



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Smith and Fox Sale 341-06-26

District: Tillamook

Date: 12/13/05

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$1,674,223.90	\$96,165.20	\$1,770,389.10
		<b>Project Work</b>	\$0.00
		<b>Advertised Value</b>	\$1,770,389.10



# Timber Sale Appraisal Timber Description Smith and Fox Sale 341-06-26

"STEWARDSHIP IN FORESTRY"

**District:** Tillamook

**Location:** Portions of sections 3, 4, 5, 8, 9, 10, 15, & 16 T1S, R7W W.M., Tillamook County, Oregon.

**Date:** 12/13/05

**Stand Stocking:** 20%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	13	0	95
Western Hemlock / Fir	13	0	95
Alder (Red)	14	0	90

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Alder (Red)	Total
2S	1,351	54	0	1,405
3S	3,198	98	0	3,296
4S	2,174	27	0	2,201
Camprun	0	0	344	344
<b>Total</b>	<b>6,723</b>	<b>179</b>	<b>344</b>	<b>7,246</b>

**Comments:** Pond Values Used: 3rd Quarter Calendar Year 2005.

Hauling costs adjusted to make equivalent to \$700 daily truck costs (P & R included).

OTHER COSTS (Profit and Risk to be added)

Brand and Paint - \$2/MBF x 7246 MBF = 14,492

Snag Creation- \$5/Snag x 330 Snags = \$1,650

TOTAL OTHER COSTS + (P/R to be added): \$16,192

ADDITIONAL OTHER COSTS (Profit and Risk Included)

Hauling:

DF..... [700/day-(\$460/day x 1.15%)] / 6.8mbf/day=\$25 mbf x 6723mbf=\$169,064

H/A... [700/day-(\$460/day x 1.15%)] / 9.9mbf/day=\$17 mbf x 523mbf=\$8,891

Non-Project Roads:

Non-Project Roads #1.....13 Stations x \$100.00 = \$1,300

Non-Project Roads #2..... 6 Stations x \$100.00 = \$600

Opening Abandoned Roads # 3.....5 Stations x \$65.00 = \$325

OHV Trails:

OHV filter Construction.....4...filters x \$75.00 = \$300

OHV Trail Clearing.....67...Stations x \$40.00 = \$2,680

Other:

Ditch pulling and end haul.....100 cyds x \$5.15 = \$515

Slash Piling.....391 acres x \$2.20 = \$860

Approach Rock pit run.....3 stations x 50 cyds x \$6.00 = \$594

Trask public safety Road Fee.....\$25 x 18/mbf x 18 acres = \$8100

TOTAL ADDITIONAL COSTS: \$193,372

ROAD MAINTENANCE

Maintenance rock (Includes move in)

(\$4.50/yard x 6.9 miles x 12 yards/MMBF/mile x 7.2MMBF)/7246MBF = \$0.37/MBF

Grading and Compaction

Move in.....=\$4.83/STA x 360 Stations/7200 MBF = \$0.24/MBF

Water.....=\$6.75/STA x 360 Stations/7200 MBF = \$0.34/MBF

Compaction.....=\$11.00/STA x 360 Stations/7200 MBF = \$0.55/MBF

Interim Grading...=\$10.00/STA x 360 Stations/7200 MBF = \$0.50/MBF

Final Grading.....=\$17.00/STA x 360 Stations/7200 MBF = \$0.24/MBF

TOTAL ROAD MAINTENANCE COSTS: \$2.84

CEDAR PRICE = Cedar pond value - Douglas-fir logging costs

\$454.36 = \$815.00/MBF - \$360.64/MBF



# Timber Sale Appraisal

## Logging Conditions

### Smith and Fox

### Sale 341-06-26

"STEWARDSHIP IN FORESTRY"

<b>Combination#: 1</b>	Douglas - Fir	59.88%	
	Western Hemlock / Fir	91.00%	
	Alder (Red)	38.90%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Small Tower <=40		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Small / Thinning 9in (70 Bft/tree), 20+ logs/MBF		
<b>Loads/Day:</b>	4		<b>Bd. Ft./Load:</b> 3,400
<b>Cost/MBF:</b>	\$194.42		
<b>Machines:</b>	Log Loader (A)		
	Tower Yarder (Small)		
<b>Combination#: 2</b>	Douglas - Fir	10.73%	
	Western Hemlock / Fir	9.00%	
	Alder (Red)	8.49%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding:</b> Yes
<b>Logging System:</b>	Track Skidder		<b>Process:</b> Manual Falling/Delimiting
<b>Tree Size:</b>	Small / Thinning 9in (70 Bft/tree), 20+ logs/MBF		
<b>Loads/Day:</b>	5		<b>Bd. Ft./Load:</b> 3,400
<b>Cost/MBF:</b>	\$204.35		
<b>Machines:</b>	Log Loader (B)		
	Track Skidder		
<b>Combination#: 3</b>	Douglas - Fir	11.29%	
	Alder (Red)	35.78%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Medium Tower >40 - <70		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
<b>Loads/Day:</b>	4		<b>Bd. Ft./Load:</b> 3,300
<b>Cost/MBF:</b>	\$257.70		
<b>Machines:</b>	Log Loader (A)		
	Tower Yarder (Medium)		
<b>Combination#: 4</b>	Douglas - Fir	18.10%	
	Alder (Red)	16.84%	

**Yarding Distance:** Medium (800 ft)

**Logging System:** Track Skidder

**Tree Size:** Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF

**Loads/Day:** 4

**Cost/MBF:** \$247.38

**Machines:**

Log Loader (B)

Track Skidder

**Downhill Yarding:** Yes

**Process:** Manual Falling/Delimiting

**Bd. Ft./Load:** 3,300



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal

## Logging Costs

### Smith and Fox

### Sale 341-06-26

Date: 12/13/05

Operating Seasons: 2.0

Profit & Risk: 15%

Project Costs: \$0

Other Costs (P/R): \$16,142

Slash Disposal: \$0

Other Costs: \$193,372

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

Road Maintenance: \$2.84

#### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	3.4
Western Hemlock / Fir	\$0.00	3.0	3.3
Alder (Red)	\$0.00	3.0	3.2



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Logging Costs Breakdown Smith and Fox Sale 341-06-26

Costs	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
<b>Logging</b>	212.22	195.31	226.82
<b>Road Maintenance</b>	2.99	2.99	3.16
<b>Fire Protection</b>	0.79	0.79	0.00
<b>Hauling</b>	69.16	46.11	48.67
<b>Other (P/R appl.)</b>	2.34	2.34	0.00
<b>Profit &amp; Risk</b>	43.12	37.13	41.80
<b>Slash Disposal</b>	0.00	0.00	0.00
<b>Scaling</b>	2.00	2.00	0.00
<b>Other</b>	28.02	28.02	0.00
<b>Total</b>	360.64	314.69	320.45

<b>Amortization</b>	0.00	0.00	0.00
<b>Pond Value</b>	607.85	383.02	600.00
<b>Stumpage</b>	247.21	68.33	279.55
<b>Amortized</b>	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary Smith and Fox Sale 341-06-26

**Amortized**

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

**Unamortized**

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
<b>MBF</b>	6,723.00	179.00	344.00
<b>Value</b>	247.21	68.33	279.55
<b>Total</b>	1,661,992.83	12,231.07	96,165.20

**Gross Timber Sale Value**

**Recovery \$1,770,389.10**

Prepared by: Jay Anderson

Date: 12/13/05

District: Tillamook

Phone: (503) 842-0246





"STEWARDSHIP IN FORESTRY"

## CRUISE REPORT

### *Smith & Fox*

1. **Type of Sale:** Regeneration Harvest (Modified Clearcut); Partial cut- Recovery
2. **Legal Description:** Portions of sections 3, 4, 5, 8, 9, 10, 15, & 16 T1S, R7W W.M., Tillamook County, Oregon.
3. **Sale Acreage:** The sale boundaries were plotted on a digital ortho photograph and the acreage was calculated with GIS.

ACRES		
Area	Sale	Net
1 Partial cut	50	49
2 Modified clear cut	72	68
4 Partial cut	230	213
5 Modified clear cut	141	123
7 Modified clear cut	119	97
8 Modified clear cut	86	60
<b>Area 3 &amp; 6 No Harvest</b>		
Total Net Partial Cut		262
Total Net Modified Clear-cut		348
<b>Total Net Acres</b>		<b>610</b>

**Sale Acres:** Area within the Timber Sale Boundary signs.

**Net Acres:** Used for calculating the advertised volume: Sale acres less roads and buffers.

4. **Cruising Procedures:**
  - A. **Cruise Method:** A total of 151 variable radius full point plots were established on the sale areas. A ratio of two count plots per one measured plot was established for areas 2, and 5, 7, 8, and a ratio of one measure to one count for areas 1, and 4. Conifer with less than 7" DBH and alder with less than 10" DBH were not recorded. On the count plots, the species and tree count were recorded. On the measure plots, the species, diameter at breast height, height to a 5" merchantable top for conifer and 8" for alder, form factor at 16', and grades, lengths and defect of each segment were recorded.
  - B. **Plot size:** 40 BAF
  - C. **Point of observation:** 4.5 feet

- D. **Grading System:** Columbia River Official Log Scaling and Grading Bureau rules.
- E. **Diameter Standards:** 4.5 feet (DBH) to the nearest inch.
- F. **Form Point:** 16 feet for conifers.
- G. **Form Factor:** A form factor was recorded for all trees on measure plots. The average form factor for Douglas-fir was 85, western hemlock, 87 and red alder, 80.
5. **Computation Procedure:** The volumes and statistics for the timber cruise were computed using Atterbury Consultants, Inc. SUPER A.C.E. 98 program.. The coefficient of variations and standard errors are as follows: Area 1: 50.1 and 20.4; Area 2 and 5: 47.1 and 7.6; Area 4: 35.7 and 5.2; and Area 7 & 8: 38.6 and 6.0. Since the standard error in Area 1 was 20.4, the volume estimates for Area 1 were checked by combining the cruise for Areas 1 and 4 and subtracting the cruise for Area 4 from it. The CV and SE for the combined Area 1 and 4 cruise was 33.9 and 4.9. The volumes were found to be very close so the cruise from Area one with the high standard area was used for the area volume estimate computations.
6. **Defect and Breakage:** A 5% reduction for defect and breakage was applied to the volume for Douglas-fir and Western Hemlock and 10% defect and breakage was applied to red alder.
7. **Timber Description:** The sale areas burned in the 1933 Tillamook Fire and the 1939 Saddle Mountain Fire. Sale Areas 1 and 4 are predominantly composed of 65 year old Douglas-fir & a small component of western hemlock. The conifer in Areas 1 and 4 were naturally regenerated while in the remaining sale areas the Douglas-fir were planted in 1960-1962. Alder naturally regenerated throughout the sale areas. Areas 2 and portions of areas 5 and 7 were commercially thinned in 2002. Portions of Area 7 were commercially thinned in 1999 and the majority of Area 4 was commercially thinned in 1994. The Douglas-fir has moderate to severe Swiss needle cast symptoms. The alder in Areas 2, 5, 7, and 8 is highly deformed because it was aerially sprayed in the 1970's to release the planted conifer.
8. **Cruiser Names/Dates:** Stumpf, Shotton, Anderson, and Lee.  
March/ April 2005.
9. **Revenue Distribution:**  
100 % FDF  
Tax Code: 56  
Deed Numbers: 161  
64% Rehabilitation Obligated
10. **Attachments:** Volume Summary and Logging Plan.



## Smith & Fox

### Volume Summary

Area 1 Partial Cut						
49 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	74	127	9.4	461	5%	438
Hemlock			0.0	0	5%	0
Alder	34	120	4.1	201	10%	181
<b>TOTAL</b>			13.5	662		619

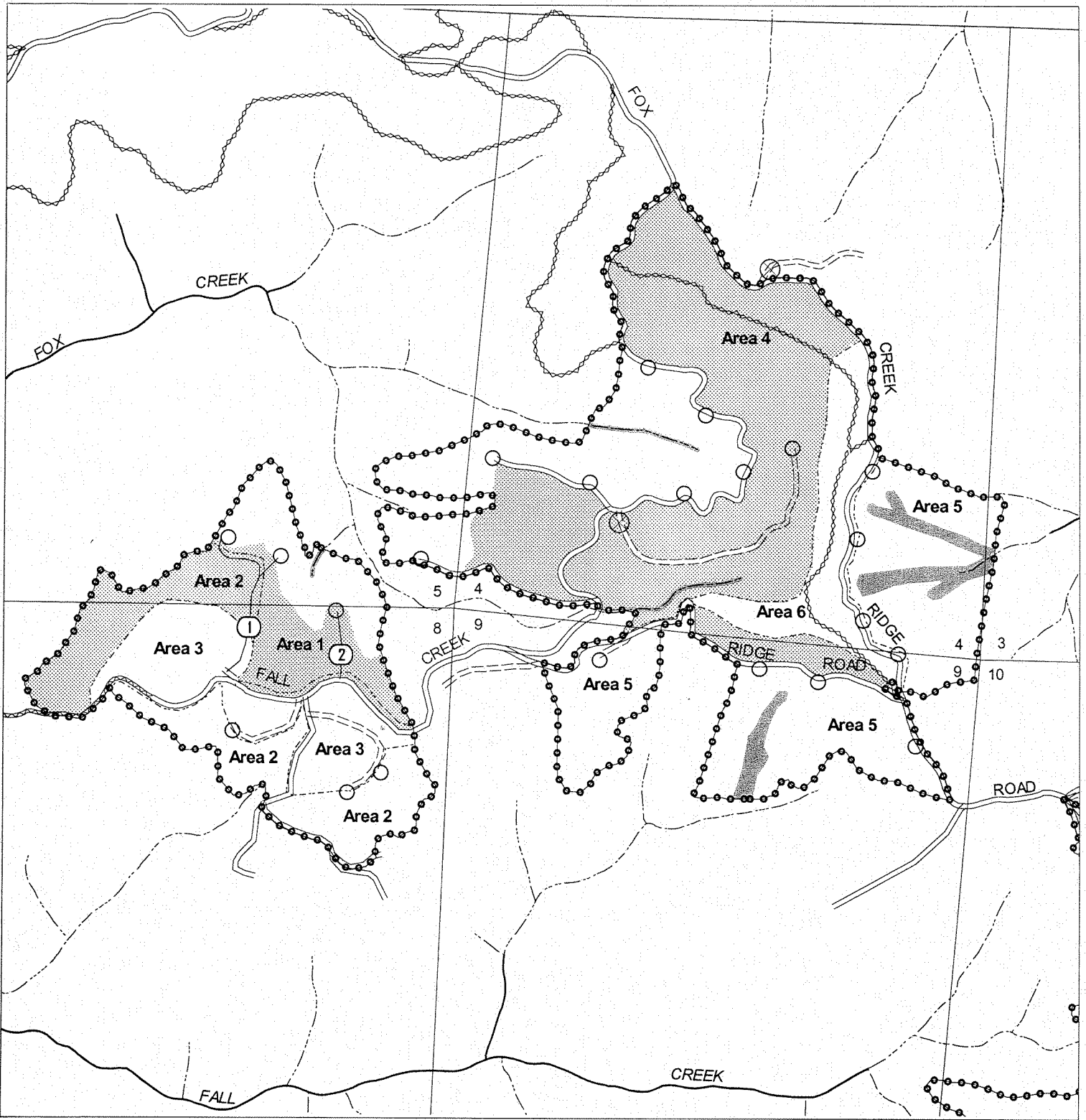
Area 2 & 5 Modified Clearcut						
191 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	134	101	13.5	2579	5%	2450
Hemlock			0.0	0	5%	0
Alder	16	45	0.7	134	10%	121
<b>TOTAL</b>			14.2	2713		2571

Area 4 Partial Cut						
213 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	66	115	7.6	1619	5%	1538
Hemlock			0.0	0	5%	0
Alder	0	0	0.0	0	10%	0
<b>TOTAL</b>			7.6	1619		1538

Area 7 & 8 Modified Clearcut						
157 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	157	98	15.4	2418	5%	2297
Hemlock	10	122	1.2	188	5%	179
Alder	5	58	0.3	47	10%	42
<b>TOTAL</b>			16.9	2653		2518

Total Net Acres 610 Acres

TOTAL SALE VOLUME			
SPECIES	Gross Vol. (MBF)		Net Vol. (MBF)
Douglas-fir	7077		6723
Hemlock	188		179
Alder	382		344
<b>TOTAL</b>	7647		7246



- Landing
- ▲ Domestic water supply
- ⊗ Blocked
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- ▧ Downhill yarding
- ▤ Buffer
- ▦ Non-required thinning
- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream
- Perennial Type-N stream
- ==== Surfaced road
- Unsurfaced road
- == State highway
- County road
- (2) Non-project road
- Swing road
- Abandoned road
- OHV trail
- Non-motorized trail
- T T Transmission line

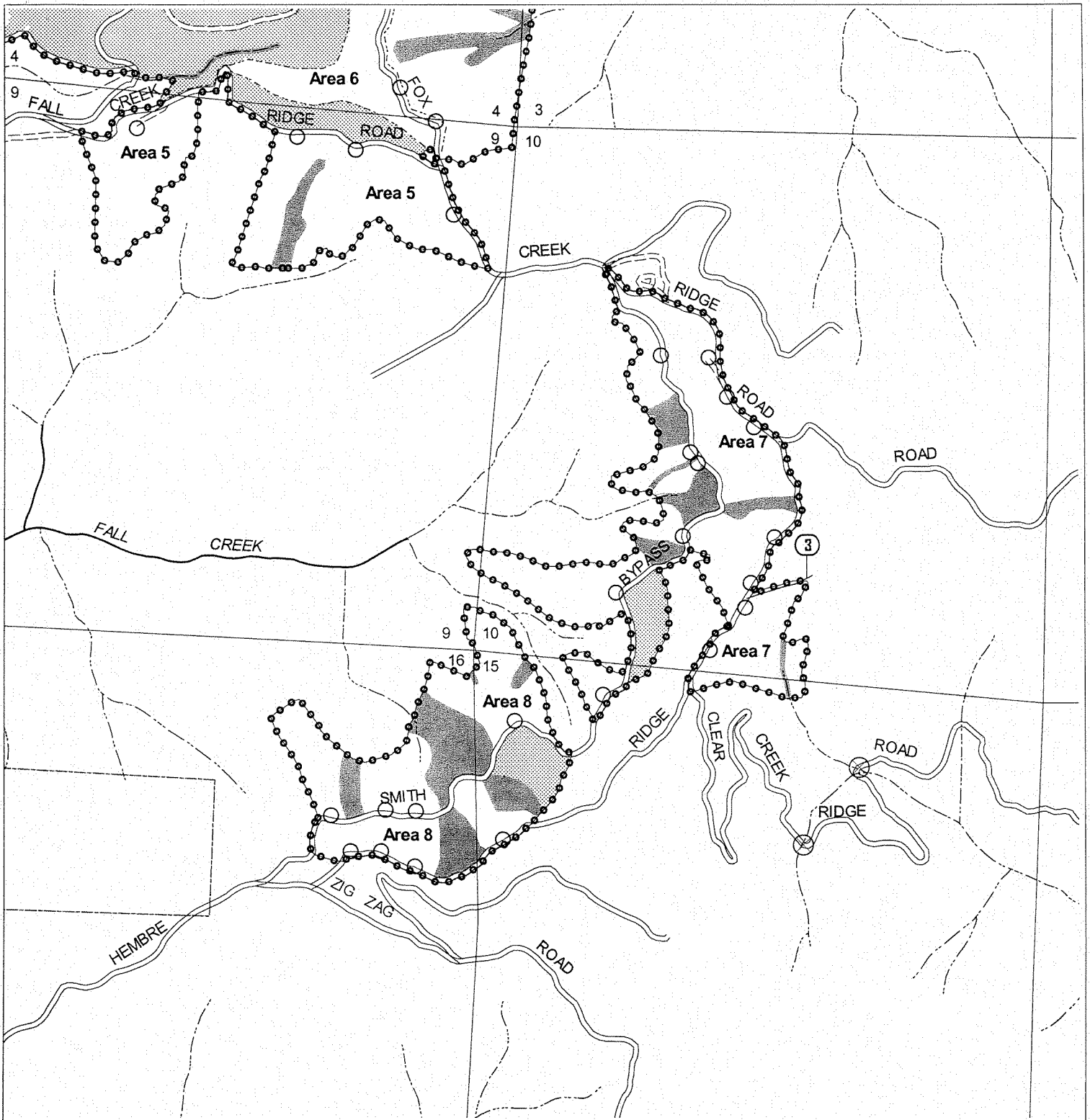
**LOGGING PLAN**  
 Timber Sale Contract No. 341-06-26  
 Smith & Fox  
 Portions of Sections 3, 4, 5, 8, 9,  
 10, 15, and 16, T1S, R7W, W. M.  
 Tillamook County, Oregon



Tillamook District GIS  
 08-29-2005  
 This product is for informational use and  
 may not have been prepared for, or suitable  
 for legal, engineering, or surveying purposes.



Area	Type of Operation	Acres	
		Sale	Net
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5	Modified clearcut	141	123
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7	Modified clearcut	119	97
8	Modified clearcut	86	60
<b>Total</b>		<b>698</b>	<b>610</b>



- Landing
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- ⊗ Blocked
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- ▧ Downhill yarding
- ▤ Buffer
- ▦ Non-required thinning
- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream
- - - Perennial Type-N stream
- == Surfaced road
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