



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Bowl Bound Beaver Sale 341-06-91

District: Coos

Date: 4/10/06

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$1,548,307.08	\$21,916.96	\$1,570,224.04
		<b>Project Work</b>	(\$80,210.00)
		<b>Advertised Value</b>	\$1,490,014.04



# Timber Sale Appraisal Timber Description Bowl Bound Beaver Sale 341-06-91

"STEWARDSHIP IN FORESTRY"

**District:** Coos

**Location:** Section 2, T24S, R11W, W.M., Coos County, Oregon.

**Date:** 4/10/06

**Stand Stocking:** 40%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	24	0	95
Western Hemlock / Fir	14	0	90
Alder (Red)	15	0	85

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Alder (Red)	Total
3P	214	0	0	214
SM	208	0	0	208
2S	1,968	0	14	1,982
3S	169	118	22	309
3S 12"+	253	0	0	253
4S	0	0	16	16
<b>Total</b>	<b>2,812</b>	<b>118</b>	<b>52</b>	<b>2,982</b>

**Comments:** Pond Values Used: 1st Quarter Calendar Year 2006.

Hauling costs adjusted to make equivalent to \$620 daily truck cost w/o P&R (P&R to be added).

Western Red Cedar Stumpage Price = Pond Value minus DF logging costs.  
\$705/MBF = \$850/MBF - \$145/MBF

Other Costs (See attached sheet).



# Timber Sale Appraisal Logging Conditions Bowl Bound Beaver Sale 341-06-91

"STEWARDSHIP IN FORESTRY"

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<b>Combination#: 1</b>	Douglas - Fir	100.00%	
	Western Hemlock / Fir	100.00%	
	Alder (Red)	100.00%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Large Tower >=70		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
<b>Loads/Day:</b>	12		<b>Bd. Ft./Load:</b> 4,800
<b>Cost/MBF:</b>	\$61.63		
<b>Machines:</b>			
	Log Loader (A)		
	Tower Yarder (Large)		



# Timber Sale Appraisal Logging Costs Bowl Bound Beaver Sale 341-06-91

"STEWARDSHIP IN FORESTRY"

Date: 4/10/06

Operating Seasons: 0.5

Profit & Risk: 13%

Project Costs: \$80,210

Other Costs (P/R): \$12,112

Slash Disposal: \$0

Other Costs: \$0

Road Maintenance: \$0.00

Miles of Road			
Dirt	Rock (Contractor)	Rock (State)	Paved
0.4	0.8	0.0	0.0

### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$65.45	2.0	4.5
Western Hemlock / Fir	\$62.00	2.0	4.5
Alder (Red)	\$75.30	2.0	3.5



# Timber Sale Appraisal Logging Costs Breakdown Bowl Bound Beaver Sale 341-06-91

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
<b>Logging</b>	61.63	61.63	61.63
<b>Road Maintenance</b>	0.56	0.60	0.63
<b>Fire Protection</b>	0.45	0.45	0.45
<b>Hauling</b>	68.89	68.89	88.59
<b>Other (P/R appl.)</b>	4.06	4.06	4.06
<b>Profit &amp; Risk</b>	17.63	17.63	20.20
<b>Slash Disposal</b>	0.00	0.00	0.00
<b>Scaling</b>	2.00	2.00	2.00
<b>Other</b>	0.00	0.00	0.00
<b>Total</b>	155.22	155.26	177.56

<b>Amortization</b>	0.00	0.00	0.00
<b>Pond Value</b>	692.20	480.00	599.04
<b>Stumpage</b>	536.98	324.74	421.48
<b>Amortized</b>	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary Bowl Bound Beaver Sale 341-06-91

**Amortized**

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
<b>MBF</b>	0.00	0.00	0.00
<b>Value</b>	0.00	0.00	0.00
<b>Total</b>	0.00	0.00	0.00

**Unamortized**

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
<b>MBF</b>	2,812.00	118.00	52.00
<b>Value</b>	536.98	324.74	421.48
<b>Total</b>	1,509,987.76	38,319.32	21,916.96

**Gross Timber Sale Value**

**Recovery \$1,570,224.04**

Prepared by: Ryan Greco

Date: 4/10/06

District: Coos

Phone: (541) 267-1755

## Summary of "Other Costs" for Timber Sale Appraisals

Sale Name: Bowl Bound Beaver

### Additional "Other Cost" with additional profit and risk to be added:

	<u>Units</u>	<u>Quantity</u>	<u>Cost/unit</u>	<u>Total Cost</u>
<b>Felling</b>				
Felling of unmerch material	MBF	0	\$ 1.00	\$ -
Directional Felling	MBF	500	\$ 2.00	\$ 1,000.00
<b>Yarding and Loading</b>				
Artificial tailhold	anchor		\$ 500.00	\$ -
Artificial guyline support	anchor	0	\$ 500.00	\$ -
Brand and paint logs	MBF	2982	\$ 1.00	\$ 2,982.00
Loader time for firewood stacking	Hours	2	\$ 75.00	\$ 150.00
Cull sorting/slash piling on landings	landing	4	\$ 125.00	\$ 500.00
Rig lift trees	lift tree	0	\$ 100.00	\$ -
<b>Snag Creation</b>				
Tree Topping	Trees	54	\$ 100.00	\$ 5,400.00
Tree Girdling	Trees	54	\$ 20.00	\$ 1,080.00
<b>Miscellaneous Costs</b>				
Additional Fire Equipment	Seasons	1	\$ 1,000.00	\$ 1,000.00
Maintenance rock per section 5	Cubic Yards	0	\$ 18.00	\$ -
Safety Flagging and/or signing	per day	0	\$ 150.00	\$ -

**Total additional "Other Cost" with additional profit and risk to be added**

**\$ 12,112.00**

### Additional "Other Cost" with no additional profit and Risk

	<u>Units</u>	<u>Quantity</u>	<u>Cost/unit</u>	<u>Total Cost</u>
Non-required road construction	Stations			\$ -
Non-rquired road rocking	Cubic Yards			\$ -
Stream clearance	Feet			\$ -
Scaling (high piece count)	MBF		\$ 1.00	\$ -

**Total additional "Other Cost" with no additional profit and Risk**

**\$ -**

**SUMMARY OF CONSTRUCTION COST  
Bowl Bound Beaver**

**Project 1A: Road Improvement**

Points: A to B      Length: 2135'      Type: 14' subgrade w/ditch

Saw time to brush road (2 person crew)	10	hrs at	\$73.50	per hour	\$735.00
Excavator to clean up brush	2	hrs at	\$120.00	per hour	\$240.00
Grader time	3	hrs at	\$75.00	per hour	\$225.00

**Total Project 1A:      \$1,200.00**

**Project 1B: Road Improvement**

Points: B to C      Length: 1345'      Type: 14' subgrade w/ditch

**Improvements**

Cat time to shape waste in road	10	hrs at	\$120.00	per hour	\$1,200.00
Grader to smooth road	3	hrs at	\$75.00	per hour	\$225.00

**Total Improvements      \$1,425.00**

**Culvert Installation**

18" culverts (includes installation)	80	ft at	\$18.36	per ft	\$1,468.80
18" bands	2	band at	\$10.80	per band	\$21.60

**Total Culverts      \$1,490.40**

**Total Project 1B:      \$2,916.00**

**Project 1C: Road Improvement**

Points: H to I      Length: 1100'      Type: 14' subgrade no ditch

Cat time for road improvement	10	hrs at	\$120.00	per hour	\$1,200.00
Excavator time for road improvement	10	hrs at	\$120.00	per hour	\$1,200.00
Dump Truck to haul slough to waste areas in road between Points B to C	10	hrs at	\$75.00	per hour	\$750.00
Laborer	10	hrs at	\$30.00	per hour	\$300.00
Grader to smooth road	2	hrs at	\$75.00	per hour	\$150.00

**Total Project 1C:      \$3,600.00**

**Move-in**

Equipment	Miles	hrs	Lowboy Rate/hr	Total
Excavator	25	4	\$95.00	\$380.00
Cat	25	4	\$95.00	\$380.00
Grader	25	4	\$95.00	\$380.00
Drill & Comp	25	4	\$95.00	\$380.00
Dump Truck	25	4	\$95.00	\$380.00

**Total Move-In:      \$1,900.00**

**Project 1 Total      \$9,616.00**



**SUMMARY OF CONSTRUCTION COST  
Bowl Bound Beaver**

**Project 2A: Road and Landing Construction**

Points: C to D      Length: 685'      Type: 14' subgrade w/ditch

**Clearing and Grubbing**

Clear and Grub	<u>0.6</u>	acres at	<u>\$1,383.00</u>	per acre	<u>\$829.80</u>
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**Total Clear and Grub      \$829.80**

**Excavation**

Excavator (rock excavation)	<u>3201</u>	yds at	<u>\$1.63</u>	per yd	<u>\$5,217.63</u>
Excavator (common excavation)	<u>4836</u>	yds at	<u>\$1.26</u>	per yd	<u>\$6,093.36</u>
Drill and shoot	<u>2,300</u>	yds at	<u>\$3.25</u>	per yd	<u>\$7,475.00</u>
Dump Truck to haul material to Pt G	<u>8,037</u>	yds at	<u>\$0.89</u>	per yd	<u>\$7,152.93</u>
Dump Truck to haul stumps near Pt G	<u>2</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$150.00</u>
Excavator to load stumps	<u>2</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$240.00</u>
Laborer	<u>95</u>	hrs at	<u>\$30.00</u>	per hour	<u>\$2,850.00</u>

**Total Excavation      \$29,178.92**

**Culvert Installation**

18" culverts (includes installation)	<u>60</u>	ft at	<u>\$18.36</u>	per ft	<u>\$1,101.60</u>
18" bands	<u>2</u>	band at	<u>\$10.80</u>	per band	<u>\$21.60</u>

**Total Culverts      \$1,123.20**

**Grader**

Grader to smooth road surface	<u>1</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$75.00</u>
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**Total Grader      \$75.00**

**Total Project 2A:      \$31,206.92**

**Project 2B: Road and Landing Construction**

Points: E to F      Length: 685'      Type: 14' subgrade no ditch

**Excavation**

Excavator	<u>10</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$1,200.00</u>
Cat time	<u>15</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$1,800.00</u>
Laborer	<u>15</u>	hrs at	<u>\$30.00</u>	per hour	<u>\$450.00</u>

**Total Excavation      \$3,450.00**

**Grader**

Grader to smooth road surface	<u>1</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$75.00</u>
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**Total Grader      \$75.00**

**Total Project 2B:      \$3,525.00**

**SUMMARY OF CONSTRUCTION COST  
Bowl Bound Beaver**

**Project 2C: Landing Construction**

Points:	G	Length:	n/a	Type:	n/a
Cat time to prep area and shape material		35	hrs at	\$120.00	per hour \$4,200.00
					<b>Total Project 2C:</b>
					<b>\$4,200.00</b>

**Project 2D: Landing Re-Construction**

Points:	I	Length:	n/a	Type:	n/a
Excavator		10	hrs at	\$120.00	per hour \$1,200.00
Cat time		10	hrs at	\$120.00	per hour \$1,200.00
Dump Truck to haul material to waste areas in road between Points B to C		10	hrs at	\$75.00	per hour \$750.00
Laborer		10	hrs at	\$30.00	per hour \$300.00
					<b>Total Project 2D:</b>
					<b>\$3,450.00</b>
					<b>Project 2 Total</b>
					<b>\$42,382.00</b>

**Project 3: Road Surfacing**

Points: A to B  
 Length: 2135'  
 Rock Type: 2 1/2"-0" Hard Crushed Quarry  
 Depth: 4" compacted 23 yds/STA 30.79 tons/STA (1.33 tons/cu yd)

2 1/2"-0" Rock (2.4 hr RT)	670.32	tons at	\$13.82	per ton	\$9,263.82
Processing (Grader and Roller)	670.32	tons at	\$1.32	per ton	\$884.82

Points: B to C  
 Length: 1345'  
 Rock Type: 2 1/2"-0" Hard Crushed Quarry  
 Depth: 6" compacted 35 yds/STA 47.10 tons/STA (1.33 tons/cu yd)

2 1/2"-0" Rock (2.4 hr RT)	646.38	tons at	\$13.82	per ton	\$8,932.97
Processing (Grader and Roller)	646.38	tons at	\$1.32	per ton	\$853.22

Points: C to D  
 Length: 685'  
 Rock Type: 2 1/2"-0" Hard Crushed Quarry  
 Depth: 8" compacted 48 yds/STA 64.04 tons/STA (1.33 tons/cu yd)

2 1/2"-0" Rock (2.4 hr RT)	430.92	tons at	\$13.82	per ton	\$5,955.31
Processing (Grader and Roller)	430.92	tons at	\$1.32	per ton	\$568.81

Points: Landing at D  
 Rock Type: Jaw Run  
 Amount: 54 yds/landing 71.82 tons/landing (1.33 tons/cu yd)

Jaw Run Rock (2.4 hr RT)	71.82	tons at	\$13.82	per ton	\$992.55
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**SUMMARY OF CONSTRUCTION COST**  
**Bowl Bound Beaver**

**Move-in**

<u>Equipment</u>	<u>Miles</u>	<u>hrs</u>	<u>Lowboy</u> <u>Rate/hr</u>	<u>Total</u>
Grader	25	4	\$95.00	\$380.00
Roller	25	4	\$95.00	\$380.00

**Total Move-in**      \$760.00

**Project 3 Total**      \$28,212.00

**Total Project Costs**      \$80,210.00

## TIMBER SALE SUMMARY

### Bowl Bound Beaver

**1. Type of Sale:** Final Harvest, Recovery, Sealed Bid

**2. Boundary Lines:** Sale boundaries are marked on the ground with "Timber Sale Boundary" posters, "Right of way Boundary" posters, red flagging, and red paint at locations shown on the Exhibit "A".

**3. Revenue Distribution:** 100% CSL, 100% Coos County.

**4. Sale Acreage:** The sale is comprised of two units totaling 55 acres. One of the units is a Right Of Way for road construction. Sale acreage was determined from electronic digitizing using the ArcView GIS program. Interior road acres were accounted for by either including in the cruise or deducting from the expansion acreage.

**5. Volume by Species, Fund and County.** See Attached table titled Net Volumes and Acreages

**6. Grade:** (by Percent, all areas)

Species	3 Peeler %	Spec. Mill %	2 Saw %	3 Saw %	Big 3 Saw %	4 Saw %
Douglas-fir	8%	7%	70%	6%	9%	
Hemlock				100%		
Hardwoods			27%	42%		31%

**7. Cruise:** Area 1 of Bowl Bound Beaver was variable plot cruised using a nested Big BAF plot method. The Big BAF method is a combination of count plots and individually measured trees. The plots were spaced 66 feet apart on cruise lines spaced 425 feet apart. A 250 BAF full plot at 16 feet was taken to determine which Douglas-fir trees would be fully measured.

A total of 59 Douglas-fir trees were fully measured for DBH, height, grade and defect. A 40 BAF full plot at 16 feet was used to determine tree counts and to measure minor species. A total of 65 count plots were measured. Cruising was done in October 2005 by ODF foresters.

Area 2 Right of Way was 100% cruised in January, 2006 by ODF foresters.

A. Summary data:

Diam	Ht. Stand	Form Pt.	Form Factor	CV %	SE %
D4H	6" DIB	Conifer: 16' Hardwood: 16'	Recorded for all cruised trees by estimate and measure	64%	7.9 %

B. Stand Data:

SPECIES	DBH	TREES/ACRE	BASAL AREA/AC	NET MBF/ACRE
Douglas Fir	24	68	221	51
Hemlock	14	14	27	2
Hardwoods	15	17	22	1

C. Green Tree Retention: There are nine (9) green tree reserve areas associated with this sale. The reserve areas consist primarily of fish bearing and perennial stream buffer extensions and trees left along seasonal

drainages. The majority of the green tree retention is posted out of the sale boundary. The table below summarizes reserve trees whose volume has been removed from the cruise. Stream buffers and GTR areas are mapped in Exhibit "A."

Sale Area	Douglas fir - MBF	Hemlock MBF	Hardwood MBF
1	173	5.4	7

**8. Timber Description:** Timber in the sale area is stocked with mature 124 year-old Douglas-fir sawtimber with minor amounts of western hemlock and red alder. Area 2, a Right of Way is approximately 1 acre of 95 year old Douglas fir. Timber quality is good.

**9. Topography:** Area 1 has a dominant northerly aspect with some eastern faces. Terrain is generally steep with gentler ground at the top of the ridge. The sale area is bordered by Beaver Creek to the north and northeast, and a Beaver Creek tributary to the east. Locations of stream buffers and green tree retention areas are indicated on the Exhibit "A".

**10. Logging Method:** Area 1 is designed for cable logging. A small amount of Area 1 may be ground logged. Existing roads will be used for logging access and will require improvement. Final determination of landing locations and logging method must give priority to protection of stream buffers and green tree retention areas. Full suspension will be required while yarding over drainages and stream buffers and single end suspension over the remainder of the sale. The landing at point D is intended for winter harvest. The remainder of the sale is intended for summer harvest. Purchaser must comply with winter and wet weather option if operations are conducted during the wet season. The sale has been designed to be logged from four landings situated on spurs from the 1420 road. Roads and landings are indicated on the Exhibit "A".

**11. Access:** From Coos Bay, proceed east on the Coos River Highway through Allegany and turn left (north) onto the 1000 road. Follow the 1000 line approximately 8 miles to the 1400 road, turn east and go 0.1 mile where the road forks. Take the right fork (1420) and proceed to the end of the road, approximately 0.5 mile.

**12. Projects:**

Project No. 1: Road and landing improvement

Project No. 2: Road and landing construction

Project No. 3: Road surfacing

## NET VOLUMES AND ACREAGE

SALE AREA & SPECIES		Tree cnt. 100% Units	NET VOLUMES (MBF)							
			By County and Fund						Total Vols.	Vol. per Acre
Area	Spec		Coos			Douglas				
		CSL	BOF	Total	CSL	BOF	Total			
1	D-fir	2774		2774				2774	51	
	Hdwd	52		52				52	1	
	WH	118		118				118	2	
2	D-fir	38		38				38	38	
ROW	Hdwd	0		0				0	0	
	WH	0		0				0	0	

**TOTAL SALE VOLUME BY SPECIES**

Douglas-fir     2812 MBF  
Hemlock         118 MBF  
Hardwoods       52 MBF  
Total              2982 MBF

Report by: Ryan Greco

Date: 01/17/2006

Unit For. *[Signature]* Date Jan 31, 06

Asst. Dist. For. *[Signature]* Date 3.3.2006

UTILITY VOLUME NOT SHOWN TO PROVIDE FOR RETENTION OF DOWN LOGS  
NO INGROWTH INCLUDED

**ACREAGE BY COUNTY (to nearest acre)**

Sale Area	Coos County						Douglas County						TOTAL ACRES
	CSL			BOF			CSL			BOF			
	Conifer		Hard wood	Conifer		Hard woods	Conifer		Hard woods	Conifer		Hard woods	
	cc	pc		cc	pc		cc	pc		cc	pc		
1	54												54
2	1												1
SUM	55	0	0	0	0	0	0	0	0	0	0	0	55

cc- clearcut                  pc- partial cut                  BOF - Board of Forestry                  CSL - Common School Land

## CRUISE VOLUME COMPUTATION REPORT

WAL NAME: Bowl Bound Beaver  
 GAL LOCATION: Section 2, T24S, R11W, WM Coos County

DATE: 01/17/2006  
 BY: Ryan Greco

### GROSS VOLUME MBF \*

SPECIES>> AREA	Doug-fir	Hemlock	Hardwds	TOTAL BY AREA
1	3361	136.6	66.7	3564
Less GTR Vol.	172.7	5.4	7	186
GrossNet	3188	131.2	59.3	3378
Area 2 ROW	44	0.0	0.0	44
<b>TOTAL</b>	<b>3232</b>	<b>131</b>	<b>59</b>	<b>3423</b>

### DEFECT AND BREAKAGE \*

ALL AREAS

Species	Doug-fir	Hemlock	Hardwds
Field cull	0.05	0.03	0.04
Hidden cull	0.04	0.03	0.04
Breakage	0.04	0.04	0.05
<b>Total</b>	<b>0.13</b>	<b>0.10</b>	<b>0.13</b>

### NET VOLUME BY MBF

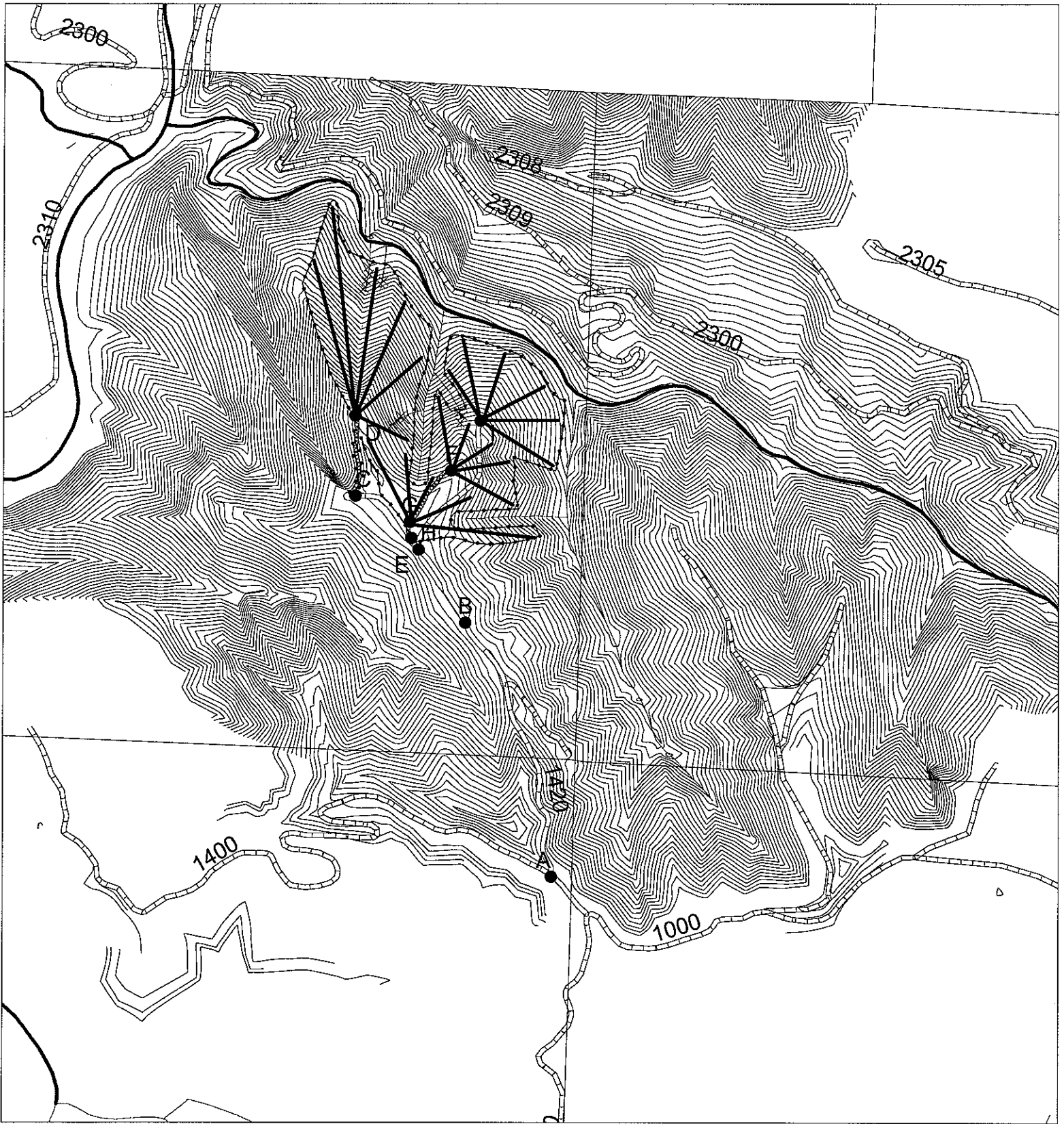
SPECIES AREA	Doug-fir	Hemlock	Hardwds	TOTALS BY AREA
1	2774	118	52	2944
2 ROW	38	0	0	38
<b>TOTALS</b>	<b>2812</b>	<b>118</b>	<b>52</b>	<b>2982</b>










### NET VOLUME BY GRADE AND MBF \*

Grade >>>>>>>>>	Area	Species	3 PEE	SM	2 SAW	3 SAW	Big 3 SAW	4 SAW/CR	check value
		Doug-Fir	214	208	1968	169	253	0	2812
		Hemlock	0	0	0	118	0	0	118.1
		Hardwoods	0	0	14	22	0	16	52

### GRADE DISTRIBUTION BY PERCENT

Grade >>>>>>>>>	Area	Species	3 PEE	SM	2 SAW	3 SAW	Big 3 SAW	4 SAW	
		Doug-fir	8%	7%	70%	6%	9%	0.0%	1.00
		Hemlock	0%	0%	0%	100%	0%	0%	1.00
		Hardwoods	0%	0%	27%	42%	0%	31%	1.00

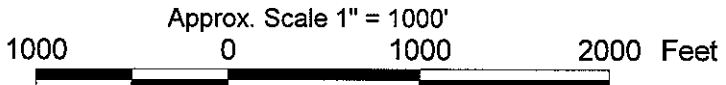


-  Timber Sale Boundary
-  Right of way boundary
-  Logging corridors
-  20' Contours
-  Project Points
- Streams
-  Type F
-  Type N Perennial
-  Type N Seasonal
-  Individual GTR



Approximate Net Acreage  
 Area 1 - 54 acres  
 Area 2 ROW - 1 acre  
 Total - 55 acres

**LOGGING PLAN**  
**OF TIMBER SALE NO.**  
**341-06-91**  
**BOWL BOUND BEAVER**  
**T24S, R11W, SECTION 2,**  
**W.M., COOS COUNTY, OREGON**



The information shown on this map depicts approximate locations. Exact locations of features represent by map symbols shall be determined on site and shall depend upon the conditions that exist on site. Activities will be conducted based upon features determined on site rather than features shown on this map