"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Jackpipe
Sale 341-07-67

District: **Astoria**

Date: **April 17, 2007**

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sales Value	$766,044.40	$174,410.60	$940,455.00
		Project Work:	$(130,793.00)
		Advertised Value:	$809,662.00

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District: **Astoria** **Date:** **April 17, 2007**

Timber Description

Location: Portions of Sections 14, 15, 22, 23, 25, 26, and 27, T8N, R9W, W.M., Clatsop County, Oregon.

Stand Stocking: 60%

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

Volume by Grade	2S	3S	4S	Campr	Total
Douglas - Fir	88	288	76	0	452
Western Hemlock / Fir	2,015	2,207	366	0	4,588
Sitka Spruce	233	164	69	0	466
Alder (Red)	0	0	0	370	370
Total	2,336	2,659	511	370	5,876

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Comments: Pond Values Used: 1st Quarter Calendar Year 2007 + Local Pond Values

Log Markets: Tillamook, Longview, Aberdeen, Willamette Valley

Western Red Cedar Stumpage Price = Pond Value minus Logging Cost:
$901.15/MBF = $1,150/MBF - $248.85/MBF

OTHER COSTS (Profit & Risk to be added):
Log skidding from Area 3 cable landing to loading site on Scandinavian Cannery Road: $13.78/MBF x 218MBF = $2,976
100% Brand and Paint: $1.00/MBF x 5,873 = $5,876
Log loader slash piling in Areas A, C & D: $87.5/hr x 10.6 hrs = $928
Slash Piling at Cable Landings: 3hrs/landing X 5 landings X $87.50/hr = $1,313
TOTAL OTHER COSTS (Profit & Risk to be added) = $11,093

OTHER COSTS (NO P&R included):
Snag Creation - Tree topping: $45/tree x 96 trees = $4,320
Construction of 6 waterbars along 5A-5B = $200
Excavator Slash Piling for Areas 1, 4, 5, and B = 60.8hrs X $120/hr = $7,296
Excavator Move-in: 2 times X $945/move = $1,890
Protection of Natural Gas Line in Area 1: Develop and haul 40 cyds pit-run x $16.11/cy = $644

TOTAL OTHER COSTS (NO P&R included): $14,350

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District: Astoria **Date: April 17, 2007**

Logging Conditions

Combination#: 1

Douglas - Fir	33.11%
Western Hemlock / Fir	59.87%
Sitka Spruce	66.25%
Alder (Red)	82.51%

Yarding Distance Medium (800 ft) **Downhill Yarding:** No
Logging System: Cable: Medium Tower >40 - <70 **Process**: Stroke Delimber
Tree Size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
Loads / Day: 8.0 **Bd. Ft / Load:** 4,000
Cost / MBF: $104.50

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

Combination#: 2

Douglas - Fir	5.39%
Western Hemlock / Fir	9.75%
Sitka Spruce	10.79%
Alder (Red)	13.43%

Yarding Distance Medium (800 ft) **Downhill Yarding:** No
Logging System: Shovel **Process**: Manual Delimbing
Tree Size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
Loads / Day: 8.0 **Bd. Ft / Load:** 4,000
Cost / MBF: $78.27

Machines: Shovel Logger

Combination#: 3

Douglas - Fir	3.69%
Western Hemlock / Fir	1.43%
Sitka Spruce	1.38%
Alder (Red)	0.24%

Yarding Distance Medium (800 ft) **Downhill Yarding:** No
Logging System: Cable: Medium Tower >40 - <70 **Process**: Stroke Delimber
Tree Size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
Loads / Day: 4.0 **Bd. Ft / Load:** 4,000
Cost / MBF: $209.01

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

Combination#: 4

Douglas - Fir	57.81%
Western Hemlock / Fir	28.96%
Sitka Spruce	21.58%
Alder (Red)	3.81%

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Jackpipe
Sale 341-07-67

District: Astoria **Date: April 17, 2007**

Yarding Distance	Medium (800 ft)	**Downhill Yarding:**	No
Logging System:	Track Skidder	**Process**:	Feller Buncher
Tree Size:	Small / Thinning 9in (70 Bft/tree), 20+ logs/MBF		
Loads / Day:	6.0	**Bd. Ft / Load:**	4,000
Cost / MBF:	$146.62		

Machines:
Log Loader (B)
Stroke Delimber (B)
Feller Buncher w/ Delimber
Track Skidder

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Jackpipe
Sale 341-07-67

District: Astoria **Date:** April 17, 2007

Logging Costs

Operating Seasons:	3.00	**Profit Risk:**	18.00%
Project Costs:	$130,793.00	**Other Costs (P/R):**	$11,093.00
Slash Disposal:	$0.00	**Other Costs:**	$14,350.00

Miles of Road

Road Maintenance: $5.08

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

Hauling Costs

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

Local Pond Values

Date	Specie	Grade	Value
4/17/07	Douglas - Fir	2S	$555.00
4/17/07	Douglas - Fir	3S	$555.00
4/17/07	Douglas - Fir	4S	$555.00
4/17/07	Western Hemlock / Fir	2S	$365.00
4/17/07	Western Hemlock / Fir	3S	$365.00
4/17/07	Western Hemlock / Fir	4S	$365.00

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Jackpipe
Sale 341-07-67

District: Astoria **Date:** April 17, 2007

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
$131.29	$5.23	$2.24	$87.29	$1.89	$41.03	$0.00	$2.00	$2.44	$273.41
Western Hemlock / Fir									
$115.63	$5.23	$2.24	$76.37	$1.89	$36.24	$0.00	$2.00	$2.44	$242.04
Sitka Spruce									
$112.20	$5.23	$2.24	$87.29	$1.89	$37.59	$0.00	$2.00	$2.44	$250.88
Alder (Red)									
$102.84	$5.33	$2.24	$69.21	$1.89	$32.67	$0.00	$2.00	$2.44	$218.62

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$555.00	$281.59	$0.00
Western Hemlock / Fir	$0.00	$365.00	$122.96	$0.00
Sitka Spruce	$0.00	$411.02	$160.14	$0.00
Alder (Red)	$0.00	$690.00	$471.38	$0.00

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Jackpipe
Sale 341-07-67

District: **Astoria** **Date:** **April 17, 2007**

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	452	$281.59	$127,278.68
Western Hemlock / Fir	4,588	$122.96	$564,140.48
Sitka Spruce	466	$160.14	$74,625.24
Alder (Red)	370	$471.38	$174,410.60

Gross Timber Sale Value

Recovery: $940,455.00

Prepared by: Nathan Agalzoff **Phone:** 503-325-5451

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale:	**Jack Pipe**	**MBF:**	5,876
Date:	March 22, 2007	**$$/MBF:**	$5.08
By:	Nate Agalzoff		

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost	
Interim	Grader 14G	$570	1	23	$84	$2,502	
Operations	Dump Truck 12CY (2 @ $119)	$119	2	16	$59	$1,182	
Entries (1)	FE Loader C966	$570	1	16	$79	$1,834	
JackPipe							
	Grader 14G	$570	1	86	$84	$7,794	
Final	Dump Truck 12CY (2 @ $119)	$119	2	60	$59	$3,778	
Road	FE Loader C966	$570	1	30	$79	$2,940	
Maintenance	Vibratory Roller	$570	1	63	$79	$5,547	
Haul Route	Water Truck 2,500 gallon	$139	1	55	$70	$3,989	
	Labor			16	$18	$288	
Total							**$29,854**

Interim Operations Road Maintenance

Production Rates	Miles/day	Distance(miles)	Days	Hours
Grader	2.0	4.5	2.3	22.5

Final Road Maintenance

Production Rates	Miles/day	Distance(miles)	Days	Hours
Grader (Grade, Shape & Roll)	1.5	9.4	6.3	62.7
Vibratory Roller	1.5	9.4	6.3	62.7

Production Rates	Miles/day	Distance(miles)	Days	Hours
Grader (Grade & Shape Only)	2.0	4.8	2.4	23.8

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Jackpipe

NEW CONSTRUCTION:

	Road segment	Length/Sta	Cost
Project No.1	2A-2B, 2C-2D, 4A-4B, 4C-4D, 5A-5B, 5C-5D	48.4	$47,023
TOTALS	0.92 miles	48.35 Stations	$47,023

ROAD IMPROVEMENT:

	Road segment	Length/Sta	Cost
Project No.2	I1 - I2, I3	8.97	$20,679
TOTALS	0.17 miles	8.97 Stations	$20,679

PROJECTS:

	Description	Cost
Project No.3	Road Vacating (V1 to V2)	$4,291
Project No.4	Roadside Brushing (19 miles)	$25,448
Project No.5	Williamsport Gate Replacement	$5,000
	Project Work Road Maintenance	$22,699
TOTALS		$57,438

MOVE IN:

Equipment	Cost
D-8 Dozer	$1,030
20cy Dump trucks (3@ $140)	$420
10cy Dump trucks (6@ $119)	$714
Front End Loader - Medium	$945
Grader (14G)	$570
Vibratory Roller	$570
Water Truck (2,500 gal.)	$139
Excavator (C330)	$1,030
Brush Cutter - Medium	$235
TOTAL	$5,653

GRAND TOTAL **$130,793**

Compiled By: Nate Agalzoff Date: 03/21/2007

FC

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Jack Pipe
ROAD: 2A-2B(13.7), 2C-2D(1.6), 4A-4B(18.35), 4C-4D(2.0), 5A-5B(10.7), 5C-5D(2.0)

NEW CONSTRUCTION: 48.35 STATIONS 0.92 MILES
IMPROVEMENT: STATIONS MILES

CLEARING & GRUBBING

Method	Acres/amount	x	Rate	=	Cost
Scatter Outside of R/W	2.70	x	$980.00	=	$2,646.00
		x		=	
		x		=	

SUB TOTAL FOR CLEARING & GRUBBING $2,646

EXCAVATION

Material	Cy/amount	x	Rate	=	Cost
		x		=	
Field Design Balanced Construction $$/sta.		x		=	
2A to 2B, 5A to 5B	24.40	x	$89.00	=	$2,171.60
Undesigned Landing Constuction	4.00	x	$285.00	=	$1,140.00
		x		=	
		x		=	
Field Design Drift up to 200'		x		=	
2C to 2D, 4A to 4B, 4C, to 4D, 5C to 5D	23.95	x	$139.00	=	$3,329.05
		x		=	
		x		=	
		x		=	

SUB TOTAL FOR EXCAVATION $6,641

CULVERT MATERIALS AND INSTALLATION

	Location	Dia/type	Lineal ft.	Rate	Cost	No. bands	Rate	Cost
2A to 2B	12+50	18	30	$13.60	$408.00			
4A to 4B	0+28	18	30	$13.60	$408.00			
	3+20	18	30	$13.60	$408.00			
	7+50	18	40	$13.60	$544.00			
	12+50	18	30	$13.60	$408.00			

	Description	Quantity	Rate	Cost
Other/miscellaneous:				
Culvert stakes & markers:	Carsonite posts 6' X 2 1/2"	5	$14.10	$70.50

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION $2,247

Subtotal **$11,533**

SURFACING

Subgrade prep:

Description	Stations/ amount	x	Rate/ sta/amt	Cost
Grade, Shape and Ditch 16'	37.25	x	$18.20	$677.95
Subgrade Compaction	37.25	x	$14.80	$551.30
Outslope 14'	10.71	x	$13.45	$144.05

ROAD SEGMENT	2A to 2B			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	2A to 2B Volume (CY) per		0+00 to 13+70 Number of					
Base Rock	4"-0"	0+00 to 13+70	9	station	49	stations	14	671	$12.27	$8,237	
Traction Rock	3/4"-0"	0+00 to 0+40	2	station	11	stations	2	22	$12.27	$270	
Turnouts	4"-0"	5+00, 12+00	9	TO	22	TO	2	44	$12.27	$540	
Turnaround	4"-0"	13+00	9	TA	10	TA	1	10	$12.27	$123	
Landings	6"-0"	Pt. 2B	N/A	Landing	50	Landings	1	50	$14.42	$721	
Total Rock for Road Segment:			2A to 2B					797			$9,890

ROAD SEGMENT	2C to 2D			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	2C to 2D Volume (CY) per		0+00 to 1+60 Number of					
Base Rock	4"-0"	0+00 to 1+60	9	station	49	stations	1.60	78	$12.27	$962	
Junctions	4"-0"	2A	9	junction	20	junctions	1	20	$12.27	$245	
Junctions	3/4"-0"	2A		junction	20	junctions	1	20	$12.27	$245	
Landings	6"-0" Pit Run	Pt. 2D	N/A	Landing	50	Landings	1	50	$14.42	$721	
Total Rock for Road Segment:			2C to 2D					168			$2,174

ROAD SEGMENT	4A to 4B			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	4A to 4B Volume (CY) per		0+00 to 18+35 Number of					
Base Rock	4"-0"	0+00 to 18+35	9	station	49	stations	18.35	899	$12.27	$11,033	
Junctions	4"-0"	4A	9	junction	20	junctions	1	20	$12.27	$245	
Turnouts	4"-0"	14+80	9	TO	22	TO's	1	22	$12.27	$270	
Turn-Arounds	4"-0"	16+50	9	TA	10	TA's	1	10	$12.27	$123	
Total Rock for Road Segment:			4A to 4B					951			$11,671

ROAD SEGMENT	4C to 4D			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	4C to 4D Volume (CY) per		0+00 to 2+00 Number of					
Base Rock	4"-0"	0+00 to 2+00	9	station	49	stations	2.00	98	$12.27	$1,202	
Junctions	4"-0"	4C	9	station	20	junctions	1	20	$12.27	$245	
Landings	6"-0" Pit Run	4D	N/A	Landing	50	Landings	1	50	$14.42	$721	
Total Rock for Road Segment:			4C to 4D					168			$2,169

ROAD SEGMENT	5A to 5B			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	5A to 5B Volume (CY) per		0+00 to 1+00 Number of					
Junctions	4"-0"	5A		junction	40	junctions	1	40	$12.27	$491	
Total Rock for Road Segment:			5A to 5B					40			$491

ROAD SEGMENT	5C to 5D			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	5C to 5D Volume (CY) per		0+00 to 2+00 Number of					
Base Rock	6'-0" Pit Run	0+00 to 2+00	9	station	49	stations	2	98	$14.42	$1,413	
Junctions	3/4"-0"	5C		junction	20	junctions	1	20	$12.27	$245	
Landings	6"-0" Pit Run	Pt. 5D	N/A	Landing	60	Landings	1	60	$14.42	$865	
Total Rock for Road Segment:			5C to 5D					178			$2,524

Processing:

Description	No.sta	Rate/sta	Cost
Water, Process & Compact:	28.00	$41.40	$1,159

	36"-24"		6"-0" pr	4"-0"	3/4"-0"	Total		
SUB TOTAL FOR SURFACING	20		308	1,933	62	2,323	2,323	**$31,451**

SPECIAL PROJECTS

Description	Cost
Install 6 1/2 oz. woven fabric 12.5' wide	
3,565' X 110% = 3,921' X $0.95 =	$3,725
Install at Gate 20 cubic yards of 36"-24" riprap rock @ $15.7	$314.00

SUB TOTAL FOR SPECIAL PROJECTS

GRAND TOTAL **$47,023**

Compiled By: Nate Agalzoff Date: 03/21/2007

X:\Sunset Unit\Timber Sale Forms\Projects\Summary of Construction.xls

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Jackpipe
ROAD: Crosel Creek Road Realignment
I1-I2, I3

NEW CONSTRUCTION: _____ STATIONS _____ MILES
IMPROVEMENT: 8.97 STATIONS 0.17 MILES

CLEARING & GRUBBING

Method	Acres/amount	x	Rate	=	Cost
Scatter outside of right of way	0.24	x	$980.00	=	$235.20
		x		=	
		x		=	

SUB TOTAL FOR CLEARING & GRUBBING $235

EXCAVATION

	Material	Cy/amount	x	Rate	=	Cost
I1-I2	End-haul excavation $/cy	1,736.00	x	$2.90	=	$5,034.40
	Aggregate Salvage $/cy	126.00	x	$1.60	=	$201.60
	Cut slope rounding $/sta	2.40	x	$31.00	=	$74.40
	Slump removal (appraised)		x		=	$1,074.00
			x		=	
	End-haul excavation $/cy	227.00	x	$2.90	=	$658.30
	(Buttress Bench Construction)		x		=	
			x		=	
	Shape Waste Area (D8 Dozer) $/hr	4.00	x	$126.00	=	$504.00
			x		=	
			x		=	

SUB TOTAL FOR EXCAVATION $7,547

CULVERT MATERIALS AND INSTALLATION

	Location	Dia/type	Lineal ft.	Rate	Cost	No. bands	Rate	Cost
I1-I2	1+66	18"/ CPP	40	$13.60	$544.00			
	5+60	18"/ CPP	40	$13.60	$544.00			

	Description	Quantity	Rate	Cost
Other/miscellaneous:				
Culvert stakes & markers:	6' x 2 1/2" White Fiberglass (Carsonite)	2	$14.10	$28.20
	"I" - Beam post			

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION $1,116

Subtotal **$8,898**

SURFACING

Subgrade prep:

Description	Stations/ amount	x	Rate/ sta/amt	Cost
Grade, Shape and Ditch 16'	3.50	x	$18.20	$63.70
Subgrade Compaction	3.50	x	$14.80	$51.80
		x		

ROAD SEGMENT	I1 to I2		Depth of Rock (inches)	POINT TO POINT I1 to I2 Volume (CY) per		Sta. to Sta. 0+00 to 8+97 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location									
Base Rock	4"-0" Crushed	2+05 to 4+30	9	station	49	stations	2.40	118	$12.27	$1,443	
Base Rock	4"-0" Crushed	8+10 to 8+97	9	station	49	stations	0.87	43	$12.27	$523	
Curve Widening	4"-0" Crushed	1+35 to 3+53	9	curve	NA	curves	2	32	$12.27	$393	
Subgrade Leveling	4"-0" Crushed	2+05 to 4+30	N/A	station	N/A	stations	N/A	92	$12.27	$1,129	
Surface Rock	3/4"-0" Crushed	2+05 to 4+30	5	station	27	stations	2.40	65	$12.27	$795	
Surface Rock	3/4"-0" Crushed	8+10 to 8+97	5	station	27	stations	0.87	23	$12.27	$288	
Curve Widening	3/4"-0" Crushed	1+35 to 3+53	5	curve	N/A	curves	2.00	16	$12.27	$196	
Culvert Bedding/Backfill	3/4"-0" Crushed	1+66 & 5+60	N/A	culvert	30	culverts	2	60	$12.27	$736	
Buttress	24"-6" Riprap	8+10 to 8+97	N/A					242	$15.70	$3,799	
Total Rock for Road Segment:			I1 to I2					691			$9,303

Processing:

Description		No.sta	Rate/sta	Cost
Water, Process & Compact	(4"-0" Crushed 1 lift)	3.27	$41.40	$135
	(3/4"-0" Crushed 1 lift)	3.27	$41.40	$135

		24"-6"	4"-0"	3/4"-0"		Total		
SUB TOTAL FOR SURFACING		242	285	164		691	691	$9,689

SPECIAL PROJECTS

	Description	Cost
	Seeding, Mulching and Fertilizing (0.60 ac @ $460/ac) Hand Application	$276
	40 Straw Bales @$4.50/ bale	$180
	Buttress Construction (C330 Excavator 8 hr @$138 / hr)	$1,104
I3	Ditchout on Scandnavian Cannery Road, armor w/ salvaged rock	$296
	Install 6 1/2 oz. woven fabric 12.5' wide 225' X 110% = 248' X $0.95 =	$236

SUB TOTAL FOR SPECIAL PROJECTS $2,092

GRAND TOTAL $20,679

Compiled By: S. Bushnell Date: 03/21/2007

CRUSHED ROCK COST

SALE NAME: Jack Pipe
PROJECT: Road Rock
QUARRY: Simmons

ROCK TYPE: Crushed

DATE: 01/10/2007
BY: N. Agalzoff

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES 45 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Total Haul
2A-2B	13.70	747	6	5	1	0.50	1.50	1.50	0.30	15.80
2C-2D	1.60	118	6	5	1	0.50	1.50	1.50	0.20	15.70
4A-4B	18.35	938	6	5	1	0.30	3.30	2.70	0.57	18.87
4C-4D	2.00	118	6	5	1	0.30	3.30	2.70	0.48	18.78
5A-5B	1.00	40	6	5	1	0.30	8.50	3.10	0.55	24.45
5C-5D	2.00	20	6	5	1	0.30	8.25	2.75	0.25	23.55
I1 to I2	4.30	449	6	5	1	0.30	1.90	1.80	0.40	16.40
TOTAL	42.95	2,430								AVERAGE HAUL
	STA./NO.	CU. YD.								
CUBIC YARD WEIGHTED HAUL			6.00	5.00	1.00	0.37	2.53	2.11	0.43	17.44
									Average Round Trip Distance (miles)	34.88

ROCK HAUL:

Truck type: D20 No. trucks: 3
Delay min.: 8 Efficiency: 85%

Truck type: D12 No. trucks:
Delay min.: 6 Efficiency: 85%

Truck type: D10 No. trucks: 6
Delay min.: 5 Efficiency: 85%

Ave haul: $9.62 /cy
Load: $0.95 /cy
Spread: $1.70 /cy

Production: cy/day = 468

CRUSHED ROCK HAUL COSTS 2,430 cy @ **$12.27 /cy**

PIT RUN ROCK COST

SALE NAME: Jack Pipe
PROJECT: Pit Run
QUARRY: Simmons

ROCK TYPE: Pit Run

DATE: 01/10/2007
BY: N. Agalzoff

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES 50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Total Haul
2D	1.00	50	6	5	1		2.00	1.50	0.20	15.63
5C-5D	2.00	158	6	5	1	0.30	4.20	2.70	0.40	19.60
2B	1.00	50	6	5	1		2.00	1.50	0.30	15.73
4D	1.00	50	6	5	1	0.30	3.30	2.70	0.57	18.80
TOTAL	5.00	308								AVERAGE HAUL
	STA./NO.	CU. YD.								
CUBIC YARD WEIGHTED HAUL			**5.97**	**5.00**	**1.00**	**0.20**	**3.34**	**2.31**	**0.38**	**18.20**
								Average Round Trip Distance (miles)		36.39

ROCK HAUL:

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

Truck type: D12 No. trucks:
Delay min.: 6 Efficiency: 85%

Truck type: D10 No. trucks: 6
Delay min.: 5 Efficiency: 85%

Ave haul: $12.51 /cy
Load: $1.91 /cy
Spread: /cy

Production: cy/day = 226

PIT RUN ROCK HAUL COSTS 308 cy @ **$14.42 /cy**

RIP RAP ROCK COST

SALE NAME: Jack Pipe
PROJECT: Willamsport Gate
QUARRY: Simmons

ROCK TYPE: Rip Rap

DATE: 01/31/2007
BY: N. Agalzoff

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES 50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Total Haul
Pt. G1	1.00	20	6	6			0.30	1.00		13.30
I1 to I2	4.30	242	6	6		0.30	1.90	1.80	0.40	16.40
TOTAL	5.30 STA./NO.	262 CU. YD.								AVERAGE HAUL
CUBIC YARD WEIGHTED HAUL			6.00	6.00		0.28	1.78	1.74	0.37	16.16
						Average Round Trip Distance (miles)			32.33	

ROCK HAUL:

Truck type: D12 No. trucks:
Delay min.: 6 Efficiency: 85%

Truck type: D10 No. trucks: 6
Delay min.: 5 Efficiency: 85%

Ave haul:	$10.21	/cy
Load:	$2.39	/cy
Develop:	$3.10	/cy

Production: cy/day = 277

RIP RAP ROCK HAUL COSTS 262 cy @ **$15.70 /cy**

Jackpipe 341-07-67 Project No. 3 - V V1-V2

Astoria Basin Vacating

Location/Description	C330 #1	C330 #2	D-7 CAT	10 CY Truck	Labor	Straw Mulch & Seed*	Total
V1 to V2 Sta. 0+00 Construct Roadblock	1						
V1 to V2 Sta 0+00 to 1+80 Pullback / Salvage Rock / Waterbar	3			3	2	30	
V1 to V2 Sta 2+30 to 6+35 Pullback / Salvage Rock / Waterbar	8			8	6	90	
V1 to V2 Sta 3+75 to 4+05 Remove Culvert and Fill	2						
V1 to V2 Sta 5+90 to 6+10 Remove Culvert and Fill	1						
V1 to V2 Sta 6+30 Utilize Salvaged Riprap to Armor Cutslope	1			1			
V1 to V2 Sta 6+30 Construct Roadblock	1						
V1 to V2 Sta 6+35 Utilize Salvaged Rock to Construct Turnout.	2.5			2.5			
Total	19.5 hr	0 hr	0 hr	14.5 hr	8 hr	120 bales	
Rate	$138 /hr	$138 /hr	$94 /hr	$59 /hr	$18 /hr	$5.00 each	
Cost	$2,691	$0	$0	$856	$144	$600	$4,291

*Cost for bales/seed includes bales of straw and grass seed @ 100 lbs/ac.

S. Bushnell 12/14/2006

PROJECT NO. 4 ROADSIDE BRUSHING
JACKPIPE TIMBER SALE

Road	Miles	Cost @ $1350/mile
Moderate		
Williamsport Rd	4.30	
Mill Cr. & Navy Heights Rd.	3.25	
Scadanavian Rd.	5.15	
Crosel Cr. Rd.	2.80	
Weyerhauser Spur	0.71	
Astoria Ridge Rd.	1.90	
Boiler Canyon Rd.	0.74	
Total Moderate Brushing	**18.85**	$25,447.50
Total Brushing Cost		**$25,447.50**

X:\DOCUMENT\2003 FY Sales\West Creek Comb\Sale Prep\Projects

Projects Road Maintenance Cost Summary

Sale: Jack Pipe
Date: February 13, 2007
By: Nate Agalzoff

Type	Equipment/Rationale	Hours	Rate	Cost
Post-Projects Road	Grader 14G	68	$84	$5,712
	Dump Truck 12CY (2 trucks)	34	$118	$4,012
	FE Loader C966	34	$79	$2,686
	Vibratory Roller	68	$79	$5,372
	Water Truck 2500 gallon	68	$70	$4,760
	Vibratory Roller (extra Move)*	1	$157	$157
			Total	**$22,699**

* Move from Astoria Ridge Road to Simmons Ridge Road - One hour with roller and Dump Truck with trailer.

Final Road Maintenance

Production Rates	Miles/day	Distance(miles)	Days	Hours
Grader	1.5	10.2	6.8	68.00
Vibratory Roller	1.5	10.2	6.8	68.00

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

Maintain from Simmons Quarry to Highway 202, Willamsport Rd to Scandinavian Cannery Rd, and Astoria Ridge Rd

Total Miles: 10.2 Miles.

Jack Pipe
FY 2007
TIMBER CRUISE REPORT

1. **Sale Area Location:** Areas 1, 2, 3, 4, 5, A, B, C, and D are located in portions of Sections 14, 15, 22, 23, 25, 26, and 27 T8N, R9W; W.M., Clatsop County, Oregon.

   All timber sale areas are posted with ODF "Timber Sale Boundary" signs, pink ribbon. The boundary between Area 5 and Area B is posted with "Area Boundary" signs and pink ribbon. Area 6 R/W is posted with ODF "Right-of-Way Boundary" signs.

2. **Fund Distribution:** **Fund:** BOF (100%)
   Tax Code: 1-01 (6%)
   1-02 (26%)
   1-08 (68%)

3. **Sale Acreage by Area:**

Area	Harvest Type	Gross Acreage	New R/W Acreage	Existing R/W Acreage	Stream Buffer Acreage	Wildlife Tree Area	Net Acreage
1	MC	8.5	0.0	0.0	0.4	--	8.1
2	PC	129.4	0.2	5.7	10.8	--	112.7
3	PC	22.2	0.0	0.3	2.8	--	19.1
4	MC	45.9	0.0	0.0	2.5	--	43.4
5	MC	43.2	0.0	0.7	5.6	--	36.9
A	GS	2.2	0.0	0.0	0.0	--	2.2
B	MC	39.5	0.0	2.2	0.0	2.2	35.1
C	GS	5.7	0.0	0.0	0.0	--	5.7
D	GS	3.3	0.0	0.0	0.0	--	3.3
6	(R/W)		0.2				0.2
Total		**299.9**		**8.9**	**22.1**	**2.2**	**266.7**

4. **Cruisers and Cruise Dates:** Areas 1, 2, 3, 4, and 5 were cruised by Nate Agalzoff, Dave Horning, and Bryce Rodgers. Areas 1, 4, and 5, were cruised on 11/20/06-11/21/06 and the PC units were cruised on 11/28/06-11/29/06. Area B was cruised by Nate Agalzoff, Dave Horning, and Bruce Hazen on 01/03/07. Areas A, C, and D were cruised by Nate Agalzoff and Dave Horning on 01/23/07.

5. **Cruise Method and Computation:** All cruises used Corvallis MicroTechnology (CMT) or Allegro 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.

   Areas 1, 4, and 5 (Modified Clearcut), were variable plot cruised with a 40 BAF for conifer and 13.61 BAF for Alder. 42 plots were sampled on a cruise grid of 4 chains by 5.5 chains, with a count/cruise plot ratio of 2:1.

   Areas 2 and 3 (Partial Cut), were variable plot cruised with a 27.7 BAF. 41 plots were sampled on a cruise grid of 6 chains by 5 chains, with a count/cruise plot ratio of 2:1.

   Areas A, C, and D (Group Selection) and Area B (Modified Clearcut), were variable plot cruised using a 40 BAF. 21 plots were sampled on a cruise grid of 4 chains by 5.5 chains, with a count cruise plot ratio of 2:1.

   Area 6 (R/W) is located within Area 3.

   All "take" and "leave" trees were measured and graded.

AREAS	PROJECT	CRUISE TYPE
1,4,5	JACKPIPE	A145,A145TAKE,A145LEAV
2,3	JACKPIPE	AREA23, AREA23TAKE, AREA23LEAV
GS A,B,C,D	JACKPIPE	ABCD, SALVAGE (T), SALVAGE (L)
Road Salvage	JACKPIPE	SALV
R/W	JACKPIPE	AREA23RW

6. Timber Description:

Areas 1, 4, and 5 (Modified Clear cut) – These stands range from 55 to 70 years old, consisting of hemlock dominated, mixed conifer. In addition, Area 4 contains a stand of alder, conifer, and brush in the center of the unit. These stands average 15 inches in DBH, with an average merchantable height of 64 feet to a merchantable top. The average volume (net) is 36.9 MBF/acre.

Areas 2 and 3 (Partial Cut) – This stand is a "auto-mark" thinning unit, about 52 to 59 years old, consisting of hemlock dominated mixed conifer. This stand will be harvested to an SDI of 30, with a target basal area of 140 ft^2, while removing approximately 114 trees per acre and 14.7 MBF/acre. The average "take" tree size is 13.5" DBH and 51 feet to a merchantable top (6" d.i.b.).

Areas A, C, and D (Group Selection) and Area B (Modified Clearcut) – These stands are located within portions of the recent FY2003 Astoria Basin Thinning timber sale. Wind thrown trees make up a the majority of the volume for these areas. The trees are approximately 65 years old consisting of a mix of western hemlock and Douglas-fir. The average DBH in this area is 17.4, with an average bole length of 61 feet to a merchantable top. The average volume (net) is 17.6 MBF/acre.

Roadside Salvage – This scattered timber is approximately 50-60 years old and averages 14 inches at DBH. Most of this road side salvage timber is western hemlock, on average there is approximately 41 MBF per mile of road.

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

Area	Target CV	Target SE%	Actual CV	Actual SE%
1, 4, 5	70%	9%	51%	8%
2, 3	70%	11%	47%	7%
A, B, C, D	50%	15%	39%	9%

The statistics for Areas 2 and 3 are "Take" and "Leave" stands combined.

8. **Volumes by Species and Log Grades for All Sale Areas by MBF:** (See "Species, Sort, Grade, Length % Type Reports" attached, of the thinning and regeneration harvest areas combined.) Volumes do not include "ingrowth." The majority of defect and breakage was culled out during the cruise.

Species	DBH	Net Vol.	2 Saw	3Saw	4 Saw	Camp Run	% D & B	% Sale
Hemlock	15.0	4,588	2015	2,207	366		6%	78
Douglas-fir	13	452	88	288	76		7%	8
Sitka spruce	14	466	233	164	69		5%	8
Alder	14	370				370	7%	6
TOTAL		**5,876**	**2,336**	**2,659**	**511**	**370**	**6%**	**100%**

9. **Prepared by:** Nate Agalzoff **Date:** December 20, 2006

10. **Approved by:** John Tuttle **Date:** 3/9/07

11. **Attachments:**

Species, Sort, Grade Reports (6 pages)
Statistics Summary Reports (13 pages)
Log Stock Table Reports (5 pages)
Stand Table Summary Reports (4 pages)
Cruise Plans & Maps (14 pages)

X:\Sunset Unit\2007 FY Sales\Jack Pipe\Sale Prep\Cruise Report-JackPipe.doc

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T08N R09W S15 TyR/W
THRU
T08N R09W S26 TyA145

Project: JACKPIPE
Acres 443.70

Date 3/8/2007
Time 2:58:47PM

Spp	S T	So Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of 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
D		DOCU		100.0	76											9		0.00	2.3
D		DO2S	19	.0	199	199	88			100		10	20	36	34	30	166	1.40	1.2
D		DO3S	64	.8	654	649	288		100			0	17	33	50	33	72	0.61	9.0
D		DO4S	17		172	172	76		100			49	51			20	25	0.43	6.8
D	**Totals**		8	7.4	1,101	1,020	452		81	19		10	23	28	38	25	53	0.59	19.4
H		DOCU		100.0	329											7		0.00	5.8
H		DO2S	43	.9	4,583	4,542	2,015			78	22	4	7	33	56	35	255	1.63	17.8
H		DO3S	49	4.8	5,222	4,973	2,207		96	3	1	2	6	27	65	36	90	0.70	55.5
H		DO4S	8	.3	829	826	367	1	99			44	44	4	8	21	26	0.41	31.3
H	**Totals**		78	5.7	10,963	10,341	4,588	0	54	36	10	6	9	28	56	30	94	0.81	110.4
S		DOCU		100.0	59											8		0.00	1.7
S		DO2S	49	.0	525	525	233			35	65	4	15	19	62	33	325	2.23	1.6
S		DO3S	36	.0	370	369	164		80	20	0	20	37	21	22	30	82	0.79	4.5
S		DO4S	15	.0	156	156	69	0	100			37	63			18	24	0.46	6.5
S	**Totals**		8	5.3	1,110	1,051	466	0	43	24	33	15	30	17	38	22	73	0.87	14.3
A		DOCU		100.0	59											9		0.00	1.8
A		DOCR	100	.2	834	832	369		84	13	3	12	29	21	38	27	71	0.75	11.8
A	**Totals**		6	6.7	893	832	369		84	13	3	12	29	21	38	25	61	0.72	13.6
Totals				5.8	14,066	13,244	5,876	0	57	32	11	8	13	27	52	28	84	0.78	157.6

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: JACKPIPE

Date 3/8/2007

Time 2:58:46PM

T08N R09W S26 TA145

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
08N	09W	26	TAKE	A145	88.40	41	174	1	W

T08N R09W S26 TA145

Spp	ST	So rt	Gr ad	% 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
H		DO	CU		100.0	583											6		0.00	8.6
H		DO	2S	44	.5	12,769	12,710	1,124			79	21	4	6	38	51	34	258	1.66	49.3
H		DO	3S	49	.2	13,984	13,958	1,234		94	5	1	0	8	28	64	36	96	0.70	145.8
H		DO	4S	7		1,819	1,819	161		100			46	42	7	5	20	24	0.40	74.3
H	**Totals**			77	2.3	29,155	28,487	2,518		52	38	10	5	9	31	54	30	102	0.84	278.1
A		DO	CU		100.0	209											8		0.00	6.9
A		DO	CR	100	.2	3,254	3,247	287		80	16	4	12	29	27	31	27	72	0.77	44.9
A	**Totals**			9	6.2	3,463	3,247	287		80	16	4	12	29	27	31	24	63	0.74	51.8
S		DO	CU		100.0	86											6		0.00	1.9
S		DO	2S	50		1,620	1,620	143			57	43	7	13	31	50	32	248	1.86	6.5
S		DO	3S	40		1,287	1,287	114		95	5		5	37	30	28	32	76	0.68	16.8
S		DO	4S	10		292	292	26		100			59	41			14	18	0.41	16.5
S	**Totals**			9	2.6	3,284	3,198	283		47	31	22	11	25	28	37	24	77	0.86	41.7
D		DO	CU		100.0	28											4		0.00	.9
D		DO	2S	30		600	600	53			100		17		28	56	31	174	1.46	3.5
D		DO	3S	64		1,245	1,245	110		100				12	47	41	32	74	0.62	16.9
D		DO	4S	6		116	116	10		100			51	49			20	23	0.41	5.0
D	**Totals**			5	1.4	1,988	1,961	173		69	31		8	10	38	43	29	75	0.71	26.3
Type Totals					2.6	37,890	36,893	3,261		55	35	10	6	12	31	50	29	93	0.82	397.8

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: JACKPIPE

Page 1
Date 3/8/2007
Time 2:58:46PM

T08N R09W S15 TTAKE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
08N	09W	15	AREA23	TAKE	131.80	41	54	1	W

T08N R09W S15 TTAKE

Spp	ST	So rt	Gr ad	% 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
H		DO	CU		100.0	425											7		0.00	11.2
H		DO	2S	36	.8	3,051	3,027	399			84	16	4	6	13	77	37	228	1.42	13.3
H		DO	3S	48	.9	4,009	3,973	524		100			7	5	19	69	35	89	0.68	44.8
H		DO	4S	16		1,271	1,271	167	3	97			36	50	3	11	22	28	0.39	45.7
H	**Totals**			73	5.5	8,756	8,271	1,090	0	63	31	6	10	13	14	63	27	72	0.68	115.0
D		DO	CU		100.0	236											10		0.00	7.2
D		DO	2S	12		263	263	35			100			51	49		28	155	1.31	1.7
D		DO	3S	64	1.3	1,359	1,341	177		100				20	25	55	34	71	0.60	19.0
D		DO	4S	24	.0	500	500	66		100			48	52			20	26	0.43	19.5
D	**Totals**			19	10.8	2,358	2,104	277		88	12		12	31	22	35	24	44	0.53	47.3
S		DO	CU		100.0	141											9		0.00	4.5
S		DO	2S	16		133	133	18				100		100			30	400	2.93	.3
S		DO	3S	43		351	351	46		41	59		59	41			22	100	1.24	3.5
S		DO	4S	41		330	330	43		100			25	75			23	31	0.48	10.8
S	**Totals**			7	14.7	954	814	107		58	25	16	35	65			19	43	0.65	19.1
A		DO	CR	100		110	110	15		100				100			30	50	0.60	2.2
A	**Totals**			1		110	110	15		100				100			30	50	0.60	2.2
Type Totals					7.2	12,178	11,300	1,489	0	68	27	6	12	21	14	53	26	62	0.64	183.6

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: JACKPIPE

Page 1
Date 3/8/2007
Time 2:58:46PM

T08N R09W S25 TABCD

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
08N	09W	25	SALVAGE (T)	ABCD	46.30	20	32	1	W

T08N R09W S25 TABCD

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
H		DO	CU		00.0	829											10		0.00	6.8
H		DO	2S	72	1.9	10,787	10,577	490			73	27	2	7	39	51	35	276	1.78	38.3
H		DO	3S	22	1.5	3,152	3,105	144		91		9	9	6	46	39	35	81	0.73	38.3
H		DO	4S	6	2.9	842	818	38		100			67	24		9	20	29	0.59	27.9
H	**Totals**			82	7.1	15,610	14,501	671		25	53	22	8	8	39	46	30	130	1.12	111.3
A		DO	CU		00.0	165											11		0.00	4.0
A		DO	CR	100		1,462	1,462	68		100			12	13		76	29	70	0.73	20.9
A	**Totals**			8	10.1	1,626	1,462	68		100			12	13		76	26	59	0.68	24.9
S		DO	2S	95		1,556	1,556	72				100				100	40	770	3.81	2.0
S		DO	3S	5		81	81	4		100						100	36	80	1.11	1.0
S	**Totals**			9		1,636	1,636	76		5		95				100	39	540	2.97	3.0
Type Totals					6.8	18,873	17,599	815		29	44	27	7	7	32	54	29	126	1.10	139.2

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: JACKPIPE

Page 1
Date 3/8/2007
Time 2:58:46PM

T08N R09W S15 TR/W

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
08N	09W	15	AREA23	R/W	.20	41	155	1	W

T08N R09W S15 TR/W

Spp	S T	So rt	Gr ad	% 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
H		DO	CU		100.0	1,096											7		0.00	18.2
H		DO	2S	60	1.3	15,162	14,969	3			65	35	6	7	35	53	34	276	1.80	54.2
H		DO	3S	32	.7	7,948	7,896	2		99	1		4	14	19	64	34	94	0.75	84.1
H		DO	4S	8		1,779	1,779	0	2	98			32	58	2	7	22	28	0.42	63.9
H	**Totals**			68	5.2	25,985	24,644	5	0	39	40	21	7	13	27	53	28	112	0.97	220.4
D		DO	CU		100.0	351											8		0.00	12.7
D		DO	2S	25	3.0	2,379	2,307	0			100			12	32	55	35	197	1.55	11.7
D		DO	3S	63	.7	5,759	5,721	1		100			1	11	16	72	35	87	0.70	66.1
D		DO	4S	12		1,062	1,062	0		100			45	55			20	26	0.41	41.5
D	**Totals**			25	4.8	9,550	9,089	2		75	25		6	17	18	59	28	69	0.71	132.0
S		DO	CU		100.0	189											7		0.00	5.7
S		DO	2S	44	2.0	1,026	1,006	0			19	81	10	21	22	46	32	578	3.84	1.7
S		DO	3S	33	5.7	781	737	0		38	37	26	21	44	24	12	25	133	1.41	5.5
S		DO	4S	23	1.4	525	517	0	14	86			59	41			19	25	0.43	20.5
S	**Totals**			6	10.4	2,521	2,260	0	3	32	20	44	25	33	17	24	19	67	0.92	33.5
A		DO	CR	100		281	281	0		42	58			42	58		28	79	0.88	3.6
A	**Totals**			1		281	281	0		42	58			42	58		28	79	0.88	3.6
Type Totals					5.4	38,337	36,274	7	0	47	35	17	8	15	25	52	27	93	0.88	389.5

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: JACKPIPE

Date 3/8/2007

Time 2:58:46PM

T08N R09W S24 TSALV

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
08N	09W	24	ROADSIDE	SALV	177.00	1	135	1	W

T08N R09W S24 TSALV

Spp	S T	So rt	Gr ad	% 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
H		DO	3S	100	25.0	2,288	1,716	304		100				27	73		37	75	0.69	22.9
H	**Totals**			100	25.0	2,288	1,716	304		100				27	73		37	75	0.69	22.9
Type Totals					25.0	2,288	1,716	304		100				27	73		37	75	0.69	22.9

TC PSTATS

PROJECT STATISTICS

PROJECT JACKPIPE

DATE 3/8/2007

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
08N	09	15	AREA23	R/W	THR	443.70	144	980	1	W
08N	09W	26	TAKE	A145						

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	144	980	6.8		
CRUISE	71	550	7.7	34,498	1.6
DBH COUNT					
REFOREST					
COUNT	67	403	6.0		
BLANKS	6				
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
WHEMLOCK	365	50.9	14.9	67		62.0	10,963	10,341	2,730	2,664
DOUG FIR	71	10.4	13.3	49		10.0	1,101	1,020	311	290
S SPRUCE	39	8.6	13.8	39		8.9	1,110	1,051	293	278
R ALDER	69	7.8	13.9	45		8.2	893	832	254	241
SNAG	6	.0	15.5	42		.0				
TOTAL	*550*	*77.8*	*14.5*	*59*		*89.0*	*14,066*	*13,244*	*3,587*	*3,473*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL 68.1	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	167.0	13.9	44	51	58			
DOUG FIR	256.6	21.4	8	10	13			
S SPRUCE	326.6	27.2	6	9	11			
R ALDER	318.0	26.5	6	8	10			
SNAG	810.1	67.5	0	0	0			
TOTAL	*117.9*	*9.8*	*70*	*78*	*85*	*556*	*139*	*62*

CL 68.1	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	151.4	12.6	54	62	70			
DOUG FIR	250.3	20.9	8	10	12			
S SPRUCE	297.3	24.8	7	9	11			
R ALDER	318.1	26.5	6	8	10			
SNAG	688.0	57.3	0	0	0			
TOTAL	*108.9*	*9.1*	*81*	*89*	*97*	*475*	*119*	*53*

CL 68.1	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	151.2	12.6	9,038	10,341	11,644			
DOUG FIR	256.8	21.4	802	1,020	1,238			
S SPRUCE	307.6	25.6	781	1,051	1,320			
R ALDER	352.5	29.4	588	832	1,077			
SNAG								
TOTAL	*118.9*	*9.9*	*11,932*	*13,244*	*14,556*	*565*	*141*	*63*

TC TSTATS

STATISTICS

PROJECT JACKPIPE

DATE 3/8/2007

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	26	0001	A145	88.40	41	310	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	41	310	7.6		
CRUISE	23	183	8.0	16,984	1.1
DBH COUNT					
REFOREST					
COUNT	18	119	6.6		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK	95	122.7	15.3	71		156.1	29,155	28,487	7,146	7,041
R ALDER	59	29.1	13.9	45		30.5	3,463	3,247	968	923
S SPRUCE	11	22.9	13.7	45		23.4	3,284	3,198	869	851
DOUG FIR	9	13.0	14.4	61		14.6	1,988	1,961	544	539
HEMLEAV	7	3.5	25.9	94		12.7	2,846	2,722	629	609
SPRUCELV	2	.9	27.9	94		3.9	798	798	174	174
TOTAL	*183*	*192.1*	*15.2*	*64*		*241.3*	*41,534*	*40,412*	*10,330*	*10,137*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	96.9	15.1	104	123	141			
R ALDER	180.4	28.2	21	29	37			
S SPRUCE	230.3	36.0	15	23	31			
DOUG FIR	248.0	38.7	8	13	18			
HEMLEAV	244.9	38.3	2	3	5			
SPRUCELV	312.9	48.9	0	1	1			
TOTAL	*52.8*	*8.3*	*176*	*192*	*208*	*112*	*28*	*12*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	88.7	13.9	134	156	178			
R ALDER	176.0	27.5	22	31	39			
S SPRUCE	229.1	35.8	15	23	32			
DOUG FIR	234.8	36.7	9	15	20			
HEMLEAV	227.9	35.6	8	13	17			
SPRUCELV	307.9	48.1	2	4	6			
TOTAL	*41.0*	*6.4*	*226*	*241*	*257*	*67*	*17*	*7*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	89.8	14.0	24,493	28,487	32,481			
R ALDER	186.4	29.1	2,302	3,247	4,192			
S SPRUCE	230.4	36.0	2,047	3,198	4,349			
DOUG FIR	234.8	36.7	1,242	1,961	2,680			
HEMLEAV	227.7	35.6	1,754	2,722	3,689			
SPRUCELV	310.6	48.5	411	798	1,185			
TOTAL	*50.7*	*7.9*	*37,214*	*40,412*	*43,610*	*103*	*26*	*11*

TC TSTATS

STATISTICS

PROJECT JACKPIPE

DATE 3/8/2007

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	26	TAKE	A145	88.40	41	291	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	41	291	7.1		
CRUISE	23	174	7.6	16,596	1.0
DBH COUNT					
REFOREST					
COUNT	17	109	6.4		
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
WHEMLOCK	95	122.7	15.3	71		156.1	29,155	28,487	7,146	7,041
R ALDER	59	29.1	13.9	45		30.5	3,463	3,247	968	923
S SPRUCE	11	22.9	13.7	45		23.4	3,284	3,198	869	851
DOUG FIR	9	13.0	14.4	61		14.6	1,988	1,961	544	539
TOTAL	*174*	*187.7*	*14.8*	*63*		*224.7*	*37,890*	*36,893*	*9,526*	*9,354*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	96.9	15.1	104	123	141			
R ALDER	180.4	28.2	21	29	37			
S SPRUCE	230.3	36.0	15	23	31			
DOUG FIR	248.0	38.7	8	13	18			
TOTAL	*55.8*	*8.7*	*171*	*188*	*204*	*125*	*31*	*14*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	88.7	13.9	134	156	178			
R ALDER	176.0	27.5	22	31	39			
S SPRUCE	229.1	35.8	15	23	32			
DOUG FIR	234.8	36.7	9	15	20			
TOTAL	*48.1*	*7.5*	*208*	*225*	*242*	*93*	*23*	*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
WHEMLOCK	89.8	14.0	24,493	28,487	32,481			
R ALDER	186.4	29.1	2,302	3,247	4,192			
S SPRUCE	230.4	36.0	2,047	3,198	4,349			
DOUG FIR	234.8	36.7	1,242	1,961	2,680			
TOTAL	*57.5*	*9.0*	*33,580*	*36,893*	*40,205*	*132*	*33*	*15*

TC TSTATS

STATISTICS

PROJECT JACKPIPE

DATE 3/8/2007

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	26	LEAVE	A145	88.40	41	27	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	41	27	.7		
CRUISE	6	9	1.5	388	2.3
DBH COUNT					
REFOREST					
COUNT	6	18	3.0		
BLANKS	29				
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
HEMLEAV	7	3.5	25.9	94		12.7	2,846	2,722	629	609
SPRUCELV	2	.9	27.9	94		3.9	798	798	174	174
TOTAL	*9*	*4.4*	*26.3*	*94*		*16.6*	*3,644*	*3,519*	*804*	*783*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
HEMLEAV	244.9	38.3	2	3	5			
SPRUCELV	312.9	48.9	0	1	1			
TOTAL	*201.7*	*31.5*	*3*	*4*	*6*	*1,628*	*407*	*181*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
HEMLEAV	227.9	35.6	8	13	17			
SPRUCELV	307.9	48.1	2	4	6			
TOTAL	*186.6*	*29.1*	*12*	*17*	*21*	*1,393*	*348*	*155*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
HEMLEAV	227.7	35.6	1,754	2,722	3,689			
SPRUCELV	310.6	48.5	411	798	1,185			
TOTAL	*186.0*	*29.0*	*2,497*	*3,519*	*4,542*	*1,384*	*346*	*154*

TC TSTATS

STATISTICS

PROJECT JACKPIPE

DATE 3/8/2007

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	15	AREA23	0023	131.80	41	361	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	41	361	8.8		
CRUISE	20	155	7.8	24,345	.6
DBH COUNT					
REFOREST					
COUNT	21	188	9.0		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
HEMLEAV	51	37.2	20.3	87		84.0	17,103	16,250	3,984	3,867
WHEMLOCK	30	54.2	13.5	61		54.2	8,756	8,271	2,258	2,160
DOUGLEAV	32	38.1	16.1	69		53.5	7,226	7,025	2,043	2,018
DOUG FIR	15	26.3	12.9	45		23.7	2,358	2,104	676	610
S SPRUCE	8	13.3	13.0	30		12.2	954	814	279	242
SPRUCELV	11	9.7	13.4	29		9.5	1,365	1,247	313	301
SNAG	6	3.1	15.5	42		4.1				
R ALDER	1	2.2	13.0	33		2.0	110	110	40	40
ALDRLEAV	1	.7	19.0	55		1.4	151	151	45	45
TOTAL	*155*	*184.7*	*15.6*	*61*		*244.6*	*38,023*	*35,973*	*9,637*	*9,283*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
HEMLEAV	77.3	12.1	33	37	42			
WHEMLOCK	131.0	20.5	43	54	65			
DOUGLEAV	118.0	18.4	31	38	45			
DOUG FIR	145.2	22.7	20	26	32			
S SPRUCE	258.2	40.3	8	13	19			
SPRUCELV	363.6	56.8	4	10	15			
SNAG	427.6	66.8	1	3	5			
R ALDER	472.5	73.8	1	2	4			
ALDRLEAV	447.1	69.8	0	1	1			
TOTAL	*42.5*	*6.6*	*172*	*185*	*197*	*72*	*18*	*8*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
HEMLEAV	75.9	11.9	74	84	94			
WHEMLOCK	125.5	19.6	44	54	65			
DOUGLEAV	113.9	17.8	44	54	63			
DOUG FIR	144.8	22.6	18	24	29			
S SPRUCE	233.7	36.5	8	12	17			
SPRUCELV	223.1	34.8	6	9	13			
SNAG	360.3	56.3	2	4	6			
R ALDER	472.5	73.8	1	2	4			
ALDRLEAV	447.1	69.8	0	1	2			
TOTAL	*32.1*	*5.0*	*232*	*245*	*257*	*41*	*10*	*5*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
HEMLEAV	80.7	12.6	14,201	16,250	18,299			
WHEMLOCK	135.2	21.1	6,525	8,271	10,018			
DOUGLEAV	116.7	18.2	5,744	7,025	8,306			
DOUG FIR	151.2	23.6	1,607	2,104	2,601			
S SPRUCE	230.2	36.0	521	814	1,107			

STATISTICS

PROJECT JACKPIPE

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	15	AREA23	0023	131.80	41	361	1	W

CL: 68.1 %
SD: 1.0

	COEFF VAR.	S.E.%	NET BF/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
SPRUCELV	305.1	47.6	653	1,247	1,841			
SNAG								
R ALDER	472.5	73.8	29	110	192			
ALDRLEAV	447.1	69.8	46	151	257			
TOTAL	*46.8*	*7.3*	*33,345*	*35,973*	*38,601*	*88*	*22*	*10*

TC TSTATS

STATISTICS

PROJECT JACKPIPE

DATE 3/8/2007

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	15	AREA23	TAKE	131.80	41	136	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	41	136	3.3		
CRUISE	17	54	3.2	12,651	.4
DBH COUNT					
REFOREST					
COUNT	19	81	4.3		
BLANKS	5				
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
WHEMLOCK	30	54.2	13.5	61		54.2	8,756	8,271	2,258	2,160
DOUG FIR	15	26.3	12.9	45		23.7	2,358	2,104	676	610
S SPRUCE	8	13.3	13.0	30		12.2	954	814	279	242
R ALDER	1	2.2	13.0	33		2.0	110	110	40	40
TOTAL	*54*	*96.0*	*13.3*	*52*		*92.1*	*12,178*	*11,300*	*3,253*	*3,052*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	131.0	20.5	43	54	65			
DOUG FIR	145.2	22.7	20	26	32			
S SPRUCE	258.2	40.3	8	13	19			
R ALDER	472.5	73.8	1	2	4			
TOTAL	*76.9*	*12.0*	*84*	*96*	*108*	*236*	*59*	*26*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	125.5	19.6	44	54	65			
DOUG FIR	144.8	22.6	18	24	29			
S SPRUCE	233.7	36.5	8	12	17			
R ALDER	472.5	73.8	1	2	4			
TOTAL	*74.6*	*11.6*	*81*	*92*	*103*	*223*	*56*	*25*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	135.2	21.1	6,525	8,271	10,018			
DOUG FIR	151.2	23.6	1,607	2,104	2,601			
S SPRUCE	230.2	36.0	521	814	1,107			
R ALDER	472.5	73.8	29	110	192			
TOTAL	*95.3*	*14.9*	*9,618*	*11,300*	*12,981*	*363*	*91*	*40*

STATISTICS

PROJECT JACKPIPE

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	15	AREA23	LEAV	131.80	41	225	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	41	225	5.5		
CRUISE	20	101	5.1	11,694	.9
DBH COUNT					
REFOREST					
COUNT	21	112	5.3		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
HEMLEAV	51	37.2	20.3	87		84.0	17,103	16,250	3,984	3,867
DOUGLEAV	32	38.1	16.1	69		53.5	7,226	7,025	2,043	2,018
SPRUCELV	11	9.7	13.4	29		9.5	1,365	1,247	313	301
SNAG	6	3.1	15.5	42		4.1				
ALDRLEAV	1	.7	19.0	55		1.4	151	151	45	45
TOTAL	*101*	*88.7*	*17.7*	*71*		*152.5*	*25,845*	*24,673*	*6,384*	*6,231*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
HEMLEAV	77.3	12.1	33	37	42			
DOUGLEAV	118.0	18.4	31	38	45			
SPRUCELV	363.6	56.8	4	10	15			
SNAG	427.6	66.8	1	3	5			
ALDRLEAV	447.1	69.8	0	1	1			
TOTAL	*44.6*	*7.0*	*83*	*89*	*95*	*80*	*20*	*9*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
HEMLEAV	75.9	11.9	74	84	94			
DOUGLEAV	113.9	17.8	44	54	63			
SPRUCELV	223.1	34.8	6	9	13			
SNAG	360.3	56.3	2	4	6			
ALDRLEAV	447.1	69.8	0	1	2			
TOTAL	*16.4*	*2.6*	*149*	*152*	*156*	*11*	*3*	*1*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
HEMLEAV	80.7	12.6	14,201	16,250	18,299			
DOUGLEAV	116.7	18.2	5,744	7,025	8,306			
SPRUCELV	305.1	47.6	653	1,247	1,841			
SNAG								
ALDRLEAV	447.1	69.8	46	151	257			
TOTAL	*33.2*	*5.2*	*23,392*	*24,673*	*25,954*	*44*	*11*	*5*

TC TSTATS

STATISTICS

PROJECT JACKPIPE

DATE 3/8/2007

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	25	SALVAGE	ABCD	46.30	20	77	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	20	77	3.8		
CRUISE	10	45	4.5	4,421	1.0
DBH COUNT					
REFOREST					
COUNT	10	32	3.2		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK	24	55.4	17.6	62		94.0	15,610	14,501	3,830	3,680
DOUGLEAV	5	18.4	14.1	51		20.0	2,491	2,232	650	576
R ALDER	7	12.5	14.3	53		14.0	1,626	1,462	475	433
SNAG	5	5.6	19.9	23		12.0				
HEMLEAV	3	2.7	23.5	83		8.0	1,560	1,388	356	346
S SPRUCE	1	1.0	33.0	120		6.0	1,636	1,636	349	349
TOTAL	*45*	*95.5*	*17.2*	*57*		*154.0*	*22,924*	*21,219*	*5,659*	*5,384*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	58.8	13.5	48	55	63			
DOUGLEAV	187.0	42.9	10	18	26			
R ALDER	328.3	75.3	3	12	22			
SNAG	258.3	59.3	2	6	9			
HEMLEAV	210.0	48.2	1	3	4			
S SPRUCE	244.2	56.0	0	1	2			
TOTAL	*53.2*	*12.2*	*84*	*95*	*107*	*119*	*30*	*13*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	46.4	10.6	84	94	104			
DOUGLEAV	165.4	38.0	12	20	28			
R ALDER	337.7	77.5	3	14	25			
SNAG	244.2	56.0	5	12	19			
HEMLEAV	205.2	47.1	4	8	12			
S SPRUCE	244.2	56.0	3	6	9			
TOTAL	*30.7*	*7.0*	*143*	*154*	*165*	*40*	*10*	*4*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	54.0	12.4	12,703	14,501	16,298			
DOUGLEAV	166.1	38.1	1,381	2,232	3,083			
R ALDER	399.1	91.6	123	1,462	2,800			
SNAG								
HEMLEAV	208.4	47.8	724	1,388	2,052			
S SPRUCE	244.2	56.0	719	1,636	2,554			
TOTAL	*39.2*	*9.0*	*19,309*	*21,219*	*23,129*	*65*	*16*	*7*

TC TSTATS

STATISTICS

PROJECT JACKPIPE

DATE 3/8/2007

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	25	SALVAGE (T)	ABCD	46.30	20	57	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	20	57	2.8		
CRUISE	10	32	3.2	3,189	1.0
DBH COUNT					
REFOREST					
COUNT	10	25	2.5		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK	24	55.4	17.6	62		94.0	15,610	14,501	3,830	3,680
R ALDER	7	12.5	14.3	53		14.0	1,626	1,462	475	433
S SPRUCE	1	1.0	33.0	120		6.0	1,636	1,636	349	349
TOTAL	*32*	*68.9*	*17.4*	*61*		*114.0*	*18,873*	*17,599*	*4,653*	*4,462*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	58.8	13.5	48	55	63			
R ALDER	328.3	75.3	3	12	22			
S SPRUCE	244.2	56.0	0	1	2			
TOTAL	*57.2*	*13.1*	*60*	*69*	*78*	*138*	*35*	*15*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	46.4	10.6	84	94	104			
R ALDER	337.7	77.5	3	14	25			
S SPRUCE	244.2	56.0	3	6	9			
TOTAL	*36.5*	*8.4*	*104*	*114*	*124*	*56*	*14*	*6*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	54.0	12.4	12,703	14,501	16,298			
R ALDER	399.1	91.6	123	1,462	2,800			
S SPRUCE	244.2	56.0	719	1,636	2,554			
TOTAL	*42.6*	*9.8*	*15,878*	*17,599*	*19,320*	*76*	*19*	*8*

TC TSTATS

STATISTICS

PROJECT JACKPIPE

DATE 3/8/2007

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	25	SALVAGE (L)	ABCD	46.30	20	20	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	20	20	1.0		
CRUISE	9	13	1.4	1,231	1.1
DBH COUNT					
REFOREST					
COUNT	5	7	1.4		
BLANKS	6				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUGLEAV	5	18.4	14.1	51		20.0	2,491	2,232	650	576
SNAG	5	5.6	19.9	23		12.0				
HEMLEAV	3	2.7	23.5	83		8.0	1,560	1,388	356	346
TOTAL	*13*	*26.6*	*16.6*	*48*		*40.0*	*4,051*	*3,620*	*1,006*	*922*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV	187.0	42.9	10	18	26			
SNAG	258.3	59.3	2	6	9			
HEMLEAV	210.0	48.2	1	3	4			
TOTAL	*123.9*	*28.4*	*19*	*27*	*34*	*647*	*162*	*72*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV	165.4	38.0	12	20	28			
SNAG	244.2	56.0	5	12	19			
HEMLEAV	205.2	47.1	4	8	12			
TOTAL	*91.8*	*21.1*	*32*	*40*	*48*	*355*	*89*	*39*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV	166.1	38.1	1,381	2,232	3,083			
SNAG								
HEMLEAV	208.4	47.8	724	1,388	2,052			
TOTAL	*109.1*	*25.0*	*2,714*	*3,620*	*4,526*	*501*	*125*	*56*

TC TSTATS

STATISTICS

PROJECT JACKPIPE

DATE 3/8/2007

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	15	AREA23	R/W	0.20	41	361	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	41	361	8.8		
CRUISE	20	155	7.8	37	423.5
DBH COUNT					
REFOREST					
COUNT	21	188	9.0		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK	81	89.8	16.8	72		138.2	25,985	24,644	6,256	6,042
DOUG FIR	47	64.7	14.8	59		77.2	9,550	9,089	2,710	2,616
S SPRUCE	19	22.8	13.2	29		21.7	2,521	2,260	623	580
SNAG	6	3.1	15.5	42		4.1				
R ALDER	2	2.7	15.2	40		3.4	281	281	89	89
TOTAL	*155*	*183.0*	*15.7*	*61*		*244.6*	*38,337*	*36,274*	*9,677*	*9,328*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	92.3	14.4	77	90	103			
DOUG FIR	111.6	17.4	53	65	76			
S SPRUCE	220.1	34.4	15	23	31			
SNAG	427.6	66.8	1	3	5			
R ALDER	334.4	52.2	1	3	4			
TOTAL	*37.5*	*5.9*	*172*	*183*	*194*	*56*	*14*	*6*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	84.0	13.1	120	138	156			
DOUG FIR	108.3	16.9	64	77	90			
S SPRUCE	182.4	28.5	16	22	28			
SNAG	360.3	56.3	2	4	6			
R ALDER	327.7	51.2	2	3	5			
TOTAL	*32.1*	*5.0*	*232*	*245*	*257*	*41*	*10*	*5*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	90.5	14.1	21,160	24,644	28,128			
DOUG FIR	111.3	17.4	7,509	9,089	10,669			
S SPRUCE	219.2	34.2	1,486	2,260	3,033			
SNAG								
R ALDER	333.8	52.1	135	281	428			
TOTAL	*48.6*	*7.6*	*33,521*	*36,274*	*39,027*	*94*	*24*	*10*

TC TSTATS

STATISTICS

PROJECT JACKPIPE

DATE 3/8/2007

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	24	ROADSIDE	SALV	177.00	1	135	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	1	135	135.0		
CRUISE	1	135	135.0	2,025	6.7
DBH COUNT					
REFOREST COUNT					
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK	135	11.4	14.0	76		12.2	2,288	1,716	583	583
TOTAL	*135*	*11.4*	*14.0*	*76*		*12.2*	*2,288*	*1,716*	*583*	*583*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

TC PLOGSTVB

Log Stock Table - MBF

T08N R09W S15 TyR/W
THRU
T08N R09W S26 TyA145

Project: JACKPIPE
Acres 443.70

Date 3/8/2007
Time 2:58:46PM

Spp	ST	Sort	Grade	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	CU	2	0	100.0														
D		DO	CU	4	5	100.0														
D		DO	CU	6	12	100.0														
D		DO	CU	12	7	100.0														
D		DO	CU	40	11	100.0														
D		DO	2S	16	9		9	2.0							9					
D		DO	2S	24	18		18	3.9						18	0					
D		DO	2S	32	32		32	7.0						32		0				
D		DO	2S	36	0		0	.0						0						
D		DO	2S	40	30		30	6.6						30						
D		DO	3S	18	0		0	.0				0								
D		DO	3S	22	8		8	1.9			3	5								
D		DO	3S	24	7		7	1.5			7		0							
D		DO	3S	26	7		7	1.4			7									
D		DO	3S	30	29	7.7	27	6.0			16	11	0							
D		DO	3S	32	57		57	12.6			0	41	16							
D		DO	3S	34	39		39	8.5			39									
D		DO	3S	36	0		0	.0			0	0								
D		DO	3S	38	29		29	6.4			29									
D		DO	3S	40	114		114	25.3			0	56	58							
D		DO	4S	12	5		5	1.2			5									
D		DO	4S	14	12		12	2.6			12									
D		DO	4S	16	11		11	2.5			2	9								
D		DO	4S	18	0		0	.0			0									
D		DO	4S	20	9		9	2.0			9									
D		DO	4S	22	8		8	1.8			8									
D		DO	4S	23	0		0	.0			0									
D		DO	4S	24	13		13	2.9			13									
D		DO	4S	26	10		10	2.1			10									
D		DO	4S	28	5		5	1.1			5									
D		DO	4S	30	3		3	.7			3									
D		Totals			488	7.4	452	7.7			167	123	74	79	9	0				
H		DO	CU	2	10	100.0														
H		DO	CU	4	2	100.0														
H		DO	CU	6	28	100.0														
H		DO	CU	8	0	100.0														

TC PLOGSTVB

Log Stock Table - MBF

T08N R09W S15 TyR/W
THRU
T08N R09W S26 TyA145

Project: JACKPIPE
Acres 443.70

Date 3/8/2007
Time 2:58:46PM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
H		DO	CU	10	17	100.0														
H		DO	CU	12	24	100.0														
H		DO	CU	16	15	100.0														
H		DO	CU	20	49	100.0														
H		DO	2S	12	0		0	.0							0					
H		DO	2S	14	12		12	.3								12				
H		DO	2S	16	30	3.7	29	.6						0		29				
H		DO	2S	20	35		35	.8						7		14	14			
H		DO	2S	22	11		11	.2						11						
H		DO	2S	24	15		15	.3							0	15	0			
H		DO	2S	26	14		14	.3							14					
H		DO	2S	30	92		92	2.0						49	20	23	0			
H		DO	2S	32	685	1.6	674	14.7						202	238	173	61	0		
H		DO	2S	36	26	7.7	24	.5							24					
H		DO	2S	40	1,113		1,110	24.2						561	287	211	51			
H		DO	3S	14	0		0	.0					0							
H		DO	3S	16	2		2	.0					2							
H		DO	3S	20	52	2.8	51	1.1			0	19	18			13				
H		DO	3S	22	0		0	.0			0	0								
H		DO	3S	24	47	5.5	44	1.0			2	7	35		0					
H		DO	3S	25	8		8	.2			8									
H		DO	3S	26	24		24	.5			0	24	0							
H		DO	3S	28	21		21	.4			17	4	0							
H		DO	3S	30	34		34	.8			18	13	3							
H		DO	3S	32	505		505	11.0			62	182	236	24						
H		DO	3S	34	110	18.5	89	1.9			89	0	0							
H		DO	3S	36	28		28	.6			20	8								
H		DO	3S	37	0		0	.0			0									
H		DO	3S	38	30		30	.7			30									
H		DO	3S	40	1,456	5.9	1,370	29.9			218	443	656	41		14				
H		DO	4S	9	1		1	.0			1									
H		DO	4S	12	11		11	.2			10	1								
H		DO	4S	13	0		0	.0			0									
H		DO	4S	14	29		29	.6			28	2								
H		DO	4S	15	1		1	.0				1								
H		DO	4S	16	65		65	1.4			50	15								

TC PLOGSTVB

Log Stock Table - MBF

T08N R09W S15 TyR/W
THRU
T08N R09W S26 TyA145

Project: JACKPIPE
Acres 443.70

Date 3/8/2007
Time 2:58:46PM

Spp	ST	So	Grade	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+
H		DO	4S	17	2		2	.0			2									
H		DO	4S	18	25	4.6	24	.5			21	2								
H		DO	4S	20	27		27	.6			25	3								
H		DO	4S	22	16		16	.3			16	0								
H		DO	4S	23	0		0	.0			0									
H		DO	4S	24	23		23	.5			23									
H		DO	4S	25	2		2	.0			2									
H		DO	4S	26	39		39	.8			39									
H		DO	4S	28	42		42	.9			42									
H		DO	4S	30	38		38	.8			38									
H		DO	4S	32	16		16	.3		5	8	3								
H		DO	4S	38	8		8	.2			8									
H		DO	4S	40	22		22	.5			22									
H		Totals			4,864	5.7	4,588	78.1		5	799	727	950	896	582	503	125	0		
S		DO	CU	2	1	100.0														
S		DO	CU	4	3	100.0														
S		DO	CU	6	14	100.0														
S		DO	CU	8	0	100.0														
S		DO	CU	32	8	100.0														
S		DO	2S	16	10		10	2.0									10			
S		DO	2S	18	0		0	.0												0
S		DO	2S	24	18		18	3.9						18						
S		DO	2S	30	18		18	3.8						0		18				
S		DO	2S	32	44		44	9.4						18			0	26		
S		DO	2S	36	21		21	4.6						21						
S		DO	2S	40	122		122	26.2						23		52		47	0	0
S		DO	3S	16	13		13	2.8						13						
S		DO	3S	18	14		14	3.0						14						
S		DO	3S	20	6		6	1.2							6					
S		DO	3S	24	0	6.9	0	.0						0			0			
S		DO	3S	26	6		6	1.2				6								
S		DO	3S	28	0		0	.0					0							
S		DO	3S	30	56		56	11.9				20	36							
S		DO	3S	32	28		28	6.0			17	11	0			0				
S		DO	3S	34	6		6	1.3			6					0				
S		DO	3S	36	7		7	1.5			3	4								
S		DO	3S	40	29		29	6.2				9	20						0	

TC PLOGSTVB

Log Stock Table - MBF

T08N R09W S15 TyR/W
THRU
T08N R09W S26 TyA145

Project: JACKPIPE
Acres 443.70

Date 3/8/2007
Time 2:58:46PM

Spp	ST	Sort	Grade	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+
S		DO	4S	10	5		5	1.2			5									
S		DO	4S	12	3		3	.5			3									
S		DO	4S	14	3		3	.7			3									
S		DO	4S	16	6		6	1.2		0	6									
S		DO	4S	20	9		9	2.0			9									
S		DO	4S	22	5		5	1.1			5									
S		DO	4S	24	22		22	4.7			22									
S		DO	4S	26	9		9	1.9			9									
S		DO	4S	28	8		8	1.6			8									
S		DO	4S	30	0		0	.0			0									
S		Totals			492	5.3	466	7.9		0	96	49	56	108	6	69	10	73	0	0
A		DO	CU	2	2	100.0														
A		DO	CU	6	6	100.0														
A		DO	CU	8	1	100.0														
A		DO	CU	10	5	100.0														
A		DO	CU	12	3	100.0														
A		DO	CU	13	2	100.0														
A		DO	CU	15	5	100.0														
A		DO	CU	16	3	100.0														
A		DO	CR	10	1		1	.3			1									
A		DO	CR	12	1		1	.2			1									
A		DO	CR	14	1		1	.3			1									
A		DO	CR	16	27		27	7.4			16	5		3	3					
A		DO	CR	20	13		13	3.5			10		3							
A		DO	CR	21	2		2	.5			2									
A		DO	CR	22	2		2	.6			2									
A		DO	CR	24	23		23	6.2			9	6	1	3		5				
A		DO	CR	26	6		6	1.6			1		4							
A		DO	CR	28	2		2	.6			2									
A		DO	CR	29	2		2	.5			2									
A		DO	CR	30	69		69	18.7			32	3	13	4	8	3	5			
A		DO	CR	32	70		70	18.9			13	6	35	4	8	5				
A		DO	CR	34	9		9	2.4			9									
A		DO	CR	38	4		4	1.1			4									
A		DO	CR	40	137		137	37.1			5	40	85		6					
A		Totals			396	6.7	369	6.3			111	61	141	14	25	13	5			

TC PLOGSTVB

Log Stock Table - MBF

T08N R09W S15 TyR/W
THRU
T08N R09W S26 TyA145

Project: JACKPIPE
Acres 443.70

Date 3/8/2007
Time 2:58:46PM

Spp	ST	Sort	Grade	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+
Total		All Species			6,241	5.8	5,876	100.0		5	1172	960	1221	1098	622	585	140	73	0	0

TC TSTNDSUM

Stand Table Summary

Project JACKPIPE

T08N R09W S15 TLEAV

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
08N	09W	15	AREA23	LEAV	131.80	41	101

T08N R09W S15 TLEA

Page: 1
Date: 03/08/201
Time: 3:22:02PM

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
HL		13	1	92	86	1.787	1.65	3.57	17.0	70.0		61	250		80	33
HL		15	3	89	90	4.027	4.94	9.40	20.9	82.9		196	779		258	103
HL		16	2	86	120	2.360	3.29	7.08	23.7	93.3		168	661		221	87
HL		17	2	87	106	2.090	3.29	5.23	28.8	104.0		151	543		198	72
HL		18	7	87	115	6.526	11.53	17.71	30.8	117.4		545	2,079		719	274
HL		19	4	87	114	3.347	6.59	10.04	31.6	130.8		317	1,314		418	173
HL		20	3	89	115	2.265	4.94	6.80	34.7	152.2		236	1,035		311	136
HL		21	8	89	116	5.479	13.18	15.07	43.4	177.7		653	2,678		861	353
HL		22	3	83	87	1.872	4.94	3.74	46.5	151.7		174	568		229	75
HL		23	3	89	100	1.713	4.94	5.14	41.8	187.8		215	965		283	127
HL		24	1	89	120	.524	1.65	1.57	52.3	230.0		82	362		109	48
HL		25	3	87	125	1.450	4.94	4.35	59.9	261.1		260	1,136		343	150
HL		27	1	86	124	.414	1.65	1.24	67.7	326.7		84	406		111	54
HL		28	2	87	101	.771	3.29	1.93	62.8	268.0		121	516		159	68
HL		29	2	87	118	.718	3.29	2.15	70.2	331.7		151	715		199	94
HL		30	2	86	103	.671	3.29	2.01	77.7	370.0		156	745		206	98
HL		31	1	88	111	.314	1.65	.94	83.3	423.3		79	399		104	53
HL		32	3	84	119	.885	4.94	2.65	82.2	414.4		218	1,100		288	145
HL		Totals	51	88	109	37.215	84.02	100.63	38.4	161.5		3,867	16,250		5,097	2,142
DL		11	1	92	117	2.535	1.67	5.07	14.5	60.0		74	304		97	40
DL		12	2	84	94	4.260	3.35	8.52	13.0	40.0		111	341		146	45
DL		13	3	85	92	5.444	5.02	10.89	16.0	56.7		174	617		230	81
DL		14	3	88	100	4.694	5.02	9.39	19.8	73.3		186	688		245	91
DL		15	1	78	98	1.363	1.67	2.73	20.5	60.0		56	164		74	22
DL		16	2	87	104	2.396	3.35	4.79	28.0	107.5		134	515		177	68
DL		17	7	82	108	7.428	11.71	13.80	32.7	114.6		451	1,581		594	208
DL		18	2	87	117	1.893	3.35	5.68	25.2	93.3		143	530		188	70
DL		19	3	87	98	2.549	5.02	5.95	30.9	115.7		184	688		242	91
DL		20	3	82	88	2.300	5.02	4.60	35.3	113.3		163	521		214	69
DL		21	2	77	99	1.391	3.35	2.78	46.2	115.0		129	320		170	42
DL		22	2	81	115	1.267	3.35	3.17	46.6	156.0		148	494		195	65
DL		24	1	83	108	.532	1.67	1.60	41.7	163.3		67	261		88	34
DL		Totals	32	85	102	38.053	53.53	78.95	25.6	89.0		2,018	7,025		2,659	926
SL		8	2	84	20	5.281	1.72	5.28	4.5	20.0		24	106		31	14
SL		10	1	82	31	1.581	.86	1.58	9.0	20.0		14	32		19	4
SL		16	2	84	59	1.235	1.72	2.47	18.7	65.0		46	161		61	21
SL		17	1	82	63	.547	.86	1.09	24.0	55.0		26	60		35	8
SL		18	1	88	87	.488	.86	.98	30.5	110.0		30	107		39	14
SL		23	1	81	56	.299	.86	.60	38.5	105.0		23	63		30	8
SL		33	1	80	118	.145	.86	.44	93.0	430.0		41	187		53	25
SL		51	1	82	144	.061	.86	.18	277.3	1373.3		51	250		67	33
SL		66	1	80	162	.036	.86	.15	325.2	1937.5		47	281		62	37
SL		Totals	11	84	36	9.674	9.49	12.76	23.6	97.7		301	1,247		397	164
AL		19	1	87	66	.688	1.36	1.38	32.5	110.0		45	151		59	20
AL		Totals	1	87	66	.688	1.36	1.38	32.5	110.0		45	151		59	20
SN		12	2	88	64	1.725	1.36									
SN		15	1	89	71	.552	.68									
SN		19	1	89	48	.344	.68									
SN		22	1	89	70	.257	.68									

TC TSTNDSUM

Stand Table Summary

Project JACKPIPE

T08N R09W S15 TLEAV

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
08N	09W	15	AREA23	LEAV	131.80	41	101

Date: 03/08/20(
Time: 3:22:02PM

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
SN		24	1	86	26	.216	.68									
SN		Totals	6	88	61	3.094	4.07									
Totals			101	86	96	88.723	152.45	193.73	32.2	127.4		6231	24,673		8,213	3,252

Revised August, 2002

CRUISE DESIGN
ASTORIA DISTRICT

Sale Name: Jack Pipe **Area(s)** Salvage (a, b, c, & d)

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

Approx. Cruise Acres: 43 **Estimated CV%** 50 [Net BF] or BA/Acre **SE% Objective** 13 [Net BF] or BA/Acre

Planned Sale Volume: 821 MBF **Estimated Sale Area Value/Acre:** $7,000

A. Cruise Goals: (a) Grade minimum 25 conifer and 5 hardwood trees: (b) Sample 21 cruise plots (10grade/11count); (c) Other goals (____ Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes; ____ Determine LWD (down wood) cubic feet and decay classes; ____ Determine "diameter limit" harvest parameters; _____)

B. Cruise Design:

1. **Plot Cruises:** BAF 40--conifer and alder ([Full point]; Half point) (circle one)
   Fixed Plot Size ____ Plot Radius _____ feet
   Cruise Line Direction(s): North & South, East & West
   Cruise Line Spacing 5.5 (chains)
   Cruise Plot Spacing 4 (chains)
   Grade/Count Ratio 1:2
2. **Reserve species:** Douglas-fir
3. **Leave Trees:** Wildlife Trees

C. Tree Measurements:

1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 8" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

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" 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. Minimum top outside bark for hardwoods is 7".

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, "reserved species", 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. **Blowdown:** A down tree is cruised at dbh, and determined to be in or out based upon where the dbh point on the tree is in relation to plot center. In instances where the bole isn't visible from plot center, the limiting distance formula can be applied.

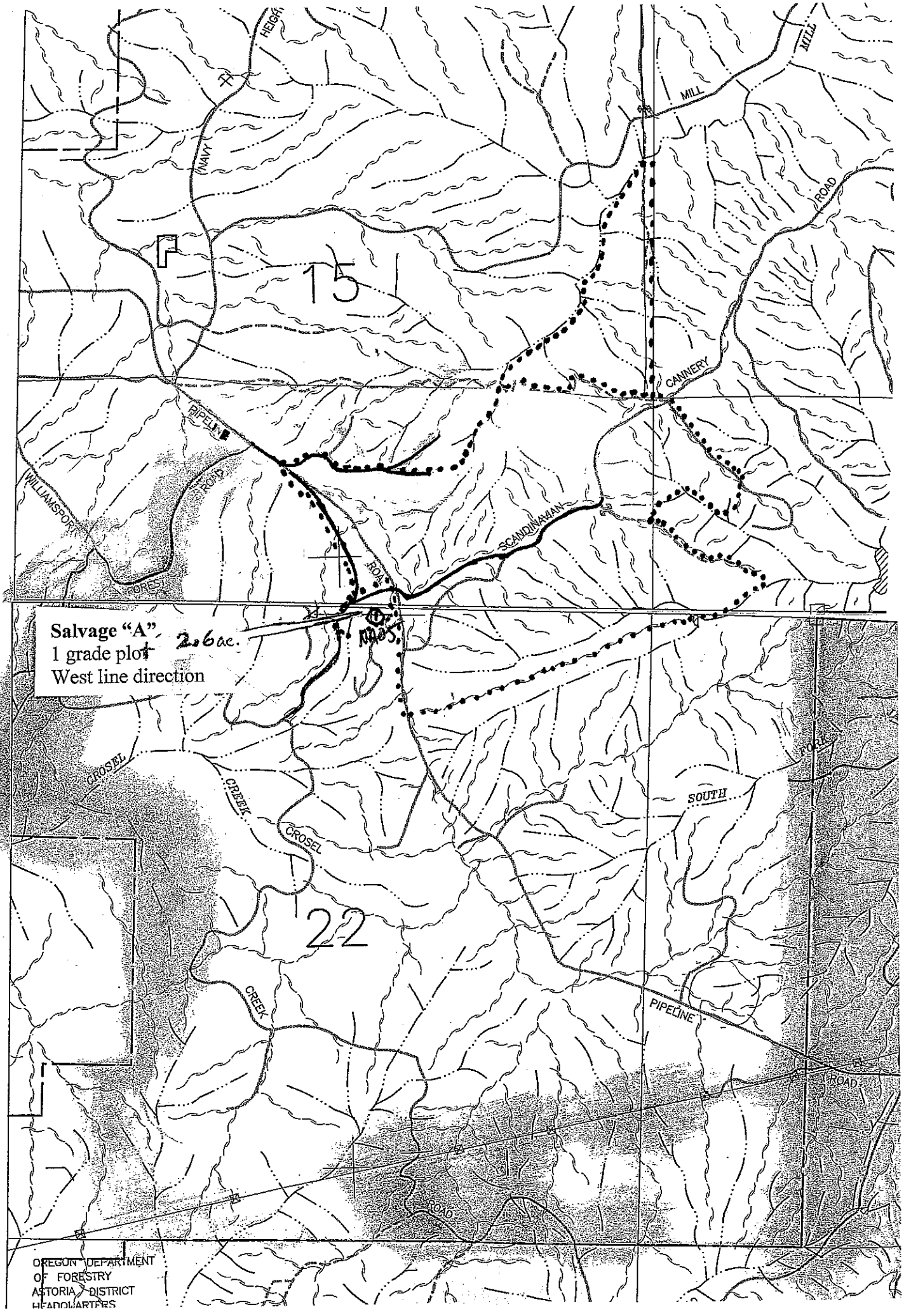
10. **Cruising Equipment:** Relaskop Rangefinder Logger's Tape (with dbh on back) Biltmore Stick Compass Cruise Cards in Tatum OR Data Recorder Cruise Design Cruise Map Yellow Flagging Blue Flagging

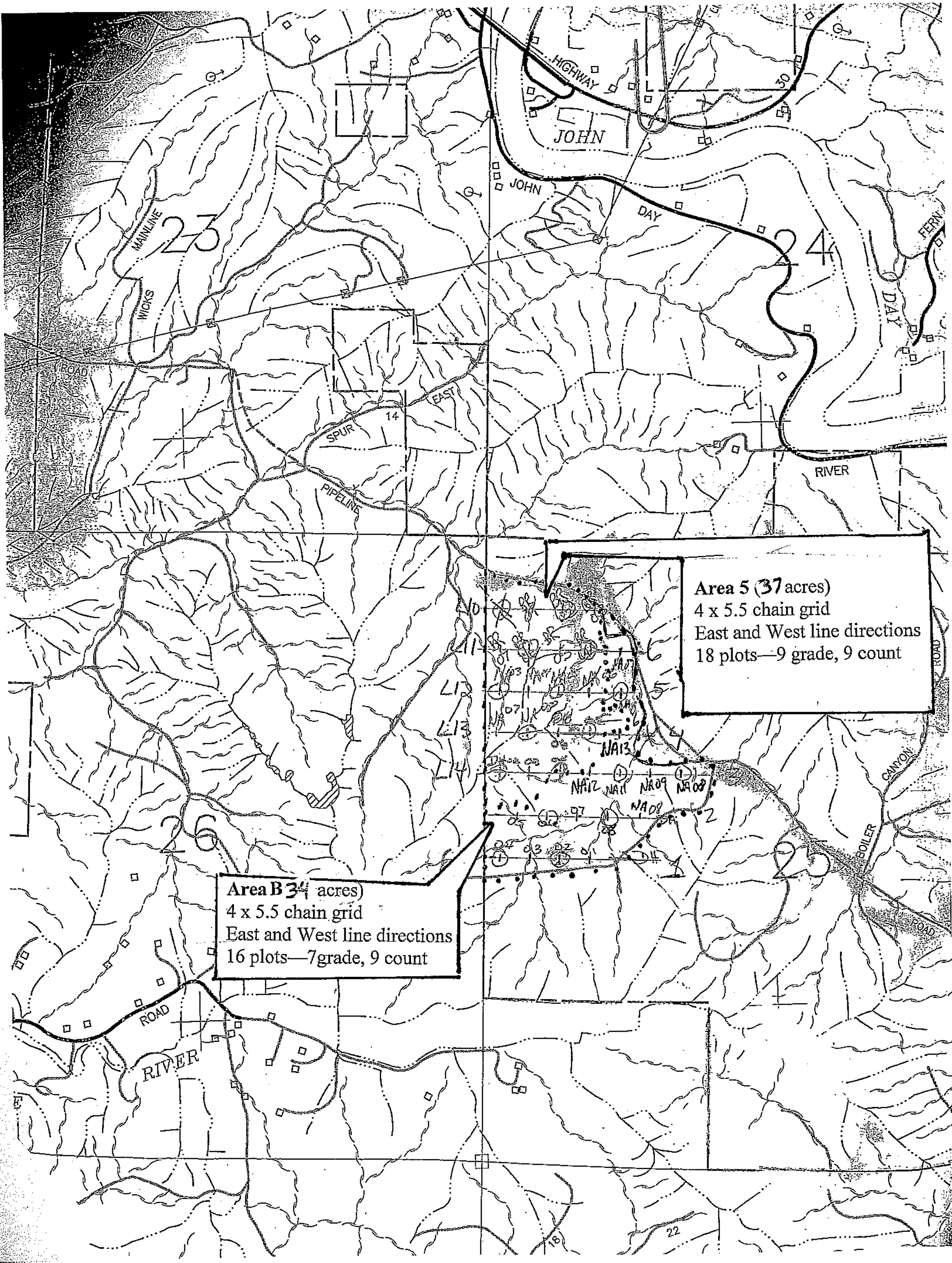
11. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.
    B. Data Recorder Instructions

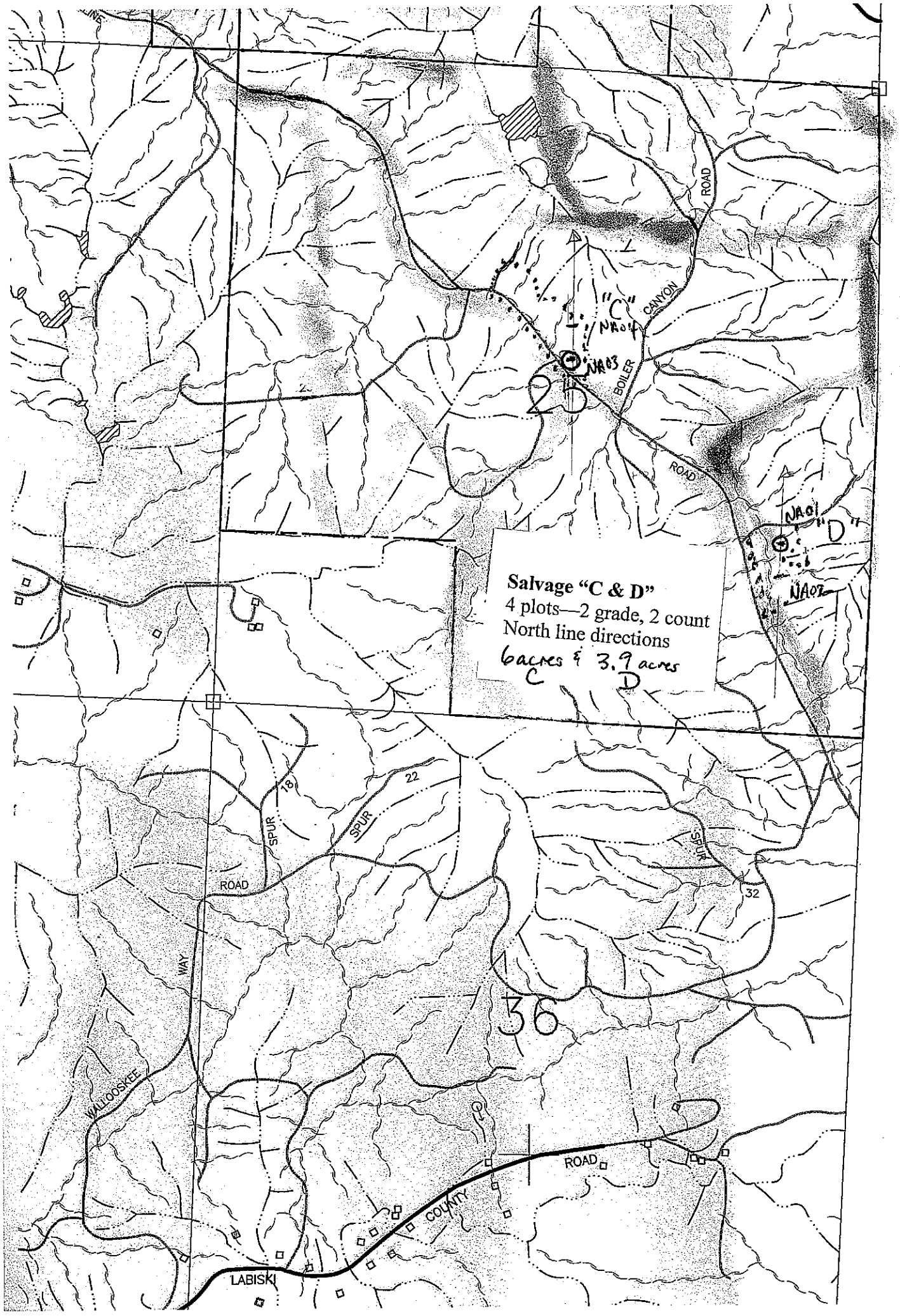
C. Other

Cruise Design by: _Nate Agalzoff_____
Approved by: _____
Date: ___1/02/07_____

C:\My Documents\Doc\Other\Cruise Design Form- Aug02.doc


HEIGHTS
MILL
MILL
NAVY
ROAD
15
CANNERY
PIPELINE
WILLIAMSPORT
ROAD
SCANDINAVIAN
ROAD
FOREST
ROAD
Salvage "A"
1 grade plot
West line direction
2.6ac.
CROSEL
CREEK
CROSEL
SOUTH
FORK
22
CREEK
PIPELINE
ROAD
ROAD
OREGON DEPARTMENT
OF FORESTRY
ASTORIA DISTRICT
HEADQUARTERS


HIGHWAY
30
JOHN
JOHN
DAY
DAY
FERN
RIVER
23
24
MAINLINE
WICKS
ROAD
EAST
SPUR
14
PIPELINE
Area 5 (37 acres)
4 x 5.5 chain grid
East and West line directions
18 plots—9 grade, 9 count
Area B 34 acres)
4 x 5.5 chain grid
East and West line directions
16 plots—7grade, 9 count
26
25
BOILER
CANYON
ROAD
ROAD
RIVER
18
22


"C"
CANYON
NA01
NA05
BOILER
ROAD
25
ROAD
NA01
"D"
NA02
Salvage "C & D"
4 plots—2 grade, 2 count
North line directions
6 acres & 3.9 acres
C
D
18
SPUR
22
SPUR
SPUR
32
ROAD
WAY
36
WALLOOSKEE
ROAD
COUNTY
LABISKI

Revised August, 2002

CRUISE DESIGN
ASTORIA DISTRICT

Sale Name: Jack Pipe **Area(s)** 1, 4, & 5

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

Approx. Cruise Acres: 90 **Estimated CV%** 70 Net BF or BA/Acre **SE% Objective** 9 Net BF or BA/Acre

Planned Sale Volume: 3.4 MMBF **Estimated Sale Area Value/Acre:** $14,000

A. Cruise Goals: (a) Grade minimum _100_ conifer and _25_ hardwood trees: (b) Sample 45 cruise plots (24grade/21count); (c) Other goals (____ Determine "automark" thinning standards; _X__ Determine log grades for sale value; _X__ Determine snag and leave tree species and sizes; ____ Determine LWD (down wood) cubic feet and decay classes; ____ Determine "diameter limit" harvest parameters; _____)

B. Cruise Design:

1. **Plot Cruises:** BAF 40--conifer 13.61--Alder ([Full point]; Half point) (circle one)
   Fixed Plot Size ____ Plot Radius _____ feet
   Cruise Line Direction(s): 135° & 315° (Area1), North & South (Area 4), East & West (Area5)
   Cruise Line Spacing 5.5 (chains)
   Cruise Plot Spacing 4 (chains)
   Grade/Count Ratio 1:2
2. **Reserve species:** cedar
3. **Leave Trees:** Wildlife Trees

C. Tree Measurements:

1. Diameter: Minimum DBH to cruise is 8" for conifers and 8" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

1. **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.

2. **Top Cruise Diameter (TCD):** Minimum top outside bark for conifer 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. Minimum top outside bark for hardwoods is 7".

3. **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.

4. **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

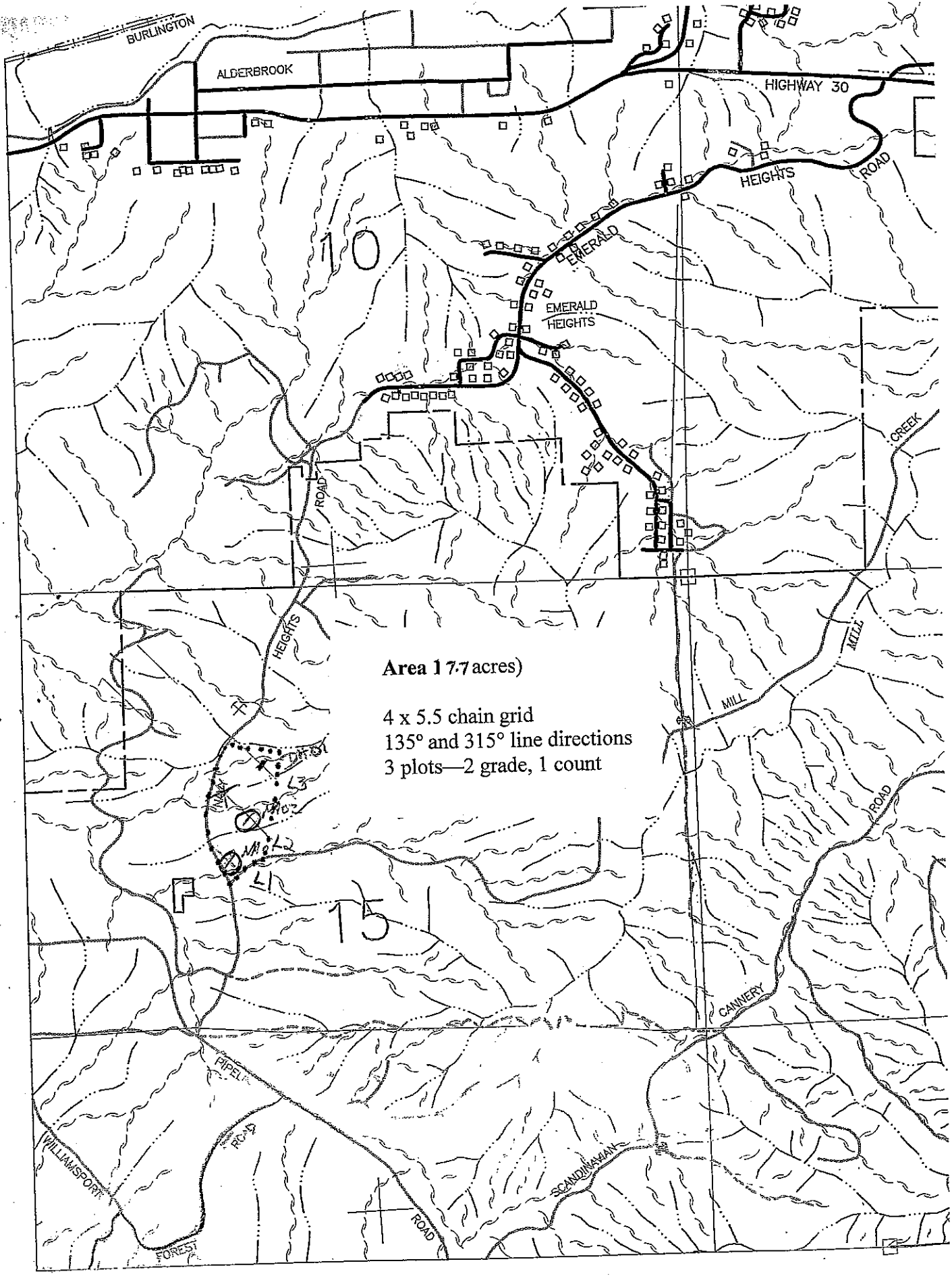
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

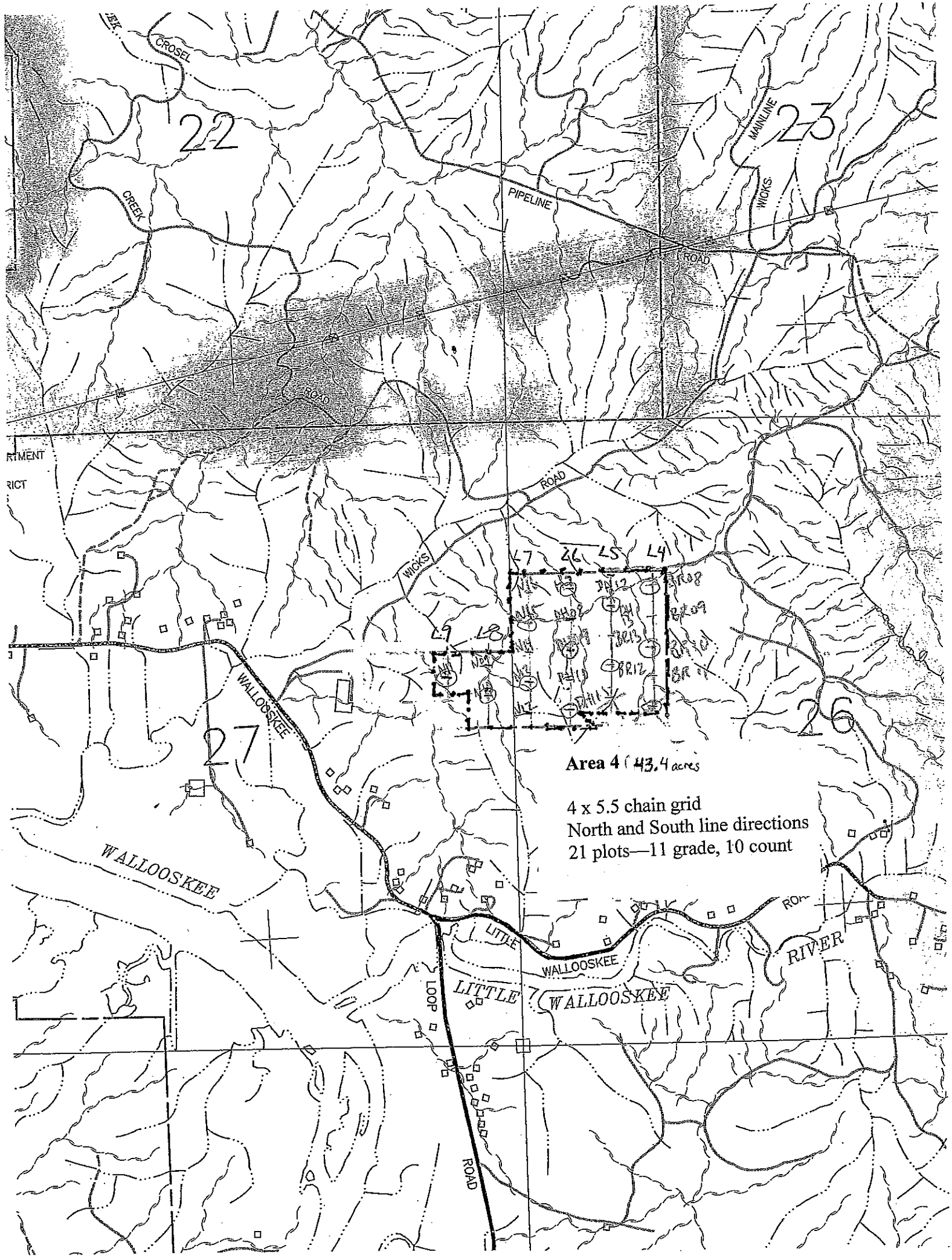
8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy 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.

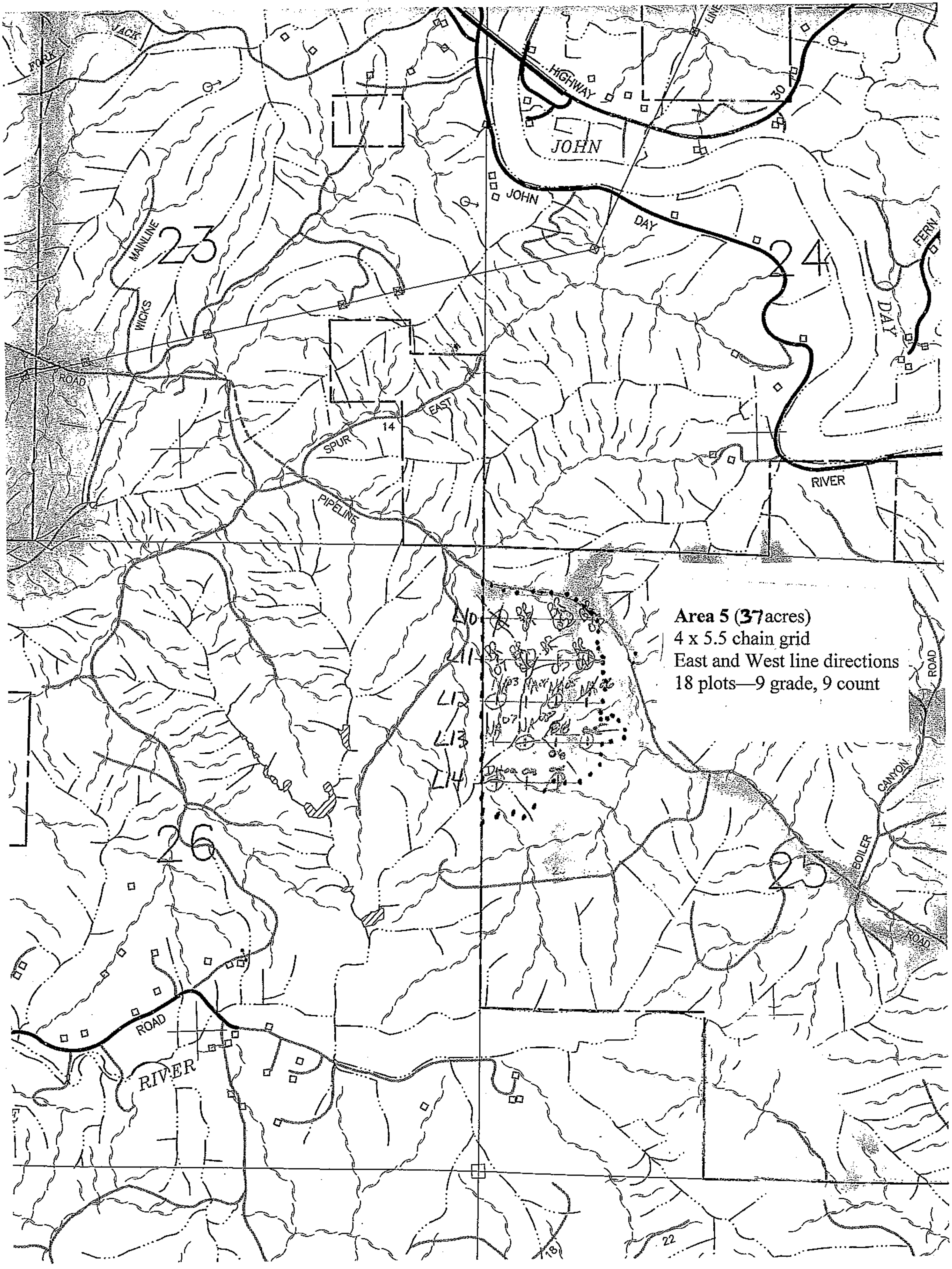
9. **Cruising Equipment:** Relaskop Rangefinder Logger's Tape (with dbh on back) Biltmore Stick Compass Cruise Cards in Tatum OR Data Recorder Cruise Design Cruise Map Yellow Flagging Blue Flagging

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: _Nate Agalzoff_____
Approved by: _____
Date: _____


BURLINGTON
ALDERBROOK
HIGHWAY 30
HEIGHTS
ROAD
EMERALD
EMERALD HEIGHTS
10
CREEK
ROAD
HEIGHTS
MILL
MILL
ROAD
CANNERY
15
PIPELINE
ROAD
WILLIAMSPORT
FOREST
ROAD
SCANDINAVIAN
ROAD
Area 1 7.7 acres)
4 x 5.5 chain grid
135° and 315° line directions
3 plots—2 grade, 1 count


CROSEL
CREEK
22
PIPELINE
MAINLINE
23
WICKS
ROAD
RTMENT
RICT
WICKS
ROAD
L7
L6
L5
L4
L9
L8
WALLOOSKEE
27
26
Area 4 (43.4 acres
4 x 5.5 chain grid
North and South line directions
21 plots—11 grade, 10 count
WALLOOSKEE
LITTLE
WALLOOSKEE
RIVER
LITTLE WALLOOSKEE
LOOP
ROAD



JACK
FORK
HIGHWAY
30
JOHN
JOHN
DAY
LINE
23
MAINLINE
WICKS
ROAD
24
DAY
FERN
SPUR
14
EAST
PIPELINE
RIVER
Area 5 (37 acres)
4 x 5.5 chain grid
East and West line directions
18 plots—9 grade, 9 count
ROAD
CANYON
BOILER
ROAD
26
25
ROAD
RIVER
22
18

Revised August, 2002

CRUISE DESIGN
ASTORIA DISTRICT

Sale Name: __Jack Pipe_____ **Area(s)** __2 & 3_____

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

Approx. Cruise Acres: _133_ **Estimated CV%** _70 [Net BF] or _BA/Acre **SE% Objective** _11_ [Net BF] or BA/Acre

Planned Sale Volume: 1.2 MMBF **Estimated Sale Area Value/Acre:** $ 6,000

A. Cruise Goals: (a) Grade minimum __100____ conifer and _0____ hardwood trees: (b) Sample ____ cruise plots; (c) Other goals (_X__ Determine "automark" thinning standards; _X__ Determine log grades for sale value; _X__ Determine snag and leave tree species and sizes; ____ Determine LWD (down wood) cubic feet and decay classes; ____ Determine "diameter limit" harvest parameters;)
Basal Area leave target 140 sq. ft.
Cruiser needs to select 4.5 or 5.5 leave trees per plot.

B. Cruise Design:

1. **Plot Cruises:** BAF _27.7_ ([Full point]; Half point) (circle one)
   Fixed Plot Size ____ Plot Radius _____ feet
   Cruise Line Direction(s) _North and South___
   Cruise Line Spacing __6__ (chains) (feet)
   Cruise Plot Spacing __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 _8"_ for conifers and _8"_for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

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 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

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

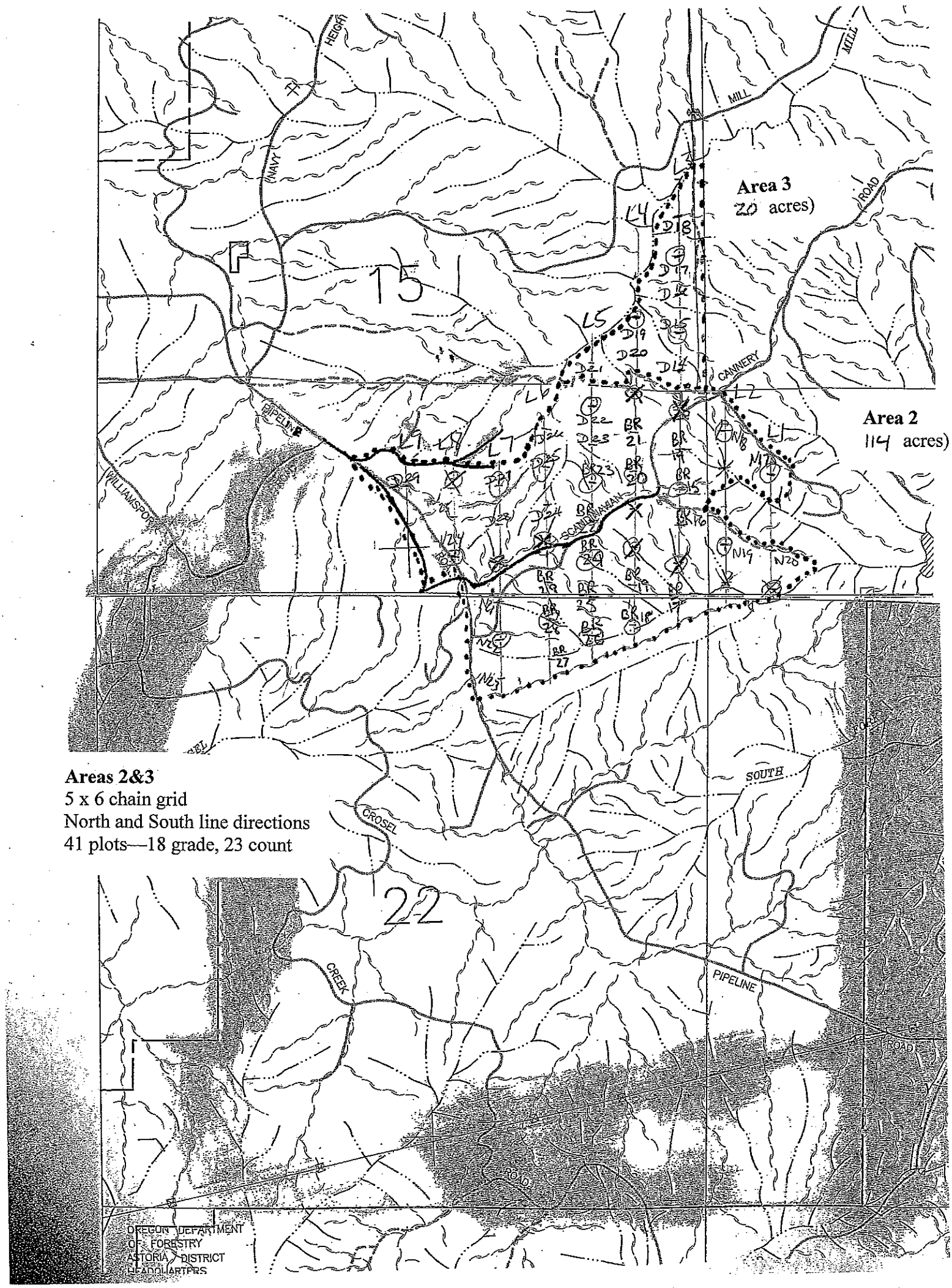
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at intervisible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.
   ITS and 100% Cruises: Mark cruise "strips" with various colored flagging (not pink). Mark trees measured and graded with 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.

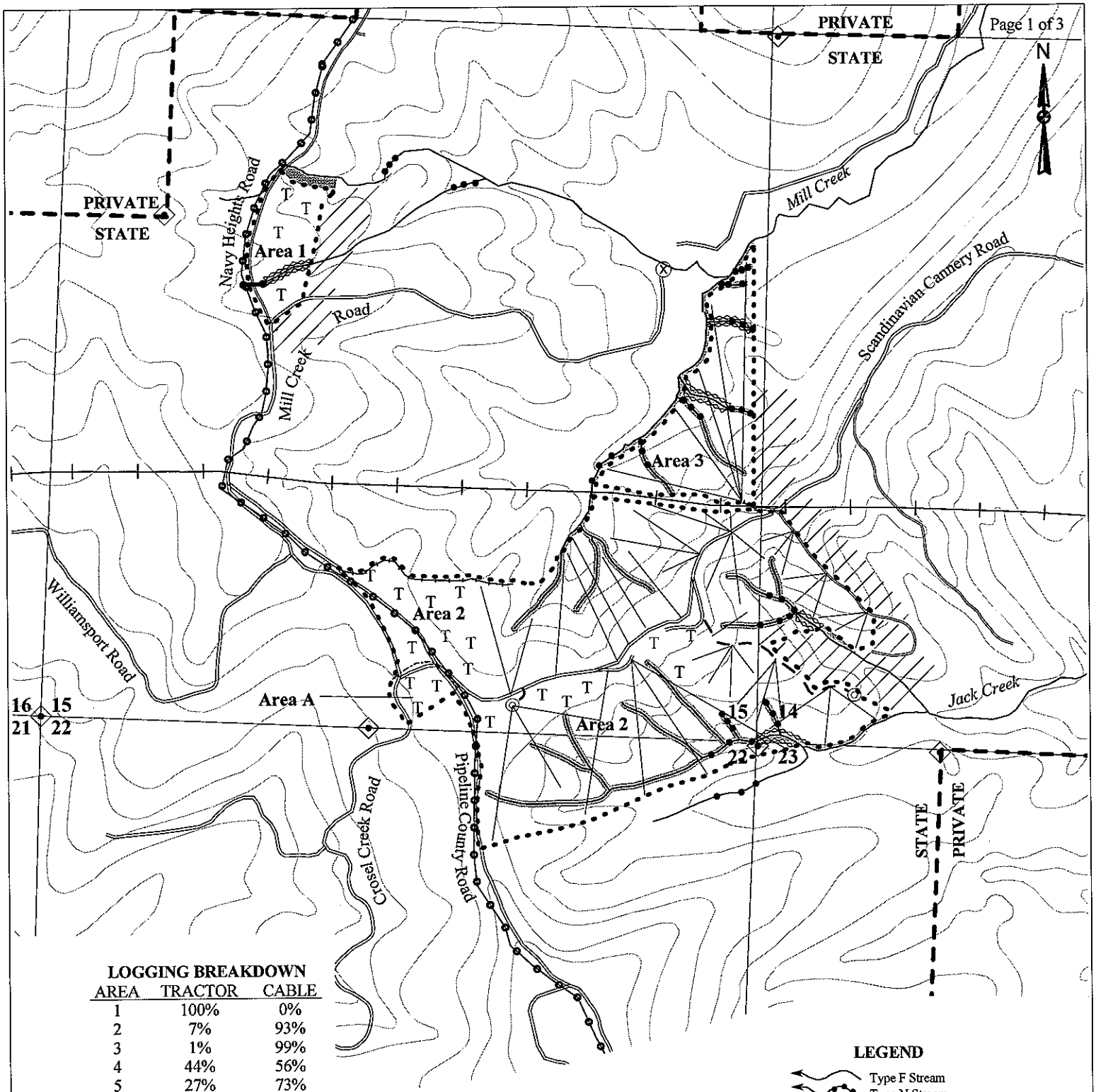
Cruise Design by: _____
Approved by: _____
Date: _____



Areas 2&3
5 x 6 chain grid
North and South line directions
41 plots—18 grade, 23 count

JACK PIPE
Roadside Salvage

Volume Calculations:		
Timber Scattered over:	386	stations
Average trees/station:	5.2	
Estimated total trees	2,025	
Average DBH	14	inches
Volume/tree	200	Bd. Ft.
Gross Volume	**405**	**MBF**
Damaged & Broken	-25%	
Net Volume	**304**	**MBF**



LOGGING BREAKDOWN

AREA	TRACTOR	CABLE
1	100%	0%
2	7%	93%
3	1%	99%
4	44%	56%
5	27%	73%
A	100%	0%
B	100%	0%
C	100%	0%
D	100%	0%

APPROXIMATE ACREAGE

AREA	MC ACRES	PC ACRES	GS ACRES
AREA 1	8.1		
AREA 2		112.7	
AREA 3		19.1	
AREA 4	43.4		
AREA 5	36.9		
AREA 6 R/W	0.2		
AREA A			2.2
AREA B	35.1		
AREA C			5.7
AREA D			3.3
TOTAL	123.7	131.8	11.2

TOTAL ALL AREAS - 266.7

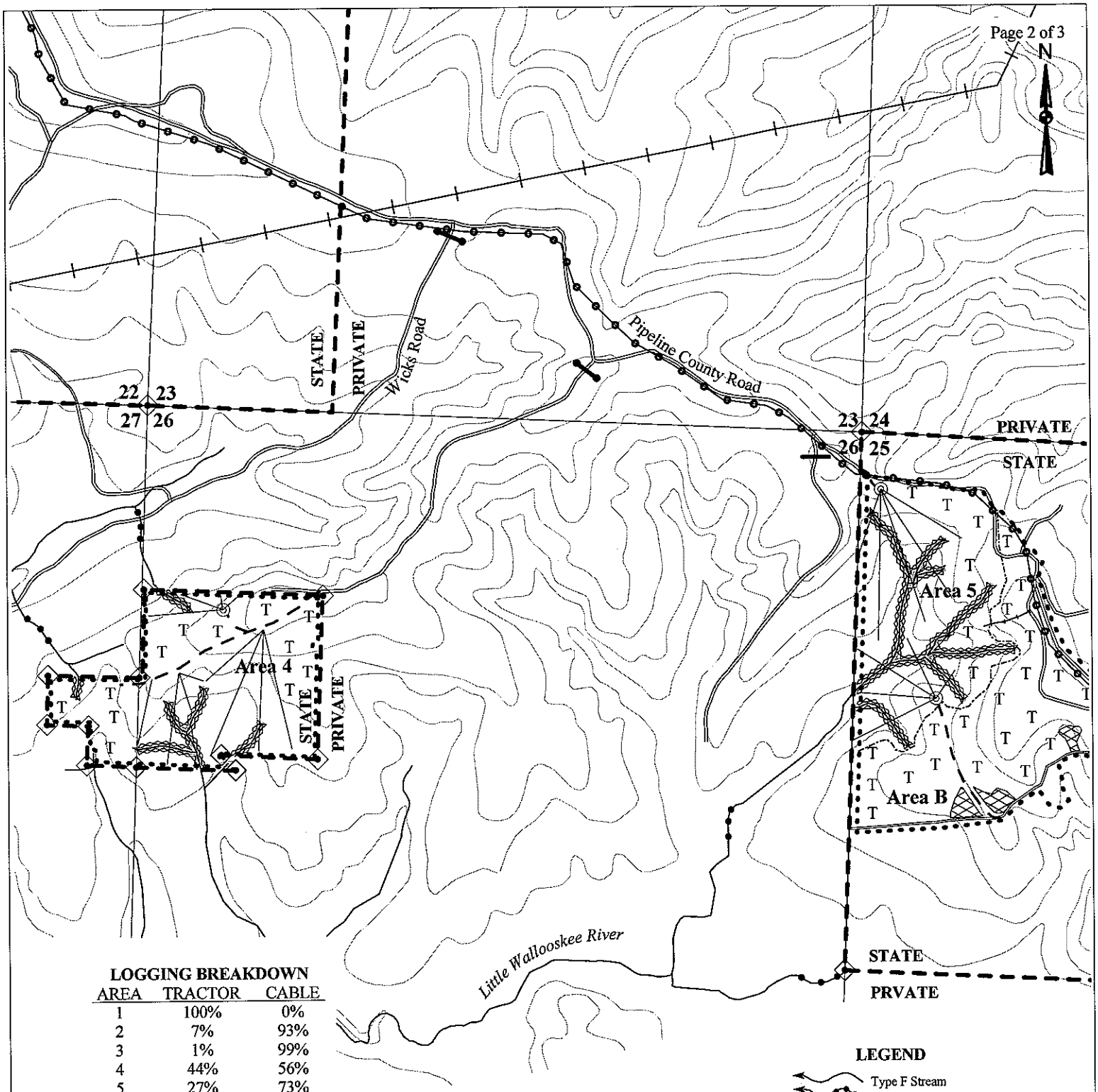
LOGGING PLAN MAP

OF TIMBER SALE CONTRACT NO. 341-07-67
JACKPIPE
PORTIONS OF SECTION 14, 15, 16, 21, 22, 23, 25, 26, & 27, T8N R9W, W.M. CLATSOP COUNTY, OREGON
APPROX. SCALE 1"=1000'

1000 0 1000 Feet

LEGEND

- Type F Stream
- Type N Stream
- Timber Sale Boundary
- Ownership Boundary
- Area Boundary
- Posted Buffer Zone Boundary
- Stream Buffer
- Underground Utilities (Approximate Loc.)
- Overhead Utilities
- Reforestation Area
- Surfaced Road
- New Road Construction
- Landing to Construct
- Loggers Choice Landing
- Known Land Survey Corner
- Green Tree Retention Area
- FAA Site
- Gate
- Cable Yarding
- T Tractor Yarding
- Loggers Choice Road



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W.M. CLATSOP COUNTY, OREGON
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1000 0 1000 Feet

LEGEND

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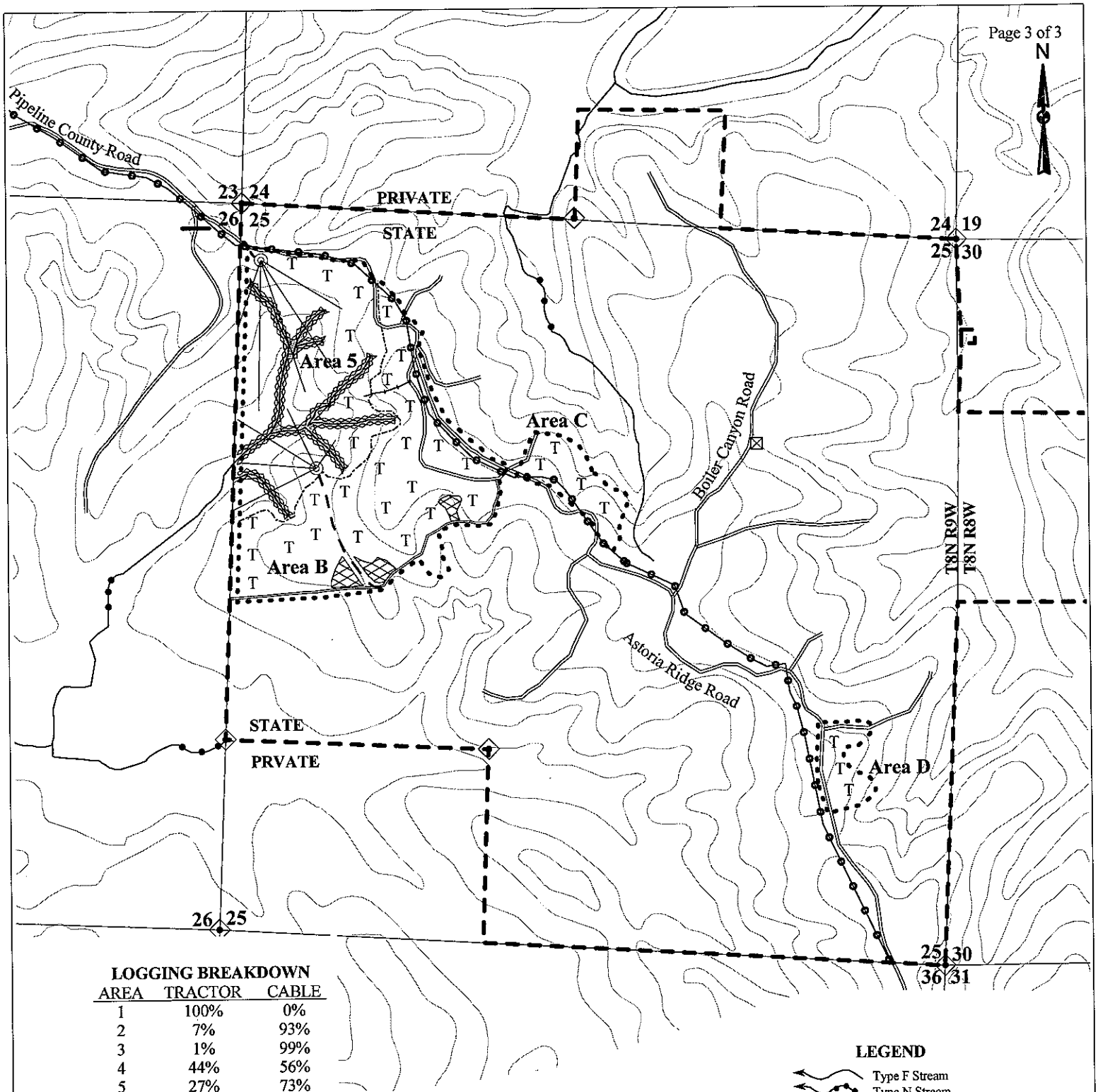
- Green Tree Retention Area
- FAA Site
- Gate
- Cable Yarding
- T Tractor Yarding
- Loggers Choice Road
- Blocked Road



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JACKPIPE
PORTIONS OF SECTION 14, 15, 16, 21, 22, 23, 25, 26, & 27, T8N R9W,
W.M. CLATSOP COUNTY, OREGON
APPROX. SCALE 1"=1000'

1000 0 1000 Feet

LEGEND

- Type F Stream
- Type N Stream
- Timber Sale Boundary
- Ownership Boundary
- Area Boundary
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- Stream Buffer
- Underground Utilities (Approximate Loc.)
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