



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Siderod Sale 341-03-92

District: Klamath/Lake

Date: 4/3/03

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$991,522.40	\$0.00	\$991,522.40
		Project Work	(\$56,881.00)
		Advertised Value	\$934,641.40



Timber Sale Appraisal Timber Description Siderod Sale 341-03-92

"STEWARDSHIP IN FORESTRY"

District: Klamath/Lake

Location: T33S, R7E, Portions Sections 3 & 4
T32S, R7E, Portion of Section 34
Klamath County, Oregon

Date: 4/3/03

Stand Stocking: 40%

Species	Avg. DBH	Amortized%	Recovery%
White Fir	17	0	95
Ponderosa Pine	14	0	97
Lodgepole Pine	12	0	97

Volume by Grade	White Fir	Ponderosa Pine	Lodgepole Pine	Total
Camprun	0	0	751	751
CR 8" - 14"	1,397	1,211	0	2,608
CR 14" - 22"	1,278	682	0	1,960
CR 22"+	297	58	0	355
Total	2,972	1,951	751	5,674

Comments: Pond Values Used: 1st Quarter 2003

Other costs (plus P&R):
Dust Abatement: \$27,919.00
Brand & Paint: \$9,700.00
Other Costs (no P&R):
Road use fees: \$2,841.00



Timber Sale Appraisal

Logging Conditions

Siderod

Sale 341-03-92

"STEWARDSHIP IN FORESTRY"

Combination#: 1

White Fir	25.00%
Ponderosa Pine	30.00%
Lodgepole Pine	100.00%

Yarding Distance: Short (400 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: 16 **Bd. Ft./Load:** 3,500
Cost/MBF: \$59.90

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

Combination#: 2

White Fir	75.00%
Ponderosa Pine	70.00%

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:** 4,500
Cost/MBF: \$72.57

Machines:
Log Loader (B)
Track Skidder



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal

Logging Costs

Siderod

Sale 341-03-92

Date: 4/3/03

Operating Seasons: 2.0

Profit & Risk: 15%

Project Costs: \$56,881

Other Costs (P/R): \$37,619

Slash Disposal: \$0

Other Costs: \$2,841

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

Road Maintenance: \$0.38

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
White Fir	\$0.00	2.0	4.0
Ponderosa Pine	\$0.00	2.0	3.5
Lodgepole Pine	\$0.00	2.0	3.0

Local Pond Values

Date	Species	Grade	Value
4/3/03	White Fir	CR 8" - 14"	\$340.00
4/3/03	White Fir	CR 14" - 22"	\$340.00
4/3/03	White Fir	CR 22"+	\$360.00
4/3/03	Ponderosa Pine	CR 8" - 14"	\$285.00
4/3/03	Ponderosa Pine	CR 14" - 22"	\$475.00
4/3/03	Ponderosa Pine	CR 22"+	\$560.00
4/3/03	Lodgepole Pine	Camprun	\$280.00



Timber Sale Appraisal Logging Costs Breakdown Siderod Sale 341-03-92

"STEWARDSHIP IN FORESTRY"

Costs	White Fir	Ponderosa Pine	Lodgepole Pine
Logging	69.40	68.77	59.90
Road Maintenance	0.40	0.39	0.39
Fire Protection	0.96	0.96	0.96
Hauling	60.53	67.73	79.18
Other (P/R appl.)	6.63	6.63	6.63
Profit & Risk	20.69	21.67	22.06
Slash Disposal	0.00	0.00	0.00
Scaling	2.00	2.00	2.00
Other	0.50	0.50	0.50
Total	161.11	168.65	171.62

Amortization	0.00	0.00	0.00
Pond Value	342.00	359.59	280.00
Stumpage	180.89	190.94	108.38
Amortized	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Siderod Sale 341-03-92

Amortized

	White Fir	Ponderosa Pine	Lodgepole Pine
MBF	0.00	0.00	0.00
Value	0.00	0.00	0.00
Total	0.00	0.00	0.00

Unamortized

	White Fir	Ponderosa Pine	Lodgepole Pine
MBF	2,972.00	1,951.00	751.00
Value	180.89	190.94	108.38
Total	537,605.08	372,523.94	81,393.38

Gross Timber Sale Value

Recovery \$991,522.40

Prepared by: Ed Scheick

Date: 4/3/03

District: Klamath/Lake

Phone: (541) 883-5681

Summary of Project Work

Project #1: Road construction and improvement	\$5,286.00
Project #2: Fell, skid, pile submerch.	\$36,768.00
Project #3: Slashing/lopping	\$11,360.00
Project #4: Tractor piling of slash	\$2,830.00
Project #5: Road closures	\$637.00
TOTAL	\$56,881.00

CRUISE REPORT

Sale Name: SIDEROD

Sale Area: T. 33 S., R. 7 E., Portions of sections 3 and 4, T. 32S., R. 7 E., Portion of section 34.

Fund: 100% FRA

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

Acreage: TYPE 234 27 acres

TYPE 2335 (types 233 & 235) 475 acres

Approximate Sale Acreage: 502 acres

Areas and exclusions 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. Blue flagging with the corresponding plot number was attached to the plot center and to the nearest available branch.

BAF: 14 BAF

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 types.

	CV%	Desired SE%	Acres
Type234	55	15	27
Type2335	78	12	475

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

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

Type 234

$$N = \frac{(1)^2(55)^2}{(15)^2} = 13 \text{ plots} \quad \text{Took 13 plots}$$

Type 2335

$$N = \frac{(1)^2(78)^2}{(12)^2} = 42 \text{ plots} \quad \text{Took 47 plots}$$

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 6 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%
Type 234	65	18.8
Type 2335	68	10.0
Total Sale Area	70.4	9.1

Cruisers:

Craig Leech
John Pellissier
Jason Pettigrew
Ed Scheick
Cruised Jan. 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>
TYPE 234	Ponderosa pine	13.9	3	3
	Lodgepole pine	11.5	200	194
	TOTAL TYPE 234			197 MBF
TYPE 2335	Ponderosa pine	14.3	1984	1948
	Lodgepole pine	12.2	559	557
	White fir	17.0	3032	2972
	TOTAL TYPE 2335			5477 MBF
TOTAL SALE AREA				
	Ponderosa pine	14.3	1987	1951
	Lodgepole pine	11.8	759	751
	White fir	17.0	3032	2972
	TOTAL SAWLOG VOLUME			5674 MBF

(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>
TYPE 234			
Variable plot:			
Lodgepole pine		12	12
Fixed plot:			
White fir	6.7	1	1
Lodgepole pine	6.6	48	48
TOTAL TYPE234		61	
TYPE 2335			
Variable plot:			
Ponderosa pine		131	131
Lodgepole pine		7	7
White fir		19	19
Fixed plot:			
Ponderosa pine	6.6	167	167
Lodgepole pine	6.3	71	71
White fir	6.6	152	152
TOTAL TYPE 2335		547	
TOTAL SALE AREA			
Ponderosa pine		298	298
Lodgepole pine		138	138
White fir		172	172
TOTAL GREEN PULP VOLUME		608 MBF	

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

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES
33S	7E	33	VP	2335	475.00	47	294

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	47	294	6.3		
CRUISE	47	294	6.3	35,267	.8
DBH COUNT					
REFOREST COUNT					
BLANKS					
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
P PINE	138	37.1	14.3	40		41.6	4,453	4,377	944	944
WHITE F	120	23.4	17.0	51	7	36.8	6,447	6,320	1,217	1,217
LP PINE	36	13.7	12.2	37		11.2	1,193	1,187	259	259
TOTAL	294	74.2	14.9	43		89.6	12,093	11,885	2,420	2,420

SD:	COEFF VAR.	S.E.%	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.
1			LOW	AVG	HIGH	5	10	15
P PINE	199.7	11.6	115	130	145			
WHITE F	198.7	11.6	195	221	246			
LP PINE	350.0	20.4	12	15	19			
TOTAL	120.5	7.0	340	366	392	581	145	65

SD:	COEFF VAR.	S.E.%	SAMPLE TREES - CF			# OF TREES REQ.		INF. POP.
1			LOW	AVG	HIGH	5	10	15
P PINE	180.8	10.5	23	26	28			
WHITE F	182.1	10.6	35	40	44			
LP PINE	336.3	19.6	3	3	4			
TOTAL	103.2	6.0	64	68	73	426	106	47

SD:	COEFF VAR.	S.E.%	TREES/ACRE			# OF PLOTS REQ.		INF. POP.
1			LOW	AVG	HIGH	5	10	15
P PINE	110.0	16.0	31	37	43			
WHITE F	163.5	23.8	18	23	29			
LP PINE	160.6	23.4	11	14	17			
TOTAL	76.4	11.2	66	74	83	234	58	26

SD:	COEFF VAR.	S.E.%	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
1			LOW	AVG	HIGH	5	10	15
P PINE	85.2	12.4	36	42	47			
WHITE F	122.1	17.8	30	37	43			
LP PINE	156.0	22.8	9	11	14			
TOTAL	58.8	8.6	82	90	97	138	35	15

SD:	COEFF VAR.	S.E.%	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
1			LOW	AVG	HIGH	5	10	15
P PINE	87.2	12.7	3,821	4,377	4,934			
WHITE F	124.2	18.1	5,175	6,320	7,465			
LP PINE	166.9	24.3	898	1,187	1,476			
TOTAL	68.3	10.0	10,702	11,885	13,068	186	47	21

SD:	COEFF VAR.	S.E.%	NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.
1			LOW	AVG	HIGH	5	10	15
P PINE	87.0	12.7	824	944	1,063			
WHITE F	122.1	17.8	1,000	1,217	1,434			
LP PINE	163.2	23.8	197	259	321			
TOTAL	64.4	9.4	2,192	2,420	2,647	166	41	18

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES
33S	7E	4	VP	234	27.00	13	62

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	13	62	4.8		
CRUISE	13	62	4.8	2,454	2.5
DBH COUNT					
REFOREST					
COUNT					
BLANKS					
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
LP PINE	60	88.9	11.5	41		64.6	7,883	7,651	1,706	1,706
P PINE	2	2.0	13.9	28		2.2	107	107	35	35
TOTAL	62	90.9	11.6	41		66.8	7,990	7,758	1,741	1,741

SD:	COEFF VAR.	S.E.%	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.
1			LOW	AVG	HIGH	5	10	15
LP PINE	78.4	10.0	101	113	124			
P PINE	638.6	81.1	0	2	4			
TOTAL	75.3	9.6	104	115	126	227	57	25

SD:	COEFF VAR.	S.E.%	SAMPLE TREES - CF			# OF TREES REQ.		INF. POP.
1			LOW	AVG	HIGH	5	10	15
LP PINE	70.3	8.9	23	25	27			
P PINE	667.0	84.7	0	1	1			
TOTAL	66.8	8.5	23	26	28	179	45	20

SD:	COEFF VAR.	S.E.%	TREES/ACRE			# OF PLOTS REQ.		INF. POP.
1			LOW	AVG	HIGH	5	10	15
LP PINE	67.6	18.8	72	89	106			
P PINE	360.6	100.0	0	2	4			
TOTAL	67.4	18.7	74	91	108	182	45	20

SD:	COEFF VAR.	S.E.%	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
1			LOW	AVG	HIGH	5	10	15
LP PINE	59.7	16.6	54	65	75			
P PINE	360.6	100.0		2	4			
TOTAL	63.0	17.5	55	67	78	159	40	18

SD:	COEFF VAR.	S.E.%	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
1			LOW	AVG	HIGH	5	10	15
LP PINE	65.7	18.2	6,257	7,651	9,045			
P PINE	360.6	100.0	0	107	214			
TOTAL	67.7	18.8	6,301	7,758	9,215	183	46	20

SD:	COEFF VAR.	S.E.%	NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.
1			LOW	AVG	HIGH	5	10	15
LP PINE	63.9	17.7	1,404	1,706	2,009			
P PINE	360.6	100.0		35	69			
TOTAL	66.4	18.4	1,421	1,741	2,061	176	44	20

Species, Sort Grade - Board Foot Volumes (Type)

Project: **SIDEROD2**

T33S R7E S33 T2335

T33S R7E S33 T2335

Twp Rge Sec Tract Type Acre Plots Sample Trees
 33S 7E 33 VP 2335 475.00 47 294

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf		
									4-5	6-14	15-22	22+	12-20	21-30	31-35	36-99					
PP		CR	CR	94	1.8	4,177	4,102	1,948		61	35	3		13	16	65	6	23	161	1.50	25.5
PP		CR	GP	6		276	276	131	69	31				100				16	15	0.22	19.0
PP	Totals			37	1.7	4,453	4,377	2,079	4	60	33	3	18	15	60	6	20	98	1.06	44.5	
WF		CR	CR	99	2.0	6,383	6,256	2,972	1	46	43	10		4	8	85	3	25	275	2.07	22.8
WF		CR	GP	0		24	24	11	33	67				100				14	15	0.26	1.6
WF		CR	DP	0		17	17	8	17	83				100				14	30	0.64	.6
WF		CR	UT	0		23	23	11			100				100			28	620	3.71	.0
WF	Totals			53	2.0	6,447	6,320	3,002	1	46	43	10	5	9	84	3	24	253	2.00	25.0	
LP		CR	CR	99	.5	1,177	1,172	557		96	4			19	5	59	17	22	104	1.02	11.3
LP		CR	GP	1		15	15	7		100				100				16	20	0.31	.8
LP	Totals			10	.4	1,193	1,187	564		96	4			20	5	58	17	22	98	0.99	12.1
Type Totals					1.7	12,093	11,885	5,645	2	56	36	7	11	11	73	5	22	146	1.38	81.5	

Species, Sort Grade - Board Foot Volumes (Type)

Project: SIDEROD2

T33S R7E S4 T234

T33S R7E S4 T234

Twp Rge Sec Tract Type Acre Plots Sample Trees
 33S 7E 4 VP 234 27.00 13 62

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf	
								4-5	6-14	15-22	22+	12-20	21-30	31-35	36-99					
LP		CR	CR	94	3.1	7,419	7,187	194	98	2		15	12	60	13	24	104	0.95	69.2	
LP		CR	GP	6		460	460	12	100			69	31			17	33	0.48	13.9	
LP	Totals			99	2.9	7,880	7,648	206	98	2		18	14	56	12	23	92	0.89	83.2	
PP		CR	CR	100		107	107	3	100			41		59		23	61	0.85	1.8	
PP	Totals			1		107	107	3	100			41		59		23	61	0.85	1.8	
Type Totals					2.9	7,987	7,755	209	98	2		19	13	55	13	23	91	0.89	84.9	

Species Table Report

TblSpecies

Date: 2/26/03

Table Name: KL SPECIES

Page: 1

Cod	Abrv	Description	Bark Ratio	ASub Const	Form Factor	Wood Type	Component	Yield Table	Min	Min	Max		Max	Max	BdFt Rule	CuFt Rule	Weight
									Log Dia	Log Len	Log Len	Log Trim	Tree Dia	Tree Hgt.			
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

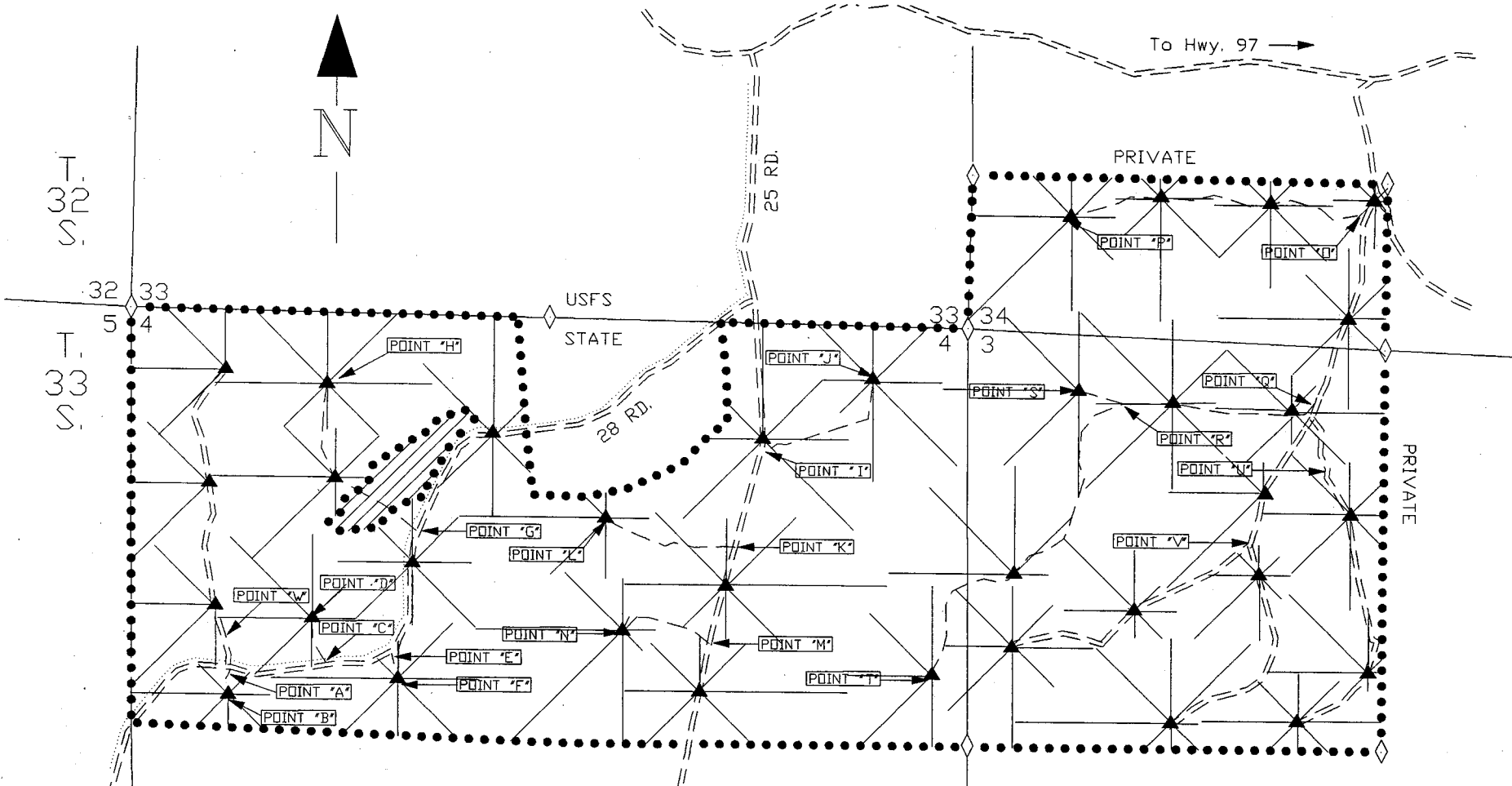
Sort/Grade Table

TblSortGrade

Table Name: KLAMATH

Date: 2/26/03

Sort	Grd	Abr	Desc	Fbr	Min	Max	Max	Min	Max	Defect	Min	Vol	Min	Knot	Knot	Str	Sap	Min	Lbs	Lbs	Cords	Cords	Type
					Dia	Dia	Butt	Len	Len		Vol	Type	Ring	Size	Freq		Age	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	DEADPUL	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

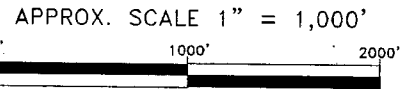
OF TIMBER SALE CONTRACT NO. 341-03-92

SIDEROD

PORTIONS OF SECTIONS 3 & 4, T33S, R7E, AND
 PORTION OF SECTION 34, T32S, R7E, W.M.

KLAMATH COUNTY, OREGON

APPROXIMATE SALE ACREAGE 502 ACRES



LEGEND

- ● ● ● ● TIMBER SALE BOUNDARY
- SECTION LINE
- ◇ KNOWN LAND SURVEY CORNER
- ▨ EXCLUSION AREA
- == == == UNSURFACED EXISTING ROAD
- - - - - UNSURFACED ROAD (CONST. REQUIRED)
- UNDERGROUND TELEPHONE LINE
- POINT 'A' POINT FOR PROJECT WORK