



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Triple Arc Sale 341-04-32

District: Klamath/Lake

Date: 8/11/03

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$75,093.03	\$0.00	\$75,093.03
		<b>Project Work</b>	(\$26,127.00)
		<b>Advertised Value</b>	\$48,966.03



# Timber Sale Appraisal Timber Description Triple Arc Sale 341-04-32

"STEWARDSHIP IN FORESTRY"

**District:** Klamath/Lake

**Location:** T.37S.,R12E., Portions of sections 28 &33 Klamath County, Oregon

**Date:** 8/11/03

**Stand Stocking:** 40%

Species	Avg. DBH	Amortized%	Recovery%
White Fir	12	0	95
Ponderosa Pine	12	0	97

Volume by Grade	White Fir	Ponderosa Pine	Total
CR 8" - 14"	518	150	668
CR 14" - 22"	144	18	162
CR 22"+	15	6	21
<b>Total</b>	<b>677</b>	<b>174</b>	<b>851</b>

**Comments:** Pond Values Used: 2nd Quarter 2003

Additional Costs with P&R  
Dust Abatement: \$7313.00  
Brand & Paint: \$ 2500.00

Additional Costs without P&R  
Road Use Fee: \$1.01 per MBF



# Timber Sale Appraisal

## Logging Conditions

### Triple Arc

### Sale 341-04-32

"STEWARDSHIP IN FORESTRY"

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**Combination#: 1**      White Fir      85.00%  
Ponderosa Pine      100.00%

**Yarding Distance:** Short (400 ft)      **Downhill Yarding:** Yes  
**Logging System:** Wheel Skidder      **Process:** Feller Buncher  
**Tree Size:** Small / Thinning 9in (70 Bft/tree), 20+ logs/MBF  
**Loads/Day:** 10      **Bd. Ft./Load:** 3,400  
**Cost/MBF:** \$98.65

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

**Combination#: 2**      White Fir      15.00%

**Yarding Distance:** Short (400 ft)      **Downhill Yarding:** Yes  
**Logging System:** Track Skidder      **Process:** Manual Falling/Delimiting  
**Tree Size:** Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF  
**Loads/Day:** 10      **Bd. Ft./Load:** 4,800  
**Cost/MBF:** \$68.03

**Machines:**  
Log Loader (B)  
Track Skidder



# Timber Sale Appraisal

## Logging Costs

### Triple Arc

### Sale 341-04-32

"STEWARDSHIP IN FORESTRY"

Date: 8/11/03

Operating Seasons: 1.0

Profit & Risk: 12%

Project Costs: \$26,127

Other Costs (P/R): \$9,813

Slash Disposal: \$0

Other Costs: \$860

Miles of Road			
Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Road Maintenance: \$1.79

#### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
White Fir	\$0.00	2.0	3.5
Ponderosa Pine	\$0.00	2.0	3.5

#### Local Pond Values

Date	Species	Grade	Value
8/11/03	White Fir	CR 8" - 14"	\$295.00
8/11/03	White Fir	CR 14" - 22"	\$300.00
8/11/03	White Fir	CR 22"+	\$300.00
8/11/03	Ponderosa Pine	CR 8" - 14"	\$255.00
8/11/03	Ponderosa Pine	CR 14" - 22"	\$425.00
8/11/03	Ponderosa Pine	CR 22"+	\$540.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Logging Costs Breakdown Triple Arc Sale 341-04-32

Costs	White Fir	Ponderosa Pine
<b>Logging</b>	94.06	98.65
<b>Road Maintenance</b>	1.88	1.85
<b>Fire Protection</b>	3.18	3.18
<b>Hauling</b>	69.16	67.73
<b>Other (P/R appl.)</b>	11.53	11.53
<b>Profit &amp; Risk</b>	21.58	21.95
<b>Slash Disposal</b>	0.00	0.00
<b>Scaling</b>	2.00	2.00
<b>Other</b>	1.01	1.01
<b>Total</b>	204.40	207.90

<b>Amortization</b>	0.00	0.00
<b>Pond Value</b>	296.17	282.41
<b>Stumpage</b>	91.77	74.51
<b>Amortized</b>	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary Triple Arc Sale 341-04-32

**Amortized**

	White Fir	Ponderosa Pine
<b>MBF</b>	0.00	0.00
<b>Value</b>	0.00	0.00
<b>Total</b>	0.00	0.00

**Unamortized**

	White Fir	Ponderosa Pine
<b>MBF</b>	677.00	174.00
<b>Value</b>	91.77	74.51
<b>Total</b>	62,128.29	12,964.74

**Gross Timber Sale Value**

**Recovery \$75,093.03**

Prepared by: John Pellissier

Date: 8/11/03

District: Klamath/Lake

Phone: (541) 883-5681

## Summary of Project Work

<b>Project #1:</b> Road Construction and Improvement	\$3202.73
<b>Project #2:</b> Fell, Skid, and Pile Submerchantable Material	\$15,765.18
<b>Project #3:</b> Hand Thinning and Lopping of Slash	\$3,680.00
<b>Project #4:</b> Tractor Piling of Slash	\$3,254.00
<b>Project #5:</b> Road Closures	\$225.00
<b>TOTAL:</b>	<b><u>\$26,127.00</u></b>

# Triple Arc

341-04-32

## Additional Costs Sheet



"STEWARDSHIP IN FORESTRY"

<b>Road Maintenance</b>									
Move-in cost (grader):	\$	241.00							
Number of Bladings		1							
Number of Miles to be Bladed		8.75							
Miles / Hour for equipment		0.5							
Cost / Hour:	\$	73.25							
Total Grading Hours:		17.5							
Grading Cost:	\$	1,281.88							
<b>Total Cost:</b>	\$	1,522.88							
<b>Cost / MBF</b>	\$	1.79							
<b>Dust Abatement (Profit &amp; Risk Included)</b>									
PP	174,000	BF	20%	Average Load	3500	BF	50	# of Loads	
WF	677,000	BF	80%	Average Load	3500	BF	193	# of Loads	
								# of Loads	
Total:	851,000	BF					Total Loads	243	
Assume:	5	Trucks/Day							
	2	Trips / Day			25	Hauling Days			
	10	Loads Per Day			5	Hours / Day			
					\$ 57.24	Cost / Hour			
					125	Total Hours			
					\$ 158.00	Move-In for Water Truck			
					\$ 7,155.00	Dust Abatement Cost			
					\$ 7,313.00	<b>Total Cost</b>			
					\$ 8.59	<b>Cost / MBF</b>			
<b>Knot Bumper and Branding</b>									
	25	Hauling Days							
	10	Hours / Day							
	\$ 10.00	Cost / Hour							
	\$ 2,500.00	<b>Total Cost</b>							
	\$ 2.94	<b>Cost / MBF</b>							



**Project #2 Fell, Skid, & Pile Submerchantable Material**

316.00	Total Subsawlog Volume MBF	88,000	PP Green Pulp (BF)
\$ 38.55	Fell & Skid / MBF	70,000	WF Green Pulp(BF)
\$ 6.45	Sort / MBF	158,000	BF Green Pulp
\$ 45.00	Total / MBF	158,000	BF Subsawlog Fixed Plot
<b>\$ 14,220.00</b>	<b>Total Cost</b>	<b>316,000</b>	<b>Total Board Feet</b>

**Landing Cleanup (included with Project # 2)**

7	Number of Landings			
	Shovel Time:	2	Hours / Landing	\$ 75.00 Cost / Hour \$ 1,050.00
	Cat Time:	1	Hours / Landing	\$ 70.74 Cost / Hour \$ 495.18
				<b>Total Cost: \$ 1,545.18</b>

**Project #4 Tractor Piling of Slash**

**Project #3 Hand Thinning and Lopping of Slash**

0.25	Percentage of Acres to be Piled	184	Number of Acres to be Slashed
184	Total Acres	\$20.00	Cost per Acre
46.0	Total Acres to be Piled (rounded #)	<b>\$ 3,680.00</b>	<b>Total Cost</b>
1	Hours / Acre		
\$ 70.74	Cost / Hour		
<b>\$ 3,254.04</b>	<b>Total Cost</b>		

**Project #5 Road Closures**

<b>Road Blocking</b>	
3	Number of closure points (C,F,G)
1	Hours / Point (include travel)
\$75	Cost / Hour (Shovel)
	Cost / Hour (Cat)
3	Total Road Blocking Hours
<b>\$ 225.00</b>	<b>Total Cost</b>

<b>Additional costs W P&amp;R</b>	
\$ 7,312.00	Dust Abatement
\$ 2,500.00	Knot Bumping & Branding
<b>\$ 9,812.00</b>	<b>Total Cost</b>
<b>Additional Costs W/O P&amp;R</b>	
\$ 1.01	Road use fee/MBF

**Cost Summary**

\$ 3,202.73	Project # 1 ~ Road Construction and Improvement
\$ 15,765.18	Project # 2 ~ Fell, Skid, & Pile Submerchantable Material
\$ 3,680.00	Project #3 ~ Hand Thinning and Lopping of Slash
\$ 3,254.04	Project #4 ~ Tractor Piling of Slash
\$ 225.00	Project #5 ~ Road Closures
<b>\$ 26,126.95</b>	<b>Total Cost</b>

# Triple Arc

341-04-32

## Project #1 Road Construction/Improvement

Move-in cost Cat \$ 370.00



"STEWARDSHIP IN FORESTRY"

<i>New Construction</i>						
	Points	Distance (feet)	Feet / Hour	Hours	Cost / Hour (Cat)	Cost
<i>Outslope</i>	C to D	900	900	1	70.74	\$ 70.74
<i>Outslope</i>	F to G	2600	2600	1	70.74	\$ 70.74
	<b>Total</b>	<b>3500</b>		<b>2</b>		<b>\$ 141.48</b>
<i>Grade and Shape (outslope)</i>						
<b>Grader</b>	Total Feet	3500		<b>Water Truck</b>	Hours	2
	Feet / Hour	1750			Cost / Hour	\$ 57.24
	Cost / Hour	\$ 73.25			<b>Total Cost</b>	<b>\$ 114.48</b>
	Total Hours	2.0				
	<b>Total Cost</b>	<b>\$ 146.50</b>				

<i>Road Improvement</i>						
	Points	Distance (feet)	Feet / Hour	Hours	Cost / Hour	Cost
<i>Crown w/ditch</i>	A to I	22440	1000	22.44	\$ 73.25	\$ 1,643.73
<i>Roadside Brushing</i>	A to I	22440		20.0	\$ 15.00	\$ 300.00
<i>Road Watering</i>	A to I	22440		8.5	\$ 57.24	\$ 486.54
						<b>\$ 2,430.27</b>

**Total: \$ 3,202.73**

## CRUISE REPORT

**Sale Name:** Triple Arc

**Sale Area:** T. 37 S., R. 12 E., Portions of sections 28 & 33.

**Fund:** 100% CSL

**Boundary Lines:** Unit boundary is posted with "Timber Sale Boundary" signs, marked with fluorescent orange paint and flagging.

**Acreage:** Area #1: 162 acres

Area #2: 22 acres

Approximate Sale Acreage: 184 acres

Areas were mapped using GPS, with data run on the district GIS program.

**Treatment:** Total acreage is marked as a selection cut, leave tree mark with orange paint. Wildlife trees are designated with an orange painted "W".

### **Cruise Method:**

Variable plot cruise with all the plots being measure plots. Fixed plot cruise for all submerch material ( 5.0 -8.0 DBH ), with all plots being measure plots.

Measure and grade all trees.

### **Plot Designation:**

Plot centers were established at every plot. White flagging with the corresponding plot number was attached to the plot center and to the nearest available branch.

**BAF:** 10 BAF: Area 1  
20 BAF: Area 2

Full point plots taken, 1/50th acre fixed plots for submerch. material (5.0-8.0 DBH)

**Sample Size Calculations:**

Sale area is comprised of two areas.

	CV%	Desired SE%	Acres
Area 1	85.0	15	162
Area 2	68.0	15	22

$$N = \frac{T^2 C^2}{A^2}$$

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

T = Number of Standard errors

A = Desired sampling error for a sale of this size and value

**Area 1**

$$N = \frac{(1)^2(85)^2}{(15)^2} = 32 \text{ plots} \quad \text{Took 34 plots} \quad 7 \times 7 \text{ chain grid}$$

**Area 2**

$$N = \frac{(1)^2(68)^2}{(15)^2} = 21 \text{ plots} \quad \text{Took 11 plots (due to minimal acreage)} \quad 5 \times 5 \text{ chain grid}$$

**Measurements and Grading:**

- DBH and Height were measured on all "in" trees in the plot.
- All plots were 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 Submerch. Material (5.0"-8.0" 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 8 or 9 inches ) The log segments are then broken out and graded accordingly.

**Minimum DBH:** 8.0" dbh for sawlog volume  
5.0" dbh for pulp volume

**Diameter Standards:** 1" diameter class

**BTR:**

Standard ratios were used. See attached species table for specifics.

**Form Factor:**

Form factor was measured or estimated at 16' for every tree.

**Form Point:** All trees were sighted at dbh.

**Final Cruise Results:**

	CV%	SE%
Area 1	57.6	9.9
Area 2	67.0	20.2
Total Sale Area	70.8	10.6

**Cruiser:**

John Pellissier and Jason Pettigrew  
Cruised March , 2003

**Volume Computation:**

All cruise data was inputted and run at the district level on Atterbury's super ace program.

**Timber Description:**

**SAWLOG VOLUME:**

This volume was obtained from the variable plot cruise. All material > 8.0" DBH.  
All material graded camprun  
See grade table for minimum standards.

	<u>SPECIES</u>	<u>AVE. DBH</u>	<u>GROSS VOL (MBF)</u>	<u>NET VOL (MBF)</u>
<b>AREA 1</b>	White fir	11.8	499	485
	Ponderosa pine	12.3	175	169
<b>TOTAL AREA 1</b> -----				<b>654 MBF</b>
<b>AREA 2</b>	White fir	14.9	200	192
	Ponderosa pine	12.3	6	5
<b>TOTAL AREA 2</b> -----				<b>197 MBF</b>
<b>TOTAL SALE AREA</b>				
	White fir	12.2	699	677
	Ponderosa pine	12.3	181	174
<b>TOTAL SAWLOG VOLUME</b> -----				<b>851 MBF</b>

(Volumes obtained from Spp, sort, Grade, len%-BDFT Report)

**GREEN PULP VOLUME:**

This volume was obtained from the variable plot cruise (>8.0"DBH) and the fixed plot cruise (5.0"-8.0"DBH).  
 All material graded green pulp.  
 See grade table for minimum standards.

<u>SPECIES</u>	<u>AVE. DBH</u>	<u>GROSS VOL (MBF)</u>	<u>NET VOL (MBF)</u>
<b>AREA 1</b>			
<b>Variable plot:</b>			
White fir		67	67
Ponderosa pine		86	86
<b>Fixed plot:</b>			
White fir	6.7	71	71
Ponderosa pine	6.4	74	74
<b>TOTAL AREA 1</b>		<b>-----298MBF</b>	
<b>AREA 2</b>			
<b>Variable plot:</b>			
White fir		3	3
Ponderosa pine		2	2
<b>Fixed plot:</b>			
White fir	6.3	12	12
Ponderosa pine	5.8	1	1
<b>TOTAL AREA 2</b>		<b>-----18 MBF</b>	
<b>TOTAL SALE AREA</b>			
White fir		153	153
Ponderosa pine		163	163
<b>TOTAL GREEN PULP VOLUME</b>		<b>-----316 MBF</b>	

(Volumes obtained from Spp, sort, Grade, len%-BDFT Report)

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES
37S	12E	33	TRIPLARC	VARI	184.00	45	330
37S	12E	33	TRIPLARC	VAR2			

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	45	330	7.3		
CRUISE	44	330	7.5	18,781	1.8
DBH COUNT					
REFOREST COUNT					
BLANKS	1				
100 %					

## STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHITE F	214	66.2	12.2	30	11	53.5	4,175	4,057	1,055	1,055
P PINE	116	35.9	12.3	27		29.8	1,459	1,424	401	401
<b>TOTAL</b>	<b>330</b>	<b>102.1</b>	<b>12.2</b>	<b>29</b>		<b>83.4</b>	<b>5,634</b>	<b>5,481</b>	<b>1,457</b>	<b>1,457</b>
	COEFF		SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD: 1	VAR.	S.E.%	LOW	AVG	HIGH		5	10	15	
WHITE F	226.2	12.5	75	86	97					
P PINE	316.6	17.4	20	24	28					
<b>TOTAL</b>	<b>180.9</b>	<b>10.0</b>	<b>99</b>	<b>110</b>	<b>121</b>		<b>1,309</b>	<b>327</b>	<b>145</b>	
	COEFF		SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD: 1	VAR.	S.E.%	LOW	AVG	HIGH		5	10	15	
WHITE F	176.8	9.7	18	20	22					
P PINE	246.0	13.5	5	6	7					
<b>TOTAL</b>	<b>134.0</b>	<b>7.4</b>	<b>24</b>	<b>26</b>	<b>28</b>		<b>718</b>	<b>180</b>	<b>80</b>	
	COEFF		TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD: 1	VAR.	S.E.%	LOW	AVG	HIGH		5	10	15	
WHITE F	82.1	12.2	58	66	74					
P PINE	153.7	22.9	28	36	43					
<b>TOTAL</b>	<b>67.0</b>	<b>10.0</b>	<b>92</b>	<b>102</b>	<b>112</b>		<b>180</b>	<b>45</b>	<b>20</b>	
	COEFF		BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD: 1	VAR.	S.E.%	LOW	AVG	HIGH		5	10	15	
WHITE F	72.7	10.8	47	54	60					
P PINE	148.5	22.1	24	30	36					
<b>TOTAL</b>	<b>55.6</b>	<b>8.3</b>	<b>76</b>	<b>83</b>	<b>90</b>		<b>124</b>	<b>31</b>	<b>14</b>	
	COEFF		NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD: 1	VAR.	S.E.%	LOW	AVG	HIGH		5	10	15	
WHITE F	95.9	14.3	3,379	4,057	4,734					
P PINE	145.3	21.7	1,149	1,424	1,698					
<b>TOTAL</b>	<b>70.8</b>	<b>10.6</b>	<b>4,846</b>	<b>5,481</b>	<b>6,115</b>		<b>201</b>	<b>50</b>	<b>22</b>	
	COEFF		NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD: 1	VAR.	S.E.%	LOW	AVG	HIGH		5	10	15	
WHITE F	81.5	12.2	910	1,055	1,201					
P PINE	142.7	21.3	324	401	479					
<b>TOTAL</b>	<b>59.1</b>	<b>8.8</b>	<b>1,320</b>	<b>1,457</b>	<b>1,594</b>		<b>140</b>	<b>35</b>	<b>16</b>	





Log Stock Table - MBF

T37S R12E S33 TyVAR1 162.00  
T37S R12E S33 TyVAR2 22.00

Project: TRIPLARC  
Acres 184.00

Spp	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	12-14	14-15	16-19	20-22	22-29	30-39	40+		
WF		CR	CR	31	4		4	.5			3	1									
WF		CR	CR	34	347	3.2	336	45.0		1	66	22	81	44	49	43	15	15			
WF		CR	CR	35	9		9	1.2					5			5					
WF		CR	CR	40	56	3.5	55	7.3			20	11		7	5	11					
WF		CR	GP	10	4		4	.5		4											
WF		CR	GP	11	2		2	.2				2									
WF		CR	GP	12	10		10	1.3		2	8										
WF		CR	GP	13	4		4	.5	1	1	1	2									
WF		CR	GP	14	14		14	1.9	1		8	5									
WF		CR	GP	15	5		5	.6		5											
WF		CR	GP	16	5		5	.6			5										
WF		CR	GP	17	3		3	.4		1		2									
WF		CR	GP	19	9		9	1.3	1	8											
WF		CR	GP	20	1		1	.1		1											
WF		CR	GP	22	2		2	.2		2											
WF		CR	GP	25	4		4	.5				4									
WF		CR	GP	27	2		2	.3	2												
WF		CR	GP	28	2		2	.2		2											
WF		CR	GP	32	3		3	.4	3												
WF		CR	GP	36	2		2	.3	2												
WF		Totals			768	2.8	746	74.0	10	28	267	107	104	71	62	67	15	15			
Total		All Species			1,037	2.7	1,008	100.0	26	42	302	196	153	105	77	70	15	21			

TC PSPCSTGR

**Species, Sort Grade - Board Foot Volumes (Project)**

T37S R12E S33 TyVAR1 162.00  
 T37S R12E S33 TyVAR2 22.00

**Project: TRIPLARC**

**Acres 184.00**

**Page 1**  
**Date 4/4/2003**  
**Time 11:58:21AM**

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
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf	
									6-8	8-14	14-22	22+	12-20	21-30	31-35	36-99				
PP	CR	CR		17	3.6	983	948	174	21	69	10		46	26	15	13	17	70	1.07	13.5
PP	CR	GP		9		476	476	88	85	15			91	5		3	14	14	0.33	32.9
<b>PP Totals</b>				<b>26</b>	<b>2.4</b>	<b>1,459</b>	<b>1,424</b>	<b>262</b>	<b>42</b>	<b>51</b>	<b>7</b>		<b>61</b>	<b>19</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>31</b>	<b>0.57</b>	<b>46.4</b>
WF	CR	CR		67	3.1	3,797	3,679	677	47	35	16	2	18	22	52	8	21	90	1.10	41.1
WF	CR	GP		7		378	378	70	86	14			80	13	4	3	15	17	0.36	22.1
<b>WF Totals</b>				<b>74</b>	<b>2.8</b>	<b>4,175</b>	<b>4,057</b>	<b>746</b>	<b>50</b>	<b>33</b>	<b>14</b>	<b>2</b>	<b>24</b>	<b>21</b>	<b>47</b>	<b>8</b>	<b>19</b>	<b>64</b>	<b>0.89</b>	<b>63.1</b>
<b>Totals</b>					<b>2.7</b>	<b>5,634</b>	<b>5,481</b>	<b>1,008</b>	<b>48</b>	<b>38</b>	<b>12</b>	<b>1</b>	<b>34</b>	<b>20</b>	<b>37</b>	<b>8</b>	<b>17</b>	<b>50</b>	<b>0.77</b>	<b>109.6</b>

# Species Table Report

TblSpecies

Date: 4/16/03

Page: 1

Table Name: KL SPECIES

Cod	Abrv	Description	Bark Ratio	ASub Const	Form Factor	Wood Type	Component	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	P PINE	.87	PP	.85	C	C	PP--EQUA--100	3	9	20	1.0	99	200	E	1	LB M
2	WF	WHITE F	.94	NF	.87	C	C	DF--EQUA--050	3	9	20	1.0	99	200	E	1	LB M
3	LP	LP PINE	.96	DF	.9	C	C	LP--EQUA--100	3	9	20	1.0	99	200	E	1	LB M
5	SP	SUG PINE	.87	PP	.84	C	C	PP--EQUA--100	3	9	20	1.0	99	200	E	1	LB M
6	IC	INC CED	.90	SS	.8	C	C	DF--EQUA--050	3	9	20	1.0	99	200	E	1	LB M

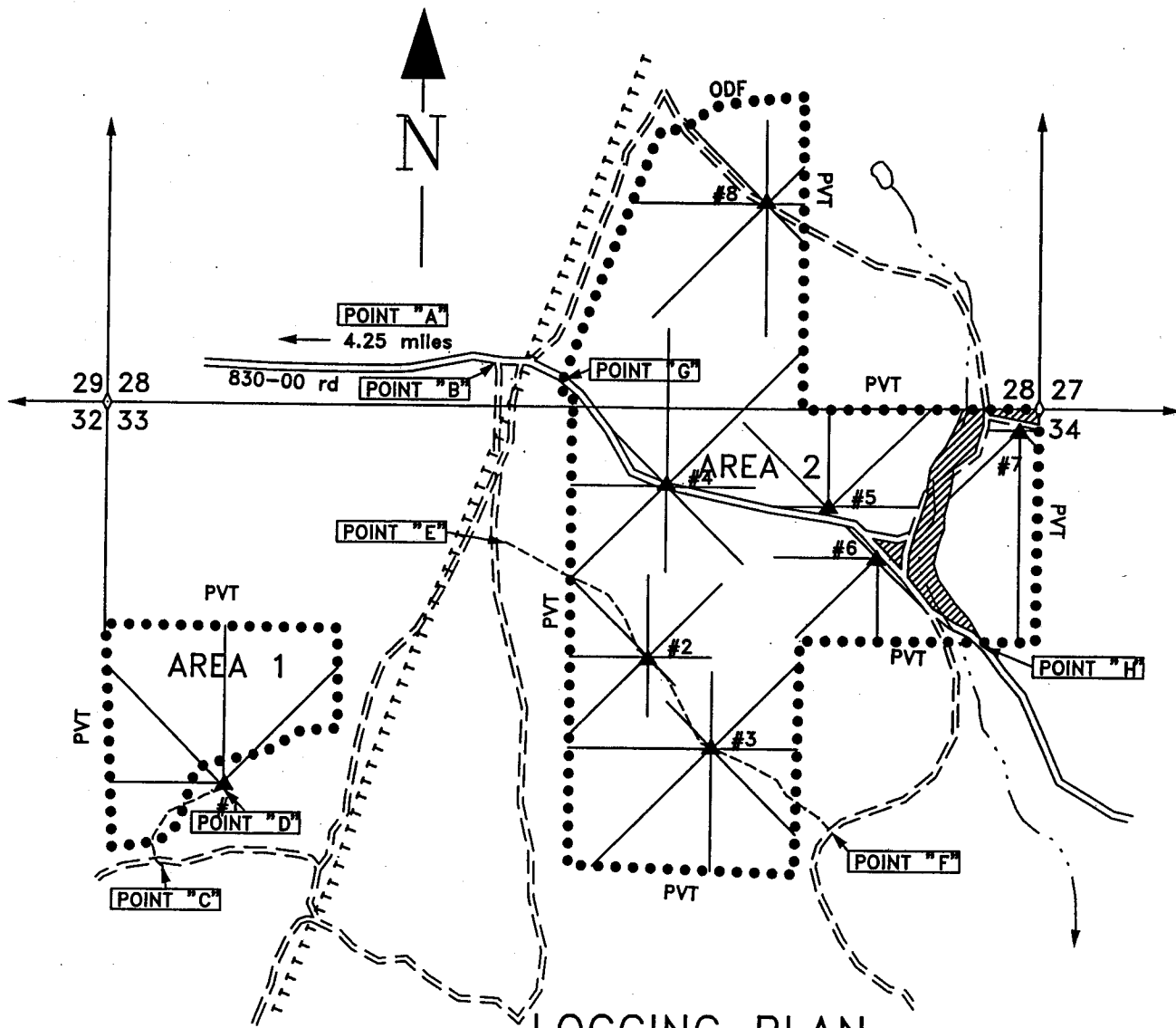
TblSortGrade

## Sort/Grade Table

Table Name: KLAMATH

Date: 4/16/03

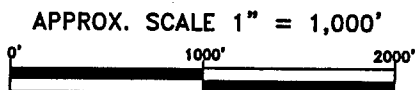
Sort	Grd	Abr	Desc	Fbr	Min Dia	Max Dia	Max Butt	Min Len	Max Len	Defect	Min Vol	Vol Type	Min Ring	Knot Size	Knot Freq	Str	Sap	Min Age	Lbs	Lbs Type	Cords	Cords Type
0		CU	CULL	G	1	0	0	1	0	0	0		0	0	0			0	0		0	
1		CR	CAMPRUN	G	6	0	0	10	0	0	0		0	0	0			0	0		0	
7		GP	GRNPULP	G	3	0	0	10	0	0	0		0	0	0			0	0		0	
8		DP	DEADPULI	G	3	0	0	10	0	0	0		0	0	0			0	0		0	
9		UT	UTILITY	G	8	0	0	12	0	0	0		0	0	0			0	0		0	
0		CU	CULL	G	0	0	0	0	0	0	0		0	0	0			0	0		0	
1		CR	CAMPRUN	G	1	0	0	1	0	0	0		0	0	0			0	0		0	



## LOGGING PLAN

of Timber Sale Contract No.  
341-04-32  
Triple Arc

Portions of Sections 28 & 33, T.37S.,R12E., W.M.  
Klamath County, Oregon



Approximate Acres	
Area 1	162 acres
Area 2	22 acres
Total	184 acres

### LEGEND

- |             |                          |             |                                   |
|-------------|--------------------------|-------------|-----------------------------------|
| .....       | TIMBER SALE BOUNDARY     | ====        | Surfaced Existing Road            |
| ←           | Section Line             | - - - - -   | Unsurfaced Existing Road          |
| ◇           | Known Land Survey Corner | - · - · - · | Unsurfaced Road (Const. Required) |
|             | Exclusion Area           | ~ ~ ~ ~ ~   | Type N Stream                     |
| [POINT "A"] | Point for Project Work   | TTTTTT      | Transmission Line                 |