



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Camp Toberson Sale 341-05-18

District: Tillamook

Date: 10/18/04

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$234,799.95	\$251,506.80	\$486,306.75
		Project Work	(\$59,655.00)
		Advertised Value	\$426,651.75



Timber Sale Appraisal Timber Description Camp Toberson Sale 341-05-18

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Portions of Section 29, T3N, R9W, W.M., Tillamook County, Oregon.

Date: 10/18/04

Stand Stocking: 60%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	18	0	95
Western Hemlock / Fir	15	0	95
Alder (Red)	17	0	95

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Alder (Red)	Total
2S	201	148	0	349
3S	214	332	0	546
4S	41	113	0	154
Camprun	0	0	684	684
Total	456	593	684	1,733

Comments: Pond Values Used: 3rd Quarter 2004.

Cedar Stumpage = \$1050 - \$257.30 = \$792.70

ADDITIONAL COSTS (Profit and Risk to be added)

Brand and Paint - \$2/MBF x 1733 MBF = \$ 3,466
Slash piling - 96 acres x \$2.20/acre = \$ 211
TOTAL OTHER COSTS + (P/R) = \$3,677

ADDITIONAL COSTS (Profit and Risk Included)

Non-Project Roads-(Seeding included)

Road 1: 3 Stations x \$130/station = \$390
Road 2: 4 Stations x \$130/station = \$520
Total 7 Stations

Non-Project Road Rock

Roads 1 & 2: 7 Stations x 50 cu. yards x \$4.50/yd. = \$1,575

Replacement Rock -(per agreement with Green Diamond)

25cy per MMbf of 1 1/2" -0" crushed rock
25 x 0.6 MMbf x \$15.00cy = \$225

TOTAL OTHER COSTS = \$2,710

ROAD MAINTENANCE

Grading - once per 2 MMBF

Maintenance - \$500/Mile x 3 miles = \$ 1500 or \$1.73/Mbf

Maintenance Rock - approximately 25cu. yds./MMBF/Mile

25 cu. yds. x 3 miles x \$15.00/yard x 1.733 = \$ 1,950 or \$1.12/Mbf

TOTAL MAINTENANCE COST per Mbf = \$1.99



Timber Sale Appraisal Logging Conditions Camp Toberson Sale 341-05-18

"STEWARDSHIP IN FORESTRY"

Combination#: 1	Douglas - Fir	95.00%	
	Western Hemlock / Fir	95.00%	
	Alder (Red)	95.00%	
Yarding Distance:	Long (1,500 ft)		Downhill Yarding: No
Logging System:	Cable: Medium Tower >40 - <70		Process: Manual Delimiting
Tree Size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF		
Loads/Day:	6		Bd. Ft./Load: 3,500
Cost/MBF:	\$172.29		
Machines:			
	Log Loader (A)		
	Tower Yarder (Medium)		
Combination#: 2	Douglas - Fir	5.00%	
	Western Hemlock / Fir	5.00%	
	Alder (Red)	5.00%	
Yarding Distance:	Short (400 ft)		Downhill Yarding: Yes
Logging System:	Shovel		Process: Manual Delimiting
Tree Size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
Loads/Day:	8		Bd. Ft./Load: 3,500
Cost/MBF:	\$82.92		
Machines:			
	Shovel Logger		



Timber Sale Appraisal

Logging Costs

Camp Toberson

Sale 341-05-18

"STEWARDSHIP IN FORESTRY"

Date: 10/18/04

Operating Seasons: 1.6

Profit & Risk: 15%

Project Costs: \$59,655

Other Costs (P/R): \$3,677

Slash Disposal: \$0

Other Costs: \$2,710

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

Road Maintenance: \$1.99

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	2.0	3.8
Western Hemlock / Fir	\$0.00	3.0	3.5
Alder (Red)	\$0.00	3.0	3.3



Timber Sale Appraisal Logging Costs Breakdown Camp Toberson Sale 341-05-18

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Westem Hemlock / Fir	Alder (Red)
Logging	167.82	167.82	167.82
Road Maintenance	2.09	2.09	2.09
Fire Protection	2.50	2.50	2.50
Hauling	60.53	46.11	46.11
Other (P/R appl.)	2.12	2.12	2.12
Profit & Risk	35.26	33.10	33.10
Slash Disposal	0.00	0.00	0.00
Scaling	2.00	2.00	2.00
Other	1.56	1.56	1.56
Total	273.88	257.30	257.30

Amortization	0.00	0.00	0.00
Pond Value	607.42	396.77	625.00
Stumpage	333.54	139.47	367.70
Amortized	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Camp Toberson Sale 341-05-18

Amortized

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

Unamortized

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
MBF	456.00	593.00	684.00
Value	333.54	139.47	367.70
Total	152,094.24	82,705.71	251,506.80

Gross Timber Sale Value

Recovery \$486,306.75

Prepared by: Neal Bond

Date: 10/18/04

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: Camp Toberson

Date: Sep. 15 2004

Construction -

Point	A - B	5+90	stations =	\$4,755.00
Point	C - D	10+50	stations =	\$7,993.62
SUB TOTAL				\$12,748.62

Improvement -

Point	A - B	70+15	stations =	\$45,201.62
Point			stations =	\$0.00
SUB TOTAL				\$45,201.62

Move - In -

Grader	\$166.11
Roller	\$181.06
Excavator	\$391.78
Dozer	\$377.31
6 Dump Trucks	\$586.80
	\$0.00
SUB TOTAL	\$1,703.06

GRAND TOTAL \$59,653.30

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Camp Toberson</u>	Road:	<u>Points A - B Toberson Rd. + New Construction</u>
Construction -	<u>5+90</u> stations <u>0.11</u> miles	Improvement -	<u>70+15</u> stations <u>1.33</u> miles
CLEARING AND GRUBBING -			
Scattering	0.40 acres @	\$815.00 per acre =	\$326.00
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00
TOTAL CLEARING AND GRUBBING			\$326.00
EXCAVATION -			
Dozer	1.5 hr.s @	\$140.00 per hr. =	\$210.00
	5.90 sta. @	\$65.00 per sta. =	\$383.50
	620 cys. @	\$1.85 per c.y. =	\$1,147.00
Stations 25+05 to 28+045	1160 cys. @	\$2.58 per c.y. =	<u>\$2,992.80</u>
TOTAL EXCAVATION			\$4,733.30
CULVERT MATERIALS -			
Culverts			
196 LF of 18"	<u>\$2,891.00</u>	0 LF of 24"	<u>\$0.00</u>
	\$2,891.00		\$0.00
Half Rounds			
40 LF of 21"	<u>\$456.00</u>	0 LF of 30"	<u>\$0.00</u>
	\$456.00		\$0.00
Culvert Stakes			
8 1/2 round stakes @	\$8.00 per stake =	\$64.00	
5 marker stakes @	\$6.00 per stake =	<u>\$30.00</u>	
TOTAL CULVERT MATERIALS			\$3,441.00
SURFACING-			
6" Depth	2,510 cy. of	Crshd Rock @	\$13.71 per c.y. = \$34,412.10
CrwWiden	135 cy. of	Crshd Rock @	\$13.71 per c.y. = \$1,850.85
10Tmouts	110 cy. of	Crshd Rock @	\$13.71 per c.y. = \$1,508.10
SmTurnrnd	11 cy. of	Crshd Rock @	\$13.71 per c.y. = <u>\$150.81</u>
TOTAL SURFACING			\$37,921.86
SPECIAL PROJECTS			
Grade & Roll Subgrade: \$25.20/sta.			\$1,916.46
Grass Seed, Fertilize and Mulch Areas of Distrubed Soil & Waste Areas: 1 Acre			\$820.00
Roadside Brushing: .6 Miles @ \$1,000/mi.			\$600.00
Remove Old Culvert From State Land			\$198.00
TOTAL SPECIAL PROJECTS			\$3,534.46
GRAND TOTAL			\$49,956.62

SUMMARY OF CONSTRUCTION COST

Sale: Camp Toberson Road: Spur C - D

Construction - 10+50 stations Improvement - stations
 0.20 miles miles

CLEARING AND GRUBBING -

Scattering	1.00 acres @	\$815.00 per acre =	\$815.00	
Piling	0.00 acres @	\$905.00 per acre =	\$0.00	
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00	
TOTAL CLEARING AND GRUBBING				\$815.00

EXCAVATION -

	0 hr.s @	\$0.00 per hr. =	\$0.00	
	10.50 sta. @	\$65.00 per sta. =	\$682.50	
	0 cys. @	\$0.00 per c.y. =	\$0.00	
TOTAL EXCAVATION				\$682.50

SURFACING-

6" Depth	347 cy. of	Crshd Rock @	\$15.06 per c.y.=	\$5,225.82
CrvWiden	23 cy. of	Crshd Rock @	\$15.06 per c.y.=	\$346.38
1Trnouts	11 cy. of	Crshd Rock @	\$15.06 per c.y.=	\$165.66
SmTurnmd	11 cy. of	Crshd Rock @	\$15.06 per c.y.=	\$165.66
TOTAL SURFACING				\$5,903.52

SPECIAL PROJECTS

Grass Seed, Fertilize & Mulch Areas of Distrubed Soil: .4 Acres	\$328.00
Grade & Roll Subgrade: \$25.20/sta.	\$264.60
TOTAL SPECIAL PROJECTS	\$592.60

GRAND TOTAL \$7,993.62

ROCK COST
SALE: CAMP TOBERSON

9/15/2004

Road Segment	Haul Cost /cu.yd.	Cost To Process /cu.yd.	On Board Cost /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A - B	\$5.11	\$1.25	\$7.35	\$13.71	2766	\$37,921.86
C - D	\$6.46	\$1.25	\$7.35	\$15.06	392	\$5,903.52
				Total C.Y.	3158	
TOTAL ROCK COST						\$43,825.38



OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT
Camp Toberson

1. Type of Sale

Partial Cut – Recovery conifer and red alder

2. Legal Description

Section 29, T3N, R9W, W.M., Tillamook County, Oregon.

3. Sale Acreage

	ACRES		
	<u>Sale</u>	<u>Total</u>	<u>Net</u>
Area 1—Partial Cut	116	107	96
Total	116	107	96

Sale Acres

Area within the Timber Sale Boundary signs.

Total Acres

For accomplishment reporting.

Clearcut harvest: Sale acres, plus green tree retention areas outside the timber sale boundary; less roads and riparian areas classified as Special Stewardship inside the sale boundary.

Partial Cut - Sale acres less roads and riparian areas classified as Special Stewardship inside the sale boundary.

Net acres: *Used for calculating the advertised volume.*

Clearcut - Sale acres, less green tree retention, roads, riparian areas, and void areas inside the sale boundary.

Partial Cut - Sale acres less roads, riparian areas, void areas, and no-required thinning areas inside the sale boundary.

4. Cruising Procedures

A. Cruise Method

A total of 38 variable radius full-point plots were taken across the sale areas. Cruise lines were established approximately 465 feet apart on a 145 degree azimuth. The plots were spaced 270 feet apart. All conifers 8 inches DBH and greater and all hardwoods 10 inches DBH and greater were recorded on all plots. On odd numbered plots, all trees were measured for merchantable height, form factor, diameter, and grade. Residual and surplus conifer trees were designated to calculate a residual basal area of 200 square feet per acre. On even numbered plots, only a species count was recorded. The standard error for the basal area plots was 6.8%.

B. Plot size

A basal area factor of 40 was used. The point of observation was at 4.5 feet.

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Conifer trees were measured to a 6-inch top or 0.4 DBH and hardwood trees were measured to an 8-inch top, both favoring 40-foot lengths. All heights were measured to the nearest foot. All diameters were measured at a height of 4.5 feet to the nearest 1-inch. Conifers less than 20 board feet and hardwoods less than 30 board feet were not recorded.

5. Computation Procedure

Plot data from measured plots was entered into Atterbury Super A.C.E. 98 program for computation of stand tables, volume, basal area, and average diameter by species. Trees were designated as residual or surplus and a volume-basal area ratio (VBAR) for each type and species was developed. This data was entered into the Volume Summary spreadsheet to compute the sale volume.

6. Hidden Defect and Breakage

A 5% deduction was applied to the volume to account for the defect and breakage.

7. Timber Description

A small portion of the timber sale was burned in the 1933 Tillamook Fire. The rest of the timber sale area was logged prior to 1950's and naturally regenerated. This area has had no prior stand management. The stand in the sale area is classified as 100% closed single canopy. The timber sale area is a mixed stand of Douglas-fir, hemlock, alder, with scattered spruce and red cedar. The conifer stands extend out the ridges to the mid-slope of the hillside. The alder stands are on the lower part of the hillsides and extend into the draws and contain scattered conifer. The conifer is overstocked resulting in slowed diameter growth.

8. Cruiser Names/Dates

Bond, Wells, Winslow, May 2004.

9. Revenue Distribution

FDF: 100% Tax Code: 56-1 – 100%

Deed Number: 35

Rehabilitation Obligated - 0%

10. Attachments

Stand Tables

Volume Summary

Logging Plan

TC PSTNDSUM		Stand Table Summary											Page 1		
TO3N R09W S29 Ty00A1 96.00		Project CAMPTOB											Date: 10/8/2004		
		Acres 96.00											Time: 3:12:05PM		
		Grown Year:													
S Spc T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
								Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DL	10	1	80	17	3.734	2.04	3.73	5.3	20.0	.55	20	75	52	19	7
DL	13	1	80	48	2.210	2.04	2.21	16.1	40.0	.98	36	88	94	34	8
DL	20	2	80	111	1.867	4.07	5.60	26.8	91.7	4.13	150	513	397	144	49
DL	21	1	81	98	.847	2.04	1.69	40.7	120.0	1.89	69	203	182	66	20
DL	22	1	80	139	.772	2.04	2.31	39.1	156.7	2.49	91	363	239	87	35
DL	23	1	80	113	.706	2.04	2.12	36.8	130.0	2.14	78	275	206	75	26
DL	24	3	81	111	1.945	6.11	5.83	40.0	151.1	6.41	233	882	615	224	85
DL	25	4	81	107	2.395	8.15	7.18	42.6	161.7	8.41	306	1,162	807	294	112
DL	26	4	80	117	2.210	8.15	6.63	49.4	186.7	9.01	328	1,237	865	315	119
DL	27	5	81	118	2.565	10.18	7.70	54.7	203.4	11.57	421	1,565	1,111	404	150
DL	29	6	80	120	2.686	12.22	8.06	63.3	242.0	14.03	510	1,950	1,347	490	187
DL	30	4	81	107	1.660	8.15	4.98	63.4	241.7	8.68	316	1,203	834	303	116
DL	31	4	81	123	1.554	8.15	4.66	73.9	303.3	9.48	345	1,414	910	331	136
DL	32	2	80	107	.729	4.07	2.19	72.4	281.7	4.36	158	616	418	152	59
DL	33	3	81	125	1.033	6.11	3.10	85.4	339.1	7.28	265	1,051	699	254	101
DL	34	1	81	131	.323	2.04	.97	95.9	413.3	2.55	93	401	245	89	38
DL	35	1	80	117	.305	2.04	.91	92.5	366.7	2.33	85	335	223	81	32
DL	36	1	81	113	.288	2.04	.86	94.6	366.7	2.25	82	317	216	79	30
DL	41	1	80	151	.228	2.04	.91	114.2	507.5	2.86	104	462	275	100	44
DL	Totals	46	80	97	28.055	93.68	71.66	51.5	197.0	101.41	3,688	14,113	9,736	3,540	1,355
WL	9	1	88	34	4.942	2.18	4.94	5.6	20.0	.88	28	99	85	26	9
WL	10	1	89	39	4.003	2.18	4.00	7.8	30.0	1.00	31	120	96	30	12
WL	13	2	89	45	4.737	4.37	4.74	16.1	40.0	2.45	76	189	235	73	18
WL	14	1	89	54	2.042	2.18	4.08	11.1	45.0	1.45	45	184	139	44	18
WL	15	3	89	70	5.337	6.55	8.90	20.2	72.0	5.76	180	640	553	173	61
WL	20	3	89	93	3.002	6.55	7.01	34.4	134.3	7.72	241	941	741	232	90
WL	21	1	88	104	.908	2.18	2.72	33.0	136.7	2.88	90	372	276	86	36
WL	23	5	89	111	3.783	10.92	11.35	42.3	179.3	15.38	480	2,035	1,476	461	195
WL	24	1	88	107	.695	2.18	2.08	44.9	193.3	3.00	94	403	288	90	39
WL	26	2	89	116	1.198	4.37	3.59	54.2	238.3	6.23	195	856	598	187	82
WL	27	1	88	105	.570	2.18	1.14	24.1	60.0	.88	27	68	84	26	7
WL	28	1	89	109	.511	2.18	1.53	64.0	300.0	3.14	98	460	301	94	44
WL	30	3	89	121	1.334	6.55	4.00	78.3	353.3	10.03	313	1,414	962	301	136
WL	31	1	88	115	.417	2.18	1.25	80.0	366.7	3.20	100	458	307	96	44
WL	32	1	88	118	.403	2.18	1.21	85.5	363.3	3.31	103	440	317	99	42
WL	Totals	27	89	71	33.883	58.95	62.55	33.6	138.8	67.28	2,103	8,681	6,459	2,019	833
RA	13	5	79	55	11.763	10.84	11.76	17.9	54.0	5.80	211	635	556	202	61
RA	14	4	80	68	8.057	8.67	8.06	20.7	57.5	4.59	167	463	440	160	44
RA	15	6	80	71	10.602	13.01	14.14	24.7	71.2	9.60	349	1,007	922	335	97
RA	16	5	80	60	7.765	10.84	12.42	20.6	61.2	7.02	255	761	674	245	73
RA	17	4	79	68	5.503	8.67	8.25	28.0	75.0	6.34	231	619	608	222	59
RA	18	3	80	63	3.681	6.51	4.91	35.6	85.0	4.80	175	417	461	168	40
RA	19	8	80	65	8.777	17.35	13.15	35.6	95.8	12.88	468	1,260	1,236	450	121
RA	20	5	79	65	4.983	10.84	7.93	36.9	103.5	8.04	292	820	772	281	79
RA	21	1	79	72	.902	2.17	1.80	36.0	100.0	1.79	65	180	171	62	17
RA	22	4	80	69	3.286	8.67	6.57	36.8	106.2	6.65	242	698	639	232	67
RA	23	2	80	66	1.503	4.34	3.01	38.6	95.0	3.19	116	286	307	112	27
RA	25	1	80	65	.636	2.17	1.27	46.1	120.0	1.61	59	153	155	56	15
RA	26	1	79	61	.588	2.17	.59	95.2	200.0	1.54	56	118	148	54	11
RA	36	1	79	50	.307	2.17	.31	165.0	200.0	1.39	51	61	134	49	6
RA	Totals	50	80	64	68.351	108.42	94.16	29.1	79.4	75.24	2,736	7,479	7,223	2,627	718

DL = Douglas-fir Leave

WL = Western hemlock Leave

TC		PSTNDSUM											Stand Table Summary			Page 2	
													Date: 10/8/2004				
T03N R09W S29 Ty00A1		96.00		Project CAMPTOB							Time: 3:12:05PM						
				Acres 96.00							Grown Year:						
S Spc T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals				
								Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF		
WH	8	1	88	19	5.058	1.77	5.06	3.2	20.0	.52	16	101	50	16	10		
WH	10	3	89	46	9.712	5.30	9.71	9.0	33.3	2.79	87	324	267	84	31		
WH	11	2	89	40	5.351	3.53	5.35	9.9	30.0	1.69	53	161	163	51	15		
WH	12	1	88	41	2.248	1.77	2.25	12.3	30.0	.89	28	67	85	27	6		
WH	14	1	88	27	1.652	1.77	1.65	12.2	20.0	.64	20	33	62	19	3		
WH	15	3	88	95	4.279	5.30	8.56	22.0	90.0	6.06	189	771	581	181	74		
WH	16	6	88	77	7.620	10.59	13.97	22.3	81.8	10.01	312	1,143	961	300	110		
WH	17	3	89	108	3.361	5.30	7.84	28.7	111.4	7.20	225	874	691	216	84		
WH	18	2	89	84	1.998	3.53	4.00	29.3	107.5	3.75	117	430	360	112	41		
WH	19	1	88	115	.926	1.77	2.78	27.4	113.3	2.43	76	315	234	73	30		
WH	20	3	89	109	2.428	5.30	6.47	34.6	145.0	7.17	224	939	688	215	90		
WH	21	3	88	89	2.182	5.30	4.36	41.0	159.7	5.73	179	697	551	172	67		
WH	23	2	88	115	1.224	3.53	3.67	42.9	185.0	5.04	157	679	484	151	65		
WH	Totals	31	88	65	48.038	54.74	75.68	22.2	86.3	53.92	1,683	6,533	5,177	1,616	627		
DF	9	1	81	19	4.549	2.01	4.55	3.9	20.0	.50	18	91	48	17	9		
DF	11	1	80	24	3.045	2.01	3.05	6.5	20.0	.56	20	61	54	19	6		
DF	15	1	80	45	1.638	2.01	1.64	21.1	40.0	.98	35	66	95	33	6		
DF	18	3	81	84	3.412	6.03	5.69	32.2	94.0	5.21	183	534	500	176	51		
DF	19	5	81	107	5.082	10.05	13.23	27.6	96.8	10.41	365	1,281	1,000	351	123		
DF	20	1	81	100	.921	2.01	1.84	38.9	120.0	2.04	72	221	196	69	21		
DF	22	1	80	108	.761	2.01	2.28	31.7	103.3	2.06	72	236	198	69	23		
DF	23	2	81	100	1.393	4.02	4.18	34.4	128.3	4.10	144	536	394	138	51		
DF	24	2	80	91	1.279	4.02	3.20	41.1	132.0	3.74	131	422	359	126	41		
DF	25	3	80	125	1.797	6.03	5.39	46.9	184.7	7.20	253	996	692	243	96		
DF	27	1	80	105	.505	2.01	1.52	47.5	163.3	2.05	72	248	197	69	24		
DF	40	1	81	120	.230	2.01	.69	122.8	526.7	2.42	85	364	232	81	35		
DF	Totals	22	81	73	24.613	44.21	47.25	30.7	107.0	41.30	1,449	5,056	3,965	1,391	485		
RC	11	2	88	35	7.443	4.91	7.44	8.7	30.0	1.52	65	223	146	62	21		
RC	13	1	87	40	2.665	2.46	2.66	14.3	30.0	.89	38	80	86	37	8		
RC	14	1	88	45	2.298	2.46	2.30	18.5	40.0	1.00	43	92	96	41	9		
RC	22	1	88	54	.956	2.46	.96	56.9	120.0	1.28	54	115	123	52	11		
RC	23	1	88	62	.851	2.46	1.70	37.0	105.0	1.48	63	179	142	61	17		
RC	Totals	6	88	40	14.213	14.74	15.06	17.4	45.7	6.18	263	689	593	252	66		
SS	14	1	87	27	1.723	1.84	1.72	13.9	20.0	.62	24	34	60	23	3		
SS	15	1	88	44	1.501	1.84	1.50	23.9	40.0	.93	36	60	89	34	6		
SS	19	1	88	48	.936	1.84	.94	41.4	70.0	1.01	39	65	97	37	6		
SS	22	1	88	33	.698	1.84	.70	40.3	50.0	.73	28	35	70	27	3		
SS	Totals	4	88	37	4.858	7.37	4.86	26.1	40.1	3.29	127	195	316	122	19		
Totals		186	84	68	222.010	382.11	371.22	32.5	115.1	348.62	12,049	42,744	33,468	11,567	4,103		

WH = Western Hemlock take

DF = Douglas-Fir take

Conifer Leave Basal area = 175-ft²/acre

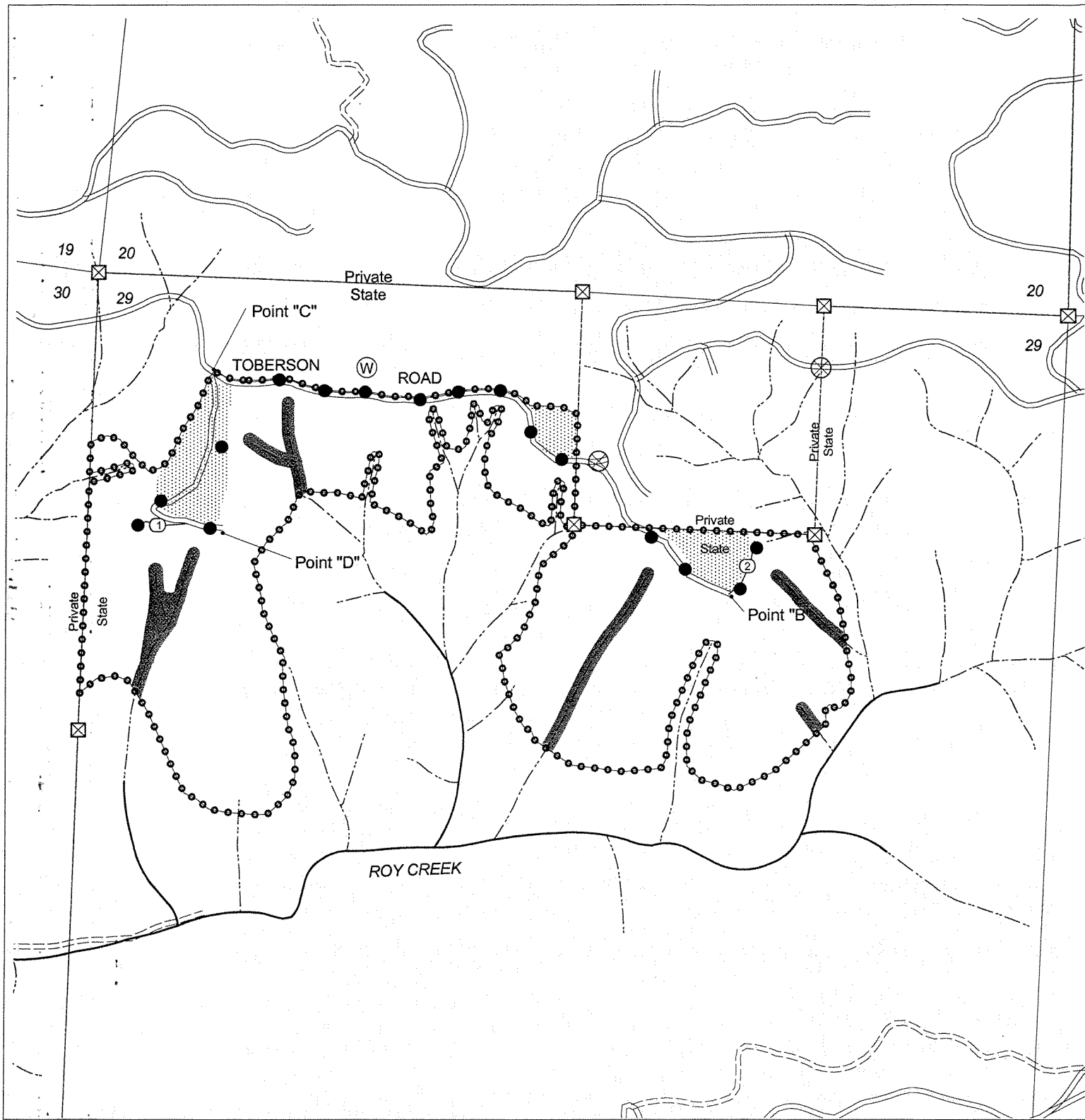


"STEWARDSHIP IN FORESTRY"

Camp Toberson

Volume Summary

Partial Cut							
96 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	18	44	114	5.0	480	5%	456
Hemlock	17	55	119	6.5	624	5%	593
Alder	15	108	69	7.5	720	5%	684
TOTAL		207		19.0	1824		1733



- Tractor landing
- Cable landing
- ▲ Domestic water supply
- ⊗ Blocked
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- ▧ Buffer
- ▨ Non-required thinning
- Setting boundary
- Area boundary
- Sale boundary
- Ownership boundary
- Type-F stream
- Type-N stream
- ==== Surfaced road
- Unsurfaced road
- ==== State highway
- ==== County road
- ② Non-project road
- Swing road
- Abandoned road
- OHV trail
- Non-motorized trail

LOGGING PLAN
 Timber Sale Contract No. 341-05-18
 Camp Toberson
 Portions of Section 29, T3N, R9W, W. M.
 Tillamook County, Oregon

Type of Operation	Acres Sale	Acres Net
Partial Cut	116	96



Tillamook District GIS
 10/05/04
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Oregon Department of Forestry

WRITTEN PLAN

"STEWARDSHIP IN FORESTRY"

SALE NAME: Camp Toberson

PROTECTED WATERS: Roy Creek, a medium Type F stream and tributary to the Nehalem River.

Definitions: Stream buffer: At least 100 feet horizontal distance from the stream bank of Type F.

LOCATION: Portions of Section 29, T3N, R9W, W.M., Tillamook County.

Activity: Cable lines across stream

Protection measures:

- Trees within the stream buffer or outside the timber sale boundary are reserved from cutting, except as approved by ODF to facilitate logging operations. Trees felled within these zones will be left for down wood.
- Trees that enter Type F streams will be left for down wood.
- Cable corridors will be at least of 150 feet apart where they extend over or through the Type F stream and buffer.
- Cables will be pulled out of the completed corridor prior to rigging the next corridor.

Date: May 24, 2004

Prepared by: Neal Bond, Forester