



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Three P Sale 341-05-10

District: Klamath/Lake

Date: 5/17/04

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$222,512.03	\$0.00	\$222,512.03
		Project Work	(\$8,530.00)
		Advertised Value	\$213,982.03



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Timber Description Three P Sale 341-05-10

District: Klamath/Lake

Location: Portions of Sections 20, 21, 28, 29 & 33, T32S, R7-1/2E, W.M., Klamath County, Oregon.

Date: 5/17/04

Stand Stocking: 20%

Species	Avg. DBH	Amortized%	Recovery%
White Fir	17	0	97
Sugar Pine	16	0	97
Ponderosa Pine	12	0	97
Lodgepole Pine	10	0	97

Volume by Grade	White Fir	Sugar Pine	Ponderosa Pine	Lodgepole Pine	Total
Camprun	0	0	0	46	46
CR 8" - 14"	101	70	210	0	381
CR 14" - 22"	27	63	104	0	194
CR 22"+	14	114	19	0	147
CR 6" - 8"	9	68	317	0	394
Total	151	315	650	46	1,162

Comments: Pond Values Used: 1st Quarter 2004

Other costs (plus P&R):

Dust Abatement: \$7,485.00

Brand and Paint: \$3,200.00



Timber Sale Appraisal Logging Conditions Three P Sale 341-05-10

"STEWARDSHIP IN FORESTRY"

Combination#: 1

White Fir	40.00%
Sugar Pine	25.00%
Ponderosa Pine	65.00%
Lodgepole Pine	100.00%

Yarding Distance: Medium (800 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	60.00%
Sugar Pine	75.00%
Ponderosa Pine	35.00%

Yarding Distance: Medium (800 ft) **Downhill Yarding:** Yes
Logging System: Wheel Skidder **Process:** Manual Falling/Delimiting
Tree Size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
Loads/Day: 10 **Bd. Ft./Load:** 4,000
Cost/MBF: \$75.02
Machines:
Log Loader (B)
Tire Skidder



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal

Logging Costs

Three P

Sale 341-05-10

Date: 5/17/04

Operating Seasons: 1.0

Profit & Risk: 12%

Project Costs: \$8,530

Other Costs (P/R): \$10,685

Slash Disposal: \$0

Other Costs: \$0

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

Road Maintenance: \$1.48

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
White Fir	\$0.00	2.0	4.0
Sugar Pine	\$0.00	2.0	4.0
Ponderosa Pine	\$0.00	2.0	3.5
Lodgepole Pine	\$0.00	2.0	3.3

Local Pond Values

Date	Species	Grade	Value
5/17/04	White Fir	CR 8" - 14"	\$325.00
5/17/04	White Fir	CR 14" - 22"	\$340.00
5/17/04	White Fir	CR 22"+	\$340.00
5/17/04	White Fir	CR 6" - 8"	\$310.00
5/17/04	Sugar Pine	CR 8" - 14"	\$390.00
5/17/04	Sugar Pine	CR 14" - 22"	\$575.00
5/17/04	Sugar Pine	CR 22"+	\$595.00
5/17/04	Sugar Pine	CR 6" - 8"	\$290.00
5/17/04	Ponderosa Pine	CR 8" - 14"	\$355.00
5/17/04	Ponderosa Pine	CR 14" - 22"	\$525.00
5/17/04	Ponderosa Pine	CR 22"+	\$640.00
5/17/04	Ponderosa Pine	CR 6" - 8"	\$265.00
5/17/04	Lodgepole Pine	Camprun	\$290.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Breakdown Three P Sale 341-05-10

Costs	White Fir	Sugar Pine	Ponderosa Pine	Lodgepole Pine
Logging	84.47	80.93	90.38	98.65
Road Maintenance	1.53	1.53	1.53	1.53
Fire Protection	2.33	2.33	2.33	2.33
Hauling	59.28	59.28	67.73	67.73
Other (P/R appl.)	9.20	9.20	9.20	9.20
Profit & Risk	18.82	18.39	20.54	21.53
Slash Disposal	0.00	0.00	0.00	0.00
Scaling	2.00	2.00	2.00	2.00
Other	0.00	0.00	0.00	0.00
Total	177.63	173.66	193.71	202.97

Amortization	0.00	0.00	0.00	0.00
Pond Value	328.18	479.60	346.64	290.00
Stumpage	150.55	305.94	152.93	87.03
Amortized	0.00	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Three P Sale 341-05-10

Amortized

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

Unamortized

	White Fir	Sugar Pine	Ponderosa Pine	Lodgepole Pine
MBF	151.00	315.00	650.00	46.00
Value	150.55	305.94	152.93	87.03
Total	22,733.05	96,371.10	99,404.50	4,003.38

Gross Timber Sale Value

Recovery \$222,512.03

Prepared by: Ed Scheick

Date: 5/17/04

District: Klamath/Lake

Phone: (541) 883-5681

Three P

341-05-10

Summary of Project Work

Project #1: Fell, skid, pile submerch.	\$6,832.00
Project #2: Tractor piling of slash	\$1,415.00
Project #3: Road closures	\$283.00
TOTAL	\$8,530.00

Three P

341-05-10

Additional Costs Sheet



"STEWARDSHIP IN FORESTRY"

Project #1 Fell, Skid, & Pile Submerchantable Material

100	Total Subsawlog Volume MBF
\$ 38.55	Fell & Skid / MBF
\$ 6.45	Sort / MBF
\$ 45.00	Total / MBF
\$ 4,500.00	Total Cost

Landing Cleanup (included with Project # 1)

16	Number of Landings		
	Shovel Time:	1	Hours / Landing
	Cat Time:	1	Hours / Landing
	Total Equipment Hours:	32	
	Total Cost:	\$ 2,331.84	
		\$ 75.00	Cost/ Hour
		\$ 70.74	Cost/ Hour

Project # 2 Tractor Piling of Slash

20	Acres
	1 Hour / Acre
\$ 70.74	Cost / Hour
\$ 1,414.80	

Project # 3 Road Closures

4	Number of closure points (A, B, C, & D)
	1 Hours / Point (include travel)
	Cost / Hour (Shovel)
\$ 70.74	Cost / Hour (Cat)
	4 Total Road Blocking Hours
\$ 282.96	Total Cost

Cost Summary

\$ 6,831.84	Project # 1 ~ Fell, Skid, & Pile Submerchantable Material
\$ 1,414.80	Project # 2 ~ Tractor Piling of Slash
\$ 282.96	Project # 3 ~ Road Closures
\$ 8,529.60	Total Cost

	With Profit and Risk
Dust Abatement	\$ 7,484.72
Knot Bumping & Branding	\$ 3,200.00
	\$ 10,684.72

Three P

341-05-10
Cruise Report



SALE NAME: Three P

LEGAL DESCRIPTION: Township 32S, Range 7 ½ E, Portions of Sections 20, 21, 28, 29, & 33.

BOUNDARY LINES:

Unit boundaries are posted with “Timber Sale Boundary” signs, marked with fluorescent orange paint and fluorescent orange flagging. Harvest exclusions are posted with “Timber Sale Boundary signs, marked with fluorescent orange paint and fluorescent orange flagging.

FUND: 100% B.O.F.

ACREAGE: Total sale acreage is 436 acres.

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

TREATMENT:

The entire timber sale is a selection cut that is cut tree marked with blue paint. Wildlife trees are designated with an orange “W”.

CRUISE METHOD:

Variable Plot cruise with all the plots being measure plots. Fixed plot cruise for all submerchantable material (5.0”to 8.0”), with all plots being measure plots.

BASAL AREA FACTOR:

Area	BAF	Type Acreage
Entire Sale Area	10 BAF	436.0 acres

Full point plots taken, 1/50th acre fixed plots for submerchantable material (5.0” to 8.0” DBH)

PLOT DESIGNATION:

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

SAMPLE SIZE CALCULATIONS:

Three P Timber Sale			
	CV %	Desired SE %	Acres
Total Sale Area	90	13	436.0

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

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

$$\text{Total Sale Number of Plots: } \frac{(1)^2(90)^2}{13^2} = 50 \text{ Plots}$$

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 submerchantable material (5"to 8")

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.:

8.0" D.B.H. for sawlog volume. (Must have a minimum of 20 board feet.)

5.0" D.B.H. for pulp volume.

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 D.B.H.

VOLUME COMPUTATION:

All cruise data was input and run at the district on Atterbury's Super Ace program.

CRUISERS: Ed Scheick

FINAL CRUISE RESULTS:

Three P Timber Sale			
	CV %	SE %	Acres
Total Sale Area	71.2	9.8	436.0

TIMBER DESCRIPTION

	Species	Average DBH	Gross Volume (MBF)	Net Volume (MBF)
Total Sale Area	Ponderosa Pine	12.4	661	650
	Sugar Pine	15.9	320	315
	White Fir	17.5	151	151
	Lodgepole Pine	10.2	46	46
				1162
		Total MBF		1162

(Volumes taken from Species, Sort Grade - Board Foot Volumes Report)

GREEN PULP VOLUME

This volume was obtained from the variable plot cruise (>8" DBH) and the fixed plot cruise (5.0"-8.0"). All material was graded green pulp. See grade table for minimum standards. The summary for green pulp listed below includes all types for the timber sale.

	Species	Green Pulp Volume (MBF)
Total Sale Area Variable	Lodgepole Pine	4
	Ponderosa Pine	28
	Sugar Pine	2
		Total: 34 MBF

(Volumes taken from Species, Sort Grade - Board Foot Volumes Report)

	Species	Green Pulp Volume (MBF)
Total Sale Area Fixed	Lodgepole Pine	4
	Ponderosa Pine	62
		Total: 66 MBF

Total Green Pulp Volume: 100 MBF

PROJECT STATISTICS
PROJECT THREEP

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES
32S	7.5	28	VARIABLE	1278	436.00	53	174

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	53	174	3.3		
CRUISE	49	174	3.6	15,273	1.1
DBH COUNT					
REFOREST COUNT					
BLANKS	4				
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	112	25.3	12.4	33		21.1	1,582	1,555	383	383
SUG PINE	41	5.6	15.9	37		7.7	740	728	168	168
WHITE F	13	1.5	17.5	57	0	2.5	346	345	76	76
LP PINE	8	2.7	10.2	30		1.5	113	113	28	28
TOTAL	174	35.0	13.1	35		32.8	2,781	2,741	656	656

SD:	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF TREES REQ.	INF. POP.
1						5	10
P PINE	212.0	16.1	71	84	98		
SUG PINE	335.4	25.4	84	112	140		
WHITE F	495.2	37.5	15	24	33		
LP PINE	491.7	37.3	1	2	3		
TOTAL	178.8	13.6	192	222	252	1,279	320

SD:	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF TREES REQ.	INF. POP.
1						5	10
P PINE	171.3	13.0	16	18	21		
SUG PINE	304.3	23.1	16	21	26		
WHITE F	439.5	33.3	3	5	7		
LP PINE	487.9	37.0	0	1	1		
TOTAL	148.1	11.2	40	45	50	878	219

SD:	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ.	INF. POP.
1						5	10
P PINE	105.8	14.5	22	25	29		
SUG PINE	241.0	33.1	4	6	7		
WHITE F	284.0	39.0	1	1	2		
LP PINE	300.8	41.3	2	3	4		
TOTAL	85.7	11.8	31	35	39	294	73

SD:	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ.	INF. POP.
1						5	10
P PINE	88.4	12.1	19	21	24		
SUG PINE	173.1	23.8	6	8	10		
WHITE F	275.9	37.9	2	2	3		
LP PINE	328.6	45.1	1	2	2		
TOTAL	66.6	9.2	30	33	36	178	44

SD:	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ.	INF. POP.
1						5	10
P PINE	96.2	13.2	1,350	1,555	1,761		
SUG PINE	166.5	22.9	561	728	894		
WHITE F	296.3	40.7	205	345	486		
LP PINE	343.5	47.2	60	113	166		
TOTAL	71.2	9.8	2,473	2,741	3,009	203	51

SD:	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ.	INF. POP.
1						5	10
P PINE	96.2	13.2	1,350	1,555	1,761		
SUG PINE	166.5	22.9	561	728	894		
WHITE F	296.3	40.7	205	345	486		
LP PINE	343.5	47.2	60	113	166		
TOTAL	71.2	9.8	2,473	2,741	3,009	203	51

PROJECT STATISTICS
PROJECT THREEP

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES			
32S	7.5	28	VARIABLE	1278	436.00	53	174			
SD: 1		COEFF VAR.	S.E.%	NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
				LOW	AVG	HIGH	5	10	15	
P PINE		93.5	12.8	334	383	433				
SUG PINE		164.2	22.6	130	168	206				
WHITE F		279.9	38.5	47	76	105				
LP PINE		337.4	46.4	15	28	42				
TOTAL		68.9	9.5	594	656	718	190	47	21	

Species, Sort Grade - Board Foot Volumes (Type)

Project: **THREEP**

T32S R7.5 S28 T1278

T32S R7.5 S28 T1278

Twp Rge Sec Tract Type Acre Plots Sample Trees
 32S 7.5 28 VARIABLE 1278 436.00 53 174

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	6-11	12-16	17+	12-20	21-30	31-35	36-99					
PP		CR	CR	96	1.8	1,517	1,490	650		72	16	13		20	14	49	16	22	80	0.90	18.7
PP		CR	GP	4		65	65	28	72	28				86	14			14	15	0.30	4.2
PP	Totals			57	1.7	1,582	1,555	678	3	70	15	12		23	14	47	15	20	68	0.82	22.9
SP		CR	CR	99	1.6	735	723	315		39	14	47		8	8	63	21	25	183	1.67	4.0
SP		CR	GP	1		5	5	2	100					100				11	5	0.18	.9
SP	Totals			27	1.6	740	728	317		39	14	47		9	8	62	21	22	149	1.53	4.9
WF		CR	CR	100	.3	346	345	151		39	52	9		5	7	79	9	27	230	1.88	1.5
WF	Totals			13	.3	346	345	151		39	52	9		5	7	79	9	27	230	1.88	1.5
LP		CR	CR	93		105	105	46	100					26	41	17	15	23	71	0.76	1.5
LP		CR	GP	7		8	8	4	100					100				19	20	0.37	.4
LP	Totals			4		113	113	49	100					32	38	16	14	22	60	0.68	1.9
Type Totals					1.4	2,781	2,741	1,195	2	59	19	20		17	13	54	16	21	88	1.00	31.2

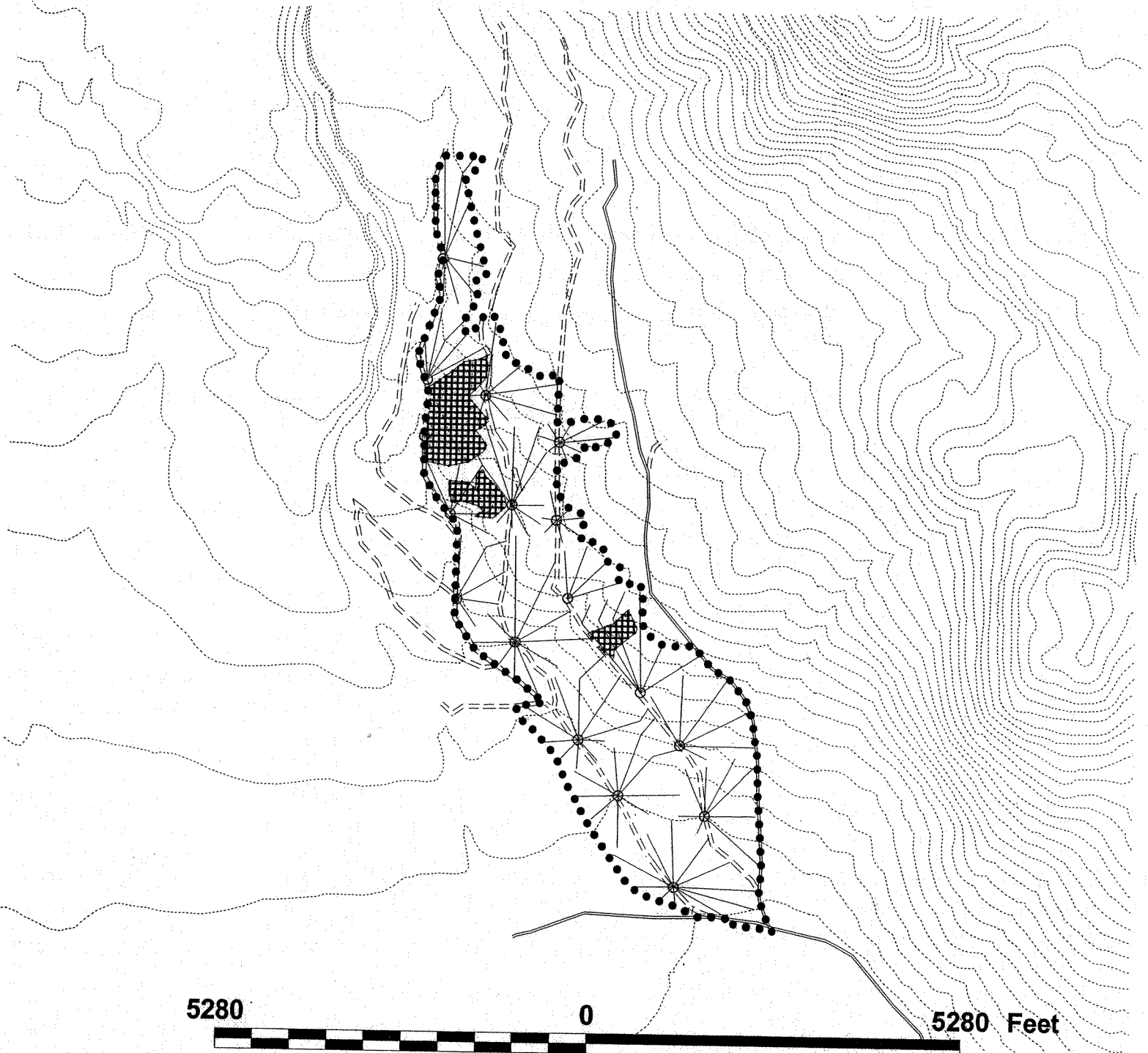
Log Stock Table - MBF
Project: THREEP

T32S R7.5 S28 T1278

T32S R7.5 S28 T1278

Twp Rge Sec Tract Type Acres Plots Sample Trees Page
 32S 7.5 28 VARIABLE 1278 436.00 53 174 1
 Date 3/17/2004
 Time 11:18:29AM

S Spp	So rt	Gr 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	12-13	14-15	16-19	20-23	24-29	30-39
PP	CR	CR	12	3		3	.4			3								
PP	CR	CR	13	6		6	.9			6								
PP	CR	CR	14	15		15	2.2			12	3							
PP	CR	CR	16	76	1.8	75	11.0			65	7	3						
PP	CR	CR	18	6		6	.9			6								
PP	CR	CR	20	28		28	4.1			18	2	2	2		3			
PP	CR	CR	22	8		8	1.2						8					
PP	CR	CR	24	32	4.8	30	4.5			15				8		8		
PP	CR	CR	26	23		23	3.3			13	2				7			
PP	CR	CR	28	25		25	3.7			8	2				15			
PP	CR	CR	30	9	10.9	8	1.2			8								
PP	CR	CR	32	325	1.9	319	47.0			87	47	63	48	26	17	31		
PP	CR	CR	36	35	2.3	35	5.1			24	5	5						
PP	CR	CR	38	6		6	.9			6								
PP	CR	CR	40	64	1.2	64	9.4			45	11		8					
PP	CR	GP	10	2		2	.2		2									
PP	CR	GP	12	5		5	.8			2	3							
PP	CR	GP	13	3		3	.4			3								
PP	CR	GP	16	7		7	1.0		7									
PP	CR	GP	19	8		8	1.2		8									
PP	CR	GP	21	4		4	.6		4									
PP	Totals			690	1.7	678	56.7		20	320	73	81	61	34	50	39		
SP	CR	CR	16	14	.8	14	4.5			9	5		1					
SP	CR	CR	20	11		11	3.5			10		2						
SP	CR	CR	24	5		5	1.5			3		1						
SP	CR	CR	26	11	8.9	10	3.1			5			4					
SP	CR	CR	28	5		5	1.6			5								
SP	CR	CR	30	5		5	1.5			5								
SP	CR	CR	32	201	1.7	198	62.4			11	18		11	8	30	48	72	
SP	CR	CR	40	68	1.1	67	21.1			20	22	6		7		12		
SP	CR	GP	10															
SP	CR	GP	12	2		2	.6			2								
SP	Totals			322	1.6	317	26.6			69	45	9	17	15	30	60	72	
WF	CR	CR	13	1		1	.7				1							
WF	CR	CR	17	6		6	4.2			2	5							
WF	CR	CR	27	11		11	7.3				11							
WF	CR	CR	34	119	.3	119	78.9			7		20	50	27		14		
WF	CR	CR	40	13		13	8.9				13							
WF	Totals			151		151	12.6			9	30	20	50	27		14		
LP	CR	CR	16	12		12	24.3			6		6						
LP	CR	CR	24	7		7	14.8			7								
LP	CR	CR	26	5		5	10.4			5								
LP	CR	CR	30	6		6	12.9			6								
LP	CR	CR	34	8		8	16.2			8								
LP	CR	CR	36	7		7	14.2			7								
LP	CR	GP	19	4		4	7.2			4								
LP	Totals			49		49	4.1			43		6						
Total All Species				1,212	1.4	1,195	100.0		20	441	148	116	128	76	81	113	72	



1: 24000
1 inch equals 2000 feet

Logging Plan
Timber Sale Contract No. 341-05-10
Three P Timber Sale
Klamath County, Oregon
436 Acres

Legend			
●●●●	Timber Sale Boundary	—	Skidroads
====	Surfaced Road	○	Landing
----	Unsurfaced Road	■	Exclusions

