



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
Blackjack  
Sale 341-12-07

District: Forest Grove

Date: January 11, 2012

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**cost summary**

	<b>Conifer</b>	<b>Hardwood</b>	<b>Total</b>
<b>Gross Timber Sale Value</b>	\$1,092,696.96	\$9,322.04	\$1,102,019.00
		<b>Project Work:</b>	\$(127,525.00)
		<b>Advertised Value:</b>	\$974,494.00



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**timber description**

**Location:** Portions of Sections 4, 9, & 10, T1N, R6W, W.M., Tillamook County, Oregon.

**Stand Stocking:** 20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	17	0	98
Alder (Red)	12	0	98

Volume by Grade	2S	3S	4S	Camprur	Total
Douglas - Fir	1,844	1,288	264	0	3,396
Alder (Red)	0	0	0	26	26
Total	1,844	1,288	264	26	3,422



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comments: Pond Values Used: 4th Quarter Calendar Year 2011.

Western hemlock and Other Conifers Stumpage Price = Pond Value  
minus Logging Cost:  
 $\$236.64/\text{MBF} = \$415/\text{MBF} - \$178.36/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value  
minus Logging Cost:  
 $\$621.64/\text{MBF} = \$800/\text{MBF} - \$178.36/\text{MBF}$

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$4.00/Gallon

HAULING COST ALLOWANCE  
Hauling costs equivalent to \$740 daily truck cost.

Other Costs (with Profit & Risk to be added):  
Brand and Paint:  $3,422 \text{ MBF} \times \$1/\text{MBF} = \$3,422$   
Intermediate Supports:  $20 \text{ each} \times \$100/\text{support} = \$2,000$   
Total Other Costs (with Profit & Risk to be added) = \$5,422

Other Costs (No Profit & Risk added):  
Machine time to block/waterbar roads and skid trails:  
 $10 \text{ hours} \times \$110/\text{hr.} = \$1,100$   
Machine time to pile landing slash:  
 $10 \text{ hours} \times \$110/\text{hr.} = \$1,100$   
Slash Treatment:  $20 \text{ acres} \times \$150/\text{acre} = \$3,000$   
Equipment Cleaning:  $2 \text{ machines} \times \$1,000/\text{machine} = \$2,000$   
TOTAL Other Costs (No Profit & Risk added) = \$7,200

ROAD MAINTENANCE  
Move-in: \$1,000  
General Road Maintenance:  $10.2 \text{ miles} \times \$1,000/\text{mile} = \$10,200$   
Total = \$11,200  
Cost per MBF =  $\$11,200/3,422 \text{ MBF} = \$3.27/\text{MBF}$



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**logging conditions**

**combination#: 1** Douglas - Fir 69.00%  
Alder (Red) 69.00%

**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:** 8.0 **bd. ft / load:** 4,000  
**cost / mbf:** \$104.50

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

**combination#: 2** Douglas - Fir 31.00%  
Alder (Red) 31.00%

**yarding distance:** Short (400 ft) **downhill yarding:** No  
**logging system:** Shovel **Process:** Stroke Delimber  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 7.0 **bd. ft / load:** 4,000  
**cost / mbf:** \$51.37

**machines:** Stroke Delimber (B)



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**logging costs**

Operating Seasons:	1.00	Profit Risk:	15.00%
Project Costs:	\$127,525.00	Other Costs (P/R):	\$5,422.00
Slash Disposal:	\$0.00	Other Costs:	\$7,200.00

**Miles of Road**

Road Maintenance: \$3.27

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

**Hauling Costs**

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.0
Alder (Red)	\$0.00	2.0	3.4



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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>									
\$88.03	\$3.34	\$1.28	\$54.69	\$1.58	\$22.34	\$0.00	\$5.00	\$2.10	\$178.36
<b>Alder (Red)</b>									
\$88.03	\$3.34	\$1.28	\$96.52	\$1.58	\$28.61	\$0.00	\$5.00	\$2.10	\$226.46

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$500.12	\$321.76	\$0.00
Alder (Red)	\$0.00	\$585.00	\$358.54	\$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	3,396	\$321.76	\$1,092,696.96
Alder (Red)	26	\$358.54	\$9,322.04

**Gross Timber Sale Value**

Recovery: \$1,102,019.00

Prepared by: Eric Foucht

Phone: 503-359-7473

## TIMBER SALE SUMMARY

**Blackjack  
341-12-07**

1. **Type of Sale:** Modified clear cut, recovery, sealed bid auction
2. **Revenue Distribution:** 100% BOF, Tillamook County, Tax Codes 56 (2%) & 9-2 (98%)
3. **Sale Acreage:** Approximately 104 acres of modified clearcut. Acres were determined using ESRI Arcmap GIS software.
4. **Cruise:** The Timber Sale was cruised by ODF cruisers using variable radius plots. Volume estimates and plot data statistics were computed using SuperACE timber cruise software. For more information see the Cruise Report
5. **Volume:**

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir	Cruise Volume	1,882	1,314	269		3,465
	Hidden D&B	(38)	(26)	(5)	( )	(69)
	<b>Total</b>	<b>1,844</b>	<b>1,288</b>	<b>264</b>		<b>3,396</b>
	<i>% Total</i>	<i>54</i>	<i>38</i>	<i>8</i>		<i>100</i>

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Red alder	Cruise Volume				27	27
	Hidden D&B	( )	( )	( )	(1)	(1)
	<b>Total</b>				<b>26</b>	<b>26</b>
	<i>% Total</i>				<i>100</i>	<i>100</i>

6. **Timber Description:** The Sale Area is 60 year old stand of Douglas-fir with minor amounts of alder, grand fir and western hemlock. The DBH averages approximately 17 inches for Douglas-fir and 12 inches for red alder. Grand fir and western hemlock are reserved. The average net volume per acre is approximately 33 MBF.
7. **Topography and Logging Method:** This sale area is 31% ground based yarding and 69% cable yarding. The maximum yarding distance is approximately 1,000 feet horizontal distance, with an average yarding distance of about 400 feet. Slopes range from 10% to 55%.
8. **Access:** The access route consists of paved or gravel all-weather roads. From Forest Grove, proceed north on Highway 8 to its junction with Highway 6. Turn left, continue west approximately 9½ miles to the Beaverdam road and turn left. Continue approximately ¾ miles on Beaverdam road to its junction with University Falls Road and turn right. Proceed 2¼ miles on the University Falls Road to the Beaverdam Road, turn right and continue ½ miles to the BD-5 road. Turn right and continue 1¾ miles to the Beaverjack Road. Turn right and proceed ½ mile to the southeast corner of the Sale Area. To



access the western portion of the Sale Area, continue west on Highway 6 from the University Falls Road to the South Fork Wilson Road and turn left. Continue 2¾ miles to the Stage Road and turn left. Proceed approximately 1 mile to the southwest corner of the Sale Area. See Exhibit A “Vicinity Map” for additional access and haul route information.

**9. Projects:**

Project No. 1: 1.1 miles of road construction and 3 miles of road improvement:	\$54,107.50
Project No. 2: 4.1 miles of road surfacing:	\$44,795.62
Project No. 3: Fill Removal:	\$14,854.93
Project No. 4: Grass seed, fertilize, and mulch:	\$1,108.10
Project No. 5: Road vacating and trail restoration:	\$6,625.00
Move in and equipment cleaning:	\$6,031.49
<b>Total Credit for all Projects (rounded)</b>	<b>\$127,525.00</b>

**10. Other Costs:**

Other Costs with (P/R)

Brand and Paint: 3,422 MBF @ \$1.00/MBF	\$3,422.00
Intermediate Supports: 20 @ \$100.00	\$2,000.00
Total Other Costs with (P/R):	\$5,422.00

Other Costs (no P/R)

Blocking/Waterbarring skid roads: 10 Hours @ \$110.00/hour	\$1,100.00
Piling Landing Slash: 10 hours @ \$110.00/hour	\$1,100.00
Slash Treatment: 20 acres @ \$150.00/ acre	\$3,000.00
Equipment Cleaning: 2 machines @ 1000/machine	\$2,000.00
Total Other Costs (no P/R):	\$7,200.00

<b>Total Other Costs:</b>	<b>\$12,622.00</b>
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PROJECT COST SUMMARY SHEET

Timber Sale: Black Jack

Sale Number: 341-12-07

PROJECT NO. 1: ROAD CONSTRUCTION AND IMPROVEMENT

CONSTRUCTION

Road Segment	Length	Cost
B to C	12+40	\$2,999.28
D to E	38+00	\$32,828.49
F to G	2+90	\$884.03
H to I	3+55	\$1,104.79
K to L	2+00	\$793.40
	56+85 stations	
	1.08 miles	

SUBTOTAL CONSTRUCTION \$38,609.99

IMPROVEMENTS

Road Segment	Length	Cost
A to B	33+30	\$3,055.11
Z to A	96+00	\$622.20
J to K	28+34	\$11,820.20
	157+64 stations	
	2.99 miles	

SUBTOTAL IMPROVEMENTS \$15,497.51

TOTAL PROJECT NO. 1 COST = \$54,107.50

PROJECT NO. 2: SURFACING

Road Segment	Amount	Type	Cost
A to B	500 cy	3" - 0	\$4,355.00
B to C	679 cy	3" - 0	\$6,287.54
D to E	1,749 cy	3" - 0	\$16,580.52
D to E	100 cy	36" - 24"	\$918.00
F to G	272 cy	3" - 0	\$2,537.76
H to I	303 cy	3" - 0	\$2,826.99
J to K	711 cy	3" - 0	\$5,851.53
K to L	228 cy	3" - 0	\$1,876.44
Z to A	366 cy	1.5" - 0	\$2,239.92
Z to A	216 cy	3" - 0	\$1,321.92
Total	366 cy	1 1/2" - 0	
	4,658 cy	3" - 0	
	100 cy	36" - 24	

TOTAL PROJECT NO. 2 COST = \$44,795.62

PROJECT NO. 3: FILL REMOVAL

Fill removal at Point X \$14,854.93

TOTAL PROJECT NO. 3 COST = \$14,854.93

PROJECT NO. 4: GRASS SEED, FERTILIZE, & MULCH

Grass seed and fertilize areas of disturbed soil.

TOTAL PROJECT NO. 4 COST = \$1,108.10

PROJECT NO. 5: VACATING AND TRAIL RESTORATION

Vacate V1 to V2 \$2,840.00

Vacate V2 to V3 \$3,785.00

TOTAL PROJECT NO. 5 COST = \$6,625.00

MOVE IN & EQUIPMENT CLEANING \$6,031.49

TOTAL ALL PROJECTS \$127,522.64

TOTAL CREDITS \$127,525.00



SUMMARY OF CONSTRUCTION COST

Timber Sale: Black Jack Timber Sale No. : 341-12-07  
 Road Segment: B to C Construction : 12+40 stations  
0.23 miles

**PROJECT NO. 1**

EXCAVATION

Clearing and Grubbing (Scatter)	1.13	acres @	\$980.00	per acre =	\$1,107.40
Balanced Road Construction	12.40	sta @	\$90.00	per sta =	\$1,116.00
Construct Turnouts (1)	1	ea @	\$60.00	per ea =	\$60.00
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	12.40	sta @	\$28.70	per sta =	\$355.88
			TOTAL EXCAVATION COSTS=		\$2,999.28

**PROJECT NO. 1 TOTAL COST =** \$2,999.28

**PROJECT NO. 2:**

SURFACING

	8	" deep =	42 cy/sta		
B to C	521	cy of	3" - 0	@	\$9.26 per cy = \$4,824.46
Curve Widening	10	cy of	3" - 0	@	\$9.26 per cy = \$92.60
Turnaround	14	cy of	3" - 0	@	\$9.26 per cy = \$129.64
Turnout	14	cy of	3" - 0	@	\$9.26 per cy = \$129.64
Landing (1)	120	cy of	3" - 0	@	\$9.26 per cy = \$1,111.20
Total =	679	cy of	3" - 0		

**PROJECT NO. 2 TOTAL COST =** \$6,287.54

**PROJECT NO. 4:**

Grass seed and fertilize areas of disturbed soil.	0.57	acres @	\$220.00	per acre =	\$124.30
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**PROJECT NO. 4 TOTAL COST =** \$124.30

**TOTAL COST =** \$9,411.12

**SUMMARY OF CONSTRUCTION COST**

Timber Sale: Black Jack  
 Road Segment: D to E

Timber Sale No. : 341-12-07  
 Construction : 38+00 stations  
0.72 miles

**PROJECT NO. 1**

**EXCAVATION**

Clearing and Grubbing (Scatter)	3.49	acres @	\$1,176.00	per acre =	\$4,104.24
Balanced Road Construction	29.70	sta @	\$90.00	per sta =	\$2,673.00
Drift	2.70	sta @	\$150.00	per sta =	\$405.00
Road Widening (Drift)	5.60	sta @	\$90.00	per sta =	\$504.00
<b>FILL CONSTRUCTION (25+25)</b>					
Excavate & Drift	1,541	cy @	\$2.25	per cy =	\$3,467.25
Haul in fill Material (from fill vacate)	209	cy @	\$2.25	per cy =	\$470.25
Place Fill	3,010	cy @	\$2.12	per cy =	\$6,381.20
Compact Fill	3,010	cy @	\$0.45	per cy =	\$1,354.50
<b>Endhaul (26+80 to 31+50)</b>					
Excavate & Load	1,260	cy @	\$1.40	per cy =	\$1,764.00
Haul (to 25+25)	1,260	cy @	\$2.25	per cy =	\$2,835.00
Construct Turnouts (5)	5	ea @	\$60.00	per ea =	\$300.00
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	32.30	sta @	\$28.70	per sta =	\$927.01
Grade and Roll (Outslope)	5.70	sta @	\$27.20	per sta =	\$155.04
<b>TOTAL EXCAVATION COSTS=</b>					<b>\$25,700.49</b>

**CULVERTS - MATERIALS & INSTALLATION**

**Culverts**

182	LF of 18"	\$3,276.00
86	LF of 36"	\$3,698.00
		<u>\$6,974.00</u>

**Culvert Markers**

5 markers	<u>\$50.00</u>
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**Bands**

2 ea of 36" @	\$52.00	per ea =	<u>104.00</u>
			104.00

**TOTAL CULVERT COSTS = \$7,128.00**

**PROJECT NO. 1 TOTAL COST = \$32,828.49**

**PROJECT NO. 2:**

	8" depth = 42 cy/sta.				
<b>SURFACING</b>	6" depth = 31 cy/sta.				
D to E (0+00 to 25+00, 8")	1,050	cy of	3" - 0	@	\$9.48 per cy = \$9,954.00
D to E (25+00 to 38+00, 6")	403	cy of	3" - 0	@	\$9.48 per cy = \$3,820.44
Curve Widening	40	cy of	3" - 0	@	\$9.48 per cy = \$379.20
Turnouts (3) (8")	42	cy of	3" - 0	@	\$9.48 per cy = \$398.16
Turnouts (2) (6")	20	cy of	3" - 0	@	\$9.48 per cy = \$189.60
Landing (1)	120	cy of	3" - 0	@	\$9.48 per cy = \$1,137.60
Culvert Bedding	40	cy of	3" - 0	@	\$9.48 per cy = \$379.20
Turnaround	14	cy of	3" - 0	@	\$9.48 per cy = \$132.72
Fill Widening	20	cy of	3" - 0	@	\$9.48 per cy = \$189.60
Place Fill Armor	100	cy of	36" - 24"	@	\$9.18 per cy = \$918.00
Total =	1749	cy of	3" - 0		
	100	cy of	36" - 24"		
<b>PROJECT NO. 2 TOTAL COST =</b>					<b>\$17,498.52</b>

**PROJECT NO. 4:**

Grass seed and fertilize areas of disturbed soil.	1.75 acres @	\$220.00	per acre =	\$383.90	
Mulch	0.25 acres @	\$600.00	per acre =	\$150.00	
<b>PROJECT NO. 4 TOTAL COST =</b>					<b>\$533.90</b>

**TOTAL COST = \$50,860.91**



SUMMARY OF CONSTRUCTION COST

Timber Sale: Black Jack Timber Sale No. : 341-12-07  
 Road Segment: H to I Construction : 3+55 stations  
0.07 miles

**PROJECT NO. 1**

EXCAVATION

Clearing and Grubbing (Scatter)	0.33	acres @	\$980.00	per acre =	\$323.40
Balanced Road Construction	3.55	sta @	\$90.00	per sta =	\$319.50
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	3.55	sta @	\$28.70	per sta =	\$101.89
				TOTAL EXCAVATION COSTS=	\$1,104.79

**PROJECT NO. 1 TOTAL COST = \$1,104.79**

**PROJECT NO. 2:**

SURFACING

	8	" deep =	42 cy/sta		
H to I	149	cy of	3" - 0	@	\$9.33 per cy = \$1,390.17
Junction	20	cy of	3" - 0	@	\$9.33 per cy = \$186.60
Turnaround	14	cy of	3" - 0	@	\$9.33 per cy = \$130.62
Landing (1)	120	cy of	3" - 0	@	\$9.33 per cy = \$1,119.60
Total =	303	cy of	3" - 0		

**PROJECT NO. 2 TOTAL COST = \$2,826.99**

**PROJECT NO. 4:**

Grass seed and fertilize areas of disturbed soil. 0.17 acres @ \$220.00 per acre = \$36.30

**PROJECT NO. 4 TOTAL COST = \$36.30**

**TOTAL COST = \$3,968.08**

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Black Jack	Timber Sale No.:	341-12-07
Road Segment:	J to K	Improvement:	28+34 stations
			0.54 miles

**PROJECT NO. 1**

**EXCAVATION**

Clearing and Grubbing (Scatter)	1.30	acres @	\$980.00	per acre =	\$1,274.00
Road Widening (Drift)	20.75	sta @	\$90.00	per sta =	\$1,867.50
Corner construction (18+42 to 21+13)					
Excavate	1,200	cy @	\$2.45	per cy =	\$2,940.00
Push	800	cy @	\$0.75	per cy =	\$600.00
End-haul to Waste Area	400	cy @	\$2.60	per cy =	\$1,040.00
Place Fill	800	cy @	\$2.12	per cy =	\$1,696.00
Compact Fill	800	hr @	\$0.75	per cy =	\$600.00
Compact Waste Area	400	cy @	\$0.25	per cy =	\$100.00
Grade, Ditch, and Roll	21.00	sta @	\$28.70	per sta =	\$602.70
			<b>TOTAL EXCAVATION COSTS=</b>		<b>\$10,720.20</b>

**CULVERTS - MATERIALS & INSTALLATION**

Culverts					
60	LF of 18"	\$1,080.00			
		\$1,080.00			
Culvert Markers					
2	markers	\$20.00			
			<b>TOTAL CULVERT COSTS =</b>		<b>\$1,100.00</b>

**PROJECT NO. 1 TOTAL COST = \$11,820.20**

**PROJECT NO. 2:**

<b>SURFACING</b>	6	" deep =	31 cy/sta		
J to K (2+00 to 23+00)	651	cy of	3" - 0	@	\$8.23 per cy = \$5,357.73
Curve Widening	40	cy of	3" - 0	@	\$8.23 per cy = \$329.20
Junction	20	cy of	3" - 0	@	\$8.23 per cy = \$164.60
Total =	711	cy of	3" - 0		

**PROJECT NO. 2 TOTAL COST = \$5,851.53**

**PROJECT NO. 4:**

Grass seed and fertilize areas of disturbed soil.	0.65	acres @	\$220.00	per acre =	\$143.00
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**PROJECT NO. 4 TOTAL COST = \$143.00**

**TOTAL COST = \$17,814.73**





SUMMARY OF CONSTRUCTION COST

Timber Sale: Black Jack  
 Road Segment: Z to A (BD 5)

Timber Sale No.: 341-12-07  
 Improvement: 96+00 stations  
1.82 miles

**PROJECT NO. 1**

Grade, Ditch, and Roll	6.00	sta @	\$28.70	per sta =	\$172.20	
Construct/improve turnouts	6.00	ea @	\$75.00	per sta =	\$450.00	
				TOTAL EXCAVATION COSTS=	\$622.20	
				<b>PROJECT NO. 1 TOTAL COST =</b>	<b>\$622.20</b>	

**PROJECT NO. 2:**

SURFACING		6	" deep =	31 cy/sta		
Base Rock (0+00 to 6+00)	216	cy of	3" - 0	@	\$6.12 per cy =	\$1,321.92
Spot Rock	300	cy of	1 1/2" - 0	@	\$6.12 per cy =	\$1,836.00
Turnouts (6)	66	cy of	1 1/2" - 0	@	\$6.12 per cy =	\$403.92
Total =	366	cy of	1 1/2" - 0			
	216	cy of	3" - 0			
					<b>PROJECT NO. 2 TOTAL COST =</b>	<b>\$3,561.84</b>

**PROJECT NO. 4:**

Grass seed and fertilize areas of disturbed soil.	0.25	acres @	\$220.00	per acre =	\$55.00	
				<b>PROJECT NO. 4 TOTAL COST =</b>	<b>\$55.00</b>	

**TOTAL COST = \$4,239.04**

SUMMARY OF CONSTRUCTION COST

Timber Sale: Black Jack Timber Sale No. : 341-12-07  
 Road Segment: Point X

**PROJECT NO. 3**

**FILL REMOVAL**

Clearing and Grubbing (Scatter)	0.30	acres @	\$1,176.00	per acre =	\$352.80
Endhaul grubbing material	300	cy @	\$2.44	per yd. =	\$732.00

**FILL EXCAVATION**

Excavate existing fill	1772	cy @	\$1.95	per cy =	\$3,455.40
Endhaul fill material	2303	cy @	\$1.21	per cy =	\$2,786.63
Place waste	2303	cy @	\$1.95	per cy =	\$4,490.85
Compact waste	2303	cy @	\$0.75	per cy =	\$1,727.25
Pump culvert installation	1	day @	\$75.00	per hr =	\$75.00
Grade & Ditch (waste area) w/ excavator	5.00	hr @	\$165.00	per hr =	\$825.00
Grass seed and fertilize areas of disturbed soil.	0.50	acres @	\$220.00	per acre =	\$110.00
Mulch	0.50	acres @	\$600.00	per acre =	\$300.00

**TOTAL COST PROJECT NO. 3 = \$14,854.93**

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Black Jack	Timber Sale No. :	341-12-07
Road Segment:	V1 to V2	Vacate :	10+10 stations
			0.19 miles

**PROJECT NO. 5**

Road Vacating

Construct Waterbars	9.00	ea. @	\$25.00 per ea. =	\$225.00
Construct Tanktrap	1.00	ea. @	\$75.00 per ea. =	\$75.00
Remove culverts	2.00	ea. @	\$75.00 per ea. =	\$150.00
Prism obliteration and outslope road	8.00	hr. @	\$165.00 per hr. =	\$1,320.00
Fill narrowing	4.00	hr. @	\$165.00 per hr. =	\$660.00
Grass seed and fertilize areas of disturbed soil.	0.50	acres @	\$220.00 per acre =	\$110.00
Mulch	0.50	acres @	\$600.00 per acre =	\$300.00

PROJECT NO. 4 TOTAL COST = \$2,840.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Black Jack Timber Sale No.: 341-12-07  
Road Segment: V2 to V3 Vacate: 12+10 stations  
0.23 miles

**PROJECT NO. 5**

Vacating & Trail Restoration

Road Narrowing to 55" width	9.00	sta @	\$250.00	per sta =	\$2,250.00
Restore trail junctions	5.00	hr. @	\$165.00	per hr. =	\$825.00
Construct Waterbars	9.00	ea. @	\$25.00	per ea. =	\$225.00
Construct Tanktrap	1.00	ea. @	\$75.00	per ea. =	\$75.00
Grass seed and fertilize areas of disturbed soil.	0.50	acres @	\$220.00	per acre =	\$110.00
Mulch	0.50	acres @	\$600.00	per acre =	<u>\$300.00</u>

PROJECT NO. 5 TOTAL COST = \$3,785.00

## Move-In & Equipment Cleaning

Timber Sale: Black Jack  
 Sale Number: 341-12-07

LOWBOY HAUL (One-way)		
DIST. (mi)	ROAD	AVE SPEED (mph)
<b>7.0</b>	Main Lines	<b>7</b>
<b>0.0</b>	Steep Grades	<b>2</b>

No.	EQUIPMENT DESCRIPTION	Equipment Cleaning	Base Cost	Woods Cost	Pilot Cars	Area Move	Begin Mileage	End Mileage	Total Miles	Within		Total Cost
										Area Cost	Area Cost	
0	Drill & Compressor		\$0.00	\$0.00		\$46.00	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
0	Brush Cutter		\$0.00	\$0.00		\$4.00	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
1	Graders		\$300.00	\$180.00		\$3.65	0.00	4.00	4.00	\$14.60	\$0.00	\$494.60
0	Loader (Small)		\$0.00	\$0.00	1	\$3.55	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
1	Loader (Med. & Large)		\$414.39	\$258.75	1	\$9.00	0.00	0.00	0.00	\$0.00	\$0.00	\$673.14
1	Rollers (smooth/grid) & Compactors		\$308.59	\$201.25		\$5.00	0.00	4.00	4.00	\$20.00	\$0.00	\$529.84
0	Excavators (Small)	\$0	\$0.00	\$0.00		\$22.00	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
0	Excavators (Med.)	\$0	\$0.00	\$0.00		\$35.50	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
1	Excavators (Large)	\$1,000	\$466.14	\$289.80	1	\$44.80	0.00	1.00	1.00	\$44.80	\$0.00	\$1,800.74
0	Tired Backhoes/Skidlers	\$0	\$0.00	\$0.00		\$3.00	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
0	Tractors (D6)	\$0	\$0.00	\$0.00	2	\$7.10	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
0	Tractors (D7)	\$0	\$0.00	\$0.00	2	\$11.30	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
1	Tractor (D8)	\$1,000	\$473.80	\$271.40	2	\$15.10	0.00	1.00	1.00	\$15.10	\$0.00	\$1,760.30
3	Dump Truck (10 cy +)		\$350.00	\$210.00		\$2.85	0.00	4.00	4.00	\$34.20	\$0.00	\$594.20
0	Dump Truck (Off Hiway)		\$0.00	\$0.00	1	\$4.75	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
0	Water Truck (1500 Gal)		\$0.00	\$0.00		\$2.85	0.00	0.00	0.00	\$0.00	\$0.00	\$0.00
1	Water Truck (2500 Gal)		\$111.67	\$67.00		\$2.85	0.00	0.00	0.00	\$0.00	\$0.00	\$178.67
<b>TOTAL MOVE-IN COSTS:</b>											<b>\$6,031.49</b>	

**CRUISE REPORT**  
**Blackjack**  
**341-12-07**

**1. CRUISE DESIGN AND SAMPLING INTENSITY:**

The cruise design assumed a Coefficient of Variation (CV%) of 50%, an average stand diameter of 12 inches, a desired sampling error (SE%) of 11% and a minimum sample size of 100 grade trees. Pre-cruise plots indicated that 5 to 6 grade trees per plot, and the desired minimum sample size could be realized with 21 variable radius measure plots using a 40 BAF prism.

**2. SAMPLING METHOD AND SAMPLE SIZE:** 23 Plots were laid out on a 5 chain x 7.5 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain. 121 trees were measured and graded. This produced an acceptable cumulative sampling error of 9.2% on the Douglas-fir volume

**3. TREE MEASUREMENT AND GRADING:**

All (grade plot) sample trees were measured and graded following Columbia River Log Scale grade rules and favoring 40 foot segments.

All plot trees were measured and graded following Columbia River Log Scale grade rules and favoring 40 foot segments.

a) **Height Standards:**

Total tree heights were measured to the nearest foot. Bole heights were calculated to a six inch top.

b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.

c) **Form Factors** were measured for each grade tree using a form point of 16 feet.

**4. DATA PROCESSING**

a) **Volumes and Statistics**, Cruise and grown forward volume estimates, and sampling statistics, were derived from Super Ace 2008 cruise software.

b) **Deductions:** Two percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage.

**5. Cruisers:** The sale was cruised by ODF cruisers N. Agalzoff and M. Savage on September 24, 2011

Prepared by: \_\_\_\_\_

TC PSTATS		PROJECT STATISTICS								PAGE	1
		PROJECT				BLCKJACK				DATE	10/24/2011
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
01N	06	09	01	0001		104.00	23	121	S	W	
				TREES	ESTIMATED	PERCENT					
		PLOTS	TREES	PER PLOT	TREES	TREES					
TOTAL		23	121	5.3							
CRUISE		23	121	5.3	14,540	.8					
DBH COUNT											
REFOREST											
COUNT											
BLANKS											
100 %											
STAND SUMMARY											
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
DOUG FIR	116	131.7	16.8	101	49.3	201.7	33,654	33,314	7,749	7,749	
WHEMLOCK	2	3.0	14.5	94	0.9	3.5	499	499	123	123	
R ALDER	2	4.6	11.8	47	1.0	3.5	263	263	84	84	
GR FIR	1	.5	26.0	138	0.3	1.7	368	307	86	86	
<b>TOTAL</b>	<i>121</i>	<i>139.8</i>	<i>16.6</i>	<i>99</i>	<i>51.6</i>	<i>210.4</i>	<i>34,784</i>	<i>34,383</i>	<i>8,042</i>	<i>8,042</i>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	82.7	7.7		408	442	476					
WHEMLOCK	12.9	12.0		145	165	185					
R ALDER	122.6	114.8			150	322					
GR FIR											
<b>TOTAL</b>	<i>83.4</i>	<i>7.6</i>		<i>401</i>	<i>434</i>	<i>467</i>	<i>278</i>	<i>69</i>	<i>31</i>		
CL	68.1	COEFF	SAMPLE TREES - CF			# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	75.5	7.0		94	101	108					
WHEMLOCK	17.8	16.7		34	41	48					
R ALDER	125.0	117.0			49	107					
GR FIR											
<b>TOTAL</b>	<i>76.0</i>	<i>6.9</i>		<i>93</i>	<i>99</i>	<i>106</i>	<i>231</i>	<i>58</i>	<i>26</i>		
CL	68.1	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	86.2	18.4		108	132	156					
WHEMLOCK	332.2	70.8		1	3	5					
R ALDER	413.4	88.1		1	5	9					
GR FIR	479.6	102.2			0	1					
<b>TOTAL</b>	<i>87.2</i>	<i>18.6</i>		<i>114</i>	<i>140</i>	<i>166</i>	<i>317</i>	<i>79</i>	<i>35</i>		
CL	68.1	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	44.9	9.6		182	202	221					
WHEMLOCK	331.3	70.6		1	3	6					
R ALDER	331.3	70.6		1	3	6					
GR FIR	479.6	102.2			2	4					
<b>TOTAL</b>	<i>44.5</i>	<i>9.5</i>		<i>190</i>	<i>210</i>	<i>230</i>	<i>83</i>	<i>21</i>	<i>9</i>		
CL	68.1	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	43.2	9.2		30,249	33,314	36,379					
WHEMLOCK	331.4	70.6		147	499	851					
R ALDER	359.4	76.6		62	263	465					
GR FIR	479.6	102.2			307	620					



**PROJECT STATISTICS**  
**PROJECT BLCKJACK**

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
01N	06	09	01	0001	104.00	23	121	S	W	
CL	68.1		COEFF		NET BF/ACRE			# OF PLOTS REQ.	INF. POP.	
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
<b>TOTAL</b>			41.7	8.9	31,332	34,383	37,434	72	18	8



Log Stock Table - MBF

T01N R06W S09 Ty0001 104.00

Project: BLCKJACK  
Acres 104.00

Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches												
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+	
DF		2M	24	18		18	.5							18						
DF		2M	28	21		21	.6											21		
DF		2M	32	22		22	.6						22							
DF		2M	40	1,849	1.5	1,821	52.6						394	503	637	231	57			
DF		3M	26	12	10.5	11	.3							11						
DF		3M	30	2		2	.1				2									
DF		3M	32	18		18	.5					9		9						
DF		3M	36	36	3.2	35	1.0				35									
DF		3M	38	13		13	.4				13									
DF		3M	40	1,240		1,235	35.6				231	443	470	53	13	24				
DF		4M	12	10		10	.3				10									
DF		4M	14	8		8	.2				8									
DF		4M	16	17		17	.5				17									
DF		4M	18	23		23	.7				23									
DF		4M	20	17		17	.5				17									
DF		4M	22	28		28	.8				23		5							
DF		4M	23	1		1	.0			1										
DF		4M	24	14		14	.4				14									
DF		4M	26	24		24	.7				24									
DF		4M	28	9		9	.3				9									
DF		4M	30	47		47	1.3				47									
DF		4M	32	14		14	.4				14									
DF		4M	34	39		39	1.1				39									
DF		4M	36	19		19	.5				19									
DF		Totals		3,500	1.0	3,465	96.9			1	544	452	475	478	526	679	252	57		
WH		3M	40	42		42	81.7				20		22							
WH		4M	26	5		5	9.8				5									
WH		4M	28	4		4	8.5				4									
WH		Totals		52		52	1.5				9	20	22							
GF		2M	40	26	24.5	20	61.5							20						
GF		3M	34	2		2	7.7				2									
GF		3M	40	10		10	30.8						10							
GF		Totals		38	16.7	32	.9				2		10		20					
RA		2M	40	16		16	60.1						16							

**Log Stock Table - MBF**

T01N R06W S09 Ty0001 104.00

Project: **BLCKJACK**  
 Acres 104.00

S Spp	T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
RA		4M	18	8		8	29.9			8									
RA		4M	30	3		3	10.0			3									
RA		Totals		27		27	.8			11		16							
Total		All Species		3,618	1.2	3,576	100.0		1	567	472	497	504	526	698	252	57		

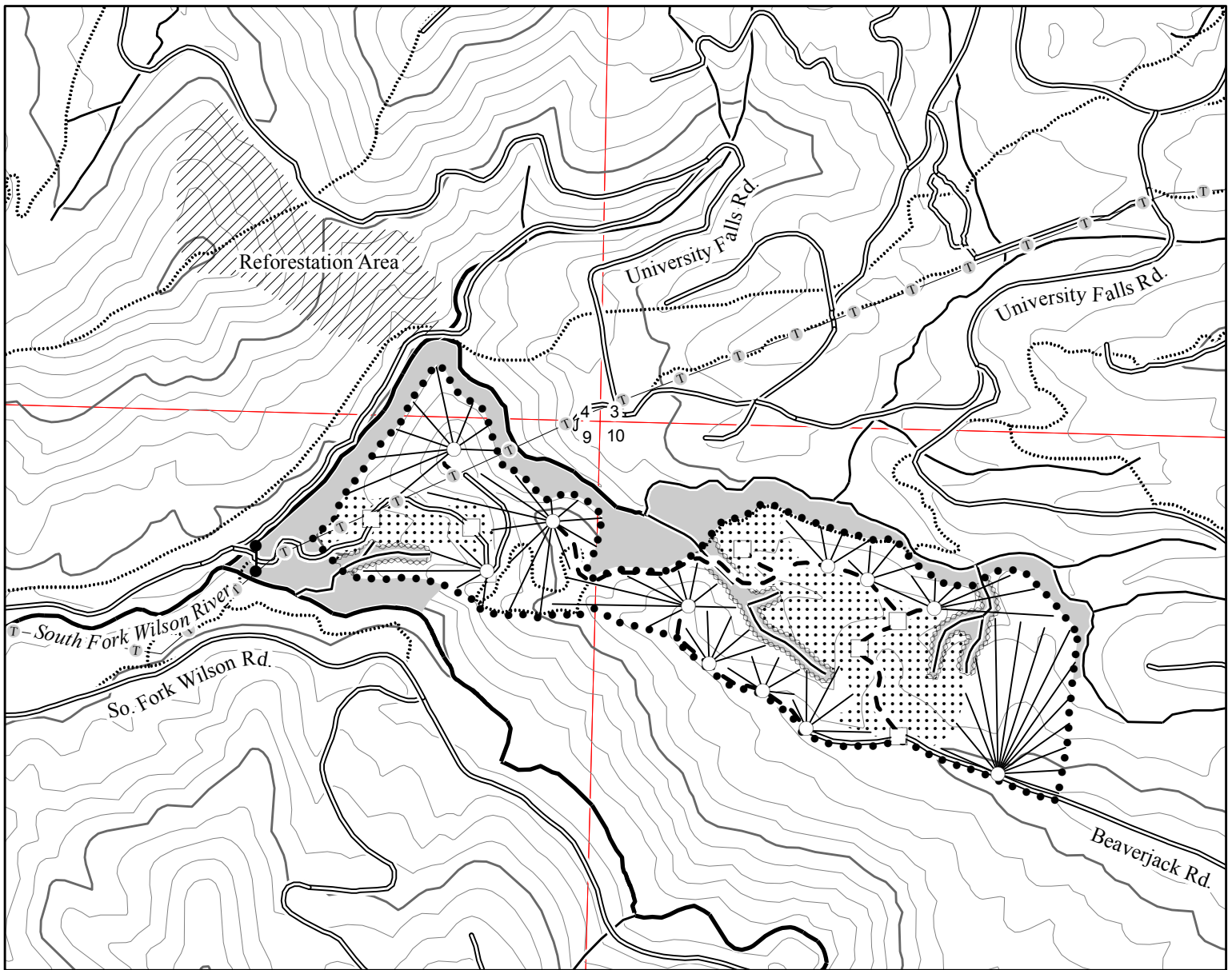
**Stand Table Summary**

T01N R06W S09 Ty0001 104.00

Project **BLCKJACK**  
Acres **104.00**

Time: **2:34:42PM**  
Grown Year:

S Spc T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
	DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DF	8	2	83	68	9.964	3.48	9.96	4.0	15.0	1.12	39	149	117	41	16
DF	9	3	84	72	11.810	5.22	11.81	7.7	36.7	2.60	91	433	271	95	45
DF	10	3	85	86	9.566	5.22	9.57	13.0	60.0	3.55	125	574	369	130	60
DF	11	3	85	70	7.906	5.22	7.91	14.5	60.0	3.27	115	474	340	119	49
DF	12	2	85	86	4.429	3.48	6.64	14.1	50.0	2.67	94	332	278	98	35
DF	13	5	86	99	9.434	8.70	18.87	14.7	59.0	7.93	278	1,113	825	289	116
DF	14	5	86	102	8.134	8.70	16.27	18.0	76.0	8.37	294	1,236	870	305	129
DF	15	8	87	106	11.337	13.91	22.67	21.9	92.5	14.12	496	2,097	1,469	515	218
DF	16	5	89	111	6.228	8.70	13.70	24.4	106.4	9.53	334	1,457	991	348	152
DF	17	6	88	112	6.620	10.43	15.45	27.0	112.9	11.87	416	1,743	1,234	433	181
DF	18	7	89	119	6.889	12.17	16.73	29.4	118.8	14.00	491	1,988	1,456	511	207
DF	19	7	88	116	6.183	12.17	15.90	31.2	121.7	14.12	496	1,934	1,469	515	201
DF	20	8	87	122	6.377	13.91	18.33	32.4	134.3	16.95	595	2,463	1,763	619	256
DF	21	6	88	124	4.338	10.43	12.29	37.2	162.4	13.02	457	1,996	1,354	475	208
DF	22	6	87	116	3.953	10.43	10.54	41.5	176.9	12.48	438	1,864	1,298	455	194
DF	23	6	87	115	3.617	10.43	9.64	43.2	190.6	11.87	416	1,838	1,234	433	191
DF	24	7	88	122	3.875	12.17	9.41	53.3	240.6	14.30	502	2,264	1,488	522	235
DF	25	7	87	122	3.571	12.17	10.20	49.1	214.0	14.29	501	2,184	1,486	521	227
DF	26	4	87	125	1.887	6.96	5.19	58.7	265.5	8.68	305	1,377	903	317	143
DF	27	3	86	128	1.312	5.22	3.50	67.1	297.5	6.69	235	1,041	696	244	108
DF	28	1	88	122	.407	1.74	1.22	61.6	276.7	2.14	75	338	223	78	35
DF	29	2	85	122	.758	3.48	2.27	61.1	261.7	3.96	139	595	412	145	62
DF	30	4	87	136	1.417	6.96	4.25	78.4	373.3	9.50	333	1,587	988	347	165
DF	31	2	84	143	.664	3.48	1.99	84.7	386.7	4.80	169	770	500	175	80
DF	32	2	86	115	.623	3.48	1.56	91.8	396.0	4.07	143	617	424	149	64
DF	40	2	84	144	.399	3.48	1.20	144.4	708.3	4.92	173	847	512	180	88
DF	Totals	116	86	101	131.697	201.74	257.08	30.1	129.6	220.85	7,749	33,314	22,968	8,059	3,465
WH	14	1	91	93	1.627	1.74	3.25	17.8	75.0	1.85	58	244	193	60	25
WH	15	1	87	95	1.417	1.74	2.83	22.9	90.0	2.08	65	255	216	68	27
WH	Totals	2	89	94	3.044	3.48	6.09	20.2	82.0	3.93	123	499	409	128	52
GF	26	1	82	138	.472	1.74	1.42	60.9	216.7	1.89	86	307	197	90	32
GF	Totals	1	82	138	.472	1.74	1.42	60.9	216.7	1.89	86	307	197	90	32
RA	9	1	78	40	3.937	1.74	3.94	5.7	20.0	.62	23	79	65	24	8
RA	22	1	82	86	.659	1.74	1.32	46.5	140.0	1.68	61	184	175	64	19
RA	Totals	2	79	47	4.595	3.48	5.25	16.0	50.1	2.31	84	263	240	87	27
Totals		121	86	99	139.808	210.43	269.84	29.8	127.4	228.98	8,042	34,383	23,814	8,364	3,576



## LOGGING PLAN

### Legend

- Timber Sale Boundary
- Roads
- New Construction
- ⋯ Recreation Trail
- Type F Stream
- Type N Stream
- Unposted Stream Buffer
- ▨ Posted Stream Buffer
- ⌚ Electric Transmission Lines
- Cable Landing
- Tractor Landing
- ⋯ Tractor Logging Area
- ◁ Cable Logging Area
- 400 Foot Contour Band
- 80 Foot Contour Band
- Sections
- Gate

FOR TIMBER SALE CONTRACT # 341-12-07  
 BLACKJACK  
 PORTIONS OF SECTIONS 4, 9, & 10, T1N, R6W, W.M.  
 TILLAMOOK COUNTY, OREGON

Forest Grove District GIS  
 November, 2011

This product is for informational use and may not be  
 suitable for legal, engineering, or surveying purposes.



### APPROXIMATE NET ACRES

CABLE	TRACTOR
72	32

1:12,000

1 inch = 1,000 feet

