



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
Panther Headwaters No. 3  
Sale 341-08-76

District: Coos

Date: January 07, 2008

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**cost summary**

	<b>Conifer</b>	<b>Hardwood</b>	<b>Total</b>
<b>Gross Timber Sale Value</b>	\$871,411.63	\$0.00	\$871,411.63
		<b>Project Work:</b>	\$(55,164.00)
		<b>Advertised Value:</b>	\$816,247.63



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**timber description**

Location: Portions of Sections 16, 20 & 21, T23S, R10W, W.M., Coos County, Oregon.

Stand Stocking: 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	24	0	95
Western Hemlock / Fir	17	0	90

Volume by Grade	2S	3S	3S 12'+	SM	Total
Douglas - Fir	2,605	196	181	157	3,139
Western Hemlock / Fir	19	9	7	0	35
Total	2,624	205	188	157	3,174



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comments: Pond Values Used: 4th Quarter Calendar Year 2007.

58 acres of regeneration harvest comprised of 113-120 year-old mature second growth Douglas-fir saw timber with a small component of Western hemlock, Western redcedar and Red alder.

Western Red Cedar Stumpage Price = Pond Value minus Logging Cost  
\$822.14/MBF = \$1,000/MBF - \$177.86/MBF

Red Alder and other hardwoods Stumpage Price = Pond Value minus Logging Cost  
\$382.14/MBF = \$560/MBF - \$177.86/MBF

HAULING

Hauling costs equivalent to \$700 daily truck cost.

Other Costs (Profit and Risk to be added):

Felling:

Directional Felling/Tree Jacking: \$2/MBF x 60 MBF = \$120

Yarding & Loading:

Brand & Paint Logs: \$1/MBF x 3,204 MBF = \$3,204

Cull Sorting/Slash Piling on Landings: \$125/landing x 5 landings = \$625

Artificial Guy Anchors (dozer, skidder): \$500 each x 10 anchors = \$5,000

Miscellaneous Costs:

Additional Fire Equipment: \$2,000/season x 1 season = \$2,000

Miscellaneous Costs - Snag Creation:

Tree Topping: \$100/tree x 58 trees = \$5,800

Tree Girdling @ DBH: \$50/tree x 58 trees = \$2,900

TOTAL Other Costs (Profit and Risk to be added) = \$19,649



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District: Coos

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## logging conditions

<b>combination#:</b> 1	Douglas - Fir	90.00%
	Western Hemlock / Fir	90.00%
<b>yarding distance:</b>	Long (1,500 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>	10.0	<b>bd. ft / load:</b> 4,900
<b>cost / mbf:</b>	\$75.38	
<b>machines:</b>	Log Loader (A) Tower Yarder (Large)	
<b>combination#:</b> 2	Douglas - Fir	10.00%
	Western Hemlock / Fir	10.00%
<b>yarding distance:</b>	Medium (800 ft)	<b>downhill yarding:</b> Yes
<b>logging system:</b>	Track Skidder	<b>Process:</b> Manual Felling/Delimiting
<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> 4,900
<b>cost / mbf:</b>	\$69.51	
<b>machines:</b>	Log Loader (B) Track Skidder	



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**logging costs**

<b>Operating Seasons:</b>	1.00	<b>Profit Risk:</b>	15.00%
<b>Project Costs:</b>	\$55,164.00	<b>Other Costs (P/R):</b>	\$19,649.00
<b>Slash Disposal:</b>	\$0.00	<b>Other Costs:</b>	\$0.00

**Miles of Road**

Road Maintenance: \$0.00

Dirt	Rock (Contractor)	Rock (State)	Paved
1.0	1.0	0.0	0.0

**Hauling Costs**

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	4.9
Western Hemlock / Fir	\$0.00	2.0	4.5

**Local Pond Values**

Date	Specie	Grade	Value
1/7/08	Red Cedar	3S	\$1,000.00
1/7/08	Alder (Red)	8" - 9"	\$565.00



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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>									
\$74.79	\$1.70	\$1.38	\$65.22	\$6.19	\$22.39	\$0.00	\$2.00	\$0.00	\$173.67
<b>Western Hemlock / Fir</b>									
\$74.79	\$1.78	\$1.38	\$74.39	\$6.19	\$23.78	\$0.00	\$2.00	\$0.00	\$184.31

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$450.09	\$276.42	\$0.00
Western Hemlock / Fir	\$0.00	\$290.86	\$106.55	\$0.00



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**summary**

**Amortized**

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	3,139	\$276.42	\$867,682.38
Western Hemlock / Fir	35	\$106.55	\$3,729.25

**Gross Timber Sale Value**

Recovery: \$871,411.63

Prepared by: Nickolus Morris

Phone: 541-267-1756

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

Sale Name: Panther Headwaters No. 3

### 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>				
Directional Felling/Tree Jacking	MBF	60	\$ 2.00	\$ 120.00
Felling of unmerch material	MBF	0	\$ 1.00	\$ -
<b>Yarding and Loading</b>				
Brand and paint logs	MBF	3,204	\$ 1.00	\$ 3,204.00
Cull sorting/slash piling on landings	landing	5	\$ 125.00	\$ 625.00
Rig lift trees	lift tree	0	\$ 100.00	\$ -
Artificial guy anchors(dozer, skidder)	anchor	10	\$ 500.00	\$ 5,000.00
Skid Road Layout	MBF	0	\$ 10.00	\$ -
<b>Miscellaneous Costs</b>				
Log Placement in Stream	Crossings	0	\$ 505.00	\$ -
Additional fire equipment	Seasons	1	\$ 2,000.00	\$ 2,000.00
Maintenance rock per section 2610	Cubic Yards	0	\$ 18.00	\$ -
Safety Flagging and/or signing	per day	0	\$ 110.00	\$ -
Tree topping	per tree	58	\$ 100.00	\$ 5,800.00
Tree Girdling @ DBH	per tree	58	\$ 50.00	\$ 2,900.00
<b>Total additional "Other Cost" with additional profit and risk to be added</b>				<b>\$ 19,649.00</b>

### 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	N/A		
Non-required road rocking	Cubic Yards	N/A		
Stream clearance	Feet	N/A		
Scaling (high piece count)	MBF	N/A	\$ 2.00	
Grass Seeding and Fertilizing	Ac	N/A		
<b>Total additional "Other Cost" with no additional profit and Risk</b>				<b>\$ -</b>



**SUMMARY OF CONSTRUCTION COST  
Panther Headwaters No. 3**

**Project 1A: Road and Landing Construction**

Points: A to B      Length: 850'      Type: 14' no ditch

Excavator	15	hrs at	\$120.00	per hour	\$1,800.00
Cat time	15	hrs at	\$120.00	per hour	\$1,800.00
Grader	1	hrs at	\$75.00	per hour	\$75.00
Laborer	15	hrs at	\$30.00	per hour	\$450.00

**Total Project 1A:      \$4,125.00**

**Project 1B: Road and Landing Construction**

Points: H to C      Length: 700'      Type: 14' no ditch

Excavator	40	hrs at	\$120.00	per hour	\$4,800.00
Cat time (waste area included)	40	hrs at	\$120.00	per hour	\$4,800.00
Dump Truck - haul to Pt F (0.5 mi RT) (approx. 3650 yds)	40	hrs at	\$95.00	per hour	\$3,800.00
Grader	3	hrs at	\$75.00	per hour	\$225.00
Laborer	40	hrs at	\$30.00	per hour	\$1,200.00

**Total Project 1B:      \$14,825.00**

**Project 1C: Landing Construction**

Points: D

Excavator	5	hrs at	\$120.00	per hour	\$600.00
Cat time	5	hrs at	\$120.00	per hour	\$600.00
Laborer	5	hrs at	\$30.00	per hour	\$150.00

**Total Project 1C:      \$1,350.00**

**Move-in**

Equipment	Miles	hrs/RT	Lowboy Rate/hr	Total
Excavator	35	3.5	\$95.00	\$332.50
Cat	35	3.5	\$95.00	\$332.50
Grader	35	3.5	\$95.00	\$332.50
Dump Truck	35	3.5	\$95.00	\$332.50

**Total Move-in:      \$1,330.00**

**Project 1 Total      \$21,630.00**

**Project 2: Road and Landing Improvement**

Points: A to E      Length: 1150'      Type: 14' no ditch

Excavator - remove small trees and brush	10	hrs at	\$120.00	per hour	\$1,200.00
Cat time	10	hrs at	\$120.00	per hour	\$1,200.00
Grader time	2	hrs at	\$75.00	per hour	\$150.00
Laborer	10	hrs at	\$30.00	per hour	\$300.00

**Project 2 Total      \$2,850.00**

**SUMMARY OF CONSTRUCTION COST**  
**Panther Headwaters No. 3**

**Project 3: Skunk Creek Rock Stockpile**

Location: 3.5 mi on 9000 Rd (9300 jct)  
Measured amount: 1200 cu yds  
Size: 1 1/2" - 0"

Cost per cu yd at crusher (WWD pricing):	\$8.25	per yd
Haul cost per cu yd:	\$16.32	per yd
Piling and shaping cost per cu yd:	<u>\$1.00</u>	per yd
 Total cost per cu yd:	 \$25.57	 per yd
Total cu yds:	1200	yards

**Total Cost for Stockpile rock: \$30,684.00**

**Project 3 Total \$30,684.00**

**Total Project Costs \$55,164.00**

## TIMBER SALE SUMMARY

Panther Headwaters No. 3

1. **Type of sale:** Final harvest; Recovery, Sealed Bid.
2. **Boundary Lines:** Sale boundaries are marked on the ground with "Timber Sale Boundary" posters, red paint, and red flagging at locations shown on the Exhibit A.
3. **Revenue Distribution:** 100% CSL.
4. **Sale Acreage:** The total sale area is 58 net acres. Buffer areas are posted outside the sale area and are not included in the net acreage calculation. The acreage was determined using orthophoto imagery on the ARCVIEW Geographic Information System program.
5. **Volume by Species, Fund, and County:** See attached table.
6. **Grade by Percent:**

Species	3 Peeler	Special Mill	2 Saw	3 Saw	3 Saw Large Diameter	4 Saw/Camp
Douglas-fir	-----	05 %	83 %	6.24 %	5.76 %	-----
Red Alder	-----	-----	-----	-----	-----	-----
Western Hemlock	-----	-----	54 %	25.3 %	20.7 %	-----
W. Red Cedar	-----	-----	-----	-----	-----	-----

7. **Cruise:** This unit was variable plot cruised using the Big BAF cruise design, which consisted of 65 nested plots. Each plot has both a full 40 BAF count plot and a full 360 BAF measure plot. The 40 BAF count plot was used to tally the number of trees by species to determine the stand basal area. The 40 BAF plot was also used to cruise hardwoods and other minor species. The 360 BAF plot was used to obtain Douglas-fir trees to cruise. Selected trees were cruised for diameter at breast height, height, grade and defect. Forty-eight Big BAF Douglas-fir trees were cruised for diameter, height, grade and defect. The cruise was analyzed using the SuperACE cruising program.

### A. Cruise Summary Data:

Diameter	Top Diameter	Form Point	Form Factor	CV %	SE%
D4H	Total Height	Conifer: 16' Hardwood: 16'	Estimated or measured on all trees	49.8	6.32

### B. Stand Summary:

Species	D4H	Trees per Acre	Basal Area (ft <sup>2</sup> /ac)	BF per acre
Douglas-fir	24	77	251	54,620
W. Hemlock	17	3	5	620

C. **Green Tree Retention Summary:** Most green trees were posted outside of the timber sale, except some scattered and grouped trees which will be removed from the cruise. These scattered trees are marked with a "W" in red.

8. **Timber Description:** The sale area is composed of 113 to 120 year-old Douglas-fir with a minor component of red alder, western hemlock and western red cedar scattered throughout the understory and draws. Conifers range from 65 to 210 feet tall while hardwoods are about 30 to 60 feet.

9. **Topography:** The topography of the sale area is dominated by a wide benched ridge that runs north to south through the center of the unit. A saddle in the center of the sale area extends east and west creating gradual benched slopes at 15% to 35%. The steepest portion of the sale area is along the western boundary with slopes ranging from 60% to 90%.
10. **Logging Method:** The sale will be cable logged uphill with single-end suspension over the majority of the unit; full suspension will be required over designated streams and RMAs. Tail-trees may need to be placed for yarding some portions of the sale area as approved in the operations plan. A small portion of the sale area will require ground based logging.
11. **Access:** From Coos Bay travel North on Highway 101 to the town of Reedsport and proceed east on Highway 38 for approximately 13 miles to the Loon Lake Road junction. From here proceed for approximately 10 miles to Elk Ridge Road (1000 Line). Proceed on the 1000 line for 5.5 miles to the 8000 road junction, and then proceed approximately .25 miles to the 8800 road junction and the timber sale area.

12. **Projects:**

Project No. 1: Road and landing construction

Project No. 2: Road and landing improvement

Project No. 3: Rock stockpile

## NET VOLUMES AND ACREAGE

SALE AREA & SPECIES		Tree cnt. 100% Units	NET VOLUMES (MBF)							
			By County and Fund						Total Vols.	Vol. per Acre
			Coos			Douglas				
Area	Spec		CSL	BOF	Total	CSL	BOF	Total		
	D-fir		3139.00		3139			0	3139	54.12
	Hem		35		35			0	35	0.60
	Cedar				0			0	0	0.00
	Hdwd				0			0	0	0.00
<b>TOTALS</b>			3174.00	0	3174	0	0	0	3174	

**TOTAL SALE VOLUME BY SPECIES**

Douglas-fir	3139	MBF
Hemlock	35	MBF
RedCedar	0	MBF
Hardwoods	0	MBF
<b>Total</b>	<b>3174</b>	

Report by: Nickolus Morris

Date: 11/07/2007

Unit For. Norma Kline 11/19/07  
Date

Asst. Dist. For. Greg Kreininger 12.13.2007  
Date

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	wood	cc	pc	woods	cc	pc	woods	cc	pc	woods	
	58												58
<b>SUM</b>	58	0	0	0	0	0	0	0	0	0	0	0	58

cc- clearcut

pc- partial cut

BOF - Board of Forestry

CSL - Common School Land

**CRUISE VOLUME COMPUTATION REPORT**

SALE NAME: Panther Headwaters #3

DATE: 10/08/2007

BY: Nick Morris

**GROSS VOLUME MBF \***

SPECIES>>	Doug-fir	Hemlock	r. cedar	Hardwds	TOTAL
	4116	50	0	0	4166
less retention vol	389	8	0	0	397
down wood	34	1	0	0	35
<b>TOTAL</b>	<b>3693</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>3734</b>

**DEFECT AND BREAKAGE**

Species	Doug-fir	Hemlock	Hardwds	Cedar
Field cull	0.03	0.03	0.03	0.03
Hidden cull	0.1	0.1	0.1	0.1
Breakage	0.02	0.02	0.02	0.02
<b>TOTAL</b>	<b>0.15</b>	<b>0.15</b>	<b>0.15</b>	<b>0.15</b>

**NET VOLUME BY MBF BY AREA\***

SPECIES	Doug-fir	Hemlock	r. cedar	Hardwds	TOTALS
	3139	36	0	0	3175
<b>TOTALS</b>	<b>3139</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>3175</b>

**NET VOLUME BY GRADE AND MBF \***

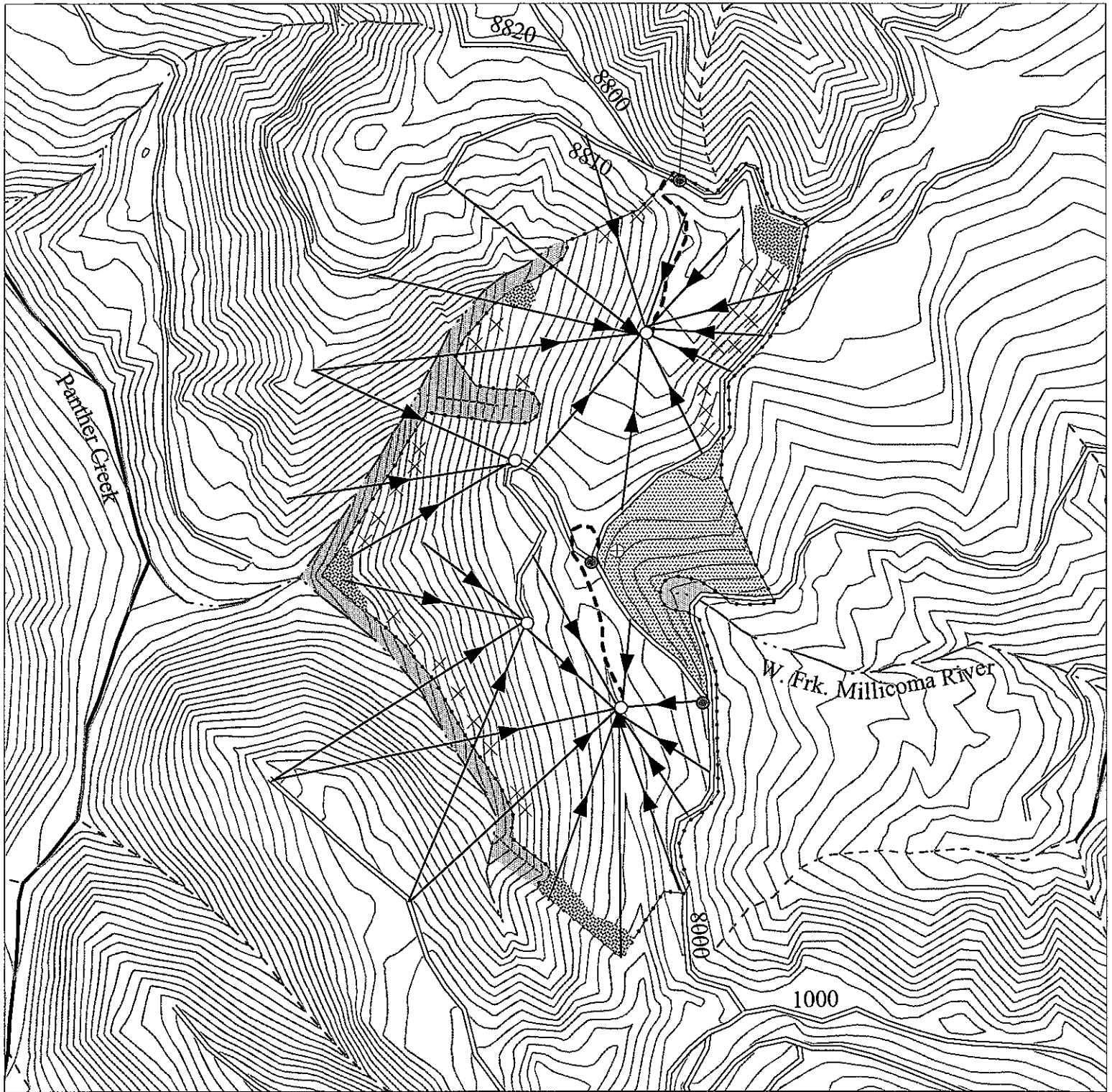
Grade >>>>>>>>>>	2PEE	3PEE	S.M.	2SAW	3SAW	Big 3 SAW	4SAW		check
Doug-Fir	0	0	156.95	2605.41	195.88	180.81	0	0	3139
Hemlock	0	0	0	19.28	9.03	7.39	0	0	36
R. Cedar	0	0	0	0	0	0	0	0	0
Hdwds	0	0	0	0	0	0	0	0	0
									<b>3175</b>

**GRADE DISTRIBUTION BY PERCENT**

Grade >>>>>>>>>>	2PEE	3PEE	S.M.	2SAW	3SAW	Big 3 SAW	4SAW		check
Doug-fir	0.00%	0.00%	5.00%	83.00%	6.24%	5.76%	0.00%	0.00%	100.00%
Hemlock	0.00%	0.00%	0.00%	54.00%	25.30%	20.70%	0.00%	0.00%	100.00%
Cedar	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Hdwds	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

**Work-Up Grade Percents\***

	TOTAL	2PEE	3PEE	S.M.	2SAW	3SAW	Big 3 SAW	4SAW		check
Doug-Fir	3139	0	0	156.95	2605.41	195.88	180.81	0	0	3139
Hemlock	36	0	0	0	19.28	9.03	7.39	0	0	36
Cedar	0	0	0	0	0	0	0	0	0	0
Hardwood	0	0	0	0	0	0	0	0	0	0



- ⊕ Disposal Site
- Project Point
- Landing
- × Single Wildlife Tree
- ↗ Yarding Corridor
- Timber Sale Boundary
- New Road Construction
- Existing Roads
- 20' Contours
- Perennial Type N Stream
- Perennial Type F Stream
- Seasonal Type N Stream
- Green Tree Area: Full Retention
- Stream Buffer
- Ground Harvest Operation Area

58 NET ACRES



## LOGGING PLAN

OF TIMBER SALE CONTRACT # 341-08-76  
 PANTHER HEADWATERS # 3  
 PORTIONS OF SECTIONS 16, 20 & 21  
 T23S, R10W, W.M.  
 COOS COUNTY, OREGON

500 0 500 1000



APPROX. SCALE 1" = 500'