



"STAND FOR THE FOREST"

Timber Sale Appraisal Kicken Klines

Sale AT-341-2016-39-

District: Astoria

Date: July 21, 2015

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$929,769.09	\$159,203.71	\$1,088,972.80
		Project Work:	(\$23,171.00)
		Advertised Value:	\$1,065,801.80



Timber Sale Appraisal Kicken Klines

Sale AT-341-2016-39-

District: Astoria

Date: July 21, 2015

Timber Description

Location: Portions of Section 34, T5N, R7W, W.M., Clatsop County, Oregon.

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	24	0	100
Western Hemlock / Fir	17	0	100
Sitka Spruce	15	0	100
Alder (Red)	14	0	100
Maple	14	0	100

Volume by Grade	2S	3S	4S	1S	Total
Douglas - Fir	1,935	277	67	0	2,279
Western Hemlock / Fir	228	158	14	0	400
Sitka Spruce	1	17	17	0	35
Alder (Red)	117	86	166	54	423
Maple	0	0	7	0	7
Total	2,281	538	271	54	3,144

Comments: Pond Values Used: 2nd Quarter Calendar Year 2015.

Expected log markets are: Warrenton, OR, Tillamook, OR, Mist, OR, Garibaldi, OR, Forest Grove, OR, Willamina, OR, Banks, OR, Longview, WA, Vancouver WA.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$1,102.28/\text{MBF} = \$1,275/\text{MBF} - \$172.72/\text{MBF}$

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$3.00/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 3,144 MBF = \$3,144
Line Pull (Area 1): 102 MBF @ \$20/MBF = \$2,040
Slash and Landing Piling (includes move-in and pile materials): \$7,134
Skyline Placement of Logs in 4 Locations:
5 Logs/site x 4 sites = 20 logs x \$125 = \$2,500
TOTAL Other Costs (with Profit & Risk to be added) = \$14,818

Other Costs (No Profit & Risk added):
Water Bar Unsurfaced Spurs (\$16/Sta @ 30.5 Sta) = \$488
Block Unsurfaced Road = \$139
Machine Wash for Invasive Weeds = \$2,000
TOTAL Other Costs (No Profit & Risk added) = \$2,627



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Logging Conditions

Combination#: 1

Douglas - Fir	9.00%
Western Hemlock / Fir	9.00%
Sitka Spruce	9.00%
Alder (Red)	9.00%
Maple	9.00%

Logging System: Cable: Medium Tower >40 - <70
Process: Stroke Delimber

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

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

loads / day: 7
bd. ft / load: 4600

cost / mbf: \$186.34

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

Combination#: 2

Douglas - Fir	91.00%
Western Hemlock / Fir	91.00%
Sitka Spruce	91.00%
Alder (Red)	91.00%
Maple	91.00%

Logging System: Shovel
Process: Harvester Head Delimbing

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

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

loads / day: 12
bd. ft / load: 4600

cost / mbf: \$96.81

machines: Forwarder
Harvester



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Logging Costs

Operating Seasons: 2.00	Profit Risk: 10%
Project Costs: \$23,171.00	Other Costs (P/R): \$14,818.00
Slash Disposal: \$0.00	Other Costs: \$2,627.00

Miles of Road

Road Maintenance: \$2.02

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

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	5.0
Western Hemlock / Fir	\$0.00	3.0	4.5
Sitka Spruce	\$0.00	3.0	4.0
Alder (Red)	\$0.00	2.0	4.0
Maple	\$0.00	3.0	3.5



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$104.87	\$2.02	\$2.79	\$78.00	\$4.71	\$19.24	\$0.00	\$5.00	\$0.84	\$217.47
Western Hemlock / Fir									
\$104.87	\$2.02	\$2.79	\$57.78	\$4.71	\$17.22	\$0.00	\$5.00	\$0.84	\$195.23
Sitka Spruce									
\$104.87	\$2.02	\$2.79	\$65.00	\$4.71	\$17.94	\$0.00	\$5.00	\$0.84	\$203.17
Alder (Red)									
\$104.87	\$2.02	\$2.79	\$97.50	\$4.71	\$21.19	\$0.00	\$5.00	\$0.84	\$238.92
Maple									
\$104.87	\$2.02	\$2.79	\$74.29	\$4.71	\$18.87	\$0.00	\$5.00	\$0.84	\$213.39

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$577.18	\$359.71	\$0.00
Western Hemlock / Fir	\$0.00	\$453.72	\$258.49	\$0.00
Sitka Spruce	\$0.00	\$391.57	\$188.40	\$0.00
Alder (Red)	\$0.00	\$612.20	\$373.28	\$0.00
Maple	\$0.00	\$400.00	\$186.61	\$0.00



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Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00
Sitka Spruce	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00
Maple	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	2,279	\$359.71	\$819,779.09
Western Hemlock / Fir	400	\$258.49	\$103,396.00
Sitka Spruce	35	\$188.40	\$6,594.00
Alder (Red)	423	\$373.28	\$157,897.44
Maple	7	\$186.61	\$1,306.27

Gross Timber Sale Value

Recovery: \$1,088,972.80

Prepared By: John Choate

Phone: 503-325-5451

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale: Kicken Klines (341-16-39)
Date: April 30, 2015
By: John Choate

MBF: 3,143
\$/MBF: \$2.02

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
Interim Operations Entries: 1	Grader 14G	\$778	1	4	\$100	\$1,178
	Grader 14G	\$778	1	8	\$100	\$1,578
Final Road Maintenance	Dump Truck 12CY	\$163	1	8	\$79	\$795
	FE Loader C966	\$778	1	2	\$83	\$944
	Vibratory Roller	\$778	1	8	\$77	\$1,394
	Water Truck 2,500 gallon	\$190	1	2	\$89	\$368
	Labor			2	\$40	\$80
Total						\$6,337

Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	3.0	1.50	0.5	4

Final Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	1.5	1.5	1.0	8
Vibratory Roller	1.5	1.5	1.0	8

*Maintenance calculations were determined as follows:

Klines Creek to Sale Area = 1.5 miles

Site Prep Appraisal

Sale Number: 341-16-39
Sale Name: Kicken Klines
Date: 05/05/2015

Vegetation Type/Zone	Vegetation Type/Zone Code	Production Rate (hr/ac)	Estimated Piles/Acre
Doug-fir	A	0.5	2.0
Hemlock/Fir	B	1.5	4.5
Hemlock/Spruce	C	2.0	6.0
Hemlock	D	2.0	6.0
Conifer/Hardwood	E	1.5	4.5
Whole Tree Yarding	F	0.25	0.5

Sale Area	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour C325	Total Cost/Area	
1	MC	A	46	23	\$129.00	\$2,967.00	
1	MC	F	34	9	\$129.00	\$1,096.50	
In-unit Piling						Sub Total =	\$4,063.50
Sale Area	Number of Landings to be Piled	Cost/Landing Pile	Total Cost/Area	Number of In-Unit Piles	Material Cost/Pile	Total Cost/Area	
1	6	\$220.00	\$1,320.00	92	\$5.00	\$460.00	
Materials						Sub Total =	\$460.00
Landing Piling						Sub Total =	\$1,320.00
Move-In Allowance	Number of Move-In's	Total Move-In Allowance					
\$1,290.00	1	\$1,290.00			Move-In	Sub Total =	\$1,290.00
Grand Total =							\$7,133.50

SALE NAME: Kicken Klines

SALE NAME: Kicken Klines

Project No. 1

0.58 Miles

Project No. 1

1.52 Miles

<u>Description</u>	<u>Cost</u>
TOTAL	

<u>Equipment</u>	<u>Cost</u>
Excavator (C330 @ \$1,406)	\$1,406
Dozer (D8 @ \$1,406 x 1.)	\$1,406
Loader (966 @ \$778)	\$778
Excavator (C315 @ \$805)	\$805
Large Grader (14G @ \$778)	\$778
10-12 yd³ dump truck (@ \$163 x 3)	\$489
TOTAL	\$5,662

\$23,171

Date: 05/07/2015

SUMMARY OF ROAD IMPROVEMENT COSTS

SALE NAME: Kicken Klimes
 ROAD: 11-12 (80+00), 1A-1B (10+60), 1C-1D (20+00)

ROAD IMPROVEMENT: 80.00 STATIONS 1.52 MILES
 DIRT CONSTRUCTION: 30.60 STATIONS 0.58 MILES

POINTS:

CLEARING & GRUBBING

Method	Acres/amount	x	Rate	=	Cost
1A-1B Clear and Scatter outside of R/W	0.9	x	\$1,337.00	=	\$1,203.30
1C-1D Clear and Scatter outside of R/W	1.60	x	\$1,337.00	=	\$2,139.20

SUB TOTAL FOR CLEARING & GRUBBING

\$3,343

EXCAVATION

Material	Cyl/amount	x	Rate	=	Cost
1A-1B Balanced Construction \$/sta.	10.60	x	\$122.00	=	\$1,293.20
Oversized Stump Removal (C330) \$/hr.	4.00	x	\$155.00	=	\$620.00
Landings to be Constructed	1.00		\$389.00		\$389.00
1C-1D Balanced Construction \$/sta.	16.00	x	\$122.00	=	\$1,952.00
Common Dift >200 ft. \$/sta.	4.00	x	\$190.00	=	\$760.00
Oversized Stump Removal (C330) \$/hr.	4.00	x	\$155.00	=	\$620.00
Landings to be Constructed	2.00	x	\$389.00	=	\$778.00
Additional Excavator Time - T/A (C330) \$/hr.	2.00	x	\$155.00	=	\$310.00

SUB TOTAL FOR EXCAVATION

\$6,722

CULVERT MATERIALS AND INSTALLATION

Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost

Description	Quantity	Rate	Cost
Other/miscellaneous:			
Culvert stakes & markers:			

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION

Subtotal of Clearing, Exc., Culv. **\$10,065**

Compiled By: John Choate

Date: 05/07/2015

SURFACING		Stations/ amount	x	Rate/ sta/amt	Cost
Subgrade prep: Description					
Grade, Shape and Ditch 16'		80.00	x	\$24.83	\$1,986.40
Grade, Shape, outslope (Dirt Construction)		30.60	x	\$18.35	\$561.51
Total Stations:		110.60			

ROAD SEGMENT				I1 - 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 - I2		0+00 to 80+00						
				Volume (CY) per		Number of						
Leveling Rock	1 1/2"-0" Crushed	0+00 to 24+50	N/A	station	N/A	loads	10.00	110	\$8.69	\$956		
Leveling Rock	1 1/2"-0" Crushed	29+00, 47+30, 61+90	N/A	load	11	loads	10	110	\$8.69	\$956		
Total Rock for Road Segment:				I1 - I2				220			\$1,912	

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 to 1B		0+00 to 30+60				
				Volume (CY) per		Number of				
Junction Rock	6"-0" Pit-run	0+00 to 0+50	8	station	N/A	stations	0.5	50	\$8.69	\$435
Junction Rock	1 1/2"-0" Crushed	0+00 to 0+50	N/A	station	22	stations	0.5	11	\$8.69	\$96
Subgrade Reinforcement	6"-0" Pit-run	N/A	8	station	N/A	stations	2.0	100	\$8.69	\$869
Total Rock for Road Segment:			1A-1B					161		

Processing:	Description					No. sta	Rate/sta	Cost
								\$0
FOR SURFACING		24"-6"rr	6"-0" pr	4"-0"	1½"-0"	¾"-0"	Total	
		0	150	0	231		381	381

SPECIAL PROJECTS

Description	Quantity	Rate/Qu.	Cost
Development (Pit-run)	150	\$2.60	\$390.00
I1-I2 Leveling Rock Compaction (Hrs.)(D. Truck)	5	\$79.00	\$395.00

SUB TOTAL FOR SPECIAL PROJECTS

\$785

Subtotal of Surfacing & Spec. Proj. \$6,644

Subtotal of Clearing, Exc., Culv. \$10,065

GRAND TOTAL

\$16,709

Compiled By: John Choate

Date: 05/07/2015

CRUSHED ROCK COST

SALE NAME:	Kicken' Klines
PROJECT:	11-12, 1A-1B
QUARRY:	Buster Stockpile

MATERIAL: Crushed/Pit-Run

DATE: 04/29/2015
BY: John Choate

[illegible]

ROCK HAUL:

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

Ave haul:	\$5.32	/cy
Load:	\$1.44	/cy
Spread:	\$1.92	/cy

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

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

Production: cy/day = 356

CRUSHED ROCK HAUL COSTS

381 cy @ \$8.69 /cy

Projects Road Maintenance Cost Summary

Sale: Kicken Klines
Date: 4/30/15
By: John Choate *FL*

Type	Equipment/Rationale			Hours	Rate	Cost
Final Project Haul Road Maintenance	Grader 14G			8.0	\$100	\$800
Total						\$800

Production Rates
 Grader

Miles/day	Distance(miles)	Days
2.2	2.30	1.0

Buster Creek Stockpile to Mullenbach (2.3 Miles)

**KICKEN KLINES
FY 2016
TIMBER CRUISE REPORT**

1. **Sale Area Location:** Areas 1 and 2 are located in portions of Section 34, T5N, R7W, W.M., Clatsop County, Oregon.

2. **Fund Distribution:** Fund: BOF 100% CSL 0%
Tax Code: 8-01 58 %
8-02 42 %

3. **Sale Acreage by Area:**

Area	Harvest Type	Gross Acres	Stream Buffer Acres	New R/W Acres	Net Acreage
1	PC	96	4	3	89
2	R/W	3			3
TOTALS		99	4	3	92

4. **Cruisers and Cruise Dates:** Area 1 was cruised by Andrew Arvin, John Choate with Derek Snow, Jon Long, Bryce Rodgers, and Ed Holloran. The cruise was performed on April 27, 2015.
5. **Cruise Method and Computation:** Area 1 is a modified clear cut unit. A variable plot cruise with a 40 BAF was used in this Area. These plots were located on a 6 chain by 2.5 chain grid, with a count/cruise plot ratio of 2 to 1K. A total of 62 plots were sampled, with 22 measured plots and 40 count plots.

Area 2 R/W was calculated applying road R/W acreage and using volume per acre from the sale Area.

Cruisers used Corvallis Micro Technology (CMT) data collectors, 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.

<u>AREAS</u>	<u>PROJECT</u>	<u>TRACT</u>	<u>CRUISE TYPE</u>
1	KICKENK	A1	01CC, TAKE, STAY
2 R/W	KICKENK	A1	RW

6. **Timber Description:** Areas 1 & 2 (R/W) are approximately 68 year old stand of Douglas-fir, with hemlock, spruce, cedar, alder, and some maple. The average take Douglas-fir tree size for harvest is approximately 24 inches DBH, with an average merchantable tree height of 84 feet. The average take hemlock tree size is approximately 17 inches DBH, with an average merchantable tree height of 50 feet. The average take spruce tree size is approximately 15 inches DBH, with an average merchantable tree height of 28 feet. The average take alder tree size is approximately 14 inches DBH with an average merchantable tree height of 45 feet. The average volume per acre to be harvested (net) is approximately 34 MBF. All trees were cruised to a merchantable top of 6 inch DIB or 40% fp.

Cedar is a reserved species in Area 1.

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

Area	Target CV	Target SE%	Actual CV	Actual SE%
1	60	9	55	7

The statistics are for the area and Take and Leave trees combined based on Net BF/Acre.

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

Conifer Species	DBH	Net Vol.	1 Saw	2 Saw	3 Saw	4 Saw	% D & B	% Sale
Douglas-fir	24	2,279		1,935	277	67	4	73
W. Hemlock & True Fir	17	400		228	158	14	3.5	13
Sitka Spruce	15	35		1	17	17	5	1
CONIFER TOTAL NET VOLUME		2,714						87

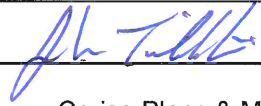
Hardwood Species	DBH	Net Vol.	1 Saw*	2 Saw*	3 Saw*	4 Saw*	% D & B	% Sale
Alder	14	423	54*	117*	86*	166*	4	13
Maple & other hardwoods	14	7				7*	1	0
HARDWOOD TOTAL NET VOLUME		430						13

*Hardwood grades based on scale end diameters: 12" = 1, 10"-11" = 2, 8"-9" = 3, and 6"-7" = 4.

	Net Vol.	% Sale
TOTAL NET VOLUME	3,144	100

9. Prepared by: Edward M. Holloran

Date: May 5, 2015

10. Approved by: 

Date: MAY 26, 2015

11. Attachments: Cruise Plans & Maps – (3 pages)
Species, Sort, Grade Reports – Take (3 pages)
Statistics Reports – (4 pages)
Stand Table Report – (1 page)
Log Stock Table Report – Take (3 pages)

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Kicken Klines **Area:** 1

Harvest Type: (CC) PC CT "Automark Thinning" (circle one)
Net BF/or

Approx. Cruise Acres: 94 **Estimated CV%** 60 BA/Acre **SE% Objective** 9 BA/Acre Net BF/or

Planned Sale Volume: 3.069 MMBF **Estimated Sale Area Value/Acre:** \$10,850

A. Cruise Goals: (a) Grade minimum 90 conifer and 20 hardwood trees:
(b) Sample X cruise plots; (c) Other goals X Determine log grades for sale value;
X Determine snag and leave tree species and sizes

B. Cruise Design:

1. Plot Cruises: BAF 40 (Full point) Half point) (circle one)

Cruise Line Direction(s) Area 1: 70/250

Cruise Line Spacing 6 chains

Cruise Plot Spacing 2 1/2 chains

Grade/Count Ratio 1:2

2. ITS (Sample Tree) Cruises: Measure-grade ratios: D-fir _____ Hemlock _____
Spruce _____ True Fir _____ Cedar _____ Hardwood _____

C. Tree Measurements:

1. Diameter: Minimum DBH to cruise is 8" for conifers and 8" for hardwoods.

Record dbh to nearest 1/2" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

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 7", 7" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh.

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 10'. 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.

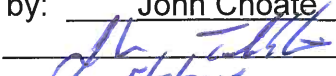
- 6. Species, Sort, and Grade Codes:** A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (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: Alder Grades: 12" + = 1 Sawmill; 10"-12" = 2 Sawmill; 10"-8" = 3 Sawmill; and 8"-6" 4 Sawmill, or 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. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at intervisible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.
ITS and 100% Cruises: Mark cruise "strips" with various colored flagging (not pink). Mark trees measured and graded with yellow paint.

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

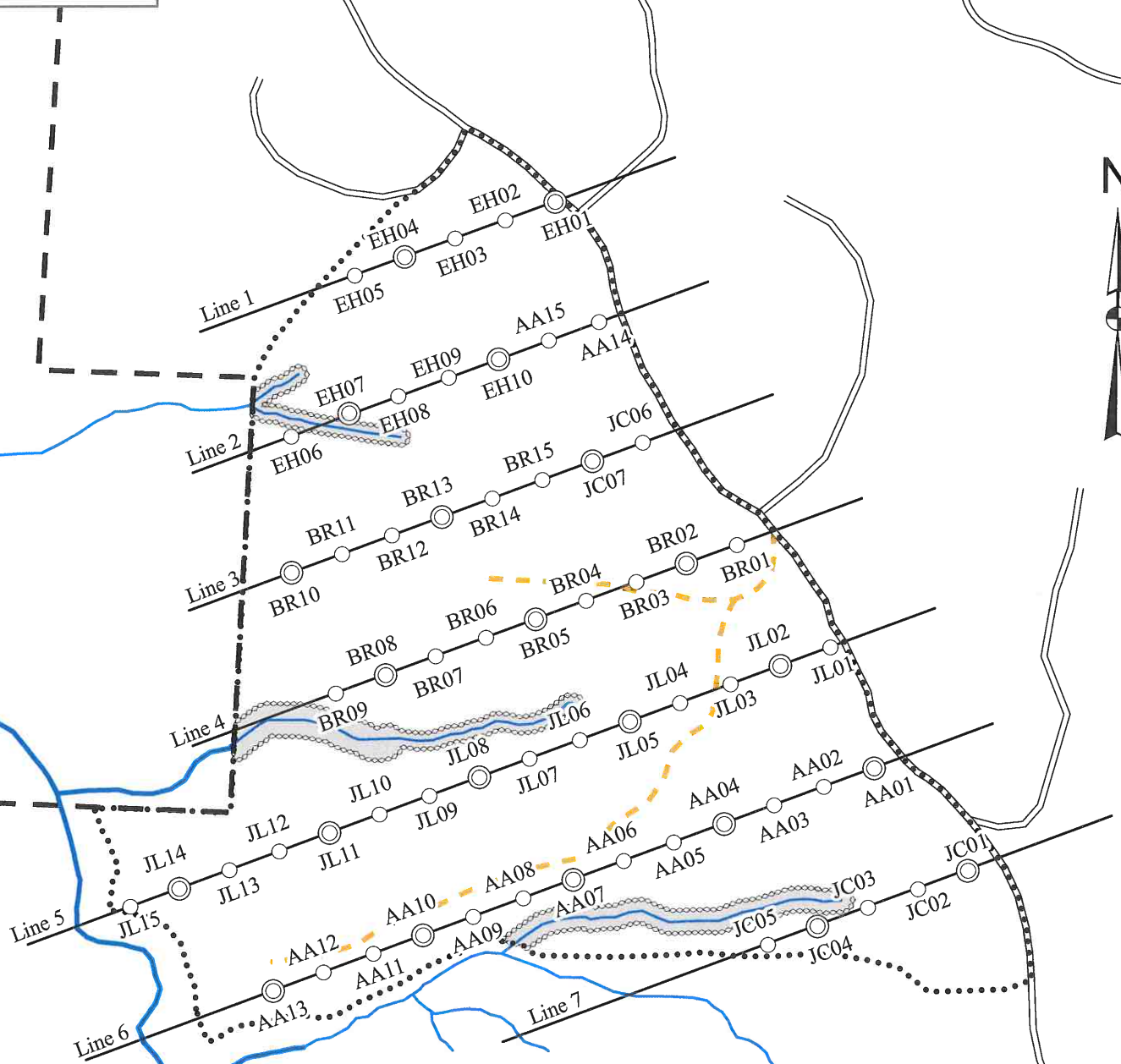
- 10. Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: John Choate
Approved by: 
Date: 5/5/2003

63 Plots Total
 Grade Plots: 22
 Count Plots: 41
 AZ: 250/70
 BAF: 40
 Line Spacing: 6 Chains
 Plot Spacing: 2.5 Chains

KICKEN KINES

341-16-39
 Portions of Section 34, T5N,
 R7W, WM, Clatsop County, Oregon



Legend

- Count Plot
- ⊙ Grade Plot
- ⋯ Timber Sale Boundary
- == Surfaced Road
- ▬ Astoria Ownership
- Fish
- Nonfish
- - - Unknown
- ▨ Stream Buffer
- - - New Construction

Approximate Scale: 1 inch = 500 feet



Species, Sort Grade - Board Foot Volumes (Project)

T05N R07W S34 TyRW 3.00
T05N R07W S34 TyTAKE 89.00

Project: KICKENK

Acres 92.00

Page 1
Date 4/29/2015
Time 8:54:54AM

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 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					
D	DOCU															7		0.00	4.4
D	DO2S	84	.9	21,230	21,032	1,935		2	39	59	1	1	7	91	38	409	2.39	51.4	
D	DO3S	13	1.4	3,049	3,005	277			91	5	4	11	13	30	46	32	95	0.92	31.8
D	DO4S	3	1.2	738	730	67		3	97			75	25			18	28	0.54	26.2
D Totals		73	1.0	25,017	24,767	2,279		0	15	34	50	4	3	9	83	31	218	1.69	113.8
H	DO2S	57	.0	2,477	2,476	228				38	62		6	7	87	38	433	2.55	5.7
H	DO3S	39		1,720	1,720	158			100			2	2	26	70	37	80	0.82	21.4
H	DO4S	4		148	148	14			100			43	57			21	30	0.55	5.0
H Totals		13	.0	4,345	4,344	400			43	22	35	2	6	14	78	35	136	1.13	32.1
A	DOCU															8		0.00	6.0
A	DO1S	12		590	590	54				100			28	37	35	32	191	1.58	3.1
A	DO2S	28		1,269	1,269	117			57	43			12	34	54	35	165	1.25	7.7
A	DO3S	20	4.1	978	937	86			78	22		4	16	39	41	33	79	0.85	11.8
A	DO4S	40	3.9	1,878	1,804	166			100			22	21		57	28	39	0.51	46.8
A Totals		13	2.4	4,714	4,600	423			71	29		9	19	22	50	28	61	0.70	75.4
S	DOCU															2		0.00	1.0
S	DO2S	1	3.3	6	6	1				100				100		32	590	4.22	.0
S	DO3S	49	12.5	209	183	17			0	100		45	0	55		22	115	1.79	1.6
S	DO4S	50	4.7	193	184	17			100			57	43			20	34	0.67	5.4
S Totals		1	8.7	408	372	35 34			50	49	2	50	21	29		18	46	0.93	8.1
M	DOCU															5		0.00	2.4
M	DO4S	100		72	72	7			100				100			24	30	0.63	2.4
M Totals		0		72	72	7			100				100			15	15	0.52	4.8
Totals			1.2	34,556	34,157	3,144 3,142		0	27	32	41	5	6	12	77	30	146	1.27	234.1

T		Species, Sort Grade - Board Foot Volumes (Type)										Page		1							
TSPCSTGR		Project: KICKENK										Date		4/29/2015							
												Time		8:53:58AM							
T05N R07W S34 TTAKE										T05N R07W S34 TTAKE											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
05N	07W	34	A1	TAKE	89.00	62	132	1	W												
S So Gr T rt ad			%	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre		
			Net BdFt					Log Scale Dia.				Log Length				Ln	Bd	CF/ Lf			
										4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	Ft		
D	DO	CU																7		0.00	4.4
D	DO	2S	84	.9	21,224	21,026	1,871				2	39	59	1	1	7	91	38	409	2.39	51.4
D	DO	3S	13	1.4	3,049	3,006	268				91	5	4	11	13	30	46	32	95	0.92	31.8
D	DO	4S	3	1.2	739	730	65			3	97			75	25			18	28	0.54	26.2
D Totals			73	1.0	25,012	24,762	2,204			0	15	34	50	4	3	9	83	31	218	1.69	113.8
A	DO	CU																8		0.00	6.0
A	DO	1S	12		590	590	53					100			28	37	35	32	191	1.58	3.1
A	DO	2S	28		1,269	1,269	113			57	43				12	34	54	35	165	1.25	7.7
A	DO	3S	20	4.1	978	937	83			78	22			4	16	39	41	33	79	0.85	11.8
A	DO	4S	40	3.9	1,878	1,804	161			100				22	21		57	28	39	0.51	46.8
A Totals			13	2.4	4,714	4,600	409			71	29			9	19	22	50	28	61	0.70	75.4
H	DO	2S	56		2,469	2,469	220				38	62			6	7	87	38	432	2.54	5.7
H	DO	3S	40		1,720	1,720	153			100				2	2	26	70	37	80	0.82	21.4
H	DO	4S	4		148	148	13			100				43	57			21	30	0.55	5.0
H Totals			13		4,338	4,338	386			43	22	35		2	6	14	78	35	135	1.13	32.1
S	DO	CU																2		0.00	1.0
S	DO	3S	49	12.5	209	182	16				100			45		55		22	115	1.80	1.6
S	DO	4S	51	4.7	193	184	16			100				57	43			20	34	0.67	5.5
S Totals			1	8.8	402	367	33			50	50			51	21	27		18	45	0.93	8.1
M	DO	CU																5		0.00	2.4
M	DO	4S	100		72	72	6			100					100			24	30	0.63	2.4
M Totals			0		72	72	6			100					100			15	15	0.52	4.8
Type Totals				1.2	34,538	34,139	3,038			0	27	32	41	5	6	12	77	30	146	1.27	234.1

T		Species, Sort Grade - Board Foot Volumes (Type)														Page		1	
TSPCSTGR		Project: KICKENK														Date		4/29/2015	
																Time		8:34:32AM	
T05N R07W S34 TRW										T05N R07W S34 TRW									
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt										
05N	07W	34	A1	RW	3.00	62	135	1	W										
S So Gr T rt ad Spp			% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre
								Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99				
D	DO	CU								7		0.00				4.3			
D	DO	2S	85	.9	21,406	21,210	64		2	39	59	1	1	7	92	38	413	2.40	51.4
D	DO	3S	12	1.4	3,041	2,998	9		91	6	4	11	13	30	46	32	94	0.92	31.8
D	DO	4S	3	1.2	734	725	2	3	97			75	25			18	28	0.54	26.1
D Totals			72	1.0	25,181	24,932	75	0	15	34	51	4	3	9	83	31	220	1.70	113.6
A	DO	CU														8		0.00	6.0
A	DO	1S	12		590	590	2			100			28	37	35	32	191	1.58	3.1
A	DO	2S	28		1,269	1,269	4		57	43			12	34	54	35	165	1.25	7.7
A	DO	3S	20	4.1	978	937	3		78	22		4	16	39	41	33	79	0.85	11.8
A	DO	4S	40	3.9	1,878	1,804	5		100			22	21		57	28	39	0.51	46.8
A Totals			13	2.4	4,714	4,600	14		71	29		9	19	22	50	28	61	0.70	75.4
H	DO	2S	59	.6	2,699	2,681	8			33	67		5	6	89	38	445	2.62	6.0
H	DO	3S	37		1,709	1,709	5		100			2	2	25	71	37	82	0.83	21.0
H	DO	4S	4		141	141	0		100			43	57			21	30	0.55	4.7
H Totals			13	.4	4,549	4,531	14		41	20	39	2	6	13	79	35	143	1.18	31.7
S	DO	CU														3		0.00	1.3
S	DO	2S	32	3.3	180	174	1				100				100	32	590	4.22	.3
S	DO	3S	35	11.5	218	193	1		9	91		41	9	50		23	106	1.69	1.8
S	DO	4S	33	4.7	185	177	1		100			57	43			20	34	0.67	5.2
S Totals			2	6.8	584	544	2		36	32	32	33	17	50		18	63	1.13	8.6
M	DO	CU														5		0.00	2.4
M	DO	4S	100		72	72	0		100				100			24	30	0.63	2.4
M Totals			0		72	72	0		100				100			15	15	0.52	4.8
Type Totals				1.2	35,099	34,680	104	0	26	31	42	5	6	12	77	30	148	1.29	234.1

TC PSTATS			PROJECT STATISTICS							PAGE	1	
			PROJECT KICKENK							DATE	4/29/2015	
TWP	RGE	SC	TRACT	TYPE			ACRES	PLOTS	TREES	CuFt	BdFt	
05N	07	34	A1	01CC			89.00	62	377	1	W	
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			62	377	6.1							
CRUISE			23	138	6.0	11,252	1.2					
DBH COUNT												
REFOREST												
COUNT			36	230	6.4							
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			86	43.1	23.9	84		134.2	25,012	24,762	5,907	5,907
R ALDER			26	49.5	14.0	45		52.9	4,714	4,600	1,483	1,483
WHEMLOCK			15	23.1	17.5	50		38.7	4,338	4,338	1,256	1,256
S SPRUCE			4	5.5	14.7	28		6.5	402	367	135	135
SNAG			3	2.4	21.0	31		5.8				
BL MAPLE			1	2.4	14.0	30		2.6	72	72	36	36
SPRUCELV			1	.2	31.0	66		1.3	165	160	43	43
HEMLEAV			1	.2	28.0	82		.6	109	104	27	27
DOUGLEAV			1	.1	40.0	95		.6	140	140	29	29
TOTAL			138	126.4	18.8	58		243.2	34,952	34,543	8,917	8,917
CONFIDENCE LIMITS OF THE SAMPLE												
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR												
CL	68.1	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		58.1	6.3	738	787	836						
R ALDER		81.4	16.3	108	129	150						
WHEMLOCK		110.9	29.6	240	341	442						
S SPRUCE		87.2	49.8	50	100	150						
SNAG												
BL MAPLE												
SPRUCELV												
HEMLEAV												
DOUGLEAV												
TOTAL		86.0	7.3	536	578	621	295	74	33			
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		83.6	10.6	39	43	48						
R ALDER		155.2	19.7	40	49	59						
WHEMLOCK		199.7	25.3	17	23	29						
S SPRUCE		292.0	37.1	3	5	7						
SNAG		390.5	49.6	1	2	4						
BL MAPLE		619.4	78.6	1	2	4						
SPRUCELV		552.2	70.1	0	0	0						
HEMLEAV		787.4	99.9	0	0	0						
DOUGLEAV		787.4	99.9	0	0	0						
TOTAL		62.5	7.9	116	126	136	156	39	17			
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		76.2	9.7	121	134	147						
R ALDER		140.8	17.9	43	53	62						
WHEMLOCK		193.5	24.6	29	39	48						
S SPRUCE		255.8	32.5	4	6	9						

TC PSTATS				PROJECT STATISTICS				PAGE	2	
				PROJECT KICKENK				DATE	4/29/2015	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
05N	07	34	A1	01CC		89.00	62	377	1	W
CL	68.1	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
SNAG		349.4	44.3	3	6	8				
BL MAPLE		619.4	78.6	1	3	5				
SPRUCELV		552.2	70.1	0	1	2				
HEMLEAV		787.4	99.9	0	1	1				
DOUGLEAV		787.4	99.9	0	1	1				
TOTAL		46.7	5.9	229	243	258	87	22	10	
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		76.3	9.7	22,366	24,762	27,158				
R ALDER		142.7	18.1	3,768	4,600	5,433				
WHEMLOCK		189.0	24.0	3,297	4,338	5,378				
S SPRUCE		274.7	34.9	239	367	494				
SNAG										
BL MAPLE		619.4	78.6	15	72	129				
SPRUCELV		552.2	70.1	48	160	272				
HEMLEAV		787.4	99.9	0	104	208				
DOUGLEAV		787.4	99.9	0	140	281				
TOTAL		54.6	6.9	32,150	34,543	36,937	119	30	13	

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT KICKENK				DATE	4/29/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
05N	07W	34	A1	TAKE	89.00	62	364	1	W		
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		62	364	5.9							
CRUISE		22	132	6.0	10,995		1.2				
DBH COUNT											
REFOREST											
COUNT		37	227	6.1							
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		86	43.1	23.9	84		134.2	25,012	24,762	5,907	5,907
R ALDER		26	49.5	14.0	45		52.9	4,714	4,600	1,483	1,483
WHEMLOCK		15	23.1	17.5	50		38.7	4,338	4,338	1,256	1,256
S SPRUCE		4	5.5	14.7	28		6.5	402	367	135	135
BL MAPLE		1	2.4	14.0	30		2.6	72	72	36	36
TOTAL		132	123.5	18.7	58		234.8	34,538	34,139	8,817	8,817
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR		58.1	6.3	738	787	836					
R ALDER		81.4	16.3	108	129	150					
WHEMLOCK		110.9	29.6	240	341	442					
S SPRUCE		87.2	49.8	50	100	150					
BL MAPLE											
TOTAL		84.0	7.3	538	580	623	282	70	31		
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		83.6	10.6	39	43	48					
R ALDER		155.2	19.7	40	49	59					
WHEMLOCK		199.7	25.3	17	23	29					
S SPRUCE		292.0	37.1	3	5	7					
BL MAPLE		619.4	78.6	1	2	4					
TOTAL		64.7	8.2	113	124	134	167	42	19		
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		76.2	9.7	121	134	147					
R ALDER		140.8	17.9	43	53	62					
WHEMLOCK		193.5	24.6	29	39	48					
S SPRUCE		255.8	32.5	4	6	9					
BL MAPLE		619.4	78.6	1	3	5					
TOTAL		49.2	6.2	220	235	249	97	24	11		
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		76.3	9.7	22,366	24,762	27,158					
R ALDER		142.7	18.1	3,768	4,600	5,433					
WHEMLOCK		189.0	24.0	3,297	4,338	5,378					
S SPRUCE		274.7	34.9	239	367	494					
BL MAPLE		619.4	78.6	15	72	129					
TOTAL		55.3	7.0	31,742	34,139	36,535	122	31	14		

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT KICKENK				DATE 4/29/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
05N	07W	34	A1	RW	3.00	62	368	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		62	368	5.9						
CRUISE		22	135	6.1	369		36.6			
DBH COUNT										
REFOREST										
COUNT		37	228	6.2						
BLANKS		3								
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	87	43.0	24.0	84		134.8	25,181	24,932	5,936	5,936
R ALDER	26	49.5	14.0	45		52.9	4,714	4,600	1,483	1,483
WHEMLOCK	16	22.6	17.9	50		39.4	4,549	4,531	1,302	1,302
S SPRUCE	5	5.5	16.0	30		7.7	584	544	181	181
BL MAPLE	1	2.4	14.0	30		2.6	72	72	36	36
TOTAL	135	123.0	18.8	59		237.4	35,099	34,680	8,939	8,939
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR	58.7	6.3	750	800	850					
R ALDER	81.4	16.3	108	129	150					
WHEMLOCK	103.5	26.7	266	363	459					
S SPRUCE	122.5	60.9	82	210	338					
BL MAPLE										
TOTAL	83.8	7.2	549	591	634		280	70	31	
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	83.7	10.6	38	43	48					
R ALDER	155.2	19.7	40	49	59					
WHEMLOCK	197.7	25.1	17	23	28					
S SPRUCE	279.2	35.4	4	6	7					
BL MAPLE	619.4	78.6	1	2	4					
TOTAL	64.1	8.1	113	123	133		164	41	18	
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	76.4	9.7	122	135	148					
R ALDER	140.8	17.9	43	53	62					
WHEMLOCK	190.8	24.2	30	39	49					
S SPRUCE	244.7	31.0	5	8	10					
BL MAPLE	619.4	78.6	1	3	5					
TOTAL	48.6	6.2	223	237	252		94	24	10	
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	76.2	9.7	22,521	24,932	27,344					
R ALDER	142.7	18.1	3,768	4,600	5,433					
WHEMLOCK	186.6	23.7	3,458	4,531	5,604					
S SPRUCE	268.0	34.0	359	544	729					
BL MAPLE	619.4	78.6	15	72	129					
TOTAL	54.6	6.9	32,276	34,680	37,085		119	30	13	

TC		PSTNDSUM		Stand Table Summary										Page		1	
														Date:		4/29/2015	
T05N R07W S34 TyRW3.00 T05N R07W S34 TyTAKE89.00				Project						KICKENK				Time:		8:54:55AM	
				Acres						92.00				Grown Year:			
S Spc	T	Sample		Tot		Trees/ Acres	BA/ Acres	Logs Acres	Average Log		Tons/ Acres	Net Cu.Ft. Acres	Net Bd.Ft. Acres	Totals			
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
D		10	2	91	23	2.860	1.56	2.86	7.0	20.0		20	57		18	5	
D		15	6	85	73	3.814	4.68	7.63	18.3	51.7		140	394		129	36	
D		17	2	85	137	.990	1.56	2.97	25.7	96.7		76	287		70	26	
D		18	8	83	91	3.531	6.24	7.06	27.6	87.5		195	618		179	57	
D		19	4	89	99	1.585	3.12	3.96	32.8	126.0		130	499		120	46	
D		20	6	83	102	2.145	4.68	5.01	35.3	111.4		177	558		162	51	
D		21	6	90	115	1.946	4.68	5.19	41.6	172.5		216	895		199	82	
D		22	6	86	110	1.773	4.68	4.14	44.3	175.7		183	727		169	67	
D		23	18	85	109	4.866	14.04	11.90	49.9	190.0		593	2,260		546	208	
D		24	8	88	121	1.986	6.24	5.96	49.4	211.7		294	1,261		271	116	
D		25	12	88	118	2.746	9.36	8.24	51.7	223.3		426	1,840		392	169	
D		26	4	87	128	.846	3.12	2.54	61.0	266.7		155	677		142	62	
D		27	16	85	121	3.139	12.48	9.42	59.8	244.2		563	2,299		518	212	
D		28	16	85	132	2.919	12.48	8.76	68.3	295.4		598	2,587		550	238	
D		29	14	86	126	2.381	10.92	6.80	77.0	339.0		523	2,306		482	212	
D		30	4	82	119	.636	3.12	1.91	66.2	278.3		126	531		116	49	
D		31	4	87	131	.595	3.12	1.79	87.5	406.7		156	726		144	67	
D		32	8	85	136	1.117	6.24	3.35	93.2	420.8		313	1,411		288	130	
D		33	6	83	135	.788	4.68	2.36	96.6	435.6		228	1,030		210	95	
D		34	8	83	130	.990	6.24	2.97	100.0	456.7		297	1,356		273	125	
D		36	10	84	141	1.104	7.80	3.53	111.6	543.8		394	1,920		363	177	
D		37	2	79	122	.209	1.56	.63	81.3	383.3		51	240		47	22	
D		40	1	85	120	.006	.05	.02	130.3	633.3		2	11		2	1	
D		44	2	77	146	.148	1.56	.44	114.3	626.7		51	278		47	26	
D		Totals	173	86	107	43.118	134.21	109.41	54.0	226.4		5,908	24,767		5,435	2,279	
A		10	4	87	66	7.461	4.07	7.46	13.0	45.0		97	336		89	31	
A		11	10	87	66	15.416	10.17	18.50	14.7	43.3		271	802		250	74	
A		12	4	87	78	5.181	4.07	10.36	13.0	45.0		135	466		124	43	
A		13	2	86	57	2.207	2.03	2.21	24.0	60.0		53	132		49	12	
A		14	4	87	64	3.807	4.07	5.71	20.7	70.0		118	400		109	37	
A		15	6	87	73	4.974	6.10	8.29	25.2	80.0		209	663		192	61	
A		16	2	86	59	1.457	2.03	1.46	37.0	90.0		54	131		50	12	
A		17	4	86	61	2.582	4.07	5.16	22.5	75.0		116	387		107	36	
A		18	2	87	61	1.151	2.03	1.15	20.0	40.0		23	46		21	4	
A		19	2	86	75	1.033	2.03	2.07	35.5	110.0		73	227		68	21	
A		20	2	87	47	.933	2.03	.93	42.0	60.0		39	56		36	5	
A		21	2	87	73	.846	2.03	1.69	42.0	135.0		71	228		65	21	
A		22	2	87	69	.771	2.03	1.54	43.0	165.0		66	254		61	23	
A		23	2	86	63	.705	2.03	1.41	43.5	155.0		61	219		56	20	
A		28	4	87	63	.952	4.07	1.43	67.3	176.7		96	252		88	23	
A		Totals	52	87	67	49.477	52.90	69.37	21.4	66.3		1,483	4,600		1,365	423	
H		13	2	86	31	2.795	2.58	2.80	13.0	30.0		36	84		33	8	
H		14	2	83	56	2.410	2.58	2.41	27.0	60.0		65	145		60	13	
H		15	6	86	47	6.299	7.73	6.30	25.0	60.0		157	378		145	35	
H		16	4	87	54	3.691	5.15	3.69	34.0	85.0		125	314		115	29	
H		17	4	84	85	3.269	5.15	6.54	28.0	95.0		183	621		168	57	
H		20	4	85	100	2.362	5.15	4.72	47.2	162.5		223	768		205	71	
H		28	3	88	115	.621	2.66	1.85	72.7	343.4		134	634		123	58	
H		29	2	89	99	.562	2.58	1.12	100.5	425.0		113	477		104	44	
H		30	4	84	99	1.050	5.15	2.62	83.8	352.0		220	924		202	85	
H		Totals	31	86	63	23.060	38.73	32.05	39.2	135.5		1,258	4,344		1,157	400	

TC		PSTNDSUM		Stand Table Summary								Page		2		
												Date:		4/29/2015		
				T05N R07W S34 TyRW		3.00		Project		KICKENK		Time:		8:54:55AM		
				T05N R07W S34 TyTAKE		89.00		Acres		92.00		Grown Year:				
S Sp	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Net		Totals	
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons		
S		10	2	83	19	2.953	1.61	2.95	8.0	30.0		24	89		22	8
S		17	2	83	63	1.022	1.61	2.04	21.5	65.0		44	133		40	12
S		18	2	82	28	.912	1.61	.91	25.0	30.0		23	27		21	3
S		23	2	79	59	.558	1.61	1.12	39.5	105.0		44	117		41	11
S		31	1	83	79	.010	.05	.02	87.0	325.0		2	6		2	1
S		Totals	9	82	33	5.455	6.49	7.04	19.3	52.8		136	372		125	34
M		14	2	87	37	2.414	2.58	2.41	15.0	30.0		36	72		33	7
M		Totals	2	87	37	2.414	2.58	2.41	15.0	30.0		36	72		33	7
Totals			267	86	78	123.524	234.92	220.30	40.0	155.0		8,821	34,157		8,116	3,142

Log Stock Table - Percent Board Feet

Project: KICKENK

Acres

92.00

T05N R07W S34 TyRW 3.00
T05N R07W S34 TyTAKE 89.00

CuFt: 1

BdFt: W

Page 1

Date 4/29/2015

Time 8:54:53AM

S T	So rt	Log Grd	Len	Gross MBF	Def %	Net MBF	% Spc	Percent 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	2S	12	10	16.3	8	.4											100.0	
D	DO	2S	16	10		10	.4									100.0			
D	DO	2S	20	1		1	.1						100.0						
D	DO	2S	24	15		15	.7										100.0		
D	DO	2S	32	104		104	4.5						81.4	11.3	7.2				
D	DO	2S	34	29	4.0	28	1.2						46.8		53.2				
D	DO	2S	38	14		14	.6					100.0							
D	DO	2S	40	1,771		1,755	77.0					1.3	8.7	16.0	39.8	29.5	4.8		
D	DO	3S	12	0		0	.0						100.0						
D	DO	3S	16	17		17	.7			10.7		24.8				64.5			
D	DO	3S	18	3		3	.1					100.0							
D	DO	3S	20	10		10	.4				44.2	35.7	20.0						
D	DO	3S	22	7		7	.3				73.0	27.0							
D	DO	3S	24	15		15	.7				36.9	63.1							
D	DO	3S	26	12		12	.5			17.3		82.7							
D	DO	3S	30	3		3	.1					100.0							
D	DO	3S	32	86	4.6	82	3.6			8.0	32.1	53.8	6.1						
D	DO	3S	36	4		4	.2			100.0									
D	DO	3S	38	3		3	.1			100.0									
D	DO	3S	40	121		121	5.3			18.2	31.8	44.0	6.0						
D	DO	4S	12	4		4	.2			18.4	61.0	20.6							
D	DO	4S	14	1		1	.0				100.0								
D	DO	4S	16	28		28	1.2		8.4	52.4	35.1	4.1							
D	DO	4S	18	10		10	.5			64.6	35.4								
D	DO	4S	19	1		1	.1				100.0								
D	DO	4S	20	5		5	.2			44.6	55.4								
D	DO	4S	22	9		9	.4			27.4	72.6								
D	DO	4S	24	2		2	.1				100.0								
D	DO	4S	26	4		4	.2			100.0									
D	DO	4S	30	3	25.0	2	.1			100.0									
D	Totals			2,302		2,279	72.5		.1	3.2	4.8	7.5	11.6	12.8	31.6	23.6	4.3	.4	
H	DO	2S	30	13		13	3.3							100.0					
H	DO	2S	32	16		16	3.9							100.0					
H	DO	2S	40	199		199	49.9						13.1	15.8	15.0	56.1			
H	DO	3S	20	3		3	.7				100.0								
H	DO	3S	30	3		3	.8				100.0								

TC PLOGSTBF

Log Stock Table - Percent Board FeetProject: **KICKENK** Acres **92.00**

T05N R07W S34 TyRW	3.00
T05N R07W S34 TyTAKE	89.00

CuFt: 1

BdFt: W

Page **3**
 Date **4/29/2015**
 Time **8:54:53AM**

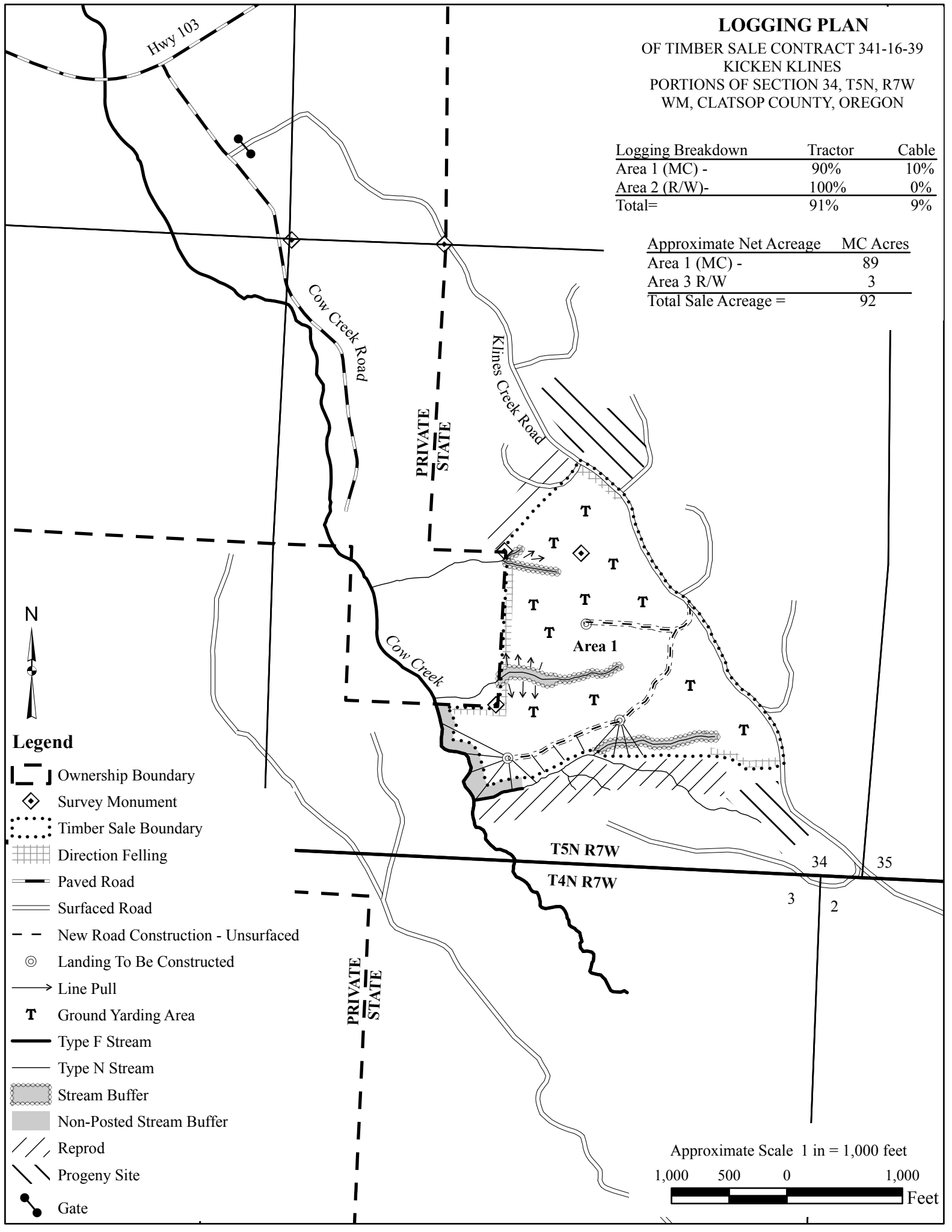
S Spp	T	So rt	Log Grd Len	Gross MBF	Def %	Net MBF	% Spc	Percent Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
S			Totals	38	8.7	34	1.1			49.4	.2		49.0			1.5			
M		DO	4S 24	7		7	100.0			100.0									
M			Totals	7		7	.2			100.0									
Total			All Species	3,179	1.2	3,142	100.0		.1	10.9	6.8	9.3	12.0	12.4	24.5	20.7	3.1		.3

LOGGING PLAN

OF TIMBER SALE CONTRACT 341-16-39
KICKEN KLINES
PORTIONS OF SECTION 34, T5N, R7W
WM, CLATSOP COUNTY, OREGON

Logging Breakdown	Tractor	Cable
Area 1 (MC) -	90%	10%
Area 2 (R/W)-	100%	0%
Total=	91%	9%

Approximate Net Acreage	MC Acres
Area 1 (MC) -	89
Area 3 R/W	3
Total Sale Acreage =	92



Legend

- Ownership Boundary
- Survey Monument
- Timber Sale Boundary
- Direction Felling
- Paved Road
- Surfaced Road
- New Road Construction - Unsurfaced
- Landing To Be Constructed
- Line Pull
- Ground Yarding Area
- Type F Stream
- Type N Stream
- Stream Buffer
- Non-Posted Stream Buffer
- Reprod
- Progeny Site
- Gate

Approximate Scale 1 in = 1,000 feet
1,000 500 0 1,000 Feet

LOGGING PLAN

OF TIMBER SALE CONTRACT 341-16-39
KICKEN KLINES
PORTIONS OF SECTION 34, T5N, R7W
WM, CLATSOP COUNTY, OREGON

Logging Breakdown	Tractor	Cable
Area 1 (MC) -	90%	10%
Area 2 (R/W)-	100%	0%
Total=	91%	9%

Approximate Net Acreage	MC Acres
Area 1 (MC) -	89
Area 3 R/W	3
Total Sale Acreage =	92

