



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Spaur Thin Sale 341-03-23

District: Tillamook

Date: 10/3/02

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$232,658.63	\$0.00	\$232,658.63
		Project Work	(\$24,678.00)
		Advertised Value	\$207,980.63



**Timber Sale Appraisal
Timber Description
Spaur Thin
Sale 341-03-23**

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Portions of Sections 1 and 2, T1S, R7W, W.M. Tillamook County

Date: 10/3/02

Stand Stocking: 20%

Species	Avg. DBH	Amortized %	Recovery %
Douglas - Fir	11	0	95
Western Hemlock / Fir	11	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Total
2S	284	187	471
3S	569	485	1,054
4S	285	75	360
Total	1,138	747	1,885

Comments: Pond Values Used: 3rd Quarter 2002

Other costs (P&R): Total: \$14,020

brand&paint: $\$2 \times 1885\text{mbf} = \$3,770$

truck assist/tractor swing Hembre Ridge Trail: $\$25/\text{mbf} \times 410\text{mbf} = \$10,250$

Other costs: Total: \$8,050

non-project roads: 22 stations @ $\$90/\text{station} = \$1,980$

surfacing: 22 stations x 30 cyds/sta @ $\$6 \text{ cyd} = \$3,960$

machine time for blocking roads/trails and constructing OHV dips: $\$115/\text{hour} \times 10 \text{ hrs} = \1150

clear slash from OHV trails: $\$40/\text{station} \times 24 \text{ stations} = \960

Road Maintenance: Total: \$12.71

grading: 11 miles @ $\$500/\text{mile} \times 2 \text{ times}/1885 \text{ mbf} = \5.84

resurfacing: 50 cy @ $\$6/\text{cy} \times 1.9\text{mmbf} \times 11 \text{ miles}/1885\text{mbf} = \3.33

compacting: 580 stations @ $\$11/\text{sta} = \$6,380$ plus $\$300 \text{ move-in} = \$6,680/1885 = \$3.54$

Hardwood pond value of $\$475/\text{mbf}$ was obtained from NW Hardwoods in June 2002.

Hardwood stumpage: $\$475/\text{MBF} - \$297.66 \text{ logging cost} = \177.34



Timber Sale Appraisal

Logging Conditions

Spaur Thin

Sale 341-03-23

"STEWARDSHIP IN FORESTRY"

Combination#: 1	Douglas - Fir	100.00%	
	Western Hemlock / Fir	100.00%	
Yarding Distance:	Medium (800 ft)		Downhill Yarding: No
Logging System:	Cable: Medium Tower >40 - <70		Process: Manual Delimiting
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
Loads/Day:	5		Bd. Ft./Load: 3,400
Cost/MBF:	\$195.09		
Machines:			
	Log Loader (A)		
	Tower Yarder (Medium)		



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal

Logging Costs

Spaur Thin

Sale 341-03-23

Date: 10/3/02

Operating Seasons: 2.0

Profit & Risk: 15%

Project Costs: \$24,678

Other Costs (P/R): \$14,020

Slash Disposal: \$0

Other Costs: \$8,050

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

Road Maintenance: \$12.71

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	3.5
Western Hemlock / Fir	\$0.00	4.0	3.5



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Breakdown Spaur Thin Sale 341-03-23

Costs	Douglas - Fir	Western Hemlock / Fir
Logging	195.09	195.09
Road Maintenance	13.38	13.38
Fire Protection	2.88	2.88
Hauling	69.16	34.58
Other (P/R appl.)	7.44	7.44
Profit & Risk	43.19	38.01
Slash Disposal	0.00	0.00
Scaling	2.00	2.00
Other	4.27	4.27
Total	337.41	297.65

Amortization	0.00	0.00
Pond Value	509.96	346.24
Stumpage	172.55	48.59
Amortized	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Spaur Thin Sale 341-03-23

Amortized

	Douglas - Fir	Western Hemlock / Fir
MBF	0.00	0.00
Value	0.00	0.00
Total	0.00	0.00

Unamortized

	Douglas - Fir	Western Hemlock / Fir
MBF	1,138.00	747.00
Value	172.55	48.59
Total	196,361.90	36,296.73

Gross Timber Sale Value

Recovery \$232,658.63

Prepared by: Steve Langer

Date: 10/3/02

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: Spaur Thin Date: Jun. 20 2002

Construction -

Point	A - B	6+85	stations =	\$4,394.70
Point			stations =	\$0.00
SUB TOTAL				\$4,394.70

Improvement -

Point	A - B	29+80	stations =	\$18,735.32
Point			stations =	\$0.00
Point			stations =	\$0.00
SUB TOTAL				\$18,735.32

Special Projects -

				\$0.00
				\$0.00
SUB TOTAL				\$0.00

Move - In -

<u>Grader, Excavator, D-7 Cat, Dump Trucks, Drill & Compressor</u>				
<u>Vibratory Roller</u>				\$1,548.42
				\$0.00
SUB TOTAL				\$1,548.42

GRAND TOTAL \$24,678.44

SUMMARY OF CONSTRUCTION COST

Sale: SPAUR THIN Road: A - B

Construction - 6+85 stations
0.13 miles

Improvement - 29+80 stations
0.56 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00
Scattering	3.20 acres @	\$815.00 per acre =	\$2,608.00
Piling	0.00 acres @	\$905.00 per acre =	\$0.00
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00
TOTAL CLEARING AND GRUBBING			\$2,608.00

EXCAVATION -

Excavator	5 hr.s @	\$130.00 per hr. =	\$650.00
	31.15 sta. @	\$65.00 per sta. =	\$2,024.75
	0 cys. @	\$0.00 per c.y. =	\$0.00
	0 cys. @	\$0.00 per c.y. =	\$0.00
	0 cys. @	\$0.00 per c.y. =	\$0.00
TOTAL EXCAVATION			\$2,674.75

CULVERT MATERIALS -

Culverts			
0 LF of 18"	\$0.00	0 LF of 24"	\$0.00
0 LF of 30"	\$0.00	0 LF of 36"	\$0.00
0 LF of 42"	\$0.00	0 LF of 48"	\$0.00
0 LF of 54"	\$0.00	0 LF of 60"	\$0.00
	<u>\$0.00</u>		<u>\$0.00</u>
Half Rounds			
0 LF of 21"	\$0.00	0 LF of 30"	\$0.00
0 LF of 36"	\$0.00	0 LF of 42"	\$19.15
0 LF of 48"	\$0.00	0 LF of 54"	\$0.00
0 LF of 60"	\$0.00	0 LF of 66"	\$0.00
	<u>\$0.00</u>		<u>\$19.15</u>
Culvert Stakes			
0 1/2 round stakes @	\$8.00 per stake =	\$0.00	
0 marker stakes @	\$6.00 per stake =	\$0.00	
TOTAL CULVERT MATERIALS			\$19.15

SURFACING-

12" Depth	2,456 cy. of	Pit Run @	\$6.42 per c.y. =	\$15,767.52
CrvWiden	40 cy. of	Pit Run @	\$6.42 per c.y. =	\$256.80
5Trnouts	110 cy. of	Pit Run @	\$6.42 per c.y. =	\$706.20
SmTurnrd	22 cy. of	Pit Run @	\$6.42 per c.y. =	\$141.24
TOTAL SURFACING				\$16,871.76

SPECIAL PROJECTS

<u>Grade Road : .69 Miles @ \$514.80/mi.</u>	\$355.21	
<u>Roll Subgrade: 36+65 Stations @ \$11/sta.</u>	\$403.15	
<u>Grass Seed & Fertilize Areas of Disturbed Soil: 1.1 Acre @ \$180/ac.</u>	\$198.00	
	<u>\$0.00</u>	
TOTAL SPECIAL PROJECTS		\$956.36

GRAND TOTAL **\$23,130.02**

PIT RUN PIT DEVELOPMENT AND STRIPPING COST SUMMARY

SALE:

Pit:	<u>Phipps Creek Ridge</u>	Location:	<u>SW1/4 NE1/4 Sec 1 T1S R7W</u>
Rock:	<u>PIT RUN</u>	Road:	<u>2628 c.y.</u>
Swell:	<u>1.30</u>	Stockpile Size:	<u>c.y.</u>
Shrinkage:	<u>1.16</u>	Total Truck Loads:	<u>2628 c.y.</u>
Drill Pct.:	<u>50%</u>	In Place Total:	<u>2022 c.y.</u>

Pit Development:				\$500.00
Drill & Shoot:	<u>\$2.10 /cu.yd.</u>	x	<u>1011 cu.yds.</u>	= <u>\$2,123.10</u>
Strip Rock:	<u>\$1.75 /cu.yd.</u>	x	<u>1,011 cu.yds.</u>	= <u>\$1,769.25</u>
Push Rock:	<u>\$0.60 /cu.yd.</u>	x	<u>2628 cu.yds.</u>	= <u>\$1,576.80</u>
Load Dump Truck:	<u>\$0.70 /cu.yd.</u>	x	<u>2628 cu.yds.</u>	= <u>\$1,839.60</u>
			<u>Sub Total</u>	<u>\$7,808.75</u>

Base Cost: \$2.97 Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A - B	<u>\$2.85</u>	<u>\$0.60</u>	<u>\$2.97</u>	<u>\$6.42</u>	<u>2628</u>	<u>\$16,871.76</u>
	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>0</u>	<u>\$0.00</u>
	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>0</u>	<u>\$0.00</u>
			<u>Total C.Y.</u>	<u>2628</u>	<u>Sub Total</u>	<u>\$16,871.76</u>

TOTAL ROCKING COSTS = \$16,871.76



OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT

Spaur Thin

"STEWARDSHIP IN FORESTRY"

1. **Type of Sale:** Thinning – Recovery
2. **Legal Description:** Portions of Sections 1 and 2, T1S, R7W, W.M., Tillamook County, Oregon.
3. **Sale Acreage:** The sale boundaries were plotted on a digital orthophotograph and the acreage was calculated with GIS.

	ACRES		
	<u>Sale</u>	<u>Total</u>	<u>Net</u>
Sale Area (Partial Cut)	395	208	208

Sale Acres

Area within the Timber Sale Boundary signs

Total acres

For accomplishment reporting

Clearcut harvest - Sale acres; plus green tree retention acres outside the sale boundary; less roads and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Partial Cut - Sale acres less areas of low stocking, hardwoods, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Net acres

Used for calculating the advertised volume.

Clearcut - Sale acres, less green tree retention, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Partial Cut - Same as total acres

4. **Cruising Procedures:**
 - A. **Cruising Method:** A total of 41 basal area plots were measured in representative portions of the sale area to develop a stand table for the conifer volume computations.
 - B. **Plot Size:** A basal area factor of 20 was used. The point of conifer tree observation was at 4.5 feet.
 - C. **Diameter Standards:** All conifer diameters were measured at a height of 4.5 feet to the nearest 1". Diameters under 8" were not recorded.
 - D. **Grading System:** Conifers were not graded during the cruise. Assignment of grades was based on results from previous cruises in similar size timber.
5. **Computation Procedures:** Basal area and density information was calculated from plot data taken. For computation purposes the sale volume was calculated using a residual basal area of 130 square feet. V-BAR (Volume-Basal Area Ratio) for the take trees was computed using information from prior cruises in stands of similar age and site class (see attached Volume Computation Summary).

6. **Defect and Breakage:** A 5% reduction was applied to the cruise volume for defect and breakage.
7. **Timber Description:** The sale area burned in 1939 and 1945 fires. The majority of the Douglas-fir in the sale is the result of planting in 1963 and 1964. Hemlock naturally seeded-in during the late 1950's and portions (approximately 50 acres) of the sale were precommercially thinned in 1982. The current average and expected stand characteristics for the sale are shown in the attached stand tables.
8. **Cruiser Names / Dates:** Katherine Skinner and Bob Shaver, August, 2001.
9. **Revenue Distribution:**
 - 100% FDF
 - Tax Code: 9-2
 - Deed No. 161
 - Rehab Obligated: 0%
10. **Attachments:**
 - Stand Table
 - Volume Computation Summary
 - Logging Plan/Thinning Acres

STAND TABLE

Spaur Thin

Expected BA - 130

DBH	Total Tk trs/acre	Total Lv trs/acre	Douglas-fir Tk tr/acre	Douglas-fir Lv tr/acre	Hemlock Tk tr/acre	Hemlock Lv tr/acre
8"	26.5	0.0	20.9	0.0	5.6	0.0
9"	0.0	0.0	0.0	0.0	0.0	0.0
10"	65.9	0.0	41.5	0.0	24.4	0.0
11"	0.0	0.0	0.0	0.0	0.0	0.0
12"	48.2	13.9	24.1	10.1	24.1	3.8
13"	0.0	0.0	0.0	0.0	0.0	0.0
14"	26.4	25.9	10.2	12.5	16.2	13.4
15"	0.0	0.0	0.0	0.0	0.0	0.0
16"	4.4	22.5	2.7	12.3	1.7	10.2
17"	0.0	10.2	0.0	0.0	0.0	0.0
18"	1.1	13.2	0.8	9.7	0.3	3.5
19"	0.0	0.0	0.0	0.0	0.0	0.0
20"	0.0	9.0	0.0	7.5	0.0	1.5
21"	0.0	0.0	0.0	0.0	0.0	0.0
22"	0.0	3.9	0.0	2.1	0.0	1.8
24"	0.0	1.7	0.0	1.3	0.0	0.4
26"	0.0	0.3	0.0	0.3	0.0	0.0
28"	0.0	0.2	0.0	0.2	0.0	0.0
30"	0.0	0.0	0.0	0.0	0.0	0.0
32"	0.0	0.1	0.0	0.1	0.0	0.0
34"	0.0	0.0	0.0	0.0	0.0	0.0
36"	0.0	0.0	0.0	0.0	0.0	0.0

TOTAL STAND

	Douglas-fir		Hemlock	
Trees/ac	263	156	107	107
Lv trs/ac	91	56	35	35
Tk trs/ac	172	100	72	72

BA(acre)	248
Lv BA/ac	130
Tk BA/ac	118

Current Ave Stand Diameter	13.1
Leave Stand - QM Diameter	16.2
Take trees - QM Diameter	11.2

	QMD
Douglas-fir	13.1
BA(acre)	146
Lv BA/ac	82
Tk BA/ac	64

	QMD
Hemlock	13.22
BA(acre)	102
Lv BA/ac	48
Tk BA/ac	54

Hemlock	
Stand Density Index	0.51
SDI - Expected	0.25

Douglas-fir	
Relative Density	69
RD- Expected	32



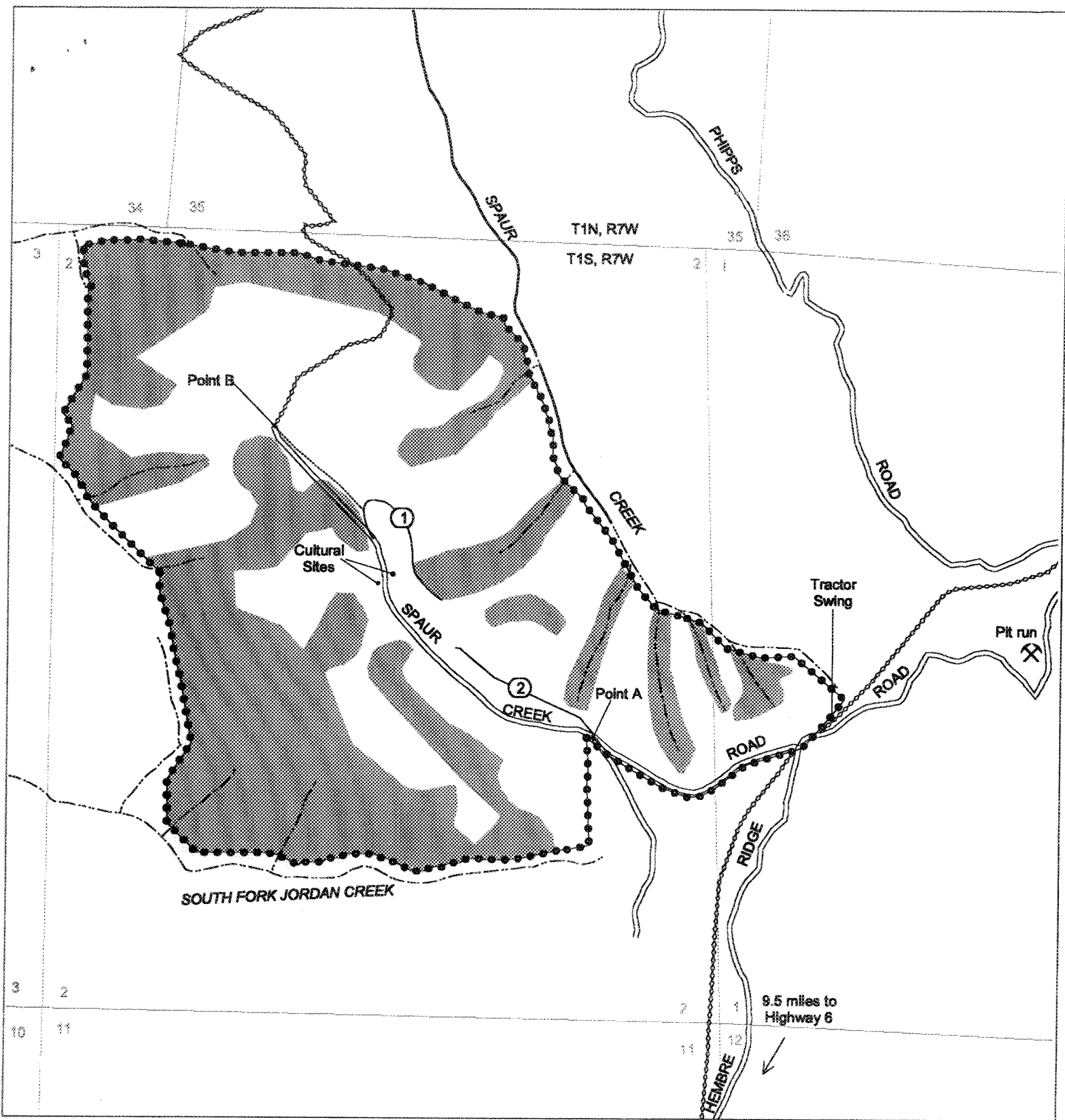
"STEWARDSHIP IN FORESTRY"

Spaur Thin

Volume Summary

208 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	64	90	5.8	1198	5%	1138
Hemlock	54	70	3.8	786	5%	747
TOTAL				1984		1885

TOTAL SALE VOLUME			
SPECIES	MBF	D&B	Net Vol. (MBF)
Douglas-fir	1198	5%	1138
Hemlock	786	5%	747
TOTAL	1984		1885



- | | | | |
|--|-----------------------|--|---------------------|
| | Rock source | | Type-F stream |
| | Stock pile | | Type-N stream |
| | Waste area | | Surfaced road |
| | Non-required thinning | | Unsurfaced road |
| | Cable yarding | | State highway |
| | Area boundary | | County road |
| | Sale boundary | | Non-project road |
| | | | Swing road |
| | | | Abandoned road |
| | | | OHV trail |
| | | | Non-motorized trail |

LOGGING PLAN
 Timber Sale Contract No. 341-03-23
 Spaur Thin
 Sections 1 and 2, T1S, R7W, W. M.
 Tillamook County, Oregon

Acres
 Sale 395
 Net 208



OREGON DEPARTMENT OF FORESTRY WRITTEN PLAN

SALE NAME: Spaur Thin

PROTECTED RESOURCE: Type F Stream: Spaur Creek

LOCATION: Portions of Sections 1 and 2, T1S, R7W, W.M., Tillamook County, Oregon.

ACTIVITY: Logging cables strung across Type F stream for deflection; Cable yarding.

Riparian Management Area (RMA): The area within 100 feet horizontal distance from the high water mark on each side of Spaur Creek, a medium Type F stream.

High Risk Sites: Active landslides and slumps; slopes steeper than 80%; headwalls or draws steeper than 70%.

PROTECTION MEASURES:

Yarding:

- The RMA is defined as a 100 foot buffer in the Sale Contract and is outside the sale area.
- When cable yarding lines are strung across the RMA they will be pulled out of RMA prior to rigging the next yarding road.
- High Risk Sites are in alder draws that will not be logged during this thinning.
- Ground yarding will not be used on High Risk Sites.
- When cable logging across High Risk Sites logs will have at least one end suspended when yarding through these sites.
- When cable logging across High Risk Sites soil gouging will be limited to a depth of 1 foot (measured perpendicular to the slope).

PREPARED BY: Steve Langer, Forester
South Unit
June 10, 2002