"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cost Summary
Sibley Arch
Sale 341-07-57

District: Tillamook **Date:** 4/5/07

	Conifer	Hardwood	Total
Gross Timber Sale Value	$430,373.97	$1,898,997.72	$2,329,371.69
		Project Work	($381,715.00)
		Advertised Value	$1,947,656.69

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Timber Description
Sibley Arch
Sale 341-07-57

District: Tillamook

Location: Portions of Sections 23, 24, 25, 26, and 27, T3N, R9W, and Sections 18, 19, and 30, T3N, R8W, W.M. Tillamook County, Oregon.

Date: 4/5/07 **Stand Stocking:** 80%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	15	0	95
Western Hemlock / Fir	13	0	95
Sitka Spruce	13	0	95
Alder (Red)	14	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Sitka Spruce	Alder (Red)	Total
2S	541	31	0	0	572
2S 12"+	0	0	0	57	57
3S	839	150	20	0	1,009
3S 10" - 11"	0	0	0	1,342	1,342
4S	349	124	31	0	504
4S 8" - 9"	0	0	0	2,195	2,195
Total	1,729	305	51	3,594	5,679

Comments: Pond Values Used: 1st Quarter Calendar Year 2007.

Western Red Cedar Stumpage Price = Pond Value minus Logging Cost
$808/MBF = $1,150/MBF - $342/MBF

HAULING
Hauling costs adjusted to make equivalent to $700 daily truck cost.
$700 - % Profit & Risk ($700 / 1.15) = $608 Daily Truck Cost.
Hauling Cost Calculation Douglas-fir:
$608 Daily Truck Cost / (2 trips per day x 3.5 MBF per load) = $86.86/MBF Hauling Cost.
Hauling Cost Calculation Western Hemlock:
$608 Daily Truck Cost / (3 trips per day x 3.3 MBF per load) = $61.41/MBF Hauling Cost.
Hauling Cost Calculation Sitka Spruce:
$608 Daily Truck Cost / (3 trips per day x 3.4 MBF per load) = $59.61/MBF Hauling Cost.
Hauling Cost Calculation Red Alder:
$608 Daily Truck Cost / (3 trips per day x 3.2 MBF per load) = $63.33/MBF Hauling Cost.

OTHER COSTS (Profit & Risk to be added):
Brand and Paint: $2/MBF x 5,679 MBF = $11,358
Snag Creation: $5/Snag x 110 snags = $550
Down Wood Creation: $10/per conifer felled x 40 conifers = $400
TOTAL OTHER COSTS (Profit & Risk to be added): $12,308

OTHER COSTS (Profit & Risk included):
Slash piling and sorting: (531 acres of cable harvest / 50 acres / hour) x $85/hr = $903
Non-project Road #1.....2 Stations x $100/station = $200
Non-project Road #2.....3 Stations x $100/station = $300
Non-project Road #3.....7 Stations x $100/station = $700
Non-project Road #4.....7 Stations x $100/station = $700
Pit-Run Approach Rock: 4 Stations x 50cy x $7.00cy = $1,400
TOTAL OTHER COSTS (Profit & Risk included): $4,203

ROAD MAINTENANCE of Sibley, Lost Creek, Cook Creek, McPherson, and Lost Creek Ridge Roads: $4.43
Grading- Interim Maintenance = $250/mile x 13 miles x 1 grading/ 5,679 MBF = $.57
Grading- Final Maintenance = $500/mile x 13 miles x 1 grading/ 5,679 MBF = $1.14
Surfacing- (15cy/mile x 5.7 MMBF x 13 miles x $7.00cy) / 5,679 MBF = $ 1.37
Compaction- (686 stations x $11 station + $111 move in) / 5,679 MBF = $1.35

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Logging Conditions
Sibley Arch
Sale 341-07-57

Combination#: 1

	Douglas - Fir	38.07%
	Western Hemlock / Fir	12.80%
	Sitka Spruce	32.45%
	Alder (Red)	50.03%

Yarding Distance: Long (1,500 ft) **Downhill Yarding:** No
Logging System: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber
Tree Size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
Loads/Day: 4 **Bd. Ft./Load:** 3,500
Cost/MBF: $234.47
Machines:
Log Loader (A)
Stroke Delimber (A)
Tower Yarder (Medium)

Combination#: 2

	Douglas - Fir	40.31%
	Western Hemlock / Fir	56.61%
	Sitka Spruce	29.90%
	Alder (Red)	33.01%

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:** 3,300
Cost/MBF: $198.95
Machines:
Log Loader (A)
Stroke Delimber (A)
Tower Yarder (Medium)

Combination#: 3

	Douglas - Fir	15.91%
	Western Hemlock / Fir	28.98%
	Sitka Spruce	32.75%
	Alder (Red)	13.77%

Yarding Distance: Short (400 ft) **Downhill Yarding:** No
Logging System: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber
Tree Size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
Loads/Day: 6 **Bd. Ft./Load:** 3,500
Cost/MBF: $156.32
Machines:
Log Loader (A)
Stroke Delimber (A)
Tower Yarder (Medium)

Combination#: 4

	Douglas - Fir	5.71%
	Western Hemlock / Fir	1.61%
	Sitka Spruce	4.90%
	Alder (Red)	3.19%

Yarding Distance: Short (400 ft) **Downhill Yarding:** Yes
Logging System: Track Skidder **Process:** Manual Falling/Delimbing
Tree Size: Small / Thinning 9in (70 Bft/tree), 20+ logs/MBF
Loads/Day: 10 **Bd. Ft./Load:** 3,300
Cost/MBF: $98.95
Machines:

Log Loader (B)
Track Skidder

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Logging Costs
Sibley Arch
Sale 341-07-57

Date: 4/5/07

Operating Seasons: 3.0 **Profit & Risk:** 15%

Project Costs: $381,715 **Other Costs (P/R):** $12,308

Slash Disposal: $0 **Other Costs:** $4,203

Road Maintenance: $4.43

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

Hauling Costs

Species	$/MBF	Trips/Day	MBF/Load
Douglas - Fir	$86.86	2.0	3.5
Western Hemlock / Fir	$61.41	3.0	3.3
Sitka Spruce	$59.61	3.0	3.4
Alder (Red)	$63.33	3.0	3.2

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Logging Costs Breakdown
Sibley Arch
Sale 341-07-57

Costs	Douglas - Fir	Western Hemlock / Fir	Sitka Spruce	Alder (Red)
Logging	199.97	189.54	191.62	207.66
Road Maintenance	4.66	4.66	4.66	4.66
Fire Protection	1.43	1.43	1.43	1.43
Hauling	91.43	64.64	62.75	66.66
Other (P/R appl.)	2.17	2.17	2.17	2.17
Profit & Risk	44.95	39.37	39.39	42.39
Slash Disposal	0.00	0.00	0.00	0.00
Scaling	2.00	2.00	2.00	2.00
Other	0.74	0.74	0.74	0.74
Total	347.35	304.55	304.76	327.71

Amortization	0.00	0.00	0.00	0.00
Pond Value	579.49	383.90	398.92	856.09
Stumpage	232.14	79.35	94.16	528.38
Amortized	0.00	0.00	0.00	0.00

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary
Sibley Arch
Sale 341-07-57

Amortized

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

Unamortized

	Douglas - Fir	Western Hemlock / Fir	Sitka Spruce	Alder (Red)
MBF	1,729.00	305.00	51.00	3,594.00
Value	232.14	79.35	94.16	528.38
Total	401,370.06	24,201.75	4,802.16	1,898,997.72

Gross Timber Sale Value

Recovery $2,329,371.69

Prepared by: Ed Wallmark Date: 4/5/07

District: Tillamook Phone: (503) 842-2545

"STEWARDSHIP IN FORESTRY"

PROJECT SUMMARY SHEET

Sale: **Sibley Arch**

CONSTRUCTION

Point	A to B	73+10	stations =	$199,659.55
Point	E to F	15+50	stations =	$37,496.81
Point	E to G	1+80	stations =	$4,254.83
Point	Point "J"			$1,465.12
Point	M to N	1+95	stations =	$1,412.59
Point	O to P	14+50	stations =	$36,961.39
			SUBTOTAL CONSTRUCTION	**$281,250.29**

IMPROVEMENT

Point	E to F	1+40	stations =	$3,386.81
Point	K to L	61+85	stations =	$49,577.56
			SUBTOTAL IMPROVEMENT	**$52,964.37**

RECONSTRUCTION

Point	C to D	10+30	stations =	$10,512.20
Point	M to N	20+45	stations =	$14,814.06
Point	O to P	3+00	stations =	$7,647.18
			SUBTOTAL IMPROVEMENT	**$32,973.44**

SPECIAL PROJECTS

Vacate	H to I	$249.50
Additional Brushing		$5,248.00
	SUBTOTAL SPECIAL PROJECTS	**$5,497.50**

MOVE IN (McPherson Side)	**$4,180.66**
MOVE IN (Sibley Side)	$4,848.74
GRAND TOTAL	**$381,715.00**

SUMMARY OF CONSTRUCTION COST

Sale: **Sibley Arch** Road: **Brushing**

Construction - 0+00 stations, 0.00 miles

Improvement - 73+10 stations, 1.38 miles

SPECIAL PROJECTS						
Lost Creek Ridge Road (light brushing)	1.23	miles @	$600.00	per mile	$738.00	
Lost Creek Ridge Road (medium brushing)	0.62	miles @	$800.00	per mile	$496.00	
Lost Alder Road (light brushing)	0.57	miles @	$600.00	per mile	$342.00	
Lost Alder Road (medium brushing)	0.57	miles @	$800.00	per mile	$456.00	
Sibley Road	5.36	miles @	$600.00	per mile	$3,216.00	
					TOTAL SPECIAL PROJECTS	**$5,248.00**
					GRAND TOTAL	**$5,248.00**

SUMMARY OF CONSTRUCTION COST

Sale: **Sibley Arch** Road: **A to B**

Construction - 73+10 stations, 1.38 miles Improvement - 0+00 stations, 0.00 miles

CLEARING AND GRUBBING -									
Endhaul					5.508	acres @	$1,500.00	per acre =	$8,262.00
								TOTAL CLEARING AND GRUBBING	**$8,262.00**
EXCAVATION -									
Common					10491	cy. @	$1.40	per c.y.=	$14,687.40
Rippable					19667	cy. @	$3.20	per c.y.=	$62,934.40
Solid					3893	cy. @	$6.00	per c.y.=	$23,358.00
								TOTAL EXCAVATION	**$100,979.80**
ENDHAUL -									
To W.A. #1	0+00	to	11+15		8360	cy. @	$1.78	per c.y.=	$14,880.80
To W.A. #2 (Sta. 44+25)	37+45	to	72+50		11642	cy. @	$2.18	per c.y.=	$25,379.56
Spread & compact (Fill Material)					14050	cy. @	$0.45	per c.y.=	$6,322.50
Spread & compact (Waste Area)					20002	cy. @	$0.25	per c.y.=	$5,000.50
								TOTAL ENDHAUL	**$51,583.36**
ROCK									
2+95 to	8+20	55	cy. of	Crushed		@	$4.12	per c.y.=	$226.60
15+90 to	19+20	38	cy. of	Crushed		@	$4.12	per c.y.=	$156.56
21+05 to	22+55	20	cy. of	Crushed		@	$4.12	per c.y.=	$82.40
24+90 to	45+60	229	cy. of	Crushed		@	$4.31	per c.y.=	$986.99
47+70 to	49+30	20	cy. of	Crushed		@	$4.12	per c.y.=	$82.40
53+05 to	71+15	213	cy. of	Crushed		@	$4.12	per c.y.=	$877.56
0+00 to	73+10	5,223	cy. of	Pit-Run		@	$5.12	per c.y.=	$26,741.76
Landing	73+10	70	cy. of	Pit-Run		@	$4.28	per c.y.=	$299.60
								TOTAL ROCK	**$29,453.87**
SPECIAL PROJECTS									
Construct waste areas -					8.00	hours @	$130.00	per hour	$1,040.00
Construct ditchouts (6+30, 16+50, 29+00, 67+50, 35+40, 44+80, & 71+90) -					7.00	@	$60.00	each	$420.00
Grade and shape road -					73.10	stations @	$14.00	per station	$1,023.40
Construct/Install rubber water diverter (9+60, 30+15, 59+70, & 65+00)-					4.00	@	$360.00	each	$1,440.00
Roll subgrade w/ vibratory roller prior to rocking -					73.10	stations @	$13.20	per station	$964.92
Remove large stumps -					24.00	lump sum @	$130.00		$3,120.00
Grass seed and fertilize -					3.51	acres @	$220.00	per acre	$772.20
Mulching (Waste Areas) -					1.000	acres @	$600.00	per acre	$600.00
								TOTAL SPECIAL PROJECTS	**$9,380.52**
								GRAND TOTAL	**$199,659.55**

SUMMARY OF CONSTRUCTION COST

Sale: **Sibley Arch** Road: **C to D**

Construction - 0+00 stations, 0.00 miles

Improvement - 10+30 stations, 0.20 miles

CLEARING AND GRUBBING -								
Endhaul				0.65	acres @	$1,500.00 per acre =	$975.00	
						TOTAL CLEARING AND GRUBBING		**$975.00**
EXCAVATION -								
Road Earthwork				8.80	sta. @	$140.00 per sta. =	$1,232.00	
Construct Turnaround (Sta. 9+15)				1	@	$75.00 each =	$75.00	
Construct Landing (Sta. 10+30)				1	@	$250.00 each =	$250.00	
Sidecast Pullback (Sta. 3+10 - 3+80)				156	cy. @	$1.40 per c.y.=	$218.40	
Widening: common (Sta. 3+10 - 3+80)				106	cy. @	$1.28 per c.y.=	$135.68	
Widening: rippable (Sta. 3+10 - 3+80)				10	cy. @	$2.25 per c.y.=	$22.50	
Road Realignment: common (Sta. 0+00 - 1+50)				169	cy. @	$1.28 per c.y.=	$216.32	
Road Realignment: Rippable (Sta. 0+00 - 1+50)				8	cy. @	$2.25 per c.y.=	$18.00	
						TOTAL EXCAVATION		**$2,167.90**
ENDHAUL -								
Pullback	3+10	to	3+80	156	cy. @	$2.08 per c.y.=	$324.48	
Widening	3+10	to	3+80	116	cy. @	$2.08 per c.y.=	$241.28	
Road Realignment	0+00	to	1+50	177	cy. @	$2.12 per c.y.=	$375.24	
Spread & compact (Waste Area)				449	cy. @	$0.25 per c.y.=	$112.25	
						TOTAL ENDHAUL		**$1,053.25**
ROCK								
0+00 to	10+30	√	531 cy. of	Pit-Run		@	$8.39 per c.y.=	$4,455.09
Landing	Sta. 10+30	√	30 cy. of	Pit-Run		@	$8.36 per c.y.=	$250.80
							TOTAL ROCK	**$4,705.89**
SPECIAL PROJECTS								
Construct waste areas -				1.50	hours @	$130.00 per hour	$195.00	
Grade and shape road -				10.30	stations @	$14.00 per station	$144.20	
Roll subgrade w/ vibratory roller prior to rocking -				10.30	stations @	$13.20 per station	$135.96	
Remove large stumps -				3.00	lump sum @	$130.00	$390.00	
Grass seed and fertilize -				1.15	acres @	$220.00 per acre	$253.00	
Mulching (sidecast pullback area: Sta. 3+10 - 3+80 & Waste Area) -				0.820	acres @	$600.00 per acre	$492.00	
						TOTAL SPECIAL PROJECTS		**$1,610.16**
						GRAND TOTAL		**$10,512.20**

SUMMARY OF CONSTRUCTION COST

Sale: **Sibley Arch** Road: **E to F**

Construction - 15+50 stations, 0.29 miles

Improvement - 1+40 stations, 0.03 miles

CLEARING AND GRUBBING -							
Endhaul			1.29	acres @	$1,500.00	per acre =	$1,935.00
						TOTAL CLEARING AND GRUBBING	**$1,935.00**
EXCAVATION -							
Common			2061	cy. @	$1.40	per c.y.=	$2,885.40
Rippable			2577	cy. @	$3.20	per c.y.=	$8,246.40
Solid			1087	cy. @	$6.00	per c.y.=	$6,522.00
						TOTAL EXCAVATION	**$17,653.80**
ENDHAUL -							
Fill Material (sta. 7+60 - 10+60) From Sta. 10+60 - 16+90			3099	cy. @	$1.30	per c.y.=	$4,028.70
To Waste Area			1979	cy. @	$2.55	per c.y.=	$5,046.45
Spread & compact (fill material)			3746	cy. @	$0.45	per c.y.=	$1,685.70
Spread & compact (waste area)			1979	cy. @	$0.25	per c.y.=	$494.75
						TOTAL ENDHAUL	**$11,255.60**
ROCK							
1+40 to 8+40		75	cy. of	Crushed		@	$4.12 per c.y.= $309.00
12+05 to 16+05		45	cy. of	Crushed		@	$4.12 per c.y.= $185.40
0+00 to 16+90		891	cy. of	Pit-Run		@	$8.54 per c.y.= $7,609.14
Landing 16+90		40	cy. of	Pit-Run		@	$8.56 per c.y.= $342.40
						TOTAL ROCK	**$8,445.94**
SPECIAL PROJECTS							
Construct ditchouts (Sta. 7+70 & 10+25)-			2.00	@	$60.00	each	$120.00
Grade and shape road -			16.90	stations @	$14.00	per station	$236.60
Roll subgrade w/ vibratory roller prior to rocking -			16.90	stations @	$13.20	per station	$223.08
Remove large stumps -			4.00	lump sum @	$130.00		$520.00
Grass seed and fertilize -			0.88	acres @	$220.00	per acre	$193.60
Mulching (Waste Areas) -			0.500	acres @	$600.00	per acre	$300.00
						TOTAL SPECIAL PROJECTS	**$1,593.28**
						GRAND TOTAL	**$40,883.62**

SUMMARY OF CONSTRUCTION COST

Sale: **Sibley Arch** Road: **E to G**

Construction - 1+80 stations, 0.03 miles Improvement - 0+00 stations, 0.00 miles

CLEARING AND GRUBBING -							
Scattering	0.170	acres	@	$980.00	per acre =	$166.60	
TOTAL CLEARING AND GRUBBING							**$166.60**
EXCAVATION -							
Road Earthwork:							
Common	391	cy.	@	$1.28	per c.y.=	$500.48	
Rippable	257	cy.	@	$2.25	per c.y.=	$578.25	
TOTAL EXCAVATION							**$1,078.73**
ENDHAUL -							
Waste Area	590	cy.	@	$1.22	per c.y.=	$719.80	
Spread & compact (Fill Material)	58	cy.	@	$0.45	per c.y.=	$26.10	
Spread & compact (Waste Area)	590	cy.	@	$0.25	per c.y.=	$147.50	
TOTAL ENDHAUL							**$893.40**
ROCK							
0+00 to 1+80	116	cy. of	Pit-Run		@	$8.41 per c.y.=	$975.56
Landing (Sta. 1+80)	118	cy. of	Pit-Run		@	$8.31 per c.y.=	$980.58
TOTAL ROCK							**$1,956.14**
SPECIAL PROJECTS							
Construct ditchouts (Sta. 0+75) -	1.00		@	$60.00	each	$60.00	
Grade and shape road (outsloped) -	1.80	stations	@	$14.00	per station	$25.20	
Roll subgrade w/ vibratory roller prior to rocking -	1.80	stations	@	$13.20	per station	$23.76	
Grass seed and fertilize -	0.12	acres	@	$220.00	per acre	$26.40	
Mulching -	0.041	acres	@	$600.00	per acre	$24.60	
TOTAL SPECIAL PROJECTS							**$159.96**
GRAND TOTAL							**$4,254.83**

SUMMARY OF VACATING COST

Sale: **Sibley Arch** Road: **H to I**

Construction - 0+00 stations, 0.00 miles

Improvement - 0+00 stations, 0.00 miles

EXCAVATION -						
Pullback slope of old landing	50	cy. @	$1.40	per c.y.=	$70.00	
Construct Waterbars	2	@	$25.00	each =	$50.00	
				TOTAL EXCAVATION		**$120.00**
ENDHAUL -						
Pullback	50	cy. @	$1.52	per c.y.=	$76.00	
Spread & compact	50	cy. @	$0.25	per c.y.=	$12.50	
				TOTAL ENDHAUL		**$88.50**
SPECIAL PROJECTS						
Grass seed and fertilize -	0.05	acres @	$220.00	per acre	$11.00	
Mulching -	0.050	acres @	$600.00	per acre	$30.00	
				TOTAL SPECIAL PROJECTS		**$41.00**
				GRAND TOTAL		**$249.50**

SUMMARY OF CONSTRUCTION COST

Sale: **Sibley Arch** Road: **Point "J"**

Construction - 0+00 stations, 0.00 miles Improvement - 0+00 stations, 0.00 miles

EXCAVATION -								
Earthwork				1.50	Hours @	$145.00	per Hour =	$217.50
Remove slash piles				1	Hours @	$145.00	per Hour =	$145.00
							TOTAL EXCAVATION	**$362.50**
ROCK								
Turnaround Rock	✓ 138	cy. of	Pit-Run		@	$6.49	per c.y.=	$895.62
							TOTAL ROCK	**$895.62**
SPECIAL PROJECTS								
Construct waste areas -				0.50	hours @	$130.00	per hour	$65.00
Grade and shape road -				0.50	hours @	$95.00	per hour	$47.50
Roll subgrade w/ vibratory roller prior to rocking -				0.50	hours @	$85.00	per hour	$42.50
Grass seed and fertilize -				0.10	acres @	$220.00	per acre	$22.00
Mulching (Waste Area) -				0.050	acres @	$600.00	per acre	$30.00
							TOTAL SPECIAL PROJECTS	**$207.00**
							GRAND TOTAL	**$1,465.12**

SUMMARY OF CONSTRUCTION COST

Sale: **Sibley Arch** Road: **K to L**

Construction - 0+00 stations, 0.00 miles Improvement - 61+85 stations, 1.17 miles

CLEARING AND GRUBBING -						
Roadside Brushing	1.17	miles @	$1,300.00	per mile =	$1,521.00	
				TOTAL CLEARING AND GRUBBING		**$1,521.00**
EXCAVATION -						
Road Earthwork Sta. 0+00 - 27+05)	27.05	sta. @	$90.00	per sta. =	$2,434.50	
Remove ditchline material (Sta. 27+05 - 61+85)	40.10	Stations @	$100.00	per sta.=	$4,010.00	
Remove existing large waterbars (Sta. 33+60, 38+40, 42+70, 45+10, 46+65, 48+90, 53+00, & 55+55)	2.5	Hours @	$145.00	per Hour =	$362.50	
Remove Large Boulder in Subgrade (Sta. 9+15)	1.5	Hours @	$145.00	per Hour =	$217.50	
Construct Turnarounds (Sta. 25+75 & 59+45)	2	@	$75.00	each =	$150.00	
Construct Turnouts (Sta. 5+50, 21+75, 32+10, 41+20, 44+10, & 50+55)	6	@	$60.00	each =	$360.00	
				TOTAL EXCAVATION		**$7,534.50**
ENDHAUL -						
Ditchline material (Sta. 27+05 - 61+85)	375	cy. @	$1.65	per c.y.=	$618.75	
Spread & compact Waste Area	375	cy. @	$0.25	per c.y.=	$93.75	
				TOTAL ENDHAUL		**$712.50**

CULVERTS - MATERIALS & INSTALLATION

Culverts						
176	LF of 18"	$2,992.00	32	LF of 24"	$768.00	
Half Rounds						
30	LF of 21"	$342.00				
Culvert Stakes & Markers						
6 stakes		$48.00				
7 markers		$56.00				
		$104.00		TOTAL CULVERTS		**$4,206.00**

ROCK								
0+00 to	61+85	662	cy. of	Crushed	@	$10.78	per c.y.=	$7,136.36
Culvert Bedding/Backfill	(Sta. 48+90)	15	cy. of	Crushed	@	$9.38	per c.y.=	$140.70
Junctions (Sta. 0+00 & 27+05)		12	cy. of	Crushed	@	$10.41	per c.y.=	$124.92
Energy Dissipator	(Sta. 14+55)	10	cy. of	Riprap	@	$7.50	per c.y.=	$75.00
0+00 to	27+05	2,033	cy. of	Pit-Run	@	$5.88	per c.y.=	$11,954.04
27+05 to	61+85	1,927	cy. of	Pit-Run	@	$6.42	per c.y.=	$12,371.34
Junctions (Sta. 0+00 & 27+05)		70	cy. of	Pit-Run	@	$5.76	per c.y.=	$403.20
							TOTAL ROCK	**$32,205.56**

SPECIAL PROJECTS						
Construct waste areas -	1.50	hours @	$130.00	per hour	$195.00	
Construct ditchouts (21+75, 26+15, 50+55, 52+75, 54+45, 55+55, 58+35(2)) -	7.00	@	$60.00	each	$420.00	
Grade and shape road -	61.85	stations @	$15.50	per station	$958.68	
Roll subgrade w/ vibratory roller prior to rocking -	61.85	stations @	$13.20	per station	$816.42	
Remove culverts from state lands	1.00	@	$142.90	total	$142.90	
Grass seed and fertilize -	1.75	acres @	$220.00	per acre	$385.00	
Mulching (Waste Areas & Areas Near Streams) -	0.800	acres @	$600.00	per acre	$480.00	
				TOTAL SPECIAL PROJECTS		**$3,398.00**

GRAND TOTAL **$49,577.56**

SUMMARY OF CONSTRUCTION COST

Sale: **Sibley Arch** Road: **M to N**

Construction - 1+95 stations, 0.04 miles

Reconstruction - 20+45 stations, 0.39 miles

CLEARING AND GRUBBING -							
Scattering		0.930	acres @	$980.00	per acre =	$911.40	
					TOTAL CLEARING AND GRUBBING		**$911.40**
EXCAVATION -							
Road Earthwork (reconstruction: Sta. 0+00 - 13+35 & 15+30 - 22+40)		20.45	sta. @	$90.00	per sta. =	$1,840.50	
Road Earthwork (construction: Sta. 13+35 - 15+30)		2	sta. @	$140.00	per sta.=	$280.00	
Fill removal and placement (Sta. 4+45)		4	Hrs. @	$145.00	per hour=	$580.00	
Construct landing (Sta. 22+40)		1	@	$250.00	each =	$250.00	
Construct Turnouts (Sta. 2+85 & 13+35)		2	@	$60.00	each =	$120.00	
Construct Turnaround (Sta. 20+50)		1	@	$75.00	each =	$75.00	
					TOTAL EXCAVATION		**$3,145.50**
ENDHAUL -							
Spread & compact fill		2	Hrs. @	$102.50	per hour=	$205.00	
					TOTAL ENDHAUL		**$205.00**
CULVERTS - MATERIALS & INSTALLATION							
Culverts							
68 LF of 18"				$1,156.00			
60 LF of 24"				$1,440.00			
Culvert Stakes & Markers							
3 markers				$24.00			
					TOTAL CULVERTS		**$2,620.00**
ROCK							
0+00 to 22+40		1,159	cy. of Pit-Run		@	$6.31 per c.y.=	$7,313.29
Culvert bedding/backfill (STA 4+45)		15	cy. of Crushed		@	$9.12 per c.y.=	$136.80
Landing (STA. 22+40)		82	cy. of Pit-Run		@	$6.39 per c.y.=	$523.98
					TOTAL ROCK		**$7,974.07**
SPECIAL PROJECTS							
Construct ditchouts (Sta. 5+25 & 6+15) -		2.00	@	$60.00	each	$120.00	
Grade and shape road (ditched) - Sta. 5+25 - 7+50 & 9+65 - 22+40		15.00	stations @	$15.50	per station	$232.50	
Grade and shape road (outsloped) - Sta. 0+00 - 5+25 & 7+50 - 9+65		7.40	stations @	$14.00	per station	$103.60	
Roll subgrade w/ vibratory roller prior to rocking -		22.40	stations @	$13.20	per station	$295.68	
Remove culverts from state lands		1.00	@	$142.90	total	$142.90	
Grass seed and fertilize -		0.80	acres @	$220.00	per acre	$176.00	
Mulching (Waste Areas & Areas Near Water) -		0.500	acres @	$600.00	per acre	$300.00	
					TOTAL SPECIAL PROJECTS		**$1,370.68**
					GRAND TOTAL		**$16,226.65**

SUMMARY OF CONSTRUCTION COST

Sale: **Sibley Arch** Road: **O to P**

Construction - 14+50 stations, 0.27 miles

Reconstruction - 3+00 stations, 0.06 miles

CLEARING AND GRUBBING -									
Endhaul					0.92	acres @	$1,500.00 per acre =	$1,380.00	
							TOTAL CLEARING AND GRUBBING		**$1,380.00**
EXCAVATION -									
Excavation (Common)					4334	cy. @	$1.40 per c.y.=	$6,067.60	
Excavation (Rippable)					4509	cy. @	$3.20 per c.y.=	$14,428.80	
							TOTAL EXCAVATION		**$20,496.40**
ENDHAUL -									
To: WA @ Sta. 15+10 - 17+50	From: 6+15 - 17+50				3653	cy. @	$1.18 per c.y.=	$4,310.54	
To: WA @ Point "J"	From: 2+23 - 6+15				1385	cy. @	$1.25 per c.y.=	$1,731.25	
Spread & compact (Fill Material)					3805	cy. @	$0.45 per c.y.=	$1,712.25	
Spread & compact (Waste Area)					5038	cy. @	$0.25 per c.y.=	$1,259.50	
							TOTAL ENDHAUL		**$9,013.54**
ROCK									
0+00 to	17+50	188	cy. of	Crushed		@	$9.65 per c.y.=	$1,814.20	
Junction (Sta. 0+00)		6	cy. of	Crushed		@	$9.12 per c.y.=	$54.72	
0+00 to	17+50	1,322	cy. of	Pit-Run		@	$7.10 per c.y.=	$9,386.20	
Junction (Sta. 0+00)		35	cy. of	Pit-Run		@	$6.83 per c.y.=	$239.05	
Landing	(Sta. 17+50)	39	cy. of	Pit-Run		@	$7.14 per c.y.=	$278.46	
							TOTAL ROCK		**$11,772.63**
SPECIAL PROJECTS									
Construct waste areas -					1.50	hours @	$130.00 per hour	$195.00	
Construct ditchouts (Sta. 2+10, 10+90, & 12+75) -					3.00	@	$60.00 each	$180.00	
Grade and shape road -					17.50	stations @	$14.00 per station	$245.00	
Roll subgrade w/ vibratory roller prior to rocking -					17.50	stations @	$13.20 per station	$231.00	
Remove large stumps -					4.00	lump sum @	$130.00	$520.00	
Grass seed and fertilize -					1.25	acres @	$220.00 per acre	$275.00	
Mulching -					0.500	acres @	$600.00 per acre	$300.00	
							TOTAL SPECIAL PROJECTS		**$1,946.00**
							GRAND TOTAL		**$44,608.57**

Move-In Calculations (McPherson Side)

Sale: **Sibley Arch**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
28.1	Pavement	30
1.5	Main Lines	7
2.7	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move ($/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
0	Drill & Compressor	$0.00		$46.00	0.00	0.00	0	$0.00	$0.00
1	Brush Cutter	$325.03		$4.00	0.00	1.17	1.17	$4.68	$329.71
1	Graders	$363.39		$3.65	0.00	2.27	2.27	$8.29	$371.68
0	Loader (Small)	$0.00	1	$3.55	0.00	0.00	0	$0.00	$0.00
0	Loader (Med. & Large)	$0.00	1	$9.00	0.00	0.00	0	$0.00	$0.00
3	Rollers (smooth/grid) & Compactors	$862.73		$5.00	0.00	2.27	2.27	$34.05	$896.78
0	Excavators (Small)	$0.00		$22.00	0.00	0.00	0	$0.00	$0.00
0	Excavators (Med.)	$0.00		$35.50	0.00	0.00	0	$0.00	$0.00
2	Excavators (Large)	$1,084.40	1	$44.80	0.00	2.27	2.27	$203.39	$1,287.79
1	Tired Backhoes/Skidders	$287.65		$3.00	0.00	1.17	1.17	$3.51	$291.16
0	Tractors (D6)	$0.00	2	$7.10	0.00	0.00	0	$0.00	$0.00
0	Tractors (D7)	$0.00	2	$11.30	0.00	0.00	0	$0.00	$0.00
1	Tractor (D8)	$517.72	2	$15.10	0.00	2.27	2.27	$34.28	$552.00
3	Dump Truck (10 cy +)	$322.70		$2.85	0.00	2.27	2.27	$19.41	$342.11
0	Dump Truck (Off Hiway)	$0.00	1	$4.75	0.00	0.00	0	$0.00	$0.00
0	Water Truck (1500 Gal)	$0.00		$2.85	0.00	0.00	0	$0.00	$0.00
1	Water Truck (2500 Gal)	$102.96		$2.85	0.00	2.27	2.27	$6.47	$109.43
0	Jaw	$1,066.00							
0	2-Stage Crusher	$1,597.00							
0	3-Stage Crusher	$2,489.00							

	TOTAL MOVE-IN COSTS:	$4,180.66

Move-In Calculations (Sibley Side)

Sale: **Sibley Arch**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
28.1	Pavement	30
3.0	Main Lines	7
1.1	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move ($/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Drill & Compressor	$284.63		$46.00	0.00	5.43	5.43	$249.78	$534.41
1	Brush Cutter	$276.73		$4.00	0.00	6.50	6.5	$26.00	$302.73
1	Graders	$309.39		$3.65	0.00	5.43	5.43	$19.82	$329.21
0	Loader (Small)	$0.00	1	$3.55	0.00	0.00	0	$0.00	$0.00
0	Loader (Med. & Large)	$0.00	1	$9.00	0.00	0.00	0	$0.00	$0.00
3	Rollers (smooth/grid) & Compactors	$856.06		$5.00	0.00	5.43	5.43	$81.45	$937.51
0	Excavators (Small)	$0.00		$22.00	0.00	0.00	0	$0.00	$0.00
0	Excavators (Med.)	$0.00		$35.50	0.00	0.00	0	$0.00	$0.00
2	Excavators (Large)	$936.54	1	$44.80	0.00	5.43	5.43	$486.53	$1,423.07
1	Tired Backhoes/Skidders	$285.35		$3.00	0.00	5.43	5.43	$16.29	$301.64
0	Tractors (D6)	$0.00	2	$7.10	0.00	0.00	0	$0.00	$0.00
0	Tractors (D7)	$0.00	2	$11.30	0.00	0.00	0	$0.00	$0.00
1	Tractor (D8)	$454.57	2	$15.10	0.00	5.43	5.43	$81.99	$536.56
3	Dump Truck (10 cy +)	$319.70		$2.85	0.00	5.43	5.43	$46.43	$366.13
0	Dump Truck (Off Hiway)	$0.00	1	$4.75	0.00	0.00	0	$0.00	$0.00
0	Water Truck (1500 Gal)	$0.00		$2.85	0.00	0.00	0	$0.00	$0.00
1	Water Truck (2500 Gal)	$102.00		$2.85	0.00	5.43	5.43	$15.48	$117.48
0	Jaw	$1,066.00							
0	2-Stage Crusher	$1,597.00							
0	3-Stage Crusher	$2,489.00							

	TOTAL MOVE-IN COSTS:	$4,848.74

CRUSHED ROCK STOCKPILE COST SUMMARY

Site:	Sibley/Lost Creek Ridge Junc.	Location:	NE 1/4 of Sec. 20, T3N, R8W, W.M.	
Sale:	**Sibley Arch**		Road:	695 c.y.
Swell:	1.40		Stockpile:	c.y.
Shirinkage	1.16		Total Truck Loads:	695 c.y.
Drill Pct.:	0%		In Place Total:	496 c.y.

Load Dump Truck: $0.70 /cu.yd. x 695 cu.yds. = $486.50

Move in Loader	(Within Area: 1.52 Miles @ $9 Miles)	=	$13.68
Move in 3 Trucks	(Within Area: 1.52 Miles @ $2.85 Miles/Truck)	=	$13.00
		Subtotal	$26.68

TOTAL PRODUCTION COSTS	$513.18

Base Cost (1-1/2"- 0")= $0.74 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
A to B: 2+95 - 8+20	0.93	2.45	0.74	4.12	55		226.60
A to B: 15+90 - 19+20	0.93	2.45	0.74	4.12	38		156.56
A to B: 21+05 - 22+55	0.93	2.45	0.74	4.12	20		82.40
A to B: 24+90 - 45+60	1.26	2.45	0.60	4.31	229		986.99
A to B: 47+70 - 49+30	0.93	2.45	0.74	4.12	20		82.40
A to B: 53+05 - 71+15	0.93	2.45	0.74	4.12	213		877.56
E to F: 1+40 - 8+40	0.93	2.45	0.74	4.12	75		309.00
E to F: 12+05 - 16+25	0.93	2.45	0.74	4.12	45		185.40
				Total C.Y.	695	Sub Total	2,906.91

TOTAL ROCKING COSTS	2,906.91

CRUSHED ROCK STOCKPILE COST SUMMARY

Site:	Cook Creek Road (5.4 Miles)	Location:	SW 1/4 of Sec. 5, T2N, R8W, W.M.		
Sale:	**Sibley Arch**		Road:		898 c.y.
Swell:	1.40		Stockpile:		c.y.
Shirinkage	1.16		Total Truck Loads:		898 c.y.
Drill Pct.:	0%		In Place Total:		641 c.y.

Load Dump Truck:	$0.70 /cu.yd.	x	898 cu.yds.	=		$628.60
Move in Loader	1	@	$304.46	=		$304.46
Move in 3 Trucks	(Within area: 7.5 miles @ $2.85/mile/truck)			=		$64.13
					Subtotal	$368.59
					TOTAL PRODUCTION COSTS	$997.19

Base Cost (2"- 0" crushed)= $1.11 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
K to L: 0+00 - 61+85	7.22	2.45	1.11	10.78	662		7,136.36
K to L (Junctions: 0+00 & 27+05)	6.85	2.45	1.11	10.41	12		124.92
K to L (Culvert Bedding)	7.37	0.90	1.11	9.38	15		140.70
M to N (Culvert Bedding)	7.11	0.90	1.11	9.12	15		136.80
O to P (Junctions: 0+00)	5.56	2.45	1.11	9.12	6		54.72
O to P: 0+00 - 17+50	6.09	2.45	1.11	9.65	188		1,814.20
				Total C.Y.	898	Sub Total	9,407.70
						TOTAL ROCKING COSTS	9,407.70

PIT-RUN ROCK DEVELOPMENT COST SUMMARY

Pit:	A to B Pit-Run Pit	Location:	Between Stations: 66+95 - 71+15 NE 1/4 of Section 27, T3N, R9W, W.M.	
Sale:	**Sibley Arch**		Road:	5293 c.y.
Swell:	1.40		Stockpile:	c.y.
Shirinkage	1.16		Total Truck Loads:	5293 c.y.
Drill Pct.:	33%		In Place Total:	3781 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.						$2,631.04
Drill & Shoot:	$2.50	/cu.yd.	x	1248 cu.yds.	=	$3,120.00
Rip Rock	$1.90	/cu.yd.	x	2533 cu.yds.	=	$4,812.70
Load Dump Truck:	$0.70	/cu.yd.	x	5293 cu.yds.	=	$3,705.10
				Subtotal		$11,637.80

Move In and set up Drill and Compressor	(Within Area: 0.25 Miles @ $46/Mile)			=	$11.50
Move in D-8	(Within Area: 0.25 Miles @ $15.10/Mile)			=	$3.78
Move in Loader	1	@	$304.46	=	$304.46
Move in Excavator	(Within Area: 0.25 Miles @ $44.80/mile)			=	$11.20
Move in Trucks	(Within Area: 0.25 Miles @ $2.85/mile/truck)			=	$2.14
				Subtotal	$333.08
				TOTAL PRODUCTION COSTS	$11,970.88

Base Cost= $2.26 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
A to B	$1.76	$1.10	$2.26	$5.12	5223		$26,741.76
Landing	$0.92	$1.10	$2.26	$4.28	70		$299.60
				Total C.Y.	5293	Sub Total	$27,041.36
						TOTAL ROCKING COSTS	$27,041.36

PIT-RUN ROCK DEVELOPMENT COST SUMMARY

Pit:	Sibley Pit-Run Pit	Location:	NW 1/4 of Sec. 22 & SW 1/4 of Sec.15, T3N, R8W, W.M.	
Sale:	**Sibley Arch**		Road:	1726 c.y.
Swell:	1.40		Stockpile:	c.y.
Shirinkage	1.16		Total Truck Loads:	1726 c.y.
Drill Pct.:	33%		In Place Total:	1233 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.							$532.76
Drill & Shoot:	$2.50	/cu.yd.	x	407	cu.yds.	=	$1,017.50
Rip Rock	$1.90	/cu.yd.	x	826	cu.yds.	=	$1,569.40
Load Dump Truck:	$0.70	/cu.yd.	x	1726	cu.yds.	=	$1,208.20
Push Rock:	$0.60	/cu.yd.	x	1726	cu.yds.	=	$1,035.60
					Subtotal		$5,363.46

Move In and set up Drill and Compressor	(Within Area: 3.48 Miles @ $46/Mile)	=	$160.08
Move in D-8	(Within Area: 3.48 Miles @ $15.10/Mile)	=	$52.55
Move in Loader	(Within Area: 6.43 Miles @ $9/Mile)	=	$57.87
Move in Excavator	(Within Area: 3.48 Miles @ $44.80/mile)	=	$155.90
Move in Trucks	(Within Area: 3.48 Miles @ $2.85/mile/truck)	=	$29.75
		Subtotal	$456.15
		TOTAL PRODUCTION COSTS	$5,819.61

Base Cost= $3.37 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
C to D	$3.92	$1.10	$3.37	$8.39	531		$4,455.09
C to D: Landing	$3.89	$1.10	$3.37	$8.36	30		$250.80
E to F	$4.07	$1.10	$3.37	$8.54	891		$7,609.14
E to F: Landing	$4.09	$1.10	$3.37	$8.56	40		$342.40
E to G	$3.94	$1.10	$3.37	$8.41	116		$975.56
E to G: Landing	$3.84	$1.10	$3.37	$8.31	118		$980.58
				Total C.Y.	1726	Sub Total	$14,613.57
						TOTAL ROCKING COSTS	$14,613.57

PIT-RUN ROCK DEVELOPMENT COST SUMMARY

Pit:	Westwood Pit Run Source	Location:	NW 1/4 of Sec. 32, T3N, R8W, W.M.
Sale:	**Sibley Arch**	Pit-Run:	6805 c.y.
Swell:	1.40	RipRap:	10 c.y.
Shirinkage	1.16	Total Truck Loads:	6815 c.y.
Drill Pct.:	50%	In Place Total:	4868 c.y.

Pit Development:Clearing and grubbing						$200.00
Drill & Shoot:	$2.50	/cu.yd.	x	2434 cu.yds.	=	$6,085.00
Rip Rock	$1.90	/cu.yd.	x	2434 cu.yds.	=	$4,624.60
Load RipRap:	$1.40	/cu.yd.	x	10 cu.yds.	=	$14.00
Load Dump Truck:	$0.70	/cu.yd.	x	6805 cu.yds.	=	$4,763.50
						$15,673.10

Move In and set up Drill and Compressor	1	@	$285.35	=	$285.35
Move in D-8	(Within Area: 2.45 Miles @ $15.10/Mile)			=	$37.00
Move in Loader	1	@	$304.46	=	$304.46
Move in Excavator	(Within Area: 2.45 Miles @ $44.80/Mile)			=	$109.76
Move in 3 Trucks	(Within Area: 2.45 Miles @ $2.85/Mile/Truck)			=	$20.95
				Subtotal	$757.52
				TOTAL PRODUCTION COSTS	$16,430.62

Base Cost P-R=	$2.41	Per Cu.Yd.
Base RR Cost=	$3.11	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
K to L: 0+00 - 27+05	$2.37	$1.10	$2.41	$5.88	2033		$11,954.04
K to L: 27+05 - 61+85	$2.91	$1.10	$2.41	$6.42	1927		$12,371.34
Junctions (0+00 & 27+05)	$2.25	$1.10	$2.41	$5.76	70		$403.20
Energy Dissipater (RipRap)	$2.99	$1.40	$3.11	$7.50	10		$75.00
M to N: 0+00 - 22+40	$2.80	$1.10	$2.41	$6.31	1159		$7,313.29
Landing (22+40)	$2.88	$1.10	$2.41	$6.39	82		$523.98
O to P: 0+00 - 17+50	$3.59	$1.10	$2.41	$7.10	1322		$9,386.20
Junction (0+00)	$3.32	$1.10	$2.41	$6.83	35		$239.05
Landing (17+50)	$3.63	$1.10	$2.41	$7.14	39		$278.46
Point "J"	$2.98	$1.10	$2.41	$6.49	138		$895.62
				Total C.Y.	6815	Sub Total	$43,440.18

TOTAL ROCKING COSTS	$43,440.18

"STEWARDSHIP IN FORESTRY"

CRUISE REPORT

Sibley Arch

1. **Type of Sale**: Modified clearcut, Rentention cut, and Partial Cut- Conifer/Hardwoods Recovery

2. **Legal Description**: Portions of Sections 23, 24, 25, 26, and 27, T3N, R9W and portions of Sections 18, 19, and 30, T3N, 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.

Area	Harvest Type	Sale	Net
1	Modified CC	100	100
2	Modified CC	45	45
3	Retention Cut	119	114
4	Retention Cut	296	260
5	Partial Cut	44	42
Total		604	561

Sale Acres
Area within the Timber Sale Boundary signs

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

4. **Cruising Procedures**:
   A. **Cruise Method**: A total of 116 plots were taken. Cruise lines and plots were placed to obtain representative sampling intensities throughout the five sale areas. All trees were recorded by species, merchantable height, form, and diameter class. Diameters were measured to the nearest inch and heights to the nearest foot. Conifers less than 8'' DBH and hardwood less than 10'' DBH were not sampled.

   B. **Plot size**: All plots were variable radius full point plots. A BAF of 40 was used for conifers and hardwoods in Areas 1, 2, 3, and 5. A 20 BAF was used for hardwoods and a 40 BAF for conifers in Area 4. The point of tree observation was 4.5 feet.

   C. **Grading System**: Tree heights were measured to a 6" merchantable top for Douglas-fir and to a 7" for hemlock/other conifers, and 8" for hardwoods; all measurements were outside bark. Conifer was graded using Columbia River rules favoring a 40' log. Alder was graded to the top end diameter for determining sort while still favoring a 40' log. 2S equals 12" and greater, 3S equals 10" and 11", and 4S equals 8" and 9 ".

D. **Defect and Breakage**: A 5% defect and breakage reduction was applied to conifers and a 10% reduction to hardwood volumes for hidden defect. This was in addition to visual defect deducted during the cruise.

E. **Cruiser Names / Dates:** Sale Prep staff. October, 2006.

5. **Computation Procedures**: Plot data was entered into SuperAce for computation of stand tables. Take and leave trees were determined by reviewing diameters and defect on each plot and SuperAce was rerun to compute basal area, V-BAR, stand tables and diameters. This data was entered into a volume summary worksheet to compute sale volumes. The coefficients of variation and sampling errors for the net MBF/acre are as follows:

Area	C.V (%)	S.E. (%)
1	59.2	12.3
2	27.4	8.7
3	55.4	11.8
4	109.1	16.6
5	63.1	16.9

The statistics for Area 4 had a higher CV/SE % due to targeting alder for removal and getting a sub-sample of Douglas-fir. Statistics for the entire timber sale were 81.3% coefficient of variation and 7.5% standard error. Volumes are based on the statistics for each area.

6. **Timber Description:** The sale contains 40 to 65 year old hemlock, spruce, and Douglas-fir. Portions of the stand are natural regeneration with areas of planted Douglas-fir after the Burn. Red alder is scattered throughout the sale with areas of concentration in the riparian areas. The alder was not aerially sprayed.

7. **Revenue Distribution**:
   100% FDF
   Tax Code: 56-1
   Deed No. 35, 36, 42, 44, 45, 381, 387, and 902

8. **Appendices**:
   - Stand Table
   - Volume Summary
   - Logging Plan
   - Log Stock Tables

TC TSTNDSUM

Stand Table Summary

Project SIBLEY

T03N R08W S19 T0001

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	08W	19	SBAREA1	0001	100.00	24	128

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
RA		10	3	84	38	9.167	5.00	9.17	6.4	26.7	1.65	59	244	165	59	24
RA		11	13	80	55	33.298	21.67	33.30	9.9	34.3	9.12	331	1,143	912	331	114
RA		12	12	79	62	25.402	20.00	25.40	16.7	57.5	11.63	423	1,459	1,163	423	146
RA		13	12	80	75	21.737	20.00	25.33	20.4	69.2	14.21	517	1,752	1,421	517	175
RA		14	9	79	73	13.942	15.00	15.42	24.0	75.7	10.17	370	1,167	1,017	370	117
RA		15	14	79	65	19.240	23.33	21.97	25.0	71.9	15.12	550	1,579	1,512	550	158
RA		16	12	80	78	14.456	20.00	22.94	22.8	79.3	14.39	523	1,818	1,439	523	182
RA		17	15	80	76	15.907	25.00	24.48	28.7	89.4	19.33	704	2,190	1,933	704	219
RA		18	4	79	70	3.871	6.67	5.76	30.3	100.6	4.80	174	579	480	174	58
RA		19	5	80	75	4.334	8.33	6.06	39.4	120.1	6.57	239	728	657	239	73
RA		21	3	80	65	2.099	5.00	2.79	45.2	125.2	3.47	126	349	347	126	35
RA		22	2	80	78	1.280	3.33	2.56	40.5	127.7	2.85	104	327	285	104	33
RA		23	2	79	55	1.155	3.33	1.16	72.0	125.0	2.29	83	144	229	83	14
RA		Totals	106	80	65	165.888	176.67	196.34	21.4	68.7	115.59	4,203	13,482	11,559	4,203	1,348
DF		10	1	70	32	2.825	1.67	2.83	6.8	20.0	.55	19	57	55	19	6
DF		11	1	79	38	2.525	1.67	2.53	8.9	30.0	.64	22	76	64	22	8
DF		12	1	75	47	2.122	1.67	2.12	14.3	30.0	.86	30	64	86	30	6
DF		13	2	79	72	3.703	3.33	5.51	15.2	50.2	2.39	84	276	239	84	28
DF		15	1	78	47	1.358	1.67	1.36	24.5	40.0	.95	33	54	95	33	5
DF		16	1	90	115	1.150	1.67	2.30	27.4	120.0	1.80	63	276	180	63	28
DF		17	2	86	104	2.165	3.33	4.33	28.2	115.0	3.48	122	498	348	122	50
DF		18	1	87	110	.986	1.67	1.97	30.9	120.0	1.74	61	237	174	61	24
DF		19	1	87	66	.865	1.67	.86	46.3	150.0	1.14	40	130	114	40	13
DF		Totals	11	79	64	17.700	18.33	23.81	20.0	70.0	13.56	476	1,667	1,356	476	167
DL		20	1	88	105	.764	1.67	1.53	40.1	150.0	1.68	61	229	168	61	23
DL		22	4	86	96	2.544	6.67	5.10	45.1	170.1	6.32	230	867	632	230	87
DL		Totals	5	86	98	3.308	8.33	6.63	43.9	165.5	8.01	291	1,097	801	291	110
BM		13	1	80	39	1.808	1.67	1.81	13.3	40.0	.64	24	72	64	24	7
BM		14	1	80	61	1.559	1.67	1.56	22.0	60.0	.91	34	94	91	34	9
BM		22	1	79	21	.631	1.67	.63	28.4	40.0	.48	18	25	48	18	3
BM		24	1	80	49	.531	1.67	.53	73.3	90.0	1.03	39	48	103	39	5
BM		32	1	80	30	.298	1.67	.30	80.1	50.0	.63	24	15	63	24	1
BM		Totals	5	80	44	4.828	8.33	4.83	28.8	52.6	3.69	139	254	369	139	25
WL		20	1	86	70	.742	1.67	1.48	29.4	110.0	1.40	44	163	140	44	16
WL		Totals	1	86	70	.742	1.67	1.48	29.4	110.0	1.40	44	163	140	44	16
Totals			128	80	65	192.465	213.33	233.09	22.1	71.5	142.24	5152	16,662	14,224	5,152	1,666

TC TSTNDSUM

Stand Table Summary

Project SIBLEY

T03N R08W S19 T0002

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	08W	19	SBAREA2	0002	45.00	11	51

Date: 11/22/20(
Time: 6:53:14AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
RA		10	3	80	52	19.611	10.91	19.61	5.5	20.0	2.97	108	392	134	49	18
RA		11	9	81	73	49.354	32.73	54.67	13.2	50.5	19.83	721	2,762	892	325	124
RA		12	5	83	83	23.355	18.18	23.36	21.9	81.7	14.06	511	1,907	633	230	86
RA		13	3	81	91	12.095	10.91	20.12	15.6	62.1	8.64	314	1,249	389	141	56
RA		14	8	80	78	28.127	29.09	35.23	21.2	72.9	20.51	746	2,570	923	336	116
RA		15	3	79	78	9.024	10.91	9.02	31.3	94.2	7.77	283	850	350	127	38
RA		16	4	82	112	10.925	14.55	21.85	23.5	93.7	14.12	514	2,048	636	231	92
RA		17	1	80	96	2.362	3.64	4.72	26.9	100.0	3.49	127	472	157	57	21
RA		19	1	84	89	1.809	3.64	3.62	35.6	120.0	3.54	129	434	159	58	20
RA		26	1	79	80	.986	3.64	1.97	58.4	210.0	3.17	115	414	142	52	19
RA		Totals	38	81	78	157.648	138.18	194.18	18.4	67.5	98.11	3,568	13,099	4,415	1,605	589
WH		8	1	87	52	10.417	3.64	10.42	5.0	30.0	1.68	53	313	76	24	14
WH		10	3	85	51	21.030	10.91	21.03	8.6	33.0	5.79	181	695	260	81	31
WH		11	2	87	66	11.138	7.27	11.14	15.1	59.5	5.37	168	663	241	75	30
WH		Totals	6	86	55	42.586	21.82	42.59	9.4	39.2	12.83	401	1,671	577	180	75
DL		21	1	91	123	1.571	3.64	4.71	34.1	166.7	4.42	161	786	199	72	35
DL		28	1	87	117	.850	3.64	1.70	54.8	235.0	2.56	93	400	115	42	18
DL		51	1	92	149	.051	.73	.15	252.1	1550.0	1.07	39	238	48	17	11
DL		Totals	3	90	121	2.473	8.00	6.57	44.6	216.8	8.05	293	1,424	362	132	64
DF		11	1	80	33	5.130	3.64	5.13	9.6	30.0	1.40	49	154	63	22	7
DF		20	1	88	115	1.718	3.64	3.44	41.6	165.0	4.08	143	567	183	64	26
DF		Totals	2	82	54	6.848	7.27	8.57	22.4	84.1	5.47	192	721	246	86	32
SS		9	1	69	50	8.051	3.64	8.05	8.2	30.0	1.71	66	242	77	30	11
SS		17	1	85	77	2.419	3.64	4.84	22.8	85.0	2.87	110	411	129	50	19
SS		Totals	2	73	56	10.471	7.27	12.89	13.7	50.6	4.58	176	653	206	79	29
Totals			51	82	72	220.026	182.55	264.79	17.5	66.3	129.05	4630	17,567	5,807	2,083	791

TC TSTNDSUM

Stand Table Summary

Project SIBLEY

T03N R08W S19 T0003

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	08W	19	SBAREA3	0003	114.00	23	97

T03N R08W S19 T0003

Date: 11/22/20(

Time: 6:54:47AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
RA		11	2	79	48	5.223	3.48	2.64	12.1	40.0	.88	32	105	100	36	12
RA		12	5	77	69	11.072	8.70	11.07	17.7	60.0	5.39	196	664	614	223	76
RA		13	7	79	61	13.218	12.17	13.22	18.9	55.6	6.87	250	735	783	285	84
RA		14	11	79	65	17.923	19.13	19.55	22.3	68.3	11.99	436	1,335	1,367	497	152
RA		15	4	81	52	5.747	6.96	5.75	24.1	65.2	3.81	138	375	434	158	43
RA		16	6	79	61	7.414	10.43	8.60	27.1	73.0	6.41	233	628	731	266	72
RA		17	4	78	45	4.388	6.96	4.39	31.1	70.0	3.75	136	307	427	155	35
RA		18	4	80	71	3.884	6.96	6.83	27.9	88.4	5.24	190	603	597	217	69
RA		19	5	76	60	4.483	8.70	4.48	49.0	108.2	6.04	220	485	688	250	55
RA		20	1	69	30	.797	1.74	.80	31.7	40.0	.69	25	32	79	29	4
RA		22	3	82	43	1.970	5.22	1.97	49.5	73.3	2.68	98	144	306	111	16
RA		24	1	80	70	.554	1.74	1.11	45.8	160.0	1.39	51	177	159	58	20
RA		25	1	80	57	.510	1.74	.51	86.9	180.0	1.22	44	92	139	51	10
RA		26	1	80	26	.472	1.74	.47	46.1	120.0	.60	22	57	68	25	6
RA		Totals	55	79	60	77.655	95.65	81.38	25.4	70.5	56.95	2,071	5,740	6,492	2,361	654
DL		17	3	81	72	3.210	5.22	5.37	25.9	78.2	3.83	139	420	436	159	48
DL		18	2	86	96	1.968	3.48	3.94	29.0	112.5	3.14	114	443	358	130	50
DL		19	2	80	88	1.767	3.48	3.53	32.8	95.0	3.19	116	336	363	132	38
DL		20	3	84	82	2.416	5.22	4.03	38.6	123.8	4.28	156	499	488	177	57
DL		21	3	78	84	2.169	5.22	4.34	38.1	106.7	4.55	165	463	518	188	53
DL		23	2	87	86	1.206	3.48	2.41	47.1	167.5	3.12	114	404	356	129	46
DL		24	2	84	93	1.107	3.48	2.21	52.7	192.5	3.21	117	426	366	133	49
DL		25	1	88	77	.510	1.74	1.02	52.2	195.0	1.47	53	199	167	61	23
DL		27	2	82	90	.872	3.48	1.74	61.1	231.8	2.93	107	404	334	121	46
DL		28	1	78	102	.419	1.74	.84	76.4	240.0	1.76	64	201	201	73	23
DL		Totals	21	82	84	15.643	36.52	29.44	38.9	128.9	31.46	1,144	3,795	3,587	1,304	433
DF		9	2	80	48	7.873	3.48	7.87	6.6	30.0	1.49	52	236	170	60	27
DF		10	1	85	79	3.189	1.74	3.19	11.6	40.0	1.05	37	128	120	42	15
DF		11	2	84	56	5.270	3.48	5.27	12.3	45.0	1.85	65	237	210	74	27
DF		12	4	82	58	8.821	6.96	8.82	15.0	50.1	3.77	132	442	430	151	50
DF		13	2	81	59	3.774	3.48	3.77	17.1	55.0	1.84	64	208	209	73	24
DF		14	4	81	77	6.418	6.96	12.93	14.6	48.9	5.37	189	632	613	215	72
DF		15	2	88	85	2.834	3.48	5.67	18.2	72.5	2.94	103	411	336	118	47
DF		16	3	77	67	3.737	5.22	4.98	24.8	62.5	3.53	124	311	402	141	35
DF		18	1	82	81	.984	1.74	1.97	27.0	85.0	1.52	53	167	173	61	19
DF		Totals	21	82	63	42.900	36.52	54.47	15.0	50.9	23.36	820	2,772	2,663	934	316
Totals			97	80	64	136.199	168.70	165.28	24.4	74.5	111.77	4035	12,307	12,742	4,600	1,403

TC TSTNDSUM

Stand Table Summary

Project SIBLEY

T03N R08W S19 T0004

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	08W	19	SBAREA4	0004	260.00	43	263

T03N R08W S19 T0004
Page: 1
Date: 11/22/20(
Time: 6:55:50AM

Spc	ST	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
RA		10	2	80	39	1.639	.93	.82	5.8	20.0	.13	5	16	34	12	4
RA		11	16	80	46	11.222	7.44	10.57	9.5	33.3	2.77	101	352	721	262	91
RA		12	17	79	49	10.105	7.91	8.25	14.6	48.6	3.31	120	400	861	313	104
RA		13	20	81	61	10.001	9.30	10.50	18.3	58.5	5.29	192	614	1,376	500	160
RA		14	26	80	67	11.454	12.09	12.32	22.4	70.1	7.59	276	863	1,974	718	224
RA		15	19	81	60	7.201	8.84	7.20	28.3	77.3	5.60	204	557	1,457	529	145
RA		16	15	81	58	5.069	6.98	6.40	25.3	70.7	4.45	162	452	1,157	420	118
RA		17	18	81	53	5.349	8.37	5.64	32.6	76.8	5.06	184	433	1,317	479	113
RA		18	8	78	59	2.131	3.72	2.65	33.2	79.4	2.41	88	210	628	228	55
RA		19	14	78	42	3.320	6.51	3.55	32.6	83.0	3.18	116	295	828	301	77
RA		20	5	78	52	1.095	2.33	1.53	33.5	80.1	1.41	51	123	365	133	32
RA		21	10	80	50	1.960	4.65	2.54	38.5	94.3	2.70	98	240	701	255	62
RA		22	6	79	47	1.056	2.79	1.06	55.2	90.1	1.60	58	95	417	152	25
RA		23	4	79	50	.645	1.86	.80	51.7	111.7	1.14	42	90	297	108	23
RA		24	2	78	48	.294	.93	.44	43.0	97.4	.53	19	43	137	50	11
RA		30	3	80	52	.282	1.40	.37	84.9	224.1	.87	32	84	227	83	22
RA		31	1	80	29	.089	.47	.09	72.3	120.0	.18	6	11	46	17	3
RA		Totals	186	80	55	72.912	86.51	74.74	23.5	65.3	48.24	1,754	4,878	12,541	4,560	1,268
DL		18	1	84	98	.557	.93	1.11	29.5	110.0	.90	33	123	235	86	32
DL		20	1	85	88	.431	.93	.86	34.7	115.0	.82	30	99	214	78	26
DL		21	2	87	126	.789	1.86	2.37	34.9	154.8	2.27	83	366	591	215	95
DL		23	1	90	121	.322	.93	.97	42.0	190.0	1.12	41	184	290	106	48
DL		24	3	86	121	.906	2.79	2.10	55.1	230.3	3.19	116	485	829	301	126
DL		25	5	87	107	1.372	4.65	3.02	58.9	242.2	4.89	178	732	1,273	463	190
DL		26	2	86	120	.511	1.86	1.79	43.8	189.2	2.16	78	339	561	204	88
DL		27	1	85	89	.237	.93	.47	64.1	230.0	.84	30	109	218	79	28
DL		28	4	86	111	.869	3.72	1.96	76.3	319.0	4.10	149	624	1,067	388	162
DL		29	3	88	92	.606	2.79	1.21	81.2	335.0	2.71	98	406	703	256	105
DL		30	1	78	114	.190	.93	.38	93.2	340.0	.97	35	129	253	92	34
DL		32	3	85	123	.509	2.79	1.69	70.5	327.8	3.28	119	555	854	310	144
DL		34	1	85	109	.152	.93	.30	120.0	510.0	1.00	36	155	261	95	40
DL		35	1	84	118	.143	.93	.43	81.3	420.0	.96	35	181	250	91	47
DL		Totals	29	86	111	7.593	26.98	18.67	56.9	240.2	29.22	1,062	4,485	7,597	2,762	1,166
DF		9	4	87	48	8.261	3.72	6.01	7.4	33.2	1.27	45	200	331	116	52
DF		11	1	84	46	1.436	.93	1.44	10.6	30.0	.43	15	43	112	39	11
DF		12	1	85	84	1.204	.93	1.20	18.5	70.0	.64	22	84	165	58	22
DF		14	2	88	87	1.704	1.86	3.41	16.3	64.8	1.58	55	221	411	144	57
DF		15	3	87	79	2.298	2.79	3.87	20.5	72.0	2.26	79	278	588	206	72
DF		16	3	85	78	1.974	2.79	3.28	23.8	79.9	2.23	78	262	580	203	68
DF		17	1	88	87	.612	.93	1.22	24.0	90.0	.84	29	110	218	76	29
DF		18	1	87	99	.557	.93	1.11	29.9	100.0	.94	33	111	245	86	29
DF		19	4	88	109	1.905	3.72	5.25	28.0	117.3	4.18	147	615	1,087	382	160
DF		21	2	87	125	.782	1.86	2.35	34.8	156.3	2.33	82	367	605	212	95
DF		22	3	87	106	1.041	2.79	2.78	39.1	161.2	3.09	109	448	804	282	116
DF		23	3	86	125	.976	2.79	2.93	41.6	180.2	3.47	122	528	903	317	137
DF		24	1	89	120	.296	.93	.89	43.6	190.0	1.10	39	169	287	101	44
DF		25	1	85	94	.269	.93	.54	63.4	220.0	.97	34	118	252	89	31
DF		30	1	84	129	.188	.93	.56	72.3	330.0	1.16	41	186	302	106	48
DF		34	1	85	140	.148	.93	.45	98.9	480.0	1.25	44	214	326	114	56
DF		Totals	32	87	76	23.652	29.77	37.28	26.1	106.1	27.76	974	3,954	7,218	2,533	1,028

TC TSTNDSUM

Stand Table Summary

Project SIBLEY

T03N R08W S19 T0004

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	08W	19	SBAREA4	0004	260.00	43	263

Date: 11/22/20(
Time: 6:55:50AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
WL		24	1	81	104	.291	.93	.58	61.3	215.0	1.14	36	125	297	93	33
WL		34	1	82	113	.152	.93	.30	128.8	540.0	1.25	39	164	326	102	43
WL		36	2	77	114	.265	1.86	.66	117.4	467.0	2.49	78	309	647	202	80
WL		42	1	86	129	.099	.93	.30	150.2	780.0	1.43	45	232	371	116	60
WL		Totals	5	80	112	.808	4.65	1.85	106.9	449.9	6.31	197	830	1,641	513	216
WH		11	1	89	47	1.410	.93	1.41	11.5	40.0	.52	16	56	135	42	15
WH		17	1	81	80	.577	.93	1.15	25.0	85.0	.92	29	98	240	75	25
WH		Totals	2	87	57	1.986	1.86	2.56	17.6	60.2	1.44	45	154	374	117	40
SL		11	1	82	17	1.490	.93									
SL		18	1	78	42	.544	.93	.54	32.4	40.0	.46	18	22	119	46	6
SL		22	1	85	17	.352	.93	.35	23.9	30.0	.22	8	11	57	22	3
SL		30	1	82	44	.186	.93	.19	100.9	40.0	.49	19	7	127	49	2
SL		46	1	80	61	.080	.93	.16	156.8	605.0	.65	25	97	170	65	25
SL		Totals	5	82	25	2.653	4.65	1.24	56.3	110.1	1.82	70	137	473	182	36
SS		13	1	80	34	1.041	.93	1.04	13.8	30.0	.37	14	31	97	37	8
SS		15	2	82	35	1.138	1.40	1.14	20.3	39.5	.60	23	45	156	60	12
SS		Totals	3	81	35	2.179	2.33	2.18	17.2	35.0	0.97	37	76	253	97	20
CL		32	1	79	73	.081	.47	.16	89.1	240.0	.34	14	39	88	38	10
CL		Totals	1	79	73	.081	.47	.16	89.1	240.0	0.34	14	39	88	38	10
Totals			263	82	62	111.864	157.21	138.68	30.0	104.9	116.10	4155	14,554	30,186	10,802	3,784

TC TSTNDSUM

Stand Table Summary

Project SIBLEY

T03N R08W S19 T0005

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	08W	19	SBAREA5	0005	36.00	15	96

T03N R08W S19 T0005

Page: 1
Date: 11/22/20(
Time: 7:00:56AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DL		15	1	88	91	4.232	5.33	8.46	19.2	75.0	4.46	162	635	161	58	23
DL		16	1	85	98	3.820	5.33	7.64	25.0	95.0	5.26	191	726	189	69	26
DL		19	1	84	94	2.709	5.33	5.42	35.6	120.0	5.30	193	650	191	69	23
DL		20	1	89	101	2.572	5.33	5.14	38.1	150.0	5.38	196	771	194	70	28
DL		22	1	88	144	2.115	5.33	6.35	40.5	193.3	7.07	257	1,227	254	93	44
DL		23	1	89	102	1.932	5.33	3.86	51.3	215.0	5.45	198	831	196	71	30
DL		24	1	85	104	1.698	5.33	3.40	58.6	215.0	5.47	199	730	197	72	26
DL		26	1	84	104	1.447	5.33	2.89	71.9	275.0	5.72	208	796	206	75	29
DL		27	1	87	107	1.341	5.33	4.02	51.5	230.0	5.70	207	926	205	75	33
DL		28	2	88	139	2.468	10.67	7.40	68.7	347.5	13.99	509	2,573	504	183	93
DL		29	2	85	114	2.325	10.67	6.98	63.0	268.3	12.09	440	1,872	435	158	67
DL		34	1	84	113	.846	5.33	2.54	85.3	386.7	5.95	216	981	214	78	35
DL		38	1	89	130	.677	5.33	2.03	120.4	663.3	6.73	245	1,348	242	88	49
DL		Totals	15	87	108	28.182	80.00	66.14	48.7	212.7	88.57	3,221	14,064	3,189	1,159	506
DF		13	1	84	93	5.424	5.00	10.85	15.5	55.0	4.79	168	597	173	61	21
DF		14	1	89	105	4.483	5.00	8.97	18.8	80.0	4.81	169	717	173	61	26
DF		15	1	88	90	4.360	5.00	8.72	18.9	75.0	4.69	165	654	169	59	24
DF		16	1	89	112	3.816	5.00	7.63	25.1	105.0	5.47	192	801	197	69	29
DF		24	2	85	88	3.183	10.00	6.37	52.9	200.0	9.60	337	1,273	345	121	46
DF		31	1	90	134	.985	5.00	1.97	103.2	500.0	5.80	203	985	209	73	35
DF		34	1	90	134	.784	5.00	2.35	104.8	566.7	7.02	246	1,332	253	89	48
DF		Totals	8	87	100	23.036	40.00	46.86	31.6	135.7	42.18	1,480	6,360	1,518	533	229
WH		12	1	90	72	7.347	5.87	7.35	18.5	70.0	4.36	136	514	157	49	19
WH		17	3	89	107	11.080	17.60	22.16	31.1	133.1	22.00	689	2,949	792	248	106
WH		23	1	88	124	2.033	5.87	6.10	45.1	200.0	8.80	275	1,220	317	99	44
WH		Totals	5	89	96	20.460	29.33	35.61	30.9	131.5	35.17	1,100	4,683	1,266	396	169
WL		12	1	86	73	4.365	3.43	4.37	21.1	70.0	2.94	92	306	106	33	11
WL		30	1	88	107	.698	3.43	2.10	69.7	323.3	4.67	146	678	168	53	24
WL		32	1	88	102	.614	3.43	1.23	113.9	455.0	4.48	140	559	161	50	20
WL		34	1	88	99	.544	3.43	1.09	126.2	545.0	4.39	137	593	158	49	21
WL		35	1	87	109	.513	3.43	1.54	94.9	456.7	4.67	146	703	168	53	25
WL		38	1	87	106	.435	3.43	1.31	110.5	556.7	4.62	144	727	166	52	26
WL		41	1	88	104	.374	3.43	1.12	127.1	646.7	4.56	143	725	164	51	26
WL		Totals	7	87	86	7.544	24.00	12.74	74.4	336.6	30.34	948	4,290	1,092	341	154
RA		12	1	84	52	6.145	4.67	6.14	14.2	50.0	2.40	87	307	86	31	11
RA		13	1	81	54	5.063	4.67	5.06	17.8	50.0	2.48	90	253	89	32	9
RA		14	2	80	66	8.731	9.33	8.73	25.5	75.0	6.13	223	655	221	80	24
RA		15	1	80	78	3.753	4.67	3.75	34.9	90.0	3.60	131	338	130	47	12
RA		18	1	90	50	2.700	4.67	2.70	35.6	80.0	2.65	96	216	95	35	8
RA		23	1	79	64	1.576	4.67	3.15	39.4	130.0	3.41	124	410	123	45	15
RA		27	1	90	96	1.200	4.67	2.40	57.0	275.0	3.76	137	660	135	49	24
RA		Totals	8	82	62	29.168	37.33	31.94	27.8	88.9	24.42	888	2,839	879	320	102
RL		11	1	79	76	6.350	4.19	6.35	12.6	50.0	2.20	80	317	79	29	11
RL		13	1	80	81	4.546	4.19	4.55	23.5	80.0	2.94	107	364	106	38	13
RL		16	1	79	70	3.001	4.19	3.00	38.5	90.0	3.18	116	270	114	42	10
RL		18	1	80	53	2.371	4.19	2.37	39.0	40.0	2.55	92	95	92	33	3
RL		19	1	80	97	2.221	4.19	4.44	32.8	110.0	4.01	146	489	144	52	18
RL		22	1	79	66	1.587	4.19	3.17	35.5	110.0	3.10	113	349	112	41	13

TC TSTNDSUM

Stand Table Summary

Project SIBLEY

T03N R08W S19 T0005

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	08W	19	SBAREA5	0005	36.00	15	96

Date: 11/22/20(
Time: 7:00:56AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
RL		23	1	89	67	1.440	4.19	2.88	40.6	180.0	3.21	117	518	116	42	19
RL		Totals	7	80	75	21.516	29.33	26.76	28.8	89.8	21.20	770	2,402	763	277	86
CL		40	1	65	84	.306	2.67									
CL		Totals	1	65	84	.306	2.67									
SL		70	1	85	91	.200	5.33									
SL		Totals	1	85	91	.200	5.33									
Totals			52	85	88	130.411	248.00	220.05	38.2	157.4	241.88	8407	34,639	8,708	3,027	1,247

"STEWARDSHIP IN FORESTRY"

Sibley Arch

Volume Summary

Area 1 - Modified Clearcut

100 acres

SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	14	18	91	1.6	160	5%	152
Alder	14	177	76	13.5	1350	10%	1215
TOTAL					1510		1367

Area 2 - Modified Clearcut

45 acres

SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	14	7	99	0.7	32	5%	30
Hemlock	10	22	77	1.7	77	5%	73
Spruce	11	7	90	0.6	27	5%	26
Alder	13	138	95	13.1	590	10%	531
TOTAL					726		660

Area 3 - Retention Cut

114 acres

SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	13	37	76	2.8	319	5%	303
Alder	15	96	60	5.8	661	10%	595
TOTAL					980		898

Area 4 - Retention Cut

260 acres

SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	15	30	133	4.0	1040	5%	988
Hemlock	13	2	83	0.2	52	5%	49
Spruce	14	3	33	0.1	26	5%	25
Alder	15	87	56	4.9	1274	10%	1147
TOTAL					2392		2209

"STEWARDSHIP IN FORESTRY"

Sibley Arch

Volume Summary

Area 5 - Partial Cut							
				42 acres			
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	18	40	160	6.4	269	5%	256
Hemlock	16	29	160	4.6	193	5%	183
Alder	15	37	77	2.8	118	10%	106
TOTAL					580		545

TOTAL SALE VOLUME	561 acres	
SPECIES	Gross (MBF)	Net Vol. (MBF)
Douglas-fir	1820	1729
Hemlock	322	305
Spruce	53	51
Alder	3993	3594
TOTAL	6188	**5679**

TC PLOGSTVB

Log Stock Table - MBF

T03N R08W S19 Ty0001
THRU
T03N R08W S19 Ty0005

Project: SIBLEY
Acres 561.00

Date 1/3/2007
Time 9:43:37AM

Spp	ST	Sort	Grade	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+
RA		DO	2M	20	6		6	.2			6			
RA		DO	2M	21	7		7	.2			7			
RA		DO	2M	27	4		4	.1			4			
RA		DO	2M	32	28		28	.7			12	16		
RA		DO	2M	40	45		45	1.1			32	13		
RA		DO	3M	12	6		6	.2				6		
RA		DO	3M	15	16		16	.4					16	
RA		DO	3M	17	6	6.7	6	.1				6		
RA		DO	3M	20	20		20	.5			9 11			
RA		DO	3M	21	13	3.1	12	.3			4	8		
RA		DO	3M	24	11		11	.3		11				
RA		DO	3M	26	11		11	.3		11				
RA		DO	3M	27	27		27	.7		17	10			
RA		DO	3M	28	26		26	.7		12	14			
RA		DO	3M	29	29		29	.7		29				
RA		DO	3M	30	30		30	.8		27	4			
RA		DO	3M	31	31	9.6	28	.7		28				
RA		DO	3M	32	371	1.0	367	9.2		62	276 14	15		
RA		DO	3M	33	47	3.6	45	1.1		45				
RA		DO	3M	34	24		24	.6		24				
RA		DO	3M	35	28	2.3	27	.7		27				
RA		DO	3M	36	40		40	1.0		23	17			
RA		DO	3M	37	30		30	.7		6	24			
RA		DO	3M	38	38		38	.9		38				
RA		DO	3M	39	32	3.3	31	.8		31				
RA		DO	3M	40	658		657	16.5		330	283 44			
RA		DO	4M	12	18		18	.4		18				
RA		DO	4M	13	12		12	.3		12				
RA		DO	4M	14	7		7	.2		7				
RA		DO	4M	15	45		45	1.1		45				
RA		DO	4M	16	60		60	1.5		60				
RA		DO	4M	17	48	1.5	47	1.2		37		10		
RA		DO	4M	18	46	3.9	44	1.1		44				
RA		DO	4M	19	106	1.7	104	2.6		104				
RA		DO	4M	20	84		84	2.1		84				
RA		DO	4M	21	63		63	1.6		52	11			
RA		DO	4M	22	145		145	3.6		96	35 14			

TC PLOGSTVB

Log Stock Table - MBF

T03N R08W S19 Ty0001
THRU
T03N R08W S19 Ty0005

Project: SIBLEY
Acres 561.00

Date 1/3/2007
Time 9:43:37AM

Spp	ST	Sort	Grade	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+
RA		DO	4M	23	89	1.3	88	2.2				88								
RA		DO	4M	24	37		37	.9				34		3						
RA		DO	4M	25	68	1.5	67	1.7				67								
RA		DO	4M	26	43		43	1.1				43								
RA		DO	4M	27	31		31	.8				31								
RA		DO	4M	28	85		85	2.1				85								
RA		DO	4M	29	112		111	2.8				111								
RA		DO	4M	30	56		56	1.4				56								
RA		DO	4M	31	85		85	2.1				85								
RA		DO	4M	32	237		237	6.0				143	59	18	18					
RA		DO	4M	33	50	4.9	48	1.2				48								
RA		DO	4M	34	110		109	2.7				109								
RA		DO	4M	35	127	1.7	124	3.1				124								
RA		DO	4M	36	85		85	2.1				85								
RA		DO	4M	37	94		94	2.4				94								
RA		DO	4M	38	96		96	2.4				96								
RA		DO	4M	39	80		80	2.0				80								
RA		DO	4M	40	303		303	7.6				269	33							
RA		Totals			4,006		3,979	43.8				2928	754	190	55	37	16			
DF		DO	2M	40	572		568	31.4						59	262	107	102	38		
DF		DO	3M	12	6		6	.3		6										
DF		DO	3M	23	29		29	1.6					29							
DF		DO	3M	24	34		34	1.9		14		20								
DF		DO	3M	26	3		3	.2					3							
DF		DO	3M	32	13		13	.7				13								
DF		DO	3M	35	15		15	.8			15									
DF		DO	3M	40	793		789	43.6			115	293	270	95		15				
DF		DO	4M	15	2		2	.1		2										
DF		DO	4M	16	4		4	.2		4										
DF		DO	4M	17	2		2	.1			2									
DF		DO	4M	18	5		5	.3		5										
DF		DO	4M	19	2		2	.1				2								
DF		DO	4M	20	12		12	.7		12										
DF		DO	4M	21	9		9	.5		4	5									
DF		DO	4M	22	9		9	.5			9									
DF		DO	4M	23	7		7	.4		7										
DF		DO	4M	24	20		20	1.1		20										

TC PLOGSTVB

Log Stock Table - MBF

T03N R08W S19 Ty0001
THRU
T03N R08W S19 Ty0005

Project: SIBLEY
Acres 561.00

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Spp	ST	Sort	Grade	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+
DF		DO	4M	25	27		27	1.5		27										
DF		DO	4M	26	13		13	.7		13										
DF		DO	4M	27	8		8	.4		8										
DF		DO	4M	28	31		31	1.7		27			4							
DF		DO	4M	29	13		13	.7		13										
DF		DO	4M	31	40		40	2.2		40										
DF		DO	4M	32	10		10	.6		10										
DF		DO	4M	33	30		30	1.6		30										
DF		DO	4M	34	28		28	1.5		28										
DF		DO	4M	36	16		16	.9		16										
DF		DO	4M	37	6		6	.3		6										
DF		DO	4M	40	58		58	3.2		21	26	12								
DF		Totals			1,816		1,807	19.9		313	171	339	306	154	262	123	102	38		
DL		DO	2M	17	20		20	.8										20		
DL		DO	2M	20	18		18	.8									18			
DL		DO	2M	32	35	4.5	34	1.4									28			6
DL		DO	2M	40	1,499		1,493	63.2						129	354	730	242	39		
DL		DO	3M	11	3		3	.1			3									
DL		DO	3M	12	3		3	.1				3								
DL		DO	3M	19	3		3	.1				3								
DL		DO	3M	21	3		3	.1					3							
DL		DO	3M	22	9	7.7	8	.3						8						
DL		DO	3M	23	10		10	.4								10				
DL		DO	3M	32	55		55	2.3			8		29	8	10					
DL		DO	3M	33	23		23	1.0			10	6	7							
DL		DO	3M	35	4		4	.2			4									
DL		DO	3M	38	8		8	.3			4	4								
DL		DO	3M	40	577		573	24.3			36	119	253	107	16	38			4	
DL		DO	4M	12	1		1	.0			1									
DL		DO	4M	13	1		1	.0				1								
DL		DO	4M	14	1		1	.0			1									
DL		DO	4M	16	1		1	.1			1									
DL		DO	4M	17	5		5	.2		2	2	2								
DL		DO	4M	18	9		9	.4		5	3	1								
DL		DO	4M	20	2		2	.1			2									
DL		DO	4M	22	4		4	.2				4								
DL		DO	4M	24	5		5	.2		4	2									

TC PLOGSTVB

Log Stock Table - MBF

T03N R08W S19 Ty0001
THRU
T03N R08W S19 Ty0005

Project: SIBLEY
Acres 561.00

Date 1/3/2007
Time 9:43:37AM

Spp	ST	Sort	Grade	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+
DL		DO	4M	25	3		3	.1				3								
DL		DO	4M	26	5		5	.2		2	3									
DL		DO	4M	27	8		8	.4		3	5									
DL		DO	4M	28	9		9	.4		9										
DL		DO	4M	29	4		4	.2			4									
DL		DO	4M	31	3		3	.1		3										
DL		DO	4M	32	3		3	.1		3										
DL		DO	4M	33	9		9	.4		6	3									
DL		DO	4M	34	5		5	.2					5							
DL		DO	4M	35	5		5	.2		5										
DL		DO	4M	36	6		6	.2		6										
DL		DO	4M	38	3		3	.1		3										
DL		DO	4M	40	13		13	.6		7	6									
DL		Totals			2,374		2,363	26.0		57	99	145	296	252	380	778	288	59	4	6
WL		DO	2M	40	270		270	65.4							27		136	107		
WL		DO	3M	16	12		12	2.9								12				
WL		DO	3M	20	3		3	.7						3						
WL		DO	3M	22	9		9	2.1								9				
WL		DO	3M	24	3		3	.7					3							
WL		DO	3M	32	26		26	6.3						6		20				
WL		DO	3M	40	85	2.4	83	20.0			18		7	9	10		38			
WL		DO	4M	13	1		1	.2					1							
WL		DO	4M	15	2		2	.4				1	1							
WL		DO	4M	17	1		1	.2				1								
WL		DO	4M	38	4		4	1.1			4									
WL		Totals			414		412	4.5			23	1	12	18	37	41	173	107		
WH		DO	2M	40	34		34	10.9								34				
WH		DO	3M	32	30		30	9.5						30						
WH		DO	3M	38	9		9	3.0			9									
WH		DO	3M	40	116		116	37.3				14	66	37						
WH		DO	4M	16	13	50.0	6	2.0						6						
WH		DO	4M	20	2		2	.5			2									
WH		DO	4M	22	13		13	4.2		3	10									
WH		DO	4M	25	14		14	4.5		14										
WH		DO	4M	26	10		10	3.1			10									

TC PLOGSTVB

Log Stock Table - MBF

T03N R08W S19 Ty0001
THRU
T03N R08W S19 Ty0005

Project: SIBLEY
Acres 561.00

Date 1/3/2007
Time 9:43:37AM

Spp	ST	Sort	Grade	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+
WH		DO	4M	29	12		12	3.7			12									
WH		DO	4M	31	15		15	4.7			15									
WH		DO	4M	32	13		13	4.2			13									
WH		DO	4M	40	38		38	12.3			38									
WH		Totals			318	2.0	312	3.4		17	108	14	66	73		34				
BM		DO	4M	19	3		3	10.0				3								
BM		DO	4M	21	7		7	28.5				7								
BM		DO	4M	27	1		1	5.9				1								
BM		DO	4M	31	9		9	36.9				9								
BM		DO	4M	39	5		5	18.8				5								
BM		Totals			25		25	.3				25								
SS		DO	3M	32	15		15	31.0					15							
SS		DO	3M	40	6		6	11.4			6									
SS		DO	4M	21	6		6	12.3			6									
SS		DO	4M	23	3		3	6.6			3									
SS		DO	4M	24	11		11	22.1		11										
SS		DO	4M	26	8		8	16.5		8										
SS		Totals			49		49	.5		19	15		15							
SL		DO	3M	32	23		23	64.5										23		
SL		DO	4M	16	5		5	14.2				3				2				
SL		DO	4M	34	6		6	15.9		6										
SL		DO	4M	40	2		2	5.4		2										
SL		Totals			36		36	.4		8		3				2		23		
CL		DO	2M	40	10		10	95.8								10				
CL		DO	4M	24	1	33.3	0	4.2		0										
CL		Totals			10	2.0	10	.1		0						10				
RL		DO	3M	32	32		32	31.7						13		19				
RL		DO	3M	40	17		17	16.6					17							
RL		DO	4M	16	6		6	5.7				6								
RL		DO	4M	18	2		2	2.4				2								
RL		DO	4M	25	13		13	13.2				13								
RL		DO	4M	37	23	17.1	19	19.1				19								
RL		DO	4M	40	11		11	11.2				11								
RL		Totals			105	3.8	101	1.1				52	17	13		19				

TC PLOGSTVB

Log Stock Table - MBF

T03N R08W S19 Ty0001
THRU
T03N R08W S19 Ty0005

Project: SIBLEY
Acres 561.00

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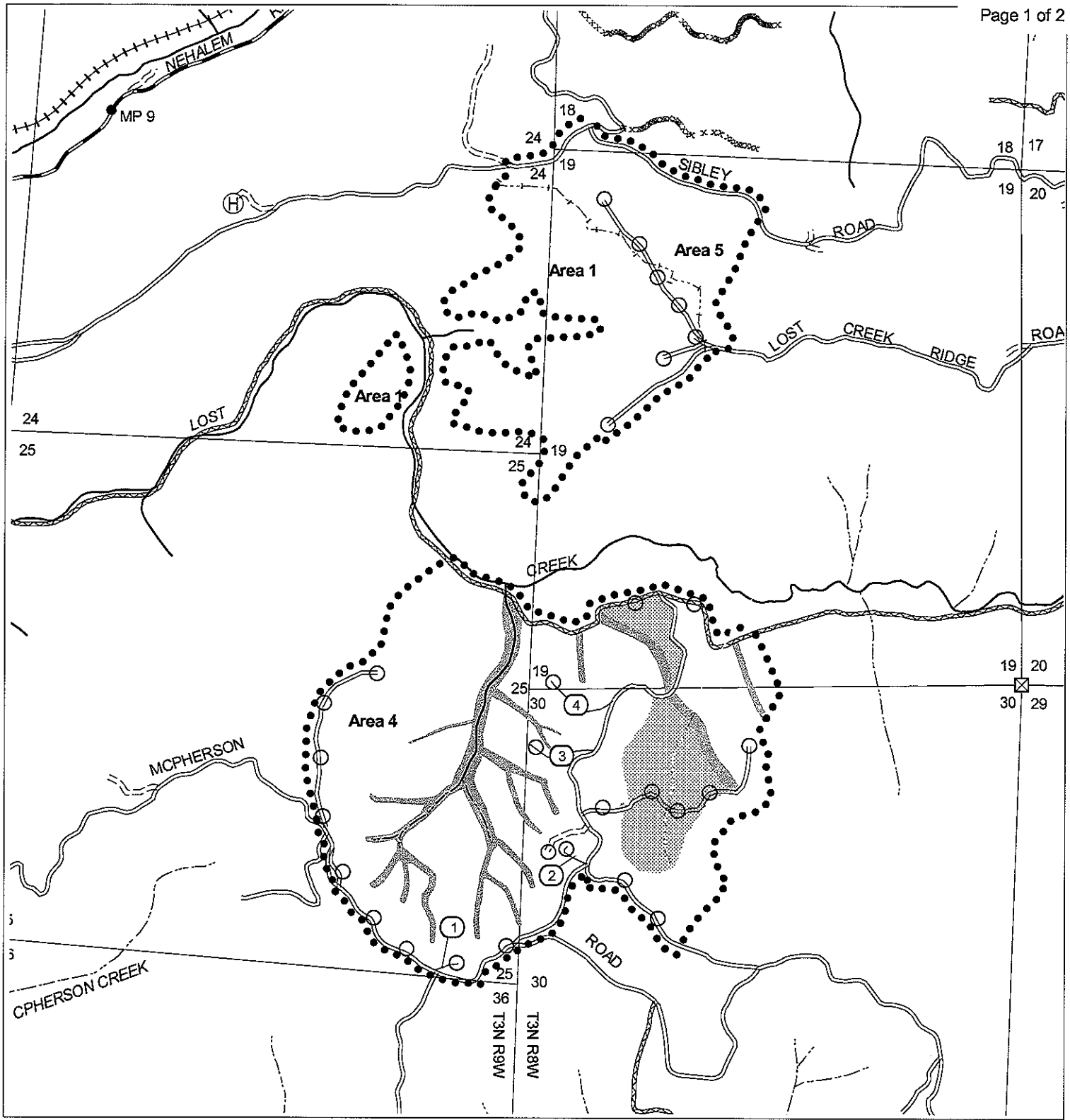
Date 1/3/2007
Time 9:43:37AM

Spp	ST	Sort	Grade	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+
Total		All Species			9,154		9,095	100.0		414	415	3508	1465	699	736	1042	579	226	4	6



- Landing
- Domestic water supply intake
- Helicopter landing zone
- Truck turn-around
- Survey corner
- 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/Federal highway
- County road
- Non-project road
- Swing road
- Legacy road
- Blocked road
- OHV trail
- Non-motorized trail
- RailRoad Tracks

LOGGING PLAN

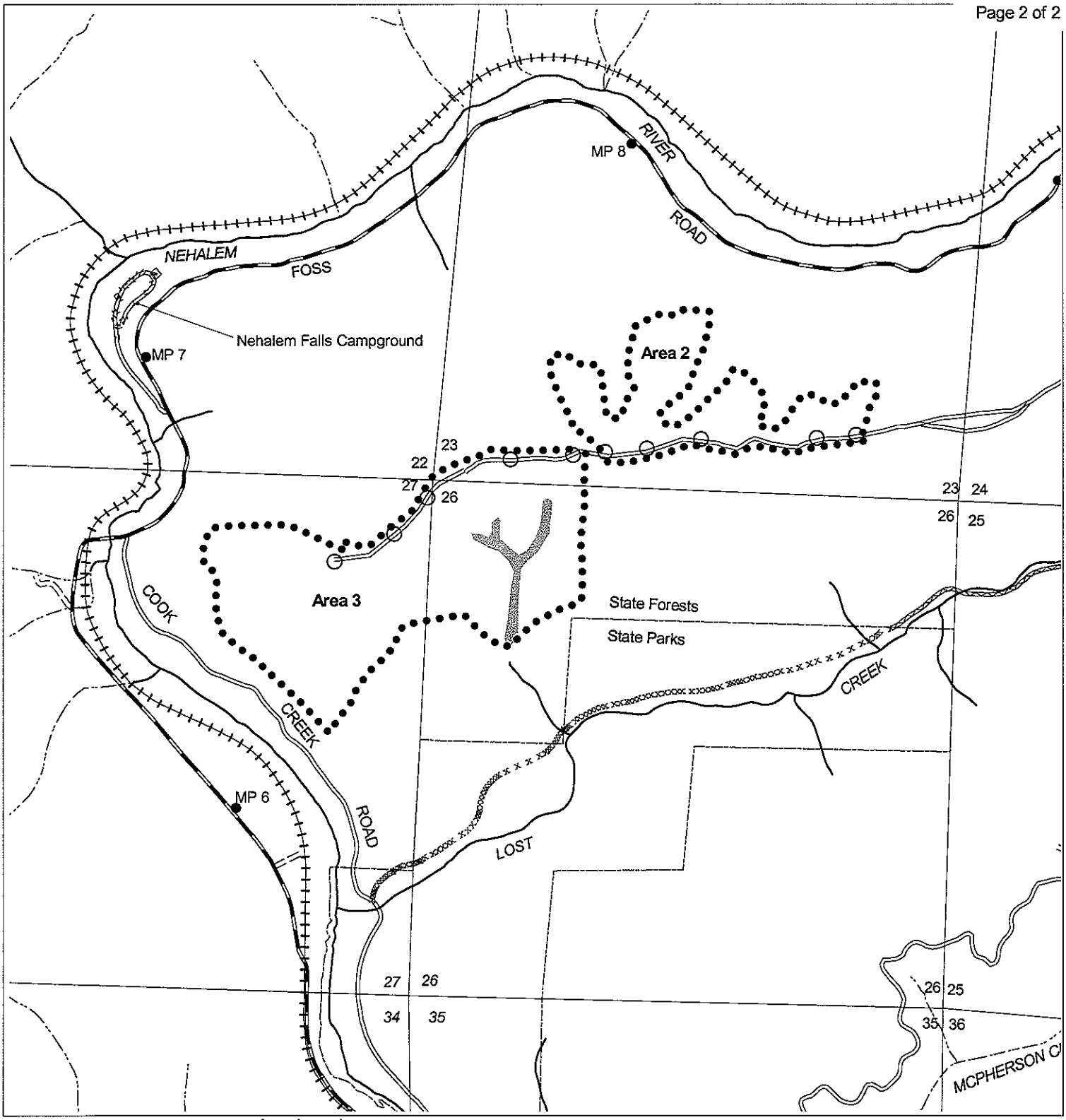
Timber Sale Contract No. 341-07-57
Sibley Arch
Portions of Sections 18, 19 and 30, T3N, R8W, and portions of Sections 23, 24, 25, 26, 27, T3N, R9W, W. M.
Tillamook County, Oregon

1000 0 1000 Feet

Tillamook District GIS
December 1, 2006
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 Gross	Net
1	Modified Clearcut	100	100
2	Modified Clearcut	45	45
3	Retention Cut	119	114
4	Retention Cut	296	260
5	Partial Cut	44	42
Total		604	561

N



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- Ownership boundary
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LOGGING PLAN

Timber Sale Contract No. 341-07-57
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Portions of Sections 18, 19 and 30, T3N, R8W, and portions of Sections 23, 24, 25, 26, 27, T3N, R9W, W. M.
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