"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Star Date 2020
Sale FG-341-2020-W00557-01

District: Forest Grove **Date: March 19, 2020**

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$2,428,270.26	$0.00	$2,428,270.26
		Project Work:	($36,986.92)
		Advertised Value:	$2,391,283.34

Timber Sale Appraisal
Star Date 2020
Sale FG-341-2020-W00557-01

District: Forest Grove **Date: March 19, 2020**

Timber Description

Location: Portions of Section 4 and 9, T5N, R3W, W.M., Columbia County, Oregon

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	25	0	98

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	4,413	644	5,057
Total	4,413	644	5,057

Comments: Pond Values Used: Local Pond Values, January 2020.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
$940/MBF = $1,146/MBF - $206/MBF

Western hemlock and Other Conifers Stumpage Price = Pond Value
$313/MBF = $519/MBF - $206/MBF

Red alder and Other Hardwoods Stumpage Price = Pond Value minus Logging Cost:
$320/MBF = $526/MBF - $206/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):
Machine Time to Block/Waterbar Roads,and Skid Trails:
20 hours x $150/hour = $3,000
Machine Time to Pile Landing Slash:
10 hours x $150/hour = $1,500
Equipment Cleaning: 3 pieces x $1,000/Piece = $3,000
Slash Treatment: 50 acres x $200/acre = $10,000
TOTAL Other Costs (No Profit & Risk added) = $17,500

ROAD MAINTENANCE
Move-in: $1,210
General Road Maintenance: 1.51 miles x $4,857.41/mile = $7,334.69
TOTAL Road Maintenance: $8,544.69/5,057 MBF = $1.69/MBF

Timber Sale Appraisal
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District: Forest Grove **Date: March 19, 2020**

Logging Conditions

Combination#: 1	Douglas - Fir	100.00%	
Logging System:	Shovel	**Process:**	Feller Buncher
yarding distance:	Short (400 ft)	**downhill yarding:**	No
tree size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	11	**bd. ft / load:**	4100
cost / mbf:	$78.45		
machines:	Feller Buncher w/ Delimber		

Timber Sale Appraisal
Star Date 2020
Sale FG-341-2020-W00557-01

District: Forest Grove **Date: March 19, 2020**

Logging Costs

Operating Seasons:	1.00	**Profit Risk:**	10%
Project Costs:	$36,986.92	**Other Costs (P/R):**	$0.00
Slash Disposal:	$0.00	**Other Costs:**	$17,500.00

Miles of Road

Road Maintenance: $1.69

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	4.8

Timber Sale Appraisal
Star Date 2020
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District: Forest Grove **Date: March 19, 2020**

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$78.45	$1.72	$0.87	$100.94	$0.00	$18.20	$0.00	$2.00	$3.46	$205.64

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$685.82	$480.18	$0.00

Timber Sale Appraisal
Star Date 2020
Sale FG-341-2020-W00557-01

District: Forest Grove **Date: March 19, 2020**

Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	5,057	$480.18	$2,428,270.26

Gross Timber Sale Value

Recovery: $2,428,270.26

Prepared By: Adrian Torres **Phone:** 503-454-8460

TIMBER SALE SUMMARY
Star Date 2020
FG-341-2020-W00557-01

1. **Location:** Portions of Sections 4 and 9, T5N, R3W, W.M., Columbia County, Oregon.

2. **Type of Sale:** This Timber Sale is 96 net acres of Modified Clearcut. The timber will be sold on a recovery basis at a sealed bid auction.

3. **Revenue Distribution:** 100% BOF; 100% Columbia County.

4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.

5. **Cruise**: The Timber Sale was cruised by ODF Cruisers in February of 2020. For more information, see Cruise Report.

6. **Timber Description:** The Timber Sale Area consists of a well-stocked, partially thinned 78-year old Douglas-fir stand with minor amounts of western hemlock, western red cedar, and red alder. The stand has an average of 179 ft^2 of basal area (all species), an average Douglas-fir DBH of 25 inches, and an estimated average net Douglas-fir volume of approximately 52.7 MBF per acre.

7. **Topography and Logging Method:** Slopes within the Timber Sale Area ranges from 2% to 40% and variable in southern and northern aspect. The Timber Sale Area is 100% ground-based yarding. The average horizontal skid trail length is approximately 500 feet and the maximum is approximately 780 feet.

8. **Access:** All access to the Timber Sale Area is on surfaced all-weather roads. From Forest Grove travel north on SR 47 through Banks. Continue on SR 47 as it merges with SR 26, then splits off again to the right toward Vernonia near MP 77. Continue north on SR47 approximately 16 miles through Vernonia then for another 8 miles to Apiary Road. Turn right onto Apiary Road and travel 6.4 miles to Mudge Loop Road and turn left. Continue on Mudge Loop Road for 0.2 miles to access the eastern portion of the Timber Sale Area.

9. **Projects:**

Project No. 1: Dirt Road Construction	$9,415.12
Project No. 2: Road Improvement	$24,080.61
Project No. 3: Road Vacating	$3,491.19
Total Credit for all Projects	$36,986.92

PROJECT COST SUMMARY SHEET

Timber Sale: Star Date 2020
Sale Number: FG-341-2020-W00557-01

PROJECT NO. 1: DIRT ROAD CONSTRUCTION

Road Segment	Length	Cost
B to C	20+00	$8,025.90
	20+00 stations	
	0.38 miles	
	Move-in =	$1,389.22
	TOTAL PROJECT COST =	**$9,415.12**

PROJECT NO. 2: ROAD IMPROVEMENT

Road Segment	Length	Cost
A to B	5+00	$2,253.23
D to E	38+00	$5,752.07
F to G	36+30	$7,179.31
PT H	- - -	$1,140.20
PT I	- - -	$4,202.66
	79+30 stations	
	1.50 miles	
Total Rock =		
100 cy	1½" - 0	
170 cy	3" - 0	
	Move-in =	$3,553.14
	TOTAL PROJECT COST =	**$24,080.61**

PROJECT NO. 3: ROAD VACATING

Road Segment	Length	Cost
B to C	20+00	$1,805.92
	20+00 stations	
	0.38 miles	
	Move-in =	$1,685.27
	TOTAL PROJECT COST =	**$3,491.19**

TOTAL CREDITS = $36,986.92

SUMMARY OF CONSTRUCTION COST

Timber Sale: Star Date 2020 Sale Number: FG-341-2020-W00557-01

Road Segment: A to B Improvement: 5+00 stations

0.09 miles

PROJECT NO. 2

IMPROVEMENT

Clearing & grubbing (scatter)	0.06	ac @	$1,078.00	per acre =	$64.68
Clean ditch & scatter waste material	5.00	sta @	$60.00	per sta =	$300.00
Clean culvert inlet & outlet, scatter waste	1	ea @	$25.00	per ea =	$25.00
Grade, ditch, & roll	5.00	sta @	$36.00	per sta =	$180.00

TOTAL IMPROVEMENT COSTS = $569.68

CULVERTS

Culverts and Bands					
18" Diameter	30	LF @	$20.00	per LF =	$600.00
Markers & Stakes					
Culvert Markers	1	ea @	$10.00	per ea =	$10.00

TOTAL CULVERT COSTS = $610.00

ROCK

	Rock Size	Base Cost $/cy	Haul Cost $/cy	Placement/ Processing Cost $/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	$16.73	$9.28	$0.50	20	$530.20
				Subtotal =	20	$530.20
Surfacing rock						
Spot rock	3" - 0	$16.03	$9.28	$1.22	20	$530.60
				Subtotal =	20	$530.60

Totals		
	All Rock =	40
	1½" - 0 =	20
	3" - 0 =	20

TOTAL ROCK COSTS = $1,060.80

EROSION CONTROL

Grass seed & fertilizer	0.03	ac @	$425.00	per ac =	$12.75

TOTAL EROSION CONTROL COSTS = $12.75

TOTAL PROJECT COST = $2,253.23

SUMMARY OF CONSTRUCTION COST

Timber Sale: Star Date 2020 | Sale Number: FG-341-2020-W00557-01

Road Segment: B to C | Construction: 20+00 stations; 0.38 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	2.30	ac @	$1,078.00	per ac =	$2,479.40	
Balanced road construction	20.00	sta @	$110.00	per sta =	$2,200.00	
Turnouts	2	ea @	$66.00	per ea =	$132.00	
Turnarounds	1	ea @	$82.50	per ea =	$82.50	
70' Landing	1	ea @	$314.00	per ea =	$314.00	
Grade & roll (outslope)	4.50	sta @	$32.20	per sta =	$144.90	
Grade, ditch, & roll	15.50	sta @	$36.00	per sta =	$558.00	
				TOTAL CONSTRUCTION COSTS =		$5,910.80

CULVERTS

Culverts and Bands						
18" Diameter	90	LF @	$20.00	per LF =	$1,800.00	
Markers & Stakes						
Culvert markers	3	ea @	$10.00	per ea =	$30.00	
				TOTAL CULVERT COSTS =		$1,830.00

ROCK

	Rock Size	Base Cost $/cy	Haul Cost $/cy	Placement/ Processing Cost $/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	$16.73	$9.28	$0.50	10	$265.10
				Subtotal =	10	$265.10

Totals	All Rock =	10
	1½" - 0 =	10

TOTAL ROCK COSTS = $265.10

EROSION CONTROL

Straw mulch (bale)	2	ea @	$10.00	per ea =	$20.00	
				TOTAL EROSION CONTROL COSTS =		$20.00

TOTAL PROJECT COST = $8,025.90

SUMMARY OF CONSTRUCTION COST

Timber Sale: Star Date 2020 | Sale Number: FG-341-2020-W00557-01

Road Segment: D to E | Improvement: 38+00 stations; 0.72 miles

PROJECT NO. 2

IMPROVEMENT

Clearing & grubbing (scatter)	0.44	ac @	$1,078.00	per acre =	$474.32	
Clean ditch & scatter waste material	38.00	sta @	$60.00	per sta =	$2,280.00	
Clean culvert inlet & outlet, scatter waste	4	ea @	$25.00	per ea =	$100.00	
Improve Turnarounds	1	ea @	$41.25	per ea =	$41.25	
Grade, ditch, & roll	38.00	sta @	$36.00	per sta =	$1,368.00	
				TOTAL IMPROVEMENT COSTS =		$4,263.57

CULVERTS

Markers & Stakes						
Culvert Markers	1	ea @	$10.00	per ea =	$10.00	
				TOTAL CULVERT COSTS =		$10.00

ROCK

	Rock Size	Base Cost $/cy	Haul Cost $/cy	Placement/ Processing Cost $/cy	Total CY	Rock Cost
Surfacing rock						
Spot Rock	3" - 0	$16.03	$10.45	$1.22	50	$1,385.00
				Subtotal =	50	$1,385.00

Totals		
	All Rock =	50
	3" - 0 =	50

TOTAL ROCK COSTS = $1,385.00

EROSION CONTROL

Grass seed & fertilizer	0.22	ac @	$425.00	per ac =	$93.50	
				TOTAL EROSION CONTROL COSTS =		$93.50

TOTAL PROJECT COST = $5,752.07

SUMMARY OF CONSTRUCTION COST

Timber Sale: Star Date 2020 Sale Number: FG-341-2020-W00557-01

Road Segment: F to G Improvement: 36+30 stations

0.69 miles

PROJECT NO. 2

IMPROVEMENT

Clearing & grubbing (scatter)	0.42	ac @	$1,078.00	per acre =	$452.76
Clean ditch & scatter waste material	36.30	sta @	$60.00	per sta =	$2,178.00
Clean culvert inlet & outlet, scatter waste	1	ea @	$25.00	per ea =	$25.00
Improve Turnouts	4	ea @	$33.00	per ea =	$132.00
Construct Turnarounds	1	ea @	$82.50	per ea =	$82.50
Construct Roadside 50' landing	1	ea @	$165.00	per ea =	$165.00
Grade, ditch, & roll	36.30	sta @	$36.00	per sta =	$1,306.80

TOTAL IMPROVEMENT COSTS = $4,342.06

ROCK

	Rock Size	Base Cost $/cy	Haul Cost $/cy	Placement/ Processing Cost $/cy	Total CY	Rock Cost
Surfacing rock						
Spot Rock	3' - 0	$16.03	$10.23	$1.22	100	$2,748.00
				Subtotal =	100	$2,748.00

Totals		
	All Rock =	100
	3" - 0 =	100

TOTAL ROCK COSTS = $2,748.00

EROSION CONTROL

Grass seed & fertilizer	0.21	ac @	$425.00	per ac =	$89.25

TOTAL EROSION CONTROL COSTS = $89.25

TOTAL PROJECT COST = $7,179.31

SUMMARY OF CONSTRUCTION COST

Timber Sale: Star Date 2020 Sale Number: FG-341-2020-W00557-01

Road Segment: Point H Improvement: + stations

0.00 miles

PROJECT NO. 2

CULVERTS

Culverts and Bands						
18" Diameter	30	LF @	$20.00	per LF =	$600.00	
Markers & Stakes						
Culvert Markers	1	ea @	$10.00	per ea =	$10.00	

TOTAL CULVERT COSTS = $610.00

ROCK

	Rock Size	Base Cost $/cy	Haul Cost $/cy	Placement/ Processing Cost $/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	$16.73	$9.28	$0.50	20	$530.20

Totals		
	All Rock =	20
	1½" - 0 =	20

TOTAL ROCK COSTS = $530.20

TOTAL PROJECT COST = $1,140.20

SUMMARY OF CONSTRUCTION COST

Timber Sale: Star Date 2020 Sale Number: FG-341-2020-W00557-01

Road Segment: Point I Improvement: stations

0.00 miles

PROJECT NO. 2

IMPROVEMENT

CULVERTS

Culverts and Bands					
30" Diameter	60	LF @	$39.00	per LF =	$2,340.00
30" Band	2	ea @	$73.58	per ea =	$147.16
Additional Installation Cost					
Fill Exavation, Construction	2	hrs @	$175.00	per hr =	$350.00

TOTAL CULVERT COSTS = $2,837.16

ROCK

	Rock Size	Base Cost $/cy	Haul Cost $/cy	Placement/ Processing Cost $/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	$16.73	$9.28	$0.50	50	$1,325.50

Totals		
	All Rock =	50
	1½" - 0 =	50

TOTAL ROCK COSTS = $1,325.50

EROSION CONTROL

Straw Mulch Bale	4	ea @	$10.00	per ea =	$40.00

TOTAL EROSION CONTROL COSTS = $40.00

TOTAL PROJECT COST = $4,202.66

SUMMARY OF CONSTRUCTION COST

Timber Sale: Timber Sale: Sale Number: FG-341-2020-W00557-01

Road Segment: B to C Vacating: 20+00 stations

0.38 miles

PROJECT NO. 3 Road Vacate

Rip dirt road surface	20.00	sta @	$25.00	per sta =	$500.00	
Rip landing	1	ea @	$150.00	per ea =	$150.00	
Remove existing culverts	3	ea @	$150.00	per ea =	$450.00	
Grass seed & fertilizer	0.69	ac @	$425.00	per ac =	$292.70	
Mulch	0.69	ac @	$600.00	per ac =	$413.22	
				TOTAL PROJECT COST =		$1,805.92

SUMMARY OF CONSTRUCTION COST

Timber Sale: Star Date 2020 Sale Number: FG-341-2020-W00557-01

PROJECT No. 1 & 2 MOVE-IN, WITHIN AREA MOVE, & CLEANING COSTS

Equipment	Total
Grader	$670.63
Roller (smooth/grid) & Compactor	$438.23
Excavator (Large) - Equipment Cleaning	$1,685.27
Dozer (Large) - Equipment Cleaning	$1,723.35
Dump Truck (10cy +)	$283.25
Water Truck (2,500 Gal)	$141.63
TOTAL MOVE-IN COSTS =	**$4,942.36**

PROJECT No. 3 MOVE-IN & CLEANING COSTS

Equipment	Total
Excavator (Large) - Equipment Cleaning	$1,685.27
TOTAL MOVE-IN COSTS =	**$1,685.27**

TIMBER SALE SUMMARY
Star Date 2020
FG-341-2020-W00557-01

1. **Location:** Portions of Sections 4 and 9, T5N, R3W, W.M., Columbia County, Oregon.

2. **Type of Sale:** This Timber Sale is 96 net acres of Modified Clearcut. The timber will be sold on a recovery basis at a sealed bid auction.

3. **Revenue Distribution:** 100% BOF; 100% Columbia County.

4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.

5. **Cruise**: The Timber Sale was cruised by ODF Cruisers in February of 2020. For more information, see Cruise Report.

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9. **Projects:**

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Project No. 2: Road Improvement	$24,080.61
Project No. 3: Road Vacating	$3,491.19
Total Credit for all Projects	$36,986.92

CRUISE REPORT
Star Date 2020
FG-341-2020-W00557-01

1. LOCATION: Portions of Sections 4 and 9, T5N, R3W, W.M., Columbia County, Oregon.

2. CRUISE DESIGN:
Pre-cruise evaluation indicated that the stand's average DBH is approximately 24 inches and the coefficient of variation is about 56%. 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 February 2020 with 36 variable radius grade plots using a 40 BAF prism. Plots were laid out on a 5 chain x 5 chain grid for the Timber Sale Area. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS:
157 trees were measured and graded producing a cumulative Sampling Error of 4.9% on the Douglas-fir basal area and 5.7% 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 Adrian Torres.

Prepared by: Adrian Torres 03/19/2020
Date

Reviewed by: Mark Savage 3/19/20
Date

TC PSTATS

PROJECT STATISTICS

PROJECT STAR20

DATE 3/17/2020

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
05N	03	04	00A1	00MC	96.00	35	157	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	35	157	4.5		
CRUISE	35	157	4.5	4,973	3.2
DBH COUNT					
REFOREST COUNT					
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	156	51.4	25.2	161	35.5	178.3	53,869	53,754	10,233	10,233
WHEMLOCK	1	.4	23.0	138	0.2	1.1	281	281	60	60
TOTAL	*157*	*51.8*	*25.2*	*161*	*35.7*	*179.4*	*54,151*	*54,036*	*10,294*	*10,294*

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	COEFF VAR.%	S.E.%	SAMPLE TREES - BF LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DOUG FIR	65.3	5.2	1,280	1,351	1,421			
WHEMLOCK								
TOTAL	*65.4*	*5.2*	*1,276*	*1,346*	*1,417*	*171*	*43*	*19*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	SAMPLE TREES - CF LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DOUG FIR	57.6	4.6	239	251	263			
WHEMLOCK								
TOTAL	*57.7*	*4.6*	*239*	*250*	*262*	*133*	*33*	*15*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	TREES/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	33.2	5.6	49	51	54			
WHEMLOCK	591.6	99.9	0	0	1			
TOTAL	*32.6*	*5.5*	*49*	*52*	*55*	*42*	*11*	*5*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	BASAL AREA/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	29.0	4.9	170	178	187			
WHEMLOCK	591.6	99.9	0	1	2			
TOTAL	*28.3*	*4.8*	*171*	*179*	*188*	*32*	*8*	*4*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	NET BF/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	33.5	5.7	50,709	53,754	56,800			
WHEMLOCK	591.6	99.9	0	281	562			
TOTAL	*33.0*	*5.6*	*51,025*	*54,036*	*57,046*	*43*	*11*	*5*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	NET CUFT FT/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	31.4	5.3	9,691	10,233	10,776			
WHEMLOCK	591.6	99.9	0	60	121			
TOTAL	*30.8*	*5.2*	*9,759*	*10,294*	*10,829*	*38*	*9*	*4*

TC PSTNDSUM

Stand Table Summary

Page 1
Date: 3/17/2020

T05N R03W S04 Ty00MC 96.00

Project STAR20
Acres 96.00

Time: 7:21:14AM
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.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		14	1	87	72	1.069	1.14	1.07	25.4	90.0	.77	27	96	74	26	9
DF		15	5	89	122	4.656	5.71	12.11	18.8	83.8	6.49	228	1,015	623	219	97
DF		18	1	89	127	.647	1.14	1.94	26.6	116.7	1.47	52	226	141	50	22
DF		19	2	90	145	1.161	2.29	3.48	32.1	148.3	3.19	112	517	306	107	50
DF		20	2	90	154	1.048	2.29	3.14	37.3	181.7	3.34	117	571	321	113	55
DF		21	9	90	156	4.276	10.29	14.25	38.0	185.0	15.43	542	2,637	1,482	520	253
DF		22	11	89	158	4.762	12.57	16.02	42.3	205.1	19.31	677	3,286	1,854	650	315
DF		23	9	89	162	3.565	10.29	12.28	46.7	230.3	16.34	573	2,828	1,568	550	272
DF		24	12	89	165	4.365	13.71	15.64	49.5	253.3	22.09	775	3,962	2,121	744	380
DF		25	19	89	163	6.370	21.71	23.13	51.7	261.4	34.09	1,196	6,048	3,272	1,148	581
DF		26	10	89	172	3.100	11.43	12.40	53.9	286.0	19.06	669	3,546	1,829	642	340
DF		27	10	89	174	2.874	11.43	10.92	61.9	332.9	19.27	676	3,636	1,850	649	349
DF		28	10	89	177	2.673	11.43	10.16	68.5	370.5	19.83	696	3,763	1,904	668	361
DF		29	10	89	184	2.492	11.43	10.22	70.1	383.4	20.42	717	3,917	1,961	688	376
DF		30	7	89	175	1.630	8.00	6.05	78.9	425.8	13.62	478	2,577	1,307	459	247
DF		31	4	89	174	.872	4.57	3.49	79.4	440.0	7.90	277	1,535	758	266	147
DF		32	8	88	175	1.637	9.14	6.34	87.0	476.5	15.73	552	3,022	1,510	530	290
DF		33	6	88	175	1.154	6.86	4.23	95.9	524.5	11.57	406	2,220	1,111	390	213
DF		34	8	88	185	1.450	9.14	5.62	101.0	571.6	16.18	568	3,212	1,553	545	308
DF		35	3	86	189	.513	3.43	2.22	96.7	547.7	6.13	215	1,218	588	206	117
DF		36	1	88	169	.162	1.14	.65	102.0	572.5	1.88	66	370	180	63	36
DF		37	1	81	167	.153	1.14	.61	100.0	457.5	1.75	61	280	168	59	27
DF		38	1	90	206	.145	1.14	.58	137.6	780.0	2.28	80	453	219	77	43
DF		39	1	88	192	.138	1.14	.55	133.6	772.5	2.10	74	426	201	71	41
DF		40	1	88	226	.131	1.14	.65	130.0	818.0	2.43	85	536	233	82	51
DF		46	1	91	230	.099	1.14	.50	181.9	1178.0	2.57	90	583	246	86	56
DF		47	1	80	235	.095	1.14	.47	166.7	958.0	2.25	79	454	216	76	44
DF		49	1	87	210	.087	1.14	.44	183.2	1100.0	2.28	80	480	219	77	46
DF		51	1	75	207	.081	1.14	.32	206.8	1052.5	1.90	67	339	182	64	33
DF		Totals	156	89	161	51.405	178.29	179.50	57.0	299.5	291.65	10,233	53,754	27,998	9,824	5,160
WH		23	1	88	138	.396	1.14	1.19	50.9	236.7	1.94	60	281	186	58	27
WH		Totals	1	88	138	.396	1.14	1.19	50.9	236.7	1.94	60	281	186	58	27
Totals			157	89	161	51.801	179.43	180.69	57.0	299.1	293.58	10,294	54,036	28,184	9,882	5,187

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T05N R03W S04 Ty00MC 96.00

Project: STAR20
Acres 96.00

Page 1
Date 3/17/2020
Time 7:21:12AM

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		2M	87	.2	47,026	46,911	4,503		0	31	69	1	1		99	39	17	486	2.21	96.6
DF		3M	11		6,125	6,125	588		98	2			2	3	95	39	9	110	0.73	55.6
DF		4M	2		719	719	69		100			47	47		7	19	6	26	0.38	27.3
DF	**Totals**		99	.2	53,869	53,754	5,160		12	28	60	1	2	0	97	36	13	299	1.57	179.5
WH		2M	92		261	261	25			30	70				100	40	15	330	1.71	.8
WH		3M	8		20	20	2		100					100		33	6	50	0.49	.4
WH	**Totals**		1		281	281	27		7	28	65			7	93	38	12	237	1.35	1.2
Totals				0.2	54,151	54,036	5,187		12	28	60	1	2	0	97	36	13	299	1.57	180.7

TC PLOGSTVB

Log Stock Table - MBF

T05N R03W S04 Ty00MC 96.00

Project: STAR20
Acres 96.00

Page 1
Date 3/17/2020
Time 7:21:12AM

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		2M		15	6		6	.1								6				
DF		2M		16	17		17	.3								8	9			
DF		2M		18	1		1	.0			1									
DF		2M		24	12		12	.2									12			
DF		2M		25	24		24	.5								24				
DF		2M		40	4,454		4,443	86.1						362	657	1688	1022	589	125	
DF		3M		22	1		1	.0					1							
DF		3M		25	1		1	.0				1								
DF		3M		27	3		3	.1				2	1							
DF		3M		28	3		3	.1			1	1	1							
DF		3M		29	1		1	.0				1								
DF		3M		30	3		3	.0			3									
DF		3M		31	1		1	.0			1									
DF		3M		32	5		5	.1			4	1								
DF		3M		33	5		5	.1			4	1								
DF		3M		34	5		5	.1			3	1								
DF		3M		35	2		2	.0			2									
DF		3M		36	4		4	.1			2	1								
DF		3M		37	2		2	.0			2									
DF		3M		38	2		2	.0			2									
DF		3M		39	3		3	.1			3									
DF		3M		40	547		547	10.6			81	173	279	13						
DF		4M		12	4		4	.1			3	1	0							
DF		4M		13	3		3	.1			3									
DF		4M		14	8		8	.2			7	0								
DF		4M		15	2		2	.0			2									
DF		4M		16	4		4	.1			4									
DF		4M		17	3		3	.1			3									
DF		4M		18	7		7	.1			5	2								
DF		4M		19	1		1	.0			1									
DF		4M		20	1		1	.0			1									
DF		4M		21	3		3	.1			2	1								
DF		4M		22	4		4	.1			4									
DF		4M		23	5		5	.1			5									
DF		4M		24	5		5	.1			5									
DF		4M		25	3		3	.1			3									
DF		4M		26	4		4	.1			4									

TC PLOGSTVB

Log Stock Table - MBF

T05N R03W S04 Ty00MC 96.00

Project: STAR20
Acres 96.00

Date 3/17/2020
Time 7:21:12AM

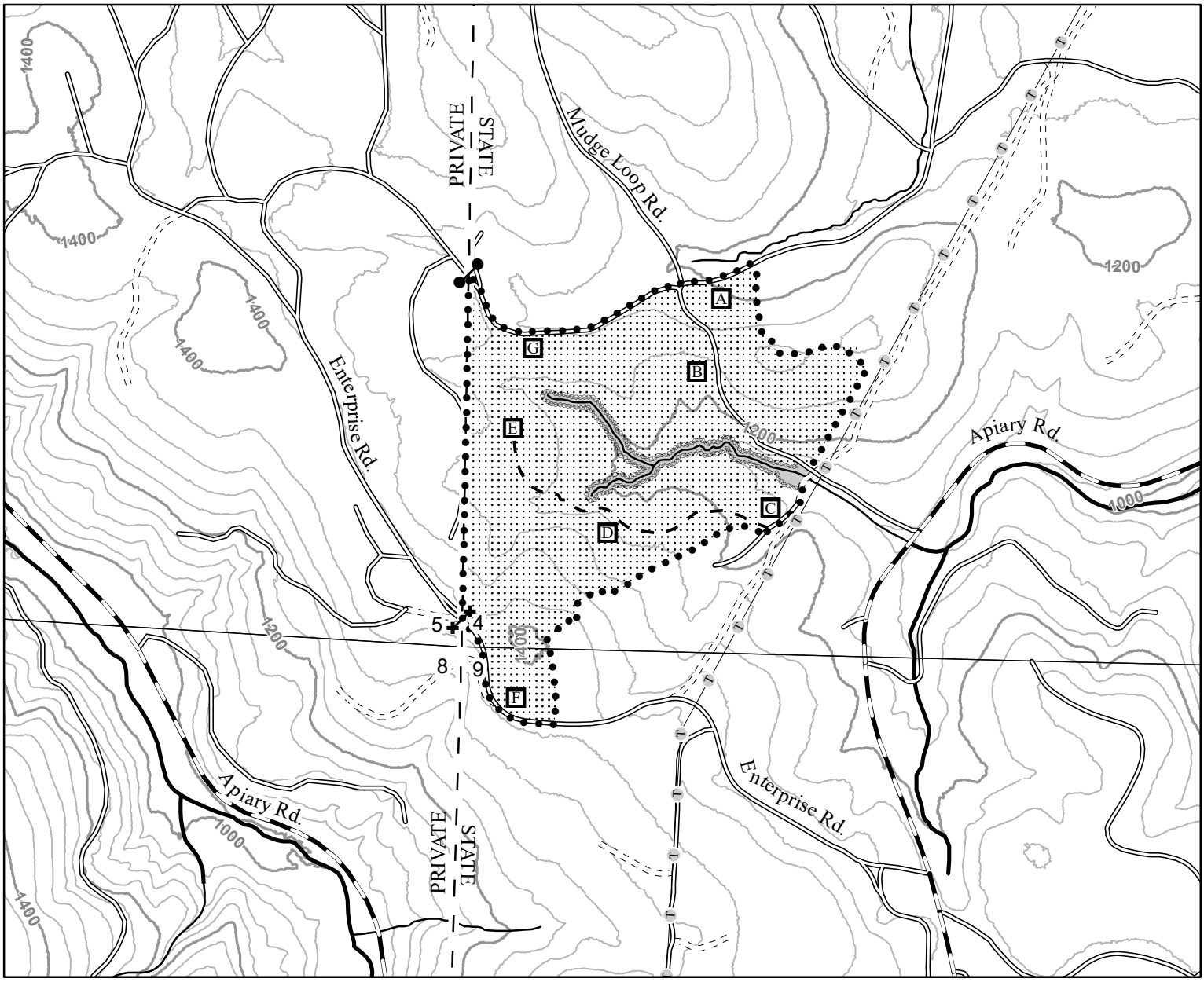
Spp	ST	So	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3 4-5	6-7 8-9	10-11 12-13	14-15 16-19	20-23 24-29	30-39 40+
DF		4	M	27	4		4	.1		4				
DF		4	M	28	1		1	.0		1				
DF		4	M	29	4		4	.1		4				
DF		4	M	30	2		2	.0		2				
DF		4	M	37	3		3	.1		3				
DF		4	M	38	2		2	.0		2				
DF		Totals			5,171		5,160	99.5		175 187	283 376	657 1727	1043 589	125
WH		2	M	40	25		25	93.0			8	17		
WH		3	M	33	2		2	7.0		2				
WH		Totals			27		27	.5		2	8	17		
Total		All Species			5,198		5,187	100.0		177 187	283 383	657 1744	1043 589	125

Volume Summary
(Shown in MBF)
Star Date 2020
FG-341-2020-W00557-01
March 2020

UNIT 1: MC (96 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	4,503	588	69	5,160
	Hidden D&B (2%)	(90)	(12)	(1)	(103)
	NET TOTAL	4,413	576	68	5,057
	% of Total	87	11	2	

SALE TOTAL				
SPECIES	**2 SAW**	**3 SAW**	**4 SAW**	**TOTAL**
Douglas-fir	4,413	576	68	5,057
Total	4,413	576	68	5,057



Legend

- Timber Sale Boundary
- Stream Buffer Boundary
- ODF Ownership Boundary
- Highways
- Surfaced Roads
- Unsurfaced Roads
- New Road Construction
- Type-F Stream
- Type-N Stream
- Stream Buffer
- Tractor Yarding Area
- Tractor Landing
- Gate
- Road Blockage
- BPA Power Lines
- Section Lines
- 40 Foot Contour Band
- 200 Foot Contour Band

LOGGING PLAN

FOR TIMBER SALE CONTRACT #FG 341-2020-W00557-01
STAR DATE 2020
PORTIONS OF SECTIONS 4 & 9, T5N, R3W, W.M.,
COLUMBIA COUNTY, OREGON

Forest Grove District GIS
March, 2020
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

0 500 1,000 2,000
Feet

APPROXIMATE NET ACRES

	TRACTOR	CABLE
TOTAL	96	0