



Timber Sale Appraisal
Daisy Chain
Sale AT-341-2018-42-

District: Astoria

Date: February 08, 2018

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$4,501,252.00	\$148,963.34	\$4,650,215.34
		Project Work:	(\$380,182.00)
		Advertised Value:	\$4,270,033.34



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District: Astoria

Date: February 08, 2018

Timber Description

Location: Portions of Sections 9, 10, 14, 15, 16, and 22 of T6N, R6W, W.M., Clatsop County, Oregon

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	26	0	97
Western Hemlock / Fir	20	0	97
Alder (Red)	14	0	95
Maple	15	0	95

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	6" - 7"	Total
Douglas - Fir	6,866	833	0	0	0	7,699
Western Hemlock / Fir	145	70	0	0	0	215
Alder (Red)	0	0	208	27	48	283
Maple	0	0	0	22	20	42
Total	7,011	903	208	49	68	8,239

Comments: Pond Values Used: December 2017.

Expected Log Markets: Mist, Willamina, Banks, Clatskanie, Tillamook, Forest Grove, Warrenton, Elma, WA, Longview, WA, Vancouver, WA and Chehalis, WA.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost: \$1,312.39/MBF = \$1,540.00/MBF - \$227.61/MBF

SCALING COST ALLOWANCE = \$5.00/MBF

BRANDING AND PAINTING COST ALLOWANCE = \$2.00/MBF

FUELING COST ALLOWANCE = \$3.00/GALLON

HAULING COST ALLOWANCE

Hauling costs equivalent to \$780 daily truck cost.

Other Costs (with Profit & Risk added):

Slash and Landing Piling (Includes move-in and pile materials)= \$12,725

End hauling slash in Area 1 (Dump truck 8 hours @ \$79/hr \$632) + Log loader 8 hours @ \$129/hr (\$1,008)) = \$1,640

Flaggers on County Road:

\$1,000/day x 1 day = \$1,000

Machine Washing for invasive Weed Compliance = \$2,000

Ditch Filters 20 bales of straw @ \$10.00/ bale = \$200

8 hours of labor @ \$40/hr = \$320.00

TOTAL Other Costs (with Profit & Risk added): \$17,885

Other Costs (No Profit & Risk added):

Waterbar and block dirt road segments: 2.62 sta @ \$15.96/sta = \$41.82

TOTAL Other Costs (No Profit & Risk added) = \$0.00

ROAD MAINTENANCE

(See attached Road Maintenance Cost Summary Sheet)

TOTAL Road Maintenance: \$22,283/ 8,238 MBF = \$2.70/MBF



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Logging Conditions

Combination#: 1

Douglas - Fir	62.00%
Western Hemlock / Fir	62.00%
Alder (Red)	62.00%
Maple	62.00%

Logging System: Cable: Large Tower >=70 **Process:** Manual Falling/Delimbing

yarding distance: Medium (800 ft) **downhill yarding:** No

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 10 **bd. ft / load:** 4500

cost / mbf: \$151.11

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

Combination#: 2

Douglas - Fir	37.00%
Western Hemlock / Fir	37.00%
Alder (Red)	37.00%
Maple	37.00%

Logging System: Shovel **Process:** Manual Falling/Delimbing

yarding distance: Medium (800 ft) **downhill yarding:** No

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 13 **bd. ft / load:** 4500

cost / mbf: \$67.31

machines: Shovel Logger

Combination#: 3

Douglas - Fir	1.00%
Western Hemlock / Fir	1.00%
Alder (Red)	1.00%
Maple	1.00%

Logging System: Shovel **Process:** Manual Falling/Delimbing

yarding distance: Short (400 ft) **downhill yarding:** No

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 14 **bd. ft / load:** 4500

cost / mbf: \$62.50

machines: Shovel Logger



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Logging Costs

Operating Seasons: 2.00	Profit Risk: 12%
Project Costs: \$380,182.00	Other Costs (P/R): \$17,885.00
Slash Disposal: \$0.00	Other Costs: \$41.82

Miles of Road

Road Maintenance: \$2.70

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	2.0	4.5
Western Hemlock / Fir	\$0.00	3.0	3.7
Alder (Red)	\$0.00	2.0	3.3
Maple	\$0.00	2.0	3.0



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling / Brand & Paint	Other	Total
Douglas - Fir									
\$119.22	\$2.78	\$1.06	\$89.27	\$2.17	\$25.74	\$0.00	\$7.00	\$0.01	\$247.25
Western Hemlock / Fir									
\$119.22	\$2.78	\$1.06	\$72.38	\$2.17	\$23.71	\$0.00	\$7.00	\$0.01	\$228.33
Alder (Red)									
\$119.22	\$2.84	\$1.06	\$124.09	\$2.17	\$29.93	\$0.00	\$7.00	\$0.01	\$286.32
Maple									
\$119.22	\$2.84	\$1.06	\$136.50	\$2.17	\$31.41	\$0.00	\$7.00	\$0.01	\$300.21

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$818.70	\$571.45	\$0.00
Western Hemlock / Fir	\$0.00	\$701.16	\$472.83	\$0.00
Alder (Red)	\$0.00	\$784.76	\$498.44	\$0.00
Maple	\$0.00	\$488.42	\$188.21	\$0.00



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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
Maple	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	7,699	\$571.45	\$4,399,593.55
Western Hemlock / Fir	215	\$472.83	\$101,658.45
Alder (Red)	283	\$498.44	\$141,058.52
Maple	42	\$188.21	\$7,904.82

Gross Timber Sale Value

Recovery: \$4,650,215.34

Prepared By: Ty Williams

Phone: 503-325-5451

Sale Number: 341-18-42
Sale Name: Daisy Chain
Date: 01/21/2018

Sale Area	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour	Total Cost/Area
1	MC	A	37	37	\$110.00	\$4,070.00
2	MC	A	22	22	\$110.00	\$2,420.00
Sub Total =						\$6,490.00
Sale Area	Number of Landings to be Piled	Cost/Landing Pile*	Total Cost/Area	Number of In- Unit Piles	Material Cost/Pile	Total Cost/Area
1	9	\$263.00	\$2,367.00	111	\$5.00	\$555.00
2	8	\$263.00	\$2,104.00	66	\$4.00	\$264.00
*Cost includes separating firewood						\$5,290.00
Sub Total =						\$5,290.00
Move-In Allowance	Number of Move-In's	Total Move-In Allowance				
\$945.00	1	\$945.00				
Sub Total =						\$945.00
Grand Total =						\$12,725.00

Road Maintenance Cost Summary

Sale: Daisy Chain
Date: 21-Jan-18
By: D.Bangs *FL*

MBF: 8,238
\$/MBF: \$2.70

Type	Equipment/Rationale	Move In	Times	Hours	Rate	Cost
Progressive Operations 1st Entry	Grader 14G	\$778	1	8	\$100	\$1,578
	Dump Truck 12CY x 2	\$326	2	8	\$79	\$1,916
	FE Loader C966	\$778	1	8	\$83	\$1,442
	Vibratory Roller	\$778	1	8	\$77	\$1,394
Final Haul Maintenance Haul Route	Grader 14G	\$778	1	24	\$100	\$3,178
	Dump Truck 12CY x 2	\$326	2	16	\$79	\$3,180
	Vibratory Roller	\$778	1	24	\$77	\$2,626
	Water Truck 2,500 gallon	\$190	1	24	\$89	\$2,326
	FE Loader C966	\$778	1	24	\$83	\$2,770
	Rubber Tire Backhoe	\$321	1	16	\$77	\$1,553
	Laborer	\$0	1	8	\$40	\$320
Total						\$22,283

Production Rates	Miles/day	Distance(miles)	Days
Grader	1.5	1.0	0.7
Vibratory Roller	1.5	1.0	0.7

Production Rates	Miles/day	Distance(miles)	Days
Grader	1.5	4.1	2.7
Vibratory Roller	1.5	4.1	2.7

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Daisy Chain

ROAD CONSTRUCTION:

	Road segment	Length/Sta	Cost
Project No. 1	1A, 1B, 1C, 1D, 1E-1F, 1G- 1H, 2A-2B, 2C, 2D-2E, 2F- 2G, 2H-2I, 2J, 2K	10.40	\$20,985
	TOTALS		\$20,985

ROAD IMPROVEMENT:

	Road segment	Length/Sta	Cost
Project No. 2	I1-I2, I3-I4, I5-I6, I7-I8	102.50	\$27,955
	TOTALS		\$27,955

SPECIAL PROJECTS:

	Description	Cost
Project No. 3	Viewpoint Quarry Development, Rock Crushing and Stockpiling	\$295,095
	Project Road Maintenance	\$28,590
	TOTAL	\$323,685

MOVE IN:

<u>Equipment</u>	<u>Cost</u>
Dozer (D8)	\$1,406
Excavator (C330)	\$1,406
Excavator (C315)	\$805
Dump Trucks (12cy x 4)	\$652
Dump Trucks (20cy x 4)	\$764
Grader (14G)	\$778
FE Loader (C966)	\$778
Vibratory Roller	\$778
Water Truck (2,500 gallon)	\$190
TOTAL	\$7,557

GRAND TOTAL	\$380,182
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Compiled By: _____ C.Bangs *FL* Date: 12/11/2017

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Daisy Chain

NEW CONSTRUCTION: 10.40 STATIONS

0.20 MILES

ROAD: New Construction

IMPROVEMENT: STATIONS

0.00 MILES

POINTS: 1A, 1B, 1C, 1D, 1E-1F(1.2), 1G-1H(1.0), 2A-2B(1.0), 2C, 2D-2E(1.5), 2F-2G(1.0), 2H-2I(4.7), 2J, 2K

CLEARING & GRUBBING

Method	Acres/amount	x	Rate	=	Cost
1A, 1B, 1C, 1D, 2C, 2J, 2K					
Stump Removal (Excavator Hrs.)	10.00	x	\$ 155	=	\$1,550.00
1E-1F, 1G-1H, 2A-2B, 2C-2D, 2F-2G, 2H-2I					
Scatter Outside of ROW (\$/acre)	1.00	x	\$ 1,337	=	\$1,337.00
SUB TOTAL FOR CLEARING & GRUBBING					\$2,887

EXCAVATION

Material	Cy/amount	x	Rate	=	Cost
1E-1F, 1G-1H, 2A-2B, 2C-2D, 2F-2G, 2H-2I					
Field Design Balanced construction (\$/sta.)	10.40	x	\$122.00	=	\$1,268.80
1D, 2E, 2H-2I (2+80), 2I, 2J, 2K					
Landing Construction	6.00	x	\$389.00	=	\$2,334.00
1C, 1F, 1H, 2B, 2G					
Landing Construction	5.00		\$195.00		\$975.00
SUB TOTAL FOR EXCAVATION					\$4,578

CULVERT MATERIALS AND INSTALLATION

Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
2D to 2E									
0+00	18/CPP	40	\$19.53	\$781.20					

	Description	Quantity	Rate	Cost
Other/miscellaneous:				
Culvert stakes & markers:	Install 6' fiberglass markers	1	\$20.00	\$20.00

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION

\$801

Subtotal of Clearing, Exc., Culv.

\$8,266

SURFACING				Stations/ amount	x	Rate/ sta/amt	Cost
Subgrade prep: 2H-2I	Description						
	Outslope 14'			4.70	x	\$18.35	\$86.25
1E-1F, 1G-1H, 2A-2B, 2D-2E, 2F-2G	Grade, Shape and Ditch 16'			5.70	x	\$24.83	\$141.53
	Subgrade Compaction			5.70	x	\$20.19	\$115.08

ROAD SEGMENT 1A				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1A Volume (CY) per		N/A Number of				
Landings	6"-0" Pit-run	N/A	N/A	Landing	44	Landings	1.00	44	\$12.12	\$533
Total Rock for Road Segment:				1A				44		
ROAD SEGMENT 1B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1B Volume (CY) per		N/A Number of				
Landings	6"-0" Pit-run	N/A	N/A	Landing	44	Landings	1.00	44	\$12.12	\$533
Total Rock for Road Segment:				1B				44		
ROAD SEGMENT 1C				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1C Volume (CY) per		N/A Number of				
Landings	6"-0" Pit-run	N/A	N/A	Landing	88	Landings	1	88	\$12.12	\$1,067
Total Rock for Road Segment:				1C				88		
ROAD SEGMENT 1D				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1D Volume (CY) per		N/A Number of				
Landings	6"-0" Pit-run	N/A	N/A	Landing	77	Landings	1	77	\$12.12	\$933
Total Rock for Road Segment:				1D				77		
ROAD SEGMENT 1E to 1F				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1E to 1F Volume (CY) per		0+00 to 1+20 Number of				
Base Rock	4"-0" Crushed	0+00 to 1+20	8	Station	50	Stations	1.2	60	\$9.10	\$546
Junctions	4"-0" Crushed	0+00	8	Junction	22	Junctions	1.0	22	\$9.10	\$200
Landings	6"-0" Pit-run	1F	N/A	Landing	66	Landings	1	66	\$12.12	\$800
Total Rock for Road Segment:				1E to 1F				148		
ROAD SEGMENT 1G to 1H				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1G to 1H Volume (CY) per		0+00 to 1+00 Number of				
Base Rock	4"-0" Crushed	0+00 to 1+00	8	Station	50	Stations	1	50	\$9.10	\$455
Junctions	4"-0" Crushed	0+00	8	Junction	22	Junctions	1.0	22	\$9.10	\$200
Junctions	3/4"-0" Crushed	0+00	N/A	Junction	11	Junctions	1	11	\$9.10	\$100
Landings	6"-0" Pit-run	1H	N/A	Landing	66	Landings	1	66	\$12.12	\$800
Total Rock for Road Segment:				1G to 1H				149		
ROAD SEGMENT 2A to 2B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2A to 2B Volume (CY) per		0+00 to 1+00 Number of				
Base Rock	4"-0" Crushed	0+00 to 1+00	8	Station	50	Stations	1	50	\$9.10	\$455
Junctions	4"-0" Crushed	0+00	8	Junction	22	Junctions	1.0	22	\$9.10	\$200
Junctions	3/4"-0" Crushed	0+00	N/A	Junction	11	Junctions	1	11	\$9.10	\$100
Landings	6"-0" Pit-run	2B	N/A	Landing	66	Landings	1	66	\$12.12	\$800
Total Rock for Road Segment:				2A to 2B				149		
ROAD SEGMENT 2C				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2C Volume (CY) per		N/A Number of				
Landings	6"-0" Pit-run	N/A	N/A	Landing	55	Landings	1	55	\$12.12	\$667
Total Rock for Road Segment:				2C				55		
ROAD SEGMENT 2D to 2E				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2D to 2E Volume (CY) per		0+00 to 1+50 Number of				
Base Rock	4"-0" Crushed	0+00 to 1+50	8	Station	50	Stations	1.5	75	\$9.10	\$683
Junctions	4"-0" Crushed	0+00	8	Junction	22	Junctions	1.0	22	\$9.10	\$200
Junctions	3/4"-0" Crushed	0+00	N/A	Junction	11	Junctions	1	11	\$9.10	\$100
Culvert Bedding and Backfill	3/4"-0" Crushed	0+00	N/A	Culvert	22	Culverts	1	22	\$9.10	\$200
Landings	6"-0" Pit-run	2E	N/A	Landing	66	Landings	1	66	\$12.12	\$800
Total Rock for Road Segment:				2D to 2E				196		
ROAD SEGMENT 2F to 2G				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2F to 2G Volume (CY) per		0+00 to 1+00 Number of				
Base Rock	4"-0" Crushed	0+00 to 1+00	8	Station	50	Stations	1	50	\$9.10	\$455
Junctions	4"-0" Crushed	0+00	8	Junction	22	Junctions	1.0	22	\$9.10	\$200
Junctions	3/4"-0" Crushed	0+00	N/A	Junction	11	Junctions	1	11	\$9.10	\$100
Landings	6"-0" Pit-run	2G	N/A	Landing	66	Landings	1	66	\$12.12	\$800
Total Rock for Road Segment:				2F to 2G				149		

\$533

\$533

\$1,067

\$933

\$1,546

\$1,555

\$1,555

\$667

\$1,883

\$1,555

Processing:

Description	No.sta	Rate/sta	Cost
Water, Process & Compact Base Rock (4"-0"):	5.7	\$56.48	\$321.94
Water, Process & Compact Surface Rock (3/4"-0"):	2.0	\$56.48	\$112.96

SUB TOTAL FOR SURFACING

	6"-0"pr	4"-0"crushed	3/4"-0"crushed	Total
	638	395	66	1,099

402

\$12,619

SPECIAL PROJECTS

Description	Cost
Seeding and Mulching on 2D to 2E	\$ 100.00

SUB TOTAL FOR SPECIAL PROJECTS

\$100

Subtotal of Surfacing & Spec. Proj.

\$12,719

Subtotal of Clearing, Exc., Culv.

\$8,266

GRAND TOTAL

\$20,985

Compiled By: C.Bangs

Date: 12/11/2017

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Daisy Chain
ROAD: Road Improvement
POINTS: I1-I2(28.5), I3-I4(38.0), I5-I6(15.0), I7-I8(21.0)

NEW CONSTRUCTION: STATIONS 0.00 MILES
IMPROVEMENT: 102.50 STATIONS 1.94 MILES

CLEARING & GRUBBING					
Method	Acres/amount	x	Rate	=	Cost
SUB TOTAL FOR CLEARING & GRUBBING					\$0

EXCAVATION					
Material	Cy/amount	x	Rate	=	Cost
I3-I4 36+00 Construct Turnaround	1.0	x	\$155.00	=	\$155.00
SUB TOTAL FOR EXCAVATION					\$155

CULVERT MATERIALS AND INSTALLATION									
Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost

				Description	Quantity	Rate	Cost
Other/miscellaneous:							
Culvert stakes & markers:							
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION							\$0

Subtotal of Clearing, Exc., Culv. \$155

SURFACING				Stations/ amount	x	Rate/ sta/amt	Cost	
Subgrade prep:				Description				
				Grade, Shape and Ditch 16' (11-12, 13-14, 15-16)	81.50	x	\$24.83 \$2,023.65	
				Subgrade Compaction 11-12, 13-14, 15-16 (0+00 to 2+00)	68.50	x	\$24.83 \$1,700.86	
				Grade, Shape and Ditch 14' (17-18)	21.00	x	\$18.35 \$385.35	
				Sod Removal/Extra ditching (grader hrs.)	16.00	x	\$100.00 \$1,600.00	
				Sod Removal/Extra ditching (excavator hrs.)	8.00	x	\$101.00 \$808.00	
ROAD SEGMENT 11 to 12				POINT TO POINT 11 to 12	Sta. to Sta. 0+00 to 28+50	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (Inches)	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	0+00 to 7+50	6	Station 38	Stations 7.5	285	\$9.10	\$2,594
Turnaround	4"-0" Crushed	11+00	8	Turnaround 22	Turnarounds 1	22	\$9.10	\$200
Junctions	4"-0" Crushed	0+00	6	Junction 44	Junctions 1	44	\$9.10	\$400
Surface Rock	3/4"-0" Crushed	7+50 to 28+50	2	Station 13	Stations 21	273	\$9.10	\$2,484
Junctions	3/4"-0" Crushed	0+00	N/A	Junction 22	Junctions 1	22	\$9.10	\$200
Turnouts	3/4"-0" Crushed	17+50	2	Turnout 11	Turnouts 1	11	\$9.10	\$100
Total Rock for Road Segment:				11 to 12		657		\$2,594
ROAD SEGMENT 13 to 14				POINT TO POINT 13 to 14	Sta. to Sta. 0+00 to 38+00	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (Inches)	Volume (CY) per	Number of			
Subgrade Leveling Rock	4"-0" Crushed	0+00 to 38+00	N/A	Load 11	Loads 10	110	\$9.10	\$1,001
Base Rock	4"-0" Crushed	0+00 to 38+00	4	Station 25	Stations 38	950	\$9.10	\$8,645
Turnouts	4"-0" Crushed	3+00, 16+50, 22+00	4	Turnout 22	Turnouts 3	66	\$9.10	\$601
Turnarounds	4"-0" Crushed	26+00, 37+00	4	Turnaround 22	Turnarounds 2	44	\$9.10	\$400
Junctions	4"-0" Crushed	0+00	4	Junction 22	Junctions 1	22	\$9.10	\$200
Landings	6"-0" Pit-run	12+30	N/A	Landing 66	Landings 1	66	\$12.12	\$800
Landings	6"-0" Pit-run	38+00	N/A	Landing 44	Landings 1	44	\$12.12	\$533
Total Rock for Road Segment:				13 to 14		1,302		\$12,180
ROAD SEGMENT 15 to 16				POINT TO POINT 15 to 16	Sta. to Sta. 0+00 to 15+00	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (Inches)	Volume (CY) per	Number of			
Subgrade Leveling	4"-0" Crushed	0+00 to 2+00	4	Station 25	Stations 2	50	\$9.10	\$455
Junctions	4"-0" Crushed	0+00	4	Junction 11	Junctions 1	11	\$9.10	\$100
Junctions	3/4"-0" Crushed	0+00	N/A	Junction 22	Junctions 1	22	\$9.10	\$200
Landings	6"-0" Pit-run	8+00, 10+00	N/A	Landing 66	Landings 2	132	\$12.12	\$1,600
Total Rock for Road Segment:				15 to 16		215		\$2,355
ROAD SEGMENT 17 to 18				POINT TO POINT 17 to 18	Sta. to Sta. 0+00 to 21+00	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (Inches)	Volume (CY) per	Number of			
Base Rock	4"-0" Crushed	0+00 to 1+00	4	Station 25	Stations 1	25	\$9.10	\$228
Junctions	4"-0" Crushed	0+00	4	Junction 22	Junctions 1	22	\$9.10	\$200
Junctions	3/4"-0" Crushed	0+00	4	Junction 22	Junctions 1	22	\$9.10	\$200
Total Rock for Road Segment:				17 to 18		69		\$228
Processing:				Description	No.sta	Rate/sta	Cost	
				Water, Process & Compact:	69.50	\$56.48	\$3,925	
				11-12, 13-14, 15-16 (0+00 to 2+00), and 17-18 (0+00 to 1+00)				
				6"-0"pr	4"-0" crushed	3/4"-0" crushed	Total	
SUB TOTAL FOR SURFACING				242	1,651	350	2,243	\$27,800
SPECIAL PROJECTS				Description	Cy/Amount	Rate	Cost	
							\$0.00	
							\$0.00	
SUB TOTAL FOR SPECIAL PROJECTS							\$0	
						Subtotal of Surfacing & Spec. Proj.	\$27,800	
						Subtotal of Clearing, Exc., Culv.	\$155	
GRAND TOTAL							\$27,955	

Compiled By: C.Bangs

Date: 12/11/2017

CRUSHED ROCK COST

SALE NAME: Daisy Chain
 PROJECT: No. 1 and No. 2
 QUARRY: Viewpoint

MATERIAL: Crushed

DATE: 12/11/2017
 BY: C.Bangs

		Cubic Yards							
Segment	Stations	Base	Running	Turnout	Turnaround	Junction		Misc	Total
1E to 1F	1.20	60				22			82
1G to 1H	1.00	50				33			83
2A to 2B	1.00	50				33			83
2D to 2E	1.50	75				33		22	130
2F to 2G	1.00	50				33			83
I1 to I2	28.50	307	273	11		66			657
I3 to I4	38.00	1,060		66	44	22			1,192
I5 to I6	15.00	50				33			83
I7 to I8	21.00	25				44			69
Grand Total	108.20	1,727	273	77	44	319		22	2,462

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES							Total Haul
			50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	
1E to 1F	1.20	82		2.5	2.0	2.3	2.4	0.9	0.2	10.30
1G to 1H	1.00	83		2.5	2.0	2.3	2.4	0.9	0.1	10.20
2A to 2B	1.00	83		2.5	1.0	2.2	2.4	0.7	0.1	8.85
2D to 2E	1.50	130		2.5	1.0	2.0	2.3	0.7	0.1	8.55
2F to 2G	1.00	83		2.5	1.0	2.0	2.0	0.7	0.1	8.25
I1 to I2	28.50	657		2.5	2.0	2.3	2.4	0.9	0.1	10.15
I3 to I4	38.00	1,192		2.5	2.0	2.3	2.4	0.9	0.3	10.40
I5 to I6	15.00	83		2.5	3.0	3.0	2.7	0.8	0.2	12.20
I7 to I8	21.00	69		2.5	1.0	2.0	2.0	0.6	0.1	8.15
TOTAL	108.20	2,462								
STA./NO.		CU. YD.								
CUBIC YARD WEIGHTED HAUL			2.50	1.87	2.29	2.38	0.86	0.20		AVERAGE HAUL 10.10
Average Round Trip Distance (miles)										20.20

ROCK HAUL:

Truck type: D20 No. trucks: 4
 Delay min.: 8 Efficiency: 85%

Ave haul: \$8.01 /cy
 Load: /cy
 Spread: \$1.08 /cy

Truck type: D12 No. trucks: 4
 Delay min.: 6 Efficiency: 85%

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

Production: cy/day = 714

CRUSHED ROCK HAUL COSTS 2,462 cy @ \$9.10 /cy

PIT RUN ROCK COST

SALE NAME: Daisy Chain
 PROJECT: No. 1 and No. 2
 QUARRY: Viewpoint

MATERIAL: Pit Run

DATE: 12/11/2017
 BY: C.Bangs

Segment	Stations	Cubic Yards						Misc	Total
		Base	Landing	Turnout	Turnaround	Junction			
1A			44						44
1B			44						44
1C			88						88
1D			77						77
1E to 1F	1.20		66						66
1G to 1H	1.00		66						66
2A to 2B	1.00		66						66
2C			55						55
2D to 2E	1.50		66						66
2G	1.00		66						66
I3 to I4	35.00		110						110
I5 to I6	15.00		132						132
Grand Total	55.70		880						880

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES							Total Haul
			50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	
1A		44		2.5	2.0	2.2	2.5	0.8	0.1	10.10
1B		44		2.5	2.0	2.2	2.5	0.8	0.1	10.10
1C		88		2.5	2.0	2.2	2.5	0.7	0.1	9.95
1D		77		2.5	2.0	2.3	2.4	0.9	0.3	10.40
1E to 1F	1.20	66		2.5	2.0	2.3	2.4	0.9	0.2	10.30
1G to 1H	1.00	66		2.5	2.0	2.3	2.4	0.9	0.1	10.20
2A to 2B	1.00	66		2.5	1.0	2.2	2.4	0.7	0.1	8.85
2C		55		2.5	1.0	2.0	2.4	0.7	0.1	8.65
2D to 2E	1.50	66		2.5	1.0	2.0	2.3	0.7	0.1	8.55
2G	1.00	66		2.5	1.0	2.0	2.0	0.7	0.1	8.25
I3 to I4	35.00	110		2.5	2.0	2.3	2.4	0.9	0.3	10.40
I5 to I6	15.00	132		2.5	3.0	3.0	2.7	0.8	0.2	12.20
TOTAL	55.70	880								
STA./NO.		CU. YD.								
CUBIC YARD WEIGHTED HAUL				2.50	1.86	2.31	2.43	0.78	0.17	AVERAGE HAUL 10.05

Average Round Trip Distance (miles) 20.09

ROCK HAUL:

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

Ave haul: \$9.12 /cy
 Load: \$1.08 /cy
 Spread: \$1.92 /cy

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

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

Production: cy/day = 415

PIT RUN ROCK HAUL COSTS

880 cy @ \$12.12 /cy

SUMMARY OF ROCK DEVELOPMENT AND CRUSHING COSTS

PROJECT NO. <u>3</u>	Timber Sale Name: <u>Daisy Chain</u>
Quarry: <u>Viewpoint</u>	Swell: _____
Location: <u>SE 1/4, SE 1/4, Sec 4, T7N, R6W, W.M.</u>	Shrink: <u>16%</u>
County: <u>Clatsop</u>	
By: <u>C.Bangs</u>	Loading Hopper: <u>Yes</u>
Date: <u>12/11/2017</u>	

ROCK SIZE	REJECT	GRADATION	STOCKPILE CU. YDS.	TRUCK MEAS CU. YDS.	TOTAL CU. YDS.
3/4"-0"	2%	CR	3,000	416	3,896
4"-0"	2%	CR	7,000		8,120
4"-0"	2%	CR	2,500	2,046	4,946
6"-0"		PR		1,480	1,480
24"-6"		RR			
36"		RR			
TOTAL CUBIC YARDS OF ROCK:			12,500	3,942	18,442

1) MOBILIZATION & SET UP:

EQUIPMENT	QUANTITY	RATE	COST	EQUIPMENT	QUANTITY	RATE	COST
3 Stage Crusher	1	\$2,891	\$2,891	Off Highway Dump Truck	1	\$553	\$553
Screening Plants	2	\$553	\$1,106	Excavator	1	\$1,406	\$1,406
Loading Hopper	1	\$553	\$553	Loader	1	\$805	\$805
Drill & Compressor	1	\$1,406	\$1,406	D5 Dozer	1	\$778	\$778
Powder	1	\$351	\$351				

SUB TOTAL FOR MOBILIZATION

\$9,848

EQUIPMENT SET UP	TIMES	RATE	COST
3 Stage Crusher	1	\$3,439	\$3,439
Screening Plants	2	\$293	\$586
Loading Hopper	1	\$293	\$293
Original Calibration	1	\$544	\$544

SUB TOTAL FOR SET UP COSTS

\$4,862

TOTAL MOBILIZATION & SET UP COSTS

\$14,710

2) CLEARING & GRUBBING

DESCRIPTION	QUANTITY	UNIT	RATE	COST

TOTAL CLEARING & GRUBBING COSTS

3) EXCAVATION

MATERIAL DESCRIPTION	QUANTITY	UNIT	RATE	COST

TOTAL EXCAVATION COSTS

4) DEVELOP ROCK

ROCK SUMMARY			METHOD	%	QUANTITY	RATE	COST
Type	Cu. yd. Vol.	Weight	Ripping	80%	14,754	\$2.60	\$38,359
crushed	16,962	92%	Drill & shoot	20%	3,756	\$2.70	\$10,142
pit run	1,480	8%	Oversize red	10%	1,844	\$5.80	\$10,696
rip rap	0	0	Other				
Total	18,442						
reject	339	1.8%					

TOTAL ROCK DEVELOPMENT COSTS

\$59,198

5) CALIBRATION & TESTING

DESCRIPTION	NO.	\$/TEST	COST
Calibrate	1	\$507.00	\$507
Calibrate			
Test		\$57.30	
Test			

TOTAL CALIBRATION & TESTING COSTS

\$507

6) FEEDING & LOADING

DESCRIPTION	CU. YD. QUANTITY	COST CU. YD.	TOTAL COST
Dig & Feed Rock	17,301	\$0.82	\$14,168
Shot Rock Handline (Exc)	120	\$155.00	\$18,600

TOTAL FEEDING & LOADING COSTS

\$32,768

7) ROCK CRUSHING

ROCK SIZE	ROCK TYPE	CU. YD. QUANTITY	CRUSHER TYPE	HOURLY PRODUCTION	RATE CU. YD.	TOTAL COST
3/4"-0"	crushed	3,896	3 stage w/s	110	\$3.54	\$13,778
4"-0"	crushed	8,120	2 stage w/s	140	\$2.48	\$20,126
4"-0"	crushed	4,946	2 stage w/s	140	\$2.48	\$12,259

TOTAL ROCK CRUSHING COSTS

\$46,163

8) STOCKPILING

STOCKPILE SITE PREPARATION

Equipment	Hours	Rate	Total
Dozer	8	\$120.00	\$960.00
Compactor	4	\$72.00	\$288.00
Grader		\$90.00	
Excavator		\$138.00	

Rock for Floor (CY)	\$/CY Haul	Total
600	\$5.26	\$3,156.00

\$1,248.00

SUB TOTAL

\$4,404

HAUL & STOCKPILE

STOCKPILE LOCATION	SIZE	# of TRUCKS	CU. YDS.	RATE	COST
1. Cow Creek	3/4"-0"	8	3,480	\$9.30	\$32,356
2. Cow Creek	4"-0"	8	8,120	\$10.28	\$83,495
3. Cow Ridge	4"-0"	8	2,900	\$6.09	\$17,649
4.					
5.					
6.					

SUB TOTAL

\$133,499

TOTAL STOCKPILING COSTS

\$137,903

9) MISCELLANEOUS COSTS

DESCRIPTION	COST
Load, Haul, and Spread the reject material at the waste area.	\$1,282
\$3.78 /CY 339 CY	
Final Quarry Dev., Access Road Const., Waterbarring, Drainage, Block Quarry Access	\$2,565

TOTAL MISCELLANEOUS COSTS

\$3,847

10) GRAND TOTAL:

\$295,095

\$/Cubic Yard

\$17.40

Footnotes:

Projects Road Maintenance Cost Summary

Sale: Daisy Chain
Date: 11-Dec-17
By: C.Bangs

Type	Equipment/Rationale			Hours	Rate	Cost
Project Work	Grader 14G			70	\$100	\$7,000
Final Haul	Dump Truck 12CY			60	\$79	\$4,740
Road	FE Loader C966			10	\$83	\$830
Maintenance	Vibratory Roller			60	\$77	\$4,620
	Water Truck 2,500 gallon			60	\$190	\$11,400
Total						\$28,590

Production Rates

Grader

Vibratory Roller

Miles/day	Distance(miles)	Days
1.5	16.00	10.7
1.5	16.00	10.7

NOTE: Viewpoint to Cow Ridge (Process and compact)	6.00	Miles
Cow Ridge (Light grading)	5.00	Miles
Bovine to Cow Creek Stockpiles (Process and compact)	5.00	Miles
		Miles
TOTAL=	16.00	Miles

Daisy Chain TIMBER CRUISE REPORT FY 2018

1. **Sale Area Location:** Areas 1 and 2 are located in portions of Sections 9, 10, 14, 15, 16, and 22, T6N, R6W, W.M., Clatsop County, OR.
2. **Fund Distribution:** BOF 100%
Tax Code 8-01 (100%)

3. **Sale Acreage by Area:**

Area	Treatment	Gross Acres	Stream Buffer	Existing Surface Roads	New Road Construction	Net Acres	Survey Method
1	Modified Clearcut	107	12	7	-	88	GIS
2	Modified Clearcut	91	13	6	1	71	GIS
3	R/W	1	-	-	-	1	GIS
TOTALS		199	25	13	1	160	

4. **Cruisers and Cruise Dates:**

All areas were cruised by Kevin Berry, John Choate, Bryce Rodgers, and Matt Dimick during November 2017.

5. **Cruise Method and Computation:**

Areas 1 and 2 are modified clearcut units and were variable plot cruised using a 40 BAF. These plots are located on a 4 chain by 8 chain grid, with every third plot measured and graded. A total of 47 plots were sampled, with 16* graded plots and 31 count plots.

Data was collected on Allegro 2 data collectors, and downloaded to the Atterbury Super A.C.E. program for computing. See the attached Cruise Design for more details on the cruise method. The cruise calculations were processed in the Astoria district office.

**Statistic report "Cruise" and "Count" plots totals for MC vary due to one count plot having a hemlock cruised.*

AREA	CRUISE	TRACT	TYPE	ACRES
1 and 2	Daisy Chain	Area12	MC	159
3 (R/W)	Daisy Chain	Area12	R/W	1

6. **Timber Description:**

Areas 1 and 2: are modified clearcut units, approximately 70 years-old, consisting of Douglas-fir and western hemlock, red alder and bigleaf maple. The average Douglas-fir tree size is 25.6 inches DBH, with an average height of 94 foot bole height. The average western hemlock is 20.0 inches DBH with an average height of 90 feet to a merchantable top (7 inch d.o.b). The average red alder tree size is 14.3 inches DBH with an average height of 47 foot bole height. The average bigleaf maple tree size is 14.6 inches DBH with an average height of 20 foot bole height. The net volume per acre to be harvested is 51.4 MBF/acre.

Area 3 R/W is similar to the timber description mentioned above in Areas 1 and 2 and cruise volume from these areas was applied to the one acre of right-of-way. Total volume to be harvested in this area is 51.4 MBF.

7. Statistical Analysis and Stand Summary

Statistics for Stand B.F. Volumes

Area	Estimated CV	Target SE%	Actual CV	Actual SE%
1 and 2	45.0	8%	46.4	6.8%

8. Volumes by Species and Log Grade:

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

Conifer

Species	DBH	Net Vol. MBF	2 Saw	3Saw	4 Saw	% D & B	% Sale
Douglas-fir	26"	7,699	6,866	695	138	<1%	93
Western Hemlock/fir	20"	215	145	60	10	<1%	3

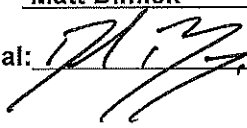
Hardwoods

Species	DBH	Net Vol. MBF	10-12"	8-10"	6-8"	% D & B	% Sale
Red Alder	14"	283	27	208	48	<1%	3
Bigleaf Maple	15"	42	22	0	20	<1%	<1%

TOTAL NET VOLUME	8,238 MBF
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9. Approvals:

Prepared by: Matt Dimick Date: 12/26/2017

Unit Forester Approval:  Date: 12/26/2017

10. **Attachments:** Cruise Designs and Maps – 4 pages
Volume Reports - 3 pages
Statistics Reports -3 pages
Stand Table Summary – 2 pages
Log Stock Tables – 1 page

Revised August, 2002

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Daisy Chain **Area(s)** 1 and 2

Harvest Type: Modified Clearcut

Approx. Cruise Acres: 159 **Estimated CV%** 45 Net BF or
BA/Acre **SE% Objective** 8

Planned Sale Volume: 6,778 MBF **Estimated Sale Area Value/Acre:** \$18,330.44

A. Cruise Goals: (a) Grade minimum 94 trees:

Determine log grades for sale value; Determine snag and leave tree species and sizes;
Determine "diameter limit" harvest parameters;

B. Cruise Design:

1. Plot Cruises: BAF 40 Full point

Cruise Line Direction(s) (Area 1) N, S, (Area 2) E, W

Cruise Line Spacing 8 chains

Cruise Plot Spacing 4 chains

Grade/Count Ratio 1:2

Record all cedar as leave. Record all snags as SN and record diameter & total height. If plot lands in buffer then offset at least 1/2 chain outside the buffer.

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.

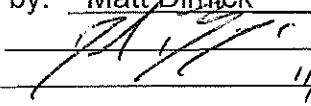
3. Top Cruise Diameter (TCD): Minimum top outside bark is 7" or 40% of dob at 16' form point. Generally, use 7" outside bark for trees less than 18" dbh and 40% of dob @ FP for trees greater than 18" dbh.

4. Form Factors: (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; Hardwood form factors are a Standard 87.

5. Tree Segments: Record log segments in "standard" 32" and 40' log lengths whenever possible. Do not record odd segments just to maximize grade. The maximum segment length is 40'. The minimum segment length is 12' for conifer and 8' for hardwoods. Minimum merchantable diameter for conifer is 8" dbh and 10" dbh for hardwoods. One foot of trim is assumed for each merchantable segment.

- 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); DL(Douglas-fir over 30"dbh); HL(Western hemlock over 30" dbh); SL(Sitka spruce over 30" dbh); CL (Western red cedar over 30" dbh); NFL (Noble fir over 30" dbh); SFL (Silver fir over 30" dbh)
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
Hardwoods: 12" + = 1 Sawmill; 10"-12" = 2 Sawmill; 10"-8" = 3 Sawmill; and 8"-6" 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 intervisible points. On "measure/grade" plots paint the tree diameter on each tree starting with the first tree right of the cruise line direction and continuing clockwise.
- 9. Cruising Equipment:** Relaskop, Rangefinder, Biltmore Stick, Compass, Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging.
- 10. Attachments:** A. Cruise Map (showing cruise unit boundaries, cruise lines and plot locations, BAF or plot size, measure/count plot ratio, north arrow, and scale bar.

Cruise Design by: Matt Dimick

Approved by: 

Date: 11/2/17

Legend

- Timber Sale Boundary
- Grade Plots
- Count Plot
- Existing_Roads
- Count Plot
- Type "F" Stream
- Type "N" Stream
- Ownership Boundary
- Posted Buffer

1 inch = 1,000 feet

0 500 1,000 Feet

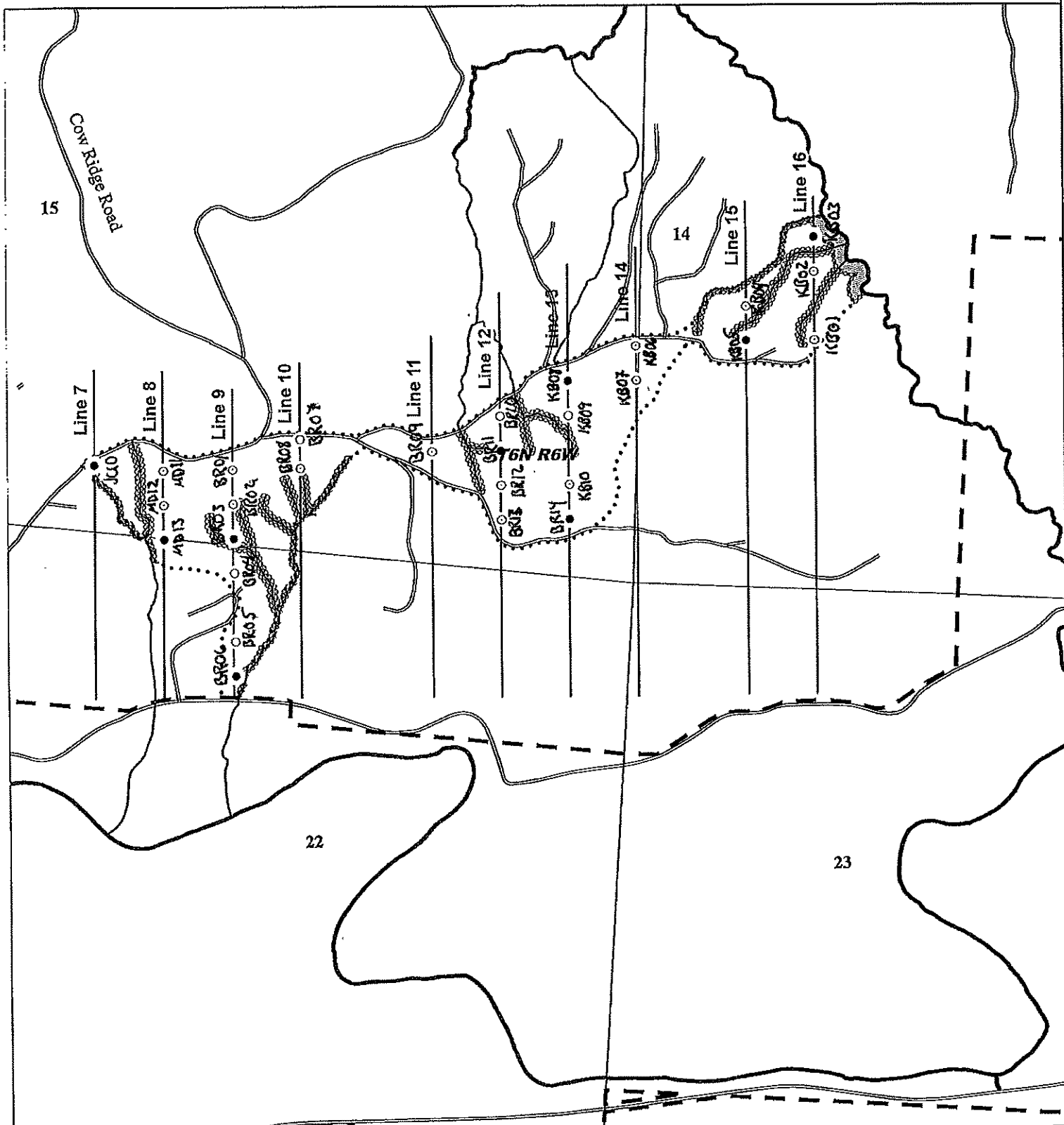
TIMBER CRUISE OF TIMBER SALE CONTRACT NO. 341-18-42 DAISY CHAIN PORTIONS OF SECTION 9, 10, 14, 15, 16, AND 22 T6N, R6W W.M., CLATSOP COUNTY, OREGON

Area 1 (MC) = 88
Area 2 (MC) = 71
Area 3 (R/W) = 1
Total Acres = 160



Daisy Chain Cruise Map

Area 1 (MC)
Plots Total: 28
Grade Plots: 9
Count Plots: 19
AZ: 0/180
BAF: 40 (Conifer)
BAF: 40 (Hardwoods)
Line Spacing: 8 Chains (528')
Plot Spacing: 4 Chains (264')
Map Scale: 1:12000



Legend

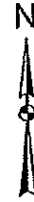
- Timber Sale Boundary
- Grade Plots
- Existing Roads
- Count Plot
- Type "F" Stream
- Type "N" Stream
- Ownership Boundary
- Posted Buffer

1 inch = 1,000 feet

0 500 1,000 Feet

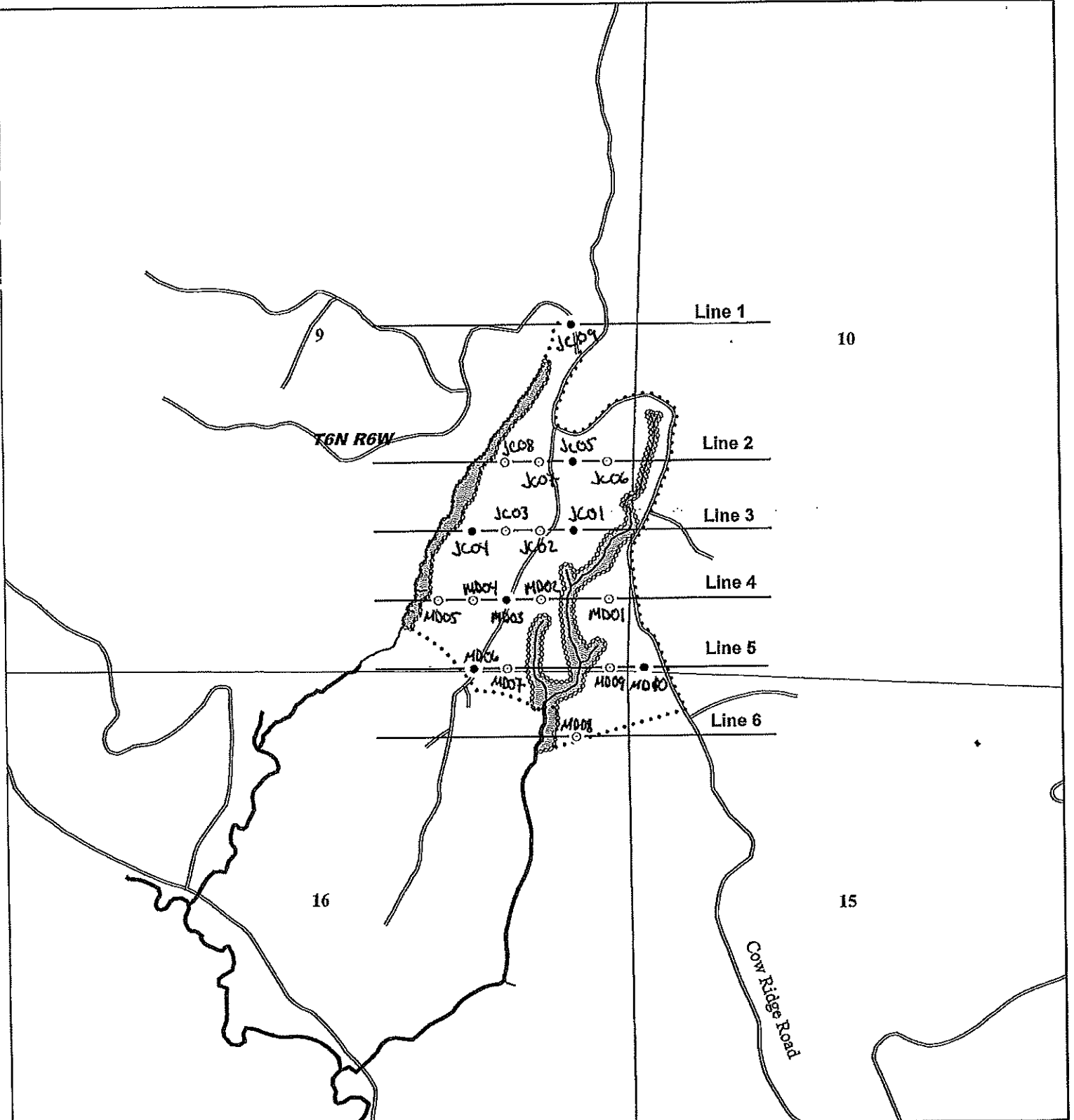
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Map Scale: 1:12000



TC		Species, Sort Grade - Board Foot Volumes (Project)															
T06N R06W S15 TyROW		1.00		Project: DAISY										Page 1			
T06N R06W S15 TyTAKE		159.00		Acres 160.00										Date 12/26/2017			
														Time 9:34:26AM			
Spp	S So Gr T rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log		Logs Per /Acre
							Log Scale Dia.				Log Length				Ln Ft	Dia In	
			4-5	6-11	12-16		17+	12-20	21-30	31-35	36-99						
D	DOCU														8 24	0.00	1.8
D	DO2S	89	.5	43,110	42,914	6,866		0	30	69	1	0	9	90	38 17	486 2.63	88.4
D	DO3S	9	.2	4,350	4,343	695		90	7	4	3	14	36	47	33 9	91 0.87	47.6
D	DO4S	2		859	859	138	33	46	5	16	39	28		33	26 7	54 0.66	15.8
D Totals		93	.4	48,319	48,116	7,699	1	9	28	62	2	2	11	85	35 13	313 1.95	153.5
M	DO2S	52		138	138	22			100			100			24 12	120 1.42	1.2
M	DO4S	48		124	124	20	30	70			70	30			18 7	26 0.62	4.7
M Totals		1		262	262	42	14	33	53		33	67			19 8	44 0.82	5.9
H	DO2S	67		905	905	145			100				100		40 14	290 1.77	3.1
H	DO3S	28		374	374	60		100					100		32 10	120 0.91	3.1
H	DO4S	5		62	62	10		100			100				15 6	20 0.47	3.1
H Totals		3		1,342	1,342	215		33	67		5		28	67	29 10	143 1.23	9.4
A	DO2S	9		170	170	27			100				100		32 12	160 1.41	1.1
A	DO3S	74		1,301	1,301	208		100				15	28	58	35 8	98 0.83	13.3
A	DO4S	17		299	299	48		100			41	11		48	25 6	31 0.49	9.6
A Totals		3		1,769	1,769	283		90	10		7	13	30	50	31 8	74 0.74	24.0
Totals			0.4	51,692	51,489	8,238	1	13	28	58	2	2	12	83	34 12	267 1.76	192.8

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1								
Project: DAISY												Date 12/11/2017								
												Time 3:23:28PM								
T06N R06W S15 TTAKE										T06N R06W S15 TTAKE										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
06N	06W	15	A12	TAKE	159.00	47	105	1	W											
S So Gr T rt ad Spp		% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre		
							Log Scale Dia.				Log Length				Ln	Dia	Bd		CF/ Lf	
			4-5	6-11	12-16		17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf					
D	DO	CU								8	24		0.00		1.8					
D	DO	2S	89	.5	43,110	42,914	6,823		0	30	69	1	0	9	90	38	17	486	2.63	88.4
D	DO	3S	9	.2	4,350	4,343	691		90	7	4	3	14	36	47	33	9	91	0.87	47.6
D	DO	4S	2		859	859	137	33	46	5	16	39	28		33	26	7	54	0.66	15.8
D Totals			93	.4	48,319	48,116	7,650	1	9	28	62	2	2	11	85	35	13	313	1.95	153.5
A	DO	2S	9		170	170	27		100					100		32	12	160	1.41	1.1
A	DO	3S	74		1,301	1,301	207		100				15	28	58	35	8	98	0.83	13.3
A	DO	4S	17		299	299	47		100			41	11		48	25	6	31	0.49	9.6
A Totals			3		1,769	1,769	281		90	10		7	13	30	50	31	8	74	0.74	24.0
M	DO	2S	52		138	138	22		100					100		24	12	120	1.42	1.2
M	DO	4S	48		124	124	20	30	70			70	30			18	7	26	0.62	4.7
M Totals			1		262	262	42	14	33	53		33	67			19	8	44	0.82	5.9
H	DO	2S	67		905	905	144		100					100		40	14	290	1.77	3.1
H	DO	3S	28		374	374	60		100					100		32	10	120	0.91	3.1
H	DO	4S	5		62	62	10		100			100				15	6	20	0.47	3.1
H Totals			3		1,342	1,342	213		33	67		5		28	67	29	10	143	1.23	9.4
Type Totals				.4	51,692	51,489	8,187	1	13	28	58	2	2	12	83	34	12	267	1.76	192.8

TC PSTATS			PROJECT STATISTICS					PAGE 1				
			PROJECT		DAISY		DATE 12/11/2017					
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
06N 06N	06 06W	15 15	A12 A12	R/W TAKE	160.00	94	572	1	W			
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			94	572	6.1							
CRUISE			33	207	6.3	13,543	1.5					
DBH COUNT												
REFOREST												
COUNT			61	362	5.9							
BLANKS												
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			180	58.9	25.6	94	41.7	211.1	48,017	47,815	10,397	10,397
R ALDER			20	16.8	14.3	47	5.0	18.7	1,758	1,758	553	553
BL MAPLE			6	5.9	14.6	20	1.8	6.8	260	260	92	92
WHEMLOCK			1	3.1	20.0	90	1.5	6.8	1,334	1,334	332	332
TOTAL			207	84.6	23.0	79	50.8	243.4	51,369	51,167	11,374	11,374
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			130.0	9.7	508	562	617					
R ALDER			119.4	27.4	43	60	76					
BL MAPLE			164.7	73.3	8	28	49					
WHEMLOCK												
TOTAL			141.2	9.8	449	498	546	796	199	88		
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			127.4	13.1	51	59	67					
R ALDER			389.9	40.2	10	17	24					
BL MAPLE			391.9	40.4	4	6	8					
WHEMLOCK			636.8	65.6	1	3	5					
TOTAL			127.0	13.1	74	85	96	644	161	72		
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			123.7	12.8	184	211	238					
R ALDER			380.8	39.2	11	19	26					
BL MAPLE			369.5	38.1	4	7	9					
WHEMLOCK			636.8	65.6	2	7	11					
TOTAL			114.9	11.8	215	243	272	528	132	59		
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			126.2	13.0	41,594	47,815	54,036					
R ALDER			405.4	41.8	1,023	1,758	2,492					
BL MAPLE			362.1	37.3	163	260	358					
WHEMLOCK			636.8	65.6	458	1,334	2,209					
TOTAL			119.8	12.3	44,848	51,167	57,486	573	143	64		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	DAISY	DATE 12/11/2017				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	06W	15	A12	TAKE	159.00	47	286	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		47	286	6.1						
CRUISE		17	104	6.1	13,461		.8			
DBH COUNT										
REFOREST										
COUNT		30	179	6.0						
BLANKS										
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		90	58.9	25.6	94	41.7	211.1	48,319	48,116	10,462
R ALDER		10	16.8	14.3	47	5.0	18.7	1,769	1,769	557
BL MAPLE		3	5.9	14.6	20	1.8	6.8	262	262	92
WHEMLOCK		1	3.1	20.0	90	1.5	6.8	1,342	1,342	334
TOTAL		104	84.7	23.0	79	50.8	243.4	51,692	51,489	11,445
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		58.7	6.2	1,055	1,125	1,194				
R ALDER		44.4	14.8	101	119	137				
BL MAPLE		97.2	67.2	19	57	95				
WHEMLOCK										
TOTAL		71.0	7.0	922	990	1,059	201	50	22	
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		57.1	8.3	54	59	64				
R ALDER		269.8	39.3	10	17	23				
BL MAPLE		271.2	39.5	4	6	8				
WHEMLOCK		447.1	65.2	1	3	5				
TOTAL		56.6	8.3	78	85	92	128	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		52.8	7.7	195	211	227				
R ALDER		263.0	38.3	12	19	26				
BL MAPLE		254.6	37.1	4	7	9				
WHEMLOCK		447.1	65.2	2	7	11				
TOTAL		41.4	6.0	229	243	258	68	17	8	
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		54.3	7.9	44,309	48,116	51,923				
R ALDER		279.2	40.7	1,049	1,769	2,489				
BL MAPLE		247.3	36.0	168	262	356				
WHEMLOCK		447.1	65.2	468	1,342	2,216				
TOTAL		46.4	6.8	48,009	51,489	54,968	86	21	10	

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT DAISY		DATE 12/11/2017				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	06W	15	A12	R/W	1.00	47	286	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
PLOTS TREES				TREES		TREES				
TOTAL		47	286	6.1						
CRUISE		16	103	6.4		82	126.3			
DBH COUNT										
REFOREST										
COUNT		31	183	5.9						
BLANKS										
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		90	58.9	25.6	94	41.7	211.1			
R ALDER		10	16.8	14.3	47	5.0	18.7			
BL MAPLE		3	5.9	14.6	20	1.8	6.8			
TOTAL		103	81.5	23.1	79	49.3	236.6			
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										
R ALDER										
BL MAPLE										
TOTAL										
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		57.1	8.3	54	59	64				
R ALDER		269.8	39.3	10	17	23				
BL MAPLE		271.2	39.5	4	6	8				
TOTAL		56.4	8.2	75	82	88	127	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		52.8	7.7	195	211	227				
R ALDER		263.0	38.3	12	19	26				
BL MAPLE		254.6	37.1	4	7	9				
TOTAL		42.4	6.2	222	237	251	72	18	8	
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										
R ALDER										
BL MAPLE										
TOTAL										

TC PSTNDSUM		Stand Table Summary										Page Date:	1 12/11/2017
T06N R06W S15 TyR/W 1.00 T06N R06W S15 TyTAKE 159.00		Project DAISY Acres 160.00										Time:	3:24:54PM
												Grown Year:	
S Spe T	DBH	Sample Trees	Tot FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons Cunits MBF
D	11	2	88	73	3.554	2.35	3.53	17.0	60.0		60	212	96 34
D	14	2	86	50	2.194	2.35	2.18	21.0	60.0		46	131	73 21
D	15	4	87	70	3.822	4.69	5.70	22.3	70.0		127	399	204 64
D	16	2	86	50	1.680	2.35	1.67	28.0	90.0		47	150	75 24
D	19	2	89	115	1.191	2.35	3.55	30.0	116.7		107	414	170 66
D	20	2	88	115	1.075	2.35	3.20	33.3	133.3		107	427	171 68
D	21	8	89	137	3.900	9.38	11.63	42.2	184.2		491	2,141	786 343
D	22	2	88	146	.888	2.35	2.65	50.3	220.0		133	583	213 93
D	23	10	87	125	4.064	11.73	11.31	49.4	206.4		559	2,334	894 373
D	24	14	88	125	5.225	16.42	14.09	55.2	232.1		777	3,271	1,244 523
D	25	12	86	120	4.128	14.07	10.94	57.9	234.4		634	2,564	1,014 410
D	26	14	87	136	4.452	16.42	12.64	66.5	297.0		841	3,755	1,346 601
D	27	10	86	114	2.949	11.73	8.79	57.9	240.0		509	2,110	815 338
D	28	12	88	139	3.291	14.07	9.27	72.2	345.3		669	3,199	1,071 512
D	29	12	88	148	3.068	14.07	10.16	75.8	359.0		771	3,648	1,233 584
D	30	10	87	148	2.389	11.73	7.12	89.9	419.3		640	2,986	1,024 478
D	31	4	90	160	.895	4.69	2.67	103.7	530.0		277	1,414	442 226
D	32	14	88	143	2.939	16.42	8.35	104.1	507.0		869	4,231	1,391 677
D	33	4	87	141	.790	4.69	2.35	106.2	518.3		250	1,220	400 195
D	34	6	86	139	1.116	7.04	3.33	109.2	517.8		363	1,722	581 276
D	35	6	88	148	1.053	7.04	3.14	120.3	630.0		378	1,978	604 316
D	36	8	86	146	1.327	9.38	3.96	125.5	616.7		497	2,440	794 390
D	37	10	86	146	1.570	11.73	4.68	128.5	664.7		602	3,112	963 498
D	38	4	87	157	.596	4.69	1.78	153.7	805.0		273	1,429	437 229
D	40	2	88	157	.269	2.35	.80	170.3	900.0		136	721	218 115
D	43	2	82	120	.233	2.35	.69	144.7	716.7		100	497	160 79
D	45	2	89	153	.212	2.35	.63	211.7	1146.7		134	726	214 116
D	Totals	180	87	121	58.868	211.06	150.81	68.9	317.1		10,397	47,815	16,635 7,650
A	12	6	87	51	7.152	5.62	7.11	18.0	53.3		128	379	205 61
A	14	4	86	79	3.503	3.74	6.96	19.5	67.5		136	470	217 75
A	15	2	86	59	1.526	1.87	1.52	34.0	90.0		52	136	82 22
A	16	4	86	80	2.682	3.74	5.33	26.0	85.0		139	453	222 72
A	18	2	87	71	1.060	1.87	2.11	29.0	95.0		61	200	98 32
A	20	2	86	48	.858	1.87	.85	45.0	140.0		38	119	61 19
A	Totals	20	86	63	16.780	18.72	23.87	23.2	73.6		553	1,758	885 281
H	20	1	85	110	3.101	6.77	9.30	35.7	143.3		332	1,334	531 213
H	Totals	1	85	110	3.101	6.77	9.30	35.7	143.3		332	1,334	531 213
M	12	2	87	17	2.890	2.27	2.87	10.0	30.0		29	86	46 14
M	15	2	86	23	1.849	2.27	1.84	13.0	20.0		24	37	38 6
M	19	2	86	36	1.153	2.27	1.15	34.0	120.0		39	137	62 22
M	Totals	6	86	23	5.892	6.81	5.85	15.6	44.5		92	260	146 42
Totals		207	87	102	84.641	243.36	189.84	59.9	269.5		11,374	51,167	18,198 8,187

TC TSTNDSUM				Stand Table Summary																	
				Project		DAISY															
T06N R06W S15 TTAKE										T06N R06W S15 TTAK											
Twp	Rge	Sec	Tract	Type			Acres		Plots	Sample Trees		Page:	1								
06N	06W	15	A12	TAKE			159.00		47	105		Date:	12/11/20								
												Time:	3:25:12PM								
Spc	S	T	Sample		FF	Av	Trees/	BA/	Logs	Average Log		Net		Net	Totals						
			DBH	Trees	16'	Ht				Acre	Acre	Acre	Net		Net	Tons/	Cu.Ft.	Bd.Ft.	Tons	Cunits	MBF
D			11	1	88	73	3.554	2.35	3.55	17.0	60.0		60	213			96		34		
D			14	1	86	50	2.194	2.35	2.19	21.0	60.0		46	132			73		21		
D			15	2	87	70	3.822	4.69	5.73	22.3	70.0		128	401			204		64		
D			16	1	86	50	1.680	2.35	1.68	28.0	90.0		47	151			75		24		
D			19	1	89	115	1.191	2.35	3.57	30.0	116.7		107	417			170		66		
D			20	1	88	115	1.075	2.35	3.22	33.3	133.3		107	430			171		68		
D			21	4	89	137	3.900	9.38	11.70	42.2	184.2		494	2,155			786		343		
D			22	1	88	146	.888	2.35	2.67	50.3	220.0		134	586			213		93		
D			23	5	87	125	4.064	11.73	11.38	49.4	206.4		562	2,349			894		373		
D			24	7	88	125	5.225	16.42	14.18	55.2	232.1		782	3,292			1,244		523		
D			25	6	86	120	4.128	14.07	11.01	57.9	234.4		638	2,580			1,014		410		
D			26	7	87	136	4.452	16.42	12.72	66.5	297.0		847	3,778			1,346		601		
D			27	5	86	114	2.949	11.73	8.85	57.9	240.0		513	2,123			815		338		
D			28	6	88	139	3.291	14.07	9.32	72.2	345.3		673	3,219			1,071		512		
D			29	6	88	148	3.068	14.07	10.23	75.8	359.0		776	3,671			1,233		584		
D			30	5	87	148	2.389	11.73	7.17	89.9	419.3		644	3,005			1,024		478		
D			31	2	90	160	.895	4.69	2.68	103.7	530.0		278	1,423			442		226		
D			32	7	88	143	2.939	16.42	8.40	104.1	507.0		875	4,258			1,391		677		
D			33	2	87	141	.790	4.69	2.37	106.2	518.3		252	1,228			400		195		
D			34	3	86	139	1.116	7.04	3.35	109.2	517.8		366	1,733			581		276		
D			35	3	88	148	1.053	7.04	3.16	120.3	630.0		380	1,990			604		316		
D			36	4	86	146	1.327	9.38	3.98	125.5	616.7		500	2,455			794		390		
D			37	5	86	146	1.570	11.73	4.71	128.5	664.7		606	3,131			963		498		
D			38	2	87	157	.596	4.69	1.79	153.7	805.0		275	1,438			437		229		
D			40	1	88	157	.269	2.35	.81	170.3	900.0		137	726			218		115		
D			43	1	82	120	.233	2.35	.70	144.7	716.7		101	500			160		79		
D			45	1	89	153	.212	2.35	.64	211.7	1146.7		135	730			214		116		
D			Totals		90	87	121	58.868	211.06	151.75	68.9	317.1		10,462	48,116			16,635		7,650	
A			12	3	87	51	7.152	5.62	7.15	18.0	53.3		129	381			205		61		
A			14	2	86	79	3.503	3.74	7.01	19.5	67.5		137	473			217		75		
A			15	1	86	59	1.526	1.87	1.53	34.0	90.0		52	137			82		22		
A			16	2	86	80	2.682	3.74	5.36	26.0	85.0		139	456			222		72		
A			18	1	87	71	1.060	1.87	2.12	29.0	95.0		61	201			98		32		
A			20	1	86	48	.858	1.87	.86	45.0	140.0		39	120			61		19		
A			Totals		10	86	63	16.780	18.72	24.02	23.2	73.6		557	1,769			885		281	
H			20	1	85	110	3.121	6.81	9.36	35.7	143.3		334	1,342			531		213		
H			Totals		1	85	110	3.121	6.81	9.36	35.7	143.3		334	1,342			531		213	
M			12	1	87	17	2.890	2.27	2.89	10.0	30.0		29	87			46		14		
M			15	1	86	23	1.849	2.27	1.85	13.0	20.0		24	37			38		6		
M			19	1	86	36	1.153	2.27	1.15	34.0	120.0		39	138			62		22		
M			Totals		3	86	23	5.892	6.81	5.89	15.6	44.5		92	262			146		42	
Totals					104	87	102	84.661	243.40	191.03	59.9	269.5		11445	51,489			18,198		8,187	

TC TLOGSTVB

Log Stock Table - MBF

Project: DAISY

T06N R06W S15 TTAKE

T06N R06W S15 TTAK

Twp Rge Sec Tract
06N 06W 15 A12Type Acres Plots Sample Trees
TAKE 159.00 47 105Page 1
Date 12/11/2017
Time 3:25:36PM

Spp	T	S	So	Gr	Log	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches								20-23	24-29	30-39	40+	
										2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19					
D		DO	CU	6																		
D		DO	CU	8																		
D		DO	CU	12																		
D		DO	2S	10		4		4	.1			4						56				
D		DO	2S	16		56		56	.7													
D		DO	2S	20		10		10	.1					10								
D		DO	2S	22		5		5	.1					5								
D		DO	2S	32		615	.7	611	8.0					178	48	266	25	46	48			
D		DO	2S	33		8		8	.1				8									
D		DO	2S	36		122		122	1.6								59	63				
D		DO	2S	40		6,034	.5	6,007	78.5					416	751	1978	1751	1044	66			
D		DO	3S	15		4		4	.0			4										
D		DO	3S	16		12		12	.2					8	4							
D		DO	3S	20		4		4	.1				4									
D		DO	3S	24		57		57	.7				21	12			24					
D		DO	3S	25		14		14	.2			3	5	6								
D		DO	3S	27		11		11	.1			5	5									
D		DO	3S	30		12		12	.2				12									
D		DO	3S	32		235		235	3.1			27	64	145								
D		DO	3S	35		16		16	.2			16										
D		DO	3S	37		40		40	.5				18	10		11						
D		DO	3S	40		287	.4	286	3.7			78	110	68	30							
D		DO	4S	16		45		45	.6			12	6	4			23					
D		DO	4S	20		8		8	.1				8									
D		DO	4S	23		14		14	.2			5	9									
D		DO	4S	24		9		9	.1			5	4									
D		DO	4S	26		9		9	.1			9										
D		DO	4S	28		6		6	.1						6							
D		DO	4S	41		45		45	.6		45											
D		Totals				7,683		7,650	93.4		45	163	272	261	650	810	2291	1891	1153	115		
A		DO	2S	32		27		27	9.6					27								
A		DO	3S	30		31		31	10.9					31								
A		DO	3S	32		57		57	20.3			38		19								
A		DO	3S	40		119		119	42.4				55	64								
A		DO	4S	20		20		20	7.0			20										
A		DO	4S	24		5		5	1.8			5										
A		DO	4S	40		23		23	8.1			23										
A		Totals				281		281	3.4			85	55	114	27							
M		DO	2S	24		22		22	52.8					22								
M		DO	4S	16		14		14	33.1			14										
M		DO	4S	21		6		6	14.1		6											
M		Totals				42		42	.5		6		14		22							
H		DO	2S	40		144		144	67.4							144						
H		DO	3S	32		60		60	27.9					60								
H		DO	4S	15		10		10	4.7			10										
H		Totals				213		213	2.6			10		60		144						

TC TLOGSTVB

Log Stock Table - MBF

Project: DAISY

T06N R06W S15 TTAKE

T06N R06W S15 TTAK

Twp Rge Sec Tract
06N 06W 15 A12Type Acres Plots Sample Trees
TAKE 159.00 47 105Page 2
Date 12/11/2017
Time 3:25:36PM

Spp	T	S	So	Gr	Log	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
Total All Species						8,219		8,187	100.0	51	258	341	434	699	954	2291	1891	1153	115

Legend

- Existing Landing
- ⊙ Landing Construction
- ◆ Survey Monument
- ⋯ Timber Sale Boundary
- ▨ Reforestation Area
- ~ Type F Stream
- ~ Type N Stream
- Buffer Zone
- ▤ Posted Buffer
- == Surfaced Road
- Paved Road
- Unsurfaced Road
- - - Horse Trail
- - - New Road Construction - Surfaced
- - - New Road Construction - Unsurfaced
- Ownership Boundary
- T Tractor Logging Area
- Cable Logging Area

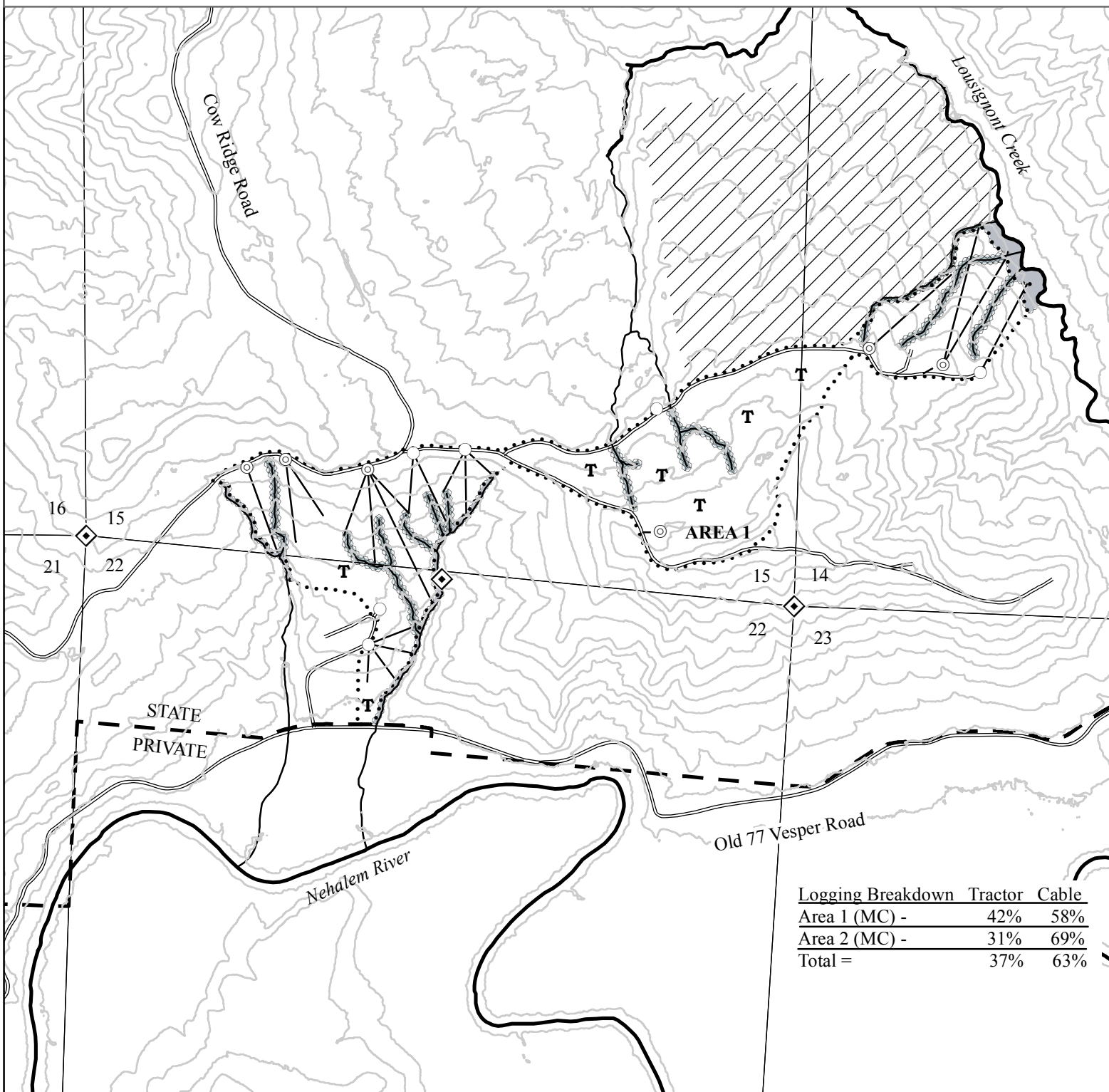
Logging Map

OF TIMBER SALE CONTRACT NO. 341-18-42
DAISY CHAIN
PORTIONS OF SECTION 9, 10, 14, 15, 16, AND 22
T6N, R6W, W.M.,
CLATSOP COUNTY, OREGON

Area 1 (MC) = 88
Area 2 (MC) = 71
Area 3 (R/W) = 1
Total Acres = 160

1 inch = 1,000 feet

0 500 1,000
Feet



Logging Breakdown	Tractor	Cable
Area 1 (MC) -	42%	58%
Area 2 (MC) -	31%	69%
Total =	37%	63%

Legend

- Existing Landing
- ⊙ Landing Construction
- ◆ Survey Monument
- ⋯ Timber Sale Boundary
- ▨ Reforestation Area
- ~ Type F Stream
- ~ Type N Stream
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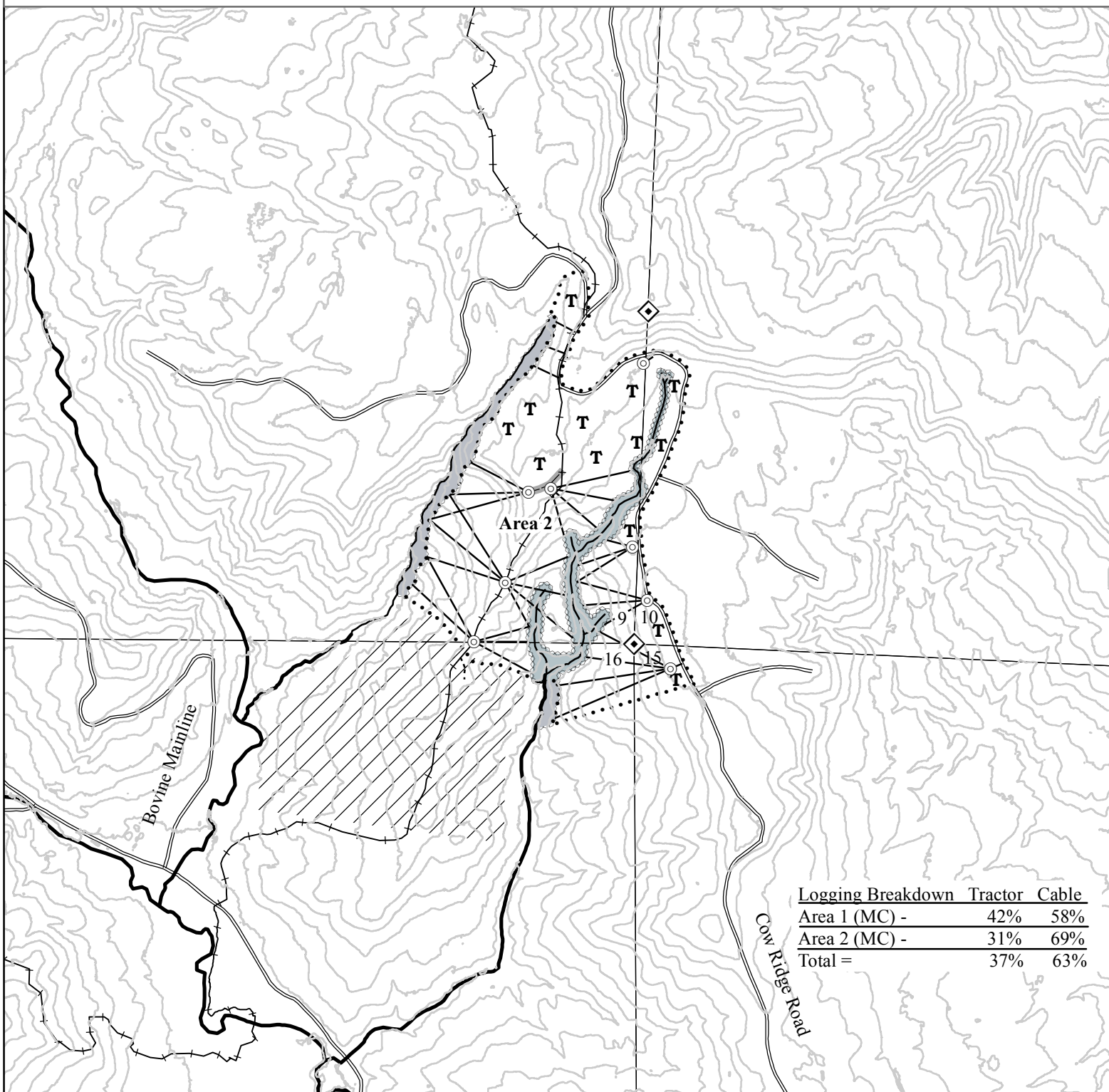
Logging Map

OF TIMBER SALE CONTRACT NO. 341-18-42
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PORTIONS OF SECTION 9, 10, 14, 15, 16, AND 22
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