



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Silver Spoon
Sale 341-08-20

District: Astoria

Date: January 03, 2008

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,599,181.36	\$22,541.22	\$1,621,722.58
		Project Work:	\$(351,618.00)
		Advertised Value:	\$1,270,104.58



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Sale 341-08-20

District: Astoria

Date: January 03, 2008

timber description

Location: Portions of Sections 3 and 10, T6N, R6W, W.M., Clatsop County, Oregon.

Stand Stocking: 80%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	20	0	100
Western Hemlock / Fir	14	0	100
Alder (Red)	19	0	100

Volume by Grade	2S	3S	4S	Camprur	SM	Total
Douglas - Fir	4,446	820	214	0	232	5,712
Western Hemlock / Fir	0	3	1	0	0	4
Alder (Red)	0	0	0	54	0	54
Total	4,446	823	215	54	232	5,770

comments: Pond Values Used: 4th Quarter Calendar Year 2007.

Log Markets: Mist, Claskanie, Tillamook, Forest Grove.

Western Redcedar Stumpage Price = Pond Value minus Logging Cost
\$670/MBF = \$1,000/MBF - \$330/MBF

HAULING

Hauling costs equivalent to \$700 daily truck cost.

Other Costs (Profit and Risk to be added):

100% Branding and Painting: \$1/MBF x 5,770/MBF = \$5,770

Snag Creation in Areas 1 and 2: Create 25 snags per area x 2 areas
x \$45/snag = \$2,250

Additional log loader piling: 3 Hours x \$65/hr x 4 landings = \$780

TOTAL Other Costs (Profit and Risk to be added) = \$8,800

OTHER COSTS (No Profit and Risk added):

Excavator Slash Piling: 17hrs x \$120/hr = \$2,040

TOTAL Other Costs (No Profit and Risk added) = \$2,040



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logging conditions

combination#: 1 Douglas - Fir 27.00%
 Western Hemlock / Fir 27.00%
 Alder (Red) 27.00%

yarding distance: Medium (800 ft) downhill yarding: No
 logging system: Cable: Medium Tower >40 - <70 Process: Stroke Delimber
 tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
 loads / day: 8.0 bd. ft / load: 5,000
 cost / mbf: \$83.60

machines: Log Loader (A)
 Stroke Delimber (A)
 Tower Yarder (Medium)

combination#: 2 Douglas - Fir 60.00%
 Western Hemlock / Fir 60.00%
 Alder (Red) 60.00%

yarding distance: Long (1,500 ft) downhill yarding: No
 logging system: Cable: Large Tower >=70 Process: Stroke Delimber
 tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
 loads / day: 8.0 bd. ft / load: 5,000
 cost / mbf: \$95.67

machines: Log Loader (A)
 Stroke Delimber (A)
 Tower Yarder (Large)

combination#: 3 Douglas - Fir 13.00%
 Western Hemlock / Fir 13.00%
 Alder (Red) 13.00%

yarding distance: Short (400 ft) downhill yarding: No
 logging system: Shovel Process: Manual Delimiting
 tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
 loads / day: 10.0 bd. ft / load: 5,000
 cost / mbf: \$50.09

machines: Shovel Logger



Timber Sale Appraisal
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Sale 341-08-20

"STEWARDSHIP IN FORESTRY"

District: Astoria

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logging costs

Operating Seasons:	2.00	Profit Risk:	14.00%
Project Costs:	\$351,618.00	Other Costs (P/R):	\$8,800.00
Slash Disposal:	\$0.00	Other Costs:	\$2,040.00

Miles of Road

Road Maintenance: \$2.76

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	3.5
Western Hemlock / Fir	\$0.00	2.0	4.0
Alder (Red)	\$0.00	2.0	3.5

Local Pond Values

Date	Specie	Grade	Value
1/3/08	Douglas - Fir	SM	\$495.00
1/3/08	Douglas - Fir	2S	\$470.00
1/3/08	Douglas - Fir	3S	\$385.00
1/3/08	Douglas - Fir	4S	\$345.00
1/3/08	Western Hemlock / Fir	3S	\$310.00
1/3/08	Western Hemlock / Fir	4S	\$300.00
1/3/08	Alder (Red)	Camprun	\$625.00



Timber Sale Appraisal
 Silver Spoon
 Sale 341-08-20

"STEWARDSHIP IN FORESTRY"

District: Astoria

Date: January 03, 2008

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$86.49	\$2.76	\$1.52	\$58.48	\$1.53	\$21.11	\$0.00	\$2.00	\$0.35	\$174.24
Western Hemlock / Fir									
\$86.49	\$2.76	\$1.52	\$76.76	\$1.53	\$23.67	\$0.00	\$2.00	\$0.35	\$195.08
Alder (Red)									
\$86.49	\$2.76	\$1.52	\$87.72	\$1.53	\$25.20	\$0.00	\$2.00	\$0.35	\$207.57

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$454.13	\$279.89	\$0.00
Western Hemlock / Fir	\$0.00	\$307.50	\$112.42	\$0.00
Alder (Red)	\$0.00	\$625.00	\$417.43	\$0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Silver Spoon
Sale 341-08-20

District: Astoria

Date: January 03, 2008

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	5,712	\$279.89	\$1,598,731.68
Western Hemlock / Fir	4	\$112.42	\$449.68
Alder (Red)	54	\$417.43	\$22,541.22

Gross Timber Sale Value

Recovery: \$1,621,722.58

Prepared by: Peter Stone

Phone: 503-325-5451

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Silver Spoon

NEW CONSTRUCTION:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 1	<u>1A-1B, 1C-1D, 2A-2B, 2C-2D, and 2E-2F</u>	<u>127.00</u>	<u>\$93,652</u>
	TOTALS	<u>127.00</u> 2.4 mi.	<u>\$93,651</u>

ROAD IMPROVEMENT:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 1	<u>I1-I2</u>	<u>232.80</u>	<u>\$44,768</u>
	TOTALS	<u>232.80</u> 4.4 mi.	<u>\$44,768</u>

SPECIAL PROJECTS:

Project No. 1 Project Work Road Maintenance \$12,526

Viewpoint Quarry Development and Rock Crushing

Project No. 2 Crush & Stockpile 5,000 yds. 3/4" - 0" & 5,000 yds. 4"-0" \$190,502

Stream Enhancement

Project No. 3 Three structures \$3,375

MOVE IN:

	<u>Equipment</u>	<u>Cost</u>
	<u>Dozer (D8)</u>	<u>\$1,030</u>
	<u>Dump Trucks (12 cy x 8)</u>	<u>\$952</u>
	<u>Dump Trucks (20 cy x 6)</u>	<u>\$840</u>
	<u>F E Loader (C966)</u>	<u>\$570</u>
	<u>Grader (14G)</u>	<u>\$570</u>
	<u>Rubber Tire Skidder (C518)</u>	<u>\$525</u>
	<u>Vibratory Roller (2)</u>	<u>\$1,140</u>
	<u>Water Truck (2,500 gallon)</u>	<u>\$139</u>
	<u>Excavator (C330)</u>	<u>\$1,030</u>
	TOTAL	<u>\$6,796</u>

GRAND TOTAL \$351,618

Compiled By: P. Stone FL

Date: 10/23/2007

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Silver Spoon (Designed Roads) NEW CONSTRUCTION: 112.10 STATIONS 2.12 MILES
 ROADS: 1A to 1B (9.2) and 2A to 2B (102.9) IMPROVEMENT: STATIONS 0.00 MILES

Method	Acres/amount	Rate	=	Cost
Scatter Outside of R/W	10.3	\$980.00	=	\$10,094.00
				\$10,094

SUB TOTAL FOR CLEARING & GRUBBING

Material	Cy/amount/station	Rate	=	Cost
Common drift excavation \$\$/cy	13.068	\$1.28	=	\$16,727.04
Common drift excavation (>50% slopes) \$\$/cy	1,300	\$1.52	=	\$1,976.00
Embankment compaction \$\$/cy	13,560	\$0.45	=	\$6,102.00
Truck End Haul	3,000	\$2.90	=	\$8,700.00
Cut Slope Rounding	37	\$31.00	=	\$1,147.00
Landing Construction 1B and 2B	2	\$285.00	=	\$570.00
				\$24,805

SUB TOTAL FOR EXCAVATION

Location	Dial/type	Lineal ft.	Rate	Cost	No. bands	Rate	Cost																														
1A-1B	1+10	40	\$13.60	\$544.00																																	
2A-2B	0+60	40	\$13.60	\$544.00																																	
2A-2B	20+50	35	\$13.60	\$476.00																																	
2A-2B	25+80	40	\$13.60	\$544.00																																	
2A-2B	26+80	50	\$13.60	\$680.00																																	
2A-2B	54+90	35	\$13.60	\$476.00																																	
2A-2B	58+70	40	\$13.60	\$544.00																																	
2A-2B	70+00	30	\$13.60	\$408.00																																	
2A-2B	85+25	35	\$13.60	\$476.00																																	
2A-2B	86+80	24" CMP 14 gauge	\$31.75	\$1,587.50																																	
2A-2B	95+25	18" CPP	\$13.60	\$408.00																																	
2A-2B	98+90	18" CPP	\$13.60	\$408.00																																	
<table border="1"> <thead> <tr> <th colspan="2">Other/miscellaneous:</th> <th>Description</th> <th>Quantity</th> <th>Rate</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td colspan="2"></td> <td>Bevel Culvert Inlet (24" CMP)</td> <td align="center">1</td> <td align="center">\$24.00</td> <td align="right">\$24.00</td> </tr> <tr> <td colspan="2"></td> <td>Fill Armor Riprap Placement \$/hr</td> <td align="center">6</td> <td align="center">\$138.00</td> <td align="right">\$828.00</td> </tr> <tr> <td colspan="2"></td> <td>Culvert stakes & markers: 6" Fiberglass Markers</td> <td align="center">11</td> <td align="center">\$14.10</td> <td align="right">\$155.10</td> </tr> <tr> <td colspan="4"></td> <td align="right" colspan="2">Subtotal</td> </tr> </tbody> </table>								Other/miscellaneous:		Description	Quantity	Rate	Cost			Bevel Culvert Inlet (24" CMP)	1	\$24.00	\$24.00			Fill Armor Riprap Placement \$/hr	6	\$138.00	\$828.00			Culvert stakes & markers: 6" Fiberglass Markers	11	\$14.10	\$155.10					Subtotal	
Other/miscellaneous:		Description	Quantity	Rate	Cost																																
		Bevel Culvert Inlet (24" CMP)	1	\$24.00	\$24.00																																
		Fill Armor Riprap Placement \$/hr	6	\$138.00	\$828.00																																
		Culvert stakes & markers: 6" Fiberglass Markers	11	\$14.10	\$155.10																																
				Subtotal																																	
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION																																					
							\$2,571																														
							\$37,470																														

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Silver Spoon (Field Design) NEW CONSTRUCTION: 14.90 STATIONS
 ROAD: 1C to 1D (6.4), 2C to 2D (2.2), and 2E to 2F (6.3) IMPROVEMENT: STATIONS
0.28 MILES
0.00 MILES

Method	Acres/amount	X	Rate	=	Cost
Scatter Outside of RW	1.3	X	\$980.00	=	\$1,274.00
SUB TOTAL FOR CLEARING & GRUBBING					\$1,274

Material	Sta/amount	X	Rate	=	Cost
Common (Drift Earth up to 200') \$\$/sta.	14.90	X	\$139.00	=	\$2,071.10
Landing Construction \$\$/landing	3	X	\$285.00	=	\$855.00
1D, 2D, and 2F					
SUB TOTAL FOR EXCAVATION					\$2,926

Location	Dia/type	Lineal ft.	Rate	No. bands	Rate	Cost	
Other/miscellaneous:					Quantity	Rate	Cost
Culvert markers:						\$14.10	\$0.00
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION					Subtotal	\$0	\$4,200

Project No. 1 New Road Construction

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Silver Spoon
ROAD: 1A-1B (9.2), 2A-2B (102.9), 2C-2D (2.2), and 2E-2F (6.3)
NEW CONSTRUCTION: 127.00 STATIONS
IMPROVEMENT: 0.00 STATIONS

Subgrade prep:
 Grade, Shape and Ditch 16'
 Subgrade Compaction
 Grade, 14' Outslope

2.41 MILES
 0.00 MILES

Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT 1A to 1B Volume (CY) per	Sta. to Sta. 0+00 to 9+20 Number of	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Base Rock	4'-0" Crushed	1A to 1B	9	station	9.20	451	\$5.07	\$2,286
Turnouts	4'-0" Crushed		9	turnouts	3	66	\$5.07	\$335
Turnouts	3/4'-0" Crushed		2	turnouts	3	30	\$5.07	\$152
Turn-Around	4'-0" Crushed	1A	9	TA	1	24	\$5.07	\$122
Junction	4'-0" Crushed		9	Junction	1	10	\$5.07	\$51
Junction	3/4'-0" Crushed	1A	2	Junction	1	20	\$5.07	\$101
Culvert Bedding	3/4'-0" Crushed	1+10	N/A	Bedding	6	66	\$5.07	\$335
Traction Rock	3/4'-0" Crushed	0+00 to 6+00	2	station	1	80	\$7.28	\$582
Landing	6'-0" Pit-run	1B	N/A	Landing	1	80	\$7.28	\$582
Total Rock for Road Segment: 1A to 1B							771	\$4,085

Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT 2A to 2B Volume (CY) per	Sta. to Sta. 0+00 to 102+90 Number of	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Base Rock	4'-0" Crushed	2A to 2B	9	station	102.90	5,042	\$5.07	\$25,563
Turnouts	4'-0" Crushed		9	turnout	16	352	\$5.07	\$1,785
Turnouts	3/4'-0" Crushed		2	turnouts	6	60	\$5.07	\$304
Turn-Around	4'-0" Crushed		N/A	TA	1	24	\$5.07	\$122
Traction Rock	3/4'-0" Crushed	0+00 to 19+20	2	station	19	211	\$5.07	\$1,071
Traction Rock	3/4'-0" Crushed	53+60 to 57+00	2	station	3	37	\$5.07	\$190
Curve Widening	4'-0" Crushed		9			420	\$5.07	\$2,129
Junction	4'-0" Crushed	2A	9	Junction	1	26	\$5.07	\$132
Junction	3/4'-0" Crushed	2A	2	Junction	1	24	\$5.07	\$122
Culvert Bedding	3/4'-0" Crushed	26+80, 86+80	N/A	Bedding	2	40	\$5.07	\$203
Dissipator	24'-6"	54+90, 86+80	N/A		2	20	\$7.28	\$146
Fill Armor	24'-6"	86+80	N/A			60	\$7.28	\$437
Landing	6'-0" Pit-run	2B	N/A	Landing	1	80	\$7.28	\$582
Total Rock for Road Segment: 2A to 2B							6,407	\$32,836

Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT 2C to 2D Volume (CY) per	Sta. to Sta. 0+00 to 2+20 Number of	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Base Rock	4'-0" Crushed	2C to 2D	9	station	2.20	108	\$5.07	\$547
Turn-Around	4'-0" Crushed		N/A	TA	1	24	\$5.07	\$122
Junction	4'-0" Crushed	2C	9	Junction	1	24	\$5.07	\$122
Landing	6'-0" Pit-run	2D	N/A	Landing	1	80	\$7.28	\$582
Total Rock for Road Segment: 2C to 2D							236	\$1,372

ROAD SEGMENT	2E to 2F		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
	Rock Size and Type	Location	Depth of Rock (Inches)	Volume (CY) per station	0+00 to 6+30	Number of stations				
Base Rock	4"-0" Crushed	2E to 2F	9	49	6.30	1	309	\$5.07	\$1,565	
Turnouts	4"-0" Crushed		N/A	22	turnouts	1	22	\$5.07	\$112	
Turn-Around	4"-0" Crushed		N/A	24	TA	1	24	\$5.07	\$122	
Junction	4"-0" Crushed	2E	9	24	Junction	1	24	\$5.07	\$122	
Landing	6"-0" Pit-run	2F	N/A	80	Landing	1	80	\$7.28	\$582	
Total Rock for Road Segment:							459			\$2,602
Processing:										
Description										
Water, Process & Compact Crushed Rock:										
Process traction rock										
							No.sta	Rate/sta	Cost	
							120.60	\$41.40	\$4,993	
							29.00	\$41.40	\$1,201	
SUB TOTAL FOR SURFACING										\$51,054

SPECIAL PROJECTS		Cost
Description		
Develop Pit-Run (\$1.90/yd x 330yd		\$627
Seed and Much Waste Area 0.3acres@1000		\$300
SUB TOTAL FOR SPECIAL PROJECTS		\$927
GRAND TOTAL		\$51,981

Compiled By: Peter Stone Date: 09/24/2007

Project No. 1 Road Improvement

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Silver Spoon
ROAD: 11-12 (232.80)

NEW CONSTRUCTION: 0.00 STATIONS
IMPROVEMENT: 232.80 STATIONS

0.00 MILES
4.41 MILES

ROAD SEGMENT	Subgrade prep:		Description	Stations/ amount	Rate/ sta/amt	Cost
	11 to 12 Greasy Spoon	11 to 12 Greasy Spoon				
Surfacing	3/4"-0" Crushed	11 to 12	Grade, Shape and Ditch	232.80	X	\$18.20
Subgrade Leveling	3/4"-0" Crushed	11 to 12	Surfacing Rock Processing and Compaction (Subgrade Leveling)	232.8	X	\$17.80
Curve Widening	3/4"-0" Crushed	11 to 12				
Turnouts	3/4"-0" Crushed	16+50				
Culvert Bedding	3/4"-0" Crushed	16+50	POINT TO POINT			
Junction	3/4"-0" Crushed	71+40	11 to 12 Greasy Spoon			
Water Source TA	4"-0" Crushed	159+00	Volume (CY) per station			
Total Rock for Road Segment:			11 to 12 Greasy Spoon	5,839		\$26,216

Processing:	Description	No. sta	Rate/sta	Cost
	Water, Process & Compact Crushed Rock:	232.80	\$41.40	\$9,638
SUB TOTAL FOR SURFACING				\$44,235

SPECIAL PROJECTS	Description	Cost
	Installing Culvert Markers 5 Markers x \$14.10	\$71
	Installing Culvert 18"x34' (16+50) \$13.60/foot x 34'	\$462
SUB TOTAL FOR SPECIAL PROJECTS		\$533

GRAND TOTAL \$44,768

Compiled By: Peter Stone

Date: 09/24/2007

SALE NAME: Silver Spoon
 PROJECT: No. 1 Road Construction
 QUARRY: Viewpoint Quarry

DATE: 09/24/2007
 BY: P. Stone

ROCK TYPE: Crushed
 3/4"-0", and 4"-0"

Segment	Stations	Cubic Yards										Total
		Base	Surfacing	Turnout	Turnaround	Junction	Curves	Misc	Total			
1A-1B	9.20	451	91	66	24	24	0	20	676			
2A-2B	102.90	5,042	248	382	24	24	446	240	6,406			
2C-2D	2.20	108			24	24			156			
2E-2F	6+30	309			24	24			357			
Grand Total	114.30	5,910	339	448	96	96	446	260	7,595			

Road Segment	Stations	ONE WAY HAUL IN MILES										Total Haul
		50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Total			
1A-1B	9.20	676			2.00	2.00	1.20	1.10	0.10	6.40		
2A-2B	102.90	6,406			2.00	2.00	1.20	1.10	0.10	6.40		
2C-2D	2.20	156			2.00	2.00	2.00	2.10	0.10	8.20		
2E-2F	6+30	357			2.00	2.00	1.80	1.60	0.10	7.50		
TOTAL	114.30	7,595			2.00	2.00	1.24	1.14	0.10	4.49		

CUBIC YARD WEIGHTED HAUL: Average Round Trip Distance (miles) 8.98

ROCK HAUL:

Truck type: D20
 Delay min.: 8
 No. trucks: 0
 Efficiency: 85%

Truck type: D12
 Delay min.: 6
 No. trucks: 8
 Efficiency: 85%

Truck type: D10
 Delay min.: 5
 No. trucks: _____
 Efficiency: 85%

Ave haul: \$4.02 /cy
 Load: \$0.40 /cy
 Spread: \$0.65 /cy

Production: cy/day = 906

CRUSHED ROCK HAUL COSTS 7,595 cy @ \$5.07 /cy

Haul min:	52.81	Yd/hr:	0.00
Haul \$/cy	\$2.95	Truck wt:	0%
Haul min:	50.81	Yd/hr:	113.37
Haul \$/cy	\$4.02	Truck wt:	100%
Haul min:	49.81	Yd/hr:	0.00
Haul \$/cy	\$4.73	Truck wt:	0%

SALE NAME: Silver Spoon
 PROJECT: Nos. 1 Road Improvement
 QUARRY: Viewpoint Quarry

DATE: 09/24/2007
 BY: P. Stone

ROCK TYPE: Crushed
 3/4" & 4"-0"

Segment	Cubic Yards										Total
	Stations	Base	Leveling	Surfacing	Turnout	Turnaround	Junction	Curves	Misc	Total	
11-12	232.80		100	4,889	350		170	300	30	5,839	
Grand Total	232.80	0	100	4,889	350	0	170	300	30	5,839	
ONE WAY HAUL IN MILES											
Road Segment	Stations	Cubic Yards	50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Total Haul	
11-12	232.80	5,839		3.00	2.00	1.20	0.60	0.10		6.90	
TOTAL	232.80	5,839		0.00	3.00	2.00	1.20	0.60	0.10	6.90	
CUBIC YARD WEIGHTED HAUL										AVERAGE HAUL	
										6.90	
Average Round Trip Distance (miles)										13.80	

ROCK HAUL:

Haul min:	61.65	Yd/hr:	116.79
Haul \$/cy	\$3.44	Truck wt:	100%
Haul min:	59.65	Yd/hr:	0.00
Haul \$/cy	\$4.72	Truck wt:	0%
Haul min:	58.65	Yd/hr:	0.00
Haul \$/cy	\$5.57	Truck wt:	0%

Truck type: D20
 Delay min.: 8
 Efficiency: 85%

Truck type: D12
 Delay min.: 6
 Efficiency: 85%

Truck type: D10
 Delay min.: 5
 Efficiency: 85%

No. trucks: 6
 Efficiency: 85%

No. trucks: 0
 Efficiency: 85%

No. trucks: 0
 Efficiency: 85%

Ave haul: \$3.44 /cy
 Load: \$0.40 /cy
 Spread: \$0.65 /cy

Production: cy/day = 934

CRUSHED ROCK HAUL COSTS

5,839 cy @ \$4.49 /cy

SALE NAME: Silver Spoon
 PROJECT: No. 1
 QUARRY: Viewpoint Quarry

ROCK TYPE: Pit Run
 6"-0" and 24"-6"

DATE: 09/24/2007
 BY: P. Stone

Segment	Stations	Cubic Yards										Total Haul						
		Base	Curve Widden	Turnout	Turnaround	Junction	Landings	Misc	Total	5 MPH	10 MPH		15 MPH	20 MPH	25 MPH	30 MPH	50 MPH	
1A-1B	0.00						80										80	6.50
2A-2B	0.00						80					80					160	8.40
2C-2D	0.00						80										80	8.40
2E-2F	0.00						80										80	7.50
																	0	0.00
																	0	0.00
																	0	0.00
																	0	0.00
																	0	0.00
																	0	0.00
																	0	0.00
Grand Total	0.00	0	0	0	0	0	320					80				400		
ONE WAY HAUL IN MILES																		
Road Segment	Stations	Cubic Yards	50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Total Haul								
1A-1B	0.00	80			2.00	2.00	1.20	0.80	0.50	6.50								
2A-2B	0.00	160			2.00	2.20	2.20	1.50	0.50	8.40								
2C-2D	0.00	80			2.00	2.20	2.20	1.50	0.50	8.40								
2E-2F	0.00	80			2.00	2.00	1.50	1.50	0.50	7.50								
										0.00								
										0.00								
										0.00								
										0.00								
										0.00								
										0.00								
										0.00								
										0.00								
TOTAL	0.00	400	0.00	0.00	2.00	2.12	1.86	1.36	0.50	7.84								
CUBIC YARD WEIGHTED HAUL										Average Round Trip Distance (miles)								
										15.68								

ROCK HAUL:

Truck type: D20	No. trucks: 0	Ave haul: \$6.58 /cy	Yd/hr: 0.00
Delay min.: 8	Efficiency: 85%	Load: \$0.70 /cy	Truck wt: 0%
Truck type: D12	No. trucks: 8	Spread: \$0.00 /cy	Yd/hr: 69.33
Delay min.: 6	Efficiency: 85%	Production: cy/day = 554	Truck wt: 100%
Truck type: D10	No. trucks: 0		Yd/hr: 0.00
Delay min.: 5	Efficiency: 85%	400 cy @ \$7.28 /cy	Truck wt: 0%

CRUSHED ROCK HAUL COSTS

SUMMARY OF ROCK DEVELOPMENT AND CRUSHING COSTS

PROJECT NO. 2

Timber Sale Name: **Silver Spoon**

Quarry: Viewpoint
 Location: SE1/4, SE1/4, Sec4, T7N, R6W, W.M.
 County: Clatsop
 By: S. Bushnell
 Date: 10/25/2007

Swell: _____
 Shrink: 16%

ROCK SIZE	REJECT	GRADATION	STOCKPILE CU. YDS.	TRUCK MEAS CU. YDS.	TOTAL CU. YDS.
3/4"-0"	9%	CR	5,000	6,339	12,139
1-1/2"-0"		CR			
4"-0"		CR	5,000	6,972	12,772
6"-0"		PR		320	320
24"-6"		RR		80	80
36"		RR			
TOTAL CUBIC YARDS OF ROCK:			10,000	13,711	25,311

1) MOBILIZATION & SET UP:

EQUIPMENT MOBILIZATION	DISTANCE IN MILES	DIST. FACTOR	BASE RATE	COST
3 Stage Crusher	75	1.40	\$2,353	\$3,294
Screening Plants (2)	75	1.40	\$954	\$1,336
D8 Cat & D6 Cat	75	1.40	\$1,600	\$2,240
Loader	75	1.40	\$590	\$826
Drill and compressor	75	1.40	\$570	\$798
Powder	75	1.40	\$286	\$400
3 Dump Trucks	75	1.40	\$357	\$500
Excavator	75	1.40	\$1,030	\$1,442
Rock hopper	75	1.40	\$500	\$700
SUB TOTAL FOR MOBILIZATION				\$11,536

EQUIPMENT SET UP	TIMES	RATE	COST
3 Stage Crusher	1	\$2,682	\$2,682
Screening Plants (2)	1	\$451	\$451
Change Gradation	1	\$424	\$424
Rock Hopper	1	\$200	\$200

SUB TOTAL FOR SET UP COSTS \$3,757

TOTAL MOBILIZATION & SET UP COSTS **\$15,293**

2) CLEARING & GRUBBING

DESCRIPTION	QUANTITY	UNIT	RATE	COST
Clear, Load, Haul to Waste Area	8.0	hr	\$197	\$1,576
Slash and Stumps (1 truck, 1 exc.)				
Pile & Burn Slash and Stumps(1 exc)	5.0	hr	\$138	\$690
Move-in Fire Truck for the burning of the Clearing Debris	1.0	ea	\$132	\$132

TOTAL CLEARING & GRUBBING COSTS **\$2,398**

3) EXCAVATION

MATERIAL DESCRIPTION	QUANTITY	UNIT	RATE	COST
Overburden Removal (excavate, load haul, spread)	2,500	bcy	\$2.54	\$6,350

TOTAL EXCAVATION COSTS \$6,350

4) DEVELOP ROCK

ROCK SUMMARY			METHOD	%	QUANTITY	RATE	COST
Type	Cu. yd. Vol.	Weight	Ripping			\$1.85	
crushed	24,911	98%	Drill & shoot	100%	26,404	\$1.95	\$51,487
pit run	320	1%	Oversize red	5%	1,262	\$5.04	\$6,358
rip rap	80	0%	Other				
Total	25,311						
reject	1,093	4.3%					

TOTAL ROCK DEVELOPMENT COSTS \$57,845

5) CALIBRATION & TESTING

DESCRIPTION	NO.	\$/TEST	COST
Calibrate	2	\$400	\$800
Calibrate			
Test	15	\$50	\$750
Test			

TOTAL CALIBRATION & TESTING COSTS \$1,550

6) FEEDING & LOADING

DESCRIPTION	CU. YD. QUANTITY	COST CU. YD.	TOTAL COST
Dig & Feed Rock	26,004	\$0.76	\$19,703

TOTAL FEEDING & LOADING COSTS \$19,703

7) ROCK CRUSHING

ROCK SIZE	ROCK TYPE	CU. YD. QUANTITY	CRUSHER TYPE	HOURLY PRODUCTIO	RATE CU. YD.	TOTAL COST
3/4"-0"	crushed	12,139	3 stage w/s	110	\$2.95	\$35,865
1-1/2"-0"	crushed		3 stage w/s			
4"-0"	crushed	12,772	2 stage	140	\$1.71	\$21,895

TOTAL ROCK CRUSHING COSTS \$57,760

8) STOCKPILING

STOCKPILE PREPARATION OR CONST	COST
Construct Stockpile Site	\$480
(See Footnote)	

SUB TOTAL \$480

HAUL & STOCKPILE STOCKPILE LOCATION	SIZE	# of TRUCKS	CU. YDS.	RATE	COST
1. Viewpoint Quarry Stockpile	3/4"-0"	3	5,800	\$1.88	\$10,929
2.	1-1/2"-0"				
3. Viewpoint Quarry Stockpile	4"-0"	3	5,800	\$1.88	\$10,929
4.					
5.					
6.					

SUB TOTAL \$21,858

TOTAL STOCKPILING COSTS **\$22,338**

9) MISCELLANEOUS COSTS

DESCRIPTION	COST
Load, Haul, and Spread the reject material at the waste area. \$2.54/CY 1,093 CY	\$2,775
Final Quarry Dev., Access Road Const., Waterbarring, Drainage, Block Quarry Access	\$2,000
Air Track Test Drilling (16hr @\$120/hr) + \$570 Move-In	\$2,490

TOTAL MISCELLANEOUS COSTS **\$7,265**

10) GRAND TOTAL: **\$190,502**

\$/Cubic Yard \$7.65

Footnotes:

Construct/Reconstruct Stockpile Floor

Equipment	Hours	Rate	Total
Dozer	4	\$120.00	\$480.00
Compactor		\$75.00	
Grader		\$80.00	
Excavator		\$130.00	

\$480.00

Total Construct Stockpile Floor \$480.00

Rock for Floor (CY)	\$/CY Haul	Total

Silver Spoon
Project No. 3 Stream Enhancement

Location	# of Structures	Number of Trees / Structure	\$/Tree*	Location Cost
SE1 to SE2	1	5	\$225.00	\$1,125.00
SE2 to SE3	2	5	\$225.00	\$2,250.00
Project Total				\$3,375.00

*\$/Tree includes transportation cost of tree up to 0.5 miles.

TIMBER CRUISE REPORT
Silver Spoon
FY 2008

1. **Sale Area Location:** Areas 1, 2, and 3(Out of Sale R/W) are located in Portions of Sections 3 and 10 of T6N, R6W; W.M., Clatsop County, Oregon.
2. **Fund Distribution:** BOF 100%
 Tax Code 8-01 (100%)

3. **Sale Acreage by Area:**

Area	Treatment	Gross Acres	Existing R/W	New R/W	GTRA	Stream Buffer	Net Acres	Survey Method
1	Modified CC	68.0	1.0	1.4	1.0	6.6	58.0	GIS
2	Modified CC	69.0	0.0	1.6	1.0	1.4	65.0	GIS
3 R/W	Out-of-Sale R/W	9.0	0.0	9.0	0.0	0.0	9.0	GIS
4 R/W	In-Sale R/W		0.0	3	0.0	0.0	3.0	GIS
TOTALS		146.0	1.0	12.0	2.0	8.0	135.0	

4. **Cruisers and Cruise Dates:** Areas 1, 2, and 3 were cruised by Peter Stone, Jasen McCoy, and Derek Bangs, Lanny Freeman, Jenny Laughman, and Jon Long in August, 2007.

5. **Cruise Method and Computation:**

Areas 1 and 2: These are both modified clearcut units, and were variable plot cruised using a 40 BAF. Areas 1 and 2 total 124 acres. These plots are located on a 3 by 7 chain grid, with every third plot measured and graded. A total of 60 plots were sampled, with 20 measured and graded plots, and 40 count plots. All cedars, hemlock, and maple are reserve species, and were recorded as "leave" trees.

Area 3 Out-of-Sale R/W: The Right-of-Way area was variable plot cruised using an 80 BAF. Out-of-Sale right of way totals 9 acres. These plots are located every 6.5 chains in the middle of the posted right-of-way. A total of 22 plots were sampled, with 11 measured and graded plots, and 11 count plots.

Area 4 In-Sale- R/W: The Right-of-Way area was extrapolated from the Area 1& 2 cruise report.

All cruisers used Corvallis MicroTechnology (CMT) data collectors, and were downloaded to the Atterbury Super A.C.E. program in District for computing. See the attached Cruise Design for more details on the cruise method. The cruise calculations were processed in the Astoria district office.

AREA	CRUISE	TRACT	TYPE
1 and 2	06N06W SEC 3	MCTAKE	TK
3 R/W	06N06W SEC 3	ROAD	R/W

6. **Timber Description:** Areas 1 and 2 are Modified Clear Cut units, approximately 70 years old, consisting mostly of Douglas-fir stands. Low stocked phellinus pockets are scattered throughout both areas. The average volume (net) is approximately 41 MBF/acre.

Area 3 R/W consists of many large Douglas-fir trees with a few scattered hemlock and alder trees. The average volume (net) is approximately 78 MBF/acre.

Area 4 R/W consists mostly of Douglas-fir stands. The average volume (net) is approximately 41 MBF/acre.

TIMBER CRUISE REPORT

Silver Spoon

7. Statistical Analysis and Stand Summary: (See "Statistics" - Type Reports, attached)

Statistics for Net B.F. volumes

Area	Estimated CV	Target SE%	Actual CV	Actual SE%
1 and 2(MC)	55%	8%	47%	6 %
3 (R/W)	40%	10%	59%	13%

8. Volumes by Species and Log Grade: (See "Species, Sort, Grade - Type and Project Reports, attached, for individual sale areas and combined sale areas.)

Volumes by Species and Grade for All Sale Areas: (MBF) Volumes do not include "in-growth."

Species	DBH	Net Vol.	Special Mill	2 Saw	3Saw	4 Saw	Camp Run	% D & B	% Sale
Douglas-fir	20"	5,712	232	4,446	820	214	0	1.7	98
Alder	19"	54	0	0	0	0	54	*1.5	1.5
Hemlock	14"	4	0	0	3	1	0	*1.5	0.5
TOTALS		5,770	232	4,446	823	215	54		

* Value has been estimated through hidden defect

9. Approvals:

Prepared by: Peter Stone Date: September 10, 2007

Unit Forester Approval:  Date: 10/16/07

10. Attachments:

- Cruise Designs - 4 pages
- Cruise Maps - 1 page
- Volume Reports - 3 pages
- Statistics Reports - 2 pages
- Log Stock Tables - 3 pages

X:\Jewell_Unit\Timber Sales\2008\Silver_Spoon\Cruise\CruiseReport.doc

Species, Sort Grade - Board Foot Volumes (Project)

T06N R06W S03 TyTK 123.00 T06N R06W S03 TyRW 9.00	Project: SSPOON Acres 132.00	Page 1 Date 9/14/2007 Time 8:47:54AM
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Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log			Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf		
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
D		DOCU															10		0.00	15.3	
D		DO2S		77	1.5	34,204	33,683	4,446		6	35	59		0	2	28	70	36	363	2.09	92.9
D		DO3S		15	.7	6,253	6,209	820		96	2	2		5	12	41	42	32	82	0.77	75.9
D		DO4S		3	3.9	1,682	1,616	213	16	84				23	58	9	9	24	29	0.45	56.0
D		DOSM		5	5.9	1,871	1,761	232			26	74				10	90	39	503	2.63	3.5
D	Totals			99	1.7	44,009	43,270	5,712	1	21	29	49		2	5	29	65	30	178	1.33	243.6
A		DOCR		100		410	410	54		60	40			6	6	45	43	28	117	1.15	3.5
A	Totals			1		410	410	54		60	40			6	6	45	43	28	117	1.15	3.5
H		DO3S		85		28	28	4		100						100		40	120	0.85	.2
H		DO4S		15		5	5	1		100				100				18	20	0.39	.2
H	Totals			0		32	32	4		100				14		86		29	70	0.71	.5
Totals					1.7	44,452	43,712	5,770	1	22	29	48		2	5	29	64	30	177	1.33	247.6

T06N R06W S03 TTK										T06N R06W S03 TTK			
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
06N	06W	03	MCTAKE	TK	123.00	60	95	1	W				

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf		
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
D		DO	CU														10		0.00	15.9	
D		DO	2S	77	1.6	32,151	31,645	3,892		7	36	57		0	2	28	70	36	351	2.03	90.2
D		DO	3S	15	.5	5,900	5,868	722		98		2		5	11	42	42	32	81	0.76	72.1
D		DO	4S	4	3.9	1,730	1,662	204	17	83				21	60	10	10	24	29	0.45	57.8
D		DO	SM	4	6.9	1,710	1,592	196			31	69					100	40	476	2.51	3.3
D	Totals			99	1.7	41,490	40,767	5,014	1	23	29	47		2	6	28	65	30	170	1.29	239.4
A		DO	CR	100		414	414	51		57	43			5	6	43	46	29	122	1.18	3.4
A	Totals			1		414	414	51		57	43			5	6	43	46	29	122	1.18	3.4
Type Totals					1.7	41,904	41,180	5,065	1	23	29	47		2	6	28	65	30	170	1.29	242.8

T06N R06W S03 TRW										T06N R06W S03 TRW			
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
06N	06W	03	ROAD	RW	9.00	22	39	1	W				

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf		
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
D		DO	CU															5	0.00	7.0	
D		DO	2S	79	1.1	62,257	61,542	554			30	70			30	70		37	475	2.60	129.5
D		DO	3S	14	1.9	11,086	10,871	98		79	21			6	19	33	42	31	85	0.82	127.9
D		DO	4S	1	3.1	1,024	992	9		100				79	21			16	32	0.60	31.2
D		DO	SM	6		4,068	4,068	37				100				63	37	35	726	3.78	5.6
D	Totals			99	1.2	78,436	77,474	697		12	27	61		2	3	32	63	31	257	1.76	301.2
H		DO	3S	85		408	408	4		100						100		40	120	0.85	3.4
H		DO	4S	15		68	68	1		100				100				18	20	0.39	3.4
H	Totals			1		476	476	4		100				14		86		29	70	0.71	6.8
A		DO	CR	100		365	365	3		100				14		86		24	70	0.85	5.2
A	Totals			0		365	365	3		100				14		86		24	70	0.85	5.2
Type Totals					1.2	79,276	78,314	705		13	26	60		2	3	32	63	31	250	1.73	313.2

TC TSTATS		STATISTICS						PAGE 1		
		PROJECT		SSPOON		DATE 9/14/2007				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	06W	03	MCTAKE	TK	123.00	60	322	1	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		60	322	5.4						
CRUISE		18	93	5.2	12,170	.8				
DBH COUNT										
REFOREST										
COUNT		41	229	5.6						
BLANKS		1								
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	91	97.3	20.0	77		211.3	41,490	40,767	9,371	9,371
R ALDER	2	1.7	19.0	60		3.3	414	414	116	116
TOTAL	93	98.9	19.9	77		214.7	41,904	41,180	9,487	9,487
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	78.8	8.3	637	695	752					
R ALDER	32.6	30.6	180	260	340					
TOTAL	79.5	8.2	629	685	742	253	63	28		
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	57.9	7.5	90	97	105					
R ALDER	404.7	52.2	1	2	3					
TOTAL	56.2	7.3	92	99	106	126	32	14		
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	47.9	6.2	198	211	224					
R ALDER	400.8	51.7	2	3	5					
TOTAL	46.5	6.0	202	215	228	87	22	10		
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	47.8	6.2	38,251	40,767	43,283					
R ALDER	400.9	51.8	200	414	628					
TOTAL	46.8	6.0	38,690	41,180	43,671	88	22	10		

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT SSPOON		DATE 9/14/2007				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	06W	03	ROAD	RW	9.00	22	92	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		22	92	4.2						
CRUISE		12	39	3.3	1,013		3.8			
DBH COUNT										
REFOREST										
COUNT		9	43	4.8						
BLANKS		1								
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	37	106.6	23.7	92		327.3	78,436	77,474	16,724	16,724
WHEMLOCK	1	3.4	14.0	60		3.6	476	476	139	139
R ALDER	1	2.6	16.0	50		3.6	365	365	107	107
TOTAL	39	112.6	23.3	90		334.5	79,276	78,314	16,971	16,971
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	59.9	9.8	1,003	1,112	1,222					
WHEMLOCK										
R ALDER										
TOTAL	64.3	10.3	953	1,062	1,172	166	41	18		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	78.5	17.1	88	107	125					
WHEMLOCK	469.0	102.3		3	7					
R ALDER	469.0	102.3		3	5					
TOTAL	69.0	15.1	96	113	130	200	50	22		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	63.1	13.8	282	327	372					
WHEMLOCK	469.0	102.3		4	7					
R ALDER	469.0	102.3		4	7					
TOTAL	58.4	12.7	292	335	377	143	36	16		
CL: 68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	61.8	13.5	67,024	77,474	87,923					
WHEMLOCK	469.0	102.3		476	964					
R ALDER	469.0	102.3		365	738					
TOTAL	59.4	13.0	68,163	78,314	88,466	148	37	16		

Log Stock Table - MBF

T06N R06W S03 TyTK 123.00
 T06N R06W S03 TyRW 9.00

Project: SSPOON
 Acres 132.00

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 Date 9/14/2007
 Time 8:47:55AM

S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches										
							2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
D	DO 2S	16	5		5	.1						5					
D	DO 2S	22	26		26	.5						26					
D	DO 2S	24	14		14	.2					14						
D	DO 2S	26	18		18	.3				18							
D	DO 2S	28	6		6	.1					6						
D	DO 2S	29	12		12	.2					12						
D	DO 2S	32	1,259	1.7	1,237	21.7				94	182	133	474	263	91		
D	DO 2S	34	15		15	.3					5		10				
D	DO 2S	36	49		49	.9								49			
D	DO 2S	38	8		8	.1					8						
D	DO 2S	40	3,104	1.5	3,057	53.5			11	137	347	577	816	657	513		
D	DO 3S	9	1		1	.0			1								
D	DO 3S	10	15		15	.3							15				
D	DO 3S	13	7		7	.1			7								
D	DO 3S	15	1	33.3	1	.0					1						
D	DO 3S	16	3		3	.1					3						
D	DO 3S	17	3		3	.0			2		1						
D	DO 3S	20	12		12	.2				7	2	2					
D	DO 3S	21	22		22	.4				9	13						
D	DO 3S	22	23		23	.4			12		11						
D	DO 3S	23	4	3.0	4	.1			3		1						
D	DO 3S	24	19		19	.3				14	5						
D	DO 3S	25	5		5	.1					5						
D	DO 3S	26	1		1	.0					1						
D	DO 3S	27	15		15	.3				15							
D	DO 3S	29	3		3	.0				1	1						
D	DO 3S	30	5		5	.1				5							
D	DO 3S	31	19	1.3	19	.3			1	10	8						
D	DO 3S	32	282	1.4	278	4.9			39	90	146		3				
D	DO 3S	33	5		5	.1			3		2						
D	DO 3S	34	20		20	.4			10		5	5					
D	DO 3S	35	14		14	.2				6	8						
D	DO 3S	36	15		15	.3			9	7							
D	DO 3S	37	8	3.8	8	.1				4	4						
D	DO 3S	38	8		8	.1					8						
D	DO 3S	39	17		17	.3				8	9						
D	DO 3S	40	282		281	4.9			90	68	113	10					
D	DO 3S	41	15		15	.3				15							

Log Stock Table - MBF

T06N R06W S03 TyTK 123.00
 T06N R06W S03 TyRW 9.00

Project: SSPOON
 Acres 132.00

Page 2
 Date 9/14/2007
 Time 8:47:55AM

Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
D		DO 4S	8	2		2	.0					2							
D		DO 4S	10	1		1	.0			1									
D		DO 4S	11	1		1	.0			1		1							
D		DO 4S	12	3		3	.1					2		2					
D		DO 4S	13	8		8	.1			7		2							
D		DO 4S	14	6		6	.1			6									
D		DO 4S	15	5		5	.1					5							
D		DO 4S	16	3		3	.0			3									
D		DO 4S	17	4		4	.1		3	2									
D		DO 4S	18	12	2.4	12	.2			7		4		2					
D		DO 4S	19	3		3	.0			3									
D		DO 4S	20	1		1	.0			1									
D		DO 4S	21	11		11	.2			11									
D		DO 4S	22	4		4	.1					4							
D		DO 4S	23	13		13	.2			11		1							
D		DO 4S	24	27		27	.5		7	12		7							
D		DO 4S	25	10		10	.2			10									
D		DO 4S	26	20		20	.3		6	9		5							
D		DO 4S	27	9		9	.2			9									
D		DO 4S	29	6		6	.1			6									
D		DO 4S	30	30	17.3	25	.4			25									
D		DO 4S	31	6		6	.1			6									
D		DO 4S	32	5		5	.1		5										
D		DO 4S	34	8		8	.1		8										
D		DO 4S	36	4		4	.1		4										
D		DO 4S	39	19	16.7	15	.3			15									
D		DO SM	32	23		23	.4							10		13			
D		DO SM	40	224	6.5	209	3.7						28	75	106				
D		Totals		5,809	1.7	5,712	99.0	4	30	322	300	602	591	771	1400	1075	616		
A		DO CR	16	0		0	.9			0									
A		DO CR	19	3		3	4.8			3									
A		DO CR	24	3		3	5.7			3									
A		DO CR	32	25		25	45.4					3		22					
A		DO CR	40	23		23	43.2					23							
A		Totals		54		54	.9			6		26		22					
H		DO 3S	40	4		4	85.7					4							

Log Stock Table - MBF

T06N R06W S03 TyTK	123.00
T06N R06W S03 TyRW	9.00

Project: **SSPOON**
 Acres **132.00**

Page **3**
 Date **9/14/2007**
 Time **8:47:55AM**

S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches										
							2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
H	DO 4S	18	1		1	14.3			1								
H	Totals		4		4	.1			1	4							
Total	All Species		5,868	1.7	5,770	100.0	4	30	329	303	629	591	793	1400	1075	616	

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Silver Spoon **Area(s)** 1 and 2

Harvest Type: (MC)

Approx. Cruise Acres: 126 **Estimated CV%** 55 Net BF **SE% Objective** 8 Net BF

Planned Sale Volume : 7,300 MBF **Estimated Sale Area Value/Acre:** \$20,000/Ac
(Area 1 and 2) (50 MBF/Ac.)

A. Cruise Goals: (a) Grade minimum 100 conifer:
(b) Sample 60 cruise plots (1 grade/2 count); (c) Other goals (Determine
"automark" thinning standards; X Determine log grades for sale value; X
Determine snag and leave tree species and sizes.

B. Cruise Design:

- 1. Plot Cruises:** BAF 40 (Full point; Half point) (circle one)
Cruise Line Direction(s) AZ= 180° (South/North)
Cruise Line Spacing 7 (chains)
Cruise Plot Spacing 3 (chains)
Grade/Count Ratio 1:2

Cruise all take and leave trees. Record all wildlife trees as leave trees. If a cruise line ends up paralleling in a buffer offset by 1 or 2 chains and continue. All cedar are leave trees and count towards the leave tree basal area.

C. Tree Measurements:

- 1. Diameter:** Minimum DBH to cruise is 8" for conifers and 10" for hardwoods.
Record dbh to nearest 1/2" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- 2. Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. Top Cruise Diameter (TCD):** Minimum top outside bark is 7" for conifers and 8" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh.
- 4. Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.
6. **Species, Sort, and Grade Codes:**
- A. **Species:** Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
- B. **Sort:** Use code "1" (Domestic).
- C. **Grade:** A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; 0 = Cull
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.
8. **Standard Field Procedures: Plot Type Cruises:** Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at inter-visible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.
9. **Cruising Equipment:** Relaskop, Rangefinder, Logger's Tape (with dbh on back) Biltmore Stick, Compass, Cruise Cards in Tatum OR Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.
10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Peter Stone
 Approved by: Jon Long 8-13-07
 Date: 8-13-07

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Silver Spoon **Area(s)** 3

Harvest Type: Out of Sale R/W

Approx. Cruise Acres: 10 **Estimated CV%** 40 Net BF **SE% Objective** 10 Net BF

Planned Sale Volume: 500 MBF **Estimated Sale Area Value/Acre:** \$20,000/Ac
(Area 3) (50 MBF/Ac)

A. Cruise Goals: (a) Grade minimum 50 conifer:
(b) Sample 20 cruise plots (1 grade/1 count); (c) Other goals (Determine
"automark" thinning standards; X Determine log grades for sale value;

B. Cruise Design:

1. Plot Cruises: BAF 80 (Full point; Half point) (circle one)
Cruise Line Directions Center of R/W
Cruise Line Spacing N/A (chains)
Cruise Plot Spacing 6.5 (chains)
Grade/Count Ratio 1/1

C. Tree Measurements:

- 1. Diameter:** Minimum DBH to cruise is 8" for conifers and 10" for hardwoods.
Record dbh to nearest 1/2" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- 2. Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. Top Cruise Diameter (TCD):** Minimum top outside bark is 7" for conifers and 8" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh.
- 4. Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.
- 5. Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length

is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

6. Species, Sort, and Grade Codes:

- A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
- B. Sort: Use code "1" (Domestic).
- C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; 0 = Cull

7. Deductions: Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. Standard Field Procedures: Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at inter-visible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.

9. Cruising Equipment: Relaskop, Rangefinder, Logger's Tape (with dbh on back) Biltmore Stick, Compass, Cruise Cards in Tatum OR Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.

10. Attachments: A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Peter Stone
Approved by: Jon Long 8-13-07
Date: 8-13-07

Exhibit "A"
 OF TIMBER SALE CONTRACT NO. 341-08-20
 SILVER SPOON
 PORTIONS OF SECTIONS 2, 3, AND 10,
 T6N, R6W, W.M., CLATSOP COUNTY, OR

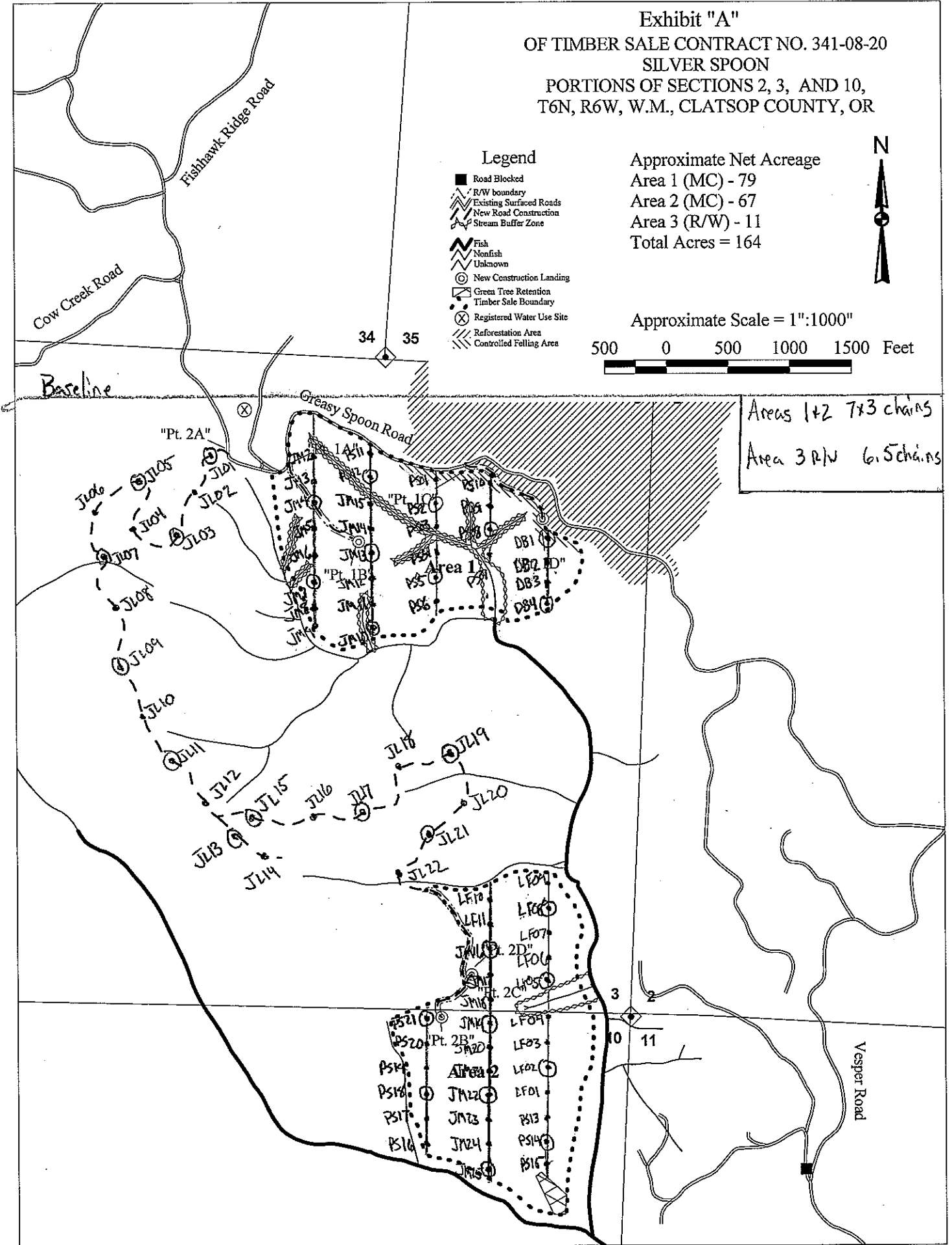
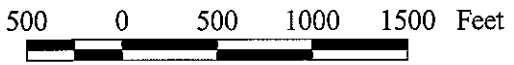
Legend

- Road Blocked
- ▬ R/W boundary
- ▨ Existing Surfaced Roads
- ▨ New Road Construction
- ▨ Stream Buffer Zone
- ▨ Fish
- ▨ Nonfish
- ▨ Unknown
- ⊙ New Construction Landing
- ⊙ Green Tree Retention
- ▬ Timber Sale Boundary
- ⊗ Registered Water Use Site
- ▨ Reforestation Area
- ▨ Controlled Felling Area

Approximate Net Acreage
 Area 1 (MC) - 79
 Area 2 (MC) - 67
 Area 3 (R/W) - 11
 Total Acres = 164



Approximate Scale = 1":1000"



Areas 1+2 7x3 chains
 Area 3 R/W 6.5 chains

LOGGING PLAN
 OF TIMBER SALE CONTRACT NO. 341-08-20
 SILVER SPOON
 PORTIONS OF SECTIONS 3 AND 10,
 T6N, R6W, W.M., CLATSOP COUNTY, OR

- Legend**
- Type F Stream
 - Type N Stream
 - Posted Stream Buffer
 - New Road Construction
 - Timber Sale Boundary
 - Green Tree Retention
 - Reforestation Area
 - Controlled Felling Area
 - New Construction Landing
 - Road Blocked
 - Existing Roads**
 - Rocked
 - Unsurfaced
 - Buffer Zone
 - 100' Top Attached
 - Cable Logging Areas
 - Tractor Logging Area

Approximate Net Acreage

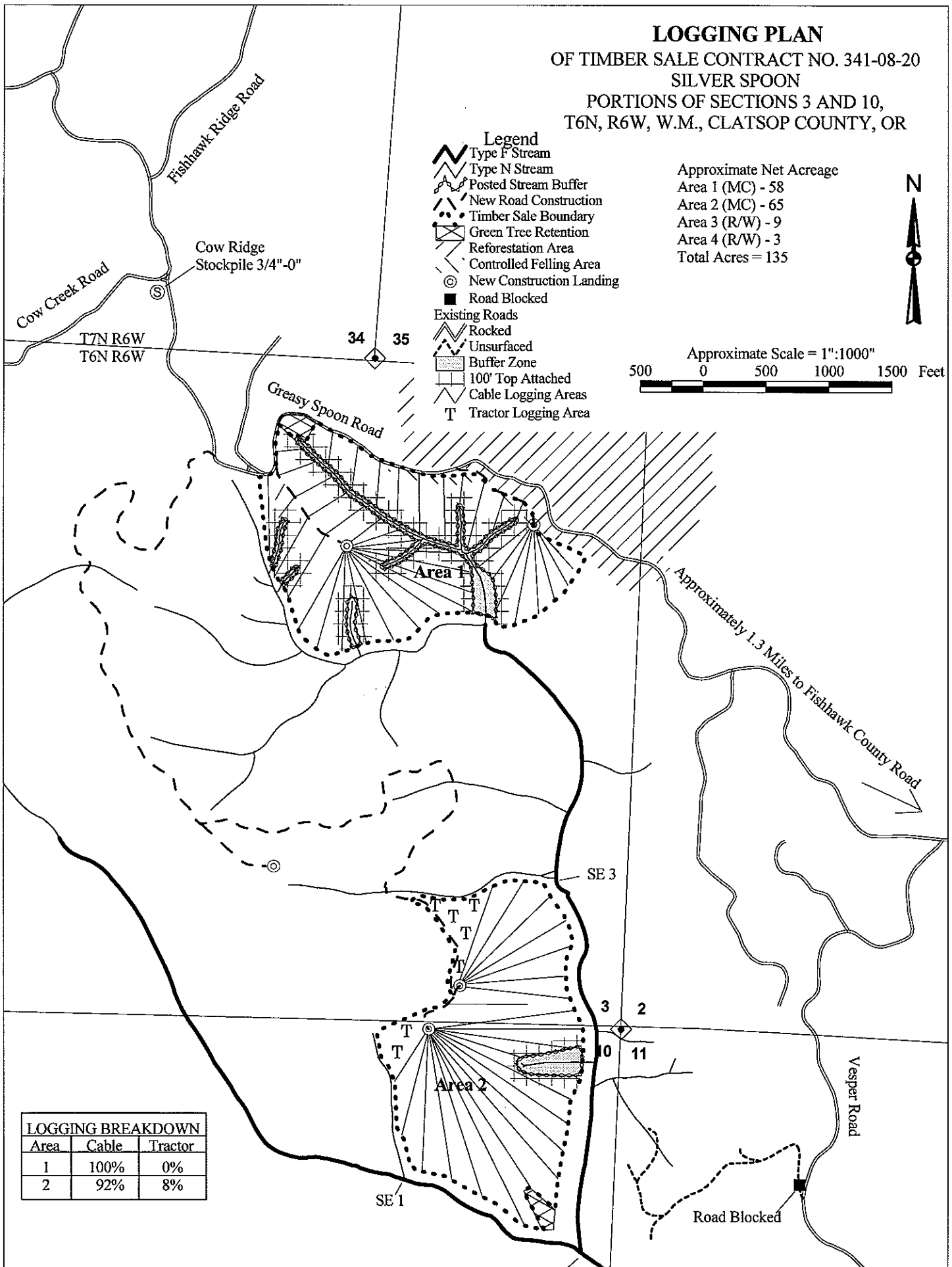
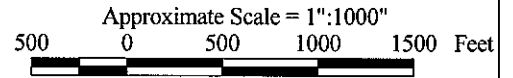
Area 1 (MC) - 58

Area 2 (MC) - 65

Area 3 (R/W) - 9

Area 4 (R/W) - 3

Total Acres = 135



LOGGING BREAKDOWN		
Area	Cable	Tractor
1	100%	0%
2	92%	8%