



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Shoe String

## Sale KL-341-2018-31-

District: Klamath/Lake

Date: August 23, 2017

### Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$392,406.54	\$0.00	\$392,406.54
		Project Work:	(\$33,839.94)
		Advertised Value:	\$358,566.60



Timber Sale Appraisal  
Shoe String  
Sale KL-341-2018-31-

**District: Klamath/Lake**

**Date: August 23, 2017**

**Timber Description**

**Location:** Portions of Sections 16, 17, 20, 21, and 28, T32S. R7.5E, W.M., Klamath County, Oregon

**Stand Stocking: 20%**

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	27	0	95
White Fir	17	0	95
Sugar Pine	25	0	90
Ponderosa Pine	17	0	95

Volume by Grade	Camprun	Total
Douglas - Fir	33	33
White Fir	411	411
Sugar Pine	529	529
Ponderosa Pine	1,276	1,276
<b>Total</b>	2,249	2,249

**Comments:** Pond Values Used: Local Pond Values, June 2017.

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: \$15,377.76

TOTAL Other Costs (with Profit & Risk to be added) = \$15,377.76

Other Costs (No Profit & Risk added):

None.





“PROFESSIONAL FORESTRY”

Timber Sale Appraisal  
Shoe String

Sale KL-341-2018-31-

District: Klamath/Lake

Date: August 23, 2017

**Logging Costs**

<b>Operating Seasons:</b> 1.00	<b>Profit Risk:</b> 14%
<b>Project Costs:</b> \$33,839.94	<b>Other Costs (P/R):</b> \$15,378.00
<b>Slash Disposal:</b> \$0.00	<b>Other Costs:</b> \$0.00

**Miles of Road**

**Road Maintenance:** \$1.06

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	3.0	4.0
White Fir	\$0.00	3.0	4.1
Sugar Pine	\$0.00	3.0	4.2
Ponderosa Pine	\$0.00	3.0	4.5



Timber Sale Appraisal  
Shoe String

Sale KL-341-2018-31-

District: Klamath/Lake

Date: August 23, 2017

**Logging Costs Breakdown**

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling / Brand & Paint	Other	Total
<b>Douglas - Fir</b>									
\$107.58	\$1.11	\$1.95	\$68.25	\$6.84	\$26.00	\$0.00	\$7.00	\$0.00	\$218.73
<b>White Fir</b>									
\$104.20	\$1.11	\$1.95	\$66.58	\$6.84	\$25.30	\$0.00	\$7.00	\$0.00	\$212.98
<b>Sugar Pine</b>									
\$105.85	\$1.17	\$1.95	\$68.09	\$6.84	\$25.75	\$0.00	\$7.00	\$0.00	\$216.65
<b>Ponderosa Pine</b>									
\$104.44	\$1.11	\$1.95	\$60.67	\$6.84	\$24.50	\$0.00	\$7.00	\$0.00	\$206.51

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$466.52	\$247.79	\$0.00
White Fir	\$0.00	\$465.51	\$252.53	\$0.00
Sugar Pine	\$0.00	\$364.85	\$148.20	\$0.00
Ponderosa Pine	\$0.00	\$364.85	\$158.34	\$0.00



Timber Sale Appraisal  
Shoe String

Sale KL-341-2018-31-

District: Klamath/Lake

Date: August 23, 2017

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**Summary**

**Amortized**

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

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	33	\$247.79	\$8,177.07
White Fir	411	\$252.53	\$103,789.83
Sugar Pine	529	\$148.20	\$78,397.80
Ponderosa Pine	1,276	\$158.34	\$202,041.84

**Gross Timber Sale Value**

Recovery: \$392,406.54

Prepared By: James Monteil

Phone: 541-883-5681

## Summary of Project Work



"STEWARDSHIP IN FORESTRY"

### **Shoe String**

341-18-31

<b>Project No. 1:</b> Road Improvement	<b>\$2,249.44</b>
<b>Project No. 2:</b> Unit Slash and Brush Piling	<b>\$21,362.50</b>
<b>Project No. 3:</b> Fell Skid and Pile Submerchantable Trees	<b>\$530.00</b>
<b>Project No. 4:</b> Spot Rocking	<b>\$5,328.00</b>
<b>Total:</b>	<b>\$33,839.94</b>

# Shoe String

341-18-31

## Other Costs

### Road Maintenance

Move-in cost (grader):	\$400.00
Number of Bladings:	2
Number of Miles to be Bladed:	4.7
Miles / Hour for equipment:	0.5
Cost / Hour (grader with operator):	\$105.50
Total Grading Hours:	9
Grading Cost:	<u>\$1,983.40</u>
<b>Total Cost:</b>	<b><u>\$2,383.40</u></b>
Cost / MBF:	\$1.06

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

PP	1276 MBF	57%	Average Load	4.5 MBF	No. of Loads	284
WF	411 MBF	18%	Average Load	4.1 MBF	No. of Loads	100
SP	529 MBF	24%	Average Load	4.2 MBF	No. of Loads	126
DF	33 MBF	1%	Average Load	4.0 MBF	No. of Loads	8
<b>Total:</b>	<b>2249 MBF</b>				<b>Total Loads</b>	<b>518</b>

Assume: 4 Trucks/Day  
3 Trips/Day  
12 Loads per Day

43 Hauling Days  
4 Hours/Day  
\$88.00 Cost/Hour  
173 Total Hours  
\$170.00 Move in for Water Truck  
\$15,364.72 Dust Abatement Cost  
**\$15,364.72** Total Cost  
\$6.83 Cost/MBF

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

<u>\$15,364.72</u> Total cost for Dust Abatement	<u>\$6.83</u> per MBF
<b><u>\$15,364.72</u></b> Total Other Costs	<b><u>\$6.83</u></b> per MBF



# Shoe String

341-18-31

## Project Costs

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*Project #1 Road Improvement*

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Move in Cost Dozer      \$400.00

### Improvement

	<b>Points</b>	<b>Distance</b>	<b>Feet/Hour</b>	<b>Hours</b>	<b>Cost/Hour</b>	<b>Cost</b>
Open/Clear/Shape	A to B	3153	1000	3.2	\$132.50	\$417.77
Open/Clear/Shape	C to D	5200	1000	5.2	\$132.50	\$689.00
Open/Clear/Shape	E to F	<u>5605</u>	1000	5.6	\$132.50	<u>\$742.66</u>
	Total	13958			Total	<u>\$1,849.44</u>

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*Project #1 Summary*

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Move in	\$400.00
Open/Clear Shape	<u>\$1,849.44</u>
<b>Project #1 Total</b>	<b><u>\$2,249.44</u></b>
per MBF	\$1.00

# Shoe String

## 341-18-31

### Project Costs

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#### *Project #2 Slash Piling*

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#### *Unit Slash and Brush Piling*

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Move in Cost Excavator: \$400.00

		Acres/Hour	Total Hours	Cost/Hour	Piling Costs
Acres to be piled:	100	0.50	200.00	\$85.50	\$17,100.00

Move in Cost:	400.00
Piling Cost:	<u>17,100.00</u>
Unit Piling Total:	17,500.00

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#### *Landing Clean Up*

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Number of Landings: 15

Shovel Time: 1 Hour per Landing	Cost per Hour: \$125.00	Total Cost: \$1,875.00
Cat Time: 1 Hour per Landing	Cost per Hour: \$132.50	Total Cost: <u>\$1,987.50</u>
		Total Cost: \$3,862.50

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#### *Project #2 Summary*

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Unit Slash Piling	\$17,500.00
Landing Cleanup:	<u>\$3,862.50</u>
<b>Total:</b>	<b>\$21,362.50</b>
per MBF	\$9.50

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#### *Project #3 Felling, Skidding, and Piling of Submerchantable Trees*

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Total Sub-Sawlog Volume: 70 MBF

Fell and Skid/MBF:	\$55.00
Sort/MBF:	<u>\$15.00</u>
<b>Total</b>	<b><u>\$4,900.00</u></b>
per MBF	<u>\$2.18</u>

# Shoe String

## 341-18-31

### Project Costs

#### Project #4 Spot Rocking

#### Spot Rocking - Delivered

<b>3/4 -</b>	<b>Rock Size</b>	
180	Cubic Yards	
1.5	Tons per Cubic Yard	
270	Tons	
\$14.00	cost per ton (delivered)	
<b>\$3,780.00</b>	<b>Total</b>	
\$1.68	per MBF	

#### Rock Spreading (Grader)

	8	Total Grader Hours
	\$105.50	Cost per Hour
	<u>\$844.00</u>	Total
	8	Total Water Truck Hours
	\$88.00	Cost per Hour
	<u>\$704.00</u>	Total
	<b>\$1,548.00</b>	<b>Total Rock Spreading</b>
	<u>\$0.69</u>	per MBF

#### Project #4 Summary

Total cost Rock		\$3,780.00
Total cost Spreading		<u>\$1,548.00</u>
<b>Total</b>		<b><u>\$5,328.00</u></b>
per MBF		\$2.37

#### Cost Summary All Projects

\$2,249.44	Project #1 Road Improvement
\$21,362.50	Project #2 Unit Slash and Brush Piling
\$4,900.00	Project #3 Fell, Skid, and Pile Submerchantable Trees
\$5,328.00	Project #4 Spot Rocking
<b><u>\$33,839.94</u></b>	<b>Total</b>
\$15.05	per MBF

# *Shoe String*

*KL-341-18-31*

*Cruise Report*



"STEWARDSHIP IN FORESTRY"

**SALE NAME:** Shoe String

**LEGAL DESCRIPTION:**

Portions of Sections 16, 17, 20, 21, and 28, T32S, R7.5E, 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% BOF

**ACREAGE:**

Gross Sale Acreage: 315 Acres

Net Sale Acreage: 315 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 all unmarked trees 5.0 inches DBH or larger to be cut. 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	14 BAF	315

**PLOT DESIGNATION:**

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

**SAMPLE SIZE:**

61 plots were taken which resulted in a sampling error of 8.8%. Cruise plots and count plots were taken at a 1:1 ratio.

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:**

Shoe String \Cruise report

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:** James Monteil, Chris Weekly, Ed Scheick, and Jon Fitch

**FINAL CRUISE RESULTS:**

AREA	CV%	SE%	ACRES
Area 1	68.7	8.8	315

**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	17.2	1296	1276
White Fir	16.6	412	411
Sugar Pine	24.6	539	529
Doug Fir	27.3	34	33

**TOTAL NET SAWLOG VOLUME: 2249 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: 70 MBF**

SPECIES	AVE DBH	NET VOL MBF
ALL	7.3	70

**Log Stock Table - MBF**  
**Project: STRING**

**T032 R007 S20 TVARI**

**T032 R007 S20 TVARI**

**Twp Rge Sec Tract Type Acres Plots Sample Trees Page**  
**032 007 20 129 VARI 315.00 61 142 Date 5/23/2017**  
**Time 9:39:44AM**

Spp	T	S	So	Gr	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+
PP		1	CR		16		34	9.8	30	2.3				2	17	4		7				
PP		1	CR		17		58	2.9	56	4.4			22	26	8							
PP		1	CR		20		21		21	1.7					6	6	10					
PP		1	CR		24		18		18	1.4					11	7						
PP		1	CR		26		119		119	9.2			90	17	11							
PP		1	CR		32		577	1.2	570	44.3				13	44	64	165	228	56			
PP		1	CR		34		458	1.9	449	34.9			67	185	108	76	13					
PP		1	CR		43		16		16	1.2			16									
PP		1	GP		15		2		2	.1		2										
PP		1	GP		16		6		6	.4				6								
PP			Totals				1,307	1.6	1,286	56.9		2		195	247	174	173	194	238	63		
SP		1	CR		16		29	5.9	27	5.1				3	1	4	4	5	10			
SP		1	CR		20		2		2	.4			2									
SP		1	CR		26		11		11	2.0						8						
SP		1	CR		28		14		14	2.7			3					11				
SP		1	CR		32		473	1.7	465	87.8			6	36	31	45	25	155	45	103	19	
SP		1	CR		34		11		11	2.0					11							
SP			Totals				539	1.8	529	23.4			11	41	43	49	37	171	55	103	19	
WF		1	CR		17		11		11	2.7				11								
WF		1	CR		26		46		46	11.2				10	5			15	16			
WF		1	CR		34		355	.4	354	86.1			75	44	63	61	53	58				
WF			Totals				412		411	18.2			75	66	68	61	53	73	16			
DF		1	CR		17		6	6.7	5	15.5									5			
DF		1	CR		34		28	.7	28	84.5			3		4	3		9	9			
DF			Totals				34	1.6	33	1.5			3		4	3		9	14			
Total All Species							2,292	1.4	2,259	100.0		2		284	353	289	286	285	490	148	103	19



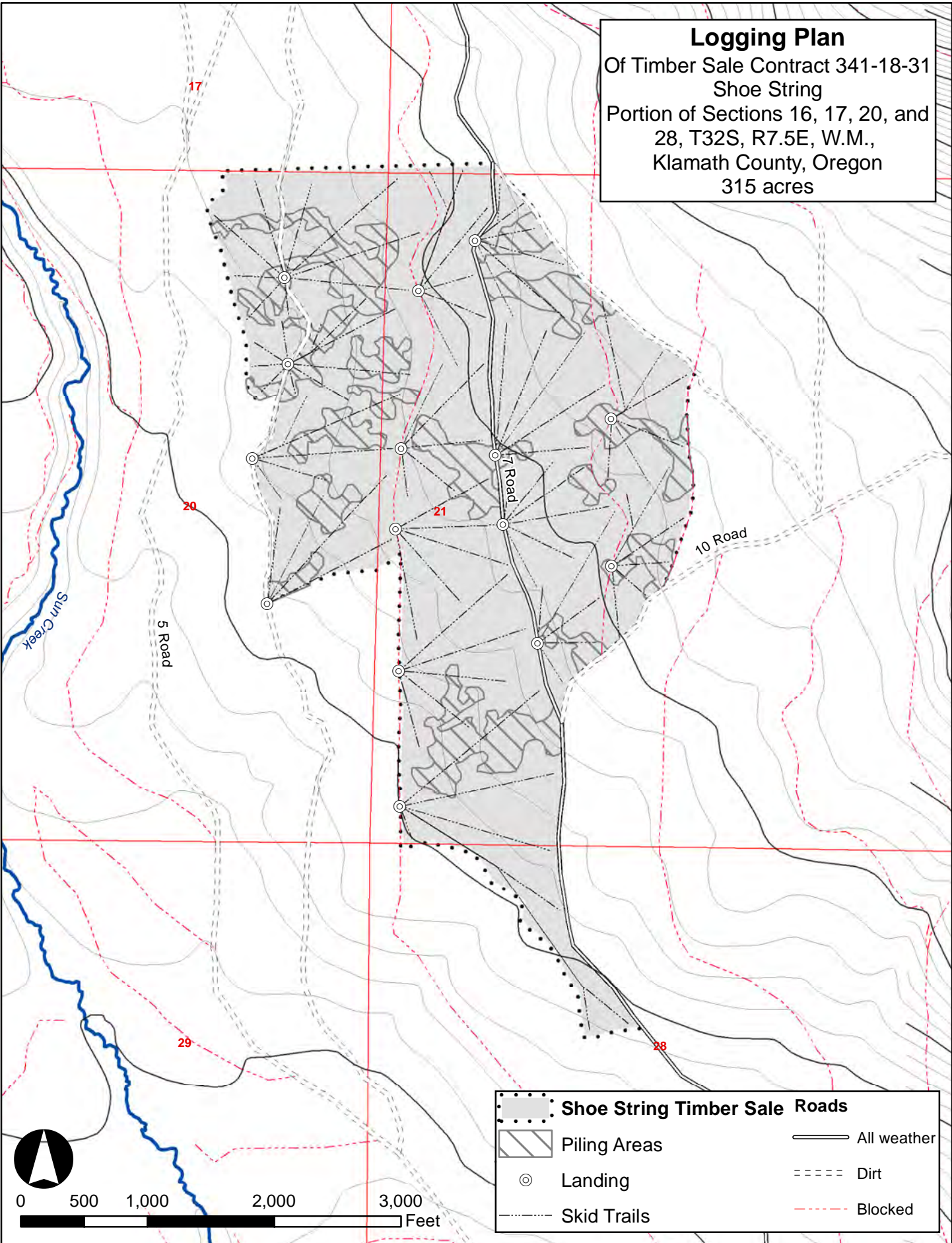
<b>T032 R007 S20 TVARI</b>										<b>T032 R007 S20 TVARI</b>				
<b>Twp</b>	<b>Rge</b>	<b>Sec</b>	<b>Tract</b>	<b>Type</b>	<b>Acres</b>	<b>Plots</b>	<b>Sample Trees</b>	<b>CuFt</b>	<b>BdFt</b>					
032	007	20	129	VARI	315.00	61	142	1	E					

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
								Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/		
				Def%	Gross	Net		Net MBF	4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft		Lf
PP	1	CR	99	1.6	4,126	4,060	1,279	48	32	21			8	11	80	1	28	9	122	0.95	33.3
PP	1	GP	1		24	24	7	25	75				100				16	6	20	0.35	1.2
<b>PP</b>	<b>Totals</b>		57	1.6	4,150	4,084	1,286	0	48	32	20		9	11	79	1	28	9	118	0.94	34.5
SP	1	CR	100	1.8	1,710	1,680	529	18	24	58			5	5	90		29	12	262	1.84	6.4
<b>SP</b>	<b>Totals</b>		23	1.8	1,710	1,680	529	18	24	58			5	5	90		29	12	262	1.84	6.4
WF	1	CR	100	.3	1,308	1,304	411	51	28	22			3	11	86		32	10	145	1.02	9.0
<b>WF</b>	<b>Totals</b>		18	.3	1,308	1,304	411	51	28	22			3	11	86		32	10	145	1.02	9.0
DF	1	CR	100	1.6	107	105	33	21	37	42			16		84		31	14	319	2.02	.3
<b>DF</b>	<b>Totals</b>		1	1.6	107	105	33	21	37	42			16		84		31	14	319	2.02	.3
<b>Type</b>	<b>Totals</b>			1.4	7,275	7,173	2,259	0	41	29	30		7	9	83	1	29	10	143	1.08	50.2

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				STRING				DATE	5/23/2017	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
032	007	20	129	VARI	315.00	61	290	1	E	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		61	290	4.8						
CRUISE		30	142	4.7	11,523		1.2			
DBH COUNT										
REFOREST										
COUNT		29	147	5.1						
BLANKS		2								
100 %										
<b>STAND SUMMARY</b>										
	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	83	25.1	17.1	47	9.7	39.9	4,150	4,084	899	899
SUG PINE	28	4.0	24.6	59	2.7	13.2	1,710	1,680	342	342
WHITE F	28	7.3	16.6	48	2.7	10.9	1,308	1,304	291	291
DOUG-FIR	3	.2	27.3	74	0.1	.7	107	105	21	21
<b>TOTAL</b>	<i>142</i>	<i>36.6</i>	<i>18.0</i>	<i>49</i>	<i>15.2</i>	<i>64.7</i>	<i>7,275</i>	<i>7,173</i>	<i>1,554</i>	<i>1,554</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
PPINE	94.9	10.4		243	271	300				
SUG PINE	87.9	16.9		641	771	901				
WHITE F	87.1	16.8		220	264	309				
DOUG-FIR	45.1	31.2		484	703	923				
<b>TOTAL</b>	<i>112.4</i>	<i>9.4</i>		<i>342</i>	<i>378</i>	<i>413</i>	<i>505</i>	<i>126</i>	<i>56</i>	
CL:	68.1 %	COEFF	<b>SAMPLE TREES - CF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
PPINE	82.0	9.0		51	56	61				
SUG PINE	75.6	14.5		125	147	168				
WHITE F	68.9	13.3		47	55	62				
DOUG-FIR	47.7	33.0		93	139	184				
<b>TOTAL</b>	<i>96.8</i>	<i>8.1</i>		<i>69</i>	<i>75</i>	<i>81</i>	<i>374</i>	<i>94</i>	<i>42</i>	
CL:	68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
PPINE	87.6	11.2		22	25	28				
SUG PINE	177.1	22.7		3	4	5				
WHITE F	157.0	20.1		6	7	9				
DOUG-FIR	553.0	70.7		0	0	0				
<b>TOTAL</b>	<i>66.9</i>	<i>8.6</i>		<i>33</i>	<i>37</i>	<i>40</i>	<i>179</i>	<i>45</i>	<i>20</i>	
CL:	68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
PPINE	80.9	10.3		36	40	44				
SUG PINE	161.2	20.6		10	13	16				
WHITE F	153.9	19.7		9	11	13				
DOUG-FIR	578.2	74.0		0	1	1				
<b>TOTAL</b>	<i>59.5</i>	<i>7.6</i>		<i>60</i>	<i>65</i>	<i>70</i>	<i>141</i>	<i>35</i>	<i>16</i>	
CL:	68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
PPINE	94.7	12.1		3,589	4,084	4,579				
SUG PINE	167.8	21.5		1,319	1,680	2,040				
WHITE F	158.6	20.3		1,039	1,304	1,569				
DOUG-FIR	572.1	73.2		28	105	182				
<b>TOTAL</b>	<i>68.7</i>	<i>8.8</i>		<i>6,542</i>	<i>7,173</i>	<i>7,803</i>	<i>188</i>	<i>47</i>	<i>21</i>	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	STRING			DATE	5/23/2017	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
032	007	20	129	VARI	315.00		61	290	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		89.4	11.4	796	899	1,002				
SUG PINE		164.7	21.1	270	342	415				
WHITE F		154.3	19.7	234	291	349				
DOUG-FIR		570.1	72.9	6	21	36				
<b>TOTAL</b>		<i>64.7</i>	<i>8.3</i>	<i>1,425</i>	<i>1,554</i>	<i>1,682</i>	<i>167</i>	<i>42</i>	<i>19</i>	

**Logging Plan**  
Of Timber Sale Contract 341-18-31  
Shoe String  
Portion of Sections 16, 17, 20, and  
28, T32S, R7.5E, W.M.,  
Klamath County, Oregon  
315 acres



- Shoe String Timber Sale Roads
- Piling Areas
- Landing
- All weather
- Dirt
- Blocked
- Skid Trails

