"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
The Back Nine
Sale 341-14-11

District: Forest Grove **Date:** February 25, 2014

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$1,290,373.78	$0.00	$1,290,373.78
		Project Work:	$(125,430.00)
		Advertised Value:	$1,164,943.78

"STEWARDSHIP IN FORESTRY"

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The Back Nine
Sale 341-14-11

District: **Forest Grove** **Date:** **February 25, 2014**

timber description

Location: Portions of Sections 29 and 30, T3N, R6W, W.M., and portions of Section 25, T3N, R7W, W.M, Tillamook County, Oregon.

Stand Stocking: 20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	14	0	98
Western Hemlock / Fir	12	0	98
Noble Fir	18	0	98

Volume by Grade	2S	3S	4S	Total
Douglas - Fir	857	1,996	506	3,359
Western Hemlock / Fir	0	19	4	23
Noble Fir	11	4	0	15
Total	868	2,019	510	3,397

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District: Forest Grove **Date: February 25, 2014**

comments: Pond Values Used: 4th Quarter Calendar Year 2013.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
$788.60/MBF = $1,050/MBF - $261.40/MBF

Red Alder and Other Hardwoods Stumpage Price = Pond Value minus Logging Cost:
$343.60/MBF = $605/MBF - $261.40/MBF

SCALING COST ALLOWANCE = $5.00/MBF

FUEL COST ALLOWANCE = $4.00/Gallon

HAULING COST ALLOWANCE
Hauling costs equivalent to $780 daily truck cost.

Other Costs (with Profit & Risk to be added):
Brand and Paint: 3,397 MBF @ $1/MBF = $3,397
TOTAL Other Costs (with Profit & Risk to be added) = $3,397

Other Costs (No Profit & Risk added):
Block/Waterbar Skid Roads: 10 Hours @ $110/hour = $1,100
Pile Landing Slash and Sort Firewood:
30 hours @ $110/hour = $3,300
Equipment Cleaning: 4 machines @1,000/machine = $4,000
TOTAL Other Costs (No Profit & Risk added) = $8,400

ROAD MAINTENANCE
Move-in: $2,000
General Road Maintenance: 11.1 miles x $1,000/mile = $11,100
TOTAL: $13,100 / 3,397 MBF = $3.83/MBF

"STEWARDSHIP IN FORESTRY"

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The Back Nine
Sale 341-14-11

District: Forest Grove **Date:** February 25, 2014

logging conditions

combination#: 1

Douglas - Fir	79.87%
Western Hemlock / Fir	74.00%
Noble Fir	100.00%

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: 6.0 **bd. ft / load:** 4,100
cost / mbf: $135.94

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

combination#: 2

Douglas - Fir	20.13%
Western Hemlock / Fir	26.00%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Shovel **Process**: Harvester Head Delimbing
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 8.0 **bd. ft / load:** 4,000
cost / mbf: $129.84

machines:
Forwarder
Harvester

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
The Back Nine
Sale 341-14-11

District: Forest Grove **Date:** February 25, 2014

logging costs

Operating Seasons:	2.00	**Profit Risk:**	15.00%
Project Costs:	$125,430.00	**Other Costs (P/R):**	$3,397.00
Slash Disposal:	$0.00	**Other Costs:**	$8,400.00

Miles of Road

Road Maintenance: $3.83

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	4.4
Western Hemlock / Fir	$0.00	2.0	3.7
Noble Fir	$0.00	2.0	3.9

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
The Back Nine
Sale 341-14-11

District: Forest Grove **Date:** February 25, 2014

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
$134.71	$3.91	$2.58	$78.61	$1.00	$33.12	$0.00	$5.00	$2.47	$261.40
Western Hemlock / Fir									
$134.35	$3.91	$2.58	$93.49	$1.00	$35.30	$0.00	$5.00	$2.47	$278.10
Noble Fir									
$135.94	$3.91	$2.58	$88.70	$1.00	$34.82	$0.00	$5.00	$2.47	$274.42

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$642.95	$381.55	$0.00
Western Hemlock / Fir	$0.00	$503.26	$225.16	$0.00
Noble Fir	$0.00	$512.33	$237.91	$0.00

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
The Back Nine
Sale 341-14-11

District: Forest Grove **Date:** February 25, 2014

summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	$0.00	$0.00
Western Hemlock / Fir	0	$0.00	$0.00
Noble Fir	0	$0.00	$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,359	$381.55	$1,281,626.45
Western Hemlock / Fir	23	$225.16	$5,178.68
Noble Fir	15	$237.91	$3,568.65

Gross Timber Sale Value

Recovery: $1,290,373.78

Prepared by: Eric Foucht **Phone:** 503-359-7473

TIMBER SALE SUMMARY
THE BACK NINE
Contract No. 341-14-11

1. **Location:** Portions of Sections 29 and 30, T3N, R6W, W.M., and portions of Section 25, T3N, R7W, W.M., Tillamook County, Oregon.

2. **Type of Sale:** This timber sale is a 252 acre combination sale consisting of a 136 acre partial cut, a 38 acre modified clearcut, a 77 acre partial cut, and 1 acre of right-of-way. The timber will be sold on a recovery basis at a sealed bid auction.

3. **Revenue Distribution:** 100% BOF, Tillamook County, Tax Code 56-1.

4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.

5. **Cruise** : The Timber Sale was cruised by ODF Cruisers in October, 2013. For more information see Cruise Report.

6. **Timber Description:** The Timber Sale Area consists of medium to well stocked 50 to 60 year old Douglas-fir stands with minor amounts of western hemlock, noble fir, and red alder. The following table summarizes stand conditions for Douglas-fir only.

	Trees/Acre	Average Diameter	Net MBF Per Acre
Area 1	74	13”	8.7
Area 2	186	15”	33.8
Area 3	90	14”	12.1

There is an additional .6 MBF/acre of western hemlock in Area 2 and approximately .2 MBF/acre of noble fir in Area 3.

7. **Topography and Logging Method:** Slopes within the sale areas range from10% to 60% and are variable in aspect. Area 1 is 28% ground-based yarding, and 72% cable-based yarding. Area 2 is 26% ground-based yarding, and 74% cable-based. Area 3 is 100% cable yarding. As configured in the Logging Plan, the approximate horizontal yarding distances are as shown below:

	Area 1		Area 2		Area 3	
	Average	Maximum	Average	Maximum	Average	Maximum
Tractor	350	800	None	None	180	550
Cable	280	1210	525	1712	375	1134

8. **Access:** The access route consists of surfaced all-weather roads. From Forest Grove, travel north on Highway 47 through Banks then merge onto Highway 26 westbound and continue for approximately 20 miles. Between the 31 and the 32 mile markers, turn south onto the Salmonberry Road and continue for approximately 7.5 miles to the east side of Area 3.

9. Projects:

Project No. 1: Road Construction and Improvement	$32,723.70
Project No. 2: Road Surfacing	$55,306.80
Project No. 3: Grass Seed, Fertilize and Mulch	$645.00
Project No. 4: Road Brushing	$23,027.00
Project No. 5: Stockpile	$8,667.52
Move in and equipment cleaning.	$5,050.98
Total Credit for all Projects (rounded)	$125,430

PROJECT COST SUMMARY SHEET

Timber Sale: The Back Nine

Sale Number: 341-14-11

PROJECT NO. 1: ROAD CONSTRUCTION AND IMPROVEMENT

CONSTRUCTION

Road Segment	Length	Cost
A to B	4+75	$1,493.04
E to G	2+30	$764.99
H to I	12+00	$3,689.00
J to K	1+20	$450.43
	20+25 stations	
	0.38 miles	

SUBTOTAL CONSTRUCTION $6,397.46

IMPROVEMENTS

Road Segment	Length	Cost
E to F	34+30	$14,759.90
C to D	65+15	$11,566.34
	99+45 stations	
	1.88 miles	

SUBTOTAL IMPROVEMENTS $26,326.24

TOTAL PROJECT NO. 1 COST = $32,723.70

PROJECT NO. 2: SURFACING

Road Segment	Amount	Type	Cost
A to B	624 cy	6"-0	$7,394.40
C to D	1,566 cy	6"-0	$16,834.50
E to F	2,540 cy	6"-0	$27,127.20
	60 cy	24" - 6"	$370.20
E to G	350 cy	6"-0	$3,580.50
Total			
	5,080 cy	6" - 0	
	60 cy	24" - 6	

TOTAL PROJECT NO. 2 COST = $55,306.80

PROJECT NO. 3: GRASS SEED, FERTILIZE, & MULCH

TOTAL PROJECT NO. 3 COST = $645.00

PROJECT NO. 4: ROAD BRUSHING

TOTAL PROJECT NO. 4 COST = $23,027.00

MOVE IN & EQUIPMENT CLEANING $5,050.98

PROJECT NO. 5: 800cy STOCKPILE

800 cy Jaw Run Stockpile $8,667.52

TOTAL PROJECT NO. 5 COST = $8,667.52

TOTAL ALL PROJECTS $125,421.00

TOTAL CREDITS $125,430.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: The Back Nine Timber Sale No. : 341-14-11

Road Segment: A to B Construction : 4+75 stations

0.09 miles

PROJECT NO. 1

EXCAVATION						
Clearing and Grubbing (Scatter)	0.38	acres @	$784.00	per acre =	$299.22	
Balanced Road Construction	2.75	sta @	$90.00	per sta =	$247.50	
Drift	2.00	sta @	$150.00	per sta =	$300.00	
Construct Turnaround	1	ea @	$75.00	per ea =	$75.00	
Roadside Landing	1	ea @	$150.00	per ea =	$150.00	
Landing	1	ea @	$285.00	per ea =	$285.00	
Grade, Ditch, and Roll	4.75	sta @	$28.70	per sta =	$136.33	
				PROJECT NO. 1 TOTAL COST =		$1,493.04

PROJECT NO. 2:

SURFACING	12	" deep =	65 cy/sta				
A to B	309	cy of	6" - 0	@	$11.85	per cy =	$3,661.65
Turnaround (1)	20	cy of	6" - 0	@	$11.85	per cy =	$237.00
Junction	20	cy of	6" - 0	@	$11.85	per cy =	$237.00
Roadside Landing	95	cy of	6" - 0	@	$11.85	per cy =	$1,125.75
Landing	180	cy of	6" - 0	@	$11.85	per cy =	$2,133.00
Total =	624	cy of	6" - 0		$11.85	per cy =	$7,394.40
					PROJECT NO. 2 TOTAL COST =		$7,394.40

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	0.19 acres @	$220.00	per acre =	$41.98	
			PROJECT NO. 3 TOTAL COST =		$41.98

TOTAL COST = $8,929.43

SUMMARY OF CONSTRUCTION COST

Timber Sale: The Back Nine Timber Sale No. : 341-14-11

Road Segment: C TO D Improvement: 65+15 stations

1.23 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.75	acres @	$980.00	per acre =	$732.86		
Pull Ditch and Endhaul Waste Material	57.60	sta @	$80.00	per sta =	$4,608.00		
Construct Turnouts	9	ea @	$60.00	per ea =	$540.00		
Construct Turnaround	1	ea @	$75.00	per ea =	$75.00		
Landing	1	ea @	$200.00	per ea =	$200.00		
Grade, Ditch, and Roll	57.60	sta @	$28.70	per sta =	$1,653.12		
Grade and Roll (Outslope)	7.55	sta @	$27.20	per sta =	$205.36		
				TOTAL EXCAVATION COSTS=			$8,014.34

CULVERTS - MATERIALS & INSTALLATION

Culverts

194 LF of 18" $3,492.00

Culvert Markers

6 markers $60.00

TOTAL CULVERT COSTS = $3,552.00

PROJECT NO. 1 TOTAL COST = $11,566.34

PROJECT NO. 2:

SURFACING	9	" deep =	47 cy/sta				
C TO D	1,434	cy of	6" - 0	@	$10.75	per cy =	$15,415.50
Turnouts (6)	132	cy of	6" - 0	@	$10.75	per cy =	$1,419.00
Total =	1,566	cy of	6" - 0		$10.75	per cy =	$16,834.50

PROJECT NO. 2 TOTAL COST = $16,834.50

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	0.37 acres @	$220.00	per acre =	$82.26		
Mulch	5.00 bales @	$4.50	per bale =	$22.50		

PROJECT NO. 3 TOTAL COST = $104.76

TOTAL COST = $28,505.60

SUMMARY OF CONSTRUCTION COST

Timber Sale: The Back Nine Timber Sale No. : 341-14-11

Road Segment: E TO F Improvement: 34+30 stations

0.65 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	3.15	acres @	$980.00	per acre =	$3,086.69	
Road Widening (Drift)	34.30	sta @	$90.00	per sta =	$3,087.00	
FILL Reconstruction (21+00)						
Excavation	380	cy @	$0.99	per cy =	$376.20	
Endhaul unsuitable fill material	300	cy @	$3.61	per cy =	$1,083.00	
Place fill	80	cy @	$2.12	per cy =	$169.60	
Compact fill	80	cy @	$0.45	per cy =	$36.00	
Compact Waste Area	300	cy @	$0.25	per cy =	$75.00	
Construct Turnouts	5	ea @	$60.00	per ea =	$300.00	
Construct Turnaround	1	ea @	$75.00	per ea =	$75.00	
Landing	1	ea @	$285.00	per ea =	$285.00	
Grade, Ditch, and Roll	34.30	sta @	$28.70	per sta =	$984.41	
				TOTAL EXCAVATION COSTS=		$9,557.90

CULVERTS - MATERIALS & INSTALLATION

Culverts

124	LF of 18"	$2,232.00
90	LF of 30"	$2,970.00

TOTAL CULVERT COSTS = $5,202.00

PROJECT NO. 1 TOTAL COST = $14,759.90

PROJECT NO. 2:

SURFACING

	12	" deep =	65 cy/sta				
E TO F	2,230	cy of	6" - 0	@	$10.68	per cy =	$23,816.40
Turnouts (5)	110	cy of	6" - 0	@	$10.68	per cy =	$1,174.80
Turnaround (1)	20	cy of	6" - 0	@	$10.68	per cy =	$213.60
Landing (1)	180	cy of	6" - 0	@	$10.68	per cy =	$1,922.40
Riprap	60	cy of	24" - 6"	@	$6.17	per cy =	$370.20
Total =							
	2,540	cy of	6" - 0		$10.68	per cy =	$27,127.20
	60	cy of	24" - 6"		$6.17	per cy =	$370.20

PROJECT NO. 2 TOTAL COST = $27,497.40

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	1.57	acres @	$220.00	per acre =	$346.46
Mulch	5.00	bales @	$4.50	per bale =	$22.50

PROJECT NO. 3 TOTAL COST = $368.96

TOTAL COST = $42,626.26

SUMMARY OF CONSTRUCTION COST

Timber Sale: The Back Nine Timber Sale No. : 341-14-11

Road Segment: E TO G Construction: 2+30 stations

0.04 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.21	acres @	$980.00	per acre =	$206.98	
Balanced Road Construction	2.30	sta @	$90.00	per sta =	$207.00	
Landing	1	ea @	$285.00	per ea =	$285.00	
Grade, Ditch, and Roll	2.30	sta @	$28.70	per sta =	$66.01	
				PROJECT NO. 1 TOTAL COST =		$764.99

PROJECT NO. 2:

SURFACING	12	" deep =	65 cy/sta				
E TO G	150	cy of	6" - 0	@	$10.23	per cy =	$1,534.50
Junction	20	cy of	6" - 0	@	$10.23	per cy =	$204.60
Landing (1)	180	cy of	6" - 0	@	$10.23	per cy =	$1,841.40
Total =	350	cy of	6" - 0		$10.23	per cy =	$3,580.50
					PROJECT NO. 2 TOTAL COST =		$3,580.50

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	0.11	acres @	$220.00	per acre =	$23.23	
				PROJECT NO. 3 TOTAL COST =		$23.23

TOTAL COST = $4,368.72

SUMMARY OF CONSTRUCTION COST

Timber Sale: The Back Nine Timber Sale No. : 341-14-11

Road Segment: H TO I Construction: 12+00 stations

0.23 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.85	acres @	$980.00	per acre =	$836.91	
Clearing and Grubbing (Endhaul) (6+50 to 9+20)	0.25	acres @	$1,846.00	per acre =	$457.69	
Balanced Road Construction	12.00	sta @	$90.00	per sta =	$1,080.00	
Construct Turnouts (1)	1	ea @	$60.00	per ea =	$60.00	
Construct Turnaround (1)	1	ea @	$75.00	per ea =	$75.00	
Landing	1	ea @	$285.00	per ea =	$285.00	
Grade, Ditch, and Roll	12.00	sta @	$28.70	per sta =	$344.40	
				TOTAL EXCAVATION COSTS=		$3,139.00

CULVERTS - MATERIALS & INSTALLATION

Culverts

30 LF of 18" $540.00

Culvert Markers

1 markers $10.00

TOTAL CULVERT COSTS = $550.00

PROJECT NO. 1 TOTAL COST = $3,689.00

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	0.43	acres @	$220.00	per acre =	$93.94	

PROJECT NO. 3 TOTAL COST = $93.94

TOTAL COST = $3,782.94

SUMMARY OF CONSTRUCTION COST

Timber Sale: The Back Nine Timber Sale No. : 341-14-11

Road Segment: J TO K Construction: 1+20 stations

0.02 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.11	acres @	$980.00	per acre =	$107.99	
Balanced Road Construction	1.20	sta @	$90.00	per sta =	$108.00	
Landing	1	ea @	$200.00	per ea =	$200.00	
Grade, Ditch, and Roll	1.20	sta @	$28.70	per sta =	$34.44	
				PROJECT NO. 1 TOTAL COST =		$450.43

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	0.06	acres @	$220.00	per acre =	$12.12	
				PROJECT NO. 3 TOTAL COST =		$12.12

TOTAL COST = $462.55

SUMMARY OF CONSTRUCTION COST

Timber Sale: The Back Nine Timber Sale No. : 341-14-11

PROJECT NO. 4:

Road Brushing

Station	Brush Density	miles @	$ per mile =	
B1 to B2	Light	8.11	$700.00	$5,677.00
B2 to B3	Light	6.20	$700.00	$4,340.00
B4	Moderate	0.37	$1,000.00	$370.00
B5	Moderate	0.61	$1,000.00	$610.00
B6 to B7	Heavy	0.84	$1,300.00	$1,092.00
B8	Heavy	1.00	$1,300.00	$1,300.00
B9	Light	2.10	$700.00	$1,470.00
B10	Heavy	0.05	$1,300.00	$65.00
B11	Moderate	1.09	$1,000.00	$1,090.00
B12	Heavy	0.48	$1,300.00	$624.00
B13	Light	0.65	$700.00	$455.00
B14	Light	1.35	$700.00	$945.00
B15 to B16	Light	2.84	$700.00	$1,988.00
B17	Light	0.07	$700.00	$49.00
B18	Light	0.37	$700.00	$259.00
B19	Light	0.11	$700.00	$77.00
B20	Light	1.04	$700.00	$728.00
B21	Heavy	0.08	$1,300.00	$104.00
B22	Light	2.02	$700.00	$1,414.00
B23	Moderate	0.37	$1,000.00	$370.00
	Total Miles=	29.75		

TOTAL COST = $23,027.00

Move-In & Equipment Cleaning

Timber Sale: The Back Nine
Sale Number: 341-14-11

LOWBOY HAUL (One-way)		
DIST. (mi)	ROAD	AVE SPEED (mph)
7.0	Main Lines	**7**
0.0	Steep Grades	**2**

No.	EQUIPMENT DESCRIPTION	Equipment Cleaning	Base Cost	Woods Cost	Pilot Cars	Within Area Move	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
0	Drill & Compressor		$0.00	$0.00		$46.00	0.0	0.0	0.0	$0.00	$0.00
0	Brush Cutter		$0.00	$0.00		$4.00	0.0	0.0	0.0	$0.00	$0.00
1	Graders		$300.00	$180.00		$3.65	0.0	0.0	0.0	$0.00	$480.00
0	Loader (Small)		$0.00	$0.00	1	$3.55	0.0	0.0	0.0	$0.00	$0.00
0	Loader (Med. & Large)		$0.00	$0.00	1	$9.00	0.0	0.0	0.0	$0.00	$0.00
1	Rollers (smooth/grid) & Compactors		$308.59	$201.25		$5.00	0.0	0.0	0.0	$0.00	$509.84
0	Excavators (Small)		$0.00	$0.00		$22.00	0.0	0.0	0.0	$0.00	$0.00
0	Excavators (Med.)		$0.00	$0.00		$35.50	0.0	0.0	0.0	$0.00	$0.00
1	Excavators (Large)	$1,000	$466.14	$289.80	1	$44.80	0.0	0.0	0.0	$0.00	$1,755.94
0	Tired Backhoes/Skidders		$0.00	$0.00		$3.00	0.0	0.0	0.0	$0.00	$0.00
0	Tractors (D6)		$0.00	$0.00	2	$7.10	0.0	0.0	0.0	$0.00	$0.00
0	Tractors (D7)		$0.00	$0.00	2	$11.30	0.0	0.0	0.0	$0.00	$0.00
1	Tractor (D8)	$1,000	$473.80	$271.40	2	$15.10	0.0	0.0	0.0	$0.00	$1,745.20
3	Dump Truck (10 cy +)		$350.00	$210.00		$2.85	0.0	0.0	0.0	$0.00	$560.00
0	Dump Truck (Off Hiway)		$0.00	$0.00	1	$4.75	0.0	0.0	0.0	$0.00	$0.00
0	Water Truck (1500 Gal)		$0.00	$0.00		$2.85	0.0	0.0	0.0	$0.00	$0.00
0	Water Truck (2500 Gal)		$0.00	$0.00		$2.85	0.0	0.0	0.0	$0.00	$0.00

TOTAL MOVE-IN COSTS: $5,050.98

ROCK DEVELOPMENT COST SUMMARY

Timber Sale: The Back Nine

Sale Number: 341-14-11

Pit Name: NF Salmonberry Pit

Swell:	1.30	Pit Run (trk measure)	5,080 cy
		Jaw Run Stockpile (Stockpile Measure)	800 cy
Shrinkage:	1.16	Total Truck Yardage:	6,008 cy
Drill Pct.:	100%	Total In Place Yardage:	4,622 cy

Scalp & Clear Overburden:					$1,400.00
Drill & Shoot:	$4.60 /cy x	1,040 cy	=		$4,784.00
Rip Rock:	$1.90 /cy x	3,582 cy	=		$6,804.92
Push Rock:	$0.70 /cy x	6,008 cy	=		$4,205.60
Crushing (6" - 0):	$1.90 /cy x	6,008 cy	=		$11,415.20
Load Dump Truck:	$0.70 /cy x	6,008 cy	=		$4,205.60
				Subtotal	$32,815.32

Equipment Cleaning	$1,000.00
Move in Excavator	$1,235.00
Move in Crusher	$1,280.00
Set up Crusher	$880.00
Move in Loader	$1,071.47
Clean Up Pit	$300.00
Subtotal	$5,766.47

PIT DEVELOPMENT COST $6.42/cy

TOTAL PRODUCTION COST $38,581.79

CRUISE REPORT
THE BACK NINE
341-14-11

1. LOCATION: Portions of Sections 29 and 30, T3N, R6W, W.M., and portions of Section 25, T3N, R7W, W.M., Tillamook County, Oregon.

2. CRUISE DESIGN:
The cruise design assumed a Coefficient of Variation (CV%) of 60%, a Confidence Level of 68%, a desired sampling error (SE%) of 11%, an average stand diameter of 17 inches and a minimum sample size of 100 grade trees. Pre-cruise plots indicated that approximately 12 trees per plot could be realized with a 20 BAF prism.

3. SAMPLING METHOD:
The Sale Areas were cruised in October, 2013 with a total of 51 variable radius plots using a 20 BAF prism. 24 plots were placed in Area 1, 8 in Area 2, and 19 in Area 3. Plots were laid out on a 5 chain x 7 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain. For the partial cut in Areas 1 and 3, Cruisers 'thinned' plots from below to 140 ft^2 of basal area by assigning a 'Take' or 'Leave' status to each tree in every plot.

4. CRUISE RESULTS
249 trees were measured and graded in Area 1, 98 in Area 2, and 231 in Area 3. The cumulative sampling error was 10.4% on the Douglas-fir 'Take' board foot volume and 9.3% on the Douglas-fir 'Take' basal area.

5. TREE MEASUREMENT AND GRADING:
All sample trees were measured and graded following Columbia River Log Scale grade rules and favoring 40 foot segments.

a) **Height Standards:**
Tree heights were measured to a top cruise diameter of 6" or 25% of DBH, whichever was larger. Where the top cruise diameter was not visible, the cruisers measured either the total tree height or a height to the smallest diameter that could be seen, and the bole lengths were then calculated to the appropriate top cruise diameter.

b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.

c) **Form Factors** were measured for each grade tree using a form point of 16 feet.

5. DATA PROCESSING

a) **Volumes and Statistics**, Cruise and grown forward volume estimates, and sampling statistics, were derived from Super Ace 2008 cruise software.

b) **Deductions:** Two percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage.

6. Cruisers: The sale was cruised by ODF cruisers Joe Koch and Mark Savage.

Prepared by: _____

Eric Foucht Date

Reviewed by: _____

Erik Marcy Date

RESIDUAL STAND SPECIFICATIONS

SALE NAME: THE BACK NINE
SALE NUMBER: 341-14-11

AREA 1

Residual QMD assumption (from leave tree cruise information)	=	18.4
Target Relative Density	=	33

	Minimum	Target	Maximum
Relative Density	30	33	35
Basal Area	130	140	150
Trees per Acre	70	76	81

AREA 3

Residual QMD assumption (from leave tree cruise information)	=	22.4
Target Relative Density	=	30

	Minimum	Target	Maximum
Relative Density	27	30	32
Basal Area	130	140	150
Trees per Acre	48	51	55

RD = BA / $\sqrt{}$ DBH
BA = $\sqrt{}$DBH (RD)
TPA = (BA/acre) / (BA/tree)
BA / tree = (π r^2) / (144)

TC TLOGSTVB

Log Stock Table - MBF

Project: BACKNINE

T03N R06W S29 T00A1

T03N R06W S29 T00A1

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	06W	29	0001	00A1	136.00	24	249

Page 1
Date 11/4/2013
Time 9:47:59AM

Spp	S T	So Grade	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	L	CU	3																
DF	L	CU	4																
DF	L	2M	16	8		8	.2								8				
DF	L	2M	40	1,789		1,789	41.1						619	457	530	127	55		
DF	L	3M	16	8		8	.2						8						
DF	L	3M	22	2		2	.0					2							
DF	L	3M	24	4		4	.1					4							
DF	L	3M	28	3		3	.1				3								
DF	L	3M	30	27		27	.6				27								
DF	L	3M	32	86		86	2.0			3	77	7							
DF	L	3M	34	13		13	.3			5	8								
DF	L	3M	36	42		42	1.0			10	31								
DF	L	3M	38	48		48	1.1			4	36	9							
DF	L	3M	40	887		887	20.4			93	168	581	45						
DF	L	4M	11																
DF	L	4M	12	20		20	.5			20									
DF	L	4M	13	12		12	.3			12									
DF	L	4M	14	8		8	.2			8									
DF	L	4M	15	9		9	.2			9									
DF	L	4M	16	17		17	.4			14	3								
DF	L	4M	17	2		2	.0			2									
DF	L	4M	18	1		1	.0			1									
DF	L	4M	19	0		0	.0			0									
DF	L	4M	21	2		2	.0			2									
DF	L	4M	22	5		5	.1			5									
DF	L	4M	23	9		9	.2			9									
DF	L	4M	24	20		20	.5			13	7								
DF	L	4M	25	4		4	.1			4									
DF	L	4M	27	5		5	.1			5									
DF	L	4M	28	3		3	.1			3									
DF	L	4M	29	15		15	.4			15									
DF	L	4M	30	5		5	.1			5									
DF	L	4M	31	6		6	.1			6									
DF	L	4M	32	23		23	.5			23									
DF	L	4M	33	8		8	.2			8									
DF	L	4M	34	8		8	.2			8									
DF	L	4M	35	18		18	.4			18									
DF	L	4M	36	6		6	.1			6									
DF	L	4M	37	16		16	.4			16									
DF	L	4M	38	10		10	.2			10									
DF	L	4M	39	10		10	.2			10									
DF	L	4M	40	9		9	.2			9									
DF	T	CU	5																
DF	T	CU	6																
DF	T	2M	40	23		23	.5						23						
DF	T	3M	12	7		7	.2							7					
DF	T	3M	24	9		9	.2					9							
DF	T	3M	28	3		3	.1				3								
DF	T	3M	32	23		23	.5			16	6								
DF	T	3M	34	23		23	.5			23									

TC TLOGSTVB

Log Stock Table - MBF

Project: **BACKNINE**

T03N R06W S29 T00A1

T03N R06W S29 T00A1

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	06W	29	0001	00A1	136.00	24	249

Page 2
Date 11/4/2013
Time 9:47:59AM

Spp	S T	So Grt	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	T	3M	36		52		52	1.2			52									
DF	T	3M	38		22		22	.5			15	7								
DF	T	3M	40		762		762	17.5			166	220	363	13						
DF	T	4M	12		22		22	.5			22									
DF	T	4M	13		18		18	.4			18									
DF	T	4M	14		8		8	.2			8									
DF	T	4M	15		3		3	.1			3									
DF	T	4M	16		3		3	.1			3									
DF	T	4M	17		12		12	.3			10	2								
DF	T	4M	18		4		4	.1			4									
DF	T	4M	21		5		5	.1			5									
DF	T	4M	22		15		15	.3			15									
DF	T	4M	23		8		8	.2			8									
DF	T	4M	24		40		40	.9			23	16								
DF	T	4M	25		22		22	.5			22									
DF	T	4M	26		3		3	.1			3									
DF	T	4M	27		2		2	.0			2									
DF	T	4M	28		5		5	.1			5									
DF	T	4M	29		3		3	.1			3									
DF	T	4M	30		16		16	.4			16									
DF	T	4M	32		29		29	.7			20	9								
DF	T	4M	33		17		17	.4			17									
DF	T	4M	35		14		14	.3			14									
DF	T	4M	36		6		6	.1			6									
DF	T	4M	37		5		5	.1			5									
DF	T	4M	38		3		3	.1			3									
DF		Totals			4,355		4,355	97.4			864	623	974	709	464	538	127	55		
WH	L	3M	38		12		12	26.7			12									
WH	L	3M	40		25		25	54.9			12	13								
WH	L	4M	12		2		2	3.8			2									
WH	L	4M	14		3		3	7.6			3									
WH	L	4M	28		3		3	7.1			3									
WH		Totals			45		45	1.0			32	13								
NF	L	2M	40		65		65	89.8						13	15		38			
NF	L	3M	32		1		1	1.9			1									
NF	L	3M	40		4		4	6.2			4									
NF	L	4M	12		1		1	.9		1										
NF	L	4M	24		1		1	1.2			1									
NF		Totals			72		72	1.6		1	7			13	15		38			
Total All Species					4,472		4,472	100.0		1	903	636	974	722	479	538	165	55		

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: BACKNINE

Page 1
Date 11/4/2013
Time 9:47:59AM

T03N R06W S29 T00A1

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
03N	06W	29	0001	00A1	136.00	24	249	S	W

T03N R06W S29 T00A1

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF	L		CU														4	13		0.00	1.0
DF	L		2M	56		13,214	13,214	1,797			67	33	0			100	40	14	316	1.67	41.8
DF	L		3M	36		8,229	8,229	1,119		95	5		1	3	9	87	38	9	113	0.75	72.8
DF	L		4M	8		1,851	1,851	252		100			28	27	25	20	22	6	29	0.36	63.4
DF L Totals				71		23,295	23,295	3,168		42	40	19	3	3	5	89	32	9	130	0.92	178.9
DF	T		CU														5	12		0.00	1.2
DF	T		2M	1		169	169	23			100					100	40	12	200	1.28	.8
DF	T		3M	76		6,628	6,628	901		98	2		1	1	5	93	38	8	98	0.59	67.5
DF	T		4M	23		1,930	1,930	263		100			27	45	23	5	21	6	27	0.32	70.7
DF T Totals				27		8,727	8,727	1,187		96	4		6	11	9	74	29	7	62	0.50	140.2
WH	L		3M	81		270	270	37		100						100	39	7	82	0.47	3.3
WH	L		4M	19		61	61	8		100			62	38			17	6	19	0.27	3.3
WH L Totals				1		332	332	45		100			11	7		82	28	7	50	0.41	6.6
NF	L		2M	89		478	478	65			42	58				100	40	16	423	2.12	1.1
NF	L		3M	8		43	43	6		100					24	76	38	7	67	0.58	.6
NF	L		4M	3		11	11	2	43	57			43	57			15	6	18	0.39	.6
NF L Totals				2		532	532	72	1	9	38	52	1	1	2	96	33	11	222	1.44	2.4
Type Totals						32,885	32,885	4,472	0	56	30	14	4	5	6	85	31	8	100	0.75	328.1

TC TSTNDSUM

Stand Table Summary

Project **BACKNINE**

T03N R06W S29 T00A1

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	06W	29	0001	00A1	136.00	24	249

T03N R06W S29 T00A1

Page: 1
Date: 11/04/201
Time: 9:48:00AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF	L	10	1	88	78	1.528	.83	1.53	12.8	60.0	.56	20	92	76	27	12
DF	L	11	2	88	81	2.525	1.67	5.05	9.3	40.0	1.34	47	202	183	64	27
DF	L	12	1	88	92	1.061	.83	2.12	11.1	45.0	.67	24	95	92	32	13
DF	L	13	3	88	97	2.712	2.50	5.42	15.7	68.3	2.43	85	371	330	116	50
DF	L	14	2	88	97	1.559	1.67	3.12	18.0	80.0	1.60	56	249	218	76	34
DF	L	15	14	88	105	9.507	11.67	20.37	20.5	91.7	11.92	418	1,867	1,621	569	254
DF	L	16	22	88	101	13.130	18.33	26.26	24.1	102.7	18.02	632	2,698	2,451	860	367
DF	L	17	2	88	99	1.057	1.67	2.11	26.5	105.0	1.60	56	222	217	76	30
DF	L	18	33	89	110	15.562	27.50	38.67	26.9	107.8	29.66	1,041	4,169	4,033	1,415	567
DF	L	19	12	89	113	5.079	10.00	14.39	27.7	113.8	11.34	398	1,638	1,543	541	223
DF	L	20	6	89	115	2.292	5.00	6.88	29.8	126.1	5.84	205	867	794	279	118
DF	L	21	13	89	119	4.504	10.83	13.51	33.7	149.0	12.97	455	2,013	1,764	619	274
DF	L	22	11	89	116	3.472	9.17	10.42	35.9	161.8	10.67	374	1,686	1,451	509	229
DF	L	23	5	89	117	1.444	4.17	4.33	40.6	180.7	5.02	176	783	682	239	106
DF	L	24	11	89	120	2.918	9.17	8.75	45.8	209.1	11.42	401	1,830	1,554	545	249
DF	L	25	5	89	129	1.222	4.17	3.67	53.2	250.7	5.56	195	919	757	265	125
DF	L	26	5	89	117	1.130	4.17	3.39	52.8	238.7	5.10	179	809	694	243	110
DF	L	27	5	89	123	1.048	4.17	3.14	59.2	273.3	5.30	186	859	721	253	117
DF	L	29	1	89	112	.182	.83	.55	64.1	300.0	1.00	35	164	135	48	22
DF	L	31	3	89	132	.477	2.50	1.59	75.5	377.0	3.42	120	599	465	163	82
DF	L	32	3	90	129	.448	2.50	1.49	79.5	398.0	3.38	119	594	460	161	81
DF	L	34	2	89	123	.264	1.67	.79	95.0	463.3	2.15	75	367	292	102	50
DF	L	41	1	90	124	.091	.83	.36	104.2	552.5	1.08	38	201	147	52	27
DF		Totals	163	89	108	73.213	135.83	177.92	30.0	130.9	152.06	5,335	23,295	20,679	7,256	3,168
DF	T	8	1	86	72	2.387	.83	2.39	7.4	50.0	.50	18	119	69	24	16
DF	T	9	7	87	73	13.204	5.83	18.86	7.6	40.0	4.10	144	755	557	195	103
DF	T	10	1	88	86	1.528	.83	3.06	7.7	40.0	.67	23	122	91	32	17
DF	T	11	14	87	80	17.678	11.67	32.83	9.6	41.2	8.99	315	1,351	1,223	429	184
DF	T	12	6	85	82	6.366	5.00	10.61	13.1	52.0	3.96	139	552	538	189	75
DF	T	13	6	88	89	5.424	5.00	10.85	14.0	57.5	4.33	152	624	589	207	85
DF	T	14	4	88	91	3.118	3.33	6.24	17.4	75.0	3.10	109	468	421	148	64
DF	T	15	15	88	100	10.186	12.50	22.41	18.6	79.4	11.91	418	1,779	1,619	568	242
DF	T	16	17	88	100	10.146	14.17	22.08	21.4	89.2	13.46	472	1,970	1,830	642	268
DF	T	17	3	88	104	1.586	2.50	3.70	23.6	97.1	2.49	87	360	338	119	49
DF	T	18	4	89	104	1.886	3.33	4.72	22.6	92.0	3.04	107	434	413	145	59
DF	T	19	2	89	111	.846	1.67	1.27	40.3	153.3	1.46	51	195	198	70	26
DF		Totals	80	87	87	74.357	66.67	139.01	14.6	62.8	57.99	2,035	8,727	7,887	2,767	1,187
NF	L	18	1	91	115	.472	.83	1.41	23.6	93.3	.80	33	132	109	45	18
NF	L	30	1	91	137	.170	.83	.51	81.9	420.0	1.00	42	214	136	57	29
NF	L	31	1	91	125	.159	.83	.48	80.4	390.0	.92	38	186	125	52	25
NF		Totals	3	91	122	.800	2.50	2.40	47.2	221.6	2.72	113	532	370	154	72
WH	L	11	2	92	86	2.525	1.67	5.05	9.4	42.5	1.52	48	215	207	65	29
WH	L	14	1	91	95	.780	.83	1.56	18.1	75.0	.90	28	117	123	38	16
WH		Totals	3	92	88	3.305	2.50	6.61	11.5	50.2	2.43	76	332	330	103	45
Totals			249	88	97	151.675	207.50	325.95	23.2	100.9	215.20	7559	32,885	29,267	10,281	4,472

TC TLOGSTVB

Log Stock Table - MBF

Project: BACKNINE

T03N R06W S29 T00A2

T03N R06W S29 T00A2

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	06W	29	0001	00A2	38.00	8	98

Page 1
Date 10/30/2013
Time 3:46:42PM

Spp	S T	So Grade	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	T	CU	4																
DF	T	CU	5																
DF	T	CU	6																
DF	T	2M	40	589	.9	584	45.4						180	108	102	150	43		
DF	T	3M	16	7		7	.5						7						
DF	T	3M	22	9		9	.7							9					
DF	T	3M	24	11		11	.8				3		8						
DF	T	3M	30	14		14	1.1				11	3							
DF	T	3M	31	3		3	.2				3								
DF	T	3M	32	44		44	3.4			12	21	11							
DF	T	3M	33	1		1	.1			1									
DF	T	3M	34	12		12	.9			12									
DF	T	3M	36	44		44	3.4			41	3								
DF	T	3M	37	5	16.7	4	.3			4									
DF	T	3M	38	66		66	5.2			60		7							
DF	T	3M	40	366		366	28.5			94	111	157	3						
DF	T	4M	12	14		14	1.1			14									
DF	T	4M	13	8		8	.6			8									
DF	T	4M	14	4		4	.3			4									
DF	T	4M	15	4		4	.3			4									
DF	T	4M	16	4		4	.3			4									
DF	T	4M	17	11		11	.8			11									
DF	T	4M	18	6		6	.5			6									
DF	T	4M	19	0		0	.0			0									
DF	T	4M	21	3		3	.2			3									
DF	T	4M	23	9		9	.7			9									
DF	T	4M	24	18		18	1.4			0	18								
DF	T	4M	25	5		5	.4			5									
DF	T	4M	26	3		3	.2			3									
DF	T	4M	28	7		7	.5			7									
DF	T	4M	29	4		4	.3			4									
DF	T	4M	30	14		14	1.1			14									
DF	T	4M	31	7		7	.6			7									
DF		Totals		1,291		1,286	98.3			327	169	178	199	117	102	150	43		
WH	T	3M	38	10		10	44.1			10									
WH	T	3M	40	9		9	40.6				9								
WH	T	4M	12	1		1	6.3			1									
WH	T	4M	19	2		2	9.0			2									
WH		Totals		23		23	1.7			14	9								
Total All Species				1,314		1,308	100.0			341	178	178	199	117	102	150	43		

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: BACKNINE

Date 10/30/2013

Time 3:46:41PM

T03N R06W S29 T00A2

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
03N	06W	29	0001	00A2	38.00	8	98	S	W

T03N R06W S29 T00A2

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF	T		CU														5	13		0.00	6.3
DF	T		2M	45	.9	15,507	15,375	584			56	44				100	40	15	352	1.98	43.6
DF	T		3M	45	.2	15,298	15,274	580		95	5		1	6	10	83	37	8	87	0.59	174.7
DF	T		4M	10		3,181	3,181	121		100			44	51	6		19	6	23	0.32	138.7
DF T Totals				98	.5	33,986	33,831	1,286		52	27	20	5	7	5	83	30	8	93	0.75	363.3
WH	T		3M	84		509	509	19		100						100	39	7	78	0.50	6.5
WH	T		4M	16		92	92	4		100			100				15	6	14	0.25	6.5
WH T Totals				2		601	601	23		100			15			85	27	7	46	0.44	13.0
Type Totals					.4	34,587	34,432	1,308		53	27	20	5	7	5	83	30	8	91	0.74	376.3

TC TSTNDSUM

Stand Table Summary

Project **BACKNINE**

T03N R06W S29 T00A2

T03N R06W S29 T00A2

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	06W	29	0001	00A2	38.00	8	98

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Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF	T	8	2	88	74	14.324	5.00	14.32	4.8	25.0	1.94	68	358	74	26	14
DF	T	9	1	89	88	5.659	2.50	5.66	8.2	40.0	1.32	46	226	50	18	9
DF	T	10	3	83	80	13.751	7.50	13.75	13.7	60.0	5.36	188	825	204	72	31
DF	T	11	10	86	78	37.882	25.00	60.61	10.9	45.0	18.81	660	2,727	715	251	104
DF	T	12	3	84	89	9.549	7.50	19.10	11.5	41.7	6.26	220	796	238	83	30
DF	T	13	5	86	84	13.561	12.50	27.12	13.1	49.0	10.09	354	1,329	383	135	51
DF	T	14	8	86	92	18.709	20.00	35.08	18.0	68.7	18.01	632	2,409	685	240	92
DF	T	15	4	87	101	8.149	10.00	16.30	22.2	95.0	10.31	362	1,548	392	137	59
DF	T	16	12	88	97	21.486	30.00	46.55	21.4	90.0	28.44	998	4,190	1,081	379	159
DF	T	17	1	88	110	1.586	2.50	3.17	29.1	120.0	2.63	92	381	100	35	14
DF	T	18	12	88	105	16.977	30.00	45.27	23.9	96.3	30.88	1,084	4,357	1,173	412	166
DF	T	19	2	83	104	2.539	5.00	6.35	22.5	82.0	4.07	143	521	155	54	20
DF	T	20	3	88	109	3.438	7.50	10.31	27.1	106.7	7.96	279	1,100	303	106	42
DF	T	21	5	86	110	5.197	12.50	14.55	32.8	130.7	13.62	478	1,902	518	182	72
DF	T	22	1	89	115	.947	2.50	2.84	34.5	156.7	2.79	98	445	106	37	17
DF	T	24	1	89	117	.796	2.50	2.39	40.6	180.0	2.76	97	430	105	37	16
DF	T	25	4	85	121	2.934	10.00	8.80	46.4	195.0	11.65	409	1,716	443	155	65
DF	T	26	3	86	123	2.034	7.50	6.10	51.7	208.9	8.99	315	1,275	342	120	48
DF	T	27	1	90	126	.629	2.50	1.89	52.5	226.7	2.82	99	428	107	38	16
DF	T	30	2	85	139	1.019	5.00	3.06	77.8	366.7	6.78	238	1,120	258	90	43
DF	T	32	3	84	126	1.343	7.50	4.03	79.7	340.0	9.15	321	1,370	348	122	52
DF	T	33	2	82	133	.842	5.00	2.53	87.0	386.7	6.26	220	977	238	83	37
DF	T	34	1	89	127	.397	2.50	1.19	83.4	386.7	2.83	99	460	107	38	17
DF	T	35	3	79	128	1.123	7.50	3.37	97.4	411.1	9.35	328	1,384	355	125	53
DF	T	36	1	89	132	.354	2.50	1.06	98.4	486.7	2.98	104	516	113	40	20
DF	T	37	1	90	130	.335	2.50	1.00	104.8	520.0	3.00	105	522	114	40	20
DF	T	38	1	86	138	.317	2.50									
DF	T	45	1	78	147	.226	2.50	.68	176.5	763.3	3.42	120	518	130	46	20
DF		Totals	96	86	92	186.100	240.00	357.08	22.8	94.7	232.49	8,158	33,831	8,835	3,100	1,286
WH	T	11	1	90	75	3.788	2.50	7.58	9.1	40.0	2.21	69	303	84	26	12
WH	T	13	1	87	83	2.712	2.50	5.42	15.3	55.0	2.66	83	298	101	32	11
WH		Totals	2	89	78	6.500	5.00	13.00	11.7	46.3	4.86	152	601	185	58	23
Totals			98	86	91	192.600	245.00	370.08	22.5	93.0	237.36	8310	34,432	9,020	3,158	1,308

TC TLOGSTVB

Log Stock Table - MBF

Project: **BACKNINE**

T03N R06W S29 T00A3

T03N R06W S29 T00A3

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	06W	29	0001	00A3	77.00	19	231

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Date 10/31/2013
Time 10:13:25AM

Spp	ST	Sort	Grade	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	L		CU	4																
DF	L		2M	40	1,284		1,284	46.9						218	328	483	204	51		
DF	L		3M	24	8		8	.3						8						
DF	L		3M	30	6		6	.2				6								
DF	L		3M	32	32		32	1.2			7	23	2							
DF	L		3M	34	3		3	.1				3								
DF	L		3M	36	22		22	.8			5	14	3							
DF	L		3M	38	28		28	1.0			17	12								
DF	L		3M	40	350		350	12.8			33	78	171	59	9					
DF	L		4M	12	7		7	.2			7									
DF	L		4M	14	9		9	.3			9									
DF	L		4M	16	7		7	.3			7									
DF	L		4M	18	6		6	.2			6									
DF	L		4M	20	6		6	.2			6									
DF	L		4M	22	3		3	.1			3									
DF	L		4M	24	5		5	.2			5									
DF	L		4M	26	1		1	.0			1									
DF	L		4M	28	7		7	.3			7									
DF	L		4M	30	3		3	.1			3									
DF	L		4M	31	1		1	.0			1									
DF	L		4M	32	3		3	.1			3									
DF	L		4M	40	14		14	.5			14									
DF	T		CU	2																
DF	T		CU	3																
DF	T		CU	4																
DF	T		2M	15	5		5	.2								5				
DF	T		2M	40	251	1.1	248	9.1						148	89	11				
DF	T		3M	22	6		6	.2					6							
DF	T		3M	28	3		3	.1			3									
DF	T		3M	30	17		17	.6			10	7								
DF	T		3M	32	62		62	2.3			30	32								
DF	T		3M	34	11		11	.4			11									
DF	T		3M	36	25	1.7	24	.9			18	6								
DF	T		3M	38	39	1.7	39	1.4			33	6								
DF	T		3M	40	389	.7	386	14.1			53	121	206	6						
DF	T		4M	12	15		15	.6			15									
DF	T		4M	13	1		1	.0			1									
DF	T		4M	14	8		8	.3			8									
DF	T		4M	16	12		12	.4			12									
DF	T		4M	18	4		4	.1			4									
DF	T		4M	20	7		7	.3			7									
DF	T		4M	22	17		17	.6			17									
DF	T		4M	24	16		16	.6			12	5								
DF	T		4M	26	21		21	.8			21									
DF	T		4M	28	15	6.8	14	.5			10	4								
DF	T		4M	30	15		15	.5			15									
DF			Totals		2,743		2,736	96.1			412	315	388	439	427	499	204	51		
NF	L		2M	40	32		32	53.0							21	11				

TC TLOGSTVB

Log Stock Table - MBF

Project: **BACKNINE**

T03N R06W S29 T00A3

T03N R06W S29 T00A3

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	06W	29	0001	00A3	77.00	19	231

Date **10/31/2013**

Time **10:13:25AM**

Spp	ST	So Grade	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+
NF	L	3M	40	11		11	18.1				8		3						
NF	L	4M	16	2		2	2.8			2									
NF	T	2M	40	11		11	18.4						11						
NF	T	3M	40	4		4	6.9				4								
NF	T	4M	12	0		0	.8			0									
NF		Totals		60		60	2.1			2	12	3	11	21	11				
RA	L	3M	36	5		5	14.9			5									
RA	L	3M	38	5		5	13.1				5								
RA	L	4M	12	1		1	3.3			1									
RA	L	CR	54	12		12	33.5			12									
RA	L	CR	56	13		13	35.3			13									
RA		Totals		36		36	1.2			31	5								
WH	L	3M	32	6		6	41.4				6								
WH	L	4M	14	2		2	11.8			2									
WH	L	4M	22	7		7	46.8			7									
WH		Totals		15		15	.5			9	6								
Total All Species				2,853		2,846	100.0			454	338	392	450	447	510	204	51		

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: BACKNINE

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Date 10/31/2013
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T03N R06W S29 T00A3

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
03N	06W	29	0001	00A3	77.00	19	231	S	W

T03N R06W S29 T00A3

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF	L		CU														4	12		0.00	.7
DF	L		2M	71		16,677	16,677	1,284			50	50				100	40	15	392	2.19	42.6
DF	L		3M	25		5,826	5,826	449		83	17			3	8	89	38	9	114	0.81	51.1
DF	L		4M	4		915	915	70		100			48	28	5	19	20	6	24	0.39	37.8
DF L Totals				63		23,419	23,419	1,803		25	40	35	2	2	2	94	33	10	177	1.28	132.1
DF	T		CU														3	14		0.00	3.1
DF	T		2M	27	1.1	3,331	3,294	254			94	6	2			98	39	13	242	1.53	13.6
DF	T		3M	59	.7	7,169	7,120	548		99	1			5	13	82	37	8	93	0.64	76.9
DF	T		4M	14	.8	1,708	1,695	130		100			36	64			19	6	23	0.30	73.7
DF T Totals				33	.8	12,209	12,108	932		72	26	2	6	12	8	75	29	8	72	0.64	167.3
NF	L		2M	71		411	411	32			66	34				100	40	15	373	1.99	1.1
NF	L		3M	25		140	140	11		100						100	40	9	127	0.88	1.1
NF	L		4M	4		22	22	2		100			100				16	6	20	0.33	1.1
NF L Totals				2		573	573	44		28	47	24	4			96	32	10	173	1.25	3.3
NF	T		2M	70		143	143	11			100					100	40	13	240	1.25	.6
NF	T		3M	27		54	54	4		100						100	40	8	90	0.64	.6
NF	T		4M	3		6	6	0		100			100				12	6	10	0.27	.6
NF T Totals				1		203	203	16		29	71		3			97	31	9	113	0.85	1.8
RA	L		3M	27		129	129	10		100						100	37	7	68	0.79	1.9
RA	L		4M	4		15	15	1		100			100				12	7	20	0.31	.8
RA	L		CR	69		317	317	24		100						100	55	7	185	0.83	1.7
RA L Totals				1		461	461	36		100			3			97	40	7	106	0.79	4.4
WH	L		3M	41		80	80	6		100					100		32	8	70	0.57	1.1
WH	L		4M	59		113	113	9		100			20	80			20	6	27	0.24	4.2
WH L Totals				1		193	193	15		100			12	47	41		22	6	36	0.34	5.3
Type Totals					.3	37,057	36,957	2,846		42	35	23	3	5	4	87	31	9	118	0.93	314.1

TC TSTNDSUM

Stand Table Summary

Project **BACKNINE**

T03N R06W S29 T00A3

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	06W	29	0001	00A3	77.00	19	231

Date: 10/31/201
Time: 10:13:24AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF	L	12	1	85	91	1.340	1.05	2.68	11.4	45.0	.87	30	121	67	23	9
DF	L	14	2	86	87	1.969	2.11	3.94	15.2	55.0	1.70	60	217	131	46	17
DF	L	15	1	86	100	.858	1.05	1.72	19.6	75.0	.96	34	129	74	26	10
DF	L	16	4	87	106	3.016	4.21	6.03	24.2	100.0	4.16	146	603	321	112	46
DF	L	17	4	87	102	2.671	4.21	6.01	23.6	98.9	4.05	142	594	312	109	46
DF	L	18	9	86	106	5.361	9.47	11.91	29.4	113.0	9.99	351	1,346	769	270	104
DF	L	19	5	83	112	2.673	5.26	6.95	29.6	114.6	5.85	205	797	451	158	61
DF	L	20	14	86	114	6.755	14.74	18.82	31.3	123.3	16.76	588	2,321	1,291	453	179
DF	L	21	8	85	114	3.501	8.42	9.19	36.5	148.1	9.57	336	1,361	737	258	105
DF	L	22	8	85	118	3.190	8.42	9.17	38.0	160.4	9.93	349	1,471	765	268	113
DF	L	23	7	84	116	2.554	7.37	7.30	40.5	164.0	8.43	296	1,197	649	228	92
DF	L	24	11	85	118	3.686	11.58	10.72	45.0	186.9	13.76	483	2,004	1,059	372	154
DF	L	25	3	85	119	.926	3.16	2.78	46.7	193.3	3.70	130	537	285	100	41
DF	L	26	3	85	129	.856	3.16	2.57	55.0	238.9	4.02	141	614	310	109	47
DF	L	27	7	84	127	1.853	7.37	5.56	58.1	249.5	9.21	323	1,387	709	249	107
DF	L	28	9	82	127	2.216	9.47	6.65	61.5	255.6	11.65	409	1,699	897	315	131
DF	L	29	9	83	122	2.065	9.47	5.97	67.9	280.8	11.54	405	1,675	889	312	129
DF	L	30	2	83	133	.429	2.11	1.29	73.0	318.3	2.68	94	410	206	72	32
DF	L	31	4	82	128	.803	4.21	2.41	77.3	334.2	5.31	186	805	409	143	62
DF	L	32	4	84	135	.754	4.21	2.45	81.1	373.8	5.66	199	916	436	153	71
DF	L	33	4	84	141	.709	4.21	2.30	89.0	413.1	5.85	205	952	450	158	73
DF	L	34	4	82	138	.668	4.21	2.17	90.9	412.3	5.62	197	895	433	152	69
DF	L	35	2	80	139	.315	2.11	.95	103.6	450.0	2.79	98	425	215	75	33
DF	L	36	1	82	150	.149	1.05	.60	89.1	422.5	1.51	53	252	116	41	19
DF	L	37	3	83	135	.423	3.16	1.27	117.7	545.6	4.26	149	692	328	115	53
DF		Totals	129	85	114	49.740	135.79	131.39	42.7	178.2	159.84	5,608	23,419	12,308	4,318	1,803
DF	T	8	5	85	71	15.078	5.26	15.08	5.4	26.0	2.33	82	392	179	63	30
DF	T	9	2	86	69	4.765	2.11	4.77	5.2	20.0	.70	25	95	54	19	7
DF	T	10	3	87	72	5.790	3.16	7.72	8.7	40.0	1.91	67	309	147	52	24
DF	T	11	4	85	74	6.380	4.21	11.17	8.6	35.7	2.75	96	399	211	74	31
DF	T	12	8	84	84	10.722	8.42	21.44	10.6	39.4	6.46	227	844	497	174	65
DF	T	13	5	86	100	5.710	5.26	11.42	15.7	63.0	5.12	180	719	395	138	55
DF	T	14	8	87	92	7.877	8.42	15.75	16.2	63.7	7.29	256	1,004	561	197	77
DF	T	15	5	86	106	4.289	5.26	9.44	19.4	83.6	5.23	183	789	402	141	61
DF	T	16	12	87	101	9.047	12.63	19.60	22.2	91.9	12.41	435	1,802	955	335	139
DF	T	17	3	87	102	2.003	3.16	4.01	28.3	115.0	3.23	113	461	249	87	35
DF	T	18	7	86	108	4.170	7.37	10.72	24.6	97.8	7.51	264	1,048	578	203	81
DF	T	19	9	83	104	4.812	9.47	9.62	32.3	112.8	8.87	311	1,085	683	240	84
DF	T	20	7	85	114	3.377	7.37	8.68	31.3	113.9	7.76	272	989	597	210	76
DF	T	21	4	85	117	1.751	4.21	4.81	32.9	124.5	4.52	159	600	348	122	46
DF	T	22	6	86	121	2.393	6.32	6.38	37.8	144.4	6.87	241	921	529	186	71
DF	T	23	2	83	114	.730	2.11	1.82	44.2	158.0	2.30	81	288	177	62	22
DF	T	24	1	85	112	.335	1.05	1.01	35.1	160.0	1.01	35	161	78	27	12
DF	T	27	1	86	137	.265	1.05	.79	59.9	253.3	1.36	48	201	104	37	15
DF		Totals	92	86	90	89.493	96.84	164.24	18.7	73.7	87.60	3,074	12,108	6,745	2,367	932
NF	L	21	1	86	125	.438	1.05	1.31	33.4	143.3	1.05	44	188	81	34	14
NF	L	22	1	91	119	.399	1.05	1.20	37.0	166.7	1.06	44	199	82	34	15
NF	L	27	1	83	117	.265	1.05	.79	55.7	233.3	1.06	44	185	82	34	14
NF		Totals	3	87	121	1.101	3.16	3.30	40.1	173.4	3.18	132	573	245	102	44
RA	L	13	1	73	70	1.142	1.05	1.14	24.1	60.0	.76	27	69	58	21	5

TC TSTNDSUM

Stand Table Summary

Project **BACKNINE**

T03N R06W S29 T00A3

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
03N	06W	29	0001	00A3	77.00	19	231

Date: 10/31/201
Time: 10:13:24AM

Spc	ST	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
RA	L	15	2	77	88	1.716	2.11	1.72	45.7	185.0	2.16	78	317	166	60	24
RA	L	16	1	74	80	.754	1.05	1.51	20.1	50.0	.84	30	75	64	23	6
RA		Totals	4	75	80	3.611	4.21	4.37	31.2	105.7	3.75	136	461	289	105	36
NF	T	18	1	91	120	.596	1.05	1.79	26.2	113.3	1.12	47	203	87	36	16
NF		Totals	1	91	120	.596	1.05	1.79	26.2	113.3	1.12	47	203	87	36	16
WH	L	8	1	88	58	3.016	1.05	3.02	5.1	30.0	.49	15	90	38	12	7
WH	L	13	1	89	67	1.142	1.05	2.28	11.0	45.0	.80	25	103	62	19	8
WH		Totals	2	88	60	4.158	2.11	5.30	7.6	36.5	1.29	40	193	100	31	15
Totals			231	85	97	148.699	243.16	310.38	29.1	119.1	256.79	9038	36,957	19,773	6,959	2,846

VOLUME SUMMARY

The Back Nine

341-14-11
October 2013
Volume in Mbf

AREA 1: PC-M (136 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	23	901	263	1,187
	Hidden D&B (2%)	()	(18)	(5)	(24)
	NET TOTAL	23	883	258	1,163
	% of Total	2	76	22	

AREA 2: MC (38 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	584	580	121	1,285
	Hidden D&B (2%)	(12)	(12)	(2)	(26)
	NET TOTAL	572	568	119	1,259
	% of Total	45	45	9	
SPECIES		**2 SAW**	**3 SAW**	**4 SAW**	**TOTAL**
Western hemlock	Cruise Volume	0	19	4	23
	Hidden D&B (2%)	()	()	()	()
	NET TOTAL	0	19	4	23
	% of Total	0	83	17	

AREA 3: PC (77 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	254	548	130	932
	Hidden D&B (2%)	(5)	(11)	(3)	(19)
	NET TOTAL	249	537	127	913
	% of Total	27	59	14	
SPECIES		**2 SAW**	**3 SAW**	**4 SAW**	**TOTAL**
Noble fir	Cruise Volume	11	4	0	15
	Hidden D&B (2%)	()	()	()	()
	NET TOTAL	11	4	0	15
	% of Total	73	27	0	

AREA 4: R/W (1 ACRE)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	13	8	2	23
	Hidden D&B (2%)	()	()	()	()
	NET TOTAL	13	8	2	23
	% of Total	57	35	9	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	857	1,996	506	3,359
Noble fir	11	4	0	15
Western hemlock		19	4	23
Total	868	2,019	510	3,397

PROJECT STATISTICS

PROJECT BACKNINE

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	06	29	0001	00A1	251.00	51	578	S	W
03N	06W	29	0001	00A2					
03N	06W	29	0001	00A3					

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	51	578	11.3		
CRUISE	51	578	11.3	39,396	1.5
DBH COUNT					
REFOREST					
COUNT					
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR-L	292	54.9	19.6	104	26.0	115.3	19,806	19,806	4,611	4,611
DOUG FIR-T	268	95.9	14.0	63	27.3	102.2	13,619	13,565	3,281	3,281
WHEMLOCK-L	5	3.1	10.9	77	0.6	2.0	239	239	54	54
WHEMLOCK-T	2	1.0	11.9	58	0.2	.8	91	91	23	23
NOB FIR-L	6	.8	23.5	121	0.5	2.3	464	464	102	102
NOB FIR-T	1	.2	18.0	101	0.1	.3	62	62	14	14
R ALDER-L	4	1.1	14.6	80	0.3	1.3	142	142	42	42
TOTAL	*578*	*157.0*	*16.2*	*78*	*55.7*	*224.1*	*34,423*	*34,369*	*8,127*	*8,127*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL 68.1 SD: 1.0 — **SAMPLE TREES - BF**

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DOUG FIR-L	70.8	4.1	494	515	537			
DOUG FIR-T	115.4	7.0	228	246	263			
WHEMLOCK-L	48.5	24.1	67	88	109			
WHEMLOCK-T	22.3	20.9	75	95	115			
NOB FIR-L	56.0	24.9	543	723	904			
NOB FIR-T								
R ALDER-L	47.5	27.1	97	133	168			
TOTAL	*92.4*	*3.8*	*370*	*384*	*399*	*341*	*85*	*38*

CL 68.1 SD: 1.0 — **SAMPLE TREES - CF**

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DOUG FIR-L	63.8	3.7	114	118	123			
DOUG FIR-T	107.4	6.6	55	59	63			
WHEMLOCK-L	54.9	27.3	15	20	26			
WHEMLOCK-T	35.8	33.6	16	24	33			
NOB FIR-L	47.8	21.3	123	156	189			
NOB FIR-T								
R ALDER-L	26.4	15.1	33	39	45			
TOTAL	*84.8*	*3.5*	*86*	*89*	*93*	*287*	*72*	*32*

CL 68.1 SD: 1.0 — **TREES/ACRE**

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR-L	66.9	9.4	50	55	60			
DOUG FIR-T	60.0	8.4	88	96	104			
WHEMLOCK-L	376.1	52.6	1	3	5			
WHEMLOCK-T	507.0	70.9	0	1	2			
NOB FIR-L	352.2	49.3	0	1	1			
NOB FIR-T	714.1	99.9	0	0	0			
R ALDER-L	500.5	70.0	0	1	2			
TOTAL	*35.0*	*4.9*	*149*	*157*	*165*	*49*	*12*	*5*

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	06	29	0001	00A1	251.00	51	578	S	W
03N	06W	29	0001	00A2					
03N	06W	29	0001	00A3					

CL 68.1 COEFF **BASAL AREA/ACRE** # OF PLOTS REQ. INF. POP.

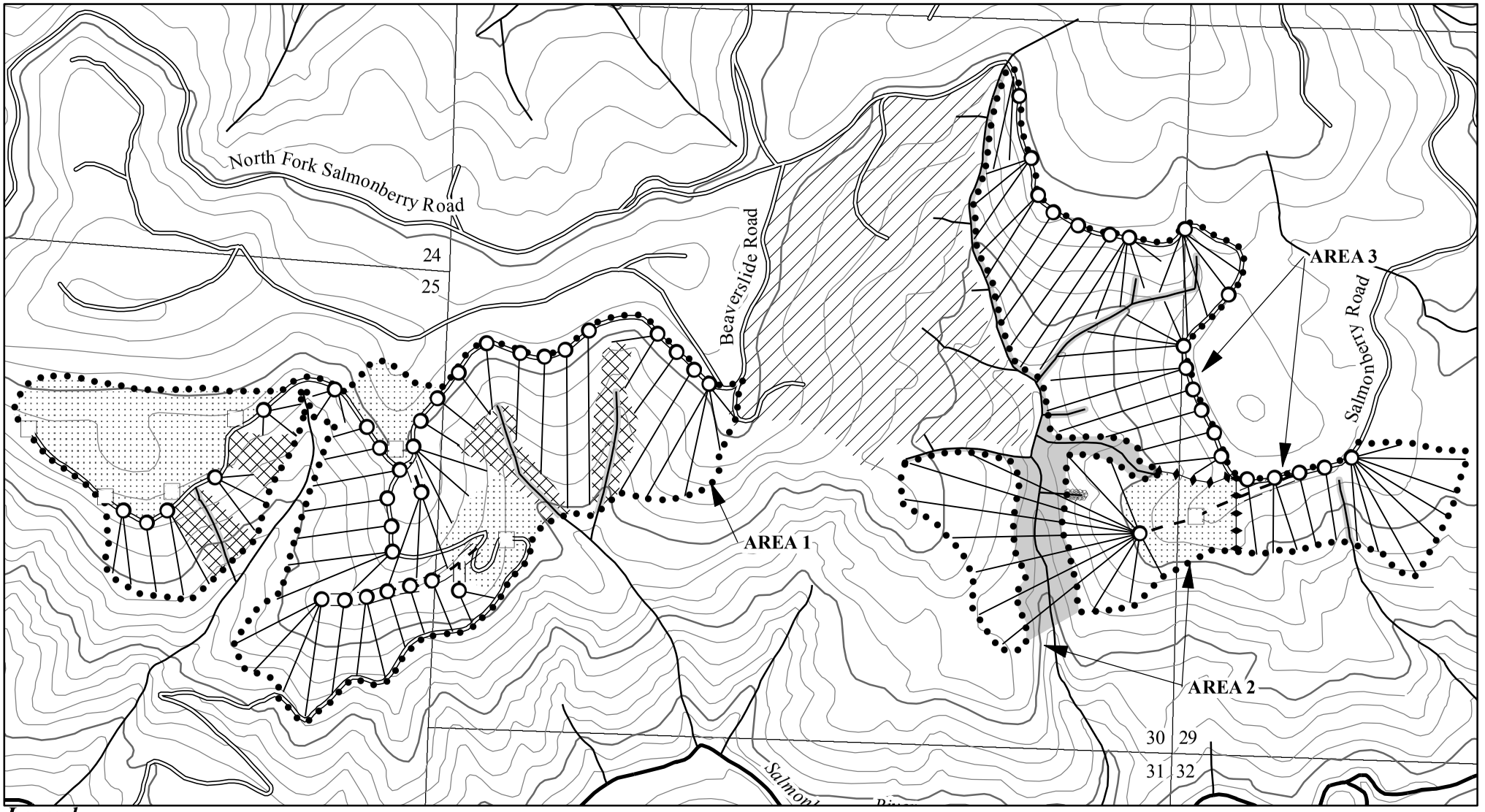
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	47.7	6.7	108	115	123			
DOUG FIR-T	66.2	9.3	93	102	112			
WHEMLOCK-L	351.5	49.2	1	2	3			
WHEMLOCK-T	499.9	69.9	0	1	1			
NOB FIR-L	314.6	44.0	1	2	3			
NOB FIR-T	714.1	99.9	0	0	1			
R ALDER-L	499.9	69.9	0	1	2			
TOTAL	*18.4*	*2.6*	*218*	*224*	*230*	*13*	*3*	*1*

CL 68.1 COEFF **NET BF/ACRE** # OF PLOTS REQ. INF. POP.

SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	48.5	6.8	18,461	19,806	21,150			
DOUG FIR-T	74.1	10.4	12,158	13,565	14,972			
WHEMLOCK-L	346.7	48.5	123	239	355			
WHEMLOCK-T	499.9	69.9	27	91	155			
NOB FIR-L	318.0	44.5	258	464	670			
NOB FIR-T	714.1	99.9	0	62	124			
R ALDER-L	535.4	74.9	36	142	248			
TOTAL	*21.7*	*3.0*	*33,325*	*34,369*	*35,412*	*19*	*5*	*2*

CL 68.1 COEFF **NET CUFT FT/ACRE** # OF PLOTS REQ. INF. POP.

SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	47.1	6.6	4,307	4,611	4,915			
DOUG FIR-T	73.2	10.2	2,944	3,281	3,617			
WHEMLOCK-L	347.6	48.6	27	54	80			
WHEMLOCK-T	502.1	70.2	7	23	39			
NOB FIR-L	314.5	44.0	57	102	147			
NOB FIR-T	714.1	99.9	0	14	29			
R ALDER-L	505.8	70.8	12	42	71			
TOTAL	*19.4*	*2.7*	*7,906*	*8,127*	*8,347*	*15*	*4*	*2*



Legend

- Timber Sale Boundary
- Area Boundary
- Right of Way Boundary
- Stream Buffer Boundary
- Type F Stream
- Type N Stream
- Stream Buffer
- Roads
- New Road Construction
- 400 Foot Contour Band
- 80 Foot Contour Band
- Cable Landing
- Tractor Landing
- Tractor Yarding Area
- Cable Yarding Area
- Reforestation Area
- Thinning Optional Area
- Sections
- AREA 4

LOGGING PLAN

FOR TIMBER SALE CONTRACT # 341-14-11
THE BACK NINE
PORTIONS OF SECTIONS 29 & 30, T3N, R6W, W.M.
AND PORTIONS OF SECTION 25, T3N, R7W, W.M.
TILLAMOOK COUNTY, OREGON

1:12,000

1 inch = 1,000 feet

0 250 500 1,000 1,500 2,000

Feet

N

APPROXIMATE NET ACRES

	TRACTOR	CABLE
AREA 1	38	98
AREA 2	10	28
AREA 3	0	77
AREA 4	1	0
TOTAL	49	203

Forest Grove District GIS
November, 2013
This product is for informational use and may not be suitable for legal, engineering, or surveying purposes.