



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Crawfish Corner
Sale AT-341-2017- 07-

District: Astoria

Date: May 03, 2017

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$960,792.02	\$72,047.22	\$1,032,839.24
		Project Work:	(\$125,299.00)
		Advertised Value:	\$907,540.24



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Timber Description

Location: Portions of Sections 29, 31, and 32, T6N, R6W, and portions of Section 5, T5N, R6W, W.M., Clatsop County, Oregon.

Stand Stocking: 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	15	0	95
Western Hemlock / Fir	16	0	97
Sitka Spruce	37	0	97
Alder (Red)	12	0	95
Maple	16	0	95

Volume by Grade	2S	3S	4S	Camprun	Total
Douglas - Fir	1,010	1,056	335	0	2,401
Western Hemlock / Fir	270	102	41	0	413
Sitka Spruce	6	2	0	0	8
Alder (Red)	0	0	0	233	233
Maple	0	0	0	51	51
Total	1,286	1,160	376	284	3,106

Comments: Pond Values Used: 1st Quarter Calendar Year 2017 + Local Pond Values, March, 2017.

Expected Log Markets: Mist, Clatskanie, Tillamook, Forest Grove, Lonview (WA), Chehalis (WA), Elma (WA), Warrenton and Garibaldi.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$1,294.21/\text{MBF} = \$983.14/\text{MBF} - \$311.07/\text{MBF}$

SCALING COST ALLOWANCE = \$5.00/MBF

BRANDING AND PAINTING COST ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$700 daily truck cost.

Other Costs (with Profit & Risk to be added):

Log Loader Slash & Landing Piling (includes Move-in and Pile Materials) = \$3,690

TOTAL Other Costs (with Profit & Risk to be added) = \$3,690

Other Costs (No Profit & Risk added):

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

TOTAL Other Costs (No Profit & Risk added) = \$2,000



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Logging Conditions

Combination#: 1	Douglas - Fir	19.00%
	Western Hemlock / Fir	19.00%
	Sitka Spruce	19.00%
	Alder (Red)	19.00%
	Maple	19.00%
Logging System:	Track Skidder	Process: Manual Falling/Delimbing
yarding distance:	Medium (800 ft)	downhill yarding: No
tree size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF	
loads / day:	10	bd. ft / load: 4200
cost / mbf:	\$106.08	
machines:	Log Loader (B) Track Skidder	
Combination#: 2	Douglas - Fir	67.00%
	Western Hemlock / Fir	67.00%
	Sitka Spruce	67.00%
	Alder (Red)	67.00%
	Maple	67.00%
Logging System:	Cable: Small Tower <=40	Process: Manual Falling/Delimbing
yarding distance:	Medium (800 ft)	downhill yarding: No
tree size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF	
loads / day:	9	bd. ft / load: 4000
cost / mbf:	\$172.22	
machines:	Log Loader (A) Tower Yarder (Small)	
Combination#: 3	Douglas - Fir	3.00%
	Western Hemlock / Fir	3.00%
	Sitka Spruce	3.00%
	Alder (Red)	3.00%
	Maple	3.00%
Logging System:	Shovel	Process: Harvester Head Delimbing
yarding distance:	Medium (800 ft)	downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	20	bd. ft / load: 4600
cost / mbf:	\$58.09	
machines:	Forwarder Harvester	
Combination#: 4	Douglas - Fir	11.00%
	Western Hemlock / Fir	11.00%
	Sitka Spruce	11.00%
	Alder (Red)	11.00%
	Maple	11.00%
Logging System:	Cable: Large Tower >=70	Process: Stroke Delimber
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: 4600

cost / mbf: \$103.68

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



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Logging Costs

Operating Seasons: 2.00	Profit Risk: 12%
Project Costs: \$125,299.00	Other Costs (P/R): \$3,690.00
Slash Disposal: \$0.00	Other Costs: \$2,000.00

Miles of Road

Road Maintenance: \$7.18

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	3.7
Western Hemlock / Fir	\$0.00	4.0	4.6
Sitka Spruce	\$0.00	2.0	4.5
Alder (Red)	\$0.00	3.0	3.8
Maple	\$0.00	2.0	3.5



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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									
\$148.69	\$7.54	\$2.82	\$110.68	\$1.19	\$32.51	\$0.00	\$7.00	\$0.64	\$311.07
Western Hemlock / Fir									
\$148.69	\$7.40	\$2.82	\$43.66	\$1.19	\$24.45	\$0.00	\$7.00	\$0.64	\$235.85
Sitka Spruce									
\$148.69	\$7.40	\$2.82	\$89.27	\$1.19	\$29.92	\$0.00	\$7.00	\$0.64	\$286.93
Alder (Red)									
\$148.69	\$7.54	\$2.82	\$71.84	\$1.19	\$27.85	\$0.00	\$7.00	\$0.64	\$267.57
Maple									
\$148.69	\$7.54	\$2.82	\$117.00	\$1.19	\$33.27	\$0.00	\$7.00	\$0.64	\$318.15

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$659.34	\$348.27	\$0.00
Western Hemlock / Fir	\$0.00	\$533.48	\$297.63	\$0.00
Sitka Spruce	\$0.00	\$496.25	\$209.32	\$0.00
Alder (Red)	\$0.00	\$543.27	\$275.70	\$0.00
Maple	\$0.00	\$471.27	\$153.12	\$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
Sitka Spruce	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	2,401	\$348.27	\$836,196.27
Western Hemlock / Fir	413	\$297.63	\$122,921.19
Sitka Spruce	8	\$209.32	\$1,674.56
Alder (Red)	233	\$275.70	\$64,238.10
Maple	51	\$153.12	\$7,809.12

Gross Timber Sale Value

Recovery: \$1,032,839.24

Prepared By: Bryce Rodgers

Phone: 503-325-5451

Site Prep Appraisal

Sale Number: 341-17-07
Sale Name: Crawfish Corner
Date: 03/15/2017

Vegetation Type/Zone	Vegetation Type/Zone Code	Production Rate (hr/ac)	Estimated Piles/Acre
Doug-fir	A	1.0	3.0
Hemlock/Fir	B	1.5	4.5
Hemlock/Spruce	C	2.0	6.0
Hemlock	D	2.0	6.0
Conifer/Hardwood	E	1.5	4.5
Whole Tree Yarding	F	0.5	0.5

Sale Area	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour	Total Cost/Area
3	MC	E	5.0	8	\$129.00	\$967.50
					In-unit Piling	Sub Total = \$967.50
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
3	6	\$220.00	\$1,320.00	22.5	\$5.00	\$112.50
*Cost includes separating firewood					Materials	Sub Total = \$112.50
					Landing Piling	Sub Total = \$1,320.00
Move-In Allowance	Number of Move-In's	Total Move-In Allowance			Move-In	Sub Total = \$1,290.00
\$1,290.00	1	\$1,290.00				
Grand Total =						\$3,690.00

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale: Crawfish Corner
Date: March 13, 2017
By: Ella Salkeld

MBF: 3,106
\$/MBF: \$7.18

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
Interim Operations and snow Entries: 2	Grader 14G	\$778	2	35	\$100	\$5,056
	Dump Truck 12CY	\$163	1	8	\$79	\$795
	FE Loader C966	\$778	1	2	\$79	\$936
Final Road Maintenance	Grader 14G	\$778	1	47	\$100	\$5,478
	Dump Truck 12CY	\$163	1	16	\$79	\$1,427
	FE Loader C966	\$778	1	6	\$83	\$1,276
	Vibratory Roller	\$778	2	47	\$77	\$5,175
	Water Truck 2,500 gallon	\$190	1	8	\$89	\$902
	Backhoe C580	\$321	1	8	\$77	\$937
	Labor			8	\$40	\$320
Total						\$22,302

Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	2.0	8.8	4.4	35

Final Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Process - Grader	1.5	8.8	5.8	47
Vibratory Roller	1.5	8.8	5.8	47

Process and compact: All crushed rock roads.

West Branch Road to Crawford Ridge Road to Hwy 202

5.2 Miles

Mulak Ridge road and spur roads to Hwy 202

2.25 Miles

Area 1 spurs to Crawford Ridge Road

1.3 Miles

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Crawfish Corner

ROAD CONSTRUCTION:

Project No. 1	Road segment	Length/Sta	Cost
Surfaced	1A-1B, 2A-2B,		
Crowned and	2C-2D, 4A-4B,		
Ditched	5A-5B, 5E-5F, A-C	32.60	\$42,522
Surfaced	2F-2G, 2H-2I	8.80	\$5,462
Outsloped			
Dirt	5C-5D, 5G-5H	31.50	\$5,135
	TOTALS	72.90	\$53,119
	Miles	1.38	

ROAD IMPROVEMENT:

Project No. 2	Road segment	Length/Sta	Cost
	11-12, 13-14, 15-16,		
	17-18, 19-110, 111-112	166.85	\$52,948
	TOTALS	166.85	\$52,948
	Miles	3.16	

SPECIAL PROJECTS:

Description	Cost
Vacating V1 to V2 and V3 to V4	\$2,788
Project Road Maintenance	\$8,464
TOTAL	\$11,252

MOVE IN:

Equipment	Cost
Excavator (C315)	\$805
Excavator (C330) x 2	\$2,812
Rubber Tired Skidder	\$805
Large Grader (14G)	\$778
Front End Loader (C966)	\$778
20 cy dump trucks X 2	\$382
10 cy dump trucks X 4	\$652
Water Truck (2,500 gal.)	\$190
Vibratory Roller	\$778
TOTAL	\$7,980

GRAND TOTAL **\$125,299**

Compiled By: Cody Valencia

Date: 03/07/2017

SALE NAME:	Crawfish corner	NEW CONSTRUCTION:	72.90 STATIONS	1.38 MILES
ROAD:	1A-1B(1.0),2A-2B(1.0),2C-2D(1.3),2F-2G(6.6)	DIRT CONSTRUCTION:	31.5	0.60 MILES
POINTS:	2H-2I(2.0),5A-5B(7.5),5C-5D(17.0),5E-5F(8.3),5G-5H(14.5),A-B(13.5)			

Method	Acres/amount	x	Rate	=	Cost
Scatter outside of R/W	2	x	1337	=	\$2,674.00
Scatter outside of R/W side of road	1	x	669	=	\$669.00

	Material	Cy/amount	x	Rate	=	Cost
1A to 1B	Drift earth <200'	\$/sta 1.00	x	\$190.00	=	\$190.00
2A to 2B	Drift earth <200'	\$/sta 1.00	x	\$190.00	=	\$190.00
2C to 2D	Drift earth <200'	\$/sta 1	x	\$190.00	=	\$247.00
2F to 2G	Balanced Construction	\$/sta 6.8	x	\$122.00	=	\$829.60
2H to 2I	Balanced Construction	\$/sta 2.00	x	\$122.00	=	\$244.00
5A to 5B	Balanced Construction	\$/sta 7.50	x	\$122.00	=	\$915.00
5C to 5D	Balanced Construction	\$/sta 10.00	x	\$122.00	=	\$1,220.00
	Drift earth <200'	\$/sta 7.00	x	\$190.00	=	\$1,330.00
5E to 5F	Balanced Construction	\$/sta 8.30	x	\$122.00	=	\$1,012.60
5G to 5H	Drift earth <200'	\$/sta 12.00	x	\$190.00	=	\$2,280.00
	Balanced Construction	\$/sta 2.50	x	\$122.00	=	\$305.00
A to B	Common drift (<50% slopes)	\$/cy 1,500.00	x	\$1.80	=	\$2,700.00
	Embankment compaction	\$/cy 1,500.00	x	\$0.70	=	\$1,050.00
	Cut slope rounding	\$/sta 5.00	x	\$43.00	=	\$215.00
	Landings at 1B, 2B, 2D, 2E, 2C	\$/landing 11.00	x	\$389.00	=	\$4,279.00

[illegible]

	Description	Quantity	Rate	Cost
Other/miscellaneous:				
Culvert stakes & markers:	Culvert marker	6	\$20.00	\$120.00

Subtotal of Clearing, Exc., Culv.	\$24,767
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SPECIAL PROJECTS		
	Description	Cost
SUB TOTAL FOR SPECIAL PROJECTS		\$0
	Subtotal of Surfacing & Spec. Proj.	\$28,352
	Subtotal of Clearing, Exc., Culv.	\$24,767
GRAND TOTAL		\$53,119

SUMMARY OF ROAD IMPROVEMENT COSTS

SALE NAME: Crawfish Corner

ROAD IMPROVEMENT: 166.85 STATIONS

3.16 MILES

ROAD: I1-I2, I3-I4, I5-I6, I7-I8, I9-I10, I11-I12

POINTS:

CLEARING & GRUBBING

Method	Acres/amount	x	Rate	=	Cost
				=	

SUB TOTAL FOR CLEARING & GRUBBING

EXCAVATION

I1 to I2	Material		Cy/amount	x	Rate	=	Cost
0+00 to 1+25	Ditch reestablishment	\$/hr	2.00	x	\$101.00	=	\$202.00
12+90	remove culvert	\$/hr	2.00	x	\$101.00	=	\$202.00
26+80	Ditchout improvement	\$/hr	1.00	x	\$101.00	=	\$101.00
13+20, 16+90	Install dissipator	\$/hr	2.00	x	\$101.00	=	\$202.00
I3 to I4						=	
				x		=	
7+70	Ditchout improvement	\$/hr	1.00	x	\$101.00	=	\$101.00
I5 to I6						=	
71+90 to 74+60	Ditch improvement	\$/hr	2.50	x	\$101.00	=	\$252.50
I7 to I8						=	
5+00	Ditchout improvement	\$/hr	1.00	x	\$101.00	=	\$101.00
7+20 to 9+20	Ditch improvement	\$/hr	2.00	x	\$101.00	=	\$202.00
				x		=	
I9 to I10						=	
7+70	Ditchout improvement	\$/hr	1.00	x	\$101.00	=	\$101.00
I11 to I12						=	
2+80, 9+80	Ditchout improvement	\$/hr	2.00	x	\$101.00	=	\$202.00
8+25	Clean culvert inlet/outlet	\$/hr	1.00	x	\$101.00	=	\$101.00
				x		=	
	Extra grader hours for sod removal		12.00	x	\$100.00	=	\$1,200.00
	I1-I2, I3-I4, I7-I8, I9-I10, I11-I12						

SUB TOTAL FOR EXCAVATION

\$2,968

CULVERT MATERIALS AND INSTALLATION

Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
I1 to I2					I11 to I12				
13+20	18"CPP	30	\$19.53	\$585.90	4+10	18"CPP	30	\$19.53	\$585.90
16+90	18"CPP	30	\$19.53	\$585.90					
I5 to I6									
14+45	18"CPP	40	\$19.53	\$781.20					
20+35	18"CPP	30	\$19.53	\$585.90					
I7 to I8									
11+15	18"CPP	30	\$19.53	\$585.90					

Other/miscellaneous:	Description	Quantity	Rate	Cost
Culvert stakes & markers:	Culvert Markers	7	\$20.00	\$140.00
	6 new 1 replacment at 38+65 on I5-I6			

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION

\$3,851

Subtotal of Clearing, Exc., Culv.

\$6,818

Compiled By: Cody Valencia

Date: 03/07/2017

SURFACING		Stations/ amount	x	Rate/ sta/amt	Cost
Subgrade prep:	Description				
	Grade, Shape and Ditch 16'	166.85	x	\$24.83	\$4,142.89
	Subgrade Compaction	166.85	x	\$20.19	\$3,368.70
	Scatter Ditch Waste Materials I7-I8, I9-I10, I11-I12	44.6	x	\$12.41	\$553.49
	Load and Haul Ditch Waste Materials I1-I2, I3-4	39.75	x	\$22.92	\$911.07

ROAD SEGMENT				I1 to I2		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I1 to I2		0+00 to 29+50						
				Volume (CY) per		Number of						
Subgrade leveling	4"-0" Crushed	0+80, 2+00, 19+40	N/A	Load	11	Loads	3	33	\$6.63	\$219		
Junctions	4"-0" Crushed	3+25, 9+50,	4	Junction	11	Junctions	2	22	\$6.63	\$146		
Turnouts	4"-0" Crushed	11+30, 28+15,	4	T/O	11	T/O's	2	22	\$6.63	\$146		
Surface rock	4"-0" Crushed	0+00 to 29+50	4	Station	25	Station	29.50	738	\$6.63	\$4,890		
Culvert Bedding/backfill	1 1/2"-0" salvaged	13+20, 16+90	N/A	culvert	22	culverts	2	44	\$4.15	\$183		
Culvert surfacing rock	4"-0" Crushed	13+20, 16+90	N/A	culvert	11	culverts	2	22	\$6.63	\$146		
Base rock	4"-0" Crushed	12+90	N/A	area	22	areas	1	22	\$6.63	\$146		
Dissipator	24"-6" riprap	13+20, 16+90	N/A	Dissipator	11	Dissipator	2	22	\$12.32	\$271		

Total Rock for Road Segment:

I1 to I2

925

\$6,145

ROAD SEGMENT I3 to I4				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I3 to I4		0+00 to 10+25				
				Volume (CY) per		Number of				
Subgrade leveling	4"-0" Crushed	4+00	N/A	Load	11	Loads	2	22	\$6.63	\$146
Turnaround	4"-0" Crushed	3+50, 8+00	4	T/A	22	T/A's	1	22	\$6.63	\$146
Base rock	4"-0" Crushed	0+00 to 10+25	4	Station	25	stations	10.25	256	\$6.63	\$1,699
Landings	6"-0" pit-run	10+25	N/A	Landing	80	Landings	1	60	\$9.83	\$590

Total Rock for Road Segment:

I3 to I4

360

\$2,580

ROAD SEGMENT I5 to I6			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	I5 to I6		0+00 to 82+50				
				Volume (CY) per		Number of				
	1 1/2"-0" crushed	0+00, 3+75, 19+60, 32+20, 39+00, 47+70, 51+95, 63+25, 73+25, 80+70	N/A	load	11	Loads	10	110	\$5.47	\$602
Leveling rock										
Surface rock	1 1/2"-0" crushed	0+00 to 82+50	2	Station	13	Stations	82.50	1,073	\$5.47	\$5,867
	1 1/2"-0" crushed	5+50, 8+95, 18+75, 22+60, 26+55, 35+90, 44+90, 48+90, 57+45, 59+05, 61+00, 66+30, 77+10,	2	T/O	11	T/O's	13	143	\$5.47	\$782
Turnouts										
Culvert Bedding/backfill	1 1/2"-0" salvaged	14+45, 20+35,	N/A	culvert	22	culverts	2	44	\$4.15	\$183
Culvert surfacing rock	1 1/2"-0" crushed	14+45, 20+35,	N/A	culvert	11	culverts	2	22	\$5.47	\$120
	1 1/2"-0" crushed	19+00, 29+20, 32+20, 54+15, 64+65, 68+60, 69+80,	2	Junction	11	Junctions	7	77	\$5.47	\$421
Junctions										

Total Rock for Road Segment:

I5 to I6

1,469

\$7,975

ROAD SEGMENT I7 to I8				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I7 to I8		0+00 to 18+20				
				Volume (CY) per		Number of				
Subgrade leveling	4"-0" Crushed	1+30, 2+80, 17+40	N/A	load	11	Loads	3	33	\$6.63	\$219
Subgrade leveling	4"-0" Crushed	13+40	N/A	load	33	Loads	1	33	\$6.63	\$219
Turnouts	4"-0" Crushed	4+25, 10+50, 12+80,	4	T/O	11	T/O's	3	33	\$6.63	\$219
Culvert Bedding/backfill	1 1/2"-0" salvaged	11+15	N/A	culvert	22	culverts	1	22	\$4.15	\$91
Culvert surfacing rock	4"-0" Crushed	11+15	N/A	culvert	11	culverts	1	11	\$6.63	\$73
Junctions	4"-0" Crushed	6+40,	4	Junction	22	Junctions	1	22	\$6.63	\$146
Base rock	1 1/2"-0" crushed	0+00 to 5+00	3	Station	25	Stations	5	125	\$5.47	\$684
Base rock	4"-0" Crushed	5+00 to 18+20	4	Station	25	Stations	13.20	330	\$6.63	\$2,188
Turn Around	4"-0" Crushed	16+25	4	T/A	33	T/A's	1	33	\$6.63	\$219
Landings	6"-0" pit-run	18+20	N/A	Landing	80	Landings	1	80	\$9.83	\$786

Total Rock for Road Segment:

I7 to I8

722

\$4,843

ROAD SEGMENT			I9 to I10		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I9 to I10		0+00 to 13+00					
				Volume (CY) per		Number of					
Subgrade leveling	4"-0" Crushed	4+80, 7+25	N/A	load	11	Loads	8	88	\$6.63	\$583	
Junctions	4"-0" Crushed	10+00	4	Junction	22	Junctions	1	22	\$6.63	\$146	
Turn Around	4"-0" Crushed	7+25	4	T/A	33	T/A's	1	33	\$6.63	\$219	

Total Rock for Road Segment:

I9 to I10

143

\$948

ROAD SEGMENT I11 to I12				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I11 to I12		0+00 to 13+40				
				Volume (CY) per		Number of				
Culvert Bedding/backfill	1 1/2"-0" salvaged	4+10	N/A	culvert	22	culverts	1	22	\$4.15	\$91
Culvert surfacing rock	4"-0" Crushed	4+10	N/A	culvert	11	culverts	1	11	\$6.63	\$73
Base rock	4"-0" Crushed	0+00 to 13+40	6	Station	37	Stations	13.40	496	\$6.63	\$3,287
Dissipator	24"-6" riprap	4+10	N/A	Dissipator	11	Dissipator	1	11	\$12.32	\$136
Turnouts	4"-0" Crushed	3+00, 10+10	6	T/O	33	T/A's	2	66	\$6.63	\$438
Landings	6"-0" pit-run	13+40	N/A	Landing	80	Landings	1	60	\$9.83	\$590

Total Rock for Road Segment:

I11 to I12

666

\$4,614

Special Projects		
Description	Cost	
SUB TOTAL FOR SPECIAL PROJECTS		\$0
		Subtotal of Surfacing & Spec. Proj. \$46,130
		Subtotal of Clearing, Exc., Culv. \$6,818
GRAND TOTAL		\$52,948

Date: 03/07/2017

CRUSHED ROCK COST

SALE NAME: Crawfish Corner
PROJECT: _____
QUARRY: Cow Creek Stockpile

MATERIAL: Crushed 4"-0" and 3/4"-0"

DATE: 02/03/2017
BY: Cody Valencia

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	
I1 to I2	29.50	859	3.45	4.98	1.58	0.88		0.18	0.10	11.17
I3 to I4	10.25	300	3.45	4.98	1.58	0.88		0.32	0.08	11.29
I7 to I8	18.20	620	1.70	3.23		0.48	0.17		0.11	5.69
I9 to I10	13.00	143	1.70	3.23		0.48	0.20	0.10	0.11	5.82
I11 to I12	13.40	495	1.70	3.23		1.10		0.12	0.12	6.27
5A to 5B	7.50	428	1.70	3.23		1.22	0.20		0.21	6.56
5E to 5F	8.30	470	1.70	3.23		1.17			0.25	6.35
2A to 2B	1.00	61	1.70	3.23		4.30	0.43		0.01	9.67
2 C to 2D	1.30	76	1.70	3.23		4.30	0.58		0.02	9.83
2F to 2G	6.80	384	1.70	3.23		4.30	0.75		0.10	10.08
2H to 2I	2.00	100	1.70	3.23		4.30	0.75		0.11	10.09
1A to 1B	1.00	66	3.45	4.98	1.58	0.88		0.28	0.0	11.19
A to B	13.50	917	1.7	3.23		4.3	0.2		0.1	9.56
TOTAL	125.75	4,919								
STA./NO.		CU. YD.								AVERAGE HAUL
CUBIC YARD WEIGHTED HAUL			2.14	3.67	0.39	1.97	0.17	0.07	0.13	8.53
									Average Round Trip Distance (miles) 17.06	

ROCK HAUL:

Truck type: D20 No. trucks: 2
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$5.13	/cy
Load:	\$0.54	/cy
Spread:	\$0.96	/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 = 804

CRUSHED ROCK HAUL COSTS 4,919 cy @ \$6.63 /cy

CRUSHED ROCK COST

SALE NAME: Crawfish Corner
PROJECT: _____
QUARRY: Culvert Bedding source

DATE: 03/21/2017
MATERIAL: Culvert Bedding 1-1/2" -0" salvaged BY: Cody Valencia

[illegible]

ROCK HAUL:

Truck type: D20 No. trucks: 2
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$2.89	/cy
Load:	\$0.48	/cy
Spread:	\$0.78	/cy

Truck type:	<u>D12</u>	No. trucks:	<u>4</u>
Delay min.:	<u>6</u>	Efficiency:	<u>85%</u>

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

Production: cy/day = 1,429

CRUSHED ROCK HAUL COSTS

220 cy @ \$4.15 /cy

CRUSHED ROCK COST

SALE NAME: Crawfish Corner
PROJECT: _____
QUARRY: Northrup Creek Stockpile

MATERIAL: Crushed 1 1/2"-0"

DATE: 02/03/2017
BY: Cody Valencia

[illegible]

ROCK HAUL:

Truck type: D20 No. trucks: 2
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$4.15	/cy
Load:	\$0.48	/cy
Spread:	\$0.84	/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 = 995

CRUSHED ROCK HAUL COSTS 1,550 cy @ \$5.47 /cy

PIT RUN ROCK COST

SALE NAME: Crawfish Corner
PROJECT: _____
QUARRY: Northrup creek Quarry

MATERIAL: Pit Run 6"-0"

DATE: 02/03/2017
BY: Cody Valencia

[illegible]

ROCK HAUL:

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

Ave haul:	\$7.43	/cy
Load:	\$0.84	/cy
Spread:	\$1.56	/cy

Truck type:	<u>D12</u>	No. trucks:	<u>6</u>
Delay min.:	<u>6</u>	Efficiency:	<u>85%</u>

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

Production: cy/day = 510

PIT RUN ROCK HAUL COSTS

740 cy @ \$9.83 /cy

RIP RAP ROCK COST

SALE NAME: Crawfish Corner
PROJECT: _____
QUARRY: Northrup creek Quarry

MATERIAL: Rip Rap 24"-6"

DATE: 02/03/2017
BY: Cody Valencia

[illegible]

ROCK HAUL:

Truck type:	<u>D12</u>	No. trucks:	<u>3</u>
Delay min.:	<u>6</u>	Efficiency:	<u>85%</u>
Truck type:	<u>D10</u>	No. trucks:	<u> </u>
Delay min.:	<u>5</u>	Efficiency:	<u>85%</u>

Ave haul:	\$6.22	/cy
Load:	\$1.80	/cy
Develop:	<u>\$4.30</u>	/cy

Production: cy/day = 304

RIP RAP ROCK HAUL COSTS

33 cy @ \$12.32 /cy

Crawfish Corner

Project No.4 Road Vacating

Location/Description	C330 Excavator	Seeding	Straw Mulch	Total
V1 to V2 0+00-17+00		10 lb.	20 bales	
Fill removal (1 sta.)	4 hrs			
Remove crossdrains (2)	1 hrs			
Waterbar (14)	4 hrs			
V3 to V4 0+00 to 14+50				
Remove culverts (1)	1 hrs			
Waterbar (12)	3.5 hrs			
Walking machine from V1 to V3 road	3 hrs			
Total	16.5 hrs	10 lb	20 Bales	
Rate	\$155 /hr	\$1.60 /lb	\$10.73 /Bale	
Cost	\$2,558	\$16	\$215	\$2,788

Prepared by: **Cody Valencia**

Projects Road Maintenance Cost Summary

Sale: Crawfish Corner
Date: March 7, 2017
By: Cody Valencia *FL*

Type	Equipment/Rationale			Hours	Rate	Cost
Final Project Haul Road Maintenance	Grader 14G			34.0	\$100	\$3,400
	Dump Truck 12CY			8.0	\$79	\$632
	FE Loader C966			4.0	\$83	\$332
	Vibratory Roller			44.0	\$77	\$3,388
	Water Truck 2,500 gallon			8.0	\$89	\$712
Total						\$8,464

Production Rates

Grader

Vibratory Roller

Miles/day	Distance(miles)	Days	Hours
2.0	8.20	4.1	33
1.5	8.20	5.5	44

Northrup Ridge Quarry to Foster mainline 0.5 miles
Foster mainline to Northrup Creek Road 0.5 miles
Cow Creek Road to Northrup Creek Road 0.1 miles
Northrup Creek Road to Hwy 202 0.5 miles
Crawford ridge road 2.4 miles
Mulak Ridge Road 2.9 miles
West Branch Road 1.8 miles
Total Miles = 8.2 Miles

X:\DOCUMENT\STATE_FOREST\UNIT_SUNSET\2017 FY Sales\Crawfish Corner\Sale Prep\Projects\Project Road Maintenance_CC

Crawfish Corner TIMBER CRUISE REPORT FY 2017

1. Sale Area Location: Areas 1, 2, 3, 4, and 5 are located in portions of Sections 29, 31 & 32, T6N, R6W; and portion of Sections of 5, T5N, R6W, W.M., Clatsop County, Oregon.

2. Fund Distribution: BOF 100%
CSL 0%

Tax Code: 8-01 (87.5%)
8-02 (12.5%)

3. Sale Acreage by Area:

Area	Treatment	Gross Acres	Stream Buffers	New R/W	Existing R/W	Net Acres	Survey Method
1	Partial Cut	57	4	<1	3	50	GIS
2	Partial Cut	77	4	1	1	71	GIS
3	Modified Clearcut	35	N/A	N/A	1	34	GIS
4 (R/W)	Right of Way	3	N/A	N/A	N/A	3	Length x Width
5	Partial Cut	133	12	1	5	115	GIS
TOTALS		305	20	2	10	273	

4. Cruisers and Cruise Dates: Area 1 was cruised by Jake Hatcher and John Choate on 01/03/17. Area 2 was cruised by Cody Valenica, Avery Petersen, and Ed Holloran on 01/03/17. Area 3 was cruised by Cody Valenica, Jake Hatcher, John Choate, and Matt Dimick on 01/05/17 and 01/06/17. Area 5 was cruised by Jake Hatcher, John Choate, Avery Petersen, and Kevin Berry on 01/05/17.

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

Areas 1, 2, and 5 are partial cut units and were variable plot cruised using a 27.78 BAF for conifer and hardwoods. These plots are located on a 5 chain by 8 chain grid, with every other plot measured and graded. A total of 71 plots were sampled, with 36 measured and graded plots, and 35 count plots.

Area 3 is a modified clearcut unit and was variable plot cruised using a 40 BAF for conifer and hardwoods. These plots are located on a 2 chain by 4 chain grid, with every other plot measured and graded. A total of 41 plots were sampled, with 20 measured and graded plots, and 21 count plots.

Area 4 R/W Right-of-way volume was calculated by multiplying the R/W acreage and the average volume per acre from the plots in Areas 1, 2, and 5. Right-of-way totals 3 acres.

AREA	CRUISE	TRACT	TYPE	ACRES
1, 2, & 5	CCORNER	AREA125	PC	236
3	CCORNER	AREA3	MC	34
4	CCORNER	AREA125	R/W	3

6. Timber Description: Areas 1, 2, and 5 are partial cut units, approximately 30-40 years old, consisting of Douglas-fir, and red alder. The average Douglas-fir tree size to be harvested is approximately 13 inches DBH, with an average height of 40 feet to a merchantable top (6 inch d.i.b./40% fp). The average red alder tree size to be harvested is approximately 10 inches DBH, with an average height of 39 feet to a merchantable top (6 inch d.i.b./40% fp). The average volume per acre to be harvested (net) is 6 MBF. The target basal area for these areas is 140.

Area 3 is a modified clearcut unit, approximately 75 to 80 years old, consisting of Douglas-fir, red alder, and western hemlock. The average Douglas-fir tree size to be harvested is approximately 23 inches DBH, with an average height of 89 feet to a merchantable top (6 inch d.i.b./40% fp). The average red alder tree size to be harvested is approximately 14 inches DBH, with an average height of 38 to a merchantable top (6 inch d.i.b./40% fp). The average western hemlock tree size to be harvested is approximately 16 inches DBH, with an average height of 48 to a merchantable top (6 inch d.i.b./40% fp). The average volume per acre to be harvested (net) is 48 MBF.

Area 4 R/W is similar to the timber description mentioned above in the timber sale areas 1, 2, and 5. The average volume 20.2 MBF/Acre (net).

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

Statistics for Stand B.F. volumes

Area	Estimated CV	Target SE%	Actual CV	Actual SE%
1, 2, and 5	45	13	26.7	3.2
3	52	9	57.3	8.9

8. Take Volumes by Species and Log Grades for All Sale Areas by MBF: (See "Species, Sort Grade-Board Feet Volumes (Project)", "Statistics (Project)", and the "Stand Table Summary" attached). Volumes do not include "in-growth." The majority of defect and breakage was taken out during the cruise.

Species	DBH	Net Vol.	2 Saw	3Saw	4 Saw	CR	% D & B	% Sale
Douglas-fir	15	2,401	1,010	1,056	335	-	2.2	77
Western Hemlock	16	413	270	102	41	-	1.9	13
Sitka spruce	37	8	6	2	<1	-	0	<1
Red alder	12	233	-	-	-	233	0.1	8
Bigleaf maple	16	51	-	-	-	51	12.7	2

TOTAL NET VOLUME	3,106 MBF
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9. Approvals:

Prepared by: Cody Valencia

Date: March 14th, 2017

Unit Forester Approval: 

Date: MARCH 28, 2017

10. Attachments:

Cruise Design and Map - 8 pages
Volume Report - 4 pages
Statistics Report - 8 pages
Stand Table Summary - 2 pages
Log Stock Tables - 3 pages

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Crawfish Corner **Area** 3

Harvest Type: CC

Approx. Cruise Acres: 35 **Estimated CV%** 52 BF /Acre **SE% Objective** 9 BF /Acre

Planned Sale Volume: 1.40 MMBF **Estimated Sale Area Value/Acre:** \$12,000

- A. Cruise Goals:** (a) Grade minimum 100 conifer trees:
(b) Sample 40 cruise plots (1 Grade: 1 Count); (c) Other goals Determine
"automark" thinning standards; X Determine log grades for sale value; X
Determine snag and leave tree species and sizes; Determine LWD (down wood)
cubic feet and decay classes; Determine "diameter limit" harvest parameters.

B. Cruise Design:

1. **Plot Cruises:** BAF 40 Full point
2. **Cruise Line Direction(s)** Due North/South
Cruise Line Spacing 4 chains 264 feet
Cruise Plot Spacing 2 chains 132 feet
Grade/Count Ratio 1:1
2. **ITS (Sample Tree) Cruises:** Measure-grade ratios: D-fir Hemlock
Spruce True Fir Cedar Hardwood

C. Tree Measurements:

1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 8" 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.
3. **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.
4. **Top Cruise Diameter (TCD):** Minimum top outside bark (DOB) for conifer is 7",
7" for hardwoods or 40 % of DOB at 16' form point. Generally, use 7" outside bark
for trees < 18" dbh and 40% of DOB @ FP for trees > 18" DBH.
5. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree
measured/graded; OR (2) Measure a minimum of 20 form factors for each major
conifer species on the cruise area, and use these to calculate average FF for the
species on the cruise. Hardwood form factors are a Standard 87.

Revised August, 2002

6. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths in conifer and 30' and 40' for hardwoods (8'/10' multiples), whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

6. **Species, Sort, and Grade Codes:** A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
B. Sort: Use code "1" (Domestic).
C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull ; 9 = Utility
Hardwoods: Camp Run

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, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.
ITS and 100% Cruises: Mark cruise "strips" with various colored flagging (not pink). Mark trees measured and graded with yellow paint.

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

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

Cruise Design by: Cody Valencia

Approved by: _____

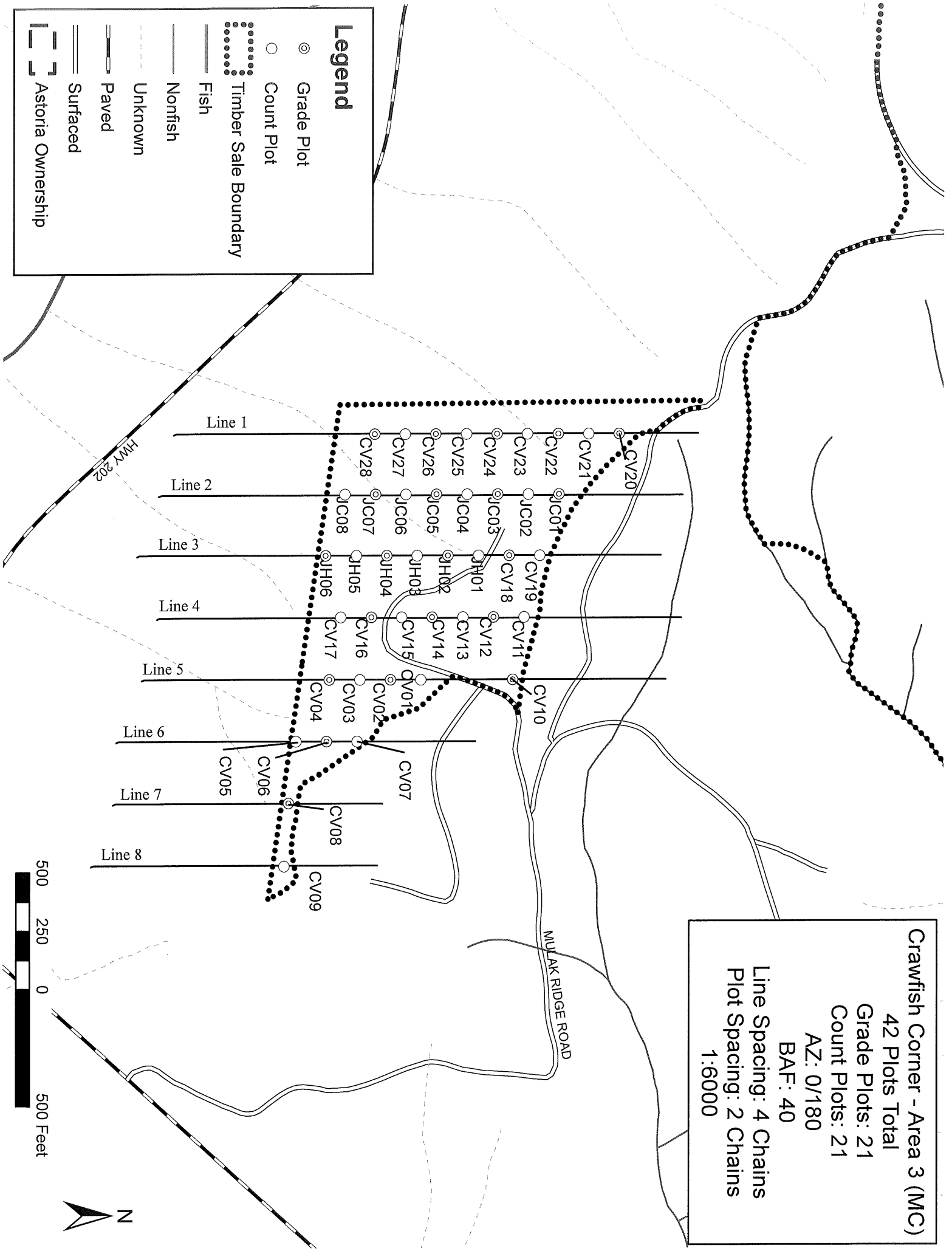


Date: 3/14/2017

Crawfish Corner - Area 3 (MC)
 42 Plots Total
 Grade Plots: 21
 Count Plots: 21
 AZ: 0/180
 BAF: 40
 Line Spacing: 4 Chains
 Plot Spacing: 2 Chains
 1:6000

Legend

- Grade Plot
- Count Plot
- Timber Sale Boundary
- Fish
- Nonfish
- Unknown
- Paved
- Surfaced
- Astoria Ownership



**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Crawfish Corner **Area** 1,2,5

Harvest Type: PC

Approx. Cruise Acres: 271 **Estimated CV%** 45 BF /Acre **SE% Objective** 13 BF /Acre

Planned Sale Volume: 1.288 MMBF **Estimated Sale Area Value/Acre:** \$2,400

A. Cruise Goals: (a) Grade minimum 66 conifer trees:
(b) Sample 66 cruise plots (1 Grade: 1 Count); (c) Other goals Determine
"automark" thinning standards; X Determine log grades for sale value; X
Determine snag and leave tree species and sizes; Determine LWD (down wood)
cubic feet and decay classes; Determine "diameter limit" harvest parameters.

B. Cruise Design:

1. **Plot Cruises:** BAF 27.78 Full point
2. **Cruise Line Direction(s)** Due North/South/East/West
Cruise Line Spacing 8 chains 528 feet
Cruise Plot Spacing 5 chains 330 feet
Grade/Count Ratio 1:1
2. **ITS (Sample Tree) Cruises:** Measure-grade ratios: D-fir Hemlock
Spruce True Fir Cedar Hardwood

C. Tree Measurements:

1. **Diameter:** Minimum DBH to cruise is 8 " for conifers and 8" 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.
3. **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.
4. **Top Cruise Diameter (TCD):** Minimum top outside bark (DOB) for conifer is 7",
7" for hardwoods or 40 % of DOB at 16' form point. Generally, use 7" outside bark
for trees < 18" dbh and 40% of DOB @ FP for trees > 18" DBH.
5. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree
measured/graded; OR (2) Measure a minimum of 20 form factors for each major
conifer species on the cruise area, and use these to calculate average FF for the
species on the cruise. Hardwood form factors are a Standard 87.

Revised August, 2002

6. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths in conifer and 30' and 40' for hardwoods (8'/10' multiples), whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

6. **Species, Sort, and Grade Codes:** A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
B. Sort: Use code "1" (Domestic).
C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull ; 9 = Utility
Hardwoods: Camp Run

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, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.
ITS and 100% Cruises: Mark cruise "strips" with various colored flagging (not pink). Mark trees measured and graded with yellow paint.

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

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

Cruise Design by: Cody Valencia

Approved by: _____



Date: 3/14/2017

Crawfish Corner - Area 1 (PC)
16 Plots Total
Grade Plots: 8
Count Plots: 8
AZ: 37/217
BAF: 27.78
Line Spacing: 8 Chains
Plot Spacing: 5 Chains
1:6000

Legend

GradePlots

CountPlots

Timber Sale Boundary

Fish

Nonfish

Unknown

Paved

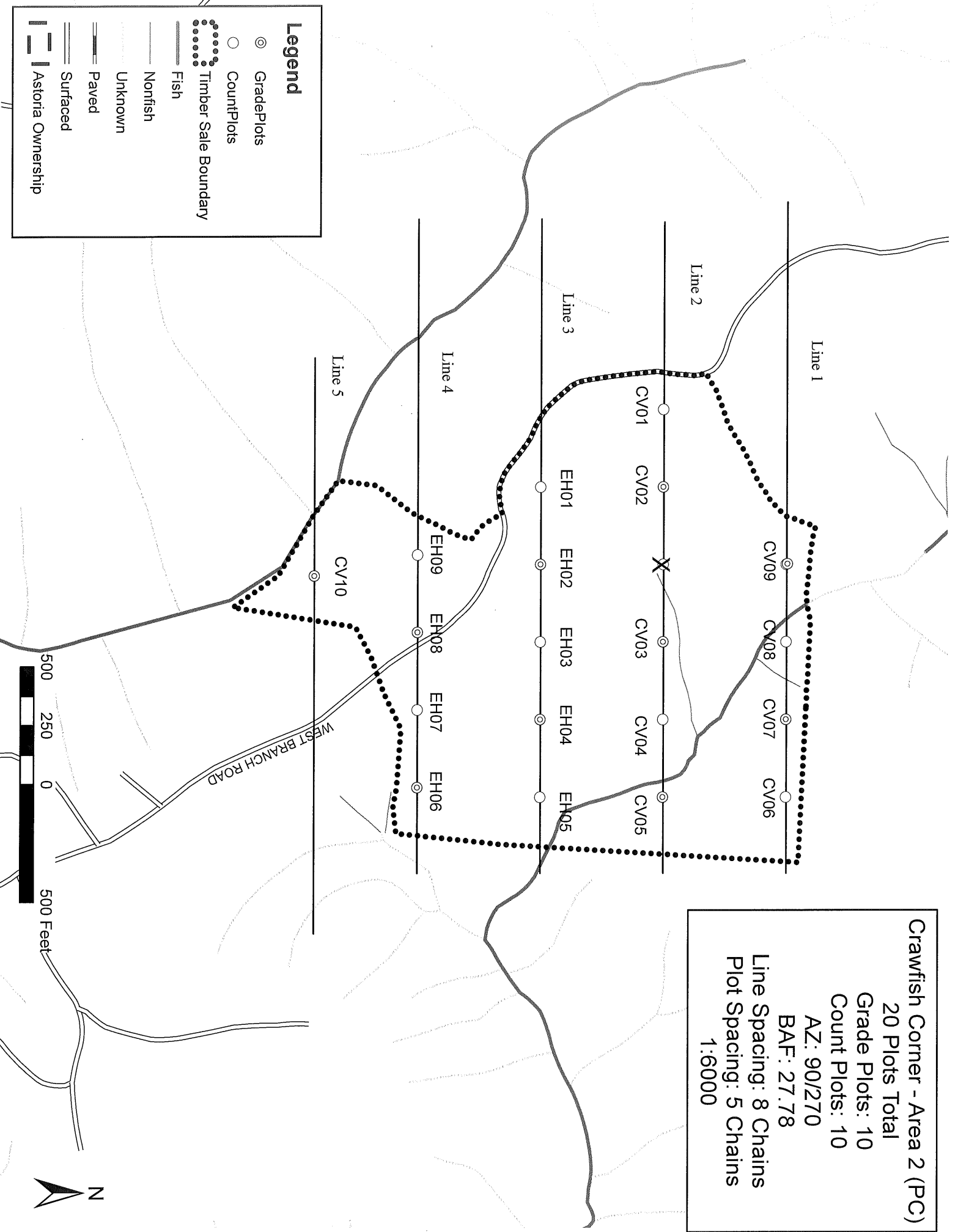
Surfaced

Astoria Ownership

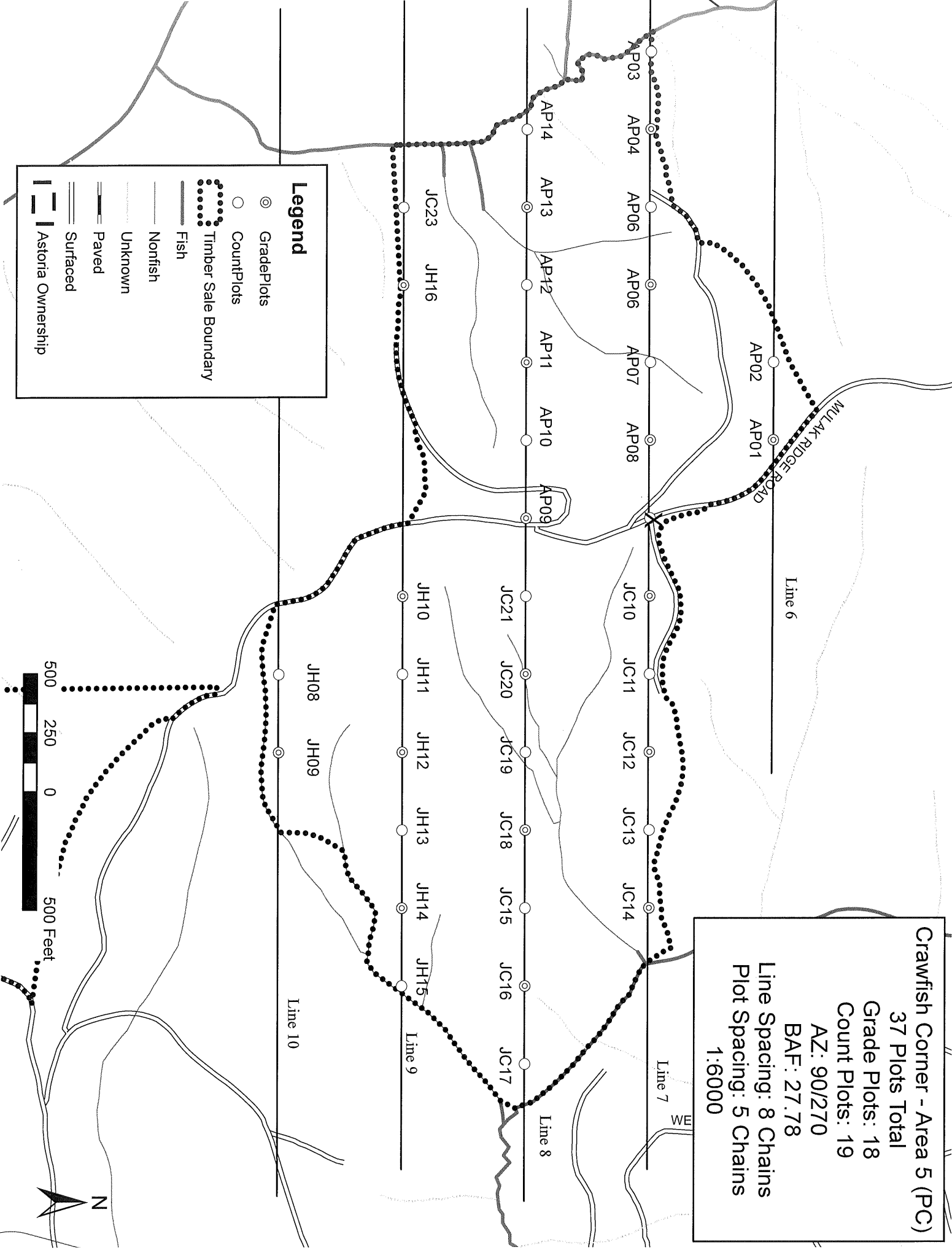
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Crawfish Corner - Area 2 (PC)
20 Plots Total
Grade Plots: 10
Count Plots: 10
AZ: 90/270
BAF: 27.78
Line Spacing: 8 Chains
Plot Spacing: 5 Chains
1:6000



Crawfish Corner - Area 5 (PC)
37 Plots Total
Grade Plots: 18
Count Plots: 19
AZ: 90/270
BAF: 27.78
Line Spacing: 8 Chains
Plot Spacing: 5 Chains
1:6000



Legend

- GradePlots
- CountPlots
- Timber Sale Boundary
- Fish
- Nonfish
- Unknown
- Paved
- Surfaced
- Astoria Ownership

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T06N R06W S31 TyTAKE236.00 T06N R06W S31 Ty00MC34.00 T06N R06W S31 TyRW3.00				Project:CCORNER Acres273.00														Page1 Date3/24/2017 Time11:44:50AM			
S Spp	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		
		Def%	Gross	Net	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf					
					4-5		6-11	12-16	17+	12-20	21-30	31-35					36-99				
D	DOCU		100.0	97											17	8		0.00	3.9		
D	DO2S	42	.9	3,732	3,700	1,010		3	38	59	3	2	10	84	34	15	342	2.14	10.8		
D	DO3S	44	1.2	3,917	3,870	1,056	0	98	1	1	1	7	34	57	35	8	90	0.76	43.1		
D	DO4S	14	1.9	1,252	1,228	335	7	93	0		61	35	2	2	20	6	25	0.44	48.5		
D Totals		77	2.2	8,997	8,798	2,401 2,402	1	57	17	25	10	9	20	61	28	8	83	0.81	106.3		
M	DOCU		100.0	27											20	9		0.00	.6		
M	DOCR	100		187	187	51		45	33	22	21	20		59	26	10	120	1.19	1.6		
M Totals		2	12.7	215	187	51		45	33	22	21	20		59	24	9	87	0.92	2.2		
A	DOCU		100.0	1											16	6		0.00	.1		
A	DOCR	100		855	855	233	2	93	5		19	4	31	46	27	7	48	0.56	17.7		
A Totals		8	.1	856	855	233	2	93	5		19	4	31	46	27	7	48	0.56	17.8		
H	DOCU		100.0	15											8	13		0.00	.3		
H	DO2S	65	.9	997	988	270			51	49	1		14	84	37	15	356	2.21	2.8		
H	DO3S	25	1.0	378	374	102		96	4		2	3	21	75	37	8	96	0.78	3.9		
H	DO4S	10	1.6	151	149	41	10	90	0		68		19	13	19	7	30	0.46	5.0		
H Totals		13	1.9	1,542	1,512	413	1	33	34	32	8	1	16	75	29	9	126	1.12	12.0		
S	DO2S	69		20	20	6				100				100	40	26	1250	6.05	.0		
S	DO3S	26		8	8	2				100			100		32	19	480	3.06	.0		
S	DO4S	5		1	1	0			100		100				16	12	80	1.50	.0		
S Totals		0		29	29	8			4	96	4		27	69	29	19	603	4.14	.0		
SN	DOCU														44	1		0.00	.0		
SN Totals															44	1		0.00	.0		
Totals			2.2	11,639	11,382	3,106 3,107	1	56	18	24	11	8	20	62	28	8	82	0.81	138.2		

T		Species, Sort Grade - Board Foot Volumes (Type)										Page		1						
TSPCSTGR		Project: CCORNER										Date		3/24/2017						
												Time		11:44:51AM						
T06N R06W S31 TTAKE										T06N R06W S31 TTAKE										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
06N	06W	31	AREA125	TAKE	236.00	71	90	1	W											
S So Gr T rt ad Spp			% Net BdFt	Bd. Ft. per Acre Def% Gross Net			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		
D DO CU				00.0	108											17	7		0.00	4.4
D DO 2S			9	4.8	524	499	118	20	80			28	12	52	8	27	12	118	1.24	4.2
D DO 3S			67	1.4	3,792	3,740	883	100				1	8	34	57	35	8	88	0.75	42.5
D DO 4S			24	2.0	1,329	1,303	308	7	93			63	34	1	2	20	6	25	0.43	51.8
D Totals			92	3.7	5,754	5,542	1,308	2	91	7		18	14	28	40	27	7	54	0.63	102.9
A DO CR			100		471	471	111	100				33		45	22	26	7	40	0.44	11.7
A Totals			8		471	471	111	100				33		45	22	26	7	40	0.44	11.7
M DO CU				00.0	18											15	10		0.00	.4
M Totals				00.0	18											15	10		0.00	.4
Type Totals				3.7	6,243	6,013	1,419	1	92	7		19	13	29	38	26	7	52	0.61	114.9

T		TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)												Page		1		
				Project: CCORNER												Date		3/24/2017		
																Time		11:44:51AM		
T06N R06W S31 T00MC										T06N R06W S31 T00MC										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
06N	06W	31	AREA3	00MC	34.00	41	139	1	W											
S Spp	So T	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
								Log Scale Dia.				Log Length								
				Def	Gross	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ln Ft	Dia In	Bd Ft	CF/ Lf	
D	DO	2S	85	.3	25,982	25,903	881	0	31	68	0	1	4	95	39	17	466	2.49	55.6	
D	DO	3S	13		3,991	3,991	136	85	11	4	1	5	35	59	35	9	101	0.86	39.6	
D	DO	4S	2		562	562	19	18	82		47	35	18		20	6	27	0.49	20.5	
D Totals			64	.3	30,535	30,456	1,035	0	13	28	58	1	2	8	89	34	12	263	1.71	115.8
H	DO	CU		100.0	121										8	13		0.00	2.6	
H	DO	2S	65	.9	7,998	7,930	270		51	49	1		14	84	37	15	356	2.21	22.2	
H	DO	3S	25	1.0	3,034	3,004	102		96	4	2	3	21	75	37	8	96	0.78	31.3	
H	DO	4S	10	1.4	1,214	1,196	41	10	90		68		19	13	19	7	30	0.46	39.8	
H Totals			25	1.9	12,367	12,130	412	1	33	34	32	8	1	16	75	29	9	126	1.12	95.9
A	DO	CR	100		3,552	3,552	121	4	86	10	7	8	18	68	30	7	59	0.70	60.0	
A Totals			7		3,552	3,552	121	4	86	10	7	8	18	68	30	7	59	0.70	60.0	
M	DO	CU		100.0	90										26	7		0.00	2.2	
M	DO	CR	100		1,504	1,504	51		45	33	22	21	20	59	26	10	120	1.19	12.6	
M Totals			3	5.6	1,594	1,504	51		45	33	22	21	20	59	26	9	102	1.01	14.8	
S	DO	2S	69		163	163	6			100				100	40	26	1250	6.05	.1	
S	DO	3S	26		63	63	2			100			100		32	19	480	3.06	.1	
S	DO	4S	5		10	10	0		100		100				16	12	80	1.50	.1	
S Totals			0		236	236	8		4	96	4		27	69	29	19	603	4.14	.4	
Type Totals				.8	48,284	47,879	1,628	1	24	28	46	4	3	11	83	31	10	167	1.30	287.0

T		Species, Sort Grade - Board Foot Volumes (Type)										Page 1								
TSPCSTGR		Project: CCORNER										Date 3/24/2017								
												Time 11:44:51AM								
T06N R06W S31 TRW										T06N R06W S31 TRW										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
06N	06W	31	AREA4	RW	3.00	71	272	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
			Def%	Gross	Net	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf			
D DO CU				00.0	296										16	8		0.00	9.1	
D DO 2S			20	1.8	3,995	3,923	12		9	91		5	8	46	41	33	12	174	1.47	22.6
D DO 3S			65	.9	12,840	12,724	38	0	98	2		1	6	39	55	35	9	101	0.85	126.1
D DO 4S			15	1.8	2,943	2,891	9	3	94	3		53	41	5	1	21	6	26	0.46	110.4
D Totals			97	2.7	20,075	19,538	59	1	80	20		9	11	35	44	28	8	73	0.78	268.1
A DO CU				00.0	111										16	6		0.00	5.8	
A DO CR			100		479	479	1		100			43	16	28	13	23	7	37	0.47	13.1
A Totals			2	18.9	591	479	1		100			43	16	28	13	20	7	25	0.36	19.0
SN DO CU															44	1		0.00	2.4	
SN Totals															44	1		0.00	2.4	
H DO CU				00.0	14										6	21		0.00	.1	
H DO 2S			85		76	76	0		100						40	13	243	1.73	.3	
H DO 3S			7		6	6	0		100				100		22	7	40	0.73	.1	
H DO 4S			8	77.2	31	7	0		47	53		47			53	22	8	17	1.18	.4
H Totals			0	29.7	126	88	0		10	90		4	7		90	26	11	89	1.35	1.0
M DO CU				00.0	18										15	10		0.00	.4	
M Totals				00.0	18										15	10		0.00	.4	
Type Totals				3.4	20,810	20,105	60	1	80	19		10	12	35	44	28	8	69	0.75	290.8

TC PSTATS				PROJECT STATISTICS				PAGE 1				
				PROJECT	CCORNER	DATE 3/24/2017						
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
06N	06	31	AREA125	TAKE	273.00	183	1,028	1	W			
06N	06W	31	AREA3	00MC								
06N	06W	31	AREA4	RW								
				TREES	ESTIMATED	PERCENT						
				PER PLOT	TOTAL	SAMPLE						
					TREES	TREES						
TOTAL			183	1028	5.6							
CRUISE			86	501	5.8	24,620	2.0					
DBH COUNT												
REFOREST												
COUNT			88	527	6.0							
BLANKS			9									
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			407	67.8	14.5	45	20.4	77.8	8,997	8,798	2,413	2,383
WHEMLOCK			42	7.4	15.7	48	2.5	10.0	1,542	1,512	386	383
R ALDER			37	13.2	12.0	38	3.0	10.4	856	855	273	272
BL MAPLE			10	1.7	16.3	35	0.6	2.4	215	187	57	48
SNAG			4	.0	12.0	43	0.0	.0			0	
S SPRUCE			1	.0	37.0	91	0.0	.1	29	29	6	6
TOTAL			501	90.2	14.3	44	26.6	100.8	11,639	11,382	3,135	3,092
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		158.4	7.8	254	276	297						
WHEMLOCK		90.3	13.9	367	427	486						
R ALDER		68.4	11.2	71	81	90						
BL MAPLE		164.4	54.7	92	204	316						
SNAG												
S SPRUCE												
TOTAL		154.9	6.9	254	273	292		958	240	106		
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		150.0	11.1	60	68	75						
WHEMLOCK		310.2	22.9	6	7	9						
R ALDER		339.5	25.1	10	13	17						
BL MAPLE		499.2	36.9	1	2	2						
SNAG		798.2	59.0	0	0	0						
S SPRUCE		1352.8	99.9	0	0	0						
TOTAL		120.2	8.9	82	90	98		577	144	64		
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		128.0	9.5	70	78	85						
WHEMLOCK		306.1	22.6	8	10	12						
R ALDER		306.8	22.7	8	10	13						
BL MAPLE		486.9	36.0	2	2	3						
SNAG		776.7	57.4	0	0	0						
S SPRUCE		1352.8	99.9	0	0	0						
TOTAL		104.4	7.7	93	101	109		435	109	48		
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		135.4	10.0	7,919	8,798	9,678						
WHEMLOCK		319.8	23.6	1,155	1,512	1,869						
R ALDER		327.0	24.2	649	855	1,062						

PROJECT STATISTICS							PAGE	2	
PROJECT							DATE	3/24/2017	
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	06	31	AREA125	TAKE	273.00	183	1,028	1	W
06N	06W	31	AREA3	00MC					
06N	06W	31	AREA4	RW					
CL	68.1	COEFF	NET BF/ACRE				# OF PLOTS REQ.	INF. POP.	
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
BL MAPLE		560.9	41.4	110	187	265			
SNAG									
S SPRUCE		1352.8	99.9	0	29	59			
TOTAL		119.5	8.8	10,377	11,382	12,387	570	143	63

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CCORNER	DATE 3/24/2017				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	06W	31	AREA125	ALL	236.00	71	550	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
PLOTS		TREES								
TOTAL		71	550	7.7						
CRUISE		36	272	7.6		41,059	.7			
DBH COUNT										
REFOREST										
COUNT		35	278	7.9						
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
DOUGLEAV		171	87.8	16.9	57	33.4	137.3	14,342	14,017	4,250
DOUG FIR		87	72.0	13.2	40	18.8	68.1	5,756	5,546	1,746
R ALDER		3	8.1	10.3	39	1.5	4.7	471	471	132
SNAG		4	3.0	12.0	43	0.7	2.3			30
HEMLEAV		3	.4	22.2	60	0.2	1.2	126	88	37
ALDRLEAV		3	2.3	9.6	36	0.4	1.2	118	74	34
BL MAPLE		1	.4	14.0	12	0.1	.4	18		5
TOTAL		272	174.0	15.1	49	55.5	215.2	20,832	20,196	6,235
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	
DOUGLEAV		38.5	2.9	171	176	182				
DOUG FIR		59.7	6.4	90	96	103				
R ALDER		44.4	30.7	39	57	74				
SNAG										
HEMLEAV		78.5	54.3	88	193	298				
ALDRLEAV		56.8	39.3	22	37	51				
BL MAPLE										
TOTAL		54.0	3.3	140	145	150	117	29	13	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUGLEAV		23.7	2.8	85	88	90				
DOUG FIR		74.0	8.8	66	72	78				
R ALDER		333.3	39.5	5	8	11				
SNAG		493.1	58.5	1	3	5				
HEMLEAV		842.6	99.9	0	0	1				
ALDRLEAV		842.6	99.9	0	2	5				
BL MAPLE		842.6	99.9	0	0	1				
TOTAL		34.7	4.1	167	174	181	48	12	5	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUGLEAV		17.4	2.1	135	137	140				
DOUG FIR		72.3	8.6	62	68	74				
R ALDER		331.5	39.3	3	5	7				
SNAG		479.5	56.9	1	2	4				
HEMLEAV		842.6	99.9	0	1	2				
ALDRLEAV		842.6	99.9	0	1	2				
BL MAPLE		842.6	99.9	0	0	1				
TOTAL		24.4	2.9	209	215	221	24	6	3	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	

TC TSTATS				STATISTICS				PAGE	2
				PROJECT	CCORNER				
								DATE	3/24/2017
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
06N	06W	31	AREA125	ALL	236.00	71	550	1	W
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.	S.E. %	LOW	AVG	HIGH	5	10	15
DOUGLEAV		19.4	2.3	13,695	14,017	14,338			
DOUG FIR		75.5	9.0	5,049	5,546	6,042			
R ALDER		338.8	40.2	282	471	661			
SNAG									
HEMLEAV		842.6	99.9	0	88	177			
ALDRLEAV		842.6	99.9	0	74	148			
BL MAPLE									
TOTAL		26.7	3.2	19,556	20,196	20,835	28	7	3

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	CCORNER			DATE	3/24/2017		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
06N	06W	31	AREA125	TAKE	236.00	71	186	1	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
TOTAL		71	186	2.6							
CRUISE		30	90	3.0	18,485		.5				
DBH COUNT											
REFOREST											
COUNT		32	96	3.0							
BLANKS		9									
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		86	69.8	13.3	41	18.5	67.7	5,754	5,542	1,747	1,713
R ALDER		3	8.1	10.3	39	1.5	4.7	471	471	132	132
BL MAPLE		1	.4	14.0	12	0.1	.4	18		5	
TOTAL		90	78.3	13.1	40	20.1	72.8	6,243	6,013	1,884	1,844
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL: 68.1 %		COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15		
DOUG FIR		59.2	6.4	93	99	106					
R ALDER		44.4	30.7	39	57	74					
BL MAPLE											
TOTAL		61.0	6.4	90	97	103	148 37		16		
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		74.6	8.8	64	70	76					
R ALDER		333.3	39.5	5	8	11					
BL MAPLE		842.6	99.9	0	0	1					
TOTAL		69.6	8.2	72	78	85	193 48		21		
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		72.7	8.6	62	68	74					
R ALDER		331.5	39.3	3	5	7					
BL MAPLE		842.6	99.9	0	0	1					
TOTAL		65.9	7.8	67	73	78	173 43		19		
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		75.9	9.0	5,043	5,542	6,041					
R ALDER		338.8	40.2	282	471	661					
BL MAPLE											
TOTAL		70.6	8.4	5,510	6,013	6,516	199 50		22		

TC TSTATS				STATISTICS PROJECT C CORNER				PAGE 1 DATE 3/24/2017			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
06N	06W	31	AREA125	LEAV	236.00	71	363	1	W		
				TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
		PLOTS	TREES								
TOTAL		71	363	5.1							
CRUISE		36	181	5.0		22,077		.8			
DBH COUNT											
REFOREST											
COUNT		35	182	5.2							
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
DOUGLEAV		171	87.8	16.9	57	33.4	137.3	14,342	14,017	4,250	4,205
SNAG		4	3.0	12.0	43	0.7	2.3			30	
HEMLEAV		3	.4	22.2	60	0.2	1.2	126	88	37	35
ALDRLEAV		3	2.3	9.6	36	0.4	1.2	118	74	34	22
TOTAL		181	93.5	16.7	56	34.8	142.0	14,586	14,179	4,352	4,262
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			
DOUGLEAV	38.5	2.9	171	176	182						
SNAG											
HEMLEAV	78.5	54.3	88	193	298						
ALDRLEAV	56.8	39.3	22	37	51						
TOTAL	43.9	3.3	165	170	176	77		19		9	
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
DOUGLEAV	23.7	2.8	85	88	90						
SNAG	493.1	58.5	1	3	5						
HEMLEAV	842.6	99.9	0	0	1						
ALDRLEAV	842.6	99.9	0	2	5						
TOTAL	26.9	3.2	91	94	97	29		7		3	
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
DOUGLEAV	17.4	2.1	135	137	140						
SNAG	479.5	56.9	1	2	4						
HEMLEAV	842.6	99.9	0	1	2						
ALDRLEAV	842.6	99.9	0	1	2						
TOTAL	12.2	1.4	140	142	144	6		1		1	
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
DOUGLEAV	19.4	2.3	13,695	14,017	14,338						
SNAG											
HEMLEAV	842.6	99.9	0	88	177						
ALDRLEAV	842.6	99.9	0	74	148						
TOTAL	15.8	1.9	13,914	14,179	14,444	10		2		1	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT		CCORNER		DATE	3/24/2017	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	06W	31	AREA3	00MC	34.00	41	292	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		41	292	7.1						
CRUISE		20	139	6.9	5,610		2.5			
DBH COUNT										
REFOREST										
COUNT		21	153	7.3						
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		63	45.6	23.4	89	28.2	136.6	30,535	30,456	6,722
WHEMLOCK		39	59.5	15.7	48	20.2	80.0	12,367	12,130	3,094
R ALDER		28	49.0	13.8	38	13.7	50.7	3,552	3,552	1,260
BL MAPLE		8	10.8	16.8	41	4.1	16.6	1,594	1,504	424
S SPRUCE		1	.1	37.0	91	0.2	1.0	236	236	48
TOTAL		139	165.0	17.8	56	67.5	284.9	48,284	47,879	11,547
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		70.3	8.9	941	1,033	1,124				
WHEMLOCK		88.4	14.1	382	445	508				
R ALDER		65.3	12.6	79	90	102				
BL MAPLE		141.3	53.3	119	255	391				
S SPRUCE										
TOTAL		104.7	8.9	582	639	695		438	110	49
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		112.2	17.5	38	46	54				
WHEMLOCK		118.6	18.5	49	60	71				
R ALDER		175.8	27.4	36	49	62				
BL MAPLE		239.4	37.4	7	11	15				
S SPRUCE		640.3	99.9	0	0	0				
TOTAL		50.0	7.8	152	165	178		100	25	11
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		96.9	15.1	116	137	157				
WHEMLOCK		116.2	18.1	65	80	95				
R ALDER		160.6	25.1	38	51	63				
BL MAPLE		234.9	36.7	11	17	23				
S SPRUCE		640.3	99.9	0	1	2				
TOTAL		41.7	6.5	266	285	303		69	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		99.0	15.5	25,750	30,456	35,162				
WHEMLOCK		124.2	19.4	9,779	12,130	14,482				
R ALDER		166.5	26.0	2,629	3,552	4,475				
BL MAPLE		252.8	39.4	911	1,504	2,097				
S SPRUCE		640.3	99.9	0	236	473				
TOTAL		57.3	8.9	43,597	47,879	52,161		131	33	15

TC TSTATS				STATISTICS				PAGE 1			
				PROJECT	CCORNER			DATE	3/24/2017		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
06N	06W	31	AREA4	RW	3.00	71	550	1	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
PLOTS		TREES									
TOTAL		71	550	7.7							
CRUISE		36	272	7.6		525		51.8			
DBH COUNT											
REFOREST											
COUNT		35	278	7.9							
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		258	160.2	15.3	49	52.5	205.4	20,075	19,538	5,990	
R ALDER		6	10.9	9.9	37	1.9	5.9	591	479	168	
SNAG		4	3.0	12.0	43	0.7	2.3			30	
WHEMLOCK		3	.4	22.2	60	0.2	1.2	126	88	37	
BL MAPLE		1	.4	14.0	12	0.1	.4	18		5	
TOTAL		272	174.9	15.0	48	55.5	215.2	20,810	20,105	6,230	
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		50.1	3.1	145	149	154					
R ALDER		50.1	22.3	36	47	57					
SNAG											
WHEMLOCK		78.5	54.3	88	193	298					
BL MAPLE											
TOTAL		54.0	3.3	140	145	150	117	29	13		
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		36.0	4.3	153	160	167					
R ALDER		314.7	37.3	7	11	15					
SNAG		493.1	58.5	1	3	5					
WHEMLOCK		842.6	99.9	0	0	1					
BL MAPLE		842.6	99.9	0	0	1					
TOTAL		33.2	3.9	168	175	182	44	11	5		
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		29.2	3.5	198	205	213					
R ALDER		309.0	36.6	4	6	8					
SNAG		479.5	56.9	1	2	4					
WHEMLOCK		842.6	99.9	0	1	2					
BL MAPLE		842.6	99.9	0	0	1					
TOTAL		24.4	2.9	209	215	221	24	6	3		
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		30.0	3.6	18,842	19,538	20,233					
R ALDER		305.6	36.2	306	479	653					
SNAG											
WHEMLOCK		842.6	99.9	0	88	177					
BL MAPLE											
TOTAL		27.5	3.3	19,449	20,105	20,762	30	8	3		

TC		PSTNDSUM		Stand Table Summary										Page		1		
														Date:		3/24/2017		
T06N R06W S31 TyTAKE236.00 T06N R06W S31 Ty00MC34.00 T06N R06W S31 TyRW3.00				ProjectCCORNER Acres273.00										Time: 11:44:52AM				
S	Sp	c	T	Tot					Average Log		Net		Net		Totals			
				DBH	Sample Trees	FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF
D				9	10	83	30	7.800	3.45	6.24	5.8	20.0		36	125		98	34
D				10	10	85	43	5.086	2.77	5.09	9.3	37.5		47	191		129	52
D				11	18	83	43	8.482	5.53	7.44	11.8	37.0		88	275		240	75
D				12	23	86	71	7.764	6.10	12.15	13.5	43.3		164	526		447	144
D				13	19	86	69	5.565	5.13	8.88	14.8	48.8		132	434		360	118
D				14	36	85	69	9.719	10.39	16.21	17.0	51.6		276	837		754	229
D				15	30	85	77	4.805	5.90	8.47	20.3	66.9		172	567		470	155
D				16	56	86	75	7.273	10.15	13.01	23.2	78.1		302	1,016		824	277
D				17	43	86	80	2.369	3.73	4.29	28.4	95.1		122	408		332	111
D				18	36	86	67	2.459	4.34	4.52	25.9	80.7		117	365		320	100
D				19	31	85	86	1.559	3.07	3.18	32.4	104.7		103	332		281	91
D				20	22	86	78	1.371	2.99	2.67	35.2	114.0		94	305		257	83
D				21	13	86	103	.482	1.16	1.18	39.5	145.4		47	172		128	47
D				22	4	87	123	.211	.56	.63	42.4	177.7		27	111		73	30
D				23	14	89	127	.767	2.21	2.19	50.8	216.9		111	475		303	130
D				24	4	89	128	.177	.56	.52	52.7	227.2		28	119		75	33
D				25	3	86	115	.161	.55	.40	60.7	229.3		24	92		66	25
D				26	7	90	132	.442	1.63	1.32	62.7	284.6		83	377		227	103
D				27	2	90	139	.136	.54	.41	71.3	340.0		29	139		79	38
D				28	4	91	149	.253	1.08	.76	81.3	406.7		62	308		168	84
D				29	2	90	139	.118	.54	.35	82.5	403.3		29	142		80	39
D				30	1	91	157	.055	.27	.17	98.7	516.7		16	85		44	23
D				31	3	86	142	.155	.81	.46	92.7	445.6		43	207		117	56
D				32	2	88	135	.097	.54	.29	97.0	485.0		28	141		77	38
D				33	2	87	147	.091	.54	.27	108.7	533.3		30	145		81	40
D				34	1	92	157	.043	.27	.13	128.0	710.0		16	91		45	25
D				35	1	85	136	.040	.27	.12	114.0	543.3		14	66		38	18
D				36	2	87	144	.076	.54	.23	127.3	646.7		29	148		80	40
D				37	3	91	137	.108	.81	.33	132.1	684.4		43	223		117	61
D				38	1	92	138	.034	.27	.10	140.7	773.3		14	80		39	22
D				39	2	87	143	.065	.54	.20	147.7	751.7		29	147		79	40
D				40	1	89	121	.031	.27	.09	136.3	713.3		13	66		35	18
D				46	1	89	153	.023	.27	.07	223.0	1190.0		16	84		43	23
D				Totals	407	85	65	67.817	77.78	102.38	23.3	85.9		2,383	8,798		6,504	2,402
H				8	1	82	20	.732	.26	.73	4.0	20.0		3	15		8	4
H				9	3	86	23	1.735	.77	1.73	5.3	23.3		9	40		25	11
H				11	3	85	66	1.161	.77	1.16	17.3	56.7		20	66		55	18
H				12	2	84	41	.651	.51	.65	15.5	45.0		10	29		28	8
H				15	2	87	97	.416	.51	.83	22.5	87.5		19	73		51	20
H				16	1	85	99	.183	.26	.37	31.0	105.0		11	38		31	10
H				17	2	86	102	.324	.51	.65	33.5	120.0		22	78		59	21
H				18	2	87	100	.289	.51	.58	39.0	130.0		23	75		62	21
H				19	2	87	80	.259	.51	.52	34.7	115.0		18	60		49	16
H				20	2	84	81	.234	.51	.47	37.0	130.0		17	61		47	17
H				21	4	87	102	.320	.77	.85	40.1	154.8		34	132		93	36
H				22	2	86	115	.098	.26	.29	42.7	176.5		13	52		34	14
H				23	3	88	106	.266	.77	.62	57.3	224.3		36	139		97	38
H				24	2	88	114	.083	.26	.25	51.5	201.2		13	50		35	14
H				25	4	87	107	.300	1.02	.82	58.4	238.2		48	196		131	54
H				27	1	89	112	.064	.26	.19	65.0	280.0		13	54		34	15
H				28	1	85	122	.060	.26	.18	73.7	336.7		13	60		36	16
H				30	1	86	112	.052	.26	.16	78.0	366.7		12	57		33	16
H				31	3	86	110	.146	.77	.44	82.1	378.9		36	166		98	45

TC		PSTNDSUM		Stand Table Summary										Page		2		
														Date:		3/24/2017		
T06N R06W S31 TyTAKE236.00 T06N R06W S31 Ty00MC34.00 T06N R06W S31 TyRW3.00					Project					CCORNER					Time:		11:44:52AM	
					Acres					273.00					Grown Year:			
S Spec T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s					
	DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF			
H	32	1	92	118	.046	.26	.14	97.7	510.0		13	70		37		19		
H	Totals	42	86	64	7.420	9.98	11.63	32.9	130.0		383	1,512		1,044		413		
A	8	2	87	22	.677	.24	.68	5.0	20.0		3	14		9		4		
A	9	2	86	110	3.087	1.36	6.17	10.0	40.0		62	247		169		67		
A	10	5	86	29	3.347	1.83	3.35	8.7	34.9		29	117		80		32		
A	11	1	86	45	.342	.23	.34	13.0	40.0		4	14		12		4		
A	12	2	87	38	.301	.24	.30	13.3	31.4		4	9		11		3		
A	13	8	86	55	2.948	2.72	3.19	21.2	56.2		68	179		184		49		
A	14	2	86	69	.422	.45	.63	22.7	66.7		14	42		39		12		
A	15	3	86	57	.552	.68	.74	24.3	62.5		18	46		49		13		
A	16	3	87	55	.485	.68	.65	26.8	65.0		17	42		47		11		
A	17	2	87	42	.286	.45	.29	27.5	55.0		8	16		21		4		
A	18	4	86	60	.511	.90	.89	28.6	85.7		26	77		70		21		
A	20	1	86	77	.103	.23	.21	40.5	135.0		8	28		23		8		
A	21	1	87	61	.094	.23	.19	35.5	105.0		7	20		18		5		
A	24	1	87	40	.072	.23	.07	54.0	70.0		4	5		11		1		
A	Totals	37	86	59	13.228	10.44	17.70	15.4	48.3		272	855		743		233		
M	13	1	86	34	.280	.26												
M	14	4	83	43	.803	.86	.72	17.3	70.0		13	51		34		14		
M	16	1	86	23	.185	.26	.18	16.0	30.0		3	6		8		2		
M	18	1	86	50	.146	.26	.15	37.0	130.0		5	19		15		5		
M	21	1	86	71	.107	.26	.21	41.5	135.0		9	29		24		8		
M	22	1	86	59	.098	.26	.20	36.5	145.0		7	28		19		8		
M	31	1	86	103	.049	.26	.10	115.0	555.0		11	55		31		15		
M	Totals	10	85	45	1.669	2.41	1.56	30.9	119.7		48	187		132		51		
S	37	1	85	111	.016	.12	.05	121.3	603.3		6	29		16		8		
S	Totals	1	85	111	.016	.12	.05	121.3	603.3		6	29		16		8		
SN	10	1	86	50	.012	.01												
SN	12	1	85	30	.008	.01												
SN	13	1	89	33	.007	.01												
SN	14	1	86	60	.006	.01												
SN	Totals	4	86	43	.033	.03												
Totals		501	85	64	90.183	100.76	133.32	23.2	85.4		3,092	11,382		8,440		3,107		

Log Stock Table - MBF

T06N R06W S31 TyTAKE	236.00
T06N R06W S31 Ty00MC	34.00
T06N R06W S31 TyRW	3.00

Project: CCORNER
Acres 273.00

Page 1
Date 3/24/2017
Time 11:44:52AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches										
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
D		DO	CU	2	0	100.0													
D		DO	CU	6	0	100.0													
D		DO	CU	7	2	100.0													
D		DO	CU	8	7	100.0													
D		DO	CU	10	0	100.0													
D		DO	CU	13	0	100.0													
D		DO	CU	19	9	100.0													
D		DO	CU	26	9	100.0													
D		DO	CU	32	0	100.0													
D		DO	2S	16	23		23	1.0					12	12					
D		DO	2S	20	14	15.4	12	.5					12						
D		DO	2S	24	14		14	.6					14	0					
D		DO	2S	26	6		6	.2					6	0					
D		DO	2S	28	2		2	.1					2						
D		DO	2S	30	2		2	.1					2		0				
D		DO	2S	32	99		99	4.1			14	1	68	10		5			
D		DO	2S	36	26	14.9	22	.9				10	4	2	6				
D		DO	2S	38	13		13	.5					7		6				
D		DO	2S	40	820		818	34.0			4		64	94	272	208	162	13	
D		DO	3S	12	7		7	.3				7							
D		DO	3S	16	2		2	.1			1	1							
D		DO	3S	20	0		0	.0			0								
D		DO	3S	21	0		0	.0			0								
D		DO	3S	23	0		0	.0				0							
D		DO	3S	24	15	9.1	13	.6			1	12							
D		DO	3S	26	6		6	.2			3	3							
D		DO	3S	28	13		13	.5			13								
D		DO	3S	30	45		45	1.9			5	25	15						
D		DO	3S	32	368	2.8	358	14.9			80	126	141	10					
D		DO	3S	34	6		6	.2			5	0							
D		DO	3S	36	74		74	3.1			28	23	22						
D		DO	3S	38	6		6	.2			0				6				
D		DO	3S	40	529		527	22.0	0		107	249	166	5					
D		DO	3S	41	0		0	.0			0								
D		DO	4S	12	12		12	.5		0	3	1	8						
D		DO	4S	14	4		4	.2			4								

Log Stock Table - MBF

T06N R06W S31 TyTAKE	236.00
T06N R06W S31 Ty00MC	34.00
T06N R06W S31 TyRW	3.00

Project: CCORNER
Acres 273.00

Page 2
Date 3/24/2017
Time 11:44:52AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
D		DO	4S	16	118	4.5	113	4.7		5	89	18								
D		DO	4S	18	30		30	1.2	2		27									
D		DO	4S	20	48		48	2.0		2	45	1								
D		DO	4S	21	0	12.6	0	.0			0									
D		DO	4S	22	12		12	.5			11	1								
D		DO	4S	24	26		26	1.1			25	1								
D		DO	4S	26	23		23	1.0		3	20									
D		DO	4S	28	12		12	.5			12									
D		DO	4S	30	43		43	1.8		3	40									
D		DO	4S	31	0	11.3	0	.0			0									
D		DO	4S	32	4		4	.2		3	0			0						
D		DO	4S	34	5	20.0	4	.2			4									
D		DO	4S	40	5		5	.2		5										
D		Totals			2,456	2.2	2,402	77.3	2	23	507	480	386	206	118	290	213	162	13	
M		DO	CU	15	4	100.0														
M		DO	CU	26	3	100.0														
M		DO	CR	12	3		3	5.2					3							
M		DO	CR	16	5		5	9.0					5							
M		DO	CR	18	1		1	1.7			1									
M		DO	CR	20	3		3	5.6			2	1								
M		DO	CR	24	6		6	12.5							6					
M		DO	CR	30	4		4	7.1						4						
M		DO	CR	40	18		18	35.8					7			11				
M		DO	CR	41	7		7	12.9			7									
M		DO	CR	42	5		5	10.1			5									
M		Totals			59	12.7	51	1.6			14	1	7	7	4	6	11			
A		DO	CU	12	0	100.0														
A		DO	CU	15	0	100.0														
A		DO	CU	22	0	100.0														
A		DO	CR	12	3		3	1.4			3									
A		DO	CR	16	24		24	10.4			24									
A		DO	CR	18	1		1	.6			1	0								
A		DO	CR	20	17		17	7.2			17									
A		DO	CR	22	1		1	.4			1									
A		DO	CR	26	3		3	1.1			2	0								
A		DO	CR	30	6		6	2.7			6									

TC PLOGSTVB		Log Stock Table - MBF																		
T06N R06W S31 TyTAKE236.00 T06N R06W S31 Ty00MC34.00 T06N R06W S31 TyRW3.00					Project: CCORNER					Page 3										
					Acres 273.00					Date 3/24/2017										
										Time 11:44:52AM										
Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
A		DO	CR	32	67		67	28.8			67									
A		DO	CR	34	5		5	2.0			3	1								
A		DO	CR	36	9		9	3.9			9									
A		DO	CR	38	28		28	12.0			3	6	15	5						
A		DO	CR	40	64		64	27.4			39	18		7						
A		DO	CR	49	5		5	2.2		5										
A		Totals			234		233	7.5		5	176	26	15	12						
H		DO	CU	4	1	100.0														
H		DO	CU	6	0	100.0														
H		DO	CU	10	3	100.0														
H		DO	2S	12	4		4	.9						4						
H		DO	2S	32	39	1.6	38	9.3					15	14	10					
H		DO	2S	38	4		4	1.1						4						
H		DO	2S	40	225		224	54.2					30	38	89	55	13			
H		DO	3S	16	1		1	.2					1							
H		DO	3S	18	1		1	.2					1							
H		DO	3S	22	1		1	.3			0		1							
H		DO	3S	28	1		1	.4			1									
H		DO	3S	32	21		21	5.2			2	5	11	4						
H		DO	3S	36	11		11	2.6			9	2								
H		DO	3S	40	67	1.5	66	15.9			21	4	41							
H		DO	4S	12	4		4	.9			3		1							
H		DO	4S	14	0		0	.1			0	0								
H		DO	4S	16	21	2.8	21	5.0		4	14	1	1							
H		DO	4S	18	2		2	.5				2								
H		DO	4S	20	1		1	.2			1									
H		DO	4S	32	8		8	1.9			8									
H		DO	4S	40	5	1.2	5	1.3			5			0						
H		Totals			421	1.9	413	13.3		4	65	15	55	48	60	98	55	13		
S		DO	2S	40	6		6	69.1								6				
S		DO	3S	32	2		2	26.5						2						
S		DO	4S	16	0		0	4.4					0							
S		Totals			8		8	.3					0		2		6			
Total		All Species			3,178	2.2	3,107	100.0		2	32	763	522	464	274	182	397	279	181	13

LOGGING PLAN

OF TIMBER SALE NO. 341-17-07
CRAWFISH CORNER
SECTIONS 29, 31 AND 32 OF T6N, R6W
AND SECTION 5 OF T5N, R6W
WM, CLATSOP COUNTY, OREGON

APPROXIMATE NET ACRES
PC ACRES MC ACRES

Area 1 (PC)	50	
Area 2 (PC)	71	
Area 3 (MC)		34
Area 4 (R/W)		3
Area 5 (PC)	115	
TOTAL	236	37

LOGGING BREAKDOWN

	TRACTOR AREA	CABLE AREA
Area 1 (PC)	6%	94%
Area 2 (PC)	37%	63%
Area 3 (MC)	15%	85%
Area 4 R/W	100%	0%
Area 5 (PC)	19%	81%
TOTAL	22%	78%

