"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cost Summary
Angle Loop No. 2
Sale 341-06-043

District: Tillamook **Date:** 3/3/06

	Conifer	Hardwood	Total
Gross Timber Sale Value	$253,187.41	$0.00	$253,187.41
		Project Work	($88,475.00)
		Advertised Value	$164,712.41

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Timber Description
Angle Loop No. 2
Sale 341-06-043

District: Tillamook

Location: Portions of Sections 4 and 5, T3N, R9W, W.M., Tillamook County, Oregon.

Date: 3/3/06 **Stand Stocking:** 60%

Species	Avg. DBH	Amortized%	Recovery%
Western Hemlock / Fir	20	0	95
Sitka Spruce	22	0	95

Volume by Grade	Western Hemlock / Fir	Sitka Spruce	Total
SM	12	0	12
2S	715	69	784
3S	383	269	652
4S	85	26	111
Total	1,195	364	1,559

Comments: Pond Values used: 4th Quarter Calendar Year 2005.

Hauling Costs Used: System currently uses hauling costs of $460 daily truck cost. Additional hauling costs add in Other Costs (No P & R) to make equivalent to $700 daily truck cost for 3.5 trips/day species.

Cedar Stumpage: $ 825.00/ MBF (pond value) - $ 247.23/ MBF (logging cost) = $ 577.77/ MBF

Alder Stumpage: $ 595.00/ MBF (Camp run, 8" and up) - $ 247.23/ MBF (logging cost) = $ 347.77/ MBF

Douglas-fir Stumpage: $ 660/MBF (pond value) - $ 247.23/ MBF (logging cost) = $ 412.77/ MBF

Additional Costs (Profit and Risk to be added):

Brand and Paint: $2 /MBF x 1,559 MBF = $ 3,118

Down wood creation (additional bucking cost): $ .10/ cubic foot created x 345 cubic feet/ac x 72 acres = $ 2,484

Tractor swing - 596 MBF x 65.52 = $ 39,049.92

Temporary culvert placement and removal and straw mulching of disturbed soil = 2 hours with a medium excavator with operator @ $ 125/ hour + $ 30 labor and $ 9 materials= $ 259

Total other costs + P&R = $ 44,991

Additional Costs (No Profit and Risk to be added):

Additional hauling cost= ($700 - ($460 x 20% P&R))/ (Species Volume/day)
Hemlock: $16,843.81
Spruce: $5,281.57
Total: $22,125

Non-Project Roads (Seeding included):
Road 1: 4 Stations x $ 100/ Station = $ 400

Non-Project Road Rock:
Road 1: 4 Stations x 50 cubic yards of pit run/ station x $ 14.75 = $ 2,950

Total other costs without P&R = $ 25,475

Road Maintenance

Grading (once during the contract)
$ 739.20/ mile x 1 Grading x 4.5 miles / 1,559 MBF = $ 2.13

Maintenance Rock (from commercial source) - estimate of 100 yards of crushed rock
100 yards3 x $ 18.50/ yard / 1,559 MBF = $ 1.19

Total Maintenance Cost = $ 3.32

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Logging Conditions
Angle Loop No. 2
Sale 341-06-043

Combination#: 1

	Western Hemlock / Fir	47.81%
	Sitka Spruce	46.15%
Yarding Distance:	Short (400 ft)	**Downhill Yarding:** Yes
Logging System:	Shovel	**Process:** Manual Delimbing
Tree Size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
Loads/Day:	10	**Bd. Ft./Load:** 3,500
Cost/MBF:	$70.82	

Machines:

Shovel Logger

Combination#: 2

	Western Hemlock / Fir	52.19%
	Sitka Spruce	53.85%
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:	6	**Bd. Ft./Load:** 3,500
Cost/MBF:	$157.93	

Machines:

Log Loader (A)
Tower Yarder (Medium)

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Logging Costs
Angle Loop No. 2
Sale 341-06-043

Date: 3/3/06

Operating Seasons: 1.0

Profit & Risk: 20%

Project Costs: $88,475

Other Costs (P/R): $44,991

Slash Disposal: $0

Other Costs: $25,475

Road Maintenance: $3.32

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

Hauling Costs

Species	$/MBF	Trips/Day	MBF/Load
Western Hemlock / Fir	$0.00	3.0	3.6
Sitka Spruce	$0.00	3.0	3.4

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Logging Costs Breakdown
Angle Loop No. 2
Sale 341-06-043

Costs	Western Hemlock / Fir	Sitka Spruce
Logging	116.28	117.73
Road Maintenance	3.49	3.49
Fire Protection	1.74	1.74
Hauling	40.37	46.11
Other (P/R appl.)	28.86	28.86
Profit & Risk	38.15	39.59
Slash Disposal	0.00	0.00
Scaling	2.00	2.00
Other	16.34	16.34
Total	247.23	255.86

Amortization	0.00	0.00
Pond Value	422.02	377.60
Stumpage	174.79	121.74
Amortized	0.00	0.00

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary
Angle Loop No. 2
Sale 341-06-043

Amortized

	Western Hemlock / Fir	Sitka Spruce
MBF	0.00	0.00
Value	0.00	0.00
Total	0.00	0.00

Unamortized

	Western Hemlock / Fir	Sitka Spruce
MBF	1,195.00	364.00
Value	174.79	121.74
Total	208,874.05	44,313.36

Gross Timber Sale Value

Recovery $253,187.41

Prepared by: David Wells Date: 3/3/06

District: Tillamook Phone: (503) 842-2545

"STEWARDSHIP IN FORESTRY"

PROJECT SUMMARY SHEET

Sale: **Angle Loop No. 2**

CONSTRUCTION

Point	A to B	30+90	stations =	$32,666.03
Point	C to D	4+20	stations =	$5,516.64
			SUBTOTAL CONSTRUCTION	**$38,182.67**

IMPROVEMENT

Point	A to B	22+10	stations =	$23,363.09
Point	E to F	21+50	stations =	$20,299.40
			SUBTOTAL IMPROVEMENT	**$43,662.49**

SPECIAL PROJECTS

Vacate	G to H			$2,774.28
			SUBTOTAL SPECIAL PROJECTS	**$2,774.28**

MOVE IN **$3,855.37**

GRAND TOTAL **$88,474.81**

SUMMARY OF CONSTRUCTION COST

Sale: **Angle Loop #2** Road: **A to B**

Construction - 30+90 stations, 0.59 miles

Improvement - 22+10 stations, 0.42 miles

CLEARING AND GRUBBING -							
Roadside Brushing			0.42	miles @	$600.00 per mile =	$252.00	
Scattering			2.000	acres @	$980.00 per acre =	$1,960.00	
					TOTAL CLEARING AND GRUBBING		**$2,212.00**
EXCAVATION -							
Road Earthwork			30.90	sta. @	$140.00 per sta. =	$4,326.00	
					TOTAL EXCAVATION		**$4,326.00**
CULVERTS - MATERIALS & INSTALLATION							
Culverts							
104 LF of 18"			$1,768.00		82 LF of 24"	$1,968.00	
Culvert Stakes & Markers							
0 stakes			$0.00				
6 markers			$48.00				
			$48.00			TOTAL CULVERTS	**$3,784.00**
ROCK							
Culvert Bedding/Backfill		60 cy. of	Crushed		@ $18.16 per c.y.=	$1,089.60	
0+00 to	53+00	2,612 cy. of	Pit-Run		@ $15.21 per c.y.=	$39,728.52	
						TOTAL ROCK	**$40,818.12**
SPECIAL PROJECTS							
Grade and shape road -			53.00	stations @	$15.50 per station	$821.50	
Roll subgrade w/ vibratory roller prior to rocking -			53.00	stations @	$13.20 per station	$699.60	
Remove log culvert @ stations: 17+70 -			6.00	hours @	$145.00 per hour	$870.00	
Remove large stumps -			1.00	lump sum @	$130.00	$130.00	
Remove culverts from state lands			5.00	@	$317.90 total	$317.90	
Grass seed and fertilize -			2.50	acres @	$220.00 per acre	$550.00	
Mulching -			2.500	acres @	$600.00 per acre	$1,500.00	
						TOTAL SPECIAL PROJECTS	**$4,889.00**
					GRAND TOTAL		**$56,029.12**

SUMMARY OF CONSTRUCTION COST

Sale: **Angle Loop #2** Road: **C to D**

Construction - 4+20 stations, 0.08 miles

Improvement - 0+00 stations, 0.00 miles

CLEARING AND GRUBBING - Scattering			0.400	acres @	$980.00 per acre =	$392.00	
					TOTAL CLEARING AND GRUBBING		**$392.00**
EXCAVATION - Road Earthwork			4.20	sta. @	$140.00 per sta. =	$588.00	
					TOTAL EXCAVATION		**$588.00**
CULVERTS - MATERIALS & INSTALLATION							
Culverts							
40 LF of 18"			$680.00		0 LF of 24"	$0.00	
Culvert Stakes & Markers							
0 stakes			$0.00				
1 markers			$8.00				
			$8.00				
					TOTAL CULVERTS		**$688.00**
ROCK							
Culvert Bedding/Backfill		10 cy. of Crushed		@	$18.57 per c.y.=	$185.70	
0+00 to 4+20		205 cy. of Pit-Run		@	$15.62 per c.y.=	$3,202.10	
					TOTAL ROCK		**$3,387.80**
SPECIAL PROJECTS							
Grade and shape road -			4.20	stations @	$15.50 per station	$65.10	
Proof-Roll subgrade prior to rocking			4.20	stations @	$4.70 per station	$19.74	
Remove large stumps -			1.00	lump sum @	$130.00	$130.00	
Grass seed and fertilize -			0.30	acres @	$220.00 per acre	$66.00	
Mulching -			0.300	acres @	$600.00 per acre	$180.00	
					TOTAL SPECIAL PROJECTS		**$460.84**
					GRAND TOTAL		**$5,516.64**

SUMMARY OF CONSTRUCTION COST

Sale: **Angle Loop #2** Road: **E to F**

Construction - 0+00 stations, 0.00 miles

Improvement - 21+50 stations, 0.41 miles

CLEARING AND GRUBBING - Scattering					0.200	acres @	$980.00	per acre = $196.00 TOTAL CLEARING AND GRUBBING	**$196.00**
EXCAVATION - Road Earthwork					21.50	sta. @	$90.00	per sta. = $1,935.00 TOTAL EXCAVATION	**$1,935.00**
ROCK 0+00	to 21+50	1,065	cy. of	Pit-Run		@	$14.79	per c.y.= $15,751.35 TOTAL ROCK	**$15,751.35**
SPECIAL PROJECTS									
Construct ditchouts -					6.00	@	$60.00	each	$360.00
Grade and shape road -					21.50	stations @	$15.50	per station	$333.25
Construct/Install Rolling Dips -					6.00	@	$150.00	each	$900.00
Roll subgrade w/ vibratory roller prior to rocking -					21.50	stations @	$13.20	per station	$283.80
Remove large stumps -					1.00	lump sum @	$130.00		$130.00
Grass seed and fertilize -					0.50	acres @	$220.00	per acre	$110.00
Mulching -					0.500	acres @	$600.00	per acre	$300.00
								TOTAL SPECIAL PROJECTS	**$2,417.05**

GRAND TOTAL **$20,299.40**

SUMMARY OF VACATING COST

Sale: **Angle Loop #2** Road: **G to H**

Construction - 0+00 stations, 0.00 miles

Improvement - 0+00 stations, 0.00 miles

CLEARING AND GRUBBING -						
Scattering	0.140	acres @	$980.00	per acre =	$137.20	
				TOTAL CLEARING AND GRUBBING		**$137.20**
EXCAVATION -						
Construct Water Bars	1	@	$25.00	per Hour =	$25.00	
Remove Log Fills and Re-establish Stream Bed (Common)	818	cy. @	$1.40	per c.y.=	$1,145.20	
Remove Log Fills and Re-establish Stream Bed (Rippable)	316	cy. @	$2.25	per c.y.=	$711.00	
				TOTAL EXCAVATION		**$1,881.20**
SPECIAL PROJECTS						
Remove large stumps & Logs (from access road) -	2.00	lump sum @	$130.00		$260.00	
Grass seed and fertilize -	0.15	acres @	$220.00	per acre	$33.00	
Mulching -	0.150	acres @	$600.00	per acre	$90.00	
				TOTAL SPECIAL PROJECTS		**$383.00**
				GRAND TOTAL		**$2,774.28**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Mohler Brown Pit	Location:	Sec. , T3N, R10W, W.M.	
Sale:	**Angle Loop #2**		Road:	3952 c.y.
Swell:	1.40		Stockpile:	c.y.
Shrinkage	1.16		Total Truck Loads:	3952 c.y.
Drill Pct.:	100%		In Place Total:	2823 c.y.

1-1/2"-0" Crushed Purchased:	$8.60	Per Cu. Yd.
Pit-Run Purchased Cost:	$5.00	Per Cu. Yd.

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds		ROCK COST
A to B: Pit-Run	9.11	1.10	5.00	15.21	2612		39,728.52
A to B: Culvert Bedding/Backfill	9.11	0.45	8.60	18.16	60		1,089.60
C to D: Pit-Run	9.52	1.10	5.00	15.62	205		3,202.10
C to D: Culvert Bedding/Backfill	9.52	0.45	8.60	18.57	10		185.70
E to F: Pit-Run	8.69	1.10	5.00	14.79	1065		15,751.35
				Total C.Y.	3952	Sub Total	59,957.27

TOTAL ROCKING COSTS	59,957.27

Move-In Calculations

Sale: **Angle Loop #2**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
52.0	Highway	37
8.0	Main Lines	11
0.0	Steep Grades	5

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move ($/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
0	Drill & Compressor	$0.00		$46.00	0.00	0.00	0	$0.00	$0.00
1	Brush Cutter	$383.61		$4.00	0.00	4.50	4.5	$18.00	$401.61
1	Graders	$155.73		$3.65	0.00	4.50	4.5	$16.43	$172.16
0	Loader (Small)	$0.00	1	$3.55	0.00	0.00	0	$0.00	$0.00
0	Loader (Med. & Large)	$0.00	1	$9.00	0.00	0.00	0	$0.00	$0.00
3	Rollers (smooth/grid) & Compactors	$1,150.83		$5.00	0.00	4.50	4.5	$67.50	$1,218.33
0	Excavators (Small)	$0.00		$22.00	0.00	0.00	0	$0.00	$0.00
0	Excavators (Med.)	$0.00		$35.50	0.00	0.00	0	$0.00	$0.00
1	Excavators (Large)	$556.59	1	$44.80	0.00	4.50	4.5	$201.60	$758.19
0	Tired Backhoes/Skidders	$0.00		$3.00	0.00	0.00	0	$0.00	$0.00
0	Tractors (D6)	$0.00	2	$7.10	0.00	0.00	0	$0.00	$0.00
1	Tractors (D7)	$522.69	2	$11.30	0.00	4.50	4.5	$50.85	$573.54
0	Tractor (D8)	$0.00	2	$15.10	0.00	0.00	0	$0.00	$0.00
4	Dump Truck (10 cy +)	$597.15		$2.85	0.00	0.00	0	$0.00	$597.15
0	Dump Truck (Off Hiway)	$0.00	1	$4.75	0.00	0.00	0	$0.00	$0.00
1	Water Truck (1500 Gal)	$121.56		$2.85	0.00	4.50	4.5	$12.83	$134.39
0	Water Truck (2500 Gal)	$0.00		$2.85	0.00	0.00	0	$0.00	$0.00
0	Jaw	$1,066.00							
0	2-Stage Crusher	$1,597.00							
0	3-Stage Crusher	$2,489.00							

	TOTAL MOVE-IN COSTS:	$3,855.37

"STEWARDSHIP IN FORESTRY"

OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT

Angle Loop No. 2

1. Type of Sale

Thinning, Recovery

2. Legal Description

Sections 4 and 5, T 3N, R 9 W, W.M. Tillamook County, Oregon

3. Sale Acreage

	ACRES		
	Sale	Total	Net
Area 1 (Partial Cut)	87	72	72

Sale Acres
Area within the Timber Sale Boundary signs

Total acres
For accomplishment reporting
Partial Cut - Sale acres less areas of low stocking, hardwoods, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Net acres
Used for calculating the advertised volume.
Partial Cut - Same as total acres

4. Cruising Procedures

A. Cruise Method

A total of 32 variable radius plots were taken in Area 1. Plots were spaced every 200 feet and lines every 380 feet. All conifers 8 inches DBH and greater and all hardwoods 10 inches DBH and greater were measured and graded on these plots. Spruce leave trees were recorded as NF (noble fir).

A 20% sample of the Right-of-Way volume was obtained with a strip cruise. For every 200' of road the trees within a 40' length were 100% cruised.

B. Plot size

For Area 1 a basal area factor of 54.45 was used. The point of observation was at 4.5 feet.

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Hemlock and Sitka spruce were measured to a 7-inch top outside bark,

Douglas-fir was measured to a 6-inch top outside bark, and hardwood trees were measured to an 9-inch top outside bark, all favoring 40-foot lengths. All heights were measured to the nearest foot. All diameters were measured to the nearest 1-inch up to 28 inches and to the nearest 2-inches over 28 inches. All diameters were measured at a height of 4.5 feet. Conifers less than 20 board feet and hardwoods less than 30 board feet were not recorded.

5. Computation Procedure

Plot data was entered into Super A.C.E. 98 program for computation of basal area, stand tables, diameters and grade. This data was then entered into the Volume Summary Worksheet to compute sale volumes for sale timber only.

Spruce logs with a top or butt diameter of 24 inches or greater were graded Utility and the volumes were not included in the summary. Logs scaled as utility will be left for Down Wood.

6. Hidden Defect and Breakage

A 5% deduction was applied to conifer volume to account for the defect and breakage.

7. Timber Description

The area was logged in the early 1900's and naturally regenerated thereafter and is now a mixed species stand of primarily of hemlock and Sitka spruce with minor components of Douglas-fir, cedar and hardwoods, The Douglas-fir has low to moderate symptoms of Swiss needle cast. Spruce log segments 24" in diameter or larger will be left on the site to create down woody debris.

8. Cruiser Names/Dates

Wells/ Winslow/ Phillips/ Hendricks, March, 2005.

9. Revenue Distribution

FDF: 100%
Tax Code: 56-1
Deed Numbers: 35 and 591
Rehab obligation: None

10. Attachments

Stand Table
Species, Sort Grade – Cubic Foot Volumes
Volume Summaries
Logging Plan

TC TSTNDSUM

Stand Table Summary

Project ANGLE2

T03N R09W S04 T2245

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	09W	04	0200	2245	1.00	32	216

T03N R09W S04 T2245

Date: 02/01/201

Time: 2:57:01PM

LEAVE TREES

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
WL		15	2	85	67	2.773	3.40	4.16	22.0	70.0	2.93	91	291	3	1	0
WL		18	1	86	66	.963	1.70	.96	46.3	150.0	1.43	45	144	1	0	0
WL		24	1	81	118	.542	1.70	1.62	46.6	190.0	2.42	76	309	2	1	0
WL		27	1	87	138	.428	1.70	1.28	59.8	290.0	2.46	77	372	2	1	0
WL		30	4	85	108	1.387	6.81	3.12	73.9	330.0	7.38	231	1,030	7	2	1
WL		31	4	84	111	1.299	6.81	3.25	83.7	344.0	8.71	272	1,117	9	3	1
WL		32	4	83	115	1.219	6.81	3.05	93.9	427.0	9.15	286	1,301	9	3	1
WL		33	2	85	137	.573	3.40	1.72	102.7	520.0	5.65	177	894	6	2	1
WL		34	3	83	119	.810	5.10	2.16	107.7	440.0	7.44	233	950	7	2	1
WL		35	5	86	146	1.273	8.51	3.82	111.8	585.3	13.66	427	2,236	14	4	2
WL		36	5	85	137	1.204	8.51	3.37	116.5	591.4	12.57	393	1,993	13	4	2
WL		37	1	86	114	.228	1.70	.68	113.9	600.0	2.49	78	410	2	1	0
WL		38	7	84	137	1.512	11.91	4.10	122.4	586.3	16.08	502	2,407	16	5	2
WL		39	1	86	144	.205	1.70	.62	146.7	793.3	2.89	90	488	3	1	0
WL		40	3	83	146	.585	5.10	1.95	111.1	584.0	6.93	217	1,139	7	2	1
WL		42	7	82	126	1.238	11.91	2.83	133.9	680.6	12.12	379	1,926	12	4	2
WL		43	2	86	143	.337	3.40	.84	141.0	802.0	3.81	119	677	4	1	1
WL		44	4	84	127	.645	6.81	1.77	140.4	747.3	7.96	249	1,325	8	2	1
WL		45	1	86	131	.154	1.70	.46	186.7	990.0	2.76	86	458	3	1	0
WL		46	4	83	122	.590	6.81	1.47	184.7	853.0	8.71	272	1,258	9	3	1
WL		47	2	83	151	.282	3.40	.99	148.0	900.0	4.68	146	890	5	1	1
WL		48	7	84	153	.951	11.91	2.72	211.4	981.8	18.37	574	2,667	18	6	3
WL		49	2	83	124	.260	3.40	.39	234.9	1140.0	2.93	92	444	3	1	0
WL		50	3	82	127	.374	5.10	1.25	157.0	672.0	6.27	196	839	6	2	1
WL		51	1	81	137	.120	1.70	.36	247.2	1150.0	2.85	89	414	3	1	0
WL		53	2	82	130	.222	3.40	.44	225.6	1030.0	3.21	100	458	3	1	0
WL		59	1	81	122	.090	1.70	.18	293.9	1665.0	1.69	53	298	2	1	0
WL		62	2	83	134	.162	3.40	.41	414.2	1856.0	5.38	168	753	5	2	1
WL		Totals	82	84	118	20.424	139.53	49.98	114.4	549.9	182.92	5,716	27,486	183	57	27
WH		10	3	85	81	9.696	5.10	12.82	9.7	39.5	3.96	125	506	4	1	1
WH		11	1	86	51	2.578	1.70	2.58	11.5	40.0	.95	30	103	1	0	0
WH		13	3	84	78	5.538	5.10	9.23	15.1	58.0	4.45	139	535	4	1	1
WH		15	1	85	81	1.387	1.70	1.39	33.4	120.0	1.48	46	166	1	0	0
WH		18	2	86	130	1.926	3.40	5.78	25.1	110.0	4.64	145	636	5	1	1
WH		19	1	81	152	.864	1.70	3.46	22.8	107.5	2.53	79	372	3	1	0
WH		20	2	84	128	1.560	3.40	4.68	31.8	135.0	4.77	149	632	5	1	1
WH		21	1	86	131	.688	1.70	2.06	36.5	156.7	2.41	75	323	2	1	0
WH		22	3	84	127	1.917	5.10	5.75	41.4	183.4	7.62	238	1,055	8	2	1
WH		23	5	84	129	2.939	8.51	8.23	45.1	186.3	11.88	371	1,533	12	4	2
WH		24	2	83	137	1.074	3.40	2.68	49.3	227.9	4.27	132	611	4	1	1
WH		25	1	85	135	.499	1.70	1.50	58.3	250.0	2.79	87	374	3	1	0
WH		26	3	85	134	1.385	5.10	4.15	59.7	275.6	8.01	248	1,145	8	2	1
WH		27	1	82	132	.428	1.70	.86	59.4	280.0	1.62	51	240	2	1	0
WH		28	3	82	148	1.194	5.10	3.58	73.2	311.1	8.39	262	1,114	8	3	1
WH		29	2	84	106	.742	3.40	1.85	74.1	264.0	4.39	137	490	4	1	0
WH		30	4	84	143	1.387	6.81	4.16	77.5	364.2	10.32	322	1,515	10	3	2
WH		31	2	85	125	.649	3.40	1.62	88.9	452.0	4.62	144	734	5	1	1
WH		32	5	86	127	1.523	8.51	4.57	76.6	378.0	11.20	350	1,727	11	4	2
WH		33	1	85	151	.286	1.70	.86	89.3	500.0	2.45	77	430	2	1	0
WH		34	2	84	109	.540	3.40	1.35	92.1	444.0	3.98	124	599	4	1	1
WH		38	2	81	148	.432	3.40	1.30	119.9	550.0	4.98	155	713	5	2	1
WH		40	1	82	167	.195	1.70	.78	118.0	550.0	2.95	92	429	3	1	0

TAKE TREES

TC TSTNDSUM

Stand Table Summary

Project ANGLE2

T03N R09W S04 T2245

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	09W	04	0200	2245	1.00	32	216

Date: 02/01/20(
Time: 2:57:01PM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
WH		42	2	84	145	.354	3.40	1.24	128.4	751.4	5.09	159	930	5	2	1
WH		Totals	53	84	105	39.780	90.18	86.46	43.2	195.6	119.75	3,739	16,911	120	37	17
NF		21	1	78	120	.707	1.70	2.12	34.2	123.3	1.75	73	262	2	1	0
NF		24	1	78	108	.542	1.70	1.62	42.3	170.0	1.65	69	276	2	1	0
NF		26	2	78	139	.919	3.40	3.22	48.6	197.2	3.82	157	635	4	2	1
NF		27	2	77	113	.856	3.40	2.14	65.2	248.0	3.35	140	531	3	1	1
NF		28	2	78	112	.796	3.40	1.99	66.5	248.0	3.18	132	493	3	1	0
NF		29	2	77	125	.742	3.40	2.60	56.2	241.4	3.56	146	627	4	1	1
NF		32	1	77	146	.305	1.70	.91	94.4	360.0	2.07	86	329	2	1	0
NF		33	1	85	139	.286	1.70	.86	89.3	490.0	1.84	77	421	2	1	0
NF		34	1	78	141	.270	1.70	.81	99.8	446.7	1.94	81	362	2	1	0
NF		35	2	82	148	.509	3.40	1.27	110.5	498.0	3.38	141	634	3	1	1
NF		37	4	78	139	.912	6.81	2.73	114.0	536.7	7.49	312	1,468	7	3	1
NF		38	1	77	107	.216	1.70	.65	101.4	433.3	1.58	66	281	2	1	0
NF		39	1	77	152	.205	1.70	.62	90.5	543.3	1.34	56	334	1	1	0
NF		40	1	78	130	.195	1.70	.58	113.3	566.7	1.59	66	331	2	1	0
NF		41	1	78	140	.186	1.70	.56	107.0	600.0	1.43	60	334	1	1	0
NF		43	2	77	136	.337	3.40	1.01	125.0	646.7	3.04	127	655	3	1	1
NF		49	1	77	119	.130	1.70	.39	192.3	880.0	1.80	75	343	2	1	0
NF		50	2	82	129	.250	3.40	.62	228.2	1058.0	3.42	142	660	3	1	1
NF		54	2	77	151	.214	3.40	.64	270.9	1330.0	4.17	174	854	4	2	1
NF		Totals	30	78	129	8.577	51.05	25.36	85.9	387.6	52.38	2,177	9,830	52	22	10
SS		13	1	87	113	1.846	1.70	3.69	18.0	70.0	1.74	66	258	2	1	0
SS		16	2	82	89	2.453	3.40	3.67	30.9	99.9	2.95	113	367	3	1	0
SS		17	2	78	101	2.159	3.40	3.24	35.4	113.3	2.99	115	367	3	1	0
SS		18	1	77	118	.963	1.70	3.85	17.6	65.0	1.77	68	250	2	1	0
SS		19	2	77	122	1.728	3.40	5.19	29.4	105.0	3.96	152	544	4	2	1
SS		21	2	78	95	1.450	3.40	2.90	41.2	122.7	3.10	119	356	3	1	0
SS		23	1	77	110	.590	1.70	1.77	39.6	126.7	1.82	70	224	2	1	0
SS		24	3	77	121	1.625	5.10	5.96	30.4	125.5	4.71	181	747	5	2	1
SS		25	2	78	129	.998	3.40	3.99	30.6	142.5	3.18	122	569	3	1	1
SS		26	1	77	126	.462	1.70	1.85	29.4	140.0	1.41	54	258	1	1	0
SS		28	1	78	148	.398	1.70	1.59	45.7	230.0	1.89	73	366	2	1	0
SS		29	1	77	147	.371	1.70	1.48	49.9	260.0	1.93	74	386	2	1	0
SS		31	1	78	115	.325	1.70	1.30	44.5	232.5	1.50	58	302	2	1	0
SS		34	1	78	122	.270	1.70	.81	91.0	350.0	1.92	74	283	2	1	0
SS		35	1	78	145	.255	1.70	.76	110.6	513.3	2.20	84	392	2	1	0
SS		36	2	77	116	.481	3.40	1.44	85.0	405.0	3.19	123	585	3	1	1
SS		39	2	77	119	.410	3.40	1.44	97.5	468.6	3.64	140	673	4	1	1
SS		Totals	26	79	112	16.783	44.24	44.93	37.6	154.2	43.90	1,688	6,929	44	17	7
DL		17	1	86	76	1.080	1.70	2.16	22.8	85.0	1.36	49	184	1	0	0
DL		30	1	85	139	.347	1.70	1.04	68.8	350.0	1.97	72	364	2	1	0
DL		33	2	86	138	.573	3.40	1.72	96.4	486.7	4.56	166	837	5	2	1
DL		34	1	89	148	.270	1.70	.81	114.1	630.0	2.54	92	510	3	1	1
DL		35	1	87	165	.255	1.70	1.02	92.2	540.0	2.58	94	550	3	1	1
DL		36	1	83	172	.241	1.70	.96	99.3	522.5	2.63	96	503	3	1	1
DL		37	1	84	115	.228	1.70	.68	102.6	493.3	1.93	70	337	2	1	0
DL		39	1	85	146	.205	1.70	.62	140.3	723.3	2.38	86	445	2	1	0
DL		40	1	85	184	.195	1.70	.78	117.2	780.0	2.73	91	608	3	1	1

SPRUCE - LEAVE

SPRUCE - TAKE

DOUGLAS-FIR LEAVE

TC TSTNDSUM

Stand Table Summary

Project ANGLE2

T03N R09W S04 T2245

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	09W	04	0200	2245	1.00	32	216

Date: 02/01/20(
Time: 2:57:01PM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DL		Totals	10	86	125	3.392	17.02	9.79	83.4	443.2	22.66	816	4,338	23	8	4
RC		12	2	79	51	4.446	3.40	4.45	15.3	59.0	1.60	68	262	2	1	0
RC		16	1	78	42	1.299	1.70	1.30	19.4	70.0	.59	25	91	1	0	0
RC		17	2	78	59	2.146	3.40	2.15	41.3	110.1	2.08	89	236	2	1	0
RC		21	1	78	109	.707	1.70	2.12	31.4	113.3	1.56	67	241	2	1	0
RC		34	1	78	124	.270	1.70	.81	95.5	413.3	1.82	77	335	2	1	0
RC		38	1	77	57	.216	1.70	.43	72.4	290.0	.74	31	125	1	0	0
RC		48	1	78	94	.137	1.70	.27	228.6	775.0	1.47	63	213	1	1	0
RC		Totals	9	78	59	9.221	15.31	11.53	36.4	130.3	9.87	420	1,502	10	4	2
RA		17	1	80	29	1.080	1.70	1.08	21.2	40.0	.63	23	43	1	0	0
RA		18	1	80	49	.974	1.70	1.95	12.8	50.0	.68	25	97	1	0	0
RA		20	1	80	80	.780	1.70	1.56	29.5	80.0	1.26	46	125	1	0	0
RA		22	1	80	112	.645	1.70	1.29	53.7	190.0	1.90	69	245	2	1	0
RA		24	1	80	77	.542	1.70	1.08	51.0	145.0	1.51	55	157	2	1	0
RA		Totals	5	80	64	4.019	8.51	6.96	31.4	95.9	5.99	218	667	6	2	1
DF		9	1	85	87	3.607	1.70	7.21	6.1	30.0	1.26	44	216	1	0	0
DF		Totals	1	85	87	3.607	1.70	7.21	6.1	30.0	1.26	44	216	1	0	0
Totals			216	82	105	105.804	367.54	242.22	61.2	280.2	438.73	14819	67,879	439	148	68

T TSPCSTGC

Species, Sort Grade - Cubic Foot Volumes (Type)

Project: ANGLE2

Page 1
Date 2/1/2006
Time 2:57:32PM

T03N R09W S04 T2245

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	09W	04	0200	2245	1.00	32	216

T03N R09W S04 T2245

Spp	S T	Sort Grd	% Net CCF	Cu. Ft. per Acre Def%	Gross	Net	Total Net CCF	Percent Net Cubic Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Cu Ft	CF/ Lf	Logs Per /Acre
WL	DO	SM	3	.0	196	196	2				100				100	40	284	7.10	.7
WL	DO	2M	66	.0	3,802	3,801	38			6	94	1	3	1	95	39	175	4.49	21.7
WL	DO	3M	29		1,644	1,644	16		27	20	53	2	27	11	60	32	64	2.02	25.6
WL	DO	4M	1		48	48	0	15	69	16		6	36	20	39	25	29	1.16	1.6
WL	DO	5	1		27	27	0				100	100				20	78	3.90	.3
WL	**Totals**		39	.0	5,716	5,716	57	0	8	10	82	2	10	4	84	35	114	3.30	50.0
WH	DO	SM	1		52	52	1				100				100	40	131	3.28	.4
WH	DO	2M	56	.2	2,109	2,105	21			41	59		3	4	93	39	93	2.39	22.6
WH	DO	3M	35		1,285	1,285	13		48	27	25	1	18	7	74	35	37	1.05	35.1
WH	DO	4M	8		296	297	3		96	4		16	52	16	16	24	10	0.43	28.4
WH	**Totals**		25	.1	3,742	3,739	37		24	33	43	2	12	6	80	32	43	1.33	86.5
NF	DO	2M	58	.2	1,285	1,282	13			18	82		4		96	39	140	3.58	9.1
NF	DO	3M	37	.3	808	805	8		13	23	64	4	21	12	64	31	64	2.07	12.6
NF	DO	4M	5		89	89	1		48	41	11	20	36	30	14	24	25	1.05	3.6
NF	**Totals**		15	.2	2,182	2,177	22		7	21	73	2	11	5	81	33	86	2.62	25.4
SS	DO	2M	12		209	209	2			74	26		30	15	54	34	71	2.08	2.9
SS	DO	3M	61	.1	1,030	1,030	10		45	46	9	3	23	6	68	31	35	1.13	29.4
SS	DO	4M	6	.5	105	105	1		100			3	24	25	48	31	16	0.51	6.6
SS	DO	UT	21	.0	345	345	3				100	27	14		60	13	57	4.33	6.0
SS	**Totals**		11	.0	1,688	1,688	17		34	37	29	7	22	7	64	29	38	1.30	44.9
DL	DO	SM	12		99	99	1				100				100	40	201	5.03	.5
DL	DO	2M	64	1.5	532	524	5			4	96		9		91	38	137	3.57	3.8
DL	DO	3M	23		186	186	2		66	15	19		27	22	51	33	42	1.28	4.4
DL	DO	4M	1		7	7	0	100				100				20	7	0.34	1.1
DL	**Totals**		6	1.0	824	816	8	1	15	6	78	1	12	5	82	34	83	2.45	9.8
RC	DO	2M	25		105	105	1			48	52				100	40	107	2.68	1.0
RC	DO	3M	61	.0	259	259	3		68		32	11	16		73	34	38	1.11	6.8
RC	DO	4M	14		56	56	1		78	22		78		22		20	15	0.76	3.7
RC	**Totals**		3	.0	420	420	4		52	15	33	17	10	3	70	30	36	1.21	11.5
RA	DO	CR	100		218	218	2		43	57		17	10		73	25	31	1.24	7.0
RA	**Totals**		1		218	218	2		43	57		17	10		73	25	31	1.24	7.0
DF	DO	4M	100		44	44	0	36	64				100			22	6	0.28	7.2
DF	**Totals**		0		44	44	0	36	64				100			22	6	0.28	7.2
Type Totals				.1	14,835	14,819	148	0	17	21	62	3	13	5	80	32	61	1.93	242.2

HEMLOCK LEAVE

HEMLOCK TAKE

SPRUCE LEAVE

SPRUCE TAKE

DOWN WOOD

"STEWARDSHIP IN FORESTRY"

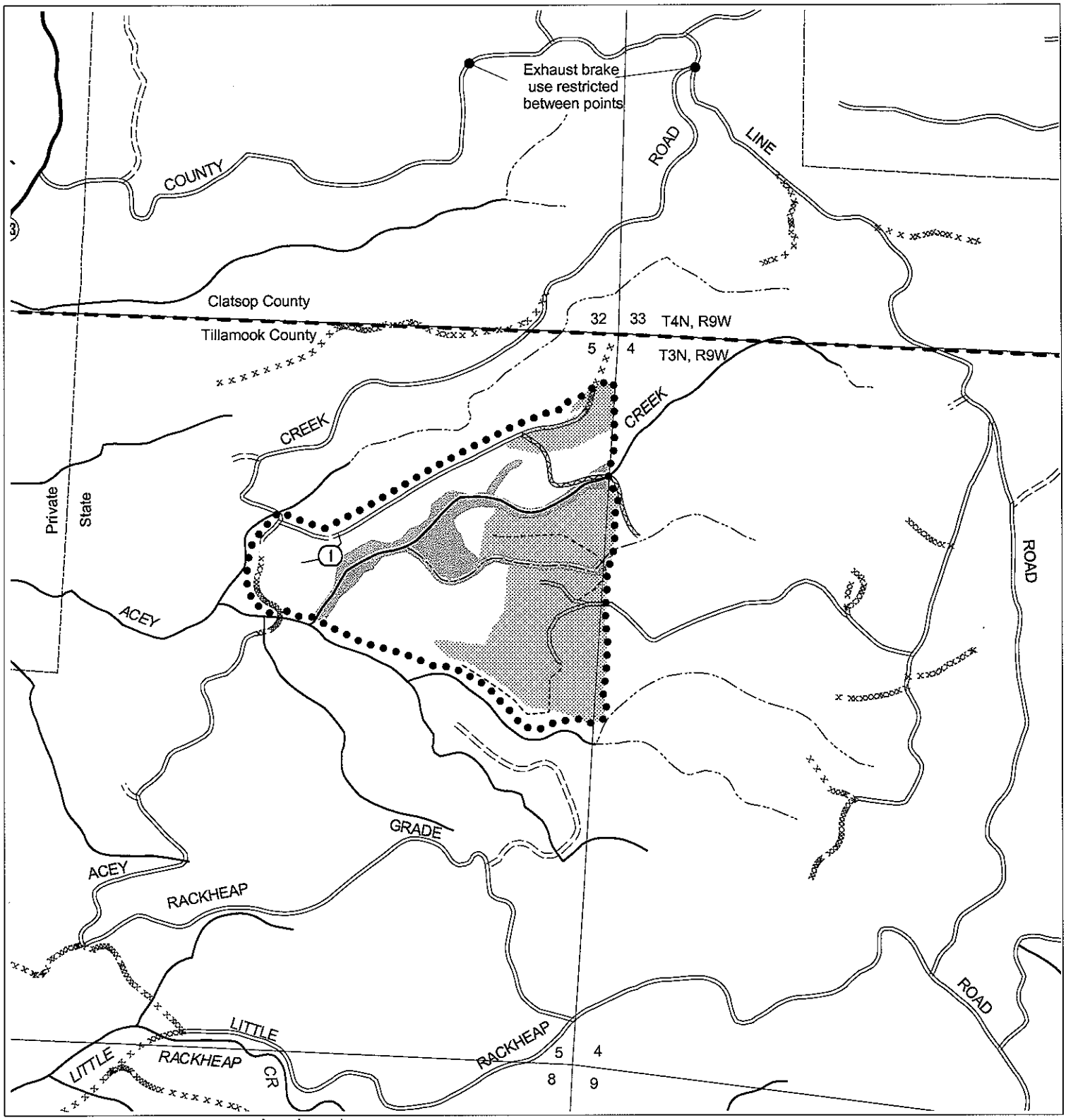
Angle Loop #2

Volume Summary

Timber Sale Area					
			72 acres		
SPECIES	Gross MBF/ Acre	Net MBF/ Acre	Net MBF	Hidden D&B	Adj Net Vol MBF
Hemlock	17.8	16.9	1217	5%	1156
Sitka spruce	5.4	5.3	382	5%	363
TOTAL	23.2	22.2	1599		1519

Right-of-Way					
SPECIES	Gross MBF	Net MBF		Hidden D&B	Adj Net Vol MBF
Hemlock	42.0	41.0		5%	39
Sitka spruce	0.9	0.9		5%	1
TOTAL	42.9	41.9			40

TOTAL SALE VOLUME			
SPECIES	MBF	% D&B	Net Vol. (MBF)
Hemlock	1258	5%	1195
Sitka spruce	383	5%	364
TOTAL	1641		**1559**



- Landing
- (D) Domestic water supply intake
- (H) Helicopter landing zone
- (T) Truck turn-around
- Cable yarding
- Ground yarding
- Helicopter yarding
- Downhill yarding
- Buffer
- Non-required thinning

- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream
- Perennial Type-N stream
- Surfaced road
- Unsurfaced road
- State/Federal highway
- County road
- (2) Non-project road
- A Swing road
- Legacy road
- Blocked road
- OHV trail
- Non-motorized trail
- T T Transmission line

LOGGING PLAN

Timber Sale Contract No. 341-06-43
Angle Loop #2
Portions of Sections 4 and 5,
T3N, R9W, W. M.
Tillamook County, Oregon

Area	Type of Operation	Acres Gross	Net
1	Partial cut	87	72

1000 0 1000 Feet

N

Tillamook District GIS
12-15-2005
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