



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
Harry Otter  
Sale 341-15-43

District: Coos

Date: September 16, 2014

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**cost summary**

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$219,931.02	\$5,776.80	\$225,707.82
		Project Work:	\$(4,639.00)
		Advertised Value:	\$221,068.82



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**timber description**

**Location:** Portions of Sections 10 and 11, T23S, R11W, W.M., Coos County, Oregon.

**Stand Stocking:** 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	18	0	95
Western Hemlock / Fir	24	0	95
Alder (Red)	16	0	90

Volume by Grade	2S	2S 12"+	3S	4S	4S 8" - 9'	6" - 7"	Total
Douglas - Fir	392	0	324	11	0	0	727
Western Hemlock / Fir	14	0	19	5	0	0	38
Alder (Red)	0	13	0	0	5	11	29
Total	406	13	343	16	5	11	794



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comments: Pond Values Used: 2nd Quarter Calendar Year 2014.

Western redcedar and Other Cedars Stumpage Price = Pond Value  
minus Conifer Logging Cost:  
 $\$628.96/\text{MBF} = \$950/\text{MBF} - \$321.04/\text{MBF}$

Regeneration harvest of 37 acres of 51 year old moderately stocked  
Douglas-fir sawtimber.

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$4.00/GALLON

HAULING COST ALLOWANCE:  
Hauling costs equivalent to \$780 daily truck cost.

Other Costs (with Profit & Risk to be added):  
YARDING AND LOADING:  
Brand and Paint Logs:  $\$1/\text{MBF} \times 794 \text{ MBF} = \$794$   
Cull Sorting and Landing Slash Piling:  $\$125/\text{landing} \times 4 \text{ landings}$   
= \$500  
Rig Tail / Lift Trees:  $\$150/\text{lift tree} \times 6 \text{ lift trees} = \$900$   
Artificial Tailholds / Guy Anchors:  $\$500/\text{anchor} \times 2 \text{ anchors} =$   
\$1,000  
Cover Landing Slash Pile w/sheathing:  $\$50/\text{pile} \times 8 \text{ piles} = \$400$   
TOTAL Other Costs (with Profit & Risk to be added) = \$3,594

Other Costs (No Profit & Risk added):  
None.



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**logging conditions**

<b>combination#:</b>	1	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: Small Tower <=40	<b>Process:</b>	Stroke Delimber
<b>tree size:</b>	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
<b>loads / day:</b>	5.0	<b>bd. ft / load:</b>	3,600
<b>cost / mbf:</b>	\$157.46		
<b>machines:</b>	Log Loader (A) Stroke Delimber (A) Tower Yarder (Small)		



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## logging costs

Operating Seasons:	1.00	Profit Risk:	20.00%
Project Costs:	\$4,639.00	Other Costs (P/R):	\$3,594.00
Slash Disposal:	\$0.00	Other Costs:	\$0.00

### Miles of Road

Road Maintenance: \$0.00

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

### Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	3.6
Western Hemlock / Fir	\$0.00	2.0	3.6
Alder (Red)	\$0.00	2.0	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>									
\$157.46	\$1.07	\$5.52	\$94.79	\$4.53	\$52.67	\$0.00	\$5.00	\$0.00	\$321.04
<b>Western Hemlock / Fir</b>									
\$157.46	\$1.07	\$5.52	\$94.79	\$4.53	\$52.67	\$0.00	\$5.00	\$0.00	\$321.04
<b>Alder (Red)</b>									
\$157.46	\$1.12	\$5.52	\$102.15	\$4.53	\$54.16	\$0.00	\$5.00	\$0.00	\$329.94

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$613.40	\$292.36	\$0.00
Western Hemlock / Fir	\$0.00	\$515.39	\$194.35	\$0.00
Alder (Red)	\$0.00	\$529.14	\$199.20	\$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
Alder (Red)	0	\$0.00	\$0.00

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	727	\$292.36	\$212,545.72
Western Hemlock / Fir	38	\$194.35	\$7,385.30
Alder (Red)	29	\$199.20	\$5,776.80

**Gross Timber Sale Value**

Recovery: \$225,707.82

Prepared by: Jon Haynes

Phone: 541-267-1758

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

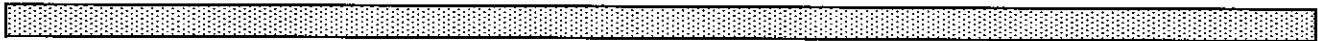
Sale Name: Harry Otter

### 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>Yarding and Loading</b>				
Brand and paint logs	MBF	794	\$ 1.00	\$ 794.00
Cull sorting/slash piling on landings	landing	4	\$ 125.00	\$ 500.00
Rig tail/lift trees	lift tree	6	\$ 150.00	\$ 900.00
Artificial tailhold / guy anchors	anchor	2	\$ 500.00	\$ 1,000.00
Cover landing slash pile w/sheeting	pile	8	\$ 50.00	\$ 400.00

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

**\$ 3,594.00**



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

	<u>Units</u>	<u>Quantity</u>	<u>Cost/unit</u>	<u>Total Cost</u>
				\$ -

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

**\$ -**



**SUMMARY OF CONSTRUCTION COST**  
**Harry Otter**

**Project 1A: Road Improvement**

Points: A to B      Length: 2325'      Type: 14' w/ditch

Grader time - blade road	4	hrs at	\$85.00	per hour	\$340.00
Laborer - remove brush	5	hrs at	\$38.00	per hour	\$190.00

**Total Project 1A:      \$530.00**

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

Points: B to C      Length: 725'      Type: 14' no ditch

Cat time - smooth road and landing area	3	hrs at	\$140.00	per hour	\$420.00
Grader time - blade road	1	hrs at	\$85.00	per hour	\$85.00
Laborer - remove brush and small trees	3	hrs at	\$38.00	per hour	\$114.00

**Total Project 1B:      \$619.00**

**Project 1C: Road and Landing Improvement**

Points: D to F      Length: 300'      Type: 14' no ditch  
(includes landing at E)

Cat time - widen landing areas	10	hrs at	\$140.00	per hour	\$1,400.00
Grader time - blade road	1	hrs at	\$85.00	per hour	\$85.00
Laborer - remove brush and small trees	10	hrs at	\$38.00	per hour	\$380.00

**Total Project 1C:      \$1,865.00**

**Move-in**

Equipment	Miles	hrs/RT	Lowboy Rate/hr	Total
Cat	35	7	\$125.00	\$875.00
Grader	35	6	\$125.00	\$750.00

**Total Move-in:      \$1,625.00**

**Project 1 Total      \$4,639.00**

**Total Project Costs      \$4,639.00**

# Operating Periods Restrictions Matrix for

Harry Otter

341-15-43

Harvesting	January		February		March		April		May		June		July		August		September		October		November		December	
					1st		1st		15th	16th			7th	8th	5th	6th	15th	16th	14th	15th				
Ground-based Yarding																								
Cable Yarding on Unsurfaced Roads																								
Cable Yarding in Seasonally Restricted Area and MMMA* Buffer																								
Logging activity in Logging Restricted Area and MMMA* Occupied Habitat																								

Hauling	January		February		March		April		May		June		July		August		September		October		November		December	
					1st		1st		15th	16th					5th	6th	15th	16th	15th					
Log Hauling on 2560 road and other unsurfaced Roads																								

Project Work	January		February		March		April		May		June		July		August		September		October		November		December	
					1st		1st		15th	16th					5th	6th	15th	16th	15th					
Project 1																								
Non-project Roads and Landings																								
Non-project Roads and Landings in Seasonally Restricted Area and MMMA* Buffer																								

Operations Allowed

Activity Restricted 2 hours before sunset through 2 hours after sunrise

Operations Prohibited - T & E

Operations Prohibited for weather conditions: unless otherwise approved in writing by STATE

Operating Matrix represents the seasonal restrictions contained within the body of the timber sale contract. See Section 2455 for further information on seasonal restrictions.

\*MMMA means Marbled Murrelet Management Area.

## **TIMBER SALE SUMMARY**

**Harry Otter**

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

**2. Boundary Lines:** Timber sale boundaries are marked on the ground with white "Timber Sale 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 area is approximately 37 acres and was determined from LIDAR imagery using electronic digitizing with the ArcMap 10.2 GIS program. The cruise expansion acres include only the timbered acres and not unstocked areas nor existing interior roads or landings.

	<b>Posted Acres</b>	<b>Interior Roads/Landings</b>	<b>Non-Stocked Acres</b>	<b>Net Cruise Acres</b>	<b>Net Harvest Acres</b>
<b>Sale Area</b>	38.06	1.41	.52	36.13	36.65

### **5. Volume by Species**

<b>Species</b>	<b>Total Volume (MBF)</b>	<b>Volume (MBF) per Acre</b>
Douglas-fir	727	19.8
Hemlock	38	1.0
Red Alder	29	.8
<b>Total</b>	794	21.6

### **6. Grade:** (by Percent,)

<b>Species</b>	<b>3 Peeler %</b>	<b>Special Mill %</b>	<b>2 Saw (12"+) %</b>	<b>3 Saw % (10" – 11") %</b>	<b>Big 3 Saw %</b>	<b>4 Saw % (8" – 9") %</b>	<b>6" – 7" % Hardwood</b>
Douglas-fir			53 %	45 %		2 %	
Hemlock			36 %	51 %		13 %	
Red Alder			46 %			17 %	37 %

**7. Cruise:** The sale areas 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. Plots were spaced 150 feet apart on cruise lines spaced 400 feet apart. A 20 BAF full plot was used to determine tree counts for all species. Trees were sighted in at 16 feet and a total of 26 count plots were installed. A 160 BAF full plot at 16 feet was taken on every plot to determine which Douglas-fir trees would be fully measured. A total of 17 Douglas-fir trees were measured for DBH, height, grade, and defect. Minor species were measured on every third plot with a 20 BAF at 16 feet. A total of 13 minor species were fully measured. Volume was calculated by preserving cruised log length to maximize grade. Cruise data was compiled using Suprace. Cruising was done by C. Hall of ODF in February 2014.

A. Summary data:

Diam	Ht. Stand	Form Pt.	Form Factor	CV %	SE %
DBH	6" DIB	All species: 16'	Recorded for all cruised trees by estimate and measure	49 %	9.6 %

B. Defect and Breakage Summary:

BY PERCENT

SPECIES	CRUISED	HIDDEN DEFECT	BREAKAGE	TOTAL %
DOUGLAS FIR	1	4	4	9
HEMLOCK	0	3	2	5
RED ALDER	2	4	4	10

C. Stand Data:

SPECIES	DBH	TREES/ACRE	BASAL AREA/AC	NET MBF/ACRE
DOUGLAS FIR	18"	78	138	19.8
HEMLOCK	24"	2	7	1.0
RED ALDER	16"	15	19	.8

- D. Green Tree Retention: There are four (4) green tree reserve areas associated with this sale that are reserved from cutting. These areas consist mostly of Type N seasonal potential debris flow stream buffers posted out of the sale area, and a small portion of a Type F perennial stream, also posted out of the sale area. Because all green tree retention is external to the sale area, no green tree retention volume was removed from the cruise. The table below summarizes the green tree retention areas and tree counts.

GTR Area	D-fir Count	Hemlock Cedar Spruce Count	Alder Maple Myrtle Count
Type F Perennial Stream Buffer	11		5
Seasonal Potential Debris Flow Buffers	99	1	251
TOTALS	110	1	256

- E. Down Wood: The down woody debris requirement of this sale is to leave 60 – 120 cubic feet per acre of hard logs across the sale areas. This will be achieved by retaining hard logs containing a minimum of 20 cubic feet for any individual piece. Existing down wood can be used to achieve this target provided they meet the definition of a hard log (sound wood in decay class 1 or 2 indicated by intact bark and original wood color).

**8. Timber Description:** The sale area is a 51 year old stand of moderately stocked Douglas-fir that was commercially thinned in early 2002. There is considerable hardwood within the stream buffers and some scattered hemlock across the sale area. Timber quality across the sale areas is generally good.

**9. Topography:** The sale area has primarily north and south aspects with slopes 70 to 80 percent. Otter Creek, a small Type F stream flows east of the sale area; only a small portion of the sale actually borders this stream. The streams originating within the sale area are classified as seasonal Type N potential debris flow streams; summarily these streams have posted buffers on them.

**10. Logging Method:** The sale area is designed to be uphill cable logged from existing landings at Points C, E, and F. There is a Logging Restricted Area northeast of the sale area and the Otter Creek Marbled Murrelet Management Area (MMMA) is located southeast of the sale area. Both the Logging Restricted Area and Otter Creek MMMA – Occupied Habitat are off limits for establishing tailholds in or for stringing cables through or above. Consequently some portions of road grades off the 2600 road may not be available for tailholds if it involves stringing lines through or above the Logging Restricted Area or Otter Creek MMMA – Occupied Habitat. Full suspension will be required while yarding over the posted stream buffers shown on Exhibit A. Single end suspension will be maintained over the remainder of the sale areas. In unit lift/tail trees will likely be necessary to achieve the required deflection while avoiding the Logging Restricted Area and Otter Creek MMMA – Occupied Habitat. Areas that cannot be yarded without impacting the Otter Creek MMMA – Occupied Habitat may be excluded from harvest and are shown as Purchaser Option Areas on Exhibit A. The Purchaser Option Area is approximately three acres. Lift tree cost has been included in the appraisal. All areas are designed for dry season operation.

**11. Access:** (All miles approximate) To access the timber sale area from Lakeside take North Lake Road 4.3 miles to the 4000 road. Proceed east on the 4000 road for 7.6 miles to the junction of the 4000, 2000, and 2560 roads. Proceed ¼ mile on the 2560 road into the sale area.

**12. Projects:** See attached “Project Cost Summary Sheet”

Project No. 1: Road and Landing Improvement

# CRUISE VOLUME COMPUTATION REPORT

SALE NAME:	Harry Otter	DATE:	07/17/2014
LEGAL LOCATION:	Sections 10 & 11, T23S, R11W	BY:	J. Haynes
	WM. Coos County, OR		

## FIELD CULL PERCENTAGE

### Sale Area

Species	Doug-fir	Spruce	Cedar	Hemlock	Red Alder	Bigleaf Maple
Field cull	1%	0	0%	0	2%	0

## NET FIELD VOLUME MBF (Gross vol. less field cull)

SPECIES>>>>>	Doug-fir	Spruce	Cedar	Hemlock	Red Alder	Bigleaf Maple	TOTAL
Sale Area	790	0	0	40	32	0	862
less GTR vol	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>790</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>32</b>	<b>0</b>	<b>862</b>

## HIDDEN DEFECT AND BREAKAGE

Species	Doug-fir	Spruce	Cedar	Hemlock	Red Alder	Bigleaf Maple
Hidden cull	0.04	0	0	0.03	0.04	0
Breakage	0.04	0	0	0.02	0.04	0
<b>TOTAL</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.08</b>	<b>0.00</b>

## NET VOLUME BY MBF BY AREA

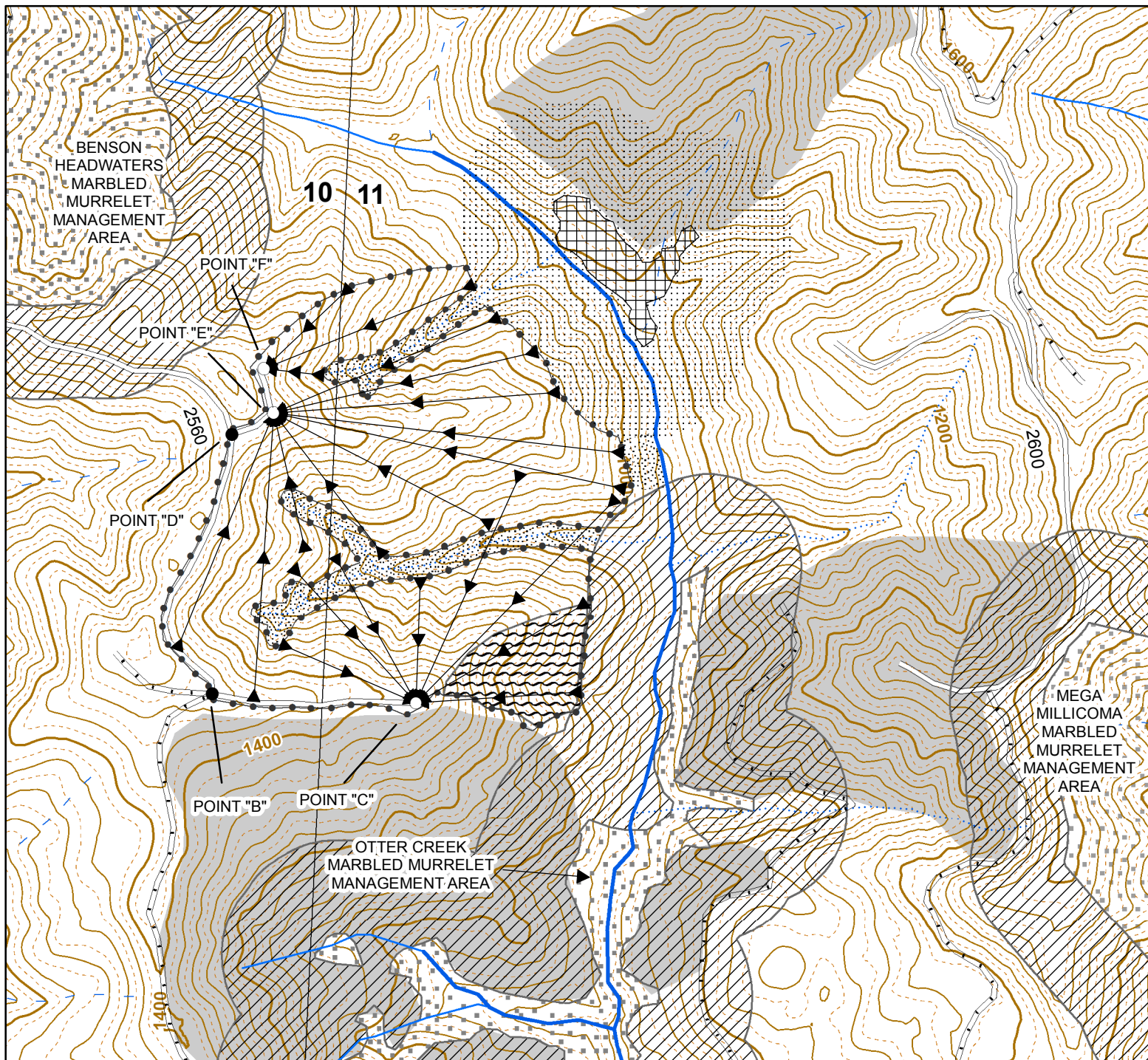
SPECIES>>>>>	Doug-fir	Spruce	Cedar	Hemlock	Red Alder	Bigleaf Maple	TOTALS
Sale Area	727	0	0	38	29	0	794
<b>TOTALS</b>	<b>727</b>	<b>0</b>	<b>0</b>	<b>38</b>	<b>29</b>	<b>0</b>	<b>794</b>

## NET VOLUME BY GRADE AND MBF

Grade >>>>>>>>>>	2PEE	3PEE	S.M.	2SAW (12"+)	3SAW (10"-11")	Big 3 SAW	4SAW (8"-9")	(6"-7")
Sale Area								
Doug-Fir	0	0	0	392	324	0	11	0
Hemlock	0	0	0	14	19	0	5	0
Red Alder	0	0	0	13	0	0	5	11
Cedar	0	0	0	0	0	0	0	0
Maple	0	0	0	0	0	0	0	0

## GRADE DISTRIBUTION BY PERCENT

Grade >>>>>>>>>>	2PEE	3PEE	S.M.	2SAW (12"+)	3SAW (10"-11")	Big 3 SAW	4SAW (8"-9")	(6"-7")
Sale Area								
Doug-fir	0%	0%	0%	53%	45%	0%	2%	0%
Hemlock	0%	0%	0%	36%	51%	0%	13%	0%
Red Alder	0%	0%	0%	46%	0%	0%	17%	37%
Cedar	0%	0%	0%	0%	0%	0%	0%	0%
Maple	0%	0%	0%	0%	0%	0%	0%	0%



Timber Sale Boundary

Purchaser Option Area

#### Roads

Existing Road - STATE Maintained

Existing Road - Purchaser Maintained

#### Project Points

Landing

Road Point

Logging Restricted Area

Seasonally Restricted Area

Reforestation Areas

#### Marbled Murrelet Management Area

Occupied Habitat

Buffer

Cable Yarding Roads

Streambuffers / Green Tree Retention Areas

#### Streams

Type F

Type N Perennial

Type N Seasonal

Unclassified

## LOGGING PLAN

Sale No. 341-15-43

Harry Otter

Portions of Sections 10 & 11

T23S, R11W, W.M.

Coos County, Oregon

Regulated Use Area CS-2

100% CSL



37 Net  
Harvest Acres

500 250 0 500  
 Feet

1:12,000 1 inch = 1,000 feet  
20 foot contour interval

The information shown on Exhibit "A" map(s) are approximate locations. Exact locations of features represented by map symbols will be determined on site and shall depend upon the conditions that exist on site. Activities shall be conducted based upon features determined on site rather than features shown on maps.