



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Fighting Phellini
Sale 341-14-12

District: Forest Grove

Date: December 09, 2013

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$954,445.80	\$0.00	\$954,445.80
Project Work:			\$0.00
Advertised Value:			\$954,445.80



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timber description

Location: Portions of Sections 19, 29, and 30, T2N, R5W, W.M., Washington County, Oregon.

Stand Stocking: 20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	17	0	95

Volume by Grade	2S	3S	4S	Total
Douglas - Fir	1,323	1,095	137	2,555
Total	1,323	1,095	137	2,555



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comments: Pond Values Used: 3rd Quarter Calendar Year 2013.

Western Hemlock and Other Conifers Stumpage Price = Pond Value
minus Logging Cost:
 $\$251.06/\text{MBF} = \$455/\text{MBF} - \$203.94/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Cost:
 $\$796.06/\text{MBF} = \$1,000/\text{MBF} - \$203.94/\text{MBF}$

Red Alder and Other Hardwoods Stumpage Price = Pond Value minus
Logging Cost:
 $\$376.06/\text{MBF} = \$580/\text{MBF} - \$203.94/\text{MBF}$

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: 2,555 MBF @ \$1/MBF = \$2,555
TOTAL Other Costs (with Profit & Risk to be added) = \$2,555

Other Costs (No Profit & Risk added):
Block/Waterbar Skid Roads: 20 Hours @ \$150/hour = \$3,000
Pile Landing Slash and Sort Firewood:
20 hours @ \$150/hour = \$3,000
Equipment Cleaning: 4 machines @ \$1,000/machine = \$4,000
Rec. Trail Clearing: 4,600 feet @ \$1/foot = \$4,600
TOTAL Other Costs (No Profit & Risk added) = \$14,600

ROAD MAINTENANCE
Move-in: \$2,000
General Road Maintenance: 4.5 miles x \$1,000/mile = \$4,500
TOTAL: \$6,500 / 2,555 MBF = \$2.54/MBF



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logging conditions

combination#:	1	Douglas - Fir	100.00%
yarding distance:	Long (1,500 ft)	downhill yarding:	No
logging system:	Shovel	Process:	Stroke Delimber
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	5.0	bd. ft / load:	4,000
cost / mbf:	\$71.91		
machines:	Stroke Delimber (B)		



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logging costs

Operating Seasons:	2.00	Profit Risk:	15.00%
Project Costs:	\$0.00	Other Costs (P/R):	\$2,555.00
Slash Disposal:	\$0.00	Other Costs:	\$14,600.00

Miles of Road

Road Maintenance: \$2.54

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	4.0



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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									
\$71.91	\$2.67	\$3.43	\$89.02	\$1.00	\$25.20	\$0.00	\$5.00	\$5.71	\$203.94

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$577.50	\$373.56	\$0.00



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summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	2,555	\$373.56	\$954,445.80

Gross Timber Sale Value

Recovery: \$954,445.80

Prepared by: Mark Savage

Phone: 503-359-7437

TIMBER SALE SUMMARY
Fighting Phellini
Contract No. 341-14-12

1. **Location:** Portions of Sections 19, 29 and 30, T2N, R5W, W.M., Washington County, Oregon.
2. **Type of Sale:** This timber sale is a 116 acre Modified Clearcut. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF, Washington County.
4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.
5. **Cruise :** The Timber Sale was cruised by ODF Cruisers in August of 2013. For more information see Cruise Report.

6. **Volume Summary:**

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	1,393	1,153	144	2,690
-5%	Hidden D&B	(70)	(58)	(7)	(135)
	Total	1,323	1,095	137	2,555
	<i>% Total</i>	52	43	5	

7. **Timber Description:** The Timber Sale Area consists of medium to well stocked 60 year old Douglas-fir stand. The average “take” Douglas-fir DBH is 17 inches in Area 1. The estimated average net per acre Douglas-fir volume in the Sale Area is 23.2 Mbf.
8. **Topography and Logging Method:** Slopes within the sale areas range from 5% to 35% and are generally of a northern aspect. The Sale Area is 100% ground-based yarding. The average horizontal tractor yarding distance is approximately 800 feet and the maximum is approximately 1,500 feet.
9. **Access:** From Forest Grove travel north on Highway 8 to its junction with Highway 6. Turn left and continue west approximately 8.6 miles to Rogers Camp Road. Turn left onto Rodgers Camp Road, proceed through the gate, and continue for 1.9 miles. Turn right and follow the road .6 miles to the Timber Sale Area. .
10. **Projects:** None.

TC PSTATS			PROJECT STATISTICS						PAGE	1		
			PROJECT			FIGHTP			DATE	10/23/2013		
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt	
02N	05	19	0001	00MC		116.00		48	398	S	W	
					TREES	ESTIMATED		PERCENT				
					PER PLOT	TOTAL		SAMPLE				
			PLOTS	TREES			TREES	TREES				
TOTAL			48	398	8.3							
CRUISE			48	398	8.3		11,730		3.4			
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			398	101.1	17.3	73	39.8	165.8	23,492	23,199	5,869	5,869
TOTAL			398	101.1	17.3	73	39.8	165.8	23,492	23,199	5,869	5,869
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			57.6	2.9	304	313	322					
TOTAL			57.6	2.9	304	313	322	133		33	15	
CL	68.1	COEFF		SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%		S.E.%	LOW	AVG	HIGH	5		10	15	
DOUG FIR			53.6	2.7	77	79	81					
TOTAL			53.6	2.7	77	79	81	115		29	13	
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			55.4	8.0	93	101	109					
TOTAL			55.4	8.0	93	101	109	123		31	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			40.6	5.9	156	166	176					
TOTAL			40.6	5.9	156	166	176	66		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			43.8	6.3	21,733	23,199	24,665					
TOTAL			43.8	6.3	21,733	23,199	24,665	77		19	9	
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			41.8	6.0	5,515	5,869	6,223					
TOTAL			41.8	6.0	5,515	5,869	6,223	70		17	8	

TC		PLOGSTVB		Log Stock Table - MBF															
<div>T02N R05W S19 Ty00MC116.00</div>				Project: Acres		FIGHTP 116.00		Page Date Time		1 10/23/2013 11:29:54AM									
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		2M 16	5		5	.2					2		3						
DF		2M 18	3		3	.1					3								
DF		2M 20	2		2	.1							2						
DF		2M 26	4		4	.2					4								
DF		2M 28	6		6	.2						6							
DF		2M 30	4		4	.2					4								
DF		2M 32	13	7.6	12	.4						7	5						
DF		2M 38	6		6	.2							6						
DF		2M 40	1,370	1.4	1,351	50.2					542	451	337	14	7				
DF		3M 14	3		3	.1					3								
DF		3M 24	2		2	.1					2								
DF		3M 26	0		0	.0			0										
DF		3M 30	13		13	.5			2	7	4								
DF		3M 32	63	2.9	61	2.3			41	11	10								
DF		3M 34	59	1.0	58	2.2			27	30	2								
DF		3M 36	104		103	3.8			40	54	10								
DF		3M 38	74	2.7	72	2.7			47	24	2								
DF		3M 40	849		841	31.2			182	219	437	2							
DF		4M 12	23		23	.8			20	2									
DF		4M 14	27		27	1.0			27										
DF		4M 16	11		11	.4			11										
DF		4M 18	9		9	.3			9	0									
DF		4M 20	8		8	.3			8										
DF		4M 22	9		9	.3			9										
DF		4M 24	12		12	.4			12										
DF		4M 26	8		8	.3			8										
DF		4M 28	19		19	.7			19										
DF		4M 30	16	1.1	16	.6			16										
DF		4M 32	3	31.1	2	.1			2										
DF		4M 34	1	20.0	1	.0			1										
DF		Totals	2,725	1.2	2,691	100.0			480	347	465	558	466	354	14	7			
Total		All Species	2,725	1.2	2,691	100.0			480	347	465	558	466	354	14	7			

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
<div>T02N R05W S19 Ty00MC116.00</div>				Project: FIGHTP												Page 1					
				Acres 116.00												Date 10/23/2013					
																Time 11:29:54AM					
S So Gr Spp T rt ad		% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs		
		Def%	Gross	Net	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	Per /Acre				
					4-5		6-11	12-16	17+	12-20	21-30	31-35						36-99			
DF	CU															5	16		0.00	1.8	
DF	2M	51	1.4	12,182	12,012	1,393			83	17	1	1	1	97	39	14	281	1.69		42.7	
DF	3M	43	1.1	10,054	9,942	1,153		100	0		0	1	10	88	38	8	95	0.67		105.1	
DF	4M	6	.9	1,256	1,245	144		100			54	44	2		18	6	21	0.32		58.8	
DF Totals		100	1.2	23,492	23,199	2,691		48	43	9	3	3	5	88	32	9	111	0.87		208.4	
Totals			1.2	23,492	23,199	2,691		48	43	9	3	3	5	88	32	9	111	0.87		208.4	

TC		PSTNDSUM		Stand Table Summary										Page		1	
														Date:		10/23/2013	
T02N R05W S19 Ty00MC 116.00				Project		FIGHTP		Time:		11:29:55AM							
				Acres		116.00		Grown Year:									
S Sp	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s			
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
DF		8	4	84	59	4.775	1.67	4.77	3.9	20.0	.52	18	95	61	21	11	
DF		9	3	86	66	2.829	1.25	2.83	6.4	26.7	.51	18	75	60	21	9	
DF		10	5	86	75	3.820	2.08	3.82	9.8	42.0	1.07	38	160	124	44	19	
DF		11	12	87	86	7.576	5.00	13.26	8.9	38.1	3.35	118	505	389	136	59	
DF		12	4	88	94	2.122	1.67	4.24	11.3	46.2	1.37	48	196	158	56	23	
DF		13	12	87	91	5.424	5.00	10.40	13.5	50.9	3.99	140	529	463	163	61	
DF		14	16	87	97	6.236	6.67	12.47	17.1	70.6	6.07	213	881	704	247	102	
DF		15	24	88	104	8.149	10.00	15.96	20.7	87.0	9.42	330	1,389	1,093	383	161	
DF		16	25	87	106	7.460	10.42	15.52	23.6	97.3	10.45	367	1,510	1,212	425	175	
DF		17	33	87	107	8.723	13.75	17.98	27.3	107.8	14.01	491	1,938	1,625	570	225	
DF		18	39	86	110	9.196	16.25	20.51	29.6	115.3	17.28	606	2,365	2,004	703	274	
DF		19	35	87	110	7.407	14.58	17.35	31.5	120.9	15.57	546	2,097	1,806	634	243	
DF		20	36	86	113	6.876	15.00	15.66	35.7	132.6	15.95	560	2,076	1,851	649	241	
DF		21	24	87	115	4.158	10.00	10.39	36.5	143.5	10.80	379	1,492	1,253	440	173	
DF		22	32	86	116	5.051	13.33	12.47	40.8	161.0	14.49	508	2,008	1,681	590	233	
DF		23	20	86	113	2.888	8.33	6.79	45.3	172.8	8.76	307	1,173	1,016	356	136	
DF		24	22	86	118	2.918	9.17	8.22	43.6	175.8	10.22	358	1,446	1,185	416	168	
DF		25	13	86	120	1.589	5.42	4.16	50.4	202.4	5.97	209	841	692	243	98	
DF		26	12	84	116	1.356	5.00	3.50	52.5	211.0	5.24	184	739	608	213	86	
DF		27	10	84	111	1.048	4.17	2.31	66.0	236.4	4.34	152	545	503	177	63	
DF		28	8	85	119	.780	3.33	2.05	62.8	261.9	3.66	128	536	425	149	62	
DF		29	4	83	117	.363	1.67	.91	69.0	261.0	1.79	63	237	207	73	28	
DF		30	3	81	121	.255	1.25	.68	74.8	301.2	1.45	51	205	168	59	24	
DF		34	1	89	114	.066	.42	.20	88.2	420.0	.50	17	83	58	20	10	
DF		37	1	83	132	.056	.42	.17	104.9	470.0	.50	18	79	58	20	9	
DF		Totals	398	86	101	101.120	165.83	206.61	28.4	112.3	167.27	5,869	23,199	19,403	6,808	2,691	
Totals		398	86	101	101.120	165.83	206.61	28.4	112.3	167.27	5,869	23,199	19,403	6,808	2,691		

**CRUISE REPORT
FIGHTING PHELLINI
341-14-12**

1. LOCATION: Portions of Sections 19, 29 and 30, T2N, R5W, W.M., Washington County, Oregon.

2. CRUISE DESIGN:

The cruise design assumed a Coefficient of Variation (CV%) of 70%, an average stand diameter of 17 inches, a desired sampling error (SE%) of 10% and a minimum sample size of 100 grade trees. Pre-cruise plots indicated that approximately 7 trees per plot could be realized with a 20 BAF prism.

3. SAMPLING METHOD:

Clearcuts: The Sale Area was cruised in August 2013 with 49 variable radius grade plots using a 20 BAF prism. Plots were laid out on a 3 chain x 7 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS

398 trees were measured and graded producing a cumulative Basal Area sampling error of 5.9% and 6.3% on the Board Foot Volume.

5. TREE MEASUREMENT AND GRADING:

All 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:** Bole heights were measured to the nearest foot of 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:** Five percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage.

6. Cruisers: The sale was cruised by ODF cruiser Mark Savage.

Prepared by:

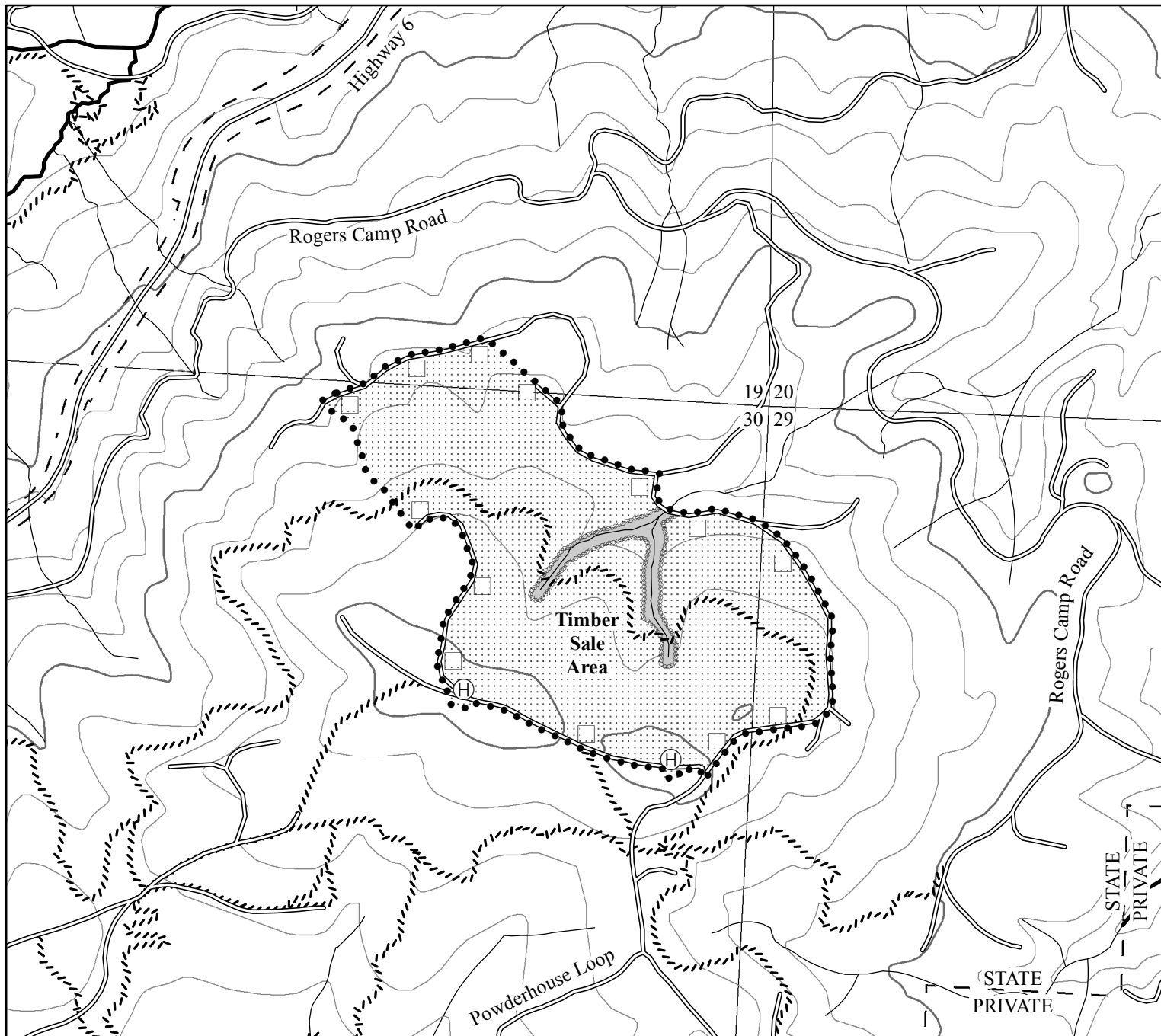
ODF Forester

Date

Reviewed by:

Eric Foucht

Date



LEGEND

- • • Timber Sale Boundary
- Roads
- //// Recreation Trail
- Type-F Stream
- Type-N Stream
- - - - - Posted Stream Buffer Boundary
- Stream Buffer
- Tractor Landing
- Tractor Yarding Area
- 400 Foot Contour Band
- 80 Foot Contour Band
- ⊕ Heliport
- - - - - ODF Ownership Boundary
- Section Line

LOGGING PLAN

FOR TIMBER SALE CONTRACT # 341-14-12
 FIGHTING PHELLINI
 PORTIONS OF SECTIONS 19, 29 & 30, T2N, R5W, W.M.
 WASHINGTON COUNTY, OREGON

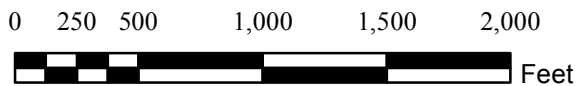
Forest Grove District GIS
 October, 2013

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
SALE AREA	116	0
TOTAL	116	0