



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
French Dip  
Sale FG-341-2020-W00230-01

District: Forest Grove

Date: November 27, 2019

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**Cost Summary**

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$4,261,620.79	\$0.00	\$4,261,620.79
		Project Work:	(\$392,500.00)
		Advertised Value:	\$3,869,120.79



# Timber Sale Appraisal French Dip Sale FG-341-2020-W00230-01

**District: Forest Grove**

**Date: November 27, 2019**

## Timber Description

**Location:** Portions of Sections 21, 24, 25, 28 & 30, T4N, R6W, W.M. Clatsop County, Oregon.

**Stand Stocking:** 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	23	0	98
Western Hemlock / Fir	28	0	98

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	7,412	1,823	9,235
Western Hemlock / Fir	125	34	159
<b>Total</b>	<b>7,537</b>	<b>1,857</b>	<b>9,394</b>

**Comments:** Pond Values Used: Local Pond Values, October 2019.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:  
\$879.45/MBF = \$1,086/MBF - \$206.55/MBF

Red alder and Other hardwoods Stumpage Price = Pond Value minus Logging Cost:  
\$309.45/MBF = \$516/MBF - \$206.55/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  
None

Other Costs (No Profit & Risk added):  
Machine Time to Block/Waterbar Roads, and Skid Trails:  
10 hours x \$150/hour = \$1,500  
Machine Time to Pile Landing Slash and Sort Firewood:  
20 hours x \$150/hour = \$3,000  
Equipment Cleaning: 3 pieces x \$1,000/Piece = \$3,000  
Slash Disposal: 30 acres x \$200/acre = \$6,000  
TOTAL Other Costs (No Profit & Risk added) =\$13,500

ROAD MAINTENANCE  
Move-in: \$4,000  
General Road Maintenance: 7 miles x \$1,200/mile = \$8,400  
TOTAL Road Maintenance: \$12,400/9,394 MBF = \$1.32/MBF



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**Logging Conditions**

<b>Combination#:</b> 1	Douglas - Fir	18.18%
	Western Hemlock / Fir	20.11%
<b>Logging System:</b>	Shovel	<b>Process:</b> Stroke Delimber
<b>yarding distance:</b>	Short (400 ft)	<b>downhill yarding:</b> No
<b>tree size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
<b>loads / day:</b>	15	<b>bd. ft / load:</b> 4600
<b>cost / mbf:</b>	\$45.97	
<b>machines:</b>	Stroke Delimber (B)	

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<b>Combination#:</b> 2	Douglas - Fir	81.82%
	Western Hemlock / Fir	79.89%
<b>Logging System:</b>	Cable: Medium Tower >40 - <70	<b>Process:</b> Stroke Delimber
<b>yarding distance:</b>	Long (1,500 ft)	<b>downhill yarding:</b> No
<b>tree size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
<b>loads / day:</b>	10	<b>bd. ft / load:</b> 4600
<b>cost / mbf:</b>	\$130.44	
<b>machines:</b>	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)	

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### Logging Costs

Operating Seasons: 2.00	Profit Risk: 10%
Project Costs: \$392,500.00	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$13,500.00

Miles of Road

Road Maintenance: \$1.32

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

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.8
Western Hemlock / Fir	\$0.00	3.0	4.0



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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
<b>Douglas - Fir</b>									
\$115.08	\$1.35	\$0.93	\$67.29	\$0.00	\$18.46	\$0.00	\$2.00	\$1.44	\$206.55
<b>Western Hemlock / Fir</b>									
\$113.45	\$1.35	\$0.93	\$80.75	\$0.00	\$19.65	\$0.00	\$2.00	\$1.44	\$219.57

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$662.47	\$455.92	\$0.00
Western Hemlock / Fir	\$0.00	\$541.58	\$322.01	\$0.00



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**Summary**

**Amortized**

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	9,235	\$455.92	\$4,210,421.20
Western Hemlock / Fir	159	\$322.01	\$51,199.59

**Gross Timber Sale Value**

**Recovery:** \$4,261,620.79

**Prepared By:** Kenton Burns

**Phone:** 503-359-7477

**TIMBER SALE SUMMARY**  
**French Dip**  
**FG-341-2020-W00230-01**

1. **Location:** Portions of Sections 21, 24, 25, 28 & 30, T4N, R6W, W.M., Clatsop County, Oregon.
1. **Type of Sale:** This timber sale is 205 acres of Modified Clearcut in three sale areas. Area 1 is 97 acres, Area 2 is 106 acres and Area 3 is 2 acres of Right-of-Way. The timber will be sold on a recovery basis at a sealed bid auction.
2. **Revenue Distribution:** 100% BOF, 100% Clatsop County, Tax Code 8-01.
3. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.
4. **Cruise:** The Timber Sale Area was cruised by ODF Cruisers in October of 2019. For more information, see Cruise Report.
5. **Timber Description:** The Timber Sale Area consists of two areas of 68-year-old Douglas-fir timber, and a Right-of-Way area, all with minor amounts of western hemlock, noble fir, red alder, and western redcedar.

The following table summarizes the ODF cruise estimates for trees to be harvested.

Sale Area	Net Acres	Average DBH	Trees/Acre	Net MBF/Acre
Area 1	97	22	79	45.1
Area 2	106	23	73	49.5
Area 3 (R/W)	2	20	75	47.4

6. **Topography and Logging Method:** Slopes within the sale areas range from 5% to 70% and are variable in aspect. Elevations range from 1,280 to 1,690 feet. The following table summarizes the estimated maximum and average horizontal cable corridor length, the estimated maximum and average tractor skid trail length, and the percent harvest method for each Timber Sale Area.

Sale Area	Tractor			Cable		
	Average	Maximum	%	Average	Maximum	%
Area 1	80	250	7	450	1400	93
Area 2	150	300	28	500	1300	72
Area 3 (R/W)	50	100	100	NA	NA	0

7. **Access:** From Forest Grove, travel north on Highway 47 through Banks then merge onto Highway 26 westbound and continue for approximately 14.5 miles to the North Fork Wolf Creek Road near milepost 35. Turn right and continue north 2.8 miles to the Nofo Road. Turn right and proceed west 0.7 miles to the southern corner of Area 2 of the Timber Sale Area.

8. **Projects:**

Project No. 1: Rocked Road Construction	\$9,075.25
Project No. 2: Road Improvement	\$262,652.10
Project No. 3: Stockpile Construction	\$65,772.00
Project No. 4: Road Brushing	\$55,000.65
Total Credits:	\$392,500.00

**PROJECT COST SUMMARY SHEET**

Timber Sale: French Dip  
 Sale Number: FG-341-2020-W00230-01

**PROJECT NO. 1: ROCKED ROAD CONSTRUCTION**

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
<u>F to G</u>	<u>5+00</u>	<u>\$8,890.38</u>
	5+00 stations	
	0.09 miles	
Total Rock =		
534 cy	4" - 0	
Move-in, Within Area Moves, & Cleaning Costs =		<u>\$184.87</u>
<b>TOTAL PROJECT NO. 1 COST =</b>		<b><u>\$9,075.25</u></b>

**PROJECT NO. 2: ROAD IMPROVEMENT**

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to B	148+15	\$11,513.21
B to C	172+20	\$151,020.68
C to D	28+95	\$7,801.60
E to F	26+75	\$5,109.02
H to I	15+00	\$9,945.47
H to J	2+00	\$1,654.60
K to L	2+15	\$1,665.40
M to N	8+60	\$4,370.80
O to P	2+05	\$3,985.37
Q to R	26+05	\$51,989.95
S to T	2+65	\$2,137.60
U	-	\$2,120.20
V	-	\$2,127.40
W	-	\$796.48
X	-	\$1,086.16
	434+55 stations	
	8.23 miles	
Total Rock =		
552 cy	1½" - 0	
12,202 cy	4" - 0	
228 cy	Riprap	
Move-in, Within Area Moves, & Cleaning Costs =		<u>\$5,328.16</u>
<b>TOTAL PROJECT NO. 2 COST =</b>		<b><u>\$262,652.10</u></b>

**PROJECT NO. 3: STOCKPILE CONSTRUCTION**

<u>Rock Size</u>	<u>Stockpile Measure</u>	<u>Cost</u>
<u>4" - 0</u>	<u>5,000 cy</u>	<u>\$65,772.00</u>
Total Rock =		
5,800 cy	4" - 0	
<b>TOTAL PROJECT COST =</b>		<b><u>\$65,772.00</u></b>

**PROJECT NO. 4: ROAD BRUSHING**

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
Light	2.90	\$2,465.00
Medium	7.00	\$7,700.00
Heavy	28.54	\$44,237.00
	38.44 miles	
Move-in, Within Area Moves, & Cleaning Costs =		<u>\$598.65</u>
<b>TOTAL PROJECT COST =</b>		<b><u>\$55,000.65</u></b>
<b>TOTAL CREDITS</b>		<b><u>\$392,500.00</u></b>

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
Road Segment: A to B

Sale Number: FG-341-2020-W00230-01  
Improvement: 148+15 stations  
2.81 miles

## PROJECT NO. 2

### IMPROVEMENT

Clean culvert inlet & outlet	31	ea @	\$25.00	per ea =	\$775.00
Grade, ditch, & roll	148.15	sta @	\$36.00	per sta =	\$5,333.40

TOTAL IMPROVEMENT COSTS = \$6,108.40

### CULVERTS

Culverts and Bands					
18" Diameter	90	LF @	\$20.00	per LF =	\$1,800.00
24" Diameter	50	LF @	\$29.00	per LF =	\$1,450.00
Markers & Stakes					
Culvert Markers	10	ea @	\$10.00	per ea =	\$100.00
Additional Installation Cost					
Culvert #4	2	hrs @	\$175.00	per hr =	\$350.00

TOTAL CULVERT COSTS = \$3,700.00

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Subgrade rock</b>						
Bedding and backfill	1½" - 0	\$1.70	\$8.22	\$0.50	96	\$1,000.32
Energy dissipator	Riprap	\$5.10	\$7.68	\$1.60	48	\$690.24
Subtotal =					144	\$1,690.56

Totals

All Rock =	144
1½" - 0 =	96
Riprap =	48

TOTAL ROCK COSTS = \$1,690.56

### EROSION CONTROL

Grass seed & fertilizer	0.01	ac @	\$425.00	per ac =	\$4.25
Straw mulch bale	1	ea @	\$10.00	per ea =	\$10.00

TOTAL EROSION CONTROL COSTS = \$14.25

TOTAL PROJECT COST = \$11,513.2100

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
Road Segment: B to C

Sale Number: FG-341-2020-W00230-01  
Improvement: 172+20 stations  
3.26 miles

## PROJECT NO. 2

### IMPROVEMENT

Clearing & grubbing (scatter)	0.17	ac @	\$1,078.00	per acre =	\$183.26
Clean ditch & end-haul waste material	7.80	sta @	\$60.00	per sta =	\$468.00
Haul waste material	57	cy @	\$3.22	per cy =	\$183.54
Shape and compact waste material	57	cy @	\$0.30	per cy =	\$17.10
Clean culvert inlet & outlet	12	ea @	\$25.00	per ea =	\$300.00
Cut Slope Lay Back					
Excavate & load	687	cy @	\$1.90	per cy =	\$1,305.30
Haul	894	cy @	\$3.22	per cy =	\$2,878.68
Shape and compact waste material	894	cy @	\$0.30	per cy =	\$268.20
Junction widening @ Point B					
Excavate	307	cy @	\$1.64	per cy =	\$503.48
Drift	200	cy @	\$0.90	per cy =	\$180.00
Load and haul to waste area	200	cy @	\$2.36	per cy =	\$472.00
Compact waste material	400	cy @	\$0.30	per cy =	\$120.00
Improve Turnouts	11	ea @	\$33.00	per ea =	\$363.00
Improve Roadside 50' landing	2	ea @	\$82.50	per ea =	\$165.00
Grade, ditch, & roll	172.20	sta @	\$36.00	per sta =	\$6,199.20

**TOTAL IMPROVEMENT COSTS = \$13,606.76**

### CULVERTS

Culverts and Bands					
18" Diameter	310	LF @	\$20.00	per LF =	\$6,200.00
24" Diameter	50	LF @	\$29.00	per LF =	\$1,450.00
Markers & Stakes					
Culvert Markers	19	ea @	\$10.00	per ea =	\$190.00
Additional Installation Cost					
Culvert #5	4	hrs @	\$175.00	per hr =	\$700.00

**TOTAL CULVERT COSTS = \$8,540.00**

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Subgrade rock</b>						
Bedding and backfill	1½" - 0	\$1.70	\$4.56	\$0.50	264	\$1,784.64
Energy dissipator	Riprap	\$5.10	\$8.03	\$1.60	48	\$707.04
Subgrade reinforcement	4"-0	\$9.44	\$5.35	\$0.75	53	\$823.62
				<b>Subtotal =</b>	<b>365</b>	<b>\$3,315.30</b>
<b>Surfacing rock</b>						
Surfacing rock	4"-0	\$9.44	\$5.35	\$1.22	7,233	\$115,800.33
Junction	4"-0	\$9.44	\$5.35	\$1.22	180	\$2,881.80
Turnout	4"-0	\$9.44	\$5.35	\$1.22	304	\$4,867.04
Roadside landing	4"-0	\$9.44	\$5.35	\$1.22	120	\$1,921.20
				<b>Subtotal =</b>	<b>7,837</b>	<b>\$125,470.37</b>

Totals

All Rock =	8,202
1½" - 0 =	264
4" - 0 =	7,890
Riprap =	48

**TOTAL ROCK COSTS = \$128,785.67**

### EROSION CONTROL

Grass seed & fertilizer	0.09	ac @	\$425.00	per ac =	\$38.25
Straw mulch bale	5	ea @	\$10.00	per ea =	\$50.00

**TOTAL EROSION CONTROL COSTS = \$88.25**

**TOTAL PROJECT COST = \$151,020.68**

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
Road Segment: C to D

Sale Number: FG-341-2020-W00230-01  
Improvement: 28+95 stations  
0.55 miles

## PROJECT NO. 2

### IMPROVEMENT

Clean culvert inlet & outlet	4	ea @	\$25.00	per ea =	\$100.00
Remove existing halfround	2	ea @	\$50.00	per ea =	\$100.00
Grade, ditch, & roll	28.95	sta @	\$36.00	per sta =	\$1,042.20

**TOTAL IMPROVEMENT COSTS = \$1,242.20**

### CULVERTS

Culverts and Bands					
18" Diameter	160	LF @	\$20.00	per LF =	\$3,200.00
Markers & Stakes					
Culvert Markers	5	ea @	\$10.00	per ea =	\$50.00
Halfround stakes	4	ea @	\$10.00	per ea =	\$40.00
Additional Installation Cost					
Inlet & halfround repair, culvert #19 & 20	6	hrs @	\$175.00	per hr =	\$1,050.00

**TOTAL CULVERT COSTS = \$4,340.00**

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Subgrade rock</b>						
Bedding and backfill	1½" - 0	\$1.70	\$4.36	\$0.50	120	\$787.20
Energy dissipator	Riprap	\$5.10	\$4.15	\$1.60	132	\$1,432.20
<b>Subtotal =</b>					<b>252</b>	<b>\$2,219.40</b>

Totals	All Rock =	252
	1½" - 0 =	120
	Riprap =	132

**TOTAL ROCK COSTS = \$2,219.40**

**TOTAL PROJECT COST = \$7,801.60**

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French, Dip  
Road Segment: E to F

Sale Number: FG-341-2020-W00230-01  
Improvement: 26+75 stations  
0.51 miles

## PROJECT NO. 2

### IMPROVEMENT

Clean ditch & scatter waste material	5.20	sta @	\$60.00	per sta =	\$312.00
Clean culvert inlet & outlet	4	ea @	\$25.00	per ea =	\$100.00
Construct settling ponds	6	ea @	\$25.00	per ea =	\$150.00
Improve turnouts	2	ea @	\$33.00	per ea =	\$66.00
Improve roadside 50' landing	1	ea @	\$82.50	per ea =	\$82.50
Grade, ditch, & roll	26.75	sta @	\$36.00	per sta =	\$963.00

**TOTAL IMPROVEMENT COSTS = \$1,673.50**

### 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
<b>Subgrade rock</b>						
Bedding and backfill	1½" - 0	\$1.70	\$7.52	\$0.50	24	\$233.28
				Subtotal =	24	\$233.28
<b>Surfacing rock</b>						
Spot rock	4"-0	\$9.44	\$4.77	\$1.22	50	\$771.50
Turnout	4"-0	\$9.44	\$4.77	\$1.22	38	\$586.34
Roadside landing	4"-0	\$9.44	\$4.77	\$1.22	80	\$1,234.40
				Subtotal =	168	\$2,592.24

Totals

All Rock =	192
1½" - 0 =	24
4" - 0 =	168

**TOTAL ROCK COSTS = \$2,825.52**

**TOTAL PROJECT COST = \$5,109.02**

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
Road Segment: F to G

Sale Number: FG-341-2020-W00230-01  
Construction: 5+00 stations  
0.09 miles

## PROJECT NO. 1

### CONSTRUCTION

Clearing & grubbing (scatter)	0.58	ac @	\$1,078.00	per ac =	\$625.24
Balanced road construction	5.00	sta @	\$110.00	per sta =	\$550.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
Landing	1	ea @	\$314.00	per ea =	\$314.00
Construct tank trap	1	ea @	\$55.00	per ea =	\$55.00
Grade, ditch, & roll	5.00	sta @	\$36.00	per sta =	\$180.00

TOTAL CONSTRUCTION COSTS = \$1,806.74

### CULVERTS

Culverts and Bands					
18" Diameter	60	LF @	\$20.00	per LF =	\$1,200.00
Markers & Stakes					
Culvert markers	2	ea @	\$10.00	per ea =	\$20.00
Additional Installation Cost					
Culvert #22	1	hrs @	\$175.00	per hr =	\$175.00

TOTAL CULVERT COSTS = \$1,395.00

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Surfacing rock</b>						
Base rock	4"-0	\$9.44	\$5.00	\$1.22	325	\$5,089.50
Turnaround	4"-0	\$9.44	\$5.00	\$1.22	29	\$454.14
70' Landing	4"-0	\$9.44	\$5.00	\$1.22	180	\$2,818.80
				Subtotal =	534	\$5,543.64

Totals

All Rock =	534
4" - 0 =	534

TOTAL ROCK COSTS = \$5,543.64

### EROSION CONTROL

Grass seed & fertilizer	0.29	ac @	\$500.00	per ac =	\$145.00
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TOTAL EROSION CONTROL COSTS = \$145.00

TOTAL PROJECT COST = \$8,890.38

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
 Road Segment: H to I

Sale Number: FG-341-2020-W00230-01  
 Improvement: 15+00 stations  
0.28 miles

## PROJECT NO. 2

### IMPROVEMENT

Clean culvert inlet & outlet	1	ea @	\$25.00	per ea =	\$25.00
Improve 70' Landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	15.00	sta @	\$36.00	per sta =	\$540.00

**TOTAL IMPROVEMENT COSTS = \$722.00**

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Surfacing rock</b>						
Surfacing rock	4"-0	\$9.44	\$5.27	\$1.22	465	\$7,407.45
Turnout	4"-0	\$9.44	\$5.27	\$1.22	14	\$223.02
Turnaround	4"-0	\$9.44	\$5.27	\$1.22	10	\$159.30
70' Landing	4"-0	\$9.44	\$5.27	\$1.22	90	\$1,433.70
<b>Subtotal =</b>					<b>579</b>	<b>\$9,223.47</b>

Totals

All Rock =	579
4" - 0 =	579

**TOTAL ROCK COSTS = \$9,223.47**

**TOTAL PROJECT COST = \$9,945.47**

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
 Road Segment: H to J

Sale Number: FG-341-2020-W00230-01  
 Improvement: 2+00 stations  
0.04 miles

## PROJECT NO. 2

### IMPROVEMENT

Improve 70' Landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	2.00	sta @	\$36.00	per sta =	\$72.00

**TOTAL IMPROVEMENT COSTS = \$229.00**

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Surfacing rock</b>						
70' Landing	4"-0	\$9.44	\$5.18	\$1.22	90	\$1,425.60
<b>Subtotal =</b>					<b>90</b>	<b>\$1,425.60</b>

Totals

All Rock =	90
4" - 0 =	90

**TOTAL ROCK COSTS = \$1,425.60**

**TOTAL PROJECT COST = \$1,654.60**

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
 Road Segment: K to L

Sale Number: FG-341-2020-W00230-01  
 Improvement: 2+15 stations  
0.04 miles

## PROJECT NO. 2

### IMPROVEMENT

Improve 70' Landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	2.15	sta @	\$36.00	per sta =	\$77.40

TOTAL IMPROVEMENT COSTS = \$234.40

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Surfacing rock</b>						
70' Landing	4"-0	\$9.44	\$5.24	\$1.22	90	\$1,431.00
Subtotal =					90	\$1,431.00

Totals

All Rock =	90
4" - 0 =	90

TOTAL ROCK COSTS = \$1,431.00

TOTAL PROJECT COST = \$1,665.40

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
Road Segment: M to N

Sale Number: FG-341-2020-W00230-01  
Improvement: 8+60 stations  
0.16 miles

## PROJECT NO. 2

### IMPROVEMENT

Clean culvert inlet & outlet	3	ea @	\$25.00	per ea =	\$75.00
Improve Roadside 50' landing	1	ea @	\$82.50	per ea =	\$82.50
Improve 70' Landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	8.60	sta @	\$36.00	per sta =	\$309.60

**TOTAL IMPROVEMENT COSTS = \$624.10**

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Surfacing rock</b>						
Roadside landing	4"-0	\$9.44	\$5.63	\$1.22	80	\$1,303.20
70' Landing	4"-0	\$9.44	\$5.63	\$1.22	150	\$2,443.50
<b>Subtotal =</b>					<b>230</b>	<b>\$3,746.70</b>

Totals

All Rock =	230
4" - 0 =	230

**TOTAL ROCK COSTS = \$3,746.70**

**TOTAL PROJECT COST = \$4,370.80**

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
Road Segment: O to P

Sale Number: FG-341-2020-W00230-01  
Improvement: 2+05 stations  
0.04 miles

## PROJECT NO. 2

### IMPROVEMENT

Clearing & grubbing (scatter)	0.17	ac @	\$808.50	per acre =	\$137.45
Construct 70' Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	2.05	sta @	\$36.00	per sta =	\$73.80

TOTAL IMPROVEMENT COSTS = \$525.25

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Surfacing rock</b>						
Surfacing rock	4"-0	\$9.44	\$5.34	\$1.22	64	\$1,024.00
70' Landing	4"-0	\$9.44	\$5.34	\$1.22	150	\$2,400.00
Subtotal =					214	\$3,424.00

Totals	All Rock =	214
	4" - 0 =	214

TOTAL ROCK COSTS = \$3,424.00

TOTAL PROJECT COST = \$3,985.37

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
Road Segment: Q to R

Sale Number: FG-341-2020-W00230-01  
Improvement: 26+05 stations  
0.49 miles

## PROJECT NO. 2

### IMPROVEMENT

Clearing & grubbing (scatter)	1.80	ac @	\$1,078.00	per acre =	\$1,940.40
Clean culvert inlet & outlet	1	ea @	\$25.00	per ea =	\$25.00
Remove & reinstall culvert	1	ea @	\$410.10	per ea =	\$410.10
Cut Slope Lay Back					
Excavate	3,631	cy @	\$1.90	per cy =	\$6,898.90
Drift material	2,361	cy @	\$0.90	per cy =	\$2,124.90
Load & endhaul	2,361	cy @	\$2.32	per cy =	\$5,477.52
Compact waste area	2,361	cy @	\$0.30	per cy =	\$708.30
Improve 70' Landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	26.05	sta @	\$36.00	per sta =	\$937.80

**TOTAL IMPROVEMENT COSTS = \$18,855.92**

### Markers & Stakes

Culvert Markers	2	ea @	\$10.00	per ea =	\$20.00
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**TOTAL CULVERT COSTS = \$20.00**

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Surfacing rock</b>						
Base rock	4"-0	\$9.44	\$5.33	\$1.22	1,694	\$27,087.06
Turnout	4"-0	\$9.44	\$5.33	\$1.22	58	\$927.42
Turnaround	4"-0	\$9.44	\$5.33	\$1.22	20	\$319.80
Roadside landing	4"-0	\$9.44	\$5.33	\$1.22	95	\$1,519.05
70' Landing	4"-0	\$9.44	\$5.33	\$1.22	180	\$2,878.20
Subtotal =					2,047	\$32,731.53

Totals

All Rock =	2,047
4" - 0 =	2,047

**TOTAL ROCK COSTS = \$32,731.53**

### EROSION CONTROL

Grass seed & fertilizer	0.90	ac @	\$425.00	per ac =	\$382.50
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**TOTAL EROSION CONTROL COSTS = \$382.50**

**TOTAL PROJECT COST = \$51,989.95**

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
Road Segment: S to T

Sale Number: FG-341-2020-W00230-01  
Improvement: 2+65 stations  
0.05 miles

## PROJECT NO. 2

### IMPROVEMENT

Improve 70' Landing	1	ea @	\$157.00	per ea =	\$157.00
Grade, ditch, & roll	2.65	sta @	\$36.00	per sta =	\$95.40

TOTAL IMPROVEMENT COSTS = \$252.40

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Surfacing rock</b>						
70' Landing	4"-0	\$9.44	\$5.05	\$1.22	120	\$1,885.20
Subtotal =					120	\$1,885.20

Totals

All Rock =	120
4" - 0 =	120

TOTAL ROCK COSTS = \$1,885.20

TOTAL PROJECT COST = \$2,137.60

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
Road Segment: U

Sale Number: FG-341-2020-W00230-01

## PROJECT NO. 2

### IMPROVEMENT

Improve 70' Landing 1 ea @ \$157.00 per ea = \$157.00

TOTAL IMPROVEMENT COSTS = \$157.00

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Surfacing rock</b>						
70' Landing	4"-0	\$9.44	\$5.70	\$1.22	120	\$1,963.20
				<b>Subtotal =</b>	<b>120</b>	<b>\$1,963.20</b>

Totals

All Rock =	120
4" - 0 =	120

TOTAL ROCK COSTS = \$1,963.20

**TOTAL PROJECT COST = \$2,120.20**

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
 Road Segment: V

Sale Number: FG-341-2020-W00230-01

## PROJECT NO. 2

### IMPROVEMENT

Improve 70' Landing 1 ea @ \$157.00 per ea = \$157.00

TOTAL IMPROVEMENT COSTS = \$157.00

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Surfacing rock</b>						
70' Landing	4"-0	\$9.44	\$5.76	\$1.22	120	\$1,970.40
				Subtotal =	120	\$1,970.40

Totals

All Rock =	120
4" - 0 =	120

TOTAL ROCK COSTS = \$1,970.40

TOTAL PROJECT COST = \$2,127.40

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
Road Segment: W

Sale Number: FG-341-2020-W00230-01

## PROJECT NO. 2

### CULVERTS

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

TOTAL CULVERT COSTS = \$610.00

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Subgrade rock</b>						
Bedding and backfill	1½" - 0	\$1.70	\$5.57	\$0.50	24	\$186.48
Subtotal =					24	\$186.48

Totals	All Rock =	24
	1½" - 0 =	24

TOTAL ROCK COSTS = \$186.48

TOTAL PROJECT COST = \$796.48

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip  
Road Segment: X

Sale Number: FG-341-2020-W00230-01

## PROJECT NO. 2

### CULVERTS

Culverts and Bands	30	LF @	\$29.00	per LF =	\$870.00
24" Diameter					
Markers & Stakes	1	ea @	\$10.00	per ea =	\$10.00
Culvert Markers					

TOTAL CULVERT COSTS = \$880.00

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
<b>Subgrade rock</b>						
Bedding and backfill	1½" - 0	\$1.70	\$6.39	\$0.50	24	\$206.16
Subtotal =					24	\$206.16

Totals

All Rock =	24
1½" - 0 =	24

TOTAL ROCK COSTS = \$206.16

TOTAL PROJECT COST = \$1,086.16

# SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip

Sale Number: FG-341-2020-W00230-01

## PROJECT NO. 3: 5,000 cy 4" - 0" STOCKPILE CONSTRUCTION

### ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement Cost \$/cy	Total CY	Rock Cost
<b>Stockpile rock</b>						
Stockpile	4" - 0	\$9.44	\$0.80	\$1.10	5,800	\$65,772.00
				<b>Subtotal =</b>	<b>5,800</b>	<b>\$65,772.00</b>

Totals

All Rock =	5,800
4" - 0 =	5,800

**TOTAL PROJECT COST = \$65,772.00**

SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip Sale Number: FG-341-2020-W00230-01

Brushing 38.44 miles

**PROJECT NO. 4**

**BRUSHING**

Roadside brushing (light)	2.90	mi @	\$850.00	per mi =	\$2,465.00
Roadside brushing (medium)	7.00	mi @	\$1,100.00	per mi =	\$7,700.00
Roadside brushing (heavy)	28.54	mi @	\$1,550.00	per mi =	\$44,237.00

**TOTAL PROJECT COST = \$54,402.00**

## QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: French Dip  
 Sale Number: FG-341-2020-W00230-01  
 Quarry Name: West Mac Quarry

4" - 0: 12,202 cy (truck measure)  
 Riprap: 228 cy (truck measure)  
 4" - 0 Stockpile: 5,000 cy (stockpile measure)  
 Total truck yardage: 18,230 cy  
 Total in place yardage: 17,529 cy  
 Oversize - Pile: 20%  
 Swell: 130%  
 Compaction: 116%

### Move-in & Other Base Cost

Quarry development & overburden removal				\$14,872.62
Equipment cleaning & move in excavator				\$1,882.58
Equipment cleaning & move in dozer				\$1,862.14
Move in & setup drill				\$500.41
Move in loader				\$773.23
Move in & setup crusher				\$3,109.30
Move in dump trucks				\$484.69
Gradation tests	\$71.50 /2,000cy x	<u>10</u>	tests =	\$715.00
Clean up quarry				\$500.00
			Subtotal =	<u>\$24,699.97</u>
			Per CY =	<u>\$1.35/cy</u>

### 4"-0 Base Cost

Drill & shoot	<u>\$2.80</u>	/ cy x	<u>17,310</u>	cy =	\$48,466.92
Push rock	<u>\$0.80</u>	/ cy x	<u>22,503</u>	cy =	\$18,002.00
Oversize - Pile	<u>\$0.80</u>	/ cy x	<u>4,501</u>	cy =	\$3,600.40
Load crusher	<u>\$0.80</u>	/ cy x	<u>18,002</u>	cy =	\$14,401.60
Crush (4" - 0)	<u>\$2.60</u>	/ cy x	<u>12,202</u>	cy =	\$31,725.20
Crush (Stockpile)	<u>\$2.60</u>	/ cy x	<u>5,800</u>	cy =	\$15,080.00
Load dump truck	<u>\$0.80</u>	/ cy x	<u>18,002</u>	cy =	\$14,401.60
				Subtotal =	<u>\$145,677.72</u>
				Per CY =	<u>\$8.09/cy</u>

### Riprap Base Cost

Drill & shoot	<u>\$2.80</u>	/ cy x	<u>219</u>	cy =	\$613.85
Push rock	<u>\$0.80</u>	/ cy x	<u>285</u>	cy =	\$228.00
Load dump truck	<u>\$0.80</u>	/ cy x	<u>285</u>	cy =	\$228.00
				Subtotal =	<u>\$1,069.85</u>
				Per CY =	<u>\$3.75/cy</u>
				Total =	<u>\$171,447.54</u>

4"-0 Base Cost = \$9.44/cy  
 Riprap Base Cost = \$5.10/cy

### STOCKPILE COST SUMMARY

Timber Sale: French Dip  
Sale Number: FG-341-2020-W00230-01  
Stockpile Name: Lower Rock Creek Stockpile

1 1/2" - 0: 552 cy (truck measure)  
Total truck yardage: 552 cy

Load dump truck      \$0.80      / cy x      552      cy =      \$441.60  
Subtotal: \$441.60

Move in loader      \$495.23  
Subtotal: \$495.23

**TOTAL PRODUCTION COST = \$936.83**

**ROCK DEVELOPMENT COST = \$1.70/cy**

SUMMARY OF CONSTRUCTION COST

Timber Sale: French Dip                      Sale Number: FG-341-2020-W00230-01

Sale Number: FG-341-2020-W00230-01

### MOVE-IN, WITHIN AREA MOVE, & CLEANING COSTS

<u>Equipment</u>	<u>Total</u>
Grader	\$799.08
Roller (smooth/grid) & Compactor	\$578.65
Excavator (Large) - Equipment Cleaning	\$2,019.24
Dozer (Large) - Equipment Cleaning	\$1,824.66
Dump Trucks	\$194.46
Water Truck (2,500 Gal)	\$96.94

**TOTAL MOVE-IN COSTS = \$5,513.03**

**CRUISE REPORT  
FRENCH DIP  
#FG-341-2020-W00230-01**

**1. LOCATION:** Portions of Sections 21, 24, 25, 28 & 30 T4N, R6W, W.M., Clatsop County, Oregon.

**2. CRUISE DESIGN:** Pre-cruise evaluation indicated that the stand's average DBH is approximately 21 inches with a Coefficient of Variation of about 68%. 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. Statistical analysis indicated that 44 variable radius plots utilizing a 40 BAF prism would produce an adequate sample size.

**3. SAMPLING METHOD:** The Timber Sale Area was cruised in October 2019. Sale Areas 1 and 2 were sampled with 44 variable radius grade plots laid out on a 5 chain x 9 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

**4. CRUISE RESULTS:** 233 trees were measured and graded producing a cumulative Sampling Error of 4.7% on the Basal Area and 5.3% on the 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.

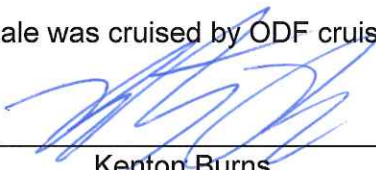
- a) **Height Standards:** Total tree heights were measured to the nearest foot. Bole heights were calculated to a six inch top.
- b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.
- c) **Form Factors:** Measured for each grade tree using a form point of 16 feet.

**5. DATA PROCESSING:**

- a) **Volumes and Statistics:** Cruise estimates and sampling statistics, were derived from Super Ace 2008 cruise software.
- b) **Deductions:** Two percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage.


**6. CRUISERS:** The sale was cruised by ODF cruisers Kenton Burns and Mark Savage.

Prepared by:

  
Kenton Burns

11/27/19  
Date

Reviewed by:

  
Mark Savage

11/27/2019  
Date

TC PSTATS			PROJECT STATISTICS						PAGE	1		
			PROJECT		FRNCHDP		DATE 10/14/2019					
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
04N	06	25	00A1	00MC		203.00	44	233	S	W		
04N	06W	25	00A2	00MC								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			44	233	5.3							
CRUISE			44	233	5.3	15,405	1.5					
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			226	73.0	22.7	131	43.1	205.5	46,884	46,302	9,798	9,798
WR CEDAR			3	2.0	15.7	60	0.7	2.7	312	312	81	81
WHEMLOCK			3	.6	27.9	137	0.5	2.7	575	566	126	126
NOB FIR			1	.2	31.0	154	0.2	.9	236	236	48	48
TOTAL			233	75.9	22.6	129	44.5	211.8	48,007	47,416	10,053	10,053
CONFIDENCE LIMITS OF THE SAMPLE												
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR												
CL	68.1	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
DOUG FIR			60.7	4.0	847	882	918					
WR CEDAR			118.8	82.2	62	350	638					
WHEMLOCK			49.4	34.2	573	870	1,167					
NOB FIR												
TOTAL			60.9	4.0	842	877	912	148	37	16		
CL	68.1	COEFF	SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
DOUG FIR			53.4	3.5	175	182	188					
WR CEDAR			103.0	71.3	25	87	149					
WHEMLOCK			28.3	19.6	158	196	234					
NOB FIR												
TOTAL			53.5	3.5	175	181	187	114	29	13		
CL	68.1	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
DOUG FIR			57.2	8.6	67	73	79					
WR CEDAR			472.6	71.2	1	2	3					
WHEMLOCK			376.7	56.7	0	1	1					
NOB FIR			663.3	99.9	0	0	0					
TOTAL			58.2	8.8	69	76	83	135	34	15		
CL	68.1	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
DOUG FIR			31.0	4.7	196	205	215					
WR CEDAR			374.0	56.3	1	3	4					
WHEMLOCK			374.0	56.3	1	3	4					
NOB FIR			663.3	99.9	0	1	2					
TOTAL			30.9	4.7	202	212	222	38	10	4		
CL	68.1	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
DOUG FIR			34.2	5.2	43,917	46,302	48,687					
WR CEDAR			438.6	66.1	106	312	519					
WHEMLOCK			407.0	61.3	219	566	913					
NOB FIR			663.3	99.9	0	236	471					

TOTAL

TC PSTATS		PROJECT STATISTICS							PAGE	2
		PROJECT FRNCHDP							DATE	10/14/2019
TWP	RGE	SC	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
04N	06	25	00A1	00MC	203.00		44	233	S	W
04N	06W	25	00A2	00MC						
CL	68.1		COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
TOTAL			35.1	5.3	44,911	47,416	49,920	49	12	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
DOUG FIR			32.1	4.8	9,324	9,798	10,272			
WR CEDAR			419.4	63.2	30	81	132			
WHEMLOCK			386.7	58.2	53	126	200			
NOB FIR			663.3	99.9	0	48	95			
TOTAL			32.4	4.9	9,562	10,053	10,544	42	11	5

TC		PSTNDSUM										Stand Table Summary										Page		1	
																						Date:		10/14/2019	
T04N R06W S25 Ty00MC					97.00					Project					FRNCHDP					Time:		12:53:41PM			
T04N R06W S25 Ty00MC					106.00					Acres					203.00					Grown Year:					
S Spec	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Totals											
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF									
DF		11	3	87	83	4.134	2.73	5.51	12.5	52.5	1.96	69	289	398	140	59									
DF		12	2	83	91	2.315	1.82	3.47	13.5	50.0	1.34	47	174	271	95	35									
DF		14	4	86	106	3.400	3.63	6.80	18.4	77.5	3.57	125	527	725	254	107									
DF		15	4	86	98	2.967	3.64	5.93	18.8	78.8	3.19	112	467	647	227	95									
DF		16	5	87	106	3.255	4.54	6.51	24.9	104.0	4.62	162	677	939	329	137									
DF		17	6	88	129	3.462	5.46	9.81	23.8	101.8	6.66	234	998	1,353	475	203									
DF		18	7	88	118	3.601	6.36	9.26	27.7	109.5	7.31	256	1,013	1,483	520	206									
DF		19	4	89	122	1.847	3.64	5.08	30.3	122.7	4.39	154	623	891	313	127									
DF		20	12	87	130	5.003	10.92	14.59	33.5	143.7	13.92	488	2,097	2,826	992	426									
DF		21	14	89	133	5.290	12.72	15.49	37.8	171.2	16.67	585	2,652	3,385	1,188	538									
DF		22	13	88	131	4.479	11.82	13.09	40.9	186.8	15.24	535	2,446	3,095	1,086	497									
DF		23	12	89	138	3.780	10.91	11.34	46.4	214.4	15.01	527	2,431	3,046	1,069	494									
DF		24	20	89	145	5.789	18.19	17.66	50.9	244.6	25.62	899	4,318	5,200	1,825	877									
DF		25	13	88	147	3.466	11.82	11.20	53.2	251.9	16.97	595	2,821	3,445	1,209	573									
DF		26	13	87	145	3.205	11.82	10.11	58.1	273.2	16.73	587	2,761	3,396	1,192	560									
DF		27	13	87	148	2.972	11.82	9.15	65.1	304.2	16.97	595	2,782	3,445	1,209	565									
DF		28	11	87	152	2.339	10.00	8.08	63.5	313.9	14.62	513	2,537	2,968	1,041	515									
DF		29	20	86	152	3.963	18.18	12.88	71.7	351.1	26.32	924	4,521	5,344	1,875	918									
DF		30	9	86	156	1.666	8.18	5.55	76.7	383.0	12.15	426	2,127	2,466	865	432									
DF		31	12	86	157	2.081	10.91	7.11	81.2	405.6	16.44	577	2,884	3,338	1,171	585									
DF		32	6	85	151	.976	5.45	3.25	83.6	410.0	7.75	272	1,334	1,574	552	271									
DF		33	5	85	170	.765	4.54	2.91	88.3	457.3	7.31	257	1,329	1,485	521	270									
DF		34	5	85	154	.721	4.55	2.60	86.9	440.6	6.43	225	1,144	1,305	458	232									
DF		35	4	86	159	.544	3.63	1.90	103.5	528.6	5.62	197	1,006	1,140	400	204									
DF		36	3	85	164	.386	2.73	1.54	96.5	505.8	4.25	149	781	862	303	159									
DF		37	2	85	157	.244	1.82	.73	132.4	705.0	2.76	97	515	560	196	105									
DF		38	1	83	166	.116	.91	.46	107.3	570.0	1.41	50	263	287	101	53									
DF		40	1	85	159	.104	.91	.42	118.4	630.0	1.41	49	263	286	100	53									
DF		43	2	84	167	.181	1.82	.72	126.4	718.8	2.60	91	519	528	185	105									
DF		Totals	226	87	131	73.050	205.46	203.15	48.2	227.9	279.24	9,798	46,302	56,686	19,890	9,399									
WH		26	1	87	124	.246	.91	.74	57.3	246.7	1.35	42	182	275	86	37									
WH		28	1	86	169	.213	.91	.85	64.8	337.5	1.76	55	287	358	112	58									
WH		30	1	69	116	.185	.91	.37	78.2	260.0	.93	29	96	188	59	20									
WH		Totals	3	81	137	.644	2.73	1.96	64.5	288.6	4.05	126	566	821	257	115									
RC		11	1	84	45	1.376	.91	1.38	7.2	30.0	.23	10	41	47	20	8									
RC		20	1	81	78	.416	.91	.83	34.9	100.0	.68	29	83	139	59	17									
RC		27	1	88	121	.229	.91	.69	61.3	273.3	.99	42	188	201	85	38									
RC		Totals	3	84	60	2.021	2.73	2.90	28.0	107.8	1.90	81	312	386	164	63									
NF		31	1	86	154	.173	.91	.52	91.7	453.3	1.14	48	236	232	97	48									
NF		Totals	1	86	154	.173	.91	.52	91.7	453.3	1.14	48	236	232	97	48									
Totals		233	87	129		75.888	211.82	208.53	48.2	227.4	286.34	10,053	47,416	58,126	20,408	9,625									

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
<div>T04N R06W S25 Ty00MC97.00</div> <div>T04N R06W S25 Ty00MC106.00</div>				Project: FRNCHDP										Page 1							
				Acres 203.00										Date 10/14/2019							
														Time 12:53:40PM							
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
					Def%	Gross	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF			CU														14	11		0.00	7.2
DF			2M	80	1.4	37,695	37,165	7,544			40	60	1	1	1	98	40	16	427	2.13	87.0
DF			3M	17	.6	8,142	8,090	1,642			95	1	4	0	2	4	39	8	108	0.74	75.1
DF			4M	3		1,048	1,048	213	8	92			38	54	4	5	21	6	26	0.37	41.0
DF Totals				98	1.2	46,884	46,302	9,399	0	19	32	49	1	2	2	95	35	11	220	1.34	210.4
RC			CU														15	5		0.00	1.4
RC			2M	58		183	183	37			25	75				100	40	16	400	2.17	.5
RC			3M	24		75	75	15		100						100	40	11	180	1.53	.4
RC			4M	18		54	54	11		100			100				17	7	27	0.45	2.0
RC Totals				1		312	312	63		41	15	44	17			83	21	8	73	0.89	4.3
WH			CU														3	29		0.00	.2
WH			2M	73	2.2	427	418	85			32	68				100	40	17	455	2.29	.9
WH			3M	24		135	135	27		45	55					100	40	12	231	1.62	.6
WH			4M	3		14	14	3		100			46	54			21	6	30	0.48	.5
WH Totals				1	1.6	575	566	115		13	37	50	1	1		98	33	14	264	1.80	2.1
NF			2M	91		215	215	44			32	68				100	40	19	620	2.98	.3
NF			3M	9		21	21	4		100						100	40	9	120	0.92	.2
NF Totals				0		236	236	48		9	29	62				100	40	16	453	2.29	.5
Totals					1.2	48,007	47,416	9,625	0	19	32	49	1	2	2	95	35	11	218	1.34	217.3

TC PLOGSTVB		Log Stock Table - MBF																		
T04N R06W S25 Ty00MC		97.00		Project:		FRNCHDP		Page		1										
T04N R06W S25 Ty00MC		106.00		Acres		203.00		Date		10/14/2019										
								Time		12:53:40PM										
Spp	S T	So rt	Gr de	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	16		9		9	.1							9					
DF		2M	18		30		30	.3							15	15				
DF		2M	22		19		19	.2											19	
DF		2M	28		23		23	.2											23	
DF		2M	30		16	38.1	10	.1						10						
DF		2M	32		37		37	.4							37					
DF		2M	33		27		27	.3								27				
DF		2M	34		26		26	.3							26					
DF		2M	36		50		50	.5							23	27				
DF		2M	40		7,415	1.4	7,313	77.8					881	1526	2701	1659	546			
DF		3M	18		1		1	.0					1							
DF		3M	20		4		4	.0					4							
DF		3M	24		15		15	.2					15							
DF		3M	28		8		8	.1			5	3								
DF		3M	29		12		12	.1			12									
DF		3M	30		2		2	.0					2							
DF		3M	32		24		24	.3			24									
DF		3M	34		35		35	.4			33	2								
DF		3M	36		37		37	.4			24	7	5							
DF		3M	38		37		37	.4			3	29	5							
DF		3M	40		1,477		1,467	15.6			248	430	712	6	10	16	44			
DF		4M	12		20		20	.2			16	4								
DF		4M	14		8		8	.1			8	1								
DF		4M	16		23		23	.2			17	5								
DF		4M	18		10		10	.1			10									
DF		4M	20		21		21	.2		6	14	1								
DF		4M	22		14		14	.1			14									
DF		4M	24		34		34	.4			34									
DF		4M	26		32		32	.3			30	2								
DF		4M	28		14		14	.2			14									
DF		4M	30		20		20	.2			20									
DF		4M	32		8		8	.1		4	4									
DF		4M	40		10		10	.1		7	3									
DF		Totals			9,517	1.2	9,399	97.7		16	534	485	745	887	1546	2827	1773	546	41	
RC		2M	40		37		37	58.7					9		28					
RC		3M	40		15		15	24.0					15							

## Log Stock Table - MBF

Page 2

T04N R06W S25 Ty00MC 97.00  
T04N R06W S25 Ty00MC 106.00

Project: FRNCHDP  
Acres 203.00

Date 10/14/2019  
Time 12:53:40PM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spe	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+
RC		4M	16		8		8	13.2				8								
RC		4M	20		3		3	4.1			3									
RC		Totals			63		63	.7			3	8	15	9		28				
WH		2M	40		87	2.2	85	73.8					10		43		32			
WH		3M	40		27		27	23.8				5	8		15					
WH		4M	18		1		1	1.1			1									
WH		4M	24		1		1	1.3			1									
WH		Totals			117	1.6	115	1.2			3	5	8	10		58		32		
NF		2M	40		44		44	91.2							14		30			
NF		3M	40		4		4	8.8				4								
NF		Totals			48		48	.5				4				14		30		
Total		All Species			9,745	1.2	9,625	100.0		16	539	502	768	906	1546	2927	1834	546		41

TC PSTATS						PROJECT STATISTICS			PAGE	1	
						PROJECT	FRNCHDP		DATE	10/14/2019	
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
04N	06	25	00A1	00MC	97.00	21	111	S	W		
						TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES			
TOTAL			21	111	5.3						
CRUISE			21	111	5.3		7,635	1.5			
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			109	77.8	22.1	124	44.1	207.6	44,619	44,141	9,491
WR CEDAR			1	.5	27.0	121	0.4	1.9	393	393	88
WHEMLOCK			1	.4	28.0	169	0.4	1.9	610	601	115
TOTAL			111	78.7	22.2	125	44.9	211.4	45,622	45,135	9,694
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR		69.4	6.6	770	825	880					
WR CEDAR											
WHEMLOCK											
TOTAL		68.7	6.5	776	830	884		188	47	21	
CL	68.1	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR		60.2	5.8	162	171	181					
WR CEDAR											
WHEMLOCK											
TOTAL		59.6	5.7	163	172	182		142	35	16	
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR		45.7	10.2	70	78	86					
WR CEDAR		458.3	102.4		0	1					
WHEMLOCK		458.3	102.4		0	1					
TOTAL		44.3	9.9	71	79	86		82	21	9	
CL	68.1	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR		23.3	5.2	197	208	218					
WR CEDAR		458.3	102.4		2	4					
WHEMLOCK		458.3	102.4		2	4					
TOTAL		25.5	5.7	199	211	223		27	7	3	
CL	68.1	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR		28.9	6.4	41,294	44,141	46,987					
WR CEDAR		458.3	102.4		393	795					
WHEMLOCK		458.3	102.4		601	1,217					
TOTAL		33.8	7.6	41,724	45,135	48,546		48	12	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	
DOUG FIR		25.8	5.8	8,945	9,491	10,037					
WR CEDAR		458.3	102.4		88	178					

AREA 1

AREA 1

PROJECT STATISTICS								PAGE 2	
TC PSTATS				PROJECT	FRNCHDP	DATE	10/14/2019		
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	06	25	00A1	00MC	97.00	21	111	S	W
CL	68.1	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.	INF. POP.	
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK			458.3	102.4	115 234				
TOTAL			29.7	6.6	9,050	9,694 10,339	37	9	4

TC		PSTNDSUM		Stand Table Summary										Page Date:		1 10/14/2019	
T04N R06W S25 Ty00MC 97.00				Project		FRNCHDP		Time:		12:45:31PM							
				Acres		97.00		Grown Year:									
S Spec T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Tons/ Acre	Net		Totals		
	DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Cu.Ft. Acre	Bd.Ft. Acre		Tons	Cunits	MBF		
DF	11	2	86	71	5.772	3.81	5.77	14.8	60.0	2.44	86	346	237	83	34		
DF	12	1	83	64	2.425	1.90	2.43	13.4	50.0	.93	33	121	90	32	12		
DF	14	1	86	97	1.782	1.90	3.56	17.5	75.0	1.77	62	267	172	60	26		
DF	15	4	86	98	6.209	7.62	12.42	18.8	78.8	6.67	234	978	647	227	95		
DF	16	2	86	107	2.728	3.81	5.46	25.0	105.0	3.89	136	573	377	132	56		
DF	17	4	89	134	4.834	7.62	14.50	23.7	102.5	9.81	344	1,486	952	334	144		
DF	18	3	88	115	3.234	5.71	7.55	30.1	117.1	6.48	227	884	629	221	86		
DF	19	2	89	118	1.935	3.81	4.84	32.7	136.0	4.51	158	658	437	153	64		
DF	20	9	87	132	7.858	17.14	23.57	32.8	140.4	22.03	773	3,309	2,137	750	321		
DF	21	5	88	122	3.960	9.52	10.29	38.8	159.2	11.38	399	1,639	1,104	387	159		
DF	22	9	88	136	6.494	17.14	19.48	41.8	191.1	23.23	815	3,723	2,253	791	361		
DF	23	4	88	129	2.641	7.62	7.92	43.0	188.3	9.70	340	1,492	941	330	145		
DF	24	12	89	142	7.276	22.86	21.22	51.4	242.9	31.06	1,090	5,154	3,013	1,057	500		
DF	25	5	88	142	2.794	9.52	8.38	56.8	270.0	13.57	476	2,263	1,316	462	220		
DF	26	5	88	129	2.583	9.52	7.23	60.0	273.6	12.36	434	1,979	1,199	421	192		
DF	27	6	86	149	2.874	11.43	9.10	63.5	300.0	16.47	578	2,731	1,597	560	265		
DF	28	6	87	148	2.673	11.43	8.91	63.9	314.5	16.22	569	2,802	1,574	552	272		
DF	29	7	86	145	2.907	13.33	9.14	70.0	343.2	18.23	640	3,135	1,768	620	304		
DF	30	3	86	148	1.164	5.71	3.49	80.6	396.7	8.02	281	1,385	778	273	134		
DF	31	5	84	147	1.817	9.52	5.45	84.9	402.0	13.18	463	2,191	1,279	449	213		
DF	32	2	82	136	.682	3.81	2.05	80.0	368.3	4.66	164	754	452	159	73		
DF	33	1	85	164	.321	1.90	1.28	81.0	417.5	2.96	104	536	287	101	52		
DF	34	3	85	150	.906	5.71	3.02	88.7	454.0	7.64	268	1,372	741	260	133		
DF	35	1	85	167	.285	1.90	1.14	95.5	505.0	3.10	109	576	301	106	56		
DF	36	2	84	168	.539	3.81	2.16	96.4	490.0	5.92	208	1,056	574	202	102		
DF	37	1	85	158	.255	1.90	.77	132.4	710.0	2.89	101	543	280	98	53		
DF	38	1	83	166	.242	1.90	.97	107.3	570.0	2.96	104	551	287	101	53		
DF	40	1	85	159	.218	1.90	.87	118.4	630.0	2.95	103	550	286	100	53		
DF	43	2	84	167	.378	3.81	1.51	126.4	718.8	5.44	191	1,086	528	185	105		
DF	Totals	109	87	124	77.784	207.62	204.48	46.4	215.9	270.49	9,491	44,141	26,238	9,206	4,282		
WH	28	1	86	169	.445	1.90	1.78	64.8	337.5	3.69	115	601	358	112	58		
WH	Totals	1	86	169	.445	1.90	1.78	64.8	337.5	3.69	115	601	358	112	58		
RC	27	1	88	121	.479	1.90	1.44	61.3	273.3	2.07	88	393	201	85	38		
RC	Totals	1	88	121	.479	1.90	1.44	61.3	273.3	2.07	88	393	201	85	38		
Totals		111	87	125	78.709	211.43	207.70	46.7	217.3	276.25	9,694	45,135	26,797	9,404	4,378		

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
<div>T04N R06W S25 Ty00MC97.00</div>				Project: FRNCHDP										Page 1							
				Acres 97.00										Date 10/14/2019							
														Time 12:45:30PM							
Spp	S So Gr T rt ad	% Net BdFt	Bd. Ft. per Acre Def%GrossNet			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre		
							Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf			
							4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99							
DF	CU																13	12		0.00	11.9
DF	2M	78	1.1	34,993	34,596	3,356				44	56	1	2	2	96	39	16	407	2.07	85.1	
DF	3M	19	1.0	8,506	8,425	817			91	2	7	0	4	3	93	39	8	109	0.74	77.4	
DF	4M	3		1,119	1,119	109			100			39	55	4	3	21	6	27	0.39	42.0	
DF	Totals	98	1.1	44,619	44,141	4,282			20	35	46	2	3	2	93	34	11	204	1.29	216.4	
RC	2M	97		383	383	37				25	75				100	40	16	400	2.17	1.0	
RC	4M	3		10	10	1			100			100				20	6	20	0.49	.5	
RC	Totals	1		393	393	38			2	24	73	2			98	33	12	273	1.84	1.4	
WH	2M	84	1.7	517	508	49				35	65				100	40	19	570	2.62	.9	
WH	3M	13		80	80	8			100						100	40	11	180	1.03	.4	
WH	4M	3		13	13	1			100			100				18	7	30	0.46	.4	
WH	Totals	1	1.5	610	601	58			16	30	55	2			98	35	14	338	1.88	1.8	
Totals			1.1	45,622	45,135	4,378			20	34	46	2	3	2	93	34	11	206	1.29	219.6	

TC PLOGSTVB			Log Stock Table - MBF																
T04N R06W S25 Ty00MC 97.00				Project: FRNCHDP Acres 97.00												Page 1 Date 10/14/2019 Time 12:45:30PM			
Spp	S T	So Gr rt de	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	16	9		9	.2							9					
DF		2M	18	15		15	.4									15			
DF		2M	22	19		19	.4											19	
DF		2M	28	23		23	.5											23	
DF		2M	30	16	38.1	10	.2							10					
DF		2M	32	37		37	.9								37				
DF		2M	33	27		27	.6									27			
DF		2M	36	50		50	1.2								23	27			
DF		2M	40	3,198	1.0	3,166	73.9						499	630	1170	588	278		
DF		3M	18	1		1	.0					1							
DF		3M	24	15		15	.4					15							
DF		3M	28	3		3	.1			2	2								
DF		3M	29	12		12	.3			12									
DF		3M	30	2		2	.1					2							
DF		3M	32	5		5	.1			5									
DF		3M	34	16		16	.4			16									
DF		3M	36	9		9	.2			9									
DF		3M	38	8		8	.2				8								
DF		3M	40	753	1.0	745	17.4			126	221	322	6	10	16	44			
DF		4M	12	8		8	.2			6	2								
DF		4M	14	5		5	.1			4	1								
DF		4M	16	14		14	.3			10	4								
DF		4M	18	5		5	.1			5									
DF		4M	20	11		11	.3			10	1								
DF		4M	22	7		7	.2			7									
DF		4M	24	19		19	.4			19									
DF		4M	26	16		16	.4			14	2								
DF		4M	28	4		4	.1			4									
DF		4M	30	14		14	.3			14									
DF		4M	32	4		4	.1			4									
DF		4M	40	3		3	.1			3									
DF		Totals		4,328	1.1	4,282	97.8			268	242	340	505	650	1255	702	278	41	
RC		2M	40	37		37	97.6					9		28					
RC		4M	20	1		1	2.4			1									
RC		Totals		38		38	.9			1		9		28					
WH		2M	40	50	1.7	49	84.4							17		32			

## Log Stock Table - MBF

T04N R06W S25 Ty00MC 97.00

Project: FRNCHDP  
Acres 97.00Page 2  
Date 10/14/2019  
Time 12:45:30PM

Spp	S T	So rt	Gr de	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+				
WH			3M	40	8		8	13.3					8											
WH			4M	18	1		1	2.2			1													
WH			Totals		59	1.5	58	1.3			1		8		17		32							
Total			All Species		4,425	1.1	4,378	100.0			270	242	348	514	650	1300	734	278		41				

TC PSTATS					PROJECT STATISTICS					PAGE 1
					PROJECT FRNCHDP					DATE 10/14/2019

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	06	25	00A2	00MC	106.00	23	122	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	23	122	5.3		
CRUISE	23	122	5.3	7,771	1.6
DBH COUNT					
REFOREST COUNT					
BLANKS					
100 %					

AREA 2

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	117	68.7	23.3	137	42.2	203.5	48,957	48,280	10,079	10,079
WHEMLOCK	2	.8	27.8	121	0.7	3.5	543	533	137	137
WR CEDAR	2	3.4	13.6	53	0.9	3.5	238	238	75	75
NOB FIR	1	.3	31.0	154	0.3	1.7	451	451	91	91
<b>TOTAL</b>	<b>122</b>	<b>73.3</b>	<b>23.0</b>	<b>133</b>	<b>44.2</b>	<b>212.2</b>	<b>50,189</b>	<b>49,503</b>	<b>10,381</b>	<b>10,381</b>

#### CONFIDENCE LIMITS OF THE SAMPLE

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

CL 68.1	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	52.8	4.9	890	935	981			
WHEMLOCK	24.7	23.1	484	630	776			
WR CEDAR	104.5	97.9	2	115	228			
NOB FIR								
<b>TOTAL</b>	<b>54.2</b>	<b>4.9</b>	<b>875</b>	<b>920</b>	<b>965</b>	<b>117</b>	<b>29</b>	<b>13</b>

CL 68.1	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	47.2	4.4	183	191	200			
WHEMLOCK	6.7	6.2	154	164	174			
WR CEDAR	115.1	107.8		39	80			
NOB FIR								
<b>TOTAL</b>	<b>48.1</b>	<b>4.4</b>	<b>181</b>	<b>189</b>	<b>197</b>	<b>93</b>	<b>23</b>	<b>10</b>

CL 68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	68.5	14.6	59	69	79			
WHEMLOCK	335.0	71.4	0	1	1			
WR CEDAR	379.8	80.9	1	3	6			
NOB FIR	479.6	102.2		0	1			
<b>TOTAL</b>	<b>70.8</b>	<b>15.1</b>	<b>62</b>	<b>73</b>	<b>84</b>	<b>209</b>	<b>52</b>	<b>23</b>

CL 68.1	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	37.4	8.0	187	203	220			
WHEMLOCK	331.3	70.6	1	3	6			
WR CEDAR	331.3	70.6	1	3	6			
NOB FIR	479.6	102.2		2	4			
<b>TOTAL</b>	<b>35.7</b>	<b>7.6</b>	<b>196</b>	<b>212</b>	<b>228</b>	<b>53</b>	<b>13</b>	<b>6</b>

CL 68.1	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	37.9	8.1	44,383	48,280	52,178			
WHEMLOCK	348.2	74.2	138	533	929			
WR CEDAR	351.3	74.8	60	238	417			
NOB FIR	479.6	102.2		451	912			

TC PSTATS		PROJECT STATISTICS							PAGE	2
		PROJECT FRNCHDP							DATE	10/14/2019
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	06	25	00A2	00MC	106.00	23	122	S	W	
CL	68.1		COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
TOTAL			36.1	7.7	45,694	49,503	53,312	54	14	6
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
DOUG FIR			36.9	7.9	9,287	10,079	10,870			
WHEMLOCK			337.7	71.9	38	137	235			
WR CEDAR			373.0	79.5	15	75	134			
NOB FIR			479.6	102.2		91	185			
TOTAL			34.8	7.4	9,613	10,381	11,150	50	13	6

TC		PSTNDSUM										Stand Table Summary										Page		1									
																						Date:		10/14/2019									
T04N R06W S25 Ty00MC					106.00					Project										FRNCHDP										Time:		12:48:29PM	
										Acres										106.00										Grown Year:			
S Spec	T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals																			
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF																	
DF		11	1	89	107	2.635	1.74	5.27	10.1	45.0	1.52	53	237	162	57	25																	
DF		12	1	82	119	2.214	1.74	4.43	13.5	50.0	1.71	60	221	181	64	23																	
DF		14	3	86	109	4.881	5.22	9.76	18.8	78.3	5.22	183	765	553	194	81																	
DF		16	3	88	105	3.737	5.22	7.47	24.9	103.3	5.30	186	772	562	197	82																	
DF		17	2	87	120	2.207	3.48	5.52	24.1	100.0	3.78	133	552	401	141	58																	
DF		18	4	88	120	3.937	6.96	10.83	26.1	104.5	8.06	283	1,132	854	300	120																	
DF		19	2	89	126	1.767	3.48	5.30	28.3	111.7	4.28	150	592	453	159	63																	
DF		20	3	89	124	2.391	5.22	6.38	35.8	155.0	6.50	228	988	689	242	105																	
DF		21	9	89	139	6.507	15.65	20.25	37.3	176.8	21.52	755	3,579	2,281	800	379																	
DF		22	4	89	120	2.635	6.96	7.25	38.4	176.4	7.94	278	1,278	841	295	135																	
DF		23	8	89	143	4.822	13.91	14.47	48.2	227.5	19.87	697	3,291	2,106	739	349																	
DF		24	8	90	150	4.429	13.91	14.39	50.3	246.9	20.63	724	3,554	2,187	767	377																	
DF		25	8	88	150	4.081	13.91	13.77	51.1	241.9	20.08	705	3,331	2,128	747	353																	
DF		26	8	87	155	3.774	13.91	12.74	57.1	273.0	20.72	727	3,476	2,197	771	368																	
DF		27	7	87	148	3.062	12.17	9.19	66.6	308.1	17.43	612	2,830	1,847	648	300																	
DF		28	5	86	157	2.034	8.70	7.32	63.0	313.3	13.15	462	2,294	1,394	489	243																	
DF		29	13	86	155	4.929	22.61	16.30	72.6	355.1	33.73	1,184	5,790	3,576	1,255	614																	
DF		30	6	86	160	2.126	10.43	7.44	75.1	377.1	15.92	559	2,806	1,688	592	297																	
DF		31	7	87	164	2.323	12.17	8.63	79.0	407.7	19.43	682	3,517	2,059	723	373																	
DF		32	4	86	158	1.246	6.96	4.36	85.2	427.9	10.58	371	1,865	1,122	394	198																	
DF		33	4	85	172	1.171	6.96	4.39	90.2	468.0	11.30	396	2,055	1,197	420	218																	
DF		34	2	86	160	.552	3.48	2.21	84.6	423.7	5.32	187	935	564	198	99																	
DF		35	3	86	156	.781	5.22	2.60	106.7	538.0	7.92	278	1,400	839	294	148																	
DF		36	1	88	155	.246	1.74	.98	96.8	537.5	2.71	95	529	288	101	56																	
DF		37	1	84	156	.233	1.74	.70	132.4	700.0	2.64	93	489	280	98	52																	
DF		Totals	117	88	137	68.718	203.48	201.94	49.9	239.1	287.25	10,079	48,280	30,448	10,684	5,118																	
WH		26	1	87	124	.472	1.74	1.42	57.3	246.7	2.59	81	349	275	86	37																	
WH		30	1	69	116	.354	1.74	.71	78.2	260.0	1.77	55	184	188	59	20																	
WH		Totals	2	79	121	.826	3.48	2.12	64.3	251.1	4.37	137	533	463	145	57																	
NF		31	1	86	154	.332	1.74	1.00	91.7	453.3	2.19	91	451	232	97	48																	
NF		Totals	1	86	154	.332	1.74	1.00	91.7	453.3	2.19	91	451	232	97	48																	
RC		11	1	84	45	2.635	1.74	2.64	7.2	30.0	.44	19	79	47	20	8																	
RC		20	1	81	78	.797	1.74	1.59	34.9	100.0	1.31	56	159	139	59	17																	
RC		Totals	2	83	53	3.432	3.48	4.23	17.6	56.4	1.75	75	238	186	79	25																	
Totals			122	87	133	73.308	212.17	209.28	49.6	236.5	295.56	10,381	49,503	31,329	11,004	5,247																	

TC		Species, Sort Grade - Board Foot Volumes (Project)																			
T04N R06W S25 Ty00MC		106.00		Project: FRNCHDP										Page 1							
				Acres 106.00										Date 10/14/2019							
														Time 12:48:28PM							
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
					4-5	6-11	12-16		17+	12-20	21-30	31-35	36-99								
DF			CU														20	10		0.00	2.9
DF			2M	81	1.6	40,167	39,515	4,189			36	64	0		1	99	40	16	445	2.18	88.8
DF			3M	16	.3	7,808	7,783	825		100			1	1	5	94	39	8	107	0.74	73.0
DF			4M	3		982	982	104	16	84			37	52	4	7	21	6	24	0.35	40.1
DF Totals				98	1.4	48,957	48,280	5,118	0	18	30	52	1	1	1	96	35	11	236	1.39	204.9
WH			CU														3	29		0.00	.4
WH			2M	62	2.7	344	335	35			28	72				100	40	15	355	2.00	.9
WH			3M	35		184	184	20		23	77					100	40	13	260	1.96	.7
WH			4M	3		14	14	1		100				100			24	6	30	0.49	.5
WH Totals				1	1.7	543	533	57		11	44	45		3		97	32	15	215	1.74	2.5
RC			CU														15	5		0.00	2.6
RC			3M	60		143	143	15		100						100	40	11	180	1.53	.8
RC			4M	40		95	95	10		100			100				17	8	28	0.44	3.4
RC Totals				0		238	238	25		100			40			60	19	7	35	0.58	6.9
NF			2M	91		411	411	44			32	68				100	40	19	620	2.98	.7
NF			3M	9		40	40	4		100						100	40	9	120	0.92	.3
NF Totals				1		451	451	48		9	29	62				100	40	16	453	2.29	1.0
Totals					1.4	50,189	49,503	5,247	0	18	30	52	1	1	1	96	35	11	230	1.38	215.2

TC PLOGSTVB			Log Stock Table - MBF																	
T04N R06W S25 Ty00MC 106.00					Project: FRNCHDP Acres 106.00										Page 1 Date 10/14/2019 Time 12:48:28PM					
Spp	S T	So Gr rt de	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	18	15		15	.3							15						
DF		2M	34	26		26	.5							26						
DF		2M	40	4,217	1.6	4,148	81.0						382	896	1531	1071	268			
DF		3M	20	4		4	.1					4								
DF		3M	28	5		5	.1			4	2									
DF		3M	32	18		18	.4			18										
DF		3M	34	19		19	.4			17	2									
DF		3M	36	28		28	.5			16	7	5								
DF		3M	38	28		28	.6			3	21	5								
DF		3M	40	725		722	14.1			122	209	390								
DF		4M	12	12		12	.2			10	1									
DF		4M	14	4		4	.1			4										
DF		4M	16	9		9	.2			8	1									
DF		4M	18	5		5	.1			5										
DF		4M	20	10		10	.2		6	4										
DF		4M	22	7		7	.1			7										
DF		4M	24	15		15	.3			15										
DF		4M	26	16		16	.3			16										
DF		4M	28	11		11	.2			11										
DF		4M	30	6		6	.1			6										
DF		4M	32	4		4	.1		4											
DF		4M	40	7		7	.1		7											
DF		Totals		5,189	1.4	5,118	97.5		16	265	243	404	382	896	1572	1071	268			
WH		2M	40	36	2.7	35	62.8					10		25						
WH		3M	40	20		20	34.5				5			15						
WH		4M	24	1		1	2.7			1										
WH		Totals		58	1.7	57	1.1			1	5	10		41						
RC		3M	40	15		15	60.2					15								
RC		4M	16	8		8	33.1				8									
RC		4M	20	2		2	6.7			2										
RC		Totals		25		25	.5			2	8	15								
NF		2M	40	44		44	91.2							14		30				
NF		3M	40	4		4	8.8				4									

## Log Stock Table - MBF

T04N R06W S25 Ty00MC 106.00

Project: FRNCHDP  
Acres 106.00Page 2  
Date 10/14/2019  
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S Spp	T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spe	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+
NF		Totals		48		48	.9				4				14	30			
Total		All Species		5,320	1.4	5,247	100.0		16	268	260	420	392	896	1627	1100	268		

**VOLUME SUMMARY**  
(Volumes in MBF)  
**French Dip**  
**FG-341-2020-W00230-01**

**November 2019**

**AREA 1: MC (97 ACRES)**

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	3,356	817	109	4,282
	Hidden D&B (2%)	(67)	(16)	(2)	(85)
	<b>NET TOTAL</b>	3,289	801	107	4,197
	% of Total	78	19	3	
Western hemlock	Cruise Volume	49	8	1	58
	Hidden D&B (2%)	(1)	(0)	(0)	(1)
	<b>NET TOTAL</b>	48	8	1	57
	% of Total	84	14	2	

**AREA 2: MC (106 ACRES)**

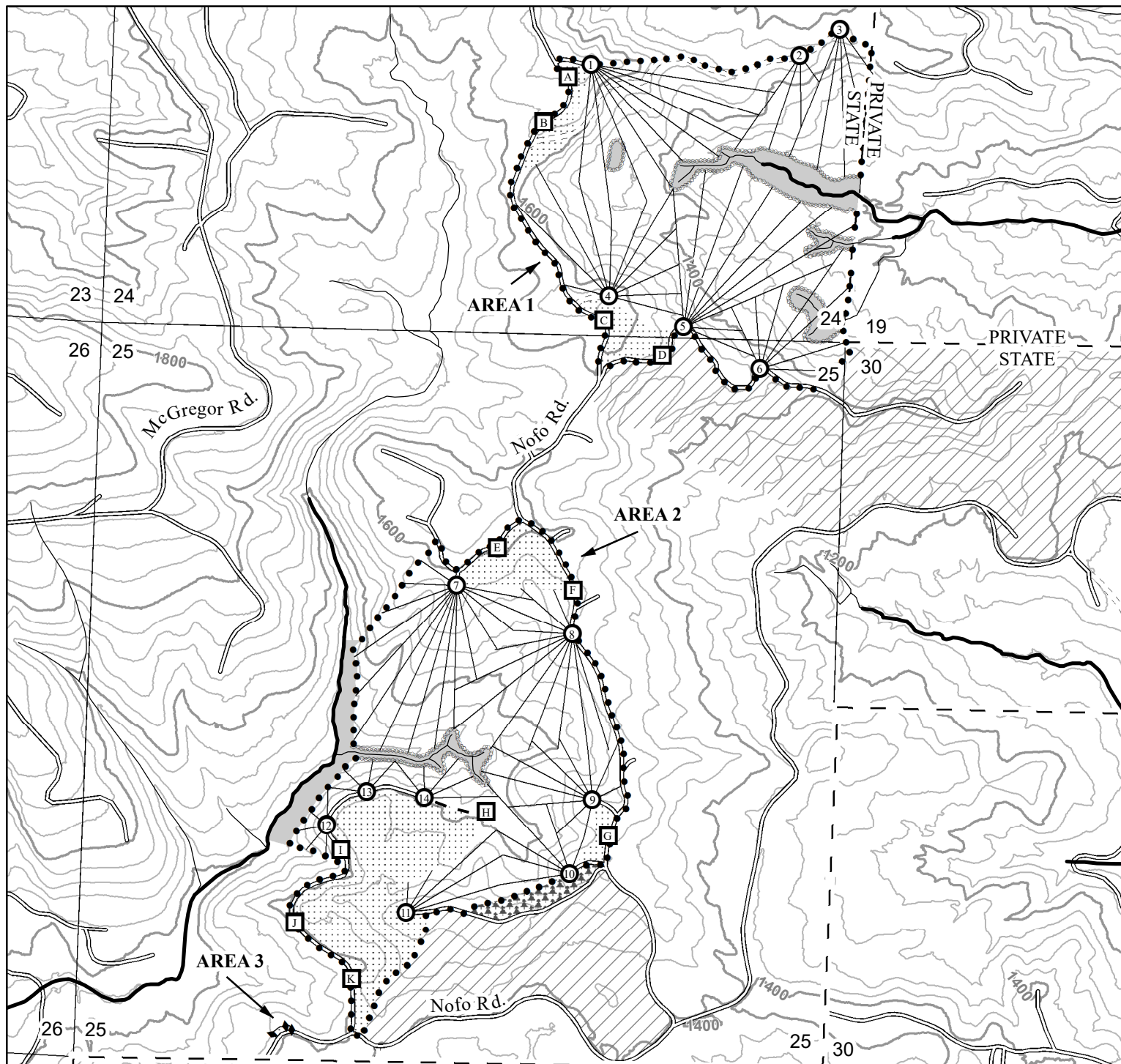
SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	4,189	825	104	5,118
	Hidden D&B (2%)	(84)	(17)	(2)	(103)
	<b>NET TOTAL</b>	4,105	808	102	5,015
	% of Total	82	16	2	
Western hemlock	Cruise Volume	35	20	1	56
	Hidden D&B (2%)	(1)	(0)	(0)	(1)
	<b>NET TOTAL</b>	34	20	1	55
	% of Total	62	36	2	
Noble fir	Cruise Volume	44	4	0	48
	Hidden D&B (2%)	(1)	(0)	(0)	(1)
	<b>NET TOTAL</b>	43	4	0	47
	% of Total	91	9	0	

**AREA 3: R/W (2 ACRES)**

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	18	4	1	23
	Hidden D&B (2%)	(0)	(0)	(0)	(0)
	<b>NET TOTAL</b>	18	4	1	23
	% of Total	78	17	5	

**SALE TOTAL**

SPECIES	2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	7,412	1,613	210	9,235
Western hemlock	82	28	2	112
Noble fir	43	4	0	47
Total	7,537	1,645	212	9,394



### Legend

- ● Timber Sale Boundary
- ▤ Stream Buffer Boundary
- ◆ Right of Way Boundary
- ▤ ODF Ownership Boundary
- Surfacted Road
- - - Unsurfaced Road
- - - New Road Construction
- ▤ Cable Yarding Area
- ▤ Tractor Yarding Area
- Cable Landing
- Tractor Landing
- Type-F Stream
- Type-N Stream
- ▤ Stream Buffer
- ▤ Green Tree Retention
- ▤ Reforestation Area
- ▤ Section Line
- ▤ 40 Foot Contour Band
- ▤ 200 Foot Contour Band

## LOGGING PLAN

FOR TIMBER SALE CONTRACT FG-341-2020-W00230-01  
FRENCH DIP  
PORTIONS OF SECTIONS 21, 24, 25, 28 & 30, T4N, R6W, W.M.,  
CLATSOP COUNTY, OREGON

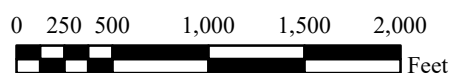
Forest Grove District GIS

November, 2019

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

1:12,000

1 inch = 1,000 feet



### APPROXIMATE NET ACRES

	TRACTOR	CABLE
AREA 1	6	91
AREA 2	30	76
AREA 3	2	0
<b>TOTAL</b>	<b>38</b>	<b>167</b>