



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Reimstein
Sale 341-14-04

District: Forest Grove

Date: August 07, 2013

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,942,223.88	\$6,153.18	\$1,948,377.06
		Project Work:	\$(140,930.00)
		Advertised Value:	\$1,807,447.06



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timber description

Location: Portions of Section 27, T1S, R6W, W.M., Washington County, Oregon.

Stand Stocking: 20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	19	0	98
Alder (Red)	16	0	98

Volume by Grade	2S	3S	4S	Camprur	Total
Douglas - Fir	3,777	1,588	328	0	5,693
Alder (Red)	0	0	0	22	22
Total	3,777	1,588	328	22	5,715



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comments: Pond Values Used: 2nd Quarter Calendar Year 2013.

Western Hemlock and Other Conifers Stumpage Price = Pond Value
minus Logging Cost:
 $\$241.06/\text{MBF} = \$485/\text{MBF} - \$243.94/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Cost:
 $\$706.06/\text{MBF} = \$950/\text{MBF} - \$243.94/\text{MBF}$

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: $5,715 \text{ MBF} \times \$1/\text{MBF} = \$5,715$

Intermediate Supports: $10 \text{ supports} \times \$200/\text{support} = \$2,000$

TOTAL Other Costs (with Profit & Risk to be added) = \$7,715

Other Costs (No Profit & Risk added):

Machine Time to Block/Waterbar Roads, and Skid Trails:

$20 \text{ hours} \times \$150/\text{hour} = \$3,000$

Machine Time to Pile Landing Slash and Sort Firewood:

$20 \text{ hours} \times \$150/\text{hour} = \$3,000$

Equipment Cleaning: $4 \times \$1,000/\text{Piece} = \$4,000$

Slash Treatment:

Acres to be Treated -- $50 \text{ acres} \times \$150/\text{acre} = \$7,500$

Equipment Cleaning -- $1 \times \$1,000/\text{Piece} = \$1,000$

Equipment Move-in -- $1 \times \$1,000/\text{Piece} = \$1,000$

Snag Creation: $175 \text{ trees} \times \$40/\text{tree} = \$7,000$

Weyerhaeuser Road Use Fee = \$70,099

TOTAL Other Costs (No Profit & Risk added) = \$96,599

ROAD MAINTENANCE

Move-in: \$2,000

General Road Maintenance: $7 \text{ miles} \times \$1,000/\text{mile} = \$7,000$

TOTAL Road Maintenance: $\$9,000 / 5,715 \text{ MBF} = \$1.57/\text{MBF}$



"STEWARDSHIP IN FORESTRY"

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Reimstein
Sale 341-14-04

District: Forest Grove

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logging conditions

combination#: 1 Douglas - Fir 53.86%
 Alder (Red) 51.00%
 yarding distance: Short (400 ft) **downhill yarding:** No
 logging system: Shovel **Process:** Stroke Delimber
 tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
 loads / day: 4.0 **bd. ft / load:** 4,600
 cost / mbf: \$78.17

 machines: Stroke Delimber (B)

combination#: 2 Douglas - Fir 46.14%
 Alder (Red) 49.00%
 yarding distance: Medium (800 ft) **downhill yarding:** No
 logging system: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber
 tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
 loads / day: 4.0 **bd. ft / load:** 4,100
 cost / mbf: \$203.91

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



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Reimstein Sale 341-14-04

District: Forest Grove

Date: August 07, 2013

logging costs

Operating Seasons:	2.00	Profit Risk:	15.00%
Project Costs:	\$140,930.00	Other Costs (P/R):	\$7,715.00
Slash Disposal:	\$0.00	Other Costs:	\$96,599.00

Miles of Road

Road Maintenance: \$1.57

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.4
Alder (Red)	\$0.00	2.0	3.7



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Timber Sale Appraisal
Reimstein
Sale 341-14-04

District: Forest Grove

Date: August 07, 2013

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$136.19	\$1.60	\$1.53	\$52.41	\$1.35	\$28.96	\$0.00	\$5.00	\$16.90	\$243.94
Alder (Red)									
\$139.78	\$1.60	\$1.53	\$93.49	\$1.35	\$35.66	\$0.00	\$5.00	\$16.90	\$295.31

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$585.10	\$341.16	\$0.00
Alder (Red)	\$0.00	\$575.00	\$279.69	\$0.00



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Reimstein
Sale 341-14-04

District: Forest Grove

Date: August 07, 2013

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	5,693	\$341.16	\$1,942,223.88
Alder (Red)	22	\$279.69	\$6,153.18

Gross Timber Sale Value

Recovery: \$1,948,377.06

Prepared by: Eric Foucht

Phone: 503-359-7473

TIMBER SALE SUMMARY
Reimstein
Contract No. 341-14-04

1. **Location:** Portions of Section 27, T1S, R6W, W.M., Washington County, Oregon.
2. **Type of Sale:** This timber sale is a 173 acre modified clearcut (MC). Area 1 is a 102 acre (MC), Area 2 is a 47 acre (MC), and Area 3 is a 24 acre (MC). The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF, Washington County.
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 April of 2013. For more information see Cruise Report.
6. **Timber Description:** The Timber Sale Area consists of medium to well stocked 60 year old Douglas-fir stands with minor amounts of hardwoods. The average Douglas-fir DBH is 19 inches in Areas 1 and 2, and 17 inches in Area 3. The estimated average net per acre Douglas-fir volume in Area 1 is 32.5 Mbf, 37.8 Mbf in Area 2, and it is 29.6 Mbf in Area 3.
7. **Topography and Logging Method:** Slopes within the sale areas range from 5% to 70% and are generally of a western aspect. Area 1 is 50% ground-based yarding, and 50% cable-based yarding. Area 2 is 51% ground-based yarding, and 49% cable-based logging. Area 3 is 79% ground-based yarding, and 21% cable-based logging. Area 4, Right-of-Way is 100% ground-based yarding. For this sale the average horizontal cable yarding distance is approximately 800 feet and the maximum is approximately 1,300 feet. The average horizontal tractor yarding distance is approximately 400 feet and the maximum is approximately 800 feet.

8. Projects:

Project No. 1: Road construction and improvement	\$39,857.72
Project No. 2: Crushing and road surfacing	\$93,801.77
Project No. 3: Grass seed, fertilize, and mulch	\$1,319.40
Move in and equipment cleaning:	\$5,138.31

Total Credit for all Projects (rounded)	\$140,930.00
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PROJECT COST SUMMARY SHEET

Timber Sale: Reimstein
Sale Number: 341-14-04

PROJECT NO. 1: ROAD CONSTRUCTION AND IMPROVEMENT

CONSTRUCTION

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to B	19+20	\$5,196.99
C to D	34+50	\$10,976.00
E to F	11+50	\$2,867.69
G to H	19+90	\$5,332.85
	85+10 stations	
	1.61 miles	
<u>SUBTOTAL CONSTRUCTION</u>		\$24,373.54

IMPROVEMENTS

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
I to J	78+00	\$12,836.60
K to G	19+25	\$2,647.59
	97+25 stations	
	1.84 miles	
<u>SUBTOTAL IMPROVEMENTS</u>		\$15,484.19
<u>TOTAL PROJECT NO. 1 COST =</u>		\$39,857.72

PROJECT NO. 2: SURFACING

<u>Road Segment</u>	<u>Amount</u>	<u>Type</u>	<u>Cost</u>
A to B	1,731 cy	4" - 0	\$27,505.59
C to D	2,685 cy	4" - 0	\$40,919.40
I to J	952 cy	4" - 0	\$14,434.26
I to J	260 cy	1 1/2" - 0	\$1,079.00
I to J	12 cy	24" - 12"	\$57.96
K to G	774 cy	4" - 0	\$9,705.96
K to G	24 cy	1 1/2" - 0	\$99.60
Totals	284 cy	1 1/2" - 0	
	6,142 cy	4" - 0	
	12 cy	24" - 12"	
<u>TOTAL PROJECT NO. 2 COST =</u>			\$93,801.77

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

	<u>Cost</u>
Grass seed and fertilize areas of disturbed soil.	\$1,129.40
Mulch	\$190.00
<u>TOTAL PROJECT NO. 3 COST =</u>	\$1,319.40

PROJECT NO. 4: Block and vacate

	<u>Cost</u>
Block and Vacate E to F	\$811.41
<u>TOTAL PROJECT NO. 3 COST =</u>	\$811.41

MOVE IN & EQUIPMENT CLEANING **\$5,138.31**

<u>TOTAL ALL PROJECTS</u>	\$140,928.61
<u>TOTAL CREDITS</u>	\$140,930.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Reimstein
Road Segment: A to B

Timber Sale No. : 341-14-04
Construction: 19+20 stations
0.36 miles

PROJECT NO. 1**EXCAVATION**

Clearing and Grubbing (Scatter)	2.27	acres @	\$980.00	per acre =	\$2,221.65
Balanced Road Construction	19.20	sta @	\$90.00	per sta =	\$1,728.00
Turnouts	2	ea @	\$60.00	per ea =	\$93.60
Approach to landing	0.60	sta @	\$90.00	per sta =	\$54.00
Landing (2)	2	ea @	\$285.00	per ea =	\$570.00
Grade, Ditch, and Roll	5.00	sta @	\$28.70	per sta =	\$143.50
Grade and Roll (Outslope)	14.20	sta @	\$27.20	per sta =	\$386.24

PROJECT NO. 1 TOTAL COST = \$5,196.99

PROJECT NO. 2:**SURFACING**

	12	" deep =	65 cy/sta			
A to B	1,248	cy of	4" - 0	@	\$15.89 per cy =	\$19,830.72
Turnouts (2)	44	cy of	4" - 0	@	\$15.89 per cy =	\$699.16
Junction (2)	40	cy of	4" - 0	@	\$15.89 per cy =	\$635.60
Approach to landing (1)	39	cy of	4" - 0	@	\$15.89 per cy =	\$619.71
Landing (2)	360	cy of	4" - 0	@	\$15.89 per cy =	\$5,720.40
Total =	1,731	cy of	4" - 0			

PROJECT NO. 2 TOTAL COST = \$27,505.59

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	1.13	acres @	\$220.00	per acre =	\$249.37
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PROJECT NO. 3 TOTAL COST = \$249.37

TOTAL COST = \$32,951.95

SUMMARY OF CONSTRUCTION COST

Timber Sale: Reimstein
 Road Segment: C to D

Timber Sale No. : 341-14-04
 Construction : 34+50 stations
0.65 miles

PROJECT NO. 1**EXCAVATION**

Clearing and Grubbing (Scatter)	3.96	acres @	\$980.00	per acre =	\$3,880.85
Balanced Road Construction	26.00	sta @	\$90.00	per sta =	\$2,340.00
Drift	8.50	sta @	\$150.00	per sta =	\$1,275.00
Turnouts	5	ea @	\$60.00	per ea =	\$300.00
Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing (1)	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	34.50	sta @	\$28.70	per sta =	\$990.15

TOTAL EXCAVATION COSTS= **\$9,146.00**

CULVERTS - MATERIALS & INSTALLATION**Culverts**

90 LF of 18" \$1,800.00

Culvert Markers

3 markers \$30.00

TOTAL CULVERT COSTS = **\$1,830.00**

PROJECT NO. 1 TOTAL COST = \$10,976.00

PROJECT NO. 2:

SURFACING	12	" deep =	65 cy/sta			
C to D	2,243	cy of	4" - 0	@	\$15.24	per cy = \$34,183.32
Curve Widening	112	cy of	4" - 0	@	\$15.24	per cy = \$1,706.88
Turnouts (5)	110	cy of	4" - 0	@	\$15.24	per cy = \$1,676.40
Turnaround (1)	20	cy of	4" - 0	@	\$15.24	per cy = \$304.80
Junction (1)	20	cy of	4" - 0	@	\$15.24	per cy = \$304.80
Landing (1)	180	cy of	4" - 0	@	\$15.24	per cy = \$2,743.20
Total =	2,685	cy of	4" - 0			

PROJECT NO. 2 TOTAL COST = \$40,919.40

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil. 1.98 acres @ \$220.00 per acre = \$435.61

PROJECT NO. 3 TOTAL COST = \$435.61

TOTAL COST = \$52,331.01

SUMMARY OF CONSTRUCTION COST

Timber Sale: Reimstein
Road Segment: E to F

Timber Sale No. : 341-14-04
Construction : 11+50 stations
0.22 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	1.06	acres @	\$980.00	per acre =	\$1,034.89
Balanced Road Construction	8.00	sta @	\$90.00	per sta =	\$720.00
Drift	3.50	sta @	\$150.00	per sta =	\$525.00
Turnaround	1	ea @	\$75.00	per ea =	\$75.00
Small Landing	1	ea @	\$200.00	per ea =	\$200.00
Grade and Roll (Outslope)	11.50	sta @	\$27.20	per sta =	\$312.80

PROJECT NO. 1 TOTAL COST = \$2,867.69

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	0.53	acres @	\$220.00	per acre =	\$116.16
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PROJECT NO. 3 TOTAL COST = \$116.16

PROJECT NO. 4:

Construct Tank Trap / Block to Vehicle Access	1	ea @	\$50.00	per ea =	\$50.00
Construct Waterbars	5	ea @	\$25.00	per ea =	\$125.00
Slash Road Surface	11.50	sta @	\$25.00	per sta =	\$287.50
Grass seed and fertilize areas of disturbed soil.	11.50	sta @	\$30.34	per sta =	\$348.91

PROJECT NO. 4 TOTAL COST = \$811.41

TOTAL COST = \$3,795.27

SUMMARY OF CONSTRUCTION COST

Timber Sale:	<u>Reimstein</u>	Timber Sale No. :	<u>341-14-04</u>
Road Segment:	<u>G to H</u>	Construction :	<u>19+90</u> stations
			<u>0.38</u> miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	2.28	acres @	\$980.00	per acre =	\$2,238.52
Balanced Road Construction	15.60	sta @	\$90.00	per sta =	\$1,404.00
Drift	4.30	sta @	\$150.00	per sta =	\$645.00
Construct Settling Ponds	1.00	ea @	\$15.00	per ea =	\$15.00
Turnouts	2	ea @	\$60.00	per ea =	\$99.20
Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing (1)	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	19.90	sta @	\$28.70	per sta =	\$571.13

PROJECT NO. 1 TOTAL COST = \$5,332.85

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	1.14	acres @	\$220.00	per acre =	\$251.26
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PROJECT NO. 3 TOTAL COST = \$251.26

TOTAL COST = \$5,584.11

SUMMARY OF CONSTRUCTION COST

Timber Sale: Reimstein
 Road Segment: I to J

Timber Sale No. : 341-14-04
 Improvement : 78+00 stations
1.48 miles

PROJECT NO. 1**EXCAVATION**

Repair Culvert Inlet (Sta 25+05 and 73+90)	2	ea @	\$50.00	per ea =	\$100.00
Grade, Ditch, and Roll	78.00	sta @	\$28.70	per sta =	\$2,238.60
Construct Settling Ponds	12.00	ea @	\$15.00	per ea =	\$180.00
Clean/Construct ditch & endhaul waste material	16.35	sta @	\$80.00	per sta =	\$1,308.00

TOTAL EXCAVATION COSTS= **\$3,826.60**

CULVERTS - MATERIALS & INSTALLATION

Culverts
 444 LF of 18" \$8,880.00

Culvert Markers
 13 markers \$130.00

TOTAL CULVERT COSTS = **\$9,010.00**

PROJECT NO. 1 TOTAL COST = \$12,836.60

PROJECT NO. 2:**SURFACING**

	10	" deep =	61 cy/sta			
I to J	732	cy of	4" - 0	@	\$15.17	per cy = \$11,104.44
Large Turnout at Dispersed Campsite	92	cy of	4" - 0	@	\$15.17	per cy = \$1,388.06
Turnouts (8)	88	cy of	4" - 0	@	\$15.17	per cy = \$1,334.96
Junctions (2)	40	cy of	4" - 0	@	\$15.17	per cy = \$606.80
Culvert Bedding	260	cy of	1 1/2" - 0	@	\$4.15	per cy = \$1,079.00
Energy Dissipator @ Sta. 21+60	12	cy of	24" - 12"	@	\$4.83	per cy = \$57.96
Totals =	260	cy of	1 1/2" - 0			
	952	cy of	4" - 0			
	12	cy of	24" - 12"			

PROJECT NO. 2 TOTAL COST = \$15,571.22

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	0.30 acres @	\$220.00	per acre =	\$66.00
Mulch	0.30 acres @	\$600.00	per acre =	\$180.00

PROJECT NO. 3 TOTAL COST = \$246.00

TOTAL COST = \$28,653.82

SUMMARY OF CONSTRUCTION COST

Timber Sale: Reimstein
Road Segment: K to G

Timber Sale No. : 341-14-04
Improvement : 19+25 stations
0.36 miles

PROJECT NO. 1**EXCAVATION**

Grade, Ditch, and Roll	14.55	sta @	\$28.70	per sta =	\$417.59
Construct Settling Ponds	4.00	ea @	\$15.00	per ea =	\$60.00
Clean/Construct ditch & endhaul waste material	12.50	sta @	\$60.00	per sta =	<u>\$750.00</u>

TOTAL EXCAVATION COSTS= **\$1,227.59**

CULVERTS - MATERIALS & INSTALLATION

Culverts
70 LF of 18" \$1,400.00

Culvert Markers
2 markers \$20.00

TOTAL CULVERT COSTS = **\$1,420.00**

PROJECT NO. 1 TOTAL COST = \$2,647.59

PROJECT NO. 2:

SURFACING	6	" deep =	36 cy/sta		
K to G	693	cy of	4" - 0	@	\$12.54 per cy = \$8,690.22
Turnouts (1)	11	cy of	4" - 0	@	\$12.54 per cy = \$137.94
Junctions (2)	70	cy of	4" - 0	@	\$12.54 per cy = \$877.80
Culvert Bedding	24	cy of	1 1/2" - 0	@	\$4.15 per cy = <u>\$99.60</u>
Totals =	774	cy of	4" - 0		

PROJECT NO. 2 TOTAL COST = \$9,805.56

PROJECT NO. 3:

Grass seed and fertilize areas of disturbed soil.	0.05 acres @	\$220.00 per acre =	\$11.00
Mulch	2.00 ea @	\$5.00 ea =	\$10.00

PROJECT NO. 3 TOTAL COST = \$21.00

TOTAL COST = \$12,474.15

Move-In & Equipment Cleaning

Timber Sale: Reimstein
Sale Number: 341-14-04

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

No.	EQUIPMENT DESCRIPTION	Equipment Cleaning	Base			Woods		Pilot Area Move			Within			Within		
			Cost			Cost		Cars	Area (\$/mile)	Mileage	Begin	End	Total Miles	Area Cost	Total Cost	
1	Graders		\$300.00			\$237.86			\$3.65	0.0	0.0		\$0.00	\$537.86		
1	Rollers (smooth/grid) & Compactors		\$308.59			\$224.25			\$5.00	0.0	0.0		\$0.00	\$532.84		
1	Excavators (Large)	\$1,000	\$466.14			\$363.73		1	\$44.80	0.0	0.0		\$0.00	\$1,829.87		
1	Tractor (D8)	\$1,000	\$473.80			\$336.13		2	\$15.10	0.0	0.0		\$0.00	\$1,809.93		
2	Dump Truck (10 cy +)		\$233.34			\$56.00			\$2.85	0.0	0.0		\$0.00	\$289.34		
1	Water Truck (2500 Gal)		\$111.67			\$26.80			\$2.85	0.0	0.0		\$0.00	\$138.47		
TOTAL MOVE-IN COSTS:														\$5,138.31		

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Timber Sale: Reimstein
Sale Number: 341-14-04
Pit Name: Barney

Swell: 130%
Shrinkage: 116% 4"-0 (trk measure) 6,142 cy
Drill Pct.: 100%

Total Truck Yardage: 6,142 cy
Total In Place Yardage: 4,724 cy

Pit Development & Cleanup including Clearing and grubbing,
place overburden in Waste Area, spread and compact. \$9,990.00

Drill & Shoot:	<u>\$2.50 /cy x</u>	<u>4,724 cy</u>	=	<u>\$11,810.58</u>
Push Rock:	<u>\$0.70 /cy x</u>	<u>6,142 cy</u>	=	<u>\$4,299.05</u>
Load Crusher:	<u>\$0.70 /cy x</u>	<u>6,142 cy</u>	=	<u>\$4,299.05</u>
Crushing (4" - 0):	<u>\$3.00 /cy x</u>	<u>6,142 cy</u>	=	<u>\$18,424.50</u>
Load Dump Truck:	<u>\$0.70 /cy x</u>	<u>6,142 cy</u>	=	<u>\$4,299.05</u>
		Subtotal		<u>\$53,122.23</u>

Equipment Cleaning				<u>\$1,000.00</u>
Move in Crusher (2 Stage)				<u>\$1,917.00</u>
Set up Crusher				<u>\$1,918.00</u>
Move in and set up Drill and Compressor				<u>\$494.83</u>
Move in Excavator				<u>\$829.87</u>
Move in D-8				<u>\$809.93</u>
Move in Loader				<u>\$731.55</u>
Clean Up Pit				<u>\$300.00</u>
Gradation Tests (\$65/2000 cy)	<u>\$65.00</u>	<u>cy/2000cy x</u>	<u>4</u> tests	<u>\$260.00</u>
			Subtotal	<u>\$8,261.18</u>

PIT DEVELOPMENT COST \$9.99/cy **TOTAL PRODUCTION COST** \$61,383.41

CRUISE REPORT
Reimstein
341-14-04

1. LOCATION:

Portions of Section 27, T1S, R6W, W.M., Washington County, Oregon.

1. CRUISE DESIGN:

The cruise design assumed a Coefficient of Variation (CV%) of 50%, an average stand diameter of 18 inches, a desired sampling error (SE%) of 9% and a minimum sample size of 100 grade trees. Pre-cruise plots indicated that approximately 5 trees per plot could be realized with a 40 BAF prism.

2. SAMPLING METHOD:

The Sale Area was cruised in 04/25/2013 with 81 variable radius grade plots using a 40 BAF prism. Plots were laid out on a 4 chain x 8 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

3. CRUISE RESULTS

368 trees were measured and graded producing a 1.4 percent sample and a cumulative sampling error of 8.5% on the Douglas-fir Board Foot Volume.

4. TREE MEASUREMENT AND GRADING:

All grade plot sample trees were measured and graded following Columbia River Log Scale grade rules and favoring 40 foot segments.

a) **Height Standards:**

Total tree heights were measured to the nearest foot. Bole heights were calculated to a six inch top.

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 Mark Savage and Joe Koch.

Prepared by:

Mark Savage	Date
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Reviewed by:

Eric Foucht	Date
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VOLUME SUMMARY
(Shown in MBF)
REIMSTEIN
Sale No. 341-14-04
June 2013

AREA 1: MC (102 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir	Cruise Volume	2,330	827	163	0	3,320
	Hidden D&B (2%)	(47)	(17)	(3)	()	(65)
	NET TOTAL	2,283	810	160	0	3,255
	% of Total	70	25	5	0	

AREA 2: MC (47 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir	Cruise Volume	1,110	559	109	0	1,778
	Hidden D&B (2%)	(22)	(11)	(2)	()	(35)
	NET TOTAL	1,088	548	107	0	1,743
	% of Total	62	31	6	0	

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Red alder	Cruise Volume	0	0	0	22	22
	Hidden D&B (2%)	()	()	()	()	()
	NET TOTAL	0	0	0	22	22
	% of Total	0	0	0	100	

AREA 3: MC (24 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir	Cruise Volume	414	235	62	0	711
	Hidden D&B (2%)	(8)	(5)	(1)	()	(14)
	NET TOTAL	406	230	61	0	697
	% of Total	58	33	9	0	

SALE TOTAL

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir		3,777	1,588	328	0	5,693
Red alder		0	0	0	22	22
TOTAL		0	0	0	22	5,715

TC TLOGSTVB				Log Stock Table - MBF															
				Project:				REIMST											
T01S R06W S27 T00A1										T01S R06W S27 T00A1									
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		Page		1	
01S		06W		27		0001		00A1		102.00		29		124		Date		8/5/2013	
																Time		1:45:47PM	
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
DF			CU	3															
DF			CU	4															
DF			CU	6															
DF			2M	12		9		9	.3							9			
DF			2M	18		13		13	.4								13		
DF			2M	30		10		10	.3					10					
DF			2M	32		28		28	.8					11		16			
DF			2M	40		2,299	1.3	2,270	68.4					445		503	955	349	18
DF			3M	30		3		3	.1			3							
DF			3M	32		27		27	.8			27							
DF			3M	34		18		18	.6			18							
DF			3M	36		29		29	.9			12	17						
DF			3M	38		73		73	2.2			43	30						
DF			3M	40		682	.9	676	20.4			73	224	379					
DF			4M	12		12		12	.4			12							
DF			4M	14		10		10	.3			10							
DF			4M	16		10		10	.3			9	1						
DF			4M	18		17		17	.5			15	1						
DF			4M	20		10		10	.3			10							
DF			4M	22		14		14	.4			14							
DF			4M	24		21		21	.6			8	1	12					
DF			4M	26		26		26	.8			26							
DF			4M	28		11		11	.3			11							
DF			4M	30		28		28	.8			28							
DF			4M	32		4		4	.1			4							
DF			Totals			3,354	1.0	3,319	99.5			324	274	391	466	519	964	362	18
WH			3M	32		4		4	21.7			4							
WH			3M	40		14		14	78.3					14					
WH			Totals			18		18	.5			4		14					
Total All Species						3,372	1.0	3,337	100.0			328	274	405	466	519	964	362	18

T		TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)												Page		1			
				Project: REIMST												Date		8/5/2013			
																Time		1:45:47PM			
T01S R06W S27 T00A1												T01S R06W S27 T00A1									
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		CuFt		BdFt			
01S		06W		27		0001		00A1		102.00		29		124		S		W			
S So Gr Spp T rt ad		% Net BdFt		Bd. Ft. per Acre Def% Gross Net		Total Net MBF		Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
								Log Scale Dia.				Log Length				Ln Dia Bd CF/ Ft In Ft Lf					
DF		CU												4 18 0.00				3.4			
DF		2M		70	1.2	23,121	22,838	2,330	53 47				1	0	1	97	39 15 362 1.89	63.1			
DF		3M		25	.7	8,164	8,107	827	100				0 5 94				39 8 105 0.69	77.5			
DF		4M		5		1,594	1,594	163	100				36	62	2		20 6 26 0.36	61.0			
DF Totals				99	1.0	32,879	32,539	3,319	30 37 33				2	3	2	92	33 10 159 1.07	205.0			
WH		3M		100	180		180	18	100				22 78				36 9 115 0.86	1.6			
WH Totals				1	180		180	18	100				22 78				36 9 115 0.86	1.6			
Type Totals					1.0	33,058	32,718	3,337	30 37 33				2	3	2	92	33 10 158 1.07	206.5			

TC		TSTNDSUM													Stand Table Summary												
Project															REIMST												
T01S R06W S27 T00A1															T01S R06W S27 T00A1												
Twp	Rge	Sec	Tract		Type			Acres		Plots	Sample Trees			Page:	1												
01S	06W	27	0001		00A1			102.00		29	124			Date:	08/05/2015												
															Time:	1:45:46PM											
S Spc	T	Sample		FF	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.	Bd.Ft.	Tons	Cunits	MBF											
DF		8	2	89	101	7.903	2.76	7.90	6.5	35.0	1.46	51	277	149	52	28											
DF		9	1	86	76	3.122	1.38	3.12	8.7	50.0	.78	27	156	79	28	16											
DF		10	2	86	91	5.058	2.76	7.59	9.5	43.3	2.06	72	329	210	74	34											
DF		13	2	88	86	2.993	2.76	5.99	13.5	50.0	2.31	81	299	235	83	31											
DF		14	8	88	94	10.322	11.03	20.64	17.3	71.9	10.15	356	1,484	1,036	363	151											
DF		15	1	92	124	1.124	1.38	3.37	18.0	83.3	1.73	61	281	177	62	29											
DF		16	3	90	117	2.964	4.14	6.92	24.0	105.7	4.73	166	731	482	169	75											
DF		17	5	87	113	4.375	6.90	10.50	25.6	102.5	7.65	268	1,076	780	274	110											
DF		18	7	87	113	5.464	9.66	14.05	27.1	111.1	10.84	380	1,561	1,106	388	159											
DF		19	7	89	120	4.904	9.66	14.01	29.3	131.5	11.69	410	1,842	1,192	418	188											
DF		20	9	88	119	5.690	12.41	15.17	33.9	140.0	14.66	514	2,124	1,495	525	217											
DF		21	6	87	124	3.441	8.28	10.32	34.1	147.8	10.03	352	1,525	1,023	359	156											
DF		22	11	89	123	5.748	15.17	16.20	40.9	182.9	18.88	662	2,963	1,925	676	302											
DF		23	7	88	133	3.346	9.66	10.04	44.8	202.9	12.81	450	2,037	1,307	458	208											
DF		24	6	89	131	2.634	8.28	8.34	45.9	213.2	10.90	383	1,778	1,112	390	181											
DF		25	11	89	132	4.451	15.17	13.76	51.4	234.7	20.16	707	3,229	2,056	721	329											
DF		26	7	88	133	2.619	9.66	7.86	58.3	275.2	13.06	458	2,162	1,332	467	221											
DF		27	8	89	132	2.775	11.03	7.98	64.1	306.5	14.58	512	2,446	1,487	522	249											
DF		28	12	88	134	3.871	16.55	11.61	67.8	328.3	22.45	788	3,813	2,290	803	389											
DF		29	4	87	123	1.203	5.52	3.31	71.4	342.7	6.73	236	1,134	686	241	116											
DF		30	1	89	126	.281	1.38	.84	75.1	363.3	1.80	63	306	184	65	31											
DF		31	1	90	151	.263	1.38	.79	95.2	506.7	2.14	75	400	218	77	41											
DF		32	1	89	128	.247	1.38	.74	87.9	446.7	1.86	65	331	189	66	34											
DF		37	1	84	119	.185	1.38	.55	107.9	460.0	1.70	60	255	174	61	26											
DF		Totals	123	88	113	84.981	169.66	201.60	35.7	161.4	205.15	7,198	32,539	20,926	7,342	3,319											
WH		18	1	82	95	.781	1.38	1.56	31.1	115.0	1.55	49	180	159	50	18											
WH		Totals	1	82	95	.781	1.38	1.56	31.1	115.0	1.55	49	180	159	50	18											
Totals			124	88	113	85.762	171.03	203.16	35.7	161.0	206.71	7247	32,718	21,084	7,392	3,337											

TC		TLOGSTVB		Log Stock Table - MBF																
				Project: REIMST																
T01S R06W S27 T00A2										T01S R06W S27 T00A2										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1											
01S	06W	27	0002	00A2	47.00	15	82	Date	6/26/2013											
								Time	9:06:59AM											
S	So	Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches												
Spp	T	rt	de	Len	MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF			CU	3																
DF			CU	6																
DF			CU	12																
DF			2M	18	10		10	.6								10				
DF			2M	24	13		13	.7								13				
DF			2M	40	1,097	.9	1,087	61.2						212	271	543	62			
DF			3M	28	1		1	.1			1									
DF			3M	34	11		11	.6			6	4								
DF			3M	36	9		9	.5				9								
DF			3M	38	22		22	1.2			6	16								
DF			3M	40	518	.4	516	29.0			40	188	289							
DF			4M	12	6		6	.3			6									
DF			4M	14	3		3	.2			3									
DF			4M	16	7		7	.4			7									
DF			4M	18	6		6	.3			4	1								
DF			4M	20	5		5	.3			4	2								
DF			4M	22	14		14	.8			14									
DF			4M	24	16		16	.9			16									
DF			4M	26	9		9	.5			9									
DF			4M	28	11		11	.6			11									
DF			4M	30	3		3	.2			3									
DF			4M	32	7		7	.4			7									
DF			4M	34	4		4	.3			4									
DF			4M	38	12		12	.7			12									
DF			4M	40	5		5	.3			5									
DF			Totals		1,790		1,778	97.8			159	220	289	212	271	566	62			
RA			CR	14	4		4	20.0					4							
RA			CR	32	6		6	26.1			6									
RA			CR	36	7		7	31.9				7								
RA			CR	40	5		5	22.1			5									
RA			Totals		22		22	1.2			11	7	4							
NF			CU	7																
NF			3M	40	14		14	80.0				14								
NF			4M	18	4		4	20.0			4									
NF			Totals		18		18	1.0			4	14								
Total All Species					1,830		1,818	100.0			174	242	293	212	271	566	62			

T		TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page		1						
				Project: REIMST										Date		6/26/2013						
														Time		9:06:59AM						
T01S R06W S27 T00A2										T01S R06W S27 T00A2												
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		CuFt		BdFt				
01S		06W		27		0002		00A2		47.00		15		82		S		W				
S So Gr T rt ad Spp		% Net BdFt		Bd. Ft. per Acre Def% Gross Net			Total Net MBF		Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
									Log Scale Dia.				Log Length				Ln Dia Bd CF/ Ft In Ft Lf					
DF		CU															6 15 0.00				4.4	
DF		2M		62 .8 23,813 23,615			1,110		64 36				1 1 98				39 15 347 1.86				68.0	
DF		3M		31 .4 11,950 11,903			559		100				0 2 98				39 9 120 0.76				99.0	
DF		4M		7 2,316 2,316			109		100				26 49 10 15				22 6 29 0.38				80.2	
DF Totals				98 .6 38,079 37,834			1,778		38 40 22				2 4 1 93				33 10 150 1.02				251.7	
RA		CR		100 479 479			22		100				20 26 54				30 8 61 0.80				7.8	
RA Totals				1 479 479			22		100				20 26 54				30 8 61 0.80				7.8	
NF		CU															7 12 0.00				2.5	
NF		3M		80 299 299			14		100				100				40 9 120 0.61				2.5	
NF		4M		20 75 75			4		100				100				18 7 30 0.35				2.5	
NF Totals				1 374 374			18		100				20 80				22 9 50 0.48				7.5	
Type Totals				.6 38,932 38,686			1,818		39 39 22				3 4 2 92				33 10 145 1.01				267.0	

TC		TSTNDSUM													Stand Table Summary												
Project															REIMST												
T01S R06W S27 T00A2															T01S R06W S27 T00A2												
Twp		Rge		Sec		Tract		Type			Acres		Plots		Sample Trees			Page:		1							
01S		06W		27		0002		00A2			47.00		15		82			Date:		06/26/2011							
																		Time:		9:04:59AM							
S SpC	T	Sample		Av		Trees/			Average Log		Net		Net		Totals												
		DBH	Trees	FF 16'	Ht Tot	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF												
DF		9	1	91	91	6.036	2.67	6.04	10.9	60.0	1.88	66	362	88	31	17											
DF		13	1	89	103	2.893	2.67	5.79	16.7	75.0	2.76	97	434	130	46	20											
DF		14	5	89	101	12.473	13.33	24.95	18.1	78.0	12.87	452	1,946	605	212	91											
DF		15	2	89	101	4.346	5.33	8.69	21.2	90.0	5.26	184	782	247	87	37											
DF		16	5	86	99	9.549	13.33	19.10	23.8	97.0	12.94	454	1,853	608	213	87											
DF		17	3	87	106	5.075	8.00	10.15	29.0	120.0	8.38	294	1,218	394	138	57											
DF		18	5	88	113	7.545	13.33	19.62	27.0	108.5	15.12	530	2,128	711	249	100											
DF		19	5	88	120	6.772	13.33	18.96	29.5	121.4	15.96	560	2,302	750	263	108											
DF		20	6	89	123	7.334	16.00	20.78	33.8	147.1	20.02	703	3,056	941	330	144											
DF		21	3	89	129	3.326	8.00	9.98	37.1	172.2	10.56	370	1,718	496	174	81											
DF		22	10	87	124	10.102	26.67	30.31	38.3	167.7	33.10	1,161	5,081	1,556	546	239											
DF		23	6	88	123	5.545	16.00	16.64	40.5	181.1	19.22	674	3,013	903	317	142											
DF		24	5	87	121	4.244	13.33	12.73	44.8	196.7	16.26	571	2,504	764	268	118											
DF		25	6	87	124	4.694	16.00	14.08	49.9	221.1	20.02	703	3,113	941	330	146											
DF		26	7	88	124	5.063	18.67	14.47	58.2	266.5	23.99	842	3,855	1,127	396	181											
DF		27	2	87	124	1.341	5.33	4.02	57.0	253.3	6.53	229	1,019	307	108	48											
DF		28	4	89	133	2.495	10.67	7.48	68.2	334.2	14.54	510	2,501	683	240	118											
DF		29	2	83	119	1.163	5.33	3.49	64.1	271.7	6.38	224	948	300	105	45											
DF		Totals		78	88	113	99.996	208.00	247.26	34.9	153.0	245.80	8,624	37,834	11,552	4,054	1,778										
RA		14	1	73	47	2.495	2.67	2.49	22.8	50.0	1.56	57	125	73	27	6											
RA		16	1	77	86	1.910	2.67	3.82	16.9	65.0	1.78	65	248	83	30	12											
RA		18	1	73	55	1.509	2.67	1.51	44.7	70.0	1.86	67	106	87	32	5											
RA		Totals		3	74	62	5.913	8.00	7.82	24.1	61.2	5.19	189	479	244	89	22										
NF		14	1	90	102	2.495	2.67	4.99	15.5	75.0	1.85	77	374	87	36	18											
NF		Totals		1	90	102	2.495	2.67	4.99	15.5	75.0	1.85	77	374	87	36	18										
Totals				82	87	110	108.403	218.67	260.07	34.2	148.8	252.84	8891	38,686	11,884	4,179	1,818										

TC TLOGSTVB				Log Stock Table - MBF															
				Project: REIMST															
T01S R06W S27 T00A3										T01S R06W S27 T00A3									
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1										
01S	06W	27	0003	00A3	24.00	8	38	Date	6/26/2013										
								Time	9:12:06AM										
S	So Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches												
Spp	T	rt de	Len	MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CU	3																
DF		CU	4																
DF		CU	10																
DF		CU	14																
DF		2M	12	7		7	.9							7					
DF		2M	34	9		9	1.2						9						
DF		2M	40	401	.7	398	56.1						123	151	124				
DF		3M	26	9		9	1.3					9							
DF		3M	34	9		9	1.2			4	4								
DF		3M	36	5		5	.7				5								
DF		3M	38	19		19	2.7			10	9								
DF		3M	40	193		193	27.1			20	71	102							
DF		4M	12	4		4	.5			4									
DF		4M	14	2		2	.3			2									
DF		4M	16	10		10	1.4			10									
DF		4M	18	7		7	1.1			7									
DF		4M	20	1		1	.1			1									
DF		4M	22	2		2	.3			2									
DF		4M	26	8		8	1.1			8									
DF		4M	30	15		15	2.1			15									
DF		4M	32	14		14	1.9			14									
DF		Totals		713		710	100.0			96	89	111	132	158	124				
Total All Species				713		710	100.0			96	89	111	132	158	124				

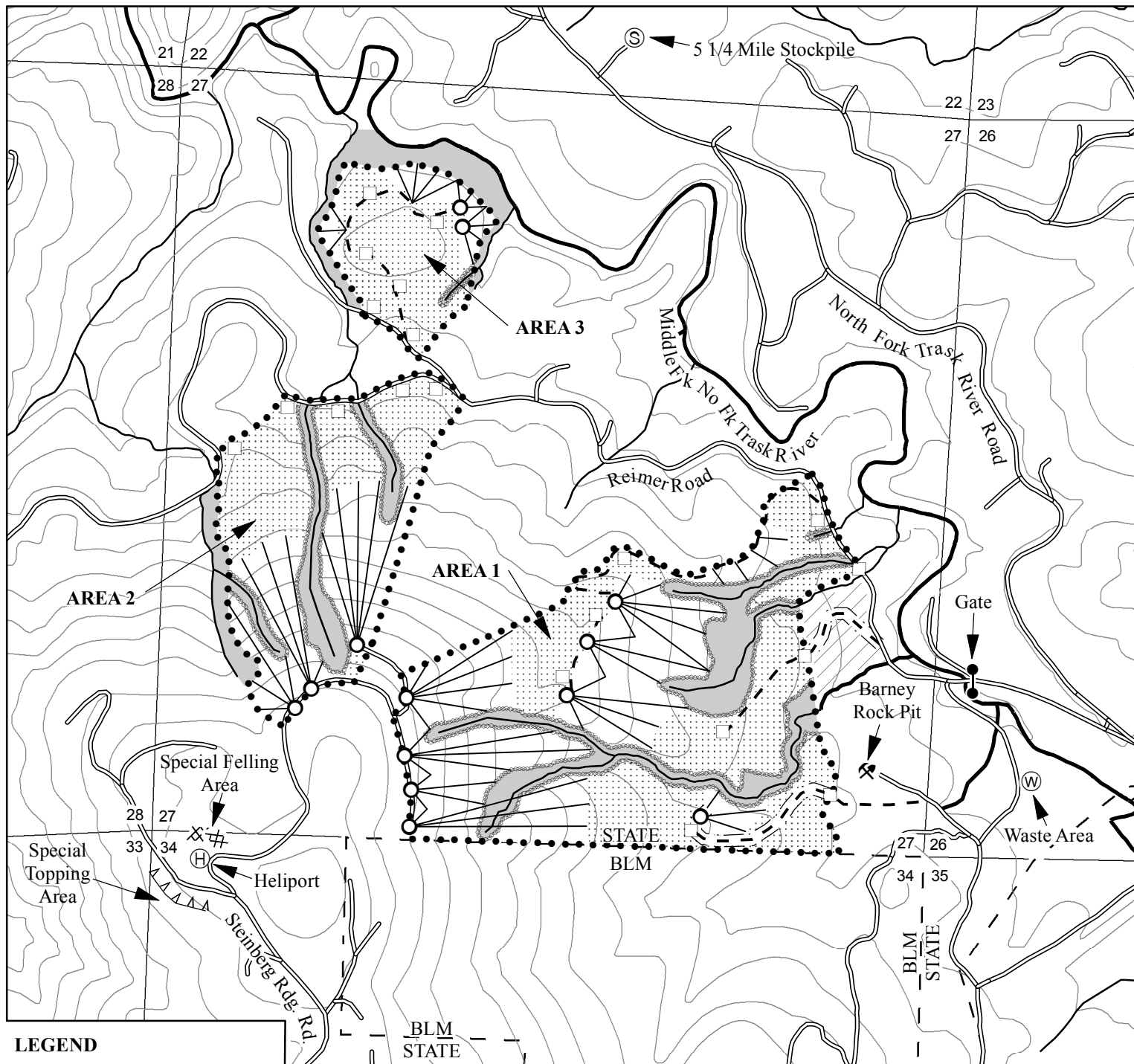
T		TSPCSTGR										Species, Sort Grade - Board Foot Volumes (Type)										Page		1																			
												Project: REIMST										Date		6/26/2013																			
																						Time		9:12:06AM																			
T01S R06W S27 T00A3															T01S R06W S27 T00A3																												
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		CuFt		BdFt																									
01S		06W		27		0003		00A3		24.00		8		38		S		W																									
				%								Percent Net Board Foot Volume								Average Log				Logs Per /Acre																			
S		So		Gr		Net		Bd. Ft. per Acre		Total		Log Scale Dia.				Log Length				Ln		Dia				Bd		CF/															
Spp		T		rt		ad		BdFt		Def%		Gross		Net		Net MBF		4-5		6-11		12-16		17+		12-20		21-30		31-35		36-99		Ft		In		Ft		Lf			
DF						CU																						9		13				0.00		10.3							
DF						2M		58		.7		17,350		17,236		414				.77		23				2				2		96		39		14		294		1.70		58.6	
DF						3M		33				9,778		9,778		235		100										4		4		92		39		9		108		0.72		90.3	
DF						4M		9				2,584		2,584		62		100								39		39		22		21		6		27		0.30		96.4			
DF		Totals				100		.4		29,712		29,599		710				42		45		13				4		5		4		87		31		9		116		0.88		255.6	
Type Totals								.4		29,712		29,599		710				42		45		13				4		5		4		87		31		9		116		0.88		255.6	

Stand Table Summary																		
Project REIMST																		
T01S R06W S27 T00A3										T01S R06W S27 T00A3								
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1									
01S	06W	27	0003	00A3	24.00	8	38	Date:	06/26/2013	Time:	9:11:26AM							
Spc	S T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	Totals					
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.		Net Bd.Ft.	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF		
DF		8	1	85	74	14.324	5.00	14.32	3.7	20.0	1.51	53	286	36	13	7		
DF		9	2	89	77	22.635	10.00	22.64	8.5	45.0	5.45	191	1,019	131	46	24		
DF		12	1	88	108	6.366	5.00	12.73	13.6	60.0	4.95	174	764	119	42	18		
DF		15	3	88	102	12.223	15.00	24.45	21.4	91.7	14.90	523	2,241	358	125	54		
DF		16	2	88	99	7.162	10.00	14.32	18.6	82.5	7.59	266	1,182	182	64	28		
DF		18	2	88	115	5.659	10.00	11.32	34.1	135.0	11.01	386	1,528	264	93	37		
DF		19	5	88	108	12.697	25.00	33.01	28.6	117.7	26.90	944	3,885	646	227	93		
DF		20	5	88	115	11.459	25.00	29.79	33.8	138.5	28.72	1,008	4,125	689	242	99		
DF		21	4	88	118	8.315	20.00	24.95	32.9	139.2	23.40	821	3,472	561	197	83		
DF		22	3	87	121	5.682	15.00	15.15	41.2	177.5	17.81	625	2,690	428	150	65		
DF		23	3	86	102	5.199	15.00	13.86	39.6	165.0	15.66	549	2,288	376	132	55		
DF		24	1	89	119	1.592	5.00	4.77	46.1	210.0	6.27	220	1,003	151	53	24		
DF		25	2	87	115	2.934	10.00	8.80	46.3	191.7	11.60	407	1,687	278	98	40		
DF		26	2	85	120	2.712	10.00	8.14	49.0	215.0	11.37	399	1,749	273	96	42		
DF		27	1	85	119	1.258	5.00	3.77	57.0	243.3	6.13	215	918	147	52	22		
DF		29	1	83	113	1.090	5.00	3.27	59.5	233.3	5.55	195	763	133	47	18		
DF		Totals		38	88	100		121.307	190.00	245.30	28.4	120.7	198.83	6,976	29,599	4,772	1,674	710
Totals				38	88	100		121.307	190.00	245.30	28.4	120.7	198.83	6976	29,599	4,772	1,674	710

TC PSTATS					PROJECT STATISTICS				PAGE	1
					PROJECT	REIMST	DATE 8/5/2013			
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
01S	06	27	0001	00A1	102.00	29	124	S	W	
					TREES	ESTIMATED	PERCENT			
					PER PLOT	TOTAL	SAMPLE			
					TREES	TREES	TREES			
TOTAL			29	124	4.3					
CRUISE			29	124	4.3	8,748	1.4			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
SAMPLE		TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
TREES		/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR		123	85.0	19.1	113	38.8	169.7	32,879	32,539	7,198
WHEMLOCK		1	.8	18.0	95	0.3	1.4	180	180	49
TOTAL		124	85.8	19.1	113	39.1	171.0	33,058	32,718	7,247
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL	68.1	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		57.5	5.2	541	571	600				
WHEMLOCK										
TOTAL		57.8	5.2	538	568	597	134	33	15	
CL	68.1	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		52.2	4.7	118	124	130				
WHEMLOCK										
TOTAL		52.4	4.7	118	124	129	110	27	12	
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		62.7	11.8	75	85	95				
WHEMLOCK		538.5	101.7		1	2				
TOTAL		61.9	11.7	76	86	96	159	40	18	
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		42.6	8.0	156	170	183				
WHEMLOCK		538.5	101.7		1	3				
TOTAL		42.3	8.0	157	171	185	74	19	8	
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		44.8	8.5	29,784	32,539	35,293				
WHEMLOCK		538.5	101.7		180	362				
TOTAL		44.5	8.4	29,972	32,718	35,464	82	20	9	
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		45.1	8.5	6,585	7,198	7,811				
WHEMLOCK		538.5	101.7		49	98				
TOTAL		44.8	8.5	6,634	7,247	7,859	83	21	9	

TC PSTATS					PROJECT STATISTICS				PAGE	1				
					PROJECT	REIMST	DATE 6/26/2013							
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt					
01S	06	27	0001	00A1	172.00	52	244	S	W					
01S	06W	27	0002	00A2										
01S	06W	27	0003	00A3										
					TREES	ESTIMATED	PERCENT							
					TOTAL		SAMPLE							
					PER PLOT	TREES	TREES							
TOTAL					52	244	4.7							
CRUISE					52	244	4.7	16,668	1.5					
DBH COUNT														
REFOREST														
COUNT														
BLANKS														
100 %														
STAND SUMMARY														
SAMPLE					TREES	AVG	BOLE	REL	BASAL	GROSS	NET			
TREES					/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC			
DOUG FIR					239	94.2	18.9	111	42.1	183.0	33,858	33,575	7,557	7,557
R ALDER					3	1.6	15.7	62	0.6	2.2	131	131	52	52
NOB FIR					1	.7	14.0	103	0.2	.7	102	102	21	21
WHEMLOCK					1	.5	18.0	95	0.2	.8	105	105	29	29
TOTAL					244	96.9	18.8	110	43.1	186.7	34,196	33,914	7,658	7,658
CONFIDENCE LIMITS OF THE SAMPLE														
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR														
CL	68.1	COEFF		SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15			
DOUG FIR		57.2	3.7	492	510	529								
R ALDER		50.0	34.6	55	83	112								
NOB FIR														
WHEMLOCK														
TOTAL		58.5	3.7	484	503	521	137	34	15					
CL	68.1	COEFF		SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15			
DOUG FIR		51.6	3.3	110	113	117								
R ALDER		32.5	22.5	26	34	41								
NOB FIR														
WHEMLOCK														
TOTAL		52.7	3.4	108	112	116	111	28	12					
CL	68.1	COEFF		TREES/ACRE					# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15			
DOUG FIR		58.9	8.2	86	94	102								
R ALDER		536.8	74.4	0	2	3								
NOB FIR		721.1	99.9	0	1	1								
WHEMLOCK		721.1	99.9	0	0	1								
TOTAL		57.1	7.9	89	97	105	130	33	14					
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		42.1	5.8	172	183	194								
R ALDER		533.3	73.9	1	2	4								
NOB FIR		721.1	99.9	0	1	1								
WHEMLOCK		721.1	99.9	0	1	2								
TOTAL		40.8	5.6	176	187	197	66	17	7					
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		45.7	6.3	31,452	33,575	35,699								
R ALDER		505.2	70.0	39	131	222								
NOB FIR		721.1	99.9	0	102	204								

TC PSTATS					PROJECT STATISTICS					PAGE	2
					PROJECT		REIMST			DATE	6/26/2013
TWP	RGE	SC	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt	
01S	06	27	0001	00A1	172.00		52	244	S	W	
01S	06W	27	0002	00A2							
01S	06W	27	0003	00A3							
CL	68.1		COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK			721.1	99.9	0	105	211				
TOTAL			44.8	6.2	31,808	33,914	36,020	80	20	9	
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			44.5	6.2	7,091	7,557	8,023				
R ALDER			530.5	73.5	14	52	90				
NOB FIR :			721.1	99.9	0	21	42				
WHEMLOCK			721.1	99.9	0	29	57				
TOTAL			43.4	6.0	7,198	7,658	8,119	75	19	8	



LEGEND

- Timber Sale Boundary
- Roads
- - - New Construction
- - - Posted Right of Way
- Type F Stream
- Type N Stream
- Stream Buffer
- Posted Stream Buffer Boundary
- ▨ Tractor Yarding Area
- ▧ Cable Yarding Area
- Cable Landing
- Tractor Landing
- /// Reforestation Area
- ODF Ownership Boundary
- Sections
- 80 Ft Elevation Contours

LOGGING PLAN

FOR TIMBER SALE CONTRACT # 341-14-04
REIMSTEIN
PORTIONS OF SECTION 27, T1S, R6W, W.M.
WASHINGTON COUNTY, OREGON

Forest Grove District GIS
June, 2013

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

1:12,000

1 inch = 1,000 feet



APPROXIMATE NET ACRES

	TRACTOR	CABLE
AREA 1	51	51
AREA 2	24	23
AREA 3	19	5
TOTAL	94	79