



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary West Creek Combination Sale 341-03-91

District: Astoria

Date: 4/3/03

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,445,467.15	\$25,155.56	\$1,470,622.71
		Project Work	(\$113,879.00)
		Advertised Value	\$1,356,743.71



Timber Sale Appraisal Timber Description West Creek Combination Sale 341-03-91

"STEWARDSHIP IN FORESTRY"

District: Astoria

Location: Portions Sections 1, 11, 12, & 14, T7N, R6W, W.M., Clatsop County, Oregon

Date: 4/3/03

Stand Stocking: 40%

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

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Red Cedar	Alder (Red)	Total
3P	20	0	0	0	20
SM	146	15	0	0	161
2S	1,463	509	1	0	1,973
3S	1,622	922	19	0	2,563
4S	265	181	2	0	448
CR 8" - 14"	0	0	0	92	92
Total	3,516	1,627	22	92	5,257

Comments: Pond Values Used: 1st Quarter 2003

Combination sale: 1 CC unit (6 acres); 8 PC units (253 acres); 2 acres R/W
Log Markets: Clatskanie, Forest Grove (Stimson), Chehalis (Cascade), Kalama (RSG)
Additional Costs Plus P & R: Brand & Paint Logs @ \$1/MBF = \$5,257
 Skid trail/Cable corridor layout @ \$4/MBF = \$20,240
 Thinning tree selection @ \$3/MBF = \$12,744
 Intermediate supports - 5 Man-days @ \$150 = \$750
 Yard slash from landings - \$.70 per MBF x 3200 MBF = \$2,240
Total Costs Plus P & R = \$41,231
Additional Costs - No P & R: Slash Piling - Area 1 - 15 hours @ \$95/hour = \$1,425
 Move-in piling machine = \$500
Portable toilet - 6 months @ \$70/month = \$420
Total Costs - No P & R = \$2,345



Timber Sale Appraisal

Logging Conditions

West Creek Combination

Sale 341-03-91

"STEWARDSHIP IN FORESTRY"

Combination#: 1

Douglas - Fir	8.88%	
Western Hemlock / Fir	17.37%	
Red Cedar	37.09%	
Alder (Red)	28.83%	

Yarding Distance: Medium (800 ft) **Downhill Yarding:** No
Logging System: Cable: Small Tower <=40 **Process:** Stroke Delimber
Tree Size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
Loads/Day: 4 **Bd. Ft./Load:** 3,700
Cost/MBF: \$187.35

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

Combination#: 2

Douglas - Fir	79.20%	
Western Hemlock / Fir	10.87%	
Red Cedar	32.73%	
Alder (Red)	19.57%	

Yarding Distance: Medium (800 ft) **Downhill Yarding:** No
Logging System: Cable: Large Tower >=70 **Process:** Manual Delimiting
Tree Size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
Loads/Day: 8 **Bd. Ft./Load:** 4,000
Cost/MBF: \$110.94

Machines:
 Log Loader (A)
 Tower Yarder (Large)

Combination#: 3

Douglas - Fir	8.13%	
Western Hemlock / Fir	32.91%	
Red Cedar	17.45%	
Alder (Red)	50.52%	

Yarding Distance: Medium (800 ft) **Downhill Yarding:** Yes
Logging System: Track Skidder **Process:** Feller Buncher
Tree Size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
Loads/Day: 6 **Bd. Ft./Load:** 3,700
Cost/MBF: \$158.51

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

Combination#: 4 Douglas - Fir 3.79%
 Western Hemlock / Fir 38.85%
 Red Cedar 12.73%
 Alder (Red) 1.09%

Yarding Distance: Short (400 ft)

Downhill Yarding: Yes

Logging System: Shovel

Process: Manual Delimiting

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

Loads/Day: 8

Bd. Ft./Load: 4,800

Cost/MBF: \$60.46

Machines:

Shovel Logger



Timber Sale Appraisal Logging Costs West Creek Combination Sale 341-03-91

"STEWARDSHIP IN FORESTRY"

Date: 4/3/03

Operating Seasons: 2.0

Profit & Risk: 12%

Project Costs: \$113,879

Other Costs (P/R): \$41,231

Slash Disposal: \$0

Other Costs: \$2,345

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

Road Maintenance: \$3.42

Hauling Costs

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



Timber Sale Appraisal Logging Costs Breakdown West Creek Combination Sale 341-03-91

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Western Hemlock / Fir	Red Cedar	Alder (Red)
Logging	119.68	120.25	141.16	156.45
Road Maintenance	3.49	3.60	3.60	3.49
Fire Protection	1.03	1.03	1.03	1.03
Hauling	39.13	40.37	46.11	44.69
Other (P/R appl.)	7.84	7.84	7.84	7.84
Profit & Risk	20.54	20.77	23.97	25.62
Slash Disposal	0.00	0.00	0.00	0.00
Scaling	2.00	2.00	2.00	2.00
Other	0.45	0.45	0.45	0.45
Total	194.16	196.31	226.16	241.57

Amortization	0.00	0.00	0.00	0.00
Pond Value	536.22	333.04	1,150.00	515.00
Stumpage	342.06	136.73	923.84	273.43
Amortized	0.00	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary

West Creek Combination Sale 341-03-91

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	3,516.00	1,627.00	22.00	92.00
Value	342.06	136.73	923.84	273.43
Total	1,202,682.96	222,459.71	20,324.48	25,155.56

Gross Timber Sale Value

Recovery \$1,470,622.71

Prepared by: Tom Scoggins

Date: 4/3/03

District: Astoria

Phone: (503) 325-5451

Road Maintenance Cost Summary

Sale: West Creek Combination
Date: 12-Mar-03
By: John Tillotson

MBF: 5,257
\$/MBF: \$3.42

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
Progressive Operations Entries (2)	Grader 14G	\$540	2	16	\$80	\$2,360
	Dump Truck 12CY	\$114	2	8	\$57	\$684
	FE Loader C966	\$540	2	8	\$75	\$1,680
Final Haul Road Maintenance Haul Route	Grader 14G	\$540	1	54	\$80	\$4,860
	Dump Truck 12CY	\$114	1	24	\$57	\$1,482
	FE Loader C966	\$540	1	12	\$75	\$1,440
	Vibratory Roller	\$540	1	40	\$75	\$3,540
	Water Truck 2,500 gallon	\$132	1	24	\$67	\$1,740
	Labor				8	\$25
Total						\$17,986

Production Rates
Grader

Miles/day	Distance(miles)	Days
1.5	9.0	6.0

SUMMARY OF ALL PROJECT COSTS

SALE NAME: West Creek Combination

NEW CONSTRUCTION:

Project No.	Road segment	Length/Sta	Cost
1	2A-2B, 6A-6B, 6C-6D, 8A-8B, 8C-8D	43.80	\$34,033
TOTALS		43.80 0.83 Miles	\$34,033

ROAD IMPROVEMENT:

Project No.	Road segment	Length/Sta	Cost
3	I-12, I3-I4, I5-I6, I7-I8, I9-I10, I11-I12, I13-I14, I15-I1	286.60	\$50,013
TOTALS		286.60 5.43 Miles	\$50,013

SPECIAL PROJECTS:

Project No.	Description	Length/Sta	Cost
2	Road Side Brushing	591 Stations	\$11,454
4	Road Vacating	0.1 Miles	\$1,770
	Project Road Maintenance		\$12,008
TOTAL			\$25,232

MOVE IN:

Equipment	Cost
Excavator C325	\$900
Dozer D8	\$980
Skidder C518	\$520
Vibratory Roller	\$540
Dump Truck 10cy X 2	\$228
Dump Truck 20cy X 4	\$536
Grader 14G	\$540
Water Truck 2,500 gallon	\$132
Brush Cutter	\$225
TOTAL	\$4,601

GRAND TOTAL **\$113,879**

Compiled By: John Tillotson Date: 3/20/2003

SURFACING		Stations/amount	x	Rate/sta/amt	Cost
Subgrade prep:	Description				
	Grade, Shape and Ditch 16'	43.80	x	\$15.20	\$665.76
	Subgrade Compaction	43.80	x	\$12.50	\$547.50

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 5+90 Number of					
Base Rock	4"-0" Crushed		8	station	50	stations	5.90	295	\$6.64	\$1,959
Turn Outs	4"-0" Crushed	2+80	8	turnout	22	turnouts	1	22	\$6.64	\$146
Turn-Arounds	4"-0" Crushed	5+00	N/A	TA	20	TAs	1	20	\$6.64	\$133
Junctions	4"-0" Crushed	2A	8	junction	20	junctions	1	20	\$6.64	\$133
Junctions	1 1/2"-0" Crushed	2A	N/A	junction	24	junctions	1	24	\$5.49	\$132
Landings	6"-0" Pit-run	2B	N/A	Landing	60	Landings	1	60	\$9.85	\$591
Total Rock for Road Segment:								441		

\$3,093

ROAD SEGMENT		6A to 6B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	6A to 6B Volume (CY) per	0+00 to 23+80 Number of					
Base Rock	4"-0" Crushed		8	station	50	stations	23.80	1,190	\$6.64	\$7,902
Turn Outs	4"-0" Crushed	9+80, 18+00	8	turnout	22	turnouts	2	44	\$6.64	\$292
Turn-Arounds	4"-0" Crushed	8+90	N/A	TA	20	TAs	1	20	\$6.64	\$133
Junctions	4"-0" Crushed	6A	8	junction	20	junctions	1	20	\$6.64	\$133
Junctions	1 1/2"-0" Crushed	6A	N/A	junction	24	junctions	1	24	\$5.49	\$132
Total Rock for Road Segment:								1,298		

\$8,591

ROAD SEGMENT		6C to 6D		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	6C to 6D Volume (CY) per	0+00 to 1+00 Number of					
Base Rock	4"-0" Crushed		8	station	50	stations	1.00	50	\$6.64	\$332
Junctions	4"-0" Crushed	6C	8	junction	20	junctions	1	20	\$6.64	\$133
Landings	6"-0" Pit-run	6D	N/A	Landing	60	Landings	1	60	\$9.85	\$591
Total Rock for Road Segment:								130		

\$1,056

ROAD SEGMENT		8A to 8B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	8A to 8B Volume (CY) per	0+00 to 7+70 Number of					
Base Rock	4"-0" Crushed		8	station	50	stations	7.70	385	\$6.64	\$2,556
Turn Outs	4"-0" Crushed	4+00	8	turnout	22	turnouts	1	22	\$6.64	\$146
Junctions	4"-0" Crushed	8A	8	junction	20	junctions	1	20	\$6.64	\$133
Turn-Arounds	4"-0" Crushed	8A	N/A	TA	20	TAs	1	20	\$6.64	\$133
Landings	6"-0" Pit-run	8B	N/A	Landing	60	Landings	1	60	\$9.85	\$591
Total Rock for Road Segment:								507		

\$3,559

ROAD SEGMENT		8C to 8D		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	8C to 8D Volume (CY) per	0+00 to 5+40 Number of					
Base Rock	4"-0" Crushed		8	station	50	stations	5.40	270	\$6.64	\$1,793
Turn Outs	4"-0" Crushed	1+50	8	turnout	22	turnouts	1	22	\$6.64	\$146
Junctions	1 1/2"-0" Crushed	8A	8	junction	24	junctions	1	24	\$5.49	\$132
Turn-Arounds	4"-0" Crushed	8A	N/A	TA	20	TAs	1	20	\$6.64	\$133
Landings	6"-0" Pit-run	8B	N/A	Landing	60	Landings	1	60	\$9.85	\$591
Energy Dissipator	24"-6" Riprap	5+00	N/A		10	Landings	1	10	\$10.45	\$105
Total Rock for Road Segment:								406		

\$2,899

Processing:	Description	No. sta	Rate/sta	Cost
	Water, Process & Compact Crushed Rock (8" roads in 1 lift)	43.80	\$37.00	\$1,621

SUB TOTAL FOR SURFACING	24"-6"tr	6"-0"pr	4"-0"	1 1/2"-0"	3/4"-0"	Total	Rate/ Sta./ amt.	Cost
	10	240	2,460	72		2,782	2,782	\$22,032

SPECIAL PROJECTS		Description	Cost
SUB TOTAL FOR SPECIAL PROJECTS			\$0

GRAND TOTAL	Cost per Mile	\$41,026	\$34,033
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Compiled By: John Tillotson Date: 3/18/2003

SURFACING		Stations/amount	x	Rate/ sta/amt	Cost
Subgrade prep	Description				
	Grade, Shape and Ditch 16'	286.60	x	\$15.20	\$4,356.32
	Subgrade Compaction	286.60	x	\$12.50	\$3,582.50

ROAD SEGMENT	I1 to I2		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I1 to I2 Volume (CY) per station	0+00 to 8+90 Number of stations	of			
Surface Rock	3/4"-0" Crushed		3	station	19	stations	169	\$6.64	\$1,123
Subgrade Leveling	3/4"-0" Crushed		N/A				20	\$6.64	\$133
Total Rock for Road Segment							189		

\$1,256

ROAD SEGMENT	I3 to I4		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I3 to I4 Volume (CY) per station	0+00 to 112+40 Number of stations	of			
Surface Rock	1 1/2"-0" Crushed		3	station	19	stations	112.40	\$5.49	\$11,724
Base Rock Restoration	4"-0" Crushed	93+00-95+00	10	station	63	stations	2.00	\$6.64	\$837
Turn Outs	1 1/2"-0" Crushed		3	turnout	10	turnouts	14	\$5.49	\$769
Junctions	1 1/2"-0" Crushed		3	junction	24	junctions	1	\$5.49	\$132
Subgrade Leveling	1 1/2"-0" Crushed		N/A				480	\$5.49	\$2,635
Culvert Bedding/Backfill	1 1/2"-0" Crushed	9+40	N/A				24	\$5.49	\$132
Energy Dissipator	24"-6" Riprap	9+40	N/A				10	\$10.45	\$106
Culvert Bedding/Backfill	1 1/2"-0" Crushed	14+90	N/A				24	\$5.49	\$132
Energy Dissipator	24"-6" Riprap	14+90	N/A				10	\$10.45	\$106
Culvert Bedding/Backfill	1 1/2"-0" Crushed	16+80	N/A				24	\$5.49	\$132
Culvert Bedding/Backfill	1 1/2"-0" Crushed	22+40	N/A				24	\$5.49	\$132
Culvert Bedding/Backfill	1 1/2"-0" Crushed	37+15	N/A				24	\$5.49	\$132
Energy Dissipator	24"-6" Riprap	37+15	N/A				10	\$10.45	\$106
Culvert Bedding/Backfill	1 1/2"-0" Crushed	48+00	N/A				24	\$5.49	\$132
Curve Widening	1 1/2"-0" Crushed						96	\$5.49	\$627
Fill Slope Armor	24"-6" Riprap	94+00	N/A				50	\$10.45	\$523
Total Rock for Road Segment							3,226		

\$18,250

ROAD SEGMENT	I5 to I6		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I5 to I6 Volume (CY) per station	0+00 to 7+75 Number of stations	of			
Surface Rock	3/4"-0" Crushed		3	station	19	stations	7.75	\$6.64	\$978
Turn Outs	3/4"-0" Crushed		3	turnout	10	turnouts	2	\$6.64	\$133
Junctions	1 1/2"-0" Crushed		3	junction	24	junctions	1	\$5.49	\$132
Subgrade Leveling	1 1/2"-0" Crushed		N/A				60	\$5.49	\$329
Curve Widening	1 1/2"-0" Crushed		3				12	\$5.49	\$66
Total Rock for Road Segment							263		

\$1,638

ROAD SEGMENT	I7 to I8		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I7 to I8 Volume (CY) per station	0+00 to 55+90 Number of stations	of			
Subgrade Leveling	1 1/2"-0" Crushed	42+50	N/A				24	\$5.49	\$132
Culvert Bedding/Backfill	1 1/2"-0" Crushed	9+05	N/A				24	\$5.49	\$132
Energy Dissipator	24"-6" Riprap	9+05	N/A				10	\$10.45	\$106
Culvert Bedding/Backfill	1 1/2"-0" Crushed	32+95	N/A				24	\$5.49	\$132
Energy Dissipator	24"-6" Riprap	32+95	N/A				10	\$10.45	\$106
Culvert Bedding/Backfill	1 1/2"-0" Crushed	11+45	N/A				24	\$5.49	\$132
Total Rock for Road Segment							116		

\$736

ROAD SEGMENT	I9 to I10		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I9 to I10 Volume (CY) per station	0+00 to 22+50 Number of stations	of			
Base Rock	1 1/2"-0" Crushed		3	station	19	stations	4.65	\$5.49	\$485
Subgrade Leveling	1 1/2"-0" Crushed	2+00	N/A				24	\$5.49	\$132
Total Rock for Road Segment							112		

\$617

ROAD SEGMENT	I11 to I12		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I11 to I12 Volume (CY) per station	0+00 to 41+30 Number of stations	of			
Culvert Bedding/Backfill	1 1/2"-0" Crushed	16+90	N/A				24	\$5.49	\$132
Culvert Bedding/Backfill	1 1/2"-0" Crushed	21+10	N/A				24	\$5.49	\$132
Culvert Bedding/Backfill	1 1/2"-0" Crushed	28+15	N/A				24	\$5.49	\$132
Culvert Bedding/Backfill	1 1/2"-0" Crushed	29+90	N/A				24	\$5.49	\$132
Total Rock for Road Segment							96		

\$527

ROAD SEGMENT	I13 to I14		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I13 to I14 Volume (CY) per station	0+00 to 1+95 Number of stations	of			
Base Rock	4"-0" Crushed		8	station	50	stations	1.95	\$6.64	\$647
Junctions	1 1/2"-0" Crushed		3	junction	24	junctions	1	\$5.49	\$132
Total Rock for Road Segment							122		

\$779

ROAD SEGMENT	I15 to I16		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I15 to I16 Volume (CY) per station	0+00 to 28+20 Number of stations	of			
Culvert Bedding/Backfill	1 1/2"-0" Crushed	11+80	N/A				24	\$5.49	\$132
Total Rock for Road Segment							24		

\$132

ROAD SEGMENT	I17 to I18		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I17 to I18 Volume (CY) per station	0+00 to 7+70 Number of stations	of			
Culvert Bedding/Backfill	1 1/2"-0" Crushed	3+20	N/A				24	\$5.49	\$132
Total Rock for Road Segment							24		

\$132

Processing:	Description	No.sta	Rate/sta	Cost
	Water, Process & Compact Crushed Rock		137.65	\$37.00

SUB TOTAL FOR SURFACING	24"-6" Rip	6"-0" pr	4"-0"	1 1/2"-0"	3/4"-0"	Total	Rate/ Sta./ amt.	Cost
	100		224	3,492	356	4,172	4,172	\$37,098

SPECIAL PROJECTS	Description	Cost
SUB TOTAL FOR SPECIAL PROJECTS		\$0

GRAND TOTAL	Cost per Mile	\$9,214	\$50,013
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**West Creek Combination
V1 and V2**

Project No. 4 Road Vacating

Location/Description	No. Sta	Seed and Mulch					Total
V1 to V2 Side Cast Pullback	5.50 sta	0.5 ac					
	sta	0 ac					
	sta	ac					
	sta	ac					
	sta	ac					
Haul away culverts to an approved refuse site off State land.	sta	ac					
Total	5.5 sta	0.5 ac	hr	hr	hr	Bales	
Rate	\$220 /sta	\$1,120 /hr	/hr	/hr	/hr	/Bale	
Cost	\$1,210	\$560					\$1,770

Prepared by: John Tillotson Date: 2/20/2003

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West Creek Combination

Road Brushing Costs

<u>Road</u>	<u>Miles</u>	<u>Miles</u>	<u>Cost</u>
Light			
B1-B2	4.18		
B5-B6	0.21		
B17-B18	1.06		
B19-B20	0.43		
B21-B22	0.78		
B25-B26	0.04		
B29-B30	0.53		
B31-B32	0.06		
B33-B34	0.15		
Total Light Brushing		<u>7.44</u>	\$7,291.20
Moderate			
B3-B4	2.13		
B7-B8	0.08		
B9-B10	0.14		
B11-B12	0.4		
B13-B14	0.27		
B23-B24	0.38		
B27-B28	0.16		
Total Moderate Brushing		<u>3.56</u>	\$3,916.00
Heavy			
B15-B16	0.1		
B35-B36	0.09		
Total Heavy Brushing		<u>0.19</u>	\$247.00
Total Miles of Brushing		11.19	
Total Brushing Cost			\$11,454.20

Project Work Road Maintenance Cost Summary

Sale: West Creek Combination
Date: 5-Mar-03
By: John Tillotson

Type	Equipment/Rationale	Hours	Rate	Cost
Post-Projects Road	Grader 14G	51	\$80	\$4,080
	Dump Truck 12CY	32	\$57	\$1,824
	FE Loader C966	16	\$60	\$960
	Vibratory Roller	40	\$75	\$3,000
	Water Truck 2500 gallon	32	\$67	\$2,144
Total				\$12,008

Production Rates
Grader

Miles/day	Distance(miles)	Days	Hours
1.50	9.5	6.3	51

X:\DOCUMENT2003 FY SalesWest Creek Comb\Sale Prep\Projects

Road Maintenance Cost Summary

Sale: West Creek Combination
Date: 12-Mar-03
By: John Tillotson

MBF: 5,257
\$/MBF: \$3.42

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
Progressive Operations Entries (2)	Grader 14G	\$540	2	16	\$80	\$2,360
	Dump Truck 12CY	\$114	2	8	\$57	\$684
	FE Loader C966	\$540	2	8	\$75	\$1,680
Final Haul Road Maintenance Haul Route	Grader 14G	\$540	1	54	\$80	\$4,860
	Dump Truck 12CY	\$114	1	24	\$57	\$1,482
	FE Loader C966	\$540	1	12	\$75	\$1,440
	Vibratory Roller	\$540	1	40	\$75	\$3,540
	Water Truck 2,500 gallon Labor	\$132	1	24	\$67	\$1,740
				8	\$25	\$200
Total						\$17,986

Production Rates
Grader

Miles/day	Distance(miles)	Days
1.5	9.0	6.0

**WEST CREEK COMBINATION
FY 2003
TIMBER CRUISE REPORT**

1. **Sale Area Location:** All sale areas are located in Township 7 North, Range 6 West, W.M., Clatsop County, Oregon. Area 1 – Located in the NE ¼ of Section 11; Area 2 – Located in the S½ of SE 1/4 of Section 1 and the NW ¼ NW ¼ of Section 12; Area 3 – Located in the W ½ of Section 12; Area 4 – Located in the SE 1/4 of Section 12 ; Area 5 - Located in the E ½ of Section 11; Area 6 – Located in the SE ¼ SE 1/4 of Section 11 and the N ½ NE ¼ of Section 14; Area 7 – Located in the NE ¼ of Section 14; Area 8 – Located in the NW ¼ of Section 14; Area 9 – Located in the E ½ of Section 14.

All timber sale areas are posted with ODF "Timber Sale Boundary" signs, pink ribbon, (and blue paint along property lines and stream buffers). Area 10 R/W is posted with ODF "Right-of-Way Boundary" signs, and with blue paint outside of sale area boundaries. Merchantable R/W trees are within Areas 2 and 6.

2. **Fund Distribution:**
- | | |
|------------------|-------------|
| Fund: | BOF (100%) |
| Tax Code: | 1-02 (64%) |
| | 6J-01 (18%) |
| | 30-05 (18%) |

3. **Sale Acreage by Area:**

Area	Gross Acreage	New R/W Acreage	Existing R/W Acreage	Non-Thinnable Acreage	Stream Buffer Acreage	Net Acreage
1	6.1	--	0.4	--	--	5.7
2	26.0	0.5	--	--	1.0	24.5
3	70.0	--	--	--	--	70.0
4	16.7	--	0.3	1.4	--	15.0
5	43.0	--	2.0	5.0	3.0	33.0
6	23.8	0.7	--	--	1.1	22.0
7	28.0	--	--	--	--	28.0
8	36.3	0.6	1.0	1.2	1.5	32.0
9	30.2	--	0.3	0.5	0.4	29.0
10 R/W		1.8	--			1.8
TOTALS	280.1	--	4.0	8.1	7.0	261.0

4. **Cruisers and Cruise Dates:** Areas 1 and 2 were cruised by Tom Scoggins-Oct. and Dec. 2002. Area 3 was cruised by Kraig Kirkpatrick, Kevin Berry, and Tom Scoggins-Jan. 2003. Area 4 was cruised by Tom Scoggins-Jan. 2003. Areas 5, 8, and 9 were cruised by Kevin Berry, Tom Scoggins, and John Tillotson – Jan., 2003. Area 6 was cruised by Kevin Berry-November, 2002. Area 7 was cruised by Kevin Berry- Jan. 2003. Cruise for Area 10 R/W was calculated using total cruise per acre volumes for Areas 2 and 6, and applying road R/W acreage.
5. **Cruise Method and Computation:** 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.

<u>AREAS</u>	<u>PROJECT</u>	<u>CRUISE TYPE</u>
1	WESTCRK	TK01
2	WEST CRK	TK02
3	WESTCRK	TK03
4 & 7	WESTCRK	TK04
6	WESTCRK	TK06
5,8 & 9	WESTCRK	TKCT
10 R/W	WESTCRK	RW02, RW06 &RWCT

6. Timber Description:

Area 1 (Clearcut) is an alder dominated stand with scattered Douglas-fir and hemlock, 40 years old. Average diameter is about 16 inches DBH, averaging 118 trees per acre with a basal area of 164 ft² per acre. Volume to remove averages 19.6 MBF per acre, while leaving about 1.4 MBF per acre of "wildlife trees" (7 TPA).

Area 2 (SDI 40, Marked Partial-Cut) is a Douglas-fir dominated, mixed conifer stand with some scattered hardwoods, averaging 90-95 years old. A portion of this area has been previously thinned, creating a significant amount of naturally regenerated hemlock in the understory. Average diameter is about 20 inches DBH, averaging 171 trees per acre with a basal area of 387 ft² per acre. Volumes to remove in this partial cut area average 33.1 MBF per acre, while retaining residual basal area of 220 ft² per acre. Trees to be removed average about 17.4 inches DBH, and 86 feet in merchantable height.

Area 3 (SDI 25 Partial-Cut) is a Douglas-fir dominated stand, about 80-90 years old. Average diameter is about 18 inches DBH, averaging 177 trees per acre with a basal area of 309 ft² per acre. Volumes to be removed in this partial cut average about 32.2 MBF per acre, while retaining a residual basal area of 120 ft² per acre. Trees to be removed average about 15.5 inches DBH, and 73 feet in merchantable height.

Area 4 (SDI 30 Partial-Cut) is a hemlock stand with a very small component of Douglas-fir and cedar, and is approximately 71 years old. There is significant dwarf mistletoe infection in about 3 acres of this stand. Average diameter is about 16 inches DBH, averaging 200 trees per acre with a basal area of 270 ft² per acre. The stand prescription is for all hemlock trees with significant mistletoe to be removed, except for those marked with blue paint (84 trees). Only hemlock will be removed from this sale area. Volumes to remove in this partial cut area average 20 MBF per acre, while retaining residual basal area of 160 ft² per acre. Trees to be removed average about 13 inches DBH, and 70 feet in merchantable height.

Areas 5, 8, and 9 (SDI 30-35 Commercial Thinning) are Douglas-fir plantations with a component of hemlock, averaging 32-38 years old. Average diameter is about 13.5 inches DBH, averaging 232 trees per acre with a basal area of 232 ft² per acre. Volumes to remove in this partial cut area average 8.3 MBF per acre, while retaining residual basal area of 140 ft² per acre. Trees to be removed average about 11.6 inches DBH, and 42 feet in merchantable height.

Area 6 (SDI 25 Partial-Cut) are mixed conifer stands of hemlock and Douglas-fir, averaging 65 years old. Portions of this area have been previously thinned, creating a significant amount of naturally regenerated hemlock in the understory. Average diameter is about 16.6 inches DBH, averaging 135 trees per acre with a basal area of 203 ft² per acre. Volumes to remove in this thinning area average 18.4 MBF per acre, while retaining residual basal area averaging 100 ft² per acre. Trees to be removed, including all hemlock infected with dwarf mistletoe, average about 14.8 inches DBH, and 65 feet in merchantable height.

Area 7 (SDI 30 Partial-Cut) is a Douglas-fir dominated mixed conifer stand, approximately 60 years old. Average diameter is about 14 inches DBH, averaging 230 trees per acre with a basal area of 240 ft² per acre. Volume to remove in this thinning area averages 16 MBF per acre, while retaining residual basal area of 140 ft² per acre. Trees to be removed average about 12 inches DBH, and 50 feet in merchantable height.

Area 10 RW is comprised of stand types within Areas 2, 6, and 8. Therefore, this area includes varying sizes and stocking levels of Douglas-fir, hemlock, and alder. Volume per acre on this 1.8 acre area averages about 47 MBF.

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

Area	Target CV	Target SE%	Actual CV	Actual SE%
1	60	20	57	19
2*	70	20	62	11
3	60	16	29	5
4 and 7	50	13	35	7
5, 8, and 9	50	14	49	9
6	70	18	37	8

*Statistics for Area 2 reflect "take" tree values, since this was a marked stand. All other values are for the "total stand."

Combined Sampling Error (SE) for the entire timber sale cruise is **3.34%**.

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.	3P	SMIL	2 Saw	3Saw	4 Saw	D & B	% Sale
Douglas-fir	16.1"	3,516	20	146	1,463	1,622	265	1.8%	67%
Hemlock/True fir	13.4"	1,627		15	509	922	181	4.2%	31%
Cedar	12.3"	22			1	19	2	11.1%	<1%
Alder & Maple	16.0"	92				77	15	3.4%	2%
TOTAL	15.0"	5,257						2.7%	100%

9. Approvals:

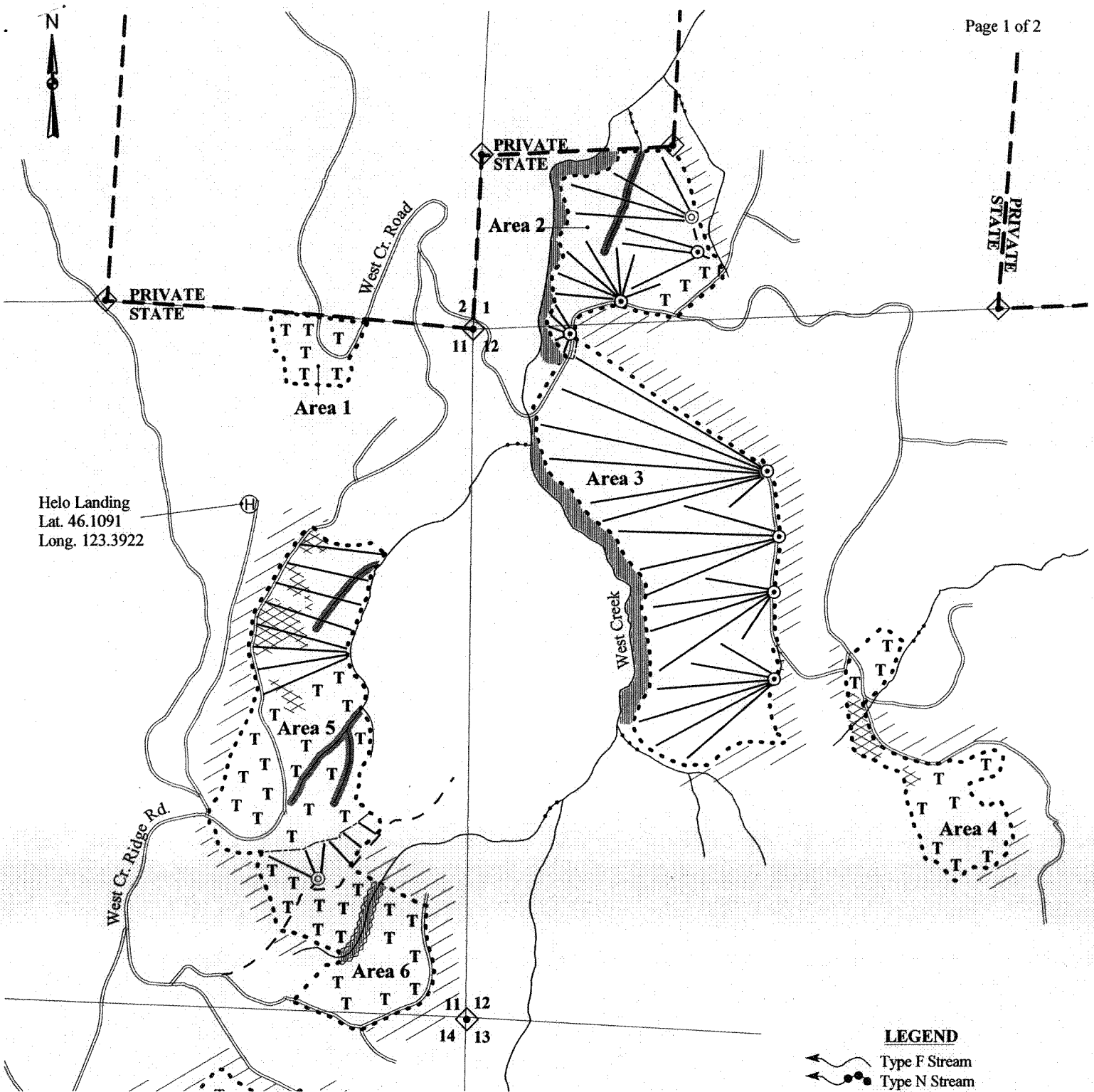
Prepared by: Tom Scoggins

Date: February 14, 2003

Approved by: *Don Goady*
District Cruise Specialist

Date: 3/21/03

- 10. Attachments:**
- Species, Sort, Grade Reports (12pages)
 - Statistics Reports (6 pages)
 - Leave Tree Stand Reports (5 pages)
 - Stand Table Reports (7 pages)
 - Total Stand Summaries (8 pages)
 - Cruise Plans & Maps (12 pages) (9 pages)



Helo Landing
 Lat. 46.1091
 Long. 123.3922

Approximate Net Acreages	
Area 1	6 Acres (CC)
Area 2	24 Acres (PC)
Area 3	70 Acres (PC)
Area 4	15 Acres (PC)
Area 5	33 Acres (CT)
Area 6	22 Acres (PC)
Area 7	28 Acres (CT)
Area 8	32 Acres (CT)
Area 9	29 Acres (CT)
Area 10	2 Acres (R/W)
Approximate Total Acres = 261	

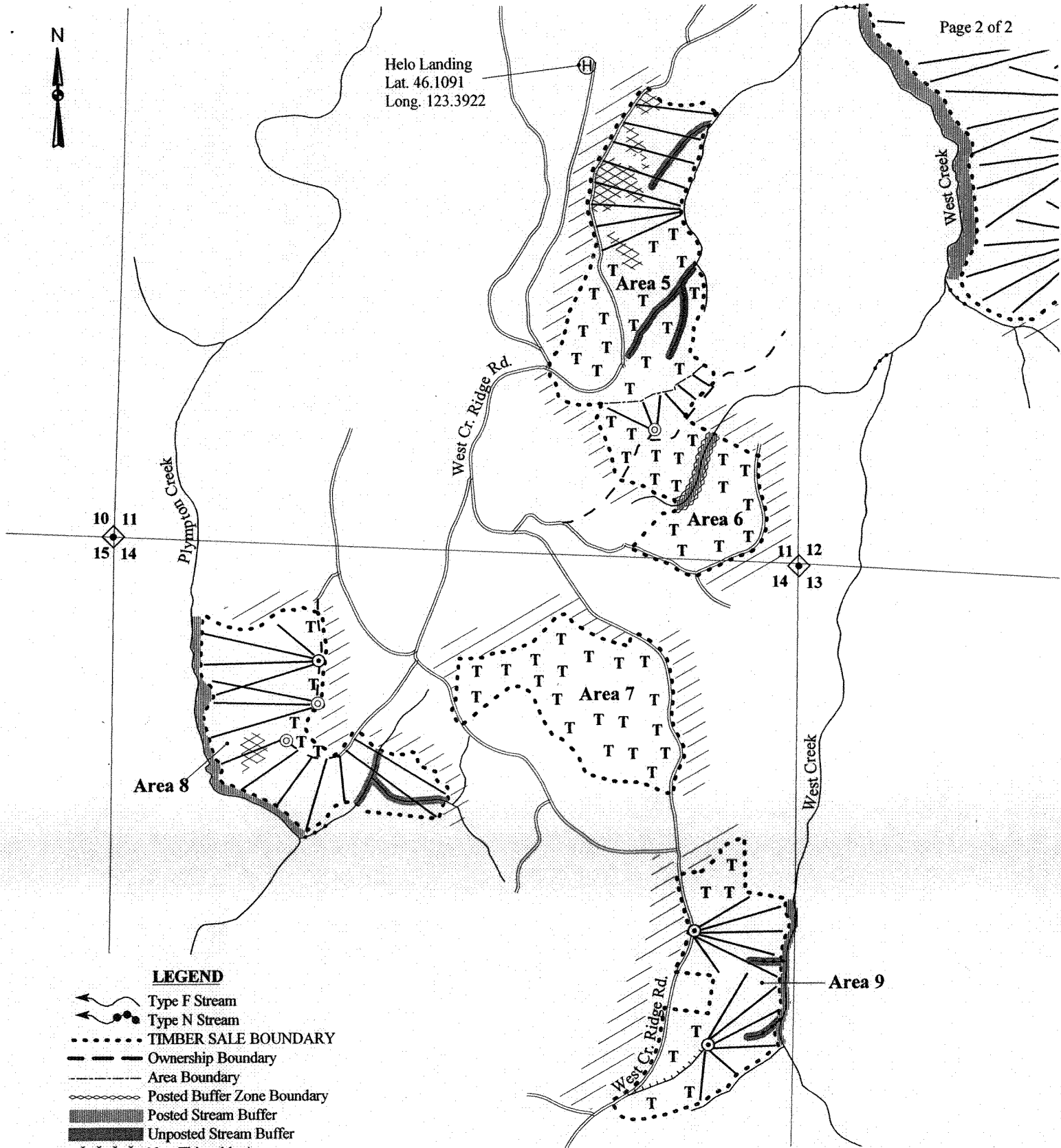
EXHIBIT "A"
LOGGING PLAN MAP
 OF TIMBER SALE CONTRACT NO. 341-03-91
 WEST CREEK COMBINATION
 PORTIONS OF SECTIONS 1, 11, 12, & 14,
 T7N, R6W, W.M., CLATSOP COUNTY, OREGON.
 APPROX. SCALE 1"=1,000'



- LEGEND**
- Type F Stream
 - Type N Stream
 - TIMBER SALE BOUNDARY
 - Ownership Boundary
 - Area Boundary
 - Posted Buffer Zone Boundary
 - Posted Stream Buffer
 - Unposted Stream Buffer
 - Non-Thinnable Area
 - Reforestation Area
 - Surfaced Road
 - New Road Construction
 - Seasonal Dirt Spur
 - Landing to Construct
 - Loggers Choice Landing
 - Known Land Survey Corner
 - Helicopter Landing Site
 - Tractor Yarding
 - Cable Yarding



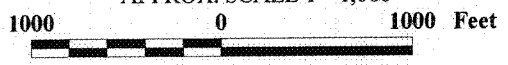
Helo Landing
 Lat. 46.1091
 Long. 123.3922



LEGEND

- Type F Stream
- Type N Stream
- TIMBER SALE BOUNDARY
- Ownership Boundary
- Area Boundary
- Posted Buffer Zone Boundary
- Posted Stream Buffer
- Unposted Stream Buffer
- Non-Thinnable Area
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- Surfaced Road
- New Road Construction
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- Landing to Construct
- Loggers Choice Landing
- Known Land Survey Corner
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FPA "Written Plan" for Harvest of State Timber
Sale No. 341-03-91
West Creek Combination

Portions of Sections 1, 11, 12, and 14, T7N, ^{RGW,} W.M., Clatsop County, Oregon

Landowner: Oregon Department of Forestry
92219 Highway 202
Astoria, Oregon 97103
Phone: (503) 325-5451

Protected Resources:

Areas 2, 3, 5, 6, & 9: West Creek (Type "F" And Type "D" stream) and several unnamed tributaries (all perennial Type "N" streams).

Areas 7 & 8: Plympton Creek (Type "F" stream) and several unnamed tributaries (all perennial Type "N" streams).

Specific Site Characteristics:

All of these sale areas are partial cut units. Type F stream buffers are posted 100 to 150 feet from the streams. Harvest prescriptions within the partial cuts call for 120 to 220 square feet of average basal area retention of the largest trees.

Vegetation within the buffers consists of a combination of conifers, hardwoods, and shrubs.

Tree and Vegetation Retention:

In all of the specified harvest areas, all trees and shrubs within the posted buffers will be retained and left undamaged. Additionally, within the harvest units, upslope from the buffers, between 120 and 220 square feet of average basal area retention of the largest trees will provide sufficient shade and large down wood potential.

Practices:

Along all of the above mentioned streams, as well as any live streams, the following practices are required, under the timber sale contract, to protect the streams and streamside areas:

- No trees will be felled within posted stream buffers (RMA's).
- Trees adjacent to the posted stream buffers (RMA's) will be felled away from or parallel to the streams to prevent trees from entering the aquatic areas.
- No ground based logging equipment will be permitted within the posted RMA's nor within 50 feet of any live stream.
- When cable logging is conducted nearby the RMA's, logging lines may cross, but will not be lowered into the RMA's during yarding, except during rigging. During rigging the lines must be pulled out of the RMA's when changing corridors.
- Cable corridors must be at least 100 feet apart where they cross the RMA's.
- Trees that fall or slide into Type F RMA's shall not be removed without prior approval from STATE.

I, the undersigned, submit this written plan in compliance with the requirements of the Forest Practices Act, regarding the planned operations to be conducted within 100 feet of Type F streams. I agree to the protection measures listed in this plan.

Submitted by: _____
Operator/ Purchaser

Date: _____

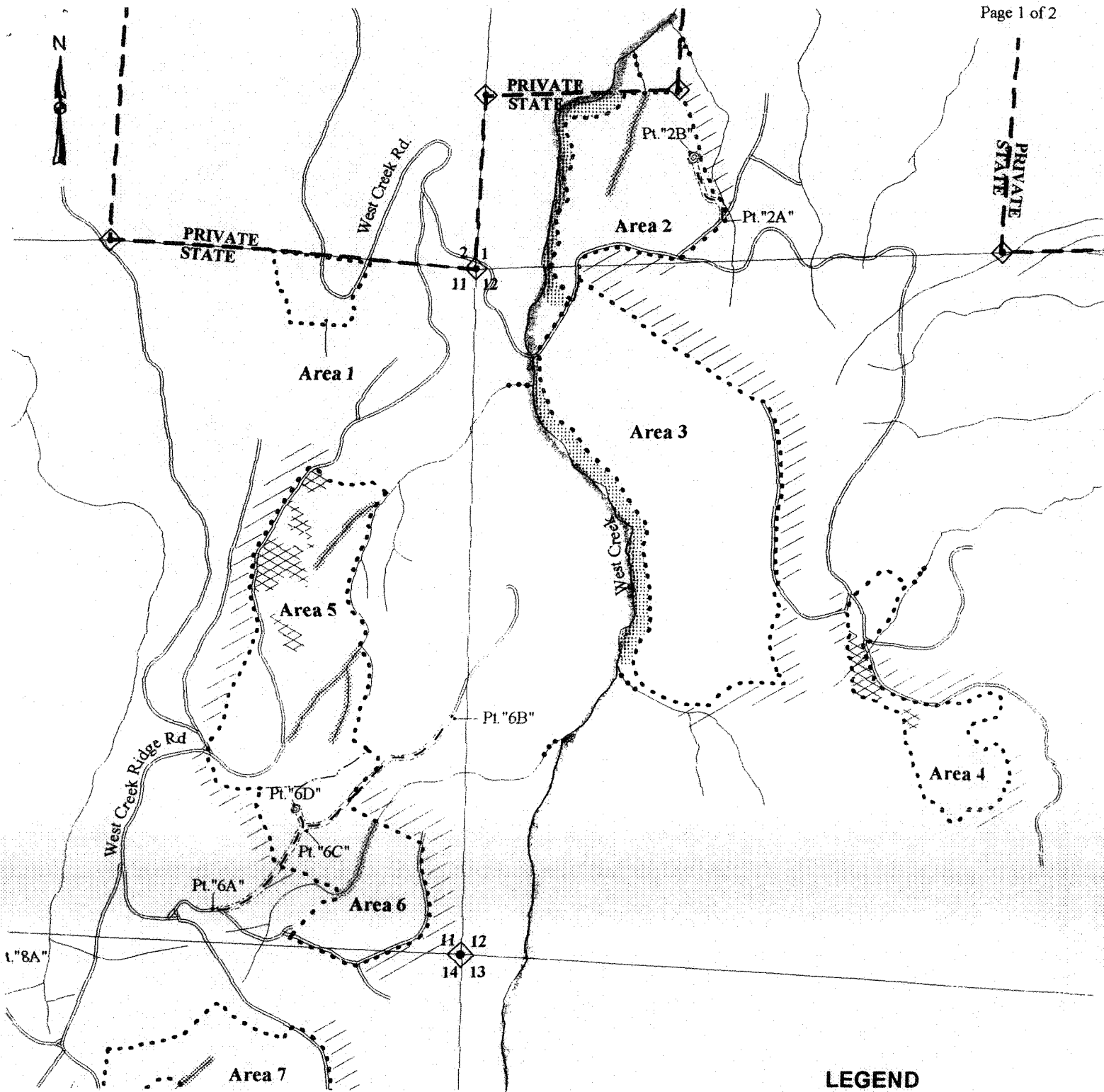
Approved by: Thomas Scoppin
State Lands Forester

Date: 3/12/03

Approved by: AM
Forest Practices Forester

Date: _____

Attachments: Exhibit A maps (2).



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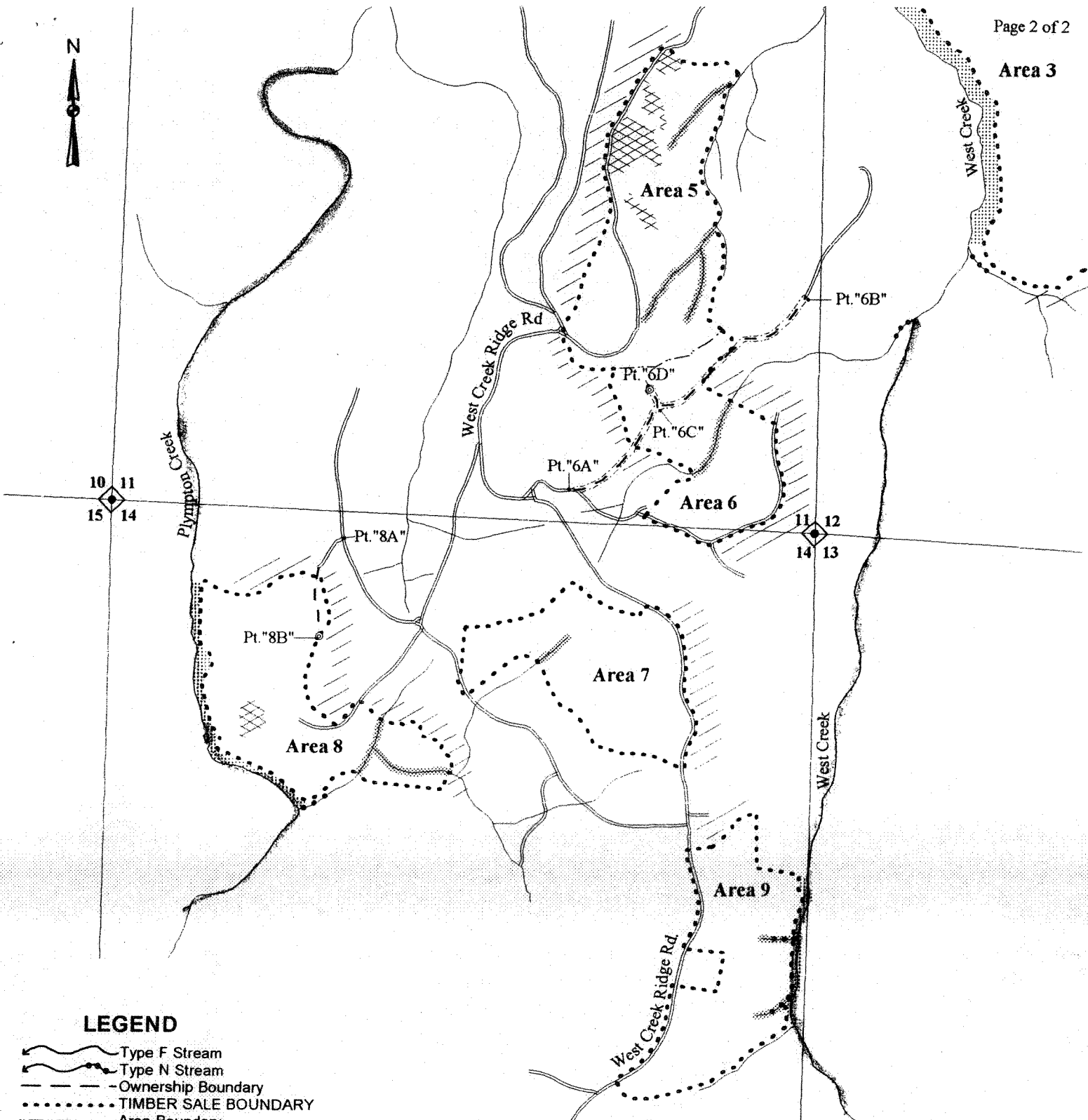
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LEGEND

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- Type N Stream
- Ownership Boundary
- TIMBER SALE BOUNDARY
- Area Boundary
- Right Of Way Boundary
- Posted Stream Buffer
- Unposted Stream Buffer
- Non-Thinnable
- Reforestation Area
- POINT "A"
Point For Project Work
- Surfaced Road
- New Construction
- Landing to Construct
- Known Land Survey Corner

Area 3



LEGEND

- Type F Stream
- Type N Stream
- Ownership Boundary
- TIMBER SALE BOUNDARY
- Area Boundary
- Right Of Way Boundary
- Posted Stream Buffer
- Unposted Stream Buffer
- Reforestation Area
- Non-thinnable
- POINT "A" Point For Project Work
- Surfaced Road
- New Construction
- Landing to Construct
- Known Land Survey Corner

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