



"STRENGTH THROUGH FORESTRY"

Timber Sale Appraisal  
Homesteader

Sale AT-341-2016-38-

District: Astoria

Date: November 19, 2015

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**Cost Summary**

	<b>Conifer</b>	<b>Hardwood</b>	<b>Total</b>
<b>Gross Timber Sale Value</b>	\$3,975,070.00	\$56,194.56	\$4,031,264.56
		<b>Project Work:</b>	(\$263,052.00)
		<b>Advertised Value:</b>	\$3,768,212.56



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District: Astoria

Date: November 19, 2015

**Timber Description**

**Location:** Portions OF Sections 7, 18, and 19, T5N, R6W,  
W.M., Clatsop County, Oregon.

**Stand Stocking:** 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	22	0	97
Western Hemlock / Fir	19	0	97
Alder (Red)	15	0	95

Volume by Grade	2S	3S	4S	Camprun	Total
Douglas - Fir	7,378	1,405	125	0	8,908
Western Hemlock / Fir	42	30	0	0	72
Alder (Red)	0	0	0	144	144
<b>Total</b>	7,420	1,435	125	144	9,124

**Comments:** Pond Values Used: 3rd Quarter Calendar Year 2015.

Expected Log Markets: Mist, OR; Clatskanie, OR; Tillamook, OR; Forest Grove, OR; Longview, OR; and Garibaldi, OR.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:  
 $\$1,100.36/\text{MBF} = \$1,250/\text{MBF} - \$149.64/\text{MBF}$

SCALING COST ALLOWANCE =  $\$5.00/\text{MBF}$

FUEL COST ALLOWANCE =  $\$3.00/\text{Gallon}$

HAULING COST ALLOWANCE  
Hauling costs equivalent to  $\$780$  daily truck cost.

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

100% Brand and Paint:  $\$1/\text{MBF} \times 9,124 \text{ MBF} = \$9,124$

Log Loader Slash & Landing Piling (includes Move-In and Pile Materials): (see attached appraisal) =  $\$17,885$

TOTAL Other Costs (with Profit & Risk to be added) =  $\$27,009$ .

Other Costs (No Profit & Risk added):

None.

ROAD MAINTENANCE

$\$10,778 / 9,124 \text{ MBF} = \$1.18/\text{MBF}$  (See Attached Appraisal)



"SUSTAINABLE FORESTRY"

# Timber Sale Appraisal Homesteader

## Sale AT-341-2016-38-

**District: Astoria**

**Date: November 19, 2015**

### Logging Conditions

<b>Combination#: 1</b>	Douglas - Fir	100.00%
	Western Hemlock / Fir	100.00%
	Alder (Red)	100.00%
<b>Logging System:</b>	Shovel	<b>Process:</b> Manual Falling/Delimbing
<b>yarding distance:</b>	Medium (800 ft)	<b>downhill yarding:</b> No
<b>tree size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
<b>loads / day:</b>	14	<b>bd. ft / load:</b> 4500
<b>cost / mbf:</b>	\$62.50	
<b>machines:</b>	Shovel Logger	



"SUSTAINABLE FORESTRY"

# Timber Sale Appraisal Homesteader

Sale AT-341-2016-38-

District: Astoria

Date: November 19, 2015

## Logging Costs

<b>Operating Seasons:</b> 2.00	<b>Profit Risk:</b> 12%
<b>Project Costs:</b> \$263,052.00	<b>Other Costs (P/R):</b> \$27,009.00
<b>Slash Disposal:</b> \$0.00	<b>Other Costs:</b> \$0.00

**Miles of Road**

**Road Maintenance:** \$1.18

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	3.0	4.4
Western Hemlock / Fir	\$0.00	3.0	3.5
Alder (Red)	\$0.00	2.0	3.3



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Homesteader

Sale AT-341-2016-38-

District: Astoria

Date: November 19, 2015

## Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
<b>Douglas - Fir</b>									
\$62.50	\$1.22	\$0.96	\$60.86	\$2.96	\$15.42	\$0.00	\$5.00	\$0.00	\$148.92
<b>Western Hemlock / Fir</b>									
\$62.50	\$1.22	\$0.96	\$76.52	\$2.96	\$17.30	\$0.00	\$5.00	\$0.00	\$166.46
<b>Alder (Red)</b>									
\$62.50	\$1.24	\$0.96	\$124.09	\$2.96	\$23.01	\$0.00	\$5.00	\$0.00	\$219.76

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$592.78	\$443.86	\$0.00
Western Hemlock / Fir	\$0.00	\$460.42	\$293.96	\$0.00
Alder (Red)	\$0.00	\$610.00	\$390.24	\$0.00



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Homesteader

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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

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	8,908	\$443.86	\$3,953,904.88
Western Hemlock / Fir	72	\$293.96	\$21,165.12
Alder (Red)	144	\$390.24	\$56,194.56

**Gross Timber Sale Value**

Recovery: \$4,031,264.56

Prepared By: Nick Haile

Phone: 503-325-5451

**SUMMARY OF ALL PROJECT COSTS**

SALE NAME: Homesteader

**ROAD CONSTRUCTION:**

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 1	<u>2A, 2B, and 3A to 3B</u>	<u>11.90</u>	<u>\$23,255.72</u>
<b>TOTALS</b>			<b>\$23,256</b>

**ROAD IMPROVEMENT:**

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Cost</u>
Project No. 2	<u>to 12, 13 to 14, 15 to 16 and 17 to 18</u>	<u>133.4</u>	<u>\$48,932</u>
<b>TOTALS</b>			<b>\$48,932</b>

**SPECIAL PROJECTS:**

	<u>Description</u>	<u>Cost</u>
Project No. 3	<u>Buster Creek Quarry Development and Rock Crushing</u>	<u>\$164,314</u>
Project No. 4	<u>Roadside Brushing</u>	<u>\$10,016</u>
	<u>Project Road Maintenance</u>	<u>\$7,832</u>
<b>TOTAL</b>		<b>\$182,162</b>

**MOVE IN:**

	<u>Equipment</u>	<u>Cost</u>
	<u>Dozer (D8)</u>	<u>\$1,406.00</u>
	<u>Excavator (C330)</u>	<u>\$1,406.00</u>
	<u>Excavator (C315)</u>	<u>\$805.00</u>
	<u>Rubber Tire Skidder (C518)</u>	<u>\$717.00</u>
	<u>Dump Trucks (20cy x 2)</u>	<u>\$382.00</u>
	<u>Dump Trucks (12cy x 6)</u>	<u>\$1,141.00</u>
	<u>Front End Loader (C966)</u>	<u>\$778.00</u>
	<u>Grader (14G)</u>	<u>\$778.00</u>
	<u>Vibratory Roller</u>	<u>\$778.00</u>
	<u>Water Truck (2,500 gallon)</u>	<u>\$190.00</u>
	<u>Backhoe (C 580)</u>	<u>\$321.00</u>
<b>TOTAL</b>		<b>\$8,702.00</b>

**GRAND TOTAL** **\$263,052**

Compiled By: N. Haile *FL* Date: 10/26/2015



**SUMMARY OF CONSTRUCTION COSTS**

SALE NAME: Homesteader  
 ROAD: 3A to 3B, 2A, and 2B  
 POINTS: \_\_\_\_\_

NEW CONSTRUCTION: 11.90 STATIONS  
 IMPROVEMENT: \_\_\_\_\_ STATIONS

0.23 MILES  
 0.00 MILES

CLEARING & GRUBBING		Acres/amount	x	Rate	=	Cost
Method				\$		
2A & 2B	Scatter Outside of Right-of-Way	1.00	x	1,337	=	\$1,337.00
			x		=	\$0.00
<b>SUB TOTAL FOR CLEARING &amp; GRUBBING</b>						<b>\$1,337</b>

EXCAVATION		Cy/amount	x	Rate	=	Cost
Material						
3A to 3B	Balanced Construction \$/sta	11.90	x	\$122.00	=	\$1,451.80
	Excavator time for fill work \$/hr	12.00	x	\$155.00	=	\$1,860.00
2A	Landing Construction \$/ldg	1	x	\$389.00	=	\$389.00
2B	Landing Construction \$/ldg	1	x	\$389.00	=	\$389.00
<b>SUB TOTAL FOR EXCAVATION</b>						<b>\$4,090</b>

CULVERT MATERIALS AND INSTALLATION		Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
3A to 3B									\$0.00
3+00	18"CPP	60	\$19.53	\$1,171.80					\$0.00
6+40	18"CPP	30	\$19.53	\$585.90					\$0.00
7+80	30"ASCP	70	\$32.93	\$2,305.10					\$0.00
8+90	18"CPP	30	\$19.53	\$585.90					\$0.00
									\$0.00
									\$0.00
									\$0.00
									\$0.00

Other/miscellaneous:		Description	Quantity	Rate	Cost
		Erosion Control 3A to 3B	0.10	\$1,433.00	\$143.30
		Culvert stakes & markers:	4	\$20.00	\$80.00

**SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION** \$4,872

*Subtotal of Clearing, Exc., Culv.* **\$10,299**

SURFACING		Description		Stations/ amount	Rate/ sta/amt	Cost
Subgrade prep:	Grade, Shape and Ditch 16' (3A to 3B)			11.90	\$24.83	\$295.48
	Subgrade Compaction (3A to 3B)			11.90	\$20.19	\$240.26

ROAD SEGMENT	3A to 3B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
	Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of			
	Base Rock	5"-0" crushed	0+00 to 8+90	8	Station	50	42	\$4.34	\$2,582
	Traction Rock	1 1/2"-0" stockpile	3+00 to 7+80	3	station	19	5	\$8.49	\$774
	Culvert Bedding/Backfill	1 1/2"-0" stockpile	6+40, 8+90	N/A	Culverts	33	2	\$8.49	\$560
	Fill Reconstruction	1 1/2"-0" stockpile	3+00, 7+80	N/A	Culverts	88	2	\$8.49	\$1,494
	Fill Reconstruction	Fill Material	N/A	N/A	N/A		1,000	\$4.38	\$4,380
	Fill Armor	24"-6" riprap	N/A	N/A	N/A		300	\$3.84	\$1,152
Total Rock for Road Segment:		3A to 3B					2,228		\$10,943

ROAD SEGMENT	2A and 2B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
	Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	Number of			
Landings	6"-0" Pit Run	2A and 2B	2A and 2B	N/A	Landing	70	2	\$3.82	\$535
Total Rock for Road Segment:		2A and 2B					140		\$535

Processing:		Description	No.sta	Rate/sta	Cost
		Water, Process & Compact Base Rock (5"-0"):	11.90	\$56.48	\$672
		Water, Process & Compact Traction Rock:	4.80	\$56.48	\$271

SUB TOTAL FOR SURFACING		1 1/2"-0"	5"-0"	6"-0"pr	crushed	Total	\$
Fill Material	1,000	24"-6" rr	300	140	595	2,368	\$12,957
							\$10,299
							\$23,256

SPECIAL PROJECTS		Description	Cost

SUB TOTAL FOR SPECIAL PROJECTS		\$
		\$0
		\$12,957
		\$10,299
<b>GRAND TOTAL</b>		<b>\$23,256</b>

Compiled By: N. Haile Date: 10/27/2015

**SUMMARY OF CONSTRUCTION COSTS**

SALE NAME: Homesteader 0.00 MILES  
 ROAD: 11 to 12, 13 to 14, 15 to 16, 17 to 18 STATIONS 133.40 STATIONS 2.53 MILES  
 POINTS: IMPROVEMENT:

Method	Acres/amount	X	Rate	=	Cost
CLEARING & GRUBBING		X		=	\$0.00
<b>SUB TOTAL FOR CLEARING &amp; GRUBBING</b>					
					\$0

Material	Cyl/amount	X	Rate	=	Cost
11 to 12					
4+00 Excavator time for ditch work	4.0		\$155.00		\$620.00
15 to 16					
2+20 Excavator time for ditch work	4.0		\$155.00		\$620.00
<b>SUB TOTAL FOR EXCAVATION</b>					
					\$1,240

Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
11 to 12									
0+00	18"/C/PP	40	\$19.53	\$781.20					\$0.00
4+00	18"/C/PP	30	\$19.53	\$585.90					\$0.00
									\$0.00
									\$0.00
									\$0.00

Description	Quantity	Rate	Cost
Other/miscellaneous:			
Erosion Control 11 to 12	0.10	\$1,433.00	\$143.30
			\$0.00
Culvert stakes & markers:			
Culvert markers	4	\$20.00	\$80.00
<b>SUB TOTAL FOR CULVERT MATERIALS &amp; INSTALLATION</b>			
			\$1,590

*Subtotal of Clearing, Exc., Culv.*

**\$2,830**

SURFACING	Subgrade prep.	Description	Stations/ amount	Rate/ sta./amt	Cost
	Grade, Shape and Ditch 16' (11-12, 13-14, 15-16, 17-18)		133.40	\$24.83	\$3,312.32
	Subgrade Compaction (11-12, 13-14, 15-16, 17-18)		133.40	\$20.19	\$2,693.35
	Sod Removal/Ditch Reconstruction (11-12) (Extra Grader \$/sta.)		4.50	\$22.23	\$100.04

ROAD SEGMENT	11 to 12	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta. 0+00 to 4+50	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
					11 to 12	Volume (CY) per				
Base Rock	5"-0" crushed	0+00 to 4+50	6	station	38	4.50	171	\$4.34	\$742	
Leveling Loads	5"-0" crushed		N/A	loads	11	2	22	\$4.34	\$95	
Bedding and Backfill	1 1/2"-0" stockpile	0+00, 4+00	N/A	culvert	33	2	66	\$8.49	\$560	
Landing	6"-0" pitrun	4+50	N/A	landing	70	1	70	\$3.82	\$267	
Junctions	5"-0" crushed		N/A	junctions	22	1	22	\$4.34	\$95	
Total Rock for Road Segment: 351										

ROAD SEGMENT	13 to 14	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta. 0+00 to 86+00	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
					13 to 14	Volume (CY) per				
Base Rock	1 1/2"-0" stockpile	0+00 to 86+00	3	station	19	86.00	1,634	\$8.49	\$13,873	
Leveling Loads	5"-0" crushed		N/A	loads	11	6	66	\$4.34	\$286	
Turnouts	1 1/2"-0" stockpile		3	TO	22	9	198	\$8.49	\$1,681	
Junctions	1 1/2"-0" stockpile		N/A	junction	22	10	220	\$8.49	\$1,868	
Landing	6"-0" pitrun	32+40	N/A	landing	70	1	70	\$3.82	\$267	
Total Rock for Road Segment: 2,188										

ROAD SEGMENT	15 to 16	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta. 0+00 to 2+20	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
					15 to 16	Volume (CY) per				
Base Rock	5"-0" crushed	0+00 to 2+50	6	station	38	2.20	84	\$4.34	\$363	
Landing	6"-0" pitrun	16	N/A	landing	70	1	70	\$3.82	\$267	
Total Rock for Road Segment: 154										

ROAD SEGMENT	17 to 18	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta. 0+00 to 40+70	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
					17 to 18	Volume (CY) per				
Base Rock	5"-0" crushed	0+00 to 40+70	6	Station	38	40.70	1,547	\$4.34	\$6,712	
Turnouts	5"-0" crushed		N/A	Turnout	22	3	66	\$4.34	\$286	
Turnarounds	5"-0" crushed		3	TA	11	1	11	\$4.34	\$48	
Junctions	5"-0" crushed		N/A	junction	11	4	44	\$4.34	\$191	
Total Rock for Road Segment: 1,668										

SUB TOTAL FOR	Description	No. sta	Rate/sta	Cost
	Water, Process & Compact (11-12, 13-14, 15-16, 17-18)	133.40	\$56.48	\$7,534
	Water, Process & Compact traction rock (11-12, 13-14)	86.00	\$56.48	\$4,857
<b>SUB TOTAL FOR</b>	<b>6"-0" pr 210</b>	<b>210</b>	<b>1 1/2"-0" crushed</b>	<b>\$46,101</b>
			<b>5"-0" crushed</b>	<b>2,032</b>
			<b>1 1/2"-0" crushed</b>	<b>2,118</b>
			<b>Total</b>	<b>4,360</b>

SPECIAL PROJECTS		Description	Cy/Amount	Rate	Cost
<b>SUB TOTAL FOR SPECIAL PROJECTS</b>					

GRAND TOTAL	Compiled By:	Date:
\$0	N. Haile	10/27/2015
\$46,101		
\$2,830		
<b>\$48,932</b>		

Subtotal of Surfacing & Spec. Proj. \$46,101  
Subtotal of Clearing, Exc., Culv. \$2,830  
**\$48,932**













**SUMMARY OF ROCK DEVELOPMENT AND CRUSHING COSTS**

PROJECT NO. 3 Timber Sale Name: Homesteader  
 Quarry: Buster Creek  
 Location: NW 1/4, Section 25, T5N, R7W, W.M. Shrink: 16%  
 County: Clatsop  
 By: C.Bangs Loading Hopper: Yes  
 Date: 10/23/15

ROCK SIZE	REJECT	GRADATION	STOCKPILE CU. YDS.	TRUCK MEAS CU. YDS.	TOTAL CU. YDS.
3/4"-0"		CR			
1-1/2"-0"		CR			
5"-0"	40%	CR	5,000	2,627	8,427
6"-0"		PR		350	350
24"-6"		RR		300	300
36"		RR			
<b>TOTAL CUBIC YARDS OF ROCK:</b>			5,000	3,277	9,077

**1) MOBILIZATION & SET UP:**

Lowboy Mobilized				EQUIPMENT	QUANTITY	RATE	COST
EQUIPMENT	QUANTITY	RATE	COST	EQUIPMENT	QUANTITY	RATE	COST
Loading Hopper	1	\$553	\$553				
Screening Plants	1	\$553	\$553				
2 Stage Crusher	1	\$2,175	\$2,175				
Drill & Compressor	1	\$1,406	\$1,406				
Off Highway Dump Truck	2	\$774	\$1,548				
Excavator	1	\$1,406	\$1,406				
Front End Loader	1	\$805	\$805				
D6 Cat	1	\$778	\$778				
Powder	1	\$351	\$351				

SUB TOTAL FOR MOBILIZATION \$9,574

EQUIPMENT SET UP	TIMES	RATE	COST
2 Stage Crusher	1	\$2,175	\$2,175
Screening Plants	1	\$293	\$293
Loading Hopper	1	\$293	\$293
Original Calibration	1	\$544	\$544

SUB TOTAL FOR SET UP COSTS \$3,305

**TOTAL MOBILIZATION & SET UP COSTS \$12,879**

**2) CLEARING & GRUBBING**

DESCRIPTION	QUANTITY	UNIT	RATE	COST

**8) STOCKPILING**

**STOCKPILE SITE PREPARATION**

Equipment	Hours	Rate	Total
Dozer	4	\$113.00	\$452.00
Compactor		\$77.00	
Grader		\$100.00	
Excavator		\$155.00	

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

\$452.00

SUB TOTAL \$452

HAUL & STOCKPILE STOCKPILE LOCATION	SIZE	# of TRUCKS	CU. YDS.	RATE	COST
1. _____					
2. _____					
3. Buster Creek	5'-0"	6	5,800	\$4.32	\$25,049
4. _____					
5. _____					
6. _____					
SUB TOTAL					\$25,049

**TOTAL STOCKPILING COSTS** **\$25,501**

**9) MISCELLANEOUS COSTS**

DESCRIPTION	COST
Load and haul reject material to Waste Area	\$3,371
\$1.00 /CY      3,371 CY	
D6 hours to work waste area      16 Hours	\$1,808
\$113.00 /Hour	
Final Quarry Maintenance	
C330      4 Hours      \$155.00 /Hour	\$620

**TOTAL MISCELLANEOUS COSTS** **\$5,799**

**10) GRAND TOTAL:** **\$163,314**

\$/Cubic Yard **\$19.38**

**Footnotes:**


**BRUSHING COST ANALYSIS - Homesteader**

341-16-38

Brushing Type	\$/mi.
Light (L)	850
Medium (M)	1100
Heavy (H)	1550

Total Brushing Miles=	9.11
Avg. \$/mi.=	\$1,099.96

**Brushing Total Cost= \$10,016**

Road Segment	Road Name	Measured Feet	Miles	Brushing Type	Estimated Cost	Notes
I3 to I4	Grand Rapids Road	8600	1.63	L	\$1,384.47	
B1		3080	0.58	L	\$495.83	
B2		450	0.09	L	\$72.44	
B3		1615	0.31	L	\$259.99	
B4		710	0.13	L	\$114.30	
B5		1150	0.22	H	\$337.59	
B6		880	0.17	H	\$258.33	
B7		4470	0.85	M	\$931.25	
B8		2600	0.49	H	\$763.26	
B9		335	0.06	M	\$69.79	
B10		910	0.17	L	\$146.50	
B11		400	0.08	L	\$64.39	
B12		650	0.12	H	\$190.81	
B13		4000	0.76	M	\$833.33	
B14		400	0.08	M	\$83.33	
B15		1100	0.21	L	\$177.08	
B16 to I4		1800	0.34	M	\$375.00	
B17		300	0.06	L	\$48.30	
B18		3360	0.64	H	\$986.36	
B19		370	0.07	H	\$108.62	
B20		1100	0.21	M	\$229.17	
B21		800	0.15	M	\$166.67	
B22		1850	0.35	M	\$385.42	
B23		750	0.14	L	\$120.74	
B24		3960	0.75	M	\$825.00	
B25		2440	0.46	M	\$508.33	
<b>TOTALS</b>		<b>48,080</b>	<b>9.11</b>		<b>\$9,936.32</b>	
					<b>\$80.00</b>	

**\$10,016**

**Hand Brushing**

Hrs	\$/Hr	\$
2	40.00	\$80.00

## Projects Road Maintenance Cost Summary

**Sale:** Homesteader  
**Date:** 23-Oct-15  
**By:** Cullen Bangs

Type	Equipment/Rationale	Hours	Rate	Cost
Project Work	Grader 14G	32	\$100	\$3,200
Final Haul	Dump Truck 12CY	4	\$79	\$316
Road	FE Loader C966	4	\$83	\$332
Maintenance	Vibratory Roller	24	\$77	\$1,848
	Water Truck 2500 gallon	24	\$89	\$2,136
<b>Total</b>				<b>\$7,832</b>

Production Rates

Grader

Vibratory Roller

Miles/day	Distance(miles)	Days
1.5	3.5	2.3
1.5	3.5	2.3

**NOTE:**

Buster Quarry Road, Buster Creek, and Grand Rapids Road

Includes grader time for light grading on Wage Rd., Northrup Creek, and Foster if needed for haul of 1 1/2" from Northrup Cr.

**Road Maintenance Cost Summary**

**Sale:** Homesteader  
**Date:** 22-Oct-15  
**By:** N. Haile FL

**MBF:** 9,124  
**\$/MBF:** \$1.18

Type	Equipment/Rationale	Move In	Times	Hours	Rate	Cost
Progressive Operations 1st Entry	Grader 14G	\$778	1	10	\$100	\$1,778
Final Haul Maintenance Haul Route	Grader 14G	\$778	1	20	\$100	\$2,778
	Dump Truck 12CY	\$163	1	8	\$79	\$795
	Vibratory Roller	\$778	1	20	\$77	\$2,318
	Water Truck 2,500 gallon	\$190	1	8	\$89	\$902
	FE Loader C966	\$778	1	4	\$83	\$1,110
	Rubber Tire Backhoe	\$321	1	8	\$77	\$937
	Labor		1	4	\$40	\$160
<b>Total</b>						<b>\$10,778</b>

Production Rates	Miles/day	Distance(miles)	Days
Grader	2.5	2.8	1.1

Production Rates	Miles/day	Distance(miles)	Days
Grader	1.5	2.8	1.8
Vibratory Roller	1.5	2.8	1.8

**Homesteader  
TIMBER CRUISE REPORT  
FY 2016**

1. **Sale Area Location:** Areas 1, 2, and 3 are located in portions of Sections 7, 18, and 19 of T5N, R6W, W.M., Clatsop County, Oregon.

2. **Fund Distribution:** BOF 100%  
Tax Code 8-01 (100%)

3. **Sale Acreage by Area:**

Area	Treatment	Gross Acres	Existing R/W	New R/W*	Green Tree Retention Area	Stream Buffer	Net Acres	Survey Method
1	Modified Clearcut	42	4	0	0	0	38	GIS
2	Modified Clearcut	29	1	1	0	5	22	GIS
3	Modified Clearcut	105	7	0	3	1	94	GIS
4	Right of Way	1	0	0	0	0	1	GIS
<b>TOTALS</b>		<b>177</b>	<b>12</b>	<b>1</b>	<b>3</b>	<b>6</b>	<b>155</b>	

4. **Cruisers and Cruise Dates:** Areas 1, 2, and 3 were cruised by Nick Haile, Ty Williams, Derek Bangs, Kevin Berry, and Dave Rygell, on October 13, 2015.

5. **Cruise Method and Computation:**

Areas 1, 2, and 3 are Modified Clearcut units and were variable plot cruised using a 40 BAF. The plots are located on a 7 chain by 4 chain grid, with every third plot measured and graded. A total of 57 plots were sampled, with 20 measured and graded plots, and 37 count plots.

All cruisers used Allegro<sup>2</sup> data collectors, and were downloaded to the Atterbury Super A.C.E. program in District for computing. See the attached Cruise Design for more details on the cruise method. The cruise calculations were processed in the Astoria district office.

AREA	CRUISE	TRACT	TYPE	ACRES
1	T5NR6W18	Area123	TAKE	38
2	T5NR6W18	Area123	TAKE	22
3	T5NR6W18	Area123	TAKE	93
4	T5NR6W18	Area123	RW	1

6. **Timber Description:**

Areas 1, 2, and 3 are modified clearcut units, averaging 74 – 90 years-old, consisting of Douglas-fir, with minor amounts of western hemlock and red alder. The average Douglas-fir tree size to be harvested is 21.7 inches DBH, with an average height of 97 feet to a merchantable top (40% of DBH) the average DBH of hemlock to be harvested is 19.3 inches, with an average bole height of 53 feet to a merchantable top. Red alder has an average DBH of 15.3 inches, and an average height of 62 feet to a merchantable top. The average volume (net) is approximately 58.9 MBF/acre.

Area 4 R/W is similar to the timber description mentioned above for Areas 1, 2, and 3. The average volume (net) is approximately 58.9 MBF/acre.

**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	45%	8%	40%	5%

**8. Volumes by Species and Log Grade:** (See "Species, Sort, Grade" - Project Report, attached).  
 Volumes by Species and Grade for All Sale Areas: (MBF) Volumes do not include "in-growth."

Species	DBH	Net Vol. MBF	2 Saw	3 Saw	4 Saw	Camp Run	% D & B	% Sale
Douglas-fir	21.7"	8,908	7,378	1,405	125		1%	97%
Hemlock/True-fir	19.3"	72	42	30			1%	<1%
Alder	15.3"	144				144	10%	2%
<b>TOTALS</b>		<b>9,124</b>	<b>7,420</b>	<b>1,435</b>	<b>125</b>	<b>144</b>	<b>1.2%</b>	<b>100%</b>

**9. Approvals:**

Prepared by: Nick Haile Date: 10/19/15

Unit Forester Approval:  Date: 10/22/15

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



**CRUISE DESIGN  
ASTORIA DISTRICT**

**Sale Name:** Homesteader **Area(s)** 1, 2, & 3

**Harvest Type:** Modified Clearcut

**Approx. Cruise Acres:** 165 ac **Estimated CV%** 45% Net BF or BA/Acre **SE% Objective** 8%

**Planned Sale Volume:** 7,750 MBF **Estimated Sale Area Value/Acre:** \$16,000/ac

**A. Cruise Goals:** (a) Grade minimum 100 conifer trees:  
Determine log grades for sale value; Determine snag and leave tree species and sizes;  
Determine "diameter limit" harvest parameters;

**B. Cruise Design:**

- 1. Plot Cruises:** BAF 40 (Full point; Half point) (circle one)  
Cruise Line Direction(s) E/W  
Cruise Line Spacing 7 chains  
Cruise Plot Spacing 4 chains  
Grade/Count Ratio 1:2


Record all hardwood as camp run and all cedar as leave. Record all snags as SN and record diameter & total height on grade plots only. If the plot lands in a buffer or near an existing road then offset at least 1/2 chain.

**C. Tree Measurements:**

- 1. Diameter:** Minimum DBH to cruise is 8" for conifers and 10" for hardwoods. Record dbh to nearest 1/2" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- 2. Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. Top Cruise Diameter (TCD):** Minimum top outside bark is 7" or 40% of dob at 16' form point. Generally, use 7" outside bark for trees < 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); DL (Douglas-fir painted for wildlife trees); HL (Western hemlock painted for wildlife trees); SL (Sitka spruce painted for wildlife trees); CL (Western red cedar); NFL (Noble fir painted for wildlife trees); SFL (Silver fir painted for wildlife trees)  
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
- 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. Cruise lines shall begin half the distance between plots from the sale boundary. 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.
- 10. Attachments:** A. Cruise Map (showing cruise unit boundaries, 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: Nick Haile  
Approved by:   
Date: 10/07/15

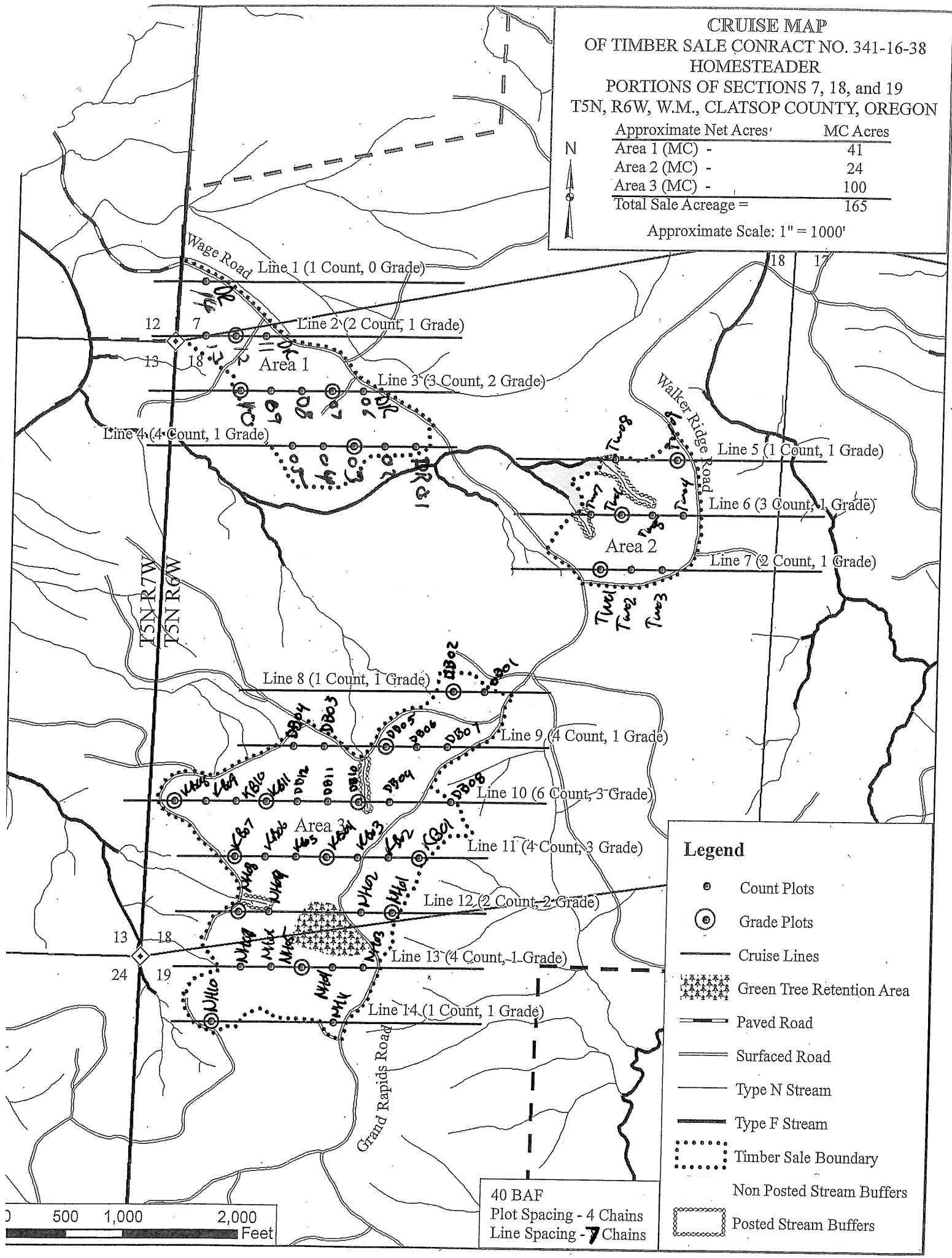
**CRUISE MAP  
OF TIMBER SALE CONTRACT NO. 341-16-38  
HOMESTEADER**

PORTIONS OF SECTIONS 7, 18, and 19  
T5N, R6W, W.M., CLATSOP COUNTY, OREGON

Approximate Net Acres'	MC Acres
Area 1 (MC) -	41
Area 2 (MC) -	24
Area 3 (MC) -	100
<b>Total Sale Acreage =</b>	<b>165</b>



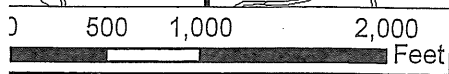
Approximate Scale: 1" = 1000'



**Legend**

- Count Plots
- ⊙ Grade Plots
- Cruise Lines
- ▨ Green Tree Retention Area
- ▬ Paved Road
- ▬ Surfaced Road
- Type N Stream
- ▬ Type F Stream
- ⋯ Timber Sale Boundary
- ▭ Non Posted Stream Buffers
- ▭ Posted Stream Buffers

40 BAF  
Plot Spacing - 4 Chains  
Line Spacing - 7 Chains





<b>T05N R06W S18 TTAKE</b>	<b>T05N R06W S18 TTAKE</b>
Twp <b>05N</b> Rge <b>06W</b> Sec <b>18</b> Tract <b>AREA123</b> Type <b>TAKE</b> Acres <b>154.00</b> Plots <b>57</b> Sample Trees <b>104</b> CuFt <b>1</b>	<b>BdFt W</b>

Spp	Sort	Grade	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre					
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft		CF/ Lf				
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99									
D	DO	CU		00.0	73																			
D	DO	2S	82	1.0	48,070	47,599	7,330		5	42	53				9	91				39	15	362	2.01	131.5
D	DO	3S	16	.9	9,146	9,062	1,396	0	88	8	4	4	12	21	63				34	8	88	0.74	102.9	
D	DO	4S	2		809	809	125	4	96			23	68		9				20	6	29	0.46	27.8	
<b>D</b>	<b>Totals</b>		98	1.1	58,097	57,469	8,850	0	20	36	44	1	3	11	85				34	11	216	1.43	265.9	
A	DO	CU		00.0	73														12	15		0.00	.7	
A	DO	CR	100	2.8	958	931	143		70	10	21			59	41				29	9	85	0.75	11.0	
<b>A</b>	<b>Totals</b>		2	9.6	1,030	931	143		70	10	21			59	41				28	9	80	0.73	11.6	
H	DO	2S	58		272	272	42			100				100					32	16	320	2.31	.9	
H	DO	3S	42		191	191	29		100					27	73				27	7	59	0.96	3.3	
<b>H</b>	<b>Totals</b>		1		464	464	71		41	59				70	30				28	9	113	1.28	4.1	
<b>Type Totals</b>					1.2	59,591	58,864	9,065	0	21	36	44	1	4	12	83			34	11	209	1.40	281.6	

<b>T05N R06W S18 TROW</b>	<b>T05N R06W S18 TROW</b>
Twp <b>05N</b> Rge <b>06W</b> Sec <b>18</b> Tract <b>AREA123</b> Type <b>ROW</b> Acres <b>1.00</b> Plots <b>57</b> Sample Trees <b>104</b> CuFt <b>1</b>	BdFt <b>W</b>

Spp	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre				
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf					
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99									
D	DO	CU		100.0	73																			
D	DO	2S	82	1.0	48,070	47,599	48		5	42	53				9	91				39	15	362	2.01	131.5
D	DO	3S	16	.9	9,146	9,062	9	0	88	8	4	4	12	21	63				34	8	88	0.74	102.9	
D	DO	4S	2		809	809	1	4	96						23	68	9		20	6	29	0.46	27.8	
<b>D</b>	<b>Totals</b>		98	1.1	58,097	57,469	57	0	20	36	44	1	3	11	85				34	11	216	1.43	265.9	
A	DO	CU		100.0	73														12	15		0.00	.7	
A	DO	CR	100	2.8	958	931	1		70	10	21				59	41			29	9	85	0.75	11.0	
<b>A</b>	<b>Totals</b>		2	9.6	1,030	931	1		70	10	21				59	41			28	9	80	0.73	11.6	
H	DO	2S	58		272	272	0				100				100				32	16	320	2.31	.9	
H	DO	3S	42		191	191	0		100						27	73			27	7	59	0.96	3.3	
<b>H</b>	<b>Totals</b>		1		464	464	0		41	59					70	30			28	9	113	1.28	4.1	
<b>Type Totals</b>				1.2	59,591	58,864	59	0	21	36	44	1	4	12	83				34	11	209	1.40	281.6	

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT HOMECC		DATE 10/22/2015				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
05N	06W	18	AREA123	TAKE	154.00	57	377	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		57	377	6.6						
CRUISE		18	104	5.8	16,416		.6			
DBH COUNT										
REFOREST										
COUNT		38	273	7.2						
BLANKS		1								
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	96	98.7	21.7	97	54.3	252.6	58,097	57,469	13,122	13,104
R ALDER	6	5.5	15.3	62	1.8	7.0	1,030	931	255	242
WHEMLOCK	2	2.4	19.3	53	1.1	4.9	464	464	149	149
<b>TOTAL</b>	<i>104</i>	<i>106.6</i>	<i>21.3</i>	<i>94</i>	<i>57.3</i>	<i>264.6</i>	<i>59,591</i>	<i>58,864</i>	<i>13,526</i>	<i>13,495</i>
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	76.9	7.8	791	859	926					
R ALDER	45.6	20.3	162	203	245					
WHEMLOCK	87.3	81.7	43	235	427					
<b>TOTAL</b>	<i>81.3</i>	<i>8.0</i>	<i>744</i>	<i>809</i>	<i>873</i>	<i>264</i>	<i>66</i>	<i>29</i>		
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	60.6	8.0	91	99	107					
R ALDER	375.1	49.6	3	5	8					
WHEMLOCK	313.7	41.5	1	2	3					
<b>TOTAL</b>	<i>53.1</i>	<i>7.0</i>	<i>99</i>	<i>107</i>	<i>114</i>	<i>113</i>	<i>28</i>	<i>13</i>		
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.	INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	52.8	7.0	235	253	270					
R ALDER	325.4	43.1	4	7	10					
WHEMLOCK	310.5	41.1	3	5	7					
<b>TOTAL</b>	<i>47.3</i>	<i>6.3</i>	<i>248</i>	<i>265</i>	<i>281</i>	<i>89</i>	<i>22</i>	<i>10</i>		
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	53.0	7.0	53,439	57,469	61,500					
R ALDER	342.6	45.3	509	931	1,353					
WHEMLOCK	316.4	41.9	270	464	658					
<b>TOTAL</b>	<i>49.7</i>	<i>6.6</i>	<i>54,993</i>	<i>58,864</i>	<i>62,735</i>	<i>99</i>	<i>25</i>	<i>11</i>		

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	HOMECC			DATE	10/22/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
05N	06W	18	AREA123	ROW	1.00	57	377	1	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
TOTAL		57	377	6.6							
CRUISE		18	104	5.8	107		97.6				
DBH COUNT											
REFOREST											
COUNT		38	273	7.2							
BLANKS		1									
100 %											
<b>STAND SUMMARY</b>											
	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	96	98.7	21.7	97	54.3	252.6	58,097	57,469	13,122	13,104	
R ALDER	6	5.5	15.3	62	1.8	7.0	1,030	931	255	242	
WHEMLOCK	2	2.4	19.3	53	1.1	4.9	464	464	149	149	
<b>TOTAL</b>	<b>104</b>	<b>106.6</b>	<b>21.3</b>	<b>94</b>	<b>57.3</b>	<b>264.6</b>	<b>59,591</b>	<b>58,864</b>	<b>13,526</b>	<b>13,495</b>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL: 68.1 %	COEFF	<b>SAMPLE TREES - BF</b>					# OF TREES REQ.	INF. POP.			
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR	76.9	7.8	791	859	926						
R ALDER	45.6	20.3	162	203	245						
WHEMLOCK	87.3	81.7	43	235	427						
<b>TOTAL</b>	<b>81.3</b>	<b>8.0</b>	<b>744</b>	<b>809</b>	<b>873</b>	<b>264</b>	<b>66</b>	<b>29</b>			
CL: 68.1 %	COEFF	<b>TREES/ACRE</b>					# OF PLOTS REQ.	INF. POP.			
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR	60.6	8.0	91	99	107						
R ALDER	375.1	49.6	3	5	8						
WHEMLOCK	313.7	41.5	1	2	3						
<b>TOTAL</b>	<b>53.1</b>	<b>7.0</b>	<b>99</b>	<b>107</b>	<b>114</b>	<b>113</b>	<b>28</b>	<b>13</b>			
CL: 68.1 %	COEFF	<b>BASAL AREA/ACRE</b>					# OF PLOTS REQ.	INF. POP.			
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR	52.8	7.0	235	253	270						
R ALDER	325.4	43.1	4	7	10						
WHEMLOCK	310.5	41.1	3	5	7						
<b>TOTAL</b>	<b>47.3</b>	<b>6.3</b>	<b>248</b>	<b>265</b>	<b>281</b>	<b>89</b>	<b>22</b>	<b>10</b>			
CL: 68.1 %	COEFF	<b>NET BF/ACRE</b>					# OF PLOTS REQ.	INF. POP.			
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR	53.0	7.0	53,439	57,469	61,500						
R ALDER	342.6	45.3	509	931	1,353						
WHEMLOCK	316.4	41.9	270	464	658						
<b>TOTAL</b>	<b>49.7</b>	<b>6.6</b>	<b>54,993</b>	<b>58,864</b>	<b>62,735</b>	<b>99</b>	<b>25</b>	<b>11</b>			



**Stand Table Summary**

T05N R06W S18 TyROW 1.00  
T05N R06W S18 TyTAKE 154.00

Project **HOMECC**  
Acres **155.00**

Time: **3:04:05PM**  
Grown Year:

S Spc T	Sample DBH	Trees	Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
			FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
D	10	2	87	66	4.825	2.63	4.82	12.0	50.0		58	241		90	37
D	11	2	91	28	3.988	2.63	3.99	10.0	30.0		40	120		62	19
D	13	2	89	113	2.855	2.63	5.71	19.5	80.0		111	457		173	71
D	14	4	92	114	4.923	5.26	9.85	23.3	97.5		229	960		355	149
D	15	2	89	83	2.144	2.63	4.29	20.0	75.0		86	322		133	50
D	16	8	89	118	7.539	10.53	18.85	25.1	100.0		473	1,885		733	292
D	17	4	88	125	3.339	5.26	8.35	28.4	108.0		237	902		367	140
D	18	6	87	125	4.468	7.89	11.91	30.8	115.0		366	1,370		568	212
D	19	18	87	120	12.029	23.68	32.08	34.2	130.8		1,096	4,197		1,699	650
D	20	6	88	122	3.619	7.89	8.44	42.1	161.4		356	1,363		552	211
D	21	8	87	144	4.376	10.53	14.22	39.9	168.5		568	2,396		880	371
D	22	8	87	136	3.988	10.53	11.96	45.7	190.0		546	2,273		847	352
D	23	10	88	145	4.560	13.16	13.68	52.5	221.3		719	3,028		1,114	469
D	24	24	87	147	10.052	31.58	30.99	55.9	235.4		1,732	7,296		2,685	1,131
D	25	14	87	151	5.404	18.42	16.98	60.8	261.8		1,032	4,447		1,600	689
D	26	8	89	141	2.855	10.53	8.56	66.7	303.3		571	2,598		885	403
D	27	16	87	142	5.295	21.05	15.88	71.0	315.0		1,127	5,004		1,747	776
D	28	14	87	154	4.308	18.42	14.15	74.0	350.4		1,047	4,960		1,623	769
D	29	8	88	144	2.295	10.53	7.46	76.8	358.5		573	2,673		887	414
D	30	8	87	150	2.144	10.53	6.43	92.4	440.8		595	2,836		922	440
D	31	2	89	159	.502	2.63	2.01	79.8	420.0		160	843		248	131
D	33	4	85	146	.886	5.26	3.10	91.0	450.0		282	1,396		437	216
D	34	2	89	154	.417	2.63	1.25	122.7	630.0		154	789		238	122
D	37	4	87	146	.705	5.26	2.47	116.1	627.1		287	1,547		444	240
D	38	4	84	170	.668	5.26	2.67	118.6	595.0		317	1,590		491	247
D	42	2	89	179	.274	2.63	1.09	158.3	930.0		173	1,017		268	158
D	44	2	88	173	.249	2.63	1.00	170.0	962.5		169	959		263	149
D	Totals	192	88	126	98.707	252.63	262.22	50.0	219.2		13,104	57,469		20,311	8,908
A	12	2	87	100	1.489	1.17	2.98	16.0	55.0		48	164		74	25
A	13	2	87	99	1.269	1.17	2.54	18.5	70.0		47	178		73	28
A	14	2	86	96	1.177	1.17	2.35	20.5	85.0		48	200		75	31
A	18	2	86	84	.662	1.17	1.32	22.5	80.0		30	106		46	16
A	22	4	87	69	.886	2.34	1.77	39.0	160.0		69	284		107	44
A	Totals	12	87	92	5.483	7.02	10.97	22.0	84.9		242	931		375	144
H	17	2	86	57	1.558	2.46	1.56	40.0	90.0		62	140		97	22
H	23	2	86	78	.851	2.46	2.55	34.0	126.7		87	323		135	50
H	Totals	4	86	64	2.409	4.91	4.11	36.3	112.8		149	464		231	72
Totals		208	88	123	106.599	264.56	277.30	48.7	212.3		13,495	58,864		20,917	9,124



**Log Stock Table - MBF**

T05N R06W S18 TyROW	1.00
T05N R06W S18 TyTAKE	154.00

Project: **HOMECC**  
 Acres **155.00**

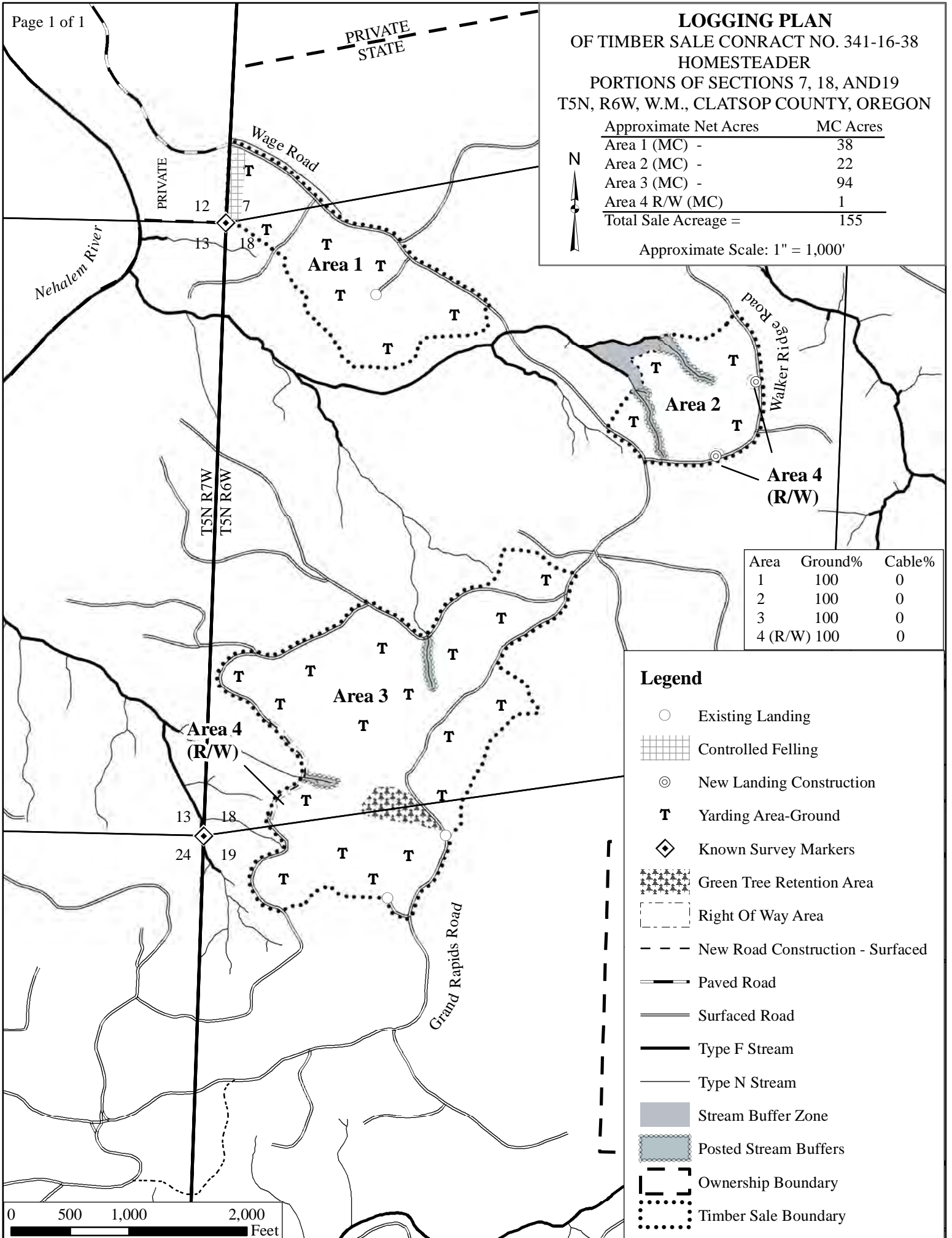
S Spp	T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches												
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+	
D		DO	4S	40	12		12	.1				12									
D		Totals			9,005	1.1	8,908	97.6	3	5	425	567	764	1284	1302	2667	1256	483	151		
H		DO	2S	32	42		42	58.7							42						
H		DO	3S	32	8		8	11.0			8										
H		DO	3S	40	22		22	30.2			22										
H		Totals			72		72	.8			8	22			42						
A		DO	CU	12	11	100.0															
A		DO	CR	21	33	8.3	30	20.9							30						
A		DO	CR	22	15	9.1	14	9.5					14								
A		DO	CR	26	3		3	2.1			3										
A		DO	CR	30	39		39	26.8			9	16	13								
A		DO	CR	32	59		59	40.6			19	18	22								
A		Totals			160	9.6	144	1.6			31	34	35	14	30						
Total		All Species			9,237	1.2	9,124	100.0	3	5	464	622	799	1298	1302	2739	1256	483	151		

**LOGGING PLAN**  
 OF TIMBER SALE CONTRACT NO. 341-16-38  
 HOMESTEADER  
 PORTIONS OF SECTIONS 7, 18, AND 19  
 T5N, R6W, W.M., CLATSOP COUNTY, OREGON

Approximate Net Acres	MC Acres
Area 1 (MC) -	38
Area 2 (MC) -	22
Area 3 (MC) -	94
Area 4 R/W (MC)	1
<b>Total Sale Acreage =</b>	<b>155</b>



Approximate Scale: 1" = 1,000'



Area	Ground%	Cable%
1	100	0
2	100	0
3	100	0
4 (R/W)	100	0

**Legend**

- Existing Landing
- ▤ Controlled Felling
- ⊙ New Landing Construction
- T Yarding Area-Ground
- ◇ Known Survey Markers
- ▨ Green Tree Retention Area
- ▭ Right Of Way Area
- - - New Road Construction - Surfaced
- ▬ Paved Road
- ▬ Surfaced Road
- ▬ Type F Stream
- ▬ Type N Stream
- ▭ Stream Buffer Zone
- ▨ Posted Stream Buffers
- ▭ Ownership Boundary
- ⋯ Timber Sale Boundary

