



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Lou's Head
Sale 341-13-36

District: Forest Grove

Date: January 08, 2013

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,727,102.25	\$0.00	\$1,727,102.25
		Project Work:	\$(31,840.00)
		Advertised Value:	\$1,695,262.25



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timber description

Location: Portions of Sections 13, 14, and 23, T3N, R6W,
W.M., Tillamook County, Oregon.

Stand Stocking: 20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	19	0	98

Volume by Grade	2S	3S	4S	Total
Douglas - Fir	3,013	1,260	164	4,437
Total	3,013	1,260	164	4,437



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comments: Pond Values Used: 4th Quarter Calendar Year 2012.

Western Hemlock and Other Conifers Stumpage Price = Pond Value
minus Logging Cost:
 $\$276.06/\text{MBF} = \$435/\text{MBF} - \$158.94/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Cost:
 $\$826.06/\text{MBF} = \$985/\text{MBF} - \$158.94/\text{MBF}$

Red Alder and Other Hardwoods Stumpage Price = Pond Value minus
Logging Cost:
 $\$401.06/\text{MBF} = \$560/\text{MBF} - \$158.94/\text{MBF}$

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):
Brand and Paint: 4,437 MBF @ \$1/MBF = \$4,437
Total Other Costs (with Profit & Risk to be added) = \$4,437

Other Costs (No Profit & Risk added):
Machine time to block/waterbar roads, and skid trails:
15 hours @ \$150/Hr. = \$2,250
Equipment Cleaning: 4 x \$1,000/Piece = \$4,000
Machine Time to Pile Landing Slash and Sort Firewood:
15 hours x \$150/hr = \$2,250
TOTAL Other Costs (No Profit & Risk added) = \$8,500

ROAD MAINTENANCE
Move-in: \$2,000
General Road Maintenance: 6.4 miles x \$1,000/mile = \$6,400
TOTAL: \$8,400 / 4,437 MBF = \$1.89/MBF



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logging conditions

combination#:	1	Douglas - Fir	100.00%
yarding distance:	Short (400 ft)	downhill yarding:	No
logging system:	Shovel	Process:	Stroke Delimber
tree size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	6.0	bd. ft / load:	4,600
cost / mbf:	\$52.11		
machines:	Stroke Delimber (B)		



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logging costs

Operating Seasons:	2.00	Profit Risk:	15.00%
Project Costs:	\$31,840.00	Other Costs (P/R):	\$4,437.00
Slash Disposal:	\$0.00	Other Costs:	\$8,500.00

Miles of Road

Road Maintenance: \$1.89

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	4.6



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logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$52.11	\$1.93	\$1.98	\$75.19	\$1.00	\$19.83	\$0.00	\$5.00	\$1.92	\$158.96

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$548.21	\$389.25	\$0.00



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District: Forest Grove

Date: January 08, 2013

summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	4,437	\$389.25	\$1,727,102.25

Gross Timber Sale Value

Recovery: \$1,727,102.25

Prepared by: Mark Savage

Phone: 503-359-7437

PROJECT COST SUMMARY SHEET

Timber Sale: Lou's Head

Sale Number: 341-13-36

PROJECT NO. 1: ROAD CONSTRUCTION

CONSTRUCTION

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to B	32+75	\$7,830.50
C to D	15+00	\$3,482.86
Point E	0+00	\$275.20
F to G	9+25	\$2,541.52
	57+00 stations	
	1.08 miles	

TOTAL PROJECT NO. 1 COST = **\$14,130.07**

PROJECT NO. 2: SURFACING

<u>Road Segment</u>	<u>Amount</u>	<u>Type</u>	<u>Cost</u>
A to B	1,600 cy	3" - 0	\$8,240.00
C to D	781 cy	3" - 0	\$3,959.67
Point E	60 cy	3" - 0	\$290.40
Total	2,441 cy	3" - 0	

TOTAL PROJECT NO. 2 COST = **\$12,490.07**

PROJECT NO. 3: GRASS SEED, FERTILIZE, & MULCH

Grass seed and fertilize areas of disturbed \$493.33
soil.

TOTAL PROJECT NO. 3 COST = **\$493.33**

MOVE IN & EQUIPMENT CLEANING **\$4,721.74**

<u>TOTAL ALL PROJECTS</u>	<u>\$31,835.21</u>
<u>TOTAL CREDITS</u>	<u>\$31,840.00</u>

SUMMARY OF CONSTRUCTION COST

Timber Sale: Lou's Head
Road Segment: A to B

Timber Sale No. : 341-13-36
Construction : 32+75 stations
0.62 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	3.01	acres @	\$980.00	per acre =	\$2,947.20
Balanced Road Construction	32.75	sta @	\$90.00	per sta =	\$2,947.50
Drift	2.00	sta @	\$150.00	per sta =	\$300.00
Excavate bank material @ 12+60	2.00	hrs @	\$125.00	per hour =	\$250.00
Construct Turnouts	2	ea @	\$60.00	per ea =	\$120.00
Construct Turnaround	1	ea @	\$75.00	per ea =	\$75.00
Construct Landing	2	ea @	\$150.00	per ea =	\$300.00
Grade and Roll (Outslope)	32.75	sta @	\$27.20	per sta =	\$890.80

PROJECT NO. 1 TOTAL COST= \$7,830.50

PROJECT NO. 2:

SURFACING

	8	" deep =	42 cy/sta			
A to B	1,376	cy of	3" - 0	@	\$5.15 per cy =	\$7,086.40
Curve Widening	20	cy of	3" - 0	@	\$5.15 per cy =	\$103.00
Turnouts (3)	63	cy of	3" - 0	@	\$5.15 per cy =	\$324.45
Turnaround (1)	21	cy of	3" - 0	@	\$5.15 per cy =	\$108.15
Landing (2)	120	cy of	3" - 0	@	\$5.15 per cy =	\$618.00
Total =	1,600	cy of	3" - 0			

PROJECT NO. 2 TOTAL COST = \$8,240.00

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	1.50 acres @	\$220.00 per acre =	\$330.81
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PROJECT NO. 3 TOTAL COST = \$330.81

TOTAL COST = \$16,401.31

SUMMARY OF CONSTRUCTION COST

Timber Sale: Lou's Head
Road Segment: C to D

Timber Sale No. : 341-13-36
Construction : 15+00 stations
0.28 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	1.38	acres @	\$980.00	per acre =	\$1,349.86
Balanced Road Construction	15.00	sta @	\$90.00	per sta =	\$1,350.00
Construct Turnaround	1	ea @	\$75.00	per ea =	\$75.00
Construct Landing	2	ea @	\$150.00	per ea =	\$300.00
Grade and Roll (Outslope)	15.00	sta @	\$27.20	per sta =	\$408.00

PROJECT NO. 1 TOTAL COST= \$3,482.86

PROJECT NO. 2:

SURFACING	8	" deep =	42 cy/sta			
C to D	630	cy of	3" - 0	@	\$5.07 per cy =	\$3,194.10
Curve Widening	10	cy of	3" - 0	@	\$5.07 per cy =	\$50.70
Turnaround (1)	21	cy of	3" - 0	@	\$5.07 per cy =	\$106.47
Landing (2)	120	cy of	3" - 0	@	\$5.07 per cy =	\$608.40
Total =	781	cy of	3" - 0			

PROJECT NO. 2 TOTAL COST = \$3,959.67

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	0.69	acres @	\$220.00	per acre =	\$151.52
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PROJECT NO. 3 TOTAL COST = \$151.52

TOTAL COST = \$7,594.05

SUMMARY OF CONSTRUCTION COST

Timber Sale: Lou's Head
Road Segment: Point E

Timber Sale No. : 341-13-36
Construction : 0+00 stations
0.00 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.10	acres @	\$980.00	per acre =	\$98.00
Construct Roadside Landing	1	ea @	\$150.00	per ea =	\$150.00
Grade and Roll (Outslope)	1.00	sta @	\$27.20	per sta =	\$27.20

PROJECT NO. 1 TOTAL COST= \$275.20

PROJECT NO. 2:

SURFACING	8	" deep =	42 cy/sta		
Landing (1)	60	cy of	3" - 0	@	\$4.84 per cy =
Total =	60	cy of	3" - 0		<u>\$290.40</u>

PROJECT NO. 2 TOTAL COST = \$290.40

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	0.05	acres @	\$220.00	per acre =	\$11.00
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PROJECT NO. 3 TOTAL COST = \$11.00

TOTAL COST = \$576.60

SUMMARY OF CONSTRUCTION COST

Timber Sale:	<u>Lou's Head</u>	Timber Sale No. :	<u>341-13-36</u>
Road Segment:	<u>F to G</u>	Construction :	<u>9+25 stations</u>
			<u>0.18 miles</u>

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.85	acres @	\$980.00	per acre =	\$832.42
Balanced Road Construction	9.25	sta @	\$90.00	per sta =	\$832.50
Drift	1.00	sta @	\$150.00	per sta =	\$150.00
Widen Pt F for long loads	2.00	hrs @	\$125.00	per hour =	\$250.00
Construct Turnaround	1	ea @	\$75.00	per ea =	\$75.00
Construct Landing	1	ea @	\$150.00	per ea =	\$150.00
Grade and Roll (Outslope)	9.25	sta @	\$27.20	per sta =	<u>\$251.60</u>

PROJECT NO. 1 TOTAL COST= \$2,541.52

TOTAL COST = \$2,541.52

Move-In & Equipment Cleaning

Timber Sale: LOU'S HEAD
Sale Number: 341-13-36

LOWBOY HAUL (One-way)		
DIST. (mi)	ROAD	AVE SPEED (mph)
4.0	Main Lines	7
0.0	Steep Grades	2

EQUIPMENT DESCRIPTION		Within					Within				
No.		Equipment Cleaning	Base Cost	Woods Cost	Pilot Cars	Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Area Cost	Total Cost
0	Drill & Compressor		\$0.00	\$0.00		\$46.00	0.0	0.0	0.0	\$0.00	\$0.00
0	Brush Cutter		\$0.00	\$0.00		\$4.00	0.0	0.0	0.0	\$0.00	\$0.00
1	Graders		\$200.00	\$102.86		\$3.65	0.0	0.0	1.5	\$5.48	\$308.34
0	Loader (Small)		\$0.00	\$0.00	1	\$3.55	0.0	0.0	0.0	\$0.00	\$0.00
1	Loader (Med. & Large)		\$303.86	\$183.35	1	\$9.00	0.0	0.0	0.0	\$0.00	\$487.21
1	Rollers (smooth/grid) & Compactors		\$219.14	\$132.25		\$5.00	0.0	0.0	0.0	\$0.00	\$351.39
0	Excavators (Small)	\$0	\$0.00	\$0.00		\$22.00	0.0	0.0	0.0	\$0.00	\$0.00
1	Excavators (Med.)	\$1,000	\$240.99	\$162.65		\$35.50	0.0	0.0	1.5	\$53.25	\$1,456.89
0	Excavators (Large)	\$0	\$0.00	\$0.00	1	\$44.80	0.0	0.0	0.0	\$0.00	\$0.00
0	Tired Backhoes/Skidders	\$0	\$0.00	\$0.00		\$3.00	0.0	0.0	0.0	\$0.00	\$0.00
0	Tractors (D6)	\$0	\$0.00	\$0.00	2	\$7.10	0.0	0.0	0.0	\$0.00	\$0.00
0	Tractors (D7)	\$0	\$0.00	\$0.00	2	\$11.30	0.0	0.0	1.5	\$0.00	\$0.00
1	Tractor (D8)	\$1,000	\$343.47	\$190.58	2	\$15.10	0.0	0.0	0.0	\$0.00	\$1,534.05
4	Dump Truck (10 cy +)		\$311.12	\$160.00		\$2.85	0.0	0.0	0.0	\$0.00	\$471.12
0	Dump Truck (Off Hiway)		\$0.00	\$0.00	1	\$4.75	0.0	0.0	0.0	\$0.00	\$0.00
0	Water Truck (1500 Gal)		\$0.00	\$0.00		\$2.85	0.0	0.0	0.0	\$0.00	\$0.00
1	Water Truck (2500 Gal)		\$74.45	\$38.29		\$2.85	0.0	0.0	0.0	\$0.00	\$112.74
TOTAL MOVE-IN COSTS:											\$4,721.74

RESIDUAL STAND SPECIFICATIONS

SALE NAME: Lou's head
SALE NUMBER: 341-13-36

AREA 1

Residual QMD assumption (from leave tree cruise information)
Target Relative Density

22.8
38

	Minimum	Target	Maximum
Relative Density	36	38	40
Basal Area	170	180	190
Trees per Acre	60	63	67

$RD = BA / \sqrt{DBH}$
 $BA = \sqrt{DBH} (RD)$
 $TPA = (BA/acre) / (BA/tree)$
 $BA / tree = (\pi r^2) / (144)$

TIMBER SALE SUMMARY

Lou's Head

Contract No. 341-13-36

1. **Type of Sale:** The timber sale is a 227 acre partial cut with 4 acres of right-of-way. The timber will be sold on a recovery basis at a sealed bid auction.
2. **Revenue Distribution:** 100% BOF, Tillamook County 56-1
3. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.
4. **Cruise Data:** The Timber Sale was cruised by ODF Cruisers in September of 2012. For more information see Cruise Report.
5. **Timber Description:** The Timber Sale Area is medium to well stocked, 70 year old Douglas-fir stand with minor amounts of western hemlock, true firs, and hardwoods. There is timber in this stand that has the potential to be considered pole quality. The average "Take" Douglas-fir DBH is approximately 19 inches. Estimated average net Douglas-fir volume per acre is 19.1 MBF.
6. **Topography and Logging Method:** Slopes within the sale areas vary in aspect and vary in range from 5% to 35%. The sale area is 100% ground-based yarding.
7. **Access:** From Forest Grove, head north on Highway 47 to its junction with Highway 26. Merge onto Highway 26 westbound and continue for approximately 17.6 miles to Salmonberry Road. Turn left off of the highway onto Salmonberry Road and continue for 1.9 miles to Camp 5 Road and turn left. Follow Camp 5 Road for approximately 1.5 miles and turn left onto Wheeler Road. Continue on Wheeler Road for approximately .1 miles to the western most edge of the sale area.

8. **Projects:**

<u>Project 1:</u> Road Construction	\$14,130.07
<u>Project 2:</u> Road Surfacing	\$12,490.07
<u>Project 3:</u> Grass seed, fertilize, and mulch	\$493.33
Equipment Move-in and Cleaning:	\$4,721.74

TOTAL rounded credit for project work: \$31,840

9. **Other Costs:**

Other Costs (with Profit & Risk to be added):
Brand and Paint: 4,437 MBF @ \$1/MBF = \$4,437

TOTAL Other Costs (with Profit & Risk to be added) = \$4,437

Other Costs (No Profit & Risk added):
Machine time to block/waterbar roads, and skid trails:
15 Hours @ \$150/Hr. = \$2,250
Equipment Cleaning: 4 x \$1,000/Piece = \$4,000
Machine time to pile landing slash and sort firewood:
15 hrs x \$150/hr = \$2,250

TOTAL Other Costs (No Profit & Risk added) = \$8,500

ROAD MAINTENANCE

Move-in: \$2,000
General Road Maintenance: 6.4 miles x \$1,000/mile = \$6,400
TOTAL: \$8,400 / 4,482 MBF = \$1.89/MBF

VOLUME SUMMARY
 (Shown in MBF)
Lou's Head
Sale No. 341-13-36
October 2012

AREA 1: PC-L (227 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	2,934	1,243	161	4,338
	Hidden D&B (2%)	(59)	(25)	(3)	(87)
	NET TOTAL	2,875	1,218	158	4,251
	% of Total	67	29	4	

AREA 2: R/W (4 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	141	43	6	190
	Hidden D&B (2%)	(3)	(1)	()	(4)
	NET TOTAL	138	42	6	186
	% of Total	74	23	3	

SALE TOTAL

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir		3,013	1,260	164	4,437
TOTAL		3,013	1,260	164	4,437

CRUISE REPORT
Lou's Head
341-13-36

1. SAMPLING INTENSITY:

The cruise design assumed a Coefficient of Variation (CV%) of 50%, an average stand diameter of 21 inches, a desired sampling error (SE%) of 8% and a minimum sample size of 100 grade trees. Pre-cruise plots indicated that 4 to 5 grade trees per plot could be realized with a variable radius plot using a 40 BAF prism.

2. SAMPLING METHOD:

The area was cruised in September of 2012 with 37 grade plots using a 40 BAF prism. There were 13 Stand Level Inventory (SLI) plots used to supplement grade plots taken on this cruise. Plots were laid out on a 5 chain x 10 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain. Cruisers 'thinned' plots to 180 ft² of basal area by assigning a 'Take' or 'Leave' status to each tree in every plot.

3. CRUISE RESULTS

119 trees were measured and graded producing a sampling error of 13% on the Douglas-fir board foot volume.

4. TREE MEASUREMENT AND GRADING:

All (grade plot) sample trees were measured and graded following Columbia River Log Scale grade rules and favoring 40 foot segments.

All grade plot 'Take' trees were measured and graded following Columbia River Log Scale grade rules and favoring 40 foot segments.

a) **Height Standards:**

Total tree heights were measured to the nearest foot. Bole heights were calculated to a six inch top.

b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.

c) **Form Factors** were measured for each grade tree using a form point of 16 feet.

5. DATA PROCESSING

a) **Volumes and Statistics,** Cruise and grown forward volume estimates, and sampling statistics, were derived from Super Ace 2008 cruise software.

b) **Deductions:** Two percent of the volume was subtracted from the computed sawlog volumes to account for hidden defect and breakage.

6. Cruisers: The sale was cruised by ODF cruisers (Savage, Stone).

Prepared by:

ODF Forester

Date

Reviewed by:

Eric Foucht

Date

TC PSTATS			PROJECT STATISTICS						PAGE	1		
			PROJECT LOUSHEAD						DATE	11/5/2012		
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt	
03N	06	13	001	A1		227.00		50	341	S	W	
			PLOTS	TREES	TREES PER PLOT		ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			50	341	6.8							
CRUISE			37	182	4.9		15,386	1.2				
DBH COUNT			13	52	4.0		10,035	.5				
REFOREST COUNT 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-L			162	36.8	25.4	133	25.7	129.6	30,235	30,235	6,202	6,202
DOUG FIR-T			119	47.4	19.2	121	21.7	95.2	19,139	19,112	4,147	4,147
WHEMLOCK-L			55	26.7	17.4	94	10.5	44.0	6,075	6,075	1,252	1,252
NOB FIR-L			5	1.1	26.1	117	0.8	4.0	636	636	115	115
TOTAL			341	112.0	21.1	119	59.3	272.8	56,085	56,057	11,715	11,715
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-L			29.3	4.1	803	837	872					
DOUG FIR-T			44.8	4.3	474	495	516					
WHEMLOCK-L			71.1	16.3	239	286	332					
NOB FIR-L												
TOTAL			50.7	3.8	548	569	591	103	26	11		
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-L			51.9	7.3	34	37	40					
DOUG FIR-T			92.7	13.1	41	47	54					
WHEMLOCK-L			176.4	24.9	20	27	33					
NOB FIR-L			327.1	46.2	1	1	2					
TOTAL			57.1	8.1	103	112	121	130	33	14		
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-L			42.1	5.9	122	130	137					
DOUG FIR-T			91.0	12.9	83	95	107					
WHEMLOCK-L			141.4	20.0	35	44	53					
NOB FIR-L			303.0	42.8	2	4	6					
TOTAL			40.5	5.7	257	273	288	65	16	7		
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-L			42.7	6.0	28,412	30,235	32,057					
DOUG FIR-T			91.6	12.9	16,637	19,112	21,587					
WHEMLOCK-L			129.6	18.3	4,963	6,075	7,187					
NOB FIR-L			308.4	43.6	359	636	913					
TOTAL			39.8	5.6	52,906	56,057	59,208	63	16	7		
CL	68.1	COEFF	NET CUFT FT/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
DOUG FIR-L			42.0	5.9	5,834	6,202	6,570					
DOUG FIR-T			92.0	13.0	3,608	4,147	4,685					
WHEMLOCK-L			140.9	19.9	1,003	1,252	1,501					
NOB FIR-L			303.4	42.9	66	115	165					

TC PSTATS			PROJECT STATISTICS					PAGE	2	
			PROJECT		LOUSHEAD			DATE	11/5/2012	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
03N	06	13	001	A1		227.00	50	341	S	W
CL	68.1		COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
TOTAL			40.8	5.8	11,041	11,715	12,390	66	17	7

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																		
<div>T03N R06W S13 TyA1227.00</div>				Project: LOUSHEAD														Page 1				
				Acres 227.00														Date 11/5/2012				
																		Time 2:36:59PM				
Spp	S	So	Gr	% Net BdFt	Bd. Ft. per Acre Def%GrossNet			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		
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
DF	L		CU														3	21		0.00	2.5	
DF	L		2M	87		26,303	26,303	5,971		0	39	60	1	2	0	97	39	16	432	2.12	60.8	
DF	L		3M	11		3,388	3,388	769		87	7	6	8	1	20	71	36	8	103	0.80	32.9	
DF	L		4M	2		544	544	123		2	98		25	70	5		22	6	28	0.44	19.1	
DF Totals				54		30,235	30,235	6,863		0	12	35	53	2	3	2	92	35	12	262	1.55	115.3
DF	T		CU														4	15		0.00	7.3	
DF	T		2M	67	.2	12,944	12,924	2,934			72	28	2	4	4	90	37	14	288	1.57	44.9	
DF	T		3M	29	.1	5,484	5,476	1,243		99	1		1	2	15	81	37	8	100	0.65	54.8	
DF	T		4M	4		711	711	161		93		7	50	50			19	6	24	0.36	29.0	
DF Totals				34	.1	19,139	19,112	4,338		32	49	19	4	5	7	84	32	10	140	0.96	136.0	
WH	L		2M	72		4,392	4,392	997			56	44				100	40	16	436	2.12	10.1	
WH	L		3M	28		1,683	1,683	382		81	19					100	39	8	102	0.62	16.6	
WH Totals				11		6,075	6,075	1,379		22	46	32				100	39	11	228	1.20	26.7	
NF	L		2M	100		636	636	144			14	86				100	40	18	591	2.68	1.1	
NF Totals				1		636	636	144			14	86				100	40	18	591	2.68	1.1	
Totals					0.0	56,085	56,057	12,725		0	20	41	40	3	3	4	90	34	11	201	1.25	279.0

Log Stock Table - MBF

T03N R06W S13 TyA1 227.00

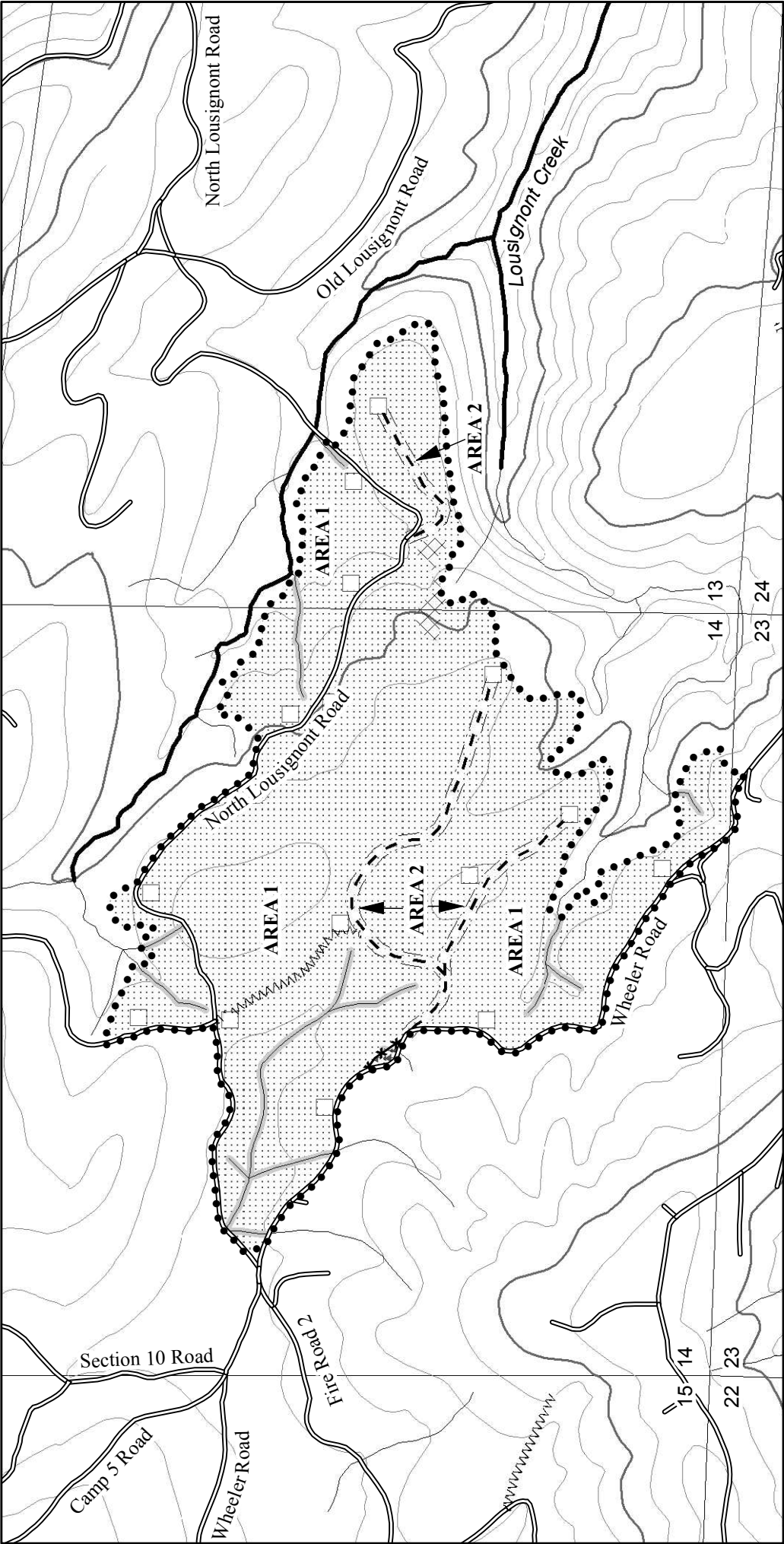
Project: LOUSHEAD
Acres 227.00Page 1
Date 11/5/2012
Time 2:36:58PM

Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	L	2M	16	70		70	1.0								26	45			
DF	L	2M	30	104		104	1.5									104			
DF	L	2M	32	8		8	.1						8						
DF	L	2M	40	5,789		5,789	84.3					22	686	1181	2007	1560	332		
DF	L	3M	16	45		45	.7									45			
DF	L	3M	20	16		16	.2				13	3							
DF	L	3M	22	6		6	.1				6								
DF	L	3M	32	85		85	1.2			19	18	48							
DF	L	3M	34	69		69	1.0			69									
DF	L	3M	36	63		63	.9			63									
DF	L	3M	38	40		40	.6			40									
DF	L	3M	40	445		445	6.5			20	30	340			55				
DF	L	4M	12	3		3	.0			3									
DF	L	4M	16	19		19	.3		3	16									
DF	L	4M	18	2		2	.0			2									
DF	L	4M	20	7		7	.1			7									
DF	L	4M	22	23		23	.3			23									
DF	L	4M	24	35		35	.5			35									
DF	L	4M	28	1		1	.0			1									
DF	L	4M	30	27		27	.4			27									
DF	L	4M	34	6		6	.1			6									
DF		Totals		6,863		6,863	53.9		3	332	67	413	694	1181	2087	1753	332		
DF	T	2M	12	23		23	.5							23					
DF	T	2M	14	21		21	.5							21					
DF	T	2M	16	13		13	.3								13				
DF	T	2M	18	15		15	.3								15				
DF	T	2M	22	31		31	.7					12			19				
DF	T	2M	24	21		21	.5									21			
DF	T	2M	26	36		36	.8					17		20					
DF	T	2M	28	19		19	.4					19							
DF	T	2M	30	15		15	.4					15							
DF	T	2M	32	91		91	2.1					47		21	24				
DF	T	2M	34	12		12	.3					12							
DF	T	2M	36	12		12	.3					12							
DF	T	2M	38	53		53	1.2					53							
DF	T	2M	40	2,574		2,569	59.2					718		781	1070				

TC PLOGSTVB		Log Stock Table - MBF																	
T03N R06W S13 TyA1				227.00		Project: LOUSHEAD		Acres 227.00		Page 2		Date 11/5/2012		Time 2:36:58PM					
Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	T	3M	20	18		18	.4						18						
DF	T	3M	22	3		3	.1			3									
DF	T	3M	26	15		15	.4					15							
DF	T	3M	28	11		11	.2			3	7								
DF	T	3M	32	170		170	3.9			55	115								
DF	T	3M	34	17		17	.4			17									
DF	T	3M	36	47		47	1.1			47									
DF	T	3M	38	16		16	.4			16									
DF	T	3M	40	947		945	21.8			165	190	590							
DF	T	4M	12	21		21	.5			10						11			
DF	T	4M	14	12		12	.3			12									
DF	T	4M	16	21		21	.5			21									
DF	T	4M	18	17		17	.4			17									
DF	T	4M	20	8		8	.2			8									
DF	T	4M	22	25		25	.6			25									
DF	T	4M	24	28		28	.6			28									
DF	T	4M	26	6		6	.1			6									
DF	T	4M	28	8		8	.2			8									
DF	T	4M	30	15		15	.3			15									
DF		Totals		4,345		4,338	34.1			454	316	605	906	884	1141	32			
WH	L	2M	40	997		997	72.3					116		344	184	167	187		
WH	L	3M	36	80		80	5.8			80									
WH	L	3M	40	302		302	21.9			33	150	47	72						
WH		Totals		1,379		1,379	10.8			113	150	47	188	344	184	167	187		
NF	L	2M	40	144		144	100.0					20		28		60	36		
NF		Totals		144		144	1.1					20		28		60	36		
Total		All Species		12,731		12,725	100.0		3	898	533	1065	1808	2410	3440	2012	555		

TC		PSTNDSUM		Stand Table Summary									Page		1	
													Date:		11/5/2012	
T03N R06W S13 TyA1227.00				Project					LOUSHEAD				Time:		2:37:00PM	
				Acres					227.00				Grown Year:			
S Spec T	Sample		Tot					Average Log		Net		Net		Totals		
	DBH	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	
DF L	15	1	89	116	.652	.80	1.96	16.2	76.7	.90	32	150	205	72	34	
DF L	18	2	87	118	.905	1.60	2.72	24.0	103.3	1.86	65	281	422	148	64	
DF L	19	2	89	126	.813	1.60	2.44	27.9	130.0	1.94	68	317	440	154	72	
DF L	20	4	87	117	1.467	3.20	4.40	30.8	130.0	3.86	136	572	877	308	130	
DF L	21	10	88	130	3.326	8.00	9.98	37.3	180.0	10.60	372	1,796	2,405	844	408	
DF L	22	7	90	131	2.121	5.60	6.36	40.7	193.8	7.38	259	1,233	1,676	588	280	
DF L	23	13	88	129	3.605	10.40	10.81	44.0	203.3	13.57	476	2,199	3,081	1,081	499	
DF L	24	19	88	142	4.838	15.20	14.51	51.9	247.0	21.46	753	3,585	4,872	1,709	814	
DF L	25	11	87	139	2.582	8.80	8.68	48.2	239.7	11.93	419	2,082	2,708	950	473	
DF L	26	12	88	130	2.604	9.60	8.03	55.0	260.5	12.59	442	2,092	2,858	1,003	475	
DF L	27	19	88	142	3.823	15.20	12.68	59.6	300.8	21.53	756	3,813	4,888	1,715	866	
DF L	28	18	87	133	3.368	14.40	10.10	69.0	342.2	19.86	697	3,457	4,508	1,582	785	
DF L	29	7	90	134	1.221	5.60	3.66	76.3	391.0	7.97	280	1,432	1,809	635	325	
DF L	30	14	88	134	2.282	11.20	6.84	78.9	390.0	15.39	540	2,670	3,494	1,226	606	
DF L	31	7	88	134	1.068	5.60	3.21	84.2	416.7	7.69	270	1,336	1,745	612	303	
DF L	32	5	88	135	.716	4.00	2.15	92.3	466.7	5.65	198	1,003	1,283	450	228	
DF L	33	5	89	136	.673	4.00	2.02	100.7	510.0	5.80	203	1,030	1,316	462	234	
DF L	34	5	87	136	.634	4.00	1.90	103.2	510.0	5.60	196	971	1,271	446	220	
DF L	36	1	90	139	.113	.80	.34	121.0	640.0	1.17	41	217	266	93	49	
DF L	Totals	162	88	133	36.811	129.60	112.80	55.0	268.0	176.75	6,202	30,235	40,123	14,078	6,863	
DF T	10	1	89	92	1.467	.80	2.93	7.3	40.0	.61	21	117	138	49	27	
DF T	11	2	87	97	2.424	1.60	4.85	9.4	42.5	1.30	46	206	295	103	47	
DF T	14	3	88	113	2.245	2.40	4.49	18.7	83.3	2.39	84	374	543	190	85	
DF T	15	5	87	102	3.259	4.00	7.17	19.4	84.5	3.96	139	606	898	315	138	
DF T	16	9	89	116	5.157	7.20	12.03	23.6	105.7	8.09	284	1,272	1,837	645	289	
DF T	17	6	88	114	3.045	4.80	7.61	24.7	105.3	5.35	188	802	1,215	426	182	
DF T	18	14	89	119	6.338	11.20	16.75	27.1	119.2	12.93	454	1,996	2,935	1,030	453	
DF T	19	8	89	130	3.250	6.40	10.16	28.0	126.8	8.10	284	1,288	1,839	645	292	
DF T	20	11	89	127	4.034	8.80	12.83	29.9	134.6	10.95	384	1,727	2,485	872	392	
DF T	21	11	88	130	3.659	8.80	10.98	37.3	180.0	11.67	410	1,976	2,650	930	448	
DF T	22	8	89	131	2.424	6.40	7.58	39.5	186.4	8.53	299	1,412	1,936	679	321	
DF T	23	11	88	129	3.050	8.80	9.15	44.9	206.1	11.71	411	1,885	2,658	933	428	
DF T	24	13	88	138	3.310	10.40	10.44	47.8	227.3	14.22	499	2,373	3,228	1,133	539	
DF T	25	6	89	139	1.408	4.80	4.46	52.1	251.6	6.62	232	1,122	1,503	527	255	
DF T	26	10	89	130	2.170	8.00	6.51	57.4	268.3	10.64	373	1,747	2,416	848	396	
DF T	27	1	90	145	.201	.80	.80	48.1	257.5	1.10	39	207	251	88	47	
DF T	Totals	119	88	121	47.442	95.20	128.75	32.2	148.4	118.18	4,147	19,112	26,826	9,413	4,338	
WH L	10	4	87	65	5.867	3.20	5.87	11.5	60.0	2.16	67	352	490	153	80	
WH L	11	2	87	78	2.424	1.60	2.42	17.1	60.0	1.33	42	145	302	94	33	
WH L	13	1	92	81	.868	.80	.87	22.7	90.0	.63	20	78	143	45	18	
WH L	14	3	88	82	2.245	2.40	2.25	30.2	120.0	2.17	68	269	493	154	61	
WH L	15	4	88	86	2.608	3.20	2.61	33.4	120.0	2.79	87	313	632	198	71	
WH L	16	2	93	97	1.146	1.60	1.15	37.7	180.0	1.38	43	206	314	98	47	
WH L	17	1	92	109	.508	.80	.51	43.6	200.0	.71	22	102	161	50	23	
WH L	18	4	87	120	1.811	3.20	1.81	53.8	240.0	3.12	97	435	707	221	99	
WH L	19	3	87	100	1.219	2.40	1.22	57.8	240.0	2.26	70	293	512	160	66	
WH L	20	5	93	106	1.833	4.00	1.83	60.8	290.0	3.56	111	532	809	253	121	
WH L	22	9	88	119	2.727	7.20	2.73	77.3	360.0	6.75	211	982	1,532	479	223	
WH L	23	4	88	111	1.109	3.20	1.11	85.6	400.0	3.04	95	444	690	216	101	
WH L	25	1	88	129	.235	.80	.23	103.5	530.0	.78	24	124	176	55	28	
WH L	26	2	93	126	.434	1.60	.43	111.8	700.0	1.55	49	304	352	110	69	
WH L	27	2	87	124	.402	1.60	.40	118.9	600.0	1.53	48	241	348	109	55	

TC PSTNDSUM		Stand Table Summary											Page 2			
													Date: 11/5/2012			
<div>T03N R06W S13 TyA1 227.00</div>					Project LOUSHEAD								Time: 2:37:00PM			
					Acres 227.00								Grown Year:			
S Spc	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Net		T o t a l s			
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre				Bd.Ft. Acre
WH	L	28	1	87	124	.187	.80	.19	129.2	700.0	.77	24	131	176	55	30
WH	L	29	1	93	128	.174	.80	.17	138.3	840.0	.77	24	147	175	55	33
WH	L	30	1	93	131	.163	.80	.16	149.4	940.0	.78	24	153	177	55	35
WH	L	31	2	93	135	.305	1.60	.31	161.0	1010.0	1.57	49	308	357	112	70
WH	L	33	1	94	143	.135	.80	.13	185.4	1250.0	.80	25	168	181	57	38
WH	L	34	2	93	146	.254	1.60	.25	198.3	1370.0	1.61	50	348	366	114	79
WH	L	Totals	55	89	94	26.655	44.00	26.65	47.0	227.9	40.06	1,252	6,075	9,093	2,842	1,379
NF	L	20	1	91	92	.367	.80	.37	57.8	240.0	.51	21	88	115	48	20
NF	L	25	1	90	115	.235	.80	.23	98.2	530.0	.55	23	124	126	52	28
NF	L	29	2	87	133	.349	1.60	.35	133.6	760.0	1.12	47	265	254	106	60
NF	L	34	1	90	151	.127	.80	.13	192.5	1250.0	.59	24	159	133	55	36
NF	L	Totals	5	89	117	1.077	4.00	1.08	107.0	590.6	2.77	115	636	628	262	144
Totals		341		88	119	111.985	272.80	269.27	43.5	208.2	337.75	11,715	56,057	76,670	26,594	12,725



Legend

- Type F Stream
- Type N Stream
- Stream Buffer
- Tractor Landing
- Tractor Yarding Area
- Wildlife Tree Area
- Thinning Not Required Area
- 200 Foot Band
- 40 Foot Band
- Sections
- Timber Sale Boundary
- Wildlife Tree Area Boundary
- Highway
- Surfaced Road
- Unsurfaced Road
- New Construction
- Right of Way
- Abandoned Road

LOGGING PLAN

OF TIMBER SALE CONTRACT NO. 341-13-36
LOU'S HEAD
PORTIONS OF SECTIONS 13, 14, 23, T3N, R6W,
W.M. TILLAMOOK COUNTY, OREGON

Forest Grove District GIS
October 2012
This product is for informational use and may not be
suitable for legal, engineering, or surveying purposes.

1:12,000
1 inch = 1,000 feet
0 500 1,000 Feet



	APPROXIMATE NET ACRES	
	TRACTOR	CABLE
AREA 1	227	0
AREA 2	4	0
TOTAL	231	0