



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Haulin Wood
Sale 341-15-01

District: Tillamook

Date: September 30, 2014

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$999,381.24	\$524,094.74	\$1,523,475.98
Project Work:			\$(458,620.00)
Advertised Value:			\$1,064,855.98



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timber description

Location: Portions of Sections 10, 11, 14, 15, 16, 21 and 22, T2S, R8W, Tillamook County, Oregon.

Stand Stocking: 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	15	0	95
Alder (Red)	14	0	90

Volume by Grade	10" - 11"	12"+	2S	3S	4S	8" - 9"	Total
Douglas - Fir	0	0	995	3,262	1,089	0	5,346
Alder (Red)	281	65	0	0	0	1,552	1,898
Total	281	65	995	3,262	1,089	1,552	7,244



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comments: Pond Values Used: 2nd Quarter Calendar Year 2014

Western Red Cedar and Other Cedars Stumpage Price = Pond Value -
Logging Cost
 $\$1,050/\text{MBF} - \$412/\text{MBF} = \$638/\text{MBF}$

Western hemlock and other conifers Stumpage Price = Pond Value -
Logging Cost
 $\$518.78/\text{MBF} - \$412/\text{MBF} = \$106.78/\text{MBF}$

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

SCALING COST ALLOWANCE = \$ 5.00/ MBF

FUEL COST ALLOWANCE = \$ 4.00/ Gallon

HAULING COST ALLOWANCE
Hauling cost equivalent to \$780 daily truck cost

Other Costs with Profit and Risk to be added:
Brand and Paint: $\$2 / \text{MBF} \times 7,244 \text{ MBF} = \$14,488$
Machine Cleaning: $\$1000/\text{machine} \times 4 = \$4,000$
Truck assist Area 5 = spur S-T/ 40 acres @ 812 MBF @ \$20 = \$16,240
TOTAL Other Costs with profit and Risk to be added = \$34,728

Other Costs with No Profit and Risk Added:
Slash piling and sorting (cable ground): $\$5/\text{ac} \times 434 \text{ ac} = \$2,170$
Cover materials for piles: $\$5/\text{pile} \times 25 \text{ piles} = \125
Non-project spur #1: $3 \text{ sta} \times \$200/\text{sta} = \600
Non-project spur #2: $2 \text{ sta} \times \$200/\text{sta} = \400
Non-project spur #3: $1 \text{ sta} \times \$200/\text{sta} = \200
Non-project spur #4: $4 \text{ sta} \times \$200/\text{sta} = \800
Approach rock (pit run) spur #3: $100 \text{ cy} \times \$6/\text{yd} = \600
Machine time for water bars and blocking non-project spurs & C to
D @ sta 222+00: $8 \text{ hrs} \times \$125 = \1000
Additional machine time for slash piling and sorting landings for
heliport: $\$125/\text{hr} \times 2 \text{ hrs} \times 3 \text{ landings} = \750
TOTAL Other Costs no Profit and Risk added = \$6,645

ROAD MAINTENANCE:
Maintenance rock S Fork Trask: $\$8/\text{cy} \times 1.3 \text{ mi} \times 15\text{cy}/\text{mmbf}/\text{mi} \times 7.2 \text{ mmbf} / 7,244 \text{ MBF} = \$0.15/ \text{MBF}$
Maintenance rock BSM Rd: $\$8/\text{cy} \times 4.2 \text{ mi} \times 20\text{cy}/\text{mmbf}/\text{mi} \times 7.2 \text{ mmbf} / 7,244 \text{ MBF} = \$0.66/ \text{MBF}$
Interim Maintenance Grading: $\$350/\text{mile} \times 5.5 \text{ miles} \times 5 \text{ gradings} / 7,244 \text{ mbf} = \$1.33/ \text{MBF}$
Final Maintenance Grading: $\$500/\text{mile} \times 5.5 \text{ miles} / 7,244 \text{ mbf} = \$0.38/ \text{MBF}$
Final Maintenance Compaction: $\$950/\text{mile} \times 5.5 \text{ miles} / 7,244 \text{ mbf} = \$0.72/ \text{MBF}$
Total Road Maintenance: \$3.24/ MBF



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logging conditions

combination#: 1 Douglas - Fir 15.95%
 Alder (Red) 24.89%
yarding distance: Short (400 ft) downhill yarding: No
logging system: Cable: Small Tower <=40 Process: Stroke Delimber
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 5.0 bd. ft / load: 3,500
cost / mbf: \$161.96

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

combination#: 2 Douglas - Fir 58.34%
 Alder (Red) 53.02%
yarding distance: Medium (800 ft) downhill yarding: No
logging system: Cable: Medium Tower >40 - <70 Process: Stroke Delimber
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 4.0 bd. ft / load: 3,500
cost / mbf: \$238.87

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

combination#: 3 Douglas - Fir 22.26%
 Alder (Red) 16.00%
yarding distance: Long (1,500 ft) downhill yarding: No
logging system: Cable: Medium Tower >40 - <70 Process: Stroke Delimber
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 3.0 bd. ft / load: 3,500
cost / mbf: \$318.49

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

combination#: 4 Douglas - Fir 3.45%
 Alder (Red) 6.09%
yarding distance: Long (1,500 ft) downhill yarding: No
logging system: Cable: Medium Tower >40 - <70 Process: Stroke Delimber
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 2.0 bd. ft / load: 3,500
cost / mbf: \$477.73

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



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logging costs

Operating Seasons:	2.00	Profit Risk:	10.00%
Project Costs:	\$458,620.00	Other Costs (P/R):	\$34,728.00
Slash Disposal:	\$0.00	Other Costs:	\$6,645.00

Miles of Road

Road Maintenance: \$3.24

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	3.5
Alder (Red)	\$0.00	2.0	3.5



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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									
\$252.57	\$3.40	\$1.21	\$106.36	\$4.79	\$36.83	\$0.00	\$5.00	\$0.92	\$411.08
Alder (Red)									
\$247.00	\$3.56	\$1.21	\$111.43	\$4.79	\$36.80	\$0.00	\$5.00	\$0.92	\$410.71

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$598.02	\$186.94	\$0.00
Alder (Red)	\$0.00	\$686.84	\$276.13	\$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	5,346	\$186.94	\$999,381.24
Alder (Red)	1,898	\$276.13	\$524,094.74

Gross Timber Sale Value

Recovery: \$1,523,475.98

Prepared by: Tracy Brostrom

Phone: 503-842-2545



PROJECT SUMMARY SHEET

Sale: Haulin' Wood

CONSTRUCTION

Point	C to D	30+05	stations =	\$36,021.40
Point	E to F	1+35	stations =	\$3,100.60
Point	K to L	2+65	stations =	\$4,926.61
Point	Q to R	9+60	stations =	\$35,547.53
Point	S to T	11+70	stations =	\$31,338.02
Point	U to V	3+05	stations =	\$7,896.56
Point	Y to Z	10+45	stations =	\$17,912.64
Point	AA to BB	6+30	stations =	\$11,958.71
Total=		75+15	SUBTOTAL CONSTRUCTION	\$148,702.07

IMPROVEMENT

Point	A to B	116+70	stations =	\$49,663.19
Point	C to D	215+80	stations =	\$183,123.84
Point	G to H	18+00	stations =	\$2,465.41
Point	I to J	1+75	stations =	\$3,689.41
Point	M to N	10+90	stations =	\$970.00
Point	O to P	11+15	stations =	\$13,989.26
Point	S to T	17+65	stations =	\$18,369.19
Point	W to X	15+20	stations =	\$15,801.84
Point	Y to Z	2+55	stations =	\$4,464.36
Total=		409+70	SUBTOTAL IMPROVEMENT	\$292,536.50

SPECIAL PROJECTS

Brush	8.79	miles of road	\$7,797.00
Project 5, Crush and Stockpile 500 c. y's. of 2 1/2"-0" Jaw-Run			\$4,630.00
SUBTOTAL SPECIAL PROJECTS			\$12,427.00

MOVE IN

\$4,954.43

GRAND TOTAL

\$458,620.00

Sale:			Haulin' Wood		Road:		A to B	
Construction -	0+00 0.00	stations miles	Improvement -	116+70 2.21	stations miles	Reconstruction -	0+00 0.00	stations miles
IMPROVEMENT: CLEARING AND GRUBBING - Roadside Brushing (Medium) 2.21 miles @ \$800.00 per mile = <u>\$1,768.00</u> TOTAL CLEARING AND GRUBBING \$1,768.00								
CULVERTS - MATERIALS & INSTALLATION								
<u>Culverts</u>								
	0	LF of 18"	\$0.00		40	LF of 24"	<u>\$1,080.00</u>	
			\$0.00				<u>\$1,080.00</u>	
<u>Culvert Stakes & Markers</u>								
	1	markers	<u>\$8.00</u>					
			\$8.00					
TOTAL CULVERTS							\$1,088.00	
ROCK								
0+00 to	71+70	1,610	cy. of	Crushed	@	\$25.45 per c.y.=	\$40,974.50	
28+25 to	30+35	60	cy. of	Crushed	@	\$25.45 per c.y.=	\$1,527.00	
0+00 to	12+35	0	cy. of	Pit Run	@	\$0.00 per c.y.=	\$0.00	
Culv. Backfill:24" Culv.	30+35	20	cy. of	Crushed	@	\$7.04 per c.y.=	\$140.80	
Landing Rock	0+00	0	cy. of	Pit-Run	@	\$0.00 per c.y.=	\$0.00	
Armor Catch Basin	30+35	20	cy. of	Riprap	@	\$5.99 per c.y.=	\$119.80	
Junction Rock	30+35	0	cy. of	Crushed	@	\$0.00 per c.y.=	\$0.00	
Slope Stabilization	0+00	0	cy. of	Riprap	@	\$0.00 per c.y.=	\$0.00	
Energy Dissipator Rock: Oi	30+35	20	cy. of	Riprap	@	\$5.99 per c.y.=	\$119.80	
Rock Quad Area	71+70, right	100	cy. of	Crushed	@	\$4.99 per c.y.=	\$499.00	
Rock Designated Campsite	108+95, left	100	cy. of	Crushed	@	\$5.93 per c.y.=	\$593.00	
TOTAL ROCK							\$43,973.90	
SPECIAL PROJECTS								
Construct catch basin @ 30+35 for 24" culvert		2.00	hours @	\$125.00		per hour	\$250.00	
Construct lay for 24" culvert @ 30+35		2.00	hours @	\$125.00		per hour	\$250.00	
Construct sump @ 30+85		1.00	hours @	\$125.00		per hour	\$125.00	
Construct ditchout for 24" culvert @ 30+35		1.00	@	\$60.00		each	\$60.00	
End Haul Material		5.00	hours @	\$70.00		per hour	\$350.00	
Compact Material		1.00	hours @	\$135.00		per hour	\$135.00	
Grade and shape road -		116.70	stations @	\$15.50		per station	\$1,808.85	
Roll subgrade w/ vibratory roller -		116.70	stations @	\$13.20		per station	\$1,540.44	
Grass seed and fertilize -		0.10	acres @	\$220.00		per acre	\$22.00	
Mulching -		0.10	acres @	\$600.00		per acre	\$60.00	
TOTAL SPECIAL PROJECTS							\$4,601.29	
GRAND TOTAL								\$51,431.19

SUMMARY OF CONSTRUCTION COST

Sale:

Haulin' Wood

Road:

C to D

Construction -	30+05	stations	Improvement -	215+80	stations	Reconstruction -	0+00	stations
	0.57	miles		4.09	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		
224+05		225+90	90%	0.17	Outslope	\$4,792	=	\$8,865.40
225+90		229+00	35%		Outslope	\$186	=	\$579.70
229+60		231+65	60%	0.33	Outslope	\$1,627	=	\$3,335.23
231+65		233+45	35%		Outslope	\$186	=	\$336.60
233+95		238+60	75%	0.07	Outslope	\$2,547	=	\$11,844.69
238+60		241+85	20%		Outslope	\$136	=	\$441.23
								TOTAL
								\$25,402.85

IMPROVEMENT: CLEARING AND GRUBBING -

Roadside Brushing (Heavy)	1.18	miles @	\$1,300.00	per mile =	\$1,534.00
Roadside Brushing (Medium)	3.03	miles @	\$800.00	per mile =	\$2,424.00
Widening	0.336	acres @	\$660.00	per acre =	\$221.76
TOTAL CLEARING AND GRUBBING					\$4,179.76

IMPROVEMENT: EXCAVATION -

Pullback	2772	cy. @	\$1.40	per c.y.=	\$3,880.80
Widening	2271	cy. @	\$1.40	per c.y.=	\$3,179.40
TOTAL EXCAVATION					\$7,060.20

IMPROVEMENT: ENDHAUL -

Pullback	22+85	to	29+95	1710	cy. @	\$1.21	per c.y.=	\$2,069.10
Pullback	47+25	to	48+25	181	cy. @	\$1.21	per c.y.=	\$219.01
Pullback	154+10	to	154+80	127	cy. @	\$1.21	per c.y.=	\$153.67
Pullback	195+00	to	195+50	302	cy. @	\$1.87	per c.y.=	\$564.74
Pullback	0+00	to	0+75	452	cy. @	\$1.87	per c.y.=	\$845.24
Widening	131+15	to	134+65	1349	cy. @	\$1.21	per c.y.=	\$1,632.29
Widening	138+80	to	142+05	783	cy. @	\$1.21	per c.y.=	\$947.43
Widening	144+70	to	145+85	139	cy. @	\$1.21	per c.y.=	\$168.19
Spread & compact				5043	cy. @	\$0.25	per c.y.=	\$1,260.75
								TOTAL ENDHAUL
								\$7,860.42

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	190	LF of 18"	\$3,325.00		
			\$3,325.00		
<u>Half Rounds</u>					
<u>Culvert Stakes & Markers</u>					
6 markers			\$48.00		
			\$48.00		
				TOTAL CULVERTS	\$3,373.00

ROCK

0+00	to	62+25	2,190	cy. of	Crushed	@	\$8.10	per c.y.=	\$17,739.00
62+25	to	156+00	3,310	cy. of	Jaw-Run	@	\$10.83	per c.y.=	\$35,847.30
222+15	to	223+15	80	cy. of	Pit-Run	@	\$10.09	per c.y.=	\$807.20
Culvert Backfill: 3 Culverts		0+00-62+25	60	cy. of	Crushed	@	\$5.62	per c.y.=	\$337.20
Energy Dissipator: 3 Culverts		0+00-62+25	30	cy. of	Riprap	@	\$4.57	per c.y.=	\$137.10
Base Rock		0+00-62+25	1,730	cy. of	Crushed	@	\$6.09	per c.y.=	\$10,535.70
Culvert Backfill: 3 Culverts		62+25-156+00	60	cy. of	Jaw-Run	@	\$11.24	per c.y.=	\$674.40
Energy Dissipator: 3 Culverts		62+25-156+00	30	cy. of	Riprap	@	\$10.19	per c.y.=	\$305.70
Base Rock		62+25-156+00	1,060	cy. of	Jaw-Run	@	\$11.35	per c.y.=	\$12,031.00
Road Rock		75+20 to 76+95	40	cy. of	Jaw-Run	@	\$10.79	per c.y.=	\$431.60
Rock for 2 70' & 1 50' Landings		0, 138+80 & 15	500	cy. of	Pit-Run	@	\$9.31	per c.y.=	\$4,655.00
								TOTAL ROCK	\$83,501.20

SPECIAL PROJECTS

Construct Ditchouts @ 46+50 & 48+90, right	2.00	@	\$60.00	each	\$120.00
Clean Culvert Inlets from 0+00 to 222+00	20.00	hours @	\$125.00	per hour	\$2,500.00
Construct 13 Waste Areas	13.00	@	\$285.00	per waste area	\$3,705.00
Excavate, end-haul and compact material for 9" lift of 4"-0"	1635.00	c. y's. @	\$3.65	per c. y.	\$5,967.75
Construct Waste Area-Edwards Butte Road	7.00	hours @	\$125.00	per hour	\$875.00
Scattering for Road Realignment:45+80 to 52+00	0.41	acres @	\$980.00	per acre	\$401.80
Excavation Material from Road Realignment:45+80 to 52+00	5910.00	c. y's. @	\$1.40	per c. y.	\$8,274.00
Endhaul Excavated Material from Road Realignment:45+80 to 52+00	5910.00	c. y's. @	\$1.25	per c. y.	\$7,387.50
Compact Excavated Material from Road Realignment:45+80 to 52+00	5910.00	c. y's. @	\$0.25	per c. y.	\$1,477.50
Excavate Fill Material for Road Alignment:45+80-52+00	250.00	c. y's. @	\$1.40	per c. y.	\$350.00
Compact Fill Material for Road Realignment:48+50-52+00	250.00	c. y's. @	\$0.45	per c. y.	\$112.50
Excavate Material from 222+00-244+05	1700.00	c. y's. @	\$1.40	per c. y.	\$2,380.00
Endhaul Excavated Material from 222+00-224+05	1700.00	c. y's. @	\$1.72	per c. y.	\$2,924.00
Compact Excavated from 222+00-224+05	1700.00	c. y's. @	\$0.25	per c. y.	\$425.00
Scattering from 222+00-233+95	0.44	acres @	\$980.00	per acre	\$431.20
Cut & Drift:227+90-229+00, 232+15-233+45 & 238+10-241+20	5.50	stations @	\$140.00	per station	\$770.00
Grade and shape road prior to rocking	215.80	stations @	\$15.50	per station	\$3,344.90
Pull Ditch & Endhaul Waste Material:11+00-12+25	1.25	stations @	\$100.00	per station	\$125.00
Pull Ditch & Endhaul Waste Material:27+45-29+45	2.00	stations @	\$100.00	per station	\$200.00
Pull Ditch & Endhaul Waste Material:37+15-38+15	1.00	stations @	\$100.00	per station	\$100.00
Pull Ditch & Endhaul Waste Material:40+40-45+25	4.50	stations @	\$100.00	per station	\$450.00
Pull Ditch & Endhaul Waste Material:66+90-71+15	4.25	stations @	\$100.00	per station	\$425.00
Pull Ditch & Endhaul Waste Material:80+50-83+40	2.90	stations @	\$100.00	per station	\$290.00
Pull Ditch & Endhaul Waste Material:124+00-125+25	1.25	stations @	\$100.00	per station	\$125.00
Roll subgrade w/ vibratory roller prior to rocking -	215.80	stations @	\$13.20	per station	\$2,848.56
Markers for Existing Culverts from 0+00 to 222+00	20.00	@	\$8.00	each	\$160.00
Landings:84+60, 98+80, 147+70, 154+95, 289+15 & 241+85	6.00	@	\$285.00	each	\$1,710.00
Drifting material for landing spurs construction @ 98+80 & 147+70	4.00	stations @	\$140.00	per station	\$560.00
Construction of landing @ 138+80	10.00	hours @	\$310.00	per hour	\$3,100.00
Construct Turn Arouds @ 100+70, 137+00 & 240+85	3.00	@	\$75.00	each	\$225.00
Sidecast Pullback @ 98+80, right	10.00	hours @	\$310.00	per hour	\$3,100.00
Remove culvert @ 54+20	1.00	@	\$232.50	total	\$232.50
Grass seed and fertilize -	2.76	acres @	\$220.00	per acre	\$607.20

GRAND TOTAL

\$187,081.84

SUMMARY OF CONSTRUCTION COST

Sale:		<u>Haulin' Wood</u>			Road:		<u>E to F</u>					
Construction -		<u>1+35</u>	stations	Improvement -		<u>0+00</u>	stations	Reconstruction -		<u>0+00</u>	stations	
		0.03	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				1+35	35%			Outslope	\$191	=	\$257.85	
										TOTAL	\$257.85	
ROCK												
0+00		to		1+35	130	cy. of		Pit-Run	@	\$9.95 per c.y.=	\$1,293.50	
Rock for 1 50 Foot Landing				1+35	100	cy. of		Pit-Run	@	\$9.96 per c.y.=	\$996.00	
Junction Rock				0+00	30	cy. of		Jaw-Run	@	\$9.97 per c.y.=	\$299.10	
										TOTAL ROCK	\$2,588.60	
SPECIAL PROJECTS												
Cut and drift					1.35			stations @	\$140.00	per station	\$189.00	
Grade and shape road prior to rocking					1.35			stations @	\$15.50	per station	\$20.93	
Roll subgrade w/ vibratory roller prior to rocking -					1.35			stations @	\$13.20	per station	\$17.82	
Grass seed and fertilize -					0.12			acres @	\$220.00	per acre	\$26.40	
										TOTAL SPECIAL PROJECTS		\$254.15
										GRAND TOTAL	\$3,100.60	

SUMMARY OF CONSTRUCTION COST

Sale:

Haulin' Wood

Road:

G to H

Construction -	0+00	stations	Improvement -	18+00	stations	Reconstruction -	0+00	stations
	0.00	miles		0.34	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Roadside Brushing	0.31	miles	@	\$1,300.00	per mile =	\$403.00
Widening	0.1	acres	@	\$660.00	per acre =	\$66.00
Scattering	0.1	acres	@	\$980.00	per acre =	\$98.00
TOTAL CLEARING AND GRUBBING						\$567.00

IMPROVEMENT: EXCAVATION -

Pullback	361	cy. @	\$1.40	per c.y.=	\$505.40	
Widening	272	cy. @	\$1.40	per c.y.=	\$380.80	
				TOTAL EXCAVATION		\$886.20

IMPROVEMENT: ENDHAUL -

Pullback	0+00	to	1+50	361	cy. @	\$1.20	per c.y.=	\$433.20
Widening	0+15	to	1+05	272	cy. @	\$0.93	per c.y.=	\$252.96
Spread & compact				633	cy. @	\$0.25	per c.y.=	\$158.25
							TOTAL ENDBAUL	\$844.41

SPECIAL PROJECTS

Grade w/ Crawler Tractor from 11+80 to 18+00	4.00	hours @	\$135.00	per hour	\$540.00	
Grass seed and fertilize existing road subgrade from 0+00 to 1+50	0.14	acres @	\$220.00	per acre	\$30.80	
				TOTAL SPECIAL PROJECTS		\$570.80

GRAND TOTAL	\$2,868.41
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SUMMARY OF CONSTRUCTION COST

Sale:		<u>Haulin' Wood</u>				Road:		<u>I to J</u>			
<u>Construction -</u>		<u>0+00</u>	stations	<u>Improvement -</u>		<u>1+75</u>	stations	<u>Reconstruction -</u>		<u>0+00</u>	stations
		0.00	miles			0.03	miles			0.00	miles
<u>IMPROVEMENT:</u> EXCAVATION -											
Road Earthwork				1.75	sta. @	\$75.00	per sta. =	<u>\$131.25</u>			
				TOTAL EXCAVATION				\$131.25			
ROCK											
0+00 to		1+75	160	cy. of	Pit-Run	@	\$9.78	per c.y.=	\$1,564.80		
Rock for 1 70 Foot Landing		1+75	200	cy. of	Pit-Run	@	\$9.79	per c.y.=	<u>\$1,958.00</u>		
				TOTAL ROCK				\$3,522.80			
<u>SPECIAL PROJECTS</u>											
Grade and shape road prior to rocking				1.75	stations @	\$15.50	per station	<u>\$27.13</u>			
Proof-Roll subgrade prior to rocking				1.75	stations @	\$4.70	per station	<u>\$8.23</u>			
				TOTAL SPECIAL PROJECTS				\$35.36			
				GRAND TOTAL				\$3,689.41			

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Haulin' Wood</u>				Road:	<u>K to L</u>			
<u>Construction -</u>		<u>2+65</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
		0.05	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		2+65	35%		Outslope	\$191	=	\$506.15	
								TOTAL	\$506.15

ROCK									
0+00	to	2+65	220	cy. of	Pit-Run	@	\$9.20 per c.y.=	\$2,024.00	
Rock for 1 60 Foot Landing		2+65	150	cy. of	Pit-Run	@	\$9.05 per c.y.=	\$1,357.50	
Junction Rock		0+00	30	cy. of	Jaw-Run	@	\$10.23 per c.y.=	\$306.90	
								TOTAL ROCK	\$3,688.40

SPECIAL PROJECTS									
Cut and drift			2.65	stations @		\$140.00	per station	\$371.00	
Grade and shape road prior to rocking			2.65	stations @		\$15.50	per station	\$41.08	
Construct 60 foot landing			1.00	@		\$285.00	each	\$285.00	
Roll subgrade w/ vibratory roller prior to rocking -			2.65	stations @		\$13.20	per station	\$34.98	
								TOTAL SPECIAL PROJECTS	\$732.06
								GRAND TOTAL	\$4,926.61

SUMMARY OF CONSTRUCTION COST

Sale:

Haulin' Wood

Road:

M to N

Construction -	0+00	stations	Improvement -	10+90	stations	Reconstruction -	0+00	stations
	0.00	miles		0.21	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -
Roadside Brushing (Medium)

0.21 miles @

\$800.00 per mile = \$168.00

TOTAL CLEARING AND GRUBBING	\$168.00
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SPECIAL PROJECTS

Construct 15 waterbars

10.00

@

acres @

\$75.00

each

\$750.00

\$220.00

per acre

\$220.00

TOTAL SPECIAL PROJECTS	\$970.00
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GRAND TOTAL

\$1,138.00

SUMMARY OF CONSTRUCTION COST

Sale:	Haulin' Wood				Road:	O to P		
<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	11+15	stations	<u>Reconstruction -</u>	0+00	stations
	0.00	miles		0.21	miles		0.00	miles
IMPROVEMENT: CLEARING AND GRUBBING -								
Roadside Brushing (Medium)			0.21	miles	@	\$800.00 per mile =	\$168.00	
						TOTAL CLEARING AND GRUBBING		\$168.00
IMPROVEMENT: EXCAVATION -								
Road Earthwork:0+00-11+15			11.15	sta.	@	\$75.00 per sta. =	\$836.25	
						TOTAL EXCAVATION		\$836.25
ROCK								
0+00 to	11+15	870	cy. of	Jaw-Run	@	\$11.31 per c.y.=	\$9,839.70	
Rock for 1 70 Foot Landing	11+15	200	cy. of	Pit-Run	@	\$10.36 per c.y.=	\$2,072.00	
Junction Rock	0+00	30	cy. of	Jaw-Run	@	\$11.23 per c.y.=	\$336.90	
						TOTAL ROCK		\$12,248.60
SPECIAL PROJECTS								
Construct Landing @ 11+15			1.00	@		\$285.00 each	\$285.00	
Construct turn around @ 0+00			1.00	@		\$75.00 each	\$75.00	
Grade and shape road prior to rocking			11.15	stations @		\$15.50 per station	\$172.83	
Roll subgrade w/ vibratory roller prior to rocking -			11.15	stations @		\$13.20 per station	\$147.18	
Grass seed and fertilize -			1.02	acres @		\$220.00 per acre	\$224.40	
						TOTAL SPECIAL PROJECTS		\$904.41
GRAND TOTAL							\$14,157.26	

SUMMARY OF CONSTRUCTION COST

Sale:

Haulin' Wood

Road:

Q to R

Construction -	9+60	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.18	miles		0.00	miles		0.00	miles

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

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station		
0+00		0+45	5%	0.00	Outslope	\$74	=	\$33.30
0+45		1+22	80%	0.25	Outslope	\$3,513	=	\$2,705.01
1+22		1+71	70%	0.25	Outslope	\$2,433	=	\$1,192.17
1+71		2+58	72%	0.25	Outslope	\$2,433	=	\$2,116.71
2+58		3+14	75%	0.25	Outslope	\$2,866	=	\$1,604.96
3+14		3+61	65%	0.25	Outslope	\$2,001	=	\$940.47
3+61		3+94	70%	0.25	Outslope	\$2,433	=	\$802.89
3+94		4+44	65%	0.25	Outslope	\$2,001	=	\$1,000.50
4+44		4+72	90%	0.25	Outslope	\$4,807	=	\$1,345.96
4+72		5+14	80%	0.30	Outslope	\$3,628	=	\$1,523.76
5+14		5+71	60%	0.30	Outslope	\$1,632	=	\$930.24
5+71		6+35	70%	0.30	Outslope	\$2,515	=	\$1,609.60
6+35		6+94	80%	0.30	Outslope	\$3,628	=	\$2,140.52
6+94		7+46	75%	0.30	Outslope	\$2,959	=	\$1,538.68
7+46		8+15	70%	0.30	Outslope	\$2,515	=	\$1,735.35
8+15		8+54	65%	0.30	Outslope	\$2,071	=	\$807.69
								TOTAL
								\$22,027.81

ROCK

0+00 to	9+45	490	cy. of	Jaw-Run	@	\$11.03 per c.y.=	\$5,404.70
Rock for 1 60 Foot Landing	9+45	150	cy. of	Pit-Run	@	\$10.06 per c.y.=	\$1,509.00
Junction Rock	0+00	30	cy. of	Jaw-Run	@	\$10.96 per c.y.=	\$328.80
							TOTAL ROCK
							\$9,669.10

SPECIAL PROJECTS

Excavate landing @ 9+45	1271.00	c. y's. @	\$1.40	per c. y.	\$1,779.40
Endhaul excess material	430.00	c. y's. @	\$1.58	per c. y.	\$679.40
Compact material for landing	840.00	c. y's. @	\$0.45	per c. y.	\$378.00
Compact excess material @ waste area	430.00	c. y's. @	\$0.25	per c. y.	\$107.50
Clear & grub landing	0.25	c. y's. @	\$980.00	per acre	\$245.00
Grade and shape road -	9.60	stations @	\$15.50	per station	\$148.80
Clear and grub landing	0.14	@	\$980.00	per acre	\$137.20
Roll subgrade w/ vibratory roller prior to rocking -	9.60	stations @	\$13.20	per station	\$126.72
Grass seed and fertilize -	1.13	acres @	\$220.00	per acre	\$248.60
					TOTAL SPECIAL PROJECTS
					\$3,850.62

GRAND TOTAL

\$35,547.53

SUMMARY OF CONSTRUCTION COST

Sale:

Haulin' Wood

Road:

S to T

Construction -	11+70	stations	Improvement -	17+65	stations	Reconstruction -	0+00	stations
	0.22	miles		0.33	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		
17+86		18+31	64%	0.33	Outslope	\$1,893	=	\$851.85
18+31		19+18	67%	0.33	Outslope	\$2,071	=	\$1,801.77
19+18		19+96	72%	0.33	Outslope	\$2,515	=	\$1,961.70
19+96		20+51	75%	0.33	Outslope	\$2,959	=	\$1,627.45
20+51		21+15	74%	0.33	Outslope	\$2,515	=	\$1,609.60
21+15		21+65	79%	0.33	Outslope	\$2,959	=	\$1,479.50
21+65		22+14	76%	0.33	Outslope	\$2,959	=	\$1,449.91
22+14		22+65	76%	0.33	Outslope	\$2,959	=	\$1,509.09
22+65		23+18	68%	0.33	Outslope	\$2,071	=	\$1,097.63
23+18		23+65	63%	0.33	Outslope	\$1,893	=	\$889.71
23+65		24+04	68%	0.33	Outslope	\$2,071	=	\$807.69
24+04		24+89	65%	0.33	Outslope	\$2,071	=	\$1,760.35
24+89		25+66	68%	0.33	Outslope	\$2,071	=	\$1,594.67
25+66		26+20	75%	0.33	Outslope	\$2,959	=	\$1,597.86
								TOTAL
								\$20,038.78

IMPROVEMENT: CLEARING AND GRUBBING -
Roadside Brushing (Medium)

0.30 miles @ \$800.00 per mile = \$240.00
TOTAL CLEARING AND GRUBBING \$240.00

IMPROVEMENT: EXCAVATION -
Road Earthwork

17.65 sta. @ \$75.00 per sta. = \$1,323.75
TOTAL EXCAVATION \$1,323.75

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>								
	30	LF of 18"	\$525.00		40	LF of 24"	\$1,080.00	
<u>Culvert Stakes & Markers</u>								
	2	markers	\$16.00					
			\$16.00					
								TOTAL CULVERTS
								\$1,621.00

ROCK

0+00 to	16+90	1,280	cy. of	Jaw-Run	@	\$10.72 per c.y.=	\$13,721.60	
Culvert Backfill	10+20/10+85	40	cy. of	Jaw-Run	@	\$10.74 per c.y.=	\$429.60	
Junction Rock	0+00	30	cy. of	Jaw-Run	@	\$10.57 per c.y.=	\$317.10	
Armor Outlet	10+20	20	cy. of	Riprap	@	\$9.68 per c.y.=	\$193.60	
Energy Dissipator	10+85	10	cy. of	Riprap	@	\$9.69 per c.y.=	\$96.90	
								TOTAL ROCK
								\$14,758.80

SPECIAL PROJECTS

Excavate junction material from 15+90 to 17+85	843.00	c. y's.@	\$1.40	per c. y.	\$1,180.20	
Endhaul excavated material	843.00	c. y's.@	\$1.65	per hour	\$1,390.95	
Compact excavated material	843.00	c. y's.@	\$0.25	per c. y.	\$210.75	
Excavate fill for junction	46.00	c. y's.@	\$1.40	per c. y.	\$64.40	
Compact junction material from 15+90 to 17+85	46.00	c. y's.@	\$0.45	per c. y.	\$20.70	
Clear and grub junction	0.25	acres @	\$980.00	per acre	\$245.00	
Grade and shape road -	29.35	stations @	\$15.50	per station	\$454.93	
Excavate landing @ 27+05	1804.00	c. y's.@	\$1.40	per c. y.	\$2,525.60	
Endhaul landing material	1804.00	c. y's.@	\$1.62	per c. y.	\$2,922.48	
Compact landing material	1804.00	c. y's.@	\$0.25	per c. y.	\$451.00	
Excavate landing material @ 27+05	327.00	c. y's.@	\$1.40	per c. y.	\$457.80	
Compact landing material	327.00	c. y's.@	\$0.45	per c. y.	\$147.15	
Clear and grub both areas	0.50	acres @	\$980.00	per acre	\$490.00	
Roll subgrade w/ vibratory roller prior to rocking -	29.35	stations @	\$13.20	per station	\$387.42	
Construct turnaround @ 15+90	1.00	@	\$75.00	each	\$75.00	
Remove culvert @ 10+20	1.00	@	\$192.90	total	\$192.90	
Grass seed and fertilize -	3.13	acres @	\$220.00	per acre	\$688.60	
Mulching -	0.10	acres @	\$600.00	per acre	\$60.00	
TOTAL SPECIAL PROJECTS						\$11,964.88

GRAND TOTAL **\$49,947.21**

SUMMARY OF CONSTRUCTION COST

Sale: **Haulin' Wood** Road: **U to V**

Construction -	3+05	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			
1+65		3+05	25%			\$165	=	\$231.00	
								TOTAL	\$231.00

ROCK									
0+00	to	3+05	240	cy. of	Pit-Run	@	\$9.20 per c.y.=	\$2,208.00	
Rock for 1 70' Landing		2+65	200	cy. of	Pit-Run	@	\$9.22 per c.y.=	\$1,844.00	
Junction Rock		0+00	30	cy. of	Jaw-Run	@	\$10.23 per c.y.=	\$306.90	
								TOTAL ROCK	\$4,358.90

SPECIAL PROJECTS									
Excavate material from 0+00 to 1+65 for road construction			876.00	c. y's.	@	\$1.40	per c. y.	\$1,226.40	
Endhaul material from road construction			876.00	c. y's.	@	\$1.22	per c. y.	\$1,068.72	
Compact material from road construction			876.00	c. y's.	@	\$0.25	per c. y.	\$219.00	
Construct landing			1.00	@		\$285.00	each	\$285.00	
Clear and grub			0.15	acres	@	\$980.00	per acre	\$147.00	
Drift material from 1+65 to 3+05 to construct landing			1.40	stations	@	\$140.00	per station	\$196.00	
Grade and shape road -			3.05	stations	@	\$15.50	per station	\$47.28	
Roll subgrade w/ vibratory roller prior to rocking -			3.05	stations	@	\$13.20	per station	\$40.26	
Grass seed and fertilize -			0.35	acres	@	\$220.00	per acre	\$77.00	
								TOTAL SPECIAL PROJECTS	\$3,306.66
								GRAND TOTAL	\$7,896.56

SUMMARY OF CONSTRUCTION COST

Sale:			<u>Haulin' Wood</u>			Road:			<u>W to X</u>								
<u>Construction -</u>			<u>0+00</u>	stations		<u>Improvement -</u>			<u>15+20</u>	stations		<u>Reconstruction -</u>			<u>0+00</u>	stations	
			0.00	miles					0.29	miles					0.00	miles	
IMPROVEMENT: CLEARING AND GRUBBING -																	
Roadside Brushing									0.29	miles	@		\$1,300.00	per mile =		\$377.00	
												TOTAL CLEARING AND GRUBBING			\$377.00		
IMPROVEMENT: EXCAVATION -																	
Road Earthwork									15.20	sta.	@		\$75.00	per sta. =		\$1,140.00	
												TOTAL EXCAVATION			\$1,140.00		
ROCK																	
0+00 to 15+20			790	cy. of	Jaw-Run					@		\$10.22	per c.y.=		\$8,073.80		
0+00 to 15+20			360	cy. of	Jaw-Run					@		\$10.22	per c.y.=		\$3,679.20		
Rock for 1 70' Landing			200	cy. of	Pit-Run					@		\$9.29	per c.y.=		\$1,858.00		
Junction Rock			0+00	30	cy. of	Jaw-Run				@		\$10.22	per c.y.=		\$306.60		
												TOTAL ROCK			\$13,917.60		
SPECIAL PROJECTS																	
Grade and shape road prior to rocking									15.20	stations	@		\$15.50	per station		\$235.60	
Roll subgrade w/ vibratory roller prior to rocking -									15.20	stations	@		\$13.20	per station		\$200.64	
Grass seed and fertilize -									1.40	acres	@		\$220.00	per acre		\$308.00	
												TOTAL SPECIAL PROJECTS			\$744.24		
												GRAND TOTAL			\$16,178.84		

SUMMARY OF CONSTRUCTION COST

Sale:

Haulin' Wood

Road:

Y to Z

Construction -	10+45	stations	Improvement -	2+55	stations	Reconstruction -	0+00	stations
	0.20	miles		0.05	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>			
2+55		5+50	15%		Outslope	\$107	=		\$315.65
12+20		13+00	15%		Outslope	\$107	=		\$85.60
								TOTAL	\$401.25

IMPROVEMENT: CLEARING AND GRUBBING -

Roadside Brushing	0.05	miles	@	\$1,300.00 per mile =	\$65.00
TOTAL CLEARING AND GRUBBING					\$65.00

IMPROVEMENT: EXCAVATION -

Road Earthwork	2.55	sta. @	\$75.00	per sta. =	\$191.25	
				TOTAL EXCAVATION		\$191.25

ROCK

[illegible]

SPECIAL PROJECTS

Construct truck turnaround @ 11+00	1.00	@	\$75.00	each	\$75.00
Construct landings @ TBD & 13+00	2.00	@	\$285.00	per landing	\$570.00
Excavate Material from 5+50 to 9+10	1700.00	c. y's. @	\$1.40	per c. y.	\$2,380.00
Compact Excavated Material 5+50 to 9+10 for Fill @ 9+10 to 12+20	1700.00	c. y's. @	\$0.45	per c. y.	\$765.00
Haul Excavated Material from 7+40 to 10+30 for Fill	1700.00	hours @	\$1.09	per hour	\$1,853.00
Grade and shape road -	13.00	stations @	\$15.50	per station	\$201.50
Clear and grub from 5+50 to 12+20	0.62	acres @	\$980.00	per acre	\$607.60
Roll subgrade w/ vibratory roller prior to rocking -	13.00	stations @	\$13.20	per station	\$171.60
Clear & Grub from 5+50 to 12+20	0.65	acres @	\$980.00	per acre	\$637.00
Grass seed and fertilize -	1.19	acres @	\$220.00	per acre	\$261.80
TOTAL SPECIAL PROJECTS					\$7,522.50

GRAND TOTAL

\$22,442.00

SUMMARY OF CONSTRUCTION COST

Sale:	Haulin' Wood			Road:	AA to BB		
Construction -	6+30	stations	Improvement -	0+00	stations	Reconstruction -	0+00
	0.12	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+40		5+00	65%	0.43		\$2,135	=	\$9,821.00
5+00		6+30	25%			\$165	=	\$214.50
								TOTAL \$10,035.50

SPECIAL PROJECTS

Construct landing	1.00	@	\$285.00	each	\$285.00
Construct waste areas -	3.00	hours @	\$130.00	per hour	\$390.00
Excavate Material from 0+00 to 0+40	240.00	c. y's. @	\$1.40	per c.y.	\$336.00
Endhaul Excavated Material from 0+00 to 0+40	240.00	c. y's. @	\$2.00	per c.y.	\$480.00
Compact Excavated Material from 0+00 to 0+40	240.00	c. y's. @	\$0.25	per c.y.	\$60.00
Grade and shape road -	6.30	stations @	\$15.50	per station	\$97.65
Roll subgrade w/ vibratory roller	6.30	stations @	\$13.20	per station	\$83.16
Grass seed and fertilize -	0.87	acres @	\$220.00	per acre	\$191.40
TOTAL SPECIAL PROJECTS					\$1,923.21
GRAND TOTAL					\$11,958.71

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Crushed	Location:	Sec. 15 , T02S, R08W, W.M.
Sale:	Haulin' Wood	Road	13240 c.y.
Swell:	1.40	Stockpile	500 c.y.
Shrinkage	1.16	Total Truck Loads:	13740 c.y.
Drill Pct.:	100%	In Place Total:	9814 c.y.

Pit Development & Cleanup including Clearing and grubbing of					\$6,481.13
Waste Area @ adjacent to pit, place overburden					
in Waste Area, spread and compact.					
Drill & Shoot:	\$2.50	/cu.yd.	x	9814 cu.yds.	= \$24,535.00
Push Rock:	\$0.70	/cu.yd.	x	13740 cu.yds.	= \$9,618.00
Load Crusher:	\$0.70	/cu.yd.	x	11080 cu.yds.	= \$7,756.00
Crush Rock:	\$2.50	/cu.yd.	x	11080 cu.yds.	= \$27,700.00
Load Dump Truck:	\$0.70	/cu.yd.	x	13740 cu.yds.	= \$9,618.00

Subtotal **\$85,708.13**

Move In/Set-up Crusher					\$2,500.00
Move In and set up Drill and Compressor	1	@	\$510.98	=	\$510.98
Move in Roller and Compactor	1	@	\$510.98	=	\$510.98
Move in Grader	1	@	\$172.77	=	\$172.77
Move in D-8	1	@	\$634.23	=	\$634.23
Move in Loader	1	@	\$514.44	=	\$514.44
Move in Excavator	1	@	\$688.03	=	\$688.03
Move in Trucks	4	@	\$166.66	=	\$666.64
Move in Water Truck	1	@	\$195.90	=	\$195.90
Change Gradation	1	@	\$210.00	=	\$210.00
Subtotal					\$6,603.97

Base Cost= \$6.72 Per Cu.Yd. **TOTAL PRODUCTION COSTS \$92,312.10**

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 7170 (Crushed)	0.00	2.45	23.00	25.45	1610	\$40,974.50
A to B 2825 3035 (Crushed)	0.00	2.45	23.00	25.45	60	\$1,527.00
A to B Culv. Backfill:24" Culv. (Crushed)	3.08	2.45	1.51	7.04	20	\$140.80
A to B Armor Catch Basin (Riprap)	3.08	1.40	1.51	5.99	20	\$119.80
A to B Energy Dissipator Rock: Outlet (Riprap)	3.08	1.40	1.51	5.99	20	\$119.80
A to B Rock Quad Area (Crushed)	1.03	2.45	1.51	4.99	100	\$499.00
A to B Rock Designated Campsite 28 (Crushed)	1.97	2.45	1.51	5.93	100	\$593.00
C to D 0 6225 (Crushed)	4.14	2.45	1.51	8.10	2190	\$17,739.00
C to D 6225 15600 (Jaw-Run)	1.66	2.45	6.72	10.83	3310	\$35,847.30
C to D 22215 22315 (Pit-Run)	1.97	1.40	6.72	10.09	80	\$807.20
C to D Culvert Backfill: 3 Culverts (Crushed)	1.66	2.45	1.51	5.62	60	\$337.20
C to D Energy Dissipator: 3 Culverts (Riprap)	1.66	1.40	1.51	4.57	30	\$137.10
C to D Base Rock (Crushed)	2.13	2.45	1.51	6.09	1730	\$10,535.70
C to D Culvert Backfill: 3 Culverts (Jaw-Run)	2.07	2.45	6.72	11.24	60	\$674.40
C to D Energy Dissipator: 3 Culverts (Riprap)	2.07	1.40	6.72	10.19	30	\$305.70
C to D Base Rock (Jaw-Run)	2.18	2.45	6.72	11.35	1060	\$12,031.00
C to D Road Rock (Jaw-Run)	1.62	2.45	6.72	10.79	40	\$431.60
C to D Rock for 2 70' & 1 50' Landings (Pit-Run)	1.49	1.10	6.72	9.31	500	\$4,655.00
E to F 0 135 (Pit-Run)	1.83	1.40	6.72	9.95	130	\$1,293.50
E to F Rock for 1 50 Foot Landing (Pit-Run)	1.84	1.40	6.72	9.96	100	\$996.00
E to F Junction Rock (Jaw-Run)	1.85	1.40	6.72	9.97	30	\$299.10
I to J 0 175 (Pit-Run)	1.66	1.40	6.72	9.78	160	\$1,564.80
I to J Rock for 1 70 Foot Landing (Pit-Run)	1.67	1.40	6.72	9.79	200	\$1,958.00
K to L 0 265 (Pit-Run)	1.08	1.40	6.72	9.20	220	\$2,024.00
K to L Rock for 1 60 Foot Landing (Pit-Run)	0.93	1.40	6.72	9.05	150	\$1,357.50
K to L Junction Rock (Jaw-Run)	1.06	2.45	6.72	10.23	30	\$306.90
O to P 0 1115 (Jaw-Run)	2.14	2.45	6.72	11.31	870	\$9,839.70
O to P Rock for 1 70 Foot Landing (Pit-Run)	2.24	1.40	6.72	10.36	200	\$2,072.00
O to P Junction Rock (Jaw-Run)	2.06	2.45	6.72	11.23	30	\$336.90
Q to R 0 945 (Jaw-Run)	1.86	2.45	6.72	11.03	490	\$5,404.70
Q to R 0 945 (Jaw-Run)	1.86	2.45	6.72	11.03	220	\$2,426.60
Q to R Rock for 1 60 Foot Landing (Pit-Run)	1.94	1.40	6.72	10.06	150	\$1,509.00
Q to R Junction Rock (Jaw-Run)	1.79	2.45	6.72	10.96	30	\$328.80
S to T 0 1690 (Jaw-Run)	1.55	2.45	6.72	10.72	1280	\$13,721.60
S to T Culvert Backfill (Jaw-Run)	1.57	2.45	6.72	10.74	40	\$429.60
S to T Junction Rock (Jaw-Run)	1.40	2.45	6.72	10.57	30	\$317.10
S to T Armor Outlet (Riprap)	1.56	1.40	6.72	9.68	20	\$193.60
S to T Energy Dissipator (Riprap)	1.57	1.40	6.72	9.69	10	\$96.90
U to V 0 305 (Pit-Run)	1.08	1.40	6.72	9.20	240	\$2,208.00
U to V Rock for 1 70' Landing (Pit-Run)	1.10	1.40	6.72	9.22	200	\$1,844.00
U to V Junction Rock (Jaw-Run)	1.06	2.45	6.72	10.23	30	\$306.90
W to X 0 1520 (Jaw-Run)	1.05	2.45	6.72	10.22	790	\$8,073.80
W to X 0 1520 (Jaw-Run)	1.05	2.45	6.72	10.22	360	\$3,679.20
W to X Rock for 1 70' Landing (Pit-Run)	1.17	1.40	6.72	9.29	200	\$1,858.00
W to X Junction Rock (Jaw-Run)	1.05	2.45	6.72	10.22	30	\$306.60
Y to Z 0 1300 (Jaw-Run)	1.03	2.45	6.72	10.20	690	\$7,038.00
Y to Z 0 1300 (Jaw-Run)	1.13	2.45	6.72	10.30	330	\$3,399.00
Y to Z Rock for 1 50' & 1 70' Landings (Pit-Run)	1.23	1.40	6.72	9.35	300	\$2,805.00
Y to Z Junction Rock (Jaw-Run)	1.03	2.45	6.72	10.20	30	\$306.00
Y to Z Junction Rock (Jaw-Run)	1.03	2.45	6.72	10.20	20	\$204.00
Y to Z Fill Widening (Jaw-Run)	1.03	2.45	6.72	10.20	40	\$408.00
Y to Z Fill Widening (Jaw-Run)	1.03	2.45	6.72	10.20	10	\$102.00
Stockpile Jaw-Run 2 1/2"-0"	0.96	1.30	6.72	8.98	500	\$4,490.00
Total C.Y.					19180	Sub Total \$210,979.90

TOTAL ROCKING COSTS \$210,979.90

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

Sale: **Haulin' Wood**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
62.0	Pavement	30
6.0	Main Lines	7
0.0	Steep Grades	1.5

								Within	
No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Area Cost	Total Cost
1	Brush Cutter	\$470.73		\$4.00	0.00	8.40	8.4	\$33.60	\$504.33
1	Graders	\$526.29		\$3.65	0.00	8.40	8.4	\$30.66	\$556.95
1	Loader (Med. & Large)	\$644.78	1	\$9.00	0.00	8.40	8.4	\$75.60	\$720.38
1	Rollers (smooth/grid) & Compactors	\$510.98		\$5.00	0.00	8.40	8.4	\$42.00	\$552.98
1	Excavators (Large)	\$735.56	1	\$44.80	0.00	8.40	8.4	\$376.32	\$1,111.88
1	Tractor (D8)	\$729.30	2	\$15.10	0.00	8.40	8.4	\$126.84	\$856.14
2	Dump Truck (10 cy +)	\$409.33		\$2.85	0.00	8.40	8.4	\$47.88	\$457.21
1	Water Truck (1500 Gal)	\$170.62		\$2.85	0.00	8.40	8.4	\$23.94	\$194.56
				TOTAL MOVE-IN COSTS:					\$4,954.43

Pond Values Used: 2nd Quarter Calendar Year 2014

Western Red Cedar and Other Cedars Stumpage Price = Pond Value – Logging Cost
 $\$1,050/\text{MBF} - \$412/\text{MBF} = \$638/\text{MBF}$

Western hemlock and other conifers Stumpage Price = Pond Value – Logging Cost
 $\$518.78/\text{MBF} - \$412/\text{MBF} = \$106.78/\text{MBF}$

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

SCALING COST ALLOWANCE = \$ 5.00/ MBF

FUEL COST ALLOWANCE = \$ 4.00/ Gallon

HAULING COST ALLOWANCE

Hauling cost equivalent to \$780 daily truck cost

Other Costs with Profit and Risk to be added:

Brand and Paint: $\$2 / \text{MBF} \times 7,244 \text{ MBF} = \$14,488$

Machine Cleaning: $\$1000/\text{machine} \times 4 = \$4,000$

Truck assist Area 5 = spur S-T/ 40 acres @ 812 MBF @ \$20 = \$16,240

TOTAL Other Costs with profit and Risk to be added = \$34,728

Other Costs with No Profit and Risk Added:

Slash piling and sorting (cable ground): $\$5/\text{ac} \times 434 \text{ ac} = \$2,170$

Cover materials for piles: $\$5/\text{pile} \times 25 \text{ piles} = \125

Non-project spur #1: $3 \text{ sta} \times \$200/\text{sta} = \600

Non-project spur #2: $2 \text{ sta} \times \$200/\text{sta} = \400

Non-project spur #3: $1 \text{ sta} \times \$200/\text{sta} = \200

Non-project spur #4: $4 \text{ sta} \times \$200/\text{sta} = \800

Approach rock (pit run) spur #3: $100 \text{ cy} \times \$6/\text{yd} = \600

Machine time for water bars and blocking non-project spurs & C to D @ sta 222+00: $8 \text{ hrs} @ \$125 = \1000

Additional machine time for slash piling and sorting landings for heliport: $\$125/\text{hr} \times 2 \text{ hrs} \times 3 \text{ landings} = \750

TOTAL Other Costs no Profit and Risk added = \$6,645

ROAD MAINTENANCE:

Maintenance rock S Fork Trask: $\$8/\text{cy} \times 1.3 \text{ mi} \times 15\text{cy}/\text{mmbf}/\text{mi} \times 7.2 \text{ mmbf} / 7,244 \text{ MBF} = \$0.15/\text{MBF}$

Maintenance rock BSM Rd: $\$8/\text{cy} \times 4.2 \text{ mi} \times 20\text{cy}/\text{mmbf}/\text{mi} \times 7.2 \text{ mmbf} / 7,244 \text{ MBF} = \$0.66/\text{MBF}$

Interim Maintenance Grading: $\$350/\text{mile} \times 5.5 \text{ miles} \times 5 \text{ gradings} / 7,244 \text{ mbf} = \$1.33/\text{MBF}$

Final Maintenance Grading: $\$500/\text{mile} \times 5.5 \text{ miles} / 7,244 \text{ mbf} = \$0.38/\text{MBF}$

Final Maintenance Compaction: $\$950/\text{mile} \times 5.5 \text{ miles} / 7,244 \text{ mbf} = \$0.72/\text{MBF}$

Total Road Maintenance: \$3.24/ MBF



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

Haulin Wood

1. Type of Sale

Regeneration harvest, Recovery

2. Legal Description

Portions of sections 10, 11, 14, 15, 16, 21 and 22 of T2S, R8W, Tillamook County, Oregon.

3. Sale Acreage

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

	ACRES	
	<u>Gross</u>	<u>Net</u>
Area 1 (Clearcut)	104	76
Area 3 (Clearcut)	52	41
Area 5 (Clearcut)	128	101
Area 7 (Clearcut)	106	75
Area 9 (Clearcut)	49	38
Area 11 (Clearcut)	129	103

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 78 plots were sampled. Odd numbered lines were sampled for a plot spacing of 700'x350'. All plots were full cruise plots. All conifers $\geq$ 8 inches DBH and containing 20 net board feet and all hardwoods $\geq$ 10 inches DBH and containing 30 net board feet were recorded on all plots. Species were recorded on all trees and measured for merchantable bole height, diameter, and form factor.

B. Plot size

See below for the basal area factor used for each area. The point of observation is 4.5 feet.

Area 1 22.5

Area 3 27.78

Area 5 40

Area 7 33.61

Area 9 27.78
Area 11 27.78

C. Grading System

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

5. Computation Procedure

The volumes and statistics for the timber cruised were computed using SuperACE 2008, developed by Atterbury Consultants, Inc. The standard error and the coefficient of variation for the cruise as based on net board feet per acre is shown below.

Sale Area	COEFF VAR%	S.E.%
Area 1	28.9	8.3
Area 3	25.1	12.5
Area 5	57.4	15.3
Area 7	47.5	12.7
Area 9	66.8	25.2
Area 11	42.4	12.8
Combined Total	50.0	5.7

6. Hidden Defect and Breakage

A 5% reduction was applied to conifers and 10% reduction to hardwood volumes for hidden defect and breakage. This was in addition to visual defect deducted during the cruise.

7. Timber Description

The timber sale areas were burned during the 1933 Tillamook Fire, the 1939 Saddle Mtn Fire and the 1951 North Fork Fire. The Douglas-fir in the sale areas are approximately 47 years old and suffering from Swiss Needle Cast and showing signs of slow growth and low needle retention.

Sale Area – Species	DBH	Merchantable Bole Height	Merchantable Top
Area 1 - Douglas-fir	15.1	71	5"
Area 1 - Alder	14.4	43	6"
Area 3 - Douglas-fir	17.4	71	5"
Area 5 – Douglas-fir	14.6	60	5"
Area 5- Alder	12.7	37	6"
Area 7-Douglas-fir	11.8	46	5"
Area 7-Alder	13.6	45	6"
Area 9-Douglas-fir	14.8	52	5"
Area 9-Alder	15.2	33	6"
Area 11-Douglas-fir	13.3	53	5"

Area 11-Alder	15.4	38	6"
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8. Cruiser Names/Dates

Contract Cruise 11/2012 – 02/13; ODF staff 05/2014

9. Revenue Distribution

FDF 100%

Tax Code: 9-1

Deed Numbers: 169 & 569

10. Attachments

Volume Summaries

Log Stock Tables

Logging Plan Map

11. Stand and Log Stock Tables Species Key

DL – Douglas-fir leave

DF – Douglas-fir take

RL – Red alder leave

RA – Red alder take

RC – Western red cedar reserved

SL – Sitka spruce leave

SS – Sitka spruce take

WL – Western hemlock leave

WH – Western hemlock take

TC TLOGSTVB				Log Stock Table - MBF																			
				Project: 244																			
T02S R08W S10 T0100										T02S R08W S10 T0100													
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1														
02S	08W	10	AREA 1	0100	76.00	15	80	Date	7/9/2014														
										Time	12:55:18PM												
Spp	T	S	So	Gr	Log	Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches												
											2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+	
DF		CO	D		16																		
DF		CO	2		40		148	2.2	145	12.9					108		18	19					
DF		CO	3		20		5		5	.4				5									
DF		CO	3		21		2		2	.2		2											
DF		CO	3		32		10	22.2	8	.7				8									
DF		CO	3		40		783	1.7	769	68.7			75	328	366								
DF		CO	4		16		5	16.6	4	.4		4											
DF		CO	4		20		1		1	.1			1										
DF		CO	4		22		3		3	.3		3											
DF		CO	4		23		3		3	.2		3											
DF		CO	4		24		13	22.2	10	.9		10											
DF		CO	4		26		17		17	1.5		17											
DF		CO	4		27		5		5	.4		5											
DF		CO	4		28		26		26	2.4		26											
DF		CO	4		29		3		3	.3		3											
DF		CO	4		30		8		8	.7		8											
DF		CO	4		31		7		7	.6		7											
DF		CO	4		32		23		23	2.0		23											
DF		CO	4		33		4		4	.3		4											
DF		CO	4		34		9		9	.8		9											
DF		CO	4		35		6		6	.5		6											
DF		CO	4		36		26		26	2.3		26											
DF		CO	4		38		4		4	.3		4											
DF		CO	4		40		34		34	3.0		16			18								
DF		Totals					1,143	2.0	1,121	80.1		175	76	340	384	108	18	19					
RA		H	D		16																		
RA		H	D		32																		
RA		H	2		26		14		14	5.1					14								
RA		H	2		28		12		12	4.4						12							
RA		H	3		40		76	3.6	73	26.1					43	29							
RA		H	4		18		2		2	.7			2										
RA		H	4		20		2		2	.7			2										
RA		H	4		21		3		3	1.2			3										
RA		H	4		22		2	33.3	1	.4			1										
RA		H	4		24		10		10	3.6			10										
RA		H	4		29		3		3	1.2			3										
RA		H	4		30		9	25.0	7	2.4			7										
RA		H	4		36		13		13	4.5				13									
RA		H	4		37		9		9	3.2			9										
RA		H	4		38		11	14.3	10	3.5			10										
RA		H	4		40		129	7.1	120	42.9			37	54	28								
RA		Totals					295	5.6	279	19.9			84	67	72	44	12						
OC		CO	D		40																		
OC		Totals																					
Total All Species							1,438	2.7	1,399	100.0		175	160	407	456	152	30	19					

TC		TSTNDSUM													Stand Table Summary															
Project																		244												
T02S R08W S10 T0100																		T02S R08W S10 T0100												
Twp		Rge		Sec		Tract		Type			Acres		Plots		Sample Trees			Page:		1										
02S		08W		10		AREA 1		0100			76.00		15		80			Date:		07/09/2014										
																		Time:		12:57:32PM										
S Spc	T	Sample		FF 16'	Av Ht Tot	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						Tons	Cunits				MBF																
DF		11	1	88	73	2.781	1.94	2.78	14.8	60.0	1.18	41	167	89	31	13														
DF		12	1	84	78	2.878	2.08	2.88	17.1	60.0	1.40	49	173	107	37	13														
DF		13	5	86	94	11.252	9.96	22.50	13.9	55.0	8.92	313	1,237	678	238	94														
DF		14	11	86	96	20.845	21.91	41.69	17.2	68.4	20.47	718	2,851	1,556	546	217														
DF		15	11	86	99	17.953	22.04	35.91	21.5	84.3	21.97	771	3,027	1,670	586	230														
DF		16	6	86	99	8.610	11.99	17.22	21.5	84.2	10.56	371	1,450	803	282	110														
DF		17	8	87	102	10.111	15.69	21.42	26.6	104.1	16.22	569	2,231	1,232	432	170														
DF		18	6	86	99	6.787	11.95	14.70	28.5	102.1	12.16	420	1,501	924	319	114														
DF		19	5	87	102	5.149	9.88	10.30	34.2	118.6	10.04	352	1,221	763	268	93														
DF		21	1	87	92	.865	1.98	1.73	40.3	140.0	1.99	70	242	151	53	18														
DF		22	1	86	109	.797	2.03	1.59	48.1	175.0	2.19	77	279	166	58	21														
DF		26	1	86	123	.554	2.03	1.66	51.0	220.0	2.42	85	366	184	64	28														
DF		Totals		57	86	97	88.582	113.47	174.38	22.0	84.5	109.50	3,835	14,744	8,322	2,915	1,121													
RA		12	3	83	85	8.420	6.40	8.42	12.2	46.2	2.82	102	389	214	78	30														
RA		13	3	87	69	6.659	5.95	6.66	22.4	63.3	4.11	149	421	312	114	32														
RA		14	1	84	52	1.942	2.08	1.94	23.4	60.0	1.25	45	117	95	35	9														
RA		15	5	82	77	9.142	10.96	9.14	32.2	96.3	8.08	294	880	614	223	67														
RA		16	2	86	83	2.788	3.97	5.58	23.2	85.1	3.56	129	475	271	98	36														
RA		17	2	86	75	2.533	3.97	3.75	29.7	104.3	3.06	111	391	232	85	30														
RA		18	3	86	78	3.443	6.04	4.57	36.0	135.4	4.52	164	618	344	125	47														
RA		21	2	87	70	1.633	3.96	3.27	35.2	115.1	3.21	115	376	244	87	29														
RA		Totals		21	84	76	36.559	43.32	43.32	25.7	84.7	30.61	1,111	3,667	2,326	844	279													
OC		25	1	86	93	.600	2.03																							
OC		40	1	85	44	.238	2.08																							
OC		Totals		2	86	79	.838	4.10																						
Totals		80		86	91	125.979	160.89	217.70	22.7	84.6	140.11	4946	18,411	10,648	3,759	1,399														

TC TLOGSTVB				Log Stock Table - MBF																			
				Project: 244																			
T02S R08W S14 T0100												T02S R08W S14 T0100											
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		Page		1					
02S		08W		14		AREA 3		0100		41.00		4		29		Date		7/9/2014					
																Time		12:59:36PM					
Spp	T	S	So	Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches													
										MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29
DF	CO	2	40	375	1.5	369	41.6									179	189						
DF	CO	3	32	15		15	1.6					15											
DF	CO	3	34	5		5	.6					5											
DF	CO	3	36	25		25	2.8					15	10										
DF	CO	3	40	383	3.3	370	41.7					21	120	229									
DF	CO	4	12	4		4	.4			4													
DF	CO	4	18	6		6	.6					6											
DF	CO	4	20	10		10	1.1			10													
DF	CO	4	24	11		11	1.2					11											
DF	CO	4	28	11		11	1.2			11													
DF	CO	4	32	7		7	.8			7													
DF	CO	4	36	34		34	3.8			34													
DF	CO	4	40	23		23	2.6			23													
DF Totals				906	2.0	887	100.0		88	72	130	229	179	189									
Total All Species				906	2.0	887	100.0		88	72	130	229	179	189									

TC		TSTNDSUM													Stand Table Summary												
Project 244																											
T02S R08W S14 T0100													T02S R08W S14 T0100														
Twp		Rge		Sec		Tract		Type			Acres		Plots		Sample Trees			Page: 1									
02S		08W		14		AREA 3		0100			41.00		4		29			Date: 07/09/2014									
Time: 1:01:17PM																											
S Spc	T	Sample		FF 16'	Av Ht Tot	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						Net	Net				Tons	Cunits	MBF											
DF		13	1	89	54	7.772	6.95	7.77	18.4	40.0	4.08	143	311	167	59	13											
DF		14	3	87	82	19.967	20.84	39.93	14.8	50.0	16.88	592	1,997	692	243	82											
DF		15	1	86	101	5.659	6.95	11.32	19.7	75.0	6.37	223	849	261	92	35											
DF		16	2	90	84	10.274	13.89	20.55	20.3	77.7	11.87	417	1,597	487	171	65											
DF		17	3	88	96	13.489	20.84	26.98	26.5	101.8	20.35	714	2,747	834	293	113											
DF		18	5	87	96	19.835	34.73	39.67	29.8	108.8	33.67	1,182	4,316	1,381	484	177											
DF		19	3	87	93	10.696	20.84	21.39	32.7	118.4	19.93	699	2,532	817	287	104											
DF		20	2	85	96	6.367	13.89	12.73	38.8	135.0	14.08	494	1,719	577	203	70											
DF		22	3	86	95	7.969	20.84	15.94	46.4	166.5	21.06	739	2,654	863	303	109											
DF		23	2	86	104	4.902	13.89	12.19	42.2	164.2	14.67	515	2,002	601	211	82											
DF		24	1	86	94	2.306	6.95	4.61	54.8	200.0	7.20	253	922	295	104	38											
DF		Totals		26	87	90	109.236	180.57	213.09	28.0	101.6	170.16	5,970	21,646	6,977	2,448	887										
OC		12	1	86	72	8.697	6.95																				
OC		13	1	89	76	8.021	6.95																				
OC		15	1	86	65	6.056	6.95																				
OC		Totals		3	87	72	22.774	20.84																			
Totals				29	87	87	132.009	201.41	213.09	28.0	101.6	170.16	5970	21,646	6,977	2,448	887										

TC		TLOGSTVB		Log Stock Table - MBF																		
				Project: 244																		
T02S R08W S14 T0100												T02S R08W S14 T0100										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1													
02S	08W	14	AREA 5	0100	101.00	16	82	Date	7/9/2014													
										Time	1:02:43PM											
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	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	2		26		24		24	1.2								24				
DF		CO	2		32		49		49	2.4							22	27				
DF		CO	2		36		82		82	4.0					50			32				
DF		CO	2		40		240	1.7	236	11.6					151	51		34				
DF		CO	3		36		85	1.6	84	4.1				19	40	24						
DF		CO	3		40		1,253	1.4	1,235	60.9				252	390	540	54					
DF		CO	4		11																	
DF		CO	4		12		26		26	1.3		12	14									
DF		CO	4		13		1		1	.0		1										
DF		CO	4		14		7		7	.3		7										
DF		CO	4		16		34		34	1.7		31	3									
DF		CO	4		18		1		1	.1		1										
DF		CO	4		20		23		23	1.1		10		7	6							
DF		CO	4		21		8		8	.4		8										
DF		CO	4		22		12		12	.6		6	6									
DF		CO	4		24		38		38	1.9		26	6	6								
DF		CO	4		26		9		9	.5			9									
DF		CO	4		28		20		20	1.0		15	6									
DF		CO	4		30		27	6.7	25	1.2		20	5									
DF		CO	4		32		21	4.3	20	1.0		16	4									
DF		CO	4		36		34		34	1.7		34										
DF		CO	4		38		5		5	.2		5										
DF		CO	4		40		47		47	2.3		47										
DF		CO	4		41		9		9	.5		9										
DF		Totals					2,054	1.3	2,029	93.3		247	304	422	586	280	73	116				
RA		CO	3		24		12		12	8.4			12									
RA		CO	4		12		2		2	1.4			2									
RA		H	4		12		11	33.3	7	4.9					7							
RA		H	4		24		19		19	12.7			19									
RA		H	4		32		28		28	19.1			28									
RA		H	4		34		28		28	19.1			28									
RA		H	4		36		19	16.7	16	10.9			16									
RA		H	4		40		37	7.9	34	23.7			18	17								
RA		Totals					155	6.2	146	6.7			110	29		7						
Total All Species							2,210	1.6	2,174	100.0		247	414	451	586	287	73	116				

TC		TSTNDSUM													Stand Table Summary												
															Project 244												
T02S R08W S14 T0100															T02S R08W S14 T0100												
Twp		Rge		Sec		Tract		Type			Acres		Plots		Sample Trees			Page:		1							
02S		08W		14		AREA 5		0100			101.00		16		82			Date:		07/09/2014							
															Time:		1:04:41PM										
S Spc	T	Sample		Av		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net		Net Bd.Ft.	T o t a l s												
		DBH	Trees	FF 16'	Ht Tot				Net Cu.Ft.	Net Bd.Ft.		Cu.Ft. Acre	Cu.Ft. Acre		Tons	Cunits	MBF										
DF		8	1	86	20	7.162	2.50	7.16	2.8	10.0	.57	20	72	57	20	7											
DF		10	2	85	71	9.192	5.00	9.19	12.5	40.0	3.28	115	368	332	116	37											
DF		11	2	86	86	7.378	5.00	10.97	12.3	50.2	3.83	134	550	387	136	56											
DF		12	5	86	82	16.057	12.50	29.08	11.9	44.2	9.84	345	1,286	994	349	130											
DF		13	2	85	91	5.183	5.00	10.37	15.6	57.2	4.62	162	593	467	164	60											
DF		14	6	85	88	13.937	15.00	27.87	15.8	55.2	12.53	440	1,538	1,265	444	155											
DF		15	8	83	77	16.396	20.00	30.86	17.9	56.7	15.78	554	1,750	1,594	559	177											
DF		16	10	86	92	17.895	25.00	35.79	22.5	86.0	22.96	806	3,078	2,319	814	311											
DF		17	8	85	88	12.733	20.00	25.47	24.7	87.2	17.94	629	2,220	1,812	636	224											
DF		18	10	85	94	14.256	25.00	31.35	26.3	97.5	23.52	825	3,056	2,376	834	309											
DF		19	5	85	98	6.461	12.50	12.92	33.4	116.0	12.32	432	1,499	1,244	437	151											
DF		20	5	85	104	5.730	12.50	12.61	35.5	125.3	12.77	448	1,579	1,290	453	159											
DF		23	1	84	90	.897	2.50	1.79	47.2	155.0	2.41	85	278	244	86	28											
DF		24	1	87	114	.830	2.50	2.49	42.1	176.7	2.99	105	440	302	106	44											
DF		25	3	83	105	2.230	7.50	6.69	36.1	152.9	6.89	242	1,023	696	244	103											
DF		26	2	84	100	1.325	5.00	3.98	44.6	189.9	5.06	177	755	511	179	76											
DF		Totals		71	85 84	137.664	177.50	258.59	21.3	77.7	157.31	5,520	20,086	15,888	5,575	2,029											
RA		10	3	87	67	13.751	7.50	13.75	11.8	53.3	4.45	162	733	450	164	74											
RA		12	1	83	64	3.131	2.50	3.13	18.9	50.0	1.63	59	157	165	60	16											
RA		13	1	84	77	2.934	2.50	2.93	21.1	60.0	1.70	62	176	172	62	18											
RA		15	1	81	49	2.010	2.50	4.02	11.9	35.0	1.32	48	141	133	48	14											
RA		16	2	81	39	3.604	5.00	3.60	22.5	65.5	2.23	81	236	225	82	24											
RA		Totals		8	85 62	25.430	20.00	27.44	15.0	52.6	11.33	412	1,443	1,144	416	146											
OC		15	1	85	46	2.037	2.50																				
OC		32	1	80	12	.448	2.50																				
OC		60	1	85	17	.127	2.50																				
OC		Totals		3	84 39	2.612	7.50																				
Totals				82	85 80	165.706	205.00	286.03	20.7	75.3	168.64	5932	21,528	17,033	5,991	2,174											

TC		TLOGSTVB		Log Stock Table - MBF																		
				Project: 244																		
T02S R08W S15 T0100										T02S R08W S15 T0100												
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1													
02S	08W	15	AREA 7	0100	75.00	15	80	Date	7/9/2014													
										Time	1:06:07PM											
Spp	T	S	So Gr	Log	Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches												
										2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+	
RA		H	UT	12		14		14	1.8					14								
RA		H	UT	16		13		13	1.7				2	11								
RA		H	2	16		9		9	1.2							9						
RA		H	2	40		15		15	2.0						15							
RA		H	3	8																		
RA		H	3	18		9		9	1.1					9								
RA		H	3	36		29	14.3	24	3.2					24								
RA		H	3	40		88	4.1	84	11.0					69	15							
RA		H	4	12		30	3.3	29	3.8				25	4								
RA		H	4	16		3		3	.3				3									
RA		H	4	18		6		6	.8					6								
RA		H	4	20		8		8	1.1				8									
RA		H	4	22		13		13	1.7				3	9								
RA		H	4	24		15		15	2.0				15									
RA		H	4	26		18		18	2.4				7	12								
RA		H	4	28		36	10.7	32	4.2				7	25								
RA		H	4	30		20	15.2	17	2.2				17									
RA		H	4	32		55		55	7.1				28	12	15							
RA		H	4	36		83	4.1	80	10.4					80								
RA		H	4	40		339	4.7	323	42.0				177	145								
RA		Totals				803	4.4	768	64.3				293	293	142	31	9					
DF		CO	2	40		40	8.3	36	8.5							19	18					
DF		CO	3	32		17		17	3.9					17								
DF		CO	3	36		23		23	5.4				23									
DF		CO	3	40		214	2.4	209	49.0				33	93	82							
DF		CO	4	12		11		11	2.6			9	2									
DF		CO	4	16		18		18	4.3			18										
DF		CO	4	20		10		10	2.3			10										
DF		CO	4	24		8		8	1.9			8										
DF		CO	4	28		36		36	8.3			36										
DF		CO	4	32		8	11.3	7	1.7			4	4									
DF		CO	4	36		23		23	5.4			23										
DF		CO	4	40		28		28	6.7			28										
DF		Totals				435	2.1	426	35.7			136	62	110	82		19	18				
Total All Species						1,238	3.6	1,194	100.0			136	354	403	224	31	28	18				

TC		TSTNDSUM															Stand Table Summary														
															Project 244																
T02S R08W S15 T0100															T02S R08W S15 T0100																
Twp		Rge		Sec		Tract		Type			Acres		Plots		Sample Trees			Page: 1													
02S		08W		15		AREA 7		0100			75.00		15		80			Date: 07/09/2014													
															Time: 1:07:51PM																
S Spc	T	Sample		FF	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s																	
		DBH	Trees	16'	Tot				Net Cu.Ft.	Net Bd.Ft.		Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF															
RA		10	2	85	73	7.906	4.48	7.91	12.9	44.4	2.81	102	351	210	77	26															
RA		11	6	87	75	20.417	13.44	23.81	14.1	51.8	9.24	336	1,233	693	252	92															
RA		12	7	86	73	20.884	15.68	29.75	13.2	46.9	10.83	394	1,396	812	295	105															
RA		13	10	85	75	24.734	22.41	41.98	14.5	48.9	16.77	610	2,053	1,258	457	154															
RA		14	7	86	69	14.850	15.68	23.03	17.3	59.4	10.97	399	1,367	823	299	103															
RA		15	4	87	66	7.338	8.96	12.72	18.3	69.9	6.40	233	889	480	175	67															
RA		16	5	81	66	8.191	11.20	11.48	21.7	60.2	6.85	249	692	514	187	52															
RA		17	4	85	70	5.705	8.96	11.41	23.4	77.4	7.36	267	883	552	201	66															
RA		18	4	81	68	5.116	8.96	8.96	28.5	78.3	7.02	255	702	526	191	53															
RA		19	3	84	55	3.414	6.72	4.55	31.5	97.5	3.95	144	444	296	108	33															
RA		20	1	89	17	1.027	2.24	1.03																							
RA		22	1	84	82	.849	2.24	1.70	42.9	135.0	2.00	73	229	150	55	17															
RA		Totals		54	85	71	120.431	121.00	178.34	17.2	57.4	84.19	3,061	10,239	6,314	2,296	768														
DF		8	4	85	49	25.079	8.96	25.08	4.9	24.9	3.49	122	624	262	92	47															
DF		9	1	88	80	5.305	2.24	5.30	8.7	40.0	1.32	46	212	99	35	16															
DF		10	1	85	87	4.552	2.24	4.55	11.6	40.0	1.50	53	182	113	39	14															
DF		11	1	85	61	3.522	2.24	3.52	13.6	40.0	1.37	48	141	103	36	11															
DF		12	2	87	84	5.803	4.48	11.61	10.9	45.0	3.60	126	522	270	95	39															
DF		13	5	86	89	12.286	11.20	24.57	13.7	52.3	9.60	337	1,286	720	253	96															
DF		14	4	89	71	8.668	8.96	17.34	13.3	46.1	6.55	230	799	492	172	60															
DF		16	1	87	96	1.565	2.24	3.13	23.2	90.0	2.07	73	282	155	54	21															
DF		17	1	88	102	1.422	2.24	2.84	28.5	110.0	2.31	81	313	173	61	23															
DF		18	1	87	93	1.213	2.24	2.43	31.1	105.0	2.15	76	255	161	57	19															
DF		19	2	84	83	2.289	4.48	4.58	30.4	102.6	3.97	139	470	298	104	35															
DF		22	1	87	104	.889	2.24	2.67	31.7	120.0	2.41	85	320	181	63	24															
DF		27	1	85	96	.585	2.24	1.17	70.4	230.0	2.35	82	269	176	62	20															
DF		Totals		25	86	71	73.179	56.02	108.79	13.8	52.2	42.70	1,498	5,675	3,202	1,124	426														
OC		13	1	79	12	2.431	2.24																								
OC		Totals		1	79	12	2.431	2.24																							
Totals				80	86	70	196.041	179.25	287.13	15.9	55.4	126.88	4559	15,914	9,516	3,420	1,194														

TC TLOGSTVB				Log Stock Table - MBF																			
				Project: 244																			
T02S R08W S16 T100												T02S R08W S16 T100											
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		Page		1					
02S		08W		16		HWAREA9		100		38.00		8		40		Date		7/9/2014					
																Time		1:09:13PM					
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	14-15	16-19	20-23
DF	8	2	40	26			26	9.9							26								
DF	8	3	32	10			10	3.9				10											
DF	8	3	40	154			154	59.5			7		107	25	14								
DF	8	4	19	3			3	1.1		3													
DF	8	4	20	1			1	.5		1													
DF	8	4	22	5			5	1.9		5													
DF	8	4	26	4			4	1.6		4													
DF	8	4	27	2			2	.9		2													
DF	8	4	28	3			3	1.0		3													
DF	8	4	30	4			4	1.6		4													
DF	8	4	31	2			2	.7		2													
DF	8	4	32	2			2	.7		2													
DF	8	4	35	2			2	.8		2													
DF	8	4	38	24			24	9.3		24													
DF	8	4	40	17			17	6.7		17													
DF	Totals			259			259	58.7		69	7	10	107	51	14								
RA	8	R	12	7			7	4.2								7							
RA	8	R	14	6			6	3.5				6											
RA	8	R	16	5			5	2.9				5											
RA	8	R	20	6			6	3.6				6											
RA	8	R	26	7			7	4.2				7											
RA	8	R	28	16			16	9.1				9		7									
RA	8	R	32	6			6	3.6			6												
RA	8	R	36	14			14	8.1			14												
RA	8	R	37	4			4	2.6			4												
RA	8	R	39	3			3	1.5			3												
RA	8	R	40	14			14	8.3					14										
RA	8	R	42	10			10	6.1			10												
RA	8	R	44	14			14	7.9			14												
RA	8	R	54	13			13	7.8			13												
RA	8	R	55	31			31	18.4			31												
RA	8	R	57	14			14	8.2			14												
RA	Totals			171			171	38.9			110	33	14	7		7							
RC	8	2	23	10			10	100.0					10										
RC	Totals			10			10	2.4					10										
Total All Species				441			441	100.0		69	117	43	121	68	14	7							

TC		TSTNDSUM															
Stand Table Summary																	
Project 244																	
T02S R08W S16 T100												T02S R08W S16 T100					
Twp	Rge	Sec	Tract		Type			Acres		Plots	Sample Trees			Page:	1		
02S	08W	16	HWAREA9		100			38.00		8	40			Date:	07/09/2014		
Time: 1:10:53PM																	
S Spc	T	Sample		FF	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s			
		DBH	Trees	16'	Tot				Net Cu.Ft.	Net Bd.Ft.		Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF	
DF		10	1	88	30	6.367	3.47	6.37	6.4	20.0	1.15	40	127	44	15	5	
DF		11	4	87	56	21.047	13.89	21.05	13.1	40.0	7.87	276	842	299	105	32	
DF		13	1	87	73	3.767	3.47	7.53	11.4	45.0	2.44	86	339	93	33	13	
DF		14	1	87	58	3.248	3.47	3.25	22.4	60.0	2.07	73	195	79	28	7	
DF		16	1	88	106	2.487	3.47	4.97	24.5	95.0	3.48	122	473	132	46	18	
DF		17	2	89	95	4.406	6.95	8.81	27.3	107.5	6.86	241	947	261	92	36	
DF		18	3	87	86	5.895	10.42	11.79	27.9	105.0	9.36	329	1,238	356	125	47	
DF		19	3	84	82	5.291	10.42	10.58	30.1	101.7	9.09	319	1,076	345	121	41	
DF		20	2	86	89	3.183	6.95	6.37	34.8	115.0	6.31	222	732	240	84	28	
DF		21	1	88	97	1.444	3.47	2.89	41.6	140.0	3.42	120	404	130	46	15	
DF		22	1	88	90	1.315	3.47	2.63	45.3	165.0	3.40	119	434	129	45	16	
DF		Totals		20	87	68	58.451	69.45	86.24	22.6	78.9	55.48	1,947	6,807	2,108	740	259
RA		11	1	85	17	5.262	3.47	5.26	6.9	30.0	1.00	36	158	38	14	6	
RA		12	1	85	21	4.421	3.47	4.42	8.1	30.0	.98	36	133	37	14	5	
RA		13	1	82	50	3.767	3.47	3.77	16.5	50.0	1.71	62	188	65	24	7	
RA		14	6	80	56	19.490	20.84	19.49	24.4	80.0	13.07	475	1,559	497	181	59	
RA		15	1	82	48	2.830	3.47	2.83	25.6	60.0	1.99	73	170	76	28	6	
RA		16	2	79	68	4.974	6.95	4.97	37.9	130.0	5.19	189	647	197	72	25	
RA		17	1	80	72	2.203	3.47	2.20	53.0	160.0	3.21	117	352	122	44	13	
RA		18	2	80	58	3.930	6.95	3.93	47.9	125.0	5.18	188	491	197	72	19	
RA		19	1	79	72	1.764	3.47	1.76	67.8	210.0	3.29	120	370	125	45	14	
RA		20	1	83	17	1.592	3.47	1.59	21.5	120.0	.94	34	191	36	13	7	
RA		22	1	82	46	1.315	3.47	1.32	48.0	140.0	1.73	63	184	66	24	7	
RA		24	1	80	46	1.105	3.47	1.11	65.1	60.0	1.98	72	66	75	27	3	
RA		Totals		19	81	49	52.653	65.98	52.65	27.8	85.7	40.27	1,465	4,510	1,530	557	171
RC		18	1	84	48	1.965	3.47	1.97	30.9	140.0	1.43	61	275	54	23	10	
RC		Totals		1	84	48	1.965	3.47	1.97	30.9	140.0	1.43	61	275	54	23	10
Totals		40		84	59	113.069	138.90	140.86	24.6	82.3	97.18	3472	11,592	3,693	1,319	441	

TC TLOGSTVB				Log Stock Table - MBF															
				Project: 244															
T02S R08W S15 T0100										T02S R08W S15 T0100									
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		Page		1	
02S		08W		15		AREA 11		0100		103.00		9		50		Date		7/9/2014	
																Time		1:12:24PM	
Spp	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
RA	H	UT	12			18		18	2.4					18					
RA	H	UT	16			30		30	4.0			5		25					
RA	H	2	16			21		21	2.9						21				
RA	H	3	8																
RA	H	3	40			72	11.5	63	8.5					28	35				
RA	H	4	12			29		29	3.9			29							
RA	H	4	20			4		4	.5			4							
RA	H	4	24			14		14	1.9			14							
RA	H	4	26			11		11	1.4			11							
RA	H	4	28			54	16.5	45	6.0			17	28						
RA	H	4	30			18		18	2.4			18							
RA	H	4	32			34		34	4.6					34					
RA	H	4	36			133	3.9	128	17.2				128						
RA	H	4	40			345	4.7	329	44.2			260	69						
RA Totals						784	4.9	745	45.1			357	225	106	35	21			
DF	CO	2	40			90	8.3	83	9.1						43	40			
DF	CO	3	32			11		11	1.2				11						
DF	CO	3	36			53		53	5.8			53							
DF	CO	3	40			457	2.6	445	49.1			76	181	188					
DF	CO	4	12			18		18	2.0		18								
DF	CO	4	16			42		42	4.6		42								
DF	CO	4	20			22		22	2.4		22								
DF	CO	4	24			19		19	2.0		19								
DF	CO	4	28			81		81	9.0		81								
DF	CO	4	32			18	11.3	16	1.8		8	8							
DF	CO	4	36			52		52	5.7		52								
DF	CO	4	40			65		65	7.2		65								
DF Totals						928	2.3	907	54.9		307	137	191	188		43	40		
Total All Species						1,712	3.5	1,652	100.0		307	494	417	294	35	64	40		

TC		TSTNDSUM														Stand Table Summary													
														Project 244															
T02S R08W S15 T0100														T02S R08W S15 T0100															
Twp		Rge		Sec		Tract		Type				Acres		Plots		Sample Trees		Page: 1											
02S		08W		15		AREA 11		0100				103.00		9		50		Date: 07/09/2014											
														Time: 1:14:03PM															
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	4	85	49	41.799	14.94	41.80	4.9	24.9	5.82	204	1,040	599	210	107													
DF		9	1	87	80	8.842	3.73	8.84	8.7	40.0	2.20	77	354	227	80	36													
DF		10	1	85	87	7.587	3.73	7.59	11.6	40.0	2.50	88	303	258	90	31													
DF		11	1	85	61	5.870	3.73	5.87	13.6	40.0	2.28	80	235	235	82	24													
DF		12	2	87	84	9.672	7.47	19.34	10.9	45.0	6.00	211	871	618	217	90													
DF		13	5	86	89	20.477	18.67	40.95	13.7	52.3	16.01	562	2,144	1,649	578	221													
DF		14	2	87	74	7.146	7.47	14.29	14.2	47.4	5.77	202	678	594	209	70													
DF		16	1	87	96	2.609	3.73	5.22	23.2	90.0	3.45	121	470	355	125	48													
DF		17	1	89	102	2.369	3.73	4.74	28.5	110.0	3.85	135	521	397	139	54													
DF		18	1	87	93	2.022	3.73	4.04	31.1	105.0	3.59	126	425	370	130	44													
DF		19	2	85	83	3.815	7.47	7.63	30.4	102.6	6.62	232	783	681	239	81													
DF		22	1	87	104	1.481	3.73	4.44	31.7	120.0	4.01	141	533	413	145	55													
DF		27	1	86	96	.975	3.73	1.95	70.4	230.0	3.91	137	449	403	141	46													
DF		Totals		23	86	71	114.665	85.89	166.71	13.9	52.8	66.00	2,316	8,804	6,798	2,385	907												
RA		11	2	86	90	11.529	7.47	17.19	12.9	46.8	6.08	221	805	627	228	83													
RA		12	3	86	86	14.519	11.20	24.12	13.9	46.0	9.25	336	1,109	953	346	114													
RA		13	5	84	64	20.680	18.67	28.88	15.1	47.3	11.98	435	1,365	1,233	449	141													
RA		14	4	86	64	14.603	14.94	18.10	19.4	60.2	9.66	351	1,089	995	362	112													
RA		15	1	89	68	3.043	3.73	6.09	15.5	55.0	2.60	94	335	267	97	34													
RA		16	4	80	69	10.976	14.94	16.46	20.1	58.6	9.10	331	965	938	341	99													
RA		17	1	86	62	2.369	3.73	4.74	21.3	80.0	2.78	101	379	286	104	39													
RA		18	2	84	60	4.227	7.47	6.34	30.5	70.0	5.31	193	444	547	199	46													
RA		19	3	84	55	5.690	11.20	7.59	31.5	97.5	6.58	239	740	677	246	76													
RA		20	1	89	17	1.712	3.73	1.71																					
RA		Totals		26	85	70	89.348	97.10	131.21	17.6	55.1	63.34	2,303	7,231	6,524	2,372	745												
OC		13	1	79	12	4.051	3.73																						
OC		Totals		1	79	12	4.051	3.73																					
Totals				50	85	70	208.064	186.72	297.92	15.5	53.8	129.34	4619	16,035	13,322	4,758	1,652												



"STEWARDSHIP IN FORESTRY"

Haulin Wood

Volume Summary

Area 1-MC				
76 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	14.7	1121	5%	1065
Hemlock		0	5%	0
Spruce		0	5%	0
Noble Fir		0	5%	0
Alder	3.7	279	10%	251
TOTAL	18.4	1399		1315

Areas 3-MC				
41 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	21.6	887	5%	843
Hemlock		0	5%	0
Spruce		0	5%	0
Noble Fir		0	5%	0
Alder		0	10%	0
TOTAL	21.6	887		843

Areas 5-MC				
101 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	20.1	2029	5%	1927
Hemlock		0	5%	0
Spruce		0	5%	0
Noble Fir		0	5%	0
Alder	1.4	146	10%	131
TOTAL	21.5	2174		2058



"STEWARDSHIP IN FORESTRY"

Haulin Wood

Volume Summary

Areas 7-MC				
75 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	5.7	426	5%	404
Hemlock		0	5%	0
Spruce		0	5%	0
Noble Fir		0	5%	0
Alder	10.2	768	10%	691
TOTAL	15.9	1194		1095

Areas 9-MC				
38 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	6.8	259	5%	246
Hemlock		0	5%	0
Spruce		0	5%	0
W Red Cedar	0.3	10	5%	10
Alder	4.5	171	10%	154
TOTAL	11.6	440		410



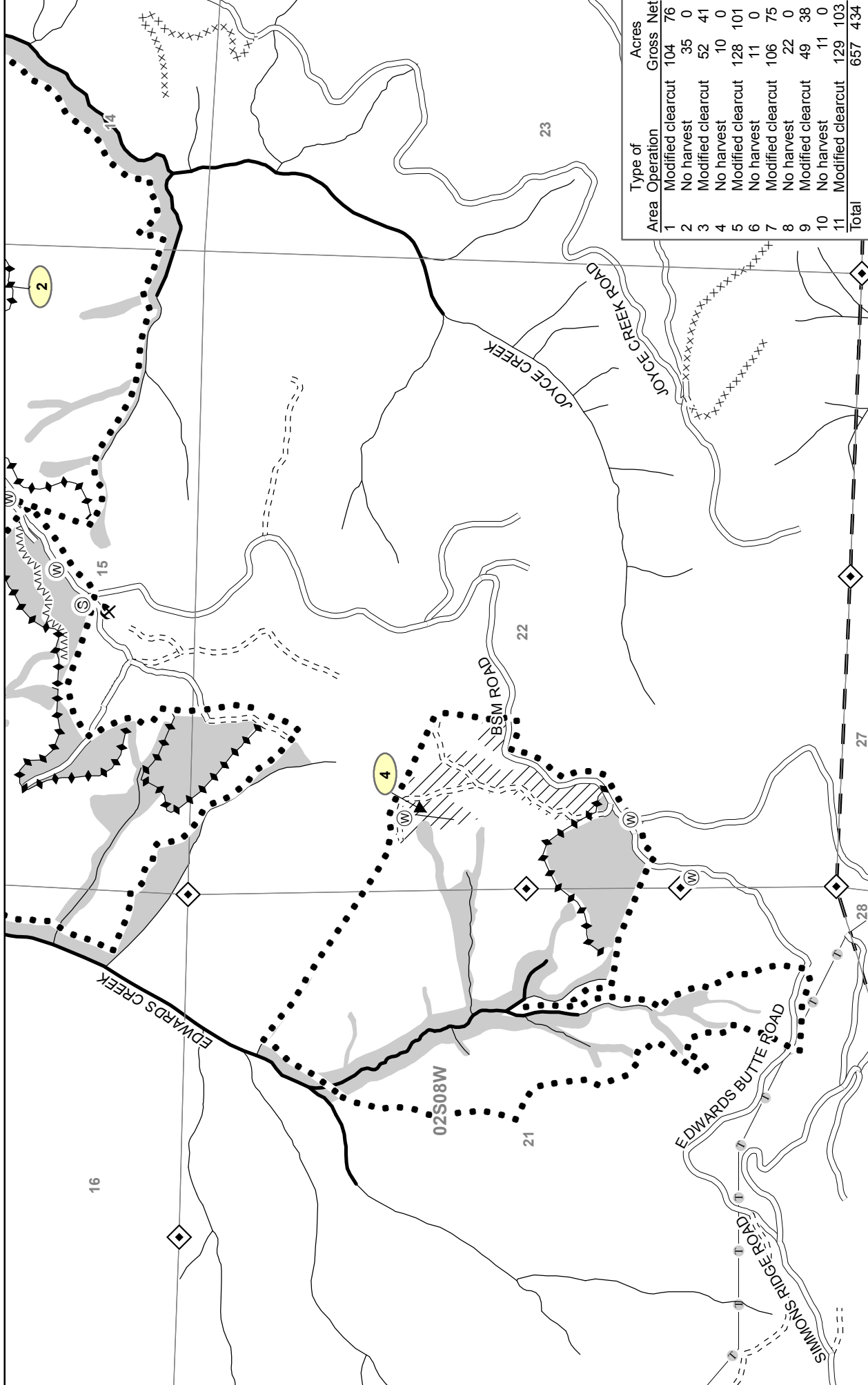
"STEWARDSHIP IN FORESTRY"

Haulin Wood

Volume Summary

Areas 11-MC				
103 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	8.8	907	5%	861
Hemlock		0	5%	0
Spruce		0	5%	0
Noble Fir		0	5%	0
Alder	7.2	745	10%	670
TOTAL	16.0	1652		1532

TOTAL SALE VOLUME			434	acres
SPECIES	Cruised Net (MBF)		Net Sale (MBF)	
Douglas-fir	5628		5346	
Hemlock	0		0	
Spruce	0		0	
Noble Fir	0		0	
Red Alder	2109		1898	
TOTAL	7736		7244	



Area	Type of Operation	Acres	Gross	Net
1	Modified clearcut	104	76	
2	No harvest	35	0	
3	Modified clearcut	52	41	
4	No harvest	10	0	
5	Modified clearcut	128	101	
6	No harvest	11	0	
7	Modified clearcut	106	75	
8	No harvest	22	0	
9	Modified clearcut	49	38	
10	No harvest	11	0	
11	Modified clearcut	129	103	
Total		657	434	

Rock source

Stock pile

Waste area

Bridge

Gate

Survey corner

Domestic water supply intake

Truck turn-around

Helicopter landing zone

Cultural site

Landing

Buffer

Non-required thinning

Cable yarding

Ground yarding

Helicopter yarding

Downhill yarding

Green tree retention area

Restricted area

Area boundary

Sale boundary

Ownership boundary

Fish stream

Non-fish stream

Unsurfaced road

Surfaced road

Paved road

Abandoned road

--A--

Swing road

Non-project road

Blocked road

OHV trail

Non-motorized trail

Transmission line

Railroad

LOGGING PLAN

Timber Sale Contract No. 341-15-001

HAULIN' WOOD

Portions of Sections 10, 11, 14, 15, 16, 21 and 22

T2S, R8W, W.M.,

Tillamook County, Oregon

1,000

0

1,000 Feet

Tillamook District GIS

08/29/2014

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