"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cost Summary
Brix Incline
Sale 341-07-49

District: Tillamook **Date:** 11/13/06

	Conifer	Hardwood	Total
Gross Timber Sale Value	$38,464.32	$68,013.00	$106,477.32
		Project Work	($47,340.00)
		Advertised Value	$59,137.32

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Timber Description
Brix Incline
Sale 341-07-49

District: Tillamook

Location: Portions of Sections 20 and 29, T3N, R7W, W.M., Tillamook County, Oregon.

Date: 11/13/06 **Stand Stocking:** 40%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	14	0	95
Alder (Red)	14	0	95

Volume by Grade	Douglas - Fir	Alder (Red)	Total
2S	65	6	71
3S	155	192	347
4S	89	260	349
Total	309	458	767

Comments: Pond Values Used: 3rd Quarter Calendar Year 2006.

Western Red Cedar Stumpage Price = Pond Value minus Logging Cost
$610/MBF = $1,000/MBF - $390/MBF

HAULING
Hauling costs adjusted to make equivalent to $700 daily truck cost.
$700 - % Profit & Risk ($700 / 1.15) = $608 Daily Truck Cost.
Hauling Cost Calculation Douglas-fir:
$608 Daily Truck Cost / (2 trips per day x 3.5 MBF per load) = $86.86/MBF Hauling Cost.
Hauling Cost Calculation Red Alder:
$608 Daily Truck Cost / (3 trips per day x 3.2 MBF per load) = $63.33/MBF Hauling Cost.

OTHER COSTS (Profit and Risk to be added):
Brand and Paint- $2/MBF x 864 MBF = $ 1,728
Slash piling and sorting: 81 acres retention cut cable harvest
1 hour/ 50 acres x $110/hour = $ 178
TOTAL OTHER COSTS (P&R to be added): $1,906

OTHER COSTS (Profit and Risk Included):
Non-Project Roads :
Non-Project Road #1 6 Stations x $120 = $720
180yds pit run x $10.50/yard = $1,890
Road closure - $500 Back Hoe, $300/one day = $800
TOTAL OTHER COSTS (No P&R added): $ 3,410

ROAD MAINTENANCE
Grading (once per 2 MMBF)
Maintenance $500/Mile x 9 miles x 1 grading /(627) = $7.17

Maintenance rock (Includes move in)

Haul Route
($8.75/yard (1.5") x 9 miles x 15 cy/MMBF/mile x .8MMBF)/627 = $1.13

TOTAL MAINTENANCE COST = $8.30

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Logging Conditions
Brix Incline
Sale 341-07-49

Combination#: 1 Douglas - Fir 72.00%
Alder (Red) 72.00%

Yarding Distance: Long (1,500 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: 4 **Bd. Ft./Load:** 3,500
Cost/MBF: $253.57
Machines:
Log Loader (A)
Tower Yarder (Large)

Combination#: 2 Douglas - Fir 28.00%
Alder (Red) 28.00%

Yarding Distance: Medium (800 ft) **Downhill Yarding:** Yes
Logging System: Track Skidder **Process:** Manual Falling/Delimbing
Tree Size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
Loads/Day: 6 **Bd. Ft./Load:** 3,500
Cost/MBF: $155.50
Machines:
Log Loader (B)
Track Skidder

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Logging Costs
Brix Incline
Sale 341-07-49

Date: 11/13/06

Operating Seasons: 2.0 **Profit & Risk:** 15%

Project Costs: $47,340 **Other Costs (P/R):** $1,906

Slash Disposal: $0 **Other Costs:** $3,410

Road Maintenance: $8.30

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

Hauling Costs

Species	$/MBF	Trips/Day	MBF/Load
Douglas - Fir	$86.86	2.0	3.5
Alder (Red)	$63.33	3.0	3.2

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Logging Costs Breakdown
Brix Incline
Sale 341-07-49

Costs	Douglas - Fir	Alder (Red)
Logging	226.11	226.11
Road Maintenance	8.74	8.74
Fire Protection	7.07	7.07
Hauling	91.43	66.66
Other (P/R appl.)	2.49	2.49
Profit & Risk	50.38	46.66
Slash Disposal	0.00	0.00
Scaling	2.00	0.00
Other	4.45	4.45
Total	392.67	362.18

Amortization	0.00	0.00
Pond Value	517.15	510.68
Stumpage	124.48	148.50
Amortized	0.00	0.00

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary
Brix Incline
Sale 341-07-49

Amortized

	Douglas - Fir	Alder (Red)
MBF	0.00	0.00
Value	0.00	0.00
Total	0.00	0.00

Unamortized

	Douglas - Fir	Alder (Red)
MBF	309.00	458.00
Value	124.48	148.50
Total	38,464.32	68,013.00

Gross Timber Sale Value

Recovery $106,477.32

Prepared by: Amber Winslow Date: 11/13/06

District: Tillamook Phone: (503) 842-2545

"STEWARDSHIP IN FORESTRY"

PROJECT SUMMARY SHEET

Sale: **Brix Incline**

CONSTRUCTION

Point	A to B	16+15	stations =	$20,187.35
Point	C to D	4+00	stations =	$6,009.72
			SUBTOTAL CONSTRUCTION	**$26,197.07**

IMPROVEMENT

Point	G to H	4+00	stations =	$2,696.05
			SUBTOTAL IMPROVEMENT	**$2,696.05**

RECONSTRUCTION

Point	E to F	10+00	stations =	$14,719.08
			SUBTOTAL IMPROVEMENT	**$14,719.08**

SPECIAL PROJECTS

SUBTOTAL SPECIAL PROJECTS	**$0.00**

MOVE IN **$3,727.80**

GRAND TOTAL **$47,340.00**

SUMMARY OF CONSTRUCTION COST

Sale: _____ Road: **A to B**

Construction - 16+15 stations, 0.31 miles

Improvement - 0+00 stations, 0.00 miles

CLEARING AND GRUBBING -							
Scattering	1.480	acres @	$980.00	per acre =	$1,450.40		
				TOTAL CLEARING AND GRUBBING			**$1,450.40**
EXCAVATION -							
Road Earthwork	16.15	sta. @	$140.00	per sta. =	$2,261.00		
Construct approach @ point A and landing const.					$700.00		
					TOTAL EXCAVATION		**$2,961.00**
ENDHAUL -							
					TOTAL ENDHAUL		**$0.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts						
74	LF of 18"	$1,258.00	0	LF of 24"	$0.00	
		$1,258.00			$0.00	
Half Rounds						
		$0.00			$0.00	
Culvert Stakes & Markers						
2	markers	$16.00				
		$16.00			TOTAL CULVERTS	**$1,274.00**

ROCK								
0+00	to	16+15	1,252	cy. of	Pit-Run	@	$10.47 per c.y.=	$13,108.44
							TOTAL ROCK	**$13,108.44**

SPECIAL PROJECTS					
Grade and shape road -	16.15	stations @	$15.50	per station	$250.33
Roll subgrade w/ vibratory roller prior to rocking -	16.15	stations @	$13.20	per station	$213.18
Remove large stumps -	5	lump sum @	$130.00		$650.00
Grass seed and fertilize -	1	acres @	$220.00	per acre	$220.00
Mulching -	0.1	acres @	$600.00	per acre	$60.00
				TOTAL SPECIAL PROJECTS	**$1,393.51**
				GRAND TOTAL	**$20,187.35**

SUMMARY OF CONSTRUCTION COST

Sale: _____ Road: **C to D**

Construction - 4+00 stations, 0.08 miles

Improvement - 0+00 stations, 0.00 miles

CLEARING AND GRUBBING -

Scattering	0.390	acres	@	$980.00	per acre =	$382.20
					TOTAL CLEARING AND GRUBBING	**$382.20**

EXCAVATION -

Road Earthwork	4.00	sta.	@	$140.00	per sta. =	$560.00
Construct approach @ point C and landing const.					per ea.=	$420.00
					TOTAL EXCAVATION	**$980.00**

ENDHAUL -

TOTAL ENDHAUL **$0.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

0	LF of 18"	$0.00	0	LF of 24"	$0.00
0	LF of 30"	$0.00	0	LF of 36"	$0.00
0	LF of 42"	$0.00	0	LF of 48"	$0.00
0	LF of 54"	$0.00	0	LF of 60"	$0.00
0	LF of 66"	$0.00	0	LF of 72"	$0.00
		$0.00			$0.00

Half Rounds

0	LF of 21"	$0.00	0	LF of 30"	$0.00
0	LF of 36"	$0.00	0	LF of 42"	$0.00
		$0.00			$0.00

Culvert Stakes & Markers

0	stakes	$0.00
0	markers	$0.00
		$0.00

TOTAL CULVERTS **$0.00**

ROCK

0+00	to	4+00	389	cy. of	Pit-Run	@	$10.48	per c.y.=	$4,076.72
								TOTAL ROCK	**$4,076.72**

SPECIAL PROJECTS

Grade and shape road -	4.00	stations	@	$15.50	per station $62.00
Roll subgrade w/ vibratory roller prior to rocking -	4.00	stations	@	$13.20	per station $52.80
Remove large stumps -	3	lump sum	@	$130.00	$390.00
Grass seed and fertilize -	0.3	acres	@	$220.00	per acre $66.00
					TOTAL SPECIAL PROJECTS **$570.80**

GRAND TOTAL **$6,009.72**

SUMMARY OF CONSTRUCTION COST

Sale: _____ Road: **E to F**

Construction - 0+00 stations, 0.00 miles — Re-Construct 10+00 stations, 0.19 miles

CLEARING AND GRUBBING -							
Scattering	0.600	acres	@	$980.00	per acre =	$588.00	
					TOTAL CLEARING AND GRUBBING		**$588.00**
EXCAVATION -							
Road Earthwork	10.00	sta.	@	$140.00	per sta. =	$1,400.00	
Construct approach curve @ point E, landings and endhaul material to WA						$1,050.00	
						TOTAL EXC. & EH.	**$2,450.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts				
0 LF of 18"	$0.00	40	LF of 24"	$960.00
	$0.00			$960.00
Half Rounds				
	$0.00			$0.00
Culvert Stakes & Markers				
1 marker	$8.00			
	$8.00			TOTAL CULVERTS **$968.00**

ROCK

0+00	to	10+00	916	cy. of	Pit-Run	@	$10.53	per c.y.=	$9,645.48
									TOTAL ROCK **$9,645.48**

SPECIAL PROJECTS						
Grade and shape road -	10.00	stations	@	$15.50	per station	$155.00
Roll subgrade w/ vibratory roller prior to rocking -	10.00	stations	@	$13.20	per station	$132.00
Remove log culvert and cribbing between stations 8+00 and 8+60	2	hours	@	$140.00	per hour	$280.00
Remove large stumps -	3	lump sum	@	$130.00		$390.00
Grass seed and fertilize -	0.23	acres	@	$220.00	per acre	$50.60
Mulching -	0.1	acres	@	$600.00	per acre	$60.00
					TOTAL SPECIAL PROJECTS	**$1,067.60**

GRAND TOTAL **$14,719.08**

SUMMARY OF CONSTRUCTION COST

Sale: _____ Road: **G to H**

Construction - 0+00 stations, 0.00 miles

Improvement - 4+00 stations, 0.08 miles

CLEARING AND GRUBBING -								
Roadside Brushing				0.00	miles	@ $1,300.00 per mile =	$0.00	
Scattering				0.429	acres	@ $980.00 per acre =	$420.42	
						TOTAL CLEARING AND GRUBBING		**$420.42**
EXCAVATION -								
Widening							$1,129.00	
Excavator & Dump Truck/Rock Hammer/Operator							TOTAL EXCAVATION	**$1,129.00**
ENDHAUL -								
Widening	0+00	to	4+00	3	hrs. @	$70.00 per hr.=	$210.00	
							TOTAL ENDHAUL	**$210.75**
CULVERTS - MATERIALS & INSTALLATION								
			Culverts					
				$0.00			TOTAL CULVERTS	**$0.00**
ROCK								
0+00	to	4+00	132 cy. of Pit-Run		@	$7.09 per c.y.=	$935.88	
							TOTAL ROCK	**$935.88**
SPECIAL PROJECTS								
							TOTAL SPECIAL PROJECTS	**$0.00**
							GRAND TOTAL	**$2,696.05**

ROCK DEVELOPMENT COST SUMMARY

Pit:	Northside Road	Location:	SE 1/4 Section 25, T3N R8W W.M.		
Sale:	**Brix Incline**		Road:		2689 c.y.
Swell:	1.40		Stockpile:		c.y.
Shirinkage	1.16		Total Truck Loads:		2689 c.y.
Drill Pct.:	30%		In Place Total:		1921 c.y.

Pit Development & Endhaul to Overburden to Waste Area & Spread and Compact $2,947.00

Drill & Shoot:	$2.50	/cu.yd.	x	576	cu.yds.	=	$1,440.00
Rip Rock	$1.90	/cu.yd.	x	1345	cu.yds.	=	$2,555.50
Load Dump Truck:	$0.70	/cu.yd.	x	2689	cu.yds.	=	$1,882.30
					Subtotal		$8,824.80

Move in Roller	1	@	$855.00	=	$855.00
Move in Grader	1	@	$1,131.43	=	$1,131.43
Move in Excavator (Within Area)	1	@	$358.40	=	$358.40
Move in Trucks	4	@	$276.86	=	$1,107.44
				Subtotal	$3,452.27
			TOTAL PRODUCTION COSTS		$12,277.07

Base Cost= $4.57 Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds		ROCK COST
A to B	$4.80	$1.10	$4.57	$10.47	1252		$13,108.44
C to D	$4.81	$1.10	$4.57	$10.48	389		$4,076.72
E to F	$4.86	$1.10	$4.57	$10.53	916		$9,645.48
G to H	$1.42	$1.10	$4.57	$7.09	132		$935.88
				Total C.Y.	2689	Sub Total	$27,766.52

TOTAL ROCKING COSTS	$27,766.52

Move-In Calculations

Sale: **Brix Incline**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
60.0	Pavement	30
12.0	Main Lines	7
8.0	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move ($/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
0	Drill & Compressor	$0.00		$46.00	0.00	0.00	0	$0.00	$0.00
0	Brush Cutter	$0.00		$4.00	0.00	0.00	0	$0.00	$0.00
0	Graders	$0.00		$3.65	0.00	0.00	0	$0.00	$0.00
0	Loader (Small)	$0.00	1	$3.55	0.00	0.00	0	$0.00	$0.00
0	Loader (Med. & Large)	$0.00	1	$9.00	0.00	0.00	0	$0.00	$0.00
0	Rollers (smooth/grid) & Compactors	$0.00		$5.00	0.00	0.00	0	$0.00	$0.00
0	Excavators (Small)	$0.00		$22.00	0.00	0.00	0	$0.00	$0.00
0	Excavators (Med.)	$0.00		$35.50	0.00	0.00	0	$0.00	$0.00
1	Excavators (Large)	$1,489.09	1	$44.80	0.00	4.00	8	$358.40	$1,847.49
0	Tired Backhoes/Skidders	$0.00		$3.00	0.00	0.00	0	$0.00	$0.00
0	Tractors (D6)	$0.00	2	$7.10	0.00	0.00	0	$0.00	$0.00
0	Tractors (D7)	$0.00	2	$11.30	0.00	0.00	0	$0.00	$0.00
1	Tractor (D8)	$1,393.14	2	$15.10	0.00	4.00	8	$120.80	$1,513.94
1	Dump Truck (10 cy +)	$340.00		$2.85	0.00	4.00	8	$22.80	$362.80
0	Dump Truck (Off Hiway)	$0.00	1	$4.75	0.00	0.00	0	$0.00	$0.00
0	Water Truck (1500 Gal)	$0.00		$2.85	0.00	0.00	0	$0.00	$0.00
0	Water Truck (2500 Gal)	$0.00		$2.85	0.00	0.00	0	$0.00	$0.00

TOTAL MOVE-IN COSTS:	$3,727.80

"STEWARDSHIP IN FORESTRY"

OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT
Brix Incline

1. Type of Sale

Clear cut alder, Partial cut Douglas-fir, Conifer – Recovery/ Hardwood – Lump Sum

2. Legal Description

Sections 20 and 29, T3N, R7W, W.M. Tillamook County, Oregon

3. Sale Acreage

ACRES

	Sale	Net
Retention Cut	93	81
Total Acres	93	81

Sale Acres
Area within the Timber Sale Boundary signs.

Net acres
Used for calculating the advertised volume.
Sale acres, less green tree retention, roads, utility, right-of-way, and less riparian areas inside the sale boundary.

4. Cruising Procedures

A. Cruise Method

A total of 46 variable radius plots were taken across the sale area. Plots were spaced on a square grid 250 x 250. All conifers 8 inches DBH and greater and all hardwoods 10 inches DBH and greater were recorded on all plots. Species were recorded on all trees, and they were graded and measured for merchantable height, diameter, and form factor. Snags were tallied on each plot by diameter.

B. Plot size

A basal area factor of 40 was used for conifer and a basal area factor of 20 was used for alder. The point of observation is 4.5 feet.

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Tree heights were recorded to a 7 inch top outside bark for hemlock, Sitka spruce; 6 inch top outside bark for Douglas-fir; 8 inches

top outside bark for hardwoods; or three tenths (0.3) of DBH for all species, whichever was greater. Log lengths all favored 40 feet. Height and diameter measurement standards were to the nearest foot or inch respectively. All diameters were taken at a height of 4.5 feet. Conifers less than 20 board feet and hardwoods less than 30 board feet were not recorded.

5. Computation Procedure

Plot data was entered into SuperAce for computation of basal area, stand tables, diameters, and volume to basal area ratio for each species and type. This data was then entered into the Volume Summary table to compute sale volumes. The standard error for the cruise was 11.9% and the coefficient variation was 80.6% based on mbf per acre.

6. Hidden Defect and Breakage

A 5% deduction was applied to the conifer and a 15% deduction was applied to the hardwood volume to account for defect and breakage.

7. Timber Description

The sale area burned in the 1945 Salmonberry fire and naturally regenerated. The timber is approximately 55-60 years old. The stand is predominately an alder stand with pockets of Douglas-fir and few scattered hemlock and spruce. The Douglas-fir has low symptoms of Swiss needle cast and there is minimal bear damage.

8. Cruiser Names/Dates

Lee/Wells/Klumph/Phillips/Wallmark/Stumpf, August 2006

9. Revenue Distribution

FDF: 100%
Tax Code: 56-1
Deed Numbers: 391, 72

10. Attachments

Volume Summary Table
Super Ace Stand Tables
Logging Plan Exhibit

"STEWARDSHIP IN FORESTRY"

Brix Incline

Volume Summary

Area 1						
			81 acres			
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	29	138	4.0	326	5%	309
Alder	84	79	6.6	538	15%	458
TOTAL				864		767

TC TSTNDSUM

Stand Table Summary

Project BRIX

T03N R07W S29 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	07W	29	BRIX	0100	81.00	46	274

T03N R07W S29 T0100

Page: 1
Date: 11/02/20(
Time: 2:36:31PM

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.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DL		18	1	84	89	.533	.89	1.07	26.2	90.0	.77	28	96	62	23	8
DL		20	7	87	109	2.834	6.23	6.08	39.5	156.2	6.60	240	950	535	194	77
DL		21	1	86	104	.370	.89	.74	45.9	180.0	.93	34	133	76	28	11
DL		22	4	89	125	1.331	3.56	3.34	47.5	217.6	4.35	159	726	353	128	59
DL		23	5	88	116	1.584	4.45	3.81	48.5	209.6	5.08	185	798	411	149	65
DL		24	2	89	143	.579	1.78	1.75	51.2	246.5	2.46	90	431	200	73	35
DL		25	4	89	125	1.047	3.56	2.87	56.0	251.7	4.43	161	723	359	130	59
DL		26	2	90	147	.490	1.78	1.47	65.1	325.5	2.63	96	479	213	78	39
DL		27	1	86	73	.224	.89	.45	56.2	195.0	.69	25	87	56	20	7
DL		29	1	86	126	.195	.89	.59	68.0	326.7	1.10	40	192	89	32	16
DL		30	2	90	157	.362	1.78	1.08	91.0	496.6	2.71	99	539	220	80	44
DL		32	1	84	186	.157	.89	.63	84.2	455.0	1.46	53	287	118	43	23
DL		33	1	89	160	.151	.89	.45	109.8	596.7	1.37	50	270	111	40	22
DL		34	1	86	121	.140	.89	.42	90.7	423.3	1.04	38	177	85	31	14
DL		35	1	87	131	.130	.89	.39	109.0	566.7	1.17	43	221	95	34	18
DL		36	3	85	115	.379	2.67	.88	120.7	563.2	2.93	107	497	237	86	40
DL		37	1	89	148	.119	.89	.36	132.2	740.0	1.30	47	265	105	38	21
DL		38	2	87	127	.225	1.78	.68	114.7	617.0	2.13	78	417	173	63	34
DL		39	1	85	128	.107	.89	.21	63.8	270.0	.38	14	58	31	11	5
DL		45	1	84	103	.080	.89	.16	212.9	905.0	.94	34	145	76	28	12
DL		Totals	42	88	120	11.039	37.39	27.43	59.0	273.1	44.48	1,618	7,492	3,603	1,310	607
RA		10	3	83	45	2.391	1.30	2.39	6.6	23.3	.43	16	56	35	13	5
RA		11	20	80	54	13.183	8.70	13.18	10.3	36.3	3.73	136	479	302	110	39
RA		12	30	80	74	16.904	13.04	17.48	17.2	61.1	8.25	300	1,068	668	243	87
RA		13	21	80	75	10.027	9.13	10.99	20.0	64.8	6.05	220	711	490	178	58
RA		14	24	80	71	9.925	10.43	11.16	22.4	69.5	6.86	250	776	556	202	63
RA		15	21	79	82	7.559	9.13	11.48	22.6	75.4	7.13	259	865	577	210	70
RA		16	20	79	73	6.616	9.13	9.10	26.6	85.3	6.65	242	776	539	196	63
RA		17	15	80	70	4.170	6.52	5.58	31.9	94.4	4.90	178	527	397	144	43
RA		18	17	80	75	4.185	7.39	6.39	33.8	100.3	5.94	216	641	481	175	52
RA		19	8	80	75	1.782	3.48	2.90	37.1	105.1	2.95	107	305	239	87	25
RA		20	8	79	59	1.611	3.48	2.22	38.3	99.3	2.34	85	221	190	69	18
RA		21	1	80	54	.174	.43	.17	36.0	70.0	.17	6	12	14	5	1
RA		22	2	79	78	.326	.87	.49	56.4	150.4	.76	28	74	62	22	6
RA		23	2	79	90	.303	.87	.61	49.4	168.6	.82	30	102	67	24	8
RA		26	1	80	61	.114	.43	.23	49.2	165.0	.31	11	38	25	9	3
RA		Totals	193	80	70	79.271	84.35	94.36	22.1	70.5	57.31	2,084	6,650	4,642	1,688	539
DF		9	2	71	26	3.088	1.30	3.09	2.9	13.3	.26	9	41	21	7	3
DF		10	3	88	67	4.664	2.61	6.23	9.2	37.4	1.63	57	233	132	46	19
DF		11	4	87	89	5.472	3.48	8.13	11.8	51.8	2.73	96	422	221	77	34
DF		12	1	85	78	1.107	.87	2.21	9.3	40.0	.59	21	89	48	17	7
DF		13	3	87	82	2.760	2.61	4.60	15.6	58.0	2.05	72	267	166	58	22
DF		14	2	85	120	1.593	1.74	3.19	20.3	88.2	1.84	65	281	149	52	23
DF		15	2	87	108	1.447	1.74	3.59	17.6	76.0	1.80	63	273	146	51	22
DF		16	2	86	99	1.270	1.74	2.54	21.8	85.3	1.58	55	217	128	45	18
DF		17	2	87	92	1.111	1.74	2.22	25.8	102.0	1.63	57	227	132	46	18
DF		18	4	86	103	1.915	3.48	4.79	26.1	100.1	3.56	125	480	288	101	39
DF		19	4	88	116	1.781	3.48	4.89	29.1	117.4	4.06	142	574	329	115	47
DF		21	1	93	139	.372	.87	1.12	38.4	193.3	1.22	43	216	99	35	17
DF		22	1	93	146	.329	.87	.99	46.9	233.3	1.32	46	231	107	38	19
DF		24	1	85	114	.270	.87	.54	63.8	260.0	.98	34	140	79	28	11

TC TSTNDSUM

Stand Table Summary

Project BRIX

T03N R07W S29 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	07W	29	BRIX	0100	81.00	46	274

Date: 11/02/20(
Time: 2:36:31PM

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.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		26	1	87	122	.245	.87	.74	50.8	223.3	1.06	37	164	86	30	13
DF		28	1	87	117	.206	.87	.62	59.5	266.7	1.05	37	165	85	30	13
DF		Totals	34	85	85	27.631	29.13	49.49	19.4	81.2	27.37	960	4,018	2,217	778	325
WH		17	1	85	103	.539	.87	1.08	30.1	120.0	1.04	32	129	84	26	10
WH		23	1	92	108	.299	.87	.60	58.7	300.0	1.12	35	179	91	28	15
WH		24	1	90	129	.272	.87	.82	54.2	253.3	1.42	44	207	115	36	17
WH		Totals	3	88	111	1.110	2.61	2.49	44.8	206.9	3.57	112	516	290	90	42
SS		10	1	82	24	1.503	.87	1.50	6.5	20.0	.25	10	30	20	8	2
SS		Totals	1	82	24	1.503	.87	1.50	6.5	20.0	0.25	10	30	20	8	2
Totals			273	82	78	120.553	154.35	175.27	27.3	106.7	132.99	4783	18,706	10,772	3,875	1,515

Take - all alder
DF < 20
DF not need for thinning 140-160ft²

Volume Relationships by Species

State	County	Project	Twn	Rng	Sec	Tract	Type No.	Acres
		BRIX						81.00

		Species						
Item	Total	RA	DL	DF	WH	SS		
Total Gross Cunits	3,874	1,688	1,310	778	90	8		
Total Net Cunits	3,875	1,688	1,310	778	90	8		
Total Gross MBF	1,522	543	610	325	42	2		
Total Net MBF	1,515	539	607	325	42	2		
Total Tons	10,772	4,642	3,603	2,217	290	20		
BA / Acre	154.35	84.35	37.39	29.13	2.61	0.87		
Trees / Acre	120.553	79.271	11.039	27.631	1.110	1.503		
QM DBH	15.3	14.0	24.9	13.9	20.8	10.3		
Gross CuFt / Acre	4,783	2,084	1,617	960	112	10		
Net CuFt / Acre	4,783	2,084	1,618	960	112	10		
Net / Gross Ratio	1.000	1.000	1.000	1.000	1.000	1.000		
Gross BdFt / Acre	18,795	6,705	7,527	4,018	516	30		
Net BdFt / Acre	18,706	6,650	7,492	4,018	516	30		
Net / Gross Ratio	0.995	0.992	0.995	1.000	1.000	1.000		
Tons / Acre	133	57	44	27	4			
Logs Per Acre	175	94	27	49	2	2		
Avg Log Length	30.4	29.0	37.0	31.0	36.0	19.0		
Lineal Ft Per Acre	5,328	2,736	1,015	1,534	90	29		
G CuFt / SqFt BA	31.0	24.7	43.3	33.0	42.8	11.2		
N CuFt / SqFt BA	31.0	24.7	43.3	33.0	42.8	11.2		
G BdFt / SqFt BA	121.8	79.5	201.3	137.9	197.6	34.6		
N BdFt / SqFt BA	121.2	78.8	200.4	137.9	197.6	34.6		
Tons / SqFt BA	0.86	0.68	1.19	0.94	1.37	0.29		
G CuFt / G MBF	254	311	215	239	217	324		
N CuFt / N MBF	256	313	216	239	217	324		
G BdFt / G CuFt	3.93	3.22	4.65	4.18	4.61	3.09		
N Bdft / N CuFt	3.91	3.19	4.63	4.18	4.61	3.09		
Tons / G CCF	2.78	2.75	2.75	2.85	3.20	2.60		
Tons / G MBF	7.08	8.55	5.91	6.81	6.93	8.42		
Lbs / G CuFt	55.61	55.00	55.00	57.00	64.00	52.00		
Lbs / N BdFt	14.22	17.23	11.87	13.62	13.87	16.84		
N CuFt / Lineal Ft	0.90	0.76	1.59	0.63	1.25	0.34		
N BdFt / Lineal Ft	3.51	2.43	7.38	2.62	5.75	1.05		
Lbs / Lineal Ft	49.92	41.89	87.65	35.68	79.69	17.73		

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: BRIX

Page 1
Date 11/2/2006
Time 2:33:39PM

T03N R07W S29 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
03N	07W	29	BRIX	0100	81.00	46	274	S	W

T03N R07W S29 T0100

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
RA		DO	2M	1		84	84	7			100			43		57	34	207	1.66	.4
RA		DO	3M	42	.8	2,831	2,809	228		91	9		2	18	4	76	37	119	1.02	23.6
RA		DO	4M	57	.8	3,789	3,758	304		100			20	29	18	33	26	53	0.64	70.4
RA	**Totals**			36	.8	6,705	6,650	539		95	5		12	25	12	51	29	70	0.77	94.4
DL		DO	SM	1		131	131	11			100					100	40	400	1.90	.3
DL		DO	2M	71	.4	5,298	5,275	427			36	64			2	98	40	480	2.35	11.0
DL		DO	3M	24	.7	1,853	1,841	149	0	46	39	15	1	5	1	93	38	176	1.19	10.4
DL		DO	4M	4		244	244	20	47	53			21	18	36	25	28	43	0.51	5.7
DL	**Totals**			40	.5	7,527	7,492	607	2	13	36	49	1	2	3	94	37	273	1.59	27.4
DF		DO	2M	20		843	843	68			54	46				100	40	365	1.86	2.3
DF		DO	3M	50		1,997	1,997	162		79	21		3		10	87	38	128	0.84	15.6
DF		DO	4M	30		1,178	1,178	95	38	62			20	11	23	46	27	37	0.34	31.6
DF	**Totals**			21		4,018	4,018	325	11	57	22	10	7	3	12	78	31	81	0.62	49.5
WH		DO	2M	73		378	378	31			25	75		11		89	37	331	1.80	1.1
WH		DO	3M	25		129	129	10		100						100	38	120	0.79	1.1
WH		DO	4M	2		8	8	1		100				100			27	30	0.49	.3
WH	**Totals**			3		516	516	42		27	19	55		10		90	36	207	1.24	2.5
SS		DO	4M	100		30	30	2	100				100				19	20	0.34	1.5
SS	**Totals**			0		30	30	2	100				100				19	20	0.34	1.5
Type Totals					.5	18,795	18,706	1,515	3	52	22	23	6	10	8	75	31	107	0.89	175.3

TC PSTATS

PROJECT STATISTICS

PROJECT RIX

DATE 11/2/2006

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	07	29	BRIX	0100	81.00	46	274	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	46	274	6.0		
CRUISE	45	273	6.1	9,765	2.8
DBH COUNT					
REFOREST COUNT					
BLANKS	1				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
R ALDER	193	79.3	14.0	41		84.3	6,705	6,650	2,084	2,084
DF-LEAVE	42	11.0	24.9	98		37.4	7,527	7,492	1,617	1,618
DOUG FIR	34	27.6	13.9	59	8	29.1	4,018	4,018	960	960
WHEMLOCK	3	1.1	20.8	84	0	2.6	516	516	112	112
S SPRUCE	1	1.5	10.3	20		.9	30	30	10	10
TOTAL	*273*	*120.6*	*15.3*	*50*		*154.3*	*18,795*	*18,706*	*4,783*	*4,783*

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
R ALDER	65.2	4.7	96	100	105			
DF-LEAVE	65.2	10.1	791	879	968			
DOUG FIR	88.9	15.2	197	232	267			
WHEMLOCK	49.9	34.5	349	533	718			
S SPRUCE								
TOTAL	*153.1*	*9.3*	*219*	*241*	*263*	*936*	*234*	*104*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	SAMPLE TREES - CF LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
R ALDER	59.5	4.3	31	32	34			
DF-LEAVE	56.1	8.6	168	184	200			
DOUG FIR	81.9	14.0	47	55	62			
WHEMLOCK	45.3	31.3	78	113	149			
S SPRUCE								
TOTAL	*120.5*	*7.3*	*55*	*59*	*63*	*580*	*145*	*64*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	TREES/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
R ALDER	74.6	11.0	71	79	88			
DF-LEAVE	149.3	22.0	9	11	13			
DOUG FIR	214.1	31.5	19	28	36			
WHEMLOCK	474.4	69.9	0	1	2			
S SPRUCE	678.2	99.9	0	2	3			
TOTAL	*54.4*	*8.0*	*111*	*121*	*130*	*118*	*30*	*13*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	BASAL AREA/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
R ALDER	67.2	9.9	76	84	93			
DF-LEAVE	137.9	20.3	30	37	45			
DOUG FIR	172.3	25.4	22	29	37			
WHEMLOCK	501.0	73.8	1	3	5			
S SPRUCE	678.2	99.9	0	1	2			
TOTAL	*47.1*	*6.9*	*144*	*154*	*165*	*89*	*22*	*10*

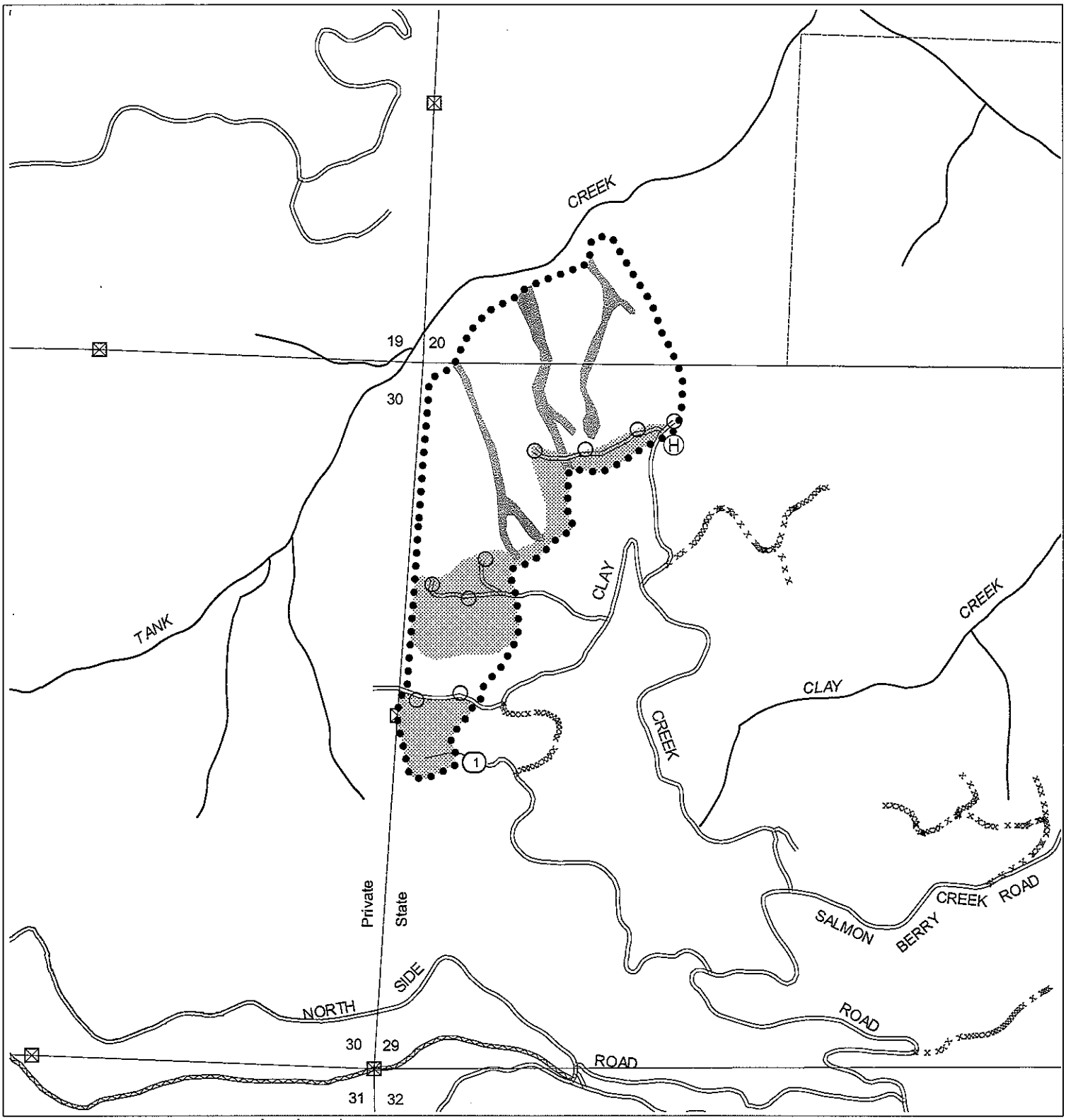
PROJECT STATISTICS

PROJECT RIX

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	07	29	BRIX	0100	81.00	46	274	S	W

CL 68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
R ALDER	80.0	11.8	5,867	6,650	7,434			
DF-LEAVE	150.0	22.1	5,836	7,492	9,147			
DOUG FIR	177.2	26.1	2,969	4,018	5,067			
WHEMLOCK	532.2	78.4	111	516	920			
S SPRUCE	678.2	99.9	0	30	60			
TOTAL	*80.6*	*11.9*	*16,484*	*18,706*	*20,928*	*260*	*65*	*29*

CL 68.1	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
R ALDER	72.8	10.7	1,861	2,084	2,308			
DF-LEAVE	144.8	21.3	1,273	1,618	1,962			
DOUG FIR	170.8	25.2	719	960	1,202			
WHEMLOCK	516.1	76.0	27	112	197			
S SPRUCE	678.2	99.9	0	10	19			
TOTAL	*65.5*	*9.6*	*4,322*	*4,783*	*5,245*	*171*	*43*	*19*



- Landing
- Domestic water supply intake
- Helicopter landing zone
- Truck turn-around
- Survey corner
- Cable yarding
- Ground yarding
- Helicopter yarding
- Downhill yarding
- Buffer
- Non-required thinning
- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream
- Perennial Type-N stream
- Surfaced road
- Unsurfaced road
- State/Federal highway
- County road
- Non-project road
- Swing road
- Legacy road
- Blocked road
- OHV trail
- Non-motorized trail
- Transmission line

LOGGING PLAN

Timber Sale Contract No. 341-07-49
Brix Incline
Portions of Sections 20 and 29,
T3N, R7W, W. M.
Tillamook County, Oregon

Type of Operation	Acres Gross	Net
Retention Cut	93	81

1000 0 1000 Feet

N