



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cool Hand Lou
Sale 341-13-60

District: Forest Grove

Date: April 09, 2013

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$391,814.88	\$0.00	\$391,814.88
		Project Work:	\$(20,640.00)
		Advertised Value:	\$371,174.88



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cool Hand Lou
Sale 341-13-60

District: Forest Grove

Date: April 09, 2013

timber description

Location: Portions of Sections 17 and 20, T3N, R5W, W.M., Washington County, Oregon, and portions of Section 13, T3N, R6W, W.M., Tillamook County, Oregon.

Stand Stocking: 20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	22	0	98

Volume by Grade	2S	3S	4S	Poles / P	Total
Douglas - Fir	185	195	37	392	809
Total	185	195	37	392	809



Timber Sale Appraisal
Cool Hand Lou
Sale 341-13-60

"STEWARDSHIP IN FORESTRY"

District: Forest Grove

Date: April 09, 2013

comments: Pond Values Used: 1st Quarter Calendar Year 2013.

Western Hemlock and Other Conifers Stumpage Price = Pond Value
minus Logging Cost:
 $\$263.19/\text{MBF} = \$480/\text{MBF} - \$216.81/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Cost:
 $\$783.19/\text{MBF} = \$1,000/\text{MBF} - \$216.81/\text{MBF}$

Red Alder and Other Hardwoods Stumpage Price = Pond Value minus
Logging Cost:
 $\$338.19/\text{MBF} = \$555/\text{MBF} - \$216.81/\text{MBF}$

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: 809 MBF @ \$1/MBF = \$809
Construct Non-Project Roads: 5 sta. x \$200/sta. = \$1,000
TOTAL Other Costs (with Profit & Risk to be added) = \$1,809

Other Costs (No Profit & Risk added):
Machine Time to Block/Waterbar Roads, and Skid Trails:
10 Hours @ \$150/Hr. = \$1,500
Equipment Cleaning: 4 x \$1,000/Piece = \$4,000
Machine Time to Pile Landing Slash and Sort Firewood:
10 hrs x \$150/hr = \$1,500
TOTAL Other Costs (No Profit & Risk added) = \$7,000

ROAD MAINTENANCE
Move-in: \$1,000
General Road Maintenance: 6.5 miles x \$500/mile = \$3,250
TOTAL: \$4,250 / 809 MBF = \$5.25/MBF



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cool Hand Lou
Sale 341-13-60

District: Forest Grove

Date: April 09, 2013

logging conditions

combination#: 1	Douglas - Fir	87.16%
yarding distance:	Medium (800 ft)	downhill yarding: No
logging system:	Shovel	Process: Stroke Delimber
tree size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	5.0	bd. ft / load: 4,200
cost / mbf:	\$68.49	
machines:	Stroke Delimber (B)	

combination#: 2	Douglas - Fir	12.84%
yarding distance:	Medium (800 ft)	downhill yarding: No
logging system:	Cable: Medium Tower >40 - <70	Process: Stroke Delimber
tree size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	5.0	bd. ft / load: 4,200
cost / mbf:	\$159.24	
machines:	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)	



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cool Hand Lou
Sale 341-13-60

District: Forest Grove

Date: April 09, 2013

logging costs

Operating Seasons:	2.00	Profit Risk:	10.00%
Project Costs:	\$20,640.00	Other Costs (P/R):	\$1,809.00
Slash Disposal:	\$0.00	Other Costs:	\$7,000.00

Miles of Road

Road Maintenance: \$5.25

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	4.2

Local Pond Values

Date	Specie	Grade	Value
4/9/13	Douglas - Fir	Poles / Pilings	\$800.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cool Hand Lou
Sale 341-13-60

District: Forest Grove

Date: April 09, 2013

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$80.14	\$5.36	\$10.84	\$86.11	\$2.24	\$18.47	\$0.00	\$5.00	\$8.65	\$216.81

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$701.13	\$484.32	\$0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cool Hand Lou
Sale 341-13-60

District: Forest Grove

Date: April 09, 2013

summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	809	\$484.32	\$391,814.88

Gross Timber Sale Value

Recovery: \$391,814.88

Prepared by: Joe Koch

Phone: 503-359-7460

TIMBER SALE SUMMARY

Cool Hand Lou

Contract No. 341-13-60

1. **Legal Description:** Portions of Sections 17 and 20, T3N, R5W, W.M., Washington County, Oregon, and Portions of Section 13, T3N, R6W, W.M., Tillamook County, Oregon.
2. **Type of Sale:** Areas 1, 2, and 3 are a Light Partial Cut (PC-L). Area 1 is 57 acres, Area 2 is 12 acres, Area 3 is 8 acres, and Area 4 is 3 acres of Right of Way. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF; 73% Washington County. 27% Tillamook County, Tax Code 56-1.
4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.
5. **Cruise Data:** The Timber Sale was cruised by SLI cruisers in April 2008 and was also cruised by ODF foresters in January 2013. For more information see Cruise Report.
6. **Timber Description:** Timber Sale Area is well stocked, 75 year old stands of Douglas-fir with minor amounts of Grand fir, Western hemlock, and hardwoods. For Areas 1 through 3 (PC-L) the average volume per acre to be removed is approximately 10 MBF. The average 'take' tree DBH is approximately 22 inches.
7. **Topography and Logging Method:** Slopes within the sale vary in aspect and range from 5% to 50%. Timber Sale Area 1 is 87% ground-based yarding and 13% cable-based yarding, Timber Sale Areas 2 and 3 are both 100% ground-based yarding.
8. **Access:** From Forest Grove travel 7.5 miles north on Highway 47 to Banks. Continue north on Highway 47 and merge onto Highway 26 westbound for approximately 20 miles. From Highway 26 turn south onto Timber Road and drive 0.7 miles and turn west onto North Louisignont Road and continue for 1.7 miles, stay left on Crossover Road for approximately 1 mile to Timber Sale Area 1. To access Timber Sale Areas 2 and 3 continue travelling North Louisignont Road for 3 additional miles turn left onto Old Louisignont Road (arrived at Timber Sale Area 2) and continue for 0.5 miles to Timber Sale Area 3.

9. Projects:

Project No. 1: 0.87 miles of road construction	\$13,550.01
Project No. 3: Seed, fertilize, and mulch areas of disturbed soil	\$639.85
Project No. 4: Block and waterbar roads	\$2,314.09
Move in and equipment cleaning:	\$4,127.23

Project Total (rounded): \$20,640.00**10. Other Costs:**

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

Brand and Paint: 809 MBF @ \$1/MBF =	\$809
Construct Operator Spurs: 5 sta. @ \$200/sta. =	\$1,000
Total Other Costs (with Profit & Risk to be added) =	\$1,809

Other Costs (No Profit & Risk added):

Machine time to block/waterbar roads, and skid trails: 10 hours @ \$150/Hr. =	\$1,500
Equipment Cleaning: 4 x \$1,000/Piece =	\$4,000
Machine Time to Pile Landing Slash and Sort Firewood: 10 hours x \$150/hr=	\$1,500
TOTAL Other Costs (No Profit & Risk added) =	\$7,000

ROAD MAINTENANCE

Move-in: \$1,000

General Road Maintenance: 6.5 miles x \$500/mile = \$3,250

TOTAL: \$4,250 / 809 MBF = \$5.25/MBF

PROJECT COST SUMMARY SHEET

Timber Sale: Cool Hand Lou

Sale Number: 341-13-60

PROJECT NO. 1: ROAD CONSTRUCTION

CONSTRUCTION

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to B	30+20	\$9,404.53
C to D	7+50	\$2,127.66
E to F	8+35	\$2,017.82
	46+05 stations	
	0.87 miles	

TOTAL PROJECT NO. 1 COST = \$13,550.01

PROJECT NO. 2: GRASS SEED & FERTILIZE

Grass seed and fertilize \$639.85

TOTAL PROJECT NO. 2 COST = \$639.85

PROJECT NO. 3: ROAD BLOCKING

Block and Waterbar Roads \$2,314.09

TOTAL PROJECT NO. 3 COST = \$2,314.09

MOVE IN & EQUIPMENT CLEANING \$4,127.23

TOTAL ALL PROJECTS \$20,631.18

TOTAL CREDITS \$20,640.00

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Cool Hand Lou	Timber Sale No.:	341-13-60
Road Segment:	A to B	Construction:	30+20 stations 0.57 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	2.77	acres @	\$1,274.00	per acre =	\$3,533.04
Balanced Road Construction	25.40	sta @	\$90.00	per sta =	\$2,286.00
Drift	4.80	sta @	\$150.00	per sta =	\$720.00
Construct Turnouts	4	ea @	\$60.00	per ea =	\$240.00
Construct Turnaround	2	ea @	\$75.00	per ea =	\$150.00
Roadside Landing	1	ea @	\$150.00	per ea =	\$150.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	12.70	sta @	\$28.70	per sta =	\$364.49
Grade and Roll (Outslope)	17.50	sta @	\$27.20	per sta =	\$476.00
TOTAL EXCAVATION COSTS=					\$8,204.53

CULVERTS - MATERIALS & INSTALLATION

Culverts
60 LF of 18" \$1,200.00

TOTAL CULVERT COSTS = \$1,200.00

PROJECT NO. 1 TOTAL COST = \$9,404.53

PROJECT NO. 2:

Grass seed and fertilize areas of disturbed soil.	1.39	acres @	\$220.00	per acre =	\$305.05
---	------	---------	----------	------------	----------

PROJECT NO. 2 TOTAL COST = \$305.05

PROJECT NO. 3:

Install Tank Trap at Point A	1	each @	\$50.00	per ea =	\$50.00
Waterbars	14	each @	\$25.00	per ea =	\$350.00
Grass seed and fertilize road surface	0.83	acres @	\$220.00	per acre =	\$183.03
Equipment Move In and Cleaning					\$1,485.00

PROJECT NO. 3 TOTAL COST = \$2,068.03

TOTAL COST = \$11,777.61

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Cool Hand Lou	Timber Sale No. :	341-13-60
Road Segment:	C to D	Construction :	7+50 stations
			0.14 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.69	acres @	\$1,274.00	per acre =	\$877.41
Balanced Road Construction	7.50	sta @	\$90.00	per sta =	\$675.00
Construct Turnaround	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	7.50	sta @	\$28.70	per sta =	\$215.25
TOTAL EXCAVATION COSTS=					\$2,127.66

PROJECT NO. 1 TOTAL COST = \$2,127.66

PROJECT NO. 2:

Grass seed and fertilize areas of disturbed soil.	0.34	acres @	\$220.00	per acre =	\$75.76
---	------	---------	----------	------------	---------

PROJECT NO. 2 TOTAL COST = \$75.76

PROJECT NO. 3:

Waterbars	3.00	each @	\$25.00	per ea =	\$75.00
Grass seed and fertilize road surface	0.21	acres @	\$220.00	per acre =	\$45.45

PROJECT NO. 3 TOTAL COST = \$120.45

TOTAL COST = \$2,323.87

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Cool Hand Lou	Timber Sale No.:	341-13-60
Road Segment:	E to F	Construction:	8+35 stations
			0.16 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.77	acres @	\$980.00	per acre =	\$751.42
Balanced Road Construction	7.50	sta @	\$90.00	per sta =	\$675.00
Construct Turnaround	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	2.85	sta @	\$28.70	per sta =	\$81.80
Grade and Roll (Outslope)	5.50	sta @	\$27.20	per sta =	\$149.60
TOTAL EXCAVATION COSTS=					\$2,017.82

PROJECT NO. 1 TOTAL COST = \$2,017.82

PROJECT NO. 2:

Grass seed and fertilize areas of disturbed soil	0.38	acres @	\$220.00	per acre =	\$84.34
--	------	---------	----------	------------	---------

PROJECT NO. 2 TOTAL COST = \$84.34

PROJECT NO. 3:

Waterbars	3.00	each @	\$25.00	per ea =	\$75.00
Grass seed and fertilize road surface	0.23	acres @	\$220.00	per acre =	\$50.61

PROJECT NO. 3 TOTAL COST = \$125.61

TOTAL COST = \$2,227.77

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Cool Hand Lou	Timber Sale No. :	341-13-60
Road Segment:	G to E	Construction :	8+20 stations
			0.16 miles

PROJECT NO. 3:

Install Tank Trap at Point G	1.00 each @	\$50.00 per ea =	\$50.00
Waterbars	3.00 each @	\$25.00 per ea =	\$75.00
Grass seed and fertilize road surface	0.23 acres @	\$220.00 per acre =	\$49.70

PROJECT NO. 3 TOTAL COST = \$174.70

TOTAL COST = \$174.70

Move-In & Equipment Cleaning

Timber Sale: Cool Hand Lou
 Sale Number: 341-13-60

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

No.	EQUIPMENT DESCRIPTION	Equipment Cleaning	Base Cost	Woods Cost	Pilot Cars	Within			End Mileage	Total Miles	Within		
						Area Move	Area Cost	Total Cost			Area Cost	Area Cost	Total Cost
0	Drill & Compressor		\$0.00	\$0.00		\$46.00	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Brush Cutter		\$0.00	\$0.00		\$4.00	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
1	Graders		\$300.00	\$93.22		\$3.65	\$0.00	\$393.22	0.0	0.0	\$0.00	\$0.00	\$393.22
0	Loader (Small)		\$0.00	\$0.00	1	\$3.55	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Loader (Med. & Large)		\$0.00	\$0.00	1	\$9.00	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
1	Rollers (smooth/grid) & Compactors		\$308.59	\$109.25		\$5.00	\$0.00	\$417.84	0.0	0.0	\$0.00	\$0.00	\$417.84
0	Excavators (Small)	\$0	\$0.00	\$0.00		\$22.00	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Excavators (Med.)	\$0	\$0.00	\$0.00		\$35.50	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
1	Excavators (Large)	\$1,000	\$466.14	\$193.70	1	\$44.80	\$0.00	\$1,659.84	0.0	0.0	\$0.00	\$0.00	\$1,659.84
0	Tired Backhoes/Skidders	\$0	\$0.00	\$0.00		\$3.00	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Tractors (D6)	\$0	\$0.00	\$0.00	2	\$7.10	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Tractors (D7)	\$0	\$0.00	\$0.00	2	\$11.30	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
1	Tractor (D8)	\$1,000	\$473.80	\$182.53	2	\$15.10	\$0.00	\$1,656.33	0.0	0.0	\$0.00	\$0.00	\$1,656.33
0	Dump Truck (10 cy +)		\$0.00	\$0.00		\$2.85	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Dump Truck (Off Hiway)		\$0.00	\$0.00	1	\$4.75	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Water Truck (1500 Gal)		\$0.00	\$0.00		\$2.85	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Water Truck (2500 Gal)		\$0.00	\$0.00		\$2.85	\$0.00	\$0.00	0.0	0.0	\$0.00	\$0.00	\$0.00
TOTAL MOVE-IN COSTS:												\$4,127.23	\$4,127.23

CRUISE REPORT
Cool Hand Lou
341-13-60

1. LEGAL DESCRIPTION:

Portions of Sections 17 and 20, T3N, R5W, W.M., Washington County, Oregon, and Portions of Section 13, T3N, R6W, W.M., Tillamook County, Oregon.

2. CRUISE DESIGN:

The volume estimate was obtained with a combination of SLI and ODF-cruised variable radius plots. The cruise design assumed a Coefficient of Variation CV% of 60%, an average stand diameter of 18 inches, a desired sampling error (SE%) of 11%.

3. SAMPLING METHOD:

A portion of Sale Area 1 was inventory cruised in April, 2008 with 17 plots using a 40 BAF prism; the results from this cruise were grown forward to February, 2013. The remaining portion of Area 1 was cruised with variable radius plots in 2013 by ODF foresters using a 40 BAF prism. For this cruise, a total of 12 measure plots were evenly distributed throughout the remaining sale area. Plots falling on or near existing roads or no-harvest areas were offset 1 chain. The plots in Sale Area 1 were spaced 5 chains apart on two cruise lines. Because of the similarities between Sale Areas 1, 2, and 3, the acres from Sale Area 2 and 3 were grouped with Area 1 to extrapolate the data from the cruise. An ocular assessment was used to estimate the amount of board feet in the Right-of-Way area (Area 4).

4. CRUISE RESULTS

158 trees were measured and graded producing a cumulative sampling error on the total tree basal area of 8.2% and 8.5% on the Board Foot Volume at a 68% confidence level.

5. TREE MEASUREMENT AND GRADING:

For the Timber Sale Area, all sample trees were measured and graded.

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 on all sale areas. It was estimated at 88% for the SLI plots.

6. 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 volumes to account for hidden defect and breakage.

7. CRUISERS: The sale was cruised by SLI contract cruisers and ODF cruisers Mark Savage and Joe Koch.

Prepared by: Joe Koch 2/26/2012
ODF Forester Date

Reviewed by: Eric Foucht
Date

RESIDUAL STAND SPECIFICATIONS

SALE NAME: Cool Hand Lou
SALE NUMBER: 341-13-60

AREAS 1, 2, & 3

Residual QMD assumption (from leave tree cruise information) =

17

Target Relative Density =

41

	Minimum	Target	Maximum
Relative Density	39	41	44
Basal Area	160	170	180
Trees per Acre	102	108	114

$$RD = BA / \sqrt{DBH}$$

$$BA = \sqrt{DBH} (RD)$$

$$TPA = (BA/acre) / (BA/tree)$$

$$BA / tree = (\pi r^2) / (144)$$

Log Stock Table - MBF

T03N R05W S20 TyPC-L 80.00

Project: COOLHAND
Acres 80.00Page 1
Date 1/28/2013
Time 9:02:30AM

Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spe	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	2M	40	589		589	72.2					124	130	336					
DF	T	3M	24	9		9	1.1				6	3							
DF	T	3M	32	22		22	2.7				9	13							
DF	T	3M	40	159		159	19.5				6	28	70	55					
DF	T	4M	12	3		3	.3				3								
DF	T	4M	16	11		11	1.4				11								
DF	T	4M	24	12		12	1.5				6	7							
DF	T	4M	32	10		10	1.3				10								
DF		Totals		816		816	100.0				44	55	72	178	130	336			
Total		All Species		816		816	100.0				44	55	72	178	130	336			

TC PSTATS				PROJECT COOLHAND				PAGE 1		DATE 1/24/2013	
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
03N	05	20	COOLHAND	PC-L	80.00	29	158	S	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
TOTAL				29	158	5.4					
CRUISE				29	158	5.4	9,917	1.6			
DBH COUNT											
REFOREST											
COUNT											
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	
DOUG FIR-L		116	100.7	17.1	91	39	160.0				
DOUG FIR-T		34	17.3	22.3	131	10	46.9	10,201	10,201	2,188	2,188
GR FIR-L		6	2.5	24.5	130	2	8.3				
WHEMLOCK-L		1	.3	29.0	143	0	1.4				
R ALDER-L		1	3.1	9.0	48		1.4				
TOTAL		158	124.0	18.0	97		217.9	10,201	10,201	2,188	2,188
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											
DOUG FIR-T		31.8	5.5	600	635	669					
GR FIR-L											
WHEMLOCK-L											
R ALDER-L											
TOTAL		203.2	16.2	115	137	159	1,649	412	183		
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		99.6	18.8	82	101	120					
DOUG FIR-T		162.9	30.8	12	17	23					
GR FIR-L		271.1	51.2	1	3	4					
WHEMLOCK-L		538.5	101.7		0	1					
R ALDER-L		538.5	101.7		3	6					
TOTAL		82.5	15.6	105	124	143	281	70	31		
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		26.7	5.0	152	160	168					
DOUG FIR-T		149.6	28.2	34	47	60					
GR FIR-L		270.3	51.0	4	8	13					
WHEMLOCK-L		538.5	101.7		1	3					
R ALDER-L		538.5	101.7		1	3					
TOTAL		43.2	8.2	200	218	236	77	19	9		
CL	68.1	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR-L											
DOUG FIR-T		140.4	26.5	7,497	10,201	12,906					
GR FIR-L											
WHEMLOCK-L											
R ALDER-L											
TOTAL		140.4	26.5	7,497	10,201	12,906	815	204	91		

PROJECT STATISTICS

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	05	20	COOLHAND	PC-L	80.00	29	158	S	W

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									
DOUG FIR-T		143.6	27.1	1,595	2,188	2,782			
GR FIR-L									
WHEMLOCK-L									
R ALDER-L									
TOTAL		143.6	27.1	1,595	2,188	2,782	853	213	95

TC P5PCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T03N R05W S20 TyPC-L 80.00

Project: COOLHAND**Page 1****Acres 80.00****Date 1/28/2013****Time 9:02:31AM**

S So Gr T rt ad Spp			% 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				
DF	T	2M	72		7,368	7,368	589			54	46				100	40	362	1.82	20.4		
DF	T	3M	23		2,375	2,375	190			71	29			5	12	84	37	129	0.85	18.4	
DF	T	4M	5		459	459	37			100				38	33	28	19	29	0.41	15.7	
DF Totals			100		10,201	10,201	816			21	46	33		2	3	4	92	33	187	1.22	54.5
Totals					10,201	10,201	816			21	46	33		2	3	4	92	33	187	1.22	54.5

TC PSTNDSUM		Stand Table Summary										Page	1
												Date:	1/28/2013
T03N R05W S20 TyPC-L 80.00		Project COOLHAND										Time:	9:02:31AM
		Acres 80.00										Grown Year:	
S	Sample	Tot				Average Log		Net		Net	Totals		
Spec T	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
DFT	18	2	89	120	1.561	2.76	4.68	24.7	105.0	3.30	116	492	264 93 39
DFT	19	3	89	117	2.102	4.14	6.30	26.3	108.9	4.73	166	687	379 133 55
DFT	20	3	88	117	1.897	4.14	5.69	29.5	125.6	4.78	168	714	383 134 57
DFT	22	9	88	137	4.703	12.41	14.63	40.3	191.4	16.79	589	2,801	1,344 471 224
DFT	23	2	89	136	.956	2.76	3.35	39.9	191.4	3.81	134	641	305 107 51
DFT	24	4	88	134	1.756	5.52	5.71	45.7	216.2	7.44	261	1,234	595 209 99
DFT	25	8	88	139	3.237	11.03	10.52	51.6	246.5	15.47	543	2,594	1,238 434 207
DFT	26	1	90	147	.374	1.38	1.50	48.4	250.0	2.06	72	374	165 58 30
DFT	27	2	87	147	.694	2.76	2.08	66.9	320.0	3.97	139	666	317 111 53
DFT	Totals	34	88	131	17.279	46.90	54.46	40.2	187.3	62.36	2,188	10,201	4,989 1,751 816
DFL	6	1	87	45	7.025	1.38							
DFL	7	1	88	48	5.161	1.38							
DFL	8	5	87	61	19.757	6.90							
DFL	9	1	88	65	3.122	1.38							
DFL	10	4	87	60	10.116	5.52							
DFL	12	8	88	88	14.050	11.03							
DFL	14	1	88	92	1.290	1.38							
DFL	15	1	89	116	1.124	1.38							
DFL	16	1	87	109	.988	1.38							
DFL	17	2	88	128	1.750	2.76							
DFL	18	4	88	119	3.122	5.52							
DFL	19	2	88	127	1.401	2.76							
DFL	20	4	88	117	2.529	5.52							
DFL	21	7	88	121	4.014	9.66							
DFL	22	7	88	136	3.658	9.66							
DFL	23	4	89	129	1.912	5.52							
DFL	24	5	88	131	2.195	6.90							
DFL	25	7	88	129	2.832	9.66							
DFL	26	9	88	126	3.367	12.41							
DFL	27	2	90	140	.694	2.76							
DFL	28	6	88	154	1.935	8.28							
DFL	29	8	89	138	2.406	11.03							
DFL	30	8	88	146	2.248	11.03							
DFL	31	5	88	137	1.316	6.90							
DFL	32	1	87	154	.247	1.38							
DFL	33	3	89	158	.697	4.14							
DFL	34	3	90	142	.656	4.14							
DFL	35	1	89	151	.206	1.38							
DFL	36	3	89	152	.585	4.14							
DFL	37	1	89	130	.185	1.38							
DFL	42	1	90	148	.143	1.38							
DFL	Totals	116	88	91	100.732	160.00							
GFL	20	1	92	104	.632	1.38							
GFL	21	1	93	134	.573	1.38							
GFL	25	2	91	134	.809	2.76							
GFL	31	1	94	162	.263	1.38							
GFL	32	1	94	139	.247	1.38							
GFL	Totals	6	92	130	2.525	8.28							
RAL	9	1	85	48	3.122	1.38							
RAL	Totals	1	85	48	3.122	1.38							

TC		PSTNDSUM		Stand Table Summary										Page		2	
														Date:		1/28/2013	
T03N R05W S20 TyPC-L				80.00		Project				COOLHAND				Time:		9:02:31AM	
						Acres				80.00				Grown Year:			
S	Spec	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
			DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
			WHL	29	1	87	143	.301	1.38								
			WHL	Totals	1	87	143	.301	1.38								
			Totals		158	88	97	123.959	217.93	54.46	40.2	187.3	62.36	2,188	10,201	4,989	1,751 816

VOLUME SUMMARY

(Shown in MBF)

Cool Hand Lou**341-13-60****January 2013****AREA 1, 2, & 3: PC-L (77 ACRES)**

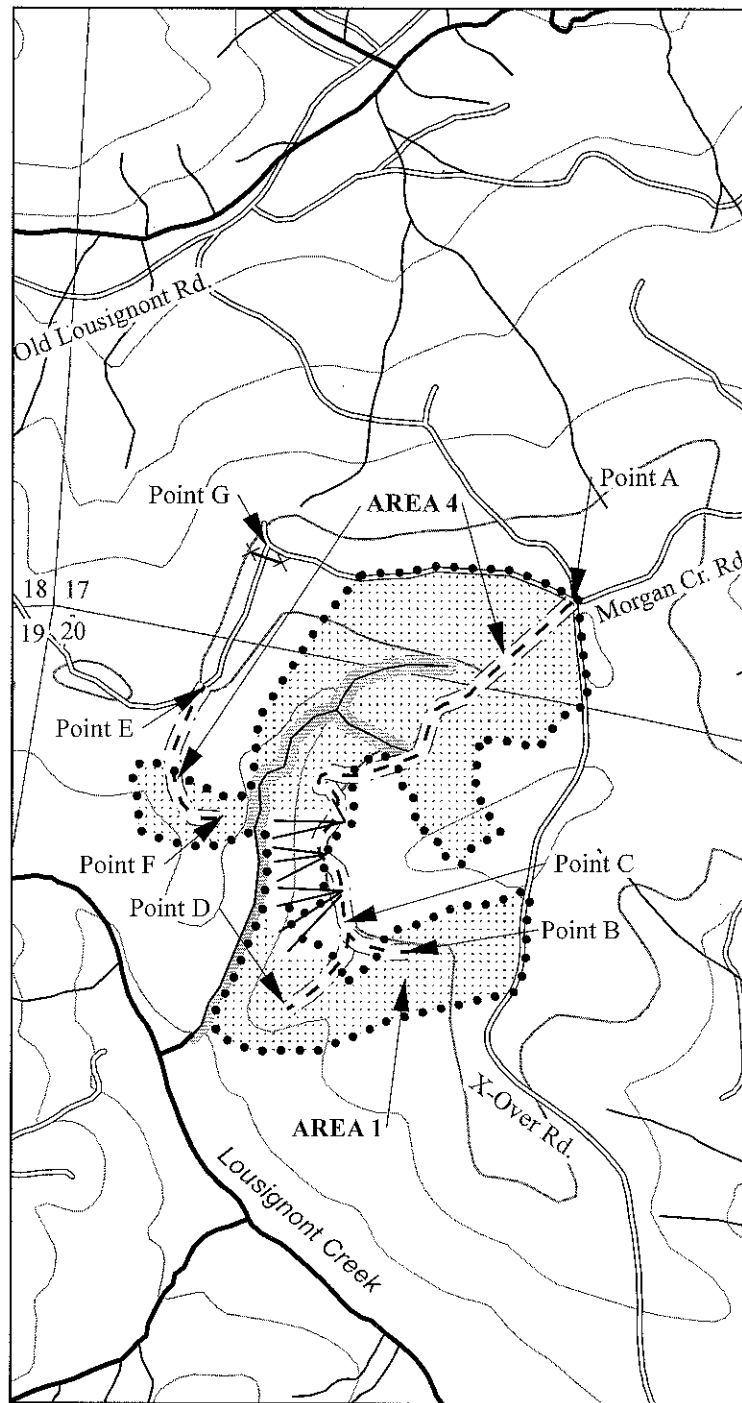
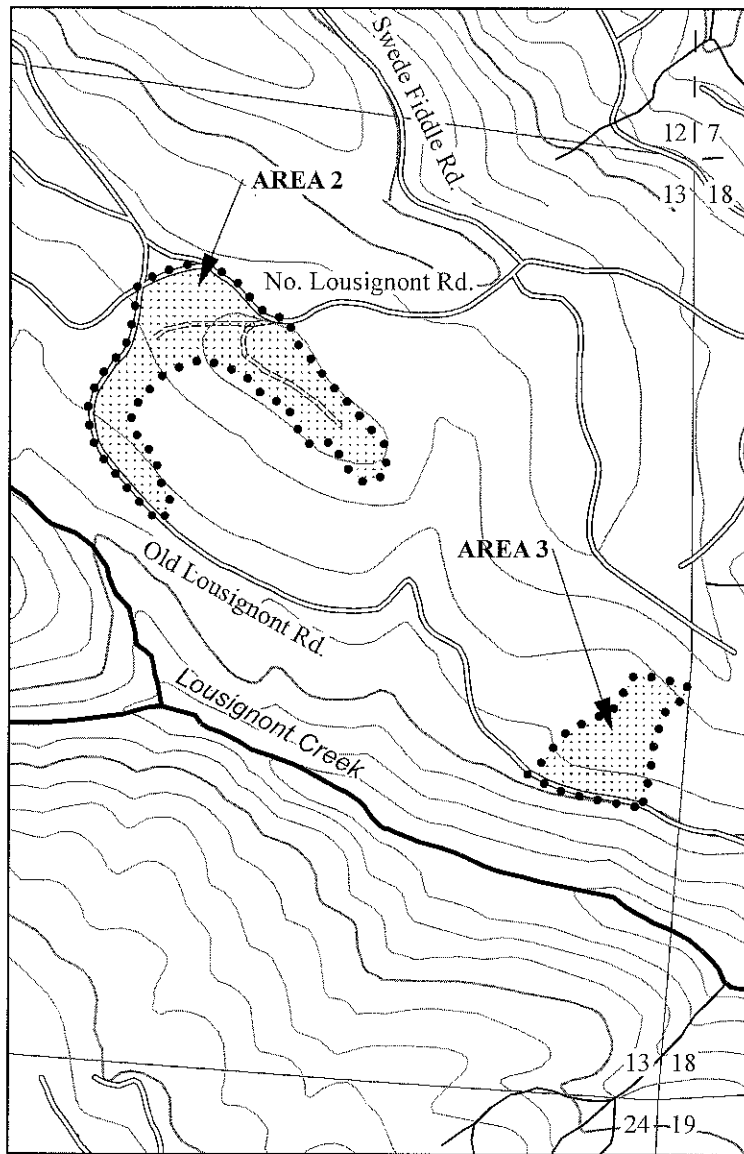
SPECIES		2 SAW	3 SAW	4 SAW	POLE	TOTAL
Douglas-fir	Cruise Volume	189	190	37	400	816
	Hidden D&B (2%)	(4)	(4)	(1)	(8)	(17)
	NET TOTAL	185	186	36	392	799
	% of Total	23	23	5	49	

AREA 4: R/W (3 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	POLE	TOTAL
Douglas-fir	Cruise Volume	0	9	1		10
	Hidden D&B (2%)	()	()	()		()
	NET TOTAL	0	9	1		10
	% of Total	0	90	10		

SALE TOTAL

SPECIES		2 SAW	3 SAW	4 SAW	POLE	TOTAL
Douglas-fir		185	195	37	392	809



Legend

- Timber Sale Boundary
- - - New Construction
- == Posted Right of Way
- Type F Stream
- Type N Stream
- ▨ Stream Buffer
- Roads
- ===== Non-Project Road
- 200 Foot Contour Band
- 40 Foot Contour Band
- ▨ Tractor Yarding
- ▨ ODF Ownership Boundary
- ▨ Sections
- ▨ Cable Yarding
- XX Blockage

LOGGING PLAN

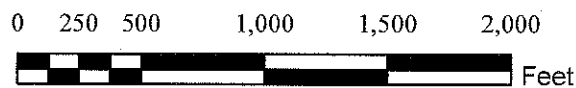
FOR TIMBER SALE CONTRACT # 341-13-60
COOL HAND LOU
PORTIONS OF SECTIONS 17 & 20, T3N, R5W, W.M.
WASHINGTON COUNTY, OREGON &
PORTION OF SECTION 13, T3N, R6W, W.M.
TILLAMOOK COUNTY, OREGON

Forest Grove District GIS
February, 2013

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



APPROXIMATE NET ACRES TRACTOR CABLE

	TRACTOR	CABLE
AREA 1 (PC-L)	47	10
AREA 2 (PC-L)	12	0
AREA 3 (PC-L)	8	0
AREA 4 (R/W)	3	0
TOTAL	70	10