



Timber Sale Appraisal  
Alter Eagle  
Sale KL-341-2017-52-

District: Klamath/Lake

Date: September 06, 2016

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**Cost Summary**

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$114,672.50	\$0.00	\$114,672.50
		Project Work:	(\$7,384.25)
		Advertised Value:	\$107,288.25



# Timber Sale Appraisal Alter Eagle Sale KL-341-2017-52-

**District:** Klamath/Lake

**Date:** September 06, 2016

## Timber Description

**Location:** Portions of Sections 3 and 10, T33S, R 7.5E, W.M., Klamath County, Oregon.

**Stand Stocking:** 40%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
White Fir	18	0	95
Ponderosa Pine	20	0	95
Lodgepole Pine	12	0	95

Volume by Grade	CR 6" - 8"	CR 8" - 14"	CR 14" - 22"	CR 22"+	Total
White Fir	6	37	70	0	113
Ponderosa Pine	62	273	249	71	655
Lodgepole Pine	8	17	0	0	25
<b>Total</b>	76	327	319	71	793

**Comments:** Pond Values Used: 2nd Quarter Calendar Year 2016.

Log Markets: Klamath Falls and Medford.

SCALING COST ALLOWANCE = \$5.00/MBF

BRANDING AND PAINTING COST ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE  
Hauling costs equivalent to \$780 daily truck cost.

Other Costs (with Profit & Risk to be added):  
Dust Abatement: \$2,312  
TOTAL Other Costs (with Profit & Risk to be added): \$2,312

Other Costs (No Profit & Risk added):  
None.



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**Logging Conditions**

**Combination#: 1**                      White Fir                      50.00%  
   Ponderosa Pine                      46.00%  
   Lodgepole Pine                      100.00%

**Logging System:** Wheel Skidder                      **Process:** Feller Buncher  
**yarding distance:** Medium (800 ft)                      **downhill yarding:** Yes  
**tree size:** Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF  
**loads / day:** 10                      **bd. ft / load:** 4200  
**cost / mbf:** \$90.40  
**machines:** Log Loader (B)  
                         Stroke Delimber (B)  
                         Feller Buncher w/ Delimber  
                         Tire Skidder

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**Combination#: 2**                      White Fir                      50.00%  
   Ponderosa Pine                      54.00%

**Logging System:** Track Skidder                      **Process:** Manual Falling/Delimbing  
**yarding distance:** Medium (800 ft)                      **downhill yarding:** Yes  
**tree size:** Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF  
**loads / day:** 10                      **bd. ft / load:** 4200  
**cost / mbf:** \$105.02  
**machines:** Log Loader (B)  
                         Track Skidder

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### Logging Costs

Operating Seasons: 1.00	Profit Risk: 12%
Project Costs: \$7,384.25	Other Costs (P/R): \$2,312.00
Slash Disposal: \$0.00	Other Costs: \$0.00

Miles of Road

Road Maintenance: \$0.90

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
Ponderosa Pine	\$0.00	3.0	4.2
Lodgepole Pine	\$0.00	3.0	4.0



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**Logging Costs Breakdown**

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling / Brand & Paint	Other	Total
<b>White Fir</b>									
\$97.71	\$0.94	\$5.53	\$63.49	\$2.92	\$20.47	\$0.00	\$7.00	\$0.00	\$198.06
<b>Ponderosa Pine</b>									
\$98.29	\$0.94	\$5.53	\$65.00	\$2.92	\$20.72	\$0.00	\$7.00	\$0.00	\$200.40
<b>Lodgepole Pine</b>									
\$90.40	\$0.94	\$5.53	\$68.25	\$2.92	\$20.16	\$0.00	\$7.00	\$0.00	\$195.20

Specie	Amortization	Pond Value	Stumpage	Amortized
White Fir	\$0.00	\$399.96	\$201.90	\$0.00
Ponderosa Pine	\$0.00	\$334.16	\$133.76	\$0.00
Lodgepole Pine	\$0.00	\$365.00	\$169.80	\$0.00



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**Summary**

**Amortized**

Specie	MBF	Value	Total
White Fir	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	113	\$201.90	\$22,814.70
Ponderosa Pine	655	\$133.76	\$87,612.80
Lodgepole Pine	25	\$169.80	\$4,245.00

**Gross Timber Sale Value**

**Recovery:** \$114,672.50

**Prepared By:** Chris Weekly

**Phone:** 541-883-5681

## **Summary of Project Work**

### **Alter Eagle KL-341-17-52**



<b>Project No. 1:</b> Road Improvement and Contruction	<b>\$1,314.25</b>
<b>Project No. 2:</b> Slash Piling	<b>\$5,540.00</b>
<b>Project No. 3:</b> Road closures.	<b>\$530.00</b>
<b>Total:</b>	<b>\$7,384.25</b>

# Alter Eagle

## KL-341-17-52

### Other Costs

#### Road Maintenance

Move-in cost (grader):	\$400.00
Number of Miles to be Bladed:	1.5
Number of Bladings:	1
Total Miles	1.5
Miles / Hour for equipment:	0.5
Cost / Hour (grader with operator):	\$105.50
Total Grading Hours:	3
Grading Cost:	\$316.50
	<b>\$716.50</b>
<b>Total Cost:</b>	\$716.50
Cost / Mbf:	\$0.90

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

PP	657 MBF	83%	Average Load	4.2 MBF	No. of Loads	156
WF	113 MBF	14%	Average Load	4.3 MBF	No. of Loads	26
LP	30 MBF	4%	Average Load	4.0 MBF	No. of Loads	8
<b>Total:</b>	<b>793 Mbf</b>				<b>Total Loads</b>	<b>190</b>

Assume: 4 Trucks/Day  
 3 Trips/Day  
**12 Loads per Day**  
**16 Hauling Days**

16 Days of Dust Abatement  
 1.5 Hours/Day  
 \$88.00 Cost/Hour  
 24 Total Hours  
 \$200.00 Move in for Water Truck  
 \$2,312.00 Dust Abatement Cost  
**\$2,312.00 Total Cost**  
 \$2.92 Cost/Mbf

#### Other Costs Summary (Profit and Risk to be added in Appraisal)

\$716.50	Total cost for Road Maintenance	\$0.90 per MBF
\$2,312.00	Total cost for Dust Abatement	\$2.92 per MBF
<b>\$3,028.50</b>	<b>Total Other Costs</b>	<b>\$3.82 per Mbf</b>



# Alter Eagle

## KL-341-17-52

### Project Costs

#### Project #1 Road Improvement and Construction

Move in Cost Dozer:      \$400.00

#### Improvement

	Points	Distance (ft)	Feet/Hour	Hours	Cost/Hour	Cost
Open/Clear/Shape	A to B	2295	1000	2.3	\$132.50	\$304.75
Open/Clear/Shape	B to E	1686	1000	1.7	\$132.50	\$225.25
Open/Clear/Shape	C to D	1291	1000	1.3	\$132.50	\$172.25
	F to G	355	1000	0.4	\$132.50	\$53.00
	H to I	423	1000	0.4	\$132.50	\$53.00
	Total	6050			Total	\$808.25

#### Construction

	Points	Distance (ft)	Feet/Hour	Hours	Cost/Hour	Cost
Construct Spur	F to G	400	500	0.8	\$132.50	\$106.00
	Total	400			Total	\$106.00

#### Project #1 Summary

Equipment Costs	\$400.00
Improvement Cost	\$808.25
Construction Cost	\$106.00
<b>Project #1 Total</b>	<b>\$1,314.25</b>
per MBF	\$1.66

Alter Eagle

# KL-341-17-52

## Project Costs

### Project #2 Slash Piling

#### Unit Slash and Brush Piling

Move in Cost Excavator: \$400.00

		Acres/Hour	Total Hours	Cost/Hour	Piling Costs
Unit acres to be piled:	15	0.50	30.00	\$85.50	\$2,565.00

Move in Cost:	400.00
Piling Cost:	2,565.00
Unit Piling Total:	2,965.00

#### Landing Clean Up

Number of Landings: 10

Shovel Time: 1 Hour per Landing	Cost per Hour: \$125.00	Total Cost: \$1,250.00
Cat Time: 1 Hour per Landing	Cost per Hour: \$132.50	Total Cost: \$1,325.00
		Total Cost: \$2,575.00

### Project #2 Summary

Unit Slash Piling \$2,965.00  
 Landing Cleanup: \$2,575.00  
**Total: \$5,540.00**  
 per MBF \$6.99

### Project #3 Road Closure

#### Road Closures

4	Number of Closure Points (A, B, D, H)
1	Hour/Point (Travel Included)
\$132.50	Cost per Hour (Cat)
<b>\$530.00</b>	<b>Total</b>
\$0.67	per MBF

### Cost Summary All Projects

\$1,314.25	Project #1 Road Improvement
\$5,540.00	Project #2 Landing Slash Piling
\$530.00	Project #3 Road Closures
<b>\$7,384.25</b>	<b>Total</b>
\$9.31	per MBF

# *Alter Eagle*

*KL-341-17-52*  
*Cruise Report*



**SALE NAME:** Alter Eagle

**LEGAL DESCRIPTION:**

T32S, R7.5E, Portions of Sections 3 and 10, 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.

**FUND:**

100% B.O.F.

**ACREAGE:**

Gross Sale Acreage: 154 Acres

Net Sale Acreage: 154 Acres

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

**TREATMENT:**

The Timber Sale is a single tree selection cuts with cut trees marked with blue paint for all trees 5.0 inches DBH or larger. All orange marked trees are reserved from cutting. All trees less than 5.0 inches DBH are reserved from cutting in the sale area.

**CRUISE METHOD:**

Variable plot cruise with a ratio of a count plot for every measure plot. Fixed plot cruise for all sub-merchantable material (5.0” to 10.0”) DBH for all Areas.

**BASAL AREA FACTOR:**

Area	BAF	Type Acreage
Area 1	10 BAF	154

### **PLOT DESIGNATION:**

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

### **SAMPLE SIZE CALCULATIONS:**

AREA	CV%	DESIRED SE%	ACRES
Area 1	80	13	154

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

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 1                       $N = \frac{(1)^2(80)^2}{(13)^2} = 38 \text{ plots}$

#### Measurements and Grading:

- Ratio of a count plot for every measure plot.
- DBH and Height were measured on all “in” trees for measure plots.
- 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 10” 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:**

10.0” 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:** Sara Stack

**FINAL CRUISE RESULTS:**

AREA	CV%	SE%	ACRES
Area 1	80	8.1	154

**TIMBER DESCRIPTION****SAWLOG VOLUME:**

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

**TOTAL SAWLOG VOLUME**

SPECIES	AVE. DBH	GROSS VOL (MBF)	NET VOL (MBF)
Ponderosa Pine	19.7	663	655
White Fir	18.1	115	113
Lodgepole Pine	12.1	28	25

**TOTAL NET SAWLOG VOLUME: 793 MBF**

**GREEN PULP VOLUME:**

This volume was obtained from the fixed plot cruise (5.0" – 9.0" DBH).  
All material was graded green pulp, see grade table for minimum standards.

**TOTAL GREEN PULP VOLUME: ~1 MBF**

TC		PLOGSTVB		Log Stock Table - MBF																	
T33S R75E S10 TyVAR2				155.00		Project:		AEAGLE										Page		1	
						Acres		155.00										Date		2/25/2016	
																		Time		14:57:30	
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	14	4		4	.7							4						
PP		CR	CR	17	39		39	5.9			9	4	5	1	10		4	6			
PP		CR	CR	24	7		7	1.1	0						7						
PP		CR	CR	26	72	2.4	70	10.6			20	6	23	2	12			8			
PP		CR	CR	34	525	1.1	519	78.5			33	55	86	84	75	87	41	57			
PP		CR	CR	36	7		7	1.1				7									
PP		CR	CR	40	9		9	1.4									9				
PP		CR	GP	19	2		2	.4		2											
PP		CR	GP	20	3		3	.5			3										
PP		Totals			669	1.2	661	82.1	0	2	66	72	113	87	101	94	55	71			
WF		CR	CR	17	15		15	13.5			6						9				
WF		CR	CR	34	100	2.1	98	86.5				13	14	10	32	29					
WF		Totals			116	1.8	113	14.1			6	13	14	10	32	29	9				
LP		CR	CR	17	4		4	14.3			4										
LP		CR	CR	26	4		4	14.2			4										
LP		CR	CR	34	20	13.9	17	56.8				9	8								
LP		CR	GP	16	5		5	14.7			5										
LP		Totals			34	8.4	31	3.8			13	9	8								
Total		All Species			819	1.6	806	100.0	0	2	85	94	136	97	133	123	64	71			

TC PSTATS				PROJECT STATISTICS					PAGE	1	
				PROJECT		AEAGLE		DATE	2/25/2016		
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt
33S	75E	10	AEAGLE	VAR2		155.00		38	141	1	E
				TREES		ESTIMATED		PERCENT			
				PLOTS		TREES		TOTAL		SAMPLE	
				PER PLOT		TREES		TREES			
TOTAL			38	141	3.7						
CRUISE			18	74	4.1		3,114		2.4		
DBH COUNT											
REFOREST											
COUNT			20	67	3.3						
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			61	14.3	19.7	60	6.8	30.3	4,319	4,268	834
WHITE F			6	2.2	18.1	50	0.9	3.9	746	732	137
LP PINE			7	3.6	12.1	30	0.8	2.9	216	198	55
TOTAL			74	20.1	18.4	54	8.7	37.1	5,281	5,198	1,026
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			88.7	11.4	441	497	554				
WHITE F			48.3	21.5	424	540	656				
LP PINE			92.7	37.8	47	76	104				
TOTAL			92.2	10.7	411	461	510	340	85	38	
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			77.1	9.9	83	92	101				
WHITE F			46.9	20.9	78	99	120				
LP PINE			78.7	32.0	14	21	28				
TOTAL			80.3	9.3	78	86	94	258	65	29	
CL	68.1	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5		10	15	
PPINE			61.0	9.9	13	14	16				
WHITE F			214.2	34.7	1	2	3				
LP PINE			253.7	41.2	2	4	5				
TOTAL			48.6	7.9	19	20	22	95	24	11	
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			54.0	8.8	28	30	33				
WHITE F			224.6	36.4	3	4	5				
LP PINE			239.7	38.9	2	3	4				
TOTAL			39.1	6.3	35	37	39	61	15	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	
PPINE			62.2	10.1	3,837	4,268	4,698				
WHITE F			239.8	38.9	447	732	1,016				
LP PINE			226.9	36.8	125	198	271				
TOTAL			50.2	8.1	4,775	5,198	5,621	101	25	11	
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			59.1	9.6	754	834	914				
WHITE F			238.4	38.7	84	137	189				



TC PSTATS			<b>PROJECT STATISTICS</b>						PAGE	<b>2</b>
			<b>PROJECT</b>			<b>AEAGLE</b>			DATE	2/25/2016
<b>TWP</b>	<b>RGE</b>	<b>SC</b>	<b>TRACT</b>	<b>TYPE</b>	<b>ACRES</b>		<b>PLOTS</b>	<b>TREES</b>	<b>CuFt</b>	<b>BdFt</b>
33S	75E	10	AEAGLE	VAR2	155.00		38	141	1	E
CL	68.1		COEFF		<b>NET CUFT FT/ACRE</b>			<b># OF PLOTS REQ.</b>		<b>INF. POP.</b>
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
LP PINE			228.1	37.0	35	55	76			
<b>TOTAL</b>			46.6	7.6	949	1,026	1,104	87	22	10

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
<div>T33S R75E S10 TyVAR2155.00</div>						Project: AEAGLE										Page 1					
						Acres 155.00										Date 2/25/2016					
																Time 14:58:40					
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			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	
					Def%	Gross	Net		6-8	9-14	15-21	22+	12-20	21-30	31-35	36-99					
PP		CR	CR	99	1.2	4,281	4,230	656	10	42	38	11	7	12	79	2	29	11	190	1.27	22.3
PP		CR	GP	1		38	38	6	100				100				20	6	25	0.33	1.5
PP Totals				82	1.2	4,319	4,268	661	10	41	38	11	7	12	79	2	29	11	179	1.23	23.8
WF				100	1.8	746	732	113	5	33	62		14		86		27	12	209	1.46	3.5
WF Totals				14	1.8	746	732	113	5	33	62		14		86		27	12	209	1.46	3.5
LP		CR	CR	85	9.7	187	169	26	33	67			17	17	67		25	8	61	0.66	2.7
LP		CR	GP	15		29	29	5	100				100				16	7	25	0.50	1.2
LP Totals				4	8.4	216	198	31	43	57			29	14	57		23	8	51	0.63	3.9
Totals					1.6	5,281	5,198	806	11	41	40	9	9	10	79	2	28	10	167	1.19	31.2

# LOGGING PLAN

OF TIMBER SALE CONTRACT NO. KL-341-17-52  
 ALTER EAGLE  
 LOCATED IN PORTIONS OF SECTIONS 3 & 10  
 T33S, R7.5E, W.M.  
 KLAMATH COUNTY, OREGON

