Timber Sale Appraisal
Thin Men

Sale WO-341-2023-W01000-01

District: West Oregon

Date: March 22, 2023

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$229,114.08	$0.00	$229,114.08
		Project Work:	($53,348.00)
		Advertised Value:	$175,766.08

Timber Sale Appraisal
Thin Men
Sale WO-341-2023-W01000-01

District: West Oregon **Date: March 22, 2023**

Timber Description

Location: Portions of Section 32 of T9S, R8W W.M. and portions of Sections 5 & 8 of T10S, R8W W.M. Polk County, Oregon and portions of Section 8 T10S, R8W, Lincoln County, Oregon.

Stand Stocking: 40%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	12	0	97

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	16	920	936
Total	16	920	936

Comments: Pond Values Used: Local Pond Values, January, 2023

Other Conifers Stumpage Price = Conifer Pulp price using a conversion factor of 10 ton/MBF: = $60.00/MBF

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
$630.26/MBF = $1300/MBF - ($519.74/MBF + $150/MBF(Extra Haul Cost))

Hardwoods Stumpage Price = Hardwood Pulp price using a conversion factor of 10 ton/MBF: = $60.00/MBF

PULP (Conifer and Hardwood Price) = $6/TON

Other Costs (with Profit & Risk to be added):
Intermediate Support/Tail Trees: 12 supports @ $100/support = $1,200
Artificial anchor (dead man): 6 anchors @ $500/anchor = $3,000
TOTAL Other Costs (with Profit & Risk to be added) = $4,200

Other Costs (No Profit & Risk added):
Equipment Cleaning (Invasive Species): $2,000
Water Bar and Block Dirt Roads: 74 Stations @ $15.96/Station = $1,181
Landing Slash piling: 6 Landings @ $100/Landing = $600
Landing Slash Piling and sorting out firewood: 10 Landings @ $180/Landing = $1,800
TOTAL Other Costs (No Profit & Risk added) = $5,581

ROAD MAINTENANCE
Move-in: (Grader) $875
Final Road Maintenance: $12,624.90
TOTAL Road Maintenance: $13,499.90/936MBF = $14.42/MBF

District: West Oregon **Date: March 22, 2023**

Logging Conditions

Combination#: 1 Douglas - Fir 54.77%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Manual Falling/Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
loads / day: 7 **bd. ft / load:** 3700
cost / mbf: $281.85
machines: Log Loader (A)
Tower Yarder (Medium)

Combination#: 2 Douglas - Fir 18.68%

Logging System: Cable: Small Tower <=40 **Process:** Manual Falling/Delimbing
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
loads / day: 8 **bd. ft / load:** 3700
cost / mbf: $229.73
machines: Log Loader (A)
Tower Yarder (Small)

Combination#: 3 Douglas - Fir 15.67%

Logging System: Track Skidder **Process:** Feller Buncher
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
loads / day: 12 **bd. ft / load:** 3700
cost / mbf: $168.93
machines: Log Loader (B)
Stroke Delimber (B)
Feller Buncher w/ Delimber
Track Skidder

Combination#: 4 Douglas - Fir 10.88%

Logging System: Track Skidder **Process:** Feller Buncher
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
loads / day: 14 **bd. ft / load:** 3700
cost / mbf: $144.79
machines: Log Loader (B)
Stroke Delimber (B)
Feller Buncher w/ Delimber
Track Skidder

Timber Sale Appraisal
Thin Men
Sale WO-341-2023-W01000-01

District: West Oregon **Date: March 22, 2023**

Logging Costs

Operating Seasons:	2.00	**Profit Risk:**	12%
Project Costs:	$53,348.00	**Other Costs (P/R):**	$4,200.00
Slash Disposal:	$0.00	**Other Costs:**	$5,581.00

Miles of Road

Road Maintenance: $14.42

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

Hauling Costs

Species	$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	$0.00	2.0	4.0

Timber Sale Appraisal
Thin Men

Sale WO-341-2023-W01000-01

District: West Oregon

Date: March 22, 2023

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$239.51	$14.85	$37.16	$160.94	$4.49	$54.83	$0.00	$2.00	$5.96	$519.74

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$764.52	$244.78	$0.00

Timber Sale Appraisal
Thin Men
Sale WO-341-2023-W01000-01

District: West Oregon **Date: March 22, 2023**

Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	936	$244.78	$229,114.08

Gross Timber Sale Value

Recovery: $229,114.08

Prepared By: Zane Sandborg **Phone:** 541-929-3266

SUMMARY OF ALL PROJECT COSTS

Sale Name: Thin Men Date: March 2023
Time: 13:48

Project #1 - Construction

Road Segment	Length	Cost
A to B	2.7 sta	$1,726
C to D	2.2 sta	$1,378
Fuel Cost Increase (10%)		$310
TOTALS	4.9 sta	$3,414

Project #2 - Improvements

Road Segment	Length	Cost
1 to 2	202.0 sta	$26,910
3 to 4	124.0 sta	$347
5 to 6	3.8 sta	$1,104
7 to 8	14.6 sta	$400
9 to 10	53.8 sta	$2,967
11 to A	20.4 sta	$1,084
12 to 13	8.9 sta	$931
14 to 15	33.6 sta	$3,352
Fuel Cost Increase (10%)		$3,710
TOTALS	461.1 sta	$40,805

Project #3 - Brushing	Length	Cost
Brushing	1.8 mi	$1,712
Sod and Brush Removal		$1,431
Fuel Cost Increase (10%)		$314
TOTAL		$3,457

Project #4 - Move in	Cost
Excavator, C325 or equiv.	$1,450
(Extra move-in cost)	$145
Dozer, D-7 or equiv.	$905
(Extra move-in cost)	$128
Grader, Cat 14-G or equiv.	$875
Vibratory roller	$875
Road Brusher	$778
Fuel Cost Increase (10%)	$516
TOTAL	$5,672

GRAND TOTAL **$53,348**

Compiled by: Zane Sandborg Date 03/21/2023

SUMMARY OF CONSTRUCTION COST

SALE Thin Men Project # 1 LENGTH const 2.7 sta
ROAD A to B

CLEARING AND GRUBBING				Rate			
Road & Landing	0.25	ac	@	$1,337.00	/ac	=	$334

TOTAL CLEARING AND GRUBBING COST = $334

EXCAVATION				Rate			
Construct road (with dozer)	2.7	sta	@	$214.00	/sta	=	$578
Construct landing (with excavator)	1	ldg	@	$550.00	/ldg	=	$550
Large stump removal	2	stmp	@	$82.50	ea	=	$165
Shape subgrade (with road grader)	2.7	sta	@	$20.63	/sta	=	$56
Compact subgrade (with vibratory roller)	2.7	sta	@	$16.00	/sta	=	$43

TOTAL EXCAVATION COST = $1,392

Compiled by: Zane Sandborg
Date: Mar 21, 2023

GRAND TOTAL =====> $1,726

SUMMARY OF CONSTRUCTION COST

SALE Thin Men Project # 1 LENGTH const 2.2 sta
ROAD C to D

CLEARING AND GRUBBING				Rate			
Road & Landing	0.18	ac	@	$1,337.00	/ac	=	$241
				TOTAL CLEARING AND GRUBBING COST =			$241

EXCAVATION				Rate			
Construct road	2.2	sta	@	$138.00	/sta	=	$304
Construct landing	1	ldg	@	$438.00	/ldg	=	$438
Shape subgrade (with road grader)	2.2	sta	@	$20.63	/sta	=	$45
Compact subgrade (with vibratory roller)	2.2	sta	@	$16.00	/sta	=	$35
				TOTAL EXCAVATION COST =			$822

SURFACING			Size		Rate			
Transition rock (Sta. 0+00 to 0+50)	10	CY	3"-0"	@	$29.71	/CY	=	$297
Shape surface (Sta. 0+00 to 0+50) (with road grader)	0.5	sta		@	$20.63	/sta	=	$10
Compact surface (Sta. 0+00 to 0+50) (with vibratory roller)	0.5	sta		@	$16.00	/sta	=	$8
					TOTAL ROCK COST =			$315

Compiled by: Zane Sandborg
Date: Mar 21, 2023

GRAND TOTAL =====> $1,378

SUMMARY OF CONSTRUCTION COST

SALE Thin Men Project # 2 LENGTH improve 202.0 sta
ROAD 1 to 2

CLEARING AND GRUBBING				Rate			
Landing (Sta. 95+00, 161+60, 172+30, 184+50, 194+50)	0.07	ac	@	$1,337.00	/ac	=	$94
			TOTAL CLEARING AND GRUBBING COST =				$94

EXCAVATION				Rate			
Construct Landing (Sta. 95+00, 161+60, 172+30, 184+50, 194+50)	5	ldgs	@	$438.00	/ldg	=	$2,190
Round cutslope (Sta. 184+50 to 188+40)	3.9	sta	@	$49.00	/sta	=	$191
End haul waste	50	CY	@	$2.50	/CY	=	$125
Comapct waste	50	CY	@	$0.80	/CY	=	$40
Shape Landing subgrade (with road grader)	2.5	sta	@	$20.63	/sta	=	$52
Compact Landing subgrade (with vibratory roller)	2.5	sta	@	$16.00	/sta	=	$40
				TOTAL EXCAVATION COST =			$2,638

IMPROVEMENT				Rate			
Reestablish ditchline (Sta. 184+50 to 188+40)	3.9	sta	@	$44.00	/sta	=	$172
Re-open landing (w/ grader) (Sta. 174+00 & 188+40)	0.5	hrs	@	$114.00	/hr	=	$57
Re-open landing (w/ d6) (Sta. 202+00)	0.5	hrs	@	$128.00	/hr	=	$64
Daylight cutting	3	hrs	@	$45.00	/hr	=	$135
Daylight road cleanup (Pts. 4 to 12, 9 to 2)	2	hrs	@	$145.00	/hr	=	$290
Shape Landing surface (with dozer)	3	sta	@	$20.63	/sta	=	$62
Compact Landing surface (with vibratory roller)	3	sta	@	$16.00	/sta	=	$48
Shape road surface (with road grader)	30.0	sta	@	$20.63	/sta	=	$619
Compact road surface (with vibratory roller)	30.0	sta	@	$16.00	/sta	=	$480
				TOTAL IMPROVEMENT COST =			$1,927

SURFACING			Size		Rate			
Landing rock	160	CY	Jaw-Run	@	$28.69	/CY	=	$4,590
Spot rock (Pt. 1 to Pt. 5)	190	CY	1½"-0"	@	$3.18	/CY	=	$604
Spot rock (Pt. 5 to Pt. 2	30	CY	1½"-0"	@	$3.18	/CY	=	$95
Culvert bedding rock (Sta. 163+90)	20	CY	1½"-0"	@	$3.18	/CY	=	$64
Base Rock (Sta. 178+00)	30	CY	3"-0"	@	$29.71	/CY	=	$891
Culvert surface rock (Sta. 178+00)	20	CY	1½"-0"	@	$3.18	/CY	=	$64
Armor fill rock (Sta. 178+00)	20	CY	Pit-Run	@	$27.01	/CY	=	$540
						TOTAL ROCK COST =		$6,848

SPECIAL PROJECTS				Rate			
Excavate culverts (163+90 & 178+00)	8	hrs	@	$145.00	/hr	=	$1,160
24"x45' cpp	45	ft	@	$21.45	/ft	=	$965
72"x55'	1	culvert	@	$11,121	ea	=	$11,121
Culvert installation	10	hrs	@	$145.00	/hr	=	$1,450
Fill compaction	540	CY	@	$0.80	/CY	=	$432
Culvert disposal	2	culverts	@	$100.00	ea	=	$200
Culvert repair (Sat. 170+50)	1	culvert	@	$25.00	ea	=	$25
Clean out culverts (inlets and outlets)	2	culverts	@	$25.00	ea	=	$50
				TOTAL SPECIAL PROJECTS COST =			$15,403

Compiled by: Zane Sandborg
Date: Mar 21, 2023

GRAND TOTAL =====> $26,910

SUMMARY OF CONSTRUCTION COST

SALE Thin Men Project # 2 LENGTH improve 124.0 sta
ROAD 3 to 4

IMPROVEMENT				Rate			
Shape surface (with road grader)	6.0 sta		@	$20.63	/sta	=	$124
Compact surface (with vibratory roller)	6.0 sta		@	$16.00	/sta	=	$96

TOTAL IMPROVEMENT COST = $220

SURFACING		Size		Rate			
Spot rock	40 CY	1½"-0"	@	$3.18	/CY	=	$127

TOTAL ROCK COST = $127

Compiled by: Zane Sandborg
Date: Mar 21, 2023

GRAND TOTAL =====> $347

SUMMARY OF CONSTRUCTION COST

SALE Thin Men Project # 2 LENGTH improve 3.8 sta
ROAD 5 to 6

IMPROVEMENT				Rate			
Re-open landing	0.5	hrs	@	$114.00	/hr	=	$57
Shape surface (with road grader)	3.8	sta	@	$20.63	/sta	=	$78
Compact surface (with vibratory roller)	3.8	sta	@	$16.00	/sta	=	$61

TOTAL IMPROVEMENT COST = $196

SURFACING			Size		Rate			
Landing rock	10	CY	Jaw-Run	@	$28.69	/CY	=	$287
Spot rock	20	CY	1½"-0"	@	$31.06	/CY	=	$621

TOTAL ROCK COST = $908

Compiled by: Zane Sandborg
Date: Mar 21, 2023

GRAND TOTAL =====> $1,104

SUMMARY OF CONSTRUCTION COST

SALE Thin Men Project # 2 LENGTH improve 14.6 sta
ROAD 7 to 8

CLEARING AND GRUBBING					Rate			
Landing	0.01	ac		@	$1,337.00	/ac	=	$13
						TOTAL CLEARING AND GRUBBING COST =		$13
EXCAVATION					Rate			
Construct landing (Sta. 2+50)	0.5	hr		@	$128.00	/hr	=	$64
Shape subgrade (with road grader)	0.5	sta		@	$20.63	/sta	=	$10
Compact subgrade (with vibratory roller)	0.5	sta		@	$16.00	/sta	=	$8
						TOTAL EXCAVATION COST =		$82
IMPROVEMENT					Rate			
Shape surface (with road grader)	0.5	sta		@	$20.63	/sta	=	$10
Compact surface (with vibratory roller)	0.5	sta		@	$16.00	/sta	=	$8
						TOTAL IMPROVEMENT COST =		$18
SURFACING			Size		Rate			
Landing rock	10	CY	Jaw-Run	@	$28.69	/CY	=	$287
						TOTAL ROCK COST =		$287

Compiled by: Zane Sandborg
Date: Mar 21, 2023

GRAND TOTAL =====> $400

SUMMARY OF CONSTRUCTION COST

SALE Thin Men Project # 2 LENGTH improve 53.8 sta
ROAD 9 to 10

CLEARING AND GRUBBING				Rate			
Road & Landing	0.14	ac	@	$1,337.00	/ac	=	$187
				TOTAL CLEARING AND GRUBBING COST =			$187
EXCAVATION				Rate			
Extend road (Sta. 52+90 to 53+80)	0.9	sta	@	$138.00	/sta	=	$124
Construct landing (Sta. 49+00 & Pt. 10)	2	Ldg	@	$438.00	/Ldg	=	$876
Shape subgrade (with road grader)	26.4	sta	@	$20.63	/sta	=	$545
Compact subgrade (with vibratory roller)	26.4	sta	@	$16.00	/sta	=	$422
					TOTAL EXCAVATION COST =		$1,967
IMPROVEMENT				Rate			
Re-open road (w/ dozer) (Sta. 28+40 to 52+90)	8	sta	@	$36.67	/sta	=	$293
Shape surface (with road grader)	3.5	sta	@	$20.63	/sta	=	$72
Compact surface (with vibratory roller)	3.5	sta	@	$16.00	/sta	=	$56
					TOTAL IMPROVEMENT COST =		$421

			Size					
SURFACING					Rate			
Spot rock (Sta. 0+00 to 28+40)	30	CY	1½"-0"	@	$3.18	/CY	=	$95
Transition rock (Sta. 28+40 to 28+90)	10	CY	3"-0"	@	$29.71	/CY	=	$297
						TOTAL ROCK COST =		$392

Compiled by: Zane Sandborg
Date: Mar 21, 2023

GRAND TOTAL =====> $2,967

SUMMARY OF CONSTRUCTION COST

SALE Thin Men Project # 2 LENGTH improve 20.4 sta
ROAD 11 to A

EXCAVATION					Rate			
Shape subgrade (with road grader)	20.4	sta		@	$20.63	/sta	=	$421
Compact subgrade (with vibratory roller)	20.4	sta		@	$16.00	/sta	=	$326
					TOTAL EXCAVATION COST =			$747
IMPROVEMENT					Rate			
Remove tank trap (Pt. 11)	0.25	hrs		@	$128.00	/hr	=	$32
Shape surface (with road grader)	0.5	sta		@	$20.63	/sta	=	$10
Compact surface (with vibratory roller)	0.5	sta		@	$16.00	/sta	=	$8
					TOTAL IMPROVEMENT COST =			$50
SURFACING			Size		Rate			
Junction rock	10	CY	Jaw-Run	@	$28.69	/CY	=	$287
						TOTAL ROCK COST =		$287

Compiled by: Zane Sandborg
Date: Mar 21, 2023

GRAND TOTAL =====> $1,084

SUMMARY OF CONSTRUCTION COST

SALE Thin Men Project # 2 LENGTH improve 8.9 sta
ROAD 12 to 13

CLEARING AND GRUBBING					Rate			
Landing	0.03	ac	@	$1,337.00	/ac	=	$40	
					TOTAL CLEARING AND GRUBBING COST =			$40
EXCAVATION					Rate			
Construct landing (w/ dozer) (Sta. 8+90)	0.5	hrs	@	$128.00	/hr	=	$64	
Construct Turnaround (w/ dozer) (Sta. 7+90)	0.5	hrs	@	$128.00	/hr	=	$64	
Shape subgrade (with road grader)	0.5	sta	@	$20.63	/sta	=	$10	
Compact subgrade (with vibratory roller)	0.5	sta	@	$16.00	/sta	=	$8	
					TOTAL EXCAVATION COST =			$146
IMPROVEMENT					Rate			
Re-open road (Sta. 1+00 to 8+90)	7.9	sta	@	$15.40	/sta	=	$122	
Shape surface (with road grader)	8.9	sta	@	$20.63	/sta	=	$184	
Compact surface (with vibratory roller)	8.9	sta	@	$16.00	/sta	=	$142	
					TOTAL IMPROVEMENT COST =			$448
SURFACING			Size		Rate			
Transition rock (Sta. 0+00 to 1+00)	10	CY	3"-0"	@ $29.71	/CY	=	$297	
					TOTAL ROCK COST =			$297

Compiled by: Zane Sandborg
Date: Mar 21, 2023

GRAND TOTAL =====> $931

SUMMARY OF CONSTRUCTION COST

SALE Thin Men Project # 2 LENGTH improve 33.6 sta
ROAD 14 to 15

EXCAVATION				Rate			
Create waste area (w/ dozer) (WA2 @ Sta. 16+40)	0.5	hr	@	$128.00	/hr	=	$64
Pullback aggregate (Sta. 25+10 to 27+50)	2.4	sta	@	$20.63	/sta	=	$50
Reconstruct road (w/ dozer) (Sta. 25+10 to 27+50)	1.5	hrs	@	$128.00	/hr	=	$192
End haul material	170	CY	@	$2.00	/cy	=	$340
Compact waste material	170	CY	@	$0.80	/cy	=	$136
Shape subgrade (with road grader)	2.4	sta	@	$20.63	/sta	=	$50
Compact subgrade (with vibratory roller)	2.4	sta	@	$16.00	/sta	=	$38

TOTAL EXCAVATION COST = $870

IMPROVEMENT				Rate			
Re-open road (Sta. 20+00 to 33+60)	13.6	sta	@	$14.50	/sta	=	$197
Re-open landing (Sta. 33+60)	0.5	hrs	@	$128.00	/hr	=	$64
Shape surface (w/ grader) (Sta. 0+00 to 20+00)	5.0	sta	@	$20.63	/sta	=	$103
Compact surface (w/ roller) (Sta. 0+00 to 20+00)	5.0	sta	@	$16.00	/sta	=	$80
Shape surface (w/ grader) (Sta. 20+00 to 33+60)	13.6	sta	@	$20.63	/sta	=	$281
Compact surface (w/ roller) (Sta. 20+00 to 33+60)	13.6	sta	@	$16.00	/sta	=	$218

TOTAL IMPROVEMENT COST = $943

SURFACING			Size		Rate			
Spot rock (Sta. 0+00 to 20+00)	40	CY	1½"-0"	@	$31.06	/CY	=	$1,242
Transition rock (Sta. 20+00 to 20+50)	10	CY	3"-0"	@	$29.71	/CY	=	$297

TOTAL ROCK COST = $1,539

Compiled by: Zane Sandborg
Date: Mar 21, 2023

GRAND TOTAL =====> $3,352

SUMMARY OF BRUSHING COST

SALE Beaver Believer Thin Project # 3 LENGTH maintain 1.76 Miles
ROAD All (Surfaced/unsurfaced)

LIGHT BRUSHING

			Rate			
Pt. 7 to Pt. 8	0.28	mi	@ $800.00	/mi	=	$224
Pt. 12 to Pt. 13	0.17	mi	@ $800.00	/mi	=	$136
Pt. 14 to Pt. 15	0.64	mi	@ $800.00	/mi	=	$512
TOTAL LENGTH =	1.09	mi	TOTAL LIGHT BRUSHING COST =			$872

HEAVY BRUSHING

			Rate			
Sta. 194+50 to 202+00 (Pt. 1 to 2)	0.14	mi	@ $1,400.00	/mi	=	$196
Sta. 28+40 to 52+90 (Pt. 9 to 10)	0.46	mi	@ $1,400.00	/mi	=	$644
TOTAL LENGTH =	0.6	mi	TOTAL HEAVY BRUSHING COST =			$840

BRUSHING GRAND TOTAL =====> $1,712

SOD AND DEBRIS REMOVAL

			Rate			
All brushing segments	1.69	mi	@ $813.12	/mi	=	$1,374
Pt. 5 to Pt. 6	0.07	mi	@ $813.12	/mi	=	$57
TOTAL LENGTH =	1.76	mi	**TOTAL SOD AND DEBRIS REMOVAL =====>**			**$1,431**

Compiled by: Zane Sandborg
Date: Mar 21, 2023

SUMMARY OF MAINTENANCE COST

SALE Thin Men Final log haul Maintenance Cost Estimate

(Costed in appraisal, not in project costs)

Move-in Grader $ 875

Road Segment	Length	Cost/Sta	Cost	Mileage
Pt. 1 to Pt. 2	202.0 sta	$20.63	$4,167.26	3.83
Pt. 3 to Pt. 4	124.0 sta	$20.63	$2,558.12	2.35
Pt. 5 to Pt. 6	3.8 sta	$20.63	$78.39	0.07
Pt. 7 to Sta. 2+50 (Pt. 7 to Pt. 8)	2.5 sta	$20.63	$51.58	0.05
9 to Sta. 28+40 (Pt. 9 to Pt. 10)	28.4 sta	$20.63	$585.89	0.54
Pt. 14 to Sta. 20+00 (Pt. 14 to Pt. 15)	20.0 sta	$20.63	$412.60	0.38
Total	380.7 sta		$7,853.84	7.21

Maintenance Rock:

	Volume	Cost/CY	Cost	Source
1½"-0"	40	$3.18	$127.20	Stockpile 1
1½"-0"	110	$31.06	$3,416.60	Commercial

Fuel Cost Increase $ 1,227.26

Grand Total $ 13,499.90

TS Volume 936 MBF

Cost / MBF = $14.42

NOTES:

Rock Haul Cost Computation

SALE NAME: Thin Men DATE: Mar 21, 2023
ROAD NAME: Fish Hatchery Fall Creek CLASS: Medium
ROCK SOURCE: Pt. 4 Stockpile 10 CY truck
Route: Beaver Creek Rd., Hatchery Fall Creek Rd., Hatchery Fall Extension Rd.

TIME Computation:
Road speed time factors:

1.	55 MPH		MRT	0.0	minutes
2.	50 MPH		MRT	0.0	minutes
3.	45 MPH		MRT	0.0	minutes
4.	40 MPH		MRT	0.0	minutes
5.	35 MPH		MRT	0.0	minutes
6.	30 MPH		MRT	0.0	minutes
7.	25 MPH		MRT	0.0	minutes
8.	20 MPH		MRT	0.0	minutes
9.	15 MPH	2.5	MRT	10.0	minutes
10.	10 MPH		MRT	0.0	minutes
11.	05 MPH		MRT	0.0	minutes

Dump or spread time per RT		0.50	minutes
Total hauling cycle time for this setting (100% efficiency)		10.50	minutes
Operator efficiency correction	0.85	12.35	minutes
Job efficiency correction	0.90	13.72	minutes
Truck capacity (CY)	10.00	1.37	min/CY
Loading time, delay time per CY		0.75	min/CY
TIME (minutes) per cubic yard		2.12	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	$3.18	/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"	$ -	$3.18	$4.68

Stockpile Note: 430 CY 1½"-0"

Rock Haul Cost Computation

SALE NAME: Thin Men DATE: Mar 21, 2023
ROAD NAME: Hatchery Fall Creek Road CLASS: Medium
ROCK SOURCE: Rickard Rock Quarry 10 CY truck
Route: Hwy 20, Blodgett-Eddyville HWY, Logsden Rd, Rudder Road, Beaver Creek Rd., Hatchery Fall Extension Rd.

TIME Computation:
Road speed time factors:

1.	55 MPH	12.6	MRT	13.7	minutes
2.	50 MPH		MRT	0.0	minutes
3.	45 MPH		MRT	0.0	minutes
4.	40 MPH		MRT	0.0	minutes
5.	35 MPH	33.6	MRT	57.6	minutes
6.	30 MPH		MRT	0.0	minutes
7.	25 MPH		MRT	0.0	minutes
8.	20 MPH	4.0	MRT	12.0	minutes
9.	15 MPH		MRT	0.0	minutes
10.	10 MPH	1.2	MRT	7.2	minutes
11.	05 MPH		MRT	0.0	minutes

Dump or spread time per RT		0.50	minutes
Total hauling cycle time for this setting (100% efficiency)		91.00	minutes
Operator efficiency correction	0.85	107.06	minutes
Job efficiency correction	0.90	118.96	minutes
Truck capacity (CY)	10.00	11.90	min/CY
Loading time, delay time per CY		0.25	min/CY
TIME (minutes) per cubic yard		12.15	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	$18.23	/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"	$ 12.83	$31.06	$32.56
3" - 0"	$ 11.48	$29.71	$31.21
Jaw-Run	$ 10.46	$28.69	$30.19
Pit-Run	$ 8.78	$27.01	$28.51

QuarryNote: Pit costs April 1, 2022 Rickard

Rock Haul Cost Computation

SALE NAME: Thin Men — DATE: Mar 21, 2023
ROAD NAME: Hatchery Fall Creek Road — CLASS: Medium
ROCK SOURC Rickard Rock Quarry — 18 CY truck
Route: Hwy 20, Blodgett-Eddyville HWY, Logsden Rd, Rudder Road, Beaver Creek Rd., Hatchery Fall Extension Rd.

TIME Computation:
Road speed time factors:

1.	55 MPH	12.6	MRT	13.7 minutes
2.	50 MPH		MRT	0.0 minutes
3.	45 MPH		MRT	0.0 minutes
4.	40 MPH		MRT	0.0 minutes
5.	35 MPH	33.6	MRT	57.6 minutes
6.	30 MPH		MRT	0.0 minutes
7.	25 MPH		MRT	0.0 minutes
8.	20 MPH	4.0	MRT	12.0 minutes
9.	15 MPH		MRT	0.0 minutes
10.	10 MPH	1.2	MRT	7.2 minutes
11.	05 MPH		MRT	0.0 minutes

Dump or spread time per RT		0.50	minutes
Total hauling cycle time for this setting (100% efficiency)		91.00	minutes
Operator efficiency correction	0.85	107.06	minutes
Job efficiency correction	0.90	118.96	minutes
Truck capacity (CY)	18.00	6.61	min/CY
Loading time, delay time per CY		0.25	min/CY
TIME (minutes) per cubic yard		6.86	min/CY

COST per CY computation

Cost of truck and operator per hour	$114.00	/hr.
Cost of truck and operator per minute	$1.90	/min
Cost per CY	$13.03	/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"	$ 12.83	$25.86	$27.36
3" - 0"	$ 11.48	$24.51	$26.01
Jaw-Run	$ 10.46	$23.49	$24.99
Pit-Run	$ 8.78	$21.81	$23.31

QuarryNote: Pit costs April 1, 2022 Rickard

TIMBER CRUISE REPORT

Thin Men
(WO-341-2023-W01000-01)
FY 2023

1. **Sale Area Location:** Portions of Section 32, T9S, R8W and portions of Sections 5 & 8 T10S, R8W, W.M. Polk County, and portions of Section 8 T10S, R8W W.M. Lincoln County, Oregon.

2. **Fund Distribution:**
   a. **Fund** BOF 100%
   CSL 0%

3. **Sale Acreage by Area:**

Unit	Treatment	Gross Acres	Stream Buffers	Wetland Buffers	Existing Roads	Non-Thinnable Acres	Net Sale Acres	Acreage Comp. Method
1	Partial Cut	76	11	-	2	1	62	GIS
2	Partial Cut	50	1	2	1	2	44	GIS
3	Partial Cut	38	4	-	<1	-	34	GIS
4	R/W	<1	-	-	-	-	<1	GIS
Total		164	16	2	3	3	140	

4. **Cruisers and Cruise Dates:** This sale was cruised by Zane Sandborg, Aaron McEwen, David Bailey and Jacob Bergstrom in January and February of 2023.

5. **Cruise Method and Computation:** The sale consists of three Partial Cut units that were cruised using variable radius plot sampling. The timber sale area was cruised using a basal area factor of 20. Plots were spaced on a 4x6 chain grid for all Units. On Unit 1, a total of 23 plots were taken: 12 measure plots and 11 count plots. On Unit 2, a total of 19 plots were taken: 11 measure plots and 8 count plots. On Unit 3, a total of 17 plots were taken: 9 measure plots and 8 count plots.

   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. Volume was removed to account for hidden defect and breakage. Volume was added to account for tree removal in Rights-of-Way and Cable Corridors.

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

6. **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.

7. **Timber Description:** Timber is primarily 34 year-old Douglas-fir for Units 1 and 2 and 37-year old Douglas-fir for Unit 3. All Units possess small amounts of red alder and Western red cedar, Unit 1 possesses a small amount of Western hemlock. For Unit 1 the average Douglas-fir to be removed is approximately 11 inches DBH, with an

average height of 37 feet to a merchantable top. For Unit 2, the average Douglas-fir to be removed is approximately 12 inches DBH, with an average height of 41 feet to a merchantable top. For Unit 3, the average Douglas-fir to be removed is approximately 13 inches DBH, with an average height of 61 feet to a merchantable top. The average volume per acre to be harvested (net) is approximately 5.3 MBF for Unit 1, 6.4 MBF for Unit 2, and 9.6 MBF for Unit 3. Conifer trees other than Douglas-fir are reserved from cutting, unless present in yarding corridors, Landings or between R/W tags. Swiss needle cast is present in Units 1 and 2.

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

Unit	Target CV	Target SE	Actual CV	Actual SE
1	40%	15%	30.9%	6.6%
2	40%	15%	31.0%	7.3%
3	40%	15%	20.3%	5.1%

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

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

Unit	Species	Gross Cruise Volume (MBF)	Cruised D & B	Cruised D & B (MBF)	Corridor Removal Acres	Corridor Removal Volume (MBF)	R/W Removal Volume	Hidden D & B	Hidden D & B (MBF)	Net Sale Volume
1	Douglas-fir	299	4.1%	(12)	4	46	-	2%	(7)	326
2	Douglas-fir	226	2.3%	(5)	5	66	2	2%	(6)	283
3	Douglas-fir	241	2.9%	(7)	5	95	1	1%	(3)	327
Total		**766**	**3.1%**	**(24)**		**207**	**3**	**2.1%**	**(16)**	**936**

Unit	Species	Avg. DBH	Tot. Net Vol.	2-Saw	3-Saw	4-Saw
1	Douglas-fir	11	Grade %	-	63%	37%
			326	-	205	121
2	Douglas-fir	12	Grade %	-	81%	19%
			283	-	229	54
3	Douglas-fir	13	Grade %	5%	77%	18%
			327	16	252	59
Total	**Total**		936	16	686	234

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

Prepared by: Zane Sandborg Date: 03/20/2023

Unit Forester: Cody Valencia Date: 3/23/23

Cody Valencia

Revised August, 2002

CRUISE DESIGN
WEST OREGON DISTRICT

Sale Name: Thin Men **Unit** 1

Harvest Type: PC
Approx. Cruise Acres: 64 **Estimated CV%** 40 Net BF /Acre **SE% Objective** 15 Net BF /Acre

Planned Sale Volume: .852 MMBF **Estimated Sale Area Value/Acre:** $ 1,800

A. Cruise Goals: (a) Grade minimum 50 conifer and 0 hardwood trees: (b) Sample 23 cruise plots (12 grade: 11 count); (c) Other goals X Determine log grades for sale value; X Determine take and leave tree species and sizes.

(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 20 Full point
   Cruise Line Direction(s) 90/270
   Cruise Line Spacing 4/264 (chains) (feet)
   Cruise Plot Spacing 6/396 (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", 8" 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; 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"

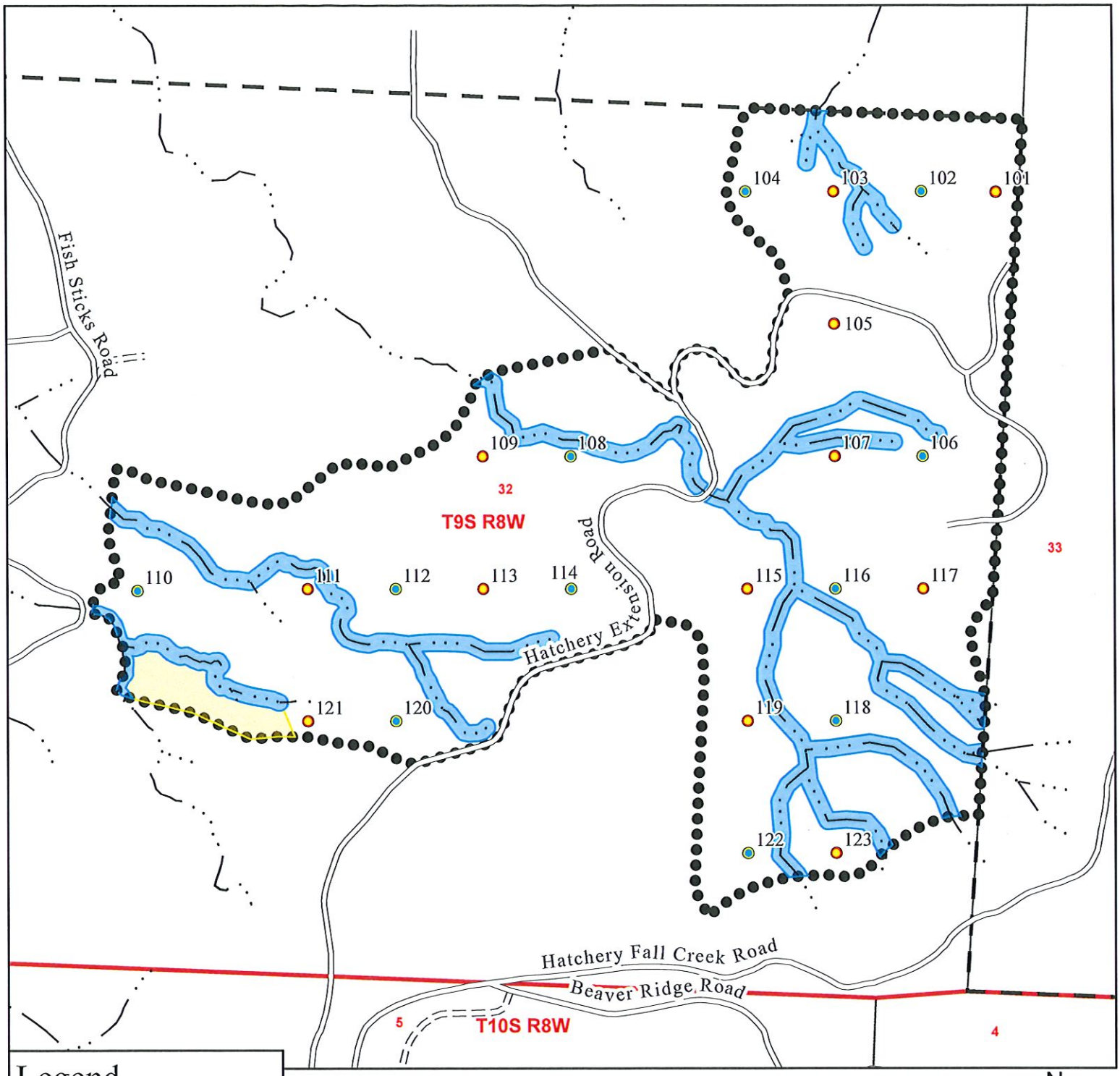
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally 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 Laser, Logger's Tape (with dbh on back), Biltmore Stick, Compass, Cruise Cards or Data Recorder, Cruise Design, Cruise Map, 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: Zane Sandborg
Approved by: _____
Date: _____



Legend

Cruise Plots

- count
- measure
- Gross_Boundary_Prep
- Harvest_not_required_Prep
- StreamBuffers_Prep

Roads

- Surfaced Road
- Unsurfaced Road

Streams

- Nonfish

Thin Men Cruise Map
Unit 1

Portions of Section 32 of T9S, R8W W.M.
Polk County, Oregon

BAF: 20
PBA:120
Spacing: 4 X 6 Chains
Line Bearing: 90/270

N
W E
S

1:5,000

0 500 1,000 2,000 Feet

03/22/2023

Revised August, 2002

CRUISE DESIGN
WEST OREGON DISTRICT

Sale Name: Thin Men **Unit** 2

Harvest Type: PC
Approx. Cruise Acres: 44 **Estimated CV%** 40 Net BF /Acre **SE% Objective** 15 Net BF /Acre

Planned Sale Volume: .852 MMBF **Estimated Sale Area Value/Acre:** $ 1,800

A. Cruise Goals: (a) Grade minimum 40 conifer and 0 hardwood trees: (b) Sample 19 cruise plots (11 grade: 8 count); (c) Other goals X Determine log grades for sale value; X Determine take and leave tree species and sizes.

(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 20 Full point
   Cruise Line Direction(s) 90/270
   Cruise Line Spacing 4/264 (chains) (feet)
   Cruise Plot Spacing 6/396 (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", 8" 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; 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"

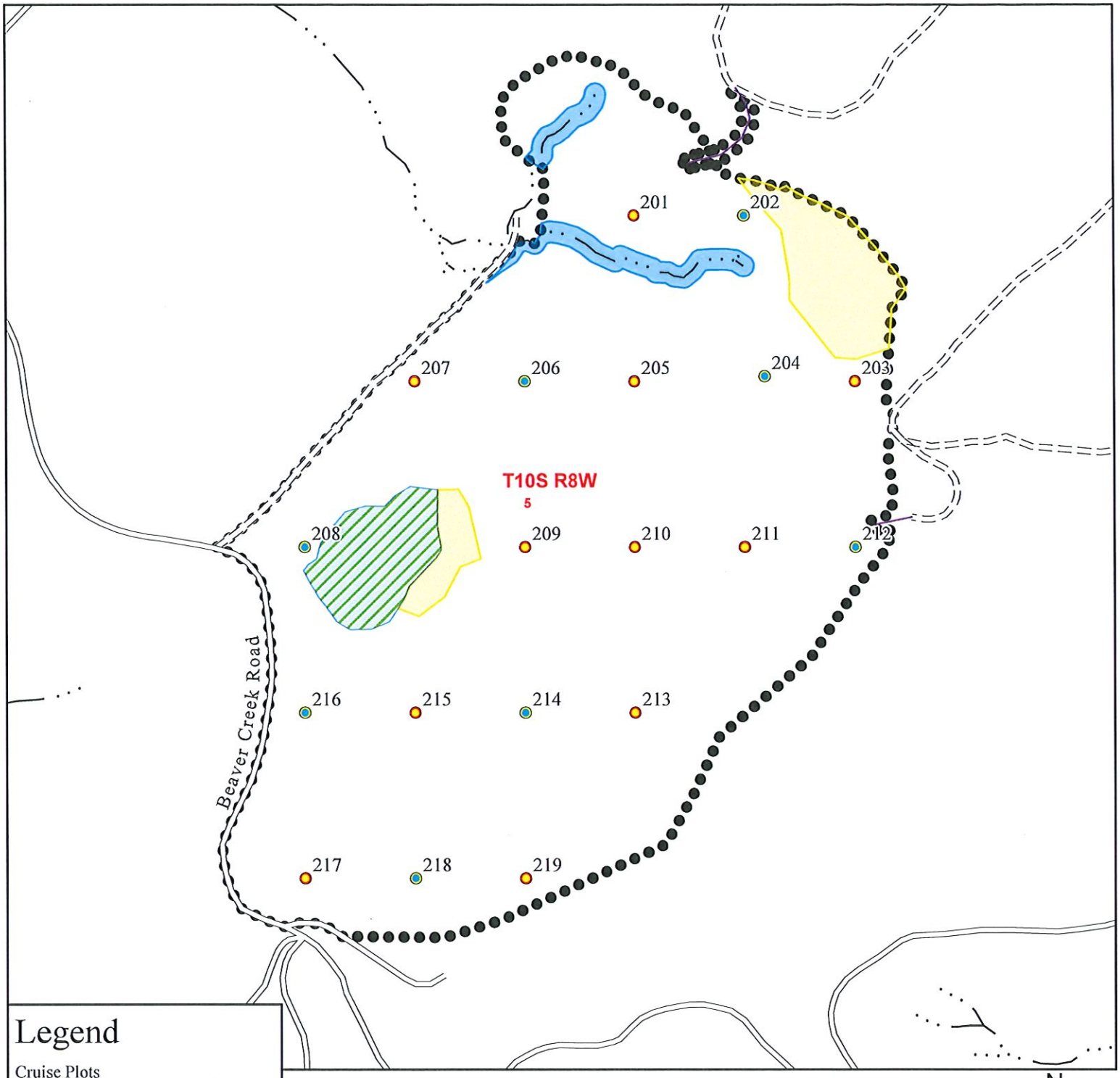
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally 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 Laser, Logger's Tape (with dbh on back), Biltmore Stick, Compass, Cruise Cards or Data Recorder, Cruise Design, Cruise Map, 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: Zane Sandborg
Approved by: _____
Date: _____



Legend

Cruise Plots

- count
- measure
- Gross_Boundary_Prep
- Harvest_not_required_Prep
- StreamBuffers_Prep
- Wetlands

Roads

- Surfaced Road
- Unsurfaced Road

Streams

- Nonfish
- Unknown

Thin Men Cruise Map
Unit 2

Portions of Section 5 of T10S, R8W W.M.
Polk County, Oregon

BAF: 20
PBA:125
Spacing: 4 X 6 Chains
Line Bearing: 90/270

N
W E
S

1:4,000

0 450 900 1,800 Feet

03/22/2023

Revised August, 2002

CRUISE DESIGN
WEST OREGON DISTRICT

Sale Name: Thin Men **Unit** 3

Harvest Type: PC
Approx. Cruise Acres: 34 **Estimated CV%** 40 Net BF /Acre **SE% Objective** 15 Net BF /Acre

Planned Sale Volume: .852 MMBF **Estimated Sale Area Value/Acre:** $ 1,800

A. Cruise Goals: (a) Grade minimum 36 conifer and 0 hardwood trees: (b) Sample 17 cruise plots (9 grade: 8 count); (c) Other goals X Determine log grades for sale value; X Determine take and leave tree species and sizes.

(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 20 Full point
   Cruise Line Direction(s) 0/180
   Cruise Line Spacing 4/264 (chains) (feet)
   Cruise Plot Spacing 6/396 (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", 8" 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; 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"

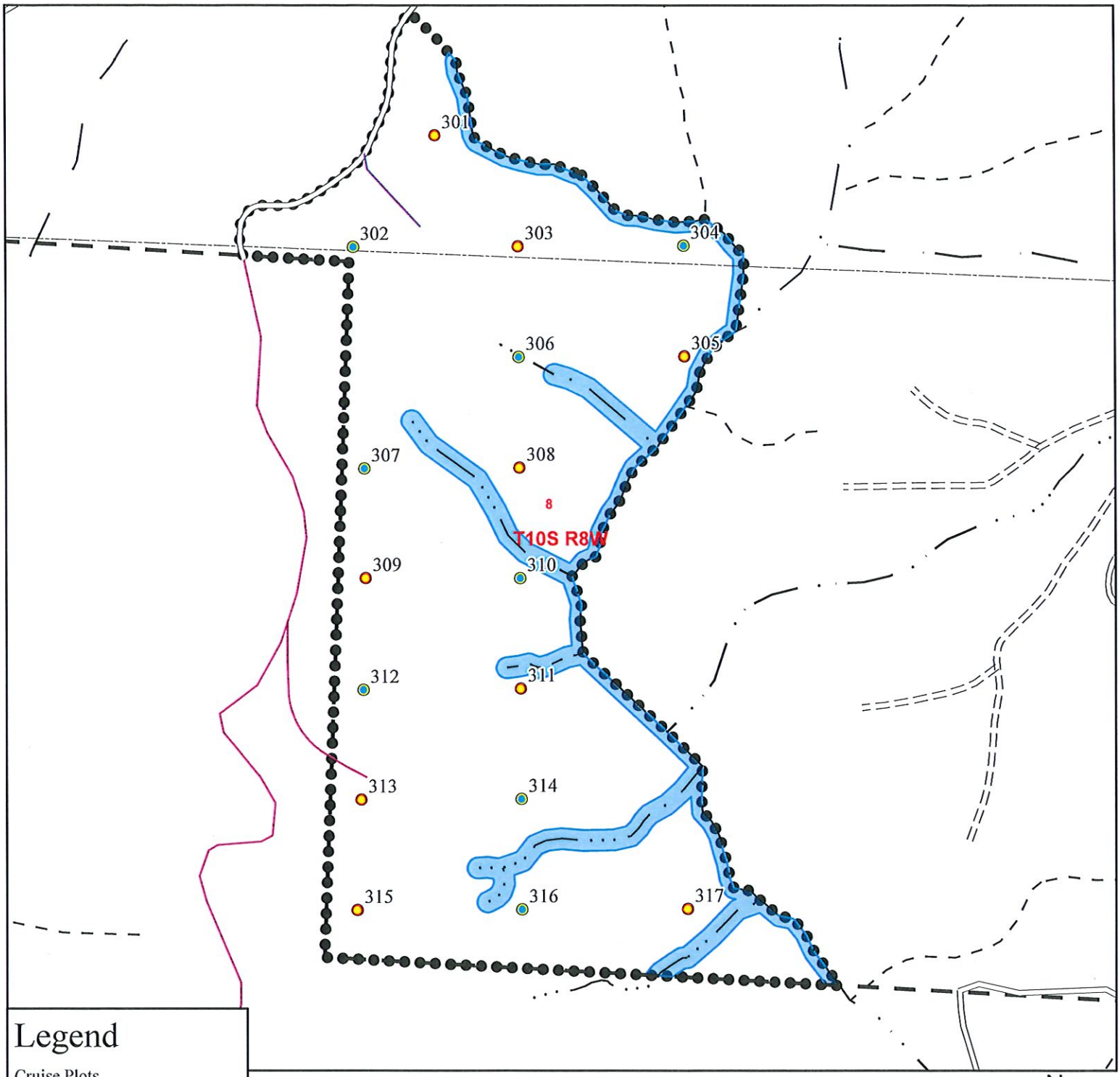
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally 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 Laser, Logger's Tape (with dbh on back), Biltmore Stick, Compass, Cruise Cards or Data Recorder, Cruise Design, Cruise Map, 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: Zane Sandborg
Approved by: _____
Date: _____



Thin Men Cruise Map
Unit 3

Portions of Section 8 of T10S, R8W W.M.
Polk & Lincoln Counties, Oregon

BAF: 20
PBA:125
Spacing: 6 X 4 Chains
Line Bearing: 0/180

Legend

Cruise Plots
- count
- measure
- Gross_Boundary_Prep
- StreamBuffers_Prep

Roads
- Surfaced Road
- Unsurfaced Road
- <all other values>

Streams
- Fish
- Nonfish
- Unknown

N
W E
S

1:4,000

0 450 900 1,800 Feet

03/22/2023

TC PSTATS

PROJECT STATISTICS

PROJECT THINMEN

DATE 3/6/2023

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
09S	08	32	U1	00PC	62.00	23	216	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	23	216	9.4		
CRUISE	12	112	9.3	14,372	.8
DBH COUNT					
REFOREST					
COUNT	11	104	9.5		
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-L	69	111.8	13.6	51	30.5	112.2	12,003	11,513	3,427	3,427
DF-T	37	89.5	10.8	37	17.2	56.5	4,827	4,630	1,378	1,378
SNAG	2	10.2	11.9	74	2.3	7.8				
R ALDER	3	7.9	12.7	36	2.0	7.0	643	643	194	194
WHEMLOCK	1	12.5	8.0	22	1.5	4.3	249	249	75	75
TOTAL	*112*	*231.8*	*12.2*	*44*	*53.8*	*187.8*	*17,723*	*17,035*	*5,075*	*5,075*

CONFIDENCE LIMITS OF THE SAMPLE

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

SAMPLE TREES - BF

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DF-L	134.7	16.2	115	137	159			
DF-T	57.4	9.4	57	62	68			
SNAG								
R ALDER	55.7	38.5	61	100	139			
WHEMLOCK								
TOTAL	*140.1*	*13.2*	*94*	*108*	*122*	*784*	*196*	*87*

SAMPLE TREES - CF

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DF-L	98.6	11.9	34	39	44			
DF-T	57.1	9.4	17	19	21			
SNAG								
R ALDER	52.8	36.5	19	30	41			
WHEMLOCK								
TOTAL	*104.6*	*9.9*	*28*	*31*	*34*	*437*	*109*	*49*

TREES/ACRE

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF-L	19.2	4.1	107	112	116			
DF-T	93.9	20.0	72	89	107			
SNAG	200.4	42.7	6	10	15			
R ALDER	200.9	42.8	5	8	11			
WHEMLOCK	238.5	50.8	6	12	19			
TOTAL	*37.0*	*7.9*	*214*	*232*	*250*	*57*	*14*	*6*

BASAL AREA/ACRE

CL 68.1 SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF-L	11.7	2.5	109	112	115			
DF-T	96.4	20.5	45	57	68			
SNAG	200.0	42.6	4	8	11			
R ALDER	205.3	43.7	4	7	10			
WHEMLOCK	238.5	50.8	2	4	7			
TOTAL	*28.8*	*6.1*	*176*	*188*	*199*	*35*	*9*	*4*

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
09S	08	32	U1	00PC	62.00	23	216	1	W

CL 68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DF-L	17.7	3.8	11,080	11,513	11,946			
DF-T	101.8	21.7	3,626	4,630	5,633			
SNAG								
R ALDER	205.4	43.8	362	643	925			
WHEMLOCK	238.5	50.8	123	249	376			
TOTAL	*30.9*	*6.6*	*15,912*	*17,035*	*18,158*	*40*	*10*	*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
DF-L	16.0	3.4	3,311	3,427	3,544			
DF-T	102.0	21.7	1,079	1,378	1,678			
SNAG								
R ALDER	206.9	44.1	109	194	280			
WHEMLOCK	238.5	50.8	37	75	113			
TOTAL	*30.4*	*6.5*	*4,746*	*5,075*	*5,404*	*39*	*10*	*4*

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T09S R08W S32 Ty00PC 62.00

Project: **THINMEN**

Acres **62.00**

Page **1**

Date **3/6/2023**

Time **11:24:55AM**

Spp	S T	So Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF	L	DO 2M	12	3.5	1,456	1,405	87			73	27	22	10		68	28	13	195	1.61	7.2
DF	L	DO 3M	72	4.6	8,735	8,330	516		100			1	7	23	69	36	8	81	0.68	102.7
DF	L	DO 4M	16	1.9	1,813	1,778	110		100			62	34		4	19	6	23	0.38	75.9
DF	**Totals**		68	4.1	12,003	11,513	714		88	9	3	13	11	16	59	29	7	62	0.63	185.8
DF	T	DO 3M	63	2.2	3,016	2,948	183		100				12	27	61	36	7	67	0.56	44.2
DF	T	DO 4M	37	7.2	1,811	1,681	104		100			51	35	14		21	6	25	0.35	67.2
DF	**Totals**		27	4.1	4,827	4,630	287		100			19	20	22	39	27	7	42	0.46	111.4
WH		DO 4M	100		249	249	15		100			100				20	6	20	0.30	12.5
WH	**Totals**		1		249	249	15		100			100				20	6	20	0.30	12.5
RA		DO CR	100		643	643	40		100			5	33	32	30	29	8	69	0.72	9.4
RA	**Totals**		4		643	643	40		100			5	33	32	30	29	8	69	0.72	9.4
Totals				3.9	17,723	17,035	1,056		92	6	2	16	14	18	52	28	7	53	0.57	319.0

TC PSTNDSUM

Stand Table Summary

Page 1
Date: 3/6/2023

T09S R08W S32 Ty00PC 62.00

Project THINMEN
Acres 62.00

Time: 11:24:57AM
Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	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	L	9	1	86	62	3.680	1.63	3.68	10.0	40.0		37	147		23	9
DF	L	10	2	87	78	5.961	3.25	5.96	14.0	55.0		83	328		52	20
DF	L	11	6	88	77	14.780	9.75	17.24	15.0	51.4		259	887		160	55
DF	L	12	11	86	75	22.769	17.88	37.26	13.3	45.0		495	1,677		307	104
DF	L	13	10	87	76	17.637	16.26	31.75	14.9	45.0		473	1,429		293	89
DF	L	14	9	87	77	13.687	14.63	24.33	18.0	59.4		438	1,445		272	90
DF	L	15	12	87	86	15.897	19.51	30.47	20.7	64.8		629	1,974		390	122
DF	L	16	5	87	83	5.822	8.13	11.64	22.3	76.0		260	885		161	55
DF	L	17	7	88	84	7.220	11.38	14.44	26.8	90.0		387	1,300		240	81
DF	L	18	3	90	89	2.760	4.88	5.52	29.5	105.0		163	580		101	36
DF	L	20	1	94	89	.745	1.63	1.49	38.5	140.0		57	209		36	13
DF	L	22	1	95	98	.616	1.63	1.23	52.0	205.0		64	252		40	16
DF	L	34	1	88	139	.258	1.63	.77	107.7	520.0		83	402		52	25
DF	L	Totals	69	87	79	111.832	112.17	185.79	18.4	62.0		3,427	11,513		2,125	714
DF	T	8	3	88	41	13.129	4.58	13.13	5.7	20.0		74	263		46	16
DF	T	9	5	86	54	17.289	7.64	17.29	9.0	32.0		156	553		96	34
DF	T	10	6	87	71	16.805	9.17	19.61	11.6	41.4		227	812		141	50
DF	T	11	9	85	74	20.833	13.75	27.78	11.7	38.3		326	1,065		202	66
DF	T	12	3	86	68	5.835	4.58	7.78	15.0	47.5		117	370		72	23
DF	T	13	5	88	79	8.286	7.64	13.26	16.2	53.8		215	713		134	44
DF	T	14	3	87	81	4.287	4.58	8.57	17.0	58.3		146	500		90	31
DF	T	15	1	88	74	1.245	1.53	1.24	31.0	90.0		39	112		24	7
DF	T	17	1	88	64	.969	1.53	1.94	20.5	65.0		40	126		25	8
DF	T	19	1	86	70	.776	1.53	.78	50.0	150.0		39	116		24	7
DF	T	Totals	37	87	65	89.454	56.52	111.37	12.4	41.6		1,378	4,630		855	287
RA		10	1	87	56	4.252	2.32	4.25	14.0	50.0		60	213		37	13
RA		14	1	87	68	2.169	2.32	2.17	31.0	90.0		67	195		42	12
RA		17	1	86	60	1.471	2.32	2.94	23.0	80.0		68	235		42	15
RA		Totals	3	87	60	7.892	6.96	9.36	20.8	68.7		194	643		121	40
WH		8	1	89	44	12.456	4.35	12.46	6.0	20.0		75	249		46	15
WH		Totals	1	89	44	12.456	4.35	12.46	6.0	20.0		75	249		46	15
SN		11	1	99	116	5.929	3.91									
SN		13	1	99	118	4.245	3.91									
SN		Totals	2	99	117	10.175	7.83									
Totals			112	88	73	231.807	187.83	318.98	15.9	53.4		5,075	17,035		3,146	1,056

TC PLOGSTVB

Log Stock Table - MBF

T09S R08W S32 Ty00PC 62.00

Project: THINMEN
Acres 62.00

Page 1
Date 3/6/2023
Time 11:24:55AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	L	DO	2M	16	7	20.0	6	.8						6						
DF	L	DO	2M	18	7	7.7	7	1.0							7					
DF	L	DO	2M	20	7	10.0	6	.9						6						
DF	L	DO	2M	24	9		9	1.2						9						
DF	L	DO	2M	40	60		59	8.3						22	13	7		16		
DF	L	DO	3M	20	7		7	.9					7							
DF	L	DO	3M	26	1		1	.2					1							
DF	L	DO	3M	28	6		6	.9				6								
DF	L	DO	3M	30	30	8.7	27	3.8				27								
DF	L	DO	3M	32	64	6.8	60	8.4			11	49								
DF	L	DO	3M	34	58	2.7	56	7.9			13	36	8							
DF	L	DO	3M	36	27	10.3	25	3.4			16	8								
DF	L	DO	3M	38	42	2.6	41	5.8			4	37								
DF	L	DO	3M	40	305	4.1	292	41.0			88	112	93							
DF	L	DO	4M	12	1		1	.1			1									
DF	L	DO	4M	16	57		57	8.0			57									
DF	L	DO	4M	18	3		3	.5			3									
DF	L	DO	4M	20	7		7	1.0			7									
DF	L	DO	4M	24	17		17	2.4			17									
DF	L	DO	4M	26	7		7	1.0			7									
DF	L	DO	4M	30	13		13	1.9			13									
DF	L	DO	4M	36	7	33.3	4	.6			4									
DF		Totals			744	4.1	714	67.6			243	275	109	43	20	7		16		
DF	T	DO	3M	30	23	5.2	22	7.6			16	6								
DF	T	DO	3M	32	38	5.4	36	12.4			29		7							
DF	T	DO	3M	34	13		13	4.7				13								
DF	T	DO	3M	36	17		17	6.0				17								
DF	T	DO	3M	38	35	2.8	34	11.7			17	10	7							
DF	T	DO	3M	40	61		61	21.3			45	16								
DF	T	DO	4M	14	5		5	1.9			5									
DF	T	DO	4M	16	30		30	10.6			26	4								
DF	T	DO	4M	18	7		7	2.6			7									
DF	T	DO	4M	20	12	14.4	10	3.6			10									
DF	T	DO	4M	24	6		6	2.2			6									
DF	T	DO	4M	26	6		6	2.2			6									
DF	T	DO	4M	28	18	15.4	15	5.2			15									

TC PLOGSTVB

Log Stock Table - MBF

T09S R08W S32 Ty00PC 62.00

Project: THINMEN
Acres 62.00

Page 2
Date 3/6/2023
Time 11:24:55AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches: 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	T	DO	4M	30	9		9	3.0			9									
DF	T	DO	4M	32	7	20.0	6	2.0			6									
DF	T	DO	4M	34	11	20.0	9	3.0			9									
DF		Totals			299	4.1	287	27.2			206	67	14							
WH		DO	4M	20	15		15	100.0			15									
WH		Totals			15		15	1.5			15									
RA		DO	CR	12	2		2	4.6			2									
RA		DO	CR	28	13		13	33.1			13									
RA		DO	CR	32	13		13	32.0					13							
RA		DO	CR	40	12		12	30.4				12								
RA		Totals			40		40	3.8			15	12	13							
Total		All Species			1,099	3.9	1,056	100.0			480	354	136	43	20	7		16		

TC PSTATS

PROJECT STATISTICS

PROJECT THINMEN

DATE 3/6/2023

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
10S	08	05	U2	00PC	44.00	19	175	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	19	175	9.2		
CRUISE	10	84	8.4	8,909	.9
DBH COUNT					
REFOREST					
COUNT	9	91	10.1		
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-L	55	108.7	13.8	57	30.6	113.7	13,323	13,118	3,799	3,799
DF-T	19	73.6	11.6	41	15.8	53.7	5,137	5,017	1,450	1,450
R ALDER	6	11.9	12.7	37	3.0	10.5	851	807	280	280
SNAG	3	5.9	9.9	48	1.0	3.2				
BL MAPLE	1	2.3	13.0	22	0.6	2.1	91	91	30	30
TOTAL	*84*	*202.5*	*12.9*	*49*	*51.0*	*183.2*	*19,402*	*19,034*	*5,558*	*5,558*

CONFIDENCE LIMITS OF THE SAMPLE

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

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

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DF-L	41.8	5.6	130	137	145			
DF-T	62.1	14.6	69	81	93			
R ALDER	33.0	14.7	63	73	84			
SNAG								
BL MAPLE								
TOTAL	*55.4*	*6.0*	*107*	*114*	*121*	*123*	*31*	*14*

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

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DF-L	38.9	5.2	38	40	42			
DF-T	61.8	14.6	20	24	27			
R ALDER	42.5	18.9	21	26	31			
SNAG								
BL MAPLE								
TOTAL	*52.4*	*5.7*	*32*	*34*	*35*	*109*	*27*	*12*

CL 68.1 SD: 1.0 — **TREES/ACRE**

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF-L	16.9	4.0	104	109	113			
DF-T	81.9	19.3	59	74	88			
R ALDER	146.4	34.5	8	12	16			
SNAG	366.7	86.4	1	6	11			
BL MAPLE	299.5	70.6	1	2	4			
TOTAL	*32.0*	*7.5*	*187*	*202*	*218*	*43*	*11*	*5*

CL 68.1 SD: 1.0 — **BASAL AREA/ACRE**

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF-L	14.4	3.4	110	114	118			
DF-T	80.5	19.0	43	54	64			
R ALDER	146.7	34.6	7	11	14			
SNAG	317.6	74.8	1	3	6			
BL MAPLE	299.5	70.6	1	2	4			
TOTAL	*28.5*	*6.7*	*171*	*183*	*195*	*34*	*9*	*4*

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
10S	08	05	U2	00PC	44.00	19	175	1	W

CL 68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DF-L	21.1	5.0	12,465	13,118	13,771			
DF-T	82.9	19.5	4,037	5,017	5,997			
R ALDER	146.7	34.6	528	807	1,086			
SNAG								
BL MAPLE	299.5	70.6	27	91	156			
TOTAL	*31.0*	*7.3*	*17,642*	*19,034*	*20,425*	*41*	*10*	*5*

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
DF-L	19.3	4.5	3,626	3,799	3,971			
DF-T	82.4	19.4	1,168	1,450	1,731			
R ALDER	147.3	34.7	183	280	378			
SNAG								
BL MAPLE	299.5	70.6	9	30	51			
TOTAL	*29.8*	*7.0*	*5,167*	*5,558*	*5,949*	*38*	*9*	*4*

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T10S R08W S05 Ty00PC 44.00

Project: **THINMEN**

Acres **44.00**

Page **1**

Date **3/6/2023**

Time **11:26:15AM**

Spp	S T	So Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of 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
RA		DO CR	100	5.2	851	807	36		100			4	13	34	49	31	7	59	0.66	13.6
RA Totals			4	5.2	851	807	36		100			4	13	34	49	31	7	59	0.66	13.6
DF	L	DO 2M	8	1.0	1,154	1,143	50			100					100	40	12	204	1.28	5.6
DF	L	DO 3M	76	1.8	10,093	9,911	436		100				3	8	89	38	8	95	0.72	104.0
DF	L	DO 4M	16	.6	2,076	2,064	91		100			50	48	2		20	6	24	0.38	86.3
DF Totals			69	1.5	13,323	13,118	577		91	9		8	10	7	76	30	7	67	0.64	195.9
DF	T	DO 3M	81	2.5	4,217	4,113	181		100				9	12	80	37	7	71	0.56	57.8
DF	T	DO 4M	19	1.7	920	904	40		100			28	72			21	6	26	0.35	35.3
DF Totals			26	2.3	5,137	5,017	221		100			5	20	9	65	31	7	54	0.51	93.1
BM		DO CR	100		91	91	4		100			100				20	8	40	0.65	2.3
BM Totals			0		91	91	4		100			100				20	8	40	0.65	2.3
Totals				1.9	19,402	19,034	837		94	6		7	13	8	72	31	7	62	0.60	304.9

TC PSTNDSUM

Stand Table Summary

Page 1
Date: 3/6/2023

T10S R08W S05 Ty00PC 44.00

Project THINMEN
Acres 44.00

Time: 11:26:17AM
Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	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	L	8	1	88	48	5.921	2.07	5.92	6.0	20.0		36	118		16	5
DF	L	11	3	86	69	9.396	6.20	9.40	16.3	56.7		153	532		68	23
DF	L	12	6	88	95	15.791	12.40	28.95	14.5	53.6		421	1,553		185	68
DF	L	13	10	87	81	22.425	20.67	42.61	15.1	50.0		641	2,130		282	94
DF	L	14	10	88	91	19.335	20.67	38.67	18.7	64.0		723	2,475		318	109
DF	L	15	11	87	92	18.528	22.74	37.06	21.9	75.5		810	2,796		356	123
DF	L	16	2	88	94	2.961	4.13	5.92	25.5	92.5		151	548		66	24
DF	L	17	6	89	89	7.868	12.40	14.42	30.1	105.5		434	1,521		191	67
DF	L	18	4	88	90	4.679	8.27	9.36	31.2	106.2		292	994		129	44
DF	L	20	1	85	87	.947	2.07	1.89	37.5	115.0		71	218		31	10
DF	L	21	1	92	78	.859	2.07	1.72	38.0	135.0		65	232		29	10
DF	L	Totals	55	88	85	108.710	113.68	195.92	19.4	67.0		3,799	13,118		1,671	577
DF	T	8	1	91	50	8.094	2.83	8.09	7.0	30.0		57	243		25	11
DF	T	10	3	85	61	15.541	8.48	15.54	12.0	46.7		186	725		82	32
DF	T	11	5	89	69	21.407	14.13	25.69	13.8	50.0		355	1,284		156	57
DF	T	12	2	86	77	7.195	5.65	7.20	20.0	65.0		144	468		63	21
DF	T	13	5	89	73	15.327	14.13	24.52	16.2	51.3		398	1,257		175	55
DF	T	14	1	85	105	2.643	2.83	5.29	21.0	70.0		111	370		49	16
DF	T	17	1	87	105	1.793	2.83	3.59	32.0	120.0		115	430		50	19
DF	T	18	1	86	72	1.599	2.83	3.20	26.0	75.0		83	240		37	11
DF	T	Totals	19	88	69	73.599	53.68	93.11	15.6	53.9		1,450	5,017		638	221
RA		11	2	86	55	5.317	3.51	5.32	14.5	50.0		77	266		34	12
RA		12	1	87	75	2.234	1.75	2.23	24.0	70.0		54	156		24	7
RA		14	2	86	70	3.282	3.51	4.92	20.7	53.3		102	263		45	12
RA		17	1	86	63	1.113	1.75	1.11	43.0	110.0		48	122		21	5
RA		Totals	6	86	63	11.946	10.53	13.59	20.6	59.4		280	807		123	36
BM		13	1	86	28	2.284	2.11	2.28	13.0	40.0		30	91		13	4
BM		Totals	1	86	28	2.284	2.11	2.28	13.0	40.0		30	91		13	4
SN		8	1	99	49	3.016	1.05									
SN		10	1	98	51	1.930	1.05									
SN		14	1	99	40	.985	1.05									
SN		Totals	3	99	48	5.930	3.16									
Totals			84	88	76	202.469	183.16	304.90	18.2	62.4		5,558	19,034		2,446	837

TC PLOGSTVB

Log Stock Table - MBF

T10S R08W S05 Ty00PC 44.00

Project: THINMEN
Acres 44.00

Page 1
Date 3/6/2023
Time 11:26:15AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3 4-5	6-7 8-9	10-11 12-13	14-15 16-19	20-23 24-29	30-39 40+
RA		DO	CR	14	1		1	4.1		1				
RA		DO	CR	24	5		5	13.2		5				
RA		DO	CR	32	14	10.7	12	34.0		7 5				
RA		DO	CR	40	18	2.7	17	48.8		12 5				
RA		Totals			37	5.2	36	4.2		25 10				
DF	L	DO	2M	40	51	1.0	50	8.7			50			
DF	L	DO	3M	30	13		13	2.2		13				
DF	L	DO	3M	32	22	4.6	21	3.6		7 14				
DF	L	DO	3M	34	15		15	2.6		8 7				
DF	L	DO	3M	36	15	9.1	14	2.4		7 7				
DF	L	DO	3M	38	21		21	3.7		21				
DF	L	DO	3M	40	358	1.6	353	61.1		29 229	95			
DF	L	DO	4M	12	3		3	.5		3				
DF	L	DO	4M	14	4		4	.7		4				
DF	L	DO	4M	16	16		16	2.8		16				
DF	L	DO	4M	18	5		5	.9		5				
DF	L	DO	4M	20	17		17	3.0		17				
DF	L	DO	4M	24	19		19	3.2		19				
DF	L	DO	4M	26	8		8	1.5		8				
DF	L	DO	4M	28	5		5	.9		5				
DF	L	DO	4M	30	11		11	1.9		11				
DF	L	DO	4M	32	3	20.0	2	.4		2				
DF		Totals			586	1.5	577	68.9		162 270	95 50			
DF	T	DO	3M	26	8		8	3.7		8				
DF	T	DO	3M	28	9	14.3	8	3.7		8				
DF	T	DO	3M	32	9		9	4.3		9				
DF	T	DO	3M	34	11		11	5.2		11				
DF	T	DO	3M	36	18		18	8.3		18				
DF	T	DO	3M	38	11		11	5.1		11				
DF	T	DO	3M	40	117	2.7	114	51.8		55 36	24			
DF	T	DO	4M	12	1		1	.6		1				
DF	T	DO	4M	14	5	13.6	4	2.0		4				
DF	T	DO	4M	16	5		5	2.4		5				
DF	T	DO	4M	24	18		18	7.9		18				
DF	T	DO	4M	28	3		3	1.6		3				
DF	T	DO	4M	30	8		8	3.4		8				

TC PLOGSTVB

Log Stock Table - MBF

T10S R08W S05 Ty00PC 44.00

Project: THINMEN
Acres 44.00

Page 2
Date 3/6/2023
Time 11:26:15AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		Totals			226	2.3	221	26.4			145	52	24							
BM		DO	CR	20	4		4	100.0				4								
BM		Totals			4		4	.5				4								
Total		All Species			854	1.9	837	100.0			332	336	119	50						

TC PSTATS

PROJECT STATISTICS

PROJECT THINMEN

DATE 3/6/2023

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
10S	08	08	U3	00PC	34.00	17	159	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	17	159	9.4		
CRUISE	9	89	9.9	4,774	1.9
DBH COUNT					
REFOREST					
COUNT	8	70	8.8		
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-L	60	79.6	17.3	78	31.1	129.4	19,465	19,067	5,249	5,249
DF-T	29	60.8	13.2	57	15.9	57.6	7,071	6,867	1,968	1,968
TOTAL	*89*	*140.4*	*15.6*	*69*	*47.3*	*187.1*	*26,536*	*25,934*	*7,218*	*7,218*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL 68.1 — **SAMPLE TREES - BF**

SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DF-L	24.5	3.2	244	252	259			
DF-T	43.6	8.2	121	132	143			
TOTAL	*38.7*	*4.1*	*204*	*212*	*221*	*60*	*15*	*7*

CL 68.1 — **SAMPLE TREES - CF**

SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DF-L	23.8	3.1	67	70	72			
DF-T	44.5	8.4	35	38	41			
TOTAL	*37.6*	*4.0*	*57*	*59*	*62*	*56*	*14*	*6*

CL 68.1 — **TREES/ACRE**

SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF-L	10.8	2.7	77	80	82			
DF-T	50.9	12.7	53	61	68			
TOTAL	*25.1*	*6.3*	*132*	*140*	*149*	*27*	*7*	*3*

CL 68.1 — **BASAL AREA/ACRE**

SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF-L	8.0	2.0	127	129	132			
DF-T	53.3	13.3	50	58	65			
TOTAL	*20.0*	*5.0*	*178*	*187*	*196*	*17*	*4*	*2*

CL 68.1 — **NET BF/ACRE**

SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF-L	10.2	2.6	18,581	19,067	19,554			
DF-T	57.5	14.4	5,881	6,867	7,853			
TOTAL	*20.3*	*5.1*	*24,619*	*25,934*	*27,249*	*17*	*4*	*2*

CL 68.1 — **NET CUFT FT/ACRE**

SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DF-L	9.2	2.3	5,129	5,249	5,370			
DF-T	56.9	14.2	1,688	1,968	2,248			
TOTAL	*19.8*	*4.9*	*6,861*	*7,218*	*7,574*	*17*	*4*	*2*

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T10S R08W S08 Ty00PC 34.00

Project: **THINMEN**

Acres **34.00**

Page **1**

Date **3/6/2023**

Time **11:28:23AM**

Spp	S T	So Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF	L	DO 2M	38	2.4	7,457	7,276	247		3	97			4		96	40	13	223	1.46	32.6
DF	L	DO 3M	58	1.5	11,231	11,058	376		100				0	9	90	38	8	103	0.76	107.8
DF	L	DO 4M	4	5.6	777	734	25	4	96			28	65	7		25	6	30	0.45	24.8
DF	**Totals**		74	2.0	19,465	19,067	648	0	63	37		1	4	6	89	36	9	115	0.88	165.2
DF	T	DO 2M	5	11.3	410	364	12			100				50	50	36	13	189	1.54	1.9
DF	T	DO 3M	77	2.9	5,437	5,280	180		100				2	19	79	37	8	87	0.67	60.4
DF	T	DO 4M	18		1,223	1,223	42		100			48	52			20	6	24	0.35	51.7
DF	**Totals**		26	2.9	7,071	6,867	233		95	5		8	11	17	63	29	7	60	0.59	114.0
Totals				2.3	26,536	25,934	882	0	71	29		3	6	9	82	33	8	93	0.77	279.2

TC PSTNDSUM

Stand Table Summary

Page 1
Date: 3/6/2023

T10S R08W S08 Ty00PC 34.00

Project THINMEN
Acres 34.00

Time: 11:28:24AM
Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	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	L	13	2	90	107	4.680	4.31	9.36	18.3	70.0		171	655		58	22
DF	L	14	1	89	107	2.018	2.16	4.04	21.0	80.0		85	323		29	11
DF	L	15	5	88	106	8.788	10.78	17.58	24.9	93.0		438	1,635		149	56
DF	L	16	10	89	104	15.447	21.57	30.89	28.5	109.5		881	3,383		299	115
DF	L	17	11	89	104	15.052	23.73	31.47	30.8	111.7		970	3,517		330	120
DF	L	18	14	89	105	17.087	30.20	36.62	33.8	119.0		1,239	4,357		421	148
DF	L	19	5	89	103	5.477	10.78	12.05	37.1	133.6		447	1,610		152	55
DF	L	20	7	89	101	6.920	15.10	14.83	40.5	138.7		600	2,056		204	70
DF	L	21	1	89	107	.897	2.16	1.79	50.0	175.0		90	314		30	11
DF	L	22	4	89	98	3.268	8.63	6.54	50.5	186.3		330	1,217		112	41
DF	L	Totals	60	89	104	79.635	129.41	165.16	31.8	115.4		5,250	19,067		1,785	648
DF	T	9	1	87	56	4.500	1.99	4.50	9.0	30.0		40	135		14	5
DF	T	10	1	88	98	3.645	1.99	7.29	9.5	40.0		69	292		24	10
DF	T	11	4	87	102	12.048	7.95	21.08	12.3	44.3		259	934		88	32
DF	T	12	3	88	88	7.593	5.96	15.19	12.8	41.7		195	633		66	22
DF	T	13	4	88	93	8.626	7.95	17.25	15.7	52.5		272	906		92	31
DF	T	14	6	88	91	11.157	11.93	22.31	18.9	66.7		422	1,488		144	51
DF	T	15	4	87	97	6.479	7.95	12.96	23.1	83.7		300	1,085		102	37
DF	T	16	2	89	90	2.847	3.98	5.69	25.5	92.5		145	527		49	18
DF	T	18	1	88	98	1.125	1.99	2.25	33.0	115.0		74	259		25	9
DF	T	19	1	87	82	1.010	1.99	2.02	33.5	115.0		68	232		23	8
DF	T	20	1	88	101	.911	1.99	1.82	43.0	130.0		78	237		27	8
DF	T	21	1	87	75	.826	1.99	1.65	27.5	85.0		45	140		15	5
DF	T	Totals	29	88	91	60.767	57.65	114.02	17.3	60.2		1,968	6,867		669	233
Totals			89	88	99	140.402	187.06	279.19	25.9	92.9		7,218	25,934		2,454	882

TC PLOGSTVB

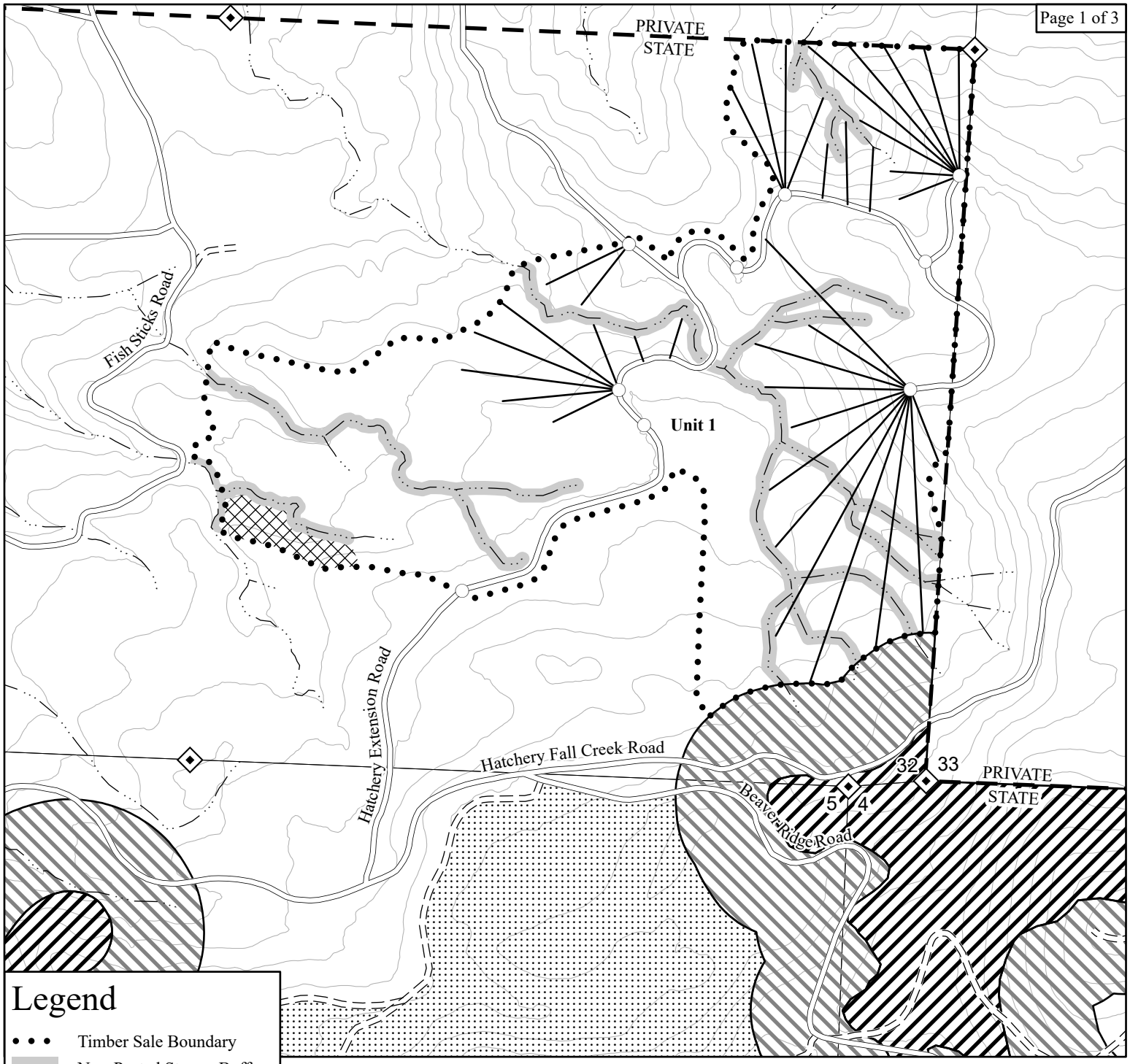
Log Stock Table - MBF

T10S R08W S08 Ty00PC 34.00

Project: THINMEN
Acres 34.00

Page 1
Date 3/6/2023
Time 11:28:22AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	L	DO	2M	30	9		9	1.3							9					
DF	L	DO	2M	40	245	2.5	239	36.8					6	180	53					
DF	L	DO	3M	26	2		2	.3				2								
DF	L	DO	3M	32	15		15	2.3			12	3								
DF	L	DO	3M	34	20		20	3.1			17	3								
DF	L	DO	3M	36	33	4.4	32	4.9			28	4								
DF	L	DO	3M	38	19		19	2.9			19									
DF	L	DO	3M	40	293	1.5	288	44.5			30	39	220							
DF	L	DO	4M	12	0		0	.1			0									
DF	L	DO	4M	16	1		1	.2			1									
DF	L	DO	4M	18	1		1	.1			1									
DF	L	DO	4M	20	5	9.6	4	.7			3	2								
DF	L	DO	4M	26	3		3	.5			3									
DF	L	DO	4M	28	3		3	.5		1	2									
DF	L	DO	4M	30	11	5.7	10	1.5			10									
DF	L	DO	4M	32	2	20.0	2	.3			2									
DF		Totals			662	2.0	648	73.5		1	128	52	226	180	61					
DF	T	DO	2M	32	7	5.3	6	2.6						6						
DF	T	DO	2M	40	7	16.7	6	2.7						6						
DF	T	DO	3M	24	5	16.7	4	1.8				4								
DF	T	DO	3M	32	14		14	6.1			14									
DF	T	DO	3M	34	19		19	8.3			2	17								
DF	T	DO	3M	36	11	2.6	10	4.4			6		4							
DF	T	DO	3M	38	9	11.3	8	3.4			8									
DF	T	DO	3M	40	126	2.5	123	52.7			19	72	32							
DF	T	DO	4M	12	2		2	.7			2									
DF	T	DO	4M	14	1		1	.5			1									
DF	T	DO	4M	16	14		14	5.8			14									
DF	T	DO	4M	18	3		3	1.4			3									
DF	T	DO	4M	24	4		4	1.8			4									
DF	T	DO	4M	26	4		4	1.8			4									
DF	T	DO	4M	28	9		9	3.8			9									
DF	T	DO	4M	30	5		5	2.0			5									
DF		Totals			240	2.9	233	26.5			91	93	36	12						
Total		All Species			902	2.3	882	100.0		1	219	146	262	192	61					



LOGGING PLAN

OF TIMBER SALE CONTRACT NO. WO-341-2023-W01000-01
THIN MEN
PORTIONS OF SECTION 32, T9S, R8W W.M.,
SECTIONS 5 & 8, T10S, R8W W.M.,
POLK & LINCOLN COUNTIES, OREGON

UNIT	NET CABLE ACRES	NET GROUND ACRES
1 (PC)	26	36
2 (PC)	35	9
3 (PC)	34	0
TOTAL	95	45

Legend

- Timber Sale Boundary
- Non-Posted Stream Buffers
- Harvest Not Required
- Reforestation Area

Marbled Murrelet Managment Area

- Occupied Habitat
- Non-Habitat Buffer
- Ownership
- Surfaced Road
- Unsurfaced Road
- Type N Stream
- Cable Corridor
- Land Survey Monument
- Landing

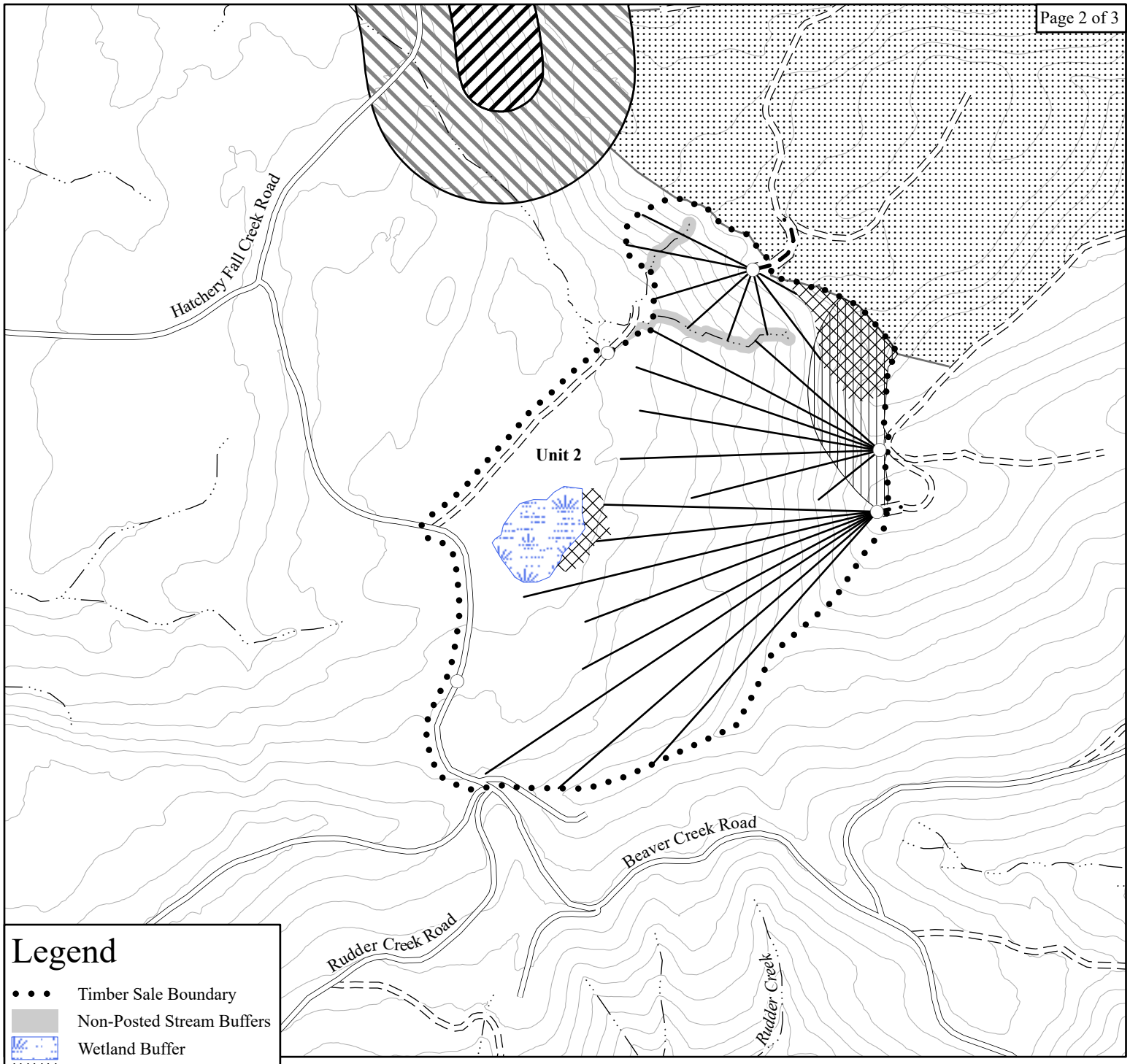
N
W E
S

1:6,000

400 200 0 400 800 1,200 1,600

Feet

04/12/2023



Legend

- Timber Sale Boundary
- Non-Posted Stream Buffers
- Wetland Buffer
- Harvest Not Required
- Felling Restriction Area
- Reforestation Area

Marbled Murrelet Managment Area

- Occupied Habitat
- Non-Habitat Buffer
- Surfaced Road
- Unsurfaced Road
- New Construction
- Right-of-Way (Posted)
- Type N Stream
- Cable Corridor
- Landing

LOGGING PLAN

OF TIMBER SALE CONTRACT NO. WO-341-2023-W01000-01
THIN MEN
PORTIONS OF SECTION 32, T9S, R8W W.M.,
SECTIONS 5 & 8, T10S, R8W W.M.,
POLK & LINCOLN COUNTIES, OREGON

UNIT	NET CABLE ACRES	NET GROUND ACRES
1 (PC)	26	36
2 (PC)	35	9
3 (PC)	34	0
TOTAL	95	45

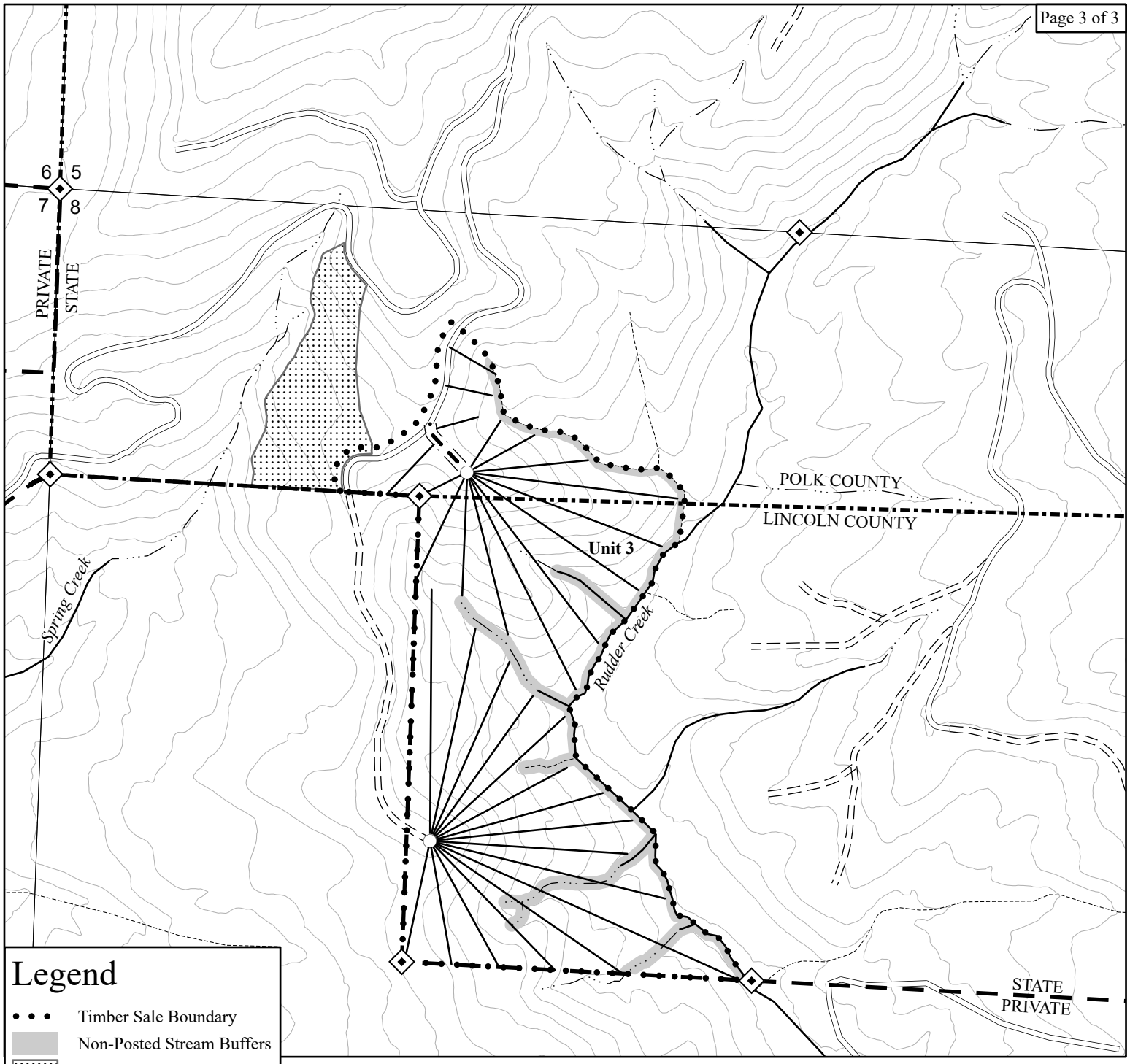
N
W E
S

1:6,000

400 200 0 400 800 1,200 1,600

Feet

04/12/2023



Legend

- Timber Sale Boundary
- Non-Posted Stream Buffers
- Reforestation Area
- Ownership
- County Line
- Surfaced Road
- Unsurfaced Road
- New Construction
- Right-of-Way (Posted)
- Type F Stream
- Type N Stream
- Unknown Stream
- Cable Corridor
- Land Survey Monument
- Landing

LOGGING PLAN

OF TIMBER SALE CONTRACT NO. WO-341-2023-W01000-01
THIN MEN
PORTIONS OF SECTION 32, T9S, R8W W.M.,
SECTIONS 5 & 8, T10S, R8W W.M.,
POLK & LINCOLN COUNTIES, OREGON

UNIT	NET CABLE ACRES	NET GROUND ACRES
1 (PC)	26	36
2 (PC)	35	9
3 (PC)	34	0
TOTAL	95	45

N
W E
S

1:6,000

400 200 0 400 800 1,200 1,600

Feet

04/12/2023