"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Progeny Split
Sale 341-09-24

District: Astoria **Date:** July 07, 2008

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$1,683,296.04	$528,149.88	$2,211,445.92
		Project Work:	$(338,821.00)
		Advertised Value:	$1,872,624.92

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Progeny Split
Sale 341-09-24

District: **Astoria**

Date: **July 07, 2008**

timber description

Location: Portions of Sections 17, 18, 19, and 20, T4N, R8W, W.M., Clatsop County, Oregon

Stand Stocking: 80%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	20	0	96
Western Hemlock / Fir	20	0	90
Sitka Spruce	23	0	98
Alder (Red)	16	0	90

Volume by Grade	2S	3S	4S	Camprur	SM	Total
Douglas - Fir	3,561	1,178	184	0	193	5,116
Western Hemlock / Fir	1,183	306	57	0	0	1,546
Sitka Spruce	152	127	17	0	0	296
Alder (Red)	0	0	0	1,227	0	1,227
Total	4,896	1,611	258	1,227	193	8,185

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Progeny Split
Sale 341-09-24

District: Astoria **Date: July 07, 2008**

comments: Pond Values Used: 2nd Quarter Calendar Year 2008.

Log Markets: Mist, Clatskanie, Tillamook, Forest Grove.

Western Red Cedar Stumpage Price = Pond Value minus Logging Cost
$894.16/MBF = $1,075/MBF - $180.84/MBF

SCALING COST ALLOWANCE = $5.00/MBF

FUEL COST ALLOWANCE = $4.50/Gallon

HAULING COST ALLOWANCE
Hauling costs equivalent to $700 daily truck cost.

Other Costs (with Profit & Risk to be added):
100% Branding and Painting: $1MBF x 8,185 MBF = $8,185
Additional log loader piling: 3hrs/landing x 12 landings x $85/hr
= $3,060
Logger's Choice Landing Area 5
Construction = 1 @ $375
Rock = 60 cubic yards
Rock Haul = $5.34/cy X 60 = $320

TOTAL Other Costs (with Profit & Risk to be added) = $11,940

OTHER COSTS (No Profit and Risk added):
Excavator Slash Piling: 104 hrs x $120/hr = $12,480
Excavator move-in: 1 move in x $945/move in = $945

TOTAL Other Costs (No Profit and Risk added) = $13,425

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Progeny Split
Sale 341-09-24

District: Astoria **Date: July 07, 2008**

logging conditions

combination#: 1

Douglas - Fir	22.28%
Western Hemlock / Fir	24.37%
Sitka Spruce	24.79%
Alder (Red)	20.70%

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: 7.0 **bd. ft / load:** 4,100
cost / mbf: $87.27

machines: Shovel Logger

combination#: 2

Douglas - Fir	54.55%
Western Hemlock / Fir	59.66%
Sitka Spruce	60.69%
Alder (Red)	50.69%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Cable: Large Tower >=70 **Process**: Manual Delimbing
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 9.0 **bd. ft / load:** 4,200
cost / mbf: $97.71

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

combination#: 3

Douglas - Fir	3.24%
Western Hemlock / Fir	2.24%
Sitka Spruce	2.03%
Alder (Red)	4.00%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Track Skidder **Process**: Manual Falling/Delimbing
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 8.0 **bd. ft / load:** 4,000
cost / mbf: $107.51

machines: Log Loader (B)
Track Skidder

combination#: 4

Douglas - Fir	19.92%
Western Hemlock / Fir	13.74%
Sitka Spruce	12.49%
Alder (Red)	24.60%

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Progeny Split
Sale 341-09-24

District: Astoria **Date: July 07, 2008**

yarding distance:	Medium (800 ft)	**downhill yarding:**	No
logging system:	Cable: Medium Tower >40 - <70	**Process**:	Manual Falling/Delimbing
tree size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	6.0	**bd. ft / load:**	4,000
cost / mbf:	$144.17		

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

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Progeny Split
Sale 341-09-24

District: Astoria **Date:** July 07, 2008

logging costs

Operating Seasons:	2.00	**Profit Risk:**	12.00%
Project Costs:	$338,821.00	**Other Costs (P/R):**	$11,940.00
Slash Disposal:	$0.00	**Other Costs:**	$13,425.00

Miles of Road

Road Maintenance: $3.48

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

Hauling Costs

Species	$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	$0.00	3.0	4.6
Western Hemlock / Fir	$0.00	3.0	3.0
Sitka Spruce	$0.00	2.0	4.0
Alder (Red)	$0.00	3.0	3.0

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Progeny Split
Sale 341-09-24

District: Astoria **Date:** July 07, 2008

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
$104.96	$3.62	$1.07	$47.10	$1.46	$18.99	$0.00	$5.00	$1.64	$183.84
Western Hemlock / Fir									
$101.77	$3.83	$1.07	$76.38	$1.46	$22.14	$0.00	$5.00	$1.64	$213.29
Sitka Spruce									
$101.13	$3.55	$1.07	$79.68	$1.46	$22.43	$0.00	$5.00	$1.64	$215.96
Alder (Red)									
$107.37	$3.83	$1.07	$76.38	$1.46	$22.81	$0.00	$5.00	$1.64	$219.56

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$465.30	$281.46	$0.00
Western Hemlock / Fir	$0.00	$341.23	$127.94	$0.00
Sitka Spruce	$0.00	$369.85	$153.89	$0.00
Alder (Red)	$0.00	$650.00	$430.44	$0.00

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Progeny Split
Sale 341-09-24

District: Astoria **Date:** July 07, 2008

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	5,116	$281.46	$1,439,949.36
Western Hemlock / Fir	1,546	$127.94	$197,795.24
Sitka Spruce	296	$153.89	$45,551.44
Alder (Red)	1,227	$430.44	$528,149.88

Gross Timber Sale Value

Recovery: $2,211,445.92

Prepared by: John Tillotson **Phone:** 503-325-5451

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Progeny Split

NEW CONSTRUCTION:

	Road segment		Length/Sta		Cost
Project No. 1	Sale Access Road Construction		67.35		$54,409.00
	TOTALS	1.28 miles		67.35 Stations	$54,409

ROAD IMPROVEMENT

	Road segment		Length/Sta		Cost
Project No. 2	Road Improvement		219.50		$102,876
	TOTALS	4.16 miles		219.50 Stations	$102,876

SPECIAL PROJECTS

	Description	Cost	
Project No. 3	Cole Mountain Crushing	$113,705	
Project No. 4	Quarry Test Drilling	$28,808	
Project No. 5	Vacating	$9,964	
Project No. 6	Fall Creek Stream Enhancement	$5,895	
	Project Road Maintenance	$15,300	
	TOTALS		$173,672

MOVE IN:

Equipment	Cost	
Grader (14G)	$653	
Vibratory Roller x 2 @ $653 each	$1,306	
Water Truck (2,500 gal)	$160	
D-8 Dozer x 1 @ $1,180 each	$1,180	
Excavator (C330) x 1 @ $1,180 each	$1,180	
FE Loader (C966) x 1 @ $664 each	$664	
12cy Dump Trucks x 6 @ $137 each	$822	
20cy Dump Trucks x 4 @ $161 each	$644	
Drill and Compressor x1 @ $653 each	$653	
Rubber Tired Skidder x 1 @ $602	$602	
TOTAL		$7,864

GRAND TOTAL **$338,821**

Compiled By: John Tillotson Date: 02/26/2008

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Progeny Split
ROAD: 1A-1B(26.4), 1C-1D(8.0), 1E-1F(11.15), 4A-4B(8.5), 4C-4D(1.8) 4E-4F(3.0), 4G-4H(1.5), 4I-4J(4.5), 4K, 4L, 5A-5B(2.5), 5C

NEW CONSTRUCTION: 67.35 **STATIONS** 1.28 **MILES**
IMPROVEMENT: _____ **STATIONS** _____ **MILES**

POINTS:

CLEARING & GRUBBING

Method		Acres/amount	x	Rate	=	Cost
Scatter Outside of R/W	$/ac	7.00	x	$756.00	=	$5,292.00
			x		=	
			x		=	

SUB TOTAL FOR CLEARING & GRUBBING $5,292

EXCAVATION

	Material		Cy/amount	x	Rate	=	Cost
				x		=	
	Field design upto 200' drift	$/sta	67.35	x	$160.00	=	$10,776.00
				x		=	
4L	End haul from 4L to 4I-4J (0+00 to 0+50)	$/cy	60.00	x	$3.40	=	$204.00
	Embankment compaction	$/cy	60.00	x	$0.60	=	$36.00
				x		=	
	Landing Construction	$/landing	15.00	x	$327.00	=	$4,905.00
				x		=	
				x		=	
				x		=	
				x		=	

SUB TOTAL FOR EXCAVATION $15,921

CULVERT MATERIALS AND INSTALLATION

	Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
1A to 1B	0+00	18" CPP	40	$17.64	$705.60					
	1+70	18" CPP	35	$17.64	$617.40					
	18+00	18" CPP	35	$17.64	$617.40					
4A to 4B	3+00	18" CPP	30	$17.64	$529.20					
4C to 4D	0+00	18" CPP	35	$17.64	$617.40					
4E to 4F	0+00	18" CPP	35	$17.64	$617.40					
4I to 4J	0+00	18" CPP	35	$17.64	$617.40					

	Description	Quantity	Rate	Cost
Other/miscellaneous:				
Culvert stakes & markers:	6' X 2.5' Fiberglass Carsonite Post	7	$18.00	$126.00

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION $4,448

Subtotal of Clearing, Exc., Culv. ***$25,661***

SURFACING

Subgrade prep:

Description	Stations/ amount	x	Rate/ sta/amt	Cost
Grade, Shape and Ditch 16'	58.65	x	$20.85	$1,222.85
Grade, Shape and Ditch 14'	8.70	x	$15.40	$133.98
Subgrade Compaction	58.65	x	$16.95	$994.12

ROAD SEGMENT	1A to 1B			POINT TO POINT		Sta. to Sta.					
				1A to 1B		26+40					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" Crushed	0+00 to 17+20	9	station	49	stations	17.70	867	$4.58	$3,972	
Junctions	4"-0" Crushed	1A	9	junction	24	junctions	1	24	$4.58	$110	
Turnouts	4"-0" Crushed	3+40, 7+85, 12+85, 17+70	9	TO	22	TO's	4	88	$4.58	$403	
Turnarounds	4"-0" Crushed	10+00	N/A	TA	12	TA's	1	12	$4.58	$55	
Total Rock for Road Segment:			1A to 1B					991			$4,540

ROAD SEGMENT	1C to 1D			POINT TO POINT		Sta. to Sta.					
				1C to 1D		8+00					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" Crushed	1C to 1D	9	station	49	stations	8.00	392	$4.58	$1,795	
Junctions	4"-0" Crushed	1C	9	junction	24	junctions	1	24	$4.58	$110	
Turnouts	4"-0" Crushed	4+00	9	TO	22	TO's	1	22	$4.58	$101	
Turnarounds	4"-0" Crushed		N/A	TA	12	TA's	1	12	$4.58	$55	
Landings	6"-0" Pit-run	1D	N/A	Landing	80	Landings	1	80	$5.34	$427	
Total Rock for Road Segment:			1C to 1D					530			$2,488

ROAD SEGMENT	1E to 1F			POINT TO POINT		Sta. to Sta.					
				1E to 1F		11+15					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" Crushed	1E-1F	9	station	49	stations	11.15	546	$4.58	$2,502	
Junctions	4"-0" Crushed	1E	9	junction	24	junctions	1	24	$4.58	$110	
Turnouts	4"-0" Crushed	5+70, 9+40	9	TO	22	TO's	2	44	$4.58	$202	
Turnarounds	4"-0" Crushed		N/A	TA	12	TA's	1	12	$4.58	$55	
Landings	6"-0" Pit-run	1F	N/A	Landing	60	Landings	1	60	$5.34	$320	
Total Rock for Road Segment:			1E to 1F					686			$3,189

ROAD SEGMENT	4A to 4B			POINT TO POINT		Sta. to Sta.					
				4A to 4B		0+00 to 8+50					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" Crushed	0+00 to 8+50	9	station	49	stations	8.50	417	$4.58	$1,908	
Junctions	4"-0" Crushed	4A	9	junction	48	junctions	1	48	$4.58	$220	
Junctions	3/4" -0" Crushed	4A	N/A	junction	20	junctions	1	20	$9.43	$189	
Turnouts	4"-0" Crushed	2+50	9	TO	24	TO's	1	24	$4.58	$110	
Turnarounds	4"-0" Crushed	5+00	N/A	TA	12	TA's	1	12	$4.58	$55	
Landings	6"-0" Pit-run	5+00, 8+50	N/A	Landing	60	Landings	2	120	$5.34	$641	
Total Rock for Road Segment:			4A to 4B					641			$3,122

ROAD SEGMENT	4C to 4D			POINT TO POINT		Sta. to Sta.					
				4C to 4D		0+00 to 1+80					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" Crushed	0+00 to 1+80	9	station	49	stations	1.80	88	$4.58	$404	
Junctions	4"-0" Crushed	4C	9	junction	24	junctions	1	24	$4.58	$110	
Junctions	3/4"-0" Crushed	4C	N/A	junction	20	junctions	1	20	$9.43	$189	
Landings	6"-0" Pit-run	4D	N/A	Landing	60	Landings	1	60	$5.34	$320	
Total Rock for Road Segment:			4C to 4D					192			$1,023

ROAD SEGMENT	4E to 4F			POINT TO POINT		Sta. to Sta.					
				4E to 4F		0+00 to 3+00					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" Crushed	0+00 to 3+00	9	station	49	stations	3.00	147	$4.58	$673	
Junctions	4"-0" Crushed	4E	9	junction	24	junctions	1.00	24	$4.58	$110	
Junctions	3/4"-0" Crushed	4E	N/A	junction	20	junctions	1	20	$9.43	$189	
Landings	6"-0" Pit-run	4F	N/A	junction	60	junctions	1	60	$5.34	$320	
Total Rock for Road Segment:			4E to 4F					251			$1,292

ROAD SEGMENT	4G to 4H			POINT TO POINT		Sta. to Sta.					
				4G to 4H		0+00 to 1+50					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" Crushed	0+00 to 1+50	9	station	49	stations	1.50	74	$4.58	$337	
Junctions	4"-0" Crushed	4G	9	junction	24	junctions	1	24	$4.58	$110	
Landings	6"-0" Pit-run	4H	N/A	Landing	60	Landings	1	60	$5.34	$320	
Total Rock for Road Segment:			4G to 4H					158			$767

ROAD SEGMENT	4I to 4J			POINT TO POINT		Sta. to Sta.					
				4I to 4J		0+00 to 4+50					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" Crushed	0+00 to 4+50	9	station	49	stations	4.50	221	$4.58	$1,010	
Junctions	4"-0" Crushed	4I	9	junction	24	junctions	1	24	$4.58	$110	
Turnarounds	4"-0" Crushed	2+90	N/A	TA	12	TA's	1	12	$4.58	$55	
Landings	6"-0" Pit-run	3+40, 4J	N/A	Landing	60	Landings	2	120	$5.34	$641	
Total Rock for Road Segment:			4I to 4J					377			$1,816

ROAD SEGMENT	4K			POINT TO POINT		Sta. to Sta.					
				4K		N/A					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Junctions	3/4"-0" Crushed	4K	N/A	junction	20	junctions	1	20	$9.43	$189	
Landings	6"-0" Pit-run	4K	N/A	Landing	60	Landings	1	60	$5.34	$320	
Total Rock for Road Segment:			4K					80			$509

ROAD SEGMENT	4L			POINT TO POINT		Sta. to Sta.					
				4L		N/A					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Junctions	4"-0" Crushed	4L	N/A	junction	12	junctions	1	12	$4.58	$55	
Landings	6"-0" Pit-run	4L	N/A	Landing	60	Landings	1	60	$5.34	$320	
Total Rock for Road Segment:			4L					72			$375

ROAD SEGMENT	5A to 5B			POINT TO POINT		Sta. to Sta.					
				5A to 5B		0+00 to 2+50					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	

Base Rock	4"-0" Crushed	0+00 to 2+50	9	station	49	stations	2.50	123	$4.58	$561	
Junctions	4"-0" Crushed	5A	9	junction	24	junctions	1	24	$4.58	$110	
Landings	6"-0" Pit-run	5B	N/A	Landing	80	Landings	1	80	$5.34	$427	
Total Rock for Road Segment:			5A to 5B					227			$1,098

ROAD SEGMENT	5C			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (Inches)	5C Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Junctions	1 1/2"-0" Crushed	5C	N/A	junction	20	junctions	1	20	$9.43	$189	
Landings	6"-0"	5C	N/A	Landing	80	Landings	1	80	$5.34	$427	
Total Rock for Road Segment:			5C					100			$616

Processing:

Description	No.sta	Rate/sta	Cost
Water, Process & Compact: 9" depth in two lifts	117.30	$47.42	$5,562

	6"-0" pr	4"-0" cr	1 1/2"-0" cr	3/4"-0" cr	Total		
SUB TOTAL FOR SURFACING	840	3,364	20	80	4,304	4,304	**$28,748**

SPECIAL PROJECTS

Description	Cost

SUB TOTAL FOR SPECIAL PROJECTS $0

Subtotal of Surfacing & Spec. Proj. *$28,748*
Subtotal of Clearing, Exc., Culv. *$25,661*

GRAND TOTAL **$54,409**

Compiled By: John Tillotson Date: 02/26/2008

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Progeny Split
ROAD: I1-I2(140.2),I3-I4(10.0),I5-I6(36.4),I7-I8(2.0),I9-I10(30.9)

NEW CONSTRUCTION: _____ STATIONS _____ MILES
IMPROVEMENT: 219.50 STATIONS 4.16 MILES

POINTS:

CLEARING & GRUBBING

	Method	Acres/amount	x	Rate	=	Cost
I1 to I2	Turnout Improvement 65+70 C315 $/hr	2.00	x	$89.00	=	$178.00
I5 to I6	Turnout Improvement 7+00 C315 $/hr	2.00	x	$89.00	=	$178.00
I5 to I6	Turnout Improvement 16+00 C315 $/hr	2.00		$89.00		$178.00
I7 to I8	Landing Improvement 2+00 C315 $/hr	2.00	x	$89.00	=	$178.00
I9 to I10	Landing Improvement 30+90 C315 $/hr	2.00		$89.00		$178.00

SUB TOTAL FOR CLEARING & GRUBBING $890

EXCAVATION

	Material	Cy/amount	x	Rate	=	Cost
1A to 1B 119+40	Remove bank material $/hr	1.00	x	$89.00	=	$89.00
	Haul bank material $/hr	1.00	x	$70.00	=	$70.00
I5 to I6 26+00 &	Remove bank material $/hr	3.00	x	$89.00	=	$267.00
34+65	Haul bank material $/hr	3.00	x	$70.00	=	$210.00
			x		=	
			x		=	
			x		=	
			x		=	
			x		=	
			x		=	
			x		=	

SUB TOTAL FOR EXCAVATION $636

CULVERT MATERIALS AND INSTALLATION

	Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
I1-I2	7+75	18" CPP	35	$17.64	$617.40					
	20+80	18" CPP	35	$17.64	$617.40					
	30+00	18" CPP	35	$17.64	$617.40					
	30+50	24" CPP*	40	$24.64	$985.60					
	32+55	30" CPP*	40	$31.14	$1,245.60					
	33+30	18" CPP	35	$17.64	$617.40					
	38+00	18" CPP	30	$17.64	$529.20					
	44+20	18" CPP	40	$17.64	$705.60					
	48+00	18" CPP	35	$17.64	$617.40					
	78+25	18" CPP	35	$17.64	$617.40					
	136+40	18" CPP	35	$17.64	$617.40					
I7-I8	0+00	18" CPP	35	$17.64	$617.40					
I9-I10	12+55	18" CPP	35	$17.64	$617.40					
	17+00	18" CPP	30	$17.64	$529.20					
	18+65	18" CPP	30	$17.64	$529.20					

	Description	Quantity	Rate	Cost
Other/miscellaneous:	*Inlet Beveling 24" and larger	54.00	$1.00	$54.00
Culvert stakes & markers:	white fiberglass (Carsonite) posts	27	$18.00	$486.00

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION $10,621

Subtotal of Clearing, Exc., Culv. ***$12,147***

SURFACING

Subgrade prep:

Description	Stations/ amount	x	Rate/ sta/amt	Cost
Grade, Shape and Ditch 16'	219.50	x	$17.80	$3,907.10
Subgrade Compaction	219.50	x	$41.40	$9,087.30

ROAD SEGMENT	I1 to I2			POINT TO POINT		Sta. to Sta.					
				I1 to I2		140+20					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock, Turnouts	4"-0" Crushed	5+60, 10+00, 65+70	N/A	TO		TO's		76	$4.58	$348	
Base Rock	4"-0" Crushed	30+50,32+55	9	Fill	24	Fills	2	48	$4.58	$220	
Base Rock	4"-0" Crushed	Buttress	N/A		81		1	81	$4.58	$371	
Subgrade Leveling	1 1/2"-0" Crushed		N/A					540	$9.43	$5,092	
Curve Widening	1 1/2"-0" Crushed							360	$9.43		
Surface Rock	1 1/2"-0" Crushed		3	station	16	stations	140.2	2,243	$9.43	$21,153	
Turnouts	1 1/2"-0" Crushed		N/A	TO	10	TO's	18	180	$9.43	$1,697	
Junctions	1 1/2"-0" Crushed		N/A	junction	20	junctions	6	120	$9.43	$1,132	
Culvert Backfill	1 1/2"-0" Crushed	7+75,20+80, 33+30,38+65,	N/A	culvert	30	culverts	4.00	120	$9.43	$1,132	
Culvert Bedding/Backfill	1 1/2"-0" Crushed	30+00,32+55	N/A	culvert	30	culverts	2.00	60	$9.43	$566	
Culvert Backfill	1 1/2"-0" Crushed	44+20,48+00, 78+25,136+40	N/A	culvert	30	culverts	4.00	120	$9.43	$1,132	
Dissipator	6"-24" Rip Rap	30+00,32+55,30+50,32+55 , 44+20,61+70, 75+50,78+25, 84+10,126+50,136+40	N/A	diss	12	dissipator	11	132	$8.79	$1,160	
Total Rock for Road Segment:			I1 to I2					4,080			$34,003

ROAD SEGMENT	I3 to I4			POINT TO POINT		Sta. to Sta.					
				I3 to I4		10+00					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Subgrade Leveling	4"-0" Crushed		N/A					44	$4.58	$202	
Surface Rock	4"-0" Crushed		6	station	33	stations	10.0	330	$4.58	$1,511	
Turnouts	4"-0" Crushed	7+15	6	TO	24	TO's	2	48	$4.58	$220	
Junctions	4"-0" Crushed	0+00, 4+00	6	junction	24	junctions	2	48	$4.58	$220	
Junctions	3/4"-0" Crushed	0+00	N/A	junction	20	junctions	1	20	$9.43	$189	
Total Rock for Road Segment:			I3 to I4					490			$2,341

ROAD SEGMENT	I5 to I6			POINT TO POINT		Sta. to Sta.					
				I5 to I6		36+40					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Subgrade Leveling	4"-0" Crushed		N/A					168	$4.58	$769	
Curve Widening	4"-0" Crushed		6					108	$4.58	$495	
Surface Rock	4"-0" Crushed		6	station	33	stations	36.4	1,201	$4.58	$5,501	
Traction Rock	3/4"-0" Crushed	6+50-20+00 & 22+00-26+0	2	station	11	stations	7.5	83	$9.43	$778	
Trench Backfill	4"-0" Crushed	19+70	N/A					36	$4.58	$165	
Turnouts	4"-0" Crushed		6	TO	24	TO's	4	96	$4.58	$440	
Trurnarounds	4"-0" Crushed		N/A	TA	12	TA's	2	24	$4.58	$110	
Junctions	4"-0" Crushed		6	junction	24	junctions	1	24	$4.58	$110	
Total Rock for Road Segment:			I5 to I6					1,740			$8,368

ROAD SEGMENT	I7 to I8			POINT TO POINT		Sta. to Sta.					
				I7 to I8		2+00					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Surface Rock	4"-0" Crushed		6	station	33	stations	2.0	66	$4.58	$302	
Junctions	4"-0" Crushed		6	junction	24	junctions	1	24	$4.58	$110	
Junctions	3/4"-0" Crushed	0+00	N/A	junction	20	junctions	1	20	$9.43	$189	
Culvert Bedding/Backfill	3/4"-0" Crushed	0+00	N/A	culvert	30	culverts	1	30	$9.43	$283	
Landing	6"-0" Pitrun	I8		landing	80	landing	1	80	$5.34	$427	
Total Rock for Road Segment:			I7 to I8					220			$1,311

ROAD SEGMENT	I9 to I10			POINT TO POINT		Sta. to Sta.					
				I9 to I10		30+90					
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Subgrade Leveling	4"-0" Crushed		N/A					202	$4.58	$925	
Surface Rock	4"-0" Crushed		6	station	33	stations	30.9	1,020	$4.58	$4,670	
Culvert Bedding/Backfill	3/4"-0" Crushed	12+55, 17+00, 18+65	N/A	culvert	30	culverts	3.00	90	$9.43	$849	
Turnouts	4"-0" Crushed		N/A	TO	24	TO's	4	96	$4.58	$440	
Junctions	4"-0" Crushed		N/A	junction	24	junctions	1	24	$4.58	$110	
Junctions	3/4"-0" Crushed	0+00	N/A	junction	20	junctions	1	20	$9.43	$189	
Dissipator	6"-24" Rip Rap	12+55, 17+00, 18+65	N/A	diss	12	dissipator	3	36	$8.79	$316	
Total Rock for Road Segment:			I9 to I10					1,488			$7,499

Processing:

Description	No.sta	Rate/sta	Cost
Water, Process & Compact:	219.50	$41.40	$9,087

	24-6" Rr	6"-0" pr	4"-0"	1 1/2"-0"	3/4"-0"	Total		
SUB TOTAL FOR SURFACING	168	80	3,764	3,743	263	8,018	8,018	$75,603

SPECIAL PROJECTS

Description	Cost
Buttress Construction @ 38.52 on I1 to I2	$15,126
(See separate costing sheet)	

SUB TOTAL FOR SPECIAL PROJECTS $15,126

Subtotal of Surfacing & Spec. Proj. *$90,729*

Subtotal of Clearing, Exc.,Culv. *$12,147*

GRAND TOTAL **$102,876**

Compiled By: John Tillotson Date: 02/27/2008

Sale Name: Progeny Split
Project: No. 2 (Road Segment I1-I2 station 38+52 - 38+85)
Project Type: Buttressing

Prepared by: d.mellison
Date: 01/23/08

Phase I: Mobilization (Special to Buttress)

Qty.	Equipment or Activity	Rate		Hours		Cost ($)
2	C330 Excavator	$1,200				$2,400.00
1	Off Highway Dump Truck	$661				$661.00
	Rubber Tired Skidder	$85		1		$85.00
1	Powder Truck/Explosives/labor	$327				$327.00
1	Cat D8	$1,200				$1,200.00
						$4,673.00

Phase II: Development and Staging of Riprap

Qty.	Equipment or activity	Qty (Cy)	($/Cy)	Hours	($/Hr)	Cost ($)
	C330 Excavator			2	$138.00	$276.00
	Drilling and Shooting (60"-48" Riprap)	183		4	$258.00	$1,032.00
	Drilling and Shooting (36"-12" Riprap)	68		1.5	$258.00	$387.00
	Staging (60"-48" Riprap)	183	$3.41			$624.03
	Haul and dump (36"-12" Riprap)	68	$2.91			$197.88
						$2,516.91

Phase III: Site Preparation

Qty.	Equipment or Activity	Unit	($/unit)	Hours	($/Hr)	Cost ($)
	Remove existing culvert @ Sta. 38+65					
	C330 Excavator			1	$138.00	$138.00
	Excavate access ramp and buttress site					
167	Material to be endhauled to waste area	bcy	$4.02			$671.34
713	Material to be staged for road prism use	bcy	$1.51			$1,076.63
20	Straw bales stream edge	bale	$10.00			$200.00
	Labor to place and deliver bales			8	$37.00	$296.00
	Remove onsite Alder trees (C330 Excavator)			1	$138.00	$138.00
						$2,519.97

Phase IV: Buttress Construction

Qty.	Equipment or Activity	Qty (Cy)	($/Cy)	Hours	($/Hr)	Cost ($)
	Placing (60"-48") Riprap material (C330 Exc)	183		20	$138.00	$2,760.00
	Placing (36"-12") Riprap material	68		4	$138.00	$552.00
						$3,312.00

Phase V: Repair Road Prism

Qty.	Equipment or Activity	Unit	($/Unit)	Hours	($/Hr)	Cost ($)
713	Place material staged for road prism	bcy	$1.51			$1,076.63
713	Compact placed material	bcy	$0.60			$427.80
	Cat D8 (Ditchline construction)			1	$132.00	$132.00
						$1,636.43

Phase VI: Miscellaneous

Qty.	Equipment or Activity	Unit	($/Unit)	Hours	($/Hr)	Cost ($)
167	Compact Waste Area	cy	$0.30			$50.10
0.1	Seed and mulch waste area	acres	$1,532.00			$153.20
	Winterize Fall Creek quarry (Cat D8)			2	$132.00	$264.00
						$467.30

Total Project Cost = $15,126

CRUSHED ROCK COST

SALE NAME: Progeny Split
PROJECT: No. 1 and 2
QUARRY: Hamlet

ROCK TYPE: 1 1/2"-0" Crushed
3/4"-0" Crushed

DATE: 02/25/2008
BY: John Tillotson

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
4A to 4B		20			1.09	1.75	2.12	1.37	0.18	6.51
4C to 4D		20			1.09	1.75	2.32	1.41	0.18	6.75
4E to 4F		20			1.09	1.75	2.32	1.47	0.18	6.81
4K		20			1.09	1.75	1.97	1.47	0.18	6.46
5C		20			1.09	2.18	3.09	0.85	0.13	7.34
I1 to I2	140.20	3,743			1.09	1.75	1.32	0.74	1.51	6.41
I3 to I4	10.00	20			1.09	1.75	2.11	1.43	0.27	6.65
I5 to I6	36.40	83			1.09	1.75	2.21	2.11	0.28	7.44
I7 to I8	2.00	50			1.09	1.75	2.21	2.23	0.18	7.46
I9 to I10	30.90	110			1.09	1.75	2.21	1.95	0.28	7.28
TOTAL	219.50	4,106								AVERAGE HAUL
	STA./NO.	CU. YD.								
CUBIC YARD WEIGHTED HAUL					**1.09**	**1.75**	**1.40**	**0.84**	**1.40**	**6.48**
								Average Round Trip Distance (miles)	12.95	

ROCK HAUL:

Truck type: D20 No. trucks: 4
Delay min.: 8 Efficiency: 85%

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

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

Ave haul: $8.03 /cy
Load: $0.50 /cy
Spread: $0.90 /cy

Production: cy/day = 810

CRUSHED ROCK HAUL COSTS 4,106 cy @ **$9.43 /cy**

CRUSHED ROCK COST

SALE NAME: Progeny Split
PROJECT: No. 1 and 2
QUARRY: Cole Mtn.

ROCK TYPE: 4"-0" Crushed

DATE: 01/18/2008
BY: Tillotson

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
1A to 1B	17.70	991			0.39		1.57	0.56	0.29	2.81
1C to 1D	8.00	450			0.39		1.73	0.75	0.20	3.07
1E to 1F	11.15	626			0.39		1.73	0.75	0.23	3.10
4A to 4B	8.50	501			0.39		1.67	0.56	0.20	2.82
4C to 4D	1.80	112			0.39		1.59	0.76	0.14	2.88
4E to 4F	3.00	171			0.39		1.59	0.77	0.16	2.91
4G to 4H	1.50	98			0.39		1.59	1.10	0.15	3.23
4I to 4J	4.50	257			0.39		1.59	1.30	0.16	3.44
4L		12			0.39		1.69	1.21	0.12	3.41
5A to 5B	2.20	147			0.39		1.69	1.52	0.17	3.77
I1 to I2	140.20	205			0.42	3.48	0.75	1.32	0.13	6.10
I3 to I4	10.00	470			0.39		1.69	0.56	0.21	2.85
I5 to I6	36.40	1,657			0.39		1.69	0.99	0.46	3.53
I7 to I8	2.00	90			0.39		1.69	1.36	0.14	3.58
I9 to I10	30.90	1,342			0.39		1.69	0.99	0.41	3.48
TOTAL	277.85	7,129								AVERAGE HAUL
	STA./NO.	CU. YD.								
CUBIC YARD WEIGHTED HAUL					**0.39**	**0.10**	**1.64**	**0.86**	**0.31**	**3.31**
								Average Round Trip Distance (miles)	6.61	

ROCK HAUL:

Truck type: D20 No. trucks: 4
Delay min.: 8 Efficiency: 85%

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

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

Ave haul: $4.13 /cy
Load: /cy
Spread: $0.45 /cy

Production: cy/day = 1,575

CRUSHED ROCK HAUL COSTS 7,129 cy @ **$4.58 /cy**

RIP RAP ROCK COST

SALE NAME: Progeny Split
PROJECT:
QUARRY: Fall Creek

ROCK TYPE: Rip Rap

DATE: 01/18/2008
BY: Tillotson

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
I1 to I2	140.20	132						0.50	0.50	1.00
I9 to I10	30.90	36					3.56	1.88	0.25	5.69
TOTAL	171.10	168								AVERAGE HAUL
	STA./NO.	CU. YD.								
CUBIC YARD WEIGHTED HAUL							0.76	0.80	0.45	2.01
					Average Round Trip Distance (miles)				4.01	

ROCK HAUL:

Truck type: D12 No. trucks: 1
Delay min.: 6 Efficiency: 85%

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

Ave haul: $3.75 /cy
Load: $5.04 /cy
Develop: /cy

Production: cy/day = 155

RIP RAP ROCK HAUL COSTS 168 cy @ **$8.79 /cy**

RIP RAP ROCK COST

SALE NAME: Progeny Split
PROJECT:
QUARRY: Fall Creek

ROCK TYPE: Rip Rap

DATE: 01/18/2008
BY: Tillotson

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
I1 to I2	140.20	120						0.50	0.50	1.00
.I9 to I10	30.90	36					3.56	1.88	0.25	5.69
TOTAL	171.10	156								AVERAGE HAUL
	STA./NO.	CU. YD.								
CUBIC YARD WEIGHTED HAUL							**0.82**	**0.82**	**0.44**	**2.08**
								Average Round Trip Distance (miles)	4.16	

ROCK HAUL:

Truck type: D12 No. trucks: 1
Delay min.: 6 Efficiency: 85%

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

Ave haul: $3.83 /cy
Load: $5.04 /cy
Develop: /cy

Production: cy/day = 152

RIP RAP ROCK HAUL COSTS 156 cy @ **$8.87 /cy**

SUMMARY OF ROCK DEVELOPMENT AND CRUSHING COSTS

PROJECT NO. 3 **Timber Sale Name: Progeny Split**

Quarry: Cole Mountain Swell:

Location: Sw 1/4, SE 1/4, Sec. 14, T4N, R9W, W.M. Shrink: 16%

County: Clatsop

By: S. Bushnell Loading Hopper: Yes

Date: 02/26/2008

ROCK SIZE	REJECT	GRADATION	STOCKPILE CU. YDS.	TRUCK MEAS CU. YDS.	TOTAL CU. YDS.
3/4"-0"		CR			
1-1/2"-0"		CR			
4"-0"	10%	CR	5,000	7,128	12,928
6"-0"		PR		920	920
24"-6"		RR		100	100
36"		RR			
TOTAL CUBIC YARDS OF ROCK:			5,000	8,148	**13,948**

1) MOBILIZATION & SET UP:

EQUIPMENT	QUANTITY	RATE	COST	EQUIPMENT	QUANTITY	RATE	COST
2 Stage Crusher	1	$2,027	$2,027	Excavator	1	$1,200	$1,200
Screening Plant	1	$515	$515	Loading Hopper	1	$515	$515
D8 Cat	1	$1,200	$1,200				
D6 Cat	1	$664	$664				
Loader	1	$688	$688				
Drill and Compressor	1	$1,180	$1,180				
Powder	1	$327	$327				
Dump Trucks	2	$137	$274				

SUB TOTAL FOR MOBILIZATION $8,590

EQUIPMENT SET UP	TIMES	RATE	COST
2 Stage Crusher	1	$2,027	$2,027
Screening Plant	1	$273	$273
Loading Hopper	1	$273	$273
Original Calibration	1	$507	$507

SUB TOTAL FOR SET UP COSTS $3,080

TOTAL MOBILIZATION & SET UP COSTS $11,670

2) CLEARING & GRUBBING

DESCRIPTION	QUANTITY	UNIT	RATE	COST
Clear, Load, Haul to Waste Area	2.0	hr	$211	$422
Slash and Stumps (1 truck, 1 exc.)				

TOTAL CLEARING & GRUBBING COSTS $422

3) EXCAVATION

MATERIAL DESCRIPTION	QUANTITY	UNIT	RATE	COST
Overburden Removal (drift, shape)	1,900	bcy	$1.80	$3,420
Overburden Removal (excavate, load haul, spread)	1,000	bcy	$3.40	$3,400

TOTAL EXCAVATION COSTS $6,820

4) DEVELOP ROCK

ROCK SUMMARY

Type	Cu. yd. Vol.	Weight
crushed	12,928	93%
pit run	920	7%
rip rap	100	1%
Total	13,948	
reject	1,293	9.3%

METHOD	%	QUANTITY	RATE	COST
Ripping	50%	6,974	$2.20	$15,343
Drill & shoot	50%	7,620	$2.30	$17,527
Oversize red	5%	692	$5.80	$4,016
Other				

TOTAL ROCK DEVELOPMENT COSTS $36,886

5) CALIBRATION & TESTING

DESCRIPTION	NO.	$/TEST	COST
Calibrate			
Calibrate			
Test	7	$57.30	$401
Test			

TOTAL CALIBRATION & TESTING COSTS $401

6) FEEDING & LOADING

DESCRIPTION	CU. YD. QUANTITY	COST CU. YD.	TOTAL COST
Dig & Feed Rock	14,221	$0.68	$9,650

TOTAL FEEDING & LOADING COSTS $9,650

7) ROCK CRUSHING

ROCK SIZE	ROCK TYPE	CU. YD. QUANTITY	CRUSHER TYPE	HOURLY PRODUCTION	RATE CU. YD.	TOTAL COST
3/4"-0"	crushed					
1-1/2"-0"	crushed					
4"-0"	crushed	12,928	2 stage w/s	140	$2.48	$32,043

TOTAL ROCK CRUSHING COSTS $32,043

8) STOCKPILING

STOCKPILE SITE PREPARATION

Equipment	Hours	Rate	Total
Dozer		$120.00	
Compactor		$72.00	
Grader	3	$90.00	$270.00
Excavator		$138.00	

Rock for Floor (CY)	$/CY Haul	Total

$270.00

SUB TOTAL $270

HAUL & STOCKPILE STOCKPILE LOCATION	SIZE	# of TRUCKS	CU. YDS.	RATE	COST
1.					
2.					
3. Cole Mountain Quarry	4"-0"	2	5,800	$1.67	$9,694
4.					
5.					
6.					

SUB TOTAL $9,694

TOTAL STOCKPILING COSTS $9,964

9) MISCELLANEOUS COSTS

DESCRIPTION	COST
Load, Haul, and Spread the reject material at the waste area.	$3,542
$2.74/CY 1,293 CY	
Final Quarry Dev., Access Road Const., Waterbarring, Drainage,	$2,100
Block Quarry Access	
Seed, Mulch, and Fertilize Waste Area (0.2 ac @$536/ac))	$107
Straw Bales (10 @ $10.00/ bale)	$100

TOTAL MISCELLANEOUS COSTS $5,849

10) GRAND TOTAL: **$113,705**

$/Cubic Yard $8.80

Footnotes:

SUMMARY OF TEST DRILLING COSTS

Timber Sale Name: Progeny Split **PROJECT NO. 4**

By: S. Bushnell

Date: 02/26/2008

FALL CREEK QUARRY: NW1/4, S20, T4N, R8W, W.M.

DESCRIPTION	COST
Hydraulic Rock Drill (16hr @$258/hr) + $1200 Move-In	$5,328
Small Excavator (10hr @ $94/hr) +688 Move-In	$1,628

COLE MOUNTAIN QUARRY: SE1/4, S14, T4N, R9W, W.M.

DESCRIPTION	COST
Hydraulic Rock Drill (16hr @$258/hr)	$4,128

MUNCE QUARRY: NE1/4, S31, T5N, R8W, W.M.

DESCRIPTION	COST
Hydraulic Rock Drill (16hr @$258/hr) + $1200 Move-In	$5,328
Small Excavator (10hr @ $94/hr) +688 Move-In	$1,628

SALLY RIDGE ROAD: NW1/4, S24, T4N, R9W, W.M.

DESCRIPTION	COST
Hydraulic Rock Drill (11hr @$258/hr) + $1200 Move-In	$4,038
Small Excavator (10hr @ $94/hr) +688 Move-In	$1,628

SOAPSTONE SITE: SW1/4, S15, T4N, R9W, W.M.

DESCRIPTION	COST
Hydraulic Rock Drill (11hr @$258/hr) + $1200 Move-In	$4,038
Small Excavator (4\hr @ $94/hr) +688 Move-In	$1,064

TOTAL TEST DRILLING COSTS **$28,808**

Progeny Split Project No. 5 Road Vacating

V1 to V2

Location/Description	C330 Excavator	D8 Cat	C330 Excavator	C330 Excavator	Labor	Grass Seed	Erosion Control	Total
V1 to V2 Fill Removal Fill Removal Waterbar	25 hrs 5 hrs	10 hrs	sta.	2 waterbars	2	0.3 ac	50 bales	
V3 and V4 Sidecast Pulback Waterbar	hrs		4.8 sta.	4 waterbars	8	0.6 ac	200 bales	
Walk excavator between sites.	2 hrs							
Total	32 hrs	10 hrs	4.8 sta.	6 waterbars	10 hr	0.9 ac	250 bales	
Rate	$138 /hr	$132 /hr	$138 /sta	$29 /waterbar	$37 /hr	$580 /ac	$10.00 /bale	
Cost	$4,416	$1,320	$662	$174	$370	$522	$2,500.00	**$9,964**

Prepared by: John Tillotson Date: 01/18/2008

x:\Document\2008 FY Sales\Progeny Split\Sale Prep\Projects\Vacating Costs -Progeny.xls

Progeny Split
Stream Enhancement
Project No. 6

Location	No. of Boulders	No. of Trees	C330 hrs @ $138/hr	24 yd of highway dump @ $125/hr	Log truck @ $73/hr	Seed and Mulch @ $1,432/ac
SE1 to SE2	60	30				
Rock Development and load			10			
Rock Haul				10		
Tree Haul					3	
Rock and Tree Placement			20			
Erosion Control						0.2
Total Time, Length or Acres			30	10	3	0.2
			$138	$125	$73	$1,432
Total Cost			**$4,140**	**$1,250**	**$219**	**$286**

Total Project Cost	**$5,895**

Projects Road Maintenance Cost Summary

Sale: **Progeny Split**
Date: Febuary 26, 2008
By: John Tillotson

Type	Equipment/Rationale	Hours	Rate	Cost
Post-Projects Road Maintenance	Grader 14G	57	$90	$5,100
	Dump Truck 12CY (2 trucks)	30	$73	$2,190
	FE Loader C966	15	$74	$1,110
	Vibratory Roller	46	$72	$3,312
	Water Truck 2500 gallon	46	$78	$3,588
			Total	**$15,300**

Interim Maintenance

Production Rates	Miles/day	Distance(miles)	Days	Hours
Grader	2.0	2.0	1.0	10.00
Vibratory Roller				

Final Road Maintenance

Production Rates	Miles/day	Distance(miles)	Days	Hours
Grader	1.5	7.0	4.7	46.67
Vibratory Roller	1.5	7.0	4.7	46.67

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

Grade and Compact Cole Mountain Road, Progeny Ridge Road, Fall Creek Road, and Hamlet Stockpile Road
Total Miles: 7 miles.

Grade Hill Road

Total Miles: 2 Miles

Progeny Split
FY 2008
TIMBER CRUISE REPORT

1. **Sale Area Location:** Areas 1, 2, 4, and 3 R/W are located in portions of Sections 17, 18, 19, and 20, T4N, R8W, W.M., Clatsop County, Oregon.

   All timber sale areas are posted with ODF "Timber Sale Boundary" signs, pink ribbon. The boundary between Areas 4 and 5 is posted with "Area Boundary" signs and pink ribbon. R/W areas are posted with ODF "Right-of-Way Boundary" signs and orange ribbon.

2. **Fund Distribution:**

Fund:	BOF (100%)
Tax Code:	8-01 (96.6%)
	10-02 (3.4%)

3. **Sale Acreage by Area:**

Area	Harvest Type	Gross Acreage	New R/W Acreage	Existing R/W Acreage	Stream Buffer Acreage	GTRA	Net Acreage
1	MC	66.0		-0	-6.4	-0.9	58.7
2	MC	54.4		-0	-1.6	-0.0	52.8
3	R/W	1.8		-0	-0.0	-0.0	4.9
4	PC	124.7	-3.1	N/A	-21.7	-0.0	99.9
5	MC	35.0		-0	-3.8	-0.0	31.2
Totals		**281.9**	**3.1***	**0.0**	**-33.5**	**-0.9**	**247.5**

*Additional 1.8 acres of R/W located outside of sale area to access areas 1 and 5.

4. **Cruisers and Cruise Dates:** Areas 1, 2 and 5 were cruised by John Tillotson, Kraig Kirkpatrick, Dave Horning, Ed Holloran, Kirkpatrick and Bryce Rodgers. Area 4 was cruised by Jay Morey, Dave Horning, Dan Goody, and Kraig Kirkpatrick. All areas were cruised on 11/30/07.

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, 2, and 5 (Modified Clear Cut), were variable plot cruised with a 54.44 BAF for Conifer and 33.6 BAF for Alder. 62 plots were sampled on a cruise grid of 5 chains by 5 chains, with a count/cruise plot ratio of 2:1.

   Area 4 (Partial Cut), was variable plot cruised with a 40 BAF for Conifer and 33.6 BAF for Alder. 25 grade plots were sampled on a cruise grid of 6 chains by 4 chains with a count/cruise plot ration of 2:1.

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

AREAS	PROJECT	CRUISE TYPE
1, 2, 5	04N08WS17	0001
4	04N08WS17	0002
3 R/W	04N08WS17	0002

6. Timber Description:

Areas 1, 2 and 5 (Modified Clear cut) – These stands are approximately 70 years old, consisting of Douglas-fir with some hemlock and some patches of alder. The harvest will remove approximately 126 trees per acre and 42.3 MBF/acre. The average tree size is 19.3 inches in DBH, with an average merchantable height of 64 feet to a merchantable top(6" d.i.b.).

Area 4 (Partial Cut) – This stand is an "automark" partial cut, approximately 70 years old, Douglas-fir dominated mixed conifer stand with patches and stringers of alder. The stand will be harvested to a Stand Density Index (SDI) of approximately 34% with a target basal area of 160 square feet. The "biggest and best" conifer trees will be retained. All alder over 12 inches DBH will be harvested except in buffers. All alder 12 inches or less will be reserved, and will not count toward the basal area requirements. The harvest will remove approximately 75 trees per acre and 18.3 MBF/acre. The average "take" tree size is 17.2" DBH and 64 feet to a merchantable top (6" d.i.b).

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

Area	Target CV	Target SE%	Actual CV	Actual SE%
1,2,5	55%	10%	51.9%	6.6%
4	55%	10%	44.9%	6.5%

The statistics for all cruises 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	SM	Camp Run	% D & B	% Sale
Douglas-fir	20	5,116	3,561	1,178	184	193		4	62.5
Hemlock/fir	20	1,546	1,183	306	57			10	18.9
Sitka spruce	23	296	152	127	17			3	3.6
Red Alder	16	1,227					1,227	5	15.0
TOTAL		**8,185**	**4,896**	**1,611**	**258**	**193**	**1,227**	**5.2**	**100**

9. Prepared by: John Tillotson **Date:** 2/4/08

10. Approved by: [signature] **Date:** 2/4/08

11. Attachments:
Species, Sort, Grade Reports (4 pages)
Statistics Stand Summary Reports (4 pages)
Log Stock Table Reports (4 pages)
Leave Tree Stand Table Reports (2 pages)
Cruise Plans & Maps (6 pages)

Revised August, 2002

CRUISE DESIGN
ASTORIA DISTRICT

Sale Name: **Progeny Split** **Area(s)** **1, 2, and 5**

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

Approx. Cruise Acres: **140** **Estimated CV%** **55%** (Net BF) or BA/Acre **SE% Objective** **10%** (Net BF) or BA/Acre

Planned Sale Volume: **9.9** MMBF **Estimated Sale Area Value/Acre:** **$11,000**

A. Cruise Goals: (a) Grade minimum **130** conifer and **20** hardwood trees: (b) Sample **64** cruise plots; Grade **33** plots; (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;)
Basal Area leave target **N/A** sq. ft. Cruiser needs to select - or - leave trees per plot.

B. Cruise Design: (11 bars) (14 bars)

1. **Plot Cruises:** BAF **33.6 – Alder** **54.44 – Conifer ((Full point)**; Half point) (circle one)
   Fixed Plot Size ____ Plot Radius ____ feet
   Cruise Line Direction(s) **Area 1– East / West;**
   Area 2 – North South;
   Area 5 – North South
   Cruise Line Spacing **5** chains -- **330** feet
   Cruise Plot Spacing **5** chains -- **330** feet
   Grade/Count Ratio **Grade 1 out of 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" or at least 20 board feet** for conifers and **8" or at least 30 board feet (10' to a 8" top -- 16' to a 7" top).** 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. **Cruise snags 15 DBH inches and over. Cruise all "W" (wildlife) trees and all reserved trees (cedar) as Leave trees by species. 100% all minor species (true fir, Maple.)**

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

4. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer

species on the cruise area, and use these to calculate average FF for the species on the cruise. **Hardwood** form factors are a Standard **87**.

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

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

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.

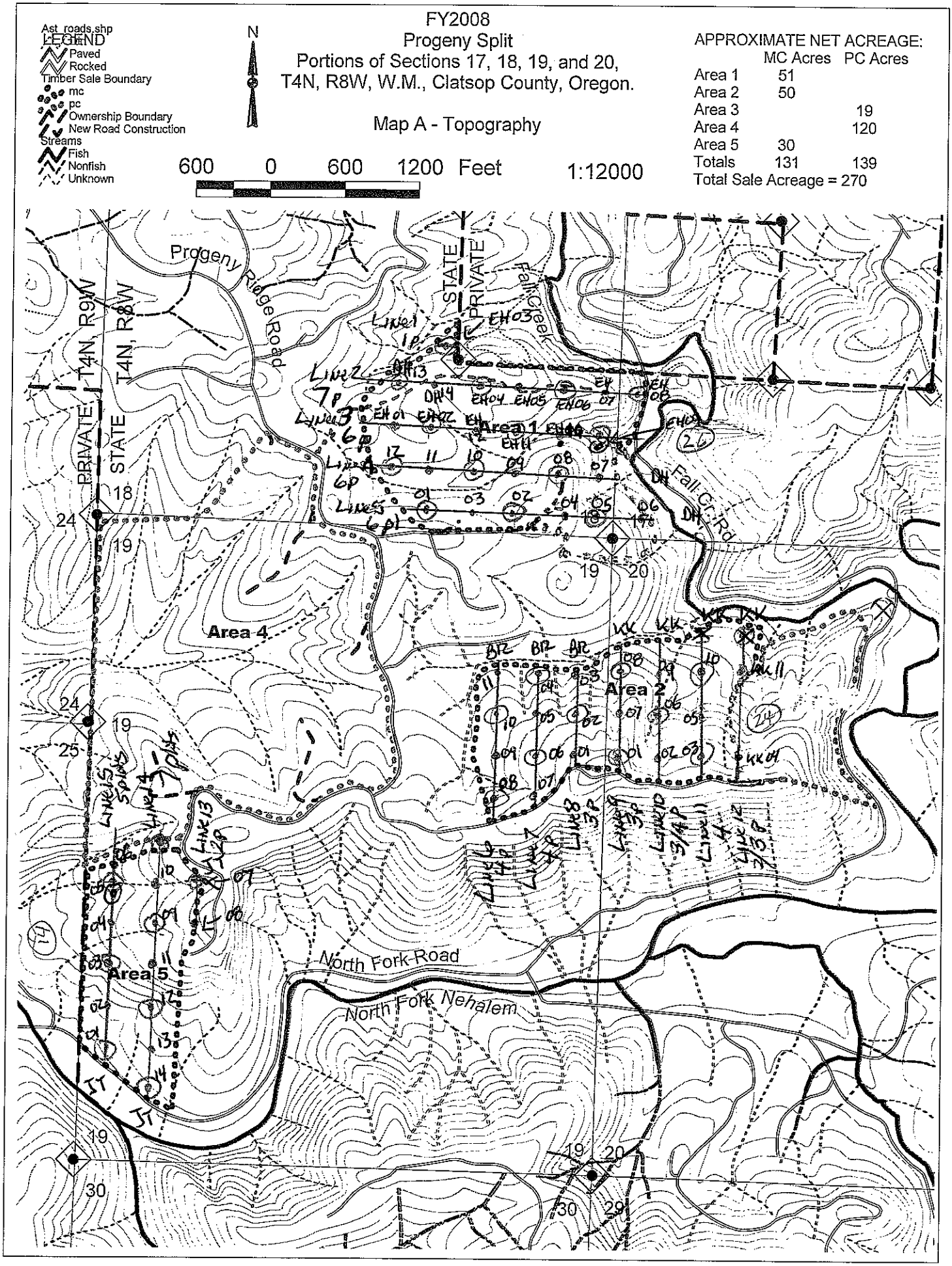
8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at indivisible 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: **Ed Holloran** **11/27/07**
Approved by: Dean Goode
Date: 11/28/07

5x5 64 plots 33 plots



Revised August, 2002

CRUISE DESIGN
ASTORIA DISTRICT

Sale Name: Progeny Split **Areas** 4

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

Approx. Cruise Acres: 115 **Estimated CV%** 50% (Net BF) or BA/Acre **SE% Objective** 10% (Net BF) or BA/Acre

Planned Sale Volume: (Area 4) 1.7 MMBF **Estimated Sale Area Value/Acre:** $5,250

I. **Cruise Goals:** (a) Grade minimum 130 conifer and 50 hardwood trees: (b) Sample 54 cruise plots; Grade 27 plots; (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;)
Basal Area leave target 160-180 sq. ft. Cruiser needs to select 4 or 5 leave trees per plot.

II. **Cruise Design:** 11 bars 12 bars

1. **Plot Cruises:** BAF 33.6 – Alder 40.0 – Conifer (Full point; Half point) (circle one)
   Fixed Plot Size ____ Plot Radius ____ feet
   Cruise Line Direction(s) Area 4 – East/West
   Cruise Line Spacing 6 (chains) (feet)
   Cruise Plot Spacing 4 (chains) (feet)
   Grade/Count Ratio Grade 1 out of 2
2. **ITS (Sample Tree) Cruises:** Measure-grade ratios: D-fir ____ Hemlock ____ Spruce ____ True Fir ____ Cedar ____ Hardwood ____

III. **Tree Measurements:**

1. **Diameter:** Minimum DBH to cruise is 8" or at least 20 board feet for conifers and 10" 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 for conifers. Generally, use 7" outside bark for trees < 18" DBH and 40% of DOB @ FP for trees > 18" DBH.
   Cruise snags 15 DBH inches and over. Cruise all reserved trees (cedar and maple trees) as Leave trees by species. Alder less than 10" DBH are to be Leave Trees, but will not count toward the Leave Basal Area requirements. Alder 10" DBH and larger can be Leave trees and will count toward the Basal Area leave requirements (Biggest & Best). Record all conifer less than 10" DBH as Leave Trees. Where available, record an intermediate conifer as a Leave Tree on every other grade plot.

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: Grade all Alder and Maple as Camp Run. Lengths for Alder are 8 and 10 foot multiples.
   Cruise snags 15 DBH inches and over. Cruise all reserved trees (cedar and maple trees) as Leave trees by species. Alder less than 10" DBH are to be Leave Trees, but will not count toward the Leave Basal Area requirements. Alder 10" DBH and larger can be Leave trees and will count toward the Basal Area leave requirements (Biggest & Best). Record all conifer less than 10" DBH as Leave Trees. Where available, record an intermediate conifer as a Leave Tree on every other grade plot.

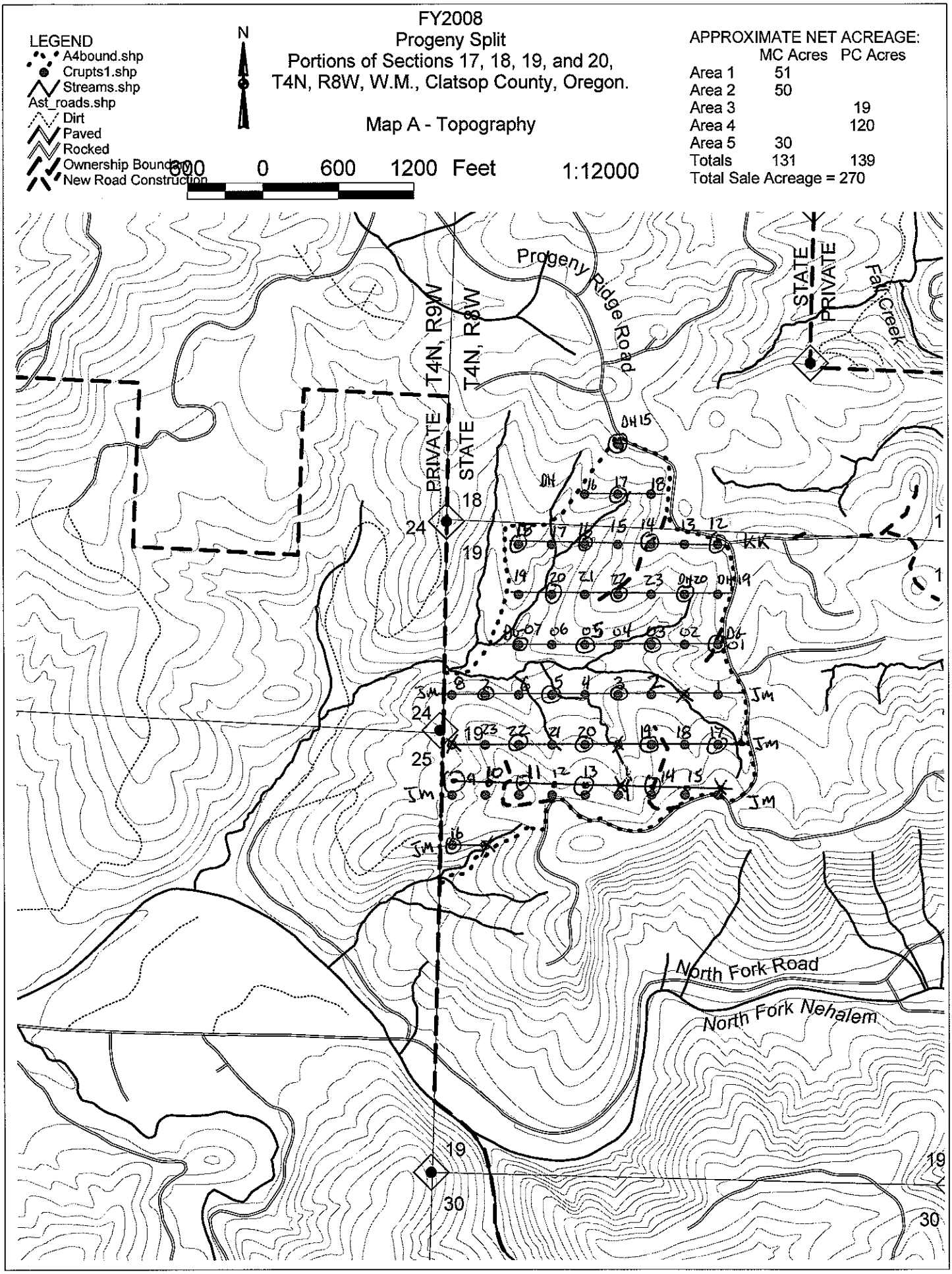
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally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

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: **Jay Morey**
Approved by: _____
Date: 11-28-07


FY2008
Progeny Split
Portions of Sections 17, 18, 19, and 20,
T4N, R8W, W.M., Clatsop County, Oregon.
Map A - Topography
LEGEND
A4bound.shp
Crupts1.shp
Streams.shp
Ast_roads.shp
Dirt
Paved
Rocked
Ownership Boundary
New Road Construction
N
600 0 600 1200 Feet
1:12000
APPROXIMATE NET ACREAGE:
MC Acres PC Acres
Area 1 51
Area 2 50
Area 3 19
Area 4 120
Area 5 30
Totals 131 139
Total Sale Acreage = 270
Progeny Ridge Road
T4N, R9W
T4N, R8W
PRIVATE
STATE
STATE
PRIVATE
Fall Creek
North Fork Road
North Fork Nehalem
18
24
19
25
30

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T04N R08W S17 Ty0002	4.90	
T04N R08W S17 Ty0002	99.90	
T04N R08W S17 Ty0001	142.70	

Project: PROSP
Acres 247.50

Page 1
Date 2/9/2008
Time 3:36:55PM

Spp	S So Gr T 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	694											12		0.00	5.4
D	DO2S	69	.7	14,488	14,387	3,561		1	43	56	1	1	22	76	37	389	2.26	37.0
D	DO3S	23	1.0	4,811	4,762	1,178		92	8		2	9	37	52	34	93	0.80	51.0
D	DO4S	4		742	742	184		100			57	37	0	6	19	28	0.44	26.3
D	DOSM	4	2.2	799	782	193				100		13	68	19	32	707	3.71	1.1
D	**Totals**	63	4.0	21,534	20,672	5,116		25	32	43	3	5	26	66	31	171	1.30	120.8
H	DOCU		100.0	675											14		0.00	1.8
H	DO2S	76	.2	4,789	4,778	1,183		0	33	67	1		8	92	38	402	2.32	11.9
H	DO3S	20		1,235	1,235	306		61	21	18	6	19	13	62	33	112	0.96	11.0
H	DO4S	4	.0	231	231	57		100			88	4	7	1	17	26	0.53	8.7
H	**Totals**	19	9.9	6,931	6,245	1,546		16	29	55	5	4	9	82	30	187	1.50	33.4
S	DOCU		100.0	33											6		0.00	.4
S	DO2S	51	.1	616	615	152			58	42				100	40	376	2.49	1.6
S	DO3S	43		514	514	127		20	6	74	0	0	65	35	33	217	1.83	2.4
S	DO4S	6		67	67	17	2	89	9		6	89		5	24	42	0.89	1.6
S	**Totals**	4	2.8	1,230	1,196	296	0	14	33	54	0	5	28	67	31	199	1.85	6.0
A	DOCU		100.0	231											8		0.00	2.8
A	DOCR	100	.2	4,967	4,957	1,227		65	24	11	13	20	40	28	28	83	0.87	59.9
A	**Totals**	15	4.6	5,199	4,957	1,227		65	24	11	13	20	40	28	27	79	0.85	62.7
Totals			5.2	34,894	33,070	8,185	0	29	30	41	5	7	25	63	29	148	1.23	222.9

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: PROSP

Page 1
Date 2/9/2008
Time 3:36:56PM

T04N R08W S17 T0001

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
04N	08W	17	TAKE125	0001	142.70	62	171	1	W

T04N R08W S17 T0001

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
D		DO	CU		100.0	1,023											13		0.00	5.6
D		DO	2S	72	.4	19,129	19,044	2,718		1	37	61	1	1	23	75	37	417	2.40	45.7
D		DO	3S	20	1.3	5,366	5,298	756		91	9		3	10	41	46	33	93	0.81	56.9
D		DO	4S	2		649	649	93		100			63	37			19	29	0.47	22.3
D		DO	SM	6	2.2	1,386	1,355	193				100		13	68	19	32	707	3.71	1.9
D	**Totals**			61	4.4	27,554	26,347	3,760		22	29	49	3	4	28	65	31	199	1.45	132.4
A		DO	CU		100.0	212											7		0.00	2.8
A		DO	CR	100	.3	5,996	5,979	853		63	23	13	10	15	42	32	29	86	0.88	69.3
A	**Totals**			14	3.7	6,209	5,979	853		63	23	13	10	15	42	32	28	83	0.87	72.1
H		DO	CU		100.0	1,115											16		0.00	2.5
H		DO	2S	75	.2	6,765	6,753	964			30	70			7	93	39	411	2.37	16.4
H		DO	3S	21		1,849	1,849	264		55	24	21	6	17	12	65	33	116	0.97	15.9
H		DO	4S	4		304	304	43		100			100				16	26	0.52	11.9
H	**Totals**			21	11.2	10,033	8,907	1,271		15	28	57	5	3	8	84	30	190	1.52	46.8
S		DO	CU		100.0	57											6		0.00	.7
S		DO	2S	60		1,020	1,020	146			61	39				100	40	364	2.43	2.8
S		DO	3S	34		578	578	83		31		69			100		32	162	1.47	3.6
S		DO	4S	6		101	101	14		100				100			24	40	0.87	2.5
S	**Totals**			4	3.3	1,756	1,699	242		16	36	47		6	34	60	30	177	1.69	9.6
Type Totals					5.8	45,551	42,931	6,126		26	28	46	4	6	26	64	30	165	1.32	260.9

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: PROSP

Page 1
Date 2/9/2008
Time 3:36:56PM

T04N R08W S17 T0002

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
04N	08W	17	A3R/W	0002	4.90	48	193	1	W

T04N R08W S17 T0002

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
D		DO	CU		100.0	854											9		0.00	10.0
D		DO	2S	78	.7	27,503	27,321	134			41	59	1	3	19	78	37	400	2.27	68.4
D		DO	3S	18	.5	6,546	6,513	32		92	8		5	13	28	54	32	91	0.82	71.4
D		DO	4S	4		1,140	1,140	6		100			43	36	11	9	21	29	0.43	39.0
D	**Totals**			73	3.0	36,044	34,974	171		20	33	46	3	6	20	71	31	185	1.40	188.8
A		DO	CU		100.0	299											8		0.00	4.2
A		DO	CR	100		4,626	4,626	23		74	22	4	20	34	31	15	26	65	0.74	71.4
A	**Totals**			10	6.1	4,926	4,626	23		74	22	4	20	34	31	15	25	61	0.72	75.6
H		DO	CU		100.0	186											6		0.00	1.4
H		DO	2S	70	1.2	4,165	4,114	20		4	34	61	2		27	71	36	370	2.20	11.1
H		DO	3S	22		1,306	1,306	6		100			2	30	9	59	34	107	0.97	12.3
H		DO	4S	8		419	419	2		100			30	26	10	34	23	37	0.55	11.3
H	**Totals**			12	3.9	6,076	5,839	29		33	24	43	4	9	22	65	30	162	1.31	36.1
S		DO	CU		100.0	15											14		0.00	.8
S		DO	2S	61	2.9	1,397	1,356	7				100				100	40	1381	7.49	1.0
S		DO	3S	18	.0	390	390	2		6	20	75	4	23		73	31	328	2.84	1.2
S		DO	4S	21		442	442	2	17	17	66		48	17		35	21	69	1.04	6.5
S	**Totals**			5	2.5	2,244	2,188	11	3	4	17	75	10	8		82	23	233	2.45	9.4
Type Totals					3.4	49,290	47,628	233	0	26	30	43	5	9	21	65	29	154	1.27	309.9

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: PROSP

Page 1
Date 2/9/2008
Time 3:36:56PM

T04N R08W S17 T0002

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
04N	08W	17	A4TAKE2	0002	99.90	48	88	1	W

T04N R08W S17 T0002

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
D		DO	CU		100.0	215											12		0.00	4.8
D		DO	2S	59	1.7	7,220	7,100	709			65	35		2	20	78	37	310	1.87	22.9
D		DO	3S	33	.6	3,934	3,909	390		93	7		2	6	30	62	34	94	0.77	41.7
D		DO	4S	8		855	855	85		100			51	36		13	20	27	0.41	31.4
D	**Totals**			65	3.0	12,224	11,864	1,185		38	41	21	4	6	22	68	29	118	1.00	100.8
A		DO	CU		100.0	255											9		0.00	2.8
A		DO	CR	100		3,515	3,515	351		70	25	5	19	30	34	17	27	77	0.84	45.9
A	**Totals**			19	6.8	3,770	3,515	351		70	25	5	19	30	34	17	26	72	0.83	48.7
H		DO	CU		100.0	72											6		0.00	.8
H		DO	2S	80	.4	1,997	1,990	199			45	55	3		8	89	37	367	2.11	5.4
H		DO	3S	15		356	356	36		100			5	34	23	39	31	92	0.90	3.9
H		DO	4S	5		117	117	12		100			55	13	32		18	29	0.55	4.0
H	**Totals**			13	3.1	2,542	2,463	246		19	37	44	6	6	11	78	28	175	1.44	14.1
S		DO	3S	100		428	428	43			17	83				100	40	605	3.86	.7
S	**Totals**			2		428	428	43			17	83				100	40	605	3.86	.7
Type Totals					3.7	18,964	18,269	1,825		41	37	23	7	10	22	60	28	111	1.01	164.3

TC PSTATS

PROJECT STATISTICS

PROJECT PROSP

DATE 2/9/2008

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08	17	A3R/W	0002	247.50	158	835	1	W
04N	08W	17	A4TAKE2	0002					
04N	08W	17	TAKE125	0001					

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	158	835	5.3		
CRUISE	83	450	5.4	26,268	1.7
DBH COUNT					
REFOREST					
COUNT	72	363	5.0		
BLANKS	3				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	263	49.8	20.0	77		108.8	21,534	20,672	4,938	4,807
R ALDER	119	37.0	15.6	48		49.2	5,199	4,957	1,495	1,452
WHEMLOCK	54	16.0	20.2	64		35.6	6,931	6,245	1,596	1,478
S SPRUCE	14	3.4	22.6	56		9.4	1,230	1,196	344	339
TOTAL	*450*	*106.1*	*18.7*	*64*		*203.0*	*34,894*	*33,070*	*8,373*	*8,075*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	SAMPLE TREES - BF LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DOUG FIR	74.6	4.6	701	734	768			
R ALDER	97.4	8.9	149	164	178			
WHEMLOCK	75.3	10.2	581	648	714			
S SPRUCE	144.0	39.9	895	1,489	2,083			
TOTAL	*109.8*	*5.2*	*566*	*597*	*627*	*481*	*120*	*53*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	TREES/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	166.4	13.2	43	50	56			
R ALDER	191.1	15.2	31	37	43			
WHEMLOCK	264.0	21.0	13	16	19			
S SPRUCE	393.6	31.3	2	3	4			
TOTAL	*102.6*	*8.2*	*97*	*106*	*115*	*420*	*105*	*47*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	BASAL AREA/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	151.9	12.1	96	109	122			
R ALDER	183.3	14.6	42	49	56			
WHEMLOCK	256.5	20.4	28	36	43			
S SPRUCE	366.6	29.1	7	9	12			
TOTAL	*98.9*	*7.9*	*187*	*203*	*219*	*391*	*98*	*43*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	NET BF/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	152.4	12.1	18,167	20,672	23,176			
R ALDER	189.2	15.0	4,212	4,957	5,703			
WHEMLOCK	257.5	20.5	4,967	6,245	7,523			
S SPRUCE	360.7	28.7	853	1,196	1,538			
TOTAL	*110.2*	*8.8*	*30,172*	*33,070*	*35,967*	*485*	*121*	*54*

TC TSTATS

STATISTICS

PROJECT PROSP

DATE 2/9/2008

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	17	TAKE125	0001	142.70	62	333	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	62	333	5.4		
CRUISE	32	169	5.3	18,018	.9
DBH COUNT					
REFOREST					
COUNT	30	158	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
DOUG FIR	89	54.9	21.2	78		134.4	27,554	26,347	6,175	5,982
R ALDER	53	42.5	15.7	49		56.9	6,209	5,979	1,779	1,741
WHEMLOCK	23	23.5	20.1	61		51.8	10,033	8,907	2,308	2,113
S SPRUCE	4	5.4	21.9	56		14.1	1,756	1,699	502	492
TOTAL	*169*	*126.3*	*19.3*	*64*		*257.2*	*45,551*	*42,931*	*10,764*	*10,328*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	74.1	7.8	771	837	902			
R ALDER	102.4	14.1	174	202	230			
WHEMLOCK	75.4	16.1	637	759	881			
S SPRUCE	79.5	45.4	269	493	716			
TOTAL	*94.7*	*7.3*	*574*	*619*	*664*	*358*	*89*	*40*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	129.1	16.4	46	55	64			
R ALDER	158.6	20.1	34	43	51			
WHEMLOCK	178.5	22.6	18	23	29			
S SPRUCE	258.4	32.8	4	5	7			
TOTAL	*61.1*	*7.7*	*116*	*126*	*136*	*149*	*37*	*17*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	107.8	13.7	116	134	153			
R ALDER	149.9	19.0	46	57	68			
WHEMLOCK	173.8	22.1	40	52	63			
S SPRUCE	252.4	32.0	10	14	19			
TOTAL	*51.1*	*6.5*	*240*	*257*	*274*	*104*	*26*	*12*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	105.0	13.3	22,837	26,347	29,857			
R ALDER	149.1	18.9	4,848	5,979	7,109			
WHEMLOCK	177.1	22.5	6,905	8,907	10,908			
S SPRUCE	256.7	32.6	1,146	1,699	2,252			
TOTAL	*60.5*	*7.7*	*39,633*	*42,931*	*46,229*	*146*	*37*	*16*

TC TSTATS

STATISTICS

PROJECT PROSP

DATE 2/9/2008

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	17	A3R/W	0002	4.90	48	347	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	48	347	7.2		
CRUISE	27	193	7.1	720	26.8
DBH COUNT					
REFOREST					
COUNT	21	141	6.7		
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
DOUG FIR	125	71.7	21.1	84		174.2	36,044	34,974	8,207	8,064
R ALDER	37	51.4	14.0	39		54.6	4,926	4,626	1,445	1,388
WHEMLOCK	22	17.1	19.4	67		35.0	6,076	5,839	1,454	1,423
S SPRUCE	9	6.7	20.2	34		15.0	2,244	2,188	544	538
TOTAL	*193*	*147.0*	*18.6*	*64*		*278.8*	*49,290*	*47,628*	*11,650*	*11,413*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	66.9	6.0	728	775	821			
R ALDER	80.9	13.3	106	122	138			
WHEMLOCK	80.9	17.6	449	545	641			
S SPRUCE	131.4	46.4	1,053	1,963	2,874			
TOTAL	*115.9*	*8.3*	*622*	*679*	*735*	*536*	*134*	*60*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	95.9	13.8	62	72	82			
R ALDER	132.6	19.1	42	51	61			
WHEMLOCK	158.9	22.9	13	17	21			
S SPRUCE	281.3	40.6	4	7	9			
TOTAL	*48.1*	*6.9*	*137*	*147*	*157*	*92*	*23*	*10*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	76.0	11.0	155	174	193			
R ALDER	117.5	16.9	45	55	64			
WHEMLOCK	144.6	20.9	28	35	42			
S SPRUCE	224.3	32.3	10	15	20			
TOTAL	*30.9*	*4.5*	*266*	*279*	*291*	*38*	*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
DOUG FIR	73.7	10.6	31,254	34,974	38,694			
R ALDER	117.2	16.9	3,845	4,626	5,408			
WHEMLOCK	143.5	20.7	4,631	5,839	7,048			
S SPRUCE	246.9	35.6	1,409	2,188	2,968			
TOTAL	*43.6*	*6.3*	*44,631*	*47,628*	*50,625*	*76*	*19*	*8*

TC TSTATS

STATISTICS

PROJECT PROSP

DATE 2/9/2008

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	17	A4TAKE2	0002	99.90	48	155	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	48	155	3.2		
CRUISE	24	88	3.7	7,530	1.2
DBH COUNT					
REFOREST					
COUNT	21	64	3.0		
BLANKS	3				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	49	41.4	17.5	75		69.2	12,224	11,864	3,010	2,969
R ALDER	29	28.3	15.7	47		37.8	3,770	3,515	1,090	1,042
WHEMLOCK	9	5.3	20.7	77		12.5	2,542	2,463	586	574
S SPRUCE	1	.4	36.0	83		2.5	428	428	109	109
TOTAL	*88*	*75.4*	*17.2*	*64*		*122.0*	*18,964*	*18,269*	*4,795*	*4,694*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	81.3	11.6	394	446	498			
R ALDER	67.2	12.7	128	147	165			
WHEMLOCK	50.7	17.9	504	613	723			
S SPRUCE								
TOTAL	*92.4*	*9.8*	*336*	*373*	*410*	*341*	*85*	*38*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	134.6	19.4	33	41	49			
R ALDER	115.4	16.6	24	28	33			
WHEMLOCK	246.2	35.5	3	5	7			
S SPRUCE	391.4	56.4	0	0	1			
TOTAL	*71.0*	*10.2*	*68*	*75*	*83*	*201*	*50*	*22*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	119.7	17.3	57	69	81			
R ALDER	109.4	15.8	32	38	44			
WHEMLOCK	230.2	33.2	8	13	17			
S SPRUCE	391.4	56.4	1	3	4			
TOTAL	*59.7*	*8.6*	*111*	*122*	*132*	*142*	*36*	*16*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	121.9	17.6	9,777	11,864	13,950			
R ALDER	116.3	16.8	2,925	3,515	4,104			
WHEMLOCK	238.3	34.4	1,616	2,463	3,309			
S SPRUCE	391.4	56.4	186	428	670			
TOTAL	*78.1*	*11.3*	*16,211*	*18,269*	*20,327*	*244*	*61*	*27*

TC TSTATS

STATISTICS

PROJECT PROSP

DATE 3/20/2008

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	17	STAY125	0001	142.70	62	82	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	62	82	1.3		
CRUISE	20	39	2.0	2,045	1.9
DBH COUNT					
REFOREST					
COUNT	22	43	2.0		
BLANKS	20				
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
SNAG	14	5.7	33.1	36		33.9	326		71	
CEDLEAV	12	4.6	25.1	47		15.8	1,046	998	450	429
DOUGLEAV	7	2.1	30.5	103		10.5	2,493	2,471	516	516
SPRUCELV	5	1.5	32.3	72		8.8	1,637	1,505	365	340
HEMLEAV	1	.5	32.0	110		2.6	764	472	143	95
TOTAL	*39*	*14.3*	*30.3*	*55*		*71.7*	*6,266*	*5,447*	*1,545*	*1,380*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 68.1 %	COEFF		SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
SNAG								
CEDLEAV	72.0	21.7	284	363	441			
DOUGLEAV	47.7	19.4	1,121	1,391	1,661			
SPRUCELV	89.5	44.5	1,229	2,214	3,199			
HEMLEAV								
TOTAL	*157.1*	*25.1*	*502*	*671*	*839*	*985*	*246*	*109*

CL: 68.1 %	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
SNAG	166.5	21.1	4	6	7			
CEDLEAV	375.3	47.6	2	5	7			
DOUGLEAV	249.0	31.6	1	2	3			
SPRUCELV	299.5	38.0	1	2	2			
HEMLEAV	447.1	56.7	0	0	1			
TOTAL	*130.3*	*16.5*	*12*	*14*	*17*	*678*	*169*	*75*

CL: 68.1 %	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
SNAG	156.0	19.8	27	34	41			
CEDLEAV	401.2	50.9	8	16	24			
DOUGLEAV	244.7	31.0	7	11	14			
SPRUCELV	255.8	32.5	6	9	12			
HEMLEAV	447.1	56.7	1	3	4			
TOTAL	*113.3*	*14.4*	*61*	*72*	*82*	*512*	*128*	*57*

CL: 68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
SNAG								
CEDLEAV	432.0	54.8	451	998	1,546			
DOUGLEAV	240.7	30.5	1,716	2,471	3,226			
SPRUCELV	260.2	33.0	1,008	1,505	2,002			
HEMLEAV	447.1	56.7	204	472	739			
TOTAL	*148.1*	*18.8*	*4,423*	*5,447*	*6,471*	*876*	*219*	*97*

TC TSTATS

STATISTICS

PROJECT PROSP

DATE 2/9/2008

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	17	A4LEAVE2	0002	99.90	48	216	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	48	216	4.5		
CRUISE	27	119	4.4	8,088	1.5
DBH COUNT					
REFOREST					
COUNT	21	90	4.3		
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
DOUGLEAV	71	30.0	25.0	96		102.5	22,925	22,308	4,968	4,879
HEMLEAV	13	12.0	18.6	61		22.5	3,442	3,283	852	833
ALDRLEAV	8	27.6	10.6	26		16.8	921	921	296	296
SNAG	12	3.5	29.4	55		16.7	654		161	
SPRUCELV	8	6.1	19.4	32		12.5	1,837	1,784	442	436
CEDLEAV	7	1.8	24.2	70		5.8	703	684	206	206
TOTAL	*119*	*81.0*	*20.0*	*60*		*176.8*	*30,481*	*28,981*	*6,926*	*6,651*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV	50.5	6.0	923	982	1,040			
HEMLEAV	104.3	30.1	348	498	647			
ALDRLEAV	22.0	8.3	31	34	37			
SNAG								
SPRUCELV	133.2	50.2	1,024	2,058	3,091			
CEDLEAV	125.1	50.9	332	676	1,020			
TOTAL	*115.5*	*10.6*	*734*	*820*	*907*	*533*	*133*	*59*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV	76.0	11.0	27	30	33			
HEMLEAV	154.4	22.3	9	12	15			
ALDRLEAV	187.7	27.1	20	28	35			
SNAG	228.9	33.0	2	4	5			
SPRUCELV	290.7	41.9	4	6	9			
CEDLEAV	676.5	97.6	0	2	4			
TOTAL	*58.7*	*8.5*	*74*	*81*	*88*	*138*	*34*	*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
DOUGLEAV	64.9	9.4	93	103	112			
HEMLEAV	150.8	21.7	18	23	27			
ALDRLEAV	189.1	27.3	12	17	21			
SNAG	184.1	26.6	12	17	21			
SPRUCELV	220.5	31.8	9	13	16			
CEDLEAV	600.0	86.5	1	6	11			
TOTAL	*24.1*	*3.5*	*171*	*177*	*183*	*23*	*6*	*3*

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	64.3	9.3	20,238	22,308	24,378			
HEMLEAV	144.4	20.8	2,600	3,283	3,967			
ALDRLEAV	183.0	26.4	678	921	1,164			
SNAG								

STATISTICS

PROJECT PROSP

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	17	A4LEAVE2	0002	99.90	48	216	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	251.0	36.2	1,138	1,784	2,430			
CEDLEAV	590.4	85.1	102	684	1,267			
TOTAL	*33.3*	*4.8*	*27,588*	*28,981*	*30,373*	*44*	*11*	*5*

TC TSTATS

STATISTICS

PROJECT PROSP

DATE 2/9/2008

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	17	A125	0001	142.70	62	415	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	62	415	6.7		
CRUISE	32	208	6.5	20,063	1.0
DBH COUNT					
REFOREST					
COUNT	30	200	6.7		
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
DOUG FIR	89	54.9	21.2	78		134.4	27,554	26,347	6,175	5,982
R ALDER	53	42.5	15.7	49		56.9	6,209	5,979	1,779	1,741
WHEMLOCK	23	23.5	20.1	61		51.8	10,033	8,907	2,308	2,113
SNAG	14	5.7	33.1	36		33.9	326		71	
CEDLEAV	12	4.6	25.1	47		15.8	1,046	998	450	429
S SPRUCE	4	5.4	21.9	56		14.1	1,756	1,699	502	492
DOUGLEAV	7	2.1	30.5	103		10.5	2,493	2,471	516	516
SPRUCELV	5	1.5	32.3	72		8.8	1,637	1,505	365	340
HEMLEAV	1	.5	32.0	110		2.6	764	472	143	95
TOTAL	*208*	*140.6*	*20.7*	*63*		*328.8*	*51,817*	*48,378*	*12,309*	*11,708*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 68.1 %	COEFF		SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	74.1	7.8	771	837	902			
R ALDER	102.4	14.1	174	202	230			
WHEMLOCK	75.4	16.1	637	759	881			
SNAG								
CEDLEAV	72.0	21.7	284	363	441			
S SPRUCE	79.5	45.4	269	493	716			
DOUGLEAV	47.7	19.4	1,121	1,391	1,661			
SPRUCELV	89.5	44.5	1,229	2,214	3,199			
HEMLEAV								
TOTAL	*110.5*	*7.7*	*580*	*629*	*677*	*488*	*122*	*54*

CL: 68.1 %	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	129.1	16.4	46	55	64			
R ALDER	158.6	20.1	34	43	51			
WHEMLOCK	178.5	22.6	18	23	29			
SNAG	166.5	21.1	4	6	7			
CEDLEAV	375.3	47.6	2	5	7			
S SPRUCE	258.4	32.8	4	5	7			
DOUGLEAV	249.0	31.6	1	2	3			
SPRUCELV	299.5	38.0	1	2	2			
HEMLEAV	447.1	56.7	0	0	1			
TOTAL	*51.8*	*6.6*	*131*	*141*	*150*	*107*	*27*	*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
DOUG FIR	107.8	13.7	116	134	153			
R ALDER	149.9	19.0	46	57	68			
WHEMLOCK	173.8	22.1	40	52	63			
SNAG	156.0	19.8	27	34	41			
CEDLEAV	401.2	50.9	8	16	24			

STATISTICS

PROJECT PROSP

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	17	A125	0001	142.70	62	415	1	W

CL: 68.1 % SD: 1.0	COEFF VAR.	S.E.%	BASAL AREA/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
S SPRUCE	252.4	32.0	10	14	19			
DOUGLEAV	244.7	31.0	7	11	14			
SPRUCELV	255.8	32.5	6	9	12			
HEMLEAV	447.1	56.7	1	3	4			
TOTAL	*39.3*	*5.0*	*312*	*329*	*345*	*62*	*15*	*7*

CL: 68.1 % SD: 1.0	COEFF VAR.%	S.E.%	NET BF/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	105.0	13.3	22,837	26,347	29,857			
R ALDER	149.1	18.9	4,848	5,979	7,109			
WHEMLOCK	177.1	22.5	6,905	8,907	10,908			
SNAG								
CEDLEAV	432.0	54.8	451	998	1,546			
S SPRUCE	256.7	32.6	1,146	1,699	2,252			
DOUGLEAV	240.7	30.5	1,716	2,471	3,226			
SPRUCELV	260.2	33.0	1,008	1,505	2,002			
HEMLEAV	447.1	56.7	204	472	739			
TOTAL	*51.9*	*6.6*	*45,191*	*48,378*	*51,565*	*108*	*27*	*12*

STATISTICS

PROJECT PROSP

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	17	A4	0002	99.90	48	370	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	48	370	7.7		
CRUISE	28	207	7.4	15,675	1.3
DBH COUNT					
REFOREST					
COUNT	20	145	7.3		
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
DOUGLEAV	70	29.9	25.0	96		101.7	23,265	22,636	5,068	4,979
DOUG FIR	49	40.4	17.5	75		67.5	11,930	11,578	2,938	2,897
R ALDER	29	27.5	15.3	46		35.0	3,501	3,265	1,006	962
HEMLEAV	13	12.0	18.6	61		22.5	3,442	3,283	852	833
ALDRLEAV	8	29.5	11.0	26		19.6	1,070	1,053	355	352
SNAG	13	3.6	29.9	54		17.5	298		75	
SPRUCELV	8	6.5	19.4	32		13.3	1,959	1,903	472	466
WHEMLOCK	9	5.3	20.7	77		12.5	2,542	2,463	586	574
CEDLEAV	7	1.8	24.2	70		5.8	732	714	215	215
S SPRUCE	1	.4	36.0	83		2.5	428	428	109	109
TOTAL	*207*	*156.9*	*18.7*	*61*		*297.9*	*49,167*	*47,322*	*11,677*	*11,386*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV	48.8	5.8	934	992	1,050			
DOUG FIR	81.3	11.6	394	446	498			
R ALDER	69.0	13.0	126	145	164			
HEMLEAV	104.3	30.1	348	498	647			
ALDRLEAV	53.5	20.2	32	40	48			
SNAG								
SPRUCELV	133.2	50.2	1,024	2,058	3,091			
WHEMLOCK	50.7	17.9	504	613	723			
CEDLEAV	142.8	58.1	325	776	1,226			
S SPRUCE								
TOTAL	*125.3*	*8.7*	*577*	*632*	*687*	*627*	*157*	*70*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV	76.7	11.1	27	30	33			
DOUG FIR	139.2	20.1	32	40	49			
R ALDER	125.2	18.1	23	28	33			
HEMLEAV	154.4	22.3	9	12	15			
ALDRLEAV	196.2	28.3	21	29	38			
SNAG	223.2	32.2	2	4	5			
SPRUCELV	273.8	39.5	4	6	9			
WHEMLOCK	246.2	35.5	3	5	7			
CEDLEAV	676.5	97.6	0	2	4			
S SPRUCE	391.4	56.4	0	0	1			
TOTAL	*48.7*	*7.0*	*146*	*157*	*168*	*95*	*24*	*11*

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	65.4	9.4	92	102	111			
DOUG FIR	124.2	17.9	55	68	80			
R ALDER	113.7	16.4	29	35	41			
HEMLEAV	150.8	21.7	18	23	27			

STATISTICS

PROJECT PROSP

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	17	A4	0002	99.90	48	370	1	W

BASAL AREA/ACRE

CL: 68.1 % COEFF
SD: 1.0 VAR.

	VAR.	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
ALDRLEAV	193.2	27.9	14	20	25			
SNAG	175.8	25.4	13	18	22			
SPRUCELV	208.3	30.0	9	13	17			
WHEMLOCK	230.2	33.2	8	13	17			
CEDLEAV	600.0	86.5	1	6	11			
S SPRUCE	391.4	56.4	1	3	4			
TOTAL	*30.3*	*4.4*	*285*	*298*	*311*	*37*	*9*	*4*

NET BF/ACRE

CL: 68.1 % COEFF
SD: 1.0 VAR.%

	VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUGLEAV	65.0	9.4	20,515	22,636	24,756			
DOUG FIR	126.4	18.2	9,467	11,578	13,688			
R ALDER	120.8	17.4	2,696	3,265	3,834			
HEMLEAV	144.4	20.8	2,600	3,283	3,967			
ALDRLEAV	189.3	27.3	765	1,053	1,340			
SNAG								
SPRUCELV	236.8	34.1	1,253	1,903	2,553			
WHEMLOCK	238.3	34.4	1,616	2,463	3,309			
CEDLEAV	571.3	82.4	126	714	1,302			
S SPRUCE	391.4	56.4	186	428	670			
TOTAL	*44.9*	*6.5*	*44,260*	*47,322*	*50,384*	*80*	*20*	*9*

TC TSTNDSUM

Stand Table Summary

Project PROSP

T04N R08W S17 T0002

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
04N	08W	17	A4LEAVE2	0002	99.90	48	119

T04N R08W S17 T0002

Date: 02/09/20(

Time: 3:49:22PM

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
DL		10	1	83	68	2.647	1.44	2.65	14.0	50.0		37	132		37	13
DL		17	2	90	115	1.832	2.89	3.66	36.0	137.5		132	504		132	50
DL		18	1	90	118	.817	1.44	2.45	27.0	103.3		66	253		66	25
DL		19	3	91	116	2.200	4.33	6.60	30.6	122.2		202	807		201	81
DL		20	2	85	119	1.323	2.89	3.97	33.5	130.0		133	516		133	52
DL		21	1	85	133	.600	1.44	1.80	40.3	156.7		73	282		73	28
DL		22	4	89	126	2.188	5.77	6.02	45.9	195.5		276	1,176		276	117
DL		23	3	89	130	1.501	4.33	3.00	61.3	270.0		184	811		184	81
DL		24	6	88	128	2.757	8.66	8.27	51.3	220.6		425	1,824		424	182
DL		25	1	86	115	.424	1.44	1.27	50.0	220.0		64	280		63	28
DL		26	6	86	138	2.349	8.66	7.05	64.5	278.3		455	1,962		454	196
DL		27	8	86	140	2.905	11.55	7.26	69.3	312.5		503	2,269		503	227
DL		28	3	86	134	1.013	4.33	3.04	71.9	323.3		218	982		218	98
DL		29	2	90	131	.629	2.89	1.89	75.3	368.3		142	696		142	69
DL		30	5	88	129	1.471	7.22	3.53	90.4	437.5		319	1,544		319	154
DL		31	3	88	140	.826	4.33	2.48	88.6	432.2		220	1,071		219	107
DL		32	3	90	138	.775	4.33	2.33	97.2	491.1		226	1,143		226	114
DL		33	6	86	147	1.458	8.66	4.62	102.2	502.6		472	2,321		472	232
DL		34	2	88	120	.458	2.89	1.37	92.5	468.3		127	643		127	64
DL		35	2	88	125	.432	2.89	1.30	102.0	505.0		132	655		132	65
DL		36	4	86	138	.817	5.77	2.86	91.9	484.3		263	1,385		262	138
DL		37	1	85	136	.193	1.44	.58	129.0	656.7		75	381		75	38
DL		39	1	89	112	.174	1.44	.52	124.0	653.3		65	341		65	34
DL		40	1	88	148	.165	1.44	.50	143.0	666.7		71	331		71	33
DL		Totals	71	87	124	29.955	102.50	79.01	61.7	282.4		4,879	22,308		4,874	2,229
HL		12	1	85	66	2.204	1.73	2.20	24.0	70.0		53	154		53	15
HL		14	1	90	91	1.619	1.73	3.24	20.0	75.0		65	243		65	24
HL		15	1	89	99	1.410	1.73	2.82	25.0	100.0		71	282		70	28
HL		16	1	82	85	1.240	1.73	2.48	25.5	90.0		63	223		63	22
HL		18	3	86	56	2.938	5.19	3.92	33.5	100.0		131	392		131	39
HL		22	1	88	111	.656	1.73	1.97	43.3	166.7		85	328		85	33
HL		23	1	85	64	.600	1.73	1.20	44.5	160.0		53	192		53	19
HL		28	1	88	111	.405	1.73	1.21	68.7	330.0		83	401		83	40
HL		30	1	84	97	.353	1.73	.71	95.0	395.0		67	279		67	28
HL		32	1	90	146	.310	1.73	.93	115.7	590.0		108	549		107	55
HL		38	1	81	104	.220	1.73	.44	122.5	550.0		54	242		54	24
HL		Totals	13	86	80	11.953	22.50	21.11	39.5	155.5		833	3,283		832	328
SL		9	1	69	20	3.537	1.56	3.54	6.0	20.0		21	71		21	7
SL		20	1	88	66	.716	1.56	.72	64.0	200.0		46	143		46	14
SL		21	1	87	50	.650	1.56	1.30	31.0	120.0		40	156		40	16
SL		24	1	86	28	.497	1.56	.50	45.0	90.0		22	45		22	4
SL		26	1	84	84	.424	1.56	.85	73.0	210.0		62	178		62	18
SL		48	1	84	129	.124	1.56	.37	230.7	1186.7		86	443		86	44
SL		66	1	85	134	.066	1.56	.20	440.3	2350.0		87	464		87	46
SL		70	1	70	121	.058	1.56	.18	410.0	1626.7		72	285		72	29
SL		Totals	8	76	38	6.072	12.50	7.64	57.1	233.5		436	1,784		436	178
AL		10	4	86	33	15.406	8.40	15.41	9.0	32.5		139	501		139	50
AL		11	3	86	43	9.549	6.30	9.55	12.0	30.0		115	286		114	29
AL		12	1	87	47	2.675	2.10	2.67	16.0	50.0		43	134		43	13

TC TSTNDSUM

Stand Table Summary

Project PROSP

T04N R08W S17 T0002

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
04N	08W	17	A4LEAVE2	0002	99.90	48	119

Date: 02/09/20(
Time: 3:49:22PM

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
AL		Totals	8	86	38	27.629	16.81	27.63	10.7	33.3		296	921		296	92
CL		18	1	81	95	.472	.83	.94	29.0	95.0		27	90		27	9
CL		20	1	81	88	.382	.83	.76	36.5	120.0		28	92		28	9
CL		24	1	82	96	.265	.83	.53	58.0	135.0		31	72		31	7
CL		26	2	81	109	.452	1.67	.90	73.2	245.0		66	221		66	22
CL		27	1	81	101	.210	.83	.42	68.5	240.0		29	101		29	10
CL		60	1	80	115	.042	.83	.04	600.0	2570.0		25	109		25	11
CL		Totals	7	81	98	1.823	5.83	3.60	57.3	189.8		206	684		206	68
SN		14	1	78	114	1.299	1.39									
SN		16	1	88	70	.995	1.39									
SN		37	1	85	26	.186	1.39									
SN		38	1	89	30	.176	1.39									
SN		40	2	82	32	.318	2.78									
SN		45	2	88	52	.252	2.78									
SN		48	1	79	26	.111	1.39									
SN		60	2	85	33	.141	2.78									
SN		70	1	70	37	.052	1.39									
SN		Totals	12	83	74	3.530	16.67									
Totals			119	86	79	80.963	176.81	139.00	47.8	208.5		6651	28,981		6,644	2,895

TC PLOGSTVB

Log Stock Table - MBF

T04N R08W S17 Ty0002	4.90
T04N R08W S17 Ty0002	99.90
T04N R08W S17 Ty0001	142.70

Project: PROSP
Acres 247.50

Date 2/9/2008
Time 3:36:56PM

Spp	S T	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	4	0	100.0														
D		DO	CU	6	58	100.0														
D		DO	CU	8	17	100.0														
D		DO	CU	10	25	100.0														
D		DO	CU	12	15	100.0														
D		DO	CU	21	6	100.0														
D		DO	CU	35	25	100.0														
D		DO	CU	36	26	100.0														
D		DO	2S	16	19		19	.4									18	1		
D		DO	2S	18	2		2	.0						2						
D		DO	2S	20	10		10	.2						3	8					
D		DO	2S	22	19		19	.4						0			19			
D		DO	2S	24	19		19	.4						3	0	13	1	2		
D		DO	2S	25	4		4	.1						4						
D		DO	2S	32	804	1.7	790	15.4					14	219	110	216	108	122	1	
D		DO	2S	40	2,708		2,697	52.7					20	382	475	745	743	332		
D		DO	3S	12	0		0	.0				0								
D		DO	3S	15	0		0	.0						0						
D		DO	3S	16	20		20	.4			0	8	12							
D		DO	3S	18	3		3	.1			0		0	2						
D		DO	3S	20	6		6	.1			3		3							
D		DO	3S	22	7		7	.1				2	5	0						
D		DO	3S	24	44		44	.9			3	23	18							
D		DO	3S	25	3		3	.1				3								
D		DO	3S	26	7		7	.1			0	3	0	4						
D		DO	3S	27	3		3	.1			3	0								
D		DO	3S	28	18		18	.4			7	8	3							
D		DO	3S	29	0		0	.0				0								
D		DO	3S	30	25		25	.5			5	7	14							
D		DO	3S	31	0		0	.0						0						
D		DO	3S	32	433	2.2	423	8.3			92	198	104	1		29				
D		DO	3S	34	4		4	.1					4							
D		DO	3S	35	5		5	.1			5									
D		DO	3S	36	25		25	.5				11	0	13						
D		DO	3S	38	33		33	.6			8		25							
D		DO	3S	39	5		5	.1						5						
D		DO	3S	40	549		546	10.7			63	185	256	19	24					

TC PLOGSTVB

Log Stock Table - MBF

T04N R08W S17 Ty0002 4.90
T04N R08W S17 Ty0002 99.90
T04N R08W S17 Ty0001 142.70

Project: PROSP
Acres 247.50

Date 2/9/2008
Time 3:36:56PM

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+
D		DO	4S	13	0		0	.0				0								
D		DO	4S	14	18		18	.4			17	1								
D		DO	4S	15	1		1	.0				1								
D		DO	4S	16	53		53	1.0			47	6								
D		DO	4S	17	0		0	.0				0								
D		DO	4S	18	15		15	.3			11	4								
D		DO	4S	20	17		17	.3			10	6								
D		DO	4S	22	17		17	.3			15	2								
D		DO	4S	24	23		23	.5			15	8								
D		DO	4S	26	6		6	.1			6									
D		DO	4S	28	12		12	.2			12									
D		DO	4S	30	9		9	.2			9									
D		DO	4S	32	1		1	.0			1									
D		DO	4S	36	11		11	.2			11									
D		DO	SM	24	28	8.0	26	.5										26		
D		DO	SM	32	133	1.6	131	2.6									99	31		
D		DO	SM	40	37		37	.7									37			
D		Totals			5,330	4.0	5,116	62.5			344	476	479	658	616	1003	1025	515	1	
H		DO	CU	6	8	100.0														
H		DO	CU	8	18	100.0														
H		DO	CU	10	16	100.0														
H		DO	CU	12	19	100.0														
H		DO	CU	16	26	100.0														
H		DO	CU	20	33	100.0														
H		DO	CU	30	47	100.0														
H		DO	2S	20	7		7	.5							7					
H		DO	2S	32	93		92	6.0					1	69	1	21	1			
H		DO	2S	40	1,086		1,083	70.1						168	142	388	286	99		
H		DO	3S	17	4		4	.2						4						
H		DO	3S	18	7		7	.5				3	5							
H		DO	3S	20	6		6	.4			2		5							
H		DO	3S	24	2		2	.2				2								
H		DO	3S	28	30		30	1.9				16		14						
H		DO	3S	30	25		25	1.6			7	18	1							
H		DO	3S	32	33		33	2.2			9	0	24							
H		DO	3S	34	7		7	.5					7							

TC PLOGSTVB

Log Stock Table - MBF

T04N R08W S17 Ty0002	4.90
T04N R08W S17 Ty0002	99.90
T04N R08W S17 Ty0001	142.70

Project: PROSP
Acres 247.50

Page 3
Date 2/9/2008
Time 3:36:56PM

Spp	S T	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+
H		DO	3S	36	13		13	.8			12		0							
H		DO	3S	38	9		9	.6					9							
H		DO	3S	40	169		169	10.9			27	17	25	11		35		55		
H		DO	4S	12	16		16	1.0			1	15								
H		DO	4S	14	5		5	.3			3	2								
H		DO	4S	16	9		9	.6			5	4								
H		DO	4S	18	18		18	1.2			15	3								
H		DO	4S	20	3		3	.2				3								
H		DO	4S	21	2		2	.1				2								
H		DO	4S	22	0		0	.0			0									
H		DO	4S	24	0		0	.0			0									
H		DO	4S	31	4		4	.3			4									
H		DO	4S	40	1		1	.0			1									
H		Totals			1,715	9.9	1,546	18.9			86	84	76	265	149	444	287	154		
S		DO	CU	6	8	100.0														
S		DO	CU	14	0	100.0														
S		DO	2S	40	152		152	51.4							88	58		1	2	2
S		DO	3S	16	0		0	.0								0				
S		DO	3S	22	0		0	.0								0				
S		DO	3S	26	0		0	.1									0			
S		DO	3S	28	0		0	.0				0								
S		DO	3S	32	83		83	27.9			19	7					57			
S		DO	3S	40	44		44	14.9						7				37		
S		DO	4S	16	0		0	.1		0										
S		DO	4S	20	1		1	.2								1				
S		DO	4S	22	0		0	.0			0									
S		DO	4S	24	15		15	4.9			14		0							
S		DO	4S	40	1		1	.3						1						
S		Totals			304	2.8	296	3.6		0	33	7	0	8	88	59	57	38	2	2
A		DO	CU	3	6	100.0														
A		DO	CU	5	0	100.0														
A		DO	CU	6	7	100.0														
A		DO	CU	8	8	100.0														
A		DO	CU	10	13	100.0														
A		DO	CU	16	23	100.0														

TC PLOGSTVB

Log Stock Table - MBF

T04N R08W S17 Ty0002	4.90
T04N R08W S17 Ty0002	99.90
T04N R08W S17 Ty0001	142.70

Project: PROSP
Acres 247.50

Page 4
Date 2/9/2008
Time 3:36:56PM

Spp	S T	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+
A		DO	CR	8	6		6	.5						6						
A		DO	CR	10	20		20	1.6			3					8			10	
A		DO	CR	12	2		2	.2					2							
A		DO	CR	16	56	2.8	55	4.5			31	3		2	19					
A		DO	CR	20	74		74	6.0			43	3	21	8						
A		DO	CR	24	58		58	4.7			34	2	7		15					
A		DO	CR	26	10		10	.8				10								
A		DO	CR	28	4		4	.3			1		3							
A		DO	CR	30	172		172	14.0			13	33	41	27	30	28				
A		DO	CR	32	487		487	39.7			78	94	113	84	15	74	31			
A		DO	CR	36	21		21	1.7			6	16								
A		DO	CR	40	318		317	25.9			52	86	111	50	18					
A		Totals			1,287	4.6	1,227	15.0			261	246	297	177	97	110	31		10	
Total		All Species			8,636	5.2	8,185	100.0		0	724	812	853	1107	951	1616	1400	707	13	2

TC TSTATS

STATISTICS

PROJECT PROSP

PAGE 1
DATE 2/9/2008

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	17	A4LEAVE2	0002	99.90	48	216	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	48	216	4.5		
CRUISE	27	119	4.4	8,088	1.5
DBH COUNT					
REFOREST					
COUNT	21	90	4.3		
BLANKS					
100 %					

65% D.Fir = SDI (630)

STAND SUMMARY SDI

	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	71	30.0	25.0	96	130	102.5	22,925	22,308	4,968	4,879
HEMLEAV	13	12.0	18.6	61	32	22.5	3,442	3,283	852	833
ALDRLEAV	8	27.6	10.6	26	30	16.8	921	921	296	296
SNAG	12	~~3.5~~	~~29.4~~	~~55~~		16.7	654		161	
SPRUCELV	8	6.1	19.4	32	18	12.5	1,837	1,784	442	436
CEDLEAV	7	1.8	24.2	70	7	5.8	703	684	206	206
TOTAL	*119*	~~*81.0*~~ 77.5	*20.0*	*60*	217/600 = 36%	~~176.8~~ 160	*30,481*	*28,981*	*6,926*	*6,651*

217/630 = 34%

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 68.1 %	COEFF		SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV	50.5	6.0	923	982	1,040			
HEMLEAV	104.3	30.1	348	498	647			
ALDRLEAV	22.0	8.3	31	34	37			
SNAG								
SPRUCELV	133.2	50.2	1,024	2,058	3,091			
CEDLEAV	125.1	50.9	332	676	1,020			
TOTAL	*115.5*	*10.6*	*734*	*820*	*907*	*533*	*133*	*59*

CL: 68.1 %	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV	76.0	11.0	27	30	33			
HEMLEAV	154.4	22.3	9	12	15			
ALDRLEAV	187.7	27.1	20	28	35			
SNAG	228.9	33.0	2	4	5			
SPRUCELV	290.7	41.9	4	6	9			
CEDLEAV	676.5	97.6	0	2	4			
TOTAL	*58.7*	*8.5*	*74*	*81*	*88*	*138*	*34*	*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
DOUGLEAV	64.9	9.4	93	103	112			
HEMLEAV	150.8	21.7	18	23	27			
ALDRLEAV	189.1	27.3	12	17	21			
SNAG	184.1	26.6	12	17	21			
SPRUCELV	220.5	31.8	9	13	16			
CEDLEAV	600.0	86.5	1	6	11			
TOTAL	*24.1*	*3.5*	*171*	*177*	*183*	*23*	*6*	*3*

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	64.3	9.3	20,238	22,308	24,378			
HEMLEAV	144.4	20.8	2,600	3,283	3,967			
ALDRLEAV	183.0	26.4	678	921	1,164			
SNAG								

STATISTICS

PROJECT PROSP

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	17	A4LEAVE2	0002	99.90	48	216	1	W

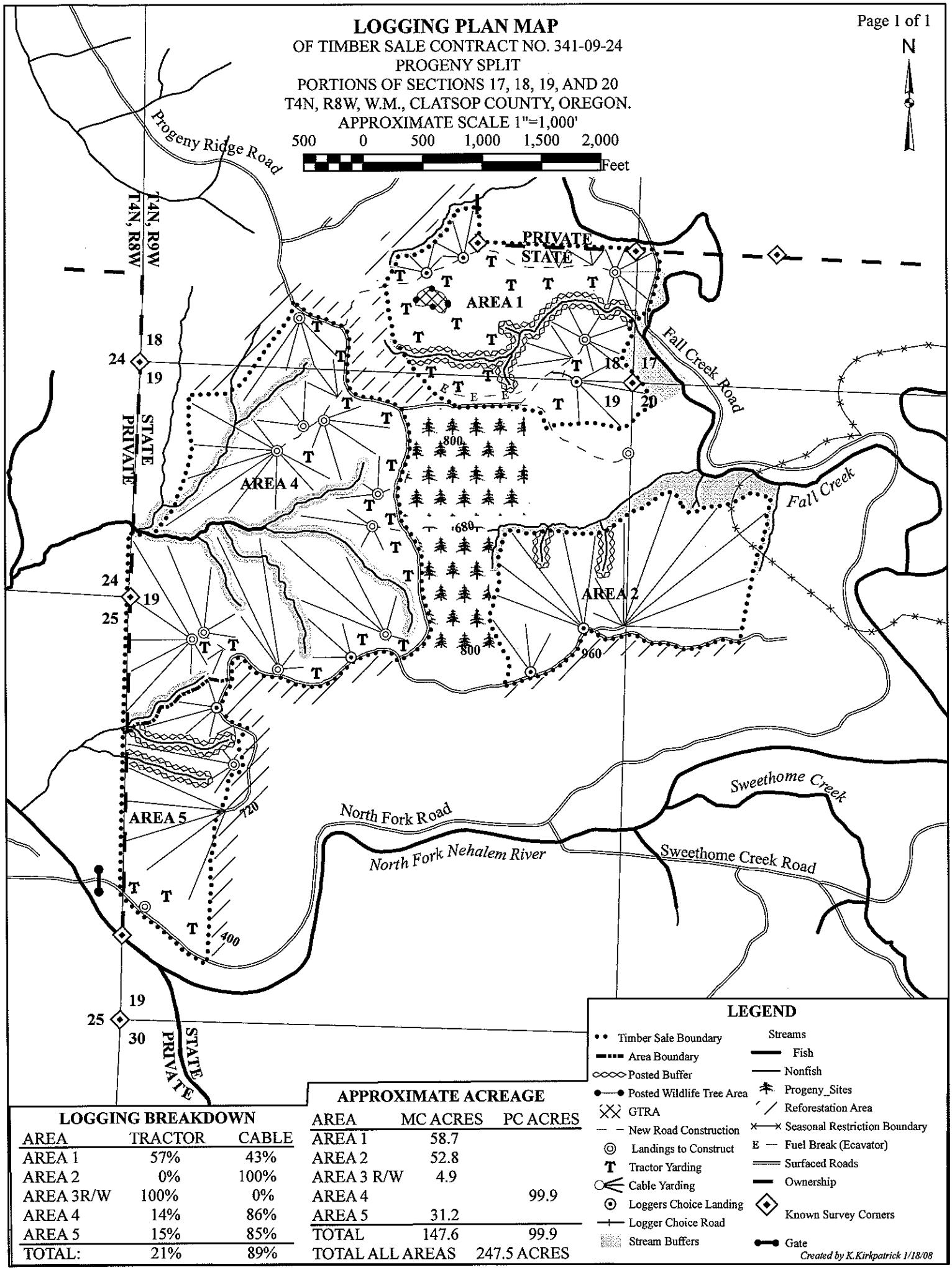
CL: 68.1 %
SD: 1.0

	COEFF VAR.	S.E.%	NET BF/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
SPRUCELV	251.0	36.2	1,138	1,784	2,430			
CEDLEAV	590.4	85.1	102	684	1,267			
TOTAL	*33.3*	*4.8*	*27,588*	*28,981*	*30,373*	*44*	*11*	*5*

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT NO. 341-09-24
PROGENY SPLIT
PORTIONS OF SECTIONS 17, 18, 19, AND 20
T4N, R8W, W.M., CLATSOP COUNTY, OREGON.
APPROXIMATE SCALE 1"=1,000'

500 0 500 1,000 1,500 2,000
Feet



LOGGING BREAKDOWN

AREA	TRACTOR	CABLE
AREA 1	57%	43%
AREA 2	0%	100%
AREA 3R/W	100%	0%
AREA 4	14%	86%
AREA 5	15%	85%
TOTAL:	21%	89%

APPROXIMATE ACREAGE

AREA	MC ACRES	PC ACRES
AREA 1	58.7	
AREA 2	52.8	
AREA 3 R/W	4.9	
AREA 4		99.9
AREA 5	31.2	
TOTAL	147.6	99.9
TOTAL ALL AREAS	247.5 ACRES	

LEGEND

- Timber Sale Boundary
- Area Boundary
- Posted Buffer
- Posted Wildlife Tree Area
- GTRA
- New Road Construction
- Landings to Construct
- T Tractor Yarding
- Cable Yarding
- Loggers Choice Landing
- Logger Choice Road
- Stream Buffers

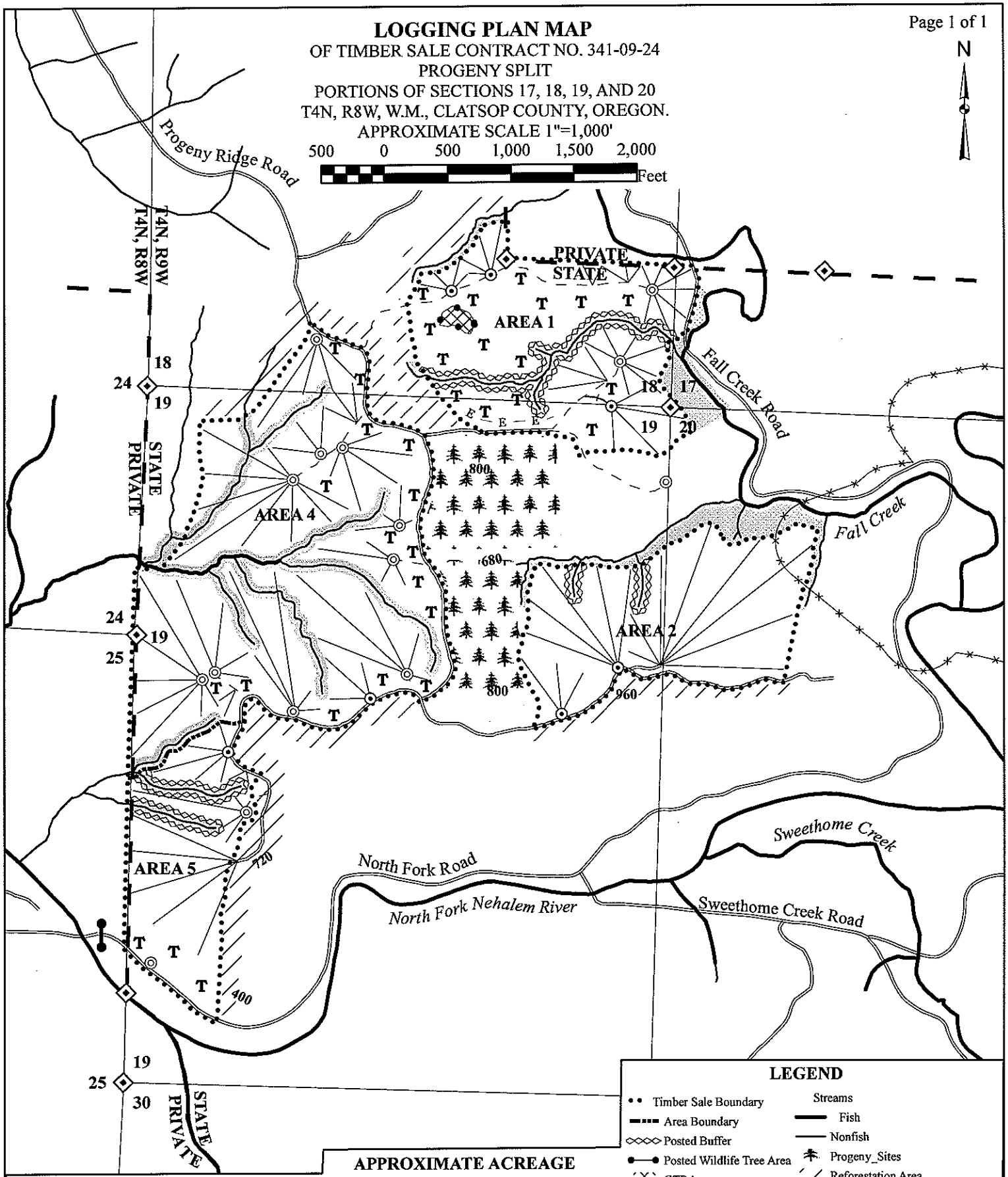
Streams
- Fish
- Nonfish
- Progeny_Sites
- Reforestation Area
- Seasonal Restriction Boundary
- E Fuel Break (Ecavator)
- Surfaced Roads
- Ownership
- Known Survey Corners
- Gate

Created by K.Kirkpatrick 1/18/08

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT NO. 341-09-24
PROGENY SPLIT
PORTIONS OF SECTIONS 17, 18, 19, AND 20
T4N, R8W, W.M., CLATSOP COUNTY, OREGON.
APPROXIMATE SCALE 1"=1,000'

500 0 500 1,000 1,500 2,000 Feet



LOGGING BREAKDOWN

AREA	TRACTOR	CABLE
AREA 1	57%	43%
AREA 2	0%	100%
AREA 3R/W	100%	0%
AREA 4	14%	86%
AREA 5	15%	85%
TOTAL:	21%	89%

APPROXIMATE ACREAGE

AREA	MC ACRES	PC ACRES
AREA 1	58.7	
AREA 2	52.8	
AREA 3 R/W	4.9	
AREA 4		99.9
AREA 5	31.2	
TOTAL	147.6	99.9
TOTAL ALL AREAS	247.5 ACRES	

LEGEND

- Timber Sale Boundary
- Area Boundary
- Posted Buffer
- Posted Wildlife Tree Area
- GTRA
- New Road Construction
- Landings to Construct
- T Tractor Yarding
- Cable Yarding
- Loggers Choice Landing
- Logger Choice Road
- Stream Buffers

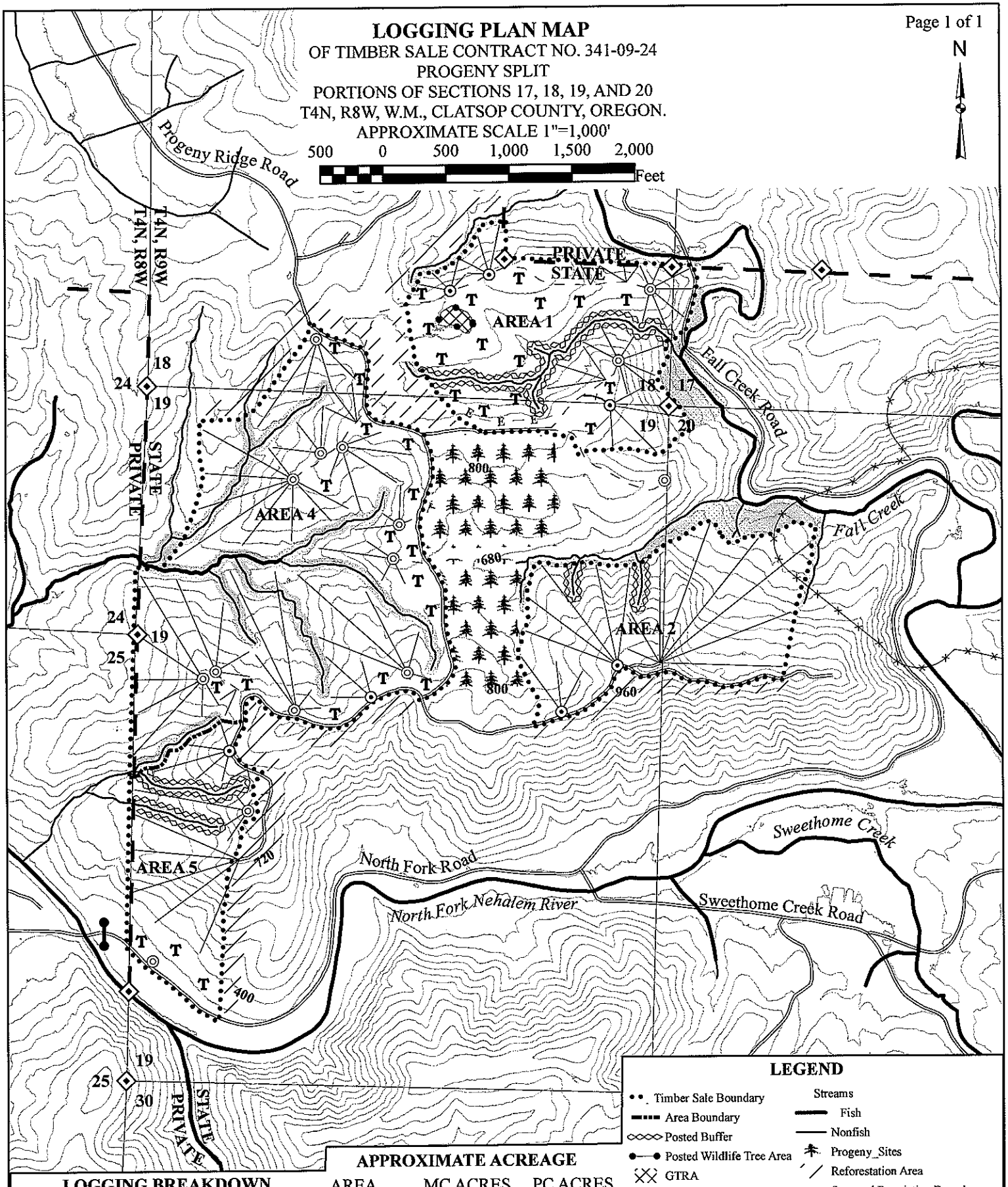
Streams
- Fish
- Nonfish
- Progeny_Sites
- Reforestation Area
- Seasonal Restriction Boundary
- E — Fuel Break (Ecavator)
- Surfaced Roads
- Ownership
- Known Survey Corners
- Gate

Created by K.Kirkpatrick 1/18/08

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT NO. 341-09-24
PROGENY SPLIT
PORTIONS OF SECTIONS 17, 18, 19, AND 20
T4N, R8W, W.M., CLATSOP COUNTY, OREGON.
APPROXIMATE SCALE 1"=1,000'

500 0 500 1,000 1,500 2,000 Feet



LOGGING BREAKDOWN

AREA	TRACTOR	CABLE
AREA 1	57%	43%
AREA 2	0%	100%
AREA 3R/W	100%	0%
AREA 4	14%	86%
AREA 5	15%	85%
TOTAL:	21%	89%

APPROXIMATE ACREAGE

AREA	MC ACRES	PC ACRES
AREA 1	58.7	
AREA 2	52.8	
AREA 3 R/W	4.9	
AREA 4		99.9
AREA 5	31.2	
TOTAL	147.6	99.9
TOTAL ALL AREAS		247.5 ACRES

LEGEND

- Timber Sale Boundary
- Area Boundary
- Posted Buffer
- Posted Wildlife Tree Area
- GTRA
- New Road Construction
- Landings to Construct
- T Tractor Yarding
- Cable Yarding
- Loggers Choice Landing
- Logger Choice Road
- Stream Buffers

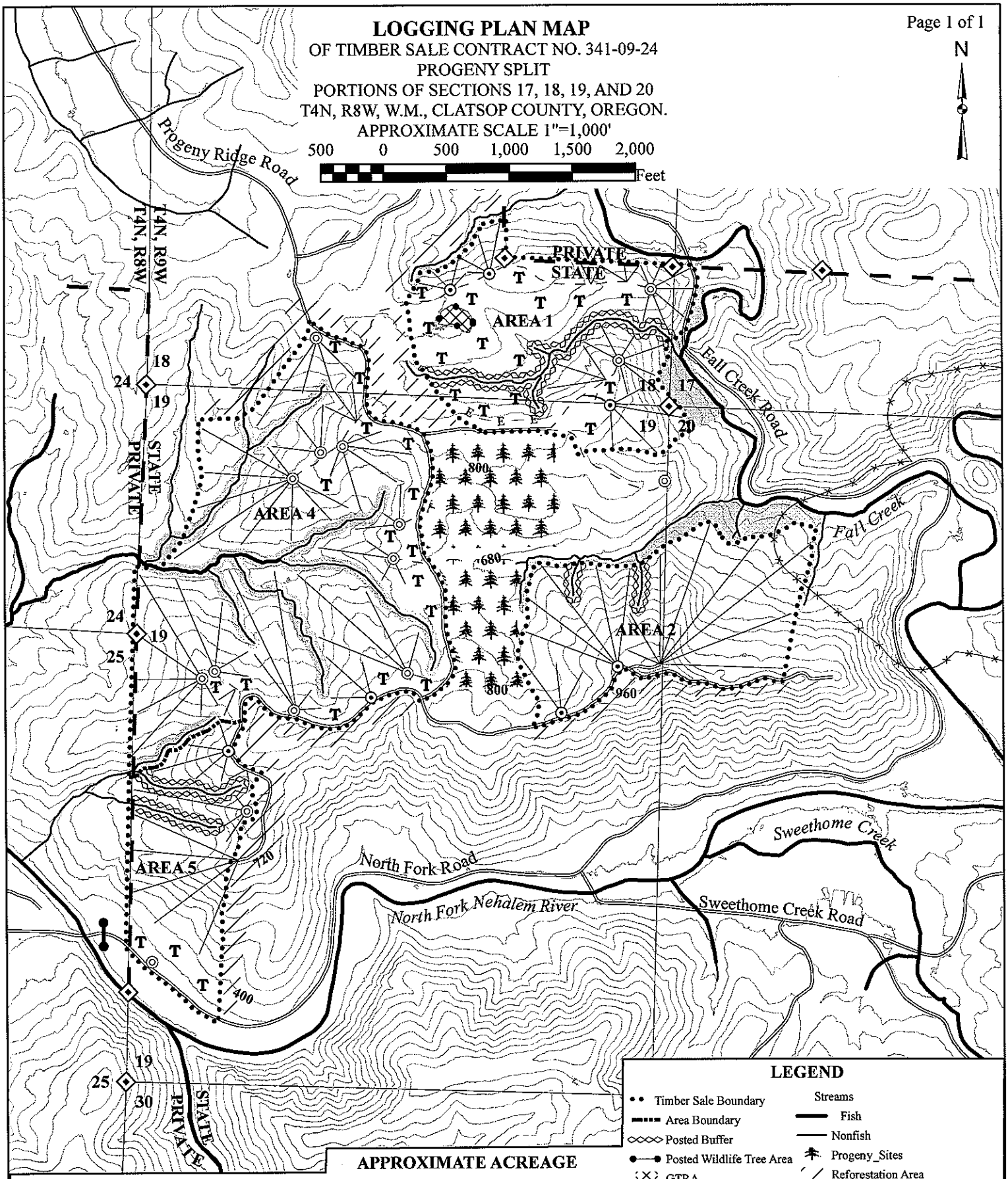
Streams
- Fish
- Nonfish
- Progeny_Sites
- Reforestation Area
- Seasonal Restriction Boundary
- E Fuel Break (Ecavator)
- Surfaced Roads
- Ownership
- Known Survey Corners
- Gate

Created by K.Kirkpatrick 1/18/08

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT NO. 341-09-24
PROGENY SPLIT
PORTIONS OF SECTIONS 17, 18, 19, AND 20
T4N, R8W, W.M., CLATSOP COUNTY, OREGON.
APPROXIMATE SCALE 1"=1,000'

500 0 500 1,000 1,500 2,000
Feet



LOGGING BREAKDOWN

AREA	TRACTOR	CABLE
AREA 1	57%	43%
AREA 2	0%	100%
AREA 3R/W	100%	0%
AREA 4	14%	86%
AREA 5	15%	85%
TOTAL:	21%	89%

APPROXIMATE ACREAGE

AREA	MC ACRES	PC ACRES
AREA 1	58.7	
AREA 2	52.8	
AREA 3 R/W	4.9	
AREA 4		99.9
AREA 5	31.2	
TOTAL	147.6	99.9
TOTAL ALL AREAS	247.5 ACRES	

LEGEND

- Timber Sale Boundary
- Area Boundary
- Posted Buffer
- Posted Wildlife Tree Area
- GTRA
- New Road Construction
- Landings to Construct
- T Tractor Yarding
- Cable Yarding
- Loggers Choice Landing
- Logger Choice Road
- Stream Buffers

Streams
- Fish
- Nonfish
- Progeny_Sites
- Reforestation Area
- Seasonal Restriction Boundary
- E Fuel Break (Ecavator)
- Surfaced Roads
- Ownership
- Known Survey Corners
- Gate

Created by K.Kirkpatrick 1/18/08