



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
McFarlane
Sale 341-12-49

District: Astoria

Date: May 16, 2012

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$86,173.92	\$93,286.84	\$179,460.76
Project Work:			\$(56,040.00)
Advertised Value:			\$123,420.76



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timber description

Location: Portions of Sections 27, 34, 35, and 36, T8N, R6W, W.M., Clatsop County, Oregon.

Stand Stocking: 50%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	13	0	97
Western Hemlock / Fir	15	0	97
Alder (Red)	14	0	95
Maple	13	0	95

Volume by Grade	2S	3S	4S	Camprur	SM	Total
Douglas - Fir	47	125	120	0	4	296
Western Hemlock / Fir	48	1	23	0	0	72
Alder (Red)	0	0	0	316	0	316
Maple	0	0	0	28	0	28
Total	95	126	143	344	4	712



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comments: Pond Values Used: 1st Quarter Calendar Year 2012.

Expected Log Markets: Warrenton, OR; Tillamook, OR; Clatskanie, OR; Mist, OR; Longview, WA.

Western redcedar Stumpage Price = Pond Value minus Logging Cost
 $\$684/\text{MBF} = \$945/\text{MBF} - \$261/\text{MBF}$

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$4.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$780 daily truck cost.

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

Additional Logging Costs:

Branding and Painting: \$1 per MBF x 712 MBF = \$712

Machine Washing for Invasive Species = \$2,000

Slash & Landing Piling (includes Move-In and Pile Materials) =
\$1,570 (see attached appraisal)

TOTAL Other Costs (with Profit & Risk to be added) = \$4,282

Other Costs (No Profit & Risk added):

Loggers Choice Spur (existing):

3 hours with D6 dozer @ \$105/hour = \$315.00

2 loads of pitrun for junction rock @ \$2.88/cy = \$63.36

1 hour with C315 to block spur @ \$94/hour = \$94.00

8 Water bars @ \$30/water bar = \$240.00

TOTAL Other Costs (No Profit & Risk added) = \$712.36



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logging conditions

combination#: 1

	Alder (Red)	19.94%	
	Maple	21.43%	
yarding distance:	Medium (800 ft)		downhill yarding: No
logging system:	Shovel		Process: Manual Falling/Delimbing
tree size:	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
loads / day:	8.0	bd. ft / load:	3,500
cost / mbf:	\$89.45		
machines:	Shovel Logger		

combination#: 2

	Douglas - Fir	81.16%	
	Western Hemlock / Fir	87.21%	
	Alder (Red)	71.71%	
	Maple	71.50%	
yarding distance:	Medium (800 ft)		downhill yarding: No
logging system:	Track Skidder		Process: Harvester Head Delimbing
tree size:	Small / Thinning 10in (90 Bft/tree), 18-20 logs/MBF		
loads / day:	10.0	bd. ft / load:	3,500
cost / mbf:	\$118.71		
machines:	Forwarder Harvester		

combination#: 3

	Douglas - Fir	8.03%	
	Western Hemlock / Fir	8.63%	
	Alder (Red)	7.09%	
	Maple	7.07%	
yarding distance:	Medium (800 ft)		downhill yarding: No
logging system:	Cable: Small Tower <=40		Process: Manual Falling/Delimbing
tree size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
loads / day:	5.0	bd. ft / load:	3,800
cost / mbf:	\$142.16		
machines:	Log Loader (A) Tower Yarder (Small)		

combination#: 4

	Douglas - Fir	10.81%
	Western Hemlock / Fir	4.17%
	Alder (Red)	1.27%



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District: Astoria

Date: May 16, 2012

yarding distance: Medium (800 ft)

downhill yarding: No

logging system: Shovel

Process: Manual Felling/Delimbing

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

loads / day: 5.0

bd. ft / load: 4,800

cost / mbf: \$104.36

machines: Shovel Logger



"STEWARDSHIP IN FORESTRY"

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District: Astoria

Date: May 16, 2012

logging costs

Operating Seasons:	2.00	Profit Risk:	15.00%
Project Costs:	\$56,040.00	Other Costs (P/R):	\$4,282.00
Slash Disposal:	\$0.00	Other Costs:	\$712.36

Miles of Road

Road Maintenance: \$8.50

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.0
Western Hemlock / Fir	\$0.00	3.0	4.0
Alder (Red)	\$0.00	2.0	3.0
Maple	\$0.00	2.0	3.5

Local Pond Values

Date	Specie	Grade	Value
5/16/12	Douglas - Fir	SM	\$488.86
5/16/12	Douglas - Fir	2S	\$488.86
5/16/12	Douglas - Fir	3S	\$488.86
5/16/12	Douglas - Fir	4S	\$488.86
5/16/12	Alder (Red)	Camprun	\$586.00



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Date: May 16, 2012

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$119.04	\$8.76	\$12.32	\$58.22	\$6.01	\$30.65	\$0.00	\$5.00	\$1.00	\$241.00
Western Hemlock / Fir									
\$120.13	\$8.76	\$12.32	\$58.22	\$6.01	\$30.82	\$0.00	\$5.00	\$1.00	\$242.26
Alder (Red)									
\$114.36	\$8.93	\$12.32	\$118.69	\$6.01	\$39.05	\$0.00	\$5.00	\$1.00	\$305.36
Maple									
\$114.10	\$8.93	\$12.32	\$101.73	\$6.01	\$36.46	\$0.00	\$5.00	\$1.00	\$285.55

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$488.86	\$247.86	\$0.00
Western Hemlock / Fir	\$0.00	\$420.14	\$177.88	\$0.00
Alder (Red)	\$0.00	\$586.00	\$280.64	\$0.00
Maple	\$0.00	\$450.00	\$164.45	\$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	296	\$247.86	\$73,366.56
Western Hemlock / Fir	72	\$177.88	\$12,807.36
Alder (Red)	316	\$280.64	\$88,682.24
Maple	28	\$164.45	\$4,604.60

Gross Timber Sale Value

Recovery: \$179,460.76

Prepared by: Andrew Arvin

Phone: 503-325-5451

Site Prep Appraisal

Sale Number: 341-12-49
Sale Name: McFarlane
Date: 03/01/2011

Vegetation Type/Zone	Vegetation Type/Zone Code	Production Rate (hr/ac)	Estimated Piles/Acre
Hardwoods	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

Sale Area	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour	Total Cost/Area
4A	MC	A	5	5	\$110.00	\$550.00
						\$0.00
						\$0.00
Sub Total =						\$550.00
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
4A	0	\$195.00	\$0.00	15	\$5.00	\$75.00
						\$0.00
						\$0.00
*No firewood piling						
Sub Total =						\$75.00
Move-In Allowance	Number of Move-In's	Total Move-In Allowance				
\$945.00	1	\$945.00	Sub Total =			
						\$945.00
Grand Total =						\$1,570.00

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale: McFarlane
Date: March 1, 2012
By: Andrew Arvin *FL*

MBF: 712
\$/MBF: \$8.50

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
Final Road Maintenance	Grader 14G	\$675	1	19	\$93	\$2,442
	Dump Truck 12CY	\$141	1	10	\$73	\$871
	FE Loader C966	\$675	1	5	\$77	\$1,060
	Vibratory Roller	\$675	1	4	\$72	\$963
	Water Truck 2,500 gallon	\$165	1	3	\$83	\$414
	Labor			8	\$38	\$304
Total						\$6,054

Final Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Process - Grader	1.5	2.8	1.9	18.7
Vibratory Roller	1.5	0.5	0.3	3.3

Process Only: (I1-I2), (1A-1B), (I5-I6)

Process and Compact: Taylorville Road (I3-I4)

Total Miles = 2.8 miles

SUMMARY OF ALL PROJECT COSTS

SALE NAME: McFarlane

NEW CONSTRUCTION:

<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
1A-1B, 3A-3B	25.15	\$17,031.00
TOTALS	25.15	\$17,031.00

ROAD IMPROVEMENT:

<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
I1-I2, I3-I4, I5-I6	136.40	\$29,984.00
TOTALS	136.40	\$29,984.00

SPECIAL PROJECTS:

<u>Description</u>	<u>Cost</u>
Project Road Maintenance	\$651.00
Vacate V1-V2	\$509.00
TOTAL	\$1,160.00

MOVE IN:

<u>Equipment</u>	<u>Cost</u>
Excavator (C330)	\$ 1,220
Excavator (C315)	\$ 699
Dozer (D6)	\$ 675
Dozer (D6)	\$ 675
Dozer (D8)	\$ 1,220
Rubber Tired Skidder	\$ 622
Vibratory Roller	\$ 675
Front End Loader (C966)	\$ 675
10-12 yd dump truck (X 4 @ \$141 each)	\$ 564
Large Grader (14G)	\$ 675
Water Truck (2,500 gal)	\$ 165
20yd dump truck w/pup trailer (X 2 @ \$166 each)	\$ 332
	\$7,865.00

GRAND TOTAL \$56,040.00

Compiled By: Andrew Arvin FL

Date: 02/29/2012

SURFACING		Stations/ amount	x	Rate/ sta/amt	Cost
Subgrade prep:	Description				
	Grade, Shape and Ditch 16'	25.15	x	\$21.55	\$541.98
	Subgrade Compaction	25.15	x	\$17.52	\$440.63

ROAD SEGMENT				1A-1B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1A-1B		0+00 to 20+95						
				Volume (CY) per		Number of						
Base Rock	Pit Run	0+00-20+95	8	station	50	stations	20.95	1,048	\$2.88	\$3,017		
Junctions	1 1/2"-0"	0+00	N/A	junction	33	junctions	1	33	\$5.94	\$196		
Turnouts	Pit Run	4+30	8	TO	28	TO's	1	28	\$2.88	\$81		
Turnarounds	Pit Run	11+31, 18+95	8	TA	13	TA's	2	26	\$2.88	\$75		
Landings	Pit Run	20+95	N/A	Landing	66	Landings	1	66	\$2.88	\$190		
Traction Rock	1 1/2"-0"	3+70-10+21	2	station	13	stations	7	85	\$5.94	\$503		
Culvert Bedding/Backfill	1 1/2"-0"	10+67	N/A	culvert	22	culverts	1.00	22	\$5.94	\$131		
Total Rock for Road Segment:				1A-1B				1,307		\$4,192		

ROAD SEGMENT				3A-3B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (Inches)	3A-3B		0+00 - 4+20						
				Volume (CY) per		Number of						
Base Rock	Pit Run	0+00-4+20	6	station	38	stations	4.20	160	\$2.88	\$460		
Junctions	1 1/2"-0"	0+00	N/A	junction	33	junctions	1	33	\$5.94	\$196		
Landings	Pit Run	4+20	N/A	Landing	66	Landings	1	66	\$2.88	\$190		
Total Rock for Road Segment:				3A-3B				259				

Processing:		Description	No.sta	Rate/sta	Cost
		Water, Process & Compact:	6.51	\$49.02	\$319
		Spread & Compact Pit Run Rock	25.15	\$29.40	\$739
		6"-0"pr	1 1/2"-0"	Total	
SUB TOTAL FOR SURFACING		1,393	173	1,566	1,566 \$7,079

SPECIAL PROJECTS		Description	Cost
		Pit Run development \$2.30/CY x 1,393 CY	\$3,204.13
SUB TOTAL FOR SPECIAL PROJECTS			\$3,204

Subtotal of Surfacing & Spec. Proj. \$10,283
Subtotal of Clearing, Exc., Culv. \$6,749

GRAND TOTAL \$17,031

Compiled By: Andrew Arvin

Date: 02/29/2012

Subtotal of Clearing, Exc., Culv.	\$7,738
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SURFACING				Subgrade prep:		Description		Stations/ amount	x	Rate/ sta/amt	Cost
						Grade, Shape and Ditch 16'		136.40	x	\$21.55	\$2,939.42
						Subgrade Compaction		136.40	x	\$17.52	\$2,389.73

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 72+55					
				Volume (CY) per		Number of					
Subgrade Leveling	1 1/2"-0"	0+00-51+75	N/A					319	\$6.41	\$2,045	
Base Rock	Pit Run	51+75-72+55	6	station	38	stations	21	790	\$3.02	\$2,387	
Culvert Bedding/Backfill	1 1/2"-0"	37+30	N/A	culvert	44	culverts	1.00	88	\$6.41	\$564	
Turnouts	Pit Run	35+00, 39+80, 58+35, 68+15	8	TO	22	TO's	4	88	\$3.02	\$266	
Turnarounds	Pit Run	60+55	8	TA	11	TA's	1	11	\$3.02	\$33	
Total Rock for Road Segment:				I1 to I2				1,296			\$5,295

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 26+60					
				Volume (CY) per		Number of					
Subgrade Leveling	1 1/2"-0"	0+00-26+60	N/A					165	\$5.94	\$980	
Culvert Bedding/Backfill	1 1/2"-0"	9+80, 21+30, 23+40	N/A	culvert	22	culverts	3.00	66	\$5.94	\$392	
Total Rock for Road Segment:				I3 to I4				231			\$1,372

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 37+25					
				Volume (CY) per		Number of					
Subgrade Leveling	1 1/2"-0"	0+00-21+20	N/A					165	\$5.94	\$980	
Subgrade Leveling	Pit Run	21+20 -37+25	N/A					111	\$2.88	\$320	
Turnouts	Pit Run	12+50, 26+90,	8	TO	22	TO's	2	44	\$2.88	\$127	
Turnarounds	Pit Run	35+80	8	TA	11	TA's	1	11	\$2.88	\$32	
Landings	Pit Run	26+90	N/A	Landing	66	Landings	1	66	\$2.88	\$190	
Total Rock for Road Segment:				I5 to I6				397			\$1,648

Processing:		Description		No.sta	Rate/sta	Cost
		Water, Process & Compact Crushed Rock:		115.60	\$49.02	\$5,667
		Spread & Compact Pit Run Rock		20.80	\$29.40	\$612
		6"-0"pr	1 1/2"-0"	Total		
SUB TOTAL FOR SURFACING		1,121	803	1,924	1,924	\$19,923

SPECIAL PROJECTS		Description	Cost
		Pit Run development \$2.30/CY x 1,010	\$2,323.00
SUB TOTAL FOR SPECIAL PROJECTS			\$2,323

Subtotal of Surfacing & Spec. Proj. \$22,246
Subtotal of Clearing, Exc., Culv. \$7,738

GRAND TOTAL \$29,984

Compiled By: Kraig Kirkpatrick

Date: 02/16/2012

McFarlane

Project No. 3 Road Vacating

Location/Description	C315 Excavator	C330 Excavator	Develop Rip rap	Truck	Labor	Seeding	Straw Mulch	Total
V1 to V2 0+00-5+00 Block road Waterbar	1 hrs 2 hrs		22 cy	2 hr				
Total	3 hrs	0 sta.	22 cy	2 hr	ac	lb	Bales	
Rate	\$94 /hr	/hr	\$3.70 cy	\$73 /hr	\$540 /ac	\$1.15 /lb	\$10.00 /Bale	
Cost	\$282	\$0	\$81	\$146	\$0	\$0	\$0.00	\$509

Prepared by: John Tillotson Date: 03/02/2012

PIT RUN ROCK COST

SALE NAME:	McFarlane
PROJECT:	1 & 2
QUARRY:	Barrow Area

MATERIAL: Pit Run

DATE: 02/21/2012
BY: Kraig Kirkpatrick

[illegible]

ROCK HAUL:

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

Ave haul:	\$2.15	/cy
Load:	\$0.28	/cy
Spread:	\$0.45	/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 = 1,630

PIT RUN ROCK HAUL COSTS	2,502 cy @	\$2.88 /cy
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Projects Road Maintenance Cost Summary

Sale: McFarlane
Date: February 24, 2012
By: Kraig Kirkpatrick KL

Type	Equipment/Rationale	Hours	Rate	Cost	Total
Post-Projects Road	Grader 14G	7	\$93	\$651	\$651

Interim Maintenance

Production Rates	Miles/day	Distance(miles)	Days	Hours
Grader				
Vibratory Roller				

Final Road Maintenance

Production Rates	Miles/day	Distance(miles)	Days	Hours
Grader	1.5	1.00	0.7	6.67
Vibratory Roller	1.5			

***Maintenance calculations were determined as follows:**

Grade as needed from Hunt Creek Quarry to Nicolai Mainline to Highway 30

Total Miles: 2 miles.

**McFarlane
FY 2012
TIMBER CRUISE REPORT**

1. **Sale Area Location:** Areas 1, 2, 3, 4, 4A and 4B are located in portions of Sections 27, 34, 35, and 36, T8N, R6W, W.M., Clatsop County, Oregon.

All timber sale areas are posted with ODF "Timber Sale Boundary", signs and pink ribbon. Area 5 R/W's are posted with ODF "Right-of-Way Boundary" signs.

2. **Fund Distribution: Fund:** BOF 116 Ac. (100%)
Tax Code: 6J-01 33%
6J-02 66%

3. **Sale Acreage by Area:**

Area	Harvest Type	Gross Acres	Non-Merch Areas	New R/W Acres	Stream Buffer Acres	Existing R/W Acres	Net Acreage
1	PC	21	-1	-	-	-0.8	19
2	PC	21	0	-	-	0	21
3	PC	46	-5	-0.25	-4	-0.7	36
4	PC	38	-8	-	-	-3	27
4A	MC	5	0	-	-	0	5
4B	ITS	6	0	-	-	0	6
5	R/W	2	0	-	-	0	2
TOTALS		139	-14	-.25	4	-5	116

4. **Cruisers and Cruise Dates:** Area 1 was cruised by Ed Holloran. Area 2 was cruised by Jon Long, and Andrew Arvin. Area 3 was cruised by Jon Long, and Bryce Rodgers. Area 4 was cruised by Jay Morey, Jon Long, and Bryce Rodgers. Area 4A was cruised by Jon Long. Area 4B was cruised by Ed Holloran, and Andrew Arvin. Areas 1, 3, and 4 were cruised on February 15, 2012. Area 2 was cruised on February 16, 2012. Areas 4A and 4B were cruised on February 24, 2012.
5. **Cruise Method and Computation:** Cruises used Corvallis MicroTechnology (CMT), and were downloaded to the Atterbury Super A.C.E. program at the Astoria 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, 3 and 4 (Partial Cut), a variable plot cruise with a 27.78 BAF for conifers and hardwoods was used. 33 plots were sampled on a cruise of 4 chains by 7 chains, with a count/cruise plot ratio of 2 count to 1 grade.

Area 4A (Modified Clear Cut), a variable plot cruise with a 33.61 BAF for conifers and hardwoods was used. 9 plots were sampled on a cruise of 2 chains by 3 chains, with a count/cruise plot ratio of 1 count to 1 grade.

Area 4B (Partial Cut), an "individual tree selection" cruise was used. 81 trees were cruised, with count/cruise ratios of 3:1 for Douglas-Fir; 2:1 for hemlock; and 1:1 for all other species.

Area 5 R/W, was calculated applying road R/W acreage using cruise per acre volumes from the Area cruises and expanding them as clearcuts for all of the R/W's. There is approximately 0.25 acres located in Area 3 of the timber sale.

<u>AREAS</u>	<u>PROJECT</u>	<u>TRACT</u>	<u>CRUISE TYPE</u>
1, 2, 3, & 4	MCFAR	A1234	00PC, TAKE, LEAV
4A	MCFAR	4A	00MC
4B	MCFAR	4B	4BPC

6. **Timber Description:** Areas 1, 2, 3 and 4 (Partial Cut) – This stand is approximately 35 years old, consisting of Douglas-fir dominant mixed conifer stands with some western hemlock. There are patches and stringers of hardwoods along the draws and streams and some scattered within the stand. This is a first entry thinning. The average (net) “take” volume per acre is approximately 5.6 MBF, the average tree size is approximately 13 inches DBH and 40 feet to a merchantable top (6” D.I.B. or 40% of the diameter at 16 feet). This stand will be harvested to an SDI of approximately 30%, with a basal area target of 120 ft², while retaining approximately 73 trees per acre.

Area 4A (Modified Clear Cut) – This stand is approximately 50 years old, consisting of Alder dominant mixed hardwood stand with some scattered conifer. This is a modified clear cut with all conifers as reserve. The average “take” volume per acre is 14.6 MBF, tree size is 15” DBH and 40 feet to a merchantable top (6” D.I.B. or 40% of the diameter at 16 feet).

Area 4B (Partial Cut) – This stand is approximately 80 years old, consisting of Douglas-fir dominant mixed conifer stands with scattered and small pockets of hardwoods. This is an “individual tree selection” harvest. The “take” volume is 39 MBF, average tree size is 17” DBH and 60 feet to a merchantable top (6” D.I.B. or 40% of the diameter at 16 feet).

Area 5 R/W – The R/W is the same type timber as Areas 1, 2, 3, and 4. The volume to remove from Area 5 R/W is negligible.

7. **Statistical Analysis: (See also “Statistics Reports,” attached.)**

Area	Target CV	Target SE%	Actual CV	Actual SE%
1, 2, 3, 4	40	7	32.2	5.6
4A	40	13	45.7	16.1
4B	N/A	N/A	N/A	N/A

The statistics are for all areas and Take and Leave trees combined.

8. **Take Volumes by Species and Log Grades for All Sale Areas by MBF:** (See “Species, Sort Grade-Board Feet Volumes (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.	SM	2 Saw	3Saw	4 Saw	Camp Run	% D & B	% Sale
Douglas-fir	13	296	4	47	125	120	-	3.1	42
Hemlock	15	69	0	48	1	20	-	5.0	10
Spruce	13	3	0	0	0	3	-	-	0
Alder	14	316	-	-	-	-	316	6.6	45
Maple	13	28	-	-	-	-	28	1.4	4
TOTAL	13	712	4	95	126	143	344	20	100

9. **Prepared by:** Andrew Arvin

Date: February 27, 2012

10. Approved by: _____

J. Tillie

Date: _____

3/19/2012

03/14/12

11. Attachments:

Cruise Plans & Maps (9 pages)
Volume Reports (4 page)
Statistics Reports (7 pages)
Stand Table Summary Reports (3 pages)
Log Stock Table Report (2 pages)

X:\Sunset Unit\2012 FY Sales\McFarlane\Sale Prep\Cruise\Cruise Report_McFarlane.docx

Revised August, 2002

CRUISE DESIGN ASTORIA DISTRICT

Sale Name: McFarlane **Area(s)** 1, 2, 3, 4

Harvest Type: (PC) "Automark Thinning"

Approx. Cruise Acres: 125 **Estimated CV%** 38 ^{Net BF or} BA/Acre **SE% Objective** 7 ^{Net BF or}

Planned Sale Volume: 6 MMBF **Estimated Sale Area Value/Acre:** \$1,300

A. Cruise Goals: (a) Grade minimum 80 conifer and 15 hardwood trees:
(b) Sample 43 cruise plots; (c) Other goals (X 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; Half point) (circle one)

Cruise Line Direction(s) See Map

Cruise Line Spacing 7 (chains)

Cruise Plot Spacing 4 (chains)

Grade/Count Ratio 1:2

Basal Area leave target 120 sq. ft. Cruiser needs to select 4 or 5 leave trees per plot. Leave all Cedar and make sure to have several alder and maple cruised!

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.
- 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 for conifer is 6 ", 6 " for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh.
- 4. Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

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

6. Species, Sort, and Grade Codes: A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
B. Sort: Use code "1" (Domestic).
C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull ; 9 = Utility
Hardwoods: #2 Sawmill = 12" + scaling diameter; #3 Sawmill = 10 and 11"; #4 Sawmill = 8 and 9"

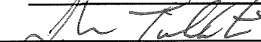
7. Deductions: Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results 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.

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: Andrew Arvin

Approved by: 

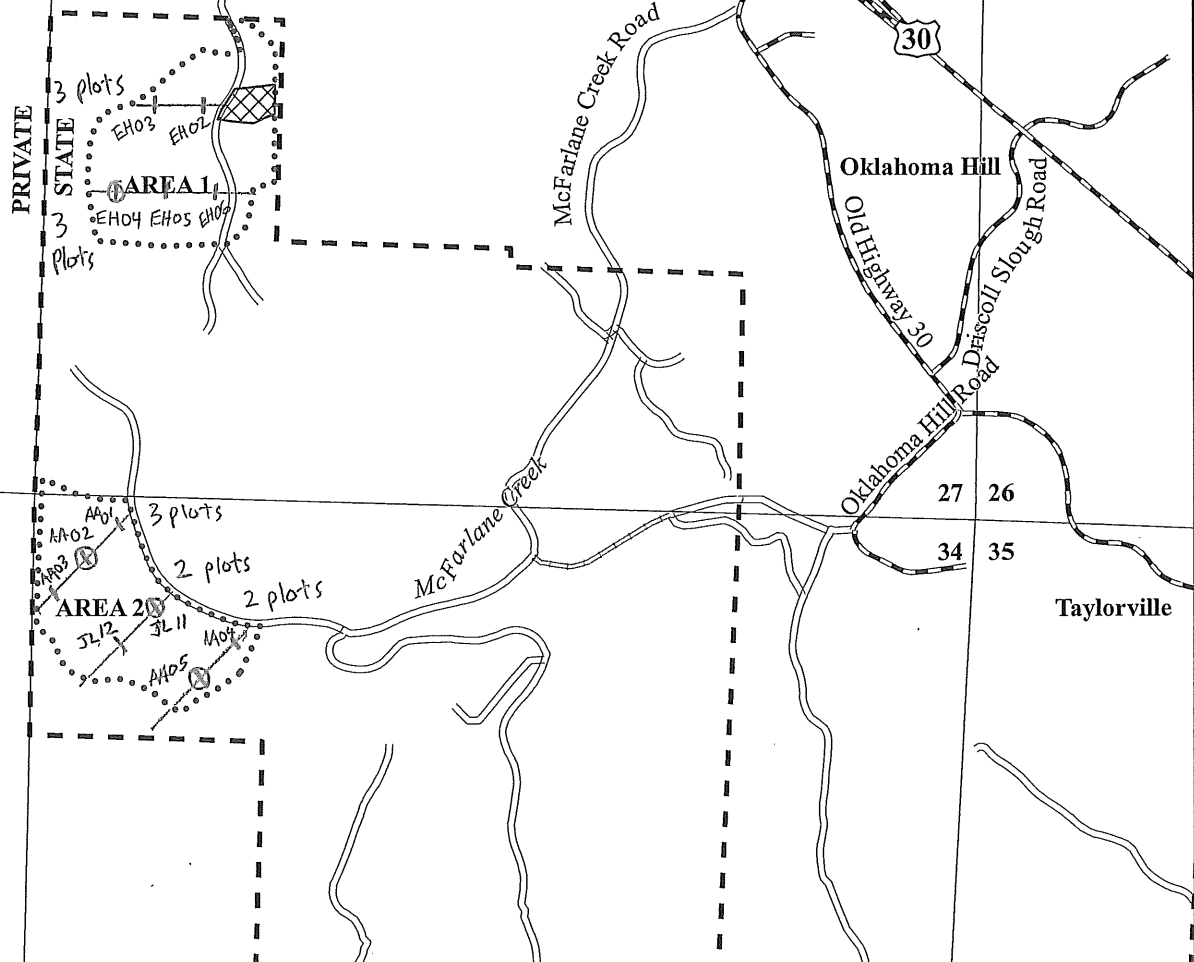
Date: 02/15/2012

Area 1: Az = 90°; 5 plots

Area 2: Az = 45°; 7 plots

Line spacing = 7 chains

Plot spacing = 4 chains



LEGEND

- Road to Vacate
- ▣ Non_Thin
- Sale Areas
- Paved Roads
- Surfaced Roads
- Ownership



Cruise Map

OF TIMBER SALE CONTRACT NO. 341-11-09
MCFARLANE
PORTIONS OF SECTIONS 27, 34, 35, AND 36 OF
T8N, R6W, W.M., CLATSOP COUNTY, OREGON.
APPROXIMATE SCALE 1"=1000'

1,000 500 0 1,000 Feet



Driscoll Slough

Taylorville Road

9 plots

Connelle DR

AREA

ÁREA 4A

AREA 4B

Taylorville Road

T8N, R6W
T7N, R6W

35	36
----	----

36

Westport

N

-

OF TIMBER SALE CONTRACT NO. 341-11-09
MCFARLANE
PORTIONS OF SECTIONS 27, 34, 35, AND 36 OF
T8N, R6W, W.M., CLATSOP COUNTY, OREGON.
APPROXIMATE SCALE 1"=1000'

--	--	--	--	--

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: McFarlane **Area(s)** 4A

Harvest Type: (CC)

Approx. Cruise Acres: 5 **Estimated CV%** 40 ^{Net BF or} BA/Acre **SE% Objective** 13 ^{Net BF or} BA/Acre

Planned Sale Volume: 125 **MBF** **Estimated Sale Area Value/Acre:** \$7,500

A. Cruise Goals: (a) Grade minimum 0 conifer and 50 hardwood trees:
(b) Sample 10 cruise plots; (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: 33.6 (Full point; Half point) (circle one)
Cruise Line Direction(s) North/South
Cruise Line Spacing 3 (chains)
Cruise Plot Spacing 2 (chains)
Grade/Count Ratio 1:1

Grade all hardwood as Camp Run. All conifer are reserve.

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.
- 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 for conifer is 6 ", 6 " for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh.
- 4. Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

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

6. **Species, Sort, and Grade Codes:** A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
B. Sort: Use code "1" (Domestic).
C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull ; 9 = Utility
Hardwoods: #2 Sawmill = 12" + scaling diameter; #3 Sawmill = 10 and 11"; #4 Sawmill = 8 and 9"

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.

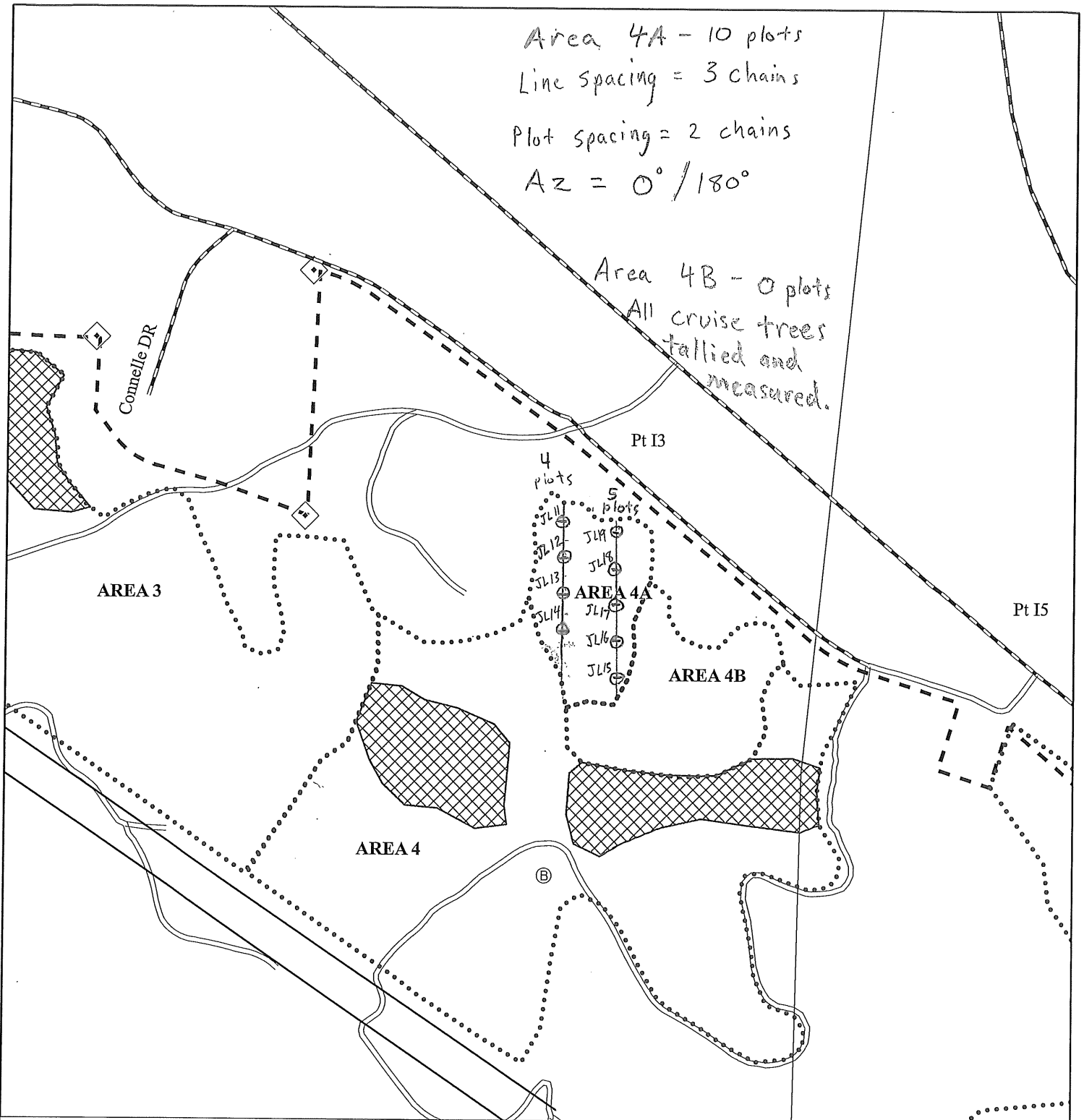
9. **Cruising Equipment:** Relaskop Rangefinder, Logger's Tape (with dbh on back) Biltmore Stick, Compass, Cruise Cards in Tatum OR Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.

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: Andrew Arvin
Approved by: [Signature]
Date: 02/24/2012

Area 4A - 10 plots
 Line spacing = 3 chains
 Plot spacing = 2 chains
 Az = 0°/180°

Area 4B - 0 plots
 All cruise trees
 tallied and
 measured.



LEGEND

- Road to Vacate
- Utility Lines
- Non_Thin
- Sale Areas
- Paved Roads
- Surfaced Roads
- Survey Corners
- Ownership



Cruise Map

OF TIMBER SALE CONTRACT NO. 341-11-09
 MCFARLANE
 PORTIONS OF SECTIONS 27, 34, 35, AND 36 OF
 T8N, R6W, W.M., CLATSOP COUNTY, OREGON.
 APPROXIMATE SCALE 1"=500'

500 250 0 500 Feet



CRUISE DESIGN ASTORIA DISTRICT

Sale Name: McFarlane **Area(s)** 4B

Harvest Type: (Individual Tree Selection)

Approx. Cruise Acres: 6 **Estimated CV%** N/A Net BF or BA/Acre **SE% Objective** N/A Net BF or BA/Acre

Planned Sale Volume: 35 MBF **Estimated Sale Area Value/Acre:** \$ 1,750

A. Cruise Goals: (a) Grade minimum _____ conifer and _____ hardwood trees:
(b) Sample _____ cruise plots; (c) Other goals (_____ Determine "automark" thinning standards; X Determine log grades for sale value; _____ 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 _____ (Full point; Half point) (circle one)
Cruise Line Direction(s) See Map
Cruise Line Spacing _____ (chains) (feet)
Cruise Plot Spacing _____ (chains) (feet)
Grade/Count Ratio _____

2. ITS (Sample Tree) Cruises: Measure-grade ratios: D-fir 3:1; Hemlock 2:1;
Hardwood 1:1

Mark all cut trees with red paint. Basal Area leave target **200** sq. ft. Cruiser needs to select **4** or **5** leave trees per plot. Leave all Cedar and make sure to have several alder and maple cruised!

Tree Measurements:

- Diameter:** Minimum DBH to cruise is 8" for conifers and 8" for hardwoods. Record dbh to nearest ½" 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.
- 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.
- Top Cruise Diameter (TCD):** Minimum top outside bark for conifer is 6", 6" 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.
- Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.
6. **Species, Sort, and Grade Codes:** A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.) B. Sort: Use code "1" (Domestic). C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull ; 9 = Utility
Hardwoods: #2 Sawmill = 12" + scaling diameter; #3 Sawmill = 10 and 11"; #4 Sawmill = 8 and 9"
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 red 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, Red 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.

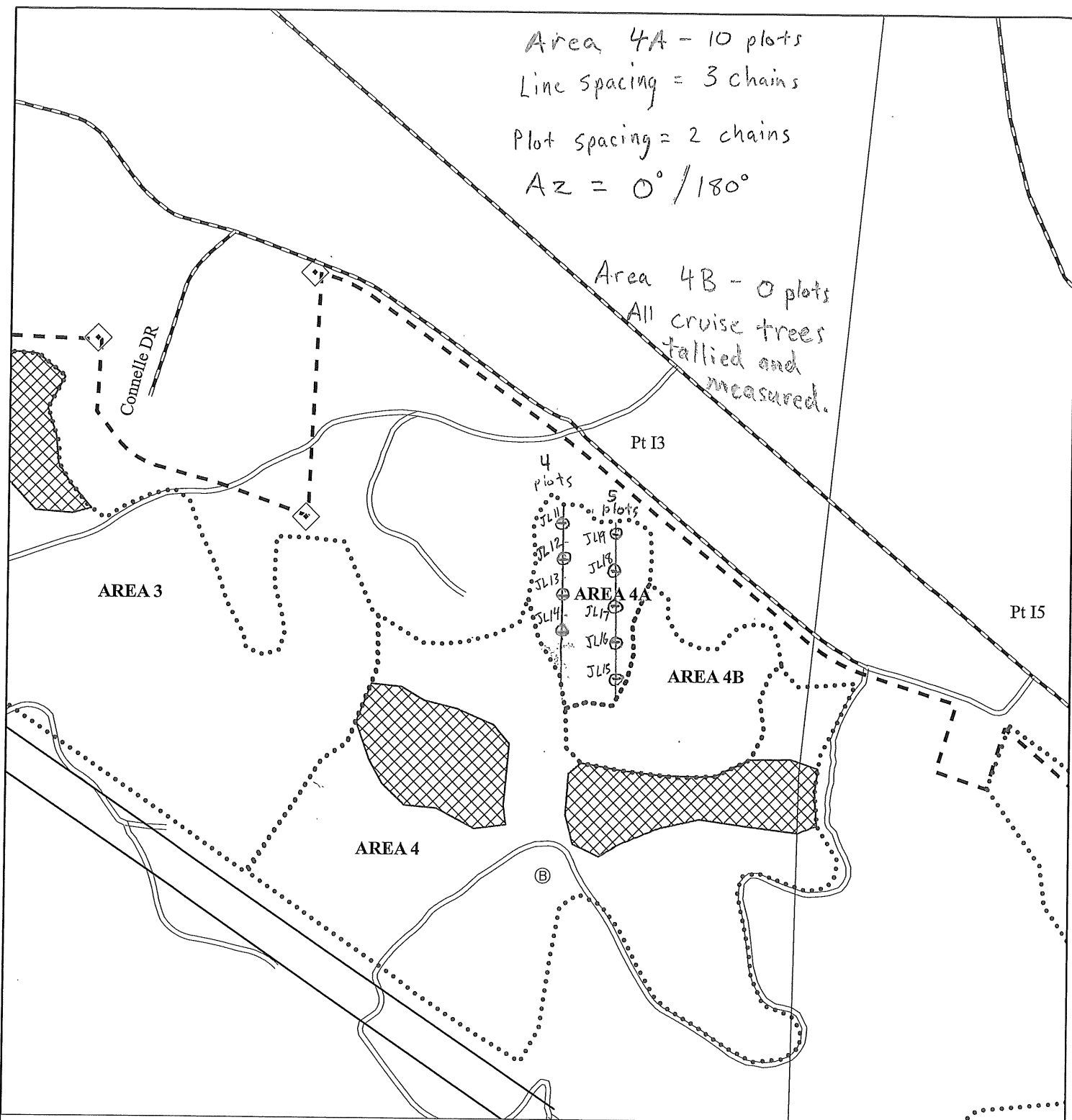
Cruise Design by: Andrew Arvin

Approved by: [Signature]

Date: 02/24/2012

Area 4A - 10 plots
 Line spacing = 3 chains
 Plot spacing = 2 chains
 Az = 0°/180°

Area 4B - 0 plots
 All cruise trees
 tallied and
 measured.



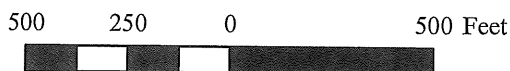
LEGEND

- Road to Vacate
- Utility Lines
- Non_Thin
- Sale Areas
- Paved Roads
- Surfaced Roads
- Survey Corners
- Ownership



Cruise Map

OF TIMBER SALE CONTRACT NO. 341-11-09
 MCFARLANE
 PORTIONS OF SECTIONS 27, 34, 35, AND 36 OF
 T8N, R6W, W.M., CLATSOP COUNTY, OREGON.
 APPROXIMATE SCALE 1"=500'



TC		Species, Sort Grade - Board Foot Volumes (Project)																	
T08N R06W S35 TyTKM5.00 T08N R06W S35 Ty4BPC6.00 T08N R06W S35 TyTAKE103.00		Project: MCFAR												Page 1					
		Acres 114.00												Date 3/5/2012					
														Time 2:05:48PM					
S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%GrossNet			Total Net MBF	Percent of Net Board Foot Volume								Average Log			Logs
								Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf	Per /Acre
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99				
A		DOCU														10		0.00	23.2
A		DOCR	95	6.9	2,848	2,652	302	17	77	4	2	14	21	21	44	30	61	0.64	43.2
A		DOCR	5	1.3	128	127	14		100				100			25	44	0.55	2.8
A Totals			45	6.6	2,977	2,779	317	16	78	4	2	14	24	20	42	23	40	0.54	69.2
M		DOCU														22		0.00	1.9
M		DOCR	100	1.4	243	240	27	12	77	10		49	3	32	16	23	40	0.57	6.0
M Totals			4	1.4	243	240	27	12	77	10		49	3	32	16	23	30	0.44	7.9
H		DOCU														10		0.00	1.2
H		DO2S	68	6.9	447	416	47			97	3			44	56	36	188	1.38	2.2
H		DO3S	2	8.8	10	9	1		60	40			8	40	52	33	87	0.87	.1
H		DO4S	30		181	181	21	99	1			1	51		48	34	34	0.46	5.3
H Totals			10	5.0	638	607	69	30	1	67	2	0	15	31	54	31	69	0.71	8.8
D		DOCU														12		0.00	5.1
D		DO2S	15	1.1	417	412	47			81	19			13	87	39	233	1.57	1.8
D		DO3S	42	6.3	1,164	1,091	124		100	0		0		36	64	37	60	0.65	18.3
D		DO4S	36		931	931	106	54	46			28	40	12	19	25	28	0.44	33.0
D		DOSM	2	2.0	39	38	4				100				100	40	720	3.19	.1
D		DO4S	5	3.1	124	120	14		100				100			27	39	0.55	3.1
D Totals			42	3.1	2,675	2,592	296	19	63	13	4	10	19	21	49	28	42	0.56	61.3
S		DO4S	100		27	27	3		100			100				16	30	0.69	.9
S Totals			0		27	27	3		100			100				16	30	0.69	.9
Totals				4.8	6,560	6,244	712	18	64	14	3	13	20	22	45	26	42	0.56	148.0

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)															
T08N R06W S35 TyTAKE 103.00				Project:		MCFAR										Page		1	
				Acres		103.00										Date		3/5/2012	
																Time		2:06:32PM	
S Spp	So Gr T rt ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log			Logs	
							Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf	Per /Acre	
							4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
A	DOCU														10		0.00	24.0	
A	DOCR	94	7.4	2,459	2,277	235	21	79			14	23	17	46	31	58	0.60	39.1	
A	DOCR	6	1.3	142	140	14		100				100			25	44	0.55	3.2	
A Totals		41	7.1	2,601	2,417	249	20	80			13	27	16	43	23	36	0.51	66.3	
D	DOCU														13		0.00	5.6	
D	DO2S	10		275	275	28		100					100		40	200	1.40	1.4	
D	DO3S	44	6.5	1,210	1,131	117		100					34	66	37	59	0.65	19.2	
D	DO4S	40		1,024	1,024	105	54	46			27	41	12	20	25	28	0.44	36.3	
D	DO4S	6	3.1	137	133	14		100				100			27	39	0.55	3.4	
D Totals		44	3.1	2,646	2,563	264	22	68	11		11	21	20	48	28	39	0.54	65.8	
M	DOCU														24		0.00	1.6	
M	DOCR	100		212	212	22	16	84			54		30	16	22	36	0.51	5.9	
M Totals		4		212	212	22	16	84			54		30	16	23	28	0.39	7.6	
H	DOCU														10		0.00	1.3	
H	DO2S	69	7.2	477	443	46		100					46	54	36	184	1.36	2.4	
H	DO4S	31		198	198	20	100					51		49	34	34	0.46	5.8	
H Totals		11	5.1	675	641	66	31	69				16	32	52	31	68	0.70	9.5	
S	DO4S	100		30	30	3		100			100				16	30	0.69	1.0	
S Totals		1		30	30	3		100			100				16	30	0.69	1.0	
Totals			4.9	6,163	5,863	604	22	66	12		13	22	20	45	26	39	0.53	150.1	

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T08N R06W S35 TyTKM5.00						Project:		MCFAR								Page		1			
						Acres		5.00								Date		3/5/2012			
																Time		2:07:44PM			
S Spp		So Gr T rt ad		% Net BdFt	Bd. Ft. per Acre Def%GrossNet			Total Net MBF	Percent of Net Board Foot Volume								Average Log			Logs Per /Acre	
									Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf		
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
A		DOCU																10		0.00	31.5
A		DOCR		100	5.213,37412,673			63		72	19	9		14	11	35	39	27	75	0.83	168.3
A		Totals		92	5.213,37412,673			63		72	19	9		14	11	35	39	25	63	0.78	199.8
M		DOCU																16		0.00	9.2
M		DOCR		100	6.61,1871,109			6		49	51			29	14	38	19	26	74	1.03	15.0
M		Totals		8	6.61,1871,109			6		49	51			29	14	38	19	22	46	0.75	24.2
Totals					5.414,56213,782			69		70	21	8		16	12	35	38	24	62	0.78	224.0

TC PSCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T08N R06W S35 Ty4BPC 6.00			Project: MCFAR												Page 1				
			Acres 6.00												Date 3/5/2012				
															Time 2:07:31PM				
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	Bd Ft	CF/ Lf				
					4-5		6-11	12-16	17+	12-20	21-30	31-35				36-99			
D	DOCU														6		0.00	1.0	
D	DO2S	59	2.8	3,200	3,110	19			53	47				32	68	36	311	2.01	10.0
D	DO3S	25	3.3	1,355	1,310	8		94	6			3		55	42	33	75	0.70	17.5
D	DO4S	2		115	115	1	13	87			74	13	13			20	26	0.46	4.5
D	DOSM	14	2.0	735	720	4				100				100		40	720	3.19	1.0
D Totals		81	2.8	5,405	5,255	32	0	25	33	42	2	0	33	64	32	155	1.21	34.0	
H	DOCU														6		0.00	.3	
H	DO2S	60		313	313	2			26	74				100	40	470	2.56	.7	
H	DO3S	33	8.8	190	173	1		60	40			8	40	52	33	87	0.87	2.0	
H	DO4S	7		33	33	0		100			100				19	25	0.54	1.3	
H Totals		8	3.1	537	520	3		26	29	45	6	3	13	78	27	120	1.17	4.3	
A	DOCU														8		0.00	1.0	
A	DOCR	100	2.6	758	738	4	4	61	23	12	8	43	24	25	30	79	0.81	9.3	
A Totals		11	2.6	758	738	4	4	61	23	12	8	43	24	25	28	71	0.78	10.3	
Totals			2.8	6,700	6,513	39	1	30	31	38	3	5	30	61	31	134	1.12	48.7	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	MCFAR	DATE 3/5/2012				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
08N	06W	35	A1234	00PC	125.00	33	241	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
PLOTS		TREES								
TOTAL		33	241	7.3						
CRUISE		15	86	5.7		21,480	.4			
DBH COUNT										
REFOREST										
COUNT		18	133	7.4						
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		42	53.1	17.5	63	88.5	9,635	9,392	2,817	2,817
DOUG FIR		14	53.1	12.6	35	46.3	2,509	2,430	935	935
R ALDER		12	32.2	13.3	47	30.9	2,459	2,277	729	729
ALDRLEAV		2	8.2	16.2	66	11.8	1,666	1,666	445	445
CEDLEAV		1	6.7	18.0	70	11.8	1,467	1,467	433	433
HEMLEAV		6	5.0	19.8	84	10.7	1,658	1,647	448	448
WHEMLOCK		3	5.8	14.6	53	6.7	675	641	209	209
BL MAPLE		5	6.7	11.7	26	5.1	212	212	67	67
S SPRUCE		1	1.0	12.5	17	.8	30	30	11	11
TOTAL		86	171.8	15.1	50	212.5	20,311	19,763	6,095	6,095
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV		55.0	9.6	48	53	58				
DOUG FIR		89.2	15.5	45	53	61				
R ALDER		165.7	28.8	23	32	41				
ALDRLEAV		283.5	49.4	4	8	12				
CEDLEAV		328.3	57.1	3	7	10				
HEMLEAV		200.5	34.9	3	5	7				
WHEMLOCK		309.9	53.9	3	6	9				
BL MAPLE		290.8	50.6	3	7	10				
S SPRUCE		574.5	100.0	0	1	2				
TOTAL		33.1	5.8	162	172	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		
DOUGLEAV		54.9	9.6	80	88	97				
DOUG FIR		89.6	15.6	39	46	54				
R ALDER		168.9	29.4	22	31	40				
ALDRLEAV		282.8	49.2	6	12	18				
CEDLEAV		328.3	57.1	5	12	19				
HEMLEAV		199.6	34.8	7	11	14				
WHEMLOCK		309.9	53.9	3	7	10				
BL MAPLE		255.6	44.5	3	5	7				
S SPRUCE		574.5	100.0	0	1	2				
TOTAL		26.2	4.6	203	213	222	27	7	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		
DOUGLEAV		59.6	10.4	8,418	9,392	10,367				
DOUG FIR		88.2	15.4	2,057	2,430	2,804				
R ALDER		165.8	28.9	1,620	2,277	2,935				
ALDRLEAV		282.9	49.2	846	1,666	2,487				
CEDLEAV		328.3	57.1	629	1,467	2,306				
HEMLEAV		197.6	34.4	1,080	1,647	2,214				
WHEMLOCK		309.9	53.9	295	641	987				

TC TSTATS				STATISTICS			PAGE	2		
				PROJECT	MCFAR		DATE	3/5/2012		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
08N	06W	35	A1234	00PC	125.00	33	241	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	
BL MAPLE		330.3	57.5	90	212	333				
S SPRUCE		574.5	100.0	0	30	59				
TOTAL		32.2	5.6	18,656	19,763	20,870	41	10	5	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	MCFAR	DATE 3/5/2012				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
08N	06W	35	A1234	TAKE	103.00	33	99	1	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		33	99	3.0						
CRUISE		13	35	2.7	10,176	.3				
DBH COUNT										
REFOREST										
COUNT		17	61	3.6						
BLANKS		3								
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	14	53.1	12.6	35		46.3	2,509	2,430	935	935
R ALDER	12	32.2	13.3	47		30.9	2,459	2,277	729	729
WHEMLOCK	3	5.8	14.6	53		6.7	675	641	209	209
BL MAPLE	5	6.7	11.7	26		5.1	212	212	67	67
S SPRUCE	1	1.0	12.5	17		.8	30	30	11	11
TOTAL	35	98.8	12.9	39		89.8	5,885	5,590	1,951	1,951
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
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	89.2	15.5	45	53	61					
R ALDER	165.7	28.8	23	32	41					
WHEMLOCK	309.9	53.9	3	6	9					
BL MAPLE	290.8	50.6	3	7	10					
S SPRUCE	574.5	100.0	0	1	2					
TOTAL	51.0	8.9	90	99	108	104	26	12		
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	89.6	15.6	39	46	54					
R ALDER	168.9	29.4	22	31	40					
WHEMLOCK	309.9	53.9	3	7	10					
BL MAPLE	255.6	44.5	3	5	7					
S SPRUCE	574.5	100.0	0	1	2					
TOTAL	52.5	9.1	82	90	98	110	28	12		
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	88.2	15.4	2,057	2,430	2,804					
R ALDER	165.8	28.9	1,620	2,277	2,935					
WHEMLOCK	309.9	53.9	295	641	987					
BL MAPLE	330.3	57.5	90	212	333					
S SPRUCE	574.5	100.0	0	30	59					
TOTAL	62.5	10.9	4,982	5,590	6,198	156	39	17		

TC TSTATS				STATISTICS			PAGE 1				
				PROJECT	MCFAR		DATE	3/5/2012			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
08N	06W	35	A1234	LEAV	125.00	33	142	1	W		
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL		33	142	4.3							
CRUISE		13	51	3.9	9,130	.6					
DBH COUNT											
REFOREST											
COUNT		20	84	4.2							
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		42	53.1	17.5	63		88.5	9,635	9,392	2,817	2,817
ALDRLEAV		2	8.2	16.2	66		11.8	1,666	1,666	445	445
CEDLEAV		1	6.7	18.0	70		11.8	1,467	1,467	433	433
HEMLEAV		6	5.0	19.8	84		10.7	1,658	1,647	448	448
TOTAL		51	73.0	17.6	65		122.7	14,426	14,173	4,144	4,144
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL: 68.1 %		COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD: 1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV		55.0	9.6	48	53	58					
ALDRLEAV		283.5	49.4	4	8	12					
CEDLEAV		328.3	57.1	3	7	10					
HEMLEAV		200.5	34.9	3	5	7					
TOTAL		17.6	3.1	71	73	75	12	3	1		
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		54.9	9.6	80	88	97					
ALDRLEAV		282.8	49.2	6	12	18					
CEDLEAV		328.3	57.1	5	12	19					
HEMLEAV		199.6	34.8	7	11	14					
TOTAL		14.1	2.5	120	123	126	8	2	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		59.6	10.4	8,418	9,392	10,367					
ALDRLEAV		282.9	49.2	846	1,666	2,487					
CEDLEAV		328.3	57.1	629	1,467	2,306					
HEMLEAV		197.6	34.4	1,080	1,647	2,214					
TOTAL		27.1	4.7	13,505	14,173	14,841	29	7	3		

TC TSTATS				STATISTICS				PAGE	1			
				PROJECT	MCFAR			DATE	3/5/2012			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
08N	06W	35	4A	00MC	5.00	9	45	1	W			
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			9	45	5.0							
CRUISE			9	45	5.0	702	6.4					
DBH COUNT												
REFOREST												
COUNT												
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
R ALDER			37	125.0	14.3	41		140.3	13,374	12,673	3,850	3,850
BL MAPLE			7	15.0	18.1	38		26.8	1,187	1,109	404	404
DOUGLEAV			1	.3	45.0	91		3.7	875	875	165	165
TOTAL			45	140.4	14.9	41		170.8	15,437	14,658	4,419	4,419
CONFIDENCE LIMITS OF THE SAMPLE												
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR												
CL: 68.1 %			COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD: 1.0			VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
R ALDER			39.5	13.9	108	125	142					
BL MAPLE			120.1	42.4	9	15	21					
DOUGLEAV			300.0	106.0		0	1					
TOTAL			31.9	11.3	125	140	156	46	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		
R ALDER			33.8	11.9	124	140	157					
BL MAPLE			84.8	30.0	19	27	35					
DOUGLEAV			300.0	106.0		4	8					
TOTAL			30.3	10.7	153	171	189	41	10	5		
CL: 68.1 %			COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD: 1.0			VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
R ALDER			53.6	18.9	10,274	12,673	15,072					
BL MAPLE			120.7	42.7	636	1,109	1,582					
DOUGLEAV			300.0	106.0		875	1,803					
TOTAL			45.7	16.1	12,293	14,658	17,022	94	23	10		

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	MCFAR			DATE	3/5/2012		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
08N	06W	35	4A	TKM	5.00	9	44	1	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
TOTAL				9	44	4.9					
CRUISE				9	44	4.9		700		6.3	
DBH COUNT											
REFOREST											
COUNT											
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
R ALDER		37	125.0	14.3	41		140.3	13,374	12,673	3,850	3,850
BL MAPLE		7	15.0	18.1	38		26.8	1,187	1,109	404	404
TOTAL		44	140.1	14.8	41		167.1	14,562	13,782	4,254	4,254
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL: 68.1 %		COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
R ALDER		39.5	13.9	108	125	142					
BL MAPLE		120.1	42.4	9	15	21					
TOTAL		31.8	11.2	124	140	156	45	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			
R ALDER		33.8	11.9	124	140	157					
BL MAPLE		84.8	30.0	19	27	35					
TOTAL		28.5	10.1	150	167	184	36	9	4		
CL: 68.1 %		COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
R ALDER		53.6	18.9	10,274	12,673	15,072					
BL MAPLE		120.7	42.7	636	1,109	1,582					
TOTAL		51.3	18.1	11,284	13,782	16,280	118	30	13		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	MCFAR	DATE 3/5/2012				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
08N	06W	35	4B	4BPC	6.00	4	81	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
PLOTS		TREES								
TOTAL		4		81		20.3				
CRUISE		4		81		20.3		158		
DBH COUNT								51.3		
REFOREST										
COUNT										
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		35	17.5	18.3	64	31.8	5,405	5,255	1,308	1,308
R ALDER		39	6.5	15.1	46	8.0	758	738	224	224
WHEMLOCK		7	2.3	17.2	53	3.7	537	520	138	138
TOTAL		81	26.3	17.4	59	43.6	6,700	6,513	1,670	1,670
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
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		28.6	16.3	15	18	20				
R ALDER		64.5	36.9	4	7	9				
WHEMLOCK		54.7	31.3	2	2	3				
TOTAL		32.3	18.5	21	26	31		55	14	6
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		25.1	14.4	27	32	36				
R ALDER		72.5	41.4	5	8	11				
WHEMLOCK		57.4	32.8	3	4	5				
TOTAL		28.9	16.5	36	44	51		44	11	5
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		55.5	31.8	3,586	5,255	6,924				
R ALDER		81.9	46.8	393	738	1,084				
WHEMLOCK		104.1	59.5	210	520	830				
TOTAL		42.9	24.6	4,913	6,513	8,113		97	24	11

TC		PSTNDSUM		Stand Table Summary										Page		1	
														Date:		3/5/2012	
T08N R06W S35 TyLEAV 125.00				Project MCFAR										Time:		3:14:58PM	
				Acres 125.00										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	
DL		12	1	86	104	2.603	2.04	5.21	14.5	50.0		75	260	94	33		
DL		14	1	82	58	1.912	2.04	1.91	24.0	60.0		46	115	57	14		
DL		15	2	83	91	3.332	4.09	5.00	23.0	86.7		115	433	144	54		
DL		16	5	84	69	7.321	10.22	11.71	23.7	75.0		278	879	348	110		
DL		17	8	84	85	10.376	16.36	20.75	26.5	88.8		550	1,842	687	230		
DL		18	10	84	79	12.384	21.88	22.86	31.4	110.3		717	2,522	896	315		
DL		19	8	84	73	8.307	16.36	16.61	29.6	88.1		492	1,464	615	183		
DL		20	5	82	85	5.213	11.37	11.36	33.9	111.4		385	1,266	482	158		
DL		21	2	85	103	1.700	4.09	4.25	37.2	144.0		158	612	198	76		
DL		Totals	42	84	80	53.147	88.46	99.67	28.3	94.2		2,817	9,392	3,521	1,174		
AL		14	1	87	93	5.512	5.89	11.02	21.5	85.0		237	937	296	117		
AL		20	1	86	75	2.701	5.89	5.40	38.5	135.0		208	729	260	91		
AL		Totals	2	87	87	8.213	11.79	16.43	27.1	101.4		445	1,666	556	208		
HL		17	1	86	93	1.444	2.28	2.89	37.0	140.0		107	404	134	51		
HL		18	1	89	100	.953	1.68	1.91	39.0	130.0		74	248	93	31		
HL		19	1	89	96	.855	1.68	1.71	42.5	140.0		73	239	91	30		
HL		22	1	87	96	.638	1.68	1.28	56.5	210.0		72	268	90	33		
HL		23	1	85	110	.584	1.68	1.75	36.3	150.0		64	263	80	33		
HL		24	1	83	103	.536	1.68	1.07	55.0	210.0		59	225	74	28		
HL		Totals	6	87	98	5.009	10.69	10.60	42.3	155.4		448	1,647	561	206		
CL		18	1	85	99	6.669	11.79	13.34	32.5	110.0		433	1,467	542	183		
CL		Totals	1	85	99	6.669	11.79	13.34	32.5	110.0		433	1,467	542	183		
Totals			51	84	84	73.039	122.72	140.04	29.6	101.2		4,144	14,173	5,180	1,772		

TC		PSTNDSUM										Stand Table Summary										Page		1				
																						Date:		3/5/2012				
T08N R06W S35 TyTKM 5.00 T08N R06W S35 Ty4BPC 6.00 T08N R06W S35 TyTAKE 103.00					Project										MCFAR										Time:		3:13:41PM	
					Acres										114.00										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												
A		8	1	87	20	.469	.16	.47	5.0	20.0		2	9			3	1											
A		9	2	86	38	.379	.17	.38	5.0	20.2		2	8			2	1											
A		10	3	86	60	3.679	2.01	3.68	13.7	49.1		50	181			57	21											
A		11	6	71	48	6.207	4.10	6.21	13.7	30.1		85	187			97	21											
A		12	11	86	49	3.254	2.38	3.05	16.4	42.2		50	129			57	15											
A		13	13	87	59	.486	.45	.53	18.8	49.0		10	26			11	3											
A		14	14	86	66	9.831	10.23	14.05	17.2	53.6		242	753			276	86											
A		15	4	79	74	4.303	5.28	5.94	29.0	99.0		172	588			197	67											
A		16	9	73	61	5.036	7.03	6.83	21.3	73.0		146	499			166	57											
A		17	8	87	77	.566	.89	1.00	31.7	101.6		32	101			36	12											
A		18	3	86	73	.110	.19	.13	47.2	152.1		6	19			7	2											
A		19	3	86	86	.249	.49	.50	37.3	130.0		19	65			21	7											
A		20	2	86	57	.018	.04	.03	39.0	123.3		1	3			1	0											
A		21	1	86	68	.009	.02	.01	38.0	70.0		0	1			0	0											
A		22	1	87	41	.062	.16	.06	39.0	110.0		2	7			3	1											
A		24	2	72	54	.061	.19	.07	22.7	61.5		2	4			2	0											
A		26	1	87	57	.044	.16	.09	44.0	190.0		4	17			4	2											
A		28	3	84	76	.085	.36	.09	87.2	333.8		8	31			9	4											
A		32	1	80	92	.029	.16	.06	104.5	400.0		6	23			7	3											
A		Totals	88	81	60	34.877	34.49	43.18	19.4	61.4		840	2,652			957	302											
D		9	2	85	42	6.790	3.00	6.79	7.0	20.0		47	136			54	15											
D		10	1	85	32	5.478	2.99	5.48	8.0	30.0		44	164			50	19											
D		11	5	85	61	4.633	3.06	4.63	15.9	40.0		74	185			84	21											
D		12	9	81	45	15.350	12.06	15.40	13.3	35.1		204	541			233	62											
D		13	2	84	62	.053	.05	.05	22.0	60.0		1	3			1	0											
D		14	6	86	53	5.696	6.09	5.77	22.4	55.3		129	319			147	36											
D		15	2	79	49	4.870	5.98	4.87	25.0	50.0		122	243			139	28											
D		16	3	83	60	4.306	6.01	6.47	22.0	50.4		143	327			163	37											
D		17	4	86	103	.105	.17	.21	30.1	108.8		6	23			7	3											
D		18	3	87	102	.079	.14	.16	34.0	126.7		5	20			6	2											
D		19	2	86	88	.053	.10	.11	33.3	112.5		4	12			4	1											
D		20	2	86	104	.053	.11	.13	33.6	120.0		4	16			5	2											
D		21	1	86	101	1.242	2.99	2.48	36.5	125.0		91	311			103	35											
D		22	2	93	130	.053	.14	.13	53.6	242.0		7	32			8	4											
D		24	1	86	126	.026	.08	.08	49.0	196.7		4	16			4	2											
D		27	1	83	115	.026	.10	.08	56.7	203.3		4	16			5	2											
D		30	1	83	146	.026	.13	.08	85.0	356.7		7	28			8	3											
D		32	1	92	150	.026	.15	.08	108.0	556.7		9	44			10	5											
D		34	1	83	136	.026	.17	.08	105.0	473.3		8	37			9	4											
D		Totals	49	83	49	48.891	43.51	53.09	17.2	46.6		914	2,472			1,041	282											
H		10	1	86	29	.018	.01	.02	8.0	20.0		0	0			0	0											
H		11	1	89	40	3.073	2.03	3.07	12.0	30.0		37	92			42	11											
H		12	1	86	55	.018	.01	.02	20.0	60.0		0	1			0	0											
H		13	1	89	33	.018	.02	.02	14.0	40.0		0	1			0	0											
H		14	1	83	106	.018	.02	.04	17.5	70.0		1	2			1	0											
H		15	1	83	70	.018	.02	.04	18.5	45.0		1	2			1	0											
H		18	1	85	101	1.148	2.03	2.30	28.0	100.0		64	230			73	26											
H		19	1	88	96	1.030	2.03	2.06	42.5	125.0		88	258			100	29											
H		21	1	86	73	.018	.04	.04	41.5	115.0		1	4			2	0											
H		28	1	86	121	.018	.08	.05	72.7	326.7		4	17			4	2											
H		Totals	10	88	64	5.374	6.28	7.64	25.7	79.4		196	607			223	69											

TC		PSTNDSUM		Stand Table Summary								Page		2	
												Date:		3/5/2012	
				T08N R06W S35 TyTKM		5.00		Project		MCFAR		Time:		3:13:41PM	
				T08N R06W S35 Ty4BPC		6.00									
				T08N R06W S35 TyTAKE		103.00		Acres		114.00		Grown Year:			
S				Tot				Average Log							
Spc T		Sample		FF Av		Trees/		Net Net		Net Net		Totals			
		DBH Trees		16' Ht		Acre		Cu.Ft. Bd.Ft.		Tons/ Cu.Ft. Bd.Ft.		Tons Cunits MBF			
M		9 1		87 20		2.066 .91 2.07		6.0 30.0		12 62		14 7			
M		11 1		87 17		1.383 .91 1.38		8.0 30.0		11 41		13 5			
M		12 1		87 47		1.162 .91 1.16		16.0 50.0		19 58		21 7			
M		14 2		87 49		.306 .33 .15		27.0 60.0		4 9		5 1			
M		15 2		78 58		1.487 1.83 .74		25.0 40.0		19 30		21 3			
M		17 2		86 44		.228 .36 .35		20.0 56.5		7 20		8 2			
M		24 1		59 54		.052 .16 .05		35.0 70.0		2 4		2 0			
M		26 1		87 61		.044 .16 .04		75.0 280.0		3 12		4 1			
M		32 1		49 81		.029 .16 .06		23.5 60.0		1 4		2 0			
M		Totals		12 85 35		6.758 5.74 6.01		13.0 39.9		78 240		89 27			
S		13 1		72 18		.892 .76 .89		11.0 30.0		10 27		11 3			
S		Totals		1 72 18		.892 .76 .89		11.0 30.0		10 27		11 3			
Totals		160 82 53		96.793 90.78 110.81		18.4 54.1		2,037 5,998		2,323 684					

Log Stock Table - MBF

T08N R06W S35 TyTKM 5.00
T08N R06W S35 Ty4BPC 6.00
T08N R06W S35 TyTAKE 103.00

Project: MCFAR
Acres 114.00

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Date 3/5/2012
Time 3:12:16PM

Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches												
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-21	22-29	30-39	40+	
A		DO CR	12	1		1	.4											1		
A		DO CR	16	21		21	6.6				7	0	14							
A		DO CR	18	16		16	5.1					0	16							
A		DO CR	20	5	7.3	5	1.4				2	2	1	0						
A		DO CR	22	0		0	.1				0									
A		DO CR	23	1	21.4	1	.2							1						
A		DO CR	24	35	20.4	28	8.8		0		2		25		0					
A		DO CR	25	0		0	.1				0									
A		DO CR	26	18		17	5.5						17		1					
A		DO CR	27	5		5	1.6		5					1						
A		DO CR	30	11		11	3.5		0		9	2		0		0	1			
A		DO CR	32	56	7.1	52	16.3		0		23	16	6	2	4					
A		DO CR	34	3		3	1.0				1			2						
A		DO CR	35	8		8	2.5		8											
A		DO CR	36	62	10.5	55	17.4		31		0		24							
A		DO CR	37	7		7	2.2		7											
A		DO CR	38	0		0	.0				0									
A		DO CR	40	76	5.2	72	22.7				16	37	13	2		2	2			
A		DO CR	25	15	1.3	14	4.6				14									
A		Totals		339	6.6	317	44.5		50		75	57	115	8	5	2	3	1		
M		DO CR	9	0		0	.5					0								
M		DO CR	14	5		5	17.3					5								
M		DO CR	16	7		7	26.1				7	0								
M		DO CR	18	2	9.1	1	5.2							1						
M		DO CR	28	0		0	1.5					0								
M		DO CR	30	0	23.1	0	1.2						0							
M		DO CR	32	8		8	29.4				7				1					
M		DO CR	34	1	14.3	1	2.6					1								
M		DO CR	40	4		4	16.2		3		1									
M		Totals		28	1.4	27	3.8		3		15	6	0	1	1					
H		DO 2S	32	21		21	30.3						21							
H		DO 2S	40	30	11.7	27	38.4						25				1			
H		DO 3S	24	0		0	.1				0									
H		DO 3S	32	0	8.7	0	.6				0	0								
H		DO 3S	36	0		0	.2				0									
H		DO 3S	40	0	12.5	0	.6							0						

Log Stock Table - MBF

T08N R06W S35 TyTKM 5.00
T08N R06W S35 Ty4BPC 6.00
T08N R06W S35 TyTAKE 103.00

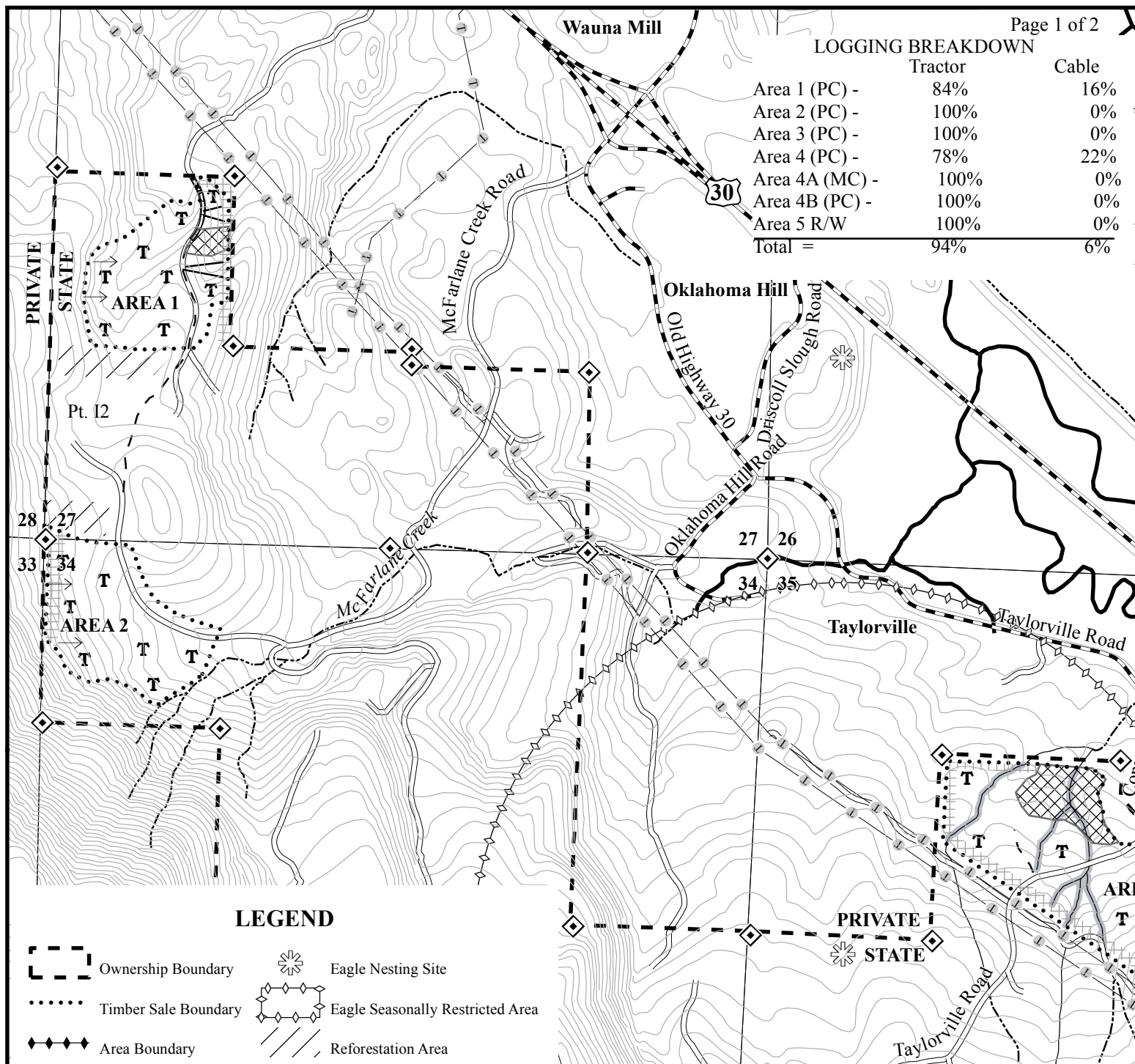
Project: MCFAR
Acres 114.00

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Date 3/5/2012
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S Spp	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	20-21	22-29	30-39	40+
H		DO	4S	16	0		0	.1				0								
H		DO	4S	18	0		0	.1			0									
H		DO	4S	20	0		0	.1			0									
H		DO	4S	30	11		11	15.2		11										
H		DO	4S	40	10		10	14.4		10										
H		Totals			73	5.0	69	9.7		20	0	0		46			1			
D		DO	2S	32	5		5	1.8					4		1					
D		DO	2S	34	1		1	.2					1							
D		DO	2S	40	41	1.2	41	13.9					30	2	4	2	3			
D		DO	3S	16	0	12.5	0	.1			0	0								
D		DO	3S	20	0		0	.0			0									
D		DO	3S	32	52	16.0	43	14.7			23	19	0	0						
D		DO	3S	34	0		0	.1			0									
D		DO	3S	35	1		1	.3				0	0							
D		DO	3S	36	0	8.3	0	.1			0									
D		DO	3S	40	79		79	26.9			78	1	0							
D		DO	4S	12	9		9	2.9				9								
D		DO	4S	16	5		5	1.8		5	0	0								
D		DO	4S	20	16		16	5.3			16									
D		DO	4S	24	32		32	10.7		19	13									
D		DO	4S	28	0		0	.0			0									
D		DO	4S	30	11		11	3.8			11									
D		DO	4S	32	13		13	4.4		13										
D		DO	4S	40	21		21	7.0		21										
D		DO	SM	40	4	2.0	4	1.5						1		3				
D		DO	4S	27	14	3.1	14	4.6			14									
D		Totals			305	3.1	296	41.5		57	155	30	1	35	2	7	2	6		
S		DO	4S	16	3		3	100.0			3									
S		Totals			3		3	.4			3									
Total		All Species			748	4.8	712	100.0		132	248	93	117	91	9	9	6	7		

LOGGING BREAKDOWN

	Tractor	Cable
Area 1 (PC) -	84%	16%
Area 2 (PC) -	100%	0%
Area 3 (PC) -	100%	0%
Area 4 (PC) -	78%	22%
Area 4A (MC) -	100%	0%
Area 4B (PC) -	100%	0%
Area 5 R/W -	100%	0%
Total =	94%	6%



LEGEND

- Ownership Boundary
- Timber Sale Boundary
- Area Boundary
- Paved Road
- Surfaced Road
- Road Vacating
- New Road Construction
- Quarry
- Known Survey Corner
- Gate
- Overhead Utility Lines
- Controlled Felling
- Non Project Road
- Eagle Nesting Site
- Eagle Seasonally Restricted Area
- Reforestation Area
- Non Thinnable Area
- Fish Stream
- Nonfish Stream
- Unknown Stream
- Nonposted Stream Buffer
- Wetland
- Tractor Logging
- Cable Logging
- Line Pull Logging

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT NO. 341-12-49
MCFARLANE

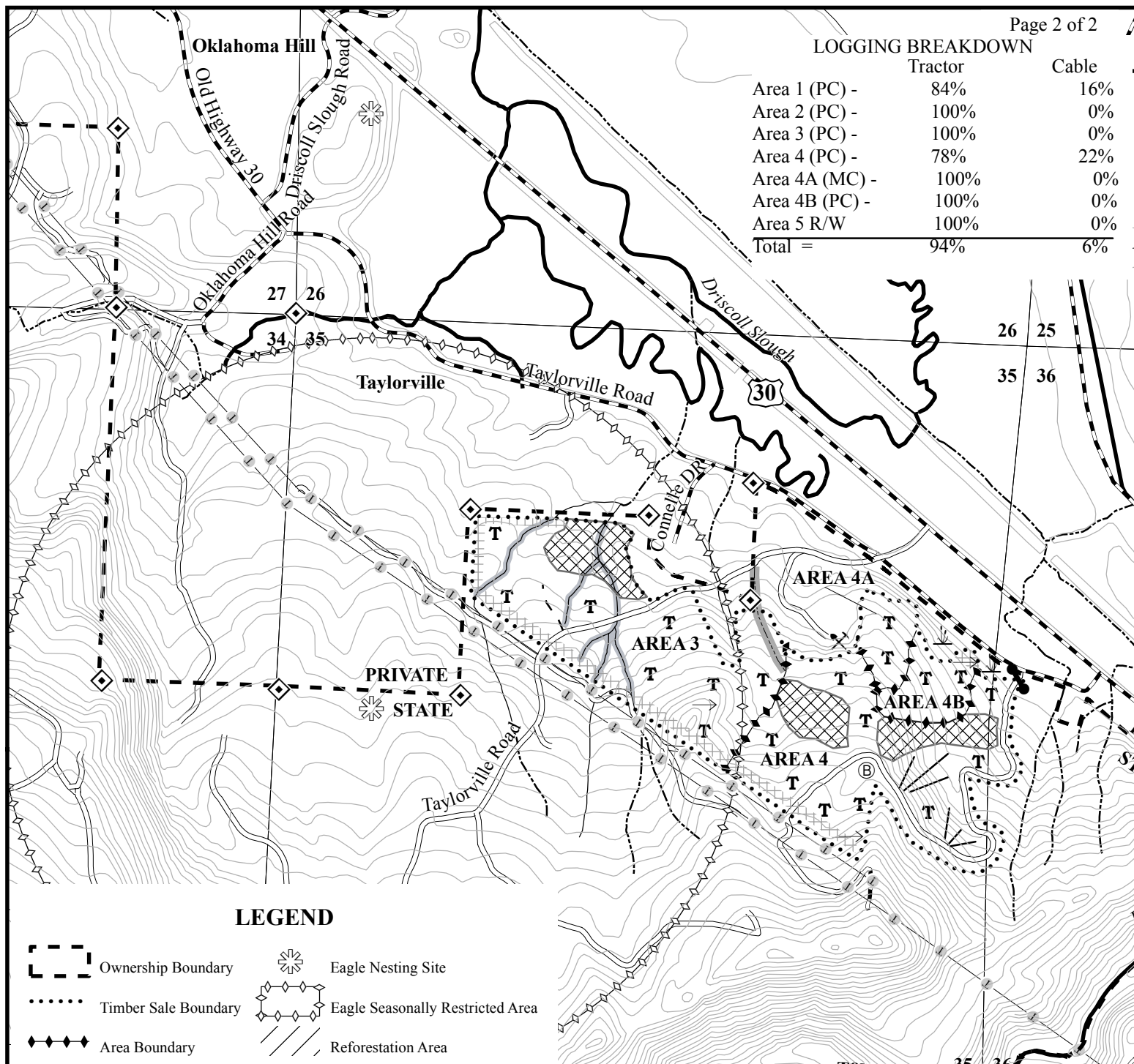
PORTIONS OF SECTIONS 27, 34, 35, AND 36 OF
T8N, R6W, W.M., CLATSOP COUNTY, OREGON.
APPROXIMATE SCALE 1"=1,000'

1,000 500 0 1,000 Feet

Approximate Net Acreage	MC Acres	PC Acres
Area 1 (PC) -		19
Area 2 (PC) -		21
Area 3 (PC) -		36
Area 4 (PC) -		27
Area 4A (MC) -	5	
Area 4B (PC) -		6
Area 5 (R/W) -	2	
Total =	7	109
Total Acreage = 116		

LOGGING BREAKDOWN

	Tractor	Cable
Area 1 (PC) -	84%	16%
Area 2 (PC) -	100%	0%
Area 3 (PC) -	100%	0%
Area 4 (PC) -	78%	22%
Area 4A (MC) -	100%	0%
Area 4B (PC) -	100%	0%
Area 5 R/W	100%	0%
Total =	94%	6%



LEGEND

	Ownership Boundary		Eagle Nesting Site
	Timber Sale Boundary		Eagle Seasonally Restricted Area
	Area Boundary		Reforestation Area
	Paved Road		Non Thinnable Area
	Surfaced Road		Fish Stream
	Road Vacating		Nonfish Stream
	New Road Construction		Unknown Stream
	Quarry		Nonposted Stream Buffer
	Known Survey Corner		Wetland
	Gate		Tractor Logging
	Overhead Utility Lines		Cable Logging
	Controlled Felling		Line Pull Logging
	Non Project Road		

LOGGING PLAN MAP
OF TIMBER SALE CONTRACT NO. 341-12-49
MCFARLANE

PORTIONS OF SECTIONS 27, 34, 35, AND 36 OF
T8N, R6W, W.M., CLATSOP COUNTY, OREGON.
APPROXIMATE SCALE 1"=1,000'

1,000 500 0 1,000 Feet

Approximate Net Acreage	MC Acres	PC Acres
Area 1 (PC) -		19
Area 2 (PC) -		21
Area 3 (PC) -		36
Area 4 (PC) -		27
Area 4A (MC) -	5	
Area 4B (PC) -		6
Area 5 (R/W) -	2	
Total =	7	109
Total Acreage = 116		