

TIMBER SALE SUMMARY

Rusty Rope

Contract No. 341-16-52

1. **Location:** Portions of Sections 22, 26, 27 and 35, W.M., Clatsop County, Oregon.
2. **Type of Sale:** This timber sale is a 141 acre Modified Clearcut. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF, Clatsop County, Tax Code 8-01.
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 December, 2015. For more information see Cruise Report.
6. **Timber Description:** The Timber Sale Area consists of medium to well stocked 60 to 70 year old Douglas-fir stands with minor amounts of western hemlock and hardwoods. The average "take" Douglas-fir DBH is 17 inches in Area 1 and 21 inches in Area 2. The estimated average net Douglas-fir harvest volume in Area 1 is 30.6 MBF/acre, and it is 46.4 MBF/acre in Area 2.
7. **Topography and Logging Method:** Slopes within the sale areas range from 10% to 70% and are generally of a southern aspect. Area 1 is 31% ground-based yarding, and 69% cable-based yarding. Area 2 is 8% ground-based yarding, and 92% cable-based logging. In Area 1 the average cable corridor yarding distance is approximately 500 feet and the maximum is approximately 1,000 feet. The average horizontal tractor yarding distance is approximately 150 feet and the maximum is approximately 200 feet. In Area 2 the average cable corridor yarding distance is approximately 700 feet and the maximum is approximately 1,700 feet. The average horizontal tractor yarding distance is approximately 150 feet and the maximum is approximately 300 feet.
8. **Access:** From Forest Grove travel north and west on Highways 47 and 26 for approximately 28 miles to the North Fork Wolf Creek Road near milepost 35. Turn right on North Fork Wolf Creek Road and continue for 4 miles to the eastern portion of Area 2. Continue following North Fork Wolf Creek Road for approximately 0.7 miles to the junction with McGregor Road. Turn west on McGregor Road and follow for 0.4 miles to the eastern portion of Area 1.

9. **Projects:**

Project No. 1 - Road Construction and Improvement:	\$21,479.29
Project No. 2 - Surfacing:	\$17,908.35
Project No. 3 - Grass Seed, Fertilize, & Mulch:	\$516.13
Move in and equipment cleaning:	\$6,441.23

Total Credit for all Projects (rounded)

\$46,345.00



"STAND FOR THE FOREST"

Timber Sale Appraisal Rusty Rope

Sale FG-341-2016-52-

District: Forest Grove

Date: February 23, 2016

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,992,551.40	\$0.00	\$1,992,551.40
		Project Work:	(\$46,345.00)
		Advertised Value:	\$1,946,206.40



"STAND FOR A FOREST"

Timber Sale Appraisal Rusty Rope

Sale FG-341-2016-52-

District: Forest Grove

Date: February 23, 2016

Timber Description

Location: Portions of Sections 22, 26, 27, and 35, T4N, R6W, W.M., Clatsop County, Oregon.

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	19	0	98

Volume by Grade	2S	3S	4S	Total
Douglas - Fir	3,719	1,741	210	5,670
Total	3,719	1,741	210	5,670

Comments: Pond Values Used: 4th Quarter Calendar Year 2015.

Western Hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost:
 $\$179.74/\text{MBF} = \$430/\text{MBF} - \$250.26/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$899.74/\text{MBF} = \$1,150/\text{MBF} - \$250.26/\text{MBF}$

Red Alder and Other Hardwoods Stumpage Price = Pond Value minus Logging Cost:
 $\$394.74/\text{MBF} = \$645/\text{MBF} - \$250.26/\text{MBF}$

SCALING COST ALLOWANCE = \$5.00/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):
Brand and Paint: $5,670 \text{ MBF} \times \$2/\text{MBF} = \$11,340$
TOTAL Other Costs (with Profit & Risk to be added) = \$11,340

Other Costs (No Profit & Risk added):
Block/Waterbar Roads/Skid Trails: $15 \text{ hrs} \times \$150/\text{hour} = \$2,250$
Pile Landing Slash/Sort Firewood: $20 \text{ hrs} \times \$150/\text{hour} = \$3,000$
Equipment Cleaning: $3 \times \$1,000/\text{Piece} = \$3,000$
TOTAL Other Costs (No Profit & Risk added) = \$8,250

ROAD MAINTENANCE
Move-in: \$4,000
General Road Maintenance: $9.8 \text{ miles} \times \$1,200/\text{mile} = \$11,760$
TOTAL Road Maintenance: $\$15,760/5,670 \text{ MBF} = \$2.78/\text{MBF}$



Timber Sale Appraisal Rusty Rope

Sale FG-341-2016-52-

District: Forest Grove

Date: February 23, 2016

Logging Conditions

Combination#: 1	Douglas - Fir	86.16%
Logging System:	Cable: Medium Tower >40 - <70	Process: Stroke Delimber
yarding distance:	Medium (800 ft)	downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	9	bd. ft / load: 4400
cost / mbf:	\$151.52	
machines:	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)	

Combination#: 2	Douglas - Fir	13.84%
Logging System:	Shovel	Process: Stroke Delimber
yarding distance:	Short (400 ft)	downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	10	bd. ft / load: 4600
cost / mbf:	\$68.96	
machines:	Stroke Delimber (B)	



STRONGER FORESTRY

Timber Sale Appraisal Rusty Rope

Sale FG-341-2016-52-

District: Forest Grove

Date: February 23, 2016

Logging Costs

Operating Seasons: 1.00	Profit Risk: 15%
Project Costs: \$46,345.00	Other Costs (P/R): \$11,340.00
Slash Disposal: \$0.00	Other Costs: \$8,250.00

Miles of Road

Road Maintenance: \$2.78

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	4.0



~~"STRENGTH IN FORESTRY"~~

Timber Sale Appraisal Rusty Rope

Sale FG-341-2016-52-

District: Forest Grove

Date: February 23, 2016

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$140.09	\$2.84	\$0.77	\$66.30	\$2.00	\$31.80	\$0.00	\$5.00	\$1.46	\$250.26

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$601.68	\$351.42	\$0.00



Timber Sale Appraisal Rusty Rope

Sale FG-341-2016-52-

District: Forest Grove

Date: February 23, 2016

Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	5,670	\$351.42	\$1,992,551.40

Gross Timber Sale Value

Recovery: \$1,992,551.40

Prepared By: Mark Savage

Phone: 503-359-7437

PROJECT COST SUMMARY SHEET

Timber Sale: Rusty Rope
Sale Number: 341-16-52

PROJECT NO. 1: ROAD CONSTRUCTION AND IMPROVEMENT**CONSTRUCTION**

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to B	10+60	\$3,321.72
A to C	6+85	\$2,310.20
	17+45 stations	
	0.33 miles	

SUBTOTAL CONSTRUCTION = \$5,631.92

IMPROVEMENTS

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
D to E	231+40	\$15,847.37
	231+40 stations	
	4.38 miles	

SUBTOTAL IMPROVEMENTS = \$15,847.37

TOTAL PROJECT NO. 1 COST = \$21,479.29

PROJECT NO. 2: SURFACING

<u>Road Segment</u>	<u>Rock Amount</u>	<u>Rock Type</u>	<u>Cost</u>
A to B	923 cy	4"-0"	\$6,451.77
A to C	657 cy	4"-0"	\$4,594.18
D to E	572 cy	1 1/2"-0"	\$6,320.24
	108 cy	36" - 24"	\$542.16
Total	572 cy	1 1/2" - 0	
	1,580 cy	4" - 0	
	108 cy	36" - 24"	

TOTAL PROJECT NO. 2 COST = \$17,908.35

PROJECT NO. 3 GRASS SEED, FERTILIZE, & MULCH

TOTAL PROJECT NO. 3 COST = \$516.13

MOVE-IN & EQUIPMENT CLEANING

Grader	\$754.44
Loader	\$671.89
Roller & Compactor	\$458.58
Excavator - Equipment Cleaning	\$1,754.44
Dozer - Equipment Cleaning	\$1,799.02
Dump Trucks	\$876.54
Water Truck	\$126.32

TOTAL MOVE-IN & EQUIPMENT CLEANING COST = \$6,441.23

TOTAL ALL PROJECTS \$46,345.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Rusty Rope
 Road Segment: A to B

Sale Number: 341-16-52
 Construction: 10+60 stations
0.20 miles

PROJECT NO. 1

EXCAVATION

Clearing & grubbing (scatter)	1.22	ac @	\$1,078.00	per acre =	\$1,311.62
Balanced road construction	10.60	sta @	\$110.00	per sta =	\$1,166.00
Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	10.60	sta @	\$36.00	per sta =	\$381.60

PROJECT NO. 1 TOTAL COST = \$3,321.72

PROJECT NO. 2:

SURFACING

		12 " deep =	65 cy/sta				
A to B	689	cy of	4" - 0	@	\$6.99	per cy =	\$4,816.11
Turnouts	22	cy of	4" - 0	@	\$6.99	per cy =	\$153.78
Turnaround	20	cy of	4" - 0	@	\$6.99	per cy =	\$139.80
Junction	12	cy of	4" - 0	@	\$6.99	per cy =	\$83.88
Landing	180	cy of	4" - 0	@	\$6.99	per cy =	\$1,258.20
Rock Total =	923						
	923	cy of	4" - 0		\$6.99	per cy =	\$6,451.77

PROJECT NO. 2 TOTAL COST = \$6,451.77

PROJECT NO. 3:

Grass seed & fertilizer	0.61	acres	@	\$425.00	per acre =	\$258.55
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PROJECT NO. 3 TOTAL COST = \$258.55

TOTAL COST = \$10,032.04

SUMMARY OF CONSTRUCTION COST

Timber Sale: Rusty Rope
 Road Segment: A to C

Sale Number: 341-16-52
 Construction: 6+85 stations
0.13 miles

PROJECT NO. 1

EXCAVATION

Clearing & grubbing (scatter)	0.79	ac @	\$1,078.00	per acre =	\$847.60
Balanced road construction	6.85	sta @	\$110.00	per sta =	\$753.50
Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	6.85	sta @	\$36.00	per sta =	\$246.60

PROJECT NO. 1 TOTAL COST = \$2,310.20

PROJECT NO. 2:

SURFACING

		12 " deep =	65 cy/sta				
A to C	445	cy of	4" - 0	@	\$6.99	per cy =	\$3,112.30
Turnouts	20	cy of	4" - 0	@	\$6.99	per cy =	\$139.80
Turnarounds	12	cy of	4" - 0	@	\$6.99	per cy =	\$83.88
Landing	180	cy of	4" - 0	@	\$6.99	per cy =	\$1,258.20
Rock Total =	657						
	657	cy of	4" - 0		\$6.99	per cy =	\$4,594.18

PROJECT NO. 2 TOTAL COST = \$4,594.18

PROJECT NO. 3:

Grass seed & fertilizer	0.39	acres	@	\$425.00	per acre =	\$167.08
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PROJECT NO. 3 TOTAL COST = \$167.08

TOTAL COST = \$7,071.46

SUMMARY OF CONSTRUCTION COST

Timber Sale: Rusty Rope
Road Segment: D to E

Sale Number: 341-16-52
Improvement: 231+40 stations
4.38 miles

PROJECT NO. 1

EXCAVATION

Clean ditch & scatter waste material	231.40	sta @	\$12.41	per sta =	\$2,871.67
Clean culvert inlet & outlet	26	ea @	\$25.00	per ea =	\$650.00
Grade, ditch, & roll	231.40	sta @	\$40.50	per sta =	\$9,371.70

TOTAL EXCAVATION COSTS = \$12,893.37

CULVERTS - MATERIALS & INSTALLATION

Culverts		Bands	
60 LF of 18"	\$1,200.00		
40 LF of 30"	\$1,560.00	1 ea of 30"	\$44.00
Culvert Markers			
15 markers	\$150.00		

TOTAL CULVERT COSTS = \$2,954.00

PROJECT NO. 1 TOTAL COST = \$15,847.37

PROJECT NO. 2:

SURFACING

Spot Rock	500	cy of	1 1/2" - 0	@	\$11.14	per cy =	\$5,570.00
Culvert bedding and backfill	72	cy of	1 1/2" - 0	@	\$10.42	per cy =	\$750.24
Riprap	36	cy of	36" - 24"	@	\$5.02	per cy =	\$180.72
Fill armor	72	cy of	36" - 24"	@	\$5.02	per cy =	\$361.44
Rock Total =	680						
	572	cy of	1 1/2" - 0		\$11.14	per cy =	\$6,320.24
	108	cy of	36" - 24"		\$5.02	per cy =	\$542.16

PROJECT NO. 2 TOTAL COST = \$6,862.40

PROJECT NO. 3:

Grass seed & fertilizer	0.10	acres	@	\$425.00	per acre =	\$42.50
Mulch	6	bales	@	\$8.00	per bale =	\$48.00

PROJECT NO. 3 TOTAL COST = \$90.50

TOTAL COST = \$22,800.27

**CRUISE REPORT
RUSTY ROPE
341-16-52**

1. LOCATION: Portions of Sections 22, 26, 27, and 35, T4N, R6W, W.M., Clatsop County, Oregon.

2. CRUISE DESIGN:

The cruise design assumed a Coefficient of Variation (CV%) of 65%, an average stand diameter of 19 inches, a desired sampling error (SE%) of 10% and a minimum sample size of 100 grade trees. Pre-cruise plots indicated that approximately 6 trees per plot could be realized with a 40 BAF prism.

3. SAMPLING METHOD:

The Sale Areas were cruised in 12/2015 with 44 variable radius grade plots using a 40 BAF prism. In Area 1 plots were laid out on a 3 chain x 7 chain grid. In Area 2 plots were laid out on a 5 chain x 5 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS

253 trees were measured and graded producing a cumulative Basal Area sampling error of 5.2% and 5.6% on the Board Foot Volume.

5. 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.

All grade plot 'Take' 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:** 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 cruiser Mark Savage.

Prepared by:

Mark Savage

Date

Reviewed by:

Eric Foucht

Date

VOLUME SUMMARY

(Shown in MBF)

RUSTY ROPE**341-16-52****January 2015****AREA 1: MC (48 ACRES)**

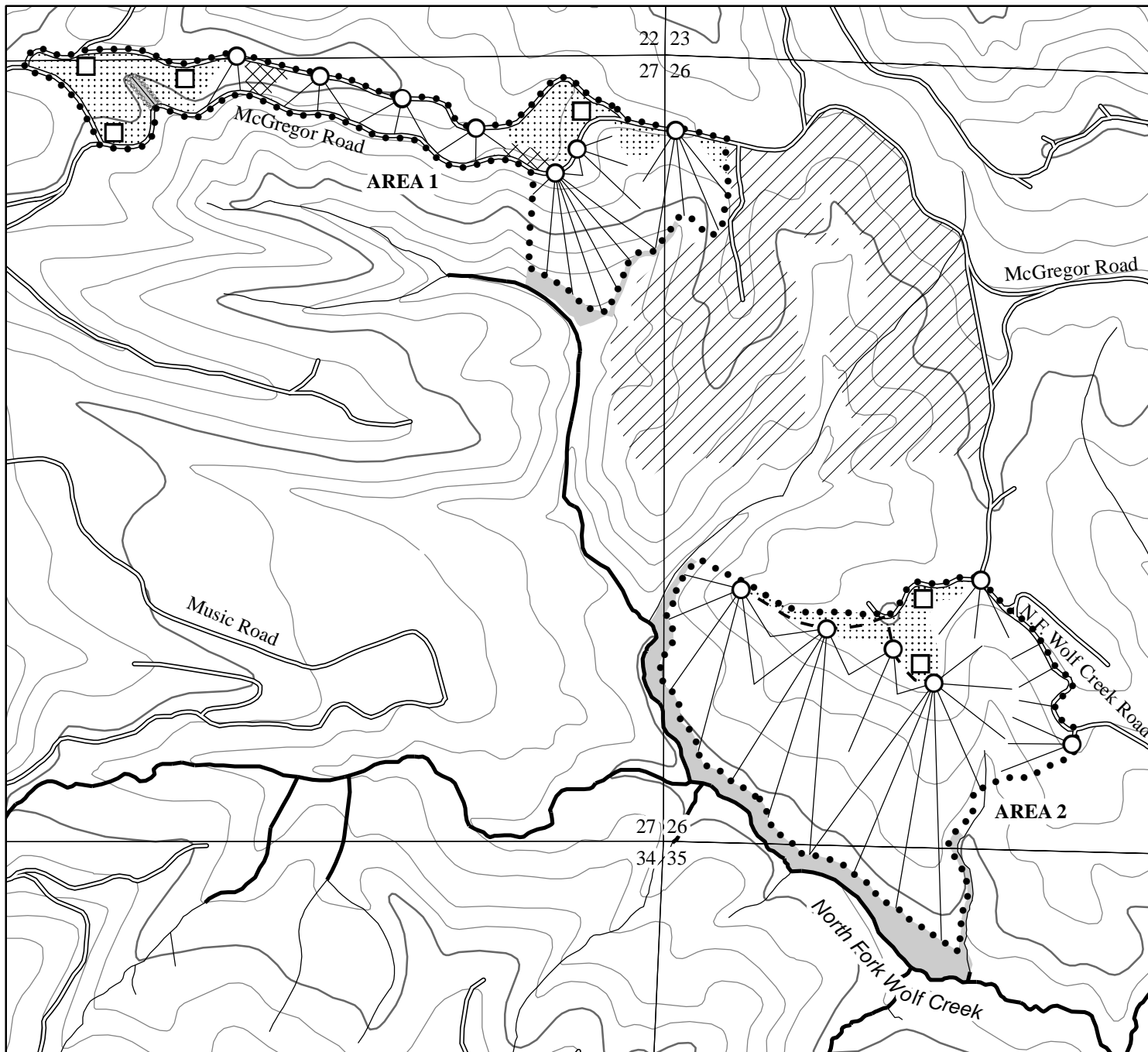
SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	654	718	97	1,469
	Hidden D&B (2%)	(13)	(14)	(2)	(29)
	NET TOTAL	641	704	95	1,440
	% of Total	45	49	7	

AREA 2: MC (93 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	3,141	1,058	117	4,316
	Hidden D&B (2%)	(63)	(21)	(2)	(86)
	NET TOTAL	3,078	1,037	115	4,230
	% of Total	73	25	3	

SALE TOTAL

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir		3,719	1,741	210	5,670



LEGEND

- Timber Sale Boundary
- Roads
- - New Road Construction
- Type F Stream
- Type N Stream
- Stream Buffer
- ▤ Posted Stream Buffer Boundary
- Cable Landing
- Tractor Landing
- ◁ Cable Yarding Area
- ▤ Tractor Yarding Area
- ▦ No Harvest Area
- /// Reforested Area
- 400 Foot Contour Band
- 80 Foot Contour Band
- Section Line

LOGGING PLAN

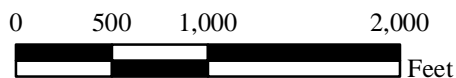
FOR TIMBER SALE CONTRACT # 341-16-52
 RUSTY ROPE
 PORTIONS OF SECTIONS 22, 26, 27 & 35, T4N, R6W, W.M.,
 CLATSOP COUNTY, OREGON

Forest Grove District GIS
 January, 2016

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

	TRACTOR	CABLE
AREA 1	15	33
AREA 2	7	86
TOTAL	22	119