



Timber Sale Appraisal
Rough Diamond
Sale KL-341-2017-50-

District: Klamath/Lake

Date: September 14, 2016

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$385,174.76	\$0.00	\$385,174.76
		Project Work:	(\$15,341.90)
		Advertised Value:	\$369,832.86



Timber Sale Appraisal Rough Diamond Sale KL-341-2017-50-

District: Klamath/Lake

Date: September 14, 2016

Timber Description

Location: Portions of Section 3, T29S, R7E, W.M., Klamath County, Oregon.

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
White Pine	3	0	100
Lodgepole Pine	12	0	95

Volume by Grade	Pulp	Camprun	Total
White Pine	1,138	0	1,138
Lodgepole Pine	0	1,741	1,741
Total	1,138	1,741	2,879

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

All material in this sale is Lodgepole Pine. White Pine species designation is used in this appraisal to identify pulp material.

Log Markets: Klamath Falls, Medford, Roseburg, and Gilchrist.

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):

None.

Other Costs (No Profit & Risk):

Scaling/Branding & Painting (merch material): \$7/MBF x 1,741 MBF = \$12,187

Branding & Painting (pulp material): \$2/MBF x 1,138 MBF = \$2,276

TOTAL Other Costs (No Profit & Risk) = \$14,463



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Logging Conditions

Combination#: 1	White Pine	100.00%
	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: 4500
cost / mbf:	\$84.37	
machines:	Log Loader (B) Stroke Delimber (B) Feller Buncher w/ Delimber Tire Skidder	



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Logging Costs

Operating Seasons: 1.00	Profit Risk: 10%
Project Costs: \$15,341.90	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$14,463.00

Miles of Road

Road Maintenance: \$0.35

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

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
White Pine	\$0.00	1.0	4.0
Lodgepole Pine	\$0.00	3.0	4.5



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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
White Pine									
\$84.37	\$0.35	\$1.52	\$195.00	\$0.00	\$28.12	\$0.00	\$0.00	\$5.02	\$314.38
Lodgepole Pine									
\$84.37	\$0.37	\$1.52	\$60.67	\$0.00	\$14.69	\$0.00	\$0.00	\$5.02	\$166.64

Specie	Amortization	Pond Value	Stumpage	Amortized
White Pine	\$0.00	\$349.38	\$35.00	\$0.00
Lodgepole Pine	\$0.00	\$365.00	\$198.36	\$0.00



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Summary

Amortized

Specie	MBF	Value	Total
White Pine	0	\$0.00	\$0.00
Lodgepole Pine	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
White Pine	1,138	\$35.00	\$39,830.00
Lodgepole Pine	1,741	\$198.36	\$345,344.76

Gross Timber Sale Value

Recovery: \$385,174.76

Prepared By: Jon Fitch

Phone: 541-883-5681

Rough Diamond

341-17-50

Other Costs



Road Maintenance

Move-in cost (grader): \$400.00

Haul Rd

Number of Bladings: 1

After Sawlog hauling, After Chipwood hauling

Number of Miles to be Bladed: 1.10

Total Miles 1.1

Miles / Hour for equipment: 0.5

Cost / Hour (grader with operator): \$105.50

Total Grading Hours: 2

Grading Cost: \$211.00

Total Cost: \$611.00

Cost / MBF: \$0.35 (sawlog only)

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

Sawlog

LP	1741 MBF	Average Load	4.5 MBF	No. of Load	387
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Total: 1741 MBF

Pulp / Chip

Total	11383 Tons	Average Load	33 Tons	No. of Load	345
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1138 MBF

Total MBF 2879 all material

Total Loads 732

Assume: 3 Trucks/Day

43 Hauling Days

(sawlog) 3 Trips/Day

1.5 Hours/Day

9 Loads per Day

\$24.00 Cost/Hour

43 Hauling Days

\$1,548.00 Sawlog Cost of Branding

\$1.12 per MBF (sawlog only)

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

\$611.00 Total cost for Road Maintenance

\$0.35 per MBF (sawlog only)

\$1,548.00 Total Cost for Log Branding

\$0.89 per MBF (sawlog only)

\$2,159.00 Total Other Costs

\$1.24 per MBF (sawlog only)

Rough Diamond

341-17-50

Project Costs



Project #1 Road Improvement

Move in Cost Grader: \$400.00

Improvement	Points	Distance (ft)	Feet/Hour	Hours	Cost/Hour	Cost
Open/Clear/Shape	C to D	1,209	1500	0.8	\$105.50	\$84.40
Total		1,209				\$84.40
Total						\$484.40

Project #1 Summary

Equipment Costs	\$400.00
Open/Clear Shape	\$84.40
Project #1 Total	\$484.40
per MBF	\$0.17 (sawlog only)

Project #2 Road Construction

Move in Cost Dozer: \$400.00

Improvement	Points	Distance (ft)	Feet/Hour	Hours	Cost/Hour	Cost
Construction	A to B	1,949	500	3.9	\$132.50	\$516.75
Construction	D to E	3,350	500	6.7	\$132.50	\$887.75
Construction	F to G	2915	500	5.8	\$132.50	\$768.50
Construction	H to I	1927	500	3.9	\$132.50	\$516.75
Construction	J to K	381	500	0.8	\$132.50	\$106.00
Construction	L to K	1,688	500	3.4	\$132.50	\$450.50
Construction	J to K	1,750	500	3.5	\$132.50	\$463.75
Total		13,960		24.1		\$3,710.00

Temporary Approach

yards	50		
\$ / yard	\$12.50		
Cost of material	\$625.00		
hrs of install	4		
hrs of removal	4		
cost / hr	\$132.50		
labor	\$1,060.00		
Total Cost of approach			\$1,685.00

*construction permit granted through agreement with ODOT and ODF

Project #2 Summary

move in cost	\$400.00
Construction	\$3,710.00
approach	\$1,685.00
Project #2 Total	\$5,795.00
per MBF	\$2.01

Rough Diamond

341-17-50

Project Costs



Project #3 Road Closures

\$400.00 move in cost for excavator
5 Number of Closure Points (B, C, F, H, J)
1 Hours / Point (include travel)
\$ 132.50 Cost / Hour (Cat)
5 Total Road Blocking Hours
\$ 662.50 Closure Cost

Total Cost Project #3 \$ 1,062.50

Project #4 Brush / Slash Piling

Acres	Area
16	200 ft. North from center line on Hwy 138
18	201 ft. South from center line on Hwy 138
6	camp site
40	

2	hour / acres
\$100.00	cost / hour
80	total hours
\$8,000.00	total cost

Rough Diamond

341-17-50

Project Costs



Other Costs Summary

\$611.00	Total cost for Road Maintenance	\$0.35 per MBF	(sawlog only)
\$1,548.00	Total cost for Log Branding	\$1.12 per MBF	(sawlog only)
\$2,159.00	Total Other Costs	\$1.47 per MBF	(sawlog only)

Project Cost Summary

\$484.40	Project #1 Road Improvement	\$0.28 per MBF	(sawlog only)
\$5,795.00	Project #2 Road Construction	\$3.33 per MBF	(sawlog only)
\$1,062.50	Project #3 Road Closure	\$0.61 per MBF	(sawlog only)
\$8,000.00	Project #4 Brush / Slash / PCT Piling	\$4.60 per MBF	(sawlog only)
\$15,341.90	Total	\$8.81 per MBF	(sawlog only)

Rough Diamond

341-17-50
Cruise Report



SALE NAME: Rough Diamond

LEGAL DESCRIPTION:

T29S, R7E, Section 3, 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% Board of Forestry

ACREAGE:

Gross Acres:	642	Acres
Exclusion Acres:	11	Acres
Net Acreage:	631	Acres

Mapping was accomplished using a District and State Geographic Information System (GIS) data and a with a code-grade handheld GPS receiver.

TREATMENT:

(A) General Prescription:

- a. Overstory removal of merchantable trees leaving the most vigorously growing trees
 - i. Residual 5" to 10" DBH trees at 194 trees per acre
 1. Residual trees WILL NOT be evenly spaced but left in groups and clumps
 2. Target BA: 40 – 60 sq. ft. / acre
 3. Two additional snags created per acre in trees over 8" dbh
- b. 3 trees per acre over 10" DBH will be left
 - i. unmerchantable trees are satisfactory leave trees
 - ii. Cull trees are satisfactory leave trees
 - iii. Trees will be retained for structure and habit in addition to Sang Creation (section 2335)
 - iv. trees with heavy infestation of mistletoe and other disease are not suitable for leave trees
 - v. Can be in groups

(B) In the 300 foot buffer of Hwy 138 AND the dispersed camp area:

- a. Sanitation removal of merchantable and sub-merchantable trees
 1. Groups of overstory and single trees left
 - a. Cut trees at risk of falling into Highway 138
 - b. Retain structure of mature trees
 - c. Residual Basal Area target: 80 sq. ft. / area

CRUISE METHOD:

Variable plot cruise with a ratio of 1 count plot for every 2 measure plots. Fixed plot cruise for all sub-merchantable material (5.0" to 9.0") DBH.

BASAL AREA FACTOR:

Area	BAF	Type Acreage
Area I	5 BAF	631 acres

PLOT DESIGNATION:

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

SAMPLE SIZE CALCULATIONS:

Area I 89 plots

Measurements and Grading:

- Ratio of 1 measure plot for every 2 count 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 submerch 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 sub-merchantable 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:

Jon Fitch, Chris Weekly, Ed Scheick, James Monteil.

FINAL CRUISE RESULTS:

AREA	CV%	SE%	ACRES
Area I	65.2	6.9	631

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)
Lodgepole Pine	11.6	1,832	1,741

TOTAL NET SAWLOG VOLUME: 1,741 MBF

GREEN PULP VOLUME:

This volume was obtained from the fixed plot cruise (5.0" – 10.0" DBH) for Timber Sale Area. All material was graded green pulp, see grade table for minimum standards.

Lodgepole Pine Pulp Material

Fixed Plot Volume (5" – 8.9" DBH)

Fixed cruise volume	1,538 bf / ac
Variable cruise volume	266 bf / ac
TOTAL	1,804 bf / ac

Total Acres	x	BF/Ac	=	BF	
631 Ac	x	1804 / ac	=	1,138,324 BF	= 1,138 MBF

Total net Pulp Volume = 1,138 MBF

1 MBF	=	10 Tons
1,138 MBF	=	11,383Tons

121°53'30"W 121°53'0"W 121°52'30"W 121°52'0"W 121°51'30"W

43°53'0"N 43°53'30"N 43°50'N 43°50'30"N

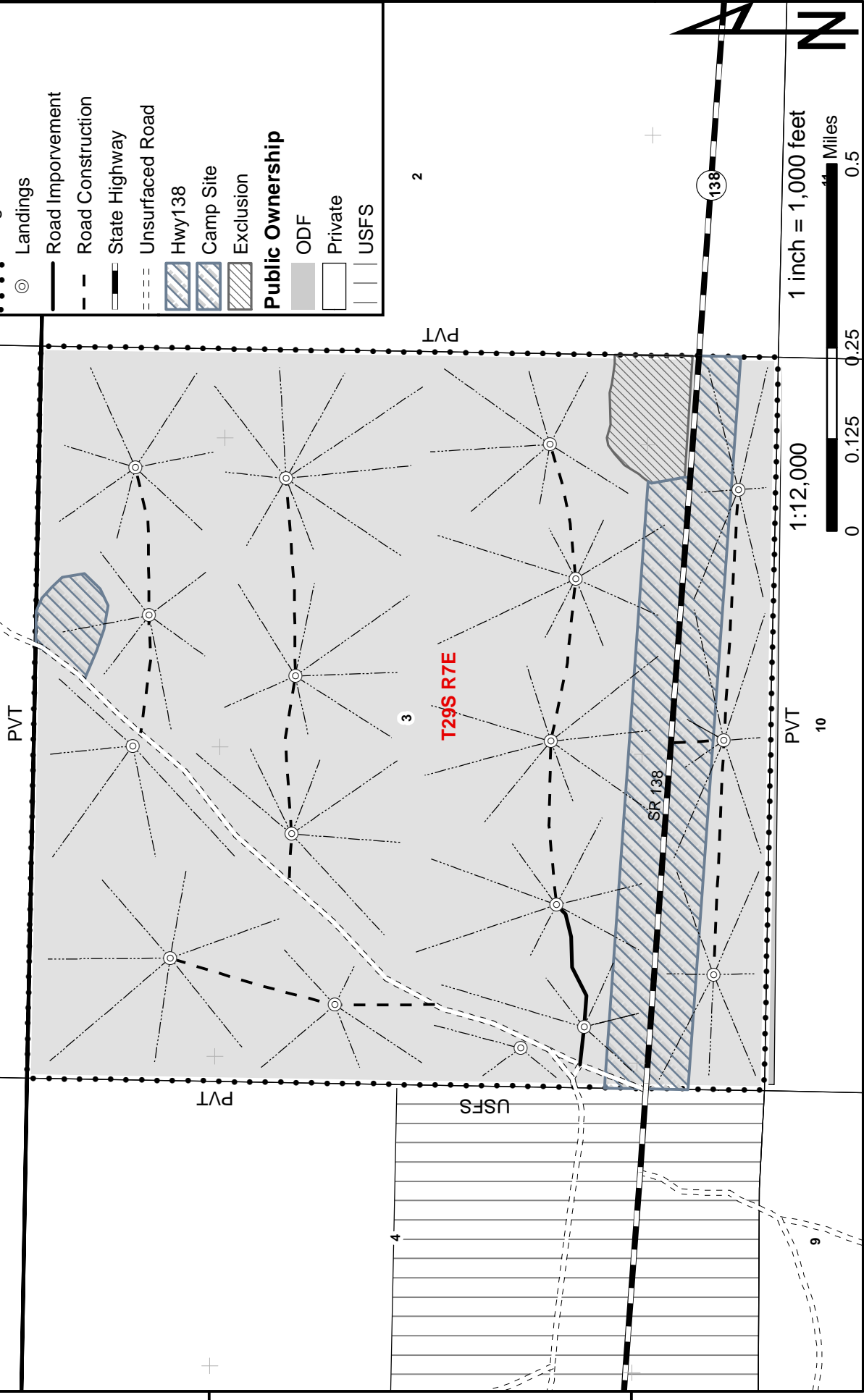
LOGGING PLAN
of Timber Sale Contract No. KL-341-17-50
ROUGH DIAMOND
T28S, R7E, Section 3, W.M
Klamath County , Oregon

Legend

- Rough Diamond Timber Sale
- Landings
- Road Improvement
- Road Construction
- State Highway
- Unsurfaced Road
- Hwy138
- Camp Site
- Exclusion

Public Ownership

- ODF
- Private
- USFS



1:12,000
1 inch = 1,000 feet
0 0.125 0.25 0.5 Miles