



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Larson Creek #2
Sale 341-08-38

District: Coos

Date: November 21, 2007

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$357,331.98	\$18,202.80	\$375,534.78
		Project Work:	\$(76,333.00)
		Advertised Value:	\$299,201.78



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timber description

Location: Portions of Section 14, T24S, R12W, W.M., Coos County, Oregon.

Stand Stocking: 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	26	0	90
Western Hemlock / Fir	14	0	90
Sitka Spruce	25	0	90
Alder (Red)	15	0	90

Volume by Grade	(10" - 11"	2S	2S 12"+	3P	3S	3S 12"+	4S	6" - 7"	SM	Total
Douglas - Fir	0	908	0	7	69	234	7	0	151	1,376
Western Hemlock / Fir	0	0	0	0	5	0	1	0	0	6
Sitka Spruce	0	6	0	0	1	5	0	0	0	12
Alder (Red)	25	0	18	0	0	0	0	13	0	56
Total	25	914	18	7	75	239	8	13	151	1,450



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comments: Pond Values Used: 3rd Quarter Calendar Year 2007.

Western Red Cedar Stumpage Price = Pond Value minus Logging Cost
 $\$772.80/\text{MBF} = \$1,000/\text{MBF} - \$227.20/\text{MBF}$

Bigleaf Maple Stumpage Price = Pond Value minus Logging Cost
 $\$250/\text{MBF} = \$477/\text{MBF} - \$227/\text{MBF}$

HAULING

Hauling costs equivalent to \$700 daily truck cost.

Other Costs (Profit and Risk to be added):

Felling:

Directional Felling: $\$2/\text{MBF} \times 700 \text{ MBF} = \$1,400$

Yarding & Loading:

Locate Corridors and Skid Roads: $\$5/\text{Corridor} \times 12 \text{ Corridors} = \60

Brand & Paint Logs: $\$1/\text{MBF} \times 1,480 \text{ MBF} = \$1,480$

Loader Time for Firewood Stacking: $\$75/\text{hr} \times 87 \text{ hours} = \600

Snag Creation:

Tree Topping: $\$100/\text{tree} \times 12 \text{ trees} = \$1,200$

Tree Girdling: $\$20/\text{tree} \times 12 \text{ trees} = \240

Miscellaneous Costs:

Additional Fire Equipment:

1 Season = \$1,000

TOTAL Other Costs (Profit and Risk to be added) = \$5,980



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logging conditions

combination#: 1	Douglas - Fir	100.00%	
	Western Hemlock / Fir	100.00%	
	Sitka Spruce	100.00%	
	Alder (Red)	100.00%	
yarding distance:	Long (1,500 ft)	downhill yarding:	No
logging system:	Cable: Large Tower >=70	Process:	Manual Delimiting
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	7.0	bd. ft / load:	4,000
cost / mbf:	\$131.91		
machines:	Log Loader (A)		
	Tower Yarder (Large)		



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logging costs

Operating Seasons:	1.00	Profit Risk:	15.00%
Project Costs:	\$76,333.00	Other Costs (P/R):	\$5,980.00
Slash Disposal:	\$0.00	Other Costs:	\$0.00

Miles of Road

Road Maintenance: \$0.90

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	4.0
Western Hemlock / Fir	\$0.00	3.0	4.0
Sitka Spruce	\$0.00	3.0	4.0
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
Douglas - Fir									
\$131.91	\$0.99	\$3.02	\$55.79	\$4.12	\$29.37	\$0.00	\$2.00	\$0.00	\$227.20
Western Hemlock / Fir									
\$131.91	\$0.99	\$3.02	\$55.79	\$4.12	\$29.37	\$0.00	\$2.00	\$0.00	\$227.20
Sitka Spruce									
\$131.91	\$0.99	\$3.02	\$55.79	\$4.12	\$29.37	\$0.00	\$2.00	\$0.00	\$227.20
Alder (Red)									
\$131.91	\$0.99	\$3.02	\$63.77	\$4.12	\$30.57	\$0.00	\$2.00	\$0.00	\$236.38

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$485.05	\$257.85	\$0.00
Western Hemlock / Fir	\$0.00	\$333.33	\$106.13	\$0.00
Sitka Spruce	\$0.00	\$385.00	\$157.80	\$0.00
Alder (Red)	\$0.00	\$561.43	\$325.05	\$0.00



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Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00
Sitka Spruce	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	1,376	\$257.85	\$354,801.60
Western Hemlock / Fir	6	\$106.13	\$636.78
Sitka Spruce	12	\$157.80	\$1,893.60
Alder (Red)	56	\$325.05	\$18,202.80

Gross Timber Sale Value

Recovery: \$375,534.78

Prepared by: Gloria Clary

Phone: 541-267-1757

Summary of "Other Costs" for Timber Sale Appraisals

Sale Name: Larson Creek #2

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>
Felling				
Felling of unmerch material	MBF	0 \$	1.00 \$	-
Directional Felling	MBF	700 \$	2.00 \$	1,400.00
Yarding and Loading				
Locate Corridors and Skid Roads	MBF	12 \$	5.00 \$	60.00
Artificial guyline support	anchor	0 \$	500.00 \$	-
Brand and paint logs	MBF	1480 \$	1.00 \$	1,480.00
Loader time for firewood stacking	Hours	8 \$	75.00 \$	600.00
Snag Creation				
Tree Topping	Trees	12 \$	100.00 \$	1,200.00
Tree Girdling	Trees	12 \$	20.00 \$	240.00
Miscellaneous Costs				
Log Placement in Stream	Crossings	0 \$	- \$	-
Additional Fire Equipment	Seasons	1 \$	1,000.00 \$	1,000.00
Maintenance rock per section 5	Cubic Yards	0 \$	18.00 \$	-
Safety Flagging and/or signing	per day	0 \$	110.00 \$	-
Total additional "Other Cost" with additional profit and risk to be added				\$ 5,980.00

SUMMARY OF CONSTRUCTION COST

Larson Creek No. 2

Project 1A: Road and Landing Construction

Points: B to C Length: 1225' Type: 14' no ditch

Excavator	100	hrs at	\$120.00	per hour	\$12,000.00
Cat time	80	hrs at	\$120.00	per hour	\$9,600.00
Drill and Shoot	30	hrs at	\$250.00	per hour	\$7,500.00
Dump Truck (0.35 mi RT)	100	hrs at	\$95.00	per hour	\$9,500.00
Grader	2	hrs at	\$75.00	per hour	\$150.00
Laborer	100	hrs at	\$30.00	per hour	\$3,000.00

Total Project 1A: \$41,750.00

Project 1B: Road and Landing Construction

Points: D to E Length: 200' Type: 14' no ditch

Excavator	10	hrs at	\$120.00	per hour	\$1,200.00
Cat time	20	hrs at	\$120.00	per hour	\$2,400.00

Total Project 1B: \$3,600.00

Move-in

Equipment	Miles	hrs/RT	Lowboy Rate/hr	Total
Excavator	20	2.5	\$95.00	\$237.50
Cat	20	2.5	\$95.00	\$237.50
Grader	20	2.5	\$95.00	\$237.50
Drill & Comp	20	2.5	\$95.00	\$237.50
Dump Truck	20	2.5	\$95.00	\$237.50

Total Move-in: \$1,188.00

Project 1 Total \$46,538.00

Project 2: Road Improvement

Points: A to B Length: 2685' Type: 14' no ditch

Excavator - remove small trees and brush, remove slough between 14+65 - 26+85	10	hrs at	\$120.00	per hour	\$1,200.00
Cat time - shape road surface	10	hrs at	\$120.00	per hour	\$1,200.00
Dump Truck - haul slough to Pt D	10	hrs at	\$95.00	per hour	\$950.00
Grader	3	hrs at	\$75.00	per hour	\$225.00

Project 2 Total \$3,575.00

SUMMARY OF CONSTRUCTION COST
Larson Creek No. 2

Project 3: Sullivan II Rock Stockpile

Location: 3.5 mi on 3000 Rd
Measured amount: 1200 cu yds
Size: 1 1/2" - 0"

Cost per cu yd at crusher (CBTO pricing):	\$15.96	per yd
Haul cost per cu yd (1.1 hr RT):	\$4.89	per yd
Piling and shaping cost per cu yd:	\$1.00	per yd

Total cost per cu yd:	\$21.85	per yd
Total cu yds:	1200	yards

Total Cost for Stockpile rock: \$26,220.00

Project 3 Total \$26,220.00

Total Project Costs \$76,333.00

TIMBER SALE SUMMARY

Larson Creek #2

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:** 98.56% CSL and 1.44% BOF; 100% Coos County.
4. **Sale Acreage:** The total sale area is 47 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	S M	2 Saw (12"+)	Big 3 Saw	3 Saw (10-11")	4 Saw (8-9")	(6-7")
Douglas-fir	1 %	11 %	66 %	17 %	5 %	1 %	----
Red Alder	----	----	32 %	----	45 %	----	23 %
Western Red Cedar	----	----	----	----	----	----	----
Western Hemlock	----	----	----	----	81 %	19 %	----
Sitka Spruce	----	----	46 %	49 %	5 %	----	----

7. **Cruise:** The unit was variable plot cruised using the Big BAF cruise design, which consisted of 111 nested plots. For the mature stand each plot consists of both a full 40 BAF count plot and a full 360 BAF measure plot. The 40 BAF plot was used to tally the number of trees by species to determine the stand basal area. The 40 BAF plot was then used to select hardwoods and minor species to cruise and the 360 BAF plot to select Douglas-fir trees to cruise. Selected trees were cruised for diameter at breast height, height, grade and defect. Sixty-two Douglas-fir Big BAF 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	63.7	8.61

B. Stand Summary:

Species	D4H	Trees per Acre	Basal Area (ft ² /ac)	BF per acre
Douglas-fir	26	27	134	30,063
Red Alder	15	13	17	1,191
Sitka Spruce	25	0.5	2	276
Western Hemlock	14	1	1	170

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

8. **Timber Description:** The timber sale has three stands that are moderately stocked of approximately 112 to 118 year old second growth and 78 year old third growth Douglas-fir, of good to average quality, with red alder, Sitka spruce and western hemlock in the understory. Conifers range from 89 to 193 feet tall while hardwoods are about 65 feet.

9. **Topography:** The unit ranges from 15% to 100% slope. There are a few benches as well as steep drainages in Area 1 and 2.

10. **Logging Method:** The sale will be cable logged uphill with single-end suspension over the unit; full suspension will be required over designated streams and RMAs. A motorized carriage will be required to obtain the necessary suspension. Tail trees may need to be placed for yarding the sale area as approved in the operations plan.

11. **Access:** From Coos Bay, proceed north on Highway 101, turn on North Bay Road for 2 miles, then proceed on Larson Way for approximately 3 miles to the 3000 Rd., then proceed 3 1/2 miles to project point A.

12. **Projects:**

Project No. 1: Road and Landing Construction

Project No. 2: Road 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		
I&II	D-fir		1356	19.86	1376			0	1376	28.85
	Hdwd		55.86	0.14	56			0	56	1.19
	Cedar		0		0			0	0	0.00
	Spruce		12		12			0	12	0.26
	Hemlock		6		6			0	6	0.13
TOTALS			1430	20	1450	0	0	0	1450	

TOTAL SALE VOLUME BY SPECIES

Douglas-fir	1376	MBF
Hemlock	6	MBF
Cedar	0	MBF
Spruce	12	
Hardwoods	56	MBF
Total	1450	MBF

Report by: Larson Creek #2

Date: 11/02/2007

Unit For. *[Signature]* Nov 2, 2007
Date

Asst. Dist. For. *[Signature]* 11.5.2007
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		cc	pc		cc	pc		cc	pc		
I	40.32			0.68									41
II	6												6
													0
													0
SUM	46.32	0	0	0.68	0	0	0	0	0	0	0	0	47

cc- clearcut

pc- partial cut

BOF - Board of Forestry

CSL - Common School Land

CRUISE VOLUME COMPUTATION REPO

SALE NAME: Larson Creek #2
 T24S, R12W Sec. 14
 DATE: 10/19/2007
 BY: Gloria Clary

SPECIES>>> AREA	GROSS VOLUME MBF *				TOTAL
	Doug-fir	Hemlock	Red Cedar	Hardwds	
I & II	1738	11	0	16	1,833
Less GTR Vol.	31	1	0	0	32
Less DWD Vol.	8	2	0	1	12
TOTAL	1699	8	0	15	1789

Species	DEFECT AND BREAKAGE *			
	Doug-fir	Hemlock	Red Cedar	Hardwds
Field cull	0.03	0.02	0.02	0.03
Hidden cull	0.08	0.07	0.07	0.07
Breakage	0.08	0.07	0.07	0.07
Total	0.19	0.16	0.16	0.17

SPECIES AREA	NET VOLUME BY MBF BY AREA *				TOTALS
	Doug-fir	Hemlock	Red Cedar	Hardwds	
I & II	1376	6	0	12	1450
TOTALS	1376	6	0	12	1450

Grade	NET VOLUME BY GRADE AND MBF *					
	2 PEE	3 PEE	SM	3SAW(12'+)	3SAW(10-11")	4SAW(8-9") (6-7")
Doug-Fir	0	7	151	908	234	69
Hdwds	0	0	0	18	0	25
Red Cedar	0	0	0	0	0	0
Hemlock	0	0	0	0	0	5
Sitka Spruce	0	0	0	6	5	1

Grade	GRADE DISTRIBUTION BY PERCENT					
	2 PEE	3 PEE	SM	3SAW(12'+)	3SAW(10-11")	4SAW(8-9") (6-7")
Doug-fir	0%	1%	11%	66%	17%	5%
Hardwood	0%	0%	0%	32%	0%	45%
Red Cedar	0%	0%	0%	0%	0%	0%
Hemlock	0%	0%	0%	0%	0%	81%
Sitka Spruce	0%	0%	0%	46%	49%	5%



LEGEND

- Landing
- ⚡ Posted Sale Boundary
- Project Point
- Roads
 - ⚡ Purchaser Maintained Road
 - ⚡ State Maintained Road
 - ⚡ New Road Construction
- ⚡ Elliott State Forest Boundary
- ⚡ Yarding Corridor
- Streams
 - ⚡ Type F
 - ⚡ Type N Perennial
 - ⚡ Type N Seasonal
- ▨ Stream Buffer
- ▨ Reforestation Area
- × Green Tree Retention Single
- ⚡ Contours: 20 Foot

APPROXIMATE ACREAGE

AREA I	41
AREA II	6
<hr/>	
TOTAL	47

LOGGING PLAN

LARSON CREEK #2
341-08-38
PORTIONS OF SECTION 14
T24S, R12W
COOS COUNTY, OREGON
APPROXIMATELY 47 NET HARVEST ACRES

APPROX. SCALE: 1"=1000'

