



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Beaver Tail
Sale 341-15-47

District: Klamath/Lake

Date: July 23, 2014

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$120,197.12	\$0.00	\$120,197.12
		Project Work:	\$(5,688.25)
		Advertised Value:	\$114,508.87



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timber description

Location: Portions of Sections 20, 28, & 29, T32S, R7.5E, W.M., Klamath County, Oregon.

Stand Stocking: 40%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
White Fir	21	0	95
Sugar Pine	22	0	95
Ponderosa Pine	14	0	95
Lodgepole Pine	12	0	95

Volume by Grade	Camprun	CR 14" -	CR 22"+	CR 6" - 8	CR 8" - 1	Total
White Fir	0	119	15	16	60	210
Sugar Pine	0	3	5	0	6	14
Ponderosa Pine	0	119	52	133	116	420
Lodgepole Pine	2	0	0	0	0	2
Total	2	241	72	149	182	646



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comments: Pond Values Used: 2nd Quarter Calendar Year 2014.

Log Markets: Klamath Falls and Medford.

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):

Log Branding and Painting = \$468

Dust Abatement = \$2,634

TOTAL Other Costs (with Profit & Risk to be added) = \$3,102

Other Costs (No Profit & Risk added):

None.



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logging conditions

combination#: 1 White Fir 15.00%

 Ponderosa Pine 40.00%

 Lodgepole Pine 100.00%

yarding distance: Medium (800 ft) **downhill yarding:** Yes

logging system: Wheel Skidder **Process:** Feller Buncher

tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF

loads / day: 10.0 **bd. ft / load:** 4,000

cost / mbf: \$83.02

machines: Log Loader (B)
Stroke Delimber (B)
Feller Buncher w/ Delimber
Tire Skidder

combination#: 2 White Fir 85.00%

 Sugar Pine 100.00%

 Ponderosa Pine 60.00%

yarding distance: Medium (800 ft) **downhill yarding:** Yes

logging system: Track Skidder **Process:** Manual Falling/Delimbing

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 10.0 **bd. ft / load:** 4,500

cost / mbf: \$75.69

machines: Log Loader (B)
Track Skidder



"STEWARDSHIP IN FORESTRY"

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logging costs

Operating Seasons:	1.00	Profit Risk:	12.00%
Project Costs:	\$5,688.25	Other Costs (P/R):	\$3,102.00
Slash Disposal:	\$0.00	Other Costs:	\$0.00

Miles of Road

Road Maintenance: \$2.25

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
White Fir	\$0.00	3.0	4.3
Sugar Pine	\$0.00	3.0	4.0
Ponderosa Pine	\$0.00	3.0	4.2
Lodgepole Pine	\$0.00	3.0	4.0



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Local Pond Values

Date	Specie	Grade	Value
7/23/14	White Fir	CR 6" - 8"	\$375.00
7/23/14	White Fir	CR 8" - 14"	\$385.00
7/23/14	White Fir	CR 14" - 22"	\$405.00
7/23/14	White Fir	CR 22"+	\$425.00
7/23/14	Sugar Pine	CR 8" - 14"	\$320.00
7/23/14	Sugar Pine	CR 14" - 22"	\$370.00
7/23/14	Sugar Pine	CR 22"+	\$410.00
7/23/14	Ponderosa Pine	CR 6" - 8"	\$280.00
7/23/14	Ponderosa Pine	CR 8" - 14"	\$325.00
7/23/14	Ponderosa Pine	CR 14" - 22"	\$380.00
7/23/14	Ponderosa Pine	CR 22"+	\$425.00
7/23/14	Lodgepole Pine	Camprun	\$325.00



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logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
White Fir									
\$76.79	\$2.36	\$6.79	\$56.69	\$4.80	\$17.69	\$0.00	\$5.00	\$0.00	\$170.12
Sugar Pine									
\$75.69	\$2.36	\$6.79	\$60.94	\$4.80	\$18.07	\$0.00	\$5.00	\$0.00	\$173.65
Ponderosa Pine									
\$78.62	\$2.36	\$6.79	\$58.03	\$4.80	\$18.07	\$0.00	\$5.00	\$0.00	\$173.67
Lodgepole Pine									
\$83.02	\$2.36	\$6.79	\$60.94	\$4.80	\$18.95	\$0.00	\$5.00	\$0.00	\$181.86

Specie	Amortization	Pond Value	Stumpage	Amortized
White Fir	\$0.00	\$398.43	\$228.31	\$0.00
Sugar Pine	\$0.00	\$362.86	\$189.21	\$0.00
Ponderosa Pine	\$0.00	\$338.71	\$165.04	\$0.00
Lodgepole Pine	\$0.00	\$325.00	\$143.14	\$0.00



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summary

Amortized

Specie	MBF	Value	Total
White Fir	0	\$0.00	\$0.00
Sugar Pine	0	\$0.00	\$0.00
Ponderosa Pine	0	\$0.00	\$0.00
Lodgepole Pine	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
White Fir	210	\$228.31	\$47,945.10
Sugar Pine	14	\$189.21	\$2,648.94
Ponderosa Pine	420	\$165.04	\$69,316.80
Lodgepole Pine	2	\$143.14	\$286.28

Gross Timber Sale Value

Recovery: \$120,197.12

Prepared by: Ed Scheick

Phone: 541-883-5681

Summary of Project Work

Beaver Tail 341-15-47



"STEWARDSHIP IN FORESTRY"

Project # 1: Road Improvement / Construction	\$1,208.25
Project # 2: Fell, Skid, & Pile Submerchantable	\$2,280.00
Project # 3: Shovel Piling	\$2,200.00
Total:	\$5,688.25

Beaver Tail

341-15-47

Additional Costs



Road Maintenance

Move-in cost (grader):	\$400.00
Number of Miles to be Bladed:	5.0
Number of Bladings:	1
Miles / Hour for equipment:	0.5
Cost / Hour (grader with operator):	\$105.50
Total Grading Hours:	10
Grading Cost:	\$1,055.00
Total Cost:	\$1,455.00
Cost / MBF:	\$2.25

Brand & Paint (Profit and Risk to be added in Appraisal)

13 Hauling Days
1.5 Hours/Day
\$24.00 Cost/Hour
\$468.00 Total Cost
\$0.72 Cost/MBF

Dust Abatement (Profit & Risk to be added in Appraisal)

PP	420 MBF	65%	Average Load	4.2 MBF	No. of Loads	100
WF	210 MBF	33%	Average Load	4.4 MBF	No. of Loads	48
LP	2 MBF	0%	Average Load	4.0 MBF	No. of Loads	1
SP	14 MBF	2%	Average Load	4.0 MBF	No. of Loads	4
Total:	646 MBF				Total Loads	153

Assume:	4 Trucks/Day	
	3 Trips/Day	7 Days of Dust Abatement
	12 Loads per Day	4 Hours/Day
	13 Hauling Days	\$88.00 Cost/Hour
		28 Total Hours
		\$170.00 Move in for Water Truck
		\$2,634.00 Dust Abatement Cost
		\$2,634.00 Total Cost
		\$4.08 Cost/MBF

Other Costs Summary

Log Branding and Painting:	\$468.00
Dust Abatement	\$2,634.00
Total Cost:	\$3,102.00

Project #1 Road Improvement/Road Construction

Move in Cost Dozer:	\$400.00
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Improvement	Points	Distance (ft)	Feet/Hour	Hours	Cost/Hour	Cost
Grub/Clear/Shape	A to B	400	200	2.0	\$132.50	\$265.00
Open/Clear/Shape	B to C	440	1000	0.4	\$132.50	\$53.00
Open/Clear/Shape	B to D	640	1000	0.6	\$132.50	\$79.50
Open/Clear/Shape	E to F	1900	1000	1.9	\$132.50	\$251.75
Open/Clear/Shape	G to H	1200	1000	1.2	\$132.50	\$159.00
	Total	4,580			Total	\$808.25
Grand Total with Move in						\$1,208.25

Project #1 Summary

Equipment Costs(Move in)	\$400.00
Open/Clear Shape	\$808.25
Project #2 Total	\$1,208.25
per MBF	\$1.87

Project #2 Fell, Yarding, and Piling of Submerchantable Material

Total Sub-Sawlog Volume:	38 MBF
Fell and Skid and sort/MBF:	\$60.00
Total:	\$2,280.00
per MBF	\$3.53

Project #3 Shovel Piling

Move in Cost for Shovel:	\$400
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Treatment Acres	Cost/Acre	Total Cost
15	\$120.00	\$1,800.00

Project #3 Summary

Shovel Piling Total	\$2,200.00
per MBF	\$3.41

Cost Summary All Projects

\$1,208.25	Project #1
\$2,280.00	Project #2
\$2,200.00	Project #3
\$5,688.25	Total
\$8.81	per MBF

BEAVER TAIL

***341-15-47
Cruise Report***



SALE NAME: Beaver Tail

LEGAL DESCRIPTION:

Portions of Sections 20, 28, and 29, T32S, R7½E, W.M., Klamath County, Oregon.

BOUNDARY LINES:

Unit boundaries are posted with “Timber Sale Boundary” signs, marked with fluorescent orange paint and fluorescent orange flagging. The timber sale boundary is not posted along the 5 road.

FUND:

100% BOF

ACREAGE:

The timber sale consists of 1 area, stand 126, total 163 acres.

Mapping was accomplished using a handheld Global Positioning System unit with the data run on the district Geographical Information System Program.

TREATMENT:

Entire sale area is a single tree selection cut with cut trees marked with blue paint for trees 5.0 inches dbh and larger. All trees less than 5.0 inches dbh are reserved from cutting in sale area.

CRUISE METHOD:

Variable plot cruise with a ratio of 1 count plot for every measure plot. Fixed plot cruise for all submerchantable material (5.0”to 9.0”) DBH.

BASAL AREA FACTOR:

Area	BAF	Type Acreage
Area I	5 BAF	163 acres

PLOT DESIGNATION:

Plot centers were established at every plot with blue flag wire stakes with the corresponding plot number. Blue and white candy stripe flagging was attached to the nearest available tree branch.

SAMPLE SIZE CALCULATIONS:

AREA	CV%	DESIRED SE%	ACRES
Area I	75	13	163

$$\text{Number of Plots} = \frac{T^2 C^2}{A^2}$$

C = Coefficient of Variation in Percent (taken from inventory data)

T = Number of Standard Errors

A = Desired Sampling Error for a sale of this size and value

Area I $N = \frac{(1)^2(75)^2}{(13)^2} = 33 \text{ plots}$ Took 33 plots

Measurements and Grading:

- DBH and Height were measured on all “in” trees for measure plots.
- Ratio of 1 count plot for every measure plot.
- Pulp volume and sawlog volume cruised.
- See attached species and grade tables for minimum requirements.
- All trees were graded using the segment system.
- Separate fixed plot cruise for all submerchantable material (5”to 9” DBH).

TREE HEIGHT:

All trees were measured to a fixed diameter outside bark. This height is usually taken as high up the bole as possible, where the cruiser can clearly see the bole, and the taper remains constant (usually 6 or 8 inches). The log segments are broken out and graded accordingly.

MINIMUM D.B.H:

9.0" DBH for sawlog volume. 5.0" DBH for submerchantable material.

DIAMETER STANDARDS:

1" diameter class

BTR:

Standard ratios were used. See attached species tables.

FORM FACTOR:

Form factor was measured or estimated at 16' for each tree. Each tree was assigned its own FF.

FORM POINT:

All trees were sighted at DBH.

VOLUME COMPUTATION:

All cruise data was input and run at the district on Atterbury's Super Ace program.

CRUISERS: Ed Scheick, Todd Clement, Sara Stack.

FINAL CRUISE RESULTS:

AREA	CV%	SE%	ACRES
Area I	50	9	163

TIMBER DESCRIPTION**SAWLOG VOLUME:**

This volume was obtained from the variable plot cruise. All material graded camprun. See grade table for minimum standards.

SPECIES	AVE. DBH	GROSS VOL (MBF)	NET VOL (MBF)
Ponderosa Pine	14.2	425	420
White Fir	20.6	214	210
Sugar Pine	21.9	14	14
Lodgepole Pine	12.2	2	2

TOTAL NET SAWLOG VOLUME: 646 MBF

GREEN PULP VOLUME:

This volume was obtained from the fixed plot cruise (5.0" – 9.0" DBH) and trees from the variable plot cruise (greater than 9.0" DBH) that did not meet sawlog standards. All material was graded green pulp, see grade table for minimum standards.

SPECIES	VOLUME
Ponderosa Pine	33
White Fir	5

TOTAL GREEN PULP VOLUME: 38 MBF

TC TSTATS				STATISTICS				PAGE	1					
				PROJECT	BTAIL	DATE 5/19/2014								
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt					
032	007	20	126	VARI	163.00	33	220	1	E					
				TREES	ESTIMATED	PERCENT								
				PER PLOT	TOTAL	SAMPLE								
					TREES	TREES								
TOTAL				33	220	6.7								
CRUISE				17	107	6.3	4,347	2.5						
DBH COUNT														
REFOREST														
COUNT				16	113	7.1								
BLANKS														
100 %														
STAND SUMMARY														
				SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
				TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
PPINE				77	23.2	14.2	40	6.8	25.5	2,647	2,621	573	573	
WHITE F				27	3.1	20.6	60	1.6	7.1	1,312	1,288	247	247	
SUG PINE				2	.2	21.9	44	0.1	.6	87	87	17	17	
LP PINE				1	.2	12.2	31	0.0	.2	9	9	3	3	
TOTAL				107	26.7	15.1	42	8.6	33.3	4,054	4,005	840	840	
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
PPINE		152.6	17.4	258	313	367								
WHITE F		66.9	13.1	535	616	697								
SUG PINE		115.6	108.3		930	1,938								
LP PINE														
TOTAL		122.9	11.9	351	399	446	605	151	67					
CL:	68.1 %	COEFF		SAMPLE TREES - CF						# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5						10	15
PPINE		127.7	14.5	50	59	67								
WHITE F		54.4	10.7	101	113	125								
SUG PINE		115.4	108.2		180	374								
LP PINE														
TOTAL		105.7	10.2	67	74	82	447	112	50					
CL:	68.1 %	COEFF		TREES/ACRE						# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5						10	15
PPINE		87.6	15.3	20	23	27								
WHITE F		123.7	21.5	2	3	4								
SUG PINE		342.5	59.6	0	0	0								
LP PINE		574.5	100.0	0	0	0								
TOTAL		71.2	12.4	23	27	30	203	51	23					
CL:	68.1 %	COEFF		BASAL AREA/ACRE						# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5						10	15
PPINE		66.3	11.5	23	25	28								
WHITE F		142.6	24.8	5	7	9								
SUG PINE		342.5	59.6	0	1	1								
LP PINE		574.5	100.0	0	0	0								
TOTAL		45.1	7.9	31	33	36	81	20	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
PPINE		61.2	10.7	2,342	2,621	2,900								
WHITE F		162.7	28.3	923	1,288	1,653								
SUG PINE		342.5	59.6	35	87	138								
LP PINE		574.5	100.0	0	9	19								
TOTAL		49.8	8.7	3,658	4,005	4,352	99	25	11					

TC TSTATS				STATISTICS				PAGE	2
				PROJECT	BTAIL		DATE	5/19/2014	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
032	007	20	126	VARI	163.00	33	220	1	E
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
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
PPINE		60.9	10.6	513	573	634			
WHITE F		154.3	26.9	180	247	313			
SUG PINE		342.5	59.6	7	17	27			
LP PINE		574.5	100.0	0	3	6			
TOTAL		45.3	7.9	773	840	906	82	20	9

TC		PLOGSTVB		Log Stock Table - MBF																
T032 R007 S20 TyVARI				163.00		Project: BTAIL		Acres 163.00		Page 1		Date 5/19/2014		Time 16:31:49						
Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
									2-3	4-5	6-8	9-10	11-12	13-14	15-16	17-19	20-21	22-29	30-39	40+
PP		CR	CR	16	5		5	1.2						5						
PP		CR	CR	17	43	1.3	42	9.9			29	8	1	3	2					
PP		CR	CR	20	1		1	.3					1							
PP		CR	CR	24	2		2	.4						2						
PP		CR	CR	26	57		57	13.3			35	4	13		5					
PP		CR	CR	28	2		2	.4					2							
PP		CR	CR	32	129	1.4	127	29.7							20	50	14	43		
PP		CR	CR	34	186		184	43.1			70	23	44	15	4	12	7	9		
PP		CR	GP	11	2		2	.5			2									
PP		CR	GP	14	2		2	.4	1		1									
PP		CR	GP	16	1		1	.2	1											
PP		CR	GP	18	3		3	.7		1	2									
PP		Totals			431		427	65.4	1	1	138	36	61	19	36	62	21	52		
WF		CR	CR	17	6		6	2.7			2	3		1						
WF		CR	CR	26	4		4	1.7			4									
WF		CR	CR	34	205	1.9	201	95.7			10	17	26	13	37	55	27	15		
WF		Totals			214	1.8	210	32.2			15	20	26	14	37	55	27	15		
SP		CR	CR	16	0		0	2.5					0							
SP		CR	CR	32	14		14	97.5					6		3			5		
SP		Totals			14		14	2.2					6		3			5		
LP		CR	CR	26	2		2	100.0			2									
LP		Totals			2		2	.2			2									
Total		All Species			661	1.2	653	100.0	1	1	155	55	93	33	73	120	48	73		

TblSortGrade

Sort/Grade Table

Table Name: SUNPASS Date: 05/19/2014

Sort	Grd	Abr	Desc	Fbr	Min Dia	Max Dia	Max B Butt	Min I Len	Max Len	Defect	Min Vol	Vol Type	Min Rings	Knot S Size	Knot Freq	Str	Sap	Min Age	Lbs	Lbs Type	Cords	Cords Type
0	0	CU	CULL	G	1	0	0	1	99	0	0	M	0	0	0			0	0	0		
	1	CR	CAMPRU	G	6	0	0	10	99	0	0	M	0	0	0			0	0	0		
	7	GP	GRNPULP	G	3	0	0	10	99	0	0	M	0	0	0			0	0	0		
	8	DP	DEADPUL	G	3	0	0	10	99	0	0	M	0	0	0			0	0	0		
	9	UT	UTILITY	G	8	0	0	12	99	0	0	M	0	0	0			0	0	0		
		CU	CULL	G	1	0	0	1	99	0	0	M	0	0	0			0	0	0		
	1	CR	CAMPRU	G	1	0	0	1	99	0	0	M	0	0	0			0	0	0		

Species Table Report

TblSpecies

Date: 05/19/2014

Page: 1

Table Name: SUNPASS

Code	Abrv	Description	Bark Ratio	ASub Const	Form Factor	Wood Type	Comp- onent	Yield Table	Min Log Dia	Min Log Len	Max Log Len	Log Trim	Max Tree Dia	Max Tree Hgt.	BdFt Rule	CuFt Rule	Weight
1	PP	PPINE	.87	PP	.85	P	C	PP--EQUA--100	3	9	20	1.0	99	200	E	1	4800
2	WF	WHITE F	.94	NF	.87	W	C	DF--EQUA--050	3	9	20	1.0	99	200	E	1	5000
3	LP	LP PINE	.96	DF	.9	P	C	LP--EQUA--100	3	9	20	1.0	99	200	E	1	4800
4	DF	DOUG-FIR	.92	DF	.87	D	C	DF--EQUA--050	3	9	20	1.0	99	200	E	1	5700
5	SP	SUG PINE	.87	PP	.84	P	C	PP--EQUA--100	3	9	20	1.0	99	200	E	1	4800
6	IC	INC CED	.90	SS	.80	C	C	DF--EQUA--050	3	9	20	1.0	99	200	E	1	4500
7	RF	SH FIR	.924	DF	.89	W	C	DF--EQUA--050	3	9	20	1.0	99	200	E	1	5000

