



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
Top Cat  
Sale 341-09-03

District: West Oregon

Date: September 17, 2008

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**cost summary**

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$770,033.16	\$85,211.34	\$855,244.50
		Project Work:	\$(155,820.00)
		Advertised Value:	\$699,424.50



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timber description

Location: Portion of Section 26, T11S, R9W, W.M., Lincoln County, Oregon.

Stand Stocking: 80%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	28	0	.98
Alder (Red)	19	0	.98

Volume by Grade	2S	3S	4S	Camprur	Total
Douglas - Fir	2,078	286	38	0	2,402
Alder (Red)	0	0	0	177	177
Total	2,078	286	38	177	2,579

comments: Pond Values Used: 2nd Quarter Calendar Year 2008

Western Hemlock and Other Conifers Stumpage Price = \$100/MBF

Western Red Cedar Stumpage Price = Pond Value minus Logging Cost  
\$938/MBF = \$1,075/MBF - \$137/MBF

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$4.50/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$700 daily truck cost.

Other Costs (with Profit & Risk to be added):

YUM Yarding of 100 Submerchantable Hardwood Trees = \$1,250

TOTAL Other Costs (with Profit and Risk to be added) = \$1,250

Other Costs (No Profit & Risk to be added):

Firewood Sorting 4 hrs x \$110/hr = \$440

Fire Trail Construction 9900ft @ \$0.75/ft = \$7,425

Slash Throwback 1000ft@\$0.25/ft = \$250

Wildlife Tree Throwback 50 trees@\$3.50/tree = \$175

TOTAL Other Costs (No Profit & Risk added) = \$8,290



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**logging conditions**

<b>combination#:</b>	1	Douglas - Fir	97.00%
		Alder (Red)	97.00%
<b>yarding distance:</b>	Medium (800 ft)	<b>downhill yarding:</b>	No
<b>logging system:</b>	Cable: Large Tower >=70	<b>Process:</b>	Stroke Delimber
<b>tree size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
<b>loads / day:</b>	10.0	<b>bd. ft / load:</b>	5,000
<b>cost / mbf:</b>	\$76.53		
<b>machines:</b>	Log Loader (A) Stroke Delimber (A) Tower Yarder (Large)		
<b>combination#:</b>	2	Douglas - Fir	3.00%
		Alder (Red)	3.00%
<b>yarding distance:</b>	Short (400 ft)	<b>downhill yarding:</b>	No
<b>logging system:</b>	Wheel Skidder	<b>Process:</b>	Manual Falling/Delimbing
<b>tree size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
<b>loads / day:</b>	10.0	<b>bd. ft / load:</b>	5,000
<b>cost / mbf:</b>	\$63.52		
<b>machines:</b>	Log Loader (B) Tire Skidder		



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logging costs

Operating Seasons:	1.00	Profit Risk:	12.00%
Project Costs:	\$155,820.00	Other Costs (P/R):	\$1,250.00
Slash Disposal:	\$0.00	Other Costs:	\$8,290.00

Miles of Road

Road Maintenance: \$0.00

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	4.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	5.0
Alder (Red)	\$0.00	3.0	3.5



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**logging costs breakdown**

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
<b>Douglas - Fir</b>									
\$76.14	\$4.16	\$1.70	\$42.50	\$0.48	\$15.00	\$0.00	\$5.00	\$3.21	\$148.19
<b>Alder (Red)</b>									
\$76.14	\$4.16	\$1.70	\$60.71	\$0.48	\$17.18	\$0.00	\$5.00	\$3.21	\$168.58

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$468.77	\$320.58	\$0.00
Alder (Red)	\$0.00	\$650.00	\$481.42	\$0.00



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**summary**

**Amortized**

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	2,402	\$320.58	\$770,033.16
Alder (Red)	177	\$481.42	\$85,211.34

**Gross Timber Sale Value**

Recovery: \$855,244.50

Prepared by: Jennifer Moore

Phone: 541-929-3266

## SUMMARY OF ALL PROJECT COSTS

Sale Name: Top Cat

Date: March 2008

Time: 14:50

### Project #1 - New Construction

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
B1 to B2	16.0 sta	\$53,871
B3 to B4	6.0 sta	\$17,382

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**TOTALS**

22.0 sta

\$71,253

### Project #2 - Improvements

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to A1	139.4 sta	\$25,602
A1 to B	22.3 sta	\$1,308
B to C	62.5 sta	\$4,829
B to D	140.0 sta	\$8,686
D to D1	23.0 sta	\$1,829

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**TOTALS**

387.2 sta

\$42,254

### Project #3 - Salmon Creek Bridge

\$34,755

### Project #4 - Post Harvest Activities

\$4,225

Turnaround rock

Install gate

### Move in

	<u>Cost</u>	<u>On-site move</u>
Excavator	\$672	\$120
Crawler tractor, D-4 or equiv.	\$488	\$50
Crawler tractor, D-7 or equiv.	\$488	
Grader, Cat 14-G or equiv.	\$304	
Water Truck	\$199	
Backhoe x 2	\$608	\$50
Vibratory roller	\$304	\$50

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**TOTAL**

\$3,333

**GRAND TOTAL**

**\$155,820**

Compiled by J. Doyal

Date 03/11/2008

# SUMMARY OF CONSTRUCTION COST

SALE Top Cat - Project #1 LENGTH const 16.0 sta  
ROAD B1 to B2

## CLEARING AND GRUBBING

0.68 acres @	\$992.20 /acre	=	\$675 road
(sta 1+00 to 7+90)			
0.72 acres @	\$902.00 /acre	=	\$649 road
(sta 7+90 to 16+00)			
0.10 acres @	\$902.00 /acre	=	\$90 landing
0.46 acres @	\$902.00 /acre	=	\$415 waste area 2

TOTAL CLEARING AND GRUBBING = \$1,829

## EXCAVATION

Construct road					
(endhaul W1)	1560 CY	@	\$3.37 /CY	=	\$5,257
(endhaul W2 & turnout)	5460 CY	@	\$4.02 /CY	=	\$21,949
Construct road	6.9 sta.	@	\$66.32 /sta	=	\$458
(dozer, Sta. 9+10 to 16+00))					
Extra drift	6 hrs.	@	\$121.25 /hr.	=	\$728
(Sta. 10+00 to 16+00)					
Construct landing	1 hr.	@	\$121.25 /hr.	=	\$121
(Sta. 9+50)					
Shape subgrade	16.0 sta.	@	\$10.31 /sta	=	\$165
(with road grader)					
Compact subgrade	16.0 sta.	@	\$8.31 /sta	=	\$133
(with vibratory roller)					
Waste area	20 hr.	@	\$80.00 /hr.	=	\$1,600
(dozer D4 @ W1 & W2)					

TOTAL EXCAVATION = \$30,411

## SURFACING

		Size	Cost/yd		
Base rock (10" lift)	853 cy of	2½-0"	\$20.50	=	\$17,487
Curve widening	101 cy of	2½-0"	\$20.50	=	\$2,071
Landing rock sta 9+50	27 cy of	jaw-run	\$23.10	=	\$624
Landing rock Pt. B2	54 cy of	jaw-run	\$23.10	=	\$1,247
Junction patch rock	9 cy of	1½-0"	\$22.46	=	\$202

TOTAL ROCK COST = \$21,631

Compiled by: J. Doyal  
Date: Mar 11, 2008

GRAND TOTAL =====>

\$53,871



# SUMMARY OF CONSTRUCTION COST

SALE Top Cat - Project #1 LENGTH const 6.0 sta  
ROAD B3 to B4

## CLEARING AND GRUBBING

0.74 acres	@	\$902.00 /acre	=	\$667 road
0.59 acres	@	\$992.20 /acre	=	\$585 waste area 1
0.10 acres	@	\$902.00 /acre	=	\$90 landing

TOTAL CLEARING AND GRUBBING = \$1,342

## EXCAVATION

With D7 dozer or equivalent

Construct road (endhaul W1)	1690 CY	@	\$3.37 /CY	=	\$5,695
Construct landing	1.5 hr.	@	\$121.25 /hr.	=	\$182
Shape subgrade (with road grader)	6.0 sta.	@	\$10.31 /sta	=	\$62
Compact subgrade (with vibratory roller)	6.0 sta.	@	\$8.31 /sta	=	\$50
Waste area (dozer D4)	20 hr.	@	\$80.00 /hr.	=	\$1,600

TOTAL EXCAVATION = \$7,589

## SURFACING

		Size	Cost/yd		
Base rock (10" lift)	303 cy of	2½-0"	\$20.50	=	\$6,212
Curve widening	57 cy of	2½-0"	\$20.50	=	\$1,169
Landing rock	54 cy of	jaw-run	\$19.81	=	\$1,070

TOTAL ROCK COST = \$8,451

Compiled by: J. Doyal  
Date: Feb 28, 2008

GRAND TOTAL =====> \$17,382

# SUMMARY OF CONSTRUCTION COST

SALE Top Cat - Project #2 LENGTH improve 139.4 sta  
ROAD A to A1

## IMPROVEMENT

Shape surface 139.4 sta. @ \$12.28 /sta = \$1,712  
(with road grader)

TOTAL IMPROVEMENT \$1,712

## SURFACING

		Size	Cost/yd		
Surface rock 4" lift	898 cy of	1½-0"	\$19.80	=	\$17,780
(sta 85+90 to 126+70)					
Curve widening rock	70 cy of	1½-0"	\$19.80	=	\$1,386
Turnout rock	22 cy of	1½-0"	\$19.80	=	\$436
Spot rock	198 cy of	1½-0"	\$18.30	=	\$3,623

TOTAL ROCK COST = \$23,225

## SPECIAL PROJECTS

Clean out culverts 29 culverts @ \$22.92 ea. = \$665  
(inlets and outlets)

TOTAL SPECIAL PROJECTS COST = \$665

Compiled by: J. Doyal  
Date: Feb 28, 2008

GRAND TOTAL =====> \$25,602

## SUMMARY OF CONSTRUCTION COST

SALE      Top Cat                      - Project #2                      LENGTH improve                      22.3 sta  
ROAD      A1 to B

### IMPROVEMENT

Shape surface                      22.3 sta.                      @                      \$12.28 /sta                      =                      \$274  
(with road grader)

TOTAL IMPROVEMENT                      \$274

### SURFACING

Spot rock                      54 cy of                      Size                      Cost/yd  
   1½-0"                      \$18.30                      =                      \$988

TOTAL ROCK COST =                      \$988

### SPECIAL PROJECTS

Clean out culverts                      2 culverts                      @                      \$22.92 ea. =                      \$46  
(inlets and outlets)

TOTAL SPECIAL PROJECTS COST =                      \$46

Compiled by:                      J. Doyal  
Date:                      Feb 28, 2008

GRAND TOTAL =====>                      \$1,308

# SUMMARY OF CONSTRUCTION COST

SALE ROAD      Top Cat B to C      - Project #2      LENGTH improve      62.5 sta

## IMPROVEMENT

Shape surface      62.5 sta.      @      \$12.28 /sta      =      \$768  
(with road grader)

TOTAL IMPROVEMENT      \$768

## SURFACING

		Size	Cost/yd		
Culvert base rock	36 cy of	2½-0"	\$19.80	=	\$713
Culvert surface rock	36 cy of	1½-0"	\$19.32	=	\$696

TOTAL ROCK COST =      \$1,409

## SPECIAL PROJECTS

Replace stream x-ing (sta 24+70 24" x 80')	80 ft.	@	\$29.69 /ft.	=	\$2,375
Clean out culverts (inlets and outlets)	11 culverts	@	\$22.92 ea.	=	\$252
Culvert disposal				=	\$25

TOTAL SPECIAL PROJECTS COST =      \$2,652

Compiled by: J. Doyal  
Date: Feb 28, 2008

GRAND TOTAL =====>      \$4,829

# SUMMARY OF CONSTRUCTION COST

SALE Top Cat - Project #2 LENGTH improve 140.0 sta  
ROAD B to D

## IMPROVEMENT

Shape surface (with road grader)	140.0 sta.	@	\$12.28 /sta	=	\$1,719
Spread turnout (dozer D4)	1 hr.	@	\$80.00 /hr.	=	\$80
Compact turnout (with vibratory roller sta 113+20)	1 hr.	@	\$73.14 /hr.	=	\$73

TOTAL IMPROVEMENT \$1,872

## SURFACING

		Size	Cost/yd		
Turnout rock	36 cy of	2½-0"	\$20.50	=	\$738
Spot rock	270 cy of	1½-0"	\$19.48	=	\$5,260
Endhaul wear rock (Pt. B1 to Pt. D)	36 cy of	1½-0"	\$19.48	=	\$701

TOTAL ROCK COST = \$6,699

## SPECIAL PROJECTS

Clean out culverts (inlets and outlets)	5 culverts	@	\$22.92 ea.	=	\$115
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TOTAL SPECIAL PROJECTS COST = \$115

Compiled by: J. Doyal  
Date: Feb 28, 2008

GRAND TOTAL =====>

\$8,686

## SUMMARY OF CONSTRUCTION COST

SALE ROAD	Top Cat D to D1	- Project #2	LENGTH improve	23.0 sta
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### IMPROVEMENT

Shape surface (with road grader)	23.0 sta.	@	\$12.28 /sta	=	\$282
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TOTAL IMPROVEMENT	\$282
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### SURFACING

		Size	Cost/yd		
Culvert base rock	18 cy of	2½-0"	\$23.96	=	\$431
Culvert surface rock	18 cy of	1½-0"	\$24.44	=	\$440
Endhaul wear rock	9 cy of	1½-0"	\$19.48	=	\$175

TOTAL ROCK COST =	\$1,046
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### SPECIAL PROJECTS

Replace culvert (18" x 30' polyethylene)	30 ft.	@	\$12.79 /ft.	=	\$384
Clean out culverts (inlets and outlets)	4 culverts	@	\$22.92 ea.	=	\$92
Culvert disposal				=	\$25

TOTAL SPECIAL PROJECTS COST =	\$501
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Compiled by:	J. Doyal
Date:	Feb 28, 2008

GRAND TOTAL =====>

\$1,829

Project No. 3

**SUMMARY OF CONSTRUCTION COST**

Lower Salmon Creek Bridge

Materials

Wingwalls, backwalls, and sills				\$	10,000
Slabs	168 LF	@	\$ 195.00 /LF	\$	32,760
Surface rock 1 1/2-0"	52 cy	@	\$19.80 /cy	\$	1,030
Base rock 2 1/2-0"	52 cy	@	\$19.32 /cy	\$	1,005
Sill level rock 1 1/2-0"	18 cy	@	\$18.30 /cy	\$	329
Riprap (24"-6")	144 cy	@	\$24.06 /cy	\$	3,465

TOTAL MATERIALS \$ 48,589

Equipment

35 ton crane	12 hrs.	@	\$ 140.00 /hr.	\$	1,680
Excavator	20 hrs.	@	\$ 114.00 /hr.	\$	2,280
Dozer (D4)	8 hrs.	@	\$ 80.00 /hr.	\$	640
Dump truck (endhaul)	52 cy	@	\$ 2.27 /cy	\$	118
Vibratory roller	6 hrs.	@	\$ 73.14 /hr.	\$	439

TOTAL EQUIPMENT \$ 5,157

Labor

General labor x 2	60 hrs.	@	\$ 43.33 /hr.	\$	2,600
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TOTAL LABOR \$ 2,600

Professional Services

Bridge design and site plans				\$	4,000
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TOTAL SERVICES \$ 4,000

Move-In

35 ton crane				\$	2,500
Excavator				\$	672
Dozer				\$	488
Vibratory roller				\$	304

TOTAL MOVE-IN \$ 3,964

Misc Exspenses

Culvert disposal				\$	200
Profit and Risk				\$	5,000

GRAND TOTAL \$ 69,510

ODF \$ 34,755

ODF&W \$ 34,755

## SUMMARY OF CONSTRUCTION COST

SALE      Top Cat      - Project #4 Post Harvest  
ROAD

### SURFACING

		Size	Cost/CY		
Turnaround rock Pt. B2	27 cy of	2½-0"	\$23.96	=	\$ 647
Turnaround rock Pt. B4	27 cy of	2½-0"	\$23.96	=	\$ 647
Landing patch rock (B1 to B2 9+50)	18 cy of	2½-0"	\$23.96	=	\$ 431

TOTAL SURFACING COST = \$1,725

### MISCELLANEOUS PROJECTS

Install gate Pt. B1 \$2,500

TOTAL MISCELLANEOUS PROJECTS = \$2,500

Compiled by: J. Doyal  
Date: Feb 28, 2008

GRAND TOTAL =====> \$4,225



## TIMBER SALE SUMMARY

**Sale Name:** Top Cat 341-09-03

**Sale Type:** Modified clearcut harvest: 69 net acres; 100% BOF.

**Sale Area:** Portion of Section 26, T11S, R9W, W.M., Lincoln County, Oregon.

**Access:** From Philomath take Highway 20 west approx. 23 miles to Salmon Creek road. Turn left and travel approx. 2.6 miles to Wolf Creek road. Turn right and drive approx. 0.3 miles to Baber Ridge road. Turn right and travel approx. 1.5 miles to arrive at the timber sale area.

**Boundaries:** The timber sale boundary is posted with "Timber Sale Boundary" signs, fluorescent pink flagging, and fluorescent red paint. Type N stream buffers in the unit are posted with fluorescent pink flagging, fluorescent red paint, and "Buffer Zone" signs. Road right-of-way boundaries are posted with "R/W Boundary" signs, and fluorescent pink ribbon.

**Timber Description:** The timber sale consists of one area. This area is a modified clearcut leaving 8-10 trees per acre after harvest. This area contains 90-year-old Douglas-fir and red alder. The average DBH of Douglas-fir is 28 inches and red alder is 19 inches.

**Topography:** The sale area has a north/south ridgetop located in the middle of the unit. Slopes range from 60-85% and the aspect is predominately southwest.

**Streams:** There are three small type N streams within the unit. The streams have a posted buffer, which extends an average of 75 feet horizontal distance from each side of the stream's edge. There is a small Type F stream south of the timber sale area. The timber sale boundary has been posted an average of 100 feet horizontal distance from the edge of the Type F stream. All timber in these areas is reserved from harvest.

**Reserve Trees:** All trees marked with fluorescent red paint are reserved from cutting. Reserve tree species include Douglas-fir, red alder, and bigleaf maple. All trees within the posted buffer zones are reserved from harvest.

**T & E Surveys:** The sale area contains suitable habitat for northern spotted owls and potential habitat for marbled murrelets. The sale was surveyed for northern spotted owls and marbled murrelets in 2006 and 2007 with no detections. Owl surveys will be conducted in 2008.

**Logging Methods:** Approximately 97% of the sale volume will require cable yarding; the remaining 3% can be ground yarded.

<b><u>Projects:</u></b>	No. 1 – Road Construction	0.4	miles
	No. 2 – Road Improvement and Maintenance	7.3	miles

No. 3 – Salmon Creek Bridge  
No. 4 – Post Harvest Activities

**Other Requirements:** There is a requirement of (4) hours of firewood sorting. Yarding Unmerchantable Material (YUM) is required on approximately 10 acres of the sale area.

**Cruise Summary:**

MBF Volume						
Gross Acres	Net Acres*	Species	Gross Volume	Net Volume	% Hidden D&B	Final Adjusted Volume
75	69	Douglas-fir	2563	2555	6	2402
		Red Alder	190	188	6	177

\* Net acres represent a reduction of gross acres to account for existing roads, and streams. Acres were determined using GIS and orthophotos.

Grade by %				
Species	2 Saw	3 Saw	4 Saw	Camp Run
Douglas-fir	87%	12%	1%	
Red alder				100%

**Cruise Methods:** The cruise design consisted of a combination of both “count” and “measure” plots. The area was cruised using variable radius plots and a 40 BAF prism along with a Big BAF of 160. A 2.25 x 2.25 chain grid was laid out in order to sample the area. On each measure plot, all Douglas-fir trees were counted and “take” trees were defined as those not marked with fluorescent red paint. The DBH of all “take” trees was measured, and take trees that were determined to be “in” using Big BAF were measured for volume and grade. The DBH and height were taken for every red alder in with a 40 BAF on the measure plots. On each count plot, all trees were counted using a 40 BAF.

**Tree form:** Form point was at 16 feet. Form factor for each measured conifer was determined using a relaskop and the formula of number of bars at form point divided by number of bars at DBH.

**Measurement Standards:** Heights for Douglas-fir were measured to the nearest foot to a top cruise diameter of 6 inches inside bark or 40% of form point. Diameters were measured at breast height to the nearest inch.

**Grading System:** All trees were graded in a maximum of 40 foot segments unless defect or length to top cruise diameter warranted otherwise.


**Utilization Standards:** For Douglas-fir a minimum log segment of 6 inches in diameter (inside bark) by 13 feet in length was used. Only trees 7 inches DBH and 13 feet in length and larger were cruised.

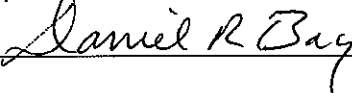
**Hidden Defect and Breakage:** A hidden D & B of 6% was applied to the net cruised volumes.

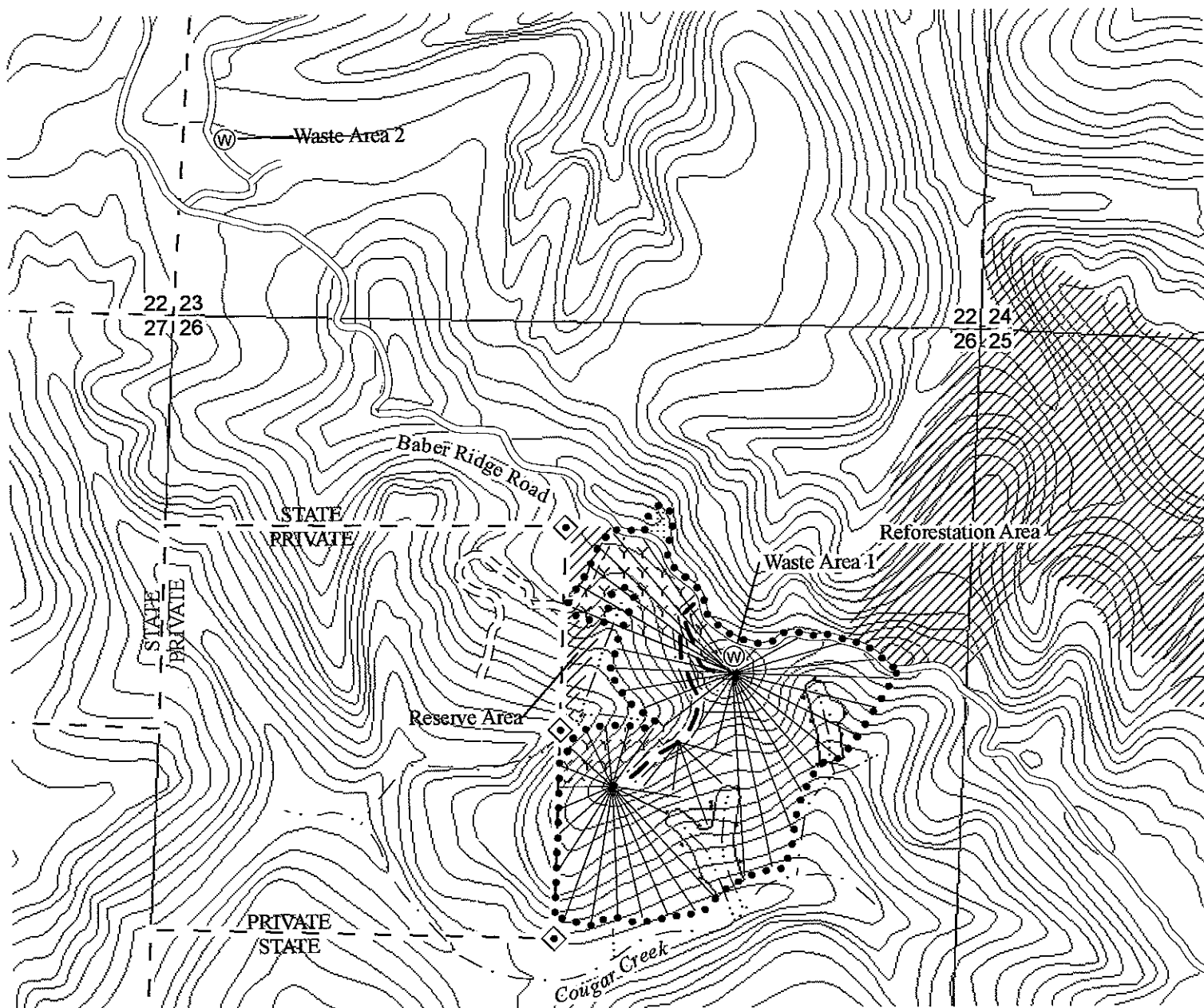
**Computation Procedures:** All cruise data was entered into the SuperAce program and calculated at the district office.

**Cruisers/ Dates:** The sale area was cruised by D. Borg, B. McKinley, and J. Moore, in December 2007 and January 2008.

**Signatures:**

Cruise Specialist 

Unit Forester 



## LOGGING PLAN

### Legend

- Timber Sale Boundary
- State Forest Property Boundary
- == Surfacd Road
- Unsurfaced Road
- New Road Construction
- Posted Right of Way Boundary
- Type F Stream
- Type N Stream
- ▭ Stream Buffer Boundary (Posted)
- ▨ Tractor Yarding Area
- Cable Corridors
- Y Y Yum Area
- /// Harvest Restricted Area
- 40 Foot Contours
- ◆ Land Survey Monument
- ⊙ Waste Area

OF TIMBER SALE # 341-09-03  
 TOP CAT  
 PORTIONS OF SECTION 26, T11S, R9W, W.M.  
 LINCOLN COUNTY, OREGON

This product is for informational use and may not have been prepared for or be suitable for legal, engineering or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.



2 NET ACRES TRACTOR  
 67 NET ACRES CABLE

