantable tree height of 23 feet. The average volume per acre to be harvested (net) is approximately 6 MBF. All trees were cruised to a merchantable top of 6 inch DIB or 40% fp. This unit was cruised to a leave basal area of 130 square feet, with an SDI of 33%.

Cedar is a reserved species.

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

Area	Target CV	Target SE%	Actual CV	Actual SE%
2	40	8	27.9	4.9

The statistics are for all areas and Take and Leave trees combined based on Net BF/Acre.

8. Take Volumes by Species and Log Grades for All Sale Areas by MBF: (See "Species, Sort Grade-Board Feet Volumes (Project)", "Statistics (Project)", and the "Stand Table Summary" attached). Volumes do not include "in-growth." The majority of defect and breakage was taken out during the cruise.

Species	DBH	Net Vol. MBF	2 Saw	3Saw	4 Saw	Camp Run	TONS* (Gross)	% Sale
Douglas-fir	13	901	28	698	175		6,888	92
W. Hemlock & True Fir	10 -	78	3	3	72		584	8
Alder	8	1				1	4	<1
TOTAL NET VOLUME		980	32	700	246	1		100
TONS*							7,476	

* 7.5 tons per MBF Douglas-fir conversion rate applied to all spp.

9. Prepared by: Edward M. Holloran

Date: May 12, 2016

10. Approved by: 

Date: MAY 25, 2016

11. Attachments: Cruise Plans & Maps (3)
Species, Sort, Grade Report (1)
Statistics Reports (2)
Stand Table Report (1)
Log Stock Table Report MBF (2)
Log Stock Table Report Tons (2)

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Noisy Thin **Area(s)** 1 & 2

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

Approx. Cruise Acres: 324 **Estimated CV%** 40 ^{Net BF or} BA/Acre **SE% Objective** 8 ^{Net BF or} BA/Acre

Planned Sale Volume: 2.106 MMBF **Estimated Sale Area Value/Acre:** \$2,112

- A. Cruise Goals:** (a) Grade minimum 150 conifer and 20 hardwood trees:
(b) Sample 56 cruise plots; (c) Other goals (X Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes; _____ Determine LWD (down wood) cubic feet and decay classes; _____ Determine "diameter limit" harvest parameters;)

Basal Area leave target 130 sq. ft. Cruiser needs to select 4 or 5 leave trees per plot.

B. Cruise Design:

- 1. Plot Cruises:** BAF 27.78 (Full point; Half point) (circle one)

Fixed Plot Size _____ Plot Radius _____ feet

Cruise Line Direction(s) Due East/West - 90° / 270°

Cruise Line Spacing 12 (chains) (feet)

Cruise Plot Spacing 5 (chains) (feet)

Grade/Count Ratio 1:2

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

C. Tree Measurements:

- 1. Diameter:** Minimum DBH to cruise is 8 " for conifers and 8" 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 (DOB) for conifer is 7", 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.

Revised August, 2002

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths in conifer and 30' and 40' for hardwoods (8'/10' multiples), 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 is 8' (prefer 10'). 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 ; 9 = Utility
Hardwoods: Camp run = R or grade (#1 Sawmill = 12" + scaling diameter; #2 Sawmill = 10" and 11"; #3 Sawmill = 8" and 9", and #4 Sawmill = 6" and 7").

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

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

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

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

Cruise Design by: Edward M. Holloran

Approved by: [Signature] Date: 12/8/15

Legend

- Section Line
- Survey Corner
- Astoria Ownership
- Timber Sale Boundary
- Paved Road
- Surfaced Road
- Old Surfaced Road
- Unsurfaced Road
- New Construction
- Fish Stream
- Nonfish Stream
- Stream Buffers
- Cruise Lines Area 2

EXHIBIT A

Timber Sale No. 341-16-29

Noisy Thin

Sections 23, 24, 25 and 26 of T8N, R7W,
W.M., Clatsop County, Oregon

APPROXIMATE NET ACRES

AREA	PC ACRES
Area 1 R/W	3
Area 2	163
TOTAL	166

32 Plots Total

Grade Plots: 13

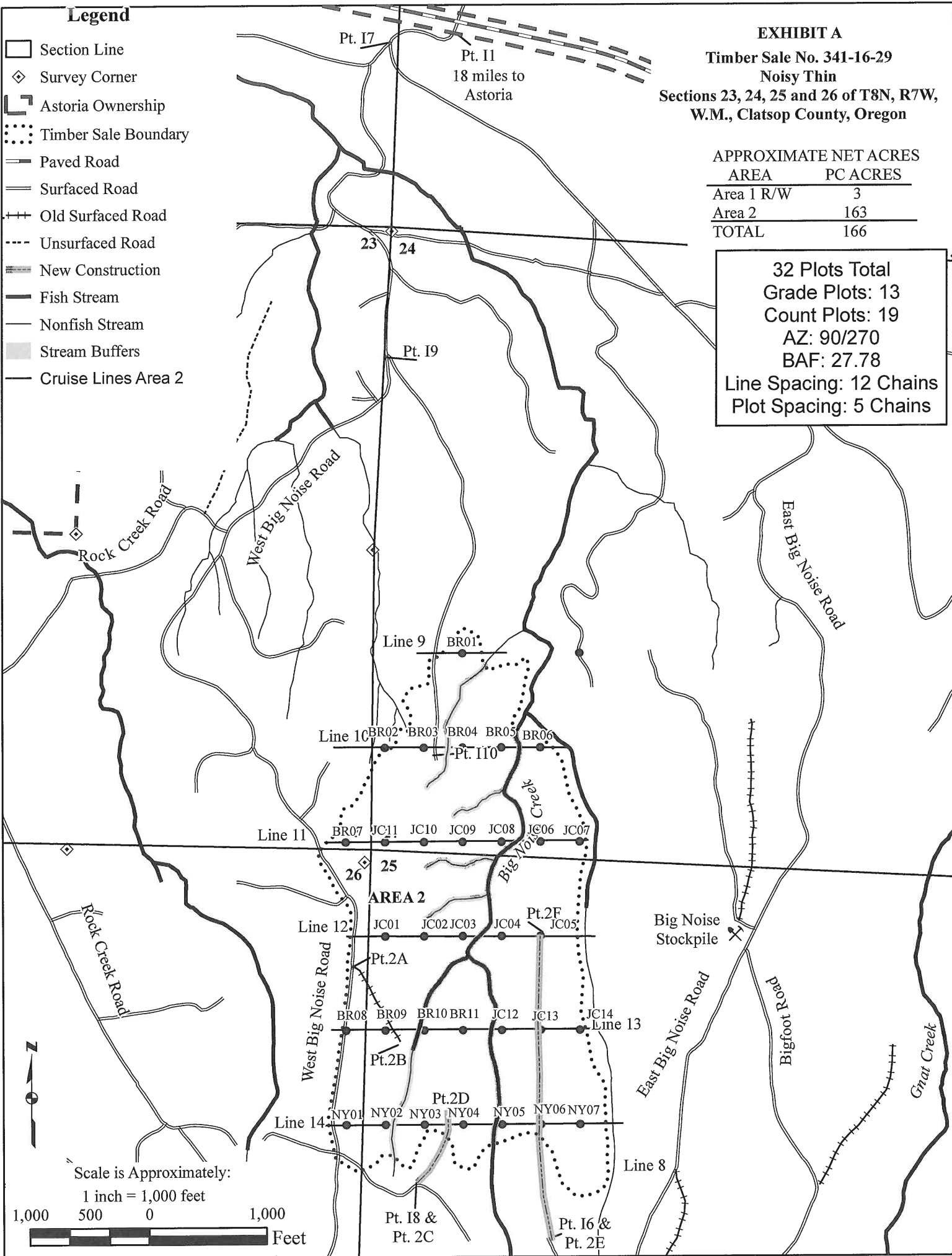
Count Plots: 19

AZ: 90/270

BAF: 27.78

Line Spacing: 12 Chains

Plot Spacing: 5 Chains



TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																
<div>T08N R07W S24 TyRW2.00 T08N R07W S24 TyTAKE163.00</div>				Project: NOISYT2 Acres165.00										Page1 Date5/20/2016 Time11:08:06AM						
S Spp	So Gr T rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
							Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
			Def%	Gross	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
D	DOCU		100.0	24											6	8		0.00	2.2	
D	DO2S	3	5.4	179	169	28			100			3	90	7	32	12	156	1.35	1.1	
D	DO3S	77	1.0	4,271	4,227	698		100			0	6	42	52	36	7	71	0.62	59.9	
D	DO4S	20	3.1	1,093	1,059	175		100			33	27	7	32	25	6	32	0.47	33.3	
D Totals		92	2.0	5,566	5,455	900		97	3		6	10	36	47	31	7	57	0.59	96.4	
H	DOCU		100.0	2											10	13		0.00	.0	
H	DO2S	3	2.4	16	16	3			28	72				100	40	15	360	2.25	.0	
H	DO3S	4		19	19	3		100						100	40	9	116	0.85	.2	
H	DO4S	93		435	435	72		100			50	50			22	6	24	0.40	18.1	
H Totals		8	.5	472	469	77		97	1	2	46	46		7	22	6	26	0.41	18.4	
A	DO4S	100		4	4	1		100				100			21	5	20	0.24	.2	
A Totals		0		4	4	1		100				100			21	5	20	0.24	.2	
Totals			1.9	6,041	5,928	978		0	97	3	0	10	13	34	44	30	7	52	0.57	115.0

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT NOISYT2				DATE	5/20/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
08N	07W	24	AREA2	03PC	163.00	32	240	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		32	240	7.5						
CRUISE		13	106	8.2	31,255			.3		
DBH COUNT										
REFOREST										
COUNT		19	134	7.1						
BLANKS										
100 %										
STAND SUMMARY										
SAMPLE		TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
TREES		/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUGLEAV		54	67.5	16.5	60	24.6	99.8	10,807	10,511	3,206
DOUG FIR		42	77.7	12.8	39	19.4	69.4	5,437	5,330	1,730
HEMLEAV		7	13.6	17.4	63	5.4	22.6	2,956	2,789	817
WHEMLOCK		2	18.0	9.9	23	3.0	9.5	433	433	155
ALDRLEAV		1	14.9	8.0	21	1.8	5.2	298	298	75
TOTAL		106	191.8	14.1	45	55.1	206.6	19,931	19,361	5,982
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15		
DOUGLEAV		36.0	4.9	163	171	180				
DOUG FIR		57.3	8.8	72	79	86				
HEMLEAV		70.9	28.8	192	270	348				
WHEMLOCK		28.3	26.5	18	25	32				
ALDRLEAV										
TOTAL		66.6	6.5	128	137	146	177	44	20	
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15		
DOUGLEAV		42.6	7.5	62	67	73				
DOUG FIR		68.7	12.1	68	78	87				
HEMLEAV		133.6	23.6	10	14	17				
WHEMLOCK		175.6	31.0	12	18	24				
ALDRLEAV		285.4	50.4	7	15	22				
TOTAL		29.3	5.2	182	192	202	34	9	4	
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15		
DOUGLEAV		42.3	7.5	92	100	107				
DOUG FIR		80.6	14.2	60	69	79				
HEMLEAV		134.2	23.7	17	23	28				
WHEMLOCK		175.0	30.9	7	10	13				
ALDRLEAV		285.4	50.4	3	5	8				
TOTAL		32.0	5.7	195	207	218	41	10	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		
DOUGLEAV		44.6	7.9	9,683	10,511	11,338				
DOUG FIR		76.6	13.5	4,608	5,330	6,051				
HEMLEAV		137.9	24.4	2,110	2,789	3,469				
WHEMLOCK		175.0	30.9	299	433	567				
ALDRLEAV		285.4	50.4	148	298	449				
TOTAL		27.9	4.9	18,408	19,361	20,315	31	8	3	

TC TSTATS				STATISTICS				PAGE	2
				PROJECT		NOISYT2		DATE	5/20/2016
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	07W	24	AREA2	03PC	163.00	32	240	1	W
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV									
DOUG FIR		78.3	13.8	35	41	46			
HEMLEAV									
WHEMLOCK		175.0	30.9	2	3	4			
ALDRLEAV									
TOTAL		71.3	12.6	38	44	50	203	51	23

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT	NOISYT2	DATE 5/20/2016				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
08N	07W	24	AREA2	RW	2.00	32	238	1	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		32	238	7.4						
CRUISE		13	106	8.2	381	27.8				
DBH COUNT										
REFOREST										
COUNT		19	132	6.9						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	96	147.2	14.5	48	44.4	169.3	16,105	15,709	4,902	4,835
WHEMLOCK	9	28.6	14.4	44	8.5	32.1	3,596	3,411	1,020	987
R ALDER	1	14.9	8.0	21	1.8	5.2	298	298	75	75
TOTAL	106	190.7	14.1	45	55.0	206.6	19,999	19,418	5,997	5,897
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR	54.7	5.6	124	131	138					
WHEMLOCK	91.8	32.4	146	216	285					
R ALDER										
TOTAL	66.6	6.5	128	137	146		177	44	20	
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR	44.8	7.9	136	147	159					
WHEMLOCK	129.3	22.8	22	29	35					
R ALDER	285.4	50.4	7	15	22					
TOTAL	29.3	5.2	181	191	201		34	9	4	
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR	50.6	8.9	154	169	184					
WHEMLOCK	126.4	22.3	25	32	39					
R ALDER	285.4	50.4	3	5	8					
TOTAL	34.1	6.0	194	207	219		47	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	
DOUG FIR	49.5	8.7	14,335	15,709	17,083					
WHEMLOCK	131.3	23.2	2,620	3,411	4,202					
R ALDER	285.4	50.4	148	298	449					
TOTAL	32.2	5.7	18,312	19,418	20,524		42	10	5	
CL: 68.1 %	COEFF	TONS/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR	50.2	8.9	110	121	131					
WHEMLOCK	130.4	23.0	21	27	33					
R ALDER	285.4	50.4	1	2	3					
TOTAL	32.8	5.8	141	150	159		43	11	5	

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	NOISYT2	DATE 5/20/2016					
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
08N	07W	24	AREA2	TAKE	163.00	32	91	1	W		
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL		32	91	2.8							
CRUISE		13	44	3.4	15,602	.3					
DBH COUNT											
REFOREST											
COUNT		16	47	2.9							
BLANKS		3									
100 %											
STAND SUMMARY											
		SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR		42	77.7	12.8	39	19.4	69.4	5,437	5,330	1,730	1,723
WHEMLOCK		2	18.0	9.9	23	3.0	9.5	433	433	155	155
TOTAL		44	95.7	12.3	36	22.5	79.0	5,870	5,763	1,885	1,878
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL:	68.1 %	COEFF		SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH		5	10	15	
DOUG FIR		57.3	8.8	72	79	86					
WHEMLOCK		28.3	26.5	18	25	32					
TOTAL		59.6	9.0	70	76	83		142	36	16	
CL:	68.1 %	COEFF		TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH		5	10	15	
DOUG FIR		68.7	12.1	68	78	87					
WHEMLOCK		175.6	31.0	12	18	24					
TOTAL		61.3	10.8	85	96	106		150	37	17	
CL:	68.1 %	COEFF		BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH		5	10	15	
DOUG FIR		80.6	14.2	60	69	79					
WHEMLOCK		175.0	30.9	7	10	13					
TOTAL		71.5	12.6	69	79	89		204	51	23	
CL:	68.1 %	COEFF		NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH		5	10	15	
DOUG FIR		76.6	13.5	4,608	5,330	6,051					
WHEMLOCK		175.0	30.9	299	433	567					
TOTAL		70.7	12.5	5,043	5,763	6,483		200	50	22	
CL:	68.1 %	COEFF		TONS/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH		5	10	15	
DOUG FIR		78.3	13.8	35	41	46					
WHEMLOCK		175.0	30.9	2	3	4					
TOTAL		72.4	12.8	38	44	50		209	52	23	

TC		PSTNDSUM		Stand Table Summary										Page Date:		1 5/20/2016	
<div>T08N R07W S24 TyRW2.00 T08N R07W S24 TyTAKE163.00</div>				ProjectNOISYT2						Time:		11:08:06AM					
				Acres165.00						Grown Year:							
S Spec	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre		Tons	Cunits	MBF	
D		9	4	84	46	7.492	3.31	7.49	9.5	40.0	2.25	71	300	371	117	49	
D		10	2	83	66	3.034	1.65	3.03	14.0	50.0	1.14	42	152	188	70	25	
D		11	12	84	61	15.046	9.93	15.05	15.0	46.7	5.27	226	702	869	372	116	
D		12	17	84	62	16.884	13.26	18.99	16.8	52.2	7.44	319	992	1,228	526	164	
D		13	18	86	61	12.660	11.67	16.34	17.2	50.0	6.26	281	817	1,034	464	135	
D		14	16	85	64	7.860	8.40	9.51	21.8	60.1	4.40	207	572	727	341	94	
D		15	11	84	75	5.446	6.68	8.20	23.6	75.0	4.61	194	614	760	320	101	
D		16	14	84	44	2.524	3.52	2.66	23.8	48.4	1.06	63	129	175	105	21	
D		17	20	86	72	6.408	10.10	10.70	26.9	88.0	7.46	288	942	1,231	475	155	
D		18	9	85	84	1.021	1.80	2.04	29.3	98.9	1.59	60	202	263	99	33	
D		19	5	85	75	.054	.11	.10	32.3	111.1	.08	3	11	14	5	2	
D		20	5	85	88	.049	.11	.10	37.7	126.0	.09	4	12	15	6	2	
D		21	1	80	82	.009	.02	.02	37.0	110.0	.02	1	2	3	1	0	
D		22	1	86	82	.008	.02	.02	41.5	145.0	.02	1	2	3	1	0	
D		23	2	86	82	.015	.04	.03	45.5	157.5	.04	1	5	6	2	1	
D		24	1	83	76	.007	.02	.01	49.0	135.0	.01	1	2	2	1	0	
D		Totals	138	85	62	78.517	70.66	94.29	18.7	57.9	41.74	1,761	5,455	6,888	2,906	900	
H		9	2	83	39	10.775	4.76	10.77	7.0	20.0	1.62	75	215	267	124	36	
H		11	2	82	37	7.213	4.76	7.21	11.0	30.0	1.62	79	216	268	131	36	
H		14	2	88	84	.081	.09	.16	19.3	70.0	.08	3	11	14	5	2	
H		16	1	85	71	.031	.04	.03	26.0	70.0	.03	1	2	5	1	0	
H		17	1	89	75	.027	.04	.05	27.5	100.0	.04	2	5	7	2	1	
H		21	1	88	71	.018	.04	.04	39.5	135.0	.04	1	5	6	2	1	
H		25	2	89	99	.025	.09	.05	73.0	267.5	.10	4	14	17	6	2	
H		Totals	11	83	39	18.170	9.82	18.32	9.0	25.6	3.54	165	469	584	273	77	
A		8	1	86	39	.181	.06	.18	5.0	20.0	.03	1	4	4	1	1	
A		Totals	1	86	39	.181	.06	.18	5.0	20.0	.03	1	4	4	1	1	
Totals			150	84	58	96.868	80.55	112.79	17.1	52.6	45.31	1,927	5,928	7,476	3,180	978	

Log Stock Table - MBF

T08N R07W S24 TyRW 2.00
T08N R07W S24 TyTAKE 163.00

Project: NOISYT2
Acres 165.00

Page 2
Date 5/20/2016
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S Spp	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+
H		DO	4S 24	36		36	46.1			36									
H		Totals		78		77	7.9			72	2	1	1		2				
A		DO	4S 21	1		1	100.0		1										
A		Totals		1		1	.1		1										
Total		All Species		997	1.9	978	100.0		1	608	190	149	28	0	2				

Project Log Stock Table - TONS

T08N R07W S24 TyRW 2.00
T08N R07W S24 TyTAKE 163.00

Project: NOISYT2
Acres 165.00

Page 2
Date 5/20/2016
Time 11:08:06AM

S Spp	T	So Gr rt de	Log Len	TONS	% Spc	Tons 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		Totals		584	7.8			540	15	6	8		14				
A		DO 4S 21		4	100.0		4										
A		Totals		4	.1		4										
Total		All Species		7,476	100.0		4	4645	1439	1144	224	3	17				

Legend

- T** Ground Yarding Area
- ◆** Survey Monument
- ┌** Ownership
- ⋯** Timber Sale Boundary
- Paved Roads
- Surfaced Roads
- Landing
- - -** Area 1 R/W
- Line Pull Area
- Type F Stream
- Type N Stream
- Non-posted Stream Buffer
- 40Foot Countour

LOGGING PLAN

TIMBER SALE NO. 341-17-43
 NOISY THIN
 SECTIONS 23, 24, 25 AND 26 OF T8N, R7W,
 W.M., CLATSOP COUNTY, OREGON
 APPROXIMATE NET ACRES

AREA	PC ACRES
Area 1 R/W	2
Area 2	163
TOTAL	165

LOGGING BREAKDOWN

AREA TRACTOR

Area 2	163
TOTAL	163

