"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Rebott

Sale WO-341-2022-W00683-01

District: West Oregon

Date: June 29, 2021

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$1,713,067.92	$45,422.50	$1,758,490.42
		Project Work:	($35,667.00)
		Advertised Value:	$1,722,823.42

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Rebott
Sale WO-341-2022-W00683-01

District: West Oregon **Date: June 29, 2021**

Timber Description

Location:

Stand Stocking: 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	21	0	97
Alder (Red)	14	0	94
Maple	19	0	94

Volume by Grade	2S	3S & 4S 6"-11"	Camprun	Total
Douglas - Fir	2,256	1,047	0	3,303
Alder (Red)	0	0	124	124
Maple	0	0	118	118
Total	2,256	1,047	242	3,545

Comments: Pond Values Used: Local Pond Values, May, 2021

Western Hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost:
$286.73/MBF = $569/MBF - $282.27/MBF

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
$914.73/MBF = $1,347/MBF - $282.27/MBF - $150.00/MBF(extra haul distance)

PULP (Conifer and Hardwood Price) = $3.00/TON

Other Costs (with Profit & Risk to be added):
Intermediate Support/Tail Trees: 4 supports @ $100/support = $400
Flaggers on County Road(Unit 1): 2 Flaggers x 2 days x $350/day = $1,400
TOTAL Other Costs (with Profit & Risk to be added) = $1,800

Other Costs (No Profit & Risk added):
Equipment Cleaning (Invasive Species): $2,000
Non-Project Roads and Landings: 10 stations @ $122/station = $1,220
Landing slash piling/firewood sorting: 10 Landings @ $180/Landing = $1,800
TOTAL Other Costs (No Profit & Risk added) = $5,020

ROAD MAINTENANCE
Move-in: (Grader) $875
Move-in: (Roller) $875
Final Road Maintenance: $17,404.97
TOTAL Road Maintenance: $19,154.97/3,545 MBF = $5.40/MBF

SLASH DISPOSAL
Weed Wash: $300
Move-In: $1,290
Walk between areas 2 hrs @ 150/hr = $300
Project Work:
In Unit: 54 hrs @ $150/hr = $8,100

TOTAL Slash Disposal = $9,990

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Rebott
Sale WO-341-2022-W00683-01

District: West Oregon **Date: June 29, 2021**

Logging Conditions

Combination#: 1

	Douglas - Fir	12.99%

Logging System: Shovel **Process:** Manual Falling/Delimbing
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 18 **bd. ft / load:** 4500
cost / mbf: $48.61
machines: Shovel Logger

Combination#: 2

	Douglas - Fir	25.01%
	Alder (Red)	28.23%
	Maple	27.97%

Logging System: Shovel **Process:** Harvester Head Delimbing
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
loads / day: 16 **bd. ft / load:** 3800
cost / mbf: $87.90
machines: Forwarder
Harvester

Combination#: 3

	Douglas - Fir	62.00%
	Alder (Red)	71.77%
	Maple	72.03%

Logging System: Cable: Large Tower >=70 **Process:** Manual Falling/Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
loads / day: 7 **bd. ft / load:** 3800
cost / mbf: $255.64
machines: Log Loader (A)
Tower Yarder (Large)

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Rebott
Sale WO-341-2022-W00683-01

District: West Oregon **Date: June 29, 2021**

Logging Costs

Operating Seasons:	3.00	**Profit Risk:**	10%
Project Costs:	$35,667.00	**Other Costs (P/R):**	$1,800.00
Slash Disposal:	$9,990.00	**Other Costs:**	$5,020.00

Miles of Road

Road Maintenance: $5.40

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	4.0	4.5
Alder (Red)	$0.00	2.0	3.8
Maple	$0.00	2.0	3.8

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Rebott

Sale WO-341-2022-W00683-01

District: West Oregon **Date: June 29, 2021**

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$186.80	$5.56	$3.71	$54.36	$0.51	$25.09	$2.82	$2.00	$1.42	$282.27
Alder (Red)									
$208.29	$5.72	$3.71	$132.50	$0.51	$35.07	$2.82	$2.00	$1.42	$392.04
Maple									
$208.73	$5.72	$3.71	$132.50	$0.51	$35.12	$2.82	$2.00	$1.42	$392.53

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$800.91	$518.64	$0.00
Alder (Red)	$0.00	$697.00	$304.96	$0.00
Maple	$0.00	$457.00	$64.47	$0.00

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Rebott
Sale WO-341-2022-W00683-01

District: West Oregon **Date: June 29, 2021**

Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,303	$518.64	$1,713,067.92
Alder (Red)	124	$304.96	$37,815.04
Maple	118	$64.47	$7,607.46

Gross Timber Sale Value

Recovery: $1,758,490.42

Prepared By: David Bailey **Phone:** 541-929-9164

SUMMARY OF ALL PROJECT COSTS

Sale Name: Rebott

Date: March 2021
Time: 16:17

Project #1 - New Construction

Road Segment	Length	Cost	
A to B	6.1 sta	$10,039	
C to D	3.2 sta	$5,430	
TOTALS	9.3 sta		$15,469

Project #2 - Road Improvement

Road Segment	Length	Cost	
1 to 2	156.0 sta	$2,606	
3 to 4	70.0 sta	$3,838	
5 to 6	20.2 sta	$1,417	
7 to 8	12.2 sta	$593	
9 to 10	14.0 sta	$1,695	
11 to 12	3.7 sta	$1,889	
13 to 14	6.5 sta	$2,759	
15 to 16	18.5 sta	$1,296	
TOTALS	301.1 sta		$16,093

Project #2 - Move in	Cost	
Excavator, C325 or equiv.	$1,450	
Dozer, D7 or equiv.	$905	
Grader, 14-G or equiv.	$875	
Vibratory roller	$875	
TOTAL		$4,105

GRAND TOTAL **$35,667**

Compiled by David Bailey Date 03/31/2021

SUMMARY OF CONSTRUCTION COST

SALE Rebott Project # 1 LENGTH const 6.1 sta
ROAD A to B Surfaced

EXCAVATION	With D7 dozer or equivalent						
Balanced road construction	6.1 sta	@	$138	/sta	=	$842	
Construct Landing (Pt. B)	1 Ldg	@	$438	/ldg	=	$438	
Shape subgrade (with road grader)	6.1 sta	@	$20.63	/sta	=	$126	
Compact subgrade (with vibratory roller)	6.1 sta	@	$16.00	/sta	=	$98	
				TOTAL EXCAVATION =			$1,504
SURFACING			Size	Cost/yd			
Shape surface (with road grader)	6.1 sta	@	$20.63	/sta	=	$126	
Compact surface (with vibratory roller)	6.1 sta	@	$16.00	/sta	=	$98	
Shape surface (Pt. A to Pt. C) (with road grader)	4.4 sta	@	$20.63	/sta	=	$91	
Compact surface (Pt. A to Pt. C) (with vibratory roller)	4.4 sta	@	$16.00	/sta	=	$70	
Landing rock (Pt. B)	40 cy of		Jaw-Run	$22.45	=	$898	
Surface rock (8"lift) (Sta.0+00 to 6+10)	270 cy of		Jaw-Run	$22.45	=	$6,062	
Surface rock (2" lift) (Pt. A to Pt. C)	50 cy of		3"-0"	$23.80	=	$1,190	
				TOTAL ROCK COST =			$8,535

Compiled by: David Bailey
Date: Mar 31, 2021

GRAND TOTAL =====> **$10,039**

SUMMARY OF CONSTRUCTION COST

SALE	Rebott		Project #	1	LENGTH const			3.2 sta
ROAD	C to D	Surfaced						

EXCAVATION	With D7 dozer or equivalent						
Balanced road construction	3.2 sta	@	$138	/sta	=	$442	
Construct Landing (Pt. D)	1 Ldg	@	$438	/ldg	=	$438	
Shape subgrade (with road grader)	3.2 sta	@	$20.63	/sta	=	$66	
Compact subgrade (with vibratory roller)	3.2 sta	@	$16.00	/sta	=	$51	
Construct turnaround (Pt. C)	1.0 ta	@	$50.00	/ta	=	$50	
				TOTAL EXCAVATION =			$1,047

SURFACING			Size	Cost/yd			
Landing rock (Pt. D)	40	cy of	Jaw-Run	$22.45	=	$898	
Surface rock (8"lift)	140	cy of	Jaw-Run	$22.45	=	$3,143	
Shape surface (with road grader)	3.2 sta	@	$20.63	/sta	=	$66	
Compact surface (with vibratory roller)	3.2 sta	@	$16.00	/sta	=	$51	
Turnaround rock (Pt. C)	10	cy of	Jaw-Run	$22.45	=	$225	
				TOTAL ROCK COST =			$4,383

Compiled by:	David Bailey		
Date:	Mar 31, 2021	**GRAND TOTAL =====>**	**$5,430**

SUMMARY OF CONSTRUCTION COST

SALE Rebott | Project # 2 | LENGTH Improve | 156.0 sta
ROAD 1 to 2 | Surfaced | Shingle Creek County Rd.

IMPROVEMENT

Shape surface (with road grader)	50.0 sta	@	$20.63	/sta	=	$1,032
Compact surface (with vibratory roller)	50.0 sta	@	$16.00	/sta	=	$800

TOTAL IMPROVEMENT = $1,832

SURFACING

			Size	Cost/yd		
Spot rock	30 cy of		1½"-0"	$24.14	=	$724

TOTAL ROCK COST = $724

SPECIAL PROJECTS

Clean out culverts (inlets and outlets)	2 culverts	@	$25.00	ea	=	$50

TOTAL SPECIAL PROJECTS COST = $50

Compiled by: David Bailey
Date: Mar 31, 2021

GRAND TOTAL =====> $2,606

SUMMARY OF CONSTRUCTION COST

SALE Rebott — Project # 2 — LENGTH improve — 70.0 sta
ROAD 3 to 4 — Surfaced

EXCAVATION — With Cat D7 Dozer or equivalent

Construct roadside Landing (Sta. 58+70)	0.5 hr	@	$162.00	/hr	=	$81
				TOTAL EXCAVATION =		$81

IMPROVEMENT

Sod Removal (Sta. 61+20 to 70+00)	8.8 sta	@	$15.40	/sta	=	$136
Shape surface (Pt. 15 to 4) (with road grader)	15.3 sta	@	$20.63	/sta	=	$316
Compact surface (Pt. 15 to 4) (with vibratory roller)	15.3 sta	@	$16.00	/sta	=	$245
				TOTAL IMPROVEMENT =		$697

SURFACING

			Size	Cost/yd		
Spot rock	60	cy of	1½"-0"	$24.14	=	$1,448
Landing rock Sta.54+60 (Pt. 15)	30	cy of	3"-0"	$23.80	=	$714
Landing rock (Sta. 58+70)	40	cy of	Jaw-Run	$22.45	=	$898
				TOTAL ROCK COST =		$3,060

Compiled by: David Bailey
Date: Mar 31, 2021

GRAND TOTAL =====> **$3,838**

SUMMARY OF CONSTRUCTION COST

SALE Rebott Project # 2 LENGTH improve 20.2 sta
ROAD 5 to 6 Surfaced

SURFACING			Size	Cost/yd		
Spot rock (Sta. 17+10 to 18+40)	30	cy of	3"-0"	$23.80	=	$714
Shape surface (Sta. 14+00 to 20+20) (with road grader)	6.2 sta	@	$20.63	/sta	=	$128
Compact surface (Sta. 14+00 to 20+20) (with vibratory roller)	6.2 sta	@	$16.00	/sta	=	$99
Turnaround rock (Sta. 14+10)	20	cy of	3"-0"	$23.80	=	$476

TOTAL ROCK COST = $1,417

Compiled by: David Bailey
Date: Mar 31, 2021

GRAND TOTAL =====> **$1,417**

SUMMARY OF CONSTRUCTION COST

SALE Rebott Project # 2 LENGTH improve 12.2 sta
ROAD 7 to 8 Surfaced

SURFACING			Size	Cost/yd		
Spot rock	20	cy of	1½"-0"	$24.14	=	$483
Shape surface (with road grader)	3 sta	@	$20.63	/sta	=	$62
Compact surface (with vibratory roller)	3 sta	@	$16.00	/sta	=	$48

TOTAL ROCK COST = $593

Compiled by: David Bailey
Date: Mar 31, 2021

GRAND TOTAL =====> **$593**

SUMMARY OF CONSTRUCTION COST

SALE	Rebott		Project #	1	LENGTH	Improve	14 sta
ROAD	9 to 10	Surfaced					

IMPROVEMENT

Sod removal	14 sta	@	$15.40	/sta	=	$216
				TOTAL IMPROVEMENT =		$216

SURFACING

			Size	Cost/yd		
Spot rock	40	cy of	1½"-0"	$24.14	=	$966
Shape surface (with road grader)	14 sta	@	$20.63	/sta	=	$289
Compact surface (with vibratory roller)	14 sta	@	$16.00	/sta	=	$224
				TOTAL ROCK COST =		$1,479

Compiled by: David Bailey
Date: Mar 31, 2021

GRAND TOTAL =====> $1,695

SUMMARY OF CONSTRUCTION COST

SALE Rebott Project # 2 LENGTH improve 3.7 sta
ROAD 11 to 12 Surfaced

IMPROVEMENT

Sod removal	3.7 sta	@	$15.40	/sta	=	$57
Re-open Landing	0.5 hrs	@	$114.00	/hr	=	$57

TOTAL IMPROVEMENT = $114

SURFACING

			Size	Cost/yd		
Surface rock (2" lift)	40	cy of	1½"-0"	$24.14	=	$966
Shape surface (with road grader)	3.7 sta	@	$20.63	/sta	=	$76
Compact surface (with vibratory roller)	3.7 sta	@	$16.00	/sta	=	$59
Landing rock (Pt. 12)	30	cy of	Jaw-Run	$22.45	=	$674

TOTAL ROCK COST = $1,775

Compiled by: David Bailey
Date: Mar 31, 2021

GRAND TOTAL =====> $1,889

SUMMARY OF CONSTRUCTION COST

SALE	Rebott		Project #	2	LENGTH improve			6.5 sta
ROAD	13 to 14	Surfaced						

IMPROVEMENT

Sod removal	6.5 sta	@	$15.40	/sta	=	$100	
Re-open Landing	0.5 hrs	@	$114.00	/hr	=	$57	
				TOTAL IMPROVEMENT =			$157

SURFACING

			Size	Cost/yd			
Surface rock (2" lift)	70 cy of		1½"-0"	$24.14	=	$1,690	
Shape surface (with road grader)	6.5 sta	@	$20.63	/sta	=	$134	
Compact surface (with vibratory roller)	6.5 sta	@	$16.00	/sta	=	$104	
Landing rock (Pt. 14)	30 cy of		Jaw-Run	$22.45	=	$674	
				TOTAL ROCK COST =			$2,602

Compiled by: David Bailey
Date: Mar 31, 2021

GRAND TOTAL =====> **$2,759**

SUMMARY OF CONSTRUCTION COST

SALE Rebott Project # 2 LENGTH improve 18.5 sta
ROAD 15 to 16 Surfaced

SURFACING				Size	Cost/yd		
Spot rock		40	cy of	1½"-0"	$24.14	=	$966
Shape surface (with road grader)	9.0 sta		@	$20.63	/sta	=	$186
Compact surface (with vibratory roller)	9.0 sta		@	$16.00	/sta	=	$144

TOTAL ROCK COST = $1,296

Compiled by: David Bailey
Date: Mar 31, 2021

GRAND TOTAL =====> $1,296

SUMMARY OF MAINTENANCE COST

SALE Rebott Final log haul Maintenance Cost Estimate

(Costed in appraisal, not in project costs)

Move-in	Grader	$	875
Move-in	Roller	$	875

Road Segment	Length	Cost/Sta	Cost	Mileage
A to B	6.1	$36.63	$223.44	0.12
C to D	3.2	$36.63	$117.22	0.06
1 to 2	156.0	$36.63	$5,714.28	2.95
3 to 4	70.0	$36.63	$2,564.10	1.33
5 to 6	20.2	$36.63	$739.93	0.38
7 to 8	12.2	$36.63	$446.89	0.23
9 to 10	14.0	$36.63	$512.82	0.27
11 to 12	3.7	$36.63	$135.53	0.07
13 to 14	6.5	$36.63	$238.10	0.12
15 to 16	18.5	$36.63	$677.66	0.35
Total	310.4		$11,369.97	5.88

Maintenance Rock:

Rock Size	Volume (CY)	Cost/CY	Cost
1½"-0"	250	$24.14	$6,035.00

Grand Total		$19,154.97
TS Volume	3,545 MBF	
Cost / MBF =		$5.40

NOTES:

Rock Haul Cost Computation

SALE NAME: Rebott DATE: Mar 31, 2021
ROAD NAME: Shimgle Creek Road CLASS: Medium
ROCK SOURCE: Wild Rose Quarry 10 CY truck
Route: Hwy 223 to Hoskins County Rd to Shingle Creek Rd to Bottger Ridg

TIME Computation:
Road speed time factors:

1.	55 MPH		MRT	0.0	minutes
2.	50 MPH		MRT	0.0	minutes
3.	45 MPH	9.3	MRT	12.4	minutes
4.	40 MPH		MRT	0.0	minutes
5.	35 MPH	3.6	MRT	6.2	minutes
6.	30 MPH		MRT	0.0	minutes
7.	25 MPH	6.2	MRT	14.9	minutes
8.	20 MPH	4.4	MRT	13.2	minutes
9.	15 MPH	2.7	MRT	10.8	minutes
10.	10 MPH		MRT	0.0	minutes
11.	05 MPH	0.1	MRT	1.2	minutes

Dump or spread time per RT		0.50	minutes
Total hauling cycle time for this setting (100% efficiency)		59.20	minutes
Operator efficiency correction	0.85	69.65	minutes
Job efficiency correction	0.90	77.39	minutes
Truck capacity (CY)	10.00	7.74	min/CY
Loading time, delay time per CY		0.25	min/CY
TIME (minutes) per cubic yard		7.99	min/CY

COST per CY computation

Cost of truck and operator per hour	$90.00	/hr.
Cost of truck and operator per minute	$1.50	/min
Cost per CY	$11.99	/CY
Spread and compact — Water truck, Grader & Roller	$1.50	/CY

Size	Cost/Yd (Pit)	Cost Delivered w/o processing	Cost Delivered with processing
1½ - 0"	$ 12.15	$24.14	$25.64
3 - 0"	$ 11.81	$23.80	$25.30
Jaw Run	$ 10.46	$22.45	$23.95
Pit-Run	$ 9.45	$21.44	$22.94

TIMBER CRUISE REPORT

Rebott
(WO-341-2022-W00683-01)
FY 2021

1. **Sale Area Location**: Portions of Sections 21 & 28, T10S, R7W, W.M., Benton County, Oregon.

2. **Fund Distribution:**
   a. **Fund** BOF 38%
   CSL 62%

3. **Sale Acreage by Area:**

Unit	Treatment	Gross Acres	Stream Buffers	Existing Roads	Net Sale Acres	Acreage Comp. Method
1	Modified Clearcut	4	-	-	4	GIS
2	Modified Clearcut	121	9	6	106	GIS
Total		125	9	6	110	

4. **Cruisers and Cruise Dates:** This sale was cruised by David Bailey, Zane Sandborg, Cody Valencia, Elliot Lowry, and Michael Loewen in February, 2021.

5. **Cruise Method and Computation:** The sale consists of two modified clearcut units that were stratified into two strata. Unit 1 is entirely within strata 1, while Unit 2 consists of both strata 1 and strata 2. The strata were cruised using variable radius plot sampling. Strata 1 was cruised on a 3 x 3 grid using a Basal Area Factor of 40 and strata 2 was cruised on a 4 x 4 spacing using a Basal Area Factor of 33.61.

6. Measure plots were measured for DBH, height, form factor, grade, and defect. Data was entered into the Atterbury Super ACE cruise program to determine stand statistics and net board foot volume. Additional volume was removed to account for hidden defect and breakage.

   Digital ortho photos, Lidar data, and GPS data were used to map the boundaries for the sale, and ArcMap GIS was used to determine gross and net acreage.

7. **Measurement Standards:** Tree heights were measured to the nearest foot, to a top diameter of 6 inches inside bark or to 40% of form factor. Diameters at breast height (DBH) were measured to the nearest inch, and a form point of 16 feet was used to calculate form factor. Form factors were measured or estimated on every tree. Most trees were graded in 40 foot log segments unless breakage, defect, or length to top of grade cruise diameter warranted otherwise.

8. **Timber Description:** Strata 1 is 18 acres of approximately 80-85 year old Douglas-fir with small amounts of big-leaf maple. Strata 2 is 92 acres of mostly 55 year old Douglas-fir with small amounts of red alder and big-leaf maple. In Unit 1 the average Douglas-fir is 31 inches DBH and the average volume is 73 MBF/acre. In unit 2 the average Douglas-fir is 20 inches DBH and the average volume is 28 MBF/acre. Conifer trees other than Douglas-fir are reserved from cutting.

9. **Statistical Analysis and Stand Summary:** (See attached "Statistics").

Strata	Target CV	Target SE	Actual CV	Actual SE
1	45%	10%	37.0%	8.3%
2	45%	9%	43.4%	6.1%

Note: Statistics shown are for conifer and hardwood trees combined. Percentages are for net board foot volume.

10. **Total Volume (MBF) by Species and Grade:** (See attached volume report "Species, Sort Grade – Board Foot Volumes - Project").

Unit	Species	Gross Cruise Volume	Cruised D & B	Cruised D & B (MBF)	Hidden D & B	Hidden D & B (MBF)	Net Sale Volume
1	DF	306	2%	(6)	3%	(9)	291
2	DF	3,140	2%	(67)	2%	(61)	3,012
	RA	133	5%	(6)	2%	(3)	124
	BM	133	10%	(13)	2%	(2)	118
Total		**3,712**	**2%**	**(92)**	**2%**	**(75)**	**3,545**

Unit	Species	Ave. DBH	Tot. Net Vol.	2-Saw	3-Saw	4-Saw	Camp-run
1	Douglas-fir	31	Grade %	92%	6%	2%	-
			291	268	17	6	-
2	Douglas-fir	20	Grade %	66%	29%	5%	-
			3,012	1,988	873	151	-
	Red alder	14	Grade %	-	-	-	100%
			124	-	-	-	124
	Bigleaf maple	19	Grade %	-	-	-	100%
			118	-	-	-	118
	Total All Areas		Grade %	64%	25%	4%	7%
			3,545	2,256	890	157	242

Attachments:

-Cruise Design
-Cruise Maps
-Statistics
-Species, Sort Grade – Board Foot Volume
-Stand Table Summary
-Log Stock Table – MBF

Prepared by: David Bailey Date: 03/30/2021

Unit Forester: Evelyn Hukari Date: 03/31/2021

Revised August, 2002

CRUISE DESIGN
WEST OREGON DISTRICT

Sale Name: Rebott **Area** S1

Harvest Type: MC
Approx. Cruise Acres: 18 **Estimated CV%** 45 Net BF /Acre **SE% Objective** 10 Net BF /Acre

Planned Sale Volume: 3.74 MMBF **Estimated Sale Area Value/Acre:** $ 21,375

A. Cruise Goals: (a) Grade minimum 60 conifer and 10 hardwood trees: (b) Sample 20 cruise plots (15 grade: 5 count); (c) Other goals X Determine log grades for sale value.

(Special cruising directions – leave trees etc.) Take plots as shown on map. Do not take plots in buffers.

DO NOT RECORD 12', 22' and 32' (for Hardwoods).

DO NOT RECORD 22' LENGTHS.

B. Cruise Design:

1. **Plot Cruises:** BAF 40 (Full point; Half point) (circle one)
   Cruise Line Direction(s) See Map
   Cruise Line Spacing 3/198 (chains) (feet)
   Cruise Plot Spacing 3/198 (chains) (feet)
   Grade/Count Ratio 1:1

C. Tree Measurements:

1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 10" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

2. **Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.

3. **Top Cruise Diameter (TCD):** Minimum top outside bark for conifer is 7", 7" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh.

4. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for

hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. log segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

6. **Species, Sort, and Grade Codes:** A. Species: Record as DF (Douglas-fir); WH (Western hemlock); SS (Sitka Spruce); RC (Western red cedar); NF (Noble fir); SF (Silver fir); RA (Red alder); BM (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DFL, HL, CL, etc.)
   B. Sort: Use code "1" (Domestic).
   C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; K = Camp Run; 0 = Cull ;
   Hardwoods: K = Camprun; #1 Sawmill = 12"+ scaling diameter; #2 Sawmill = 10" and 11"; #3 Sawmill = 8" and 9"; #4 Sawmill = 6" and 7"

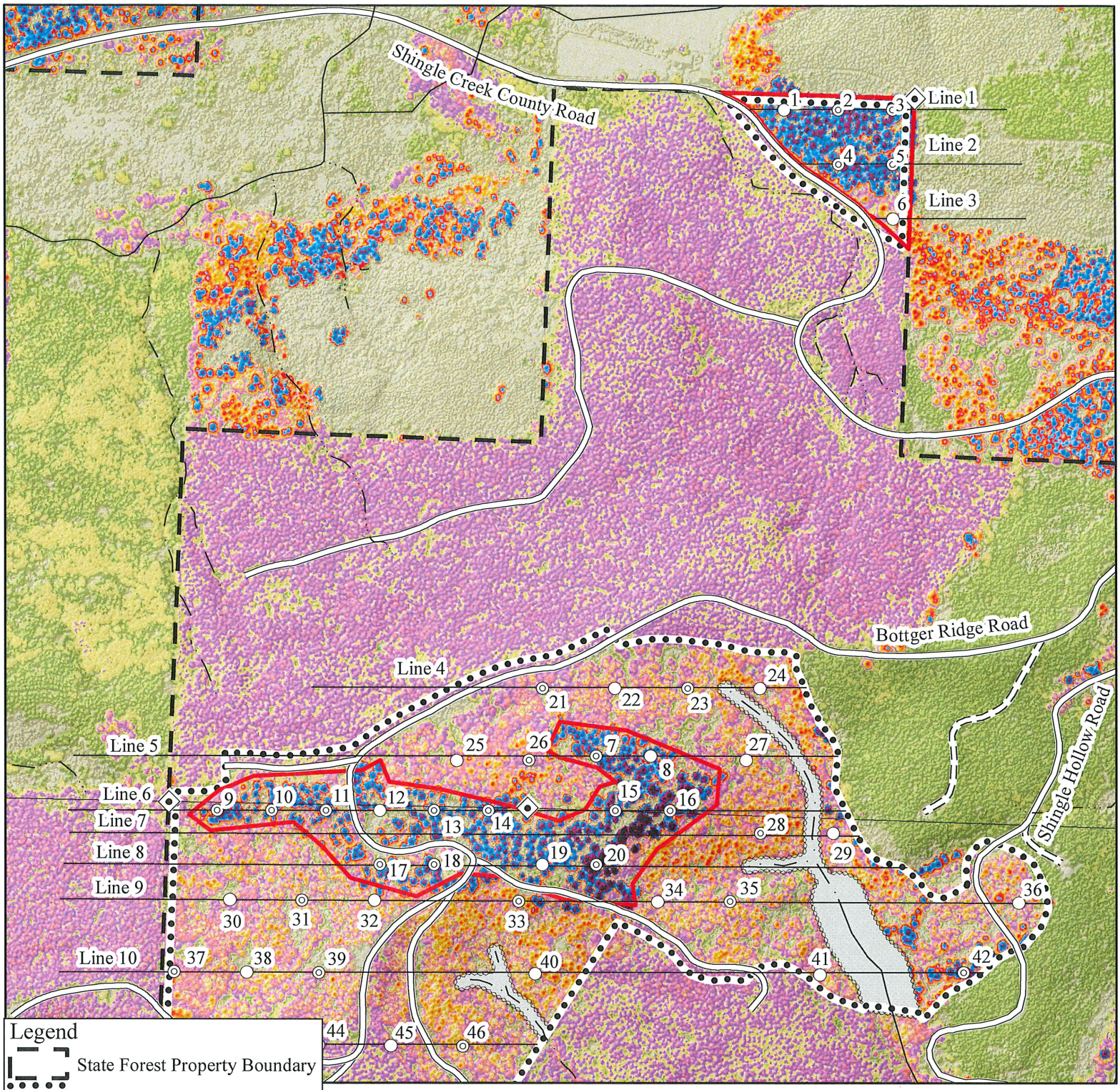
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning points with red flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie red flagging above eye level near plot center and another red flagging around a sturdy wooden stake marking plot center. On red flagging, write the plot identification number. On "measure/grade" plots write the tree number and/or tree diameter on all measured trees (clockwise from the line direction) in yellow paint. Mark leave trees with an L for leave.
   ITS and 100% Cruises: Mark cruise "strips" with various colored flagging (not pink). Mark trees measured and graded with yellow paint.

9. **Cruising Equipment:** Relaskop, Rangefinder or Lazer, Logger's Tape (with dbh on back), Biltmore Stick, Compass, Cruise Cards or Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.

10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: David Bailey
Approved by: Cody Wie
Date: 2/2/2021



Legend

- State Forest Property Boundary
- Timber Sale Boundary

Streams

- Type F Stream
- Type N Stream
- Unknown Stream

Roads

- Surfaced
- Unsurfaced
- Green Tree Retention Area

Cruise Plots

- Count
- Measure

Rebott Cruise Map

PORTIONS OF SECTIONS 21 & 28
T10S, R7W, W.M.,
BENTON COUNTY, OREGON

Scale 1:6,000

500 0 500 1,000 Feet

N

Line Spacing:S1 3 chains 198' S2 4 chains 264'
Plot spacing: S1 3 chains 198' S2 4 chains 264'
Bearing 90/270
BAF: S1 33.61, S2 40

Date: 02/11/2021

Revised August, 2002

CRUISE DESIGN
WEST OREGON DISTRICT

Sale Name: Rebott **Area** S2

Harvest Type: MC
Approx. Cruise Acres: 92 **Estimated CV%** 45 Net BF /Acre **SE% Objective** 9 Net BF /Acre

Planned Sale Volume: 3.74 MMBF **Estimated Sale Area Value/Acre:** $ 16,150

A. **Cruise Goals:** (a) Grade minimum 100 conifer and 15 hardwood trees: (b) Sample 50 cruise plots (25 grade: 25 count); (c) Other goals X Determine log grades for sale value.

(Special cruising directions – leave trees etc.) Take plots as shown on map. Do not take plots in buffers.

DO NOT RECORD 12', 22' and 32' (for Hardwoods).

DO NOT RECORD 22' LENGTHS.

B. **Cruise Design:**
1. **Plot Cruises:** BAF 33.61 (Full point; Half point) (circle one)
   Cruise Line Direction(s) See Map
   Cruise Line Spacing 4/264 (chains) (feet)
   Cruise Plot Spacing 4/264 (chains) (feet)
   Grade/Count Ratio 1:1

C. **Tree Measurements:**
1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 10" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

2. **Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.

3. **Top Cruise Diameter (TCD):** Minimum top outside bark for conifer is 7", 7" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh.

4. **Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for

hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. log segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

6. **Species, Sort, and Grade Codes:** A. Species: Record as DF (Douglas-fir); WH (Western hemlock); SS (Sitka Spruce); RC (Western red cedar); NF (Noble fir); SF (Silver fir); RA (Red alder); BM (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DFL, HL, CL, etc.)
   B. Sort: Use code "1" (Domestic).
   C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; K = Camp Run; 0 = Cull ;
   Hardwoods: K = Camprun; #1 Sawmill = 12"+ scaling diameter; #2 Sawmill = 10" and 11"; #3 Sawmill = 8" and 9"; #4 Sawmill = 6" and 7"

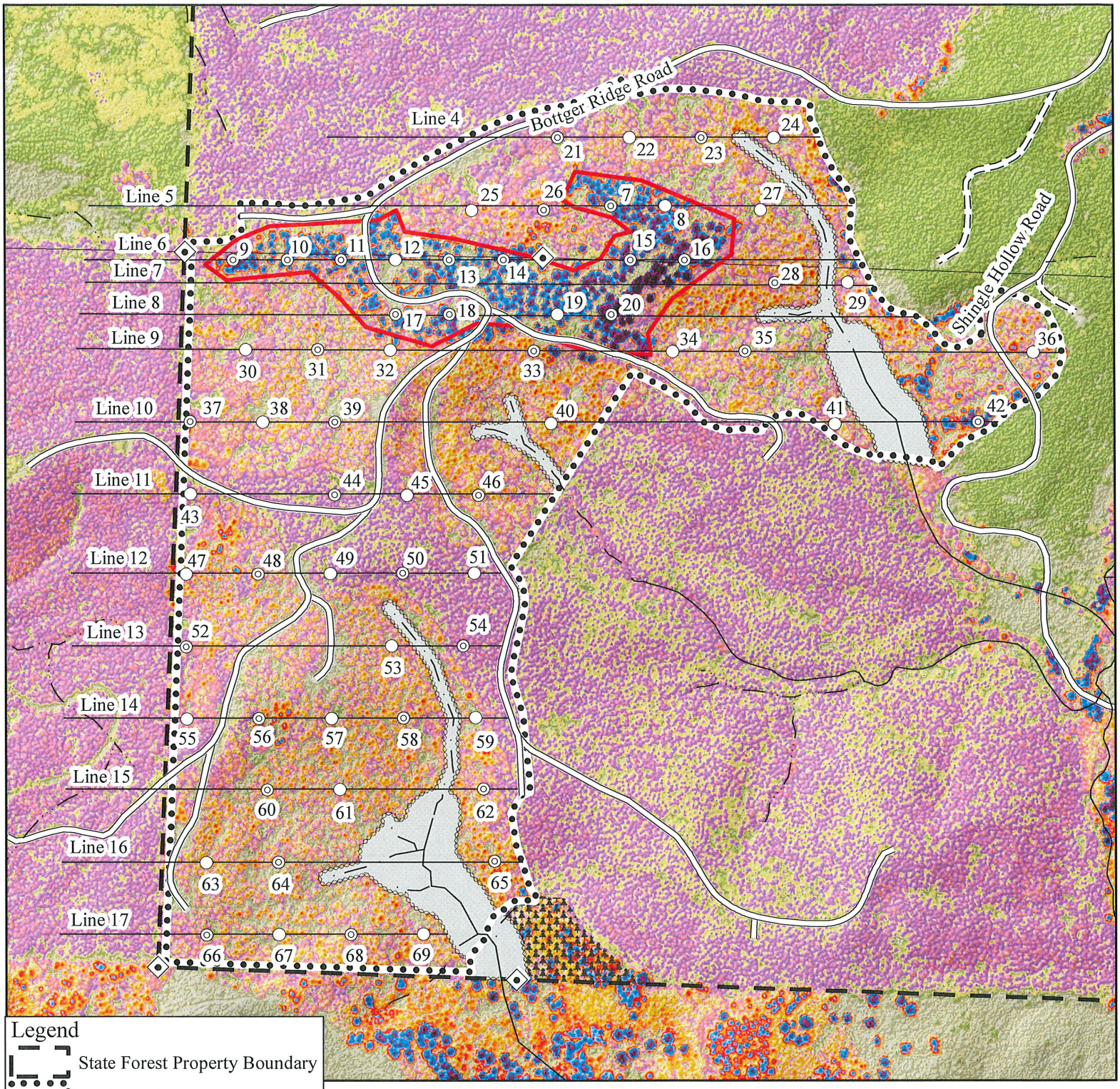
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning points with red flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie red flagging above eye level near plot center and another red flagging around a sturdy wooden stake marking plot center. On red flagging, write the plot identification number. On "measure/grade" plots write the tree number and/or tree diameter on all measured trees (clockwise from the line direction) in yellow paint. Mark leave trees with an L for leave.
   ITS and 100% Cruises: Mark cruise "strips" with various colored flagging (not pink). Mark trees measured and graded with yellow paint.

9. **Cruising Equipment:** Relaskop, Rangefinder or Lazer, Logger's Tape (with dbh on back), Biltmore Stick, Compass, Cruise Cards or Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.

10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: David Bailey
Approved by: Cody Mc
Date: 2/2/2021



Legend

- State Forest Property Boundary
- Timber Sale Boundary

Streams

- Type F Stream
- Type N Stream
- Unknown Stream

Roads

- Surfaced
- Unsurfaced
- Green Tree Retention Area

Cruise Plots

- Count
- Measure

Rebott Cruise Map

PORTIONS OF SECTIONS 21 & 28
T10S, R7W, W.M.,
BENTON COUNTY, OREGON

Scale 1:6,000

500 0 500 1,000 Feet

Line Spacing:S1 3 chains 198' S2 4 chains 264'
Plot spacing: S1 3 chains 198' S2 4 chains 264'
Bearing 90/270
BAF: S1 33.61, S2 40

N

Date: 02/11/2021

TC TSTATS

STATISTICS

PAGE 1

PROJECT REBOTT

DATE 3/25/2021

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
10S	**07W**	**21**	**S1**	**00MC**	18.00	20	142	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	20	142	7.1		
CRUISE	14	106	7.6	1,051	10.1
DBH COUNT					
REFOREST					
COUNT	6	36	6.0		
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
DF	97	52.0	30.5	109	47.8	264.0	76,457	74,941	15,000	15,000
SNAG	5	5.0	21.0	65	2.6	12.0				
BL MAPLE	2	1.1	26.4	42	0.8	4.0	109	94	79	79
DF LEAVE	2	.3	51.2	125	0.6	4.0	1,339	1,339	237	237
TOTAL	*106*	*58.4*	*29.9*	*104*	*52.0*	*284.0*	*77,905*	*76,374*	*15,316*	*15,316*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 67.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DF	61.5	6.1	2,118	2,256	2,394			
SNAG								
BL MAPLE	15.7	14.4	77	90	103			
DF LEAVE	32.7	29.9	3,603	5,140	6,677			
TOTAL	*69.7*	*6.6*	*2,019*	*2,163*	*2,306*	*186*	*47*	*21*

CL: 67.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DF	59.5	13.4	45	52	59			
SNAG	230.4	51.8	2	5	8			
BL MAPLE	310.0	69.6	0	1	2			
DF LEAVE	322.3	72.4	0	0	0			
TOTAL	*59.4*	*13.4*	*51*	*58*	*66*	*143*	*36*	*16*

CL: 67.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DF	29.7	6.7	246	264	282			
SNAG	219.0	49.2	6	12	18			
BL MAPLE	307.8	69.2	1	4	7			
DF LEAVE	307.8	69.2	1	4	7			
TOTAL	*33.9*	*7.6*	*262*	*284*	*306*	*46*	*12*	*5*

CL: 67.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DF	35.0	7.9	69,052	74,941	80,830			
SNAG								
BL MAPLE	307.8	69.2	29	94	159			
DF LEAVE	308.6	69.3	411	1,339	2,268			
TOTAL	*37.0*	*8.3*	*70,023*	*76,374*	*82,724*	*55*	*14*	*6*

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: REBOTT

Page 1
Date 3/25/2021
Time 9:02:37AM

T10S R07W S21 T00MC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
10S	07W	21	S1	00MC	18.00	20	106	1	W

T10S R07W S21 T00MC

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		DO	2M	92	1.8	70,936	69,678	1,254			17	83	1	0	4	95	38	19	655	3.40	106.4
DF		DO	3M	6	4.9	4,730	4,497	81		58	4	38	3	9	20	68	32	10	145	1.18	31.1
DF		DO	4M	2	3.2	790	765	14		99	1		26	47		27	25	7	39	0.52	19.7
DF	**Totals**			98	2.0	76,457	74,941	1,349		5	16	80	1	1	5	93	35	16	477	2.74	157.2
BM		DO	CR	100	14.0	109	94	2		100						100	40	8	89	1.86	1.1
BM	**Totals**			0	14.0	109	94	2		100						100	40	8	89	1.86	1.1
DFL		DO	2M	4		62	62	1				100				100	36	20	630	4.39	.1
DFL		DO	3M	96		1,277	1,277	23			2	98	2		7	91	34	27	1386	7.06	.9
DFL	**Totals**			2		1,339	1,339	24			1	99	1		7	92	34	26	1313	6.79	1.0
Type Totals					2.0	77,905	76,374	1,375		5	15	80	1	1	5	93	35	16	479	2.76	159.3

TC TLOGSTVB

Log Stock Table - MBF

Project: REBOTT

T10S R07W S21 T00MC

T10S R07W S21 T00M

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
10S	07W	21	S1	00MC	18.00	20	106

Page 1
Date 3/25/2021
Time 9:02:36AM

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		DO	2M	12	2		2	.2						0	1	0				
DF		DO	2M	14	0		0	.0						0						
DF		DO	2M	16	7		7	.5						3	2	2				
DF		DO	2M	18	0		0	.0						0						
DF		DO	2M	24	5		5	.4						2	2	2				
DF		DO	2M	32	32	.6	32	2.4						14	4	10	5			
DF		DO	2M	34	14		14	1.1						5		4	6			
DF		DO	2M	36	35	3.2	34	2.5						7	5	13	5	3		
DF		DO	2M	38	46	4.2	45	3.3						3	18	9	5	9		
DF		DO	2M	40	1,134	1.7	1,114	82.6						36	52	183	197	392	235	19
DF		DO	3M	16	3	5.0	3	.2					3							
DF		DO	3M	24	7	3.8	7	.5				4	3							
DF		DO	3M	32	14		14	1.0			4	4	3	3						
DF		DO	3M	34	3		3	.2			2	1								
DF		DO	3M	36	6	1.4	5	.4				1	5							
DF		DO	3M	38	11		11	.8				5	6							
DF		DO	3M	40	42	8.8	39	2.9				4	4					17	14	
DF		DO	4M	12	2		2	.1					2							
DF		DO	4M	14	0		0	.0				0								
DF		DO	4M	16	2	25.0	1	.1			0	1		0						
DF		DO	4M	24	3		3	.2			2	1								
DF		DO	4M	26	2		2	.1			2									
DF		DO	4M	30	2		2	.2			2									
DF		DO	4M	38	4		4	.3			4									
DF			Totals		1,376	2.0	1,349	98.1			15	21	25	74	84	224	217	421	249	19
BM		DO	CR	40	2	14.0	2	100.0				2								
BM			Totals		2	14.0	2	.1				2								
DFL		DO	2M	36	1		1	4.6									1			
DFL		DO	3M	16	0		0	1.5							0					
DFL		DO	3M	34	2		2	6.9								2				
DFL		DO	3M	40	21		21	87.0										4	10	7
DFL			Totals		24		24	1.8							0	2	1	4	10	7
Total All Species					1,402	2.0	1,375	100.0			15	22	25	74	85	226	218	426	259	25

TC TSTNDSUM

Stand Table Summary

Project REBOTT

T10S R07W S21 T00MC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
10S	07W	21	S1	00MC	18.00	20	106

T10S R07W S21 T00MC

Date: 03/25/20

Time: 9:02:37AM

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.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		12	1	86	58	3.465	2.72	3.47	18.0	60.0		62	208		11	4
DF		13	1	85	80	2.953	2.72	5.91	13.5	45.0		80	266		14	5
DF		17	1	88	129	1.727	2.72	5.18	27.0	103.3		140	535		25	10
DF		18	1	85	127	1.540	2.72	4.62	29.3	106.7		136	493		24	9
DF		19	1	86	131	1.382	2.72	4.15	33.7	126.7		140	525		25	9
DF		22	3	84	132	3.093	8.16	9.28	44.8	183.3		415	1,701		75	31
DF		23	3	86	142	2.830	8.16	8.49	51.8	211.1		440	1,792		79	32
DF		24	3	86	132	2.599	8.16	7.80	52.0	206.7		405	1,611		73	29
DF		25	4	86	143	3.194	10.89	10.38	56.8	243.8		590	2,531		106	46
DF		26	1	86	151	.738	2.72	2.21	68.0	300.0		151	664		27	12
DF		27	3	86	142	2.054	8.16	6.16	72.1	314.4		444	1,937		80	35
DF		28	4	87	157	2.546	10.89	8.27	77.0	372.3		637	3,081		115	55
DF		29	2	88	153	1.187	5.44	3.56	86.7	418.3		309	1,489		56	27
DF		30	1	86	138	.554	2.72	1.66	86.0	400.0		143	665		26	12
DF		32	3	87	159	1.462	8.16	4.87	100.9	501.0		492	2,441		89	44
DF		33	8	88	156	3.666	21.77	12.83	99.1	500.4		1,272	6,420		229	116
DF		34	6	87	157	2.590	16.33	8.63	110.0	553.0		950	4,774		171	86
DF		35	3	87	149	1.222	8.16	3.67	123.7	624.4		453	2,289		82	41
DF		36	3	87	159	1.155	8.16	3.85	124.4	649.0		479	2,499		86	45
DF		37	4	87	145	1.458	10.89	4.74	125.5	648.5		595	3,073		107	55
DF		38	2	87	172	.691	5.44	2.76	124.5	690.0		344	1,908		62	34
DF		39	6	87	152	1.968	16.33	6.56	140.7	728.5		923	4,780		166	86
DF		40	3	88	161	.936	8.16	3.43	143.8	771.8		493	2,648		89	48
DF		41	4	87	163	1.187	10.89	3.86	160.2	860.0		618	3,319		111	60
DF		42	2	88	164	.566	5.44	1.98	169.0	940.0		335	1,861		60	34
DF		43	3	85	164	.810	8.16	2.97	162.6	850.0		483	2,523		87	45
DF		44	3	87	162	.773	8.16	2.58	190.6	1019.0		491	2,626		88	47
DF		45	1	90	170	.246	2.72	.99	176.7	1007.5		174	993		31	18
DF		46	1	88	159	.236	2.72	.94	175.0	962.5		165	908		30	16
DF		47	4	89	165	.904	10.89	3.16	211.9	1142.9		670	3,614		121	65
DF		48	2	88	173	.433	5.44	1.73	200.2	1077.5		347	1,867		62	34
DF		49	2	88	159	.416	5.44	1.45	225.6	1250.0		328	1,819		59	33
DF		50	1	88	147	.200	2.72	.60	228.3	1126.7		137	675		25	12
DF		51	1	88	174	.192	2.72	.77	228.5	1315.0		175	1,009		32	18
DF		52	2	87	163	.369	5.44	1.29	253.3	1402.9		327	1,812		59	33
DF		53	2	88	162	.355	5.44	1.24	265.7	1370.0		330	1,704		59	31
DF		54	2	88	161	.342	5.44	1.20	272.6	1568.6		327	1,879		59	34
DF		Totals	97	87	139	52.038	264.00	157.25	95.4	476.6		15,000	74,941		2,700	1,349
DFL		45	1	88	164	.181	2.00	.72	173.0	987.5	.00	125	715	0	23	13
DFL		61	1	87	147	.099	2.00	.30	379.3	2110.0	.00	112	624	0	20	11
DFL		Totals	2	88	158	.280	4.00	1.02	232.8	1312.9	0.01	237	1,339	0	43	24
BM		25	1	87	48	.587	2.00	.59	67.0	80.0		39	47		7	1
BM		28	1	87	48	.468	2.00	.47	84.0	100.0		39	47		7	1
BM		Totals	2	87	48	1.054	4.00	1.05	74.5	88.9		79	94		14	2
SN		17	2	98	66	3.045	4.80									
SN		21	1	98	62	.998	2.40									
SN		24	1	98	55	.764	2.40									
SN		47	1	98	91	.199	2.40									
SN		Totals	5	98	65	5.006	12.00									

TC TSTNDSUM

Stand Table Summary

Project REBOTT

T10S R07W S21 T00MC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
10S	07W	21	S1	00MC	18.00	20	106

Date: 03/25/20
Time: 9:02:37AM

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.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
Totals			106	88	131	58.379	284.00	159.32	96.1	479.4	.01	15316	76,374	0	2,757	1,375

TC TSTATS

STATISTICS

PAGE 1

PROJECT REBOTT

DATE 3/25/2021

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
10S	**07W**	**21**	**S2**	**00MC**	92.00	49	262	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	49	262	5.3		
CRUISE	24	129	5.4	9,643	1.3
DBH COUNT					
REFOREST					
COUNT	25	133	5.3		
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
DF	107	71.3	18.8	72	31.8	137.9	22,500	22,000	5,673	5,673
R ALDER	9	17.8	14.1	39	5.1	19.2	1,441	1,376	460	460
BL MAPLE	7	10.8	17.4	42	4.3	17.8	1,425	1,295	474	474
SNAG	6	4.9	13.4	53	1.3	4.8				
TOTAL	*129*	*104.8*	*17.7*	*62*	*42.7*	*179.7*	*25,365*	*24,671*	*6,607*	*6,607*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 67.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DF	142.8	13.5	550	636	722			
R ALDER	74.1	25.6	57	77	96			
BL MAPLE	72.1	28.8	118	166	213			
SNAG								
TOTAL	*157.4*	*13.6*	*468*	*542*	*615*	*952*	*238*	*106*

CL: 67.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DF	74.1	10.4	64	71	79			
R ALDER	236.2	33.1	12	18	24			
BL MAPLE	274.1	38.4	7	11	15			
SNAG	364.4	51.0	2	5	7			
TOTAL	*66.9*	*9.4*	*95*	*105*	*115*	*172*	*43*	*19*

CL: 67.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DF	53.9	7.5	127	138	148			
R ALDER	228.7	32.0	13	19	25			
BL MAPLE	269.6	37.7	11	18	25			
SNAG	350.0	49.0	2	5	7			
TOTAL	*39.4*	*5.5*	*170*	*180*	*190*	*60*	*15*	*7*

CL: 67.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DF	56.0	7.8	20,277	22,000	23,723			
R ALDER	231.8	32.4	930	1,376	1,823			
BL MAPLE	269.6	37.7	806	1,295	1,783			
SNAG								
TOTAL	*43.4*	*6.1*	*23,172*	*24,671*	*26,169*	*72*	*18*	*8*

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: REBOTT

Date 3/25/2021

Time 9:03:24AM

T10S R07W S21 T00MC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
10S	07W	21	S2	00MC	92.00	49	129	1	W

T10S R07W S21 T00MC

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		DO	2M	62	2.2	14,163	13,846	1,274			53	47		1	3	97	39	15	362	2.17	38.3
DF		DO	3M	32	2.1	7,073	6,922	637		89	6	5		2	18	80	37	8	102	0.82	68.0
DF		DO	4M	6	2.5	1,263	1,232	113		100			40	50	11		21	6	26	0.43	46.6
DF	**Totals**			89	2.2	22,500	22,000	2,024		34	35	31	2	4	8	86	32	9	144	1.15	152.9
RA		DO	CR	100	4.5	1,441	1,376	127		100			12		20	68	31	7	63	0.69	21.8
RA	**Totals**			6	4.5	1,441	1,376	127		100			12		20	68	31	7	63	0.69	21.8
BM		DO	CR	100	9.1	1,425	1,295	119		69	15	16	5		37	58	30	9	90	1.09	14.4
BM	**Totals**			5	9.1	1,425	1,295	119		69	15	16	5		37	58	30	9	90	1.09	14.4
Type Totals					2.7	25,365	24,671	2,270		39	32	29	3	3	10	84	32	9	130	1.09	189.1

TC TLOGSTVB

Log Stock Table - MBF

Project: REBOTT

T10S R07W S21 T00MC — **T10S R07W S21 T00M**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
10S	07W	21	S2	00MC	92.00	49	129

Page 1
Date 3/25/2021
Time 9:03:24AM

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		DO	2M	24	2	16.7	2	.1						2						
DF		DO	2M	26	4		4	.2						4						
DF		DO	2M	28	2		2	.1								2				
DF		DO	2M	32	21	1.6	20	1.0						18	2					
DF		DO	2M	34	15	2.3	15	.7						15						
DF		DO	2M	36	56	7.4	52	2.6						52						
DF		DO	2M	38	69	2.0	67	3.3						22	11	35				
DF		DO	2M	40	1,134	2.0	1,112	54.9						203	274	313	77	132	113	
DF		DO	3M	24	3		3	.2				1	2							
DF		DO	3M	26	3		3	.2				3								
DF		DO	3M	28	9		9	.4				9								
DF		DO	3M	32	100	3.4	97	4.8			23	33	40							
DF		DO	3M	34	16		16	.8			12	4								
DF		DO	3M	36	140	3.8	135	6.7			26	60	32	17						
DF		DO	3M	38	80	2.4	78	3.9			10	38	20	11						
DF		DO	3M	40	299	1.1	296	14.6			38	80	133	12				14	18	
DF		DO	4M	12	3		3	.1			2	1								
DF		DO	4M	14	3		3	.2			3									
DF		DO	4M	16	33		33	1.7			28	5								
DF		DO	4M	18	4		4	.2			3	1								
DF		DO	4M	20	1		1	.1			1									
DF		DO	4M	24	37	3.9	35	1.7			33	2								
DF		DO	4M	26	13		13	.7			13									
DF		DO	4M	28	8		8	.4			8									
DF		DO	4M	32	14	10.7	12	.6			12									
DF			Totals		2,070	2.2	2,024	89.2			211	239	227	355	287	350	77	145	131	
RA		DO	CR	16	10		10	7.6			10									
RA		DO	CR	18	3		3	2.5			3									
RA		DO	CR	20	3		3	2.1			3									
RA		DO	CR	32	28	12.1	25	19.7			7		18							
RA		DO	CR	36	31		31	24.6			31									
RA		DO	CR	38	40		40	31.6				18	22							
RA		DO	CR	40	17	14.3	15	11.8			15									
RA			Totals		133	4.5	127	5.6			69	18	40							
BM		DO	CR	16	10	43.6	6	4.7			6									
BM		DO	CR	32	44		44	37.1			21		23							
BM		DO	CR	36	28	7.3	26	21.7			6					19				
BM		DO	CR	40	49	11.4	43	36.5				16	9	18						
BM			Totals		131	9.1	119	5.2			33	16	32	18		19				
Total All Species					2,334	2.7	2,270	100.0			314	273	300	373	287	369	77	145	131	

TC TSTNDSUM

Stand Table Summary

Project REBOTT

T10S R07W S21 T00MC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
10S	07W	21	S2	00MC	92.00	49	129

T10S R07W S21 T00MC

Date: 03/25/20

Time: 9:03:25AM

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.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		9	1	83	54	2.917	1.29	2.92	10.0	30.0		29	87		27	8
DF		10	1	91	96	2.362	1.29	4.72	9.5	40.0		45	189		41	17
DF		11	2	86	62	3.905	2.58	3.90	16.0	55.0		62	215		57	20
DF		12	1	89	98	1.641	1.29	3.28	14.0	55.0		46	180		42	17
DF		13	4	85	92	5.592	5.15	11.18	15.2	51.3		171	573		157	53
DF		14	3	84	94	3.616	3.87	7.23	19.0	66.7		137	482		126	44
DF		15	5	86	94	5.250	6.44	9.45	24.4	84.4		231	798		213	73
DF		16	7	86	90	6.460	9.02	12.92	24.3	83.6		314	1,080		289	99
DF		17	5	85	100	4.087	6.44	8.99	26.9	92.7		242	834		223	77
DF		18	10	86	101	7.291	12.88	16.77	30.5	104.3		512	1,750		471	161
DF		19	9	86	104	5.890	11.60	14.40	32.3	111.4		465	1,603		428	148
DF		20	6	87	103	3.544	7.73	8.86	35.1	125.3		311	1,110		286	102
DF		21	8	86	110	4.286	10.31	10.71	40.6	146.5		435	1,570		400	144
DF		22	6	88	107	2.929	7.73	6.83	46.6	169.3		318	1,157		293	106
DF		23	5	87	107	2.233	6.44	5.36	49.4	188.3		265	1,009		244	93
DF		24	5	86	112	2.051	6.44	4.92	55.0	209.2		271	1,029		249	95
DF		25	2	89	127	.756	2.58	2.27	55.7	235.0		126	533		116	49
DF		26	5	87	120	1.747	6.44	4.89	59.8	242.1		293	1,185		269	109
DF		27	5	87	110	1.620	6.44	3.89	69.7	283.3		271	1,102		249	101
DF		28	2	89	120	.603	2.58	1.81	67.0	295.0		121	533		111	49
DF		29	3	86	123	.843	3.87	2.53	72.2	311.1		183	787		168	72
DF		31	1	86	129	.246	1.29	.74	84.0	383.3		62	283		57	26
DF		35	1	87	133	.193	1.29	.58	112.0	560.0		65	324		60	30
DF		36	1	88	139	.182	1.29	.55	119.3	583.3		65	319		60	29
DF		38	2	87	139	.327	2.58	.98	135.7	700.0		133	687		123	63
DF		41	1	85	152	.141	1.29	.42	170.0	836.7		72	353		66	32
DF		43	1	89	164	.128	1.29	.38	203.3	1100.0		78	422		72	39
DF		45	1	86	143	.117	1.29	.35	192.0	970.0		67	339		62	31
DF		46	1	88	155	.112	1.29	.33	224.7	1186.7		75	397		69	37
DF		53	1	88	157	.084	1.29	.25	297.7	1570.0		75	396		69	36
DF		54	1	86	143	.081	1.29	.24	276.0	1373.3		67	334		62	31
DF		56	1	85	141	.075	1.29	.23	292.0	1500.0		66	339		61	31
DF		Totals	107	86	98	71.306	137.87	152.90	37.1	143.9		5,673	22,000		5,219	2,024
RA		10	1	86	74	3.913	2.13	3.91	17.0	60.0		67	235		61	22
RA		12	1	87	80	2.717	2.13	2.72	24.0	60.0		65	163		60	15
RA		14	1	87	43	1.996	2.13	2.00	19.0	40.0		38	80		35	7
RA		15	4	87	71	6.956	8.54	12.17	22.0	71.4		268	869		246	80
RA		18	1	87	12	1.208	2.13									
RA		20	1	86	22	.978	2.13	.98	23.0	30.0		22	29		21	3
RA		Totals	9	87	63	17.767	19.21	21.78	21.1	63.2		460	1,376		423	127
BM		11	1	86	64	3.860	2.55	3.86	17.0	60.0		66	232		60	21
BM		15	1	87	70	2.076	2.55	4.15	20.0	65.0		83	270		76	25
BM		17	1	86	61	1.616	2.55	1.62	43.0	110.0		70	178		64	16
BM		20	1	87	43	1.168	2.55	1.17	38.0	60.0		44	70		41	6
BM		22	1	86	71	.965	2.55	1.93	43.5	115.0		84	222		77	20
BM		28	1	87	51	.596	2.55	.60	92.0	170.0		55	101		50	9
BM		29	1	87	61	.555	2.55	1.11	65.5	200.0		73	222		67	20
BM		Totals	7	86	62	10.837	17.83	14.43	32.8	89.7		474	1,295		436	119
SN		11	1	98	46	1.213	.80									
SN		12	1	99	34	1.019	.80									

TC TSTNDSUM

Stand Table Summary

Project REBOTT

T10S R07W S21 T00MC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
10S	07W	21	S2	00MC	92.00	49	129

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.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
SN		13	1	99	80	.868	.80									
SN		14	1	99	75	.749	.80									
SN		15	1	99	57	.652	.80									
SN		19	1	98	68	.406	.80									
SN		Totals	6	99	57	4.907	4.80									
Totals			129	87	87	104.816	179.71	189.11	34.9	130.5		6607	24,671		6,079	2,270

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: REBOTT

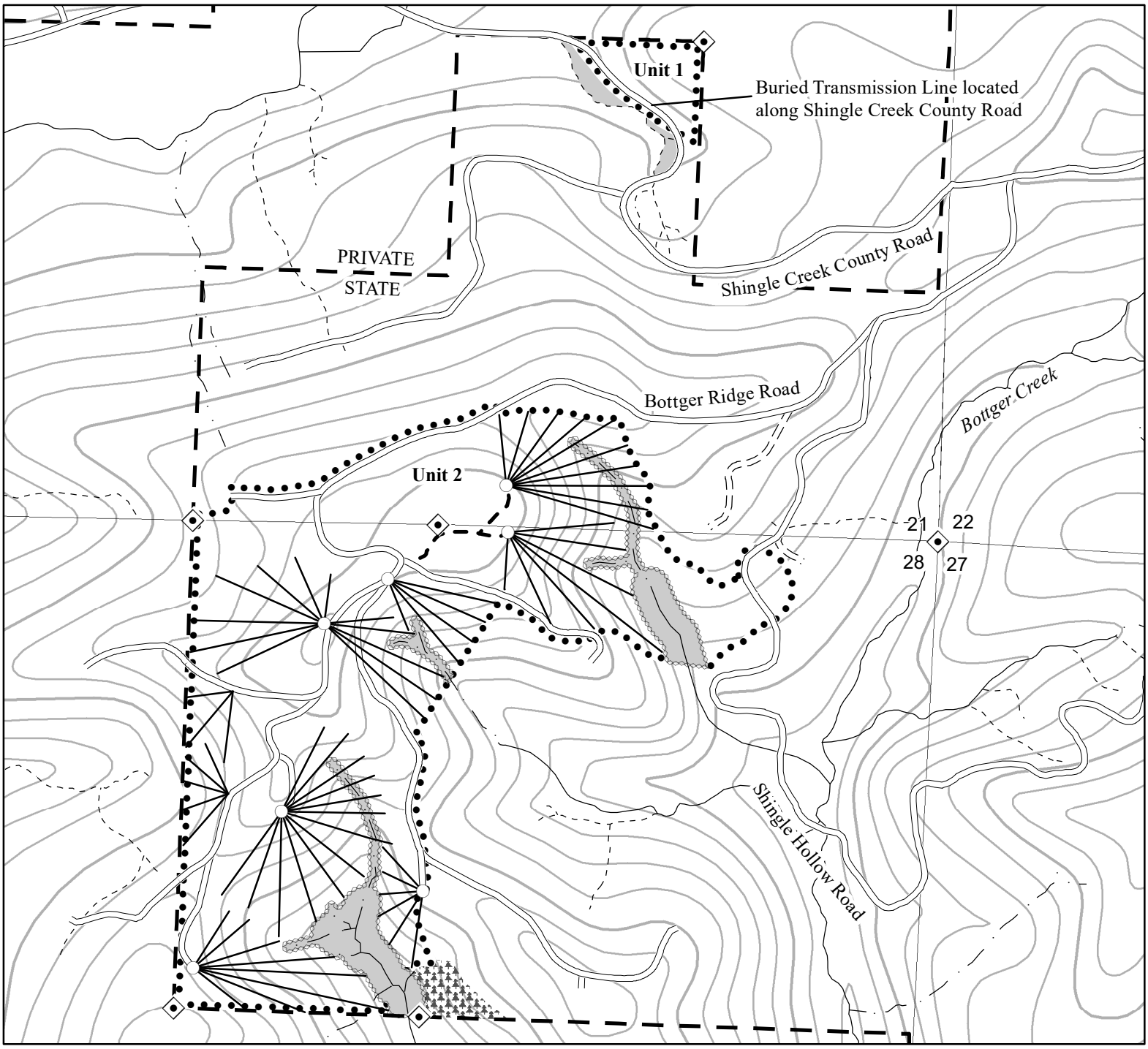
Page 1
Date 3/25/2021
Time 9:04:03AM

T10S R07W S21 T00MC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
10S	07W	21	UNIT1	00MC	4.00	20	106	1	W

T10S R07W S21 T00MC

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		DO	2M	92	1.8	70,936	69,678	279			17	83	1	0	4	95	38	19	655	3.40	106.4
DF		DO	3M	6	4.9	4,730	4,497	18		58	4	38	3	9	20	68	32	10	145	1.18	31.1
DF		DO	4M	2	3.2	790	765	3		99	1		26	47		27	25	7	39	0.52	19.7
DF	**Totals**			98	2.0	76,457	74,941	300		5	16	80	1	1	5	93	35	16	477	2.74	157.2
BM		DO	CR	100	14.0	109	94	0		100						100	40	8	89	1.86	1.1
BM	**Totals**			0	14.0	109	94	0		100						100	40	8	89	1.86	1.1
DFL		DO	2M	4		62	62	0				100				100	36	20	630	4.39	.1
DFL		DO	3M	96		1,277	1,277	5			2	98	2		7	91	34	27	1386	7.06	.9
DFL	**Totals**			2		1,339	1,339	5			1	99	1		7	92	34	26	1313	6.79	1.0
Type Totals					2.0	77,905	76,374	305		5	15	80	1	1	5	93	35	16	479	2.76	159.3



LOGGING PLAN

OF TIMBER SALE CONTRACT
NO. WO-341-2022-W00683-01
REBOTT
PORTIONS OF SECTIONS 21 & 28
T10S, R7W, W.M.,
BENTON COUNTY, OREGON

Legend

- Timber Sale Boundary
- State Forest Property Boundary
- Stream Buffer - Posted
- Green Tree Retention Area

Roads

- Surfaced Road
- Unsurfaced Road
- New Construction

Streams

- Type F Stream
- Type N Stream
- Unknown Stream
- Land Survey Monument
- Landing
- Cable Corridor

UNIT	TRACTOR ACRES	CABLE ACRES
1 (MC)	4	0
2 (MC)	40	66
TOTAL	44	66

This product is for informational use and may not have been prepared for or be suitable for legal, engineering or survey purposes. User of this information should review or consult the primary data and information sources to ascertain the usability of this information.

Scale 1:9,000

0 450 900 1,800 Feet

N

Date: 03/30/2021