"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cost Summary
Backbreak Ridge
Sale 341-03-62

District: Astoria **Date:** 1/21/03

	Conifer	Hardwood	Total
Gross Timber Sale Value	$240,897.37	$167,983.88	$408,881.25
		Project Work	$0.00
		Advertised Value	$408,881.25

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Timber Description
Backbreak Ridge
Sale 341-03-62

District: Astoria

Location: Township 8 North, Range 7 West, Sections1,2 & 12, W.M., Clatsop County, Oregon.

Date: 1/21/03 **Stand Stocking:** 20%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	12	0	98
Western Hemlock / Fir	15	0	96
Red Cedar	16	0	95
Alder (Red)	13	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Red Cedar	Alder (Red)	Total
2S	24	230	16	0	270
3S	330	449	11	422	1,212
4S	58	101	10	132	301
Total	412	780	37	554	1,783

Comments: Pond Values Used: 4th Quarter 2002

Log Markets: Warrenton, Tillamook, Banks, Longview, Forest Grove and Mist.

Additional Costs:

Additional Costs With P&R.
Painting and Branding @ $1/MBF X 1,783 MBF = $1,783
Total Cost w/P&R = $1,783

Additional Costs Without P&R

Slash Piling at Landings 8 Landings @ $130.00/Landing= $1,040
Slash Piling in the Units 84 Hrs. @ $95.00/Hrs.= $7,980

Move in (2 Moves) @ $500/move = $1,000
Total Non-P&R Costs = $10,020

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Logging Conditions
Backbreak Ridge
Sale 341-03-62

Combination#: 1	Douglas - Fir	38.00%		
	Western Hemlock / Fir	38.00%		
	Red Cedar	38.00%		
	Alder (Red)	38.00%		
Yarding Distance:	Short (400 ft)		**Downhill Yarding**	Yes
Logging System:	Wheel Skidder		**Process:**	Manual Falling/Delimbing
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF			
Loads/Day:	8		**Bd. Ft./Load:**	4,000
Cost/MBF:	$93.77			

Machines:

Log Loader (B)
Tire Skidder

Combination#: 2	Douglas - Fir	62.00%		
	Western Hemlock / Fir	62.00%		
	Red Cedar	62.00%		
	Alder (Red)	62.00%		
Yarding Distance:	Medium (800 ft)		**Downhill Yarding**	No
Logging System:	Cable: Medium Tower >40 - <70		**Process:**	Manual Delimbing
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF			
Loads/Day:	7		**Bd. Ft./Load:**	4,000
Cost/MBF:	$118.45			

Machines:

Log Loader (A)
Tower Yarder (Medium)

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Logging Costs
Backbreak Ridge
Sale 341-03-62

Date: 1/21/03

Operating Seasons: 1.0 **Profit & Risk:** 13%

Project Costs: $0 **Other Costs (P/R):** $1,783

Slash Disposal: $0 **Other Costs:** $10,020

Road Maintenance: $5.01

Miles of Road			
Dirt	**Rock (Contractor)**	**Rock (State)**	**Paved**
0.0	0.0	0.0	0.0

Hauling Costs

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

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Logging Costs Breakdown
Backbreak Ridge
Sale 341-03-62

Costs	Douglas - Fir	Western Hemlock / Fir	Red Cedar	Alder (Red)
Logging	109.07	109.07	109.07	109.07
Road Maintenance	5.11	5.22	5.27	5.27
Fire Protection	1.52	1.52	1.52	1.52
Hauling	58.67	59.90	60.53	46.11
Other (P/R appl.)	1.00	1.00	1.00	1.00
Profit & Risk	22.80	22.97	23.06	21.19
Slash Disposal	0.00	0.00	0.00	0.00
Scaling	2.00	2.00	2.00	2.00
Other	5.62	5.62	5.62	5.62
Total	205.79	207.30	208.07	191.78

Amortization	0.00	0.00	0.00	0.00
Pond Value	507.72	317.91	1,025.00	495.00
Stumpage	301.93	110.61	816.93	303.22
Amortized	0.00	0.00	0.00	0.00

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary
Backbreak Ridge
Sale 341-03-62

Amortized

	Douglas - Fir	Western Hemlock / Fir	Red Cedar	Alder (Red)
MBF	0.00	0.00	0.00	0.00
Value	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00

Unamortized

	Douglas - Fir	Western Hemlock / Fir	Red Cedar	Alder (Red)
MBF	412.00	780.00	37.00	554.00
Value	301.93	110.61	816.93	303.22
Total	124,395.16	86,275.80	30,226.41	167,983.88

Gross Timber Sale Value

Recovery $408,881.25

Prepared by: Kraig Kirkpatrick Date: 1/21/03

District: Astoria Phone: (503) 325-5451

Road Maintenance Cost Summary

Sale: Backbreak Ridge
Date: 13-Dec-02
By: K. Kirkpatrick

MBF: 1,783
$$/MBF: $5.01

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost	
Progressive Operations Entries (**NONE**)	Grader 14G	$540					
	Dump Truck 12CY	$114					
	FE Loader C966	$540					
Final Haul Road Maintenance Haul Route	Grader 14G	$540	1	27	$80	$2,700	
	Dump Truck 12CY	$114	2	16	$57	$1,140	
	FE Loader C966	$540	1	8	$75	$1,140	
	Vibratory Roller	$540	1	27	$75	$2,540	
	Water Truck 2,500 gallon	$132	1	16	$67	$1,204	
	Labor			8	$25	$200	
Total							$8,924

Production Rates

	Miles/day	Distance(miles)	Days
Grader	1.5	5.0	3.3
Vibratory Roller*	1.5	5.0	3.3

*Final Road Maintenance Only

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Backbreak Ridge
FY 2003
TIMBER CRUISE REPORT

1. **Sale Area Location:** All sale areas are within Township 8 North, Range 7 West, W.M., Clatsop County, Oregon. Area 1- Portions of W ½ NW ¼ of Section 1 and E ½, NE ¼ of Section 2. Area 2 - Portions of N ½, N ½ of Section 12.

2. **Fund Distribution:** BOF 100%
   Tax Code: 4-01 = 50%
   4-03 = 50%

3. **Sale Acreage by Area:**

Area	Treatment	Gross Acres	Existing R/W	New R/W	Buffers	Net Acres	Survey Method	Closure
1	Clearcut	72	-1.5	0	-4.5	66	GIS	N/A
2	Clearcut	43	-2.0	0	-2.0	39	GIS	N/A
Total		115	-3.5		-6.5	105		

4. Cruisers and Cruise Dates: Areas 1and 2 were cruised by; Tom Scoggins, Kraig Kirkpatrick and John Tillotson on September 5TH, 6 TH and 10 Th of 2002.

5. Cruise Method and Computation: AREAS 1and 2 were variable plot cruised with a 33.61 BAF. Cruise lines were located for efficiency and minimizing walking between plots (*See Cruise Plan Map for detailed cruise plot locations*). 80 plots were sampled along cruise lines 5 chains apart. All "take" and "leave" trees were measured and graded.

All cruises used Corvallis MicroTechnology (CMT) 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	CRUISE TYPE
1-2	Clear Cut	8N7WSEC12,TRACT:A 1 & 2,TYPE:TAKE, LEAV

6. Timber Description: Areas 1 & 2 (Regeneration) consist of conifer stocking in clumps with interspersed pockets of alder. These stands average 13.6 inches in DBH, with an average merchantable height of 49 feet to a merchantable top. The average volume (net) is 17.8 MBF/acre.

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

Area	Est. CV	Target SE%	Actual CV	Actual SE%
1 & 2	70%	11%	51%	5.7%

8. Volumes by Species and Log Grade: (See "Species, Sort and Grade" - Type Report attached of individual sale areas and combined areas and three cruise types)

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

Species	DBH (Inches)	Net Vol.	2 Saw	3Saw	4 Saw	D&B%	% Sale
Hemlock	15"	780	230	449	101	0.9	44
Alder	13"	551	0	419	132	2.7	31
Douglas-fir	12"	412	24	330	58	0.5	23
W. Red Cedar	16"	37	16	11	10	1.7	2
Maple	22"	3	---	3	--	0.0	0.1
TOTALS		**1,783**					

9. Approvals:

Prepared by: Kraig Kirkpatrick **Date:** 12/13/02

Approved by: Tom Scoggin **Date:** 12/16/02

10. Attachments:

Cruise Designs (1)
Cruise Maps (1)
Volume Reports - 1 page
Statistics Reports - 4 pages
Stand Tables - 2 pages

X:\DOCUMENT\2003FYsales\Back Break Ridge\Cruise Report.doc

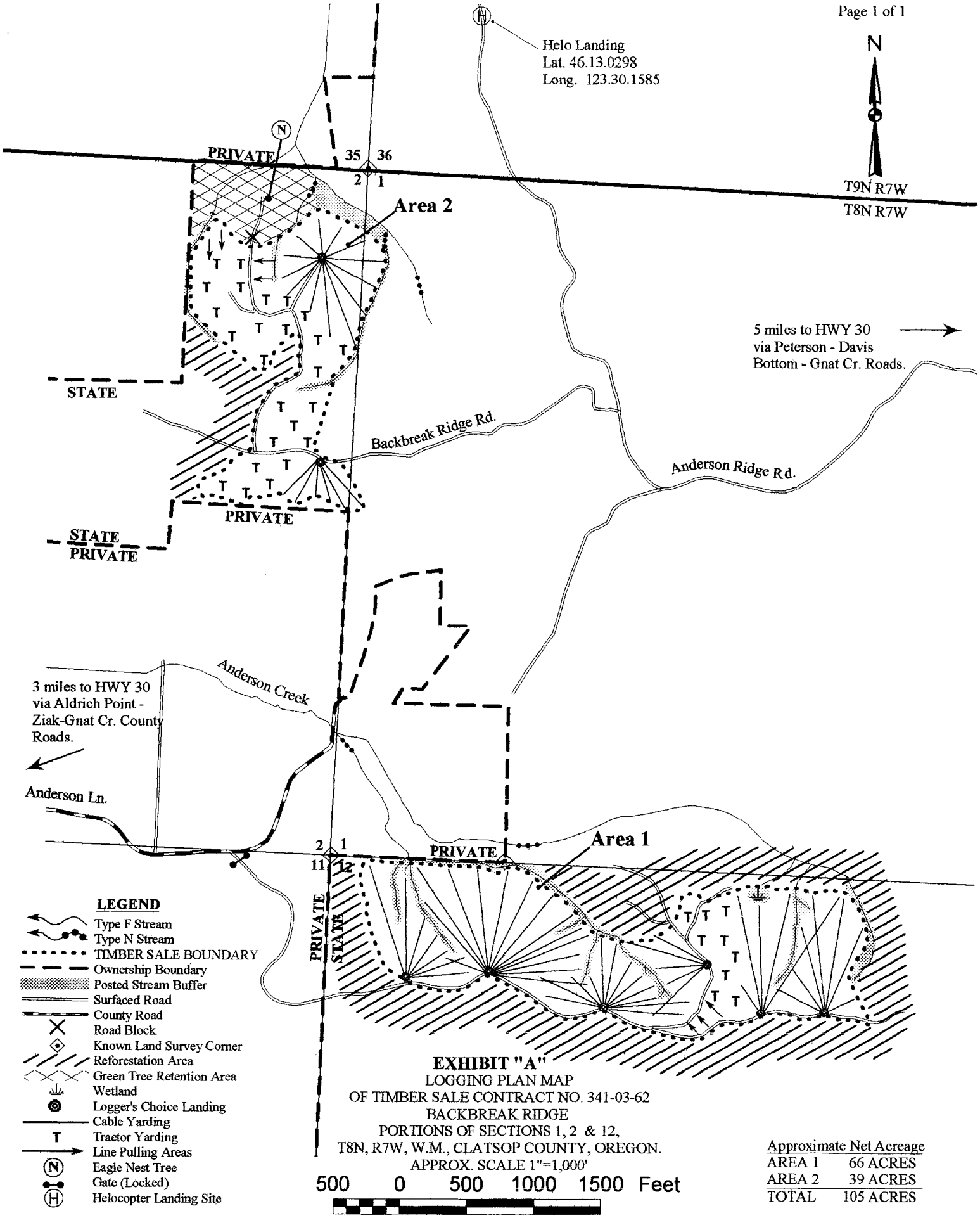


EXHIBIT "A"
LOGGING PLAN MAP
OF TIMBER SALE CONTRACT NO. 341-03-62
BACKBREAK RIDGE
PORTIONS OF SECTIONS 1, 2 & 12,
T8N, R7W, W.M., CLATSOP COUNTY, OREGON.
APPROX. SCALE 1"=1,000'

500 0 500 1000 1500 Feet

Approximate Net Acreage	
AREA 1	66 ACRES
AREA 2	39 ACRES
TOTAL	105 ACRES

Revised August, 2002

CRUISE DESIGN
ASTORIA DISTRICT

Sale Name: Backbreak Ridge **Area(s)** 1 & 2

Harvest Type: (CC) PC CT "Automark Thinning" (circle one)

Approx. Cruise Acres: 103 **Estimated CV%** 70% Net BF or BA/Acre **SE% Objective** 11 Net BF or BA/Acre

Planned Sale Volume: 3.9 MMBF **Estimated Sale Area Value/Acre:** $ 7961

A. **Cruise Goals:** (a) Grade minimum 150 conifer and 80 hardwood trees: (b) Sample 80 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;
*LWD Area 1 only, SLI standards.)

B. **Cruise Design:**

1. **Plot Cruises:** BAF 33.6 (Full point) Half point) (circle one) 11 bars
   Fixed Plot Size ____ Plot Radius ____ feet
   Cruise Line Direction(s) West - East
   Cruise Line Spacing 5 (chains) (feet)
   Cruise Plot Spacing 2.5 (chains) (feet)
   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 9 " for conifers and 9 " 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.

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). 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

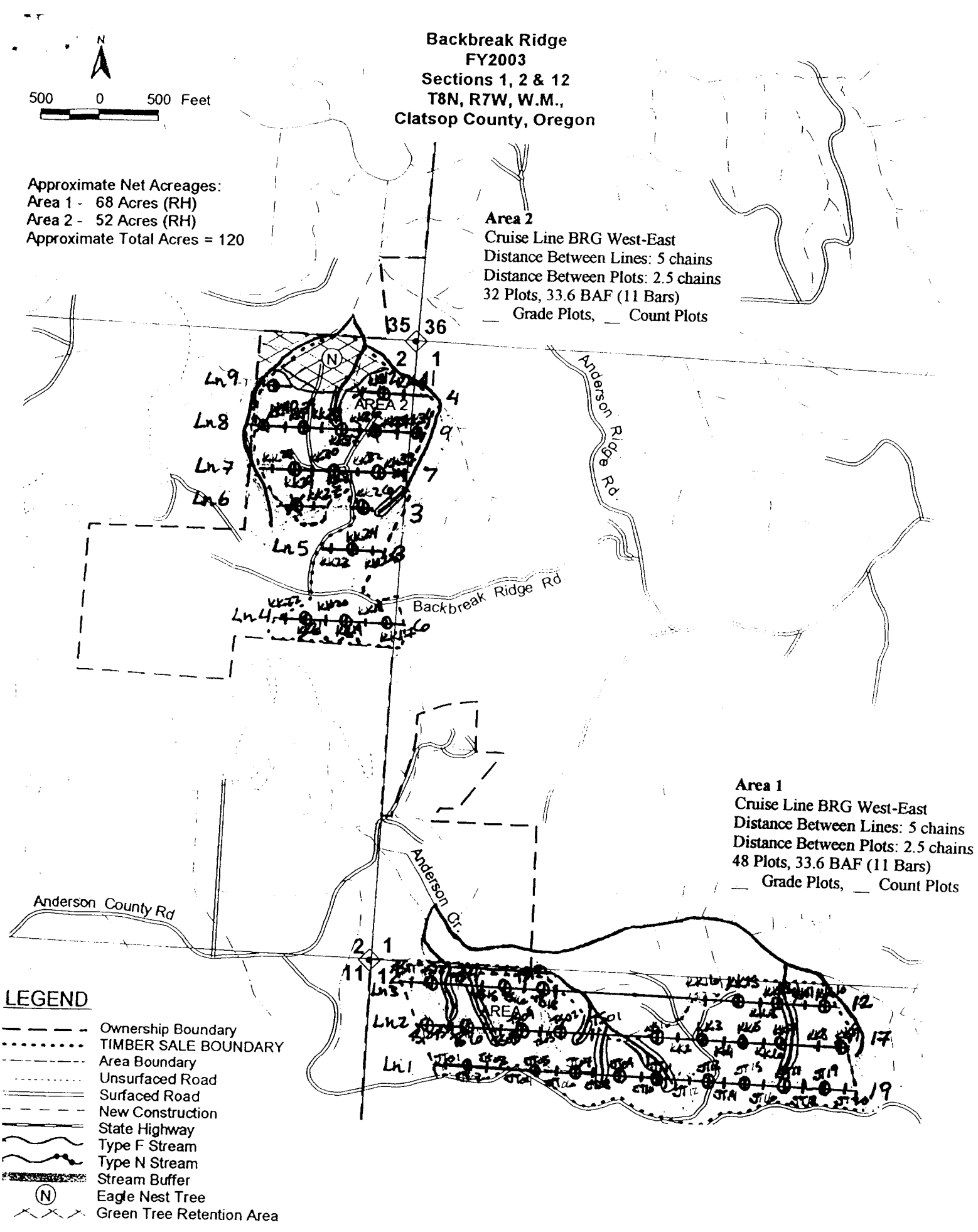
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally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

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.
B. Data Recorder Instructions
C. Other

Cruise Design by: Craig Kirkpatrick
Approved by: Tom Scoggin
Date: 9/4/02


N
500 0 500 Feet
Backbreak Ridge
FY2003
Sections 1, 2 & 12
T8N, R7W, W.M.,
Clatsop County, Oregon
Approximate Net Acreages:
Area 1 - 68 Acres (RH)
Area 2 - 52 Acres (RH)
Approximate Total Acres = 120
Area 2
Cruise Line BRG West-East
Distance Between Lines: 5 chains
Distance Between Plots: 2.5 chains
32 Plots, 33.6 BAF (11 Bars)
__ Grade Plots, __ Count Plots
Area 1
Cruise Line BRG West-East
Distance Between Lines: 5 chains
Distance Between Plots: 2.5 chains
48 Plots, 33.6 BAF (11 Bars)
__ Grade Plots, __ Count Plots
Anderson Ridge Rd.
Backbreak Ridge Rd
Anderson County Rd
Anderson Cr.
AREA 2
AREA 1
Ln1
Ln2
Ln3
Ln4
Ln5
Ln6
Ln7
Ln8
Ln9
LEGEND
Ownership Boundary
TIMBER SALE BOUNDARY
Area Boundary
Unsurfaced Road
Surfaced Road
New Construction
State Highway
Type F Stream
Type N Stream
Stream Buffer
Eagle Nest Tree
Green Tree Retention Area

TC TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: BACKBREA

Page 1
Date 10/24/2002
Time 11:27:25AM

T8N R7W S12 TTAKE

Twp	Rge	Sec	Tract	Type	Acre	Plots	Sample Trees	CuFt	BdFt
8N	7W	12	A 1&2	TAKE	105.00	80	183	1	W

T8N R7W S12 TTAKE

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Bd Ft	CF/ Lf	Logs Per /Acre
A		?	?														15		0.00	12.2
A		?	2S	3		144	144	15			100		100				15	98	1.45	1.5
A		?	3S	73	3.5	3,995	3,855	405		65	29	5	8	20	41	31	32	95	0.86	40.8
A		?	4S	24	.6	1,260	1,253	132		100			33	34	15	18	23	31	0.50	40.5
A	**Totals**			31	2.7	5,398	5,251	551		72	24	4	16	23	34	27	26	55	0.66	94.9
H		?	?														6		0.00	6.1
H		?	2S	29	1.5	2,224	2,190	230			86	14	3	15	15	67	34	246	1.72	8.9
H		?	3S	58	.8	4,308	4,275	449		70	9	21	2	3	32	63	35	107	0.81	40.0
H		?	4S	13		966	966	101		89	11		37	35	13	15	21	32	0.46	30.7
H	**Totals**			44	.9	7,498	7,431	780		52	32	16	7	11	24	58	28	87	0.81	85.7
D		?	?														12		0.00	5.2
D		?	2S	6		226	226	24			100		21	36	44		25	127	1.27	1.8
D		?	3S	80	.6	3,164	3,144	330		100			3	9	42	47	34	70	0.54	45.1
D		?	4S	14		552	552	58	6	94			73	12	15		19	23	0.34	24.1
D	**Totals**			23	.5	3,942	3,922	412	1	93	6		14	11	38	37	28	51	0.50	76.2
C		?	2S	43		152	152	16				100	100				20	500	7.30	.3
C		?	3S	30	5.4	112	106	11				100			100		32	350	2.56	.3
C		?	4S	26		92	92	10		100			70	30			19	26	0.63	3.5
C	**Totals**			2	1.7	356	350	37		26		74	62	8	30		20	85	1.36	4.1
M		?	?														20		0.00	.9
M		DO	3S	83		25	25	3			100		100				10	50	1.10	.5
M		DO	4S	17		5	5	1		100			100				8	10	0.50	.5
M	**Totals**			0		29	29	3		17	83		100				14	15	0.27	1.9
Type Totals					1.4	17,224	16,984	1,783	0	67	23	10	13	14	31	42	27	65	0.67	262.9

TC TSTATS

STATISTICS

PROJECT BACKBREA

DATE 10/24/2002

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
8N	7W	12	A 1&2	TAKE	105.00	80	360	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	80	360	4.5		
CRUISE	40	183	4.6	15,793	1.2
DBH COUNT					
REFOREST					
COUNT	39	177	4.5		
BLANKS	1				
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	78	60.5	13.3	41		58.8	5,398	5,251	1,603	1,603
WHEMLOCK	65	44.2	15.0	57		54.2	7,498	7,431	1,961	1,961
DOUG FIR	34	41.4	11.7	53		31.1	3,942	3,922	1,051	1,051
WR CEDAR	2	3.5	16.2	24		5.0	356	350	110	110
BL MAPLE	4	.8	22.3	37		2.1	29	29	7	7
TOTAL	*183*	*150.4*	*13.6*	*49*		*151.2*	*17,224*	*16,984*	*4,732*	*4,732*

SAMPLE TREES - BF

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
R ALDER	162.3	12.0	47	54	60			
WHEMLOCK	224.0	16.6	98	117	137			
DOUG FIR	243.4	18.0	17	21	25			
WR CEDAR	1324.7	97.9	0	5	10			
BL MAPLE	1352.8	100.0		0	1			
TOTAL	*126.1*	*9.3*	*179*	*197*	*216*	*636*	*159*	*71*

SAMPLE TREES - CF

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
R ALDER	155.6	11.5	14	16	18			
WHEMLOCK	201.0	14.9	24	29	33			
DOUG FIR	242.1	17.9	5	6	7			
WR CEDAR	1302.8	96.3	0	1	3			
BL MAPLE	1352.8	100.0		0	0			
TOTAL	*103.6*	*7.7*	*48*	*52*	*56*	*429*	*107*	*48*

TREES/ACRE

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
R ALDER	127.9	14.3	52	61	69			
WHEMLOCK	129.3	14.5	38	44	51			
DOUG FIR	179.4	20.1	33	41	50			
WR CEDAR	337.1	37.7	2	4	5			
BL MAPLE	515.9	57.7	0	1	1			
TOTAL	*65.4*	*7.3*	*139*	*150*	*161*	*171*	*43*	*19*

BASAL AREA/ACRE

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
R ALDER	118.4	13.2	51	59	67			
WHEMLOCK	113.1	12.7	47	54	61			
DOUG FIR	176.1	19.7	25	31	37			
WR CEDAR	337.1	37.7	3	5	7			
BL MAPLE	465.5	52.0	1	2	3			
TOTAL	*50.6*	*5.7*	*143*	*151*	*160*	*103*	*26*	*11*

NET BF/ACRE

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15

STATISTICS

PROJECT BACKBREA

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
8N	7W	12	A 1&2	TAKE	105.00	80	360	1	W

NET BF/ACRE

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
R ALDER	118.4	13.2	4,556	5,251	5,947			
WHEMLOCK	113.2	12.7	6,491	7,431	8,372			
DOUG FIR	181.2	20.3	3,127	3,922	4,717			
WR CEDAR	337.1	37.7	218	350	482			
BL MAPLE	735.4	82.2	5	29	54			
TOTAL	*54.3*	*6.1*	*15,953*	*16,984*	*18,015*	*118*	*29*	*13*

NET CUFT FT/ACRE

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
R ALDER	118.7	13.3	1,390	1,603	1,815			
WHEMLOCK	112.2	12.5	1,715	1,961	2,207			
DOUG FIR	177.4	19.8	842	1,051	1,259			
WR CEDAR	337.1	37.7	69	110	152			
BL MAPLE	735.4	82.2	1	7	13			
TOTAL	*52.3*	*5.8*	*4,455*	*4,732*	*5,009*	*109*	*27*	*12*

TC TSTATS

STATISTICS

PROJECT BACKBREA

DATE 10/24/2002

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
8N	7W	12	A 1&2	0001	105.00	80	379	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	80	379	4.7		
CRUISE	40	197	4.9	16,418	1.2
DBH COUNT					
REFOREST					
COUNT	39	182	4.7		
BLANKS	1				
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	78	60.5	13.3	41		58.8	5,398	5,251	1,603	1,603
WHEMLOCK	65	44.2	15.0	57		54.2	7,498	7,431	1,961	1,961
DOUG FIR	34	41.4	11.7	53		31.1	3,942	3,922	1,051	1,051
WR CEDAR	2	3.5	16.2	24		5.0	356	350	110	110
HEMLEAV	7	2.0	18.8	64		3.8	426	426	108	108
DOUGLEAV	4	3.5	11.5	58		2.5	348	344	91	91
BL MAPLE	4	.8	22.3	37		2.1	29	29	7	7
ALDRLEAV	3	.5	21.1	52		1.3	114	114	32	32
TOTAL	*197*	*156.4*	*13.6*	*49*		*158.8*	*18,112*	*17,868*	*4,963*	*4,963*

SAMPLE TREES - BF

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
R ALDER	170.7	12.2	44	50	56			
WHEMLOCK	234.0	16.7	91	109	127			
DOUG FIR	254.0	18.1	16	19	23			
WR CEDAR	1374.5	97.9	0	5	10			
HEMLEAV	655.9	46.7	6	12	18			
DOUGLEAV	765.1	54.5	1	2	4			
BL MAPLE	1403.6	100.0		0	1			
ALDRLEAV	909.4	64.8	1	4	6			
TOTAL	*122.6*	*8.7*	*184*	*201*	*219*	*601*	*150*	*67*

SAMPLE TREES - CF

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
R ALDER	163.8	11.7	13	15	17			
WHEMLOCK	210.3	15.0	23	27	30			
DOUG FIR	252.7	18.0	4	5	6			
WR CEDAR	1351.8	96.3	0	1	3			
HEMLEAV	627.6	44.7	2	3	4			
DOUGLEAV	775.0	55.2	0	1	1			
BL MAPLE	1403.6	100.0		0	0			
ALDRLEAV	893.7	63.7	0	1	2			
TOTAL	*101.2*	*7.2*	*49*	*53*	*56*	*410*	*102*	*46*

TREES/ACRE

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
R ALDER	127.9	14.3	52	61	69			
WHEMLOCK	129.3	14.5	38	44	51			
DOUG FIR	179.4	20.1	33	41	50			
WR CEDAR	337.1	37.7	2	4	5			
HEMLEAV	372.2	41.6	1	2	3			
DOUGLEAV	551.5	61.7	1	3	6			
BL MAPLE	515.9	57.7	0	1	1			
ALDRLEAV	516.6	57.8	0	1	1			

STATISTICS

PROJECT BACKBREA

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
8N	7W	12	A 1&2	0001	105.00	80	379	1	W

TREES/ACRE

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
TOTAL	*62.4*	*7.0*	*145*	*156*	*167*	*156*	*39*	*17*

BASAL AREA/ACRE

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
R ALDER	118.4	13.2	51	59	67			
WHEMLOCK	113.1	12.7	47	54	61			
DOUG FIR	176.1	19.7	25	31	37			
WR CEDAR	337.1	37.7	3	5	7			
HEMLEAV	447.1	50.0	2	4	6			
DOUGLEAV	552.2	61.7	1	3	4			
BL MAPLE	465.5	52.0	1	2	3			
ALDRLEAV	509.8	57.0	1	1	2			
TOTAL	*46.8*	*5.2*	*151*	*159*	*167*	*88*	*22*	*10*

NET BF/ACRE

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
R ALDER	118.4	13.2	4,556	5,251	5,947			
WHEMLOCK	113.2	12.7	6,491	7,431	8,372			
DOUG FIR	181.2	20.3	3,127	3,922	4,717			
WR CEDAR	337.1	37.7	218	350	482			
HEMLEAV	438.9	49.1	217	426	636			
DOUGLEAV	559.4	62.5	129	344	559			
BL MAPLE	735.4	82.2	5	29	54			
ALDRLEAV	549.2	61.4	44	114	184			
TOTAL	*50.8*	*5.7*	*16,852*	*17,868*	*18,883*	*103*	*26*	*11*

NET CUFT FT/ACRE

SD: 1	COEFF VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
R ALDER	118.7	13.3	1,390	1,603	1,815			
WHEMLOCK	112.2	12.5	1,715	1,961	2,207			
DOUG FIR	177.4	19.8	842	1,051	1,259			
WR CEDAR	337.1	37.7	69	110	152			
HEMLEAV	424.0	47.4	57	108	159			
DOUGLEAV	549.3	61.4	35	91	147			
BL MAPLE	735.4	82.2	1	7	13			
ALDRLEAV	532.1	59.5	13	32	50			
TOTAL	*48.4*	*5.4*	*4,694*	*4,963*	*5,232*	*94*	*23*	*10*

TC TSTNDSUM

Stand Table Summary

Project BACKBREA

T8N R7W S12 T0001

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
8N	7W	12	A 1&2	0001	105.00	80	197

Date: 10/24/20(
Time: 1:50:14PM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
H		9	3	83	64	5.662	2.50	7.55	8.2	32.5		62	245		65	26
H		10	3	86	62	4.586	2.50	6.11	10.0	35.0		61	214		64	22
H		11	6	85	88	7.580	5.00	15.16	10.9	38.3		166	581		174	61
H		12	3	83	74	3.279	2.50	4.34	17.5	52.7		76	229		80	24
H		13	4	85	80	3.692	3.34	6.48	16.6	54.8		108	355		113	37
H		14	6	84	92	4.680	5.00	9.36	19.5	69.2		183	647		192	68
H		15	3	89	88	2.038	2.50	4.08	24.2	93.3		99	380		103	40
H		16	3	90	88	1.831	2.50	3.66	27.0	100.1		99	367		104	38
H		17	4	85	84	2.116	3.34	4.76	24.7	86.7		117	413		123	43
H		18	3	92	96	1.415	2.50	3.30	32.9	127.1		109	420		114	44
H		19	5	91	97	2.117	4.17	4.66	38.2	146.4		178	682		187	72
H		20	2	78	86	.764	1.67	1.53	31.3	102.5		48	157		50	16
H		21	2	83	108	.693	1.67	1.73	41.0	150.0		71	260		75	27
H		22	1	80	80	.316	.83	.63	31.0	105.0		20	66		21	7
H		23	3	80	121	.867	2.50	2.60	45.6	175.6		118	457		124	48
H		24	2	87	106	.531	1.67	1.33	57.6	224.0		76	297		80	31
H		26	2	84	118	.452	1.67	1.36	59.8	238.3		81	323		85	34
H		27	3	82	114	.629	2.50	1.68	60.5	253.8		101	426		107	45
H		30	2	76	112	.340	1.67	.85	59.2	254.0		50	216		53	23
H		31	1	86	144	.159	.83	.48	66.7	356.7		32	170		33	18
H		34	1	80	149	.132	.83	.53	89.7	417.5		47	221		50	23
H		36	1	75	115	.118	.83	.24	52.0	210.0		12	50		13	5
H		41	1	72	146	.091	.83	.27	85.3	470.0		23	128		24	13
H		42	1	80	121	.087	.83	.26	90.3	493.3		23	128		25	13
H		Totals	65	85	84	44.176	54.20	82.94	23.6	89.6		1,961	7,431		2,059	780
A		9	8	86	58	13.655	6.03	15.36	8.3	28.9		128	444		134	47
A		10	4	85	54	5.530	3.02	5.53	9.5	30.0		53	166		55	17
A		11	4	86	69	4.570	3.02	6.86	12.2	38.3		83	263		88	28
A		12	9	86	58	8.726	6.79	5.85	19.5	56.7		114	332		120	35
A		13	9	85	62	7.363	6.79	9.00	20.0	56.4		180	507		189	53
A		14	4	86	77	2.822	3.02	4.94	20.6	70.0		102	346		107	36
A		15	5	87	65	3.072	3.77	6.76	16.9	57.3		114	387		120	41
A		16	10	86	68	5.401	7.54	10.26	22.8	75.8		234	778		246	82
A		17	5	86	75	2.392	3.77	4.78	26.6	89.0		127	426		134	45
A		18	7	87	68	2.987	5.28	6.40	26.2	88.7		168	568		176	60
A		19	2	86	59	.766	1.51	1.15	29.3	80.0		34	92		35	10
A		20	3	86	74	1.037	2.26	2.07	37.3	125.0		77	259		81	27
A		21	1	86	82	.314	.75	.63	47.0	165.0		29	103		31	11
A		22	4	87	62	1.143	3.02	2.29	38.1	141.3		87	323		91	34
A		23	1	84	79	.261	.75	.52	50.5	165.0		26	86		28	9
A		24	2	87	67	.480	1.51	.96	47.0	180.0		45	173		47	18
A		Totals	78	86	63	60.519	58.82	83.35	19.2	63.0		1,603	5,251		1,683	551
D		9	2	83	60	4.140	1.83	2.07	12.0	40.0		25	83		26	9
D		10	5	82	77	8.745	4.57	12.10	10.8	43.4		131	525		138	55
D		11	7	85	102	10.239	6.40	19.09	11.3	43.3		216	827		227	87
D		12	4	85	86	4.657	3.66	9.31	12.8	41.3		119	384		125	40
D		13	7	88	106	7.268	6.40	14.54	16.7	64.5		242	937		255	98
D		14	2	85	104	1.711	1.83	3.42	20.3	70.0		69	240		73	25
D		15	2	87	93	1.542	1.83	3.08	21.7	80.3		67	248		70	26
D		16	2	88	98	1.353	1.83	2.71	26.0	97.6		70	264		74	28
D		17	3	84	108	1.776	2.74	4.71	23.5	87.9		111	414		116	43

TC TSTNDSUM

Stand Table Summary

Project BACKBREA

T8N R7W S12 T0001

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
8N	7W	12	A 1&2	0001	105.00	80	197

T8N R7W S12 T0001

Date: 10/24/20(

Time: 1:50:14PM

Spc	ST	Sample DBH	Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
D		Totals	34	85	91	41.430	31.09	71.03	14.8	55.2		1,051	3,922		1,103	412
HL		13	1	94	102	.634	.54	1.27	20.5	90.0		26	114		27	12
HL		15	1	83	51	.440	.54	.44	28.0	60.0		12	26		13	3
HL		17	1	89	61	.343	.54	.69	22.0	90.0		15	62		16	6
HL		22	1	80	99	.205	.54	.41	22.0	80.0		9	33		9	3
HL		24	1	80	99	.172	.54	.34	65.0	215.0		22	74		23	8
HL		33	1	81	108	.091	.54	.27	59.0	276.7		16	75		17	8
HL		35	1	81	112	.081	.54	.08	91.0	520.0		7	42		8	4
HL		Totals	7	87	84	1.965	3.78	3.50	30.9	121.8		108	426		114	45
C		12	1	70	28	3.210	2.52	3.21	10.0	20.0		32	64		34	7
C		39	1	69	108	.304	2.52	.91	85.7	313.3		78	286		82	30
C		Totals	2	70	35	3.513	5.04	4.12	26.7	84.9		110	350		116	37
DL		10	1	87	104	1.155	.63	2.31	9.5	40.0		22	92		23	10
DL		11	1	87	99	.955	.63	1.91	10.0	40.0		19	76		20	8
DL		12	1	87	111	.874	.63	1.75	13.5	45.0		24	79		25	8
DL		16	1	86	112	.481	.63	.96	27.5	100.0		26	96		28	10
DL		Totals	4	87	105	3.465	2.52	6.93	13.1	49.6		91	344		96	36
AL		20	2	86	63	.385	.84	.58	29.3	106.7		17	62		18	6
AL		24	1	87	71	.134	.42	.27	54.5	195.0		15	52		15	5
AL		Totals	3	86	65	.519	1.26	.85	37.3	134.6		32	114		33	12
M		14	1	84	47	.491	.53	.98	7.5	30.0		7	29		8	3
M		27	1	83	44	.132	.53									
M		34	1	69	65	.083	.53									
M		38	1	68	64	.067	.53									
M		Totals	4	81	50	.773	2.10	.98	7.5	30.0		7	29		8	3
Totals			197	85	77	156.361	158.81	253.71	19.6	70.4		4963	17,868		5,211	1,876

FPA "Written Plan" for Harvest of State Timber Sale
Backbreak Ridge
Portions of Sections 1, 2 & 12, T8N, R7W, W.M., Clatsop County, Oregon.

(1) Protected Resources:

Unnamed tributary to Blind Slough: Small Type F Stream

Specific Site Characteristics:
Sale areas 1 & 2 are clearcut units.

Unnamed tributary stream of Blind Slough (small Type F) flows in a northerly direction adjacent to the northeast corner of Area 2 and is posted out of the sale area with a 100 foot or greater buffer.

Tree and Vegetation Retention:

Unnamed tributary stream of Blind Slough: The RMA consists of alder, 63 year old conifer and various brush species.

Resource Protection Measures:

Felling: Trees are to be felled away from or parallel to the RMA to prevent them from entering the RMA. Any felled trees that may accidentally enter the RMA will be removed only with the STATE contract administrator's approval. Any felled trees that may accidentally enter the RMA will be yarded out of the RMA before limbing and bucking.

Yarding: There will be no machine activity permitted within the RMA and no temporary stream crossings will be permitted across Type F streams. When cables pass through or over the RMA, precautions will be taken to protect the residual timber. These precaution measures include but are not limited to:

A. Cables will be pulled out of the residual timber before rigging the next yarding road.

B. Operator will avoid lowering the skyline into RMA during the yarding cycle. If this is not feasible, then lowering of the skyline will be limited to that which is necessary to release logs at the landing and lines will be eased into and out of the RMA to minimize damage to vegetation.

C. Yarding roads will be located in "natural" openings and/or where cables will not cause damage to conifer trees within the RMA.

D. All skid trails on slopes exceeding 10%, or within 100 feet of a stream, will be waterbarred prior to the rainy season

Aquatic Protection: Debris entering the RMA or aquatic area will be removed by the end of operations each day or as soon as possible and placed in a stable location, unless an alternate practice is approved by STATE.

(2) Protected Resource:

Brownsmead Bald Eagle Nesting Site.

Specific Site Characteristics:

Brownsmead Bald Eagle Nesting Site located just off the end of the northern most landing in a Green Tree Retention Area on the northern portion of Area 2. Legal description of the nest location is NE¼NE¼ of Section 2, T8N, R7W, W.M., Clatsop County, Oregon.

FPA "Written Plan" for Harvest of State Timber Sale
Backbreak Ridge
Portions of Sections 1, 2 & 12, T8N, R7W, W.M., Clatsop County, Oregon.

Tree and Vegetation Retention:

The Green Tree Retention Area (GTRA) surrounding the nest tree is approximately 11 acres (determined by GIS) containing approxiamately 1,200 trees of approximately 63 year old conifers and various brush species. The southern portion of the buffer is posted with Timber Sale Boundary signs and pink ribbon. Additional trees were marked with blue "W's" to the southeast of the forested buffer to provide additional bald eagle nesting opportunity. These older remnant trees include 3 Sitka spruce, 3 western hemlocks and 3 Douglas-fir trees. In addition to these marked perch trees there are at least five marked wildlife trees per acre that are grouped near Type "N" stream buffers and around the nine identified nest replacement trees.

Resource Protection Measures:

Felling: Trees are to be felled away from or parallel to the GTRA to prevent them from entering the GTRA. Any felled trees that may accidentally enter the GTRA will be removed only with the STATE contract administrator's approval. Any felled trees that may accidentally enter the GTRA will be yarded out of the GTRA before limbing and bucking.

Yarding: There will be no machine activity permitted within the GTRA.

During the critical period of use (January 1 through August 31, annually), operations shall not be permitted within ¼ mile of the active nest tree or perch trees. If the eagles have line-of-site vision from these trees to the operation, the distance is ½ mile.

I, the undersigned, submit this written plan in compliance with the requirements in the Forest Practices Act regarding the operations conducted within ¼ mile of a Bald Eagle Nesting Site and within 100 feet of streams with the Riparian Management Areas (buffer strips) as shown on the attached map, Exhibit "A".

Submitted by: _____ Date: _____
Operator

Approved by: _____ Date: _____
State Lands Forester

_____ Date: _____
Forest Practices Forester

Attachments: Timber Sale Exhibit "A" map.
Site Management Plan for the Brownmead Bald Eagle Nesting Territory.

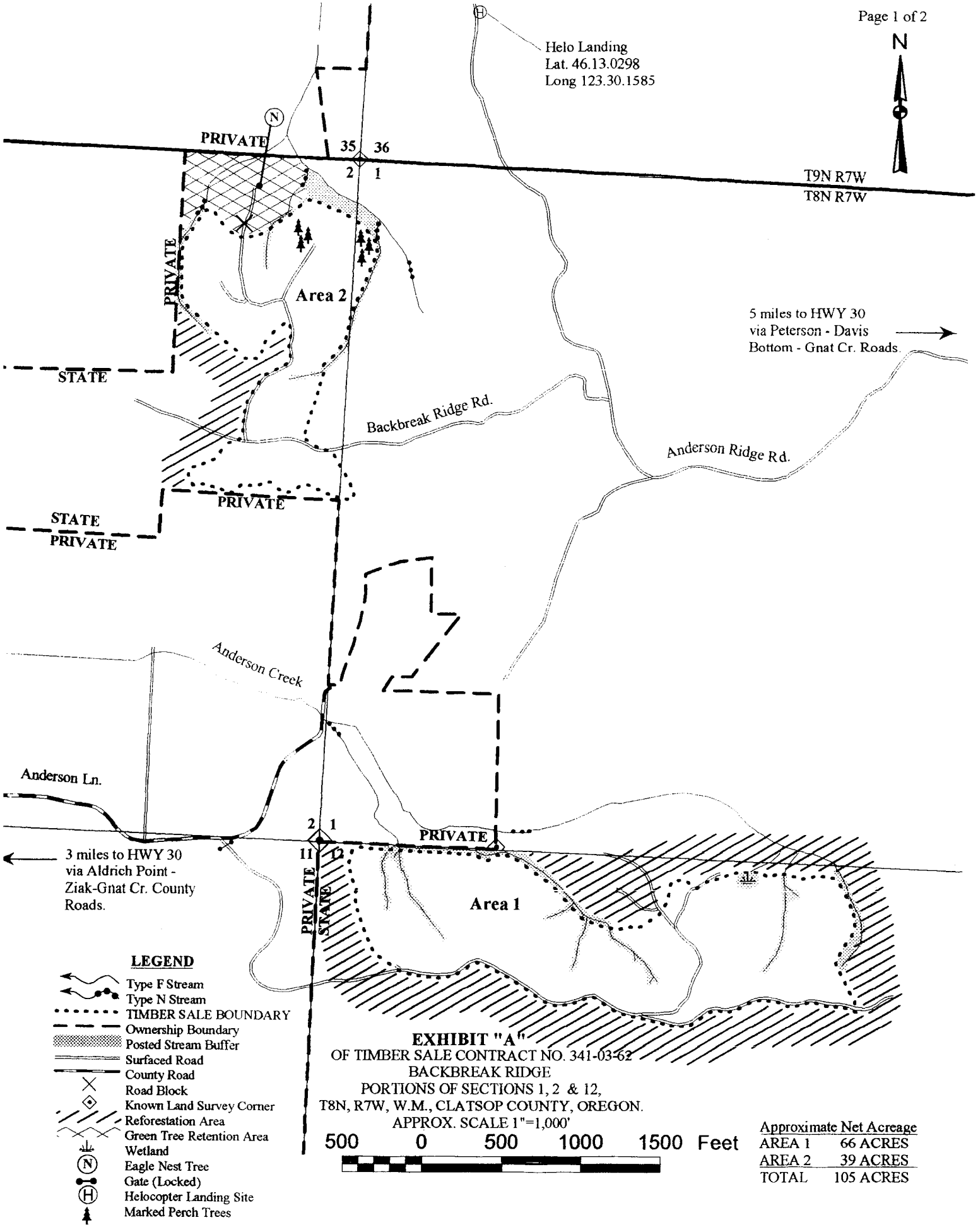


EXHIBIT "A"
OF TIMBER SALE CONTRACT NO. 341-03-62
BACKBREAK RIDGE
PORTIONS OF SECTIONS 1, 2 & 12,
T8N, R7W, W.M., CLATSOP COUNTY, OREGON.
APPROX. SCALE 1"=1,000'

Approximate Net Acreage	
AREA 1	66 ACRES
AREA 2	39 ACRES
TOTAL	105 ACRES

FPA "Written Plan" for Harvest of State Timber Sale
Backbreak Ridge
Portions of Sections 1, 2 & 12, T8N, R7W, W.M., Clatsop County, Oregon.

(1) Protected Resources:

Unnamed tributary to Blind Slough: Small Type F Stream

Specific Site Characteristics:
Sale areas 1 & 2 are clearcut units.

Unnamed tributary stream of Blind Slough (small Type F) flows in a northerly direction adjacent to the northeast corner of Area 2 and is posted out of the sale area with a 100 foot or greater buffer.

Tree and Vegetation Retention:

Unnamed tributary stream of Blind Slough: The RMA consists of alder, 63 year old conifer and various brush species.

Resource Protection Measures:

Felling: Trees are to be felled away from or parallel to the RMA to prevent them from entering the RMA. Any felled trees that may accidentally enter the RMA will be removed only with the STATE contract administrator's approval. Any felled trees that may accidentally enter the RMA will be yarded out of the RMA before limbing and bucking.

Yarding: There will be no machine activity permitted within the RMA and no temporary stream crossings will be permitted across Type F streams. When cables pass through or over the RMA, precautions will be taken to protect the residual timber. These precaution measures include but are not limited to:

A. Cables will be pulled out of the residual timber before rigging the next yarding road.

B. Operator will avoid lowering the skyline into RMA during the yarding cycle. If this is not feasible, then lowering of the skyline will be limited to that which is necessary to release logs at the landing and lines will be eased into and out of the RMA to minimize damage to vegetation.

C. Yarding roads will be located in "natural" openings and/or where cables will not cause damage to conifer trees within the RMA.

D. All skid trails on slopes exceeding 10%, or within 100 feet of a stream, will be waterbarred prior to the rainy season

Aquatic Protection: Debris entering the RMA or aquatic area will be removed by the end of operations each day or as soon as possible and placed in a stable location, unless an alternate practice is approved by STATE.

(2) Protected Resource:

Brownsmead Bald Eagle Nesting Site.

Specific Site Characteristics:

Brownsmead Bald Eagle Nesting Site located just off the end of the northern most landing in a Green Tree Retention Area on the northern portion of Area 2. Legal description of the nest location is NE¼NE¼ of Section 2, T8N, R7W, W.M., Clatsop County, Oregon.

FPA "Written Plan" for Harvest of State Timber Sale
Backbreak Ridge
Portions of Sections 1, 2 & 12, T8N, R7W, W.M., Clatsop County, Oregon.

Tree and Vegetation Retention:

The Green Tree Retention Area (GTRA) surrounding the nest tree is approximately 11 acres (determined by GIS) containing approxiamately 1,200 trees of approximately 63 year old conifers and various brush species. The southern portion of the buffer is posted with Timber Sale Boundary signs and pink ribbon. Additional trees were marked with blue "W's" to the southeast of the forested buffer to provide additional bald eagle nesting opportunity. These older remnant trees include 3 Sitka spruce, 3 western hemlocks and 3 Douglas-fir trees. In addition to these marked perch trees there are at least five marked wildlife trees per acre that are grouped near Type "N" stream buffers and around the nine identified nest replacement trees.

Resource Protection Measures:

Felling: Trees are to be felled away from or parallel to the GTRA to prevent them from entering the GTRA. Any felled trees that may accidentally enter the GTRA will be removed only with the STATE contract administrator's approval. Any felled trees that may accidentally enter the GTRA will be yarded out of the GTRA before limbing and bucking.

Yarding: There will be no machine activity permitted within the GTRA.

During the critical period of use (January 1 through August 31, annually), operations shall not be permitted within ¼ mile of the active nest tree or perch trees. If the eagles have line-of-site vision from these trees to the operation, the distance is ½ mile.

I, the undersigned, submit this written plan in compliance with the requirements in the Forest Practices Act regarding the operations conducted within ¼ mile of a Bald Eagle Nesting Site and within 100 feet of streams with the Riparian Management Areas (buffer strips) as shown on the attached map, Exhibit "A".

Submitted by: _____ Date: _____
Operator

Approved by: _____ Date: _____
State Lands Forester

_____ Date: _____
Forest Practices Forester

Attachments: Timber Sale Exhibit "A" map.
Site Management Plan for the Brownmead Bald Eagle Nesting Territory.

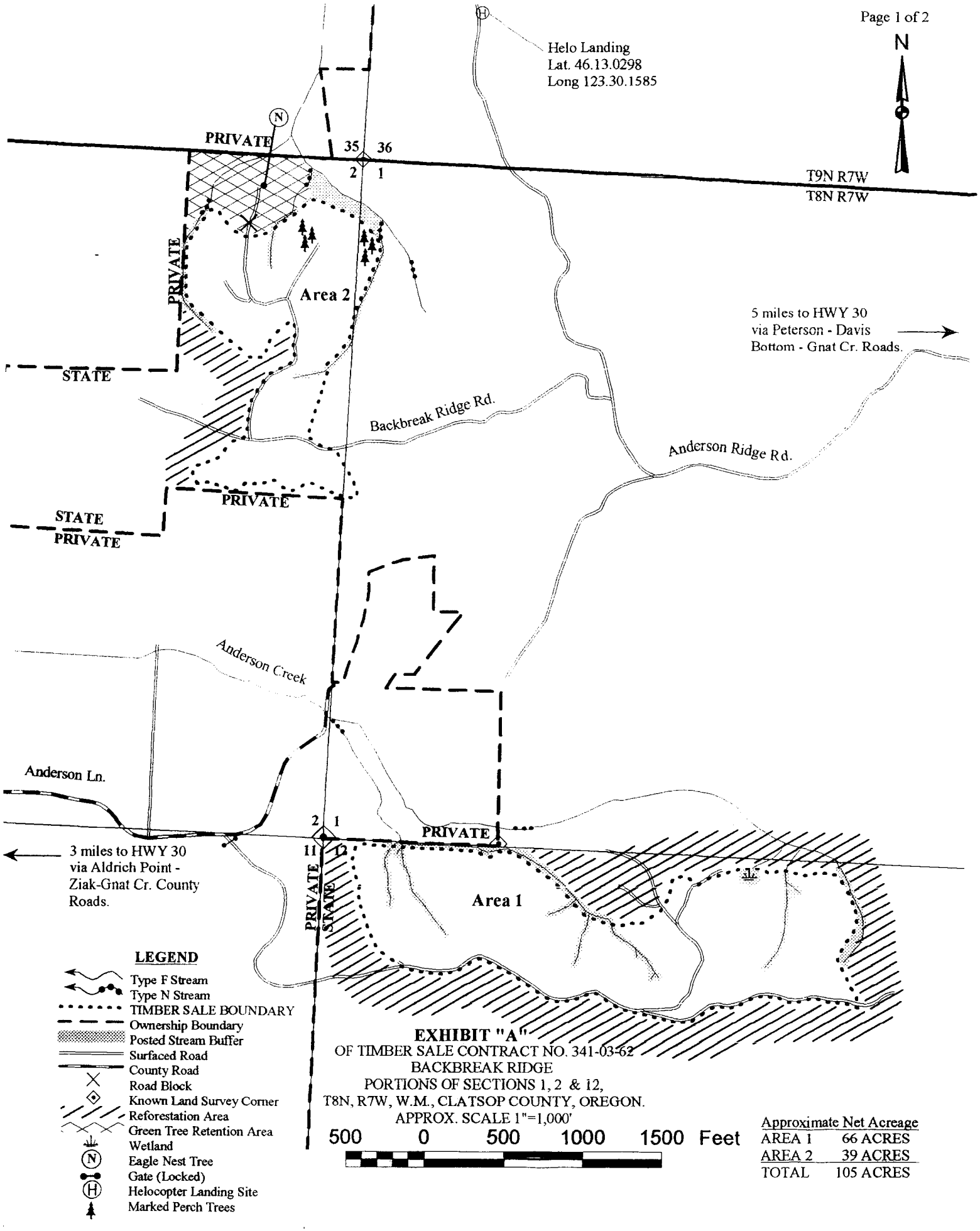


EXHIBIT "A"
OF TIMBER SALE CONTRACT NO. 341-03-62
BACKBREAK RIDGE
PORTIONS OF SECTIONS 1, 2 & 12,
T8N, R7W, W.M., CLATSOP COUNTY, OREGON.
APPROX. SCALE 1"=1,000'

Approximate Net Acreage	
AREA 1	66 ACRES
AREA 2	39 ACRES
TOTAL	105 ACRES