



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Beaver High Sale 341-04-17

District: Tillamook

Date: 8/26/03

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$137,454.38	\$0.00	\$137,454.38
		Project Work	(\$24,910.00)
		Advertised Value	\$112,544.38



Timber Sale Appraisal Timber Description Beaver High Sale 341-04-17

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Sections 6 & 7, T3S, R8W

Date: 8/26/03

Stand Stocking: 40%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	13	0	95
Western Hemlock / Fir	12	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Total
2S	121	0	121
3S	425	281	706
4S	61	31	92
Total	607	312	919

Comments: Pond Values Used: 2nd Quarter 2003

Added costs w/ P&R: Brand & Paint - $919\text{mbf} @ \$2/\text{mbf} = \$1,838$

Added costs w/o P&R: total \$13,724

Machine work for roads: $40\text{ sta} @ \$120/\text{sta} = \$4,800$

600 cubic yards pitrun rock @ $\$8.11/\text{cy} = \$4,866$

move-in - \$500

Grass seeding: $40\text{ sta} @ \$9/\text{sta} = \360

Slash/firewood piling: $2\text{ hours} @ \$110/\text{hour} = \220

BLM road maint.& rock wear - $\$3.24\text{ per mbf} \times 919\text{MBF} = \$2,978$

Road Maintenance: $\$3.81/\text{mbf}$

Grading - $\$500/\text{mile} \times 3\text{ miles} \times 1\text{ times} = \$3000/919\text{mbf} = \$1.63$

Surfacing - $50\text{ cu yds} @ \$20/\text{cu yd} \times 1\text{ mmbf} \times 2\text{ miles} = \$2,000/919\text{mbf} = \$2.18$

Hardwood stumpage price was calculated based on a $\$2/\text{ton}$ value.

$\$2 \times 20\text{ tons per load} \text{ divided by } 2.5\text{ MBF per load} = \16 per MBF.



Timber Sale Appraisal Logging Conditions Beaver High Sale 341-04-17

"STEWARDSHIP IN FORESTRY"

Combination#: 1 Douglas - Fir 50.00%
 Western Hemlock / Fir 50.00%

Yarding Distance: Short (400 ft) **Downhill Yarding:** No
Logging System: Cable: Small Tower <=40 **Process:** Manual Delimiting
Tree Size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
Loads/Day: 5 **Bd. Ft./Load:** 3,200
Cost/MBF: \$161.13

Machines:
 Log Loader (A)
 Tower Yarder (Small)

Combination#: 2 Douglas - Fir 50.00%
 Western Hemlock / Fir 50.00%

Yarding Distance: Short (400 ft) **Downhill Yarding:** No
Logging System: Track Skidder **Process:** Feller Buncher
Tree Size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
Loads/Day: 7 **Bd. Ft./Load:** 3,200
Cost/MBF: \$157.09

Machines:
 Feller Buncher w/ Delimber
 Log Loader (B)
 Stroke Delimber (B)
 Track Skidder



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Beaver High Sale 341-04-17

Date: 8/26/03

Operating Seasons: 1.0

Profit & Risk: 15%

Project Costs: \$24,910

Other Costs (P/R): \$1,838

Slash Disposal: \$0

Other Costs: \$13,724

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

Road Maintenance: \$3.81

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	3.2
Western Hemlock / Fir	\$0.00	4.0	3.2



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Breakdown Beaver High Sale 341-04-17

Costs	Douglas - Fir	Western Hemlock / Fir
Logging	159.11	159.11
Road Maintenance	4.01	4.01
Fire Protection	2.95	2.95
Hauling	69.16	34.58
Other (P/R appl.)	2.00	2.00
Profit & Risk	35.58	30.40
Slash Disposal	0.00	0.00
Scaling	2.00	2.00
Other	14.93	14.93
Total	289.74	249.98

Amortization	0.00	0.00
Pond Value	489.44	302.02
Stumpage	199.70	52.04
Amortized	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Beaver High Sale 341-04-17

Amortized

	Douglas - Fir	Western Hemlock / Fir
MBF	0.00	0.00
Value	0.00	0.00
Total	0.00	0.00

Unamortized

	Douglas - Fir	Western Hemlock / Fir
MBF	607.00	312.00
Value	199.70	52.04
Total	121,217.90	16,236.48

Gross Timber Sale Value

Recovery \$137,454.38

Prepared by: Steve Langer

Date: 8/26/03

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: Beaver High

CONSTRUCTION

Point	stations =	\$0.00
SUBTOTAL CONSTRUCTION		\$0.00

IMPROVEMENT

Point	A to B	stations = 118+80	\$16,320.10
SUBTOTAL IMPROVEMENT			\$16,320.10

SPECIAL PROJECTS

<u>Road Brushing</u>	\$7,200.00
<u>Remove Culverts From State Land</u>	\$282.32
SUBTOTAL SPECIAL PROJECTS	\$7,482.32

MOVE IN	\$1,107.58
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GRAND TOTAL	\$24,910.00
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SUMMARY OF CONSTRUCTION COST

Sale: <u>Beaver High</u>	Road: <u>Segment A to B</u>
Construction - _____ stations _____ miles	Improvement - _____ 118+80 stations _____ 2.25 miles
CLEARING AND GRUBBING -	
Side cast	0.00 acres @ \$513.00 per acre = \$0.00
Scattering	0.00 acres @ \$790.00 per acre = \$0.00
Piling	0.00 acres @ \$877.00 per acre = \$0.00
Endhaul	0.00 acres @ \$1,500.00 per acre = \$0.00
	TOTAL CLEARING AND GRUBBING
	\$0.00
EXCAVATION -	
	0 sta. @ \$0.00 per sta. = \$0.00
	0 cys. @ \$0.00 per c.y. = \$0.00
	0 cys. @ \$0.00 per c.y. = \$0.00
	0 cys. @ \$0.00 per c.y. = \$0.00
	TOTAL EXCAVATION
	\$0.00
CULVERTS - MATERIALS & INSTALLATION	
Culverts	
164 LF of 18" \$2,419.00	128 LF of 24" \$2,272.00
0 LF of 30" \$0.00	0 LF of 36" \$0.00
0 LF of 42" \$0.00	84 LF of 48" \$2,714.04 (Materials Only)
0 LF of 54" \$0.00	0 LF of 60" \$0.00
<u>\$2,419.00</u>	<u>\$4,986.04</u>
Half Rounds	
0 LF of 21" \$0.00	0 LF of 30" \$0.00
0 LF of 36" \$0.00	0 LF of 42" \$0.00
<u>\$0.00</u>	<u>\$0.00</u>
Culvert Stakes & Markers	
0 stakes \$0.00	
7 markers \$42.00	
<u>\$42.00</u>	
	TOTAL CULVERTS
	\$7,447.04
SURFACING-	
Road	322 cy. of Pit Run @ \$8.11 per c.y.= \$2,610.93
TA	17 cy. of @ \$8.11 per c.y.= \$137.84
	0 cy. of @ \$0.00 per c.y.= \$0.00
	TOTAL SURFACING
	\$2,748.77
SPECIAL PROJECTS	
<u>Remove logs from fill, Install 48' culvert and rebuild fill @ station 93+15</u>	<u>\$3,899.69</u>
<u>Grade and shape - 119 station @ \$17.40/Sta.</u>	<u>\$2,070.60</u>
<u>Grass seed and fertilize - .3 acres @ \$180/acre</u>	<u>\$54.00</u>
<u>Mulch - .1 acres @ \$1000/acre</u>	<u>\$100.00</u>
	TOTAL SPECIAL PROJECTS
	\$6,124.29

GRAND TOTAL **\$16,320.10**

PIT RUN ROCK DEVELOPMENT COST SUMMARY

Pit: <u>East Beaver</u>	Location: <u>NW,NW, Sec. 33, T2S, R8W,W.M.</u>
Sale: <u>Beaver High</u>	Road: <u>322 c.y.</u>
Swell: <u>1.40</u>	Stockpile Base: <u>c.y.</u>
Shrinkage: <u>1.16</u>	Total Truck Loads: <u>322 c.y.</u>
Drill Pct.: <u>0%</u>	In Place Total: <u>230 c.y.</u>

Strip rock:	<u>\$1.50</u>	/cu.yd.	x	<u>322</u>	cu.yds.	=	\$483.00
Load Dump Truck:	<u>\$0.60</u>	/cu.yd.	x	<u>322</u>	cu.yds.	=	\$193.20
						Subtotal	<u>\$676.20</u>

Move in excavator - within area	\$347.70
Move in truck	<u>\$26.22</u>
	Subtotal <u>\$373.92</u>

TOTAL PRODUCTION COSTS	\$1,050.12
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Base Cost= \$3.26 Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
	<u>\$4.25</u>	<u>\$0.60</u>	<u>\$3.26</u>	<u>\$8.11</u>	<u>322</u>	<u>\$2,610.93</u>
				Total C.Y.	322	Sub Total <u>\$2,610.93</u>

TOTAL ROCKING COSTS	\$2,610.93
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OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT



"STEWARDSHIP IN FORESTRY"

Beaver High

1. **Type of Sale:** Partial cut/Recovery
2. **Legal Description:** Portions of Sections 6 and 7, T3S, R8W, W.M., Tillamook County, Oregon.
3. **Sale Acreage:** The sale boundary was plotted on a digital orthophotograph and the acreage was calculated with GIS.

	Sale Acres	Total Acres	Net Acres
Area 1	164	103	103
Area 2	20	18	18
Total	184	121	121

Sale Acres

Area within Timber Sale Boundary signs.

Total Acres

For accomplishment reporting

Partial Cut – Sale acres less areas of low stocking, hardwoods, no harvest buffers, roads and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Net Acres

Used for calculating the advertised volume

Partial Cut – Same as total acres.

4. **Cruising Procedures:**

- A) **Cruising Method:** Variable radius full point plots spaced 330 feet apart on a square grid pattern were taken in the net acre portion of Area 1 and on Area 2 to develop a stand table for conifer volume computations. Diameters were measured on all plot trees. Residual and surplus hemlock trees were designated to achieve a residual basal area of 110 square feet on Areas 1 and 160 square feet on Area 2.
- B) **Plot Size:** A 20 BAF full plot was used for all plots. The point of conifer tree observation was at 4.5 feet (DBH).
- C) **Grading System:** Conifers were not graded during the cruise. Assignment of grades was based on results from previous cruises in similar size timber.

D. **Defect and Breakage:** A 5% defect and breakage reduction were applied to the volume.

E. **Cruiser Names/Dates:** Steve Langer and Robert Shaver, March, 2001.

5. **Computation Procedures:** Basal area and density information was calculated from plot data taken. V-BARs (volume-basal area ratios) for the take trees were computed using information from prior cruises in stands of similar age and site class (see attached Volume Computation Summary).
6. **Timber Description:** The sale area consists of dense stands of Douglas-fir severely infected with Swiss needle cast and western hemlock. Area 1 was planted in 1962 to Douglas-fir but also contains small patches of naturally seeded hemlock. This area was pre-commercial thinned in 1978. Area 2 is a 43 year old stand of dense hemlock resulting from natural seeding
7. **Revenue Distribution:**
100% FDF
Tax Code: 8.
Deed Number: 186 and 441
Rehabilitation obligated: N/A
8. **Attachments:**
Volume Summary
Logging Plan



"STEWARDSHIP IN FORESTRY"

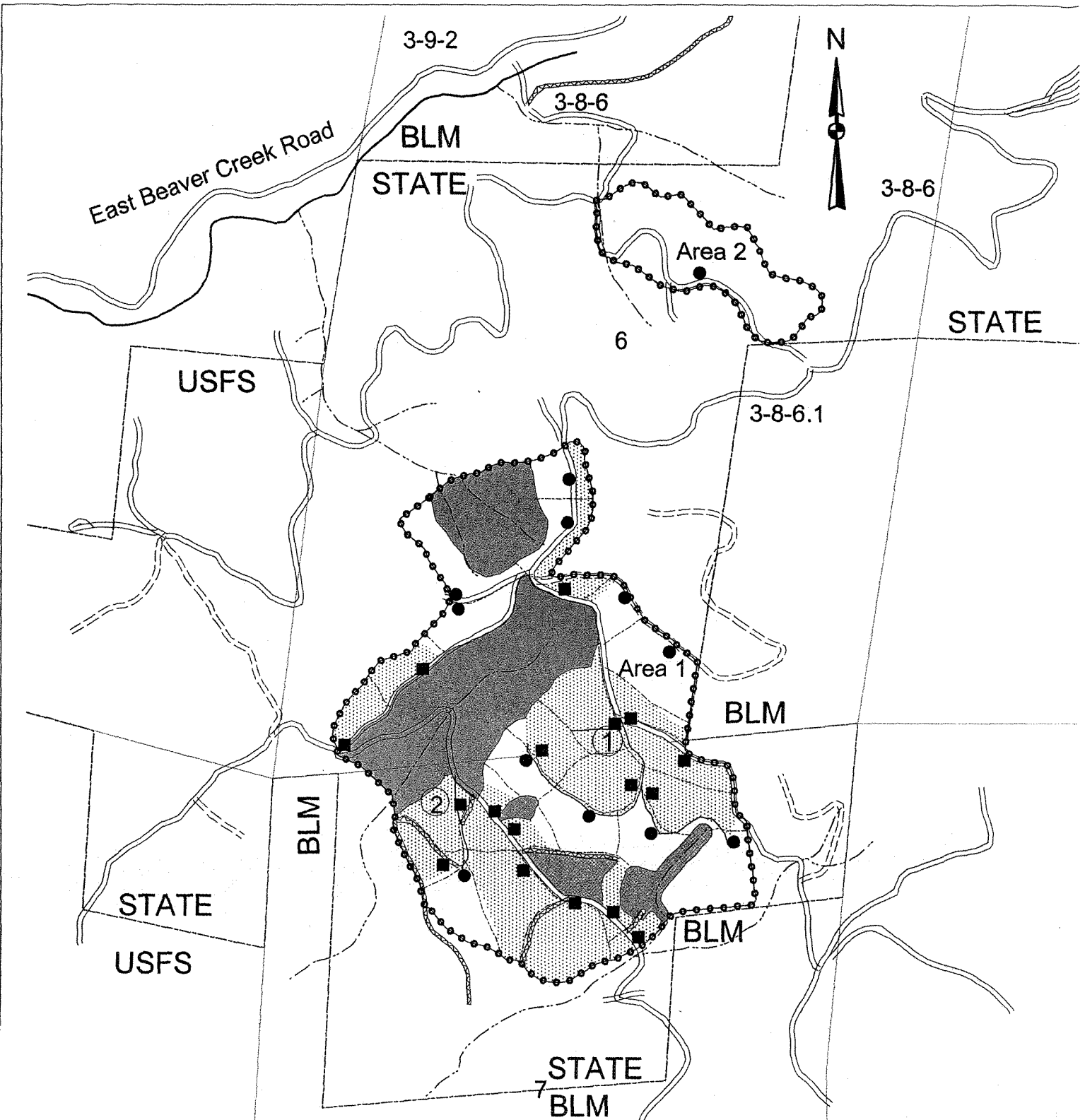
Beaver High

Volume Summary

Area 1							
103 acres							
SPECIES	QMD	Basal Area per acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	12.7"	77	80	6.2	639	5%	607
Hemlock	11.7"	32	70	2.2	227	5%	216
TOTAL				8.4	866	5%	823

Area 2							
18 acres							
SPECIES	QMD	Basal Area per acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Hemlock	10.9"	70	80	5.6	101	5%	96
TOTAL				5.6	101	5%	96

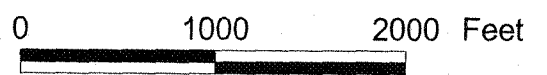
TOTAL SALE VOLUME				
SPECIES	QMD	MBF	D&B	Net Vol. (MBF)
Douglas-fir	12.7"	639	5%	607
Hemlock	11.4"	328	5%	312
TOTAL		967	5%	919



- Tractor landing
- Cable landing
- ▲ Domestic water supply
- ⊗ Block
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- Buffer zone
- Non-required thinning
- ⊂ Green tree retention area
- Setting boundary
- - - Area boundary
- Sale boundary
- - - Ownership boundary
- Type-F stream
- - - Type-N stream
- == Surfaced road
- == Unsurfaced road
- State highway
- County road
- (2)— Non-project road
- - - Swing road
- ⊘ Abandoned road
- ⊘ OHV trail
- ⋯ Non-motorized trail

LOGGING PLAN
 Timber Sale Contract No. 341-04-17
 Beaver High
 Portions of sections 6 and 7, T3S, R8W, W. M.
 Tillamook County, Oregon

Area	Type of Operation	Acres	
		Sale	Net
1	partial cut	164	103
2	partial cut	20	18
Total		184	121



OREGON DEPARTMENT OF FORESTRY

WRITTEN PLAN

Beaver High

Protected Resource: One unnamed small type N stream.

Location: SE 1/4 SW 1/4 Section 7, T3S, R8W, W.M. Tillamook County.

Activity: Fill reconstruction, which will be greater than 15 feet high.

Protection Measures: No in stream activity or work associated with fill reconstruction shall be conducted prior to July 1st or after September 15th without prior approval from ODFW. Work will be performed only during dry weather periods and low water stream flows. Machine activity in the stream will be kept to a minimum. Disturbance of existing vegetation will be kept to a minimum. Fill slopes will be constructed at a 1 ½:1 fill width to height ratio with selected native earth material free from woody debris. Waste material will be end-hauled to stable locations marked in the field. Fill material will be placed and compacted in 8 inch lifts. All disturbed areas will be grass seeded, mulched and fertilized to minimize erosion.

Prepared by: Gary Baker
Road Specialist

Date: February 10, 2003