

Sale FG-341-2022-W00859-01

District: Forest Grove Date: February 23, 2022

# **Cost Summary**

	Conifer	Hardwood	Total	
Gross Timber Sale Value	\$2,377,952.72	\$44,963.38	\$2,422,916.10	
		Project Work:	(\$207,524.00)	
		Advertised Value:	\$2,215,392.10	

2/23/22



Sale FG-341-2022-W00859-01

District: Forest Grove Date: February 23, 2022

# **Timber Description**

#### Location:

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)	
Douglas - Fir	21	0	98	
Alder (Red)	14	0	95	

Volume by Grade	2\$	3S & 4S 6"- 11"	Camprun	Total
Douglas - Fir	2,815	999	0	3,814
Alder (Red)	0	0	154	154
Total	2,815	999	154	3,968

2/23/22

**Comments:** Pond Values Used: Local Pond Values, January 2022.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost: \$889.17/MBF = \$1,175/MBF - \$285.83/MBF

Western hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost: \$359.17/MBF = \$645/MBF - \$285.83/MBF

Bigleaf maple and Other Hardwoods Stumpage Price = Pond Value minus Logging Cost: \$43.97/MBF = \$400/MBF - \$356.03/MBF

BRANDING AND PAINTING COST ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$950 daily truck cost.

Other Costs (with Profit & Risk to be added): None

Other Costs (No Profit & Risk added):
Stimson Road Use Fee = \$99,264.28
Machine Time to Block/Waterbar Roads,and Skid Trails:
20 hours x \$150/hour = \$3,000
Machine Time to Pile Landing Slash:
20 hours x \$150/hour = \$3,000
Equipment Cleaning: 3 pieces x \$1,000/Piece = \$3,000
TOTAL Other Costs (No Profit & Risk added) = \$108,264.28

SLASH TREATMENT: 15 acres x \$250/acre = \$3,750

ROAD MAINTENANCE

(Includes; Move-in, Grading, Rolling and Spot Rock)

Move-in = \$3,431.10

General Road Maintenance: 4.76 miles X \$2,577.57 = \$12,269.23 TOTAL Road Maintenance: \$15,700.33 / 3968 MBF = \$3.95/MBF

2/23/22



## Sale FG-341-2022-W00859-01

District: Forest Grove Date: February 23, 2022

**Logging Conditions** 

Combination#: 1 Douglas - Fir 30.00%

Alder (Red) 30.00%

**Logging System:** Cable: Small Tower <=40 **Process:** Harvester Head Delimbing

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

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 10 bd. ft / load: 4600

cost / mbf: \$160.44

machines: Log Loader (A)

Forwarder Harvester

Tower Yarder (Small)

Combination#: 2 Douglas - Fir 70.00%

Alder (Red) 70.00%

Logging System: Shovel Process: Harvester Head Delimbing

yarding distance: Medium (800 ft) downhill yarding: No

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 13 bd. ft / load: 4600

cost / mbf: \$89.37
machines: Forwarder

Harvester



## Sale FG-341-2022-W00859-01

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# **Logging Costs**

**Operating Seasons: 2.00** 

Profit Risk: 15%

**Project Costs:** \$207,524.00

Other Costs (P/R): \$0.00

**Slash Disposal:** \$3,750.00 **Other Costs:** \$108,264.28

### Miles of Road

Road Maintenance:

\$3.95

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	4.6	
Alder (Red)	\$0.00	2.0	3.0	



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# **Logging Costs Breakdown**

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas -	Fir								
\$110.69	\$4.03	\$2.21	\$105.33	\$0.00	\$33.34	\$0.95	\$2.00	\$27.28	\$285.83
Alder (Red	l)								
\$110.69	\$4.15	\$2.21	\$166.25	\$0.00	\$42.50	\$0.95	\$2.00	\$27.28	\$356.03

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$909.31	\$623.48	\$0.00
Alder (Red)	\$0.00	\$648.00	\$291.97	\$0.00



## Sale FG-341-2022-W00859-01

District: Forest Grove Date: February 23, 2022

## **Summary**

#### Amortized

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

#### Unamortized

Specie	MBF	Value	Total	
Douglas - Fir	3,814	\$623.48	\$2,377,952.72	
Alder (Red)	154	\$291.97	\$44,963.38	

## **Gross Timber Sale Value**

**Recovery:** \$2,422,916.10

Prepared By: MARK SAVAGE Phone: 503-359-7437

#### PROJECT COST SUMMARY SHEET

Timber Sale: Sale Number:	Daily E FG-341-2022		
PROJECT NO. 1: ROCKED ROAD CONSTRUC	CTION		
	Road Segment	Length	Cost
	A to B	2+40	\$6,345.04
		2+40 stations	
Total Rock =		0.05 miles	
	336 cy	3" - 0	
		Move-in =	\$272.23
		TOTAL PROJECT COST =	\$6,617.27
PROJECT NO. 2: DIRT ROAD CONSTRUCTIO	N		
	Road Segment	Length	Cost
	C to D	Length	\$3,547.62
	E to F	9+00	\$3,314.92
		16+70 stations	ψ0,011.0 <u>L</u>
		0.32 miles	
		Move-in =	\$294.43
		TOTAL PROJECT COST =	\$7,156.97
PROJECT NO. 3: ROAD IMPROVEMENT			
	Road Segment	Length	Cost
	G to H	205+00	\$130,123.79
	I to C	8+60	\$4,550.98
	J to K	6+50	\$5,181.87
	L to M	6+00	\$4,963.90
	N to O	32+60	\$22,475.99
		38+60 stations 0.73 miles	
Total Rock =			
	144 cy 9,089 cy	1½" - 0 3" - 0	
	•	Move-in =	\$7,177.79
		TOTAL PROJECT COST =	\$174,474.32
PROJECT NO. 4: ROAD BRUSHING		<del>-</del>	
	Dand Comment	I am	Ocat
	Road Segment	Length 637+90	Cost
	All Roads	12.08 miles	\$15,223.95
		Move-in =	\$653.18
		TOTAL PROJECT COST =	\$15,877.13
PROJECT NO. 5: ROAD VACATING		<del>-</del>	
	Pood Soament	Longth	Cost
	Road Segment C to D	Length	\$639.75
	E to F	9+00	\$639.75 \$542.75
		16+70 stations	÷3.2.70
		0.32 miles	
		Move-in =	\$2,215.81
		TOTAL PROJECT COST =	\$3,398.31
_		TOTAL CREDITS =	\$207,524.00

Timber Sale:	Daily Edition		Sale	e Number:	FG-341-2	022-W00859-01	
Road Segment:		A to B		Col	nstruction:		stations
						0.05	miles
PROJECT NO. 1							
CONSTRUCTION							
Clearing & grubbing (scatter)	0.28	ac @	\$1,078.00	per ac =		\$301.84	
Balanced road construction	2.40	sta @	\$110.00	per sta =		\$264.00	
Construct landing	1	ea @	\$314.00	per ea =		\$314.00	
Grade, ditch, & roll	2.40	sta @	\$36.00	per sta =		\$86.40	_
				TOTAL CONO	TOUGTION		000004
ROCK				TOTAL CONS	TRUCTION	N COSTS =	\$966.24
		1	1	Discount		1	1
	Rock	Base	Haul Cost	Placement/	T-4-LOV	D1: O4	
	Size	Cost \$/cy	\$/cy	Processing Cost \$/cy	Total CY	Rock Cost	
Surfacing rock					•		J
Base rock	3" - 0	\$9.12	\$5.46	\$1.22	156	\$2,464.80	1
Landing	3" - 0	\$9.12	\$5.46	\$1.22	180	\$2,844.00	
				Subtotal =	336	\$5,308.80	]
			Totals	All Rock =	336	1	
			rotalo	3" - 0 =		İ	
				то	TAL ROCI	K COSTS =	\$5,308.80
EDOSION CONTROL							
EROSION CONTROL Grass seed & fertilizer	0.14	ac @	\$500.00	per ac =		\$70.00	
	•		<b>7000.00</b>	F		Ψ. σ.σσ	-
			<u>T</u>	OTAL EROSION	CONTRO	L COSTS =	\$70.00
				TOTA	L PROJE	CT COST =	\$6,345.04

Timber Sale:	_	Daily Edition			Sale Number: FG-341-20	022-W00859-01
- Road Segment:		C to D		-	Construction: 7+70	stations
-				_	0.15	miles
PROJECT NO. 2						
CONSTRUCTION						
Clearing & grubbing (scatter)	0.89	ac @	\$1,078.00	per ac =	\$959.42	
Balanced road construction	6.70	sta @	\$110.00	per sta =	\$737.00	
Remove large stump	2.00	ea @	\$82.50	per ea =	\$165.00	
Drift	1.00	sta @	\$180.00	per sta =	\$180.00	
Turnaround	1	ea @	\$82.50	per ea =	\$82.50	
Construct landing	1	ea @	\$314.00	per ea =	\$314.00	
Grade, ditch, & roll	7.70	sta @	\$36.00	per sta =	\$277.20	
				TOTAL	CONSTRUCTION COSTS =	\$2,715.12
CULVERTS						
Culverts and Bands						
18" Diameter	30	LF @	\$20.00	per LF =	\$600.00	
Markers & Stakes			<b>*</b> 4 <b>*</b> • • •		*40.00	
Culvert markers	1	ea @	\$10.00	per ea =	\$10.00	
					TOTAL CULVERT COSTS =	\$610.00
EROSION CONTROL						
Grass seed & fertilizer	0.45	ac @	\$500.00	per ac =	\$222.50	
			Т	OTAL ER	OSION CONTROL COSTS =	\$222.50
			_			· ·
					TOTAL PROJECT COST =	\$3,547.62
PROJECT NO. 5					10171211100201 0001 -	Ψ0,0-17.02
Construct tank trap	1	ea @	\$55.00	per ea =	\$55.00	
Rip dirt road surface	7.70	sta @	\$25.00	per sta =	\$192.50	
Rip & narrow landing	1	ea @	\$150.00	•	\$150.00	
Remove existing culvert	1	ea @	\$150.00	•	\$150.00	
Grass seed & fertilizer	0.09	ac @	\$425.00	per ac =	\$38.25	
Mulch	0.09	ac @	\$600.00	per ac =	\$54.00	
		<u> </u>		•	TOTAL PROJECT COST =	\$639.75

Timber Sale:		Daily Edition	on	_	Sale Number: FG-341-202	22-W00859-01
Road Segment:		E to F			Construction: 9+00	stations
					0.17	miles
PROJECT NO. 2						
CONSTRUCTION						
Clearing & grubbing (scatter)	1.04	ac @	\$1,078.00	per ac =	\$1,121.12	
Balanced road construction	6.50	sta @	\$110.00	per sta =	\$715.00	
Remove large stump	1.00	ea @	\$82.50	per ea =	\$82.50	
Drift	2.50	sta @	\$180.00	per sta =	\$450.00	
Turnaround	1	ea @	\$82.50	per ea =	\$82.50	
Construct landing	1	ea @	\$314.00	per ea =	\$314.00	
Grade & roll (outslope)	9.00	sta @	\$32.20	per sta =	\$289.80	
				TOTAL	CONSTRUCTION COSTS =	\$3,054.92
EROSION CONTROL						
Grass seed & fertilizer	0.52	ac @	\$500.00	per ac =	\$260.00	
				TOTAL ER	OSION CONTROL COSTS =	\$260.00
					TOTAL BD0 1507 0007	<b>#</b> 0.044.00
PROJECT NO. 5					TOTAL PROJECT COST =	\$3,314.92
Construct tank trap	1	ea @	\$55.00	per ea =	\$55.00	
Rip dirt road surface	9.00	sta @	\$25.00	per sta =	\$225.00	
Rip & narrow landing	1	ea @	\$150.00	per ea =	\$150.00	
Grass seed & fertilizer	0.11	ac @	\$425.00	per ac =	\$46.75	
Mulch	0.11	ac @	\$600.00	per ac =	\$66.00	
		J		•	TOTAL PROJECT COST =	\$542.75

				CTION COST			
Timber Sale:			_	Sale Number:		2-W00859-01	
Road Segment:		G to H		_	Improvement:	205+00	stations
						3.88	miles
PROJECT NO. 3							
IMPROVEMENT							
Clearing & grubbing (scatter)	2.36	ac @	\$1.078.00	per acre =		\$2,544.08	
Clean ditch & scatter waste material	0.20	sta @				\$12.00	
Construct settling pond	6	ea @				\$150.00	
Improve turnout	16	ea @				\$528.00	
Improve turnaround	1	ea @		•		\$41.25	
Improve landing	1	ea @		per ea =		\$157.00	
Grade & roll (outslope)	14.60	sta @		per sta =		\$470.12	
Grade, ditch, & roll	190.40	sta @		per sta =		\$6,854.40	
				то	TAL IMPROVEME	NT COSTS =	\$10,956.85
CULVERTS	_						,
Culverts and Bands							
18" Diameter	90	LF @	\$20.00	per LF =		\$1,800.00	
24" Diameter	80	LF @	\$29.00	per LF =		\$2,320.00	
36" Diameter	40	LF @	\$50.00	per LF =		\$2,000.00	
Markers & Stakes							
Culvert Markers	9	ea @	\$10.00	per ea =		\$90.00	
					TOTAL OULVE	DT COOTO	<b>#</b> 0.040.00
ROCK					TOTAL CULVE	<u> </u>	\$6,210.00
THOUSE THE PARTY OF THE PARTY O		<u> </u>	1	T	1 1		
	Rock	Base	Haul Cost	Placeme	nt/ Total CY	Rock Cost	
	Size	Cost \$/cy	\$/cy	Processing Co	ost \$/cy   Total CT	NOCK COSt	
Subgrade rock					<u> </u>		
Bedding and backfill	1½" - 0	\$0.80	\$5.56	\$0.50	144	\$987.84	
	1			Su	ubtotal = 144	\$987.84	
Surfacing rock Surfacing rock	3" - 0	\$9.12	\$5.56	\$1.22	6,355	\$101,044.50	
Junction	3" - 0	\$9.12	\$5.56	\$1.22		\$2,544.00	
Turnout	3" - 0	\$9.12	\$5.56	\$1.22	364	\$5,787.60	
Turnaround	3" - 0	\$9.12	\$5.56	\$1.22	10	\$159.00	
Landing	3" - 0	\$9.12	\$5.56	\$1.22	90	\$1,431.00	
Landing	0 - 0	Ψ5.12	ψ5.50	·	ubtotal = 6,979	\$110,966.10	
			Totals		Rock = 7,123		
				1	1½" - 0 = 144		
					3" - 0 = 6,979		
					TOTAL RO	CK COSTS =	\$111.953.94
EROSION CONTROL					<u> </u>		, , 500.01
Grass seed & fertilizer	2.36	ac @	\$425.00	per ac	=	\$1,003.00	
				TOTAL	EROSION CONTR	01 00979 -	\$1,003.00
				IOTAL	LINGSION CONTR	<u>OL 00313 -</u>	ψ1,003.00
					TOTAL PRO I	ECT COST =	\$130 123 79
					TOTAL FROM	<del></del> =	ψ100,120.13

Timber Sale	e:	Daily Edition		Sa	ale Number:	FG-341-202	22-W00859-01
Road Segmen	t:	I to C		Improvement:			stations
						0.16	miles
PROJECT NO. 3							
IMPROVEMENT							
Clearing & grubbing (scatter)	0.10	ac @	\$1,078.00	per acre =		\$107.80	
Grade, ditch, & roll	8.60	sta @	\$36.00	per sta =		\$309.60	
				TOTAL IMF	ROVEMEN	T COSTS =	\$417.40
ROCK	_						· ·
	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/c	Total CY	Rock Cost	
Surfacing rock		1		l			
Surfacing rock	3" - 0	\$9.12	\$5.04	\$1.22	266	\$4,091.08	
·				Subtotal	= 266	\$4,091.08	
			Totals	All Rock	=   266	1	
			rotalo	3" - 0		]	
				I	OTAL ROC	K COSTS =	\$4,091.08
Grass seed & fertilizer	0.10	ac @	\$425.00	per ac =		\$42.50	
				TOTAL EROSIO	N CONTRO	L COSTS =	\$42.50
				<u>TO</u> 1	AL PROJE	CT COST =	\$4,550.98

Timber Sale:	Daily Edition				FG-341-202	22-W00859-01	
Road Segment:	J to K		Improvement:			stations	
-						0.12	miles
PROJECT NO. 3							
IMPROVEMENT							
Clearing & grubbing (scatter)	0.08	ac @	\$1,078.00	per acre =		\$86.24	
Improve turnaround	1	ea @	\$41.25	per ea =		\$41.25	
Improve landing	1	ea @	\$157.00	per ea =		\$157.00	
Grade, ditch, & roll	6.50	sta @	\$36.00	per sta =		\$234.00	
				TOTAL IMPI	ROVEMEN	T COSTS =	\$518.49
ROCK						_	
	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost	
Surfacing rock		1		l			
Surfacing rock	3" - 0	\$9.12	\$5.04	\$1.22	201	\$3,091.38	
Turnaround	3" - 0	\$9.12	\$5.04	\$1.22	10	\$153.80	
Landing	3" - 0	\$9.12	\$5.04	\$1.22	90	\$1,384.20	
				Subtotal :	= 301	\$4,629.38	
			Totals	All Rock = 3" - 0 :		]	
				<u>TC</u>	TAL ROC	K COSTS =	\$4,629.38
EROSION CONTROL							
Grass seed & fertilizer	0.08	ac @	\$425.00	per ac =		\$34.00	
				TOTAL EROSION	I CONTRO	L COSTS =	\$34.00
				<u>TOT.</u>	AL PROJE	CT COST =	\$5,181.87

			ONOTINO				
Timber Sale:	Daily Edition		Sale Number:		FG-341-202	22-W00859-01	
Road Segment:		L to M		Imp	Improvement:		stations
						0.11	miles
PROJECT NO. 3							
IMPROVEMENT							
Clearing & grubbing (scatter)	0.07		\$1,078.00			\$75.46	
Improve turnaround	1	ea @	\$41.25	per ea =		\$41.25	
Improve landing	1	ea @	\$157.00	per ea =		\$157.00	
Grade, ditch, & roll	6.00	sta @	\$36.00	per sta =		\$216.00	
				TOTAL IMPE	ROVEMEN	T COSTS =	\$489.71
ROCK						_	
	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost	
Surfacing rock		•		l	1		
Surfacing rock	3" - 0	\$9.12	\$5.20	\$1.22	186	\$2,890.44	
Turnaround	3" - 0	\$9.12	\$5.20	\$1.22	10	\$155.40	
Landing	3" - 0	\$9.12	\$5.20	\$1.22	90	\$1,398.60	
				Subtotal =	286	\$4,444.44	
			Totals	All Rock = 3" - 0 =		]	
				TC	TAL ROCI	K COSTS =	\$4,444.44
Grass seed & fertilizer	0.07	ac @	\$425.00	per ac =		\$29.75	
				TOTAL EROSION	CONTRO	L COSTS =	\$29.75
				<u> TOT</u> /	AL PROJE	CT COST =	\$4,963.90

	SUMI	MARY OF (	CONSTRUC	CHON COST			
Timber Sale:	Daily Edition		_ Sa	ale Number:	FG-341-202	2-W00859-01	
Road Segment:	N to O		Im	provement:	32+60	stations	
·				-		0.62	miles
PROJECT NO. 3							
IMPROVEMENT							
Clearing & grubbing (scatter)	0.38	ac @	\$1,078.00	per acre =		\$409.64	
Clean culvert inlet & outlet, scatter waste	6	ea @		per ea =		\$150.00	
Improve turnout	2	ea @		per ea =		\$66.00	
Improve turnaround	1	ea @		per ea =		\$41.25	
Construct roadside landing	1	ea @		per ea =		\$165.00	
Improve landing	1	ea @		per ea =		\$157.00	
Grade, ditch, & roll	32.60	sta @	\$36.00	per sta =		\$1,173.60	
				TOTAL IM	PROVEMEN	NT COSTS =	\$2,162.49
CULVERTS						-	<del>+-,</del>
Markers & Stakes							
Culvert Markers	4	ea @	\$10.00	per ea =		\$40.00	
		Ŭ					
				<u>TOT</u>	AL CULVER	RT COSTS =	\$40.00
ROCK							
[		I _	I				
	Rock	Base	Haul Cost		Total CY	Rock Cost	
	Size	Cost \$/cy	\$/cy	Processing Cost \$/c	У		
Surfacing rock							
Surfacing rock	3" - 0	\$9.12	\$5.66	\$1.22	1,010	\$16,160.00	
Junction	3" - 0	\$9.12	\$5.66	\$1.22	24	\$384.00	
Turnout	3" - 0	\$9.12	\$5.66	\$1.22	28	\$448.00	
Turnaround	3" - 0	\$9.12	\$5.66	\$1.22	10	\$160.00	
Roadside landing	3" - 0	\$9.12	\$5.66	\$1.22	95	\$1,520.00	
Landing	3" - 0	\$9.12	\$5.66	\$1.22	90	\$1,440.00	
				Subtotal	= 1,257	\$20,112.00	
			Totals	All Rock	= 1,257	1	
				3" - 0		1	
						•	
				• •	TOTAL ROO	CK COSTS =	\$20,112.00
EROSION CONTROL						_	
Grass seed & fertilizer	0.38	ac @	\$425.00	per ac =		\$161.50	
		J					
				TOTAL EROSIC	ON CONTRO	<u>DL COSTS = </u>	\$161.50
				<u>TO</u>	TAL PROJI	ECT COST =	\$22,475.99

Timber Sale	e:	Daily Edition	n	_	Sale Number:	FG-341-2022	-W00859-01
Road Segmen	t:	All roads		_	Improvement: _	637+90 12.08	stations miles
PROJECT NO. 3: ROAD BRUSHING IMPROVEMENT Roadside brushing	12.08	mi @	\$1,260.11	per mi =		\$15,223.95	

TOTAL PROJECT COST = \$15,223.95

Timber Sale:	Daily Edition	Sale Number:	FG-341-2022-W00859-01

Equipment	Total
Brush Cutter	\$699.03
Grader	\$1,215.81
Roller (smooth/grid) & Compactor	\$699.03
Excavator (Large) - Equipment Cleaning	\$2,215.81
Dozer (Large) - Equipment Cleaning	\$2,260.39
Dump Truck (10cy +)	\$731.83

TOTAL MOVE-IN COSTS = \$8,397.63

PROJECT No. 5 MOVE-IN, WITHIN AREA MOVE, & CLEANING COSTS

Equipment Total
Excavator (Large) - Equipment Cleaning \$2,215.81

TOTAL MOVE-IN COSTS = \$2,215.81

### **QUARRY DEVELOPMENT & CRUSHING COST SUMMARY**

Timber Sale:
Sale Number:
Quarry Name:

3" - 0:
9,425 cy
Total truck yardage:
7,632 cy

Oversize - Pile:
Swell:
130%
Compaction:

Daily Edition
FG-341-2022-W00859-01
(truck measure)
7,632 cy

116%

Move-in & Other Base Cost

Move-in & Other Base Cost	_							
Quarry development & overburden removal								
Equipment cleaning & move	in excavator				\$1,976.63			
Equipment cleaning & move	in dozer				\$1,955.43			
Move in & setup drill					\$592.75			
Move in loader					\$886.00			
Move in & setup crusher					\$1,946.28			
Move in dump trucks					\$675.00			
Gradation tests	\$71.50 /	2,000cy x	5	tests =	\$357.50			
Clean up quarry		-			\$500.00			
				Subtotal =	\$10,062.48			
				Per CY =	\$1.07/cy			
3"-0 Base Cost								
Drill & shoot	\$2.80	/ cy x	7,632	cy =	\$21,368.42			
Push rock	\$0.80	/ cy x	9,921	cy =	\$7,936.84			
Oversize - Pile	\$0.80	/ cy x	496	cy =	\$396.84			
Load crusher	\$0.80	/ cy x	9,425	cy =	\$7,540.00			
Crush (3" - 0)	\$3.30	/ cy x	9,425	cy =	\$31,102.50			
Load dump truck	\$0.80	/ cy x	9,425	cy =	\$7,540.00			
				Subtotal =	\$75,884.61			
				Per CY =	\$8.05/cy			

3"-0 Base Cost = **\$9.12/cy** 

#### **QUARRY DEVELOPMENT & CRUSHING COST SUMMARY**

Timber Sale: Daily Edition
Sale Number: FG-341-2022-W00859-01
Stockpile Name: Saddle Stockpile

1 1/2" - 0: \_\_\_\_144 cy\_\_\_(truck measure)

Total truck yardage: 144 cy

1 1/2"-0 Base Cost

Load dump truck \$0.80 / cy x 144 cy = \$115.20 Subtotal = \$115.20 Per CY = \$0.80

1 1/2"-0 Cost = **\$0.80/cy** 

# CRUISE REPORT Daily Edition #FG-341-2022-W00859-01

1. LOCATION: Portions of Sections 18 and 19, T1S, R5W, W.M., Washington County, Oregon.

#### 2. CRUISE DESIGN:

Pre-cruise evaluation indicated that the stand's average DBH is approximately 18 inches and the coefficient of variation is about 50%. For sales of this size and approximate value, ODF cruise standards require a sampling error of 9% at a 68% confidence level, and a minimum sample size of 100 graded trees. The cruise design chosen for this sale is a variable radius sample plot using a 40 BAF prism.

#### 3. SAMPLING METHOD:

The Timber Sale Area was sampled in January 2022 with 32 variable radius grade plots using a 40 BAF prism. Plots were laid out on a 6 chain x 5 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

#### 4. CRUISE RESULTS:

166 trees were measured and graded producing a cumulative Sampling Error of 9.5% on the Douglas-fir basal area and 9.7% for the Douglas-fir net board foot volume.

#### 5. TREE MEASUREMENT AND GRADING:

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

- a) Height Standards: Total tree heights were measured to the nearest foot. Bole heights were calculated to a top DIB of six inches (or 25% of DBH, whichever is larger) for conifers.
- b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.
- c) Form Factors: Measured for each grade tree using a form point of 16 feet.

#### 6. DATA PROCESSING:

- a) **Volumes and Statistics:** Cruise estimates and sampling statistics were derived from Super Ace 2008 cruise software.
- b) Deductions: The following percent volume deductions are by species to account for the hidden defect and breakage. For conifers two percent was deducted. For hardwoods five percent was deducted.
- **7. CRUISERS:** The sale was cruised by ODF cruiser Shamus Smith.

Prepared by:	<u>Mark Savage</u>	<u>2/16/2022</u>
		Date
Reviewed by:	Mark Savage	2/16/2022
Ť	•	Date

TC PST	ATS				OJECT OJECT	STATIS DAY				PAGE DATE	1 2/1/2022
ODF IWP	RGE	SC TRACT		TYPE	OJECI		RES	PLOTS	TREES	CuFt	2/1/2022 BdFt
01S	<b>KGE</b> 05	19 00U1		00MC		AC	109.00	32	184	S	W
					TREES	1	ESTIMATED TOTAL		ERCENT AMPLE		
		PLOTS	TREES		PER PLOT		TREES		TREES		
TOTA		32	184		5.8		TREES		TREES		
CRUIS		32	183		5.7		14,251		1.3		
	COUNT						, -				
REFO	REST										
COUN	VT										
BLAN											
100 %	1										
					ND SUMM						
		SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
DOM	C EID	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG R ALI		144 20	73.2 22.4	21.2 14.3	119 68	39.1 6.6	180.0 25.0	35,860 1,482	35,704 1,482	7,882 526	7,88: 52:
DF-SN		17	33.9	14.5	47	6.8	23.0	1,462	1,402	320	32
BL M.		2	1.1	20.3	71	0.6	2.5	198	198	59	5
TOTA	AL	183	130.7	18.0	91	54.3	230.0	37,541	37,384	8,468	8,468
CL SD:	68.1 1.0	COEFF VAR.%		I	SAMPLI OW	E TREES -	BF HIGH	#	OF TREES R	EQ. 10	INF. POP.
DOUG	110	74.7		L	812	866	920		3	10	
R ALI DF-SN	DER	84.4			86	107	128				
BL M.	APLE	34.4	32.2		125	185	245				
TOTA	AL .	95.3	7.0		646	695	744		362	91	
CL	68.1	COEFF				E TREES -		#	OF TREES R	•	INF. POP.
SD:	1.0	VAR.% 67.6		Lo	OW 174	AVG 184	HIGH		5	10	
DOUG R ALI		6/6	5.6		174	184					
					30		194 44				
DF-SN		77.7			30	37	194 44				
DF-SN BL M.	NAG		17.8		30 47						
	NAG APLE	77.7	17.8 12.6			37	44		300	75	
BL M.	NAG APLE	77.7 13.4	17.8 12.6 6.4		47	54 149	44 61	#	300 OF PLOTS R		INF. POP.
BL M.	NAG IAPLE <b>AL</b>	77.7 13.4 86.7	17.8 12.6 6.4	LC	47 140	37 54 149 ACRE AVG	44 61	#			
BL M. TOTA  CL SD: DOUG	NAG IAPLE AL 68.1 1.0 G FIR	77.7 13.4 86.7 COEFF VAR.% 76.0	17.8 12.6 6.4 5 5 S.E.% 13.4	L	47 140 TREES/A	37 54 149 ACRE AVG 73	44 61 159 HIGH 83	#	OF PLOTS R	EQ.	INF. POP.
BL M. TOTA  CL SD: DOUG R ALI	NAG IAPLE AL 68.1 1.0 G FIR DER	77.7  13.4  86.7  COEFF  VAR.%  76.0  276.2	17.8 12.6 6.4 5 5 S.E.% 13.4 48.8	Lo	47 140 TREES/A	37 54 149 ACRE AVG 73 22	44 61 159 HIGH 83 33	#	OF PLOTS R	EQ.	INF. POP.
CL SD: DOUG R ALI	NAG APLE AL 68.1 1.0 G FIR DER NAG	77.7  13.4  86.7  COEFF  VAR.%  76.0  276.2  237.7	17.8 12.6 6.4 5 8 S.E.% 13.4 48.8 42.0	L	47 140 TREES/A DW 63 11 20	37 54 149 ACRE AVG 73 22 34	44 61 159 HIGH 83 33 48	#	OF PLOTS R	EQ.	INF. POP.
CL SD: DOUG R ALI	NAG APLE AL 68.1 1.0 G FIR DER NAG APLE	77.7  13.4  86.7  COEFF  VAR.%  76.0  276.2	17.8 12.6 6.4 5 8 S.E.% 13.4 48.8 42.0	Lo	47 140 TREES/A	37 54 149 ACRE AVG 73 22	44 61 159 HIGH 83 33	#	OF PLOTS R	EQ.	INF. POP.
CL SD: DOUG R ALL DF-SM BL M.	NAG IAPLE  68.1  1.0  G FIR DER NAG IAPLE  AL	77.7  13.4  86.7  COEFF  VAR.%  76.0  276.2  237.7  397.9	17.8 12.6 6.4 5. S.E.% 13.4 48.8 42.0 70.3 15.2	L	47 140 TREES/A DW 63 11 20 0	37 54 149 ACRE AVG 73 22 34 1 131	44 61 159 HIGH 83 33 48 2 151		OF PLOTS R 5	EQ. 10	INF. POP.
CL SD: DOUG R ALL DF-SN BL M. TOTA	NAG APLE AL 68.1 1.0 G FIR DER NAG APLE	77.7  13.4  86.7  COEFF  VAR.%  76.0  276.2  237.7  397.9  86.1	17.8  12.6  6.4  S.E.%  13.4  48.8  42.0  70.3  15.2		47 140 TREES/A DW 63 11 20 0	37 54 149 ACRE AVG 73 22 34	44 61 159 HIGH 83 33 48 2 151		OF PLOTS R 5	EQ. 10	INF. POP.
CL SD: DOUC R ALL DF-SN BL M. TOTA	NAG IAPLE AL 68.1 1.0 G FIR DER NAG IAPLE AL 68.1 1.0	77.7  13.4  86.7  COEFF VAR.%  76.0  276.2  237.7  397.9  86.1  COEFF	17.8  12.6 6.4  S.E.%  13.4 48.8 42.0 70.3 15.2		47 140 TREES/2 DW 63 11 20 0 111 BASAL 2	37 54 149 ACRE AVG 73 22 34 1 131	44 61 159  HIGH 83 33 48 2 151		OF PLOTS R 5  296  OF PLOTS R	EQ. 10 74 EQ.	INF. POP.
CL SD: DOUG R ALL SD: CL SD: DOUG R ALL SD: DOUG R ALL SD: DOUG R ALL	AL  68.1  1.0  G FIR  DER  NAG  (APLE  AL  68.1  1.0  G FIR  DER	77.7  13.4  86.7  COEFF  VAR.%  76.0  276.2  237.7  397.9  86.1  COEFF  VAR.%  53.8  232.6	17.8  12.6 6.4  5.E.% 13.4 48.8 42.0 70.3 15.2  5.E.% 9.5 41.1		47 140 TREES/A DW 63 11 20 0 111 BASAL A DW 163 15	37 54 149  ACRE AVG 73 22 34 1 131  AREA/ACI AVG 180 25	HIGH  83  33  48  2  151  RE  HIGH  197  35		OF PLOTS R 5  296  OF PLOTS R	EQ. 10 74 EQ.	INF. POP.
BL M. TOTA  CL SD: DOUC R ALL DF-SN BL M. TOTA  CL SD: DOUC R ALL DF-SN	AL  68.1  1.0  G FIR DER NAG APLE AL  68.1  1.0  G FIR DER AL	77.7  13.4  86.7  COEFF  VAR.%  76.0  276.2  237.7  397.9  86.1  COEFF  VAR.%  53.8  232.6  162.4	17.8  12.6 6.4  3.5 5.E.%  13.4 48.8 42.0 70.3 15.2  3.5 5.E.% 9.5 41.1 28.7		47 140 TREES/A DW 63 11 20 0 111 BASAL A DW 163 15 16	37 54 149  ACRE AVG 73 22 34 1 131  AREA/ACI AVG 180 25 23	HIGH  83  33  48  2  151  RE  HIGH  197  35  29		OF PLOTS R 5  296  OF PLOTS R	EQ. 10 74 EQ.	INF. POP.
BL M. TOTA  CL SD: DOUC R ALL DF-SN BL M. TOTA  CL SD: DOUC R ALL DF-SN BL M.	AL  68.1  1.0  G FIR DER NAG APLE AL  68.1  1.0  G FIR DER AL  68.1  1.0  G FIR DER NAG AL	77.7  13.4  86.7  COEFF VAR.%  76.0  276.2  237.7  397.9  86.1  COEFF VAR.%  53.8  232.6  162.4  393.5	17.8  12.6 6.4  3.5 5.E.%  13.4 48.8 42.0 70.3 15.2  3.5 5.E.% 9.5 41.1 28.7 69.5		47 140 TREES/A DW 63 11 20 0 111 BASAL A DW 163 15 16	37 54 149  ACRE AVG 73 22 34 1 131  AREA/ACI AVG 180 25 23 3	HIGH  83 33 48 2 151  RE HIGH  197 35 29 4		OF PLOTS R 5  296  OF PLOTS R 5	74 EQ. 10	INF. POP.
CL SD: DOUG R ALL SD: DOUG R ALL SD: DOUG R ALL SD: DOUG R ALL DF-SN BL M. TOTA	AL  68.1  1.0  G FIR  DER  NAG  (APLE  AL  68.1  1.0  G FIR  DER  AL  68.1  AL  AL  AL  AL  AL	77.7  13.4  86.7  COEFF  VAR.%  76.0  276.2  237.7  397.9  86.1  COEFF  VAR.%  53.8  232.6  162.4  393.5  37.5	17.8  12.6 6.4  3.5 5.E.%  13.4 48.8 42.0 70.3 15.2  3.5 5.E.% 9.5 41.1 28.7 69.5 6.6		47 140  TREES/A  DW  63 11 20 0 111  BASAL A  DW  163 15 16 1 215	37 54 149 ACRE AVG 73 22 34 1 131 AREA/ACI AVG 180 25 23 3 230	HIGH  83  33  48  2  151  RE  HIGH  197  35  29	#	OF PLOTS R 5  296  OF PLOTS R 5	EQ. 10 74 EQ. 10	INF. POP.
BL M. TOTA  CL SD: DOUC R ALL DF-SN BL M. TOTA  CL SD: DOUC R ALL DF-SN BL M.	AL  68.1  1.0  G FIR DER NAG APLE AL  68.1  1.0  G FIR DER AL  68.1  1.0  G FIR DER NAG AL	77.7  13.4  86.7  COEFF VAR.%  76.0  276.2  237.7  397.9  86.1  COEFF VAR.%  53.8  232.6  162.4  393.5	17.8  12.6 6.4  3.5  13.4 48.8 42.0 70.3 15.2  3.5 5.E.% 9.5 41.1 28.7 69.5 6.6	Lo	47 140 TREES/A DW 63 11 20 0 111 BASAL A DW 163 15 16	37 54 149 ACRE AVG 73 22 34 1 131 AREA/ACI AVG 180 25 23 3 230	HIGH  83 33 48 2 151  RE HIGH  197 35 29 4	#	OF PLOTS R 5  296  OF PLOTS R 5	EQ. 10 74 EQ. 10	INF. POP.
BL M. TOTA  CL SD: DOUC R ALL DF-SN BL M. TOTA  CL SD: DOUC R ALL DF-SN BL M. TOTA	NAG IAPLE  68.1  1.0 G FIR DER NAG IAPLE  AL  68.1  1.0 G FIR DER LO G FIR LO LO G FIR LO	77.7  13.4  86.7  COEFF  VAR.%  76.0  276.2  237.7  397.9  86.1  COEFF  VAR.%  53.8  232.6  162.4  393.5  37.5  COEFF	17.8  12.6 6.4  3.5 13.4 48.8 42.0 70.3 15.2  3.5 5.E.% 9.5 41.1 28.7 69.5 6.6  3.5.E.%	L	47 140  TREES/A  DW  63 11 20 0 111  BASAL A  DW  163 15 16 1 215  NET BF	37 54 149 ACRE AVG 73 22 34 1 131 AREA/ACI AVG 180 25 23 3 230	HIGH  83  33  48  2  151  RE  HIGH  197  35  29  4  245	#	OF PLOTS R  5  296  OF PLOTS R  5  56  OF PLOTS R	EQ. 10 74 EQ. 10	INF. POP.
BL M. TOTA  CL SD: DOUC R ALL DF-SN BL M. TOTA  CL SD: DOUC R ALL DF-SN BL M. TOTA  CL SD: CL SD:	AL  68.1  1.0  G FIR  DER  NAG  IAPLE  AL  68.1  1.0  G FIR  DER  NAG  IAPLE  AL  68.1  1.0  G FIR  DER  NAG  IAPLE  AL  68.1  1.0  G FIR	77.7  13.4  86.7  COEFF VAR.%  76.0  276.2  237.7  397.9  86.1  COEFF VAR.%  53.8  232.6  162.4  393.5  37.5  COEFF VAR.%	17.8  12.6 6.4  3.5 13.4 48.8 42.0 70.3 15.2  3.5 5.E.% 9.5 41.1 28.7 69.5 6.6  3.5 5.E.% 9.7	L	47 140  TREES/A  DW  63 11 20 0 111  BASAL A  DW  163 15 16 1 215  NET BF/DW	37 54 149 ACRE AVG 73 22 34 1 131 AREA/ACI AVG 180 25 23 3 230 CACRE AVG	HIGH  83 33 48 2 151  RE  HIGH  197 35 29 4 245  HIGH	#	OF PLOTS R  5  296  OF PLOTS R  5  56  OF PLOTS R	EQ. 10 74 EQ. 10	INF. POP.
BL M. TOTA  CL SD: DOUC R ALI DF-SN BL M. TOTA  CL SD: DOUC R ALI DF-SN BL M. TOTA  CL SD: DOUC R ALI DF-SN BL M. TOTA	NAG AAL  68.1  1.0 G FIR DER NAG AAL  68.1  1.0 G FIR DER NAG AAL  68.1  1.0 G FIR DER NAG DER	77.7  13.4  86.7  COEFF VAR.%  76.0  276.2  237.7  397.9  86.1  COEFF VAR.%  53.8  232.6  162.4  393.5  37.5  COEFF VAR.%  54.7	17.8  12.6 6.4  3.5 13.4 48.8 42.0 70.3 15.2  3.6 5.E.% 9.5 41.1 28.7 69.5 6.6  3.5.E.% 9.7 33.5	L	47 140  TREES/A  DW 63 11 20 0 111  BASAL A  DW 163 15 16 1 215  NET BF/DW 82,255	37 54 149 ACRE AVG 73 22 34 1 131 AREA/ACI AVG 180 25 23 3 230 ACRE AVG 35,704	HIGH  83  33  48  2  151  RE  HIGH  197  35  29  4  245  HIGH  39,153	#	OF PLOTS R  5  296  OF PLOTS R  5  56  OF PLOTS R	EQ. 10 74 EQ. 10	INF. POP.

TC PST	ATS				PROJECT PROJECT		STICS YED			PAGE DATE	<b>2</b> 2/1/2022
TWP	RGE	$\mathbf{SC}$	TRACT	TYP	E	A	CRES	PLOTS	TREES	CuFt	BdFt
01S	05	19	00U1	00MC			109.00	32	184	S	W
CL	68.1		COEFF		NET B	F/ACRE			# OF PLOTS	S REQ.	INF. POP.
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH		5	10	15
TOTA	<b>A</b> L		48.4	8.6	34,185	37,384	40,583		94	23	10
CL	68.1		COEFF		NET C	UFT FT/A	CRE		# OF PLOTS RE	EQ.	INF. POP.
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15
DOUG	3 FIR		53.8	9.5	7,133	7,882	8,631				
R AL	DER		195.0	34.4	345	526	708				
DF-Si	NAG										
BL M	APLE		394.0	69.6	18	59	100				
TOTA	<b>AL</b>		44.2	7.8	7,806	8,468	9,129		78	20	9

TC ODF	PSPCSTGR		Sı	pecies, S	ort Gra	de - Board Fo	oot V	olum	es (Pr	oject	)								
TO	T01S R05W S19 Ty00MC 109.00					Project: Acres	·								Page Date Time		1 2/1/2022 11:28:48AM		
	S So Gr Net Bd. Ft. per Acre Total Log Scale Dia Log Length									ige Log		Logs							
Spp	S So Gr T rt ad	Net BdFt	Def%	Gross	Net	Total Net MBF	4-5	Log Sca 6-11	ale Dia. 12-16	17+	12-20	Log 1 21-30	Length 31-35	36-99	Ln Ft	Dia In	Bd Ft	CF/ Lf	Per /Acre
DF DF DF DF	CU 2M 3M 4M	73 25 2	.5 .4	26,468 8,699 693	26,347 8,664 693	2,872 944 76		98 100	36	64	0 2 43	0 2 57	7	99 89	23 40 38 20	6 17 8 6	469 100 25	0.00 2.42 0.69 0.37	12.0 56.1 86.5 27.5
DF	Totals	96	.4	35,860	35,704	3,892		26	27	48	1	2	2	95	35	10	196	1.24	182.2
BM BM	CU CR Totals	100		198	198	22		45	55 55				100		26 32 29	5 12 9	178	0.00 1.67 0.92	1.1 1.1 2.2
RA RA	CU CR	100		1,482	1,482	162		82	18		23	16	10	51	23 28	6	78	0.00 0.98	17.2 19.0
RA	Totals	4		1,482	1,482	162		82	18		23	16	10	51	26	7	41	0.57	36.2
Tota	nls		0.4	37,541	37,384	4,075		28	26	45	2	3	3	93	33	10	170	1.16	220.5

TC PSTNDSUM			Stand Table	Summary	Page	1	
ODF					Date:	2/1/2022	
T0	S R05W S19 Ty00MC 10	0.00	Project	DAYED	Time:	11:28:49AM	

Acres 109.00 Grown Year:

No.   Part					Tot				Average	e Log		Net	Net			
DF	S				Av	Trees/	BA/	Logs			Tons/		Bd.Ft.			
Dep	Spc T	DBH	Trees	16'	Ht	Acre	Acre	Acre	Cu.Ft.	Bd.Ft.	Acre	Acre	Acre	Tons	Cunits	MBF
March   Marc	DF	10	1	85	95	2.292	1.25	2.29	7.1	30.0	.46	16	69	50	18	7
Dec-	DF	11	1	85	59	1.894	1.25	1.89	12.6	50.0	.68	24	95	74	26	10
Decolute	DF															
Decolute	DF															
Decolute																
DF																
Decoration   Property   Decoration   Decor														•		
Decoration																
DF																
DF																
DF																
Def		22	5	87						175.3		277				
DF		23	5	87	131	2.166	6.25	6.07	47.2	208.6	8.16	286	1,265	889	312	138
DF	DF	24	4	86	125	1.592	5.00	4.38	49.5	210.9	6.17	216	923	672	236	101
DF	DF	25	1	84	128	.367	1.25	1.10	40.3	173.3	1.26	44	191	138	48	21
DF	DF	26	4	86	133	1.356	5.00	4.07	57.9	255.0	6.72	236	1,037	732	257	113
DF         29         4         85         199         1.090         5.00         3.27         70.5         322.5         6.57         231         1.055         21.63         2.630         92.3         436           DF         31         6         85         140         1.431         7.50         10.70         79.1         337.8         24.13         847         3.998         2.630         92.3         436           DF         31         6         85         140         1.431         7.50         4.29         84.4         386.1         10.33         362         1.15         395         181           DF         33         2         85         137         4.21         2.50         12.6         94.5         450.0         3.0         119         15.68         371         130         62           DF         33         4         85         147         .187         .125         56         112.3         543.3         1.80         63         305         196         69         33           DF         35         1         86         146         .167         1.25         5.05         112.5         6467         1.83	DF	27	3	86	131	.943	3.75	2.83	59.5	257.8	4.80	168	729		184	80
DF   30	DF	28		85		2.046	8.75	6.14	65.2	286.7	11.40	400	1,760		436	192
DF	DF					1.090										
DF	DF													•		
DF 33														•		
DF																
DF																
DF         36         5         85         144         .884         6.25         2.65         117.0         580.7         8.84         310         1.540         964         338         168           DF         37         1         86         146         .167         1.25         .50         127.5         646.7         1.83         64         325         199         70         35           DF         38         4         85         149         .635         5.00         1.90         134.0         690.0         7.27         255         1.314         793         278         143           DF         39         1         84         140         .151         1.25         445         131.0         656.7         1.69         59         297         184         65         32           DF         40         3         84         141         .430         3.75         1.17         160.6         817.8         5.17         182         925         564         198         101           DF         41         2         87         145         .273         3.250         1.71         160.6         817.8         123.5         1																
DF         37         1         86         146         .167         1.25         .50         127.5         646.7         1.83         64         325         199         70         35           DF         38         4         85         149         .635         5.00         1.90         134.0         690.0         7.27         255         1.314         793         278         143           DF         39         1         84         140         .151         1.25         .45         131.0         656.7         1.69         59         297         184         65         32           DF         40         3         84         141         430         3.75         1.29         140.8         717.8         5.17         182         925         564         198         101           DF         41         2         87         145         .273         2.50         .82         153.8         823.3         3.59         126         674         391         137         73           DF         42         3         84         141         439         390         3.75         1.17         160.6         817.8         5.35																
DF         38         4         85         149         .635         5.00         1.90         134.0         690.0         7.27         255         1,314         793         278         143           DF         39         1         84         140         .151         1.25         .45         131.0         656.7         1.69         59         297         184         65         32           DF         40         3         84         141         430         3.75         1.29         140.8         717.8         5.17         182         925         564         198         101           DF         41         2         87         145         273         2.50         82         153.8         823.3         3.59         126         674         391         137         73           DF         Totals         144         86         119         73.238         180.00         170.17         46.3         209.8         224.63         7.82         35.70         24.485         8.591         3.892           RA         10         1         74         60         2.292         1.25         2.29         6.5         20.0         4.1																
DF																
DF DF DF DF DF ALT STATE OF STATE		39	1	84	140		1.25	.45		656.7		59		184	65	
DF         42         3         84         149         .390         3.75         1.17         160.6         817.8         5.35         188         956         583         205         104           DF         Totals         144         86         119         73.238         180.00         170.17         46.3         209.8         224.63         7.882         35,704         24,485         8,591         3,892           RA         9         1         74         30         2.829         1.25         2.29         6.5         20.0         .41         15         46         45         16         5           RA         10         1         74         60         2.292         1.25         2.29         6.5         20.0         .41         15         46         45         16         5           RA         11         3         74         67         5.682         3.75         1.89         10.5         30.0         .55         20         57         60         22         6           RA         14         2         73         70         1.019         1.25         1.02         33.3         70.0         1.93         34 <td></td> <td>40</td> <td>3</td> <td>84</td> <td>141</td> <td>.430</td> <td>3.75</td> <td>1.29</td> <td>140.8</td> <td>717.8</td> <td>5.17</td> <td>182</td> <td>925</td> <td>564</td> <td>198</td> <td>101</td>		40	3	84	141	.430	3.75	1.29	140.8	717.8	5.17	182	925	564	198	101
DF   Totals   144   86   119   73.238   180.00   170.17   46.3   209.8   224.63   7.882   35.704   24.485   8.591   3.892    RA   9   1   74   30   2.829   1.25   2.29   6.5   20.0   .41   1.5   46   45   16   5    RA   10   1   74   60   2.292   1.25   2.29   6.5   20.0   .41   1.5   46   45   16   5    RA   11   3   74   67   5.682   3.75   1.89   10.5   30.0   .55   20   57   60   22   66    RA   14   2   73   73   2.339   2.50   2.34   16.3   34.50   1.05   38   105   114   41   11    RA   15   1   73   70   1.019   1.25   1.02   33.3   70.0   .93   34   71   102   37   8    RA   16   2   73   70   1.790   2.50   1.79   29.9   80.0   1.47   53   143   160   58   16    RA   17   4   74   92   3.172   5.00   4.76   34.7   95.0   4.54   165   452   495   180   49    RA   18   2   74   75   1.415   2.50   1.41   39.6   105.0   1.54   56   149   168   61   16    RA   20   1   74   85   5.73   1.25   1.15   37.6   105.0   1.19   43   120   129   47   13    RA   21   1   73   85   5.20   1.25   1.04   284   110.0   81   30   114   89   32   12    RA   22   1   74   100   4.74   1.25   9.5   44.4   130.0   1.16   42   123   126   46   13    RA   26   1   74   80   3.39   1.25   3.4   89.7   300.0   8.4   30   102   91   33   11    RA   Totals   20   74   68   22.443   25.00   18.98   27.7   78.1   14.48   526   1.482   1.578   574   162    BM   19   1   74   70   6.635   1.25   6.3   49.0   140.0   83   31   89   90   34   10    BM   Totals   2   78   71   1.108   2.50   1.11   53.4   178.4   1.57   59   198   171   65   22	DF	41	2	87	145	.273	2.50	.82	153.8	823.3	3.59	126	674	391	137	73
RA 9 1 74 30 2.829 1.25	DF	42	3	84	149	.390	3.75	1.17	160.6	817.8	5.35	188	956	583	205	104
RA 10 1 74 60 2.292 1.25 2.29 6.5 20.0 .41 15 46 45 16 5   RA 11 3 74 67 5.682 3.75 1.89 10.5 30.0 .55 20 57 60 22 6   RA 14 2 73 73 2.339 2.50 2.34 16.3 45.0 1.05 38 105 114 41 11   RA 15 1 73 70 1.019 1.25 1.02 33.3 70.0 .93 34 71 102 37 8   RA 16 2 73 70 1.790 2.50 1.79 29.9 80.0 1.47 53 143 160 58 16   RA 17 4 74 92 3.172 5.00 4.76 34.7 95.0 4.54 165 452 495 180 49   RA 18 2 74 75 1.415 2.50 1.41 39.6 105.0 1.54 56 149 168 61 16   RA 20 1 74 85 .573 1.25 1.15 37.6 105.0 1.19 43 120 129 47 13   RA 21 1 73 85 .520 1.25 1.04 28.4 110.0 .81 30 114 89 32 12   RA 22 1 74 100 4.74 1.25 .95 44.4 130.0 1.16 42 123 126 46 13   RA 26 1 74 80 .339 1.25 3.4 89.7 300.0 .84 30 102 91 33 11   RA Totals 20 74 68 22.443 25.00 18.98 27.7 78.1 14.48 526 1.482 1.578 574 162   BM 19 1 74 70 .635 1.25 .63 49.0 140.0 .83 31 89 90 34 10   BM 22 1 84 72 4.74 1.25 .47 59.3 230.0 7.4 28 109 81 31 12   BM Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22	DF	Totals	144	86	119	73.238	180.00	170.17	46.3	209.8	224.63	7,882	35,704	24,485	8,591	3,892
RA       10       1       74       60       2.292       1.25       2.29       6.5       20.0       .41       15       46       45       16       5         RA       11       3       74       67       5.682       3.75       1.89       10.5       30.0       .55       20       57       60       22       6         RA       14       2       73       73       2.339       2.50       2.34       16.3       45.0       1.05       38       105       114       41       11         RA       15       1       73       70       1.019       1.25       1.02       33.3       70.0       93       34       71       102       37       8         RA       16       2       73       70       1.790       2.50       1.79       29.9       80.0       1.47       53       143       160       58       16         RA       17       4       74       92       3.172       5.00       4.76       34.7       95.0       4.54       165       452       495       180       49         RA       18       2       74       75       1.415	RA	9	1	74	30	2.829	1.25									
RA       11       3       74       67       5.682       3.75       1.89       10.5       30.0       .55       20       57       60       22       6         RA       14       2       73       73       2.339       2.50       2.34       16.3       45.0       1.05       38       105       114       41       11         RA       15       1       73       70       1.019       1.25       1.02       33.3       70.0       .93       34       71       102       37       8         RA       16       2       73       70       1.790       2.50       1.79       29.9       80.0       1.47       53       143       160       58       16         RA       17       4       74       92       3.172       5.00       4.76       34.7       95.0       4.54       165       452       495       180       49         RA       18       2       74       75       1.415       2.50       1.41       39.6       105.0       1.54       56       149       168       61       16         RA       20       1       74       85       .520		10	1	74	60	2.292	1.25	2.29	6.5	20.0	.41	15	46	45	16	5
RA 15 1 73 70 1.019 1.25 1.02 33.3 70.0 93 34 71 102 37 8 RA 16 2 73 70 1.790 2.50 1.79 29.9 80.0 1.47 53 143 160 58 16 RA 17 4 74 92 3.172 5.00 4.76 34.7 95.0 4.54 165 452 495 180 49 RA 18 2 74 75 1.415 2.50 1.41 39.6 105.0 1.54 56 149 168 61 16 RA 20 1 74 85 .573 1.25 1.15 37.6 105.0 1.19 43 120 129 47 13 RA 21 1 73 85 .520 1.25 1.04 28.4 110.0 81 30 114 89 32 12 RA 22 1 74 100 .474 1.25 .95 44.4 130.0 1.16 42 123 126 46 13 RA 26 1 74 80 .339 1.25 .34 89.7 300.0 .84 30 102 91 33 11 RA Totals 20 74 68 22.443 25.00 18.98 27.7 78.1 14.48 526 1.482 1.578 574 162 8M 19 1 74 70 .635 1.25 .63 49.0 140.0 .83 31 89 90 34 10 8M 22 1 84 72 .474 1.25 .47 59.3 230.0 .74 28 109 81 31 12 8M Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22		11	3	74	67	5.682	3.75	1.89	10.5	30.0	.55	20	57	60	22	6
RA 16 2 73 70 1.790 2.50 1.79 29.9 80.0 1.47 53 143 160 58 16 RA 17 4 74 92 3.172 5.00 4.76 34.7 95.0 4.54 165 452 495 180 49 RA 18 2 74 75 1.415 2.50 1.41 39.6 105.0 1.54 56 149 168 61 16 RA 20 1 74 85 .573 1.25 1.15 37.6 105.0 1.19 43 120 129 47 13 RA 21 1 73 85 .520 1.25 1.04 28.4 110.0 81 30 114 89 32 12 RA 22 1 74 100 .474 1.25 .95 44.4 130.0 1.16 42 123 126 46 13 RA 26 1 74 80 .339 1.25 .34 89.7 300.0 .84 30 102 91 33 11  RA Totals 20 74 68 22.443 25.00 18.98 27.7 78.1 14.48 526 1.482 1.578 574 162  BM 19 1 74 70 .635 1.25 .63 49.0 140.0 .83 31 89 90 34 10  BM Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22	RA	14	2	73	73	2.339	2.50	2.34	16.3	45.0	1.05	38	105	114	41	11
RA 17 4 74 92 3.172 5.00 4.76 34.7 95.0 4.54 165 452 495 180 49  RA 18 2 74 75 1.415 2.50 1.41 39.6 105.0 1.54 56 149 168 61 16  RA 20 1 74 85 .573 1.25 1.15 37.6 105.0 1.19 43 120 129 47 13  RA 21 1 73 85 .520 1.25 1.04 28.4 110.0 81 30 114 89 32 12  RA 22 1 74 100 .474 1.25 .95 44.4 130.0 1.16 42 123 126 46 13  RA 26 1 74 80 .339 1.25 .34 89.7 300.0 .84 30 102 91 33 11  RA Totals 20 74 68 22.443 25.00 18.98 27.7 78.1 14.48 526 1.482 1.578 574 162  BM 19 1 74 70 .635 1.25 .63 49.0 140.0 .83 31 89 90 34 10  BM Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22	RA	15	1	73	70	1.019	1.25	1.02	33.3	70.0	.93	34	71	102	37	8
RA 18 2 74 75 1.415 2.50 1.41 39.6 105.0 1.54 56 149 168 61 16 RA 20 1 74 85 .573 1.25 1.15 37.6 105.0 1.19 43 120 129 47 13 RA 21 1 73 85 .520 1.25 1.04 28.4 110.0 81 30 114 89 32 12 RA 22 1 74 100 .474 1.25 .95 44.4 130.0 1.16 42 123 126 46 13 RA 26 1 74 80 .339 1.25 .34 89.7 300.0 .84 30 102 91 33 11  RA Totals 20 74 68 22.443 25.00 18.98 27.7 78.1 14.48 526 1.482 1.578 574 162  BM 19 1 74 70 .635 1.25 .63 49.0 140.0 .83 31 89 90 34 10  BM 22 1 84 72 .474 1.25 .47 59.3 230.0 .74 28 109 81 31 12  BM Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22	RA	16	2	73	70	1.790	2.50	1.79	29.9	80.0	1.47	53	143	160	58	16
RA 20 1 74 85 .573 1.25 1.15 37.6 105.0 1.19 43 120 129 47 13 RA 21 1 73 85 .520 1.25 1.04 28.4 110.0 .81 30 114 89 32 12 RA 22 1 74 100 .474 1.25 .95 44.4 130.0 1.16 42 123 126 46 13 RA 26 1 74 80 .339 1.25 .34 89.7 300.0 .84 30 102 91 33 11  RA Totals 20 74 68 22.443 25.00 18.98 27.7 78.1 14.48 526 1,482 1,578 574 162  BM 19 1 74 70 .635 1.25 .63 49.0 140.0 .83 31 89 90 34 10 BM 22 1 84 72 .474 1.25 .47 59.3 230.0 .74 28 109 81 31 12  BM Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22	RA					3.172		4.76								
RA 21 1 73 85 .520 1.25 1.04 28.4 110.0 .81 30 114 89 32 12 RA 22 1 74 100 .474 1.25 .95 44.4 130.0 1.16 42 123 126 46 13 RA 26 1 74 80 .339 1.25 .34 89.7 300.0 .84 30 102 91 33 11  RA Totals 20 74 68 22.443 25.00 18.98 27.7 78.1 14.48 526 1,482 1,578 574 162  BM 19 1 74 70 .635 1.25 .63 49.0 140.0 .83 31 89 90 34 10 BM 22 1 84 72 .474 1.25 .47 59.3 230.0 .74 28 109 81 31 12  BM Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22	RA															
RA 22 1 74 100 .474 1.25 .95 44.4 130.0 1.16 42 123 126 46 13 RA 26 1 74 80 .339 1.25 .34 89.7 300.0 .84 30 102 91 33 11 RA Totals 20 74 68 22.443 25.00 18.98 27.7 78.1 14.48 526 1,482 1,578 574 162 8M 19 1 74 70 .635 1.25 .63 49.0 140.0 .83 31 89 90 34 10 8M 22 1 84 72 .474 1.25 .47 59.3 230.0 .74 28 109 81 31 12 8M Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22																
RA 26 1 74 80 .339 1.25 .34 89.7 300.0 .84 30 102 91 33 11  RA Totals 20 74 68 22.443 25.00 18.98 27.7 78.1 14.48 526 1,482 1,578 574 162  BM 19 1 74 70 .635 1.25 .63 49.0 140.0 .83 31 89 90 34 10  BM 22 1 84 72 .474 1.25 .47 59.3 230.0 .74 28 109 81 31 12  BM Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22																
RA Totals 20 74 68 22.443 25.00 18.98 27.7 78.1 14.48 526 1,482 1,578 574 162  BM 19 1 74 70 .635 1.25 .63 49.0 140.0 .83 31 89 90 34 10  BM 22 1 84 72 .474 1.25 .47 59.3 230.0 .74 28 109 81 31 12  BM Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22																
BM 19 1 74 70 .635 1.25 .63 49.0 140.0 .83 31 89 90 34 10 BM 22 1 84 72 .474 1.25 .47 59.3 230.0 .74 28 109 81 31 12 BM Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22	RA			/4	80	.339	1.25		89.7	300.0	.84	30	102	91	33	11
BM 22 1 84 72 .474 1.25 .47 59.3 230.0 .74 28 109 81 31 12  BM Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22	RA	Totals	20	74	68	22.443	25.00	18.98	27.7	78.1	14.48	526	1,482	·	574	162
BM Totals 2 78 71 1.108 2.50 1.11 53.4 178.4 1.57 59 198 171 65 22																
	BM	22	1	84	72	.474	1.25	.47	59.3	230.0	.74	28	109	81	31	12
DFS 5 1 86 51 9.707 1.32	BM	Totals	2	78	71	1.108	2.50	1.11	53.4	178.4	1.57	59	198	171	65	22
	DFS	5	1	86	51	9.707	1.32									

TC ODF	PSTNDSU	М				\$	Stand T	Γable Sι	ummary				Page Date:	2 2/1/20	22
T01S	R05W S19	Ту00МС		109.	00		Project Acres	t D	0AYED 109.0	00			Time: Grown Year		49AM
S Spc T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Net Cu.Ft.		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Tons	Totals Cunits	MBF
DFS	8	4	85	43	15.167	5.29									
DFS	11	1	86	77	2.005	1.32									
DFS	13	1	86	60	1.436	1.32									
DFS	16	1	85	32	.948	1.32									
DFS	18	1	86	20	.749	1.32									
DFS	19	1	86	17	.672	1.32									
DFS	20	2	86	24	1.213	2.65									
DFS	21	1	86	63	.550	1.32									
DFS	22	1	86	30	.501	1.32									
DFS	24	1	86	55	.421	1.32									
DFS	28	1	85	65	.310	1.32									
DFS	30	1	86	107	.270	1.32									
DFS	Totals	17	86	47	33.949	22.50								_	
Totals		183	84	91	130.739	230.00	190.26	44.5	196.5	240.68	8,468	37,384	26,234	9,230	4,075

| Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code |

$\mathbf{s}$	So Gr	Log	Gross	Def Net	%		I	let Volu	me by S	caling I	<u> Diamete</u>	r in Inch	es			,	
Spp T	rt de	Len	MBF	% MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	2M	20	6	6	.1						6						
DF	2M	30	14	14	.4								14				
DF	2M	40	2,865	2,852	73.3						394	344	747	889	454	24	
DF	3M	20	20	5.4 19	.5				12	8							
DF	3M	28	7	7	.2			1	4	2							
DF	3M	30	12	12	.3			8	4								
DF	3M	32	25	25	.6			15	2	7							
DF	3M	34	44	44	1.1			27	18								
DF	3M	36	12	12	.3			8	4								
DF	3M	38	38	38	1.0			32	6								
DF	3M	40	789	786	20.2			143	215	412			16				
DF	4M	12	5	5	.1			5									
DF	4M	14	7	7	.2			7									
DF	4M	16	10	10	.2			10									
DF	4M	18	1	1	.0			1									
DF	4M	20	10	10	.3			10									
DF	4M	22	2	2	.0			2									
DF	4M	24	19	19	.5			18	1								
DF	4M	26	11	11	.3			11									
DF	4M	28	2	2	.1			2									
DF	4M	30	9	9	.2			9									
DF	Totals		3,909	3,892	95.5			310	265	429	400	344	777	889	454	24	
ВМ	CR	32	22	22	100.0					10		12					
BM	Totals		22	22	.5					10		12					
RA	CR	14	5	5	3.1			5									
RA	CR	20	32	32	20.1			8	5	11		8					
RA	CR	22	3	3	2.1			3									
RA	CR	28	4	4	2.7			4									
RA	CR	30	17	17	10.8			6					11				
RA	CR	32	17	17	10.4				7		10						
RA	CR	40	82	82	50.8			11	47	24							
RA	Totals		162	162	4.0			39	59	36	10	8	11				
Total	All Specie	s	4,092	4,075	100.0			349	324	474	410	363	788	889	454	24	

### **Volume Summary**

(Shown in MBF)

## Daily Edition

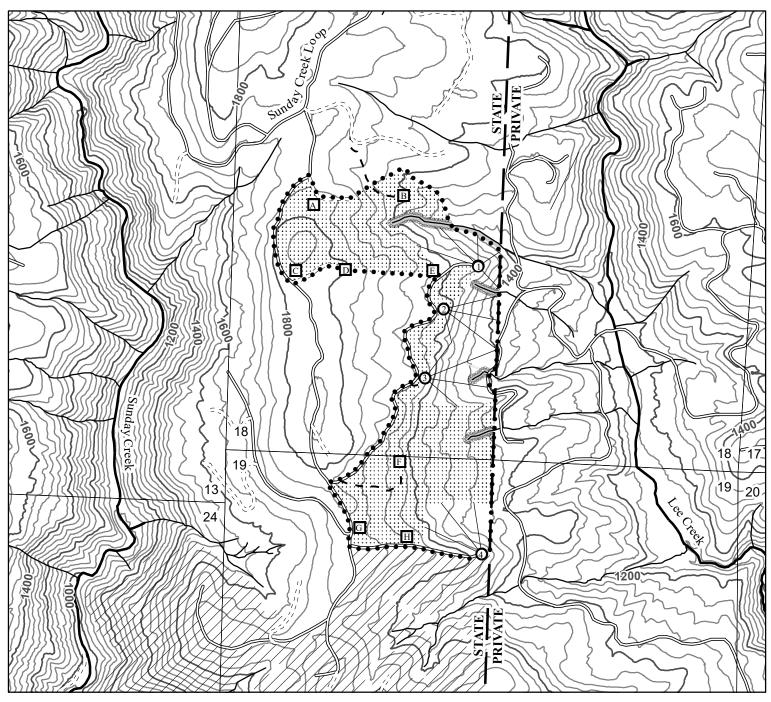
### #FG-341-2022-W00859-01 February 2022

### **UNIT 1: MC (109 ACRES)**

SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
	Cruise Volume	2,872	944	76	0	3,892
Douglas-fir	Hidden D&B (2%)	(57)	(19)	(2)	(0)	(78)
Douglas-III	NET TOTAL	2,815	925	74	0	3,814
	% of Total	74	24	2	0	
	Cruise Volume	0	0	0	162	162
Pod alder	Hidden D&B (5%)	(0)	(0)	(0)	(8)	(8)
Red alder	NET TOTAL	0	0	0	154	154
	% of Total	0	0	0	100	

## SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	2,815	925	74	0	3,814
Red alder	0	0	0	154	154
Total	2,815	925	74	154	3,968



### LEGEND

• • • Timber Sale Boundary
Stream Buffer Boundary

ODF Ownership Boundary

Surfaced Roads

= = = : Unsurfaced Roads

New Road Construction

Type-F Stream

Type-N Stream

Stream Buffer

Cable Yarding Area

::::::: Tractor Yarding Area

O Cable Landing

☐ Tractor Landing

Section Lines

40 Foot Contour Band200 Foot Contour Band

## **LOGGING PLAN**

FOR TIMBER SALE CONTRACT #FG-341-2022-W00859-01 DAILY EDITION
PORTIONS OF SECTIONS 18 & 19, T1S, R5W, W.M.,
WASHINGTON COUNTY, OREGON

Forest Grove District GIS February, 2022

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

1:12,000 1 inch = 1,000 feet 500 1,000 2,000

#### APPROXIMATE NET ACRES

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	TRACTOR	CABLE
ΓIMBER SALE AREA	76	33
TOTAL	76	33