



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Coast Moon Tie
Sale 341-12-02

District: Tillamook

Date: January 27, 2012

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$605,107.44	\$100,994.95	\$706,102.39
		Project Work:	\$(87,610.00)
		Advertised Value:	\$618,492.39



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timber description

Location: Portions of Sections 12, 13, 24, 25, and 35, T2S, R8W and portions of Sections 1 and 2, T3S, R8W, W.M., Tillamook County, Oregon.

Stand Stocking: 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	18	0	95
Alder (Red)	14	0	90

Volume by Grade	10" - 11"	12"+	2S	3S	4S	6" - 7"	8" - 9"	Total
Douglas - Fir	0	0	1,684	1,779	584	0	0	4,047
Alder (Red)	81	37	0	0	0	298	89	505
Total	81	37	1,684	1,779	584	298	89	4,552



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

Western Hemlock and Other Conifers Stumpage Price = Pond Value
minus Logging Cost
 $\$130/\text{MBF} = \$430/\text{MBF} - \$300/\text{MBF}$

Western redcedar & Other Cedars Stumpage Price = Pond Value minus
Logging Cost
 $\$500/\text{MBF} = \$800/\text{MBF} - \$300/\text{MBF}$

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

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

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

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

Other Costs (with Profit & Risk to be added):
Brand and Paint: $\$2/\text{MBF} \times 4,552 \text{ MBF} = \$9,104$
TOTAL Other Costs (with Profit & Risk to be added) = $\$9,104$

Other Costs (No Profit & Risk added):
Slash Piling and Sorting: $\$2.50/\text{acre} \times 126(\text{cable}) \text{ acres} = \315
Cover Material for Piles: $20 \text{ piles} \times \$5/\text{pile} = \$100$
Snag Creation: $\$10/\text{snag} \times 339 \text{ snags} = \$3,390$
Culvert Removal: Move-in Backhoe 1 time $\times \$310 = \310
3 culverts @ $1.333/\text{hrs. per culvert} \times \$80/\text{hr.} = \$320$
Swing Costs: $78 \text{ MBF} @ \$135/\text{hr.} \times 25.57 \text{ hours} = \$3,452$
Non-Project Road: $3/\text{Station} \times \$300/\text{Station} = \$900$
Trask Public Safety Road Fee: $\$20/\text{MBF} \times 4,552 \text{ MBF} = \$91,040$
TOTAL Other Costs (No Profit & Risk added) = $\$99,827$

ROAD MAINTENANCE
Maintenance Rock: $(\$8.00/\text{cu. yd.} \times 12 \text{ miles} \times 20 \text{ cu. yd./MMBF/mile} \times 4,552 \text{ MMBF})/4,552 \text{ MBF} = \$1.92/\text{MBF}$

Interim Maintenance: Grading - $\$250/\text{Mile} \times 12 \text{ miles} \times 1 \text{ grading}/4,552 \text{ MBF} = \$0.66/\text{MBF}$

Vibratory Roller: $\$17.75/\text{station} \times 52.8 \text{ stations/mile} \times 12 \text{ miles}/4,552 = \$2.47/\text{MBF}$

Final Maintenance:
Grading - $\$500/\text{Mile} \times 12 \text{ miles} \times 1 \text{ grading}/4,552 \text{ MBF} = \$1.32/\text{MBF}$

TOTAL Maintenance Cost = $\$6.37/\text{MBF}$



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logging conditions

combination#: 1 Douglas - Fir 45.00%
 Alder (Red) 50.00%

yarding distance: Long (1,500 ft) **downhill yarding:** No
logging system: Cable: Large Tower >=70 **Process:** Stroke Delimber
tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
loads / day: 4.0 **bd. ft / load:** 3,700
cost / mbf: \$258.56

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

combination#: 2 Douglas - Fir 15.00%
 Alder (Red) 15.00%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Cable: Small Tower <=40 **Process:** Stroke Delimber
tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
loads / day: 5.0 **bd. ft / load:** 3,700
cost / mbf: \$153.20

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

combination#: 3 Douglas - Fir 40.00%
 Alder (Red) 35.00%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Track Skidder **Process:** Stroke Delimber
tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
loads / day: 6.0 **bd. ft / load:** 3,700
cost / mbf: \$64.79

machines: Stroke Delimber (B)



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logging costs

Operating Seasons:	1.00	Profit Risk:	15.00%
Project Costs:	\$87,610.00	Other Costs (P/R):	\$9,104.00
Slash Disposal:	\$0.00	Other Costs:	\$99,827.00

Miles of Road

Road Maintenance: \$6.37

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	2.0	3.3
Alder (Red)	\$0.00	3.0	3.0



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logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$165.25	\$6.69	\$0.96	\$102.38	\$2.00	\$41.59	\$0.00	\$5.00	\$21.93	\$345.80
Alder (Red)									
\$174.94	\$7.01	\$0.96	\$78.65	\$2.00	\$39.53	\$0.00	\$5.00	\$21.93	\$330.02

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$495.32	\$149.52	\$0.00
Alder (Red)	\$0.00	\$530.01	\$199.99	\$0.00



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summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	4,047	\$149.52	\$605,107.44
Alder (Red)	505	\$199.99	\$100,994.95

Gross Timber Sale Value

Recovery: \$706,102.39

Prepared by: David Luttrell

Phone: 503-815-7025



PROJECT SUMMARY SHEET

Sale: Coast Moon Tie

CONSTRUCTION

Point	A to B	36+25	stations =	\$22,330.13
Point	C to D	12+00	stations =	\$4,246.20
Point	E to F	6+00	stations =	\$2,431.00
Point	G to H	6+50	stations =	\$2,720.85
Point	K to L	2+00	stations =	\$713.25
Point	M to N	8+25	stations =	\$12,963.43
Point	O to P	5+50	stations =	\$9,269.60
SUBTOTAL CONSTRUCTION				<u>\$54,674.46</u>

IMPROVEMENT

Point	Q to R	50+00	stations =	\$14,908.92
SUBTOTAL IMPROVEMENT				<u>\$14,908.92</u>

RECONSTRUCTION

Point	I to J	9+50	stations =	\$2,844.25
Point	K to L	17+25	stations =	\$6,171.63
SUBTOTAL RECONSTRUCTION				<u>\$9,015.88</u>

SPECIAL PROJECTS

Road Closure - S to T				<u>\$5,616.90</u>
SUBTOTAL SPECIAL PROJECTS				<u>\$5,616.90</u>
				\$3,393.84

MOVE IN

GRAND TOTAL

\$87,610.00

Sale:	Coast Moon Tie			Road:			Q to R		
<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>50+00</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations	
	0.00	miles		0.95	miles		0.00	miles	
IMPROVEMENT: EXCAVATION -									
Road Earthwork- Ditchline & Culvert Cleanout Endhaul			35.00	sta. @	\$60.00	per sta. =	\$2,100.00		
Pullback			73	cy. @	\$1.40	per c.y.=	\$102.20		
Widening			121	cy. @	\$1.40	per c.y.=	\$169.40		
TOTAL EXCAVATION							\$2,371.60		
IMPROVEMENT: Sidecast PullBack Endhaul-									
Pullback	36+00	to	36+50	73	cy. @	\$1.73	per c.y.=	\$126.29	
Widening	36+00	to	36+50	121	cy. @	\$1.73	per c.y.=	\$209.33	
Spread & compact				194	cy. @	\$0.25	per c.y.=	\$48.50	
TOTAL ENDHAUL							\$384.12		
ROCK									
0+00	to	50+00	860	cy. of	Crushed	@	\$13.10	per c.y.= \$11,266.00	
TOTAL ROCK							\$11,266.00		
SPECIAL PROJECTS									
Grade and shape road -			50.00	stations @	\$15.50	per station	\$775.00		
Grass seed and fertilize -			0.51	acres @	\$220.00	per acre	\$112.20		
TOTAL SPECIAL PROJECTS							\$887.20		
GRAND TOTAL							\$14,908.92		

SUMMARY OF CONSTRUCTION COST

Sale:			Coast Moon Tie			Road:			O to P		
<u>Construction -</u>			5+50	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	0+00	stations	
			0.10	miles		0.00	miles		0.00	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	75%	0.1	Outslope	\$2,772	=		\$2,079.00	
	0+75		5+50	45%		Outslope	\$269	=		\$1,277.75	
										TOTAL	\$3,356.75
ROCK											
	0+00	to	5+50	310	cy. of	Pit-Run	@	\$9.03 per c.y.=		\$2,799.30	
	0+00	to	5+00	100	cy. of	Crushed	@	\$13.27 per c.y.=		\$1,327.00	
	Landing Rock		5+50	90	cy. of	Pit-Run	@	\$9.03 per c.y.=		\$812.70	
										TOTAL ROCK	\$4,939.00
SPECIAL PROJECTS											
	Grade and shape road -			5.50	stations @		\$15.50	per station		\$85.25	
	Construct Landing -			1	@		\$360.00	each		\$360.00	
	Roll subgrade w/ vibratory roller prior to rocking -			5.50	stations @		\$13.20	per station		\$72.60	
	Remove large stumps -			1.00	lump sum @		\$390.00			\$390.00	
	Grass seed and fertilize -			0.30	acres @		\$220.00	per acre		\$66.00	
										TOTAL SPECIAL PROJECTS	\$973.85
										GRAND TOTAL	\$9,269.60

Sale:			Coast Moon Tie		Road:		M to N				
Construction -		8+25 0.16	stations miles	Improvement -		0+00 0.00	stations miles	Reconstruction -	0+00 0.00	stations miles	
CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -											
Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station					
0+00		1+80	70%		Outslope	\$2,193	=			\$3,947.40	
1+80		8+25	30%		Outslope	\$191	=			\$1,231.95	
										TOTAL	\$5,179.35
CULVERTS - MATERIALS & INSTALLATION											
<u>Culverts</u>											
										40	LF of 24" \$1,080.00
											\$1,080.00
<u>Culvert Stakes & Markers</u>											
										1 markers	\$8.00
											\$8.00
										TOTAL CULVERTS	\$1,088.00
ROCK											
0+00	to	8+25	490	cy. of	Pit-Run	@	\$8.15	per c.y.=		\$3,993.50	
0+00	to	3+00	70	cy. of	Crushed	@	\$12.90	per c.y.=		\$903.00	
Landing Rock		8+25	90	cy. of	Pit-Run	@	\$7.88	per c.y.=		\$709.20	
										TOTAL ROCK	\$5,605.70
SPECIAL PROJECTS											
Grade and shape road -					8.25	stations @	\$15.50	per station		\$127.88	
Construct Landing -					1	@	\$250.00	each		\$250.00	
Roll subgrade w/ vibratory roller prior to rocking -					8.25	stations @	\$13.20	per station		\$108.90	
Remove large stumps -					1.00	lump sum @	\$520.00			\$520.00	
Grass seed and fertilize -					0.38	acres @	\$220.00	per acre		\$83.60	
										TOTAL SPECIAL PROJECTS	\$1,090.38
GRAND TOTAL										\$12,963.43	

SUMMARY OF CONSTRUCTION COST

Sale:

Coast Moon Tie

Road:

K to L

Construction -	2+00	stations	Improvement -	0+00	stations	Reconstruction -	17+25	stations
	0.04	miles		0.00	miles		0.33	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			
17+25		19+25	30%		Outslope	\$191	=	\$382.00	
								TOTAL	\$382.00

RECONSTRUCTION: CLEARING AND GRUBBING -
Scattering

1.270	acres @	\$980.00 per acre =	\$1,244.60	
			TOTAL CLEARING AND GRUBBING	\$1,244.60

RECONSTRUCTION: EXCAVATION -
Road Earthwork

17.25	sta. @	\$120.00 per sta. =	\$2,070.00	
			TOTAL EXCAVATION	\$2,070.00

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	32	LF of 18"	\$560.00	
<u>Culvert Stakes & Markers</u>	1	markers	\$8.00	
			<u>\$8.00</u>	
				TOTAL CULVERTS
				\$568.00

ROCK

0+00 to	1+00	70	cy. of	Pit-Run	@	\$9.53 per c.y.=	\$667.10		
Loaded Log Truck Turnaround	0+00	70	cy. of	Pit-Run	@	\$9.53 per c.y.=	\$667.10		
								TOTAL ROCK	\$1,334.20

SPECIAL PROJECTS

Construc Log Truck T.A.	2.00	hours @	\$145.00	per hour	\$290.00	
Grade and shape road -	19.25	stations @	\$15.50	per station	\$298.38	
Construct Landing -	1	@	\$250.00	each	\$250.00	
Roll subgrade w/ vibratory roller prior to rocking -	19.25	stations @	\$13.20	per station	\$254.10	
Grass seed and fertilize -	0.88	acres @	\$220.00	per acre	\$193.60	
TOTAL SPECIAL PROJECTS						\$1,286.08

GRAND TOTAL	\$6,884.88
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SUMMARY OF CONSTRUCTION COST

Sale:		<u>Coast Moon Tie</u>				Road:		<u>I to J</u>			
<u>Construction -</u>		<u>0+00</u>	stations	<u>Improvement -</u>		<u>0+00</u>	stations	<u>Reconstruction -</u>		<u>9+50</u>	stations
		0.00	miles			0.00	miles			0.18	miles
<u>RECONSTRUCTION:</u> CLEARING AND GRUBBING -											
Scattering		0.700	acres	@		\$980.00	per acre =		\$686.00		
TOTAL CLEARING AND GRUBBING										\$686.00	
<u>RECONSTRUCTION:</u> EXCAVATION -											
Road Earthwork		9.50	sta.	@		\$100.00	per sta. =		\$950.00		
TOTAL EXCAVATION										\$950.00	
ROCK											
0+00 to 1+00		70	cy. of	Pit-Run	@	\$8.82	per c.y.=		\$617.40		
TOTAL ROCK										\$617.40	
SPECIAL PROJECTS											
Grade and shape road -		9.50	stations	@		\$15.50	per station		\$147.25		
Construct Landing -		1	@			\$250.00	each		\$250.00		
Roll subgrade w/ vibratory roller prior to rocking -		9.50	stations	@		\$13.20	per station		\$125.40		
Grass seed and fertilize -		0.31	acres	@		\$220.00	per acre		\$68.20		
TOTAL SPECIAL PROJECTS										\$590.85	
GRAND TOTAL										\$2,844.25	

Sale: Coast Moon Tie			Road: G to H		
<u>Construction</u> -	6+50	stations	<u>Improvement</u> -	0+00	stations
	0.12	miles		0.00	miles
			<u>Reconstruction</u> -	0+00	stations
				0.00	miles

<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>	=	\$1,072.50	
0+00		6+50	25%			\$165		TOTAL	\$1,072.50

SPECIAL PROJECTS				
Grade and shape road -	6.50	stations @	\$15.50	per station \$100.75
Construct Landing -	1.00	@	\$250.00	each \$250.00
Roll subgrade w/ vibratory roller prior to rocking -	6.50	stations @	\$13.20	per station \$85.80
Remove large stumps -	1.00	lump sum @	\$520.00	\$520.00
Grass seed and fertilize -	0.30	acres @	\$220.00	per acre \$66.00
				TOTAL SPECIAL PROJECTS \$1,022.55
			GRAND TOTAL	\$2,720.85

SUMMARY OF CONSTRUCTION COST

Sale:			<u>Coast Moon Tie</u>			Road:			<u>E to F</u>					
<u>Construction -</u>			6+00	stations	<u>Improvement -</u>			0+00	stations	<u>Reconstruction -</u>			0+00	stations
			0.11	miles				0.00	miles				0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION & COMPACTION -								
	Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	
	0+00		6+00	40%		Outsloped	\$243	=
								\$1,458.00
								TOTAL
								\$1,458.00

SPECIAL PROJECTS								
Construct Landing -	1	@				\$250.00	each	\$250.00
Grade and shape road -	6.00	stations @				\$15.50	per station	\$93.00
Roll subgrade w/ vibratory roller prior to rocking -	6.00	stations @				\$13.20	per station	\$79.20
Remove large stumps -	1.00	lump sum @				\$520.00		\$520.00
Grass seed and fertilize -	0.14	acres @				\$220.00	per acre	\$30.80
							TOTAL SPECIAL PROJECTS	\$973.00
							GRAND TOTAL	\$2,431.00

SUMMARY OF CONSTRUCTION COST

Sale:		<u>Coast Moon Tie</u>		Road:		<u>C to D</u>		
<u>Construction -</u>	12+00	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	0+00	stations
	0.23	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION & COMPACTION -									
	Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station		
	0+00		12+00	40%		Outsloped	\$243	=	\$2,916.00
									TOTAL
									\$2,916.00
SPECIAL PROJECTS									
Construct Landing -					1	@	\$250.00	each	\$250.00
Grade and shape road -					12.00	stations @	\$15.50	per station	\$186.00
Roll subgrade w/ vibratory roller prior to rocking -					12.00	stations @	\$13.20	per station	\$158.40
Remove large stumps -					1.00	lump sum @	\$650.00		\$650.00
Grass seed and fertilize -					0.39	acres @	\$220.00	per acre	\$85.80
								TOTAL SPECIAL PROJECTS	\$1,330.20
								GRAND TOTAL	\$4,246.20

SUMMARY OF CONSTRUCTION COST

Sale:

Coast Moon Tie

Road:

A to B

<u>Construction -</u>	36+25	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	0+00	stations
	0.69	miles		0.00	miles		0.00	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		7+00	25%		Outslope	\$165	=	\$1,155.00
7+00		9+00	35%		Outslope	\$191	=	\$382.00
9+00		12+00	50%		Outslope	\$459	=	\$1,377.00
12+00		14+00	35%		Outsloped	\$191	=	\$382.00
14+00		16+00	70%		Outsloped	\$2,193	=	\$4,386.00
16+00		18+00	30%		Outsloped	\$191	=	\$382.00
18+00		36+25	45%		Outsloped	\$269	=	\$4,909.25
								TOTAL
								\$12,973.25

CULVERTS - MATERIALS & INSTALLATION

Culverts

80	LF of 18"	\$1,400.00
		\$1,400.00

Culvert Stakes & Markers

2 markers	\$16.00
	\$16.00

TOTAL CULVERTS **\$1,416.00**

ROCK

0+00	to	1+00	70	cy. of	Pit-Run	@	\$9.00 per c.y.=	\$630.00
15+00	to	17+00	140	cy. of	Pit-Run	@	\$9.08 per c.y.=	\$1,271.20
19+50	to	22+50	210	cy. of	Pit-Run	@	\$9.27 per c.y.=	\$1,946.70
								TOTAL ROCK
								\$3,847.90

SPECIAL PROJECTS

Grade and shape road -	36.25	stations @	\$15.50	per station	\$561.88
Construct Landings	2.00	@	\$300.00	each	\$600.00
21+00 to 22+00-Geotextile Fabric - 100' x 12.5' = 140 sq. yds.	140.00	@	\$2.00	Sq. Yd.	\$280.00
Roll subgrade w/ vibratory roller prior to rocking -	36.25	stations @	\$13.20	per station	\$478.50
Remove large stumps -	1.00	lump sum @	\$1,820.00		\$1,820.00
Grass seed and fertilize -	1.33	acres @	\$220.00	per acre	\$292.60
Mulching -	0.100	acres @	\$600.00	per acre	\$60.00
					TOTAL SPECIAL PROJECTS
					\$4,092.98

GRAND TOTAL **\$22,330.13**

SUMMARY OF ROAD CLOSURE COST

Sale:

Coast Moon Tie

Road:

S to T

Road Closure	25+00	stations		
	0.47	miles		

ROCK

Road Block	0+00	20	cy. of	Riprap	@	\$15.00 per c.y.=	\$300.00	
TOTAL ROCK								\$300.00

SPECIAL PROJECTS

Move-in	1.00	lump sum @					\$1,090.00	
Improve/Construct access to Road	6.00	hours @	\$145.00	per hour			\$870.00	
Remove large fills/stream crossings	16.00	hours @	\$145.00	per hour			\$2,320.00	
Construct waterbars -	8.00	hours @	\$145.00	per hour			\$1,160.00	
Remove culverts from state lands	9.00	@	\$632.90	total			\$632.90	
Grass seed and fertilize -	0.70	acres @	\$220.00	per acre			\$154.00	
Mulching -	0.300	acres @	\$600.00	per acre			\$180.00	
TOTAL SPECIAL PROJECTS								\$5,316.90

GRAND TOTAL	\$5,616.90
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ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Pit_run	Location:	M to N (New Quarry)
Sale:	Coast Moon Tie	SW 1/4 SE 1/4 Sec. 2, T3S, R8W, W.M.	
Swell:	1.40	Road:	1700 c.y.
Shrinkage	1.16	Stockpile:	c.y.
Drill Pct.:	25%	Total Truck Loads:	1700 c.y.
		In Place Total:	1214 c.y.

Construct Pit Access Road, Pit Development & Cleanup including Clearing and grubbing of					\$2,687.00
Waste Area @ adjacent to pit, place overburden, dig test holes					
in Waste Area, spread and compact.					
Drill & Shoot:	\$2.50 /cu.yd.	x	304 cu.yds.	=	\$760.00
Rip Rock:	\$1.90 /cu.yd.	x	910 cu.yds.	=	\$1,729.00
Load Dump Truck:	\$0.70 /cu.yd.	x	1700 cu.yds.	=	\$1,190.00
			Subtotal		\$6,366.00

Move In and set up Drill and Compressor	1	@	\$708.78	=	\$708.78
Move in Roller and Compactor- Within Area	1	@	\$140.00	=	\$140.00
Move in Grader - Within Area	1	@	\$50.00	=	\$50.00
Move in Excavator	1	@	\$1,075.41	=	\$1,075.41
Move in Trucks	3	@	\$236.69	=	\$710.07
			Subtotal		\$2,684.26

Base Cost=	\$5.32	Per Cu.Yd.			
			TOTAL PRODUCTION COSTS		\$9,050.26

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B 0 100 (Pit-Run)	2.58	1.10	5.32	9.00	70	\$630.00
A to B 1500 1700 (Pit-Run)	2.66	1.10	5.32	9.08	150	\$1,362.00
A to B 1950 2250 (Pit-Run)	2.85	1.10	5.32	9.27	220	\$2,039.40
G to H 0 100 (Pit-Run)	2.52	1.10	5.32	8.94	70	\$625.80
I to J 0 100 (Pit-Run)	2.40	1.10	5.32	8.82	70	\$617.40
K to L 0 100 (Pit-Run)	3.11	1.10	5.32	9.53	70	\$667.10
K to L Loaded Log Truck Turnaround (Pi	3.11	1.10	5.32	9.53	70	\$667.10
M to N 0 825 (Pit-Run)	1.73	1.10	5.32	8.15	490	\$3,993.50
M to N Landing Rock (Pit-Run)	1.46	1.10	5.32	7.88	90	\$709.20
O to P 0 550 (Pit-Run)	2.61	1.10	5.32	9.03	310	\$2,799.30
O to P Landing Rock (Pit-Run)	2.61	1.10	5.32	9.03	90	\$812.70
				Total C.Y.	1700	Sub Total
						\$14,923.50

TOTAL ROCKING COSTS	\$14,923.50
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CRUSHED ROCK COST SUMMARY (EXISTING STOCKPILED ROCK)

Pit:	Crushed	Location:	NF Trask .5 Mile 1 1/2"-0" Stockpile
Sale:	<u>Coast Moon Tie</u>		NE 1/4 SE 1/4 Sec 25, T1S, R8W, W.M.
		Road:	1030 c.y.
		Total Truck Loads:	1030 c.y.

Load Dump Truck: \$0.70 /cu.yd. x 1030 cu.yds. = \$721.00

Subtotal \$721.00

Move in Roller and Compactor	1	@	\$708.78	=	\$708.78
Move in Grader	1	@	\$180.07	=	\$180.07
Move in Loader (To N.F. Stockpile)	1	@	\$179.78	=	\$179.78
Move in Trucks	4	@	\$236.69	=	\$946.76
				Subtotal	\$2,293.60

Base Cost= \$2.93 Per Cu.Yd.

TOTAL PRODUCTION COSTS	\$3,014.60
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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
M to N 0 300 (Crushed)	7.52	2.45	2.93	12.90	70	\$903.00
O to P 0 500 (Crushed)	7.89	2.45	2.93	13.27	100	\$1,327.00
Q to R 0 5000 (Crushed)	7.72	2.45	2.93	13.10	860	\$11,266.00
				Total C.Y.	1030	Sub Total \$13,496.00

TOTAL ROCKING COSTS	\$13,496.00
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Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Coast Moon Tie**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
26.0	Pavement	30
20.0	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	Excavators (Large)	\$1,095.35	1	\$44.80	0.00	3.00	6	\$268.80	\$1,364.15
1	Tractor (D8)	\$1,019.16	2	\$15.10	0.00	3.00	6	\$90.60	\$1,109.76
2	Dump Truck (10 cy +)	\$581.33		\$2.85	0.00	0.00	6	\$34.20	\$615.53
1	Water Truck (2500 Gal)	\$287.30		\$2.85	0.00	0.00	6	\$17.10	\$304.40
					TOTAL MOVE-IN COSTS:				\$3,393.84



"STEWARDSHIP IN FORESTRY"

Coast Moon Tie

Volume Summary

Area 1-Modified Clearcut				
117 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol MBF
Douglas-fir	18.3	2148	5.1%	2038
Hemlock			5.0%	0
Spruce		0	5.0%	0
Noble Fir		0	5.0%	0
Alder	3.3	383	12.0%	337
TOTAL	21.6	2531		2375

Areas 2-Modified Clearcut				
98 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol MBF
Douglas-fir	20.4	2001	5.1%	1899
Hemlock		0	5.0%	0
Spruce		0	5.0%	0
Noble Fir		0	5.0%	0
Alder	0.6	54	10.0%	49
TOTAL	21.0	2055		1948

Areas 3-Modified Clearcut				
13 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol MBF
Douglas-fir	4.6	60	5.0%	57
Hemlock		0	5.0%	0
Spruce		0	5.0%	0
Noble Fir		0	5.0%	0
Alder	9.9	129	11.9%	114
TOTAL	14.5	189		171

Areas 4-Daylighting				
4 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol MBF
Douglas-fir	14.0	56	5.8%	53
Hemlock			5.0%	0
Spruce		0	5.0%	0
Noble Fir		0	5.0%	0
Alder	1.5	6	10.0%	5



STEWARDSHIP IN FORESTRY™

Coast Moon Tie

Volume Summary

TOTAL	15.5	62		58
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TOTAL SALE VOLUME		232	acres
SPECIES	Gross Vol. (MBF)	Net Vol. (MBF)	
Douglas-fir	4265	4047	
Hemlock	0	0	
Spruce	0	0	
Noble Fir	0	0	
Red Alder	572	505	
TOTAL	4837	4552	

TC		TLOGSTVB		Log Stock Table - MBF																																					
				Project:				COASMOON																																	
T02S R08W S02 T0100												T02S R08W S02 T0100																													
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees				Page		2																					
02S		08W		02		MC		0100		117.00		18		85				Date		3/29/2011																					
																		Time		10:11:35AM																					
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+	
WH				Totals				16				16		.6				16																							
Total All Species								2,564				2,553		100.0				235		342		330		395		540		450		262											

TC		TLOGSTVB		Log Stock Table - MBF																	
				Project: COASMOON																	
T02S R08W S02 T0200										T02S R08W S02 T0200											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1												
02S	08W	02	MC	0200	98.00	16	76	Date	2/22/2011												
										Time	10:18:17AM										
Spp	T	S	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	746	.2	745	37.3					387		267	92				
DF		CO	3		21	8		8	.4					8							
DF		CO	3		22	2		2	.1		2										
DF		CO	3		32	22		22	1.1				22								
DF		CO	3		40	923	.1	921	46.1			91	212	520	22		76				
DF		CO	4		14	1		1	.0		1										
DF		CO	4		15	7		7	.3		5	1									
DF		CO	4		16	11		11	.6		9	2									
DF		CO	4		18	9		9	.5		9										
DF		CO	4		19	12		12	.6		12										
DF		CO	4		20	4		4	.2		4										
DF		CO	4		21	6		6	.3		2	3									
DF		CO	4		22	13		13	.7		6				7						
DF		CO	4		23	2		2	.1		2										
DF		CO	4		24	16		16	.8					16							
DF		CO	4		25	11		11	.5		8		3								
DF		CO	4		26	5		5	.3		5										
DF		CO	4		27	6		6	.3		6										
DF		CO	4		28	13		13	.6		13										
DF		CO	4		29	7		7	.3		7										
DF		CO	4		30	4		4	.2		4										
DF		CO	4		31	11		11	.6		11										
DF		CO	4		33	21		21	1.0		7	14									
DF		CO	4		34	6		6	.3		6										
DF		CO	4		35	15		15	.8		15										
DF		CO	4		36	19		19	.9		19										
DF		CO	4		37	15		15	.7		15										
DF		CO	4		38	18		18	.9		18										
DF		CO	4		40	60		60	3.0		51	9									
DF		CO	4		41	9		9	.4		9										
DF		Totals				2,001		1,999	97.0		247	120	237	544	416	267	168				
RA		H	4		19	5		5	9.8			5									
RA		H	4		24	17		17	31.1			3			13						
RA		H	4		35	13		13	24.5			13									
RA		H	4		36	19		19	34.6			19									
RA		Totals				54		54	2.6			41			13						
WL		CO	4		35	8		8	100.0		8										
WL		Totals				8		8	.4		8										
Total All Species						2,063		2,061	100.0		255	161	237	544	429	267	168				

TC TLOGSTVB				Log Stock Table - MBF Project: COASMOON															
T02S R08W S02 T0300										T02S R08W S02 T0300									
Twp	Rge	Sec	Tract	Type			Acres	Plots	Sample Trees			Page 1							
02S	08W	02	MC	0300			13.00	3	13			Date 2/22/2011							
										Time 10:22:21AM									
S Spp	So T	Gr rt	Log de Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
RA	H	4	15	2		2	2.0			2									
RA	H	4	20	3		3	2.6			3									
RA	H	4	22	5		5	3.8			5									
RA	H	4	29	5	25.0	4	2.9			4									
RA	H	4	32	29		29	23.0				29								
RA	H	4	35	13		13	10.4			13									
RA	H	4	40	71	1.7	70	55.3			38	14	19							
RA			Totals	129	1.9	127	67.0			65	43	19							
BM	H	4	35	3		3	100.0					3							
BM			Totals	3		3	1.4					3							
DF	CO	2	40	25		25	42.6							25					
DF	CO	3	40	27		27	45.1			17	10								
DF	CO	4	30	6		6	9.5		6										
DF	CO	4	32	2		2	2.8		2										
DF			Totals	60		60	31.5		7	17	10			25					
Total All Species				191	1.3	189	100.0		7	65	60	31		25					

TC TLOGSTVB				Log Stock Table - MBF Project: COASMOON																
T02S R08W S02 T0400										T02S R08W S02 T0400										
Twp	Rge	Sec	Tract		Type	Acres	Plots		Sample Trees		Page 1									
02S	08W	02	DAYLIGHTING		0400	1.00	8		26		Date 1/4/2012		Time 6:12:59AM							
S Spp	So T	Gr rt	Log de 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	3	40	42	1.9	41	73.6			2	16	6	17						
DF		CO	4	14	0		0	.7		0										
DF		CO	4	16	1		1	1.4		1										
DF		CO	4	18	1		1	1.4		1										
DF		CO	4	19	1		1	1.4		1										
DF		CO	4	20	1		1	1.4		1										
DF		CO	4	24	1		1	2.1		1										
DF		CO	4	26	1		1	2.1		1										
DF		CO	4	27	1		1	2.1		1										
DF		CO	4	28	1		1	2.1		1										
DF		CO	4	35	2		2	2.9		2										
DF		CO	4	40	5		5	8.6		5										
DF		Totals			57	1.4	56	76.9		15	2	16	6	17						
RA		H	4	22	2		2	37.5			2									
RA		H	4	27	1		1	18.8			1									
RA		H	4	40	3		3	43.8			3									
RA		Totals			6		6	8.8			6									
BM		H	4	12	0		0	3.8			0									
BM		H	4	22	1		1	11.5			1									
BM		H	4	27	1		1	11.5			1									
BM		H	4	29	2		2	15.4			2									
BM		H	4	32	2		2	19.2			2									
BM		H	4	33	2		2	19.2			2									
BM		H	4	35	2		2	19.2			2									
BM		Totals			10		10	14.3			10									
Total All Species					74	1.1	73	100.0		15	19	16	6	17						

T	Species, Sort Grade - Board Foot Volumes (Type)														Page 1						
Project: COASMOON														Date 3/29/2011							
														Time 10:07:52AM							
T02S R08W S02 T0100										T02S R08W S02 T0100											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
02S	08W	02	MC	0100	117.00	18	85	S	W												
S So Gr T rt ad Spp			% Net BdFt	Bd. Ft. per Acre Def% Gross Net		Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre			
			Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf								
			46	.1	8,480	8,472	991	93 7				3 97				40	274	1.68	30.9		
			40	.1	7,427	7,420	868	76 12 11				1 8 91				39	128	0.88	57.8		
			14	.3	2,448	2,440	286	77	23					12	12	30	46	30	35	0.39	69.0
DF	Totals		84	.1	18,355	18,333	2,145	10	34	48	8	2	2	9	88	35	116	0.88	157.7		
			11		365	365	43	21 79				100				24	73	0.88	5.0		
			24	3.9	803	772	90	75 25				69 31				35	154	1.19	5.0		
			65	1.6	2,103	2,069	242	100				10	18	37	35	30	46	0.52	44.9		
RA	Totals		15	2.0	3,271	3,206	375	85	15					7	23	40	30	30	58	0.62	55.0
			100		151	151	18	100				100				40	120	1.10	1.3		
BM	Totals		1		151	151	18	100				100				40	120	1.10	1.3		
			100		135	135	16	100				100				34	40	0.40	3.4		
WH	Totals		1		135	135	16	100				100				34	40	0.40	3.4		
Type Totals				.4	21,912	21,824	2,553	9	42	43	6	2	5	14	79	34	100	0.81	217.3		

T	Species, Sort Grade - Board Foot Volumes (Type)										Page		1								
	Project: COASMOON										Date		2/22/2011								
											Time		10:19:56AM								
T02S R08W S02 T0200										T02S R08W S02 T0200											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
02S	08W	02	MC	0200	98.00	16	76	S	W												
S So Gr T rt ad Spp			% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre		
			Def%	Gross	Net	Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf					
										4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99				
DF	CO	2		37	.2	7,617	7,606		745			91	9				100	40	262	1.59	29.0
DF	CO	3		48	.1	9,742	9,729		953	0	89	5	6		1	2	97	39	132	0.91	73.7
DF	CO	4		15		3,059	3,059		300	82	16	2		15	28	18	40	29	34	0.40	89.0
DF	Totals			97	.1	20,418	20,394		1,999	12	45	37	6	2	5	4	89	34	106	0.83	191.8
RA	H	4		100		553	553		54		75	25		10	31	25	35	29	51	0.54	10.9
RA	Totals			3		553	553		54		75	25		10	31	25	35	29	51	0.54	10.9
WL	CO	4		100		81	81		8	100							100	35	40	0.60	2.0
WL	Totals			0		81	81		8	100							100	35	40	0.60	2.0
Type Totals					.1	21,052	21,028		2,061	12	46	36	6	2	5	5	88	34	103	0.81	204.7

T	Species, Sort Grade - Board Foot Volumes (Type)													Page	1					
Project: COASMOON															Date	2/22/2011				
															Time	10:23:24AM				
T02S R08W S02 T0300															T02S R08W S02 T0300					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
02S	08W	02	MC	0300	13.00	3	13	S	W											
S So Gr T rt ad Spp			% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
			Def%	Gross	Net	Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf				
RA	H	4		100	1.9	9,932	9,741	127	100				5	7	33	55	33	64	0.66	151.5
RA	Totals			67	1.9	9,932	9,741	127	100				5	7	33	55	33	64	0.66	151.5
BM	H	4		100	209		209	3	100				100				35	130	1.72	1.6
BM	Totals			1	209		209	3	100				100				35	130	1.72	1.6
DF	CO	2		42	1,952		1,952	25	100				100				40	460	2.23	4.2
DF	CO	3		45	2,066		2,066	27	100				100				40	110	0.69	18.7
DF	CO	4		13	561		561	7	100				77		23	30	30	0.28	18.7	
DF	Totals			32	4,579		4,579	60	12	45	43		9	3	88	36	110	0.71	41.7	
Type Totals					1.3	14,721	14,530	189	4	83	13		3	8	25	65	33	75	0.68	194.8

T	Species, Sort Grade - Board Foot Volumes (Type)													Page 1					
Project: COASMOON													Date	1/4/2012					
													Time	6:14:07AM					
T02S R08W S02 T0400													T02S R08W S02 T0400						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt										
02S	08W	02	DAYLIGHTING	0400	1.00	8	26	S	W										
S So Gr T rt ad Spp			% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre
			Def%	Gross	Net	Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf			
DF	CO	3		1.9	42,000	41,200	41	58 42				100				40	129	1.07	320.0
DF	CO	4			14,800	14,800	15	100				24	32	11	32	27	28	0.39	520.0
DF	Totals			77	1.4	56,800	56,000	56	26	43	31	6	9	3	82	32	67	0.72	840.0
RA	H	4		100	6,400	6,400	6	100				56 44				28	40	0.62	160.0
RA	Totals			9	6,400	6,400	6	100				56 44				28	40	0.62	160.0
BM	H	4		100	10,400	10,400	10	100				4	38	58		27	37	0.49	280.0
BM	Totals			14	10,400	10,400	10	100				4	38	58		27	37	0.49	280.0
Type Totals					1.1	73,600	72,800	73	20	56	24	5	17	10	67	30	57	0.66	1,280.0

TC		TSTNDSUM															
Stand Table Summary																	
Project COASMOO																	
T02S R08W S02 T0100												T02S R08W S02 T0100					
Twp	Rge	Sec	Tract	Type				Acres		Plots	Sample Trees			Page:	1		
02S	08W	02	MC	0100				117.00		18	85			Date:	03/29/2011		
Time: 10:12:31AM																	
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		9	1	86	70	5.030	2.22	5.03	8.5	40.0	1.22	43	201	142	50	24	
DF		10	1	87	63	4.074	2.22	4.07	11.0	40.0	1.28	45	163	149	52	19	
DF		11	2	78	59	6.734	4.44	6.73	13.9	35.0	2.67	94	236	313	110	28	
DF		12	1	88	73	2.829	2.22	5.66	10.1	45.0	1.63	57	255	191	67	30	
DF		13	2	84	75	4.822	4.44	7.23	16.2	53.3	3.32	117	386	388	137	45	
DF		15	6	84	92	10.865	13.33	19.92	21.7	78.2	12.34	433	1,557	1,444	507	182	
DF		16	3	84	85	4.775	6.67	7.96	25.3	88.0	5.76	202	700	674	236	82	
DF		17	2	86	96	2.820	4.44	5.64	27.2	102.5	4.38	154	578	512	180	68	
DF		18	7	84	101	8.803	15.56	17.61	31.8	114.3	15.93	559	2,012	1,864	654	235	
DF		19	5	87	103	5.643	11.11	12.41	32.5	119.1	11.51	403	1,479	1,347	472	173	
DF		20	8	85	111	8.149	17.78	19.35	35.4	132.1	19.54	686	2,557	2,286	802	299	
DF		21	5	86	118	4.619	11.11	12.93	35.5	146.4	13.07	459	1,894	1,529	537	222	
DF		22	6	83	108	5.051	13.33	11.79	42.8	156.4	14.37	504	1,844	1,681	590	216	
DF		23	3	85	105	2.311	6.67	6.16	39.1	165.0	6.85	241	1,017	802	282	119	
DF		24	5	85	107	3.537	11.11	9.20	46.9	188.5	12.28	431	1,733	1,437	504	203	
DF		28	2	85	105	1.039	4.44	2.60	65.7	262.0	4.87	171	681	570	200	80	
DF		29	3	85	106	1.453	6.67	3.39	75.1	307.1	7.25	255	1,042	849	298	122	
DF		Totals	62	84	92	82.554	137.78	157.69	30.8	116.3	138.29	4,852	18,333	16,180	5,677	2,145	
RA		10	3	76	47	12.223	6.67	12.22	9.1	26.7	3.00	111	326	350	130	38	
RA		11	3	84	60	10.102	6.67	10.10	14.1	46.7	3.95	142	471	463	167	55	
RA		12	3	83	55	8.488	6.67	8.49	16.6	50.0	3.90	141	424	456	165	50	
RA		13	1	82	66	2.411	2.22	2.41	23.8	70.0	1.58	57	169	184	67	20	
RA		14	1	83	69	2.079	2.22	2.08	28.4	90.0	1.62	59	187	190	69	22	
RA		16	3	85	69	4.775	6.67	6.37	28.1	82.5	4.91	179	525	575	209	61	
RA		17	1	85	57	1.410	2.22	1.41	38.5	90.0	1.49	54	127	175	64	15	
RA		18	4	84	63	5.030	8.89	10.06	21.4	75.0	5.93	216	755	694	252	88	
RA		21	1	85	67	.924	2.22	1.85	34.8	120.0	1.77	64	222	207	75	26	
RA		Totals	20	82	58	47.441	44.44	54.99	18.6	58.3	28.14	1,023	3,206	3,293	1,197	375	
BM		18	1	81	63	1.258	2.22	1.26	44.2	120.0	1.47	56	151	172	65	18	
BM		Totals	1	81	63	1.258	2.22	1.26	44.2	120.0	1.47	56	151	172	65	18	
WH		11	1	83	51	3.367	2.22	3.37	13.5	40.0	1.46	46	135	171	53	16	
WH		Totals	1	83	51	3.367	2.22	3.37	13.5	40.0	1.46	46	135	171	53	16	
OC		21	1	36	17	.924	2.22										
OC		Totals	1	36	17	.924	2.22										
Totals		85			83	78	135.544	188.89	217.30	27.5	100.4	169.36	5977	21,824	19,815	6,993	2,553

TC		TSTNDSUM													Stand Table Summary																													
															Project													COASMOO																
T02S R08W S02 T0200																														T02S R08W S02 T0200														
Twp		Rge		Sec		Tract					Type			Acres			Plots			Sample Trees			Page: 1																					
02S		08W		02		MC					0200			98.00			16			76			Date: 02/22/2011																					
																							Time: 10:21:04AM																					
S		Sample			Av					Average Log			Net		Net				Net		Net		T o t a l s																					
T		DBH		Trees		FF 16'		Ht Tot		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		1		88		92		5.659		2.50		5.66		9.7		40.0		1.57		55		226		153		54		22														
DF		11		1		80		48		3.788		2.50		3.79		12.3		30.0		1.33		47		114		131		46		11														
DF		12		1		88		50		3.183		2.50		3.18		14.3		40.0		1.30		46		127		127		45		12														
DF		13		2		82		84		5.424		5.00		10.85		12.8		45.0		3.95		139		488		387		136		48														
DF		14		4		84		84		9.354		10.00		14.03		20.5		73.3		8.22		288		1,029		805		282		101														
DF		15		2		85		85		4.074		5.00		8.15		17.7		65.0		4.11		144		530		403		141		52														
DF		16		4		86		95		7.162		10.00		16.11		20.5		84.4		9.39		330		1,361		920		323		133														
DF		17		9		85		94		14.274		22.50		26.96		28.2		105.3		21.66		760		2,839		2,123		745		278														
DF		18		5		82		99		7.074		12.50		15.56		27.8		99.1		12.35		433		1,542		1,210		425		151														
DF		19		11		84		98		13.967		27.50		30.47		31.8		115.0		27.59		968		3,504		2,704		949		343														
DF		20		8		83		103		9.167		20.00		21.77		33.9		120.5		21.06		739		2,624		2,064		724		257														
DF		21		5		87		116		5.197		12.50		14.55		35.0		145.7		14.50		509		2,120		1,421		499		208														
DF		22		3		84		103		2.841		7.50		6.63		42.3		145.7		8.00		281		966		784		275		95														
DF		23		2		86		108		1.733		5.00		4.33		43.9		166.0		5.42		190		719		531		186		70														
DF		26		1		80		120		.678		2.50		2.03		51.0		190.0		2.96		104		386		290		102		38														
DF		27		2		87		119		1.258		5.00		3.77		55.0		241.7		5.91		208		912		579		203		89														
DF		28		1		81		85		.585		2.50		1.17		69.4		220.0		2.31		81		257		227		79		25														
DF		29		2		83		89		1.090		5.00		2.73		61.9		238.0		4.81		169		649		471		165		64														
DF		Totals		64		84		93		96.509		160.00		191.76		28.6		106.4		156.42		5,489		20,394		15,330		5,380		1,999														
RA		12		1		69		82		3.183		2.50		3.18		15.4		60.0		1.35		49		191		132		48		19														
RA		13		2		75		49		5.424		5.00		5.42		13.3		35.0		1.98		72		190		194		70		19														
RA		20		1		74		70		1.146		2.50		2.29		21.2		75.0		1.34		49		172		131		48		17														
RA		Totals		4		73		63		9.753		10.00		10.90		15.6		50.7		4.66		170		553		457		166		54														
WL		15		1		87		43		2.037		2.50		2.04		21.1		40.0		1.38		43		81		135		42		8														
WL		Totals		1		87		43		2.037		2.50		2.04		21.1		40.0		1.38		43		81		135		42		8														
OC		29		1		62		23		.545		2.50																																
OC		32		1		85		30		.448		2.50																																
OC		34		1		50		17		.397		2.50																																
OC		36		1		98		17		.354		2.50																																
OC		40		1		41		18		.286		2.50																																
OC		49		1		67		31		.191		2.50																																
OC		72		1		98		17		.088		2.50																																
OC		Totals		7		69		22		2.309		17.50																																
Totals				76		83		88		110.608		190.00		204.69		27.9		102.7		162.46		5702		21,028		15,921		5,588		2,061														

Stand Table Summary																	
Project COASMOO																	
T02S R08W S02 T0300													T02S R08W S02 T0300				
Twp	Rge	Sec	Tract	Type				Acres		Plots	Sample Trees			Page:	1		
02S	08W	02	MC	0300				13.00		3	13			Date:	02/22/2011		
Time: 10:24:33AM																	
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	Ht				Net	Net		Cu.Ft.	Bd.Ft.	Tons	Cunits	MBF	
RA		11	1	79	71	20.203	13.33	20.20	15.0	50.0	8.33	303	1,010	108	39	13	
RA		12	1	81	85	16.977	13.33	16.98	21.1	70.0	9.83	357	1,188	128	46	15	
RA		14	3	81	75	37.418	40.00	62.36	17.4	58.0	29.86	1,086	3,617	388	141	47	
RA		16	3	81	78	28.648	40.00	47.75	25.6	76.0	33.62	1,225	3,629	437	159	47	
RA		24	1	77	49	4.244	13.33	4.24	73.5	70.0	8.58	312	297	112	41	4	
RA		Totals		9	80	76	107.490	120.00	151.53	21.7	64.3	90.21	3,283	9,741	1,173	427	127
DF		13	1	88	97	14.465	13.33	28.93	15.0	60.0	12.36	434	1,736	161	56	23	
DF		24	1	88	134	4.244	13.33	12.73	48.9	223.3	17.74	623	2,844	231	81	37	
DF		Totals		2	88	105	18.709	26.67	41.66	25.3	109.9	30.10	1,056	4,579	391	137	60
BM		39	1	64	64	1.607	13.33	1.61	60.0	130.0	2.56	96	209	33	13	3	
BM		41	1	67	45	1.454	13.33										
BM		Totals		2	65	55	3.062	26.67	1.61	60.0	130.0	2.56	96	209	33	13	3
Totals		13			81	79	129.261	173.33	194.80	22.8	74.6	122.87	4435	14,530	1,597	577	189

TC		TSTNDSUM													Stand Table Summary																													
															Project															COASMOO														
T02S R08W S02 T0400																														T02S R08W S02 T0400														
Twp		Rge		Sec		Tract				Type		Acres		Plots		Sample Trees				Page:		1																						
02S		08W		02		DAYLIGHTING				0400		1.00		8		26				Date:		01/04/2011																						
																				Time:		6:16:25AM																						
S Spc	T	Sample		FF	Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	Tons/ Acre	Cu.Ft.	Bd.Ft.	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		10	4	73	35	160.000	87.27	160.00	6.8	22.5	30.92	1,085	3,600	31	11	4																												
DF		11	1	76	40	40.000	26.40	40.00	10.0	30.0	11.80	400	1,200	12	4	1																												
DF		14	3	74	82	120.000	128.28	200.00	19.0	46.0	108.46	3,796	9,200	108	38	9																												
DF		15	2	85	83	80.000	98.17	160.00	17.5	65.0	79.67	2,795	10,400	80	28	10																												
DF		16	1	85	100	40.000	55.85	80.00	25.4	95.0	57.87	2,031	7,600	58	20	8																												
DF		18	1	72	77	40.000	70.69	40.00	46.4	90.0	52.85	1,854	3,600	53	19	4																												
DF		20	1	85	98	40.000	87.27	80.00	38.9	120.0	88.67	3,111	9,600	89	31	10																												
DF		23	1	78	97	40.000	115.41	80.00	51.1	135.0	116.77	4,086	10,800	117	41	11																												
DF		Totals		14	77	69	560.000	669.33	840.00	22.8	66.7	547.01	19,159	56,000	547	192	56																											
BM		8	1	74	36	40.000	13.96	40.00	3.3	10.0	3.47	131	400	3	1	0																												
BM		10	2	74	67	80.000	43.63	80.00	14.1	50.0	29.50	1,125	4,000	29	11	4																												
BM		11	2	74	49	80.000	52.80	80.00	11.3	30.0	24.03	907	2,400	24	9	2																												
BM		12	1	74	53	40.000	31.42	40.00	16.0	40.0	17.19	640	1,600	17	6	2																												
BM		13	1	74	60	40.000	36.87	40.00	22.1	50.0	23.47	886	2,000	23	9	2																												
BM		Totals		7	74	54	280.000	178.68	280.00	13.2	37.1	97.66	3,689	10,400	98	37	10																											
RA		10	1	80	45	40.000	21.82	40.00	8.0	30.0	8.98	320	1,200	9	3	1																												
RA		13	2	74	28	80.000	73.74	40.00	12.0	30.0	13.53	480	1,200	14	5	1																												
RA		14	1	80	44	40.000	42.76	40.00	15.1	30.0	16.60	604	1,200	17	6	1																												
RA		16	1	80	62	40.000	55.85	40.00	33.3	70.0	36.60	1,331	2,800	37	13	3																												
RA		Totals		5	78	41	200.000	194.17	160.00	17.1	40.0	75.71	2,735	6,400	76	27	6																											
Totals				26	76	60	1040.000	1042.18	1,280.00	20.0	56.9	720.37	25582	72,800	720	256	73																											



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT *Coast Moon Tie*

1. Type of Sale

Regeneration harvest, Recovery

2. Legal Description

Portions of Section 12,13, 24, 25 and 35, T2S, R8W and Sections 1 and 2, T3S, R8W, W.M., Tillamook County, Oregon.

3. Sale Acreage

How the acreage was determined (sale acreage was determined by GPS and orthophotographs along with GIS).

	ACRES	
	<u>Gross</u>	<u>Net</u>
Area 1 (Clearcut)	134	117
Area 2 (Clearcut)	105	98
Area 3 (Clearcut)	13	13
Area 4 (Daylighting)	4	4

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

Used for calculating the advertised volume.

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

4. Cruising Procedures

A. Cruise Method

A total of 37 variable radius plots were used on the sale area, spaced on a rectangular grid of 350' x 700'. All plots were full cruise plots. All conifers 8 inches DBH and greater containing 20 net board feet and all hardwoods 9 inches DBH and greater containing 30 net board feet were recorded on all plots.

Species were recorded on all trees, and they were graded and measured for merchantable height, diameter, and form factor. The standard error and the coefficient of variation for the cruise as based on net board feet per acre shown in the table below. There were also 8 Strip Cruise Plots done on Area 4, each plot was a 52 foot long, 1/40th of the area was sampled.

Cruise Statistics (Net/BF Volume Per Acre)			
Area	Number of Plots	SE(%)	CV (%)
1	18	9.4	38.9
2	16	9.6	37.2
3	3	29.3	42.3
*4	14	33.8	89.7
Total	37	6.1	37.2

* Area 4 statistics separate from other areas

B. Plot size

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

C. Grading System

Describe the method of determining grade unless it was already specified in the Cruise Method.

5. Computation Procedure

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

6. Hidden Defect and Breakage

A 5% and 10 % hidden defect and breakage was applied to conifers and hardwoods respectively in addition to visible defect deducted during cruising.

7. Timber Description

Area 1 (Modified Clearcut) – About 77 acres in the northern portion of the stand burned in the 1939 Tillamook fire and again in the 1951 North Fork fire. This burned portion was planted in the 1963-64 planting season. About 35 acres in the northern half of Area 1 was a heavy pre-commercial thin in 1989. The rest of the Area has had no prior management.

The stand is approximately 47 years old consisting of Douglas-fir (80 %), alder (15%), red Cedar (4%) and less than 1% of hemlock and maple. The cedar ranges from saplings to about 36 inches mostly in the southern portion of the stand below Coast Moon Tie Road. The Douglas-fir averages 17.5 inches in DBH, with an average merchantable height of 92 feet to a merchantable top (5" d.i.b.). The red alder averages 13.1 inches in DBH, with an average merchantable height of 58 feet to a merchantable top (6" d.i.b.). The understory is comprised of mostly sword fern with pockets of salmonberry.

Area 2 (Modified Clearcut) – The entire area burned in the 1939 Tillamook fire and the 1951 North Fork fire. The area was then planted between 1963 and 1965. The entire area was heavily pre-commercially thinned in 1989.

The stand is approximately 47 years old consisting of mostly Douglas-fir with about 3% mix of alder and an occasional hemlock. The Douglas-fir averages 17.4 inches in DBH, with an average merchantable height of 93 feet to a merchantable top (5" d.i.b.). The Red alder averages 13.7 inches in DBH, with an average merchantable height of 63 feet to a merchantable top (6" d.i.b.). The understory is comprised of mostly sword fern with pockets of salmonberry.

Area 3 (Modified Clearcut) – The entire area burned in the 1939 Tillamook fire and in the 1951 North Fork fire. The area was planted in the 1959-60 planting season. Some of the alder has been sprayed.

The stand is about 67% red alder and about 32% Douglas-fir and the rest is maple. The alder averages 14.3 inches in DBH, with an average merchantable height 76 feet to a merchantable top (6" d.i.b.). The Douglas-fir averages 16.2 inches in DBH, with an average merchantable height of 105 feet to a merchantable top (5" d.i.b.). The understory is comprised of mostly sword fern with pockets of salmonberry.

Area 4 (Road Daylighting) – These are trees within 25' of the centerline of the road. About 90% of the volume is from Douglas-fir, 5% alder, 3% big leaf maple and 1% hemlock. The Douglas-fir averages 17.3 inches in DBH, with an average merchantable height of 84 feet to a merchantable top (5" d.i.b.) The alder averages 13.5 inches in DBH, with an average merchantable height 51 feet to a merchantable top (6" d.i.b.).

8. Cruiser Names/Dates

Dave Luttrell, Dave Wells, Nick Stumpf

9. Revenue Distribution

FDF: 100%

Tax Code: 8, 8-1

Deed Numbers: 211, 295

10. Attachments

Stand Table

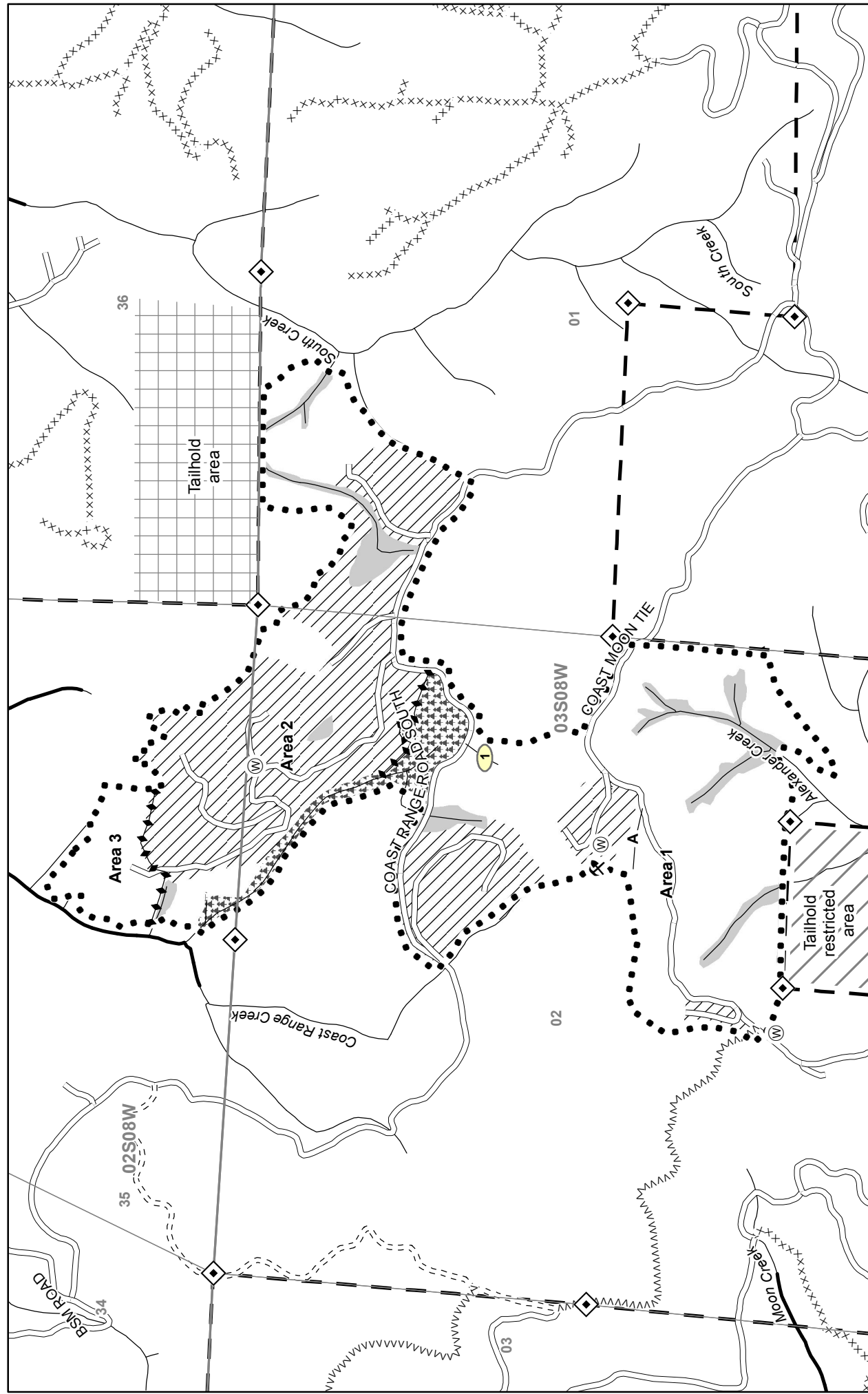
Volume Summaries

Log Stock Tables

Logging Plan

11. Stand and Log Stock Tables Species Key

DL – Douglas-fir leave
DF – Douglas-fir take
NF – Noble fir reserved
RA – Red alder take
RC – Western red cedar reserved
SS – Sitka spruce reserved
WH – Western hemlock reserved



LOGGING PLAN

Timber Sale Contract No. 341-12-002

COAST MOON TIE

Portions of Section 35, T2S, R8W
and Sections 1 and 2, T3S, R8W, W.M.,
Tillamook County, Oregon

Type of Area	Operation	Gross	Net	Acres
1	Modified clearcut	134	117	
2	Modified clearcut	110	98	
3	Modified clearcut	13	13	
4	Selective harvest	*	4	4
Total		261	232	

(* see page 3)

Tillamook District GIS
03-02-2011

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



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