



Timber Sale Appraisal
Three Little Ridges
Sale TL-341-2017-21-

District: Tillamook

Date: November 29, 2016

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,527,903.18	\$156,906.36	\$1,684,809.54
		Project Work:	(\$270,460.00)
		Advertised Value:	\$1,414,349.54



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Timber Description

Location: Portions of Sections 22, 23, 26, 27, 34, and 35, T1N, R8W, W.M., Tillamook County, Oregon.

Stand Stocking: 40%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	16	0	95
Western Hemlock / Fir	12	0	95
Sitka Spruce	13	0	95
Alder (Red)	15	0	93

Volume by Grade	2S	3S	4S	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	1,607	2,698	741	0	0	0	0	5,046
Western Hemlock / Fir	20	86	26	0	0	0	0	132
Sitka Spruce	0	12	3	0	0	0	0	15
Alder (Red)	0	0	0	129	133	218	196	676
Total	1,627	2,796	770	129	133	218	196	5,869

Comments: Pond Values Used: 3rd Quarter Calendar Year 2016.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$860/\text{MBF} = \$1,150/\text{MBF} - \$290/\text{MBF}$

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

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

BRANDING AND PAINTING COST ALLOWANCE = $\$2.00/\text{MBF}$

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

HAULING COST ALLOWANCE

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

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

Snag Creation, girdling at base: $\$15/\text{tree} \times 556 \text{ trees} = \$8,340$

Truck Assist, Area 3: $7 \text{ acres} \times 20.1 \text{ MBF/acre} \times \$20/\text{MBF} = \$2,814$

TOTAL Other Costs (with Profit & Risk to be added) = $\$11,154$

Other Costs (No Profit & Risk added):

Machine Cleaning: $\$1,000/\text{machine} \times 2 \text{ machines} = \$2,000$

Heliport Construction: 6 hours machine loader time for slash moving @ $\$110/\text{hour} = \660

Cover Materials for Piles: $\$5/\text{pile} \times 40 \text{ piles} = \200

Slash Piling and Sorting (Cable Ground): $\$5/\text{acre} \times 305 \text{ acres} = \$1,525$

Ditch Cleaning and Bank Sluff Removal:

Mobilization: two times – dump truck w/tilt bed & small excavator: $\$890 \times 2 = \$1,780$

Small excavator (Cat 312 or equivalent): 40 hours @ $\$95/\text{hour} = \$3,800$

Dump truck: 40 hours @ $\$70/\text{hour} = \$2,800$

TOTAL Other Costs (No Profit & Risk added) = $\$12,765$

ROAD MAINTENANCE:

Spot Rocking:

Cedar Butte, Firebreak 5, Little North Fork, Muesial Creek, and Upper Muesial Creek Roads:

$20\text{cy}/\text{mmbf}/\text{mile} \times 5.9 \text{ MMBF} \times \$13.00/\text{cy} \times 8.3 \text{ miles} / 5,869 \text{ MBF} = \$2.17/\text{MBF}$

Grading:

Cedar Butte, Firebreak 5, Little North Fork Muesial Creek and Upper Muesial Creek Roads: $\$250/\text{mile} \times 8.3 \text{ miles} \times 4 \text{ times} / 5,869 \text{ MBF} = \$1.41/\text{MBF}$

Final Maintenance Grading: $\$500 \times 8.3 \text{ miles} / 5,869 \text{ MBF} = \$0.71/\text{MBF}$

Final Maintenance Compaction: $\$950/\text{mile} \times 2.2 \text{ miles} / 5,869 \text{ MBF} = \$0.36/\text{MBF}$

TOTAL Road Maintenance: $\$4.65/\text{MBF}$



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Logging Conditions

Combination#: 1	Douglas - Fir	91.83%
Logging System:	Cable: Medium Tower >40 - <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:	8.4	bd. ft / load: 3800
cost / mbf:	\$187.97	
machines:	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)	
Combination#: 2	Western Hemlock / Fir Sitka Spruce	88.11% 87.00%
Logging System:	Cable: Medium Tower >40 - <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:	9	bd. ft / load: 3800
cost / mbf:	\$175.44	
machines:	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)	
Combination#: 3	Alder (Red)	93.06%
Logging System:	Cable: Medium Tower >40 - <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:	5.53	bd. ft / load: 3800
cost / mbf:	\$285.52	
machines:	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)	
Combination#: 4	Douglas - Fir Western Hemlock / Fir Sitka Spruce Alder (Red)	8.17% 11.89% 13.00% 6.94%
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:	20	bd. ft / load: 3800
cost / mbf:	\$41.74	
machines:	Stroke Delimber (B)	



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Logging Costs

Operating Seasons: 2.00	Profit Risk: 12%
Project Costs: \$270,460.00	Other Costs (P/R): \$11,154.00
Slash Disposal: \$0.00	Other Costs: \$12,765.00

Miles of Road

Road Maintenance: \$4.65

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
Western Hemlock / Fir	\$0.00	3.0	3.8
Sitka Spruce	\$0.00	3.0	3.4
Alder (Red)	\$0.00	3.0	3.4



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling / Brand & Paint	Other	Total
Douglas - Fir									
\$176.02	\$4.88	\$1.49	\$68.25	\$1.90	\$30.30	\$0.00	\$7.00	\$2.17	\$292.01
Western Hemlock / Fir									
\$159.54	\$4.88	\$1.49	\$71.84	\$1.90	\$28.76	\$0.00	\$7.00	\$2.17	\$277.58
Sitka Spruce									
\$158.06	\$4.88	\$1.49	\$80.29	\$1.90	\$29.59	\$0.00	\$7.00	\$2.17	\$285.38
Alder (Red)									
\$268.61	\$4.98	\$1.49	\$81.82	\$1.90	\$43.06	\$0.00	\$7.00	\$2.17	\$411.03

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$589.93	\$297.92	\$0.00
Western Hemlock / Fir	\$0.00	\$448.41	\$170.83	\$0.00
Sitka Spruce	\$0.00	\$422.00	\$136.62	\$0.00
Alder (Red)	\$0.00	\$643.14	\$232.11	\$0.00



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Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00
Sitka Spruce	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	5,046	\$297.92	\$1,503,304.32
Western Hemlock / Fir	132	\$170.83	\$22,549.56
Sitka Spruce	15	\$136.62	\$2,049.30
Alder (Red)	676	\$232.11	\$156,906.36

Gross Timber Sale Value

Recovery: \$1,684,809.54

Prepared By: David Wells

Phone: 503-842-2545



PROJECT SUMMARY SHEET

Sale: Three Little Ridges

CONSTRUCTION

Point	G to H	12+20	stations =	\$17,021.00
Point	K to L	28+30	stations =	\$50,976.34
Point	M to N	2+20	stations =	\$3,141.15
Point	Q to R	6+70	stations =	\$3,395.79
Point	U to V	3+60	stations =	\$4,376.52
Point	CC to DD	4+40	stations =	\$2,802.28
Point	EE to FF	3+00	stations =	\$6,458.60
SUBTOTAL CONSTRUCTION				\$88,171.68

IMPROVEMENT

Point	A to B	308+50	stations =	\$26,734.51
Point	C to D	102+00	stations =	\$27,406.75
Point	E to F	16+50	stations =	\$1,764.64
Point	G to H	18+60	stations =	\$9,878.74
Point	W to X	15+50	stations =	\$1,760.35
SUBTOTAL IMPROVEMENT				\$67,544.99

RECONSTRUCTION

Point	C to D	28+80	stations =	\$18,255.33
Point	G to H	18+60	stations =	\$30,960.94
Point	I to J	15+00	stations =	\$7,043.55
Point	M to N	3+00	stations =	\$3,451.99
Point	O to P	6+30	stations =	\$7,100.40
Point	S to T	2+00	stations =	\$2,720.42
Point	Y to Z	17+00	stations =	\$14,478.52
Point	AA to BB	2+50	stations =	\$2,837.40
SUBTOTAL RECONSTRUCTION				\$86,848.55

SPECIAL PROJECTS

Brushing	21.0	Miles of road	\$18,900.00
Rock Quarry Test Drilling		Including Move-In	\$2,765.00
SUBTOTAL SPECIAL PROJECTS			\$21,665.00

MOVE IN

\$6,229.78

GRAND TOTAL

\$270,460.00

SUMMARY OF CONSTRUCTION COST

Sale:			<u>Three Little Ridges</u>			Road:			<u>A to B</u>		
<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	308+50	stations	<u>Reconstruction -</u>	0+00	stations			
	0.00	miles		5.84	miles		0.00	miles			
<u>IMPROVEMENT:</u> CLEARING AND GRUBBING -											
Widening				0.060	acres @	\$980.00	per acre =	\$58.80			
									TOTAL CLEARING AND GRUBBING		\$58.80
<u>IMPROVEMENT:</u> EXCAVATION -											
Widening				270	cy. @	\$2.25	per c.y. =	\$607.50			
									TOTAL EXCAVATION		\$607.50
<u>IMPROVEMENT:</u> ENDHAUL -											
Widening	221+00	to	221+50	30	cy. @	\$3.57	per c.y. =	\$107.10			
Widening	224+00	to	224+60	35	cy. @	\$3.45	per c.y. =	\$120.75			
Widening	249+70	to	250+00	26	cy. @	\$3.31	per c.y. =	\$86.06			
Widening	259+20	to	259+60	23	cy. @	\$3.11	per c.y. =	\$71.53			
Widening	303+50	to	304+10	156	cy. @	\$3.26	per c.y. =	\$508.56			
Spread & compact				270	cy. @	\$0.25	per c.y. =	\$67.50			
									TOTAL ENDHAUL		\$961.50
CULVERTS - MATERIALS & INSTALLATION											
<u>Culvert Stakes & Markers</u>											
				0	stakes	\$0.00					
				10	markers	\$80.00					
						\$80.00					
									TOTAL CULVERTS		\$80.00
ROCK											
Resurfacing at Widening	303+50-304+10	30	cy. of	Crushed	@	\$8.79	per c.y. =	\$263.70			
Switchback Widening	189+40, 202+40	40	cy. of	Crushed	@	\$6.95	per c.y. =	\$278.00			
Spot Rock	TBD	500	cy. of	Crushed	@	\$31.05	per c.y. =	\$15,525.00			
									TOTAL ROCK		\$16,066.70
SPECIAL PROJECTS											
Construct ditchout through berm at 4+50 -				1.00	@	\$120.00	each	\$120.00			
Pluck alder along switchbacks at 189+40 & 202+40 -				2.00	hours @	\$140.00	per hour	\$280.00			
Pull Ditch and endhaul material -				40.00	stations @	\$80.00	per station	\$3,200.00			
Grade and shape road -				186.30	stations @	\$15.50	per station	\$2,887.65			
Roll subgrade w/ vibratory roller prior to rocking -				186.30	stations @	\$13.20	per station	\$2,459.16			
Grass seed and fertilize -				0.06	acres @	\$220.00	per acre	\$13.20			
									TOTAL SPECIAL PROJECTS		\$8,960.01
GRAND TOTAL										\$26,734.51	

SUMMARY OF CONSTRUCTION COST

Sale:

Three Little Ridges

Road:

C to D

Construction -	0+00	stations	Improvement -	102+00	stations	Reconstruction -	28+80	stations
	0.00	miles		1.93	miles		0.55	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Side cast	0.017	acres @	\$980.00	per acre =	\$16.66	
Scattering	0.230	acres @	\$980.00	per acre =	\$225.40	
TOTAL CLEARING AND GRUBBING						\$242.06

IMPROVEMENT: EXCAVATION -

Pullback	70	cy. @	\$1.40	per c.y. =	\$98.00	
TOTAL EXCAVATION						\$98.00

IMPROVEMENT: ENDHAUL -

Pullback	24+60	to	25+20	70	cy. @	\$3.19	per c.y. =	\$223.30	
Spread & compact				70	cy. @	\$0.25	per c.y. =	\$17.50	
TOTAL ENDHAUL									\$240.80

RECONSTRUCTION: CLEARING AND GRUBBING -

Side cast	0.041	acres @	\$660.00	per acre =	\$27.06	
Scattering	2.380	acres @	\$980.00	per acre =	\$2,332.40	
TOTAL CLEARING AND GRUBBING						\$2,359.46

RECONSTRUCTION: EXCAVATION -

Pullback	130	cy. @	\$1.40	per c.y. =	\$182.00	
Widening/Grade Reduction/Landing	2500	cy. @	\$1.40	per c.y. =	\$3,500.00	
TOTAL EXCAVATION						\$3,682.00

RECONSTRUCTION: ENDHAUL -

Pullback	113+20	to	114+20	130	cy. @	\$2.88	per c.y. =	\$374.40	
Widening/Grade Reduction				1070	cy. @	\$2.88	per c.y. =	\$3,081.60	
Spread & compact as subgrade fill				2630	cy. @	\$0.45	per c.y. =	\$1,183.50	
TOTAL ENDHAUL									\$4,639.50

CULVERTS - MATERIALS & INSTALLATION

Culverts

120	LF of 18"	\$2,100.00	140	LF of 24"	\$3,780.00
90	LF of 30"	\$3,240.00	0	LF of 36"	\$0.00
		<u>\$5,340.00</u>			<u>\$3,780.00</u>

Culvert Stakes & Markers

0 stakes	\$0.00
9 markers	\$72.00
	<u>\$72.00</u>

TOTAL CULVERTS \$9,192.00

ROCK

102+00 to	130+80	1,380	cy. of	Jaw-Run	@	\$8.50	per c.y. =	\$11,730.00	
Landing Rock	130+80	70	cy. of	Jaw-Run	@	\$8.50	per c.y. =	\$595.00	
Fill Reconstruction	24+90	40	cy. of	Riprap	@	\$8.64	per c.y. =	\$345.60	
Energy Dissipator (9)	All Pipes	45	cy. of	Riprap	@	\$10.36	per c.y. =	\$466.20	
Spot Rock	0+00 - 102+00	500	cy. of	Crushed	@	\$6.76	per c.y. =	\$3,380.00	
Stream Culvert Surfacing (5)	102+00 - 130+80	50	cy. of	Crushed	@	\$8.11	per c.y. =	\$405.50	
TOTAL ROCK									\$16,922.30

SPECIAL PROJECTS

Construct waste areas -	1.00	hours @	\$130.00	per hour	\$130.00	
Construct ditches -	14.10	stations @	\$100.00	each	\$1,410.00	
Construct turn around before landing -	1.00	@	\$75.00	each	\$75.00	
Grade and shape road -	130.80	stations @	\$15.50	per station	\$2,027.40	
Construct rolling road dip -	9.00	@	\$150.00	each	\$1,350.00	
Roll subgrade w/ vibratory roller prior to rocking -	130.80	stations @	\$13.20	per station	\$1,726.56	
Remove logs and reconstruct fill @ stations 118+40 & 126+80 -	8.00	hours @	\$145.00	per hour	\$1,160.00	
Grass seed and fertilize -	1.13	acres @	\$220.00	per acre	\$248.60	
Mulching -	0.264	acres @	\$600.00	per acre	\$158.40	
TOTAL SPECIAL PROJECTS						\$8,285.96

GRAND TOTAL \$45,662.08

SUMMARY OF CONSTRUCTION COST

Sale:		<u>Three Little Ridges</u>				Road:		<u>E to F</u>			
<u>Construction -</u>		<u>0+00</u>	stations	<u>Improvement -</u>		<u>16+50</u>	stations	<u>Reconstruction -</u>		<u>0+00</u>	stations
		0.00	miles			0.31	miles			0.00	miles
 <u>IMPROVEMENT</u> : CLEARING AND GRUBBING -											
Widening				0.002	acres	@	\$660.00	per acre =		\$1.32	
Scattering				0.380	acres	@	\$980.00	per acre =		\$372.40	
										<u>TOTAL CLEARING AND GRUBBING</u>	\$373.72
 <u>IMPROVEMENT</u> : EXCAVATION -											
Widening				12	cy.	@	\$2.25	per c.y.=		<u>\$27.00</u>	
										<u>TOTAL EXCAVATION</u>	\$27.00
 <u>IMPROVEMENT</u> : ENDHAUL -											
Widening		9+60	to	10+00	12	cy.	@	\$2.96	per c.y.=	\$35.52	
Spread & compact					12	cy.	@	\$0.25	per c.y.=	<u>\$3.00</u>	
										<u>TOTAL ENDHAUL</u>	\$38.52
 ROCK											
7+50 to		8+50		50	cy. of	Pit-Run CB	@	\$8.39	per c.y.=	\$419.50	
Junction Rock		7+50		10	cy. of	Pit-Run CB	@	\$8.26	per c.y.=	<u>\$82.60</u>	
										<u>TOTAL ROCK</u>	\$502.10
 SPECIAL PROJECTS											
Improve landing -				1.00		@	\$125.00	each		\$125.00	
Construct ditchouts through berm -				2.00		@	\$100.00	each		\$200.00	
Grade and shape road -				16.50	stations	@	\$13.00	per station		\$214.50	
Roll subgrade w/ vibratory roller prior to rocking -				16.50	stations	@	\$13.20	per station		\$217.80	
Grass seed and fertilize -				0.30	acres	@	\$220.00	per acre		<u>\$66.00</u>	
										<u>TOTAL SPECIAL PROJECTS</u>	\$823.30
										GRAND TOTAL	\$1,764.64

SUMMARY OF CONSTRUCTION COST

Sale: Three Little Ridges

Road: G to H

<u>Construction</u> -	<u>12+20</u> 0.23	stations miles	<u>Improvement</u> -	<u>18+60</u> 0.35	stations miles	<u>Reconstruction</u> -	<u>18+60</u> 0.35	stations miles
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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. Slope</u>	<u>Avg. Dist. To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>				
18+60		20+60	20%		Ditch	\$183	=		\$366.00	
20+60		29+60	50%		Ditch	\$651	=		\$5,859.00	
29+60		30+80	70%	0.2	Ditch	\$3,597	=		\$4,316.40	
									TOTAL	\$10,541.40

RECONSTRUCTION: CLEARING AND GRUBBING -
Scattering

RECONSTRUCTION: EXCAVATION -
Widening/Grade Reduction/Landing

RECONSTRUCTION: ENDHAUL -
Widening/Grade Reduction
Spread & compact as subgrade fill

1.540	acres @	\$980.00	per acre =	<u>\$1,509.20</u>	
			TOTAL CLEARING AND GRUBBING		\$1,509.20
5300	cy. @	\$1.40	per c.y. =	<u>\$7,420.00</u>	
			TOTAL EXCAVATION		\$7,420.00
<u>3300</u>	cy. @	\$2.96	per c.y. =	\$9,768.00	
5300	cy. @	\$0.45	per c.y. =	<u>\$2,385.00</u>	
			TOTAL ENDDHAUL		\$12,153.00

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>					
120	LF of 18"	\$2,100.00	0	LF of 24"	\$0.00
		\$2,100.00			\$0.00
<u>Culvert Stakes & Markers</u>					
0	stakes	\$0.00			
4	markers	\$32.00			
		\$32.00			
				TOTAL CULVERTS	\$2,132.00

ROCK

18+60	to	49+40	2,300	cy. of	Pit-Run EA	@	\$8.39 per c.y.=	\$19,297.00	
Spot Rock		0+00 - 18+60	100	cy. of	Crushed	@	\$6.94 per c.y.=	\$694.00	
Landing Rock		49+40	70	cy. of	Pit-Run EA	@	\$8.46 per c.y.=	\$592.20	
Junction Rock		18+60	20	cy. of	Pit-Run EA	@	\$8.25 per c.y.=	\$165.00	
Energy Dissipator (4)		All Pipes	20	cy. of	Riprap	@	\$8.69 per c.y.=	\$173.80	
								TOTAL ROCK	\$20,922.00

SPECIAL PROJECTS

Construct waste areas -	2.00	hours @	\$130.00	per hour	\$260.00
Construct ditchouts -	2.00	@	\$60.00	each	\$120.00
Construct Ditches -	8.20	stations @	\$100.00	per station	\$820.00
Grade and shape road -	49.40	stations @	\$15.00	per station	\$741.00
Construct turnaround before landing -	1.00	@	\$75.00	each	\$75.00
Roll subgrade w/ vibratory roller prior to rocking -	49.40	stations @	\$13.20	per station	\$652.08
Grass seed and fertilize -	1.25	acres @	\$220.00	per acre	\$275.00
Mulching -	0.400	acres @	\$600.00	per acre	\$240.00
TOTAL SPECIAL PROJECTS					\$3,183.08
GRAND TOTAL					\$57,860.68

SUMMARY OF CONSTRUCTION COST

Sale:				<u>Three Little Ridges</u>				Road:				<u>I to J</u>					
<u>Construction -</u>				<u>Improvement -</u>				<u>Reconstruction -</u>									
0+00 stations				0+00 stations				15+00 stations									
0.00 miles				0.00 miles				0.28 miles									
<u>RECONSTRUCTION:</u> CLEARING AND GRUBBING -																	
Scattering				1.240	acres	@		\$980.00	per acre =	1,215.20							
														TOTAL CLEARING AND GRUBBING		\$1,215.20	
<u>RECONSTRUCTION:</u> EXCAVATION -																	
Widening/Grade Reduction/Landing				1700	cy.	@		\$1.40	per c.y.=	2,380.00							
														TOTAL EXCAVATION		\$2,380.00	
<u>RECONSTRUCTION:</u> ENDHAUL -																	
Widening/Grade Reduction				400	cy.	@		\$2.88	per c.y.=	1,152.00							
Spread & compact in waste area				400	cy.	@		\$0.25	per c.y.=	100.00							
Spread & compact as subgrade fill				1300	cy.	@		\$0.45	per c.y.=	585.00							
														TOTAL ENDHAUL		\$1,837.00	
ROCK																	
0+00 to				1+00	80	cy. of	Pit-Run CB	@		\$8.87	per c.y.=	709.60					
Junction Rock				0+00	20	cy. of	Pit-Run CB	@		\$8.86	per c.y.=	177.20					
														TOTAL ROCK		\$886.80	
SPECIAL PROJECTS																	
Construct waste areas -				1.00	hours	@		\$130.00	per hour	130.00							
Grade and shape road -				15.00	stations	@		\$14.25	per station	213.75							
Construct turnaround before landing -				1.00	@			\$75.00	each	75.00							
Roll subgrade w/ vibratory roller prior to rocking -				15.00	stations	@		\$13.20	per station	198.00							
Grass seed and fertilize -				0.49	acres	@		\$220.00	per acre	107.80							
														TOTAL SPECIAL PROJECTS		\$724.55	
														GRAND TOTAL		\$7,043.55	

Sale: <u>Three Little Ridges</u>			Road: <u>K to L</u>		
<u>Construction -</u>	<u>28+30</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations
	0.54	miles		0.00	miles
<u>Reconstruction -</u>	<u>0+00</u>	stations			
	0.00	miles			

<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Slopeside</u>	<u>Avg. Dist. To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>		
0+00		0+60	60%	0.4	Ditch	\$2,476	=	\$1,485.60
0+60		6+30	40%		Ditch	\$330	=	\$1,881.00
6+30		9+20	60%	0.5	Ditch	\$2,558	=	\$7,418.20
9+20		11+20	60%	0.6	Outslope	\$1,793	=	\$3,586.00
11+20		13+30	50%		Outslope	\$459	=	\$963.90
13+30		14+70	25%		Outslope	\$165	=	\$231.00
14+70		17+70	35%		Ditch	\$256	=	\$768.00
17+70		18+50	60%	0.7	Outslope	\$1,844	=	\$1,475.20
18+50		25+30	25%		Outslope	\$165	=	\$1,122.00
25+30		28+30	40%		Outslope	\$243	=	\$729.00
								TOTAL
								\$19,659.90

<u>Culverts</u>	90	LF of 18"	\$1,575.00	190	LF of 24"	\$5,130.00	
			\$1,575.00			\$5,130.00	
<u>Culvert Stakes & Markers</u>							
	0	stakes	\$0.00				
	8	markers	\$64.00				
			\$64.00				
					TOTAL CULVERTS		\$6,769.00

0+00 to	28+80	2,130	cy. of	Pit-Run CB	@	\$10.06	per c.y.=	\$21,427.80
Landing Rock	28+80	70	cy. of	Pit-Run CB	@	\$10.35	per c.y.=	\$724.50
Junction Rock	0+00	20	cy. of	Pit-Run CB	@	\$9.77	per c.y.=	\$195.40
Energy Dissipator (8)	All Pipes	40	cy. of	Riprap	@	\$10.36	per c.y.=	\$414.40
Stream Culvert Surfacing (5)	Pipes >18"	50	cy. of	Crushed	@	\$8.11	per c.y.=	\$405.50
								TOTAL ROCK
								\$23,167.60

Construct waste areas -	1.00	hours @	\$130.00	per hour	\$130.00
Grade and shape road -	28.30	stations @	\$14.25	per station	\$403.28
Construct turnaround before landing -	1.00	@	\$75.00	each	\$75.00
Roll subgrade w/ vibratory roller prior to rocking -	28.30	stations @	\$13.20	per station	\$373.56
Grass seed and fertilize -	1.10	acres @	\$220.00	per acre	\$242.00
Mulching -	0.260	acres @	\$600.00	per acre	\$156.00
TOTAL SPECIAL PROJECTS					\$1,379.84
GRAND TOTAL					\$50,976.34

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Three Little Ridges</u>				Road:	<u>M to N</u>			
<u>Construction -</u>		<u>2+20</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>3+00</u>	stations
		<u>0.04</u>	miles		<u>0.00</u>	miles		<u>0.06</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. To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>			
3+00		4+00	55%		Outslope	\$689	=	\$689.00	
4+00		5+20	20%		Outslope	\$139	=	\$166.80	
								<u>TOTAL</u>	\$855.80

RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	0.220	acres	@	\$980.00	per acre =	<u>\$215.60</u>	\$215.60
TOTAL CLEARING AND GRUBBING							\$215.60

RECONSTRUCTION: EXCAVATION -

Construct ditch right and inslope subgrade from 0+00 to 1+00 -	1	sta.	@	\$120.00	per sta. =	<u>\$120.00</u>	\$120.00
TOTAL EXCAVATION							\$120.00

CULVERTS - MATERIALS & INSTALLATION

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

ROCK

0+00 to 5+20	430	cy. of	Pit-Run CB	@	\$8.38	per c.y. =	\$3,603.40	
Landing Rock 5+20	70	cy. of	Pit-Run CB	@	\$8.45	per c.y. =	\$591.50	
Junction Rock 0+00	20	cy. of	Pit-Run CB	@	\$8.32	per c.y. =	<u>\$166.40</u>	
TOTAL ROCK								\$4,361.30

SPECIAL PROJECTS

Construct landing at 5+20 -	1.00	@	\$250.00	each	\$250.00	
Construct turnaround before landing -	1.00	@	\$75.00	each	\$75.00	
Grade and shape road -	5.20	stations @	\$13.00	per station	\$67.60	
Roll subgrade w/ vibratory roller prior to rocking -	5.20	stations @	\$13.20	per station	\$68.64	
Grass seed and fertilize -	0.21	acres @	\$220.00	per acre	<u>\$46.20</u>	
TOTAL SPECIAL PROJECTS						\$507.44

GRAND TOTAL	\$6,593.14
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Sale:				Three Little Ridges		Road:		O to P	
Construction -		0+00 0.00	stations miles	Improvement -		0+00 0.00	stations miles	Reconstruction -	
								6+30 0.12	stations miles
RECONSTRUCTION: CLEARING AND GRUBBING -									
Widening				0.030	acres @	\$660.00	per acre =	\$19.80	
Endhaul				0.460	acres @	\$1,500.00	per acre =	\$690.00	
								TOTAL CLEARING AND GRUBBING	\$709.80
RECONSTRUCTION: EXCAVATION -									
Widening				158	cy. @	\$2.25	per c.y.=	\$355.50	
								TOTAL EXCAVATION	\$355.50
RECONSTRUCTION: ENDHAUL -									
Widening	2+60	to	5+00	104	cy. @	\$2.28	per c.y.=	\$237.12	
Widening	3+80	to	4+20	31	cy. @	\$2.28	per c.y.=	\$70.68	
Widening	5+00	to	5+40	23	cy. @	\$2.28	per c.y.=	\$52.44	
Spread & compact				158	cy. @	\$0.25	per c.y.=	\$39.50	
								TOTAL ENDHAUL	\$399.74
ROCK									
0+00 tc	6+30	500	cy. of	Pit-Run CB	@	\$8.52	per c.y.=	\$4,260.00	
Landing Rock	6+30	70	cy. of	Pit-Run CB	@	\$8.59	per c.y.=	\$601.30	
Junction Rock	0+00	20	cy. of	Pit-Run CB	@	\$8.45	per c.y.=	\$169.00	
								TOTAL ROCK	\$5,030.30
SPECIAL PROJECTS									
Construct loaded turnaround at 0+00 -				2.00	hours @	\$130.00	per hour	\$260.00	
Reconstruct landing at 6+30 -				1.00	@	\$125.00	each	\$125.00	
Grade and shape road -				6.30	stations @	\$13.00	per station	\$81.90	
Roll subgrade w/ vibratory roller prior to rocking -				6.30	stations @	\$13.20	per station	\$83.16	
Grass seed and fertilize -				0.25	acres @	\$220.00	per acre	\$55.00	
								TOTAL SPECIAL PROJECTS	\$605.06
GRAND TOTAL									\$7,100.40

SUMMARY OF CONSTRUCTION COST

Sale: <u>Three Little Ridges</u>			Road: <u>Q to R</u>		
<u>Construction -</u>	<u>6+70</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations
	<u>0.13</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		0+60	20%		Outslope	\$139	=	\$83.40	
0+60		2+20	40%		Outslope	\$243	=	\$388.80	
2+20		4+00	50%		Outslope	\$459	=	\$826.20	
4+00		6+10	45%		Outslope	\$269	=	\$564.90	
6+10		6+70	30%		Outslope	\$191	=	\$114.60	
								<u>TOTAL</u>	\$1,977.90

ROCK									
0+00	to	1+00	80	cy. of	Pit-Run CB	@	\$8.34 per c.y. =	\$667.20	
Junction Rock		0+00	20	cy. of	Pit-Run CB	@	\$8.26 per c.y. =	\$165.20	
								<u>TOTAL ROCK</u>	\$832.40

SPECIAL PROJECTS									
Construct landing at 6+70 -				1.00	@	\$250.00	each	\$250.00	
Construct turnaround before landing -				1.00	@	\$75.00	each	\$75.00	
Grade and shape road -				6.70	stations @	\$15.50	per station	\$103.85	
Roll subgrade w/ vibratory roller prior to rocking -				6.70	stations @	\$13.20	per station	\$88.44	
Grass seed and fertilize -				0.31	acres @	\$220.00	per acre	\$68.20	
								<u>TOTAL SPECIAL PROJECTS</u>	\$585.49
								GRAND TOTAL	\$3,395.79

SUMMARY OF CONSTRUCTION COST

Sale: Three Little Ridges

Road: S to T

<u>Construction -</u>	<u>0+00</u> stations	<u>Improvement -</u>	<u>0+00</u> stations	<u>Reconstruction -</u>	<u>2+00</u> stations
	<u>0.00</u> miles		<u>0.00</u> miles		<u>0.04</u> miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Widening	0.003	acres	@	\$660.00	per acre =	\$1.98	
Endhaul	0.170	acres	@	\$1,500.00	per acre =	<u>\$255.00</u>	
TOTAL CLEARING AND GRUBBING							\$256.98

RECONSTRUCTION: EXCAVATION -

Widening	18	cy. @	\$2.25	per c.y. =	<u>\$40.50</u>	
				TOTAL EXCAVATION		\$40.50

RECONSTRUCTION: ENDHAUL -

Widening	0+40	to	1+00	18	cy. @	\$2.88	per c.y. =	\$51.84	
Spread & compact				18	cy. @	\$0.25	per c.y. =	\$4.50	
							TOTAL ENDHAUL		\$56.34

ROCK

0+00	to	2+00	170	cy. of	Pit-Run CB	@	\$8.34 per c.y.=	\$1,417.80	
Landing Rock		2+00	70	cy. of	Pit-Run CB	@	\$8.36 per c.y.=	\$585.20	
Junction Rock		0+00	20	cy. of	Pit-Run CB	@	\$8.32 per c.y.=	\$166.40	
								TOTAL ROCK	\$2,169.40

SPECIAL PROJECTS

Reconstruct landing -	1.00	@	\$125.00	each	\$125.00
Grade and shape road -	2.00	stations @	\$13.00	per station	\$26.00
Roll subgrade w/ vibratory roller prior to rocking -	2.00	stations @	\$13.20	per station	\$26.40
Grass seed and fertilize -	0.09	acres @	\$220.00	per acre	\$19.80
				TOTAL SPECIAL PROJECTS	\$197.20

GRAND TOTAL	\$2,720.42
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SUMMARY OF CONSTRUCTION COST

Sale: <u>Three Little Ridges</u>			Road: <u>U to V</u>		
<u>Construction -</u>	<u>3+60</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations
	<u>0.07</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>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>			
0+00		1+00	30%	Fill	Outslope	\$552	=	\$552.00	
1+00		1+60	40%	Ballanced	Outslope	\$243	=	\$145.80	
1+60		3+70	30%	Cut / Landing	Outslope	\$1,294	=	\$2,717.40	
								<u>TOTAL</u>	\$3,415.20

ROCK									
0+00	to	1+00	80	cy. of	Pit-Run EA	@	\$8.29 per c.y. =	\$663.20	
Junction Rock		0+00	20	cy. of	Pit-Run EA	@	\$8.32 per c.y. =	\$166.40	
								<u>TOTAL ROCK</u>	\$829.60

SPECIAL PROJECTS									
Grade and shape road -					3.60	stations @	\$13.00	per station	\$46.80
Roll subgrade w/ vibratory roller prior to rocking -					3.60	stations @	\$13.20	per station	\$47.52
Grass seed and fertilize -					0.17	acres @	\$220.00	per acre	\$37.40
								<u>TOTAL SPECIAL PROJECTS</u>	\$131.72
								GRAND TOTAL	\$4,376.52

SUMMARY OF CONSTRUCTION COST

Sale: <u>Three Little Ridges</u>			Road: <u>W to X</u>		
<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>15+50</u>	stations
	<u>0.00</u>	miles		<u>0.29</u>	miles
<u>Reconstruction -</u>	<u>0+00</u>	stations			
	<u>0.00</u>	miles			

IMPROVEMENT: CLEARING AND GRUBBING -					
Scattering	0.360	acres	@	\$980.00 per acre =	<u>\$352.80</u>
TOTAL CLEARING AND GRUBBING					\$352.80

ROCK					
0+00 to	1+00	50	cy. of	Pit-Run EA	@
Junction Rock	0+00	10	cy. of	Pit-Run EA	@
				\$8.42 per c.y. =	\$421.00
				\$8.01 per c.y. =	<u>\$80.10</u>
TOTAL ROCK					\$501.10

SPECIAL PROJECTS					
Improve landing -	1.00	@	\$125.00	each	\$125.00
Construct punchouts through berm -	3.00	@	\$60.00	each	\$180.00
Grade and shape road -	15.50	stations @	\$19.50	per station	\$302.25
Roll subgrade w/ vibratory roller prior to rocking -	15.50	stations @	\$13.20	per station	\$204.60
Grass seed and fertilize -	0.43	acres @	\$220.00	per acre	<u>\$94.60</u>
TOTAL SPECIAL PROJECTS					\$906.45
GRAND TOTAL					\$1,760.35

SUMMARY OF CONSTRUCTION COST

Sale: Three Little Ridges

Road: Y to Z

<u>Construction -</u>	<u>0+00</u> stations	<u>Improvement -</u>	<u>0+00</u> stations	<u>Reconstruction -</u>	<u>17+00</u> stations
	<u>0.00</u> miles		<u>0.00</u> miles		<u>0.32</u> miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Side cast	0.372	acres	@	\$660.00	per acre =	\$245.52	
Scattering	1.090	acres	@	\$980.00	per acre =	<u>\$1,068.20</u>	
TOTAL CLEARING AND GRUBBING							\$1,313.72

RECONSTRUCTION: EXCAVATION -

Pullback	781	cy. @	\$1.40	per c.y. =	\$1,093.40	
Widening/Grade Work/Landing	1970	cy. @	\$1.40	per c.y. =	<u>\$2,758.00</u>	
				TOTAL EXCAVATION		\$3,851.40

RECONSTRUCTION: ENDHAUL -

Pullback	3+00	to	7+00	347	cy. @	\$2.91	per c.y.=	\$1,009.77
Pullback	10+00	to	15+00	434	cy. @	\$3.12	per c.y.=	\$1,354.08
Widening /Grade Work	0+00	to	17+00	1520	cy. @	\$3.01	per c.y.=	\$4,575.20
Spread & compact in waste area				2301	cy. @	\$0.25	per c.y.=	\$575.25
Spread & compact as subgrade fill				450	cy. @	\$0.45	per c.y.=	\$202.50
							TOTAL ENDHAUL	\$7,716.80

ROCK

0+00	to	1+00	80	cy. of	Pit-Run EA	@	\$8.09 per c.y.=	\$647.20	
Junction Rock		0+00	20	cy. of	Pit-Run EA	@	\$8.06 per c.y.=	\$161.20	
								TOTAL ROCK	\$808.40

SPECIAL PROJECTS

Construct waste areas -	1.00	hours @	\$130.00	per hour	\$130.00	
Grade and shape road -	17.00	stations @	\$14.00	per station	\$238.00	
Roll subgrade w/ vibratory roller prior to rocking -	17.00	stations @	\$13.20	per station	\$224.40	
Grass seed and fertilize -	0.89	acres @	\$220.00	per acre	\$195.80	
				TOTAL SPECIAL PROJECTS		\$788.20

GRAND TOTAL	\$14,478.52
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SUMMARY OF CONSTRUCTION COST

Sale: <u>Three Little Ridges</u>			Road: <u>AA to BB</u>		
<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations
	<u>0.00</u>	miles		<u>0.00</u>	miles
<u>Reconstruction -</u>	<u>2+50</u>	stations			
	<u>0.05</u>	miles			

RECONSTRUCTION: CLEARING AND GRUBBING -					
Scattering	0.180	acres	@	\$980.00 per acre =	<u>\$176.40</u>
TOTAL CLEARING AND GRUBBING					\$176.40

ROCK					
0+00 to	2+50	210	cy. of	Pit-Run EA	@
Landing Rock	2+50	70	cy. of	Pit-Run EA	@
Junction Rock	0+00	20	cy. of	Pit-Run EA	@
					\$8.14 per c.y. = \$1,709.40
					\$8.27 per c.y. = \$578.90
					\$8.01 per c.y. = <u>\$160.20</u>
TOTAL ROCK					\$2,448.50

SPECIAL PROJECTS					
Reconstruct landing -	1.00	@	\$125.00	each	\$125.00
Grade and shape road -	2.50	stations @	\$13.00	per station	\$32.50
Roll subgrade w/ vibratory roller prior to rocking -	2.50	stations @	\$13.20	per station	\$33.00
Grass seed and fertilize -	0.10	acres @	\$220.00	per acre	<u>\$22.00</u>
TOTAL SPECIAL PROJECTS					\$212.50
GRAND TOTAL					\$2,837.40

SUMMARY OF CONSTRUCTION COST

Sale: <u>Three Little Ridges</u>			Road: <u>CC to DD</u>		
<u>Construction -</u>	<u>4+40</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations
	<u>0.08</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>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	to	1+00	10%		Outslope	\$90	=	\$90.00	
1+00	to	4+40	30%		Outslope	\$191	=	\$649.40	
								<u>TOTAL</u>	\$739.40

ROCK									
0+00	to	1+00	80	cy. of	Pit-Run EA	@	\$8.49 per c.y.=	\$679.20	
Junction Rock		0+00	20	cy. of	Pit-Run EA	@	\$8.47 per c.y.=	\$169.40	
								<u>TOTAL ROCK</u>	\$848.60

SPECIAL PROJECTS									
Construct landing -				1.00	@	\$250.00	each	\$250.00	
Fill roadway @ area of 0+00 - 1+00 -				1500.00	cubic yards	\$0.45	each	\$675.00	
Grade and shape road -				4.40	stations @	\$13.00	per station	\$57.20	
Roll subgrade w/ vibratory roller prior to rocking -				4.40	stations @	\$13.20	per station	\$58.08	
Remove large stumps -				1.00	lump sum @	\$130.00		\$130.00	
Grass seed and fertilize -				0.20	acres @	\$220.00	per acre	\$44.00	
								<u>TOTAL SPECIAL PROJECTS</u>	\$1,214.28
								GRAND TOTAL	\$2,802.28

SUMMARY OF CONSTRUCTION COST

Sale:

Three Little Ridges

Road:

EE to FF

Construction -	3+00	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.06	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	20%		Outslope	\$139	=	\$111.20
0+80		1+80	40%		Outslope	\$243	=	\$243.00
1+80		2+40	Construct Fill		Outslope	\$924	=	\$554.40
2+40		3+00	Construct Landing		Outslope	\$1,663	=	\$997.80
								TOTAL
								\$1,906.40

CULVERTS - MATERIALS & INSTALLATION

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

ROCK

0+00 to	3+00	280	cy. of	Pit-Run CB	@	\$10.20 per c.y.=	\$2,856.00
Landing Rock	3+00	70	cy. of	Pit-Run CB	@	\$10.24 per c.y.=	\$716.80
Stream Culvert Surfacing	2+20	10	cy. of	Crushed	@	\$8.11 per c.y.=	\$81.10
Energy Dissipator	2+20	5	cy. of	Riprap	@	\$10.50 per c.y.=	\$52.50
Junction Rock	0+00	20	cy. of	Pit-Run CB	@	\$10.17 per c.y.=	\$203.40
							TOTAL ROCK
							\$3,909.80

SPECIAL PROJECTS

Grade and shape road -	3.00	stations @	\$13.00	per station	\$39.00
Roll subgrade w/ vibratory roller prior to rocking -	3.00	stations @	\$13.20	per station	\$39.60
Grass seed and fertilize -	0.14	acres @	\$220.00	per acre	\$30.80
					TOTAL SPECIAL PROJECTS
					\$109.40

GRAND TOTAL **\$6,458.60**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Pit_run	Cedar Butte: NE 1/4, NE 1/4, Sec 23, T1N, R8W, WM
Sale:	Three Little Ridges	East Access: NE 1/4, SE 1/4, Sec 34, T1N, R8W, WM
Swell:	1.40	Road: 7420 c.y.
Shrinkage	1.16	Stockpile: c.y.
Drill Pct.:	50%	Total Truck Loads: 7420 c.y.
		In Place Total: 5300 c.y.

Pit Development & Cleanup including Clearing and grubbing of					\$10,417.36
Waste Area @ adjacent to pit, place overburden					
in Waste Area, spread and compact.					
Drill & Shoot:	\$2.50 /cu.yd.	x	2650 cu.yds.	=	\$6,625.00
Rip Rock:	\$1.90 /cu.yd.	x	2650 cu.yds.	=	\$5,035.00
Load Dump Truck:	\$0.70 /cu.yd.	x	7420 cu.yds.	=	\$5,194.00

Subtotal **\$27,271.36**

Move In (Including Within Area)					
Move In and set up Drill and Compressor	1	@	\$725.45	=	\$725.45
Move in Roller and Compactor	1	@	\$573.95	=	\$573.95
Move in Grader	1	@	\$186.35	=	\$186.35
Move in D-8	1	@	\$855.18	=	\$855.18
Move in Excavator	1	@	\$1,044.77	=	\$1,044.77
Move in Trucks	3	@	\$182.40	=	\$547.20
Move in Water Truck	1	@	\$214.40	=	\$214.40

Subtotal **\$4,147.30**

Base Cost=	\$4.23	Per Cu.Yd.	TOTAL PRODUCTION COSTS	\$31,418.66
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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
C to D Fill Reconstruction (Riprap)	3.01	1.40	4.23	8.64	40	\$345.60
C to D Energy Dissipator (9) (Riprap)	4.73	1.40	4.23	10.36	45	\$466.20
E to F 750 850 (Pit-Run CB)	3.06	1.10	4.23	8.39	50	\$419.50
E to F Junction Rock (Pit-Run CB)	2.93	1.10	4.23	8.26	10	\$82.60
G to H 1860 4940 (Pit-Run EA)	3.06	1.10	4.23	8.39	2300	\$19,297.00
G to H Landing Rock (Pit-Run EA)	3.13	1.10	4.23	8.46	70	\$592.20
G to H Junction Rock (Pit-Run EA)	2.92	1.10	4.23	8.25	20	\$165.00
G to H Energy Dissipator (4) (Riprap)	3.06	1.40	4.23	8.69	20	\$173.80
I to J 0 100 (Pit-Run CB)	3.54	1.10	4.23	8.87	80	\$709.60
I to J Junction Rock (Pit-Run CB)	3.53	1.10	4.23	8.86	20	\$177.20
K to L 0 2880 (Pit-Run CB)	4.73	1.10	4.23	10.06	2130	\$21,427.80
K to L Landing Rock (Pit-Run CB)	5.02	1.10	4.23	10.35	70	\$724.50
K to L Junction Rock (Pit-Run CB)	4.44	1.10	4.23	9.77	20	\$195.40
K to L Energy Dissipator (8) (Riprap)	4.73	1.40	4.23	10.36	40	\$414.40
M to N 0 520 (Pit-Run CB)	3.05	1.10	4.23	8.38	430	\$3,603.40
M to N Landing Rock (Pit-Run CB)	3.12	1.10	4.23	8.45	70	\$591.50
M to N Junction Rock (Pit-Run CB)	2.99	1.10	4.23	8.32	20	\$166.40
O to P 0 630 (Pit-Run CB)	3.19	1.10	4.23	8.52	500	\$4,260.00
O to P Landing Rock (Pit-Run CB)	3.26	1.10	4.23	8.59	70	\$601.30
O to P Junction Rock (Pit-Run CB)	3.12	1.10	4.23	8.45	20	\$169.00
Q to R 0 100 (Pit-Run CB)	3.01	1.10	4.23	8.34	80	\$667.20
Q to R Junction Rock (Pit-Run CB)	2.93	1.10	4.23	8.26	20	\$165.20
S to T 0 200 (Pit-Run CB)	3.01	1.10	4.23	8.34	170	\$1,417.80
S to T Landing Rock (Pit-Run CB)	3.03	1.10	4.23	8.36	70	\$585.20
S to T Junction Rock (Pit-Run CB)	2.99	1.10	4.23	8.32	20	\$166.40
U to V 0 100 (Pit-Run EA)	2.96	1.10	4.23	8.29	80	\$663.20
U to V Junction Rock (Pit-Run EA)	2.99	1.10	4.23	8.32	20	\$166.40
W to X 0 100 (Pit-Run EA)	3.09	1.10	4.23	8.42	50	\$421.00
W to X Junction Rock (Pit-Run EA)	2.68	1.10	4.23	8.01	10	\$80.10
Y to Z 0 100 (Pit-Run EA)	2.76	1.10	4.23	8.09	80	\$647.20
Y to Z Junction Rock (Pit-Run EA)	2.73	1.10	4.23	8.06	20	\$161.20
AA to BB 0 250 (Pit-Run EA)	2.81	1.10	4.23	8.14	210	\$1,709.40
AA to BB Landing Rock (Pit-Run EA)	2.94	1.10	4.23	8.27	70	\$578.90
AA to BB Junction Rock (Pit-Run EA)	2.68	1.10	4.23	8.01	20	\$160.20
CC to DD 0 100 (Pit-Run)	3.16	1.10	4.23	8.49	80	\$679.20
CC to DD Junction Rock (Pit-Run)	3.14	1.10	4.23	8.47	20	\$169.40
EE to FF 0 300 (Pit-Run)	4.87	1.10	4.23	10.20	280	\$2,856.00
EE to FF Landing Rock (Pit-Run)	4.91	1.10	4.23	10.24	70	\$716.80
EE to FF Energy Dissipator (Rip-Rap)	4.87	1.40	4.23	10.50	5	\$52.50
EE to FF Junction Rock (Pit-Run)	4.84	1.10	4.23	10.17	20	\$203.40
Total C.Y.					7420	Sub Total \$66,849.10

TOTAL ROCKING COSTS \$66,849.10

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Stockpiles	Wolf Point:	NW 1/4, NW 1/4, Sec 13, T1N, R8W, WM
Sale:	Three Little Ridges	Cedar Butte:	SW 1/4, NE 1/4, Sec 23, T1N, R8W, WM
Swell:	1.40	Road:	2230 c.y.
Shrinkage	1.16	Stockpile:	c.y.
Drill Pct.:	0%	Total Truck Loads:	2230 c.y.
		In Place Total:	1593 c.y.

Load Dump Truck: \$0.70 /cu.yd. x 2230 cu.yds. = \$1,561.00

Subtotal \$1,561.00

Move In (Including Within Area)					
Move in Loader	1	@	\$697.94	=	\$697.94
Move in Trucks	3	@	\$182.40	=	\$547.20

Subtotal \$1,245.14

Base Cost=		\$1.26	Per Cu.Yd.	TOTAL PRODUCTION COSTS	\$2,806.14
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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 Resurfacing at Widening (Crushed	5.08	2.45	1.26	8.79	30	\$263.70
A to B Switchback Widening (Crushed)	3.24	2.45	1.26	6.95	40	\$278.00
C to D 10200 13080 (Jaw-Run)	4.79	2.45	1.26	8.50	1380	\$11,730.00
C to D Landing Rock (Jaw-Run)	4.79	2.45	1.26	8.50	70	\$595.00
C to D Spot Rock (Crushed)	3.05	2.45	1.26	6.76	500	\$3,380.00
C to D Stream Culvert Surfacing (5) (Cru:	4.40	2.45	1.26	8.11	50	\$405.50
G to H Spot Rock (Crushed)	3.23	2.45	1.26	6.94	100	\$694.00
K to L Stream Culvert Surfacing (5) (Crus	4.40	2.45	1.26	8.11	50	\$405.50
EE to FF Stream Culvert Surf (Crushed)	4.40	2.45	1.26	8.11	10	\$81.10
				Total C.Y.	2230	Sub Total \$17,832.80
					TOTAL ROCKING COSTS	\$17,832.80

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Purchased	Location:	Sec. , TN, RW, W.M.
Sale:	Three Little Ridges	Road:	500 c.y.
Swell:	1.00	Stockpile:	c.y.
Shrinkage	1.00	Total Truck Loads:	500 c.y.
Drill Pct.:	0%	In Place Total:	500 c.y.

Base Cost= \$17.05 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 Spot Rock (Crushed)	11.55	2.45	17.05	31.05	500	\$15,525.00
				Total C.Y.	500	Sub Total \$15,525.00

TOTAL ROCKING COSTS	\$15,525.00
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Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: Three Little Ridges

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
36.0	Pavement	30
11.0	Main Lines	7
3.0	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	Brush Cutter	\$601.45		\$4.00	0.00	0.00	0	\$0.00	\$601.45
1	Graders	\$672.43		\$3.65	0.00	5.00	5	\$18.25	\$690.68
1	Rollers (smooth/grid) & Compactors	\$555.45		\$5.00	0.00	5.00	5	\$25.00	\$580.45
1	Excavators (Med.)	\$724.94		\$35.50	0.00	5.00	5	\$177.50	\$902.44
1	Excavators (Large)	\$905.87	1	\$44.80	0.00	5.00	5	\$224.00	\$1,129.87
1	Tractor (D8)	\$854.88	2	\$15.10	0.00	5.00	5	\$75.50	\$930.38
2	Dump Truck (10 cy +)	\$449.17		\$2.85	0.00	0.00	0	\$0.00	\$449.17
1	Dump Truck (Off Hiway)	\$724.94	1	\$4.75	0.00	5.00	5	\$23.75	\$748.69
1	Water Truck (1500 Gal)	\$182.40		\$2.85	0.00	5.00	5	\$14.25	\$196.65
				TOTAL MOVE-IN COSTS:					\$6,229.78



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT *Three Little Ridges*

1. Type of Sale

Regeneration harvest, Recovery

2. Legal Description

Sections 22, 23, 26, 27, 34, and 35, T1N, R8W, W.M., Tillamook County, Oregon.

3. Sale Acreage

The acreage was determined using GPS and orthophotographs along with GIS.

	ACRES	
	<u>Gross</u>	<u>Net</u>
Area 1 (Clearcut)	149	117
Area 2 (Clearcut)	122	108
Area 3 (Clearcut)	131	106

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

Areas 1 and 3 were cruised with 350' between plots and 700' between lines. All trees on all plots were measured.

Area 2 was cruised on a 350' square grid. On odd numbered lines all trees on all plots were measured. On even numbered lines, odd numbered plots were measured and even numbered plots were "counted" for in or out trees and recorded by species.

The timber sales areas were cruised with variable plots. All conifers 8" DBH and greater containing 20 board feet and all hardwoods 8" DBH and greater containing 30 board feet were recorded on all plots. Species were recorded on all plots. On all measure plots trees were measured for merchantable bole height, diameter, form factor and merchantable heights were recorded to 6" or 7" outside bark for conifers and hardwoods, respectively.

B. Plot size

BAF used for all areas was 27.78. Point of tree 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

Plot data was entered into SuperAce for computation of basal areas, ingrowth, advertised volumes, volume summaries, log stock tables, and stand tables for each species and type. Areas 1, 2, and 3 were originally cruised in 2014. In 2016 additional plots were added to Area 2 to reduce the Standard Error. All areas were grown forward to June 2017. The net sale acreage was used for volume calculation.

Statistics – Net Board Feet/ Acre				
	# Plots measure	# Plots count	SE %	CV %
Area 1	25		9.4	46.2
Area 2	23	7	11.2	62.6
Area 3	17		12.7	50.9
Total	65	7	7.2	61.3

6. Hidden Defect and Breakage

A 1% reduction was applied to conifers and a 10% reduction to hardwood volumes for hidden defect and breakage.

7. Timber Description

All three areas burned in the 1933 Tillamook and 1939 Saddle mountain fires. The east 39 acres of Area 1 also burned in the Wilson River Fire of 1945. The sale areas were initially seeded from 1955-1959 with portions of Areas 1 and 3 replanted again between 1962-1968. Portions of all three areas were commercially thinned in the Muesial Five Thin completed in 2002. The stands are comprised of Douglas-fir and red alder with a minor component of western hemlock and Sitka spruce. All three areas have portions of sprayed alder.

Sale Area - Species	DBH	Merchantable Bole Height	Merchantable Top
Area 1: Douglas-fir	15	60	5"
Area 1: Alder	13	22	6"
Area 2: Douglas-fir	16	68	5"

Area 2: Alder	14	37	6"
Area 3: Douglas-fir	16	65	5"
Area 3: Alder	14	43	6"

*Above data derived from Statistics (type) report using SuperAce 2008, developed by
Atterbury Consultants, Inc.*

8. Cruiser/Dates

Areas 1, 2, and 3 Contract 2014. Area 2, additional plots, ODF 2016.

9. Revenue Distribution

FDF: 100%

Tax Code: 56 (100%)

Deed Numbers: 161, 162

10. Attachments

Stand Tables

Volume Summaries

Log Stock Tables

Logging Plan Map

11. Stand and Log Stock Tables Species Key

DF – Douglas-fir take

RA – Red alder take

SS – Sitka spruce take

WH – Western hemlock take

OC - Snag, Class 1 or 2 leave

FI TLOGSTVB				Log Stock Table - MBF																
David Wells				Project: 3_LTL_RG																
T01N R08W S26 TGRO												T01N R08W S26 TGRO								
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		Page		1		
01N		08W		26		437_AREA1		GRO		117.00		25		121		Date		8/23/2016		
												Time		10:51:10AM						
Spp	T	S	So	Gr	Log	Len	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches									
											MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13
DF		CO	2		20		11		11	.6					11					
DF		CO	2		40		444	1.6	437	26.4					211	109	117			
DF		CO	3		16		4		4	.3				4						
DF		CO	3		24		10		10	.6				10						
DF		CO	3		32		63		63	3.8			11	40	12					
DF		CO	3		35		2		2	.1			2							
DF		CO	3		36		5		5	.3			3	2						
DF		CO	3		37		5		5	.3			3	2						
DF		CO	3		39		3		3	.2			3							
DF		CO	3		40		864	.8	857	51.8			228	197	277	57	43	54		
DF		CO	4		13		3		3	.2		2	1							
DF		CO	4		14		5		5	.3		5								
DF		CO	4		15		6		6	.4		5	1							
DF		CO	4		16		19		19	1.2		19								
DF		CO	4		17		4		4	.3		3	1							
DF		CO	4		18		7		7	.4		6	1							
DF		CO	4		19		10		10	.6		10								
DF		CO	4		20		4		4	.2		4								
DF		CO	4		22		17		17	1.0		17								
DF		CO	4		23		4		4	.2		4								
DF		CO	4		24		11		11	.7		11								
DF		CO	4		25		4		4	.2		3	1							
DF		CO	4		26		4		4	.2		4								
DF		CO	4		27		9		9	.6		9								
DF		CO	4		28		2		2	.1		2								
DF		CO	4		29		10		10	.6		10								
DF		CO	4		31		5		5	.3		5								
DF		CO	4		32		12		12	.7		12								
DF		CO	4		34		7		7	.4		7								
DF		CO	4		35		18		18	1.1		18								
DF		CO	4		36		18	4.5	17	1.0		17								
DF		CO	4		38		22		22	1.4		22								
DF		CO	4		39		10		10	.6		10								
DF		CO	4		40		48		48	2.9		48								
DF		Totals					1,669		1,655	91.0		254	255	242	303	269	162	171		
RA		H	2		32		14		14	18.7							14			
RA		H	3		20		9		9	11.9				9						
RA		H	3		22		12		12	15.4				12						
RA		H	4		12		15		15	20.2			15							
RA		H	4		32		6		6	8.6			6							
RA		H	4		38		12		12	15.9			12							
RA		H	4		40		8	11.1	7	9.3				7						
RA		Totals					77	1.1	76	4.2			19	22	21		14			
WH		CO	2		40		20		20	25.9					20					
WH		CO	3		40		48		48	63.8			13	16	18					
WH		CO	4		20		4		4	4.8		4								
WH		CO	4		40		4		4	5.5		4								
WH		Totals					75		75	4.1		8	13	16	18		20			

FI TLOGSTVB				Log Stock Table - MBF																																			
David Wells				Project: 3_LTL_RG																																			
T01N R08W S26 TGRO												T01N R08W S26 TGRO																											
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		Page		2																					
01N		08W		26		437_AREA1		GRO		117.00		25		121		Date		8/23/2016																					
																Time		10:51:10AM																					
S		So Gr		Log		Gross		%		Net		%		Net Volume by Scaling Diameter in Inches																									
Spp		T		rt de		Len		MBF		Def		MBF		Spc		2-3		4-5		6-7		8-9		10-11		12-13		14-15		16-19		20-23		24-29		30-39		40+	
SS		CO		3		40		16		27.1		11		85.7																11									
SS		CO		4		23		2				2		14.3				2																					
SS				Totals				17		24.2		13		.7				2												11									
Total All Species								1,839		1.1		1,819		100.0				263		286		281		342		269		182		185		11							

FI		TSTNDSUM		Stand Table Summary												
David Wells				Project		3_LTL_RG										
T01N R08W S26 TGRO												T01N R08W S26 TGRO				
Twp	Rge	Sec	Tract	Type			Acres		Plots	Sample Trees			Page:	1		
01N	08W	26	437_AREA1	GRO			117.00		25	121			Date:	08/23/2016		
												Time:	10:33:22AM			
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.		Net Bd.Ft.	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF
DF		8		84	47	3.130	1.15	3.22	4.6	21.5	.43	15	69	50	17	8
DF		9		84	99	2.473	1.15	2.54	12.1	42.9	.88	31	109	103	36	13
DF		10		85	71	18.029	10.33	20.58	11.2	42.9	6.55	230	883	767	269	103
DF		11		87	86	8.278	5.74	13.61	11.4	49.6	4.41	155	675	516	181	79
DF		12		87	78	6.956	5.74	11.43	13.2	48.3	4.30	151	552	503	176	65
DF		13		86	79	7.112	6.89	13.39	14.0	54.6	5.33	187	732	624	219	86
DF		14		86	80	7.155	8.04	12.60	18.1	63.5	6.49	228	800	759	266	94
DF		15		85	89	4.452	5.74	8.23	20.8	73.9	4.89	171	608	572	201	71
DF		16		86	97	4.695	6.89	10.45	20.1	81.7	5.97	210	854	699	245	100
DF		17		86	92	4.852	8.04	9.97	26.6	103.5	7.56	265	1,031	884	310	121
DF		18		86	96	4.946	9.18	10.16	31.4	114.7	9.10	319	1,165	1,065	374	136
DF		19		85	96	4.994	10.33	10.83	32.5	118.0	10.02	352	1,278	1,172	411	150
DF		21		85	101	2.003	4.59	4.63	35.3	124.0	4.66	163	574	545	191	67
DF		22		83	107	3.180	8.04	7.47	39.4	142.8	8.38	294	1,066	980	344	125
DF		23		85	107	2.483	6.89	5.95	39.7	154.0	6.74	237	917	789	277	107
DF		24		81	110	.757	2.30	1.56	41.1	171.7	1.82	64	267	213	75	31
DF		25		83	100	2.087	6.89	4.64	49.9	178.3	6.61	232	828	773	271	97
DF		27		83	111	1.778	6.89	4.26	63.4	244.5	7.70	270	1,042	901	316	122
DF		28		86	98	.550	2.30	1.13	73.2	281.6	2.36	83	318	276	97	37
DF		29		68	127	.256	1.15	.79	58.4	171.7	1.31	46	135	153	54	16
DF		32		83	98	.208	1.15	.43	97.9	337.9	1.20	42	145	140	49	17
DF		35		64	106	.173	1.15	.36	118.8	268.2	1.21	42	95	141	49	11
DF		Totals		85	85	90.548	120.53	158.22	23.9	89.4	107.88	3,785	14,144	12,622	4,429	1,655
RA		11		90	17	5.668	3.41	5.74	5.2	22.7	.82	30	130	96	35	15
RA		15		93	44	1.928	2.27	1.95	19.3	79.4	1.04	38	155	122	44	18
RA		16		83	47	1.680	2.27	1.70	26.1	79.4	1.22	44	135	143	52	16
RA		18		81	57	1.308	2.27	1.33	42.0	79.4	1.53	56	105	179	65	12
RA		25		91	58	.328	1.14	.33	75.1	362.9	.69	25	121	80	29	14
RA		Totals		88	32	10.912	11.37	11.06	17.4	58.4	5.30	193	646	620	225	76
WH		12		88	91	1.354	1.15	2.78	14.9	61.7	1.32	41	172	155	48	20
WH		14		84	60	1.154	1.15	1.19	24.1	67.3	.92	29	80	107	33	9
WH		17		88	107	.762	1.15	1.57	30.8	123.4	1.54	48	193	180	56	23
WH		23		86	107	.403	1.15	.83	57.9	241.1	1.53	48	200	179	56	23
WH		Totals		87	86	3.672	4.60	6.36	26.1	101.3	5.31	166	644	622	194	75
SS		18		72	28	.694	1.17	.72	21.0	22.5	.39	15	16	46	18	2
SS		36		84	75	.164	1.17	.17	197.7	572.9	.87	33	97	102	39	11
SS		Totals		74	37	.857	2.34	.89	54.8	127.5	1.26	48	113	147	57	13
Totals				86	80	105.989	138.85	176.53	23.7	88.1	119.75	4193	15,547	14,011	4,905	1,819

FI TLOGSTVB				Log Stock Table - MBF																																			
David Wells				Project: 3_LTL_RG																																			
T01N R08W S35 TGRO												T01N R08W S35 TGRO																											
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		Page		2																					
01N		08W		35		438_AREA2		GRO		108.00		31		134		Date		8/23/2016																					
																Time		11:11:52AM																					
S		So Gr		Log		Gross		%		Net		%		Net Volume by Scaling Diameter in Inches																									
Spp		T		rt de		Len		MBF		Def		MBF		Spc		2-3		4-5		6-7		8-9		10-11		12-13		14-15		16-19		20-23		24-29		30-39		40+	
RA		H		4		15		2				2		.9						2																			
RA		H		4		16		13				13		5.0						13																			
RA		H		4		18		4				4		1.4						4																			
RA		H		4		21		2				2		.8						2																			
RA		H		4		22		1				1		.6						1																			
RA		H		4		24		9				9		3.4										9															
RA		H		4		26		9				9		3.5						5		4																	
RA		H		4		28		3				3		1.1						3																			
RA		H		4		30		6				6		2.3						6																			
RA		H		4		32		28				28		10.6								28																	
RA		H		4		37		13		16.7		11		4.1						11																			
RA		H		4		38		5				5		1.9						5																			
RA		H		4		39		2				2		.9						2																			
RA		H		4		40		59		1.4		58		21.8						28		16		15															
RA				Totals				271		1.1		268		13.1						97		48		45		51		16		12									
WH		CO		4		21		12				12		100.0				12																					
WH				Totals				12				12		.6				12																					
SS		CO		3		36		2				2		100.0						2																			
SS				Totals				2				2		.1						2																			
Total All Species								2,056				2,042		100.0				215		237		278		387		386		279		172		88							

FI TSTNDSUM				Stand Table Summary												
David Wells				Project		3_LTL_RG										
T01N R08W S35 TGRO													T01N R08W S35 TGRO			
Twp	Rge	Sec	Tract	Type			Acres		Plots	Sample Trees			Page:	1		
01N	08W	35	438_AREA2	GRO			108.00		31	134			Date:	08/23/2010		
													Time:	11:13:39AM		
S Spc	T	Sample		Av		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s		
		DBH	Trees	FF 16'	Ht Tot				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DF		8		78	73	3.441	1.23	3.49	8.7	41.4	.86	30	144	93	33	16
DF		9		85	51	5.437	2.46	5.51	7.6	31.1	1.20	42	171	129	45	18
DF		10		64	63	2.202	1.23	2.23	11.8	31.1	.75	26	69	81	28	7
DF		11		86	82	7.279	4.92	12.91	10.1	41.4	3.73	131	535	402	141	58
DF		12		88	82	4.588	3.69	9.30	10.9	46.6	2.89	101	433	312	110	47
DF		13		84	81	7.818	7.39	11.88	16.5	56.4	5.60	196	670	604	212	72
DF		15		85	96	8.808	11.08	17.85	20.7	77.1	10.53	369	1,376	1,137	399	149
DF		16		84	102	6.021	8.62	13.95	21.1	82.8	8.40	295	1,155	907	318	125
DF		17		88	96	5.334	8.62	10.81	24.4	99.1	7.53	264	1,071	813	285	116
DF		18		87	107	6.117	11.08	14.46	27.7	113.4	11.41	400	1,640	1,232	432	177
DF		19		88	105	5.490	11.08	13.60	30.5	120.0	11.83	415	1,632	1,278	448	176
DF		20		87	116	2.202	4.92	6.14	32.4	131.8	5.67	199	809	612	215	87
DF		21		86	115	4.494	11.08	11.64	37.8	154.4	12.52	439	1,797	1,352	474	194
DF		22		88	125	2.275	6.15	6.45	43.1	187.9	7.93	278	1,212	857	301	131
DF		23		86	104	2.081	6.15	5.06	46.0	182.9	6.63	233	926	716	251	100
DF		24		88	120	1.147	3.69	3.10	50.2	220.0	4.43	156	682	479	168	74
DF		25		94	131	.352	1.23	1.07	56.6	286.5	1.73	61	307	187	65	33
DF		26		92	120	.326	1.23	.66	79.2	403.8	1.49	52	267	161	56	29
DF		27		93	137	.604	2.46	1.84	68.1	352.0	3.56	125	647	385	135	70
DF		28		91	123	.281	1.23	.85	64.2	321.0	1.56	55	274	169	59	30
DF		32		87	116	.432	2.45	1.30	77.5	366.6	2.88	101	478	311	109	52
DF		Totals		85	93	76.728	111.99	154.10	25.8	105.7	113.13	3,969	16,295	12,218	4,287	1,760
RA		10		75	52	5.575	3.25	3.74	11.6	37.9	1.19	43	142	129	47	15
RA		11		81	58	3.072	2.17	3.09	13.5	48.7	1.15	42	151	124	45	16
RA		12		71	48	7.743	6.50	5.20	11.0	40.6	1.57	57	211	170	62	23
RA		13		83	65	2.199	2.17	2.21	13.2	48.7	.80	29	108	86	31	12
RA		14		72	59	2.844	3.25	1.91	15.0	48.7	.79	29	93	85	31	10
RA		16		86	85	3.304	4.33	5.82	18.0	69.6	2.89	105	405	312	113	44
RA		17		87	61	2.904	4.33	2.92	26.5	75.8	2.13	78	222	230	84	24
RA		18		82	53	1.929	3.25	2.59	28.8	81.2	2.05	74	210	221	80	23
RA		19		83	50	2.294	4.33	2.31	28.4	113.7	1.81	66	263	195	71	28
RA		20		73	56	2.059	4.33	3.63	20.2	74.3	2.02	73	269	218	79	29
RA		22		90	77	.421	1.08	.85	39.6	146.2	.92	34	124	100	36	13
RA		23		76	46	1.152	3.25	.77	53.8	249.1	1.14	42	193	124	45	21
RA		24		79	64	.703	2.17	.71	59.1	130.0	1.15	42	92	124	45	10
RA		Totals		78	57	36.198	44.40	35.75	19.9	69.4	19.61	713	2,482	2,118	770	268
WH		8		70	55	5.024	1.82	5.09	6.3	21.2	1.03	32	108	111	35	12
WH		Totals		70	55	5.024	1.82	5.09	6.3	21.2	1.03	32	108	111	35	12
SS		25		81	46	.261	.92	.26	69.9	84.7	.48	19	22	52	20	2
SS		Totals		81	46	.261	.92	.26	69.9	84.7	0.48	19	22	52	20	2
Totals				82	80	118.211	159.14	195.20	24.2	96.9	134.25	4733	18,908	14,499	5,112	2,042

FI TLOGSTVB				Log Stock Table - MBF																
David Wells				Project: 3_LTL_RG																
T01N R08W S34 TGRO												T01N R08W S34 TGRO								
Twp	Rge	Sec	Tract		Type	Acres	Plots		Sample Trees				Page	2						
01N	08W	34	439_AREA3		GRO	106.00	17		108				Date	9/8/2016						
												Time	7:14:15AM							
S	So Gr	Log	Gross		%	Net	%	Net Volume by Scaling Diameter in Inches												
Spp	T	rt	de	Len	MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
RA	H	4	30		4		4	1.0			4									
RA	H	4	33		9		9	2.1			9									
RA	H	4	34		12	20.0	9	2.3			9									
RA	H	4	38		9		9	2.2			9									
RA	H	4	40		88	3.1	85	20.8			20	65								
RA Totals					415	1.6	408	19.1			103	71	80	25	36	62	31			
WH	CO	3	40		39		39	84.2			17		22							
WH	CO	4	14		2		2	5.3		2										
WH	CO	4	35		5		5	10.5		5										
WH Totals					46		46	2.1		7	17		22							
OC	*	*	32		9		9	100.0			9									
OC Totals					9		9	.4			9									
Total All Species					2,158		2,144	100.0		198	421	367	392	310	173	187	95			

Stand Table Summary																		
FI TSTNDSUM				Project 3_LTL_RG														
David Wells																		
T01N R08W S34 TGRO														T01N R08W S34 TGRO				
Twp	Rge	Sec	Tract	Type			Acres	Plots	Sample Trees			Page:	1					
01N	08W	34	439_AREA3	GRO			106.00	17	108			Date:	09/08/2010					
											Time:	7:12:46AM						
S Spc	T	Sample		FF	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s				
		DBH	Trees	16'	Tot				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF		
DF		8		65	80	4.602	1.69	4.60	14.3	59.3	1.97	66	273	209	70	29		
DF		10		87	85	11.782	6.75	18.14	9.3	42.9	4.82	169	777	511	179	82		
DF		11		88	88	12.171	8.43	22.49	10.3	48.8	6.60	232	1,098	700	246	116		
DF		12		87	75	6.136	5.06	10.50	12.3	49.3	3.67	129	517	389	137	55		
DF		13		86	86	6.971	6.75	14.31	13.5	52.2	5.50	193	747	583	205	79		
DF		14		86	97	7.514	8.43	15.42	18.1	72.9	7.95	279	1,124	843	296	119		
DF		15		87	107	6.545	8.43	13.44	22.9	95.4	8.76	308	1,281	929	326	136		
DF		16		86	87	8.054	11.81	14.17	24.1	95.5	9.72	341	1,354	1,030	362	144		
DF		17		85	96	2.038	3.37	4.18	21.1	75.0	2.52	88	314	267	94	33		
DF		18		86	105	3.636	6.75	8.40	29.2	111.9	6.99	246	940	741	260	100		
DF		19		85	102	4.895	10.12	10.89	33.5	121.2	10.37	364	1,319	1,100	386	140		
DF		20		86	104	3.682	8.43	7.56	35.3	131.8	7.60	267	996	805	283	106		
DF		22		85	95	2.672	6.75	4.80	41.6	142.3	5.69	200	683	603	212	72		
DF		23		84	106	2.434	6.75	6.25	40.2	151.1	7.15	251	944	758	266	100		
DF		25		86	117	2.557	8.43	7.35	45.6	200.5	9.55	335	1,473	1,012	355	156		
DF		27		76	119	1.307	5.06	3.58	56.7	204.9	5.78	203	733	612	215	78		
DF		29		77	110	.751	3.37	1.54	81.1	262.5	3.56	125	405	377	133	43		
DF		33		86	105	.288	1.69	.59	109.8	471.4	1.85	65	278	196	69	30		
DF		35		75	103	.510	3.37	1.05	118.6	388.4	3.53	124	406	375	132	43		
DF		39		76	90	.204	1.69	.42	139.7	466.1	1.67	58	195	177	62	21		
DF		Totals		85	93	88.750	123.14	169.66	23.8	93.5	115.24	4,043	15,858	12,215	4,286	1,681		
RA		10		79	70	11.134	6.68	5.64	10.9	45.2	1.70	62	255	180	65	27		
RA		12		94	31	2.300	1.67	2.33	9.7	33.9	.62	23	79	66	24	8		
RA		13		82	51	3.866	3.34	3.92	16.9	39.6	1.82	66	155	193	70	16		
RA		14		92	43	1.647	1.67	1.67	13.4	33.9	.62	22	57	65	24	6		
RA		15		91	51	4.261	5.01	5.76	17.2	65.0	2.72	99	374	288	105	40		
RA		16		84	84	3.711	5.01	6.27	18.4	72.3	3.16	115	453	335	122	48		
RA		17		91	74	3.262	5.01	5.51	25.9	113.0	3.92	143	623	416	151	66		
RA		18		86	80	2.890	5.01	2.93	30.4	109.3	2.44	89	320	259	94	34		
RA		19		80	66	.859	1.67	.87	18.3	45.2	.44	16	39	47	17	4		
RA		20		78	54	.771	1.67	.78	33.9	124.3	.73	26	97	77	28	10		
RA		22		82	72	1.262	3.34	1.92	39.3	139.4	2.07	75	267	220	80	28		
RA		23		84	56	1.150	3.34	1.75	32.4	162.0	1.56	57	283	165	60	30		
RA		27		86	65	.412	1.67	.42	53.3	339.1	.61	22	141	65	24	15		
RA		29		89	67	.710	3.34	1.44	66.3	243.0	2.63	95	350	278	101	37		
RA		31		91	43	.309	1.67	.31	98.9	260.0	.85	31	81	90	33	9		
RA		34		88	60	.272	1.67	.28	145.1	452.1	1.10	40	125	116	42	13		
RA		36		84	53	.241	1.67	.49	71.8	316.5	.96	35	154	102	37	16		
RA		Totals		85	64	39.058	53.43	42.26	24.1	91.2	27.96	1,017	3,854	2,964	1,078	408		
WH		12		90	80	1.990	1.69	4.09	11.5	44.7	1.51	47	183	160	50	19		
WH		18		86	99	.991	1.69	2.04	31.6	123.0	2.06	64	250	218	68	27		
WH		Totals		89	86	2.981	3.38	6.12	18.2	70.8	3.57	111	433	378	118	46		
OC		16		92	67	1.308	1.72	1.31	27.9	61.8	.91	36	81	97	39	9		
OC		Totals		92	67	1.308	1.72	1.31	27.9	61.8	0.91	36	81	97	39	9		
Totals					85	84	132.097	181.66	219.36		23.7	92.2	147.68	5208	20,226	15,654	5,521	2,144



"STEWARDSHIP IN FORESTRY"

Three Little Ridges

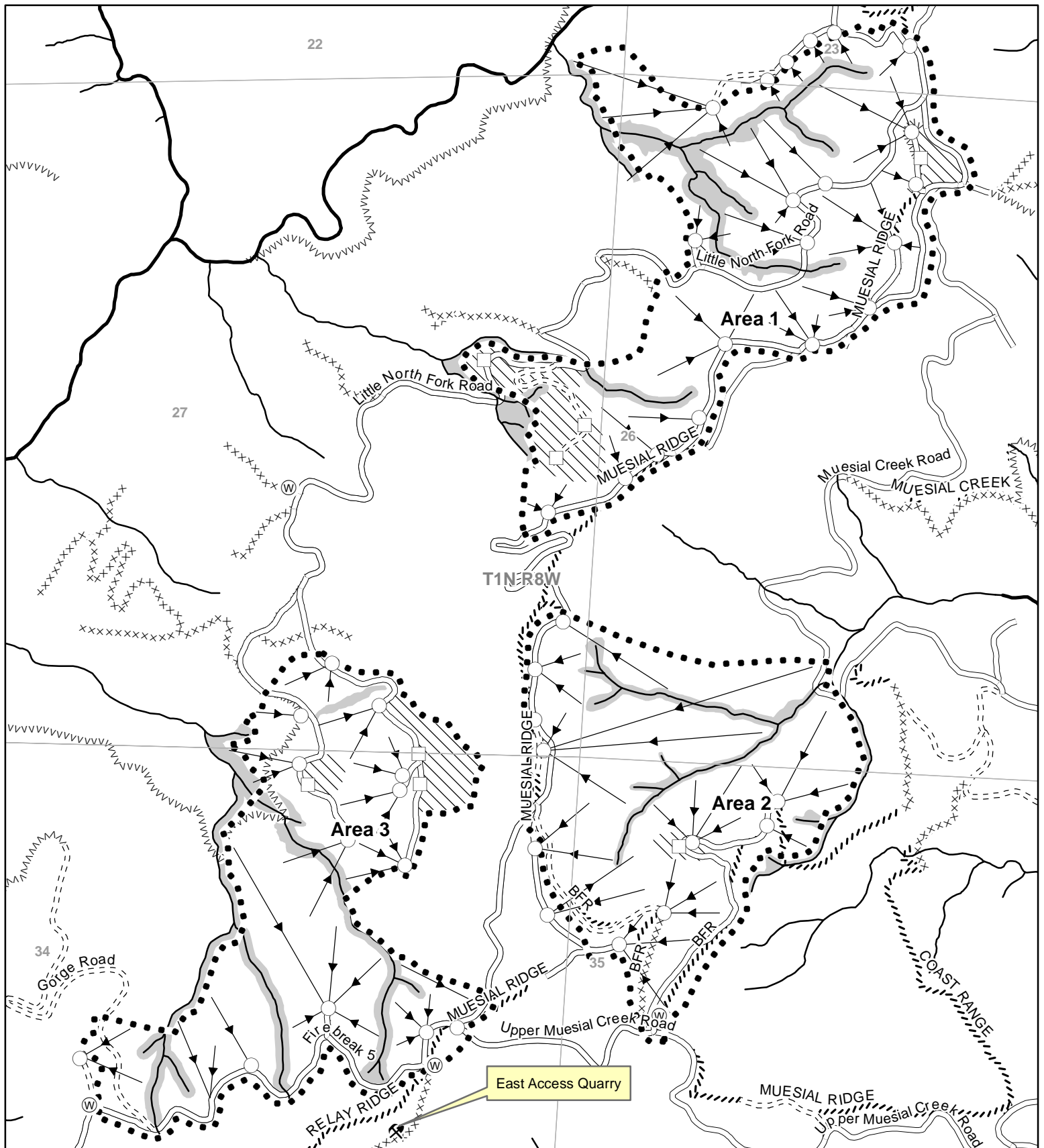
Volume Summary

Area 1-Modified Clearcut				
117 acres				
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Douglas-fir	14.1	1655	1%	1639
Hemlock	0.6	75	1%	74
Sitka Spruce	0.1	13	1%	13
Alder	0.6	76	10%	68
TOTAL	15.5	1819		1793

Areas 2-Modified Clearcut				
108 acres				
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Douglas-fir	16.3	1760	1%	1743
Hemlock	0.1	12	1%	12
Sitka Spruce	0.0	2	1%	2
Alder	2.5	268	10%	241
TOTAL	18.9	2042		1998

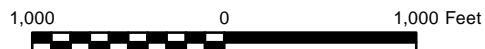
Areas 3-Modified Clearcut				
106 acres				
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Douglas-fir	15.9	1681	1%	1664
Hemlock	0.4	46	1%	46
Alder	3.8	408	10%	367
TOTAL	20.1	2135		2077

TOTAL SALE VOLUME			331	acres
SPECIES	Cruised Net (MBF)		Net Sale (MBF)	
Douglas-fir	5096		5046	
Hemlock	133		132	
Sitka Spruce	15		15	
Alder	752		676	
TOTAL	5996		5869	



- | | | |
|---|--|--|
| <ul style="list-style-type: none"> Rock source Stock pile Waste area Bridge Gate Survey corner Truck turn-around Helicopter landing zone Cable yarding Ground Landing Yarder Landing | <ul style="list-style-type: none"> Buffer Cable yarding Ground yarding Restricted area Area boundary Sale boundary Blocked road | <ul style="list-style-type: none"> Fish stream Non-fish stream Unsurfaced road Surfaced road Paved road Abandoned road Swing road Non-project road Ownership boundary OHV trail Non-motorized trail |
|---|--|--|

LOGGING PLAN
 Timber Sale Contract No. 341-17-021
THREE LITTLE RIDGES
 Portions of Sections 22, 23, 26,
 27, 34, and 35, T1N, R8W, W.M.,
 Tillamook County, Oregon



Area	Type of Operation	Acres	
		Gross	Net
1	Modified Clearcut	149	117
2	Modified Clearcut	122	108
3	Modified Clearcut	131	106
Total		402	331

Tillamook District GIS
 10/18/2016
 This product is for informational use and may
 not have been prepared or suitable for
 legal, engineering, or surveying purposes.