



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Josey Gales
Sale FG-341-2017-23-

District: Forest Grove

Date: January 03, 2017

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,105,306.66	\$33,567.52	\$2,138,874.18
		Project Work:	(\$136,825.00)
		Advertised Value:	\$2,002,049.18



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District: Forest Grove

Date: January 03, 2017

Timber Description

Location: Portions of Section 33, T2N, R5W, W.M., Washington County, Oregon.

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	17	0	98
Alder (Red)	15	0	95

Volume by Grade	2S	3S	4S	Camprun	Total
Douglas - Fir	2,591	1,891	205	0	4,687
Alder (Red)	0	0	0	86	86
Total	2,591	1,891	205	86	4,773

Comments: Pond Values Used: 4th Quarter Calendar Year 2016.

Western Hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost:
 $\$308.47/\text{MBF} = \$490/\text{MBF} - \$181.53/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$928.47/\text{MBF} = \$1,110/\text{MBF} - \$181.53/\text{MBF}$

SCALING COST ALLOWANCE = \$5.00/MBF

BRANDING AND PAINTING COST ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$780 daily truck cost.

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

None.

Other Costs (No Profit & Risk added):

Slash Treatment: 35 acres @ \$150/acre = \$5,250

Snag Creation: 100 trees @ \$40/tree = \$4,000

Block/Waterbar Roads/Skid Trails: 10 hrs x \$150/hour = \$1,500

Pile Landing Slash: 20 hrs x \$150/hour = \$3,000

Equipment Cleaning: 3 x \$1,000/Piece = \$3,000

TOTAL Other Costs (No Profit & Risk added) = \$16,750

ROAD MAINTENANCE

Move-in: \$4,000

General Road Maintenance: 4.3 miles x \$1,200/mile = \$5,160

TOTAL Road Maintenance: $\$9,160/4,773 \text{ MBF} = \$1.92/\text{MBF}$



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Logging Conditions

Combination#: 1 Douglas - Fir 35.00%
 Alder (Red) 35.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber

yarding distance: Short (400 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 10 **bd. ft / load:** 3800

cost / mbf: \$157.90

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

Combination#: 2 Douglas - Fir 65.00%
 Alder (Red) 65.00%

Logging System: Shovel **Process:** Stroke Delimber

yarding distance: Short (400 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 14 **bd. ft / load:** 3800

cost / mbf: \$59.62

machines: Stroke Delimber (B)



"PARTNERSHIP IN FORESTRY"

Timber Sale Appraisal
 Josey Gales
 Sale FG-341-2017-23-

District: Forest Grove

Date: January 03, 2017

Logging Costs

Operating Seasons: 2.00	Profit Risk: 10%
Project Costs: \$136,825.00	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$16,750.00

Miles of Road

Road Maintenance: \$1.92

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	4.6
Alder (Red)	\$0.00	2.0	3.3



"SUSTAINABILITY IN FORESTRY"

Timber Sale Appraisal
 Josey Gales
 Sale FG-341-2017-23-

District: Forest Grove

Date: January 03, 2017

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling / Brand & Paint	Other	Total
Douglas - Fir									
\$94.02	\$1.96	\$1.84	\$57.65	\$0.00	\$15.55	\$0.00	\$7.00	\$3.51	\$181.53
Alder (Red)									
\$94.02	\$2.02	\$1.84	\$124.09	\$0.00	\$22.20	\$0.00	\$7.00	\$3.51	\$254.68

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$630.71	\$449.18	\$0.00
Alder (Red)	\$0.00	\$645.00	\$390.32	\$0.00



"PROGRESS THROUGH FORESTRY"

Timber Sale Appraisal
Josey Gales
Sale FG-341-2017-23-

District: Forest Grove

Date: January 03, 2017

Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	4,687	\$449.18	\$2,105,306.66
Alder (Red)	86	\$390.32	\$33,567.52

Gross Timber Sale Value

Recovery: \$2,138,874.18

Prepared By: Joe Koch

Phone: 503-357-2191

TIMBER SALE SUMMARY
Josey Gales
Contract No. 341-17-23

1. **Location:** Portions of Section 33, T2N, R5W, W.M., Washington County, Oregon.
2. **Type of Sale:** This timber sale is 101 net acres of Modified Clearcut, and a Right-of-Way of less than one acre. 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 November, 2016. For more information see Cruise Report.
6. **Timber Description:** The Timber Sale Area consists of a well-stocked 60 year old Douglas-fir stand with minor amounts of western hemlock, western redcedar, true firs, and hardwoods. The stand has an average of 250 ft² of basal area (all species), an average Douglas-fir DBH of 17 inches, and an estimated average net Douglas-fir volume of approximately 47,520 BF per acre.

7. Volume Summary

SPECIES		2 SAW	3 SAW	4 SAW	Camp Run	TOTAL
Douglas-fir	Cruise Volume	2,644	1,930	209		4,783
	Hidden D&B (2%)	(53)	(39)	(4)		(96)
	NET TOTAL	2,591	1,891	205		4,687
	% of Total	55	40	4		
Red alder	Cruise Volume				88	88
	Hidden D&B (2%)				(2)	(2)
	NET TOTAL				86	86
	% of Total				100	
Douglas-fir		2,591	1,891	205		4,687
Red alder					86	86
SALE TOTAL						4,773

8. **Topography and Logging Method:** Slopes within the sale areas range from 5% to 65%, but are generally less than 35%, and are variable in aspect. The timber sale is 65% ground-based yarding and 35% cable yarding. The maximum cable corridor length is 844 feet and the average is 394 feet. The maximum horizontal skid trail length is approximately 820 feet and the average is approximately 450 feet.

9. **Access:** All access to the Timber Sale Area is on surfaced all-weather roads. From the Forest Grove District Office drive west on Highway 8 to its junction with Highway 6. Head West on Highway 6 for approximately 5.5 miles and turn left onto South Fork Gales Creek Road. Head south on South Fork Gales Creek Road for approximately 3 miles to the north end of the Timber Sale Area.

10. Projects:

Project No. 1: Road Construction and Improvement	\$29,164.49
Project No. 2: Road Surfacing	\$100,477.37
Project No. 3: Grass Seed, Fertilize, and Mulch	\$1,079.25
Move in and equipment cleaning:	\$6,103.89
Total Credit for all Projects (rounded)	\$136,825.00

PROJECT COST SUMMARY SHEET

Timber Sale: Josey Gales
Sale Number: 341-17-23

PROJECT NO. 1: ROAD CONSTRUCTION AND IMPROVEMENT

CONSTRUCTION

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
<u>C to D</u>	<u>45+00</u>	<u>\$14,179.40</u>

45+00 stations
0.85 miles

SUBTOTAL CONSTRUCTION = \$14,179.40

IMPROVEMENTS

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
<u>A to B</u>	<u>24+60</u>	<u>\$14,985.09</u>

24+60 stations
0.47 miles

SUBTOTAL IMPROVEMENTS = \$14,985.09

TOTAL PROJECT NO. 1 COST = \$29,164.49

PROJECT NO. 2: SURFACING

<u>Road Segment</u>	<u>Rock Amount</u>	<u>Rock Type</u>	<u>Cost</u>
A to B	602 cy	1 1/2" - 0	\$11,768.30
	1021 cy	3" - 0	\$20,675.25
	20 cy	Pit-run	\$158.20
	50 cy	36" - 24"	\$304.70
<u>C to D</u>	<u>3077 cy</u>	<u>3" - 0</u>	<u>\$67,570.92</u>

Total 4,770 cy
602 cy 1 1/2" - 0
4,098 cy 3" - 0
20 cy Pit-run
50 cy 36" - 24"

TOTAL PROJECT NO. 2 COST = \$100,477.37

PROJECT NO. 3 GRASS SEED, FERTILIZE, & MULCH

TOTAL PROJECT NO. 3 COST = \$1,079.25

MOVE-IN & EQUIPMENT CLEANING

Grader	\$856.97
Roller (smooth/grid) & Compactor	\$538.72
Excavator (Large) - Equipment Cleaning	\$1,856.97
Dozer (Large) - Equipment Cleaning	\$1,901.55
Dump Truck (10cy +)	\$949.68

TOTAL MOVE-IN & EQUIPMENT CLEANING COST = \$6,103.89

TOTAL CREDITS \$136,825.00

ROCK PIT DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Josey Gales

Sale Number: 341-17-23

Pit Name: Wildcat Mountain Pit

3" - 0: 4,098 cy (truck measure)

Total truck yardage: 4,098 cy

Total in place yardage: 3,152 cy

Swell: 130%

Shrinkage: 116%

Oversize Reduction	<u>\$6.00</u>	/ cy x	<u>3,152</u>	cy =	\$18,913.85
Load crusher	<u>\$0.80</u>	/ cy x	<u>4,098</u>	cy =	\$3,278.40
Crush (3" - 0)	<u>\$3.30</u>	/ cy x	<u>4,098</u>	cy =	\$13,523.40
Load dump truck	<u>\$0.80</u>	/ cy x	<u>4,098</u>	cy =	\$3,278.40
				Subtotal:	<u>\$38,994.05</u>
Equipment cleaning & move in excavator					\$1,771.55
Move in loader					\$691.55
Move in crusher					\$3,286.00
Setup crusher					\$3,327.00
Gradation tests	\$275.00	/2,000cy x	<u>3</u>	tests	\$825.00
Clean up pit					\$700.00
				Subtotal:	<u>\$10,601.10</u>
				TOTAL PRODUCTION COST =	<u><u>\$49,595.15</u></u>
				ROCK DEVELOPMENT COST =	<u><u>\$12.10/cy</u></u>

CRUISE REPORT

Josey Gales

341-17-23

1. LOCATION:

Portions of Section 33, T2N, R5W, W.M., Washington County, Oregon.

2. CRUISE DESIGN:

Pre-cruise evaluation indicated that the stand's average DBH is approximately 17 inches and its Coefficient of Variation is about 55%. For sales of this size and approximate value, ODF cruise standards require a Sampling Error of 9% at a 68% confidence level, and a minimum sample size of 100 graded trees. The cruise design chosen for this sale is a variable radius sample plot using a 40 BAF prism and employing a combination of count and measure plots at a ratio of 1 measured plot to 1 count plots.

3. SAMPLING METHOD:

The Timber Sale Area was cruised in November 2016. The Timber Sale Area was sampled with 23 variable radius grade plots and 23 variable radius count plots using a 40 BAF prism. Plots were laid out on a 4 chain x 4 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS

142 trees were measured and graded producing a cumulative Sampling Error of 4.4% on the Basal Area and 4.4% on the Board Foot Volume.

5. TREE MEASUREMENT AND GRADING:

All sample trees were measured and graded following Columbia River Log Scale grade rules and favored 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 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, Kenton Burns, and Joe Koch.

Prepared by:

ODF Forester

Date

Reviewed by:

Eric Foucht

Date

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT JOSEGFIN							DATE	11/18/2016	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
02N	05	29	00A1	00MC		101.00	46	289	S	W	
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			46	289	6.3						
CRUISE			25	142	5.7	16,287	.9				
DBH COUNT											
REFOREST											
COUNT			21	138	6.6						
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		138	153.7	16.9	119	58.3	240.0	47,520	47,362	10,401	10,401
R ALDER		2	6.8	14.6	115	2.1	7.8	891	873	243	243
WHEMLOCK		1	.4	28.0	140	0.3	1.7	529	529	99	99
NOB FIR		1	.3	22.0	147	0.2	.9	217	217	45	45
TOTAL		<i>142</i>	<i>161.3</i>	<i>16.9</i>	<i>119</i>	<i>61.0</i>	<i>250.4</i>	<i>49,157</i>	<i>48,981</i>	<i>10,788</i>	<i>10,788</i>
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		79.5	6.8	486	522	557					
R ALDER		96.8	90.6	18	190	362					
WHEMLOCK											
NOB FIR											
TOTAL		<i>79.6</i>	<i>6.7</i>	<i>488</i>	<i>523</i>	<i>558</i>	<i>253</i>	<i>63</i>	<i>28</i>		
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		71.6	6.1	105	111	118					
R ALDER		104.6	97.9	1	55	109					
WHEMLOCK											
NOB FIR											
TOTAL		<i>71.5</i>	<i>6.0</i>	<i>105</i>	<i>112</i>	<i>118</i>	<i>204</i>	<i>51</i>	<i>23</i>		
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		55.5	8.2	141	154	166					
R ALDER		386.1	56.9	3	7	11					
WHEMLOCK		474.2	69.9	0	0	1					
NOB FIR		678.2	99.9	0	0	1					
TOTAL		<i>50.3</i>	<i>7.4</i>	<i>149</i>	<i>161</i>	<i>173</i>	<i>101</i>	<i>25</i>	<i>11</i>		
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		35.3	5.2	228	240	252					
R ALDER		382.8	56.4	3	8	12					
WHEMLOCK		474.2	69.9	1	2	3					
NOB FIR		678.2	99.9	0	1	2					
TOTAL		<i>30.0</i>	<i>4.4</i>	<i>239</i>	<i>250</i>	<i>262</i>	<i>36</i>	<i>9</i>	<i>4</i>		
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		33.6	5.0	45,015	47,362	49,710					
R ALDER		384.3	56.6	379	873	1,367					
WHEMLOCK		474.2	69.9	159	529	898					
NOB FIR		678.2	99.9	0	217	435					

PROJECT STATISTICS
PROJECT JOSEGFIN

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
02N	05	29	00A1	00MC	101.00	46	289	S	W
CL	68.1	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
TOTAL		30.1	4.4	46,813	48,981	51,150	36	9	4
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		33.6	5.0	9,886	10,401	10,917			
R ALDER		385.3	56.8	105	243	381			
WHEMLOCK		474.2	69.9	30	99	168			
NOB FIR		678.2	99.9	0	45	90			
TOTAL		29.3	4.3	10,323	10,788	11,253	34	9	4

Species, Sort Grade - Board Foot Volumes (Project)

T02N R05W S29 Ty00MC 101.00	Project: JOSEFIN	Page 1
	Acres 101.00	Date 11/18/2016
		Time 1:50:03PM

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
DF		CU															5	17		0.00	2.0	
DF		2M		55	.5	26,302	26,176	2,644				57	43	1	2	1	97	40	15	361	1.87	72.4
DF		3M		40	.2	19,144	19,113	1,930			97	3				9	91	39	8	97	0.59	197.4
DF		4M		5		2,074	2,074	209			100			42	58			21	6	24	0.30	84.8
DF	Totals			97	.3	47,520	47,362	4,784			44	33	24	2	3	4	91	34	9	133	0.85	356.6
WH		2M		95		504	504	51				32	68				100	40	19	620	2.66	.8
WH		3M		5		24	24	2			100						100	36	7	60	0.83	.4
WH	Totals			1		529	529	53			5	31	65				100	39	15	433	2.09	1.2
RA		CU																4	11		0.00	5.0
RA		R		100	2.0	891	873	88			61	39		26	23	12	39	23	8	57	0.70	15.3
RA	Totals			2	2.0	891	873	88			61	39		26	23	12	39	18	9	43	0.66	20.3
NF		2M		90		198	198	20				100					100	40	14	300	1.50	.7
NF		3M		10		20	20	2			100						100	36	6	60	0.49	.3
NF	Totals			0		217	217	22			9	91					100	39	11	220	1.18	1.0
Totals					0.4	49,157	48,981	4,947			43	33	24	3	4	4	90	34	9	129	0.85	379.1

Log Stock Table - MBF

T02N R05W S29 Ty00MC 101.00

Project: JOSEFIN
Acres 101.00

Page 1
Date 11/18/2016
Time 1:50:04PM

S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spe	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	2M	18	15		15	.3										15		
DF	2M	24	20		20	.4										20		
DF	2M	28	24		24	.5										24		
DF	2M	32	19	6.3	18	.4							18					
DF	2M	36	18		18	.4						18						
DF	2M	40	2,560		2,549	53.3						626	557	858	477	30		
DF	3M	32	92		92	1.9			71	19	3							
DF	3M	34	73		73	1.5			59	15								
DF	3M	36	38		38	.8			38									
DF	3M	38	74		74	1.5			74									
DF	3M	40	1,656		1,652	34.5			304	738	561	49						
DF	4M	12	8		8	.2			8									
DF	4M	14	6		6	.1			6									
DF	4M	16	40		40	.8			40									
DF	4M	18	20		20	.4			20									
DF	4M	20	14		14	.3			14									
DF	4M	22	22		22	.5			22									
DF	4M	24	17		17	.4			17									
DF	4M	26	9		9	.2			9									
DF	4M	28	43		43	.9			43									
DF	4M	30	31		31	.6			31									
DF	Totals		4,799		4,784	96.7			755	771	564	693	557	876	536	30		
WH	2M	40	51		51	95.4							16	35				
WH	3M	36	2		2	4.6			2									
WH	Totals		53		53	1.1			2				16	35				
RA	R	12	10		10	11.4			10									
RA	R	20	13		13	14.4				13								
RA	R	24	20		20	22.8			20									
RA	R	34	11		11	12.3			11									
RA	R	40	36	5.0	34	39.0						34						
RA	Totals		90	2.0	88	1.8			41		13	34						
NF	2M	40	20		20	90.9						7	13					
NF	3M	36	2		2	9.1			2									
NF	Totals		22		22	.4			2			7	13					

Log Stock Table - MBF

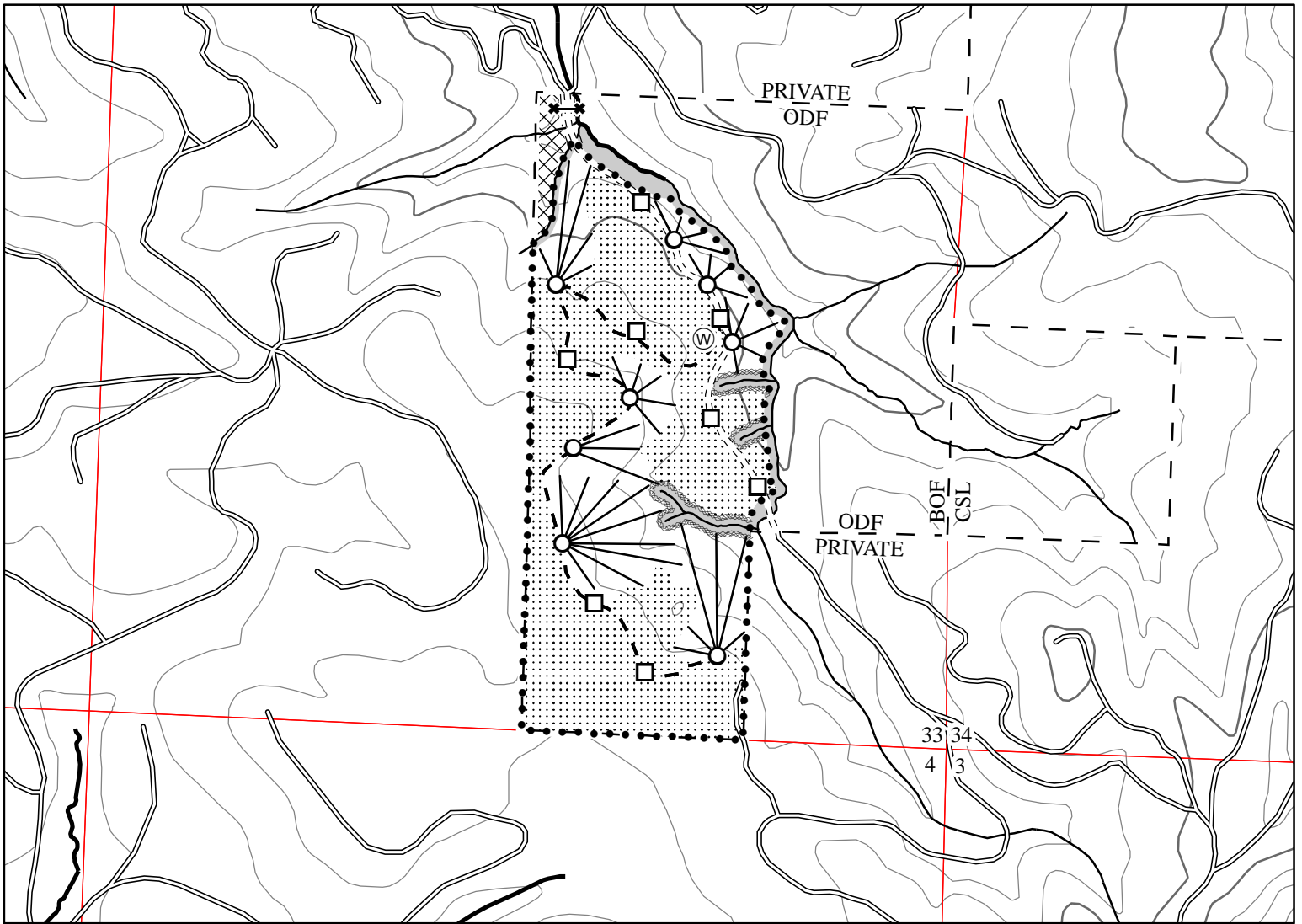
T02N R05W S29 Ty00MC 101.00

Project: JOSEGFIN
Acres 101.00

Page 2
Date 11/18/2016
Time 1:50:04PM

S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Sp	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
Total	All Species		4,965		4,947	100.0			801	771	577	734	557	906	570	30	

TC PSTNDSUM		Stand Table Summary											Page 1		
T02N R05W S29 Ty00MC 101.00		Project JOSEGFIN											Date: 11/18/2016		
		Acres 101.00											Time: 1:50:02PM		
		Grown Year:													
S Spc T	Sample DBH	Trees	Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
			FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DF	9	1	87	84	3.937	1.74	3.94	9.3	50.0	1.04	37	197	105	37	20
DF	10	8	88	95	25.509	13.91	38.26	9.7	45.8	10.57	371	1,754	1,067	375	177
DF	11	3	87	101	7.906	5.22	15.81	9.6	43.3	4.32	152	685	437	153	69
DF	12	4	87	106	8.857	6.96	15.50	14.8	62.9	6.53	229	974	659	231	98
DF	13	8	87	116	15.094	13.91	30.19	17.3	78.8	14.92	524	2,377	1,507	529	240
DF	14	11	88	118	17.895	19.13	37.42	19.3	86.5	20.58	722	3,237	2,079	729	327
DF	15	4	86	107	5.669	6.96	11.34	21.6	90.0	6.99	245	1,020	706	248	103
DF	16	6	88	134	7.473	10.43	21.17	21.6	97.1	13.04	457	2,055	1,317	462	208
DF	17	6	86	132	6.620	10.43	19.86	22.9	96.1	12.99	456	1,909	1,312	460	193
DF	18	8	87	137	7.873	13.91	22.64	27.7	117.8	17.90	628	2,667	1,808	634	269
DF	19	12	87	131	10.599	20.87	30.91	30.1	126.3	26.49	929	3,904	2,675	939	394
DF	20	9	87	137	7.174	15.65	21.52	33.9	148.9	20.80	730	3,205	2,101	737	324
DF	21	4	87	121	2.892	6.96	7.95	36.9	155.5	8.37	294	1,236	845	297	125
DF	22	12	87	139	7.906	20.87	23.06	43.4	199.7	28.51	1,000	4,605	2,879	1,010	465
DF	23	3	83	144	1.808	5.22	5.42	44.5	193.3	6.89	242	1,049	696	244	106
DF	24	9	86	144	4.982	15.65	14.95	51.1	230.0	21.78	764	3,438	2,200	772	347
DF	25	3	86	141	1.531	5.22	4.59	56.1	254.4	7.34	258	1,168	741	260	118
DF	26	5	87	142	2.358	8.70	7.08	60.3	288.7	12.16	427	2,042	1,228	431	206
DF	27	2	89	133	.875	3.48	2.62	60.9	303.3	4.56	160	796	460	162	80
DF	28	2	85	145	.813	3.48	2.44	70.1	313.3	4.88	171	765	493	173	77
DF	29	3	89	139	1.137	5.22	3.41	77.0	394.4	7.49	263	1,346	757	266	136
DF	30	4	90	140	1.417	6.96	4.25	82.8	424.2	10.03	352	1,803	1,013	355	182
DF	31	2	89	148	.664	3.48	1.99	94.6	498.3	5.37	188	992	542	190	100
DF	32	8	89	144	2.491	13.91	7.47	95.9	490.8	20.43	717	3,668	2,064	724	370
DF	35	1	89	140	.260	1.74	.78	111.6	600.0	2.48	87	469	251	88	47
DF	Totals	138	87	119	153.743	240.00	354.59	29.3	133.6	296.44	10,401	47,362	29,940	10,505	4,784
RA	12	1	73	108	4.982	3.91	9.96	7.2	30.0	1.96	71	299	198	72	30
RA	20	1	74	134	1.794	3.91	5.38	31.9	106.7	4.72	172	574	476	173	58
RA	Totals	2	73	115	6.776	7.83	15.35	15.8	56.9	6.68	243	873	675	245	88
WH	28	1	93	140	.407	1.74	1.22	81.0	433.3	3.16	99	529	319	100	53
WH	Totals	1	93	140	.407	1.74	1.22	81.0	433.3	3.16	99	529	319	100	53
NF	22	1	90	147	.329	.87	.99	45.8	220.0	1.09	45	217	110	46	22
NF	Totals	1	90	147	.329	.87	.99	45.8	220.0	1.09	45	217	110	46	22
Totals		142	87	119	161.255	250.43	372.14	29.0	131.6	307.37	10,788	48,981	31,044	10,896	4,947



Legend

- Timber Sale Boundary
- Surfaced Road
- ==== Unsurfaced Road
- - - New Road Construction
- Posted R/W Boundary
- Type F Stream
- Type N Stream
- ▨ Stream Buffer Boundary
- ▨ Stream Buffer
- Cable Landing
- Tractor Landing
- ∟ Cable Yarding Area
- ▨ Tractor Yarding Area
- | — ODF Ownership Boundary
- ▭ Section Line
- 400 Foot Contour Band
- 80 Foot Contour Band
- ⊗ Snag Creation Area
- ⊙ Waste Area
- ✂ Blockage

LOGGING PLAN

FOR TIMBER SALE CONTRACT # 341-17-23
 JOSEY GALES
 PORTIONS OF SECTION 33, T2N, R5W, W.M.
 WASHINGTON COUNTY, OREGON.

Forest Grove District GIS
 November, 2016

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



APPROXIMATE NET ACRES
TRACTOR CABLE

	TRACTOR	CABLE
AREA 1	66	35
AREA 2 R/W	>1	0
TOTAL	66	35

1:12,000

1 inch = 1,000 feet

