



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Millicoma Elk Sale 341-02-71

District: Coos

Date: 5/10/02

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$1,813,447.12	\$33,522.84	\$1,846,969.96
		<b>Project Work</b>	(\$89,738.00)
		<b>Advertised Value</b>	\$1,757,231.96



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Timber Description Millicoma Elk Sale 341-02-71

District: Coos

Location: Portions of Secs. 26, 35, and 36  
T23S, R11W, Coos County, OR

Date: 5/10/02

Stand Stocking: 80%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	30	0	95
Western Hemlock / Fir	17	0	95
Red Cedar	21	0	95
Alder (Red)	14	0	90

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Red Cedar	Alder (Red)	Total
3P	78	0	0	0	78
SM	392	0	0	0	392
2S	2,975	0	0	0	2,975
3S	470	18	11	0	499
Camprun	0	0	0	87	87
Total	3,915	18	11	87	4,031

Comments: Pond Values Used: 1st Quarter 2002

72 acre regeneration harvest of mature second growth predominately Douglas-fir sawtimber



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal

## Logging Conditions

### Millicoma Elk

### Sale 341-02-71

---

<b>Combination#:</b> 1	Douglas - Fir	100.00%	
	Western Hemlock / Fir	100.00%	
	Red Cedar	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>	14		<b>Bd. Ft./Load:</b> 4,800
<b>Cost/MBF:</b>	\$52.83		
<b>Machines:</b>			
	Log Loader (A)		
	Tower Yarder (Large)		



# Timber Sale Appraisal

## Logging Costs

### Millicoma Elk

### Sale 341-02-71

"STEWARDSHIP IN FORESTRY"

Date: 5/10/02

Operating Seasons: 0.7

Profit & Risk: 15%

Project Costs: \$89,738

Other Costs (P/R): \$15,296

Slash Disposal: \$0

Other Costs: \$0

Miles of Road			
Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	1.6	0.0	0.0

Road Maintenance: \$0.00

#### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	4.5
Western Hemlock / Fir	\$0.00	2.0	4.5
Red Cedar	\$0.00	2.0	4.5
Alder (Red)	\$0.00	3.0	3.5



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal

## Logging Costs Breakdown

### Millicoma Elk

### Sale 341-02-71

Costs	Douglas - Fir	Western Hem lock / Fir	Red Cedar	Alder (Red)
<b>Logging</b>	52.83	52.83	52.83	52.83
<b>Road Maintenance</b>	0.88	0.88	0.88	0.92
<b>Fire Protection</b>	0.47	0.47	0.47	0.47
<b>Hauling</b>	53.79	53.79	53.79	48.67
<b>Other (P/R appl.)</b>	3.79	3.79	3.79	3.79
<b>Profit &amp; Risk</b>	16.76	16.76	16.76	16.00
<b>Slash Disposal</b>	0.00	0.00	0.00	0.00
<b>Scaling</b>	2.00	2.00	2.00	2.00
<b>Other</b>	0.00	0.00	0.00	0.00
<b>Total</b>	130.52	130.52	130.52	124.68

<b>Amortization</b>	0.00	0.00	0.00	0.00
<b>Pond Value</b>	591.20	350.00	670.00	510.00
<b>Stumpage</b>	460.68	219.48	539.48	385.32
<b>Amortized</b>	0.00	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary Millicoma Elk Sale 341-02-71

**Amortized**

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

**Unamortized**

	Douglas - Fir	Western Hemlock / Fir	Red Cedar	Alder (Red)
<b>MBF</b>	3,915.00	18.00	11.00	87.00
<b>Value</b>	460.68	219.48	539.48	385.32
<b>Total</b>	1,803,562.20	3,950.64	5,934.28	33,522.84

**Gross Timber Sale Value**

**Recovery \$1,846,969.96**

Prepared by: Jon Haynes

Date: 5/10/02

District: Coos

Phone: (541) 267-1759

# Millicoma Elk Summary of Construction Cost

## Project No. 1a: Road and Landing Construction

Points: C to D  
Length: 220'  
Type: 14', no ditch

### Clearing and Grubbing

0.15 acres at \$790.00 \$ per acre = \$118.50

**Total clearing and grubbing** \$119

### Excavation

Cat excavation 4 hrs at \$95.00 per hr \$380.00  
Excavator 3 hrs at \$110.00 per hr \$330.00

**Total Excavation** \$710

### Grade Road Surface

1 hrs Grade @ \$75.00 per hour \$75.00

**Total Grading** \$75

**Project 1a Cost** \$904

## Project No. 1b: Road and Landing Construction

Point: E

### Clearing and Grubbing

0.15 acres at \$790.00 \$ per acre = \$118.50

**Total clearing and grubbing** \$119

### Excavation

Excavator time 3 hrs at \$110.00 per hr \$330.00  
Cat time to shape waste material 3 hrs at \$95.00 per hr \$285.00

**Total Excavation** \$615

**Project 1b Cost** \$734

## Project No. 1c: Road and Landing Construction

Point: G

### Clearing and Grubbing

0.15 acres at \$790.00 \$ per acre = \$118.50

**Total clearing and grubbing** \$119

# Millicoma Elk Summary of Construction Cost

## Excavation

Excavator time	<u>20</u>	hrs at	<u>\$110.00</u>	per hr	<u>\$2,200.00</u>
Cat time to shape waste material	<u>5</u>	hrs at	<u>\$95.00</u>	per hr	<u>\$475.00</u>
Drill and Shoot	<u>5</u>	hrs at	<u>\$115.00</u>	per hr	<u>\$575.00</u>
Laborer	<u>10</u>	hrs at	<u>\$30.00</u>	per hr	<u>\$300.00</u>

**Total Excavation** **\$3,550**

## Hauling

Dump Truck to haul excess waste	<u>20</u>	hrs at	<u>\$60.00</u>	per hr	<u>\$1,200.00</u>
---------------------------------	-----------	--------	----------------	--------	-------------------

**Total Haul** **\$1,200**

**Project 1c Cost** **\$4,869**

## Move-in

Equipment	Miles	Mileage Factor	Equipment Allowance	Total
Excavator	35	0.74	\$533.00	\$394.42
D7 Cat	35	0.74	\$387.00	\$286.38
Grader	35	0.74	\$241.00	\$178.34
Drill & Comp	35	0.74	\$241.00	\$178.34
Dump Truck	35	0.74	\$144.00	\$106.56

**Total Move-in** **\$1,144**

**Total Project 1 Cost** **\$7,650**

## Project 2a: Road and Landing Improvement

Points: A to B  
 Length: 4810'  
 Type: 14', no ditch

## Excavation

Cat time for improvements	<u>4</u>	hrs at	<u>\$95.00</u>	per hr	<u>\$380.00</u>
---------------------------	----------	--------	----------------	--------	-----------------

**Total Excavation** **\$380**

## Grade Road Surface

	<u>3</u>	hrs Grade @	<u>\$75.00</u>	per hour	<u>\$225.00</u>
--	----------	-------------	----------------	----------	-----------------

**Total Grading** **\$225**

**Project 2a Cost** **\$605**



**Project 2b: Road and Landing Improvement**

Points: B to C  
 Length: 800'  
 Type: 14', no ditch

**Clearing and Grubbing**

Sawtime for road brushing                    4            hrs at            \$31.00            per hr            \$124.00

**Total clearing and grubbing                    \$124**

**Grade Road Surface**

1            hrs Grade @            \$75.00            per hour            \$75.00

**Total Grading                    \$75**

**Project 2b Cost                    \$199**

**Project 2c: Road and Landing Improvement**

Points: B to H  
 Length: 2425'  
 Type: 14', no ditch

**Clearing and Grubbing**

Sawtime to brush road                    10            hrs at            \$31.00            per hr            \$310.00

**Total clearing and grubbing                    \$310**

**Excavation**

Cat time for improvements                    4            hrs at            \$95.00            per hr            \$380.00  
 Excavator time to remove cutbank slough                    2            hrs at            \$110.00            per hr            \$220.00

**Total Excavation                    \$600**

**Hauling**

Dump Truck to haul cutbank slough to B                    2            hrs at            \$60.00            per hr            \$120.00

**Total Haul                    \$120**

**Grade Road Surface**

2            hrs Grade @            \$75.00            per hour            \$150.00

**Total Grading                    \$150**

**Project 2c Cost                    \$1,180**

**Project 2d: Road and Landing Improvement**

Point: F

**Excavation**

Cat time to shape waste material	1	hrs at	\$95.00	per hr	\$95.00
Excavator	2	hrs at	\$110.00	per hr	\$220.00

**Total Excavation**                      \$315

**Hauling**

Dump Truck to haul excess waste	2	hrs at	\$60.00	per hr	\$120.00
---------------------------------	---	--------	---------	--------	----------

**Total Haul**                                      \$120

**Project 2d Cost**                                      \$435

**Total Project 2**                                      \$2,419

**Project 3 - Road Surfacing**

**Road Rocking**

Points                      A to B (includes turnouts)  
 Length:                      4810' (35 yds per sta)  
 Type:                              14' with 2' ditch  
 Round Trip:                      3.1 hrs

Rock (1 1/2" - 0") (6" compacted depth)	1728	yds at	\$7.00	per yd	\$12,096.00
Haul	1728	yds at	\$10.33	per yd	\$17,850.24
Processing (full)	1728	yds at	\$1.50	per yd	\$2,592.00

**Total Rocking:**                                      \$32,538

**Road Rocking**

Points                      B to C  
 Length:                      800' (35 yds per sta)  
 Type:                              14' with 2' ditch  
 Round Trip:                      3.1 hrs

Rock (2 1/2" - 0") (6" compacted depth)	288	yds at	\$6.50	per yd	\$1,872.00
Haul	288	yds at	\$10.33	per yd	\$2,975.04
Processing (full)	288	yds at	\$1.50	per yd	\$432.00

**Total Rocking:**                                      \$5,279

**Road Rocking**

Points                      C to D  
 Length:                      220' (48 yds per sta)  
 Type:                              14' with 2' ditch  
 Round Trip:                      3.1 hrs

Rock (2 1/2" - 0") (8" compacted depth)	108	yds at	\$6.50	per yd	\$702.00
Haul	108	yds at	\$10.33	per yd	\$1,115.64
Processing (full)	108	yds at	\$1.50	per yd	\$162.00

**Total Rocking:**                                      \$1,980

# Millicoma Elk Summary of Construction Cost

## Road Rocking

Points B to F  
 Length: 740' (35 yds per sta)  
 Type: 14' with 2' ditch  
 Round Trip: 3.1 hrs

Rock (2 1/2" - 0") (6" compacted depth)	270	yds at	\$6.50	per yd	\$1,755.00
Haul	270	yds at	\$10.33	per yd	\$2,789.10
Processing (full)	270	yds at	\$1.50	per yd	\$405.00

**Total Rocking: \$4,949**

## Landing Rocking

Points D, E, F  
 Length:  
 Type:  
 Round Trip: 3.1 hrs

Rock (Jaw Run - 6" compacted depth)	144	yds at	\$6.35	per yd	\$914.40
Haul	144	yds at	\$10.33	per yd	\$1,487.52
Processing	144	yds at	\$1.00	per yd	\$144.00

**Total Rocking: \$2,546**

## Road Rocking - Spot Rock

Points Haul Route  
 Length: Spot Rock  
 Type: 14' with 2' ditch  
 Round Trip: 3.0 hrs

Rock (1 1/2" - 0")	500	yds at	\$7.00	per yd	\$3,500.00
Haul	500	yds at	\$10.00	per yd	\$5,000.00

**Total Rocking: \$8,500**

## Move-in

Equipment	Miles	Mileage Factor	Equipment Allowance	Total
Roller	30	0.66	\$241.00	\$159.06
Water Truck	30	0.66	\$158.00	\$104.28
Grader	30	0.66	\$241.00	\$159.06

**Total Move-in \$422**

**Total Project 3 Cost \$56,214**

# Millicoma Elk Summary of Construction Cost

## Project No. 4: West Fork Millicoma Stockpile

Location:	1.6 mi on 8000 Rd		
Measured amount:	1000 cubic yards		
Delivered amount:	1200 cubic yards (20% expansion)		
Size:	1 1/2" - 0"		
Cost per cubic yard at crusher:		\$7.00	per cu yd
Haul cost per cubic yard (2.3 hr. RT):		\$7.67	per cu yd
Piling and shaping cost per cubic yard:		<u>\$0.53</u>	per cu yd
Total cost per cubic yard:		\$15.20	per cu yd
Total cubic yards:		1200 cubic yards	
<b>Total Cost for Stockpile rock:</b>		<b>\$18,240.00</b>	

**Total Project 4 cost \$18,240**

## Project No. 5: Fish Log Stockpile

Location:	Junction of 8200 road and 8000 road, behind locked gate
Log Source:	Millicoma Elk
Log Count:	36 logs
Log Volume:	58 mbf removed from cruise

### Felling and Bucking

<u>58</u>	mbf at	<u>\$7.40</u>	\$ per mbf =	<u>\$429.20</u>
-----------	--------	---------------	--------------	-----------------

15% of total logging cost from appraisal

### Yarding

<u>58</u>	mbf at	<u>\$34.05</u>	\$ per mbf =	<u>\$1,974.90</u>
-----------	--------	----------------	--------------	-------------------

69% of total logging cost from appraisal

### Loading

<u>58</u>	mbf at	<u>\$7.90</u>	\$ per mbf =	<u>\$458.20</u>
-----------	--------	---------------	--------------	-----------------

16% of total logging cost from appraisal

### Hauling

58	mbf at	3 mbf/trip=	20 trips	
20	trips at	1.0 hrs/trip=	20 hrs	
20	hours at	<u>\$60.00</u>	\$ per hour	<u>\$1,200.00</u>

skidder helper	<u>4</u>	hours at	<u>\$75.00</u>	\$ per hour	<u>\$300.00</u>
----------------	----------	----------	----------------	-------------	-----------------

### Unloading with log loader

<u>58</u>	mbf at	<u>\$7.90</u>	\$ per mbf	<u>\$458.20</u>
-----------	--------	---------------	------------	-----------------

**Total Yarding & Hauling \$4,821**

### Move-in

Equipment	Miles	Mileage Factor	Equipment Allowance	Total
Log loader	35	0.74	\$533.00	\$394.42
Skidder	35	0.74	\$241.00	\$178.34

**Total Move-in \$394**

**Total Project 5 cost \$5,215**

**Total Project Costs \$89,738**

## TIMBER SALE SUMMARY

### Millicoma Elk

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

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

**3. Revenue Distribution:** 100% CSL; 0% BOF

**4. Sale Acreage:** The sale is divided into two separate areas totaling approximately 72 acres (Area I is approximately 69 acres and Area II is approximately 3 acres. Sale acreage for Areas I and II was determined from electronic digitizing using the ArcView GIS program.

Area	Posted Acres	Net Cruise Acres	Interior Road Acres	Net Harvest Acres
I	69	69	0	69
II	3	3	0	3

**5. Volume by Species, Fund and County.** See Attached table.

**6. Grade:** (by Percent) Areas I and II

Species	3 Peeler %	Spec. Mill %	2 Saw %	3 Saw %	4 Saw %
Douglas-fir	2 %	10 %	76 %	12 %	0 %
Hemlock					100 %
Cedar					100 %
Hardwoods					100 %

**7. Cruise:** Areas I and II were variable plot cruised using a nested Big BAF plot method. The Big BAF method is a combination of count plots and individually measured trees on seventy-three (73) nested plots. The plots were spaced 2 chains apart on cruise lines spaced 5 chains apart. At each plot center a 360 BAF full plot was taken to determine which Douglas-fir trees would be fully measured. A total of 44 Douglas-fir trees were fully measured for DBH, height, grade and defect. At the same plot centers a 40 BAF full plot was used to determine tree counts and to measure minor species. Cruising was done in October 2001 by ODF personnel.

A. Summary data:

#### AREAS I and II

Diam	Ht. Stand	Form Pt.	Form Factor	CV %	SE %
D4H	5" DIB or 30% of diam at 16 feet	Conifer: 16' Hardwood: 4'	Recorded for all cruised trees by estimate and measure	48 %	7.2 %

B. Defect and Breakage Summary:

#### AREA I and II - BY PERCENT

SPECIES	CRUISED DEFECT	HIDDEN DEFECT	BREAKAGE	TOTAL %
DOUGLAS FIR	1	2	5	8
HEMLOCK	0	7	8	15
CEDAR	0	7	8	15
HARDWOODS	0	15	--	15

C. Stand Data:

AREAS I & II

SPECIES	DBH	TREES/ACRE	BASAL AREA/AC	MBF/ACRE
DOUGLAS FIR	30	54	263	60.0
HEMLOCK	17	2	3	< 1
CEDAR	21	<1	2	< 1
HARDWOODS	14	20	23	1

D. Green Tree Retention: There are ten (10) green tree reserve areas associated with this sale (Area I has nine and Area II has one). Areas 1-6, 8-9, and 10 have been posted out of the sale area with "Timber Sale Boundary" posters, red flagging and red paint. Area 7 is posted with area boundary signs and yellow paint. Areas 11 and 12 are individually blue painted trees. Volumes from Areas 7, 11, and 12 have been removed from the cruise. In addition, 58 mbf net of Douglas-fir has been removed from the cruise to replenish a fish log stockpile.

GTR Area	D-fir Count	D-fir MBF	Hemlock Count	Hemlock MBF	Redcedar Count	Redcedar MBF	Hdwd Count	Hdwd MBF
AREA 7	43	39.8	2	<1	--	--	3	<1
AREA 11	6	2.3	--	--	1	<1	3	<1
AREA 12	10	12.2	9	<1	--	--	--	--

**8. Timber Description:** Timber in Areas I and II are even-aged and medium to well stocked with 116 to 129 year old Douglas-fir with a minor amount of red alder. There is some scattered western hemlock and red cedar. Timber quality is average to good.

**9. Topography:** The topography of the sale area is moderate to steep with slopes from 60% to over 70%. Unnamed Type F tributaries of the West Fork Millicoma River flow between Areas I and II and from the middle of Area I. Type N tributaries also originate within the sale area.

**10. Logging Method:** Areas I and II will be cable logged uphill from landings on the 9340 and 9348 roads. A short spur will be required of the end of the 9340 road. Full suspension will be required while yarding over drainages and stream buffers, and due to the high risk of operating on steep slopes, full suspension will be maintained where possible over the remainder of the sale. Single end suspension will be utilized where full suspension is not possible. One hundred (100) foot width slope distance buffers have been posted on both sides of the Type F streams within Area I and between Area I and II. Fifty (50) foot stream buffers (both sides) have been posted along the Type N perennial streams in Area I. Green tree retention areas have been located in inoperable corners and headwalls, as stream buffer extensions, and as scattered pockets on the upper slopes. Locations of stream buffers and green tree retention areas associated with the sale area are indicated on the Exhibit "A". During the process of yarding the sale area 36 logs shall be trucked to a fish log stockpile site located behind a gate at the 7100/8000/8200 junction.

**11. Access:** To access the timber sale area from the south, take the Coos River Highway to Allegany, turn onto the the 1000 road (Marlow Creek Road) and continue to the 9000 road. Continue to the 9300 road to the 9340 road. Continue on the 9340 to the junction with the 9348 road. The northeast corner of sale area is located at this road junction. To access the sale from the north, take North Lake road out of Lakeside to the 4000 road. Continue to the 4900 road and to the 2000 road. Continue south on the 2000 to the 8000 road. Follow the 8000 road downhill for approximately 2 miles to the 9300 road. Follow the 9300 road south for approximately 4 miles to the 9340.

**12. Projects:** See attached "Project Cost Summary Sheet"

**Project No. 1:** Road and Landing Construction

**Project No. 2:** Road and Landing Improvement

**Project No. 3:** Road Surfacing

**Project No. 4:** Rock Stockpile Delivery

**Project No. 5:** Fish Log Stockpile Delivery

# NET VOLUMES AND ACREAGE

Millicoma Elk

SALE AREA & SPECIES		Tree cnt. 100% Units	NET VOLUMES (MBF)							Total Vols.	Vol. per Acre
			By County and Fund								
Area	Spec	Coos			Douglas			Total Vols.	Vol. per Acre		
		FRA	FDF	Total	FRA	FDF	Total				
I & II	D-fir		3915		3915			0	3915	54.4	
	Hem		18		18			0	18	0.3	
	Cedar		11		11			0	11	0.2	
	Hdwd		87		87			0	87	1.2	
<b>TOTALS</b>			4031	0	4031	0	0	0	4031		

**TOTAL SALE VOLUME BY SPECIES**

Douglas-fir    3915 MBF  
 Hemlock        18 MBF  
 Cedar            11 MBF  
 Hdwd            87 MBF

Report by: J. HAYNES

Date: 3/26/2002

Unit For. John P. King 3/28/02  
Date

Asst. Dist. For. Gregory J. Kretzinger 3/29/2002  
Date

**NO INGROWTH INCLUDED. UTILITY VOLUME NOT INCLUDED TO PROVIDE FOR DOWN WOOD RETENTION.**

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

Sale Area	Coos County						Douglas County						TOTAL ACRES
	FRA			FDF			FRA			FDF			
	Conifer		Hard wood	Conifer		Hard woods	Conifer		Hard woods	Conifer		Hard woods	
	cc	pc		cc	pc		cc	pc		cc	pc		
I	69												69
II	3												3
<b>SUM</b>	<b>72</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>72</b>

cc- clearcut

pc- partial cut

FDF- Forest Development Fund

FRA- Forest Revenue Account



