



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Jack Flash
Sale 341-11-79

District: Tillamook

Date: April 08, 2011

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,012,677.12	\$56,193.86	\$1,068,870.98
		Project Work:	\$(201,500.00)
		Advertised Value:	\$867,370.98



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timber description

Location: Portions of Sections 10, 11, 12, 13, 14, and 15, T1N, R7W, W.M., Tillamook County, Oregon.

Stand Stocking: 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	20	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	1,558	1,483	235	0	0	3,276
Alder (Red)	18	8	0	0	0	88	104	218
Total	18	8	1,558	1,483	235	88	104	3,494



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comments: Pond Values Used: 1st Quarter Calendar Year 2011.

Western redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Costs
 $\$735/\text{MBF} = \$950/\text{MBF} - \$215/\text{MBF}$

Western Hemlock and Other Conifers Stumpage Price = Pond Value
minus Logging Costs
 $\$240/\text{MBF} = \$455/\text{MBF} - \$215/\text{MBF}$

Pulp (Conifer and Hardwood) Price = $\$55/\text{MBF}$
(See attached Pulp Appraisal sheet)

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

FUEL COST ALLOWANCE = $\$3.00/\text{Gallon}$

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

Other Costs (with Profit & Risk to be added):
Brand and Paint: $\$2/\text{MBF} \times 3,494 \text{ MBF} = \$6,988$
Truck Assist: 6 acres (west end Area 1) $\times 19.8 \text{ MBF/acre} \times \$20/\text{MBF}$
= $\$2,376$
TOTAL Other Costs (with Profit & Risk to be added) = $\$9,364$

Other Costs (No Profit & Risk added):
Slash Piling and Sorting: $\$2.50/\text{acre} \times 87 \text{ (cable) acres} = \218
Cover Material for Piles: $45 \text{ piles} \times \$5/\text{pile} = \$225$
Snag Creation: $\$10/\text{snag} \times 314 \text{ snags} = \$3,140$
Tank Trap un-surfaced roads:
Area 1: block access to 2 un-surfaced roads, $2 \times \$75 = \150
Area 2: block access to 2 un-surfaced roads, $2 \times \$75 = \150
Area 3: block access to 1 un-surfaced road, $1 \times \$75 = \75
Road Vacating:
Area 2: Pull fill, mulch, grass seed, move-in = $\$873$
Area 3: Pull 2 culverts, mulch, grass seed, walk equip from Area 2
= $\$1,271$
TOTAL Other Costs (No Profit & Risk added) = $\$6,102$

ROAD MAINTENANCE
Road Maintenance: Ben Smith Road, Jump Road, Archers Road, Lyda
Road, C-Line Road, South Fork Road
Interim grading: $\$250/\text{mile} \times 4.8 \text{ miles} \times 1 \text{ time} / 3,494 \text{ MBF} =$
 $\$0.34/\text{MBF}$
Interim grading: $\$250/\text{mile} \times 3.7 \text{ miles} \times 2 \text{ times} / 3,494 \text{ MBF} =$
 $\$0.53/\text{MBF}$
Spot rocking: $20\text{cy}/\text{mile} \times \$15/\text{cy} \times 3.5 \text{ MMBF} \times 8.5 \text{ miles} / 3,494$
 $\text{MBF} = \$2.55/\text{MBF}$
Compaction (185 stations $\times \$18/\text{station}$) + 111 move-in/ $3,494 \text{ MBF}$
= $\$0.98/\text{MBF}$
Final grading: $\$500/\text{miles} \times 8.5 \text{ miles} / 3,494 \text{ MBF} = \$1.22/\text{MBF}$



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Compact Ben Smith Road from Highway 6 to Jump Road
Interim grade 1 x Jump, Archers, Lyda, C-Line, and South Fork
Roads
Interim grade 2 x Ben Smith Road
TOTAL Road Maintenance: \$ 5.62/MBF



"STEWARDSHIP IN FORESTRY"

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logging conditions

combination#: 1 Douglas - Fir 56.42%
Alder (Red) 67.03%

yarding distance: Medium (800 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: 5.6 **bd. ft / load:** 3,600
cost / mbf: \$164.95

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

combination#: 2 Douglas - Fir 43.58%
Alder (Red) 32.97%

yarding distance: Medium (800 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:** 3,600
cost / mbf: \$57.07

machines: Stroke Delimber (B)



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logging costs

Operating Seasons:	2.00	Profit Risk:	12.00%
Project Costs:	\$201,500.00	Other Costs (P/R):	\$9,364.00
Slash Disposal:	\$0.00	Other Costs:	\$6,102.00

Miles of Road

Road Maintenance: \$5.62

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	3.8
Alder (Red)	\$0.00	3.0	3.0



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logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$117.94	\$5.90	\$2.51	\$57.56	\$2.68	\$22.39	\$0.00	\$5.00	\$1.75	\$215.73
Alder (Red)									
\$129.38	\$6.18	\$2.51	\$76.38	\$2.68	\$26.06	\$0.00	\$5.00	\$1.75	\$249.94

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$524.85	\$309.12	\$0.00
Alder (Red)	\$0.00	\$507.71	\$257.77	\$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	3,276	\$309.12	\$1,012,677.12
Alder (Red)	218	\$257.77	\$56,193.86

Gross Timber Sale Value

Recovery: \$1,068,870.98

Prepared by: David Wells

Phone: 503-842-2545

Pulp Appraisal

Sale Name	Jack Flash
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Species	Douglas-fir	Alder		
Stems Per/ac. ****	66	21		
Acres ***	157	157	0	
Total Stems	10362	3297	0	
BF/Stem, Conversion	10	10	10	
Total MBF Per/Species	104	33	0	
Pond Value Per/MBF	\$270	\$230	\$0	
*Logging + Hauling Costs	\$175.50	\$175.50	\$0.00	
Stumpage	\$94.50	\$54.50	\$0.00	
Tons Per/MBF, Conversion	10	10	10	
Price Per/Ton	\$9.45	\$5.45	\$0.00	
Total Tons Per/Species	1036	330	0	
Total Value	\$9,792.09	\$1,796.87	\$0.00	
Less P/R 35%	\$6,364.86	\$1,167.96	\$0.00	

	Total Price	Price/Ton	Price/MBF	
Total Price	\$11,588.96	\$8.48	\$84.84	
Total Less P/R 35%	\$7,532.82	\$5.51	\$55.15	**

Contract Price	\$55.00
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*Conifer logging & hauling cost based on the Douglas-fir price.

** Pulp price rounded down to nearest whole dollar

*** Areas 1, 2, and 3

**** Combination of Areas 1, 2, and 3



PROJECT SUMMARY SHEET

Sale: Jack Flash

CONSTRUCTION

Point	A to B	20+90	stations =	\$27,166.13
Point	C to D	7+95	stations =	\$3,775.37
Point	E to F	4+45	stations =	\$1,493.87
Point	I to J	12+95	stations =	\$9,184.20
Point	K to L	9+30	stations =	\$3,332.61
Point	M to N	11+60	stations =	\$3,279.54
Point	S to T	19+65	stations =	\$8,705.30
SUBTOTAL CONSTRUCTION				\$56,937.02

IMPROVEMENT

Point	G to H	2+75	stations =	\$7,714.63
Point	I to J	6+70	stations =	\$2,278.41
Point	O to P	1+60	stations =	\$118.92
Point	Q to R	158+40	stations =	\$79,142.68
Point	S to T	21+20	stations =	\$3,537.55
SUBTOTAL IMPROVEMENT				\$92,792.19

SPECIAL PROJECTS

Construct 2 1/2"-0" Stockpile	2,500 C Y	\$30,150.00
Construct 4"-0" Stockpile	1,500 C Y	\$18,090.00
Develop Stockpile Area	Lump Sum	\$725.00
SUBTOTAL SPECIAL PROJECTS		\$48,965.00

MOVE IN \$2,805.79

GRAND TOTAL \$201,500.00

SUMMARY OF CONSTRUCTION COST

Sale:

Jack Flash

Road:

A to B

Construction -	20+90	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0+40	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+40	45%			\$269	=	\$645.60
2+40		3+05	30%			\$191	=	\$124.15
3+05		4+50	65%			\$1,832	=	\$2,656.40
4+50		5+15	40%			\$243	=	\$157.95
5+15		6+05	60%			\$1,493	=	\$1,343.70
6+05		7+70	40%			\$243	=	\$400.95
7+70		8+35	45%			\$269	=	\$174.85
8+35		9+15	30%			\$191	=	\$152.80
9+15		9+80	30%			\$191	=	\$124.15
9+80		11+35	15%			\$107	=	\$165.85
11+35		11+65	25%			\$165	=	\$49.50
11+65		12+05	15%			\$107	=	\$42.80
12+05		13+55	35%			\$191	=	\$286.50
13+55		15+80	18%			\$129	=	\$290.25
15+80		18+35	10%			\$90	=	\$229.50
18+35		20+35	30%			\$191	=	\$382.00
20+35		20+90	15%			\$107	=	\$58.85
TOTAL								\$7,285.80

CULVERTS - MATERIALS & INSTALLATION

Culverts	30	LF of 18"	\$525.00	0	LF of 24"	\$0.00
			\$525.00			\$0.00
Culvert Stakes & Markers	1	stakes	\$8.00			\$8.00
			\$8.00			\$8.00
TOTAL CULVERTS						\$533.00

ROCK

0+00 to	15+40	830	cy. of	Crushed	@	\$16.43	per c.y.=	\$13,636.90
Junction Rock	0+00	20	cy. of	Crushed	@	\$16.19	per c.y.=	\$323.80
Bedding/Backfill	13+60	10	cy. of	Crushed	@	\$14.58	per c.y.=	\$145.80
TOTAL ROCK								\$14,106.50

SPECIAL PROJECTS

Construct Landings	3.00	@	\$250.00	per landing	\$750.00
Construct waste areas -	3.00	hours @	\$130.00	per hour	\$390.00
Drift material from 10+15 to 13+05	2.90	stations @	\$140.00	per station	\$406.00
Grade and shape road -	20.90	stations @	\$15.50	per station	\$323.95
Roll entire subgrade w/ vibratory roller & prior to rocking -	20.90	stations @	\$13.20	per station	\$275.88
Remove large stumps -	1.00	lump sum @	\$2,600.00		\$2,600.00
Grass seed and fertilize - Includes Waste Area	2.25	acres @	\$220.00	per acre	\$495.00
TOTAL SPECIAL PROJECTS					\$5,240.83

GRAND TOTAL **\$27,166.13**

SUMMARY OF CONSTRUCTION COST

Sale:

Jack Flash

Road:

C to D

Construction -	7+95 stations	Improvement -	0+00 stations	Reconstruction -	0+00 stations
	0.15 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		0+80	25%			\$165	=	\$132.00
0+80		2+10	10%			\$90	=	\$117.00
2+10		3+20	15%			\$107	=	\$117.70
3+20		4+40	25%			\$165	=	\$198.00
4+40		5+30	35%			\$191	=	\$171.90
5+30		6+20	25%			\$165	=	\$148.50
6+20		7+95	10%			\$90	=	\$157.50
TOTAL								\$1,042.60

ROCK

0+00	to	1+00	80	cy. of	Crushed	@	\$16.37 per c.y.=	\$1,309.60	
									TOTAL ROCK \$1,309.60

SPECIAL PROJECTS

Construct Landing -	1.00	@	\$250.00	each	\$250.00
Grade and shape road -	7.95	stations @	\$15.50	per station	\$123.23
Roll entire subgrade w/ vibratory roller & prior to rocking -	7.95	stations @	\$13.20	per station	\$104.94
Remove large stumps -	1.00	lump sum @	\$780.00		\$780.00
Grass seed and fertilize -	0.75	acres @	\$220.00	per acre	\$165.00
					TOTAL SPECIAL PROJECTS \$1,423.17

GRAND TOTAL \$3,775.37

SUMMARY OF CONSTRUCTION COST

Sale:

Jack Flash

Road:

E to F

Construction -	4+45	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.08	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		0+60	15%			\$107	=	\$64.20
0+60		1+85	20%			\$139	=	\$173.75
1+85		4+45	15%			\$107	=	\$278.20
TOTAL								\$516.15

SPECIAL PROJECTS

Drift material from 1+20 to 3+00	1.80	@	\$140.00	per station	\$252.00
Construct Landing -	1.00	@	\$250.00	each	\$250.00
Grade and shape road -	4.45	stations @	\$15.50	per station	\$68.98
Roll entire subgrade w/ vibratory roller	4.45	stations @	\$13.20	per station	\$58.74
Remove large stumps -	1.00	lump sum @	\$260.00		\$260.00
Grass seed and fertilize -	0.40	acres @	\$220.00	per acre	\$88.00
TOTAL SPECIAL PROJECTS					\$977.72

GRAND TOTAL **\$1,493.87**

SUMMARY OF CONSTRUCTION COST

Sale: Jack Flash

Road: G to H

Construction -	0+00	stations	Improvement -	2+75	stations	Reconstruction -	0+00	stations
	0.00	miles		0.05	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -
Scattering

	0.250	acres @	\$980.00	per acre =	\$245.00
TOTAL CLEARING AND GRUBBING					
\$245.00					

IMPROVEMENT: EXCAVATION -
Road Earthwork

	2.75	sta. @	\$10.00	per sta. =	\$27.50
TOTAL EXCAVATION					
\$27.50					

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>					
	0	LF of 18"	\$0.00	36	LF of 24" \$972.00
	0	LF of 30"	\$0.00	36	LF of 36" \$1,188.00
			\$0.00		
			\$0.00		

<u>Culvert Stakes & Markers</u>					
	2	stakes	\$16.00		
			\$16.00		

TOTAL CULVERTS \$2,176.00

ROCK

0+00 to	2+75	170	cy. of	Crushed	@	\$15.91	per c.y. =	\$2,704.70
Fill Armor	1+00/2+20	20	cy. of	Riprap	@	\$14.86	per c.y. =	\$297.20
Bedding/Backfill	1+00/2+20	20	cy. of	Crushed	@	\$14.06	per c.y. =	\$281.20
TOTAL ROCK								\$3,431.70

SPECIAL PROJECTS

Develop on Site Culvert Fill Material Site	3.00	hours @	\$145.00	per hour	\$435.00
Repair Outside Shoulder of Road	3.00	hours @	\$145.00	per hour	\$435.00
Grade and shape road -	2.75	stations @	\$15.50	per station	\$42.63
Roll subgrade w/ vibratory roller prior to rocking -	2.75	stations @	\$13.20	per station	\$36.30
Remove culverts from state lands	2.00	@	\$352.50	total	\$352.50
Grass seed and fertilize -	0.65	acres @	\$220.00	per acre	\$143.00
Mulching -	0.65	acres @	\$600.00	per acre	\$390.00
TOTAL SPECIAL PROJECTS					\$1,834.43

GRAND TOTAL \$7,714.63

SUMMARY OF CONSTRUCTION COST

Sale:

Jack Flash

Road:

I to J

Construction -	12+95 stations 0.25 miles	Improvement -	6+70 stations 0.13 miles	Reconstruction -	0+00 stations 0.00 miles
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CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	
6+70		7+60	10%			\$90	=	\$81.00
7+60		10+25	45%			\$269	=	\$712.85
10+25		12+00	60%			\$1,493	=	\$2,612.75
12+00		12+30	25%			\$165	=	\$49.50
12+30		13+75	60%			\$1,493	=	\$2,164.85
13+75		14+50	30%			\$191	=	\$143.25
14+50		15+50	20%			\$139	=	\$139.00
15+50		18+60	5%			\$74	=	\$229.40
18+60		19+65	20%			\$139	=	\$145.95
TOTAL								\$6,278.55

IMPROVEMENT: CLEARING AND GRUBBING -

Scattering	0.620	acres @	\$980.00	per acre =	\$607.60
TOTAL CLEARING AND GRUBBING					\$607.60

IMPROVEMENT: EXCAVATION -

Road Earthwork	6.70	sta. @	\$25.00	per sta. =	\$167.50
TOTAL EXCAVATION					\$167.50

ROCK

0+00 to	1+00	80	cy. of	Crushed	@	\$15.29	per c.y. =	\$1,223.20
Junction Rock	0+00	20	cy. of	Crushed	@	\$15.29	per c.y. =	\$305.80
TOTAL ROCK								\$1,529.00

SPECIAL PROJECTS

Drifting Material for Fill @ 12+20	1.00	stations @	\$140.00	per station	\$140.00
Construct waste areas -	3.00	hours @	\$145.00	per hour	\$435.00
Construct Landing	1.00	@	\$250.00	each	\$250.00
Grade and shape road -	19.65	stations @	\$15.50	per station	\$304.58
Roll entire subgrade w/ vibratory roller & prior to rocking -	19.65	stations @	\$13.20	per station	\$259.38
Remove large stumps -	1.00	lump sum @	\$1,040.00		\$1,040.00
Grass seed and fertilize - Includes Waste Area	2.05	acres @	\$220.00	per acre	\$451.00
TOTAL SPECIAL PROJECTS					\$2,879.96

GRAND TOTAL **\$11,462.61**

SUMMARY OF CONSTRUCTION COST

Sale:

Jack Flash

Road:

K to L

Construction -	9+30	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	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	
0+00		1+30	5%			\$74	=	\$96.20
1+30		2+15	15%			\$107	=	\$90.95
2+15		3+00	20%			\$139	=	\$118.15
3+00		3+70	35%			\$191	=	\$133.70
3+70		4+40	25%			\$165	=	\$115.50
4+40		5+50	20%			\$139	=	\$152.90
5+50		7+05	15%			\$107	=	\$165.85
7+05		7+80	20%			\$139	=	\$104.25
7+80		7+80	10%			\$90	=	\$133.20
TOTAL								\$1,110.70

SPECIAL PROJECTS

Drift material to reduce grades form 1+30 to 5+50	4.20	stations @	\$140.00	per station	\$588.00
Drift material to construct landing form 7+30 to 9+30	2.00	stations @	\$140.00	per station	\$280.00
Construct Landing -	1.00	@	\$250.00	each	\$250.00
Grade and shape road -	9.30	stations @	\$15.50	per station	\$144.15
Roll entire subgrade w/ vibratory roller	9.30	stations @	\$13.20	per station	\$122.76
Remove large stumps -	1.00	lump sum @	\$650.00		\$650.00
Grass seed and fertilize -	0.85	acres @	\$220.00	per acre	\$187.00
TOTAL SPECIAL PROJECTS					\$2,221.91

GRAND TOTAL **\$3,332.61**

SUMMARY OF CONSTRUCTION COST

Sale:

Jack Flash

Road:

M to N

Construction -	11+60	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.22	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		0+40	0%			\$55	=	\$22.00
0+40		2+50	25%			\$165	=	\$346.50
2+50		3+95	20%			\$139	=	\$201.55
3+95		4+65	40%			\$243	=	\$170.10
4+65		5+50	30%			\$191	=	\$162.35
5+50		6+55	20%			\$139	=	\$145.95
6+55		7+65	15%			\$107	=	\$117.70
7+65		8+80	20%			\$139	=	\$159.85
8+80		10+35	30%			\$191	=	\$296.05
10+35		11+05	25%			\$165	=	\$115.50
11+05		11+58	20%			\$139	=	\$73.67
TOTAL								\$1,811.22

SPECIAL PROJECTS

Grade and shape road -	11.60	stations @	\$15.50	per station	\$179.80
Construct Landing -	1.00	@	\$250.00	each	\$250.00
Roll entire subgrade w/ vibratory roller	11.60	stations @	\$13.20	per station	\$153.12
Remove large stumps -	1.00	lump sum @	\$650.00		\$650.00
Grass seed and fertilize -	1.07	acres @	\$220.00	per acre	\$235.40
TOTAL SPECIAL PROJECTS					\$1,468.32

GRAND TOTAL **\$3,279.54**

SUMMARY OF CONSTRUCTION COST

Sale:

Jack Flash

Road:

O to P

Construction -	0+00	stations	Improvement -	1+60	stations	Reconstruction -	0+00	stations
	0.00	miles		0.03	miles		0.00	miles

IMPROVEMENT: EXCAVATION -
Road Earthwork

	1.60	sta. @	\$25.00	per sta. =	\$40.00	
				TOTAL EXCAVATION	\$40.00	

SPECIAL PROJECTS

Grade and shape road -
Roll subgrade w/ vibratory roller -
Grass seed and fertilize -

	1.60	stations @	\$15.50	per station	\$24.80	
	1.60	stations @	\$13.20	per station	\$21.12	
	0.15	acres @	\$220.00	per acre	\$33.00	
				TOTAL SPECIAL PROJECTS	\$78.92	

GRAND TOTAL **\$118.92**

SUMMARY OF CONSTRUCTION COST

Sale:

Jack Flash

Road:

Q to R

Construction -	0+00	stations	Improvement -	158+40	stations	Reconstruction -	0+00	stations
	0.00	miles		3.00	miles		0.00	miles

CULVERTS - MATERIALS & INSTALLATION

Culverts	34	LF of 18"	\$595.00	0	LF of 24"	\$0.00
			\$595.00			\$0.00

Culvert Stakes & Markers	1	stakes	\$8.00
			\$8.00

TOTAL CULVERTS \$603.00

ROCK

0+00	to	158+40	5,530	cy. of	Crushed	@	\$13.14	per c.y. =	\$72,664.20
Culvert Backfill		0+15	10	cy. of	Crushed	@	\$13.44	per c.y. =	\$134.40
									TOTAL ROCK \$72,798.60

SPECIAL PROJECTS

Pull Ditches : 134+50 to 158+40	23.90	stations @	\$50.00	per station	\$1,195.00
Grade and shape road -	158.40	stations @	\$15.50	per station	\$2,455.20
Roll subgrade w/ vibratory roller prior to rockng -	158.40	stations @	\$13.20	per station	\$2,090.88
					TOTAL SPECIAL PROJECTS \$5,741.08

GRAND TOTAL \$79,142.68

SUMMARY OF CONSTRUCTION COST

Sale:

Jack Flash

Road:

S to T

Construction -	19+65 0.37	stations miles	Improvement -	21+20 0.40	stations miles	Reconstruction -	0+00 0.00	stations miles
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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	=	
21+20		22+00	10%			\$90	=	\$72.00
22+00		23+30	30%			\$191	=	\$248.30
23+30		24+20	50%			\$459	=	\$413.10
24+20		24+90	60%			\$1,493	=	\$1,045.10
24+90		25+60	50%			\$459	=	\$321.30
25+60		26+50	20%			\$139	=	\$125.10
26+50		27+20	50%			\$459	=	\$321.30
27+20		27+65	45%			\$269	=	\$121.05
27+65		28+15	60%			\$1,493	=	\$746.50
28+15		28+60	40%			\$243	=	\$109.35
28+60		29+10	60%			\$1,493	=	\$746.50
29+10		29+85	20%			\$139	=	\$104.25
29+85		30+65	40%			\$243	=	\$194.40
30+65		31+60	35%			\$191	=	\$181.45
31+60		32+60	15%			\$107	=	\$107.00
32+60		33+35	25%			\$165	=	\$123.75
33+35		36+35	15%			\$107	=	\$321.00
36+35		37+75	20%			\$139	=	\$194.60
37+75		39+30	25%			\$165	=	\$255.75
39+30		40+85	15%			\$107	=	\$165.85
TOTAL								\$5,917.65

IMPROVEMENT: EXCAVATION -
Road Earthwork

	21.20	sta. @	\$25.00	per sta. =	\$530.00
TOTAL EXCAVATION					\$530.00

CULVERTS - MATERIALS & INSTALLATION

Culverts						
	0	LF of 18"	\$0.00	30	LF of 24"	\$810.00
	0	LF of 30"	\$0.00	30	LF of 36"	\$990.00
Culvert Stakes & Markers						
	1	stakes	\$8.00			
			\$8.00			
TOTAL CULVERTS						\$1,808.00

ROCK

0+00 to	1+00	80	cy. of	Crushed	@	\$13.72	per c.y. =	\$1,097.60
Culvert Backfill	25+30	10	cy. of	Crushed	@	\$12.27	per c.y. =	\$122.70
Culvert Backfill	39+70	10	cy. of	Crushed	@	\$12.51	per c.y. =	\$125.10
Junction Rock	0+00	20	cy. of	Crushed	@	\$13.72	per c.y. =	\$274.40
TOTAL ROCK								\$1,619.80

SPECIAL PROJECTS

Construct Landing -	1.00	@	\$250.00	each	\$250.00
Grade and shape road -	40.85	stations @	\$15.50	per station	\$633.18
Roll entire subgrade w/ vibratory roller -	40.85	stations @	\$13.20	per station	\$539.22
Grass seed and fertilize -	3.75	acres @	\$220.00	per acre	\$825.00
Mulching -	0.20	acres @	\$600.00	per acre	\$120.00
TOTAL SPECIAL PROJECTS					\$2,367.40

GRAND TOTAL **\$12,242.85**

Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: Jack Flash

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
56.0	Pavement	30
5.5	Main Lines	7
5.5	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
1	Excavators (Large)	\$1,081.38	1	\$44.80	0.00	3.90	3.9	\$174.72	\$1,256.10
1	Tractor (D8)	\$1,024.91	2	\$15.10	0.00	3.90	3.9	\$58.89	\$1,083.80
1	Dump Truck (10 cy +)	\$240.88		\$2.85	0.00	3.90	3.9	\$11.12	\$252.00
1	Water Truck (1500 Gal)	\$202.77		\$2.85	0.00	3.90	3.9	\$11.12	\$213.89
TOTAL MOVE-IN COSTS:								\$2,805.79	

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Crushed 2"-0"	Location:	Sec. 18, T1N, R6W, W.M.
Sale:	Jack Flash	Road:	6920 c.y.
Swell:	1.40	Stockpile:	4000 c.y.
Shrinkage:	1.16	Total Truck Loads:	10920 c.y.
Drill Pct.:	100%	In Place Total:	7800 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.				\$4,560.60
Drill & Shoot:	\$2.50 /cu.yd.	x 7800 cu.yds.	=	\$19,500.00
Push Rock:	\$0.60 /cu.yd.	x 10920 cu.yds.	=	\$6,552.00
Load Crusher:	\$0.60 /cu.yd.	x 10920 cu.yds.	=	\$6,552.00
Crush Rock: 2 1/2"-0"	\$2.80 /cu.yd.	x 8070 cu.yds.	=	\$22,596.00
Crush Rock: 4"-0"	\$2.35 /cu.yd.	x 2850 cu.yds.	=	\$6,697.50
Load Dump Truck:	\$0.70 /cu.yd.	x 10920 cu.yds.	=	\$7,644.00

Subtotal \$74,102.10

Move In/Set-up Crusher				\$2,520.00
Move In and set up Drill and Compressor	1	@	\$593.78	= \$593.78
Move in Roller and Compactor	1	@	\$593.78	= \$593.78
Move in Grader	1	@	\$236.64	= \$236.64
Move in D-8	1	@	\$939.05	= \$939.05
Move in Loader	2	@	\$787.91	= \$1,575.82
Move in Excavator	1	@	\$1,038.45	= \$1,038.45
Move in Trucks	6	@	\$195.97	= \$1,175.82
Move in Water Truck	1	@	\$230.35	= \$230.35
Change Gradation	1	@	\$210.00	= \$210.00
				Subtotal \$9,113.69

TOTAL PRODUCTION COSTS \$83,215.79

Base Cost= \$7.62 Per Cu.Yd.

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 - 1540 (Crushed)	6.36	2.45	7.62	16.43	830	\$13,636.90
A to B - Junction Rock (Crushed)	6.12	2.45	7.62	16.19	20	\$323.80
A to B - Bedding/Backfill (Crushed)	6.36	0.60	7.62	14.58	10	\$145.80
C to D - 0 - 100 (Crushed)	6.30	2.45	7.62	16.37	80	\$1,309.60
G to H - 0 - 275 (Crushed)	5.84	2.45	7.62	15.91	170	\$2,704.70
G to H - Fill Armor (Riprap)	5.84	1.40	7.62	14.86	20	\$297.20
G to H - Embankment Fill (Crushed)	5.84	1.40	7.62	14.86	10	\$148.60
G to H - Bedding/Backfill (Crushed)	5.84	0.60	7.62	14.06	20	\$281.20
I to J - 0 - 100 (Crushed)	5.22	2.45	7.62	15.29	80	\$1,223.20
I to J - Junction Rock (Crushed)	5.22	2.45	7.62	15.29	20	\$305.80
Q to R - 0 - 15840 (Crushed)	3.07	2.45	7.62	13.14	5530	\$72,664.20
Q to R - Culvert Backfill (Crushed)	5.22	0.60	7.62	13.44	10	\$134.40
S to T - 0 - 100 (Crushed)	3.65	2.45	7.62	13.72	80	\$1,097.60
S to T - Culvert Backfill (Crushed)	4.05	0.60	7.62	12.27	10	\$122.70
S to T - Culvert Backfill (Crushed)	4.29	0.60	7.62	12.51	10	\$125.10
S to T - Junction Rock (Crushed)	3.65	2.45	7.62	13.72	20	\$274.40
2"-0" Stockpile	3.19	1.25	7.62	12.06	2500	\$30,150.00
4"-0" Stockpile	3.19	1.25	7.62	12.06	1500	\$18,090.00
				Total C.Y.	10920	Sub Total \$143,035.20

TOTAL ROCKING COSTS \$143,035.20



"STEWARDSHIP IN FORESTRY"

Jack Flash

Volume Summary

Area 1-Modified Clear-cut				
52 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden & Visible D&B	Net Vol MBF
Douglas-fir	17.7	922	7.2%	860
Red Alder	2.0	106	23.3%	86
TOTAL	19.8	1028	8.7%	946

Area 2-Modified Clear-cut				
71 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden & Visible D&B	Net Vol MBF
Douglas-fir	24.6	1746	5.6%	1653
Red Alder	2.0	140	13.8%	123
TOTAL	26.6	1886	6.2%	1776

Area 3-Modified Clear-cut				
34 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden & Visible D&B	Net Vol MBF
Douglas-fir	23.7	807	5.8%	763
Red Alder	0.3	10	11.1%	9
TOTAL	24.0	817	5.8%	772

TOTAL SALE VOLUME			157	acres
SPECIES	Gross Vol. (MBF)	Net Vol. (MBF)		
Douglas-fir	3475	3276		
Red Alder	256	218		
TOTAL	3731	3494		

IC		TSTNDSUM		Stand Table Summary												
Project												JAKFLASH				
T01N R07W S13 TSALE												T01N R07W S13 TSALE				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
01N	07W	13	AREA_3	SALE	34.00	14	40	Date:	01/27/2011							
								Time:	7:43:06AM							
Spc	S T	Sample		Av		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
		DBH	Trees	FF 16'	Ht Tot				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DF		8	1	92	66	14.204	4.96	14.20	6.5	28.5	2.61	92	405	89	31	14
DF		10	1	92	86	9.090	4.96	9.09	12.8	57.0	3.31	116	518	112	39	18
DF		11	1	81	43	7.513	4.96	7.51	10.2	28.5	2.19	77	214	74	26	7
DF		13	1	91	78	5.379	4.96	10.76	13.3	52.3	4.07	143	562	139	49	19
DF		14	1	86	110	4.638	4.96	9.28	19.1	76.0	5.06	177	705	172	60	24
DF		15	2	84	84	8.080	9.92	16.16	19.4	66.5	8.93	313	1,075	304	107	37
DF		16	1	87	121	3.551	4.96	10.65	18.7	79.2	5.68	199	843	193	68	29
DF		17	1	75	111	3.145	4.96	6.29	29.9	90.2	5.37	188	568	183	64	19
DF		18	2	84	124	5.611	9.92	16.83	25.5	95.0	12.21	428	1,599	415	146	54
DF		19	3	80	122	7.554	14.87	20.14	29.5	105.7	16.95	595	2,129	576	202	72
DF		21	3	82	118	6.184	14.87	16.49	36.1	125.9	16.99	596	2,076	578	203	71
DF		22	3	82	108	5.634	14.87	11.27	38.3	133.0	12.29	431	1,499	418	147	51
DF		23	3	82	124	5.155	14.87	15.47	41.2	158.3	18.16	637	2,449	617	217	83
DF		24	1	88	131	1.578	4.96	4.73	48.6	212.2	6.56	230	1,005	223	78	34
DF		25	2	76	113	2.909	9.92	7.27	52.9	171.0	10.96	385	1,244	373	131	42
DF		26	3	83	108	4.034	14.87	8.07	66.2	256.5	15.22	534	2,070	518	182	70
DF		27	1	87	96	1.247	4.96	1.25	117.4	665.0	4.17	146	829	142	50	28
DF		28	1	75	119	1.159	4.96	3.48	57.2	161.5	5.68	199	562	193	68	19
DF		30	1	83	101	1.010	4.96	2.02	92.2	313.5	5.29	186	633	180	63	22
DF		32	1	84	106	.888	4.96	2.66	74.4	288.2	5.65	198	767	192	67	26
DF		44	1	78	143	.470	4.96	1.41	101.1	487.7	4.06	142	687	138	48	23
DF	Totals	34	85	96		99.034	168.57	195.04	30.8	115.0	171.41	6,014	22,438	5,828	2,045	763
DL		8	1	85	33	8.185	2.86	8.19	3.8	20.0	.86	31	164	29	11	6
DL		16	1	78	127	2.046	2.86	4.09	26.8	105.0	3.02	110	430	103	37	15
DL		24	2	79	105	1.819	5.71	3.64	56.3	177.5	5.63	205	646	191	70	22
DL	Totals	4	83	60		12.050	11.43	15.92	21.7	77.9	9.51	346	1,239	323	118	42
WH		20	1	85	102	1.310	2.86	2.62	42.2	142.5	3.54	111	373	120	38	13
WH	Totals	1	85	102		1.310	2.86	2.62	42.2	142.5	3.54	111	373	120	38	13
RA		22	1	82	85	1.082	2.86	2.16	45.9	121.5	2.73	99	263	93	34	9
RA	Totals	1	82	85		1.082	2.86	2.16	45.9	121.5	2.73	99	263	93	34	9
Totals		40	85	92		113.476	185.71	215.74	30.5	112.7	187.19	6570	24,313	6,365	2,234	827

TC TLOGSTVB

Log Stock Table - MBF
Project: JAKFLASH

T01N R07W S13 TSALE

T01N R07W S13 TSAL

Twp Rgc Sec Tract
01N 07W 13 AREA_3

Type
SALE

Acres
34.00

Plots
14

Sample Trees
40

Page 1
Date 1/27/2011
Time 7:37:19AM

SPP	S T	So rt	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Sealing 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	2M	40		282	5.6	266	34.9					72	93	62	22	17				
DF	C	3M	40		446	5.6	421	55.2			37	84	157	28	51	36	28				
DF	C	4M	12		1	5.0	1	.1		1											
DF	C	4M	13		2	5.0	2	.2		2											
DF	C	4M	15		3	5.0	3	.4		3											
DF	C	4M	16		6	5.0	5	.7		5											
DF	C	4M	17		3	5.0	2	.3		2											
DF	C	4M	20		1	5.0	1	.1		1											
DF	C	4M	22		1	5.0	1	.1		1											
DF	C	4M	24		5	5.0	5	.7		0		5									
DF	C	4M	25		2	5.0	2	.2		2											
DF	C	4M	26		4	5.0	3	.5		3											
DF	C	4M	27		5	5.0	5	.7		4		1									
DF	C	4M	28		2	5.0	2	.2		2											
DF	C	4M	30		9	5.0	9	1.2		9											
DF	C	4M	31		4	5.0	4	.5		4											
DF	C	4M	32		17	5.0	16	2.1		16											
DF	C	4M	36		5	5.0	5	.6		5											
DF	C	4M	38		6	5.0	6	.8		6											
DF	C	4M	40		4	5.0	4	.5		4											
DF	Totals				807	5.5	763	92.3		69		39	89	157	100	144	98	50	17		
DL	C	2M	40		7		7	17.6						7							
DL	C	3M	40		28		28	66.2			6		10		11						
DL	C	4M	19		6		6	13.2		6											
DL	C	4M	40		1		1	2.9		1											
DL	Totals				42		42	5.1		7		6		10	7	11					
WH	C	2M	40		11	5.0	10	80.0						10							
WH	C	3M	40		3	5.0	3	20.0			3										
WH	Totals				13	5.0	13	1.5			3			10							
RA	H	B	40		9	10.0	8	88.9						8							
RA	H	D	28		1	10.0	1	11.1			1										
RA	Totals				10	10.0	9	1.1			1			8							
Total All Species					873	5.3	827	100.0		76		48	89	168	125	155	98	50	17		

TC		Stand Table Summary														
Project													JAKFLASH			
T01N R07W S14 TSALE											T01N R07W S14 TSALE					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
01N	07W	14	AREA_2	SALE	71.00	16	105	Date:	01/27/2011							
								Time:	8:38:02AM							
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.	Net Bd.Ft.	Tons
DF		14	2	85	127	3.248	3.47	8.12	17.4	66.5	4.03	141	540	286	100	38
DF		15	1	86	125	1.415	1.74	4.24	16.6	69.7	2.01	70	296	142	50	21
DF		16	1	83	168	1.243	1.74	2.49	30.7	128.3	2.17	76	319	154	54	23
DF		17	4	85	123	4.406	6.95	13.22	21.2	81.5	7.97	280	1,078	566	199	77
DF		18	3	85	118	2.948	5.21	7.86	27.2	99.8	6.09	214	784	432	152	56
DF		19	3	85	129	2.645	5.21	7.94	27.4	104.5	6.21	218	829	441	154	59
DF		20	7	83	121	5.571	12.15	15.92	30.8	109.7	13.97	490	1,746	992	348	124
DF		21	2	86	131	1.444	3.47	4.33	34.2	139.3	4.22	148	603	300	105	43
DF		22	8	83	121	5.262	13.89	13.81	41.7	154.3	16.42	576	2,131	1,166	409	151
DF		23	9	81	121	5.416	15.63	16.25	38.9	143.2	18.03	633	2,327	1,280	449	165
DF		24	7	82	118	3.869	12.15	11.05	44.3	161.5	13.96	490	1,785	991	348	127
DF		25	8	82	126	4.075	13.89	10.70	48.2	189.1	14.70	515	2,023	1,044	366	144
DF		26	12	80	127	5.651	20.84	16.95	51.6	190.5	24.97	875	3,230	1,773	621	229
DF		27	4	81	120	1.747	6.95	4.80	60.0	221.1	8.22	288	1,062	584	205	75
DF		28	4	78	119	1.624	6.95	4.47	58.2	204.7	7.42	260	914	527	184	65
DF		29	2	80	99	.757	3.47	1.51	83.2	266.0	3.59	126	403	255	89	29
DF		30	4	80	119	1.415	6.95	3.89	71.0	256.5	7.87	276	998	559	196	71
DF		31	2	78	124	.663	3.47	1.99	73.6	267.6	4.17	146	532	296	104	38
DF		32	1	77	103	.311	1.74	.62	101.9	294.5	1.81	63	183	128	45	13
DF		33	2	79	133	.585	3.47	1.75	85.5	326.2	4.27	150	572	303	106	41
DF		34	1	77	148	.275	1.74	.83	99.2	399.0	2.34	82	330	166	58	23
DF		35	2	79	130	.520	3.47	1.56	95.4	386.3	4.24	149	602	301	106	43
DF	Totals		89	82	124	55.088	154.53	154.30	40.6	150.9	178.68	6,267	23,287	12,686	4,449	1,653
RA		8	2	99	38	9.948	3.47	9.95	4.6	18.0	1.27	46	179	90	33	13
RA		9	1	76	21	3.930	1.74	3.93	4.8	18.0	.52	19	71	37	13	5
RA		11	1	76	122	2.631	1.74	5.26	10.0	40.5	1.45	53	213	103	37	15
RA		12	1	80	100	2.211	1.74	4.42	12.6	40.5	1.56	56	179	111	39	13
RA		13	2	82	103	3.921	3.47	7.84	15.3	51.8	3.33	120	407	237	85	29
RA		14	3	83	103	4.872	5.21	9.74	19.0	66.0	5.13	185	643	364	132	46
RA		15	1	77	77	1.415	1.74	2.83	17.6	40.5	1.37	50	115	97	35	8
RA		19	2	79	67	1.764	3.47	3.53	27.9	72.0	2.74	98	254	194	70	18
RA	Totals		13	86	70	30.692	22.57	47.50	13.2	43.4	17.37	627	2,060	1,233	445	146
DL		16	2	86	111	2.487	3.47	4.97	24.6	100.0	3.40	122	497	241	87	35
DL	Totals		2	86	111	2.487	3.47	4.97	24.6	100.0	3.40	122	497	241	87	35
WH		22	1	76	104	.658	1.74	1.32	50.5	142.5	2.17	66	187	154	47	13
WH	Totals		1	76	104	.658	1.74	1.32	50.5	142.5	2.17	66	187	154	47	13
Totals			105	84	104	88.924	182.31	208.09	34.0	125.1	201.62	7083	26,032	14,315	5,029	1,848

TC TLOGSTVB

Log Stock Table - MBF

Project: JAKFLASH

T01N R07W S14 TSALE

T01N R07W S14 TSAL

Twp Rge Sec Tract Type Acres Plots Sample Trees
 01N 07W 14 AREA_2 SALE 71.00 16 105

Page 2
 Date 1/27/2011
 Time 8:35:11AM

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	14-15	16-19
RA					Totals	166	11.8	146	7.9			61	69	16							
DL		C	3M	40		26		26	75.0					26							
DL		C	4M	40		9		9	25.0		4	5									
DL					Totals	35		35	1.9		4	5		26							
WH		C	3M	40		11	5.0	11	80.0					11							
WH		C	4M	39		3	5.0	3	20.0			3									
WH					Totals	14	5.0	13	.7			3		11							
Total All Species						1,961	5.8	1,848	100.0		45	150	233	270	247	359	472	72			

TC TLOGSTVB

Log Stock Table - MBF

Project: **JAKFLASH**

T01N R07W S14 TSALE

T01N R07W S14 TSAL

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	2
01N	07W	14	AREA_2	SALE	71.00	16	105	Date	1/27/2011
								Time	8:35:11AM

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	14-15	16-19
RA					Totals	166	11.8	146	7.9			61	69	16							
DL		C	3M	40		26		26	75.0					26							
DL		C	4M	40		9		9	25.0		4	5									
DL					Totals	35		35	1.9		4	5		26							
WH		C	3M	40		11	5.0	11	80.0					11							
WH		C	4M	39		3	5.0	3	20.0			3									
WH					Totals	14	5.0	13	.7			3		11							
Total All Species						1,961	5.8	1,848	100.0		45	150	233	270	247	359	472	72			

TC		Stand Table Summary														
Project JAKFLASH																
T01N R07W S14 TSALE										T01N R07W S14 TSALE						
Twp	Rge	Sec	Tract		Type	Acres	Plots	Sample Trees			Page:	1				
01N	07W	14	AREA_1		SALE	52.00	11	58			Date:	01/27/2011				
											Time:	7:39:09AM				
Spc	S T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	Totals			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.		Net Bd.Ft.	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF
DF		8	1	74	58	7.235	2.53	7.23	6.1	28.5	1.25	44	206	65	23	11
DF		9	1	78	70	5.716	2.53	5.72	9.8	38.0	1.60	56	217	83	29	11
DF		12	1	83	89	3.216	2.53	6.43	12.1	42.7	2.23	78	275	116	41	14
DF		13	1	79	111	2.740	2.53	5.48	7.6	33.2	1.19	42	182	62	22	9
DF		14	1	85	96	2.362	2.53	4.72	17.6	57.0	2.37	83	269	123	43	14
DF		15	2	84	100	4.116	5.05	8.23	20.6	76.0	4.83	170	626	251	88	33
DF		17	3	81	110	4.807	7.58	11.22	25.6	86.9	8.17	287	974	425	149	51
DF		18	1	85	137	1.429	2.53	4.29	27.7	110.8	3.39	119	475	176	62	25
DF		19	2	81	107	2.565	5.05	6.41	30.9	106.4	5.65	198	682	294	103	35
DF		20	3	81	122	3.473	7.58	10.42	30.0	90.8	8.96	313	946	466	163	49
DF		21	1	83	124	1.050	2.53	3.15	33.1	120.3	2.97	104	379	155	54	20
DF		22	2	81	111	1.913	5.05	4.78	40.0	134.9	5.46	191	645	284	100	34
DF		23	2	83	103	1.751	5.05	3.50	51.6	163.9	5.15	181	574	268	94	30
DF		24	1	77	104	.804	2.53	1.61	58.1	171.0	2.66	93	275	139	49	14
DF		25	4	80	117	2.963	10.10	8.15	49.4	182.2	11.50	403	1,485	598	209	77
DF		26	2	82	126	1.370	5.05	4.11	53.1	212.2	6.22	218	872	324	114	45
DF		27	4	82	122	2.541	10.10	6.99	59.5	230.6	11.86	415	1,611	617	216	84
DF		28	4	80	132	2.362	10.10	6.50	64.8	234.0	12.00	421	1,521	624	219	79
DF		29	5	78	112	2.753	12.63	7.16	69.1	236.8	14.09	494	1,695	733	257	88
DF		30	3	82	127	1.543	7.58	4.63	69.3	277.6	9.14	321	1,285	475	167	67
DF		31	1	80	127	.482	2.53	1.45	75.9	202.7	3.18	110	293	165	57	15
DF		35	1	78	122	.378	2.53	1.13	90.9	329.3	2.94	103	373	153	54	19
DF		36	2	77	110	.715	5.05	1.43	134.4	470.2	5.47	192	672	285	100	35
DF	Totals		48	80	101	58.284	121.22	124.73	37.2	132.5	132.30	4,637	16,533	6,880	2,411	860
RA		9	1	87	78	5.716	2.53	5.72	12.0	45.0	1.91	69	257	99	36	13
RA		11	1	77	90	3.827	2.53	3.83	18.4	54.0	1.94	70	207	101	37	11
RA		12	1	86	72	3.216	2.53	3.22	21.1	63.0	1.86	68	203	97	35	11
RA		14	3	86	91	7.087	7.58	14.17	17.9	64.5	6.96	253	914	362	132	48
RA		19	1	81	72	1.283	2.53	2.57	29.4	27.0	2.12	75	69	110	39	4
RA	Totals		7	84	83	21.129	17.68	29.50	18.1	55.9	14.79	535	1,650	769	278	86
DL		16	1	81	126	1.809	2.53	5.43	18.8	76.7	2.81	102	416	146	53	22
DL		23	2	79	112	1.751	5.05	4.38	43.6	146.0	5.25	191	639	273	99	33
DL	Totals		3	80	119	3.559	7.58	9.80	29.9	107.6	8.06	293	1,055	419	152	55
Totals			58	81	97	82.972	146.48	164.04	33.3	117.3	155.15	5465	19,238	8,068	2,842	1,000

TC		TLOGSTVB		Log Stock Table - MBF																	
				Project: JAKFLASH																	
T01N R07W S14 TSALE										T01N R07W S14 TSAL											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1												
01N	07W	14	AREA_1	SALE	52.00	11	58	Date	1/27/2011												
									Time	7:33:13AM											
Spp	T	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	14-15	16-19	20-23
DF	C	CL	14																		
DF	C	2M	40		454	8.4	416	48.4					70	60	258		28				
DF	C	3M	34		4	5.0	4	.5					4								
DF	C	3M	36		44	5.8	42	4.9					9	23	9						
DF	C	3M	38		2	5.0	2	.2					2								
DF	C	3M	40		328	5.1	311	36.2					22	87	58	65	24	13		42	
DF	C	4M	12		1	5.0	1	.1						1							
DF	C	4M	13		1	5.0	1	.1						1							
DF	C	4M	14		1	5.0	1	.1		1											
DF	C	4M	15		1	5.0	1	.2					1	1							
DF	C	4M	16		3	5.0	3	.4			3										
DF	C	4M	18		4	5.0	3	.4			2		1								
DF	C	4M	19		4	5.0	4	.4			3		1								
DF	C	4M	21		5	5.0	4	.5			4		1								
DF	C	4M	22		3	5.0	3	.4			1		2								
DF	C	4M	23		1	5.0	1	.1						1							
DF	C	4M	24		2	5.0	2	.2					2								
DF	C	4M	25		13	5.0	12	1.5			11		2								
DF	C	4M	26		5	5.0	5	.6			4		1								
DF	C	4M	27		7	5.0	6	.7						6							
DF	C	4M	28		8	5.0	8	.9			8										
DF	C	4M	29		1	5.0	1	.1						1							
DF	C	4M	34		12	5.0	11	1.3			11										
DF	C	4M	35		3	5.0	3	.4			3										
DF	C	4M	36		5	5.0	5	.6			5										
DF	C	4M	40		9	5.0	9	1.0						9							
DF	Totals				922	6.8	860	85.9			55		50	99	86	143	84	272		70	
RA	H	D	15		1	10.0	1	1.4					1								
RA	H	D	19		5	10.0	4	5.2					4								
RA	H	D	23		4	10.0	3	3.9					3								
RA	H	D	35		12	10.0	11	12.5					11								
RA	H	D	38		18	25.0	13	15.6					13								
RA	H	D	40		66	20.0	53	61.5					11	40	2						
RA	Totals				106	18.8	86	8.6					44	40	2						
DL	C	2M	40		13		13	24.1								13					
DL	C	3M	36		6		6	10.3					6								
DL	C	3M	40		30		30	55.6						5	14	11					
DL	C	4M	15		2		2	3.4			2										
DL	C	4M	18		1		1	1.7			1										
DL	C	4M	40		3		3	5.0					3								
DL	Totals				55		55	5.5			3		8	5	14	11		13			
Total All Species					1,083	7.6	1,000	100.0			58		102	145	102	154		97	272		70



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT *Jack Flash*

1. Type of Sale

Regeneration harvest, Recovery

2. Legal Description

Sections 10, 11, 12, 13, 14, and 14, T1N, R7W, W.M. Tillamook County, Oregon

3. Sale Acreage

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

ACRES

	<u>Gross</u>	<u>Net</u>
Area 1 (Clearcut)	62	52
Area 2 (Clearcut)	85	71
Area 3 (Clearcut)	42	34

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 LMCS inside the sale boundary.

4. Cruising Procedures

A. Cruise Method

A total of 41 variable radius plots were taken distributed in Areas 1, 2, and 3 with 11, 16, and 14 plots respectively. In Areas 1 and 2 the plots were 350' apart on lines running north-south 700' apart. In Area 3 the lines ran east-west 750' apart with plots spaced 180'. All conifers 8 inches DBH and greater containing 20 net board feet and all hardwoods 10 inches DBH and greater containing 30 net board feet were recorded on all plots. Species were recorded on all trees, and they were measured for merchantable height, diameter, and form factor. In Area 3 every other plot was a count plot.

Cruise Statistics (Net BF/Acre)			
Area	# Plots	CV%	SE%
1	11	49.6	15.7
2	16	34.4	8.9
3	14	32.4	9.0
Project (all areas)	41	47.6	7.4

B. Plot size

A basal area factor of 27.78 was used in Areas 1 and 2 and a BAF of 40 was used in Area 3, and the point of tree observation was 4.5 feet.

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading rules. Tree heights were recorded to a 6 inch top outside bark for all conifers and 7 inches outside bark for hardwoods; or three tenths (0.3) of DBH for all species, whichever was greater. Log lengths all favored 40 feet for all species. Height and diameter measurement standards were to the nearest foot or inch respectively.

5. Computation Procedure

Plot data was entered into SuperAce for computation of stand information and volume. Volume reserved for snag creation and the outer riparian management zone adjacent to Type F streams was designated as Douglas-fir leave.

6. Hidden and Visual Defect and Breakage

A 5% and 10% reduction for hidden defect and breakage was applied to conifers and hardwoods respectively. The total defect and breakage for conifers and hardwoods was:

Area	Total defect %	
	Conifer	Hardwood
1	7.2	23.3
2	5.6	13.8
3	5.8	11.1

7. Timber Description

All of the sale areas were burned in the 1933, 1939, and 1945 fires. Seeding and planting records for Areas 1, 2 and most of 3 are not well documented but the east edge of Area 3 was planted in the 1950 and again in the 1952 season. Stand age is about 50 years old. Understory is mostly fern, salmonberry, and Oregon grape.

Area 1 (Modified Clearcut) – The Douglas-fir averages 19.5" DBH with a merchantable height of 75 feet to a merchantable top (5" d.i.b.) and red alder averages 12.4" DBH with a merchantable height of 50' to a merchantable top (6" d.i.b.). In 1977 the northeast two-thirds of the area was sprayed to control alder. The area was commercially thinned in 1996 with the Ben Thin sale.

Area 2 (Modified Clearcut) – The Douglas-fir averages 22.7" DBH with a merchantable height of 98 feet to a merchantable top and alder averages 11.6" DBH of merchantable

height to a merchantable top. The area was commercially thinned in 1996 with the Ben Thin sale.

Area 3 (Modified Clearcut) - The Douglas-fir averages 17.7" DBH with a merchantable height of 72 feet to a merchantable top and red alder averages 22.0" DBH with a merchantable height of 70' to a merchantable top. The east edge was commercially thinned in 1994 with the Moore Thin sale.

8. Cruiser Names/Dates

The Areas 1 and 2 were contract cruised in 2010. Area 3 was cruised by ODF in 2009.

9. Revenue Distribution

FDF 100%

Tax Code: 9-2 100%

Deed Number: 159

10. Attachments

Volume Summary

Stand Tables

Log Stock Tables

Logging Plan

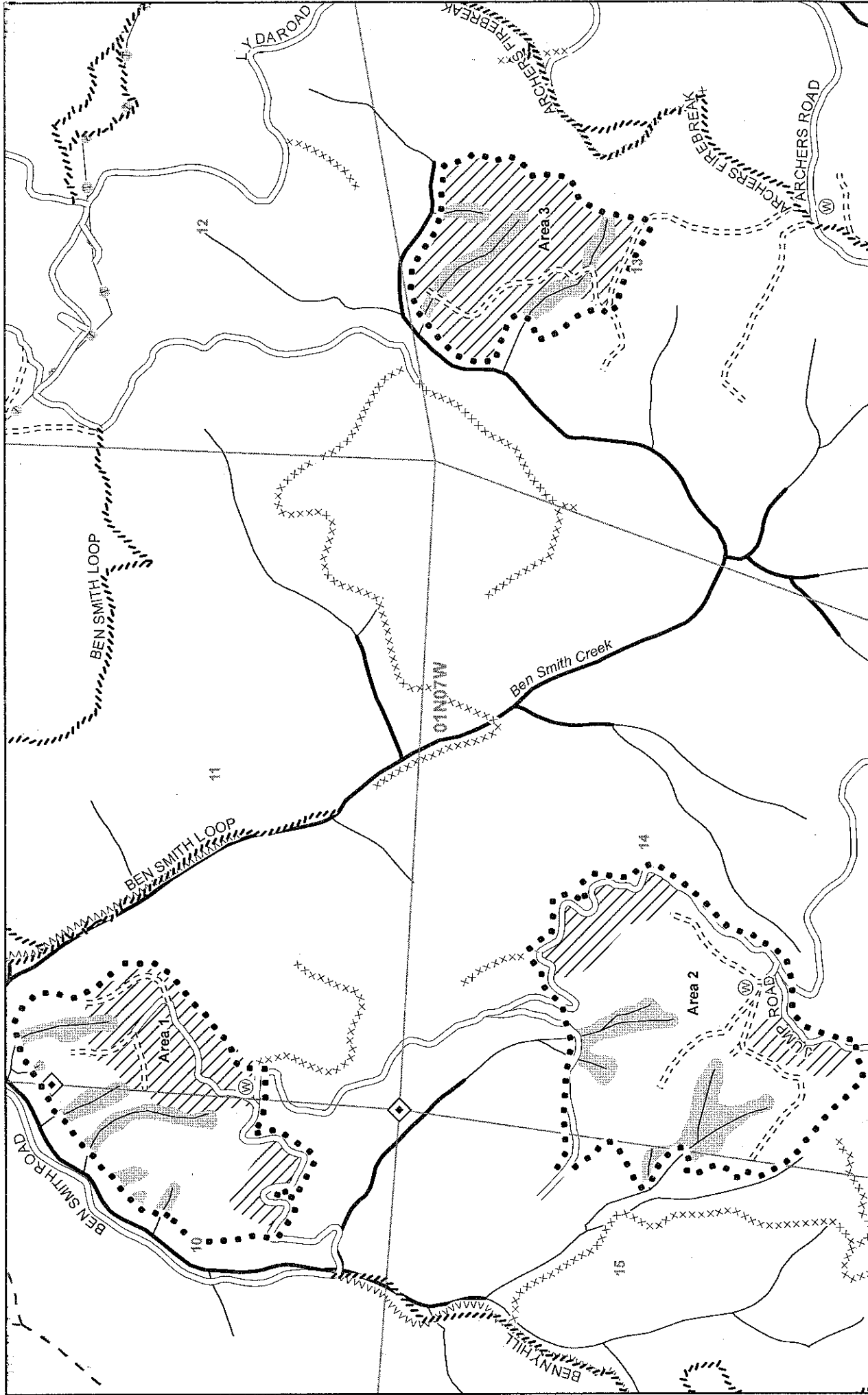
11. Stand and Log Stock Tables Species Key

DF – Douglas-fir take

RA – Red alder take

DL – Douglas-fir leave

WH – Western hemlock leave



LOGGING PLAN
 Timber Sale Contract No. 341-11-79
JACK FLASH
 Portions of Sections 10, 11, 13, 14 and 15
 T11N, R7W, W.M.,
 Tillamook County, Oregon

Tillamook District, GIS
 02-01-2011
 This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.

Area	Type of Operation	Acres
1	Modified clearcut	62
2	Modified clearcut	85
3	Modified clearcut	42
Total		189
	Gross Net	157

Legend:

- Rock source
- Stock pile
- Waste area
- Bridge
- Gate
- Survey corner
- Domestic water supply intake
- Truck turn-around
- Helicopter landing zone
- Cultural site
- Landing
- Buffer
- Non-required thinning
- Cable yarding
- Ground yarding
- Helicopter yarding
- Downtill yarding
- Green tree retention 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