



"STAND FOR THE FOREST"

Timber Sale Appraisal Feldshaw

Sale TL-341-2016-36-

District: Tillamook

Date: September 23, 2015

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$430,040.60	\$107,049.92	\$537,090.52
		Project Work:	(\$249,742.88)
		Advertised Value:	\$287,347.64



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Sale TL-341-2016-36-

District: Tillamook

Date: September 23, 2015

Timber Description

Location: Portions of Sections 15, 16, and 22, T1N, R8W, W. M., Tillamook County, Oregon.

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	14	0	99
Alder (Red)	14	0	98

Volume by Grade	2S	3S	4S	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	367	1,193	508	0	0	0	0	2,068
Alder (Red)	0	0	0	136	132	43	225	536
Total	367	1,193	508	136	132	43	225	2,604

Comments: Pond Values Used: 2nd Quarter Calendar Year 2015.

Western Hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost:
 $\$98/\text{MBF} = \$435/\text{MBF} - \$337/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$938/\text{MBF} = \$1,275/\text{MBF} - \$337/\text{MBF}$

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 costs equivalent to $\$780$ daily truck cost.

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

Brand and Paint: $\$2/\text{MBF} \times 2,604 \text{ MBF} = \$5,208$

Machine Cleaning: $\$1,000/\text{machine} \times 1 \text{ machine} = \$1,000$

Snag Creation: $246 \text{ Snags} \times \$10/\text{Snag} = \$2,460$

Grass Seed Existing Cat Roads used for Tailhold Cat: $1.2 \text{ acres} @ \$220 \text{ per acre} = \264

Pullback Sidecast Created from Opening Existing Cat Roads: $2,635 \text{ ft} / 1,200 \text{ ft a day} \times \$95 \text{ per hour} \times 10 \text{ hrs per day} = \$2,086$

TOTAL Other Costs (with Profit & Risk to be added) = $\$11,018$

Other Costs (No Profit & Risk added):

Cover Materials for Piles: $\$5/\text{pile} \times 15 \text{ piles} = \75

Non-Project Spur Construction: $2+00 \text{ stations} @ \$200 \text{ per station} = \400

Approach Rock Non-project Spur: $1 \text{ approach} @ 30 \text{ cy (Pit-Run)}/\text{approach} \times \$7.78/\text{cy} = \$233$

Non-Project Landings: $1 \text{ landings} @ 140 \text{ cy (Pit-Run)}/\text{landing} @ \$7.78/\text{cy} = \$1,089$

Construct 4 Non-project Landings: $\$285/\text{landing} \times 4 \text{ Landings} = \$1,140$

Slash piling and sorting (Cable Ground): $\$5/\text{ac} \times 106 \text{ ac} = \530

Heliport slash sorting and construction: $1 \text{ heliports} \times \$500/\text{heliport} = \$500$

TOTAL Other Costs (No Profit & Risk added) = $\$3,967$

ROAD MAINTENANCE:

Spot rocking: $20 \text{ cy}/\text{mmbf}/\text{mile} \times \$16.35/\text{cy} \times 2.6 \text{ MMBF} \times 5.92 \text{ miles} / 2,604 \text{ MBF} = \$1.93/\text{MBF}$

Interim Maintenance Grading: $\$250 \times 5.92 \text{ miles} / 2,604 \text{ MBF} \times 2 \text{ times} = \$1.14/\text{MBF}$

Final Maintenance Grading: $\$820 \times 5.92 \text{ miles} / 2,604 \text{ MBF} = \$1.86/\text{MBF}$

Final Maintenance Compaction: $\$700/\text{mile} \times 5.92 \text{ miles} / 2,604 \text{ MBF} = \$1.59/\text{MBF}$

Total Road Maintenance: $\$6.52/\text{MBF}$



Timber Sale Appraisal Feldshaw

Sale TL-341-2016-36-

District: Tillamook

Date: September 23, 2015

Logging Conditions

Combination#: 1 Douglas - Fir 82.80%
 Alder (Red) 84.56%

Logging System: Cable: Large Tower >=70 **Process:** Stroke Delimber

yarding distance: Medium (800 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 8 **bd. ft / load:** 3400

cost / mbf: \$227.94

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

Combination#: 2 Douglas - Fir 17.20%
 Alder (Red) 15.44%

Logging System: Shovel **Process:** Stroke Delimber

yarding distance: Short (400 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 9 **bd. ft / load:** 3400

cost / mbf: \$103.66

machines: Stroke Delimber (B)



STRENGTH IN FORESTRY

Timber Sale Appraisal Feldshaw

Sale TL-341-2016-36-

District: Tillamook

Date: September 23, 2015

Logging Costs

Operating Seasons: 3.00	Profit Risk: 10%
Project Costs: \$249,742.88	Other Costs (P/R): \$11,018.00
Slash Disposal: \$0.00	Other Costs: \$3,967.00

Miles of Road

Road Maintenance: \$6.52

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	3.6
Alder (Red)	\$0.00	3.0	3.0



"SUSTAINABLE FORESTRY"

Timber Sale Appraisal Feldshaw

Sale TL-341-2016-36-

District: Tillamook

Date: September 23, 2015

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$206.57	\$6.59	\$5.05	\$72.94	\$4.23	\$29.54	\$0.00	\$5.00	\$1.52	\$331.44
Alder (Red)									
\$208.75	\$6.65	\$5.05	\$88.40	\$4.23	\$31.31	\$0.00	\$5.00	\$1.52	\$350.91

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$539.39	\$207.95	\$0.00
Alder (Red)	\$0.00	\$550.63	\$199.72	\$0.00



"SUSTAINABLE FORESTRY"

Timber Sale Appraisal Feldshaw

Sale TL-341-2016-36-

District: Tillamook

Date: September 23, 2015

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	2,068	\$207.95	\$430,040.60
Alder (Red)	536	\$199.72	\$107,049.92

Gross Timber Sale Value

Recovery: \$537,090.52

Prepared By: James Neuman

Phone: 503-842-2545



PROJECT SUMMARY SHEET

Sale: Feldshaw

CONSTRUCTION

Point	E to F	14+51	stations =	\$51,998.64
Point	G to H	10+82	stations =	\$26,758.83
Point	I to J	1+67	stations =	\$3,128.12
Point	K to L	0+74	stations =	\$1,359.22
Point	M to N	10+23	stations =	\$5,711.25
Point	O to P	5+77	stations =	\$31,423.30
Point	Q to R	1+30	stations =	\$1,382.51
Point	S to T	7+58	stations =	\$20,060.58
SUBTOTAL CONSTRUCTION				<u>\$141,822.45</u>

IMPROVEMENT

Point	A to B	280+62	stations =	\$50,165.32
Point	C to D	88+07	stations =	\$9,871.31
SUBTOTAL IMPROVEMENT				<u>\$60,036.63</u>

RECONSTRUCTION

Point	E to F	14+05	stations =	\$23,545.23
Point	O to P	6+69	stations =	\$13,429.15
SUBTOTAL RECONSTRUCTION				<u>\$36,974.38</u>

SPECIAL PROJECTS

Brush	5.8	miles of road		\$6,380.00
SUBTOTAL SPECIAL PROJECTS				<u>\$6,380.00</u>

MOVE IN \$4,529.42

GRAND TOTAL **\$249,742.88**

SUMMARY OF CONSTRUCTION COST

Sale: **Feldshaw**

Road: **A to B**

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	280+62	stations	<u>Reconstruction -</u>	0+00	stations
	0.00	miles		5.31	miles		0.00	miles

IMPROVEMENT: EXCAVATION -

Ditch & Endhaul	211.62	sta. @	\$100.00	per sta. =	\$21,162.00	
				TOTAL EXCAVATION		\$21,162.00

IMPROVEMENT: ENDHAUL -

Culvert Endhaul	300	cy. @	\$1.58	per c.y. =	\$474.00	
Spread & compact	300	cy. @	\$0.25	per c.y. =	\$75.00	
				TOTAL ENDHAUL		\$549.00

CULVERTS - MATERIALS & INSTALLATION

Culverts

760	LF of 18"	\$13,300.00
		\$13,300.00

Culvert Stakes & Markers

50	stakes	\$400.00
15	markers	\$120.00
4	Elbows	\$200.00
		\$720.00

TOTAL CULVERTS \$14,020.00

ROCK

Culvert Backfill		225	cy. of	Crushed	@	\$22.73 per c.y.=	\$5,114.25	
Leveling	154+31	20	cy. of	Crushed	@	\$22.24 per c.y.=	\$444.80	
Energy Dissipator		75	cy. of	Riprap	@	\$14.04 per c.y.=	\$1,053.00	
Leveling		210	cy. of	Jaw-Run	@	\$18.27 per c.y.=	\$3,836.70	
Berm	70+96	3	cy. of	Crushed	@	\$20.03 per c.y.=	\$60.09	
Recreation Stockpile	Point Z	20	cy. of	Jaw-Run	@	\$18.22 per c.y.=	\$364.40	
							TOTAL ROCK	\$10,873.24

SPECIAL PROJECTS

Flume Work	2.00	hours @	\$30.00	per hour	\$60.00	
Clean Outlet	0.15	hours @	\$130.00	per hour	\$19.50	
Construct ditchouts -	2.00	@	\$60.00	each	\$120.00	
Conveyor Belt Berm	0.66	hours @	\$165.00	per station	\$108.90	
Grade and shape road -	88.33	stations @	\$15.50	per station	\$1,369.12	
Roll subgrade w/ vibratory roller prior to rocking -	88.33	stations @	\$13.20	per station	\$1,165.96	
Grass seed and fertilize -	2.58	acres @	\$220.00	per acre	\$567.60	
Mulching -	0.250	acres @	\$600.00	per acre	\$150.00	
				TOTAL SPECIAL PROJECTS		\$3,561.08

GRAND TOTAL \$50,165.32

SUMMARY OF CONSTRUCTION COST

Sale:		<u>Feldshaw</u>			Road:		<u>C to D</u>				
<u>Construction -</u>		<u>0+00</u>	stations	<u>Improvement -</u>		<u>88+07</u>	stations	<u>Reconstruction -</u>		<u>0+00</u>	stations
		0.00	miles			1.67	miles			0.00	miles
IMPROVEMENT: EXCAVATION -											
Widening/Full Bench				150	cy. @	\$4.38	per c.y. =	<u>\$657.00</u>			
								TOTAL EXCAVATION		\$657.00	
IMPROVEMENT: ENDHAUL -											
Widening/Full Bench				150	cy. @	\$1.48	per c.y. =	\$222.00			
Spread & compact				150	cy. @	\$0.25	per c.y. =	<u>\$37.50</u>			
								TOTAL ENDHAUL		\$259.50	
ROCK											
Leveling		0+00	50	cy. of	Jaw-Run	@	\$20.56	per c.y. =	\$1,028.00		
								TOTAL ROCK		\$1,028.00	
SPECIAL PROJECTS											
Waste Area Preperation-				14.00	hours @	\$270.00	per hour	\$3,780.00			
Grade and shape road -				88.07	stations @	\$15.50	per station	\$1,365.09			
Roll subgrade w/ vibratory roller prior to rocking -				88.07	stations @	\$13.20	per station	\$1,162.52			
Grass seed and fertilize -				7.36	acres @	\$220.00	per acre	\$1,619.20			
								TOTAL SPECIAL PROJECTS		\$7,926.81	
GRAND TOTAL										\$9,871.31	

SUMMARY OF CONSTRUCTION COST

Sale:	Feldshaw				Road:	E to F			
<u>Construction -</u>		<u>14+51</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>14+05</u>	stations
		0.27	miles		0.00	miles		0.27	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -									
				<u>Avg. Dist.</u>					
<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>			
14+05		18+21	25%	0.0	Outslope	\$165	=	\$686.40	
18+21		19+46	59%	1	Ditch	\$996	=	\$1,245.00	
19+46		20+90	91%	1	Ditch	\$8,881	=	\$12,788.64	
20+90		25+38	65%	1	Ditch	\$3,754	=	\$16,817.92	
25+38		28+56	15%	0	Outslope	\$107	=	\$340.26	
								TOTAL	\$31,878.22

RECONSTRUCTION: CLEARING AND GRUBBING -									
Roadside Brushing				0.27	miles @	\$1,300.00	per mile =	\$351.00	
Widening				0.198	acres @	\$660.00	per acre =	\$130.68	
Scattering				1.030	acres @	\$980.00	per acre =	\$1,009.40	
								TOTAL CLEARING AND GRUBBING	\$1,491.08

RECONSTRUCTION: EXCAVATION -									
Ditching				12.44	sta. @	\$80.00	per sta. =	\$995.20	
Widening				1126	cy. @	\$1.40	per c.y. =	\$1,576.40	

CULVERTS - MATERIALS & INSTALLATION									
		<u>Culverts</u>							
			80	LF of 18"		\$1,400.00			
		<u>Culvert Stakes & Markers</u>							
			2	markers		\$16.00			
						<u>\$16.00</u>		TOTAL CULVERTS	\$1,416.00

ROCK									
0+00 to	28+56	1,540	cy. of	Jaw Run	@	\$19.74	per c.y. =	\$30,399.60	
Landing Rock		200	cy. of	Pit-Run	@	\$13.66	per c.y. =	\$2,732.00	
Junction Rock		30	cy. of	Crushed	@	\$22.34	per c.y. =	\$670.20	
Switchback		75	cy. of	Jaw Run	@	\$19.78	per c.y. =	\$1,483.50	
								TOTAL ROCK	\$35,285.30

SPECIAL PROJECTS									
Construct ditchouts -				3.00	@	\$20.00	each	\$60.00	
Grade and shape road -				28.56	stations @	\$15.50	per station	\$442.68	
Roll subgrade w/ vibratory roller prior to rocking -				28.56	stations @	\$13.20	per station	\$376.99	
Remove large stumps -				12.00	lump sum @	\$130.00		\$1,560.00	
Grass seed and fertilize -				2.10	acres @	\$220.00	per acre	\$462.00	
								TOTAL SPECIAL PROJECTS	\$2,901.67
								GRAND TOTAL	\$75,543.87

SUMMARY OF CONSTRUCTION COST

Sale:	Feldshaw			Road:	G to H		
<u>Construction -</u>		<u>10+82</u>	stations	<u>Improvement -</u>		<u>0+00</u>	stations
		<u>0.20</u>	miles			<u>0.00</u>	miles
<u>Reconstruction -</u>		<u>0+00</u>	stations			<u>0.00</u>	miles

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

		<u>Avg. Dist.</u>							
<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>			
0+00		3+12	22%	1.0	Ditch	\$183	=	\$570.96	
3+12		4+74	51%	1	Ditch	\$651	=	\$1,054.62	
4+74		5+70	47%	1	Ditch	\$374	=	\$359.04	
5+70		7+21	48%	1	Ditch	\$374	=	\$564.74	
7+21		8+14	57%	1	Ditch	\$996	=	\$926.28	
8+14		8+80	75%	1	Ditch	\$5,320	=	\$3,511.20	
8+80		9+45	62%	1	Ditch	\$2,957	=	\$1,922.05	
9+45		10+82	15%			\$107	=	\$146.59	
								TOTAL	\$9,055.48

CULVERTS - MATERIALS & INSTALLATION

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

ROCK

0+00	to	10+82	620	cy. of	Jaw Run	@	\$19.66	per c.y. =	\$12,189.20	
Landing Rock			100	cy. of	Pit-Run	@	\$13.37	per c.y. =	\$1,337.00	
Junction Rock			4	cy. of	Jaw Run	@	\$19.57	per c.y. =	\$78.28	
Switchback			67	cy. of	Jaw Run	@	\$19.62	per c.y. =	\$1,314.54	
									TOTAL ROCK	\$14,919.02

SPECIAL PROJECTS

Construct ditchouts -	2.00	@	\$20.00	each	\$40.00	
Grade and shape road -	10.82	stations @	\$15.50	per station	\$167.71	
Roll subgrade w/ vibratory roller prior to rocking -	10.82	stations @	\$13.20	per station	\$142.82	
Remove large stumps -	8.00	lump sum @	\$130.00		\$1,040.00	
Grass seed and fertilize -	1.49	acres @	\$220.00	per acre	\$327.80	
					TOTAL SPECIAL PROJECTS	\$1,718.33

GRAND TOTAL	\$26,758.83
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SUMMARY OF CONSTRUCTION COST

Sale: Feldshaw

Road: I to J

<u>Construction</u> -	<u>1+67</u> 0.03	stations miles	<u>Improvement</u> -	<u>0+00</u> 0.00	stations miles	<u>Reconstruction</u> -	<u>0+00</u> 0.00	stations miles
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CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

				<u>Avg. Dist.</u>					
<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>			
0+00		1+71	25%	0.0	Ditch	\$219	=	\$374.49	
								TOTAL	\$374.49

ROCK

0+00	to	1+67	90	cy. of	Jaw Run	@	\$19.59 per c.y.=	\$1,763.10	
Landing Rock			50	cy. of	Pit-Run	@	\$13.30 per c.y.=	\$665.00	
								TOTAL ROCK	\$2,428.10

SPECIAL PROJECTS

Grade and shape road -	1.67	stations @	\$15.50	per station	\$25.89
Roll subgrade w/ vibratory roller prior to rocking -	1.67	stations @	\$13.20	per station	\$22.04
Remove large stumps -	2.00	lump sum @	\$130.00		\$260.00
Grass seed and fertilize -	0.08	acres @	\$220.00	per acre	\$17.60
				TOTAL SPECIAL PROJECTS	\$325.53

GRAND TOTAL	\$3,128.12
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SUMMARY OF CONSTRUCTION COST

Sale: <u>Feldshaw</u>			Road: <u>K to L</u>		
<u>Construction -</u>	<u>0+74</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations
	<u>0.01</u>	miles		<u>0.00</u>	miles
<u>Reconstruction -</u>	<u>0+00</u>	stations		<u>0.00</u>	miles

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

<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist.</u>	<u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>			
0+00		0+75	10%		0.0		\$90	=	\$67.50	
									TOTAL	\$67.50

ROCK										
Landing Rock		0+74	50	cy. of	Pit-Run	@	\$13.42 per c.y.=		\$671.00	
Junction Rock		0+00	30	cy. of	Jaw Run	@	\$19.72 per c.y.=		\$591.60	
									TOTAL ROCK	\$1,262.60

SPECIAL PROJECTS										
Grade and shape road -			0.74	stations @	\$15.50	per station		\$11.47		
Proof-Roll subgrade prior to rocking			0.74	stations @	\$4.70	per station		\$3.48		
Grass seed and fertilize -			0.02	acres @	\$220.00	per acre		\$4.40		
									TOTAL SPECIAL PROJECTS	\$29.12
									GRAND TOTAL	\$1,359.22

SUMMARY OF CONSTRUCTION COST

Sale: Feldshaw			Road: M to N		
<u>Construction -</u>	<u>10+23</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations
	<u>0.19</u>	miles		<u>0.00</u>	miles
<u>Reconstruction -</u>	<u>0+00</u>	stations		<u>0.00</u>	miles

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

		<u>Avg. Dist.</u>							
<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>			
0+00		2+10	40%		Ditch	\$330	=	\$693.00	
2+10		3+56	20%		Outslope	\$139	=	\$202.94	
3+56		5+76	25%		Ditch	\$219	=	\$481.80	
5+76		10+23	10%		Outslope	\$90	=	\$402.30	
								TOTAL	\$1,780.04

ROCK									
0+00	to	1+00	60	cy. of	Jaw Run	@	\$19.78 per c.y. =	\$1,186.80	
Landing Rock			100	cy. of	Pit-Run	@	\$13.64 per c.y. =	\$1,364.00	
Junction Rock		0+00	30	cy. of	Jaw Run	@	\$19.78 per c.y. =	\$593.40	
								TOTAL ROCK	\$3,144.20

SPECIAL PROJECTS									
Grade and shape road -		10.23	stations @	\$15.50	per station	\$158.57			
Roll subgrade w/ vibratory roller prior to rocking -		10.23	stations @	\$13.20	per station	\$135.04			
Remove large stumps -		3.00	lump sum @	\$130.00		\$390.00			
Grass seed and fertilize -		0.47	acres @	\$220.00	per acre	\$103.40			
								TOTAL SPECIAL PROJECTS	\$787.01
								GRAND TOTAL	\$5,711.25

SUMMARY OF CONSTRUCTION COST

Sale: **Feldshaw**

Road: **O to P**

<u>Construction -</u>	5+77	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	6+69	stations
	0.11	miles		0.00	miles		0.13	miles

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

<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist. To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>			
6+69		12+46	78%	0.1	Ditch	\$4,105	=	\$23,685.85	
									TOTAL
									\$23,685.85
									TOTAL ENDHAUL
									\$0.00

RECONSTRUCTION: CLEARING AND GRUBBING -

Side cast	0.011	acres @	\$660.00	per acre =	\$7.26	
Widening	0.151	acres @	\$660.00	per acre =	\$99.66	
Scattering	0.460	acres @	\$980.00	per acre =	\$450.80	
						TOTAL CLEARING AND GRUBBING
						\$557.72

RECONSTRUCTION: EXCAVATION -

Road Earthwork	6.69	sta. @	\$60.00	per sta. =	\$401.40	
Pullback	47	cy. @	\$1.40	per c.y. =	\$65.80	
Widening	1089	cy. @	\$1.40	per c.y. =	\$1,524.60	
						TOTAL EXCAVATION
						\$1,991.80

RECONSTRUCTION: ENDHAUL -

Pullback	10+24	to	11+44	47	cy. @	\$1.43	per c.y. =	\$67.21	
Widening	0+00	to	0+40	95	cy. @	\$1.43	per c.y. =	\$135.85	
Widening	0+40	to	2+38	497	cy. @	\$1.43	per c.y. =	\$710.71	
Widening	2+38	to	2+95	108	cy. @	\$1.43	per c.y. =	\$154.44	
Widening	2+95	to	6+31	389	cy. @	\$1.43	per c.y. =	\$556.27	
Spread & compact				1136	cy. @	\$0.25	per c.y. =	\$284.00	
									TOTAL ENDHAUL
									\$1,908.48

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	30	LF of 18"	\$525.00	
<u>Culvert Stakes & Markers</u>	1	markers	\$8.00	
			\$8.00	
				TOTAL CULVERTS
				\$533.00

ROCK									
0+00 to	12+46	700	cy. of	Jaw Run	@	\$19.24	per c.y. =	\$13,468.00	
Landing Rock	12+46	50	cy. of	Pit-Run	@	\$13.03	per c.y. =	\$651.50	
Junction Rock	0+00	10	cy. of	Crushed	@	\$22.99	per c.y. =	\$229.90	
Junction Rock	0+00	30	cy. of	Jaw Run	@	\$19.14	per c.y. =	\$574.20	
									TOTAL ROCK
									\$14,923.60

SPECIAL PROJECTS

Construct waste areas -	2.00	hours @	\$270.00	per hour	\$540.00	
Grade and shape road -	12.46	stations @	\$15.50	per station	\$193.13	
Roll subgrade w/ vibratory roller prior to rocking -	12.46	stations @	\$13.20	per station	\$164.47	
Remove large stumps -	1.00	lump sum @	\$130.00		\$130.00	
Grass seed and fertilize -	1.02	acres @	\$220.00	per acre	\$224.40	
						TOTAL SPECIAL PROJECTS
						\$1,252.00

GRAND TOTAL **\$44,852.45**

SUMMARY OF CONSTRUCTION COST

Sale: <u>Feldshaw</u>			Road: <u>Q to R</u>		
<u>Construction -</u>	<u>1+30</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations
	<u>0.02</u>	miles		<u>0.00</u>	miles
<u>Reconstruction -</u>	<u>0+00</u>	stations		<u>0.00</u>	miles

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

<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist.</u>	<u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>			
0+00		1+30	10%		0.0		\$90	=		\$117.00
									TOTAL	\$117.00

ROCK										
Landing Rock		1+30	50	cy. of	Pit-Run	@	\$12.99	per c.y.=	\$649.50	
Junction Rock		0+00	30	cy. of	Jaw Run	@	\$19.29	per c.y.=	\$578.70	
									TOTAL ROCK	\$1,228.20

SPECIAL PROJECTS										
Grade and shape road -					1.30	stations @	\$15.50	per station	\$20.15	
Roll subgrade w/ vibratory roller prior to rocking -					1.30	stations @	\$13.20	per station	\$17.16	
									TOTAL SPECIAL PROJECTS	\$37.31
									GRAND TOTAL	\$1,382.51

SUMMARY OF CONSTRUCTION COST

Sale: Feldshaw			Road: S to T		
<u>Construction -</u>	<u>7+58</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations
	<u>0.14</u>	miles		<u>0.00</u>	miles
<u>Reconstruction -</u>	<u>0+00</u>	stations		<u>0.00</u>	stations
	<u>0.00</u>	miles		<u>0.00</u>	miles

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

				<u>Avg. Dist.</u>					
<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>			
0+00		1+89	40%	0.1	Ditch	\$330	=	\$623.70	
1+89		4+64	60%	0.6	Ditch	\$2,641	=	\$7,262.75	
4+64		5+26	29%	0.1	Ditch	\$219	=	\$135.78	
5+26		7+58	10%			\$90	=	\$208.80	
								TOTAL	\$8,231.03

ROCK									
0+00	to	7+58	450	cy. of	Jaw Run	@	\$19.38 per c.y. =	\$8,721.00	
Landing Rock		7+58	50	cy. of	Pit-Run	@	\$13.14 per c.y. =	\$657.00	
								TOTAL ROCK	\$9,378.00

SPECIAL PROJECTS									
Grade and shape road -					7.58	stations @	\$15.50	per station	\$117.49
Roll subgrade w/ vibratory roller prior to rocking -					7.58	stations @	\$13.20	per station	\$100.06
Remove large stumps -					4.00	lump sum @	\$520.00		\$2,080.00
Grass seed and fertilize -					0.70	acres @	\$220.00	per acre	\$154.00
								TOTAL SPECIAL PROJECTS	\$2,451.55
								GRAND TOTAL	\$20,060.58

PIT RUN AND RIP RAP COST SUMMARY

Pit:	Pit_run	Location:	Sec. 16, T1N, R8W, W.M.
Sale:	Feldshaw	Road:	725 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	725 c.y.
Drill Pct.:	100%	In Place Total:	518 c.y.

Drill & Shoot:	\$2.50	/cu.yd.	x	518 cu.yds.	=	\$1,295.00
Load Dump Truck:	\$0.70	/cu.yd.	x	725 cu.yds.	=	\$507.50

Subtotal \$1,802.50

Base Cost= \$9.30 Per Cu.Yd.

TOTAL PRODUCTION COSTS	\$1,802.50
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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 Energy Dissipator (Riprap)	2.74	2.00	9.30	14.04	75	\$1,053.00
E to F Landing Rock (Pit-Run)	3.26	1.10	9.30	13.66	200	\$2,732.00
G to H Landing Rock (Pit-Run)	2.97	1.10	9.30	13.37	100	\$1,337.00
I to J Landing Rock (Pit-Run)	2.90	1.10	9.30	13.30	50	\$665.00
K to L Landing Rock (Pit-Run)	3.02	1.10	9.30	13.42	50	\$671.00
M to N Landing Rock (Pit-Run)	3.24	1.10	9.30	13.64	100	\$1,364.00
O to P Landing Rock (Pit-Run)	2.63	1.10	9.30	13.03	50	\$651.50
Q to R Landing Rock (Pit-Run)	2.59	1.10	9.30	12.99	50	\$649.50
S to T Landing Rock (Pit-Run)	2.74	1.10	9.30	13.14	50	\$657.00
				Total C.Y.	725	Sub Total \$9,780.00

TOTAL ROCKING COSTS	\$9,780.00
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ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Jaw_run	Location:	Sec.16, T1N, R8W, W.M.
Sale:	Feldshaw	Road:	4006 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	4006 c.y.
Drill Pct.:	100%	In Place Total:	2861 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburder in Waste Area, spread and compact. \$32,215.00

Drill & Shoot:	\$2.50 /cu.yd.	x	2861 cu.yds.	=	\$7,152.50
Push Rock:	\$0.60 /cu.yd.	x	4006 cu.yds.	=	\$2,403.60
Load Crusher:	\$0.60 /cu.yd.	x	4006 cu.yds.	=	\$2,403.60
Crush Rock:	\$2.60 /cu.yd.	x	4006 cu.yds.	=	\$10,415.60
Load Dump Truck:	\$0.70 /cu.yd.	x	4006 cu.yds.	=	\$2,804.20
Oversize Reduction:	\$4.50 /cu.yd.	x	0 cu.yds.	=	\$0.00

Subtotal \$57,394.50

Move In/Set-up Crusher					\$733.00
Move In and set up Drill and Compressor	1	@	\$433.24	=	\$433.24
Move in Roller and Compactor	1	@	\$433.24	=	\$433.24
Move in Grader	1	@	\$159.63	=	\$159.63
Move in D-8	1	@	\$694.31	=	\$694.31
Move in Loader	1	@	\$562.56	=	\$562.56
Move in Excavator	1	@	\$765.51	=	\$765.51
Move in Trucks	5	@	\$139.13	=	\$695.65
Move in Water Truck	1	@	\$163.54	=	\$163.54
Change Gradation					

Subtotal \$4,640.68

Base Cost= \$14.25 Per Cu.Yd.

TOTAL PRODUCTION COSTS \$62,035.18

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 Leveling (Jaw-Run)	1.57	2.45	14.25	18.27	210	\$3,836.70
A to B Recreation Stockpile (Jaw-Run)	2.87	1.10	14.25	18.22	20	\$364.40
C to D Leveling (Jaw-Run)	3.86	2.45	14.25	20.56	50	\$1,028.00
E to F 0 2856 (Jaw Run)	3.04	2.45	14.25	19.74	1540	\$30,399.60
E to F Switchback (Jaw Run)	3.08	2.45	14.25	19.78	75	\$1,483.50
G to H 0 1082 (Jaw Run)	2.96	2.45	14.25	19.66	620	\$12,189.20
G to H Junction Rock (Jaw Run)	2.87	2.45	14.25	19.57	4	\$78.28
G to H Switchback (Jaw Run)	2.92	2.45	14.25	19.62	67	\$1,314.54
I to J 0 167 (Jaw Run)	2.89	2.45	14.25	19.59	90	\$1,763.10
K to L Junction Rock (Jaw Run)	3.02	2.45	14.25	19.72	30	\$591.60
M to N 0 100 (Jaw Run)	3.08	2.45	14.25	19.78	60	\$1,186.80
M to N Junction Rock (Jaw Run)	3.08	2.45	14.25	19.78	30	\$593.40
O to P 0 1246 (Jaw Run)	2.54	2.45	14.25	19.24	700	\$13,468.00
O to P Junction Rock (Jaw Run)	2.44	2.45	14.25	19.14	30	\$574.20
Q to R Junction Rock (Jaw Run)	2.59	2.45	14.25	19.29	30	\$578.70
S to T 0 758 (Jaw Run)	2.68	2.45	14.25	19.38	450	\$8,721.00
				Total C.Y.	4006	Sub Total \$78,171.02

TOTAL ROCKING COSTS \$78,171.02

STOCKPILE ROCK COST SUMMARY

Pit:	Crushed	Location:	Sec.32, 1TN, R7W, W.M.
Sale:	Feldshaw	Road:	288 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	288 c.y.
Drill Pct.:	0%	In Place Total:	206 c.y.

Load Dump Truck: \$0.70 /cu.yd. x 288 cu.yds. = \$201.60

Subtotal \$201.60

Move in Roller and Compactor	1	@	\$433.24	=	\$433.24
Move in Grader	1	@	\$159.63	=	\$159.63
Move in Loader	1	@	\$562.56	=	\$562.56
Move in Trucks	5	@	\$139.13	=	\$695.65
Move in Water Truck	1	@	\$163.54	=	\$163.54
Change Gradation					

Subtotal \$2,014.62

Base Cost= \$7.70 Per Cu.Yd.

TOTAL PRODUCTION COSTS	\$2,216.22
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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 Culvert Backfill (Crushed)	12.58	2.45	7.70	22.73	225	\$5,114.25
A to B Leveling (Crushed)	12.09	2.45	7.70	22.24	20	\$444.80
A to B Berm (Crushed)	9.88	2.45	7.70	20.03	3	\$60.09
E to F Junction Rock (Crushed)	12.19	2.45	7.70	22.34	30	\$670.20
O to P Junction Rock (Crushed)	12.84	2.45	7.70	22.99	10	\$229.90
				Total C.Y.	288	Sub Total
						\$6,519.24

TOTAL ROCKING COSTS	\$6,519.24
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Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Feldshaw**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
33.8	Pavement	30
5.2	Main Lines	7
4.0	Steep Grades	2

			Within Area			Within			
No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Area Cost	Total Cost
1	Brush Cutter	\$507.99		\$4.00	2.99	3.69	0.7	\$2.80	\$510.79
0	Graders	\$0.00		\$3.65	2.99	3.69	0.7	\$0.00	\$0.00
0	Rollers (smooth/grid) & Compactors	\$0.00		\$5.00	2.99	3.69	0.7	\$0.00	\$0.00
1	Excavators (Large)	\$791.42	1	\$44.80	2.99	7.03	4.04	\$180.99	\$972.41
1	Tractors (D6)	\$636.43	2	\$7.10	2.99	3.69	0.7	\$4.97	\$641.40
1	Tractor (D8)	\$746.13	2	\$15.10	2.99	7.03	4.04	\$61.00	\$807.13
2	Dump Truck (10 cy +)	\$341.73		\$2.85	0.00	0.00	0	\$0.00	\$341.73
2	Dump Truck (Off Hiway)	\$1,249.31	1	\$4.75	2.99	3.69	0.7	\$6.65	\$1,255.96
TOTAL MOVE-IN COSTS:									\$4,529.42



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

Feldshaw

1. Type of Sale

Areas 1, 2 and 3: Modified Clearcut, Recovery.

2. Legal Description

Portions of Sections 15, 16 and 22, T1N, R8W, 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)	152	113
Area 2 (Clearcut)	19	10
Area 3 (Clearcut)	5	5

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

Used for calculating the advertised volume.

Gross acres, less green tree retention, roads, and riparian areas inside the sale boundary.

4. Cruising Procedures

A. Cruise Method

Area 1 had 24 plots cruised and Area 2 had 6 plots cruised. Area 3 (rock pit area and waste area) was not cruised but had volume per acre applied using the cruise from Area 1 as it is the most similar stand type. All plots were full cruise plots at a spacing of 700' x 350'. 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 measured for merchantable bole height, diameter, and form factor. Merchantable heights were recorded to 6" and 7" outside bark for conifers and hardwoods respectively.

B. Plot size

A basal area factor of 40 was used for all plots. The point of observation is 4.5 feet.

C. Grading System

All species were graded using Columbia River Log Scaling and Grading Bureau rules favoring a 40' log.

5. Computation Procedure

The volumes and statistics for the timber cruise were computed using SuperACE 2008, developed by Atterbury Consultants, Inc. Computations for standard error and coefficient of variation are based on net board feet per acre. The standard error is 8.9% on Area 1 and 8.1% on Area 2. The coefficient of variation for these areas are 48.1% and 18.2%, respectively. Plots cruised in 2010 were grown forward to 2015 using SuperACE. A reduction factor for this growth from 2010 to 2015 has been applied due to Swiss Needle Cast in the stand.

6. Hidden Defect and Breakage

A 1% reduction was applied to conifers and a 10% reduction to hardwood volumes for hidden defect and breakage. This reduction is in addition to the visual defect taken out during the cruise.

7. Timber Description

The sale area burned in the 1933 Tillamook Fire and 1939 Saddle Mountain Fire. The area was planted in 1956-1957. The alder was aerially sprayed in 1977 for conifer release and portions of Area 1 and Area 2 were helicopter commercially thinned in 1995 with Kilo Helo Thin. There has been no additional stand management. No snags were recorded in the cruise.

Sale Area – Species	DBH	Merchantable Bole Height	Merchantable Top
Area 1&3: Douglas-fir	14	78	5"
Area 1&3: Alder	14	54	6"
Area 2: Douglas-fir	16	92	5"
Area 2: Alder	14	88	6"

8. Cruiser Names/Dates

ODF 2010 and 2015

9. Revenue Distribution

FDF 100%

Tax Code: 56 (100%)

Deed Numbers: 161

10. Attachments

Stand Table

Volume Summaries

Log Stock Tables

Logging Plan Map

11. Stand and Log Stock Tables Species Key

DF – Douglas-fir take

RA – Red alder take

WL – Western Hemlock leave

FI		PSTNDSUM		Stand Table Summary									Page		1	
													Date:		9/4/2015	
<div>T01N R08W S22 TyMC89.00</div> <div>T01N R08W S22 TyMC24.00</div>				Project		SALE75		Time:		2:38:18PM						
				Acres		113.00		Grown Year:		2015						
S Sp	T	Tot					Average Log		Net		Net		T o t a l s			
		Sample DBH	FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF	
DF		9	91	52	30.181	13.33	30.18	7.4	34.7	6.37	223	1,046	720	252	118	
DF		10	92	70	12.991	6.67	12.99	11.6	39.6	4.28	150	514	484	170	58	
DF		11	86	77	20.203	13.33	30.31	11.0	36.3	9.48	333	1,100	1,071	376	124	
DF		12	89	87	17.163	13.33	34.33	12.4	47.5	12.12	425	1,629	1,370	481	184	
DF		13	86	86	21.618	20.00	43.24	13.7	52.6	16.91	593	2,276	1,910	670	257	
DF		14	85	90	18.450	20.00	36.90	17.2	64.4	18.08	634	2,377	2,043	717	269	
DF		15	84	98	10.865	13.33	21.73	20.4	74.2	12.62	443	1,613	1,426	500	182	
DF		16	84	112	9.612	13.33	24.12	20.6	83.0	14.19	498	2,002	1,603	563	226	
DF		19	86	125	3.316	6.67	9.95	29.3	115.5	8.30	291	1,149	938	329	130	
DF		20	92	108	3.214	6.67	9.64	26.6	115.5	7.32	257	1,114	827	290	126	
DF		24	89	127	2.087	6.67	6.26	48.2	221.1	8.61	302	1,384	973	341	156	
DF		Totals	88	82	149.700	133.33	259.64	16.0	62.4	118.28	4,150	16,205	13,366	4,690	1,831	
RA		8	92	17	19.099	6.67										
RA		13	81	72	22.288	20.00	29.52	15.2	43.2	12.33	448	1,274	1,393	507	144	
RA		14	81	57	12.473	13.33	12.47	23.8	54.0	8.16	297	674	923	335	76	
RA		15	82	55	10.865	13.33	16.30	17.8	54.0	7.98	290	880	902	328	99	
RA		17	86	51	8.361	13.33	12.49	23.8	75.0	8.17	297	937	923	336	106	
RA		Totals	85	50	73.085	66.67	70.78	18.8	53.2	36.64	1,332	3,764	4,141	1,506	425	
WL		23	86	110	2.311	6.67	6.93	41.2	178.2	9.13	285	1,235	1,032	322	140	
WL		Totals	86	110	2.311	6.67	6.93	41.2	178.2	9.13	285	1,235	1,032	322	140	
Totals			87	72	225.096	206.67	337.36	17.1	62.9	164.05	5,768	21,204	18,538	6,518	2,396	

TC		Stand Table Summary														
Project										SALE75						
T01N R08W S15 TMC										T01N R08W S15 TMC						
Twp	Rge	Sec	Tract	Type			Acres	Plots	Sample Trees			Page: 1				
01N	08W	15	AREA 2	MC			10.00	6	30			Date: 09/04/2015				
													Time: 2:37:17PM			
S Spc	T	Sample		Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s			
		DBH	Trees	16'				Tot	Net Cu.Ft.		Net Bd.Ft.	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF
DF		9	1	92	29	15.090	6.67	15.09	5.1	19.8	2.19	77	299	22	8	3
DF		14	3	83	86	18.709	20.00	37.42	16.9	57.8	17.97	631	2,161	180	63	22
DF		15	1	81	137	5.432	6.67	16.30	16.9	69.3	7.83	275	1,129	78	27	11
DF		17	2	85	105	8.459	13.33	21.15	22.8	89.1	13.75	483	1,884	138	48	19
DF		18	2	86	120	7.545	13.33	22.64	24.6	99.0	15.85	556	2,241	158	56	22
DF		19	2	89	114	6.772	13.33	20.32	26.7	110.5	15.47	543	2,246	155	54	22
DF		20	3	87	119	9.167	20.00	27.50	30.8	125.4	24.11	846	3,449	241	85	34
DF		21	1	88	113	2.772	6.67	8.32	31.6	132.0	7.48	262	1,098	75	26	11
DF		24	1	84	117	2.122	6.67	6.37	44.1	178.2	8.01	281	1,134	80	28	11
DF		Totals	16	86	92	76.069	106.67	175.09	22.6	89.3	112.67	3,953	15,641	1,127	395	156
RA		11	1	77	80	10.102	6.67	10.10	19.1	54.0	5.32	193	545	53	19	5
RA		12	1	77	67	8.488	6.67	8.49	18.2	54.0	4.24	154	458	42	15	5
RA		13	2	78	101	14.465	13.33	28.93	14.8	47.3	11.74	427	1,367	117	43	14
RA		14	3	79	92	18.709	20.00	37.42	17.3	51.0	17.77	646	1,908	178	65	19
RA		15	3	78	85	16.297	20.00	38.03	15.7	50.1	16.41	597	1,907	164	60	19
RA		17	3	82	91	12.688	20.00	29.61	22.1	77.1	18.03	656	2,284	180	66	23
RA		20	1	81	81	3.056	6.67	9.17	20.5	75.0	5.16	188	688	52	19	7
RA		Totals	14	79	88	83.806	93.33	161.74	17.7	56.6	78.67	2,861	9,157	787	286	92
Totals		30		82	90	159.874	200.00	336.83	20.2	73.6	191.34	6814	24,798	1,913	681	248

FI PLOGSTVB		Log Stock Table - MBF																	
T01N R08W S22 TyMC 89.00				Project: SALE75												Page 1			
T01N R08W S22 TyMC 24.00				Acres 113.00												Date 9/4/2015			
				Time 2:28:40PM															
S T Spp	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	CO 2	40	283		283	15.4					175		107						
DF	CO 3	32	65		65	3.6			33	32									
DF	CO 3	40	1,012		1,012	55.3			190	619	203								
DF	CO 4	13	20		20	1.1		20											
DF	CO 4	15	18		18	1.0		18											
DF	CO 4	16	32		32	1.8		32											
DF	CO 4	19	7		7	.4		7											
DF	CO 4	23	20		20	1.1		20											
DF	CO 4	24	92		92	5.0		92											
DF	CO 4	26	45		45	2.5		45											
DF	CO 4	27	7		7	.4		7											
DF	CO 4	30	18		18	1.0		18											
DF	CO 4	32	18		18	1.0		18											
DF	CO 4	37	68		68	3.7		68											
DF	CO 4	39	21		21	1.2		21											
DF	CO 4	40	103		103	5.6		103											
DF	Totals		1,831		1,831	76.4		471	223	651	203	175		107					
RA	H 3	17	73		73	17.2					39	34							
RA	H 3	40	63		63	14.8					63								
RA	H 4	14	11		11	2.6			11										
RA	H 4	16	15		15	3.5			15										
RA	H 4	18	8		8	2.0			8										
RA	H 4	27	22		22	5.2			22										
RA	H 4	32	51		51	12.1				51									
RA	H 4	33	32		32	7.5			32										
RA	H 4	40	150		150	35.2			100	50									
RA	Totals		425		425	17.8			188	101	102	34							
WL	CO 2	40	103		103	74.1							103						
WL	CO 3	32	31		31	22.2					31								
WL	CO 4	20	5		5	3.7		5											
WL	Totals		140		140	5.8		5			31		103						
Total	All Species		2,396		2,396	100.0		476	411	752	336	210		211					

TC TLOGSTVB				Log Stock Table - MBF Project: SALE75															
T01N R08W S15 TMC										T01N R08W S15 TMC									
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1										
01N	08W	15	AREA 2	MC	10.00	6	30	Date	9/4/2015										
									Time	2:35:18PM									
S Spp	So	Gr	Log	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	CO	2	40	73	1.0	72	46.2					38	26	8					
DF	CO	3	32	10	1.0	10	6.6				10								
DF	CO	3	40	59	1.0	58	37.3			8	36	14							
DF	CO	4	12	0	1.0	0	.2		0										
DF	CO	4	14	0	1.0	0	.2		0										
DF	CO	4	15	3	1.0	3	1.9		3										
DF	CO	4	17	4	1.0	4	2.8		4										
DF	CO	4	19	1	1.0	1	.4		1										
DF	CO	4	20	1	1.0	1	.5		1										
DF	CO	4	21	3	1.0	3	1.9		3										
DF	CO	4	28	1	1.0	1	.8		1										
DF	CO	4	30	2	1.0	2	1.2		2										
DF	Totals			158		156	63.1		15	8	47	14	38	26	8				
RA	H	4	20	2	10.0	2	2.4					2							
RA	H	4	22	1	10.0	1	.9			1									
RA	H	2	20	9	10.0	8	8.4					4	4						
RA	H	3	14	3	10.0	2	2.7					2							
RA	H	3	32	12	10.0	11	12.2					11							
RA	H	3	36	7	10.0	6	6.7					6							
RA	H	4	14	1	10.0	1	1.2			1									
RA	H	4	16	1	10.0	1	1.1			1									
RA	H	4	18	3	10.0	2	2.6			2									
RA	H	4	21	3	10.0	3	2.9					3							
RA	H	4	22	4	10.0	4	3.9			1	2								
RA	H	4	23	2	10.0	1	1.6			1									
RA	H	4	26	6	10.0	6	6.1			2	4								
RA	H	4	28	2	10.0	1	1.6			1									
RA	H	4	32	18	10.0	16	17.4			2	14								
RA	H	4	34	2	10.0	2	2.1			2									
RA	H	4	37	9	10.0	8	9.3			8									
RA	H	4	39	6	10.0	5	6.0			5									
RA	H	4	40	11	10.0	10	11.0				10								
RA	Totals			102	10.0	92	36.9			29	30	25	4	4					
Total All Species				260	4.5	248	100.0		15	37	77	38	42	29	8				



"STEWARDSHIP IN FORESTRY"

Feldshaw

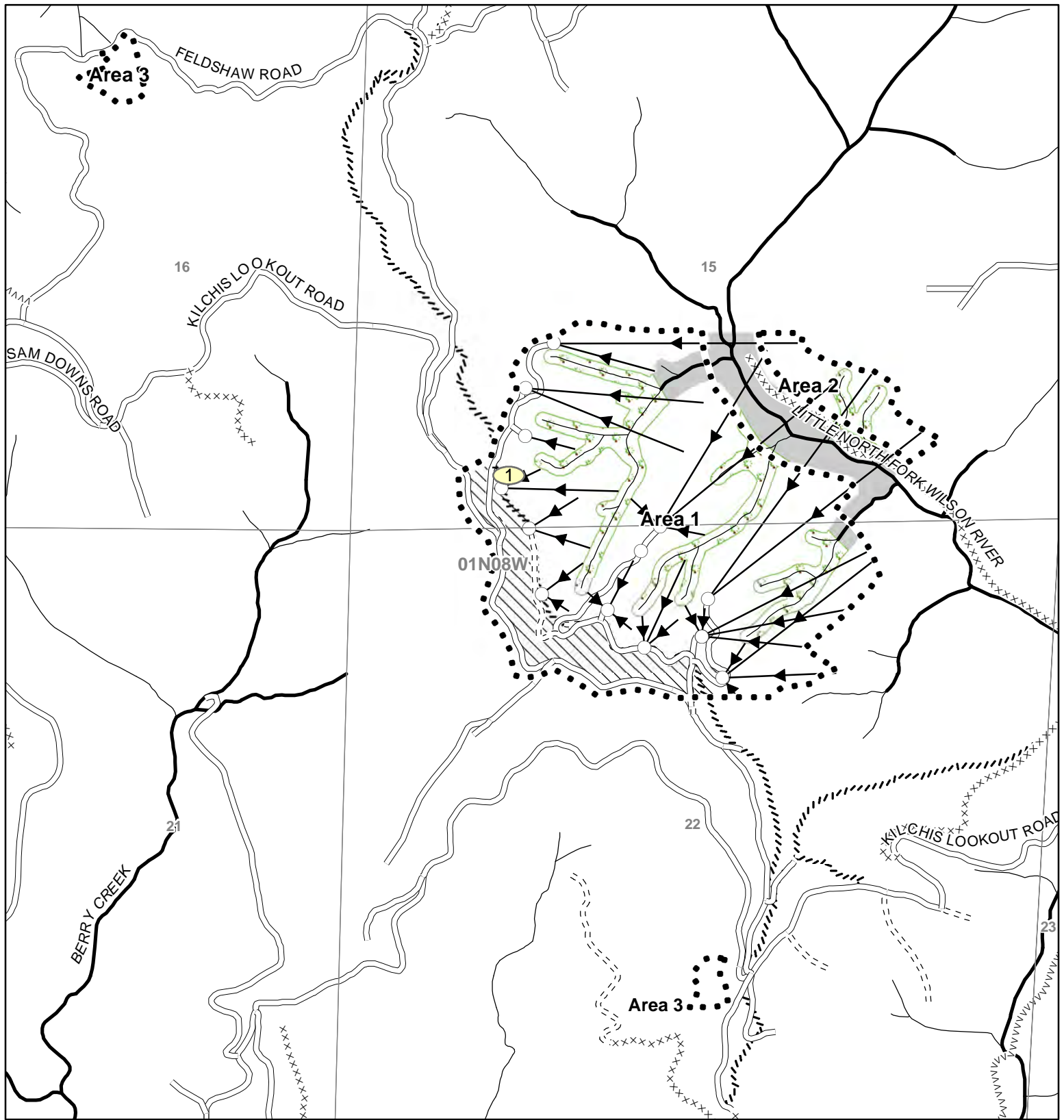
Volume Summary

Area 1-Modified Clearcut				
113 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF / Acre	MBF	D&B	MBF
Douglas-fir	16.4	1850	1.0%	1831
Alder	4.2	473	10.0%	425
TOTAL	20.6	2322		2256

Area 2 - Modified Clearcut				
10 acres				
Species	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF / Acre	MBF	D & B	Area
Douglas-fir	15.8	158	1%	156
Alder	10.2	102	10%	92
Total	26.0	260		248

Area 3 (Rock Pit /Waste Area)				
5 acres				
Species	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF / Acre	MBF	D & B	Area
Douglas-fir	16.4	82.0	1%	81
Alder	4.2	21.0	10%	19
Total	20.6	103		100

SPECIES	Cruised Net (MBF)	Net Sale (MBF)
Douglas-fir	2089	2068
Alder	596	536
TOTAL	3280	2604



- | | | |
|--|--|---|
| <ul style="list-style-type: none"> Rock source Stock pile Waste area Bridge Gate Survey corner Domestic water supply intake Truck turn-around Helicopter landing zone Cultural site Cable yarding Ground Landing Yarder Landing | <ul style="list-style-type: none"> Buffer Non-required thinning Cable yarding Ground yarding Helicopter yarding Downhill yarding Green tree retention area Restricted area Area boundary Sale boundary Ownership boundary | <ul style="list-style-type: none"> Fish stream Non-fish stream Unsurfaced road Surfaced road Paved road Abandoned road Swing road Non-project road Blocked road OHV trail Non-motorized trail Transmission line Railroad |
|--|--|---|

LOGGING PLAN

Timber Sale Contract No. 341-16-36
FELDSHAW

Portions of Sections 15, 16 and 22
T1N R8W, W.M.,
Tillamook County, Oregon

1,000 0 1,000 Feet

Tillamook District GIS
7/08/2015

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	
		Gross	Net
1	Modified Clearcut	152	113
2	Modified Clearcut	19	10
3	Modified Clearcut	5	5
Total		176	128

