



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Electric Horseman
Sale FG-341-2020-W00257-01

District: Forest Grove

Date: September 12, 2019

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,322,101.20	\$1,853.73	\$1,323,954.93
		Project Work:	(\$74,535.00)
		Advertised Value:	\$1,249,419.93



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Date: September 12, 2019

Timber Description

Location: Portions of Sections 2 & 3, T1N, R6W, W.M. Tillamook County, Oregon, Tax Code 56.

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	18	0	98
Western Hemlock / Fir	20	0	98
Alder (Red)	15	0	95

Volume by Grade	2S	3S & 4S 6"-11"	Camprun	Total
Douglas - Fir	1,680	1,320	0	3,000
Western Hemlock / Fir	12	18	0	30
Alder (Red)	0	0	9	9
Total	1,692	1,338	9	3,039

Comments: Pond Values Used: Local Pond Values, July 2019.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$714.69/\text{MBF} = \$936/\text{MBF} - \$221.31/\text{MBF}$

Noble fir and Other conifers Stumpage Price = Pond Value minus Logging Cost:
 $\$333.04/\text{MBF} = \$551.60/\text{MBF} - \$218.56/\text{MBF}$

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 Block/Rip Non-Project Roads:

10 hours x \$100/hour = \$1,000

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: 25 acres x \$200/acre = \$5,000

Recreation Trail Cleaning and Repair: 1,500' @ \$1.00/foot = \$1,500

TOTAL Other Costs (No Profit & Risk added) = \$15,000

ROAD MAINTENANCE

Move-in: \$4,000

General Road Maintenance: 6 miles x \$1,200/mile = \$7,200

TOTAL Road Maintenance: \$11,200/3,039 MBF = \$3.69/MBF



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Logging Conditions

Combination#: 1

Douglas - Fir	56.87%
Western Hemlock / Fir	72.80%
Alder (Red)	49.00%

Logging System: Shovel **Process:** Stroke Delimber

yarding distance: Medium (800 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: \$68.96

machines: Stroke Delimber (B)

Combination#: 2

Douglas - Fir	43.13%
Western Hemlock / Fir	27.20%
Alder (Red)	51.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber

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

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

loads / day: 8 **bd. ft / load:** 4600

cost / mbf: \$163.04

machines: Log Loader (A)
Stroke Delimber (A)
Tower Yarder (Medium)



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Logging Costs

Operating Seasons: 2.00	Profit Risk: 15%
Project Costs: \$74,535.00	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$15,000.00

Miles of Road

Road Maintenance: \$3.69

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	3.0	4.6
Western Hemlock / Fir	\$0.00	3.0	3.9
Alder (Red)	\$0.00	2.0	2.8



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Electric Horseman Sale FG-341-2020-W00257-01

District: Forest Grove

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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									
\$109.54	\$3.76	\$2.89	\$70.22	\$0.00	\$27.96	\$0.00	\$2.00	\$4.94	\$221.31
Western Hemlock / Fir									
\$94.55	\$3.76	\$2.89	\$82.82	\$0.00	\$27.60	\$0.00	\$2.00	\$4.94	\$218.56
Alder (Red)									
\$116.94	\$3.87	\$2.89	\$178.12	\$0.00	\$45.27	\$0.00	\$2.00	\$4.94	\$354.03

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$658.68	\$437.37	\$0.00
Western Hemlock / Fir	\$0.00	\$551.60	\$333.04	\$0.00
Alder (Red)	\$0.00	\$560.00	\$205.97	\$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
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,000	\$437.37	\$1,312,110.00
Western Hemlock / Fir	30	\$333.04	\$9,991.20
Alder (Red)	9	\$205.97	\$1,853.73

Gross Timber Sale Value

Recovery: \$1,323,954.93

Prepared By: Kenton Burns

Phone: 503-359-7477

PROJECT COST SUMMARY SHEET

Timber Sale: Electric Horseman
Sale Number: FG-341-2020-W00257-01

PROJECT NO. 1: ROCKED ROAD CONSTRUCTION

Road Segment	Length	Cost
G to H	7+80	\$8,591.36
I to J	1+60	\$3,623.71
	9+40 stations	
	0.18 miles	
Total Rock =		
603 cy	3" - 0	
300 cy	Jaw-run	
	Move-in =	\$3,625.32

TOTAL PROJECT NO. 1 COST = \$15,840.39

PROJECT NO. 2: DIRT ROAD CONSTRUCTION AND RECONSTRUCTION

Road Segment	Length	Cost
A to B	1+36	\$1,532.86
C to D	5+05	\$2,672.96
E to F	8+50	\$4,389.96
K to L	10+00	\$1,802.44
	24+91 stations	
	0.47 miles	
Total Rock =		
24 cy	1½" - 0	
	Move-in =	\$2,551.14

TOTAL PROJECT NO. 2 COST = \$12,949.36

PROJECT NO. 3: ROAD VACATING & BLOCKING

Road Segment	Length	Cost
A to B	1+36	\$1,503.00
C to D	5+05	\$195.00
E to F	8+50	\$1,192.25
K to L	10+00	\$55.00
	24+91 stations	
	0.47 miles	

TOTAL PROJECT NO. 3 COST = \$2,945.25

PROJECT NO. 4: ROAD BRUSHING

TOTAL PROJECT NO. 4 COST = \$42,800.00

TOTAL CREDITS \$74,535.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Electric Horseman
Road Segment: A to B

Sale Number: FG-341-2020-W00257-01
Construction: 1+36 stations
0.03 miles

PROJECT NO. 2

CONSTRUCTION

Clearing & grubbing (scatter)	0.10	ac @	\$1,078.00	per ac =	\$107.80
Balanced road construction	1.36	sta @	\$110.00	per sta =	\$149.60
70' Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	1.36	sta @	\$36.00	per sta =	\$48.96

TOTAL CONSTRUCTION COSTS = \$620.36

CULVERTS

Culverts and Bands					
18" Diameter	40	LF @	\$20.00	per LF =	\$800.00
Markers & Stakes					
Culvert markers	1	ea @	\$10.00	per ea =	\$10.00

TOTAL CULVERT COSTS = \$810.00

EROSION CONTROL

Winterization blocking	1	ea @	\$50.00	per ea =	\$50.00
Winterization waterbarring	1	ea @	\$27.50	per ea =	\$27.50
Grass seed & fertilizer	0.05	ac @	\$500.00	per ac =	\$25.00

TOTAL EROSION CONTROL COSTS = \$102.50

TOTAL PROJECT NO. 2 COST = \$1,532.86

PROJECT NO. 3

Construct tank traps	1	ea @	\$55.00	per ea =	\$55.00
Construct waterbars	1	ea @	\$27.50	per ea =	\$27.50
Rip dirt road surface	1.36	sta @	\$50.00	per sta =	\$68.00
Remove existing culverts	1	ea @	\$150.00	per ea =	\$150.00
Grass seed & fertilizer	0.10	ac @	\$425.00	per ac =	\$42.50
Mulch	0.10	ac @	\$600.00	per ac =	\$60.00
Equipment move-in, within area move, & cleaning					\$1,100.00

TOTAL PROJECT NO. 3 COST = \$1,503.00

TOTAL PROJECT COST = \$3,035.86

SUMMARY OF CONSTRUCTION COST

Timber Sale: Electric Horseman
 Road Segment: C to D

Sale Number: FG-341-2020-W00257-01
 Construction: 5+05 stations
0.10 miles

PROJECT NO. 2

CONSTRUCTION

Clearing & grubbing (scatter)	0.47	ac @	\$1,078.00	per ac =	\$506.66
Balanced road construction	5.05	sta @	\$110.00	per sta =	\$555.50
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
70' Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	5.05	sta @	\$36.00	per sta =	\$181.80

TOTAL CONSTRUCTION COSTS = \$1,640.46

CULVERTS

Culverts and Bands					
18" Diameter	40	LF @	\$20.00	per LF =	\$800.00
Markers & Stakes					
Culvert markers	1	ea @	\$10.00	per ea =	\$10.00

TOTAL CULVERT COSTS = \$810.00

EROSION CONTROL

Winterization blocking	1	ea @	\$50.00	per ea =	\$50.00
Winterization waterbarring	2	ea @	\$27.50	per ea =	\$55.00
Grass seed & fertilizer	0.24	ac @	\$500.00	per ac =	\$117.50

TOTAL EROSION CONTROL COSTS = \$222.50

TOTAL PROJECT NO. 2 COST = \$2,672.96

PROJECT NO. 3

Block road	1	ea @	\$140.00	per ea =	\$140.00
Construct waterbars	2	ea @	\$27.50	per ea =	\$55.00

TOTAL PROJECT NO. 3 COST = \$195.00

TOTAL PROJECT COST = \$2,867.96

SUMMARY OF CONSTRUCTION COST

Timber Sale: Electric Horseman
Road Segment: E to F

Sale Number: FG-341-2020-W00257-01
Construction: 8+50 stations
0.16 miles

PROJECT NO. 2

CONSTRUCTION

Clearing & grubbing (scatter)	0.49	ac @	\$1,078.00	per ac =	\$528.22
Balanced road construction	8.50	sta @	\$110.00	per sta =	\$935.00
Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
70' Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	8.50	sta @	\$36.00	per sta =	\$306.00

TOTAL CONSTRUCTION COSTS = \$2,231.72

CULVERTS

Culverts and Bands

18" Diameter	35	LF @	\$20.00	per LF =	\$700.00
24" Diameter	35	LF @	\$29.00	per LF =	\$1,015.00

Markers & Stakes

Culvert markers	2	ea @	\$10.00	per ea =	\$20.00
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TOTAL CULVERT COSTS = \$1,735.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$0.80	\$5.71	\$0.50	24	\$168.24
Subtotal =					24	\$168.24

Totals

All Rock =	24
1½" - 0 =	24

TOTAL ROCK COSTS = \$168.24

EROSION CONTROL

Winterization blocking	1	ea @	\$50.00	per ea =	\$50.00
Winterization waterbarring	3	ea @	\$27.50	per ea =	\$82.50
Grass seed & fertilizer	0.25	ac @	\$500.00	per ac =	\$122.50

TOTAL EROSION CONTROL COSTS = \$255.00

TOTAL PROJECT NO. 2 COST = \$4,389.96

PROJECT NO. 3

Construct tank traps	1	ea @	\$55.00	per ea =	\$55.00
Construct waterbars	2	ea @	\$27.50	per ea =	\$55.00
Rip dirt road surface	6.00	sta @	\$50.00	per sta =	\$300.00
Grass seed & fertilizer	0.49	ac @	\$425.00	per ac =	\$208.25
Mulch	0.49	ac @	\$600.00	per ac =	\$294.00
Reestablish trail	2.00	hrs @	\$140.00	per hr =	\$280.00

TOTAL PROJECT NO. 3 COST = \$1,192.25

TOTAL PROJECT COST = \$5,582.21

SUMMARY OF CONSTRUCTION COST

Timber Sale: Electric Horseman
 Road Segment: G to H

Sale Number: FG-341-2020-W00257-01
 Construction: 7+80 stations
0.15 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	0.72	ac @	\$1,078.00	per ac =	\$776.16
Balanced road construction	7.80	sta @	\$110.00	per sta =	\$858.00
End-haul					
Excavate & load	200	cy @	\$1.64	per cy =	\$328.00
Haul	260	cy @	\$2.83	per cy =	\$735.80
Compact waste area	260	cy @	\$0.30	per cy =	\$78.00
Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
70' Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	7.80	sta @	\$36.00	per sta =	\$280.80

TOTAL CONSTRUCTION COSTS = \$3,519.26

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	3" - 0 =	\$0.80	\$5.93	\$1.22	414	\$3,291.30
Junction	3" - 0 =	\$0.80	\$5.93	\$1.22	30	\$238.50
Turnout	3" - 0 =	\$0.80	\$5.93	\$1.22	24	\$190.80
Turnaround	3" - 0 =	\$0.80	\$5.93	\$1.22	20	\$159.00
70' Landing	Jaw-run =	\$0.80	\$5.93	\$1.22	150	\$1,192.50
				Subtotal =	638	\$5,072.10

Totals

All Rock =	638
3" - 0 =	488
Jaw-run =	150

TOTAL ROCK COSTS = \$5,072.10

TOTAL PROJECT NO. 1 COST = \$8,591.36

SUMMARY OF CONSTRUCTION COST

Timber Sale: Electric Horseman
 Road Segment: I to J

Sale Number: FG-341-2020-W00257-01
 Construction: 1+60 stations
0.03 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	0.12	ac @	\$1,078.00	per ac =	\$129.36
Balanced road construction	1.60	sta @	\$110.00	per sta =	\$176.00
70' Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	1.60	sta @	\$36.00	per sta =	\$57.60

TOTAL CONSTRUCTION COSTS = \$676.96

CULVERTS

Culverts and Bands					
18" Diameter	40	LF @	\$20.00	per LF =	\$800.00
Markers & Stakes					
Culvert markers	1	ea @	\$10.00	per ea =	\$10.00

TOTAL CULVERT COSTS = \$810.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	3" - 0 =	\$0.80	\$5.93	\$1.22	85	\$675.75
Junction	3" - 0 =	\$0.80	\$5.93	\$1.22	30	\$238.50
70' Landing	Jaw-run =	\$0.80	\$5.93	\$1.22	150	\$1,192.50
				Subtotal =	265	\$2,106.75

Totals

All Rock =	265
3" - 0 =	115
Jaw-run =	150

TOTAL ROCK COSTS = \$2,106.75

EROSION CONTROL

Grass seed & fertilizer	0.06	ac @	\$500.00	per ac =	\$30.00
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TOTAL EROSION CONTROL COSTS = \$30.00

TOTAL PROJECT NO. 1 COST = \$3,623.71

SUMMARY OF CONSTRUCTION COST

Timber Sale: Electric Horseman
 Road Segment: K to L

Sale Number: FG-341-2020-W00257-01
 Construction: 10+00 stations
0.19 miles

PROJECT NO. 2

RECONSTRUCTION

Clearing & grubbing (scatter)	0.23	ac @	\$1,078.00	per ac =	\$247.94
Balanced road construction	10.00	sta @	\$82.50	per sta =	\$825.00
Clean culvert inlet & outlet	3	ea @	\$25.00	per ea =	\$75.00
50' Landing	1	ea @	\$220.00	per ea =	\$220.00
Grade & roll (outslope)	10.00	sta @	\$32.20	per sta =	\$322.00

TOTAL CONSTRUCTION COSTS = \$1,689.94

EROSION CONTROL

Winterization blocking	1	ea @	\$55.00	per ea =	\$55.00
Grass seed & fertilizer	0.12	ac @	\$500.00	per ac =	\$57.50

TOTAL EROSION CONTROL COSTS = \$112.50

TOTAL PROJECT NO. 2 COST = \$1,802.44

PROJECT NO. 3

Road blocking	1	ea @	\$55.00	per ea =	\$55.00
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TOTAL PROJECT NO. 3 COST = \$55.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Electric Horseman Timber Sale No. : FG-341-2020-W00257-01

PROJECT NO. 4:

Road Brushing

<u>Brush Density</u>	<u>miles @</u>	<u>\$ per mile =</u>	
Light	26.93	\$850.00	\$22,890.50
Moderate	8.94	\$1,100.00	\$9,834.00
Heavy	6.16	\$1,550.00	\$9,548.00

Total Miles= 42.03

Move In & Within Area Move

Brush Cutter \$527.50

TOTAL COST PROJECT NO. 4 = \$42,800.00

Timber Sale: Electric Horseman

Sale Number: FG-341-2020-W00257-01

<u>Equipment</u>	<u>Total</u>
Grader	\$785.22
Loader into Stockpile Site	\$647.94
Roller (smooth/grid) & Compactor	\$522.69
Excavator (Large) - Equipment Cleaning	\$1,785.22
Dozer (Large) - Equipment Cleaning	\$1,829.80
Dump Trucks (10cy +)	\$466.53
Water Truck (1,500 Gal)	\$139.06
<u>TOTAL MOVE-IN COSTS =</u>	<u>\$6,176.46</u>

CRUISE REPORT
Electric Horseman
FG-341-2020-W00257-01

1. LOCATION: Portions of Sections 2 & 3, T1N, R6W, W.M., Tillamook County, Oregon.

2. CRUISE DESIGN: Pre-cruise evaluation indicated that the stand's average DBH is approximately 16 inches with a Coefficient of Variation of 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. Statistical analysis indicated that 38 variable radius plots utilizing a 40 BAF prism would produce an adequate sample size.

3. SAMPLING METHOD: The Timber Sale Area was cruised in July, 2019. The Timber Sale Area was sampled with 38 variable radius grade plots laid out on a 5 chain x 5 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS: 174 trees were measured and graded producing a cumulative Sampling Error of 10.9% on the Basal Area and 11.8% 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. For conifers, bole heights were calculated to a six inch top. For hardwoods, bole heights were calculated to a seven 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:** For conifers, two percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage. For hardwoods, five 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:

 8/15/19
Name Date

Reviewed by:

 8/15/19
Name Date

TC PSTATS			PROJECT STATISTICS						PAGE	1		
			PROJECT		HORSEWO				DATE	7/24/2019		
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
01N	06	03	00A1	00MC		105.00	38	174	S	W		
01N	06W	03	00A2	00MC								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			38	174	4.6							
CRUISE			38	174	4.6	11,416	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			170	106.0	17.6	104	42.8	179.6	29,423	29,147	6,956	6,956
WHEMLOCK			2	1.0	19.5	99	0.5	2.0	291	291	76	76
R ALDER			2	1.7	15.2	69	0.6	2.2	97	85	34	34
TOTAL			174	108.7	17.6	104	43.8	183.8	29,810	29,523	7,066	7,066
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			89.4	6.9	453	486	519					
WHEMLOCK			79.9	74.8	116	460	804					
R ALDER			38.6	36.1	35	55	75					
TOTAL			90.1	6.8	448	481	513	324	81	36		
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			80.7	6.2	105	112	119					
WHEMLOCK			82.4	77.2	28	122	215					
R ALDER			3.8	3.6	19	20	21					
TOTAL			81.2	6.1	104	111	118	263	66	29		
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			84.5	13.7	92	106	121					
WHEMLOCK			507.1	82.2	0	1	2					
R ALDER			616.4	99.9	0	2	3					
TOTAL			81.5	13.2	94	109	123	265	66	29		
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			70.4	11.4	159	180	200					
WHEMLOCK			431.3	69.9	1	2	3					
R ALDER			616.4	99.9	0	2	4					
TOTAL			67.5	10.9	164	184	204	182	45	20		
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			74.2	12.0	25,643	29,147	32,651					
WHEMLOCK			430.9	69.8	88	291	494					
R ALDER			616.4	99.9	0	85	171					
TOTAL			72.6	11.8	26,049	29,523	32,997	210	53	23		
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			72.1	11.7	6,144	6,956	7,769					
WHEMLOCK			430.3	69.7	23	76	128					

PROJECT STATISTICS							PAGE	2		
TC PSTATS		PROJECT		HORSEWO			DATE	7/24/2019		
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
01N	06	03	00A1	00MC	105.00	38	174	S	W	
01N	06W	03	00A2	00MC						
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	
R ALDER			616.4	99.9	0	34	68			
TOTAL			70.1	11.4	6,263	7,066	7,869	196	49	22

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																
<div>T01N R06W S03 Ty00MC88.00 T01N R06W S03 Ty00MC17.00</div>				<div>Project: HORSEWO Acres105.00</div>												<div>Page1 Date7/24/2019 Time1:56:01PM</div>				
S Spp	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														16	7		0.00	2.6	
DF	2M	56	1.2	16,516	16,326	1,714			58	42		0		100	40	15	351	1.94	46.5	
DF	3M	39	.6	11,515	11,450	1,202		96	2	3	0	1	4	95	39	8	101	0.67	113.7	
DF	4M	5	1.5	1,392	1,371	144	9	91			55	42	3		19	6	22	0.32	62.1	
DF	Totals	99	.9	29,423	29,147	3,060	0	42	33	25	3	3	2	93	33	9	130	0.92	225.0	
RA	CU														14	13		0.00	.5	
RA	R	100	12.1	97	85	9		100				100			29	8	50	0.67	1.7	
RA	Totals	0	12.1	97	85	9		100				100			26	9	38	0.58	2.3	
WH	2M	38		113	113	12				100				100	40	19	600	3.61	.2	
WH	3M	62		178	178	19		100					22	78	36	8	102	0.76	1.7	
WH	Totals	1		291	291	31		61		39			13	87	37	9	151	1.07	1.9	
Totals			1.0	29,810	29,523	3,100	0	42	33	25	3	3	2	93	33	9	129	0.92	229.2	

TC PLOGSTVB		Log Stock Table - MBF																	
T01N R06W S03 Ty00MC 88.00 T01N R06W S03 Ty00MC 17.00		Project: HORSEWO										Page 1							
		Acres 105.00										Date 7/24/2019							
												Time 1:56:00PM							
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
DF		2M	22		8		8	.3						8					
DF		2M	40		1,726	1.2	1,706	55.7					451	405	494	229	128		
DF		3M	20		1		1	.0			1								
DF		3M	24		4		4	.1			4								
DF		3M	26		1		1	.0			1								
DF		3M	28		2		2	.1			1	1							
DF		3M	30		7		7	.2			4	3							
DF		3M	32		22		22	.7			17	5							
DF		3M	34		27		27	.9			20	6							
DF		3M	36		38	1.9	38	1.2			13	18	7						
DF		3M	38		22		22	.7			5	14	4						
DF		3M	40		1,084		1,078	35.2			267	314	444	13	6	7	15	13	
DF		4M	12		11		11	.4		4	8								
DF		4M	14		15		15	.5			15								
DF		4M	16		13		13	.4		3	9	1							
DF		4M	18		18		18	.6		2	16								
DF		4M	20		22		22	.7			22								
DF		4M	22		15		15	.5			15								
DF		4M	24		11		11	.4			10	1							
DF		4M	26		12		12	.4			12								
DF		4M	28		12		12	.4		2	9								
DF		4M	30		12	12.8	10	.3			10								
DF		4M	32		1		1	.0		1									
DF		4M	34		5	15.2	4	.1			4								
DF		Totals			3,089		3,060	98.7		12	458	368	455	463	411	509	244	140	
RA		R	29		6	20.0	5	55.0			5								
RA		R	30		4		4	45.0			4								
RA		Totals			10	12.1	9	.3			5	4							
WH		2M	40		12		12	38.9						12					
WH		3M	32		4		4	13.3			4								
WH		3M	40		15		15	47.8			2	12							
WH		Totals			31		31	1.0			4	2	12		12				
Total		All Species			3,130		3,100	100.0		12	467	375	467	463	411	520	244	140	

TC		PSTNDSUM										Stand Table Summary										Page		1				
																						Date:		7/24/2019				
<div>T01N R06W S03 Ty00MC88.00</div> <div>T01N R06W S03 Ty00MC17.00</div>					Project										HORSEWO										Time:		1:56:02PM	
					Acres										105.00										Grown Year:			
S Spec	T	Tot				Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Net Bd.Ft.	Totals														
		Sample DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Cu.Ft.	Tons/ Acre	Cu.Ft. Acre		Bd.Ft. Acre	Tons	Cunits	MBF											
DF		8	2	87	73	6.196	2.16	6.20	4.6	20.0	.82	29	124	86	30	13												
DF		10	2	87	93	3.965	2.16	3.97	12.8	60.0	1.44	51	238	151	53	25												
DF		11	6	85	81	9.358	6.18	12.40	12.4	47.9	4.39	154	594	461	162	62												
DF		12	8	85	101	10.816	8.50	21.63	12.5	50.7	7.73	271	1,097	812	285	115												
DF		13	5	88	86	5.697	5.25	9.22	15.9	59.8	4.17	146	551	437	153	58												
DF		14	6	86	97	5.923	6.33	11.85	16.9	67.8	5.71	200	803	600	210	84												
DF		15	6	85	106	5.287	6.49	10.57	21.9	88.3	6.60	231	934	693	243	98												
DF		16	12	87	106	9.182	12.82	18.36	24.7	103.1	12.95	454	1,894	1,360	477	199												
DF		17	14	86	104	9.506	14.98	20.38	26.2	104.9	15.21	534	2,137	1,597	561	224												
DF		18	12	86	112	7.255	12.82	15.73	30.9	119.4	13.88	487	1,879	1,457	511	197												
DF		19	11	88	113	5.883	11.58	15.06	30.3	121.1	13.01	457	1,824	1,366	479	191												
DF		20	11	88	118	5.453	11.90	15.37	32.2	132.9	14.11	495	2,042	1,482	520	214												
DF		21	9	87	119	3.981	9.58	10.60	37.3	152.7	11.27	395	1,618	1,183	415	170												
DF		22	7	86	120	2.868	7.57	7.37	41.9	178.3	8.80	309	1,315	924	324	138												
DF		23	6	85	123	2.195	6.33	6.21	43.8	186.6	7.75	272	1,159	814	286	122												
DF		24	8	86	125	2.605	8.18	7.81	45.4	194.2	10.12	355	1,517	1,062	373	159												
DF		25	3	84	130	.906	3.09	2.72	48.4	204.7	3.75	132	556	394	138	58												
DF		26	7	86	126	2.053	7.57	6.16	54.4	230.0	9.55	335	1,417	1,002	352	149												
DF		27	5	86	130	1.321	5.25	3.96	60.0	261.6	6.78	238	1,037	712	250	109												
DF		28	4	84	125	.975	4.17	2.93	62.6	263.3	5.22	183	770	548	192	81												
DF		29	6	86	136	1.346	6.18	4.04	72.9	337.9	8.39	295	1,365	881	309	143												
DF		30	3	84	120	.661	3.24	1.98	69.4	298.9	3.92	138	593	412	144	62												
DF		31	2	85	124	.413	2.16	1.24	75.8	331.7	2.68	94	411	281	99	43												
DF		32	2	80	138	.387	2.16	1.16	85.1	365.0	2.82	99	424	296	104	45												
DF		33	2	84	129	.364	2.16	1.09	88.9	401.7	2.77	97	439	291	102	46												
DF		34	1	87	139	.172	1.08	.51	102.9	503.3	1.51	53	259	158	56	27												
DF		35	1	83	128	.138	.93	.42	97.5	413.3	1.15	41	172	121	43	18												
DF		36	3	84	131	.415	2.93	1.24	106.5	487.9	3.78	133	607	397	139	64												
DF		37	1	83	137	.124	.93	.37	115.8	560.0	1.23	43	208	129	45	22												
DF		38	2	85	139	.235	1.85	.70	125.6	600.0	2.52	89	423	265	93	44												
DF		39	1	87	129	.130	1.08	.39	126.9	653.3	1.41	50	256	148	52	27												
DF		40	1	84	137	.124	1.08	.37	137.2	646.7	1.45	51	240	153	54	25												
DF		41	1	83	158	.101	.93	.30	158.5	806.7	1.37	48	244	144	50	26												
DF		Totals	170	86	104	106.035	179.62	222.33	31.3	131.1	198.26	6,956	29,147	20,817	7,304	3,060												
WH		16	1	86	98	.775	1.08	1.55	25.4	100.0	1.26	39	155	132	41	16												
WH		30	1	82	104	.188	.93	.38	96.2	360.0	1.16	36	136	122	38	14												
WH		Totals	2	85	99	.963	2.01	1.93	39.2	150.9	2.42	76	291	254	79	31												
RA		13	1	73	62	1.173	1.08	1.17	19.4	40.0	.63	23	47	66	24	5												
RA		19	1	74	83	.549	1.08	.55	20.5	70.0	.31	11	38	32	12	4												
RA		Totals	2	73	69	1.722	2.16	1.72	19.7	49.6	.93	34	85	98	36	9												
Totals		174	86	104		108.720	183.79	225.98	31.3	130.6	201.61	7,066	29,523	21,169	7,419	3,100												

TC PSTATS			PROJECT STATISTICS					PAGE 1			
			PROJECT		HORSEWO			DATE 7/24/2019			
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt
01N	06	03	00A1	00MC		88.00		31	146	S	W
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES		PERCENT SAMPLE TREES			
TOTAL			31	146	4.7						
CRUISE			31	146	4.7	10,122		1.4			
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			143	112.0	17.4	105	44.3	184.5	29,681	29,424	7,084
R ALDER			2	2.1	15.2	69	0.7	2.6	116	102	41
WHEMLOCK			1	.9	16.0	98	0.3	1.3	185	185	47
TOTAL			146	115.0	17.3	104	45.3	188.4	29,981	29,711	7,172
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			82.5	6.9	401	430	460				
R ALDER			38.6	36.1	35	55	75				
WHEMLOCK											
TOTAL			83.7	6.9	394	424	453	280	70	31	
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			74.9	6.3	95	101	107				
R ALDER			3.8	3.6	19	20	21				
WHEMLOCK											
TOTAL			75.9	6.3	93	100	106	230	57	26	
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			81.8	14.7	96	112	128				
R ALDER			556.8	99.9	0	2	4				
WHEMLOCK			556.8	99.9	0	1	2				
TOTAL			78.7	14.1	99	115	131	247	62	27	
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			71.2	12.8	161	185	208				
R ALDER			556.8	99.9	0	3	5				
WHEMLOCK			556.8	99.9	0	1	3				
TOTAL			68.7	12.3	165	188	212	189	47	21	
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			77.0	13.8	25,361	29,424	33,487				
R ALDER			556.8	99.9	0	102	204				
WHEMLOCK			556.8	99.9	0	185	369				
TOTAL			75.9	13.6	25,664	29,711	33,757	230	57	26	
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			74.0	13.3	6,143	7,084	8,025				
R ALDER			556.8	99.9	0	41	81				

PROJECT STATISTICS								PAGE	2
TC PSTATS		PROJECT		HORSEWO		DATE		7/24/2019	
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
01N	06	03	00A1	00MC	88.00	31	146	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		556.8	99.9	0	47	94			
TOTAL		72.7	13.0	6,236	7,172	8,107	211	53	23

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																
<div>T01N R06W S03 Ty00MC88.00</div>						Project: HORSEWO										Page 1				
						Acres 88.00										Date 7/24/2019 Time 1:58:09PM				
S Spp	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														18	5		0.00	2.8	
DF	2M	53	1.2	15,867	15,679	1,380			63	37				100	40	15	337	1.88	46.6	
DF	3M	42	.5	12,369	12,309	1,083		97	2	1	0	1	4	95	39	8	101	0.67	122.3	
DF	4M	5	.6	1,444	1,436	126	8	92			56	40	4		19	6	22	0.31	66.0	
DF Totals		99	.9	29,681	29,424	2,589	0	45	34	20	3	2	2	93	33	9	124	0.89	237.7	
RA		CU													14	13		0.00	.7	
RA		R	100	12.1	116	102	9	100			100				29	8	50	0.67	2.1	
RA Totals		0	12.1	116	102	9	100				100				26	9	38	0.58	2.7	
WH		3M	100		185	185	16	100					25	75	36	8	100	0.70	1.8	
WH Totals		1		185	185	16	100						25	75	36	8	100	0.70	1.8	
Totals			0.9	29,981	29,711	2,615	0	46	34	20	3	3	2	93	33	9	123	0.89	242.3	

TC PLOGSTVB		Log Stock Table - MBF																	
T01N R06W S03 Ty00MC 88.00				Project: HORSEWO Acres 88.00										Page 1 Date 7/24/2019 Time 1:58:08PM					
S T	Spp	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
DF		2M	40		1,396	1.2	1,380	53.3					387	359	385	194	54		
DF		3M	20		1		1	.0				1							
DF		3M	24		4		4	.2				4							
DF		3M	26		1		1	.0				1							
DF		3M	28		2		2	.1			1	1							
DF		3M	30		4		4	.2			4								
DF		3M	32		20		20	.8			15	5							
DF		3M	34		24		24	.9			18	6							
DF		3M	36		34	2.1	33	1.3			13	14	7						
DF		3M	38		22		22	.9			5	14	4						
DF		3M	40		976		972	37.5			222	301	414	13	6		15		
DF		4M	12		11		11	.4		4	7								
DF		4M	14		15		15	.6			15								
DF		4M	16		8		8	.3		1	6	1							
DF		4M	18		17		17	.7		2	15								
DF		4M	20		21		21	.8			21								
DF		4M	22		15		15	.6			15								
DF		4M	24		10		10	.4			10								
DF		4M	26		11		11	.4			11								
DF		4M	28		12		12	.5		2	9								
DF		4M	30		3		3	.1			3								
DF		4M	32		1		1	.0		1									
DF		4M	34		5	15.2	4	.2			4								
DF		Totals			2,612		2,589	99.0		10	394	347	425	400	365	385	209	54	
RA		R	29		6	20.0	5	55.0			5								
RA		R	30		4		4	45.0				4							
RA		Totals			10	12.1	9	.3			5	4							
WH		3M	32		4		4	25.0			4								
WH		3M	40		12		12	75.0					12						
WH		Totals			16		16	.6			4		12						
Total		All Species			2,638		2,615	100.0		10	403	351	437	400	365	385	209	54	

TC		PSTNDSUM		Stand Table Summary									Page		1		
													Date:		7/24/2019		
T01N R06W S03 Ty00MC 88.00				Project HORSEWO									Time:		1:58:10PM		
				Acres 88.00									Grown Year:				
S Spec	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Net		T o t a l s		
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF	
DF		8	2	87	73	7.393	2.58	7.39	4.6	20.0	.98	34	148	86	30	13	
DF		10	2	87	93	4.732	2.58	4.73	12.8	60.0	1.72	60	284	151	53	25	
DF		11	4	85	84	7.821	5.16	9.78	13.5	52.0	3.75	132	508	330	116	45	
DF		12	7	85	102	11.500	9.03	23.00	12.7	51.4	8.35	293	1,183	735	258	104	
DF		13	4	88	90	5.599	5.16	9.80	15.2	58.6	4.25	149	574	374	131	51	
DF		14	5	86	99	6.035	6.45	12.07	17.2	70.0	5.91	207	845	520	182	74	
DF		15	6	85	106	6.309	7.74	12.62	21.9	88.3	7.87	276	1,115	693	243	98	
DF		16	11	87	105	10.165	14.19	20.33	24.5	101.8	14.22	499	2,070	1,251	439	182	
DF		17	13	86	104	10.642	16.77	22.92	26.0	103.9	16.99	596	2,382	1,495	525	210	
DF		18	11	86	111	8.032	14.19	17.52	30.7	118.3	15.34	538	2,074	1,350	474	182	
DF		19	9	88	115	5.898	11.61	15.73	29.4	118.7	13.16	462	1,868	1,158	406	164	
DF		20	11	88	118	6.506	14.19	18.33	32.2	132.9	16.84	591	2,437	1,482	520	214	
DF		21	8	87	118	4.292	10.32	11.27	37.5	151.0	12.04	423	1,701	1,060	372	150	
DF		22	7	86	120	3.422	9.03	8.80	41.9	178.3	10.50	368	1,569	924	324	138	
DF		23	5	85	121	2.236	6.45	6.26	43.7	183.6	7.80	274	1,149	686	241	101	
DF		24	5	85	124	2.054	6.45	6.16	44.5	186.7	7.82	274	1,150	688	241	101	
DF		25	2	84	134	.757	2.58	2.27	51.7	216.7	3.34	117	492	294	103	43	
DF		26	7	86	126	2.450	9.03	7.35	54.4	230.0	11.39	400	1,690	1,002	352	149	
DF		27	4	85	125	1.298	5.16	3.89	58.6	249.2	6.50	228	970	572	201	85	
DF		28	3	84	121	.905	3.87	2.72	61.4	256.7	4.75	167	697	418	147	61	
DF		29	4	86	135	1.125	5.16	3.38	73.0	339.2	7.02	246	1,145	618	217	101	
DF		30	3	84	120	.789	3.87	2.37	69.4	298.9	4.68	164	707	412	144	62	
DF		31	2	85	124	.492	2.58	1.48	75.8	331.7	3.19	112	490	281	99	43	
DF		32	2	80	138	.462	2.58	1.39	85.1	365.0	3.36	118	506	296	104	45	
DF		33	2	84	129	.434	2.58	1.30	88.9	401.7	3.30	116	524	291	102	46	
DF		34	1	87	139	.205	1.29	.61	102.9	503.3	1.80	63	309	158	56	27	
DF		36	1	82	125	.183	1.29	.55	102.0	450.0	1.59	56	246	140	49	22	
DF		39	1	87	129	.156	1.29	.47	126.9	653.3	1.69	59	305	148	52	27	
DF		40	1	84	137	.148	1.29	.44	137.2	646.7	1.73	61	287	153	54	25	
DF		Totals	143	86	105	112.038	184.52	234.92	30.2	125.3	201.90	7,084	29,424	17,767	6,234	2,589	
WH		16	1	86	98	.924	1.29	1.85	25.4	100.0	1.50	47	185	132	41	16	
WH		Totals	1	86	98	.924	1.29	1.85	25.4	100.0	1.50	47	185	132	41	16	
RA		13	1	73	62	1.400	1.29	1.40	19.4	40.0	.75	27	56	66	24	5	
RA		19	1	74	83	.655	1.29	.66	20.5	70.0	.37	13	46	32	12	4	
RA		Totals	2	73	69	2.055	2.58	2.06	19.7	49.6	1.11	41	102	98	36	9	
Totals		146	86	104		115.017	188.39	238.83	30.0	124.4	204.52	7,172	29,711	17,997	6,311	2,615	

TC PSTATS			PROJECT STATISTICS							PAGE	1	
			PROJECT		HORSEWO			DATE		7/24/2019		
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt	
01N	06	03	00A2	00MC		17.00		7	28	S	W	
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES		PERCENT SAMPLE TREES				
TOTAL			7	28	4.0							
CRUISE			7	28	4.0	1,294		2.2				
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			27	75.0	19.4	102	35.0	154.3	28,086	27,715	6,294	6,294
WHEMLOCK			1	1.2	30.0	104	1.0	5.7	838	838	224	224
TOTAL			28	76.1	19.6	102	36.1	160.0	28,924	28,553	6,518	6,518
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			84.4	16.5	650	779	908					
WHEMLOCK												
TOTAL			83.1	16.0	653	777	901	286	71	32		
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			78.2	15.3	144	170	196					
WHEMLOCK												
TOTAL			76.5	14.7	145	171	196	242	61	27		
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			80.2	32.7	50	75	99					
WHEMLOCK			264.6	107.7		1	2					
TOTAL			77.0	31.3	52	76	100	275	69	31		
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			50.6	20.6	123	154	186					
WHEMLOCK			264.6	107.7		6	12					
TOTAL			43.3	17.6	132	160	188	87	22	10		
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			49.3	20.1	22,155	27,715	33,274					
WHEMLOCK			264.6	107.7		838	1,741					
TOTAL			44.0	17.9	23,438	28,553	33,668	90	22	10		
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			47.8	19.5	5,069	6,294	7,519					
WHEMLOCK			264.6	107.7		224	465					
TOTAL			41.2	16.8	5,426	6,518	7,610	79	20	9		

TC PSCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																			
T01NR06W S03 Ty00MC 17.00				Project: HORSEWO										Page 1							
				Acres 17.00										Date 7/24/2019							
														Time 2:01:25PM							
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														4	18		0.00	1.7
DF			2M	71	1.0	19,875	19,677	335			37	63		2		98	39	16	426	2.27	46.2
DF			3M	25	1.2	7,090	7,003	119		84		16		3	4	93	39	8	101	0.70	69.3
DF			4M	4	7.7	1,121	1,034	18	14	86			47	53			21	6	25	0.35	41.7
DF Totals				97	1.3	28,086	27,715	472	1	24	26	49	2	4	1	93	34	10	175	1.17	158.8
WH 2M				83		698	698	12				100				100	40	19	600	3.61	1.2
WH 3M				17		140	140	2		100						100	40	9	120	1.21	1.2
WH Totals				3		838	838	14		17		83				100	40	14	360	2.41	2.3
Totals					1.3	28,924	28,553	485	1	24	25	50	2	4	1	93	34	10	177	1.19	161.1

Log Stock Table - MBF

T01N R06W S03 Ty00MC 17.00

Project: HORSEWO
Acres 17.00Page 1
Date 7/24/2019
Time 2:01:25PM

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	22	8		8	1.8							8					
DF		2M	40	330	1.0	326	69.2					63		46	108	35	74		
DF		3M	30	3		3	.7				3								
DF		3M	32	3		3	.6			3									
DF		3M	34	2		2	.5			2									
DF		3M	36	4		4	.9				4								
DF		3M	40	108	1.4	106	22.5			44	13	30			7		13		
DF		4M	12	0		0	.1			0									
DF		4M	16	5		5	1.1		2	3									
DF		4M	18	1		1	.2			1									
DF		4M	20	2		2	.4			2									
DF		4M	24	1		1	.3			1	1								
DF		4M	26	1		1	.2			1									
DF		4M	30	8	17.8	7	1.4			7									
DF		Totals		477	1.3	471	97.1		2	64	21	30	63	46	123	35	87		
WH		2M	40	.12		12	83.3							12					
WH		3M	40	2		2	16.7				2								
WH		Totals		14		14	2.9				2			12					
Total		All Species		492	1.3	485	100.0		2	64	24	30	63	46	135	35	87		

TC		PSTNDSUM										Stand Table Summary										Page		1	
																						Date:		7/24/2019	
T01N R06W S03 Ty00MC 17.00					Project					HORSEWO					Time:		2:01:26PM								
					Acres					17.00					Grown Year:										
S Spec	T	Sample			Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals										
		DBH	Trees	FF	Av Ht	Net Cu.Ft.				Net Bd.Ft.	Tons				Cunits	MBF									
DF		11	2	85	77	17.317	11.43	25.98	10.4	40.0	7.67	269	1,039	130	46	18									
DF		12	1	87	91	7.276	5.71	14.55	10.9	45.0	4.51	158	655	77	27	11									
DF		13	1	86	68	6.199	5.71	6.20	21.1	70.0	3.72	131	434	63	22	7									
DF		14	1	88	88	5.345	5.71	10.69	15.4	55.0	4.70	165	588	80	28	10									
DF		16	1	87	118	4.093	5.71	8.19	27.4	120.0	6.40	225	982	109	38	17									
DF		17	1	88	107	3.625	5.71	7.25	29.1	120.0	6.02	211	870	102	36	15									
DF		18	1	88	116	3.234	5.71	6.47	34.1	135.0	6.29	221	873	107	38	15									
DF		19	2	86	102	5.804	11.43	11.61	37.0	137.5	12.23	429	1,596	208	73	27									
DF		21	1	90	125	2.376	5.71	7.13	35.8	166.7	7.27	255	1,188	124	43	20									
DF		23	1	88	131	1.981	5.71	5.94	44.3	203.3	7.51	263	1,208	128	45	21									
DF		24	3	87	127	5.457	17.14	16.37	47.2	208.9	22.01	772	3,420	374	131	58									
DF		25	1	83	120	1.676	5.71	5.03	40.9	176.7	5.86	206	888	100	35	15									
DF		27	1	88	149	1.437	5.71	4.31	66.9	320.0	8.22	288	1,380	140	49	23									
DF		28	1	85	137	1.336	5.71	4.01	66.9	286.7	7.64	268	1,149	130	46	20									
DF		29	2	85	140	2.492	11.43	7.47	72.8	335.0	15.50	544	2,504	264	92	43									
DF		35	1	83	128	.855	5.71	2.57	97.5	413.3	7.13	250	1,061	121	43	18									
DF		36	2	85	135	1.617	11.43	4.85	109.1	510.0	15.09	529	2,474	256	90	42									
DF		37	1	83	137	.765	5.71	2.30	115.8	560.0	7.58	266	1,286	129	45	22									
DF		38	2	85	139	1.451	11.43	4.35	125.6	600.0	15.58	547	2,612	265	93	44									
DF		41	1	83	158	.623	5.71	1.87	158.5	806.7	8.44	296	1,508	144	50	26									
DF		Totals	27	86	102	74.960	154.29	157.13	40.1	176.4	179.38	6,294	27,714	3,049	1,070	471									
WH		30	1	82	104	1.164	5.71	2.33	96.2	360.0	7.17	224	838	122	38	14									
WH		Totals	1	82	104	1.164	5.71	2.33	96.2	360.0	7.17	224	838	122	38	14									
Totals		28	86	102		76.124	160.00	159.46	40.9	179.1	186.55	6,518	28,553	3,171	1,108	485									

VOLUME SUMMARY
(Volumes in MBF)
Electric Horseman
FG-341-2020-W00257-01

August 2019

AREA 1: MC (88 ACRES)

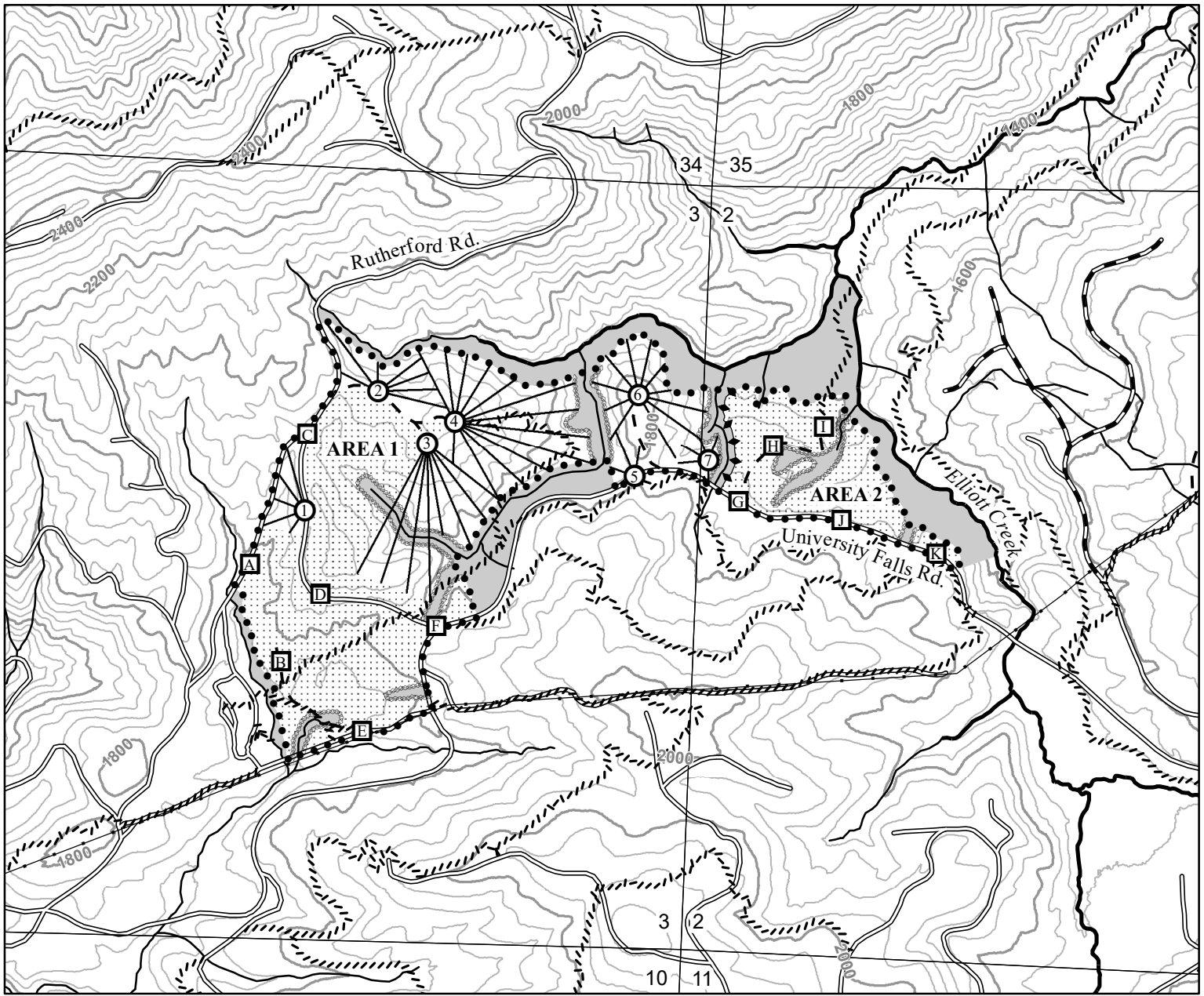
SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	Cruise Volume	1,380	1,083	126	0	2,589
	Hidden D&B (2%)	(28)	(22)	(2)	(0)	(52)
	NET TOTAL	1,352	1,061	124	0	2,537
	% of Total	53	42	5	0	
Western hemlock	Cruise Volume	0	16	0	0	16
	Hidden D&B (2%)	(0)	(0)	(0)	(0)	(0)
	NET TOTAL	0	16	0	0	16
	% of Total	0	100	0	0	
Red alder	Cruise Volume	0	0	0	9	9
	Hidden D&B (5%)	(0)	(0)	(0)	(0)	0
	NET TOTAL	0	0	0	9	9
	% of Total	0	0	0	105	

AREA 2: MC (17 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	Cruise Volume	335	119	18	0	472
	Hidden D&B (2%)	(7)	(2)	(0)	(0)	(9)
	NET TOTAL	328	117	18	0	463
	% of Total	71	25	4	0	
Western hemlock	Cruise Volume	12	2	0	0	14
	Hidden D&B (2%)	(0)	(0)	(0)	(0)	(0)
	NET TOTAL	12	2	0	0	14
	% of Total	86	14	0	0	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	1,680	1,178	142	0	3,000
Western hemlock	12	18	0	0	30
Red alder	0	0	0	9	9
Total	1,692	1,196	142	9	3,039



Legend

- • • Timber Sale Boundary
- ◆ ◆ ◆ Posted Area Boundary
- ~~~~~ Stream Buffer Boundary
- ODF Ownership Boundary
- Surfed Road
- - - New Road Construction
- ↗ Cable Yarding Area
- ▤ Tractor Yarding Area
- Cable Landing
- Tractor Landing
- Type-F Stream
- Type-N Stream
- ▨ Stream Buffer
- ////// Recreation Trails
- Electric Transmission Lines
- Sections
- 40 Foot Contour Band
- 200 Foot Contour Band

LOGGING PLAN

FOR TIMBER SALE CONTRACT #FG-341-2020-W00257-01
ELECTRIC HORSEMAN
PORTIONS OF SECTIONS 2 & 3, T1N, R6W, W.M.,
TILLAMOOK COUNTY, OREGON

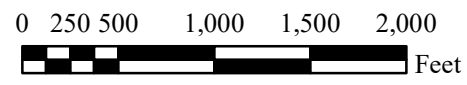
Forest Grove District GIS
August, 2019

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	43	45
AREA 2	17	0
TOTAL	60	45