



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Bushong Sale 341-03-77

District: Tillamook

Date: 5/9/03

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$394,478.72	\$50,873.35	\$445,352.07
		Project Work	(\$70,168.12)
		Advertised Value	\$375,183.95



Timber Sale Appraisal Timber Description Bushong Sale 341-03-77

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Bushong Road
T2S R8W Section 13
T2S R7W Sections 18, 19 and 30

Date: 5/9/03

Stand Stocking: 20%

Species	Avg. DBH	Amortized %	Recovery %
Douglas - Fir	13	0	95
Alder (Red)	13	0	95

Volume by Grade	Douglas - Fir	Alder (Red)	Total
2S	177	0	177
3S	1,472	0	1,472
4S	180	0	180
Camprun	0	187	187
Total	1,829	187	2,016

Comments: Pond Values Used: 1st Quarter 2003 + Local Pond Values

Alder pond value of \$515/mbf was obtained locally in March 2003.

Expenses (add profit and risk): \$4032 total

Brand and Paint: \$2/mbf x 2016 mbf = \$4032

Maintenance Bushong and South Fork Trask Roads: \$6.28

Grading: \$500/mile x 8 miles x 2 times / 2016 mbf = \$3.97/mbf

Surfacing: 20cy/mile x \$4.51/cy x 2.0 mmbf x 8 miles / 2016 mbf = \$0.72/mbf

Final Maintenance Rolling: \$581/mile x 5.5 miles / 2016 mbf = \$1.59/mbf

Other (Profit and Risk included): \$5632

Pit run for non-project roads: 40cy/sta x \$6/cy x 3 sta = \$720

Construction of non-project roads: \$120/sta x 8.4 sta = \$1008

Move-in costs = \$594

Clear debris from OHV trails: 2300 feet at \$0.40/foot = \$920.00

Block trails (16) and construct grade dips (10): 26 constructs @ \$75/ea = \$1950

Slash piling and sorting: \$110/hr/50 acres cable harvest x 200 acres = 4 hours = \$440



Timber Sale Appraisal Logging Conditions Bushong Sale 341-03-77

"STEWARDSHIP IN FORESTRY"

Combination#: 1	Douglas - Fir	79.29%	
	Alder (Red)	69.80%	
Yarding Distance:	Medium (800 ft)		Downhill Yarding: No
Logging System:	Cable: Medium Tower >40 - <70		Process: Stroke Delimber
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
Loads/Day:	5		Bd. Ft./Load: 3,500
Cost/MBF:	\$187.58		
Machines:			
	Log Loader (A)		
	Stroke Delimber (A)		
	Tower Yarder (Medium)		
Combination#: 2	Douglas - Fir	20.71%	
	Alder (Red)	30.20%	
Yarding Distance:	Medium (800 ft)		Downhill Yarding: Yes
Logging System:	Track Skidder		Process: Manual Falling/Delimiting
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
Loads/Day:	8		Bd. Ft./Load: 3,500
Cost/MBF:	\$116.62		
Machines:			
	Log Loader (B)		
	Track Skidder		



Timber Sale Appraisal

Logging Costs

Bushong

Sale 341-03-77

"STEWARDSHIP IN FORESTRY"

Date: 5/9/03

Operating Seasons: 2.0

Profit & Risk: 11%

Project Costs: \$70,168

Other Costs (P/R): \$4,032

Slash Disposal: \$0

Other Costs: \$5,632

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

Road Maintenance: \$6.28

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	3.5
Alder (Red)	\$0.00	3.0	3.2

Local Pond Values

Date	Species	Grade	Value
5/9/03	Douglas - Fir	2S	\$530.00
5/9/03	Douglas - Fir	3S	\$505.00
5/9/03	Douglas - Fir	4S	\$455.00
5/9/03	Alder (Red)	Camprun	\$515.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Breakdown Bushong Sale 341-03-77

Costs	Douglas - Fir	Alder (Red)
Logging	172.89	166.15
Road Maintenance	6.61	6.61
Fire Protection	2.96	0.00
Hauling	69.16	46.11
Other (P/R appl.)	2.20	0.00
Profit & Risk	27.92	24.08
Slash Disposal	0.00	0.00
Scaling	2.00	0.00
Other	3.08	0.00
Total	286.82	242.95

Amortization	0.00	0.00
Pond Value	502.50	515.00
Stumpage	215.68	272.05
Amortized	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Bushong Sale 341-03-77

Amortized

	Douglas - Fir	Alder (Red)
MBF	0.00	0.00
Value	0.00	0.00
Total	0.00	0.00

Unamortized

	Douglas - Fir	Alder (Red)
MBF	1,829.00	187.00
Value	215.68	272.05
Total	394,478.72	50,873.35

Gross Timber Sale Value

Recovery \$445,352.07

Prepared by: John Pine

Date: 5/9/03

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: Bushong

CONSTRUCTION

Point stations =
SUBTOTAL CONSTRUCTION \$0.00

IMPROVEMENT

Point stations =
SUBTOTAL IMPROVEMENT \$0.00

SPECIAL PROJECTS

Crush and stockpile rock \$62,290.12
Core Drilling \$7,500.00
SUBTOTAL SPECIAL PROJECTS \$69,790.12

Move In (Core Drill) \$378.00

GRAND TOTAL **\$70,168.12**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit: <u>Joyce Creek</u>	Location: <u>SE 1/4, NW 1/4, Sec. 13, T2N, R8W, W. M.</u>
Sale: <u>Bushong</u>	Road: _____ c.y.
Swell: <u>1.30</u>	Stockpile: _____ 6184 c.y.
Shrinkage: <u>1.16</u>	Total Truck Loads: _____ 6184 c.y.
Drill Pct.: <u>100%</u>	In Place Total: 4757 c.y.

Clear, scalp, load & compact overburden; construct access road:		
D-8 Cat and excavator · 10 Hrs. @ \$260.00/Hr		\$2,600.00
End-haul overburden to waste area:		
Dump Truck 20 Hrs. @ \$57.00/Hr		\$1,140.00
Seed & mulch waste area:		\$68.00
Drill & Shoot:	\$2.10 /cu.yd. x 4757 cu.yds. =	\$9,989.11
Push Rock:	\$0.60 /cu.yd. x 6184 cu.yds. =	\$3,710.24
Load Crusher:	\$0.60 /cu.yd. x 6184 cu.yds. =	\$3,710.24
Crushing 2 1/2"-0":	\$2.15 /cu.yd. x 6184 cu.yds. =	\$13,295.03
Load Dump Truck:	\$0.60 /cu.yd. x 6184 cu.yds. =	\$3,710.24
Oversize Reduction:	\$4.00 /cu.yd. x 618 cu.yds. =	\$2,473.49
	Subtotal	\$40,696.36

Move in and set up crusher	\$3,195.00
Move in and set up drill and compressor	\$186.88
Move in D-8	\$276.69
Move in Excavator	\$281.52
Move in loader	\$252.77
Move in trucks	\$228.00
	Subtotal

TOTAL PRODUCTION COSTS \$45,117.22

Base Cost= \$7.30 Per Cu.Yd.

	Haul Cost	Proc Cost	Base Cst.	Cost	Number	ROCK COST
	/cu.yd.	/cu.yd.	/cu.yd.	/cu.yd.	Cu. Yds	
Stockpile # 1	\$1.57	\$0.60	\$7.30	\$9.47	3963	\$37,533.33
Stockpile # 2	\$3.25	\$0.60	\$7.30	\$11.15	2220	\$24,756.80
			Total C.Y.		6184	Sub Total \$62,290.12

TOTAL COSTS \$62,290.12



**OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT**

Bushong

1. **Type of Sale:** Regeneration harvest – Recovery
2. **Legal Description:** Portions of Sections 18, 19 and 30, T2S, R7W, and Section 13, T2S, 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.

ACRES			
Area	Sale	Total	Net
1	112	131	101
2	98	107	95
3	60	58	55
Total	270	296	251

Sale Acres

Area within the Timber Sale Boundary signs

Total acres for accomplishment reporting

Sale acres, plus green tree retention acres outside the sale boundary, less roads, and less riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Net acres for calculating the advertised volume

Sale acres, less green tree retention, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. **Cruising Procedures:**
 - A. **Cruise Method:** Cruise lines were established in the sale areas with variable radius full point plots taken every 250 feet. Area 1 contained 22 plots, Area 2 had 20 plots, and Area 3 had 11 plots taken. A total of 53 count tree plots were established and 35 of the plots were also measured and graded to determine a V-BAR for the stand. Diameters were recorded to the nearest 1", heights to the nearest foot. Diameters were taken at 4.5' above the ground on the uphill side. Diameters under 8" were not recorded for conifer or below 10" for hardwoods. The cruise had a coefficient of variation of 50.3 and a SE% of 6.9 for the net board feet/acre.
 - B. **Plot size:** A BAF of 20 was used for conifers and a BAF of 10 for hardwoods, the point of tree observation was 4.5 feet.
 - C. **Grading System:** Trees heights were measured to a 6" merchantable top for conifers and 8" for hardwoods. Douglas-fir was graded using Columbia River rules favoring a 40' log, all other species graded camprun.

- D. **Defect and Breakage**: A 5% defect and breakage reduction was applied to both conifer and hardwood volume.
- E. **Cruiser Names / Dates**: John Pine and Owen Burney. December 2002 and January 2003.
5. **Computation Procedures**: V-BAR (Volume-Basal Area Ratio) and Basal Area for the take trees was computed using SuperACE. The data from SuperACE was entered into a Volume Computation spreadsheet (see attached) to obtain volumes for use in the appraisal.
6. **Timber Description**: The sale contains Douglas-fir stands 38 years of age with scattered Hemlock, Spruce, and Noble Fir. Hardwoods are present in draws and near abandoned roads. The current average stand characteristics for the sale area are shown in the attached stand tables.
7. **Revenue Distribution**:
100% FDF
Tax Code: 9-1, 8-1
Deed No. 169
100% Rehabilitation Obligated
8. **Appendices**:
- Volume Summary
- Logging Plan



"STEWARDSHIP IN FORESTRY"

Bushong

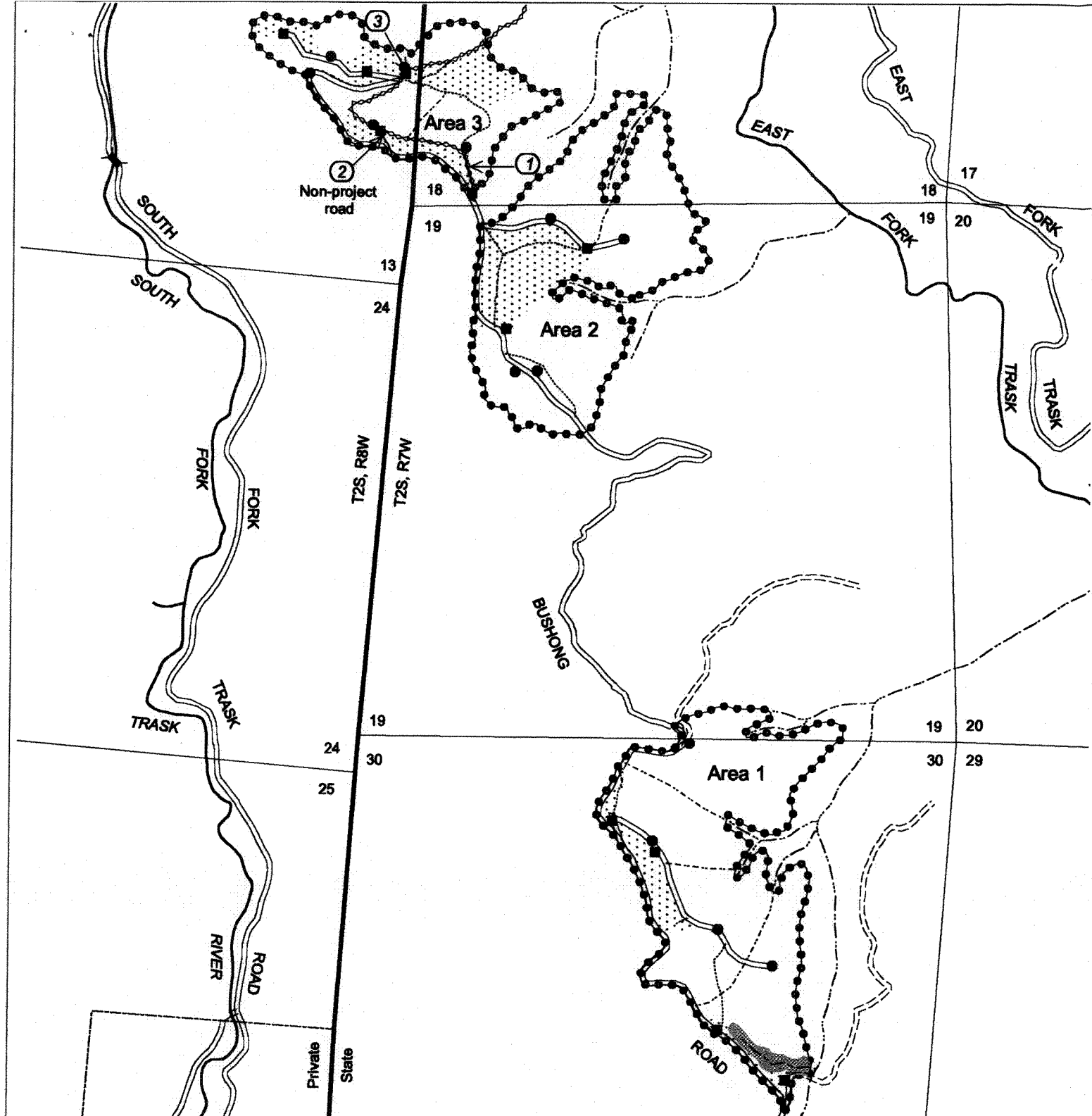
Volume Summary

Area I						
101 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	81	104	8.4	846	5%	803
Alder	2	90	0.2	17	5%	16
TOTAL				862		819

Area II						
95 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	73	89	6.5	617	5%	586
Alder	10	98	1.0	93	5%	88
TOTAL				710		674

Area III						
55 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	100	84	8.4	464	5%	440
Alder	27	59	1.6	87	5%	83
TOTAL				551		523

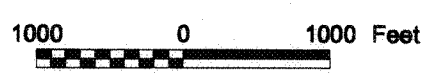
TOTAL SALE VOLUME			
SPECIES	MBF	D&B	Net Vol. (MBF)
Douglas-fir	1926	5%	1829
Alder	197	5%	187
TOTAL	2123		2016



- Tractor landing
- Cable landing
- ▲ Domestic water supply
- ⊗ Block
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- ▧ Buffer
- ▨ 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. 341-03-77
 Bushong
 Portions of sections 18, 19, and 30, T2S, R7W,
 and section 13, T2S, R8W, W. M.
 Tillamook County, Oregon

Area	Type of Operation	Acres	
		Sale	Net
1	clearcut	112	101
2	clearcut	98	95
3	clearcut	60	55
Total		270	251



OREGON DEPARTMENT OF FORESTRY

WRITTEN PLAN

Bushong Project Work

Protected Waters: South Fork Trask River, Joyce Creek. Type F Streams

Location: SE ¼, NW ¼ Section 13, T2S, R8W, W.M. Tillamook County.

Activity: Rock Crushing

Protection Measures: Work will be performed only during dry weather periods with no rainfall runoff. Waste material will be end-hauled to stable locations marked in the field. Waste area will be grass seeded, fertilized and mulched to minimize erosion.

Prepared by: Gary Baker
Road Specialist

Date: February 24, 2003