



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
Alder Joy  
Sale 341-12-37

District: Tillamook

Date: September 26, 2011

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**cost summary**

	<b>Conifer</b>	<b>Hardwood</b>	<b>Total</b>
<b>Gross Timber Sale Value</b>	\$384,876.91	\$224,815.80	\$609,692.71
		<b>Project Work:</b>	\$(128,170.00)
		<b>Advertised Value:</b>	\$481,522.71



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**timber description**

**Location:** Portions of Sections 13, 14, 22, 23, and 24, T2S, R8W, W.M., Tillamook County, Oregon.

**Stand Stocking:** 40%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	15	0	95
Alder (Red)	12	0	90

Volume by Grade	10" - 11"	12"+	2S	3S	4S	6" - 7"	8" - 9"	Total
Douglas - Fir	0	0	628	1,852	501	0	0	2,981
Alder (Red)	271	146	0	0	0	537	311	1,265
Total	271	146	628	1,852	501	537	311	4,246



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comments: Pond Values Used: 2nd Quarter Calendar Year 2011.

Western Hemlock and Other Conifers Stumpage Price = Pond Value  
minus Logging Costs  
 $\$110/\text{MBF} = \$435/\text{MBF} - \$325/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value  
minus Logging Costs  
 $\$595/\text{MBF} = \$950/\text{MBF} - \$355/\text{MBF}$

Pulp (Conifer and Hardwood) Price =  $\$25/\text{MBF}$

SCALING COST ALLOWANCE =  $\$5.00/\text{MBF}$

FUEL COST ALLOWANCE =  $\$4.00/\text{Gallon}$

HAULING COST ALLOWANCE

Hauling cost equivalent to  $\$740$  daily truck cost.

Other Costs (with Profit & Risk to be added):

Branding and Painting:  $\$2/\text{MBF} \times 4,246 \text{ MBF} = \$8,492$

Snag Creation by Girdling at DBH:  $578 \text{ snags} \times \$5/\text{snag} = \$2,890$

Felling for Down Wood (Area 4):  $194 \text{ trees} \times \$5/\text{tree} = \$970$

Truck Assist (Area 4):  $16.4 \text{ acres} \times 17.5 \text{ MBF} \times \$25/\text{MBF} = \$7,175$

TOTAL Other Costs (with Profit & Risk to be added) =  $\$19,527$

Other Costs (No Profit & Risk added):

Trask River Public Safety Road Use Fee:  $\$20/\text{MBF} \times 4,246 \text{ MBF} =$   
 $\$84,920$

Slash Piling and Sorting:  $\$5/\text{acre} \times 278 \text{ (cable) acres} = \$1,390$

Cover Material for Piles:  $20 \text{ piles} \times \$5/\text{pile} = \$100$

Construct Motorcycle Filter at Point C:  $1 \times \$75/\text{each} = \$75$

Block Roads with Tank Traps at Point A and Truck Assist Road in  
Area 4:  $2 \times \$75/\text{each} = \$150$

TOTAL Other Costs (No Profit & Risk added) =  $\$86,635$

ROAD MAINTENANCE

Road Maintenance: South Fork Trask, from pavement end to Joyce  
Creek Road, and Joyce Creek Road

Interim Grading:  $\$250/\text{mile} \times 7.5 \text{ miles} \times 3 \text{ times} / 4,246 \text{ MBF} =$   
 $\$1.32/\text{MBF}$

Spot rocking:  $20 \text{ cy}/\text{mile} \times 10.00/\text{cy} \times 4.2 \text{ MMBF} \times 7.5 \text{ miles} / 4,246$   
 $\text{MBF} = \$1.48/\text{MBF}$

Compaction of Joyce Creek Road from its junction with the South  
Fork Trask Road to its junction with Area 2:  $0.9 \text{ miles} ((48$

stations  $\times \$18/\text{station}) + \$111 \text{ move-in}) / 4,246 \text{ MBF} = \$0.23/\text{MBF}$

Final Maintenance Grading:  $\$500 \times 7.5 \text{ miles} / 4,246 \text{ MBF} = \$0.88/\text{MBF}$

Total Road Maintenance:  $\$3.91/\text{MBF}$



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## logging conditions

**combination#: 1** Douglas - Fir 6.83%  
Alder (Red) 11.17%

**yarding distance:** Short (400 ft) **downhill yarding:** No  
**logging system:** Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 6.0 **bd. ft / load:** 3,500  
**cost / mbf:** \$159.24

**machines:** Log Loader (A)  
Stroke Delimber (A)  
Tower Yarder (Medium)

**combination#: 2** Douglas - Fir 84.69%

**yarding distance:** Long (1,500 ft) **downhill yarding:** No  
**logging system:** Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 4.0 **bd. ft / load:** 3,500  
**cost / mbf:** \$238.87

**machines:** Log Loader (A)  
Stroke Delimber (A)  
Tower Yarder (Medium)

**combination#: 3** Douglas - Fir 8.48%  
Alder (Red) 9.57%

**yarding distance:** Short (400 ft) **downhill yarding:** No  
**logging system:** Track Skidder **Process:** Stroke Delimber  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 8.0 **bd. ft / load:** 3,500  
**cost / mbf:** \$51.37

**machines:** Stroke Delimber (B)

**combination#: 4** Alder (Red) 79.27%

**yarding distance:** Long (1,500 ft) **downhill yarding:** No  
**logging system:** Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 4.0 **bd. ft / load:** 3,000  
**cost / mbf:** \$278.68

**machines:** Log Loader (A)  
Stroke Delimber (A)  
Tower Yarder (Medium)



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**logging costs**

Operating Seasons:	2.00	Profit Risk:	12.00%
Project Costs:	\$128,170.00	Other Costs (P/R):	\$19,527.00
Slash Disposal:	\$0.00	Other Costs:	\$86,635.00

**Miles of Road**

Road Maintenance: \$3.91

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	3.5
Alder (Red)	\$0.00	3.0	3.3



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**logging costs breakdown**

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
<b>Douglas - Fir</b>									
\$217.54	\$4.11	\$2.07	\$66.07	\$4.60	\$35.33	\$0.00	\$5.00	\$20.40	\$355.12
<b>Alder (Red)</b>									
\$243.60	\$4.30	\$2.07	\$73.41	\$4.60	\$39.36	\$0.00	\$5.00	\$20.40	\$392.74

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$484.23	\$129.11	\$0.00
Alder (Red)	\$0.00	\$570.46	\$177.72	\$0.00



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summary

**Amortized**

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	2,981	\$129.11	\$384,876.91
Alder (Red)	1,265	\$177.72	\$224,815.80

**Gross Timber Sale Value**

Recovery: \$609,692.71

Prepared by: David Wells

Phone: 503-842-2545



## PROJECT SUMMARY SHEET

Sale: Alder Joy

### CONSTRUCTION

Point	E to F	9+50	stations =	\$14,488.55
Point	G to H	13+70	stations =	\$18,428.25
Point	I to J	17+25	stations =	\$21,852.82
Point	K to L	2+20	stations =	\$4,742.94
<b>SUBTOTAL CONSTRUCTION</b>				<b>\$59,512.56</b>

### IMPROVEMENT

Point	M to I	249+00	stations =	\$4,119.90
<b>SUBTOTAL IMPROVEMENT</b>				<b>\$4,119.90</b>

### RECONSTRUCTION

Point	A to B	17+50	stations =	\$23,557.05
Point	C to D	11+00	stations =	\$13,328.10
Point	I to J	15+95	stations =	\$18,834.47
<b>SUBTOTAL RECONSTRUCTION</b>				<b>\$55,719.62</b>

### SPECIAL PROJECTS

Boulder Placement Between Points M to N				\$743.40
Brush	8.2	miles of road		\$5,740.00
<b>SUBTOTAL SPECIAL PROJECTS</b>				<b>\$6,483.40</b>

**MOVE IN** **\$2,334.52**

**GRAND TOTAL** **\$128,170.00**



## SUMMARY OF CONSTRUCTION COST

Sale: **Alder Joy**

Road: **A to B**

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	17+50	stations
	0.00	miles		0.00	miles		0.33	miles

**RECONSTRUCTION: CLEARING AND GRUBBING -**  
End Haul Stumps to Waste Area

1.290	acres @	\$1,500.00 per acre =		\$1,935.00	
<b>TOTAL CLEARING AND GRUBBING</b>					<b>\$1,935.00</b>

**RECONSTRUCTION: EXCAVATION -**  
Road Earthwork

17.50	sta. @	\$200.00 per sta. =		\$3,500.00	
<b>TOTAL EXCAVATION</b>					<b>\$3,500.00</b>

**ROCK**

0+00 to	17+50	960	cy. of	Crushed	@	\$15.78 per c.y. =		\$15,148.80
Landing Rock	17+50	100	cy. of	Crushed	@	\$15.78 per c.y. =		\$1,578.00
<b>TOTAL ROCK</b>								<b>\$16,726.80</b>

**SPECIAL PROJECTS**

Grade and shape road -	17.50	stations @	\$15.50	per station		\$271.25
Construct Landing -	1.00	@	\$285.00	each		\$285.00
Roll subgrade w/ vibratory roller prior to rocking -	17.50	stations @	\$13.20	per station		\$231.00
Remove large stumps -	1.00	lump sum @	\$520.00			\$520.00
Grass seed and fertilize -	0.40	acres @	\$220.00	per acre		\$88.00
<b>TOTAL SPECIAL PROJECTS</b>						<b>\$1,395.25</b>

<b>GRAND TOTAL</b>	<b>\$23,557.05</b>
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## SUMMARY OF CONSTRUCTION COST

Sale:

**Alder Joy**

Road:

**C to D**

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	11+00	stations
	0.00	miles		0.00	miles		0.21	miles

**CONSTRUCTION & RECON..:** CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	<u>Avg. Dist.</u> To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	
0+00		0+75	20%		Outslope	\$139	=	\$104.25
0+75		3+15	70%	0.2	Outslope	\$2,433	=	\$5,839.20
3+15		6+40	30%		Outslope	\$191	=	\$620.75
6+40		9+00	70%	0.1	Outslope	\$2,352	=	\$6,115.20
9+00		11+00	20%		Outslope	\$139	=	\$278.00
<b>TOTAL</b>								<b>\$12,957.40</b>

**SPECIAL PROJECTS**

Grade and shape road -	11.00	stations @	\$15.50	per station	\$170.50
Roll subgrade w/ vibratory roller -	11.00	stations @	\$13.20	per station	\$145.20
Grass seed and fertilize -	0.25	acres @	\$220.00	per acre	\$55.00
TOTAL SPECIAL PROJECTS					<b>\$370.70</b>

**GRAND TOTAL** **\$13,328.10**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Alder Joy**

Road:

**E to F**

Construction -	9+50	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.18	miles		0.00	miles		0.00	miles

**CONSTRUCTION:** CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	<u>Avg. Dist.</u> To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	
0+00		0+75	20%		Outslope	\$139	=	\$104.25
0+75		3+00	45%			\$269	=	\$605.25
3+00		9+50	30%			\$191	=	\$1,241.50
<b>TOTAL</b>								<b>\$1,951.00</b>

**ROCK**

0+00	to	9+40	550	cy. of	Crushed	@	\$17.41 per c.y.=	\$9,575.50
Landing Rock		9+40	100	cy. of	Crushed	@	\$17.41 per c.y.=	\$1,741.00
<b>TOTAL ROCK</b>								<b>\$11,316.50</b>

**SPECIAL PROJECTS**

Construct landing -	1.00	@	\$250.00	each	\$250.00
Grade and shape road -	9.50	stations @	\$15.50	per station	\$147.25
Roll subgrade w/ vibratory roller prior to rocking -	9.50	stations @	\$13.20	per station	\$125.40
Remove large stumps -	1.00	lump sum @	\$650.00		\$650.00
Grass seed and fertilize -	0.22	acres @	\$220.00	per acre	\$48.40
<b>TOTAL SPECIAL PROJECTS</b>					<b>\$1,221.05</b>

**GRAND TOTAL** **\$14,488.55**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Alder Joy**

Road:

**G to H**

<u>Construction -</u>	13+70	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	0+00	stations
	0.26	miles		0.00	miles		0.00	miles

**CONSTRUCTION:** CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist.	To W.A. (mi.)	Outslope/Ditch	Cost per Station	=		
0+00		13+70	30%			Outslope/Ditch	\$191	=	\$2,616.70	
									<b>TOTAL</b>	<b>\$2,616.70</b>

**ROCK**

0+00	to	13+70	750	cy. of	Crushed	@	\$17.66 per c.y.=	\$13,245.00	
Landing Rock		13+70	100	cy. of	Crushed	@	\$17.66 per c.y.=	\$1,766.00	
								<b>TOTAL ROCK</b>	<b>\$15,011.00</b>

**SPECIAL PROJECTS**

Grade and shape road -	13.70	stations @	\$15.50	per station	\$212.35	
Remove large stumps -	1.00	lump sum @	\$520.00		\$520.00	
Grass seed and fertilize -	0.31	acres @	\$220.00	per acre	\$68.20	
					<b>TOTAL SPECIAL PROJECTS</b>	<b>\$800.55</b>

**GRAND TOTAL** **\$18,428.25**

## SUMMARY OF CONSTRUCTION COST

Sale: **Alder Joy**

Road: **I to J**

Construction -	17+25	stations	Improvement -	0+00	stations	Reconstruction -	15+95	stations
	0.33	miles		0.00	miles		0.30	miles

**CONSTRUCTION:** CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	
7+35		11+40	40%		Outslope	\$243	=	\$984.15
20+00		25+00	30%		Outslope	\$191	=	\$955.00
25+00		33+20	50%		Outslope	\$459	=	\$3,763.80
<b>TOTAL</b>								<b>\$5,702.95</b>

**RECONSTRUCTION:** CLEARING AND GRUBBING -

Scattering	1.540	acres @	\$980.00	per acre =	\$1,509.20	
<b>TOTAL CLEARING AND GRUBBING</b>						<b>\$1,509.20</b>

**RECONSTRUCTION:** EXCAVATION -

Road Earthwork	15.95	sta. @	\$150.00	per sta. =	\$2,392.50	
<b>TOTAL EXCAVATION</b>						<b>\$2,392.50</b>

**CULVERTS - MATERIALS & INSTALLATION**

<u>Culverts</u>	60	LF of 18"	\$1,050.00			
			\$1,050.00			
<u>Culvert Stakes &amp; Markers</u>						
2 markers			\$16.00			
			\$16.00			
<b>TOTAL CULVERTS</b>						<b>\$1,066.00</b>

**ROCK**

0+00 to 25+00	1,360	cy. of	Crushed	@	\$17.79	per c.y. =	\$24,194.40
<b>TOTAL ROCK</b>							<b>\$24,194.40</b>

**SPECIAL PROJECTS**

Drill and shoot landing	1.00	lump sum @	\$3,100.00			\$3,100.00
Construct landing-	1.00	@	\$250.00	each		\$250.00
Grade and shape road -	33.20	stations @	\$15.50	per station		\$514.60
Roll subgrade w/ vibratory roller prior to rocking -	33.20	stations @	\$13.20	per station		\$438.24
Remove large stumps -	1.00	lump sum @	\$1,040.00			\$1,040.00
Remove logs from fill @ station 4+90	1.00	hours @	\$145.00	per/hr		\$145.00
Grass seed and fertilize -	1.52	acres @	\$220.00	per acre		\$334.40
<b>TOTAL SPECIAL PROJECTS</b>						<b>\$5,822.24</b>

**GRAND TOTAL** **\$40,687.29**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Alder Joy**

Road:

**K to L**

Construction -	2+20	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.04	miles		0.00	miles		0.00	miles

**CONSTRUCTION:** CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist.	To W.A. (mi.)	Outslope/Ditch	Cost per Station	=		
0+00		2+20	30%				\$191	=	\$420.20	
									<b>TOTAL</b>	<b>\$420.20</b>

**ROCK**

0+00	to	2+20	120	cy. of	Crushed	@	\$17.54 per c.y.=	\$2,104.80	
Landing Rock		2+20	70	cy. of	Crushed	@	\$17.54 per c.y.=	\$1,227.80	
Junction Rock		0+00	30	cy. of	Crushed	@	\$17.50 per c.y.=	\$525.00	
								<b>TOTAL ROCK</b>	<b>\$3,857.60</b>

**SPECIAL PROJECTS**

Construct landing -	1.00	@	\$250.00	each	\$250.00	
Grade and shape road -	2.20	stations @	\$15.50	per station	\$34.10	
Roll subgrade w/ vibratory roller prior to rocking -	2.20	stations @	\$13.20	per station	\$29.04	
Remove large stumps -	1.00	lump sum @	\$130.00		\$130.00	
Grass seed and fertilize -	0.10	acres @	\$220.00	per acre	\$22.00	
					<b>TOTAL SPECIAL PROJECTS</b>	<b>\$465.14</b>

**GRAND TOTAL** **\$4,742.94**

## SUMMARY OF CONSTRUCTION COST

Sale: Alder Joy

Road: M to I

Construction -	0+00	stations	Improvement -	249+00	stations	Reconstruction -	0+00	stations
	0.00	miles		4.72	miles		0.00	miles

**IMPROVEMENT: EXCAVATION -**

Excavate and endhaul roadway slide material  
and remove woody debris between stations 42+30 to 43+30

21.00 hrs. @ \$145.00 per hr. = \$3,480.00

**TOTAL EXCAVATION \$3,480.00**

**ROCK**

Spot Rock 90 cy. of

Crushed @ \$7.11 per c.y. =

\$639.90  
**TOTAL ROCK \$639.90**

**GRAND TOTAL \$4,119.90**

**ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY**

Pit:	Crushed	Location:	SE 1/4 NW 1/4 Sec.13 , T2S, R8W, W.M.
Sale:	Alder Joy	Road:	4290 c.y.
Swelt:	1.30	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	4290 c.y.
Drill Pct.:	70%	In Place Total:	3300 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, enhancing overburden to Waste Area, spread and compact.					\$6,450.00
Drill & Shoot:	\$2.50 /cu.yd.	x	2310 cu.yds.	=	\$5,775.00
Rip Rock:	\$1.90 /cu.yd.	x	990 cu.yds.	=	\$1,881.00
Push Rock:	\$0.70 /cu.yd.	x	4200 cu.yds.	=	\$2,940.00
Load Crusher:	\$0.70 /cu.yd.	x	4140 cu.yds.	=	\$2,898.00
Crush Rock:	\$2.35 /cu.yd.	x	4140 cu.yds.	=	\$9,729.00
Load Dump Truck:	\$0.70 /cu.yd.	x	4290 cu.yds.	=	\$3,003.00
			Subtotal		\$32,676.00

Move In/Set-up Crusher					\$1,866.00
Move In and set up Drill and Compressor	1	@	\$334.65	=	\$334.65
Move in Roller and Compactor	1	@	\$334.65	=	\$334.65
Move in Grader	1	@	\$118.63	=	\$118.63
Move in D-8	1	@	\$544.80	=	\$544.80
Move in Loader	1	@	\$424.87	=	\$424.87
Move in Excavator	1	@	\$598.82	=	\$598.82
Move in Trucks	4	@	\$104.23	=	\$416.92
Move in Water Truck	1	@	\$122.51	=	\$122.51
			Subtotal		\$4,761.85

Base Cost=	\$8.73	Per Cu.Yd.	<b>TOTAL PRODUCTION COSTS</b>	\$37,437.85
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Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B 0 1750 (Crushed)	4.60	2.45	8.73	15.78	960	\$15,148.80
A to B Landing Rock (Crushed)	4.60	2.45	8.73	15.78	100	\$1,578.00
E to F 0 940 (Crushed)	6.23	2.45	8.73	17.41	550	\$9,575.50
E to F Landing Rock (Crushed)	6.23	2.45	8.73	17.41	100	\$1,741.00
G to H 0 1370 (Crushed)	6.48	2.45	8.73	17.66	750	\$13,245.00
G to H Landing Rock (Crushed)	6.48	2.45	8.73	17.66	100	\$1,766.00
I to J 0 2500 (Crushed)	6.61	2.45	8.73	17.79	1360	\$24,194.40
K to L 0 220 (Crushed)	6.36	2.45	8.73	17.54	120	\$2,104.80
K to L Landing Rock (Crushed)	6.36	2.45	8.73	17.54	70	\$1,227.80
K to L Junction Rock (Crushed)	6.32	2.45	8.73	17.50	30	\$525.00
M to I Spot Rock (Crushed)	6.41	0.70	0.00	7.11	90	\$639.90
Point N Blocking (Riprap)	2.26	1.40	8.73	12.39	60	\$743.40
			Total C.Y.	4290	Sub Total	\$72,489.60

<b>TOTAL ROCKING COSTS</b>	\$72,489.60
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## Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Alder Joy**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
24.0	Pavement	30
4.1	Main Lines	7
3.1	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
1	Brush Cutter	\$383.53		\$4.00	0.00	0.00	0	\$0.00	\$383.53
1	Excavators (Large)	\$617.22	1	\$44.80	0.00	0.00	4	\$179.20	\$796.42
1	Tractor (D8)	\$581.60	2	\$15.10	0.00	0.00	4	\$66.46	\$648.06
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
1	Water Truck (2500 Gal)	\$122.51		\$2.85	0.00	0.00	0	\$0.00	\$122.51
<b>TOTAL MOVE-IN COSTS:</b>								<b>\$2,334.52</b>	



"STEWARDSHIP IN FORESTRY"

# Alder Joy

## Volume Summary

Area 1-Modified Clear-cut				
11 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Defect and Breakage	Adj Net Vol MBF
Douglas-fir	4.0	44	5.0%	42
Red Alder	0.9	10	10.0%	9
<b>TOTAL</b>	<b>4.9</b>	<b>54</b>	<b>5.6%</b>	<b>51</b>

Area 2-Modified Clear-cut				
92 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Defect and Breakage	Adj Net Vol MBF
Douglas-fir	8.8	810	5.0%	769
Red Alder	0.9	87	10.3%	78
<b>TOTAL</b>	<b>9.7</b>	<b>897</b>	<b>5.6%</b>	<b>847</b>

Area 3-Modified Clear-cut				
100 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Defect and Breakage	Adj Net Vol MBF
Douglas-fir	9.4	944	5.0%	897
Red Alder	9.3	927	10.0%	835
<b>TOTAL</b>	<b>18.7</b>	<b>1871</b>	<b>7.4%</b>	<b>1732</b>

Area 4-Modified Clear-cut				
97 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Defect and Breakage	Adj Net Vol MBF
Douglas-fir	13.6	1318	5.4%	1246
Red Alder	3.9	383	12.4%	336
<b>TOTAL</b>	<b>17.5</b>	<b>1701</b>	<b>7.0%</b>	<b>1582</b>

Area 5-Modified Clear-cut				
2 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Defect and Breakage	Adj Net Vol MBF
Douglas-fir	14.5	29	5.5%	27
Red Alder	3.9	8	12.4%	7
<b>TOTAL</b>	<b>18.4</b>	<b>37</b>	<b>8.1%</b>	<b>34</b>

TOTAL SALE VOLUME			302 acres	
SPECIES	Gross Vol. (MBF)	Adjusted Net Vol. (MBF)		
Douglas-fir	3145	2981		
Red Alder	1415	1265		
<b>TOTAL</b>	<b>4560</b>	<b>4246</b>		



# OREGON DEPARTMENT OF FORESTRY CRUISE REPORT *Alder Joy*

## 1. Type of Sale

Regeneration harvest, Recovery

## 2. Legal Description

Portions of Sections 13, 14, 22, 23, and 24, T2S, R8W, W.M. Tillamook County, Oregon

## 3. Sale Acreage

Sale acreage was determined by GPS and orthophotographs along with GIS.

	Gross Acres	Net Acres
Area 1 (Modified Clearcut)	13	11
Area 2 (Modified Clearcut)	106	92
Area 3 (Modified Clearcut)	111	100
Area 4 (Modified Clearcut)	103	97
Area 5 (Modified Clearcut)	2	2

### Gross Acres

Area within the Timber Sale Boundary signs.

### Net acres

*Used for calculating the advertised volume.*

Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in ODF's LMCS inside the sale boundary.

## 4. Cruising Procedures

### A. Cruise Method

A total of 88 plots were sampled on all sale areas. Plots were placed on a rectangular grid pattern with varying distances between plots and cruise lines. All conifers 8 inches DBH and greater containing 20 net board feet and all hardwoods 9 inches DBH and greater containing 30 net board feet were sampled for tree species, DBH, form factor, merchantable height, visible defect and grade.

All diameters were measured outside bark to the nearest inch. Merchantable heights were recorded to the nearest foot. Area 4 cruise data was applied to Area 5 (heliport location) because they were similar timber types.

Cruise Layout			
Area	Plot Spacing (ft)	Line Spacing (ft)	# of plots
1	200	350	4
2	200	350	31
3	200	600	35
4	350	700	18
5	Used Area 4 cruise data		

## B. Plot size

All plots were variable radius using a BAF of 27.78 for all species and the point of tree observation was 4.5 feet.

## C. Grading System

Tree heights were measured to a 6" merchantable top of conifers and 7" for hardwoods. All measurements were outside bark. Species were graded using Columbia River Log Scaling and Grading Bureau rules favoring a 40' log in the conifer species.

## 5. Computation Procedure

The volumes and statistics for the timber cruise were computed using SuperACE 2004, developed by Atterbury Consultants, Inc. The coefficient of variation and standard error for the cruise based on net board feet per acre is shown in the table below:

Area	C.V. (%)	S.E. (%)
1	119.4	68.2
2	63.1	11.3
3	35.9	6.1
4	44.1	10.7
5	44.1	10.7
<b>Total</b>	<b>85.3</b>	<b>8.3</b>

## 6. Hidden Defect and Breakage

A hidden defect and breakage reduction of 5% and 10% board foot volume was applied to conifers and hardwoods respectively. This was in addition to visual defect deducted during the cruise.

## 7. Timber Description

The entire area was burned in the 1939 Saddle Mountain and 1951 North Fork Fires. The sale area is predominantly Douglas-fir and alder with scattered hemlock and big leaf maple. All sale areas except Area 3 were precommercially thinned in 1990.

- Area 1 was seeded in 1957-58 and again in the 1962-63.
- Area 2 was planted in the 1957-58 and seeded in the 1966-67. About 80% of the area was sprayed to control alder in the 1970's resulting in trees with multiple

tops and short merchantable bole heights.

- Area 3 was seeded in the 1957-58 and received no further management.
- Area 4 received two planting regimes, about 2/3rds of the area was seeded in 1957-58 and again in 1965-66, and the remaining 1/3 of the area was planted in 1957-58 and seeded in 1962-63.
- Area 5 was seeded in 1957-58 and again in 1961-62

	Ave. Take tree DBH (in)	Ave. Merch Ht.(ft)
<b>Area 1</b>		
Douglas-fir (84%)	13.7	55
Alder (16%)	13.9	30
<b>Area 2</b>		
Douglas-fir (91%)	14.6	52
Alder (9%)	10.9	23
<b>Area 3</b>		
Douglas-fir (52%)	14.7	66
Alder (48%)	12.4	49
<b>Areas 4 and 5</b>		
Douglas-fir (80%)	14.5	66
Alder (20%)	14.6	61

## 8. Cruiser Names/Dates

Areas 1, 2, and 3 were cruised by ODF personnel between August 2007 and May 2008, Area 4 was cruised by contract in January 2011.

## 9. Revenue Distribution

FDF 100%

Tax Code: 9-1

Deed Numbers: 169, 230

## 10. Attachments

Volume Summary

Stand Tables

Log Stock Tables

Logging Plan

## 11. Stand and Log Stock Tables Species Key

DL – Douglas-fir leave

DF – Douglas-fir take

NF – Noble fir leave  
RA – Red alder take  
WH – Western hemlock leave  
BM – Big leaf maple leave

TC		Stand Table Summary															
TSTNDSUM		Project ALDERJOY															
T02S R08W S24 TSALE											T02S R08W S24 TSALE						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:									
02S	08W	24	AREA 5	SALE	2.00	18	98	1	Date:	09/12/2011							
								Time:	7:57:10AM								
Spc	S T	Sample			Av			Average Log		Net			Totals				
		DBH	Trees	16'	FF	Ht	Tot	Trees/	BA/	Logs	Net	Net	Tons/	Cu.Ft.	Net	Tons	Cunits
							Acres	Acres	Acres	Cu.Ft.	Bd.Ft.	Acres	Acres	Acres			
DF		9	1	88	59		3.493	1.54	3.49	7.8	28.5	.77	27	100	2	1	0
DF		10	3	88	70		8.489	4.63	11.32	8.2	35.6	2.63	92	403	5	2	1
DF		11	5	87	87		11.693	7.72	21.05	10.1	42.2	6.07	213	889	12	4	2
DF		12	9	88	86		17.685	13.89	31.44	12.2	47.5	10.94	384	1,493	22	8	3
DF		13	3	90	95		5.160	4.63	10.32	14.0	55.5	4.12	144	572	8	3	1
DF		14	7	90	94		10.106	10.80	20.21	16.7	63.1	9.64	338	1,276	19	7	3
DF		15	8	87	98		10.012	12.35	20.02	20.7	78.9	11.85	415	1,580	24	8	3
DF		16	7	90	91		7.737	10.80	15.47	23.2	89.6	10.23	359	1,386	20	7	3
DF		17	9	90	96		8.812	13.89	20.56	23.5	91.8	13.78	483	1,888	28	10	4
DF		18	5	87	92		4.367	7.72	8.73	29.8	103.6	7.42	260	904	15	5	2
DF		19	8	87	103		6.279	12.35	13.34	32.7	119.1	12.42	436	1,588	25	9	3
DF		20	2	88	101		1.415	3.09	2.83	39.8	137.7	3.21	113	390	6	2	1
DF		21	3	88	103		1.925	4.63	5.13	34.5	131.8	5.04	177	677	10	4	1
DF		22	1	89	108		.585	1.54	1.75	33.4	139.3	1.67	58	244	3	1	0
DF		23	2	83	86		1.070	3.09	1.60	36.8	145.7	1.68	59	234	3	1	0
DF		Totals	73	88	90		98.827	112.66	187.29	19.0	72.7	101.47	3,560	13,625	203	71	27
RA		10	1	87	104		2.830	1.54	2.83	14.6	54.0	1.14	41	153	2	1	0
RA		11	1	87	103		2.339	1.54									
RA		12	1	94	52		1.965	1.54									
RA		13	5	86	97		8.273	7.72	16.55	15.3	51.2	6.95	253	847	14	5	2
RA		14	3	87	92		4.331	4.63	7.22	18.6	68.4	3.68	134	494	7	3	1
RA		15	2	85	82		2.515	3.09	5.03	18.4	65.2	2.55	93	328	5	2	1
RA		16	2	86	89		2.211	3.09	3.32	30.2	108.0	2.76	100	358	6	2	1
RA		17	1	81	106		.979	1.54	1.96	32.0	108.0	1.72	63	211	3	1	0
RA		18	1	86	69		.873	1.54	1.75	21.8	72.0	1.05	38	126	2	1	0
RA		19	1	91	75		.784	1.54	.78	51.1	180.0	1.10	40	141	2	1	0
RA		20	4	83	90		2.830	6.17	4.95	40.0	128.6	5.45	198	637	11	4	1
RA		21	1	82	105		.642	1.54	1.28	47.5	130.5	1.68	61	167	3	1	0
RA		Totals	23	86	91		30.571	35.50	45.67	22.4	75.8	28.07	1,021	3,462	56	20	7
BM		15	1	85	65		1.258	1.54	2.52	14.9	55.0	1.00	38	138	2	1	0
BM		16	1	83	57		1.105	1.54	1.11	33.3	60.0	.97	37	66	2	1	0
BM		Totals	2	84	61		2.363	3.09	3.62	20.5	56.5	1.97	74	205	4	1	0
Totals			98	88	90		131.762	151.25	236.57	19.7	73.1	131.52	4655	17,291	263	93	35





Log Stock Table - MBF

Project: ALDERJOY

T02S R08W S24 TSALE

T02S R08W S24 TSALE

Twp Rge Sec Tract Type Acres Plots Sample Trees Page  
 02S 08W 24 AREA 5 SALE 2.00 18 98 2  
 Date 9/12/2011  
 Time 7:57:12AM

Spp	T	S	So	Gr	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+
RA		H	C		36		1	12.6	1	9.6					1							
RA		H	C		40		1	12.7	1	12.0					0	1						
RA		H	D		18		0	10.0	0	.9												
RA		H	D		19		0	10.0	0	.7												
RA		H	D		20		0	10.0	0	.9												
RA		H	D		22		0	10.0	0	2.3												
RA		H	D		23		0	10.0	0	1.8												
RA		H	D		25		0	10.0	0	1.3												
RA		H	D		27		0	10.0	0	1.2												
RA		H	D		28		0	10.0	0	3.0												
RA		H	D		30		0	10.0	0	1.9												
RA		H	D		32		0	10.0	0	1.7												
RA		H	D		33		0	10.0	0	2.8												
RA		H	D		36		1	10.0	1	15.1					0	0						
RA		H	D		39		0	10.0	0	1.1												
RA		H	D		40		2	13.1	2	21.9					0	1						
RA		Totals					8	12.4	7	20.0					2	2		2	2		0	
BM		H	UT		17		0		0	12.3					0							
BM		H	D		25		0	10.0	0	55.3					0							
BM		H	D		40		0	14.3	0	32.4					0							
BM		Totals					0	10.4	0	1.2					0			0				
Total All Species							37	7.0	35	100.0		4		6	7		9	6		2	0	

TC		TSTNDSUM		Stand Table Summary												
Project													ALDERJOY			
T02S R08W S24 TSALE										T02S R08W S24 TSALE						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
02S	08W	24	AREA 4	SALE	97.00	18	98	Date:	09/20/2011							
								Time:	10:31:30AM							
Spc	S T	Sample			Av			Average Log		Net			Totals			
		DBH	Trees	16'	FF	Ht	Tot	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Tons
DF		9	1	88	59	3.493	1.54	3.49	7.8	28.5	.77	27	100	75	26	10
DF		10	3	88	70	8.489	4.63	11.32	8.2	35.6	2.63	92	403	255	90	39
DF		11	5	87	87	11.693	7.72	21.05	10.1	42.2	6.07	213	889	589	207	86
DF		12	9	88	86	17.685	13.89	31.44	12.2	47.5	10.94	384	1,493	1,061	372	145
DF		13	3	90	95	5.160	4.63	10.32	14.0	55.5	4.12	144	572	399	140	56
DF		14	7	90	94	10.106	10.80	20.21	16.7	63.1	9.64	338	1,276	935	328	124
DF		15	6	88	98	7.497	9.26	14.99	20.5	79.1	8.77	308	1,186	851	298	115
DF		16	7	90	91	7.737	10.80	15.47	23.2	89.6	10.23	359	1,386	993	348	134
DF		17	9	90	96	8.812	13.89	20.56	23.5	91.8	13.78	483	1,888	1,336	469	183
DF		18	3	86	90	2.620	4.63	5.24	29.2	99.8	4.36	153	523	423	149	51
DF		19	8	87	103	6.279	12.35	13.34	32.7	119.1	12.42	436	1,588	1,205	423	154
DF		20	2	88	101	1.415	3.09	2.83	39.8	137.7	3.21	113	390	311	109	38
DF		21	3	88	103	1.925	4.63	5.13	34.5	131.8	5.04	177	677	489	172	66
DF		22	1	89	108	.585	1.54	1.75	33.4	139.3	1.67	58	244	162	57	24
DF		23	2	83	86	1.070	3.09	1.60	36.8	145.7	1.68	59	234	163	57	23
DF	Totals		69	88	89	94.566	106.49	178.76	18.7	71.9	95.34	3,345	12,849	9,248	3,245	1,246
RA		10	1	87	104	2.830	1.54	2.83	14.6	54.0	1.14	41	153	110	40	15
RA		11	1	87	103	2.339	1.54									
RA		12	1	94	52	1.965	1.54									
RA		13	5	86	97	8.273	7.72	16.55	15.3	51.2	6.95	253	847	674	245	82
RA		14	3	87	92	4.331	4.63	7.22	18.6	68.4	3.68	134	494	357	130	48
RA		15	2	85	82	2.515	3.09	5.03	18.4	65.2	2.55	93	328	247	90	32
RA		16	2	86	89	2.211	3.09	3.32	30.2	108.0	2.76	100	358	267	97	35
RA		17	1	81	106	.979	1.54	1.96	32.0	108.0	1.72	63	211	167	61	21
RA		18	1	86	69	.873	1.54	1.75	21.8	72.0	1.05	38	126	101	37	12
RA		19	1	91	75	.784	1.54	.78	51.1	180.0	1.10	40	141	107	39	14
RA		20	4	83	90	2.830	6.17	4.95	40.0	128.6	5.45	198	637	529	192	62
RA		21	1	82	105	.642	1.54	1.28	47.5	130.5	1.68	61	167	163	59	16
RA	Totals		23	86	91	30.571	35.50	45.67	22.4	75.8	28.07	1,021	3,462	2,723	990	336
DL		15	2	85	99	2.515	3.09	5.03	21.4	82.5	2.97	108	415	288	104	40
DL		18	2	88	96	1.747	3.09	3.49	30.7	115.0	2.95	107	402	286	104	39
DL	Totals		4	86	98	4.262	6.17	8.52	25.2	95.8	5.92	215	817	574	208	79
BM		15	1	85	65	1.258	1.54	1.26	23.6	90.0	.79	30	113	76	29	11
BM		16	1	83	57	1.105	1.54	1.11	33.3	60.0	.97	37	66	95	36	6
BM	Totals		2	84	61	2.363	3.09	2.36	28.1	76.0	1.76	66	180	171	64	17
Totals			98	88	90	131.762	151.25	235.32	19.7	73.5	131.09	4647	17,307	12,716	4,508	1,679

### Log Stock Table - MBF

Project: ALDERJOY

T02S R08W S24 TSALE

T02S R08W S24 TSALE

<b>Twp</b>	<b>Rge</b>	<b>Sec</b>	<b>Tract</b>	<b>Type</b>	<b>Acres</b>	<b>Plots</b>	<b>Sample Trees</b>	<b>Page</b>	<b>1</b>
02S	08W	24	AREA 4	SALE	97.00	18	98	Date	9/20/2011
								Time	10:33:04AM

Spp	T	S	So	Gr	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+
DF	C	CL	12																			
DF	C	CL	19																			
DF	C	CL	24																			
DF	C	2M	24	14	5.0	14	1.1							14								
DF	C	2M	32	17	9.1	16	1.3									16						
DF	C	2M	34	18	10.6	16	1.3										16					
DF	C	2M	36	72	5.8	68	5.5							32	36							
DF	C	2M	40	157	5.0	150	12.0							115	34							
DF	C	3M	20	18	5.0	17	1.4							17								
DF	C	3M	26	10	5.0	9	.7						9									
DF	C	3M	32	27	12.9	24	1.9						5	19								
DF	C	3M	36	104	5.9	98	7.9				48	39	12									
DF	C	3M	40	652	5.0	619	49.7				120	205	278	16								
DF	C	4M	12	2	5.0	2	.2				2											
DF	C	4M	13	1	5.0	1	.1				1											
DF	C	4M	14	4	5.0	4	.3				3	1										
DF	C	4M	16	1	5.0	1	.1				1											
DF	C	4M	17	10	5.0	10	.8				10											
DF	C	4M	18	5	5.0	5	.4				5											
DF	C	4M	19	15	5.0	14	1.1				14											
DF	C	4M	20	15	5.0	14	1.1				6	8										
DF	C	4M	22	5	5.0	5	.4				5											
DF	C	4M	24	7	5.0	6	.5				6											
DF	C	4M	25	3	5.0	3	.2				3											
DF	C	4M	26	28	5.0	26	2.1				26											
DF	C	4M	27	9	5.0	9	.7				9											
DF	C	4M	28	13	5.0	12	1.0				12											
DF	C	4M	29	6	5.0	5	.4				5											
DF	C	4M	30	15	5.0	14	1.1				14											
DF	C	4M	32	25	5.0	23	1.9				23											
DF	C	4M	34	8	5.0	7	.6				7											
DF	C	4M	35	4	5.0	4	.3				4											
DF	C	4M	36	11	5.0	10	.8				10											
DF	C	4M	38	20	5.0	19	1.5				19											
DF	C	4M	39	6	5.0	6	.5				6											
DF	C	4M	40	16	5.0	15	1.2				8	7										
DF	Totals			1,318	5.4	1,246	74.2				201	183	258	325	177	86	16					
RA	H	CL	14																			
RA	H	CL	15																			
RA	H	CL	16																			
RA	H	CL	20																			
RA	H	CL	21																			
RA	H	CL	36																			
RA	H	CL	40																			
RA	H	B	20	12	10.0	11	3.3									11						
RA	H	B	24	13	22.0	10	3.0								10							
RA	H	B	40	48	13.6	41	12.3								41							
RA	H	C	30	13	18.2	11	3.3							11								
RA	H	C	36	37	12.6	32	9.6							32								
RA	H	C	40	46	12.7	40	12.0							15	25							

TC TLOGSTVB

## Log Stock Table - MBF

Project: ALDERJOY

T02S R08W S24 TSALE

T02S R08W S24 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	2
02S	08W	24	AREA 4	SALE	97.00	18	98	Date	9/20/2011
								Time	10:33:04AM

Spp	S	So	Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches														
									T	rt	de	Len	MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15
RA	H	D		18	3	10.0	3	.9				3											
RA	H	D		19	2	10.0	2	.7				2											
RA	H	D		20	3	10.0	3	.9				3											
RA	H	D		22	9	10.0	8	2.3				8											
RA	H	D		23	7	10.0	6	1.8				6											
RA	H	D		25	5	10.0	4	1.3				4											
RA	H	D		27	5	10.0	4	1.2				4											
RA	H	D		28	11	10.0	10	3.0						10									
RA	H	D		30	7	10.0	6	1.9				6											
RA	H	D		32	6	10.0	6	1.7				6											
RA	H	D		33	10	10.0	9	2.8				9											
RA	H	D		36	56	10.0	51	15.1				24	12	15									
RA	H	D		39	4	10.0	4	1.1				4											
RA	H	D		40	85	13.1	74	21.9				4	55	14									
RA	Totals				383	12.4	336	20.0				83	77	88	76	11							
DL	C	2M		40	17		17	21.4						17									
DL	C	3M		40	48	2.5	47	59.3					13	34									
DL	C	4M		31	4		4	4.6			4												
DL	C	4M		33	5		5	6.2			5												
DL	C	4M		36	7		7	8.6			7												
DL	Totals				80	1.5	79	4.7			15		13	34	17								
BM	H	CL		17																			
BM	H	D		25	12	10.0	11	63.1						11									
BM	H	D		40	8	14.3	6	36.9				6											
BM	Totals				20	11.6	17	1.0				6		11									
Total All Species					1,801	6.8	1,679	100.0			216		273	349	458	270	97	16					



Stand Table Summary																	
TC TSTNDSUM		Project ALDERJOY															
T2S R8W S22 TSALE										T2S R8W S22 TSALE							
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees			Page:	2						
2S	8W	22	AREA 3	SALE	100.00	35	216			Date:	08/24/2011						
										Time:	1:17:55PM						
Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	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	
NF		Totals	2	90	117	.374	1.59										
Totals			216	84	77	166.429	171.44	297.18	18.1	66.6	150.63	5370	19,784	15,063	5,370	1,978	



TC TLOGSTVB

**Log Stock Table - MBF**  
Project: **ALDERJOY**

T2S R8W S22 TSALE

T2S R8W S22 TSALE

Twp Rge Sec Tract Type Acres Plots Sample Trees  
2S 8W 22 AREA 3 SALE 100.00 35 216

Page 2  
Date 8/24/2011  
Time 1:17:54PM

SPP	So	Gr	Log	Gross	% Def	Net	% Spc	Net Volume by Scaling Diameter in Inches												
								MBF	MBF	MBF	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29
DF	DO	4M	29	15	5.0	14	1.5		14											
DF	DO	4M	30	6	5.0	6	.6		6											
DF	DO	4M	31	6	5.0	5	.6		5											
DF	DO	4M	32	8	5.0	7	.8		7											
DF	DO	4M	33	13	5.0	12	1.3		12											
DF	DO	4M	34	6	5.0	6	.7		6											
DF	DO	4M	35	3	5.0	2	.3		2											
DF	DO	4M	36	4	5.0	4	.5		4											
DF	DO	4M	37	5	5.0	5	.5		5											
DF	DO	4M	40	9	5.0	8	.9		8											
DF	DO	4M	41	9	5.0	9	1.0		9											
DF	Totals			944	5.0	897	45.3		140	152	167	268	114	56						
DL	DO	2M	40	131		131	65.8					5	19	108						
DL	DO	3M	32	14		14	6.9				6	8								
DL	DO	3M	40	36		36	18.0			9	17	10								
DL	DO	4M	17	1		1	.3		1											
DL	DO	4M	22	4		4	2.0		1				3							
DL	DO	4M	23	1		1	.5		1											
DL	DO	4M	24	6		6	3.2		1				5							
DL	DO	4M	28	4		4	2.1							4						
DL	DO	4M	29	1		1	.3		1											
DL	DO	4M	40	2		2	.9			2										
DL	Totals			200		200	10.1		5	11	23	17	13	23	108					
WH	DO	2M	40	9	5.0	8	17.6						8							
WH	DO	3M	32	9	5.0	8	17.6			8										
WH	DO	3M	38	9	5.0	8	17.6			8										
WH	DO	3M	40	19	5.0	18	39.1			9		9								
WH	DO	4M	17	3	5.0	3	5.9			3										
WH	DO	4M	26	1	5.0	1	2.2			1										
WH	Totals			50	5.0	47	2.4			30		9	8							
Total All Species				2,121	6.7	1,978	100.0		144	598	406	469	169	85	108					



TC		TSTNDSUM		Stand Table Summary												
Project														ALDERJOY		
T2S R8W S14 TSALE										T2S R8W S14 TSALE						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees			Page:	1					
2S	8W	14	AREA 2	SALE	92.00	31	113			Date:	08/24/2011					
										Time:	1:15:17PM					
Spc	S T	DBH	Sample Trees	FF 16'	Av. Ht Tot	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
DF		8	2	88	32	5.134	1.79	5.13	4.1	23.7	.61	21	122	56	20	11
DF		9	1	88	33	2.561	1.13	2.56	5.6	19.0	.41	14	49	37	13	4
DF		10	3	84	69	6.208	3.39	6.21	11.4	46.2	2.02	71	287	185	65	26
DF		11	6	84	76	10.394	6.86	16.32	10.1	42.6	4.68	164	695	431	151	64
DF		12	4	83	76	5.700	4.48	9.12	12.2	42.7	3.17	111	390	292	102	36
DF		13	3	85	58	3.605	3.32	4.98	13.4	43.6	1.90	67	217	175	61	20
DF		14	11	82	72	12.078	12.91	18.73	17.3	51.6	9.23	324	966	849	298	89
DF		15	4	83	76	2.921	3.58	4.38	22.7	66.5	2.84	100	291	261	92	27
DF		16	8	84	81	6.681	9.33	13.36	20.9	69.9	7.95	279	934	731	256	86
DF		17	7	83	86	4.821	7.60	9.64	24.4	81.3	6.71	236	783	618	217	72
DF		18	7	83	84	4.101	7.25	8.20	27.1	87.4	6.34	223	717	583	205	66
DF		19	10	81	83	5.881	11.58	11.76	30.7	97.3	10.28	361	1,144	946	332	105
DF		20	4	83	95	1.643	3.58	3.29	38.1	112.8	3.57	125	371	328	115	34
DF		21	4	86	90	1.490	3.58	2.98	39.9	128.2	3.39	119	382	312	109	35
DF		22	7	83	97	2.518	6.65	5.04	44.4	146.4	6.37	224	737	586	206	68
DF		23	3	83	90	.932	2.69	1.86	49.0	148.8	2.60	91	277	239	84	26
DF		Totals	84	84	73	76.668	89.72	123.57	20.5	67.7	72.07	2,529	8,363	6,630	2,326	769
DL		15	2	83	89	2.100	2.58	4.20	18.8	64.4	2.17	79	271	200	73	25
DL		24	3	83	88	.856	2.69	1.71	52.1	183.3	2.45	89	314	225	82	29
DL		25	2	81	90	.695	2.37	1.39	57.0	172.8	2.18	79	240	201	73	22
DL		26	1	80	69	.243	.90	.24	92.2	240.0	.62	22	58	57	21	5
DL		31	1	84	90	.171	.90	.34	87.9	335.0	.83	30	115	76	28	11
DL		32	1	77	93	.264	1.47	.53	94.7	310.0	1.37	50	164	126	46	15
DL		Totals	10	82	88	4.329	10.90	8.41	41.6	138.0	9.62	350	1,161	885	322	107
RA		9	4	35	30	27.193	12.01	27.19	.5	1.3	.35	13	37	32	12	3
RA		10	2	86	90	3.286	1.79	4.93	10.6	45.0	1.44	52	222	132	48	20
RA		12	2	89	39	2.282	1.79	2.28	13.0	45.0	.82	30	103	75	27	9
RA		13	2	82	61	1.944	1.79	2.92	15.7	48.0	1.25	46	140	115	42	13
RA		14	2	84	38	1.677	1.79	1.68	18.2	54.0	.84	30	91	77	28	8
RA		16	2	89	43	1.284	1.79	1.28	26.8	99.0	.94	34	127	87	32	12
RA		19	2	70	27	.910	1.79	.91	29.7	81.0	.74	27	74	68	25	7
RA		22	1	81	45	.505	1.33	.50	53.9	54.0	.75	27	27	69	25	3
RA		24	1	76	39	.285	.90	.29	58.8	45.0	.46	17	13	42	15	1
RA		26	1	82	46	.243	.90	.24	77.1	63.0	.52	19	15	47	17	1
RA		Totals	19	50	38	39.609	25.89	42.22	7.0	20.1	8.11	295	848	746	272	78
Totals			113	73	62	120.606	126.51	174.21	18.2	59.5	89.80	3174	10,372	8,261	2,920	954

Log Stock Table - MBF

Project: ALDERJOY

T2S R8W S14 TSALE

T2S R8W S14 TSALE

Twp Rge Sec Tract Type Acres Plots Sample Trees Page  
 2S 8W 14 AREA 2 SALE 92.00 31 113 1  
 Date 8/24/2011  
 Time 1:15:16PM

Spp	T	S	So	Gr	Log	Gross	% Def	Net	% Spc	Net Volume by Scaling Diameter in Inches												
										MBF	MBF	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
DF		DO	2M	30		5	5.0	4	.6						4							
DF		DO	2M	32		13	5.0	12	1.6						12							
DF		DO	2M	40		181	5.0	172	22.4						131	42						
DF		DO	3M	32		147	5.0	140	18.2			54	50	36								
DF		DO	3M	33		1	5.0	1	.2			1										
DF		DO	3M	35		2	5.0	1	.2			1										
DF		DO	3M	36		6	5.0	6	.7			6										
DF		DO	3M	38		7	5.0	7	.9			7										
DF		DO	3M	40		311	5.0	295	38.4			72	81	142								
DF		DO	4M	16		4	5.0	4	.5		4											
DF		DO	4M	17		8	5.0	8	1.0		8											
DF		DO	4M	18		10	5.0	9	1.2		9											
DF		DO	4M	19		5	5.0	4	.6		4											
DF		DO	4M	20		4	5.0	4	.5		4											
DF		DO	4M	21		6	5.0	6	.8		6											
DF		DO	4M	22		4	5.0	4	.5		4											
DF		DO	4M	23		9	5.0	9	1.1		9											
DF		DO	4M	24		24	5.0	23	3.0		21	2										
DF		DO	4M	26		10	5.0	10	1.2		8	2										
DF		DO	4M	27		11	5.0	11	1.4		11											
DF		DO	4M	28		3	5.0	3	.4		3											
DF		DO	4M	29		5	5.0	4	.6		4											
DF		DO	4M	30		9	5.0	8	1.1		8											
DF		DO	4M	31		2	5.0	2	.3		2											
DF		DO	4M	32		3	5.0	3	.3		3											
DF		DO	4M	33		7	5.0	6	.8		6											
DF		DO	4M	34		4	5.0	4	.5		4											
DF		DO	4M	35		2	5.0	2	.3		2											
DF		DO	4M	36		2	5.0	1	.2		1											
DF		DO	4M	38		1	5.0	1	.1		1											
DF		DO	4M	40		4	5.0	4	.5		4											
DF		Totals				810	5.0	769	80.6		126	145	132	177	147	42						
RA		DO	2M	14		14	10.0	12	15.9						6	6						
RA		DO	2M	20		1	10.0	1	1.0			1										
RA		DO	3M	12		10	10.0	9	11.1				4	5								
RA		DO	3M	29		4	10.0	3	4.4			3										
RA		DO	3M	32		17	10.0	15	19.8			8	7									
RA		DO	3M	36		6	10.0	5	6.8			5										
RA		DO	3M	38		3	10.0	3	3.2			3										
RA		DO	4M	6																		
RA		DO	4M	7																		
RA		DO	4M	14		3	10.0	3	3.5			3										
RA		DO	4M	15		2	10.0	2	2.1			2										
RA		DO	4M	17		4	10.0	3	4.3			3										
RA		DO	4M	32		6	13.9	5	6.7			5										
RA		DO	4M	37		6	10.0	6	7.3			6										
RA		DO	4M	39		2	10.0	1	1.8			1										
RA		DO	4M	42		11	10.0	10	12.2			10										
RA		Totals				87	10.3	78	8.2		41	16	4	5	6	6						

TC TLOGSTVB

**Log Stock Table - MBF**

Project: **ALDERJOY**

T2S R8W S14 TSALE

T2S R8W S14 TSALE

Twp Rge Sec Tract Type Acres Plots Sample Trees  
 2S 8W 14 AREA 2 SALE 92.00 31 113

Page 2  
 Date 8/24/2011  
 Time 1:15:16PM

Spp	T	S	So	Gr	Log	Gross	% Def	Net	% Spc	Net Volume by Scaling Diameter in Inches															
										MBF	MBF	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+		
DL		DO	2M	32	6			6	5.7						6										
DL		DO	2M	40	66			66	61.6						15	19	32								
DL		DO	3M	32	2			2	2.0																
DL		DO	3M	33	1			1	1.0																
DL		DO	3M	40	25			25	23.4						5	20									
DL		DO	4M	18	2			2	1.9			2													
DL		DO	4M	21	1			1	.7				1												
DL		DO	4M	30	1			1	1.1			1													
DL		DO	4M	32	3			3	2.6			3													
DL		Totals			107			107	11.2			6			6	23			15		25	32			
Total All Species					1,004	4.9		954	100.0			132			192	171			181	167	73	38			

TC		TSTINDSUM		Stand Table Summary															
Project														ALDERJOY					
T2S R8W S13 TSALE											T2S R8W S13 TSALE								
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:											
2S	8W	13	AREA 1	SALE	11.00	4	9	1											
								Date:	08/24/2011										
								Time:	1:10:26PM										
Spc	S	T	DBH	Sample Trees	FF	Av Ht	16'	Tot	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
DF			10	1	87	74			12.733	6.95	12.73	11.8	57.0	4.28	150	726	47	17	8
DF			13	1	87	94			7.535	6.95	7.53	22.7	85.5	4.87	171	644	54	19	7
DF			16	2	86	99			9.948	13.89	19.90	23.6	87.9	13.39	470	1,748	147	52	19
DF			18	1	83	87			3.930	6.95	7.86	27.9	85.5	6.25	219	672	69	24	7
DF			Totals		5	86	87		34.146	34.73	48.02	21.0	78.9	28.79	1,010	3,790	317	111	42
RA			9	1	52	44			15.720	6.95	15.72								
RA			16	1	83	50			4.974	6.95	4.97	31.1	54.0	4.25	154	269	47	17	3
RA			19	1	82	49			3.527	6.95	3.53	43.6	63.0	4.23	154	222	47	17	2
RA			24	1	86	54			2.211	6.95	2.21	68.6	135.0	4.17	152	298	46	17	3
RA			Totals		4	65	47		26.432	27.78	26.43	17.4	29.9	12.65	460	789	139	51	9
Totals					9	77	69		60.578	62.51	74.46	19.7	61.5	41.44	1470	4,580	456	162	50

TC TLOGSTVB

**Log Stock Table - MBF**

Project: **ALDERJOY**

**T2S R8W S13 TSALE**

**T2S R8W S13 TSALE**

<b>Twp</b>	<b>Rge</b>	<b>Sec</b>	<b>Tract</b>	<b>Type</b>	<b>Acres</b>	<b>Plots</b>	<b>Sample Trees</b>	<b>Page</b>	<b>1</b>
<b>2S</b>	<b>8W</b>	<b>13</b>	<b>AREA 1</b>	<b>SALE</b>	<b>11.00</b>	<b>4</b>	<b>9</b>	<b>Date</b>	<b>8/24/2011</b>
								<b>Time</b>	<b>1:10:24PM</b>

Spp	T	S	So	Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches									
										MBF	Def	MBF	SpC	2-3	4-5	6-7	8-9	10-11	12-13
DF		DO	3M	37		8	5.0	8	19.1			8							
DF		DO	3M	40		30	5.0	29	69.2				7	22					
DF		DO	4M	28		1	5.0	1	3.0		1								
DF		DO	4M	32		2	5.0	2	3.7		2								
DF		DO	4M	37		2	5.0	2	5.0		2								
DF		Totals				44	5.0	42	82.8		5	8	7	22					
RA		DO	4M	8															
RA		DO	4M	39		6	10.0	5	62.2			5							
RA		DO	4M	40		4	10.0	3	37.8					3					
RA		Totals				10	10.0	9	17.2			5		3					
Total All Species						54	5.9	50	100.0		5	13	7	25					

SALE: Alder Joy  
 ROCK QUANTITIES

TYPE OF ROCK	SIZE OF ROCK	COMPACTED DEPTH (in.)	SURFACED WIDTH (ft.)	LOCATION	APPROX. TOTAL TRUCK MEASURE VOLUME (CY)
Crushed	4"-0"	9	12	0+00 K to L to 2+20	110

**Crushed**  
 9 INCH LIFT

TURNAROUNDS (MODIFIED)		+00	to	2+20
NUMBER	DESCRIPTION	UNIT	QUANTITY	
0	30'X16' W/20' RADII RETURNS	TCY	0	
TURNOUTS		+00	to	2+20
NUMBER	DESCRIPTION	UNIT	QUANTITY	
0	8' WIDTH, 25' LONG, (2) 25' TRANSITIO	TCY	0	
CURVE WIDENING		+00	to	2+20
		UNIT	QUANTITY	
		TCY	10	

120

TOTAL	Crushed	9	INCH LIFT	TCY	120
TOTAL	Crushed		Stockpile	TCY	0
GRAND TOTAL:				TCY	120

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	ROAD SEGMENT Point to Point	STATION
1	18	30	I to J	4+90
2	18	30	I to J	17+80
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				

ROAD SEGMENT: A to B		STATIONS: 0+00 to 17+50						
Application	Rock Size and Type	Location	Compacted Depth	Volume (CY) per		Number of Units	Curve Widening (CY)	Approx. Total (CY)
Road Rock	Crushec 4"-0"	0+00 to 17+50	9 "	station	47.429	17.50	40	870
Turnouts	Crushec 4"-0"	A to B	9 "	TO	20	3		60
Turnarounds	Crushec 4"-0"	17+00	9 "	TA	30	1		30
Application	Rock Size and Type	Location	Approx. Total (CY)					
Landing Rock	Crushec 4"-0"	17+50	100					
ROAD SEGMENT: E to F		STATIONS: 0+00 to 9+40						
Application	Rock Size and Type	Location	Compacted Depth	Volume (CY) per		Number of Units	Curve Widening (CY)	Approx. Total (CY)
Road Rock	Crushec 4"-0"	0+00 to 9+40	9 "	station	47.872	9.40	30	480
Turnouts	Crushec 4"-0"	E to F	9 "	TO	20	2		40
Turnarounds	Crushec 4"-0"	8+00	9 "	TA	30	1		30
Application	Rock Size and Type	Location	Approx. Total (CY)					
Landing Rock	Crushec 4"-0"	9+40	100					
ROAD SEGMENT: G to H		STATIONS: 0+00 to 13+70						
Application	Rock Size and Type	Location	Compacted Depth	Volume (CY) per		Number of Units	Curve Widening (CY)	Approx. Total (CY)
Road Rock	Crushec 4"-0"	0+00 to 13+70	9 "	station	47.445	13.70	30	680
Turnouts	Crushec 4"-0"	G to H	9 "	TO	20	2		40
Turnarounds	Crushec 4"-0"	13+50	9 "	TA	30	1		30
Application	Rock Size and Type	Location	Approx. Total (CY)					
Landing Rock	Crushec 4"-0"	13+70	100					
ROAD SEGMENT: I to J		STATIONS: 0+00 to 25+00						
Application	Rock Size and Type	Location	Compacted Depth	Volume (CY) per		Number of Units	Curve Widening (CY)	Approx. Total (CY)
Road Rock	Crushec 4"-0"	0+00 to 25+00	9 "	station	47.600	25.00	60	1,250
Turnouts	Crushec 4"-0"	I to J	9 "	TO	20	4		80
Turnarounds	Crushec 4"-0"	25+00	9 "	TA	30	1		30
ROAD SEGMENT: K to L		STATIONS: 0+00 to 2+20						
Application	Rock Size and Type	Location	Compacted Depth	Volume (CY) per		Number of Units	Curve Widening (CY)	Approx. Total (CY)
Road Rock	Crushec 4"-0"	0+00 to 2+20	9 "	station	50.000	2.20	10	120
Application	Rock Size and Type	Location	Approx. Total (CY)					
Landing Rock	Crushec 4"-0"	2+20	70					
Junction Rock	Crushec 4"-0"	0+00	30					



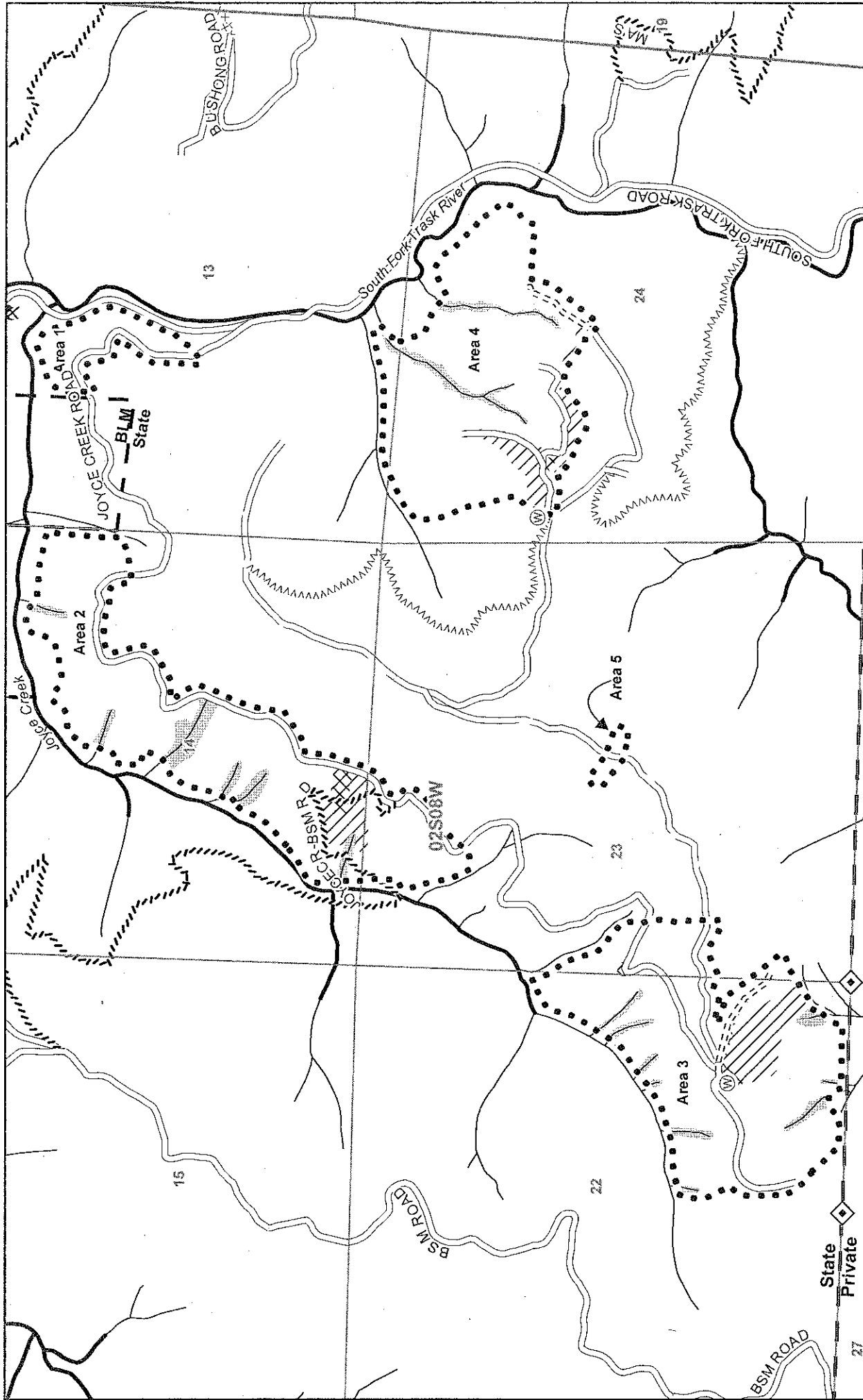
ROAD SEGMENT: M to I STATIONS: 0+00 to 249+00

Application	Rock Size and Type	Location	Approx. Total (CY)
Spot Rock	Crusher 2 1/2"-0"	*	90

ROAD SEGMENT: M to N

Application	Rock Size and Type	Location	Approx. Total (CY)
Blocking	Riprap 48"-24"	*	60

Rock Totals (CY):	
4"-0"	4,140
2 1/2"-0"	90
Rip Rap	60



**LOGGING PLAN**  
 Timber Sale Contract No. 341-12-037  
 ALDER JOY  
 Portions of Sections 13, 14, 22, 23 and 24  
 T2S, R8W, W.M.,  
 Tillamook County, Oregon

Tillamook District GIS  
 08/18/2011  
 This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.

1,000 0 1,000 Feet

Type of Operation		Acres	
Area	Operation	Gross	Net
1	Modified clearcut	13	11
2	Modified clearcut	106	92
3	Modified clearcut	111	100
4	Modified clearcut	103	97
5	Modified clearcut	2	2
<b>Total</b>		<b>335</b>	<b>302</b>

**Legend:**

- Rock source
- Stock pile
- Waste area
- Bridge
- Gate
- Survey corner
- Domestic water supply intake
- Truck turn-around
- Helicopter landing zone
- Helicopter
- Cultural site
- Landing
- Buffer
- Non-required thinning
- Cable yarding
- Ground yarding
- Helicopter yarding
- Downhill yarding
- Green tree retention area
- Restricted area
- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream
- Perennial Type-N stream
- Unsurfaced road
- Surfaced road
- Paved road
- Abandoned road
- Swing road
- Non-project road
- Blocked road
- OHV trail
- Non-motorized trail
- Transmission line
- Railroad