



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Bobcat Sale 341-02-26

District: Tillamook

Date: 4/29/02

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$617,052.08	\$0.00	\$617,052.08
		Project Work	(\$257,895.00)
		Advertised Value	\$359,157.08



Timber Sale Appraisal Timber Description Bobcat Sale 341-02-26

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Portion of Sections 19, 20, 21, 28 & 29
T1S, R7W, W.M. Tillamook County, Oregon

Date: 4/29/02

Stand Stocking: 40%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	13	0	100

Volume by Grade	Douglas - Fir	Total
2S	237	237
3S	1,661	1,661
4S	474	474
Total	2,372	2,372

Comments: Pond Values used: 1st Quarter 2002

Road Maintenance: Total - \$3.00

Grading: 5 miles X 2 gradings X 500/mile / 2372 MBF = \$2.11/MBF

Surfacing: \$3.50/yard X 2.4 MMBF X 5 miles X 50 CuYds/mile / 2372 MBF = \$0.89

Other Costs P/R (profit and risk to be added):

Brand and paint: \$2.00/MBF X 2372MBF = \$4744

Other costs: Total - \$855

Remove waterbars on spur roads w/tractor - 3 hrs @ \$85/hr = \$255

100 yds pit-run for landings and spot rocking -\$6/cy= \$600



Timber Sale Appraisal Logging Conditions Bobcat Sale 341-02-26

"STEWARDSHIP IN FORESTRY"

Combination#: 1	Douglas - Fir	75.00%
Yarding Distance:	Medium (800 ft)	Downhill Yarding No
Logging System:	Cable: Medium Tower >40 - <70	Process: Stroke Delimber
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF	
Loads/Day:	6	Bd. Ft./Load: 3,500
Cost/MBF:	\$156.32	
Machines:	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)	
Combination#: 2	Douglas - Fir	25.00%
Yarding Distance:	Short (400 ft)	Downhill Yarding No
Logging System:	Wheel Skidder	Process: Feller Buncher
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF	
Loads/Day:	8	Bd. Ft./Load: 3,500
Cost/MBF:	\$119.79	
Machines:	Feller Buncher w/ Delimber Log Loader (B) Stroke Delimber (B) Tire Skidder	



**Timber Sale Appraisal
Logging Costs
Bobcat
Sale 341-02-26**

"STEWARDSHIP IN FORESTRY"

Date: 4/29/02

Operating Seasons: 2.0

Profit & Risk: 15%

Project Costs: \$257,895

Other Costs (P/R): \$4,744

Slash Disposal: \$0

Other Costs: \$855

Road Maintenance: \$3.00

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

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	3.0	3.5



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Breakdown Bobcat Sale 341-02-26

Costs	Douglas - Fir
Logging	147.19
Road Maintenance	3.00
Fire Protection	2.28
Hauling	43.80
Other (P/R appl.)	2.00
Profit & Risk	29.74
Slash Disposal	0.00
Scaling	2.00
Other	0.36
Total	230.37

Amortization	0.00
Pond Value	490.51
Stumpage	260.14
Amortized	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Bobcat Sale 341-02-26

Amortized

	Douglas - Fir
MBF	0.00
Value	0.00
Total	0.00

Unamortized

	Douglas - Fir
MBF	2,372.00
Value	260.14
Total	617,052.08

Gross Timber Sale Value

Recovery \$617,052.08

Prepared by: Steve Langer

Date: 4/29/02

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: Bobcat

CONSTRUCTION

Point	A to B	+00 stations =	\$0.00
SUBTOTAL CONSTRUCTION			\$0.00

IMPROVEMENT

Point	A to B	342+05 stations =	\$226,404.02
SUBTOTAL IMPROVEMENT			\$226,404.02

SPECIAL PROJECTS

Stockpile 2320 cubic yards of 2 1/2"-0" crushed rock	\$30,415.20
SUBTOTAL SPECIAL PROJECTS	\$30,415.20

MOVE IN	\$1,075.78
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GRAND TOTAL	\$257,895.00
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SUMMARY OF CONSTRUCTION COST

Sale:	Bobcat	Road:	A to B								
Construction -	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">+00</td> <td style="text-align: left;">stations</td> </tr> <tr> <td style="text-align: right; border-top: 1px solid black;">0.00</td> <td style="text-align: left; border-top: 1px solid black;">miles</td> </tr> </table>	+00	stations	0.00	miles	Improvement -	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">342+05</td> <td style="text-align: left;">stations</td> </tr> <tr> <td style="text-align: right; border-top: 1px solid black;">6.48</td> <td style="text-align: left; border-top: 1px solid black;">miles</td> </tr> </table>	342+05	stations	6.48	miles
+00	stations										
0.00	miles										
342+05	stations										
6.48	miles										
CLEARING AND GRUBBING -											
Scattering (0+00 to 342+05)	6.28 acres @	\$815.00 per acre =	\$5,119.76								
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00								
		TOTAL CLEARING AND GRUBBING	\$5,119.76								
EXCAVATION -											
Sidecast pullback	35+10 to 35+90	284 cys. @	\$1.40 per c.y. = \$398.22								
Sidecast pullback	40+25 to 40+80	196 cys. @	\$1.40 per c.y. = \$273.78								
Widening	40+25 to 40+80	44 cys. @	\$1.40 per c.y. = \$61.60								
Widening	273+65 to 274+25	16 cys. @	\$1.40 per c.y. = \$22.40								
Widening	292+80 to 294+30	160 cys. @	\$1.40 per c.y. = \$224.00								
Widening	295+40 to 297+55	153 cys. @	\$1.40 per c.y. = \$214.04								
Widening	302+70 to 303+40	62 cys. @	\$1.40 per c.y. = \$87.11								
Spread and Compact		915 cys. @	\$0.35 per c.y. = \$320.29								
		TOTAL EXCAVATION	\$1,601.44								
END-HAULING -											
To Waste Area @ Sta. 38+65:											
Sidecast pullback	35+10 to 35+90	284 cys. @	\$0.60 per c.y. = \$169.62								
Sidecast pullback	40+25 to 40+80	196 cys. @	\$0.54 per c.y. = \$106.22								
Widening	40+25 to 40+80	44 cys. @	\$0.54 per c.y. = \$23.90								
To Waste Area @ Sta. 244+50:											
Widening	273+65 to 274+25	16 cys. @	\$1.06 per c.y. = \$17.00								
Widening	292+80 to 294+30	160 cys. @	\$1.46 per c.y. = \$233.61								
Widening	295+40 to 297+55	153 cys. @	\$1.52 per c.y. = \$232.30								
Widening	302+70 to 303+40	62 cys. @	\$1.65 per c.y. = \$102.84								
		TOTAL END-HAUL	\$885.49								
CULVERTS - MATERIALS & INSTALLATION											
	Culverts										
	538 LF of 18"	\$7,935.50									
	0 LF of 30"	\$0.00									
		\$7,935.50									
	Half Rounds										
	20 LF of 21"	\$228.00									
	0 LF of 36"	\$0.00									
		\$228.00									
	Culvert Stakes										
	4 stakes	\$32.00									
	Culvert Markers										
	19 markers	\$114.00									
		TOTAL CULVERTS	\$9,765.00								
SURFACING-											
Sta. 0+00 - 342+05	12,780 cy. of 2-1/2"-0"	@	\$15.35 per c.y.= \$196,173.00								
		TOTAL SURFACING	\$196,173.00								
SPECIAL PROJECTS											
Remove Culverts From State Land	4		\$408.58								
Construct Waste Areas	2.00 Hours @ 130.00/Hr.		\$260.00								
Grade and Shape Road (Surfaced, 0+00 to 342+05)	6.48 miles @ \$919.00/Mile		\$5,953.48								
Roll Subgrade Prior To Rocking (Sta. 0+00 - 342+05)	342.05 Sta. @ \$11.00/Sta.		\$3,762.55								
Construct 50 lineal feet of ditchline @ 210+25	0.5 Hours @ 110.00/Hr.		\$55.00								
Provide 2.5 feet cover for culvert @ sta. 252+75	8.3 CY @ \$1.75/CY		\$14.58								
Erosion Control: Sedimentation	19.00 Bio Filtration Bags @ \$4.60/Bag		\$87.40								
Erosion Control: Grass Seed and Fertilize	7.14 Acres @ \$180/Acre		\$1,285.14								
Erosion Control: Seeding & Mulching	1.03 Acres @ \$1000/Acre		\$1,032.60								
		TOTAL SPECIAL PROJECTS	\$12,859.34								
		GRAND TOTAL	\$226,404.02								

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	<u>Crushing Pit</u>	Location:	<u>Sec. 15, T1N, R7W, W.M.</u>
Sale:	<u>Bobcat</u>	Road:	<u>12780 c.y.</u>
Swell:	<u>1.40</u>	Stockpile:	<u>2320 c.y.</u>
Shrinkage:	<u>1.16</u>	Total Truck Loads:	<u>15100 c.y.</u>
Drill Pct.:	<u>100%</u>	In Place Total:	<u>10786 c.y.</u>

Pit Development & Cleanup including Clearing and grubbing of Waste Area @485+75, Haul overburden to Waste Area, spread and compact.				\$1,558.58	
Drill & Shoot:	<u>\$2.10</u> /cu.yd.	x	<u>10786</u> cu.yds.	=	\$22,650.60
Push Rock:	<u>\$0.60</u> /cu.yd.	x		=	\$0.00
Load Crusher:	<u>\$0.60</u> /cu.yd.	x	<u>15100</u> cu.yds.	=	\$9,060.00
Crushing: 2-1/2"-0"	<u>\$2.20</u> /cu.yd.	x	<u>15100</u> cu.yds.	=	\$33,220.00
Load Dump Truck:	<u>\$0.60</u> /cu.yd.	x	<u>15100</u> cu.yds.	=	\$9,060.00
Oversize Reduction:	<u>\$4.50</u> /cu.yd.	x	<u>539</u> cu.yds.	=	\$2,425.50
Change gradation					\$0.00
				Subtotal	\$77,974.68

Move In and Set Up 1 Crusher					\$1,853.10
Move In and set up 1 Drill and Compressor					\$139.78
Move in 1 Roller and Compactor					\$139.78
Move in 1 Grader					\$139.78
Move in 1 D-8					\$309.14
Move in 1 Loader					\$224.46
Move in 1 Excavator					\$309.14
Move in 3 Trucks					\$250.56
Move in 1 Water Truck					\$91.64
				Subtotal	\$3,457.38

TOTAL PRODUCTION COSTS	\$81,432.06
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Base Cost= \$5.39 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 to B: St. 0+00 - 342+05 (2-1/2"-0")	<u>\$7.54</u>	<u>\$2.42</u>	<u>\$5.39</u>	<u>\$15.35</u>	<u>12780</u>	<u>\$196,173.00</u>
A to B: St. 181+25, STOCKPILE (2-1/2"-0")	<u>\$7.42</u>	<u>\$0.30</u>	<u>\$5.39</u>	<u>\$13.11</u>	<u>2320</u>	<u>\$30,415.20</u>
				Total C.Y.	<u>15100</u>	Sub Total <u>\$226,588.20</u>

TOTAL ROCKING COSTS	\$226,588.20
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MOVE-IN COST SUMMARY

Sale: BOBCAT

MILEAGE FACTORS			
Distance Factor		Distance Factor	
0-25	0.58	55	1.07
30	0.66	60	1.15
35	0.74	65	1.23
40	0.82	70	1.31
45	0.91	75	1.40
50	1.00	80	1.48

MILEAGE FACTOR	0.58
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No.	EQUIPMENT DESCRIPTION	Base Cost	Move in Cost	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
0	Drill & Compressor	\$241	\$0.00	\$13.73	0	0	0	\$0.00	\$0.00
0	Graders	\$241	\$0.00	\$7.05	0	0	0	\$0.00	\$0.00
0	Loader (1.5 - 2.5 cy)	\$241	\$0.00	\$6.83	0	0	0	\$0.00	\$0.00
0	Loader (3 cy +)	\$387	\$0.00	\$8.15	0	0	0	\$0.00	\$0.00
0	Rollers & Compactors	\$241	\$0.00	\$13.73	0	0	0	\$0.00	\$0.00
0	Excavators	\$533	\$0.00	\$36.60	0	0	0	\$0.00	\$0.00
1	Excavators	\$533	\$309.14	\$36.60	0	3.2	3.2	\$117.12	\$426.26
0	Large Backhoes	\$533	\$0.00	\$21.42	0	0	0	\$0.00	\$0.00
0	Small backhoes	\$241	\$0.00	\$3.52	0	0	0	\$0.00	\$0.00
0	Tractors (D5-D7)	\$385	\$0.00	\$18.47	0	0	0	\$0.00	\$0.00
1	Tractors (D8)	\$533	\$309.14	\$25.53	0	3.2	3.2	\$81.70	\$390.84
0	Dump Truck (< 10 cy)	\$121	\$0.00	\$2.30	0	0	0	\$0.00	\$0.00
2	Dump Truck (10 cy +)	\$144	\$167.04	\$2.76	0	0	0	\$0.00	\$167.04
1	Water Truck	\$158	\$91.64	\$3.03	0	0	0	\$0.00	\$91.64

TOTAL MOVE-IN COSTS: **\$1,075.78**



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

Bobcat

"STEWARDSHIP IN FORESTRY"

1. **Type of Sale:** Clearcut, Recovery
2. **Legal Description:** Sections 19, 20, 21, 28 and 29, 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.

ACREAGES			
Area	Sale	Total	Net
1	66	66	60
2	26	26	24
3	10	13	9
4	28	29	28
5	94	98	89
Total	224	232	210

Sale Acres: Area within the Timber Sale Boundary signs.

Total acres: 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. For accomplishment reporting - clearcut (regeneration) harvest.

Net: Sale acres; less green tree retention, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary. For calculating the advertised volume.

4. **Cruising Procedures:**
 - A. **Cruise Method:** A total of 81 variable radius full point plots were established on the sale area to determine the basal area. Diameter was taken at 4.5 feet and was measured to the nearest inch. A tree was measured on odd numbered plots to determine V-BAR.
 - B. **Plot size:** A 20 BAF was used, point of tree observation was 4.5 feet.
 - C. **Grading System:** Grade was determined by using information from cruises in similar size timber.
5. **Computation Procedure:** V-BAR was calculated from the measured trees. V-BAR was then applied to the basal area to determine volume. See attached volume summary.
6. **Defect and Breakage:** A 5% reduction for defect and breakage was applied to the volume.

7. **Timber Description:** The sale area is composed of 40 year old Douglas-fir with scattered alder. The sale area burned in the 1933 and 1939 Tillamook fires. The sale areas were aerial seeded in 1958-1959 and planted in 1961-1962. The majority of the alder was sprayed in the 1970's which killed the tops resulting in numerous tops and short boles. The sale areas was thinned in 1998 and 1999 with a residual basal area of 100 to 120 square feet per acre. The Douglas-fir is severely infected with Swiss needle cast. Current stand characteristics are shown on the attached stand table.
8. **Cruiser Names/Dates:** Bob Shaver, Ed Keith, October 2000, March 2001.
9. **Revenue Distribution:**
100% FDF
Tax Code: 9-2
Deed Numbers: 161, 162, 169
100% Rehabilitation Obligated
7. **Attachments:**
Stand Tables
Volume Summary
Logging Plan



"STEWARDSHIP IN FORESTRY"

Bobcat

Volume Summary

Area I						
60 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	150	95	14.3	855	5%	812
TOTAL				855		812

Area II						
24 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	99	95	9.4	226	5%	214
TOTAL				226		214

Area III						
9 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	123	95	11.7	105	5%	100
TOTAL				105		100

Area IV						
28 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	140	95	13.3	372	5%	354
TOTAL				372		354

Bobcat

Volume Summary

Area Y						
89 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	111	95	10.5	939	5%	892
TOTAL				939		892

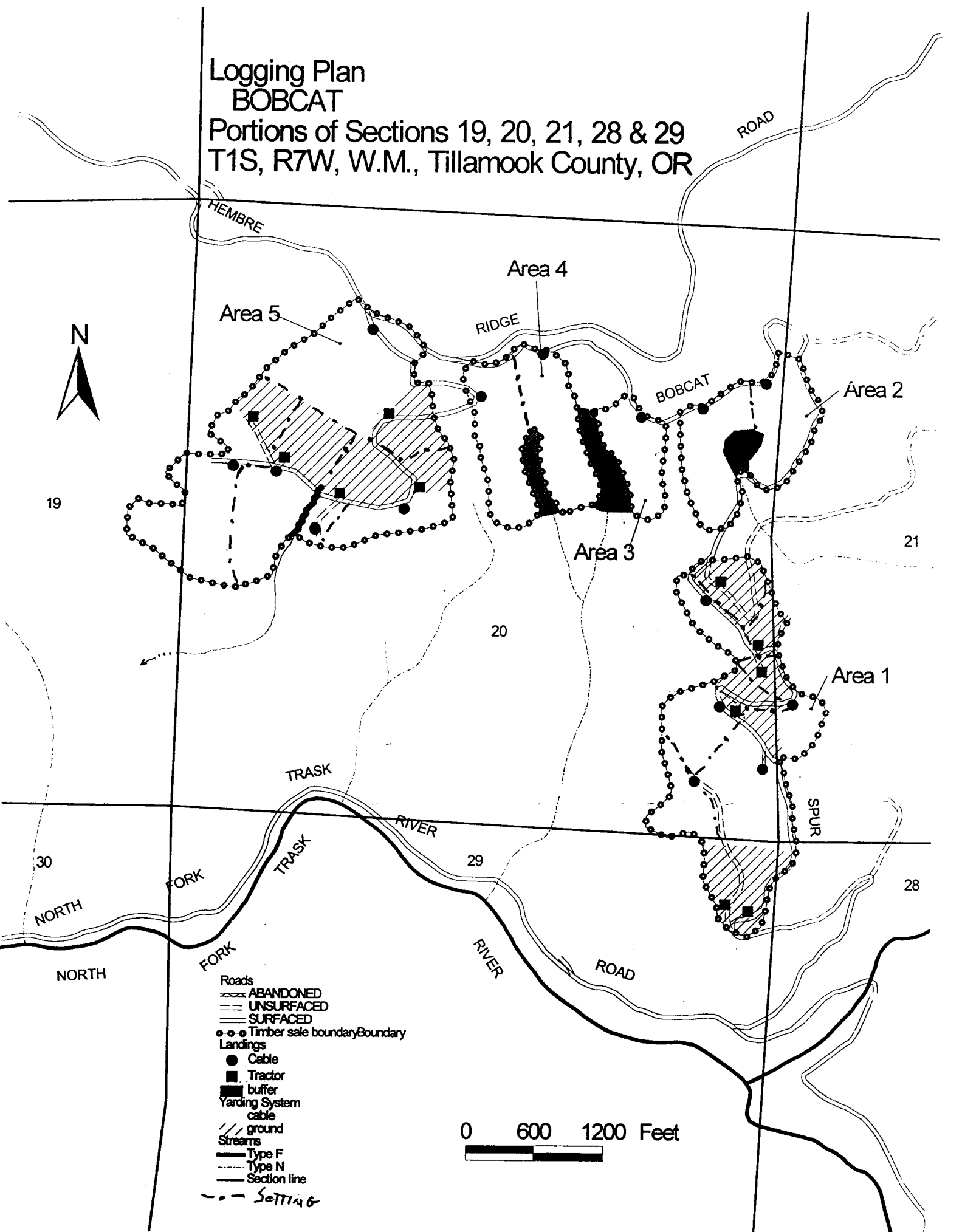
TOTAL SALE VOLUME			
SPECIES	MBF		Net Vol. (MBF)
Douglas-fir	2497		2372
TOTAL	2497		2372

211 acres

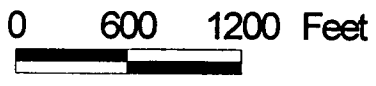
11.9mbf/acre

Logging Plan BOBCAT

Portions of Sections 19, 20, 21, 28 & 29
T1S, R7W, W.M., Tillamook County, OR



- Roads**
- ABANDONED
 - - - UNSURFACED
 - == SURFACED
- Timber sale boundary/ Boundary
- Landings**
- Cable
 - Tractor
 - buffer
- Yarding System**
- cable
 - /// ground
- Streams**
- Type F
 - - - Type N
 - Section line
 - - - Settlement



**OREGON DEPARTMENT OF FORESTRY
WRITTEN PLAN**

SALE NAME: Bobcat

PROTECTED RESOURCE: No High Risk Sites were identified on the sale areas. If active landslides and slumps; slopes steeper than 80%; headwalls or draws steeper than 70% are found that constitute a High Risk Site the following practices will apply.

LOCATION: Portions of Section 19, 20, 21, 28, and 29, T1S, R7W, W.M., Tillamook County, Oregon.

ACTIVITY: Cable yarding across or adjacent to High Risk Sites.

PROTECTION MEASURES:

YARDING:

- Logs will have at least one end suspended when yarding through high risk sites.
- Soil gouging will be limited to a depth of 1 foot (measured vertically) when yarding through high risk sites.

**PREPARED BY: Wayne Auble
South Unit Forester
March 7, 2002**