



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Steampot
Sale TL-341-2022-W00505-01

District: Tillamook

Date: December 09, 2020

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$3,293,014.24	\$3,450.46	\$3,296,464.70
		Project Work:	(\$634,120.00)
		Advertised Value:	\$2,662,344.70



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Timber Description

Location:

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	19	0	100
Alder (Red)	12	0	100

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	6" - 7"	Total
Douglas - Fir	4,682	2,900	0	0	7,582
Western Hemlock / Fir	0	0	0	0	0
Alder (Red)	0	0	10	36	46
Total	4,682	2,900	10	36	7,628

Comments: Additional Costs - Steampot
Pond Values Used: January 2021
Region: Astoria, Forest Grove, and Tillamook

Western red cedar and other cedars stumpage price = \$1,159.00/MBF - \$376.29/MBF = \$782.71/ MBF
Western hemlock and true firs stumpage price = \$ 589.00/MBF - \$399.08/MBF = \$189.92/ MBF

Pulp (Conifer and Hardwood) Price = \$ 2.50/ Ton

BRAND AND PAINT ALLOWANCE = \$2.00/ MBF

FUEL COST ALLOWANCE = \$3.00/ Gallon

HAULING COST ALLOWANCE

Hauling cost equivalent to \$950 daily truck cost
\$95.00/hr x 10 hr. = \$950

Other Costs with Profit and Risk to be added:

Non-Project Rd. 1: 2+61 sta. \$185/sta. = \$482.85

Non-Project Rd. 2: 5+98 sta. \$185/sta. = \$1106.30

Non-Project Rd. 3: 2+63 sta. \$185/sta. = \$486.55

Swing Rd. 4: 26.6 MBF/ac X 0.9 ac X \$25/MBF

+ \$1,000 (temporary crossing install/removal) = \$1,598.00

Closing Non-Project: 3 Roads x \$50 = \$150

Blocking roads and trails in/out of grassy area (bottom of Unit 1) = \$300

Fell & Buck to facilitate full-suspension over Type F (unit 3)

\$30/MBF X 21.8MBF/ac. X 1 ac. = \$654

TOTAL Other Costs with profit and Risk to be added = \$4777.70

Other Costs with No Profit and Risk Added:

Move-in Machine Cleaning: \$1,000/machine x 3 machines x 2 seasons = \$6,000

Slash piling and sorting (Cable Settings): \$5/ac x 185ac. = \$925

Heliport Construction: \$500/unit x 3 unit = \$1,500

Tops and slash left in ground-based harvest area adjacent to driveable road
to prevent motorized access (bottom of Unit 1) = \$175

Ditch Cleaning and Bank Sluff Removal:

Mobilization: three times – dump truck w/ tilt bed & small excavator: \$900 x 3 = \$2,700

Small excavator (Cat 312 or equivalent): 40 hours @ \$135/ hour = \$5,400

Dump truck: 40 hours @ \$90/ hour = \$3,600

TOTAL Other Costs no Profit and Risk added = \$20,300

ROAD MAINTENANCE:

Spot Rocking: 20cy/MMBF/mile x 7.628 MMBF x \$15/cy x 15.1 miles / 7,628 MBF = \$4.53/MBF

Interim Grading: \$1,150/mile x 15.1 miles x 2 times/ 7,628 MBF = \$4.55/MBF

Final Maintenance Grading: \$1,500/mile x 15.1 miles/ 7,628 MBF = \$2.97/MBF

Final Maintenance Compaction: \$950/mile x 7 miles/ 7,628 MBF = \$0.87/MBF

Total Road Maintenance: = \$12.9



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Logging Conditions

Combination#:	1	Douglas - Fir Alder (Red)	17.37% 7.02%
Logging System:	Cable: Large Tower >=70		Process: Harvester Head Delimbing
yarding distance:	Short (400 ft)		downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	11		bd. ft / load: 4000
cost / mbf:	\$181.37		
machines:	Log Loader (A) Forwarder Harvester Tower Yarder (Large)		
Combination#:	2	Douglas - Fir Alder (Red)	30.74% 34.04%
Logging System:	Cable: Large Tower >=70		Process: Harvester Head Delimbing
yarding distance:	Medium (800 ft)		downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	7		bd. ft / load: 4000
cost / mbf:	\$285.01		
machines:	Log Loader (A) Forwarder Harvester Tower Yarder (Large)		
Combination#:	3	Douglas - Fir Alder (Red)	14.21% 23.59%
Logging System:	Cable: Large Tower >=70		Process: Harvester Head Delimbing
yarding distance:	Long (1,500 ft)		downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	5		bd. ft / load: 4000
cost / mbf:	\$399.02		
machines:	Log Loader (A) Forwarder Harvester Tower Yarder (Large)		
Combination#:	4	Douglas - Fir Alder (Red)	37.67% 35.35%
Logging System:	Shovel		Process: Harvester Head Delimbing
yarding distance:	Medium (800 ft)		downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	16		bd. ft / load: 4000
cost / mbf:	\$83.50		
machines:	Forwarder Harvester		



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Logging Costs

Operating Seasons: 2.00	Profit Risk: 10%
Project Costs: \$634,120.00	Other Costs (P/R): \$4,777.70
Slash Disposal: \$0.00	Other Costs: \$20,300.00

Miles of Road

Road Maintenance: \$12.92

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

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	4.1
Alder (Red)	\$0.00	2.0	4.3



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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									
\$207.30	\$12.92	\$1.15	\$115.85	\$0.63	\$33.78	\$0.00	\$2.00	\$2.66	\$376.29
Alder (Red)									
\$233.39	\$12.92	\$1.15	\$110.47	\$0.63	\$35.86	\$0.00	\$2.00	\$2.66	\$399.08

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$810.61	\$434.32	\$0.00
Alder (Red)	\$0.00	\$474.09	\$75.01	\$0.00



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Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	7,582	\$434.32	\$3,293,014.24
Alder (Red)	46	\$75.01	\$3,450.46

Gross Timber Sale Value

Recovery: \$3,296,464.70

Prepared By: Cole Lindsay

Phone: 503-842-2545



PROJECT SUMMARY SHEET

Sale: Steampot

CONSTRUCTION

Point	G to H	4+15	stations =	\$1,748.43
Point	I to J	2+85	stations =	\$1,726.88
Point	K to L	13+80	stations =	\$16,284.28
Point	O to P	3+75	stations =	\$1,511.28
Point	U to V	2+05	stations =	\$1,064.14
SUBTOTAL CONSTRUCTION				\$22,335.01

IMPROVEMENT

Point	A to B	376+50	stations =	\$265,979.26
Point	C to D	1+85	stations =	\$1,447.68
Point	E to F	392+75	stations =	\$139,166.57
Point	K to L	1+00	stations =	\$1,006.02
Point	M to N	17+70	stations =	\$2,437.65
Point	S to T	25+10	stations =	\$2,822.45
Point	U to V	34+25	stations =	\$15,027.28
Point	W to X	10+60	stations =	\$3,955.23
Point	AA to BB	250+00	stations =	\$13,421.00
SUBTOTAL IMPROVEMENT				\$445,263.14

RECONSTRUCTION

Point	Q to R	7+35	stations =	\$1,522.33
SUBTOTAL RECONSTRUCTION				\$1,522.33

SPECIAL PROJECTS

Brush	60.2	miles of road	\$63,210.00
Project #7		Bridge Redecking	\$9,005.00
Pit Development Work		24 Hours	\$8,400.00
A to B		2,000yd Stockpile station 66+35	\$38,660.00
AA to BB		3,000yd Stockpile station 223+05	\$38,190.00
Murphy Camp Pit Work		14 hours Excavator	\$2,000.00
SUBTOTAL SPECIAL PROJECTS			\$159,465.00

MOVE IN AND EQUIPMENT WASHING **\$5,534.52**

GRAND TOTAL **\$634,120.00**

Sale:		Steampot		Road:		A to B					
Construction -		0+00 stations 0.00 miles		Improvement -		376+50 stations 7.13 miles		Reconstruction -		0+00 stations 0.00 miles	
IMPROVEMENT: CLEARING AND GRUBBING -											
Widening				0.065	acres @	\$860.00	per acre =	\$55.90			
TOTAL CLEARING AND GRUBBING								\$55.90			
IMPROVEMENT: EXCAVATION -											
Pullback				94	cy. @	\$2.00	per c.y.=	\$188.00			
Widening				303	cy. @	\$2.00	per c.y.=	\$606.00			
Fill Removal				673	cy. @	\$2.00	per c.y.=	\$1,346.00			
Slope Stabilization Prep.				737	cy. @	\$2.00	per c.y.=	\$1,474.00			
TOTAL EXCAVATION								\$3,614.00			
IMPROVEMENT: ENDHAUL -											
Pullback				258+35	to	258+80	59	cy. @	\$2.08	per c.y.=	\$122.72
Pullback				35+60	to	36+00	35	cy. @	\$1.88	per c.y.=	\$65.80
Widening				132+00	to	132+75	8	cy. @	\$1.38	per c.y.=	\$11.04
Widening				133+10	to	134+10	217	cy. @	\$1.34	per c.y.=	\$290.78
Widening				176+90	to	178+35	29	cy. @	\$1.44	per c.y.=	\$41.76
Widening				334+10	to	335+45	49	cy. @	\$1.74	per c.y.=	\$85.26
Fill Removals				0+00	to	0+00	673	cy. @	\$1.31	per c.y.=	\$881.63
Slope Stabilization Prep.				22+75	to	23+35	61	cy. @	\$1.47	per c.y.=	\$89.67
Slope Stabilization Prep.				25+20	to	25+70	173	cy. @	\$1.55	per c.y.=	\$268.15
Slope Stabilization Prep.				109+15	to	109+65	130	cy. @	\$1.26	per c.y.=	\$163.80
Slope Stabilization Prep.				317+75	to	318+20	108	cy. @	\$2.12	per c.y.=	\$228.96
Slope Stabilization Prep.				334+80	to	337+30	265	cy. @	\$1.72	per c.y.=	\$455.80
Spread & compact							1807	cy. @	\$0.50	per c.y.=	\$903.50
TOTAL ENDHAUL								\$3,608.87			
CULVERTS - MATERIALS & INSTALLATION											
<u>Culverts</u>											
280				LF of 18"	\$5,600.00						
40				LF of 30"	\$1,640.00						
						40	LF of 36"	\$1,697.06			
						100	LF of 60"	\$11,732.88			
						\$13,429.94					
<u>Culvert Stakes & Markers</u>											
34 markers					\$272.00						
						\$272.00					
TOTAL CULVERTS \$20,941.94											
ROCK											
0+00 to				349+50	7,780	cy. of	Crushed	@	\$19.88	per c.y.=	\$154,666.40
349+50 to				376+50	930	cy. of	Jawrun	@	\$19.43	per c.y.=	\$18,069.90
Cross Drain Fill				20yds/ culvert	180	cy. of	Crushed	@	\$16.96	per c.y.=	\$3,052.80
Cross Drain Dissipator				5yds/culvert	40	cy. of	Rip Rap	@	\$9.97	per c.y.=	\$398.80
Crushed Rock Berm				As Directed	25	cy. of	Crushed	@	\$17.11	per c.y.=	\$427.75
Spot Rock				As Directed	170	cy. of	Jawrun	@	\$16.81	per c.y.=	\$2,857.70
Spot Rock				As Directed	100	cy. of	Pitrun	@	\$9.15	per c.y.=	\$915.00
Spot Rock				As Directed	25	cy. of	Rip Rap	@	\$8.53	per c.y.=	\$213.25
Rip Rap Toe				22+75	50	cy. of	Rip Rap	@	\$9.13	per c.y.=	\$456.50
Rip Rap Toe				25+20	130	cy. of	Rip Rap	@	\$9.08	per c.y.=	\$1,180.40
Rip Rap Toe				109+65	100	cy. of	Rip Rap	@	\$8.13	per c.y.=	\$813.00
Rip Rap Toe				317+75	65	cy. of	Rip Rap	@	\$12.07	per c.y.=	\$784.55
Rip Rap Toe				334+80	280	cy. of	Rip Rap	@	\$12.39	per c.y.=	\$3,469.20
Culvert Backfill				102+80	40	cy. of	Pitrun	@	\$7.70	per c.y.=	\$308.00
Culvert Bedding				102+80	20	cy. of	Crushed	@	\$18.50	per c.y.=	\$370.00
Fill Armor				102+80	20	cy. of	Rip Rap	@	\$8.00	per c.y.=	\$160.00
Culvert Backfill				132+95	220	cy. of	Pitrun	@	\$8.27	per c.y.=	\$1,819.40
Culvert Bedding				132+95	70	cy. of	Crushed	@	\$18.12	per c.y.=	\$1,268.40
Fill Armor				132+95	20	cy. of	Rip Rap	@	\$8.57	per c.y.=	\$171.40
Culvert Backfill				143+00	130	cy. of	Pitrun	@	\$8.76	per c.y.=	\$1,138.80
Culvert Bedding				143+00	25	cy. of	Crushed	@	\$17.99	per c.y.=	\$449.75
Fill Armor				143+00	10	cy. of	Rip Rap	@	\$8.76	per c.y.=	\$87.60
Culvert Backfill											

SUMMARY OF CONSTRUCTION COST

Sale: Steampot			Road: C to D		
Construction -	0+00	stations	Improvement -	1+85	stations
	0.00	miles		0.04	miles
Reconstruction -	0+00	stations			
	0.00	miles			

ROCK					
0+00	to	1+00	60	cy. of	Jawrun @ \$13.91 per c.y. = \$834.60
TOTAL ROCK					\$834.60

SPECIAL PROJECTS					
Reshape Road	2.00	hours @	\$180.00	per hour	\$360.00
Landing Clearing	1.00	hours @	\$180.00	per hour	\$180.00
Grade and shape road -	1.85	stations @	\$22.00	per station	\$40.70
Roll subgrade w/ vibratory roller prior to rocking -	1.85	stations @	\$17.50	per station	\$32.38
TOTAL SPECIAL PROJECTS					\$613.08
GRAND TOTAL					\$1,447.68

SUMMARY OF CONSTRUCTION COST

Sale: **Steampot**

Road: **E to F**

Construction -	0+00	stations	Improvement -	392+75	stations	Reconstruction -	0+00	stations
	0.00	miles		7.44	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Side cast	0.046	acres @	\$860.00	per acre =	\$39.56	
Widening	0.192	acres @	\$860.00	per acre =	\$165.12	
TOTAL CLEARING AND GRUBBING						\$204.68

IMPROVEMENT: EXCAVATION -

Pullback	686	cy. @	\$2.00	per c.y.=	\$1,372.00	
Fill Removal	810	cy. @	\$2.00	per c.y.=	\$1,620.00	
Motorcycle Intersections	170	cy. @	\$2.00	per c.y.=	\$340.00	
Widening	811	cy. @	\$2.00	per c.y.=	\$1,622.00	
TOTAL EXCAVATION						\$4,954.00

IMPROVEMENT: ENDHAUL -

Pullback	37+50	to	38+70	564	cy. @	\$1.39	per c.y.=	\$783.96
Pullback	300+65	to	301+25	122	cy. @	\$1.31	per c.y.=	\$159.82
Fill Removal	167+50			265	cy. @	\$1.82	per c.y.=	\$482.30
Fill Removal	171+25			420	cy. @	\$1.94	per c.y.=	\$814.80
Motorcycle Intersections	Various			40	cy. @	\$1.81	per c.y.=	\$72.40
Spread & compact				1411	cy. @	\$0.50	per c.y.=	\$705.50
TOTAL ENDHAUL								\$3,018.78

CULVERTS - MATERIALS & INSTALLATION

Culverts

490	LF of 18"	\$9,800.00			
			60	LF of 36"	\$2,575.12
			50	LF of 48"	\$3,645.46
					\$6,220.58

Culvert Stakes & Markers

26 markers	\$208.00
	\$208.00

TOTAL CULVERTS \$16,228.58

ROCK

66+60	to	306+45	5,340	cy. of	Crushed	@	\$9.80	per c.y.=	\$52,332.00
370+20	to	392+75	1,270	cy. of	Jawrun	@	\$14.23	per c.y.=	\$18,072.10
ATV Trail Hardening		106+75	10	cy. of	Pitrun	@	\$9.27	per c.y.=	\$92.70
ATV Trail Hardening		120+20	10	cy. of	Pitrun	@	\$9.53	per c.y.=	\$95.30
Spot Rock		191+05	30	cy. of	Crushed	@	\$6.14	per c.y.=	\$184.20
ATV Trail Hardening		214+00	40	cy. of	Pitrun	@	\$11.30	per c.y.=	\$452.00
Spot Rock		258+20	20	cy. of	Pitrun	@	\$8.26	per c.y.=	\$165.20
ATV Trail Hardening		258+80	30	cy. of	Pitrun	@	\$8.26	per c.y.=	\$247.80
Spot Rock		300+65	80	cy. of	Rip Rap	@	\$8.47	per c.y.=	\$677.60
Spot Rock		242+30	40	cy. of	Jawrun	@	\$13.73	per c.y.=	\$549.20
Spot Rock		370+20	30	cy. of	Jawrun	@	\$14.02	per c.y.=	\$420.60
Crushed Rock Berm		191+65	5	cy. of	Crushed	@	\$5.03	per c.y.=	\$25.15
Cross Drain Backfill	20yds/ culvert		280	cy. of	Crushed	@	\$6.85	per c.y.=	\$1,918.00
Cross Drain Dissipator	5yds/culvert		70	cy. of	Rip Rap	@	\$11.35	per c.y.=	\$794.50
Culvert Backfill		107+65	110	cy. of	Pitrun	@	\$11.03	per c.y.=	\$1,213.30
Culvert Bedding		107+65	25	cy. of	Crushed	@	\$6.92	per c.y.=	\$173.00
Dissipator		107+65	5	cy. of	Rip Rap	@	\$10.73	per c.y.=	\$53.65
Culvert Backfill		167+50	200	cy. of	Pitrun	@	\$9.89	per c.y.=	\$1,978.00
Culvert Bedding		167+50	45	cy. of	Crushed	@	\$5.78	per c.y.=	\$260.10
Fill Armor		167+50	20	cy. of	Rip Rap	@	\$10.99	per c.y.=	\$219.80
Culvert Backfill		171+25	370	cy. of	Pitrun	@	\$9.82	per c.y.=	\$3,633.40
Culvert Bedding		171+25	40	cy. of	Crushed	@	\$5.71	per c.y.=	\$228.40
Fill Armor		171+25	20	cy. of	Rip Rap	@	\$10.92	per c.y.=	\$218.40
Landing Rock		392+75	100	cy. of	Jawrun	@	\$9.70	per c.y.=	\$970.00
TOTAL ROCK									\$84,974.40

SPECIAL PROJECTS

Construct waste areas -	4.00	hours @	\$200.00	per hour	\$800.00	
Clean/Construct Ditchlines-Endhaul	16.90	stations @	\$130.00	per station	\$2,197.00	
Clean/Construct Ditchlines-No Endhaul	97.00	stations @	\$80.00	per station	\$7,760.00	
Construct ditchouts -	8.00	@	\$60.00	each	\$480.00	
Clean Culverts	4.00	@	\$60.00	per hour	\$240.00	
Remove Material from road and ditch @ 258+20	1.00	hours @	\$200.00	per hour	\$200.00	
Grade and shape road -	392.75	stations @	\$22.00	per station	\$8,640.50	
Roll subgrade	392.75	stations @	\$17.50	per station	\$6,873.13	
Remove culverts from state lands	4.00	@	\$337.50	total	\$337.50	
Grass seed and fertilize -	5.00	acres @	\$280.00	per acre	\$1,400.00	
Mulching -	1.100	acres @	\$780.00	per acre	\$858.00	
TOTAL SPECIAL PROJECTS						\$29,786.13

GRAND TOTAL \$139,166.57

SUMMARY OF CONSTRUCTION COST

Sale: Steampot			Road: G to H		
Construction -	4+15	stations	Improvement -	0+00	stations
	0.08	miles		0.00	miles
Reconstruction -	0+00	stations			
	0.00	miles			

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -										
	<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist.</u> <u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>		<u>Drill & Shoot</u>	<u>Endhaul</u>
	0+00		4+15	15%			\$134	=		\$556.10
									TOTAL	\$556.10

ROCK										
0+00	to		1+00	40	cy. of	Jawrun	@	\$14.38 per c.y.=	\$575.20	
									TOTAL ROCK	\$575.20

SPECIAL PROJECTS									
Construct Landing				1.00	hours @	\$200.00	per hour	\$200.00	
Grade and shape road -				4.15	stations @	\$22.00	per station	\$91.30	
Roll subgrade				4.15	stations @	\$17.50	per station	\$72.63	
Remove large stumps -				1.00	lump sum @	\$200.00		\$200.00	
Grass seed and fertilize -				0.19	acres @	\$280.00	per acre	\$53.20	
								TOTAL SPECIAL PROJECTS	\$617.13
								GRAND TOTAL	\$1,748.43

SUMMARY OF CONSTRUCTION COST

Sale:			<u>Steampot</u>			Road:			<u>I to J</u>		
<u>Construction -</u>			<u>2+85</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations	
			0.05	miles		0.00	miles		0.00	miles	
CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -											
			<u>Station</u>	to	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist.</u>	<u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>	
0+00					2+85	15%				\$134	
									=	<u>Drill & Shoot</u>	
										<u>Endhaul</u>	
										\$381.90	
									TOTAL	\$381.90	
ROCK											
0+00			to		1+00	40	cy. of	Jawrun	@	\$19.90 per c.y.=	
										\$796.00	
									TOTAL ROCK	\$796.00	
SPECIAL PROJECTS											
Construct Landing						1.00	hours @	\$200.00	per hour	\$200.00	
Grade and shape road -						2.85	stations @	\$22.00	per station	\$62.70	
Roll subgrade						2.85	stations @	\$17.50	per station	\$49.88	
Remove large stumps -						1.00	lump sum @	\$200.00		\$200.00	
Grass seed and fertilize -						0.13	acres @	\$280.00	per acre	\$36.40	
									TOTAL SPECIAL PROJECTS	\$548.98	
									GRAND TOTAL	\$1,726.88	

SUMMARY OF CONSTRUCTION COST

Sale:			Steampot			Road:			K to L								
<u>Construction -</u>			13+80 stations			<u>Improvement -</u>			1+00 stations			<u>Reconstruction -</u>			0+00 stations		
			0.26 miles						0.02 miles						0.00 miles		

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -									
	<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist. To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>	<u>Drill & Shoot</u>	<u>Endhaul</u>
	1+00		14+80	20%			\$174	=	\$2,401.20
									TOTAL
									\$2,401.20

ROCK									
1+00	to	14+80	770	cy. of	Jawrun	@	\$13.91 per c.y.=	\$10,710.70	
Spot Rock		1+00	30	cy. of	Jawrun	@	\$13.78 per c.y.=	\$413.40	
Landing Rock		14+80	100	cy. of	Jawrun	@	\$14.04 per c.y.=	\$1,404.00	
								TOTAL ROCK	\$12,528.10

SPECIAL PROJECTS						
Construct Landings -	3.00	hours @	\$200.00	each	\$600.00	
Grade and shape road -	14.80	stations @	\$22.00	per station	\$325.60	
Roll subgrade w/ vibratory roller prior to rocking -	14.80	stations @	\$17.50	per station	\$259.00	
Remove large stumps -	5.00	lump sum @	\$200.00		\$1,000.00	
Grass seed and fertilize -	0.63	acres @	\$280.00	per acre	\$176.40	
				TOTAL SPECIAL PROJECTS		\$2,361.00
				GRAND TOTAL		\$17,290.30

SUMMARY OF CONSTRUCTION COST

Sale:		<u>Steampot</u>		Road:		<u>M to N</u>		
<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>17+70</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
	0.00	miles		0.34	miles		0.00	miles
ROCK								
Spot Rock	As Directed	50	cy. of	Jawrun	@	\$14.20	per c.y.=	\$710.00
Landing Rock	17+70	50	cy. of	Jawrun	@	\$14.37	per c.y.=	\$718.50
TOTAL ROCK								\$1,428.50
SPECIAL PROJECTS								
Clean landing		1.00	hours @		\$200.00	per hour		\$200.00
Clean Ditchline-no endhaul		1.00	stations @		\$80.00	per hour		\$80.00
Construct Ditchout		1.00	@		\$30.00	each		\$30.00
Grade and shape road -		17.70	stations @		\$22.00	per station		\$389.40
Roll subgrade w/ vibratory roller prior to rocking -		17.70	stations @		\$17.50	per station		\$309.75
TOTAL SPECIAL PROJECTS								\$1,009.15
GRAND TOTAL								\$2,437.65

SUMMARY OF CONSTRUCTION COST

Sale:				<u>Steampot</u>		Road:		<u>O to P</u>			
<u>Construction -</u>		3+75	stations	<u>Improvement -</u>		0+00	stations	<u>Reconstruction -</u>		0+00	stations
		0.07	miles			0.00	miles			0.00	miles
CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -											
<u>Station</u>		<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist.</u> <u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>	=	<u>Drill & Shoot</u>	<u>Endhaul</u>	
0+00			3+75	5%			\$93				\$348.75
										TOTAL	\$348.75
ROCK											
0+00		to	1+00	40	cy. of	Jawrun	@	\$14.17	per c.y.=	\$566.80	
										TOTAL ROCK	\$566.80
SPECIAL PROJECTS											
Construct Landing						1.00	hours @	\$200.00	per hour	\$200.00	
Grade and shape road -						3.75	stations @	\$22.00	per station	\$82.50	
Roll subgrade w/ vibratory roller prior to rocking -						3.75	stations @	\$17.50	per station	\$65.63	
Remove large stumps -						1.00	lump sum @	\$200.00		\$200.00	
Grass seed and fertilize -						0.17	acres @	\$280.00	per acre	\$47.60	
										TOTAL SPECIAL PROJECTS	\$595.73
										GRAND TOTAL	\$1,511.28

SUMMARY OF CONSTRUCTION COST

Sale:			Steampot			Road:			Q to R		
Construction -			0+00 stations			Improvement -			Reconstruction -		
			0.00 miles			0+00 stations			7+35 stations		
						0.00 miles			0.14 miles		

ROCK											
0+00	to	1+00	40	cy. of	Jawrun	@	\$15.80	per c.y. =	\$632.00		
										TOTAL ROCK	\$632.00

SPECIAL PROJECTS											
Remove vegetative material and sod from roadway and landing				3.00	hours @	\$200.00	per hour	\$600.00			
Grade and shape road -				7.35	stations @	\$22.00	per station	\$161.70			
Roll subgrade w/ vibratory roller prior to rocking -				7.35	stations @	\$17.50	per station	\$128.63			
										TOTAL SPECIAL PROJECTS	\$890.33
										GRAND TOTAL	\$1,522.33

SUMMARY OF CONSTRUCTION COST

Sale:			<u>Steampot</u>			Road:			<u>S to T</u>		
<u>Construction -</u>			<u>0+00</u> stations			<u>Improvement -</u>			<u>25+10</u> stations		
			<u>0.00</u> miles						<u>Reconstruction -</u>		
									<u>0+00</u> stations		
									<u>0.00</u> miles		
ROCK											
Spot Rock			As Directed			100 cy. of			Jawrun @		
									\$14.31 per c.y.=		
									\$1,431.00		
									TOTAL ROCK		
									\$1,431.00		
SPECIAL PROJECTS											
Construct Landings -			2.00			hours @			\$200.00 per hour		
Grade and shape road -			25.10			stations @			\$22.00 per station		
Roll subgrade w/ vibratory roller prior to rocking -			25.10			stations @			\$17.50 per station		
									TOTAL SPECIAL PROJECTS		
									\$1,391.45		
									GRAND TOTAL		
									\$2,822.45		

SUMMARY OF CONSTRUCTION COST

Sale: **Steampot**

Road: **U to V**

Construction -	2+05	stations	Improvement -	34+25	stations	Reconstruction -	0+00	stations
	0.04	miles		0.65	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	Drill & Shoot	Endhaul	
34+25		36+30	10%			\$113				\$231.65
										TOTAL
										\$231.65

IMPROVEMENT: CLEARING AND GRUBBING -
Side cast

0.042	acres @	\$860.00	per acre =	\$36.12	
TOTAL CLEARING AND GRUBBING					\$36.12

IMPROVEMENT: EXCAVATION -
Pullback

264	cy. @	\$2.00	per c.y. =	\$528.00	
TOTAL EXCAVATION					\$528.00

IMPROVEMENT: ENDHAUL -

Pullback	13+00	to	17+55	264	cy. @	\$1.60	per c.y. =	\$422.40	
Spread & compact				264	cy. @	\$0.50	per c.y. =	\$132.00	
TOTAL ENDHAUL									\$554.40

CULVERTS - MATERIALS & INSTALLATION

Culvert Stakes & Markers	
2 markers	\$16.00

TOTAL CULVERTS **\$16.00**

ROCK

0+00 to	1+70	80	cy. of	Crushed	@	\$5.45	per c.y. =	\$436.00	
34+25 to	36+30	110	cy. of	Jawrun	@	\$14.67	per c.y. =	\$1,613.70	
Spot Rock	As Directed	60	cy. of	Crushed	@	\$3.94	per c.y. =	\$236.40	
Landing Rock	30+70	90	cy. of	Jawrun	@	\$14.58	per c.y. =	\$1,312.20	
Landing Rock	36+30	60	cy. of	Jawrun	@	\$14.69	per c.y. =	\$881.40	
Spot Rock	As Directed	200	cy. of	Jawrun	@	\$14.33	per c.y. =	\$2,866.00	
TOTAL ROCK									\$7,345.70

SPECIAL PROJECTS

Flatten knob at station 30+70 and drift to new construction	7.00	hours @	\$380.00	per hour	\$2,660.00	
Construct Landing	2.00	hours @	\$180.00	per hour	\$360.00	
Construct waste areas -	1.00	hours @	\$200.00	per hour	\$200.00	
Construct/Clean Ditchlines No Endhaul	4.05	stations @	\$80.00	each	\$324.00	
Construct/Clean Ditchlines Endhaul	16.85	stations @	\$130.00	per hour	\$2,190.50	
Grade and shape road -	36.30	stations @	\$22.00	per station	\$798.60	
Roll subgrade w/ vibratory roller prior to rocking -	36.30	stations @	\$17.50	per station	\$635.25	
Remove large stumps -	1.00	lump sum @	\$200.00		\$200.00	
Grass seed and fertilize -	0.04	acres @	\$280.00	per acre	\$11.20	
TOTAL SPECIAL PROJECTS					\$7,379.55	

GRAND TOTAL **\$16,091.42**

SUMMARY OF CONSTRUCTION COST

Sale: **Steampot**

Road: **W to X**

Construction -	0+00	stations	Improvement -	10+60	stations	Reconstruction -	0+00	stations
	0.00	miles		0.20	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Side cast	0.009	acres	@	\$860.00	per acre =	\$7.74	
Widening	0.079	acres	@	\$860.00	per acre =	\$67.94	
Alder Grubbing	0.730	acres	@	\$500.00	per acre =	\$365.00	
TOTAL CLEARING AND GRUBBING							\$440.68

IMPROVEMENT: EXCAVATION -

Pullback	20	cy.	@	\$2.00	per c.y.=	\$40.00	
Widening	255	cy.	@	\$2.00	per c.y.=	\$510.00	
TOTAL EXCAVATION							\$550.00

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	30	LF of 18"	\$600.00				
<u>Culvert Stakes & Markers</u>	1	markers	\$8.00				
TOTAL CULVERTS							\$608.00

ROCK

Culvert Backfill	7+35	15	cy. of	Jawrun	@	\$13.70	per c.y.=	\$205.50
Energy Dissipator	7+35	5	cy. of	Rip Rap	@	\$8.75	per c.y.=	\$43.75
Spot Rock	As Directed	50	cy. of	Jawrun	@	\$14.44	per c.y.=	\$722.00
TOTAL ROCK								\$971.25

SPECIAL PROJECTS

Remove vegetative material and sod from roadway	2.00	hours	@	\$200.00	per hour	\$400.00	
Clear Landings	1.00	hours	@	\$200.00	per hour	\$200.00	
Grade and shape road -	10.60	stations	@	\$22.00	per station	\$233.20	
Roll subgrade w/ vibratory roller prior to rocking -	10.60	stations	@	\$17.50	per station	\$185.50	
Remove pulp decks from landing	1.00	lump sum	@	\$200.00		\$200.00	
Remove culverts from state lands	1.00	@		\$141.40	total	\$141.40	
Grass seed and fertilize -	0.09	acres	@	\$280.00	per acre	\$25.20	
TOTAL SPECIAL PROJECTS							\$1,385.30

GRAND TOTAL **\$3,955.23**

SUMMARY OF CONSTRUCTION COST

Sale:				<u>Steampot</u>		Road:		<u>AA to BB</u>	
<u>Construction -</u>		<u>0+00</u>	stations	<u>Improvement -</u>		<u>250+00</u>	stations	<u>Reconstruction -</u>	
		0.00	miles			4.73	miles	<u>0+00</u>	
								0.00	
								miles	
ROCK									
Spot Rock		14+90	40	cy. of	Crushed	@	\$15.95 per c.y.=	\$638.00	
Spot Rock		As Directed	200	cy. of	Crushed	@	\$14.54 per c.y.=	\$2,908.00	
								TOTAL ROCK	\$3,546.00
SPECIAL PROJECTS									
Grade and shape road following rock haul -					250.00	stations @	\$22.00 per station	\$5,500.00	
Roll subgrade w/ vibratory roller following rock haul -					250.00	stations @	\$17.50 per station	\$4,375.00	
								TOTAL SPECIAL PROJECTS	\$9,875.00
								GRAND TOTAL	\$13,421.00

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Property Line	Location:	, T3S, R7W, W.M.
Sale:	Steampot	Road:	13520 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage:	1.16	Total Truck Loads:	13520 c.y.
Drill Pct.:	100%	In Place Total:	9657 c.y.

Drill & Shoot:	\$3.25	/cu.yd.	x	8857	cu.yds.	=	\$28,785.25
Rip Rock:	\$3.00	/cu.yd.	x	800	cu.yds.	=	\$2,400.00
Push Rock:	\$1.00	/cu.yd.	x	12720	cu.yds.	=	\$12,720.00
Load Crusher:	\$1.00	/cu.yd.	x	13520	cu.yds.	=	\$13,520.00
Crush Rock:	\$4.25	/cu.yd.	x	13520	cu.yds.	=	\$57,460.00
Load Dump Truck:	\$1.00	/cu.yd.	x	13520	cu.yds.	=	\$13,520.00

Subtotal \$128,405.25

Move In/Set-up Jaw and Crusher	1	@	\$5,713.00	=	\$5,713.00
Move In and set up Drill and Compressor	1	@	\$299.79	=	\$299.79
Move in Roller and Compactor	1	@	\$264.50	=	\$264.50
Move in Grader	1	@	\$252.38	=	\$252.38
Move in D-8	1	@	\$461.29	=	\$461.29
Move in Loader	1	@	\$294.29	=	\$294.29
Move in Excavator	1	@	\$409.29	=	\$409.29
Move in Trucks	4	@	\$85.81	=	\$343.24

Subtotal \$8,037.78

Base Cost= \$10.09 Per Cu.Yd.

TOTAL PRODUCTION COSTS \$136,443.03

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base/load Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B 0 34950 (Crushed)	6.59	3.20	10.09	19.88	7780	\$146,166.40
A to B Cross Drain Fill (Crushed)	5.97	0.90	10.09	16.96	40	\$678.40
A to B Crushed Rock Berm (Crushed)	6.42	0.60	10.09	17.11	25	\$427.75
A to B Culvert Bedding (Crushed)	7.51	0.90	10.09	18.50	20	\$370.00
A to B Culvert Bedding (Crushed)	7.13	0.90	10.09	18.12	70	\$1,268.40
A to B Culvert Bedding (Crushed)	7.00	0.90	10.09	17.99	25	\$449.75
A to B Culvert Bedding (Crushed)	5.00	0.90	10.09	15.99	40	\$639.60
A to B Campsite Rocking (Crushed)	6.40	1.70	10.09	18.19	280	\$5,093.20
AA to BB Spot Rock (Crushed)	4.16	1.70	10.09	15.95	40	\$638.00
AA to BB Spot Rock (Crushed)	2.75	1.70	10.09	14.54	200	\$2,908.00
A to B Stockpile (Crushed)	8.34	0.90	10.09	19.33	2000	\$38,660.00
AA to BB Stockpile (Crushed)	1.74	0.90	10.09	12.73	3000	\$38,190.00
				Total C.Y.	13520	Sub Total
						\$235,489.50

TOTAL ROCKING COSTS \$235,489.50

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	East Fork Trask Station 81+00	Location:	Sec. 18 , T2S, R7W, W.M.
Sale:	Steampot	Road:	1350 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	1350 c.y.
Drill Pct.:	0%	In Place Total:	964 c.y.

Rip Rock:	\$3.00	/cu.yd.	x	964 cu.yds.	=	\$2,892.00
Sort Rock	\$1.00	/cu.yd.	x	1350 cu.yds.	=	\$1,350.00
Load Dump Truck:	\$1.00	/cu.yd.	x	1350 cu.yds.	=	\$1,350.00

Subtotal \$5,592.00

Move in Excavator	1	@	\$409.29	=	\$409.29
				Subtotal	<u>\$409.29</u>

Base Cost=	<u>\$4.45</u>	Per Cu.Yd.	TOTAL PRODUCTION COSTS	\$6,001.29
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Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B Cross Drain Dissipator (Rip Rap)	3.82	1.70	4.45	9.97	40	\$398.80
A to B Spot Rock (Pitrun)	3.00	1.70	4.45	9.15	100	\$915.00
A to B Spot Rock (Rip Rap)	2.38	1.70	4.45	8.53	25	\$213.25
A to B Rip Rap Toe (Rip Rap)	2.68	2.00	4.45	9.13	50	\$456.50
A to B Rip Rap Toe (Rip Rap)	2.63	2.00	4.45	9.08	130	\$1,180.40
A to B Rip Rap Toe (Rip Rap)	1.68	2.00	4.45	8.13	100	\$813.00
A to B Rip Rap Toe (Rip Rap)	5.62	2.00	4.45	12.07	65	\$784.55
A to B Rip Rap Toe (Rip Rap)	5.94	2.00	4.45	12.39	280	\$3,469.20
A to B Culvert Backfill (Pitrun)	1.55	1.70	4.45	7.70	40	\$308.00
A to B Fill Armor (Rip Rap)	1.55	2.00	4.45	8.00	20	\$160.00
A to B Culvert Backfill (Pitrun)	2.12	1.70	4.45	8.27	220	\$1,819.40
A to B Fill Armor (Rip Rap)	2.12	2.00	4.45	8.57	20	\$171.40
A to B Culvert Backfill (Pitrun)	2.31	2.00	4.45	8.76	130	\$1,138.80
A to B Fill Armor (Rip Rap)	2.31	2.00	4.45	8.76	10	\$87.60
A to B Culvert Backfill (Pitrun)	5.27	2.00	4.45	11.72	50	\$586.00
A to B Fill Armor (Rip Rap)	5.27	2.00	4.45	11.72	10	\$117.20
C to D 0 100 (Jawrun)	6.26	3.20	4.45	13.91	60	\$834.60
					Total C.Y.	1350
					Sub Total	\$13,453.70

TOTAL ROCKING COSTS **\$13,453.70**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Steampot	Location:	Sec. 22, T2S, R7W, W.M.
Sale:	Steampot	Road:	1800 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	1800 c.y.
Drill Pct.:	0%	In Place Total:	1286 c.y.

Rip Rock:	\$3.00	/cu.yd.	x	1286	cu.yds.	=	\$3,858.00
Push Rock:	\$1.00	/cu.yd.	x	1800	cu.yds.	=	\$1,800.00
Load Crusher:	\$1.00	/cu.yd.	x	1800	cu.yds.	=	\$1,800.00
Crush Rock:	\$3.75	/cu.yd.	x	1800	cu.yds.	=	\$6,750.00
Load Dump Truck:	\$1.00	/cu.yd.	x	1800	cu.yds.	=	\$1,800.00

Subtotal \$16,008.00

Move In/Set-up Jaw	1	@	\$950.00	=	\$2,016.00
Move in Excavator	1	@	\$409.29	=	\$409.29
				Subtotal	<u>\$2,425.29</u>

Base Cost= \$10.24 Per Cu.Yd.

TOTAL PRODUCTION COSTS \$18,433.29

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B 34950 37650 (Jawrun)	7.49	1.70	10.24	19.43	930	\$18,069.90
A to B Spot Rock (Jawrun)	4.87	1.70	10.24	16.81	170	\$2,857.70
A to B Landing Rock (Jawrun)	7.93	1.70	10.24	19.87	110	\$2,185.70
E to F ATV Trail Hardening (Pitrun)	2.88	0.90	5.49	9.27	10	\$92.70
E to F ATV Trail Hardening (Pitrun)	3.14	0.90	5.49	9.53	10	\$95.30
E to F ATV Trail Hardening (Pitrun)	4.91	0.90	5.49	11.30	40	\$452.00
U to V 3425 3630 (Jawrun)	2.73	1.70	10.24	14.67	110	\$1,613.70
U to V Landing Rock (Jawrun)	2.64	1.70	10.24	14.58	90	\$1,312.20
U to V Landing Rock (Jawrun)	2.75	1.70	10.24	14.69	60	\$881.40
U to V Spot Rock (Jawrun)	2.39	1.70	10.24	14.33	200	\$2,866.00
W to X Culvert Backfill (Jawrun)	2.56	0.90	10.24	13.70	15	\$205.50
W to X Energy Dissipator (Rip Rap)	2.56	0.70	5.49	8.75	5	\$43.75
W to X Spot Rock (Jawrun)	2.50	1.70	10.24	14.44	50	\$722.00
				Total C.Y.	1800	Sub Total \$31,397.85

TOTAL ROCKING COSTS \$31,397.85

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Jawrun	Location:	Sec. 13, 15, 16, T2S, R7W, W.M.
Sale:	Steampot	Road:	3625 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	3625 c.y.
Drill Pct.:	0%	In Place Total:	2589 c.y.

Rip Rock:	\$3.00 /cu.yd.	x	2589 cu.yds.	=	\$7,767.00
Push Rock:	\$1.00 /cu.yd.	x	3625 cu.yds.	=	\$3,625.00
Load Crusher:	\$1.00 /cu.yd.	x	3625 cu.yds.	=	\$3,625.00
Crush Rock:	\$3.75 /cu.yd.	x	3625 cu.yds.	=	\$13,593.75
Load Dump Truck:	\$1.00 /cu.yd.	x	3625 cu.yds.	=	\$3,625.00

Subtotal \$32,235.75

Move In/Set-up Jaw	1	@	\$2,016.00		\$2,016.00
Move in Excavator	1	@	\$409.29	=	\$409.29
				Subtotal	<u>\$2,425.29</u>

Base Cost=	<u>\$9.56</u>	Per Cu.Yd.	TOTAL PRODUCTION COSTS	\$34,661.04
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Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
E to F 37020 39275 (Jawrun)	2.97	1.70	9.56	14.23	1270	\$18,072.10
E to F Spot Rock (Pitrun)	2.45	1.00	4.81	8.26	20	\$165.20
E to F ATV Trail Hardening (Pitrun)	2.45	1.00	4.81	8.26	30	\$247.80
E to F Spot Rock (Rip Rap)	1.66	2.00	4.81	8.47	80	\$677.60
E to F Spot Rock (Jawrun)	2.47	1.70	9.56	13.73	40	\$549.20
E to F Spot Rock (Jawrun)	2.76	1.70	9.56	14.02	30	\$420.60
E to F Cross Drain Dissipator (Rip Rap)	5.94	0.60	4.81	11.35	70	\$794.50
E to F Culvert Backfill (Pitrun)	5.32	0.90	4.81	11.03	110	\$1,213.30
E to F Dissipator (Rip Rap)	5.32	0.60	4.81	10.73	5	\$53.65
E to F Culvert Backfill (Pitrun)	4.18	0.90	4.81	9.89	200	\$1,978.00
E to F Fill Armor (Rip Rap)	4.18	2.00	4.81	10.99	20	\$219.80
E to F Culvert Backfill (Pitrun)	4.11	0.90	4.81	9.82	370	\$3,633.40
E to F Fill Armor (Rip Rap)	4.11	2.00	4.81	10.92	20	\$218.40
E to F Landing Rock (Jawrun)	3.19	1.70	4.81	9.70	100	\$970.00
G to H 0 100 (Jawrun)	3.12	1.70	9.56	14.38	40	\$575.20
I to J 0 100 (Jawrun)	8.64	1.70	9.56	19.90	40	\$796.00
K to L 100 1480 (Jawrun)	2.65	1.70	9.56	13.91	770	\$10,710.70
K to L Spot Rock (Jawrun)	2.52	1.70	9.56	13.78	30	\$413.40
K to L Landing Rock (Jawrun)	2.78	1.70	9.56	14.04	100	\$1,404.00
M to N Spot Rock (Jawrun)	2.94	1.70	9.56	14.20	50	\$710.00
M to N Landing Rock (Jawrun)	3.11	1.70	9.56	14.37	50	\$718.50
O to P 0 100 (Jawrun)	2.91	1.70	9.56	14.17	40	\$566.80
Q to R 0 100 (Jawrun)	3.04	3.20	9.56	15.80	40	\$632.00
S to T Spot Rock (Jawrun)	3.05	1.70	9.56	14.31	100	\$1,431.00
					Total C.Y.	3625
					Sub Total	\$47,171.15

TOTAL ROCKING COSTS **\$47,171.15**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Stockpile	Location:	Sec. 1, 11, 24, 28, T2S, R7W, W.M.
Sale:	Steampot	Road:	5905 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	5905 c.y.
Drill Pct.:	0%	In Place Total:	4218 c.y.

Load Dump Truck:	\$1.00 /cu.yd.	x	5905 cu.yds.	=	\$5,905.00
			Subtotal		\$5,905.00

Move in Loader	2	@	\$294.29	=	\$588.58
			Subtotal		\$588.58

Base Cost=	\$1.10	Per Cu.Yd.	TOTAL PRODUCTION COSTS	\$6,493.58
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Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
E to F 6660 30645 (Crushed)	5.50	3.20	1.10	9.80	5340	\$52,332.00
E to F Spot Rock (Crushed)	3.34	1.70	1.10	6.14	30	\$184.20
E to F Crushed Rock Berm (Crushed)	3.33	0.60	1.10	5.03	5	\$25.15
E to F Cross Drain Backfill (Crushed)	4.85	0.90	1.10	6.85	280	\$1,918.00
E to F Culvert Bedding (Crushed)	4.92	0.90	1.10	6.92	25	\$173.00
E to F Culvert Bedding (Crushed)	3.78	0.90	1.10	5.78	45	\$260.10
E to F Culvert Bedding (Crushed)	3.71	0.90	1.10	5.71	40	\$228.40
U to V 0 170 (Crushed)	1.15	3.20	1.10	5.45	80	\$436.00
U to V Spot Rock (Crushed)	1.14	1.70	1.10	3.94	60	\$236.40
			Total C.Y.	5905	Sub Total	\$55,793.25

TOTAL ROCKING COSTS	\$55,793.25
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Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Steampot**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
26.0	Pavement	30
1.0	Main Lines	7
0.0	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Brush Cutter	\$212.00		\$4.00	0.00	35.00	35	\$140.00	\$352.00
1	Graders	\$252.38		\$3.65	0.00	12.00	12	\$43.80	\$296.18
1	Excavators (Med.)	\$328.54		\$35.50	0.00	10.00	10	\$355.00	\$683.54
1	Excavators (Large)	\$409.29	1	\$44.80	0.00	14.00	14	\$627.20	\$1,036.49
1	Tractors (D6)	\$422.44	2	\$7.10	0.00	12.00	12	\$85.20	\$507.64
1	Tractor (D8)	\$461.29	2	\$15.10	0.00	12.00	12	\$181.20	\$642.49
2	Dump Truck (Off Hiway)	\$770.83	1	\$4.75	0.00	14.00	14	\$133.00	\$903.83
1	Water Truck (2500 Gal)	\$100.95		\$2.85	0.00	4.00	4	\$11.40	\$112.35
				TOTAL MOVE-IN COSTS:				\$4,534.52	



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT *Steampot*

1. Type of Sale

Regeneration harvest, Recovery

2. Legal Description

Section(s) 24, 25, 26, 27, 28 of T2S R7W W.M.

3. Sale Acreage

Sale acreage was determined by GPS and orthophotographs along with GIS.

	<u>ACRES</u>	
	<u>Gross</u>	<u>Net</u>
Unit 1 (Modified Clearcut)	139	109
Unit 2 (Modified Clearcut)	129	106
Unit 3 (Modified Clearcut)	118	89
Total Acres	386	304

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

Used for calculating the advertised volume.

Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. Cruising Procedures

A. Cruise Method

Units 1 & 3 were cruised using a 175' x 600' grid; Unit 2 was cruised using a 175' x 550' grid. All timber sale units were cruised with a variable plot sampling method. All conifers 8" DBH and greater and all hardwoods 10" DBH and greater were recorded on all plots. A 1:1 volume plot to basal area plot ratio was used, with each volume plot recording species, diameter, height, form factor and grade and each basal area plot recording species and diameter. Merchantable heights were recorded to 6" and 7" outside bark for conifers and hardwoods, respectively.

B. Plot size

Point of observation was 4.0'. Form factor was measured at 16.0'.

Unit	BAF
1	27.78
2	27.78

3	27.78
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C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Log lengths favored 40' lengths.

5. Computation Procedure

Cruise data was entered into SuperAce for computation of basal area, advertised volume, volume summary, log stock table, and stand table for each species and type. Cruise volumes were cruised by the Marketing Unit in 2020. Plots landing in riparian management areas or areas excluded from the timber sale harvest areas were removed from computation procedures.

Net sale acreage was used for volume calculation.

Cruise Statistics (Board Foot Volumes)			
Unit	Number of Plots	SE (%)	CV (%)
1	36	5.8	35.1
2	41	5.5	35.0
3	36	5.7	34.1
Total	113	3.6 (comb.)	38.2 (comb.)

6. Hidden Defect and Breakage

A 1% reduction was applied to conifers and a 2% reduction to hardwood volumes for hidden defect and breakage.

7. Timber Description

Unit 1 is approximately a 60 year old stand of Douglas-fir with minor amounts of red alder. The unit was burned in the Tillamook Fire of 1933 and Saddle Mountain Fire of 1939. Approximately 41 acres received spray treatment for red alder in a 1977 spray project, the red alder observed appeared mostly healthy with some split tops. Portions of the unit were thinned with the Rockin' Murphy timber sale between 1998-2000.

Unit 2 is approximately a 55 year stand of Douglas-fir. Most of the unit was burned in the Tillamook Fire of 1933 and all in the Saddle Mountain Fire of 1939. The unit was planted in 1967 and again in 1970. Portions of the unit were thinned with the Rockin' Murphy timber sale between 1998-2000.

Unit 3 is approximately a 50 year old stand of Douglas-fir with minor amounts of red alder and noble fir. Most of the unit was burned in the Tillamook Fire of 1933 and all in the Saddle Mountain Fire of 1939. Portions of the unit were planted in 1967, '70 and '75

Portions of the unit were thinned with the Rockin' Murphy timber sale between 1998-2000.

The stand is comprised of multiple merchantable species, please see the table below:

Unit #	Species	DBH	Merchantable Bole Height (feet)	Merchantable top (inches inside bark)
1	Douglas-fir	19.6	87	5
1	Red alder	10.9	61	6
2	Douglas-fir	19.2	82	5
3	Douglas-fir	18.7	68	5
3	Red Alder	15.2	46	6

Above data derived from Statistics (type) report using SuperAce 2008, developed by Atterbury consultants, Inc.

8. Cruiser /Dates

The timber sale was cruised by the Tillamook District Marketing unit in October 2020.

9. Revenue Distribution

FDF 100%

Tax Code: 801 – 100%

Deed Numbers: 169

10. Attachments

Volume Summary

Stand Tables (3)

Log Stock Tables (3)

Species, Sort, Grade Tables (3)

Logging Plan (3)

11. Stand and Log Stock Tables Species Key

DF – Douglas-fir take

RA – Red alder take

BM – Big-leaf maple

OC – Other conifer

NL – Noble fir leave

Prepared by: Cole Lindsay

Date: 12/14/2020

T	Species, Sort Grade - Board Foot Volumes (Type)									Page 1										
	Project: STEAMPOT									Date	12/7/2020									
										Time	7:42:19AM									
T02S R07W S28 T0100										T02S R07W S28 T0100										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
02S	07W	28	880	0100	109.00	36	220	S	W											
S So Gr T rt ad Spp		% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log		Logs Per /Acre			
		Def%	Gross	Net	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf				
DF	CO	2	60	.7	16,107	15,988	1,743	65	35	1	1	98	40	15	336	1.92	47.6			
DF	CO	3	33	.6	8,679	8,626	940	94	5	1	0	0	5	94	39	9	117	0.80	74.0	
DF	CO	4	7		1,658	1,658	181	78	20	2	45	26	11	18	23	5	26	0.32	63.3	
DF	Totals		99	.7	26,444	26,271	2,864	5	32	41	22	3	2	2	92	33	9	142	1.03	184.9
RA	H	4	100		292	292	32	100				76	7	17	22	7	35	0.50	8.3	
RA	Totals		1		292	292	32	100				76	7	17	22	7	35	0.50	8.3	
Type Totals				.6	26,735	26,563	2,895	5	33	41	21	4	2	3	91	33	9	137	1.02	193.2

TC		TSTNDSUM													Stand Table Summary														
															Project			STEAMPOT											
T02S R07W S28 T0100															T02S R07W S28 T0100														
Twp		Rge		Sec		Tract		Type			Acres		Plots		Sample Trees			Page:		1									
02S		07W		28		880		0100			109.00		36		220			Date:		12/07/2020									
																		Time:		7:42:20AM									
S	T	Sample		FF	Ht	Av	Trees/	BA/	Logs	Average Log		Net	Net	Tons/	Cu.Ft.	Bd.Ft.	Totals												
		DBH	Trees							Net	Net						Acres	Acres	Acres	Tons	Cunits	MBF							
DF		9	1	81	48		1.747	.77	1.75	6.8	30.0	.34	12	52	37	13	6												
DF		10	3	83	53		4.244	2.32	4.24	8.9	36.7	1.08	38	156	118	41	17												
DF		11	3	81	64		3.508	2.32	3.51	11.3	33.3	1.13	40	117	123	43	13												
DF		12	3	88	103		2.948	2.32	5.90	13.7	60.0	2.31	81	354	251	88	39												
DF		14	7	80	91		5.053	5.40	8.66	18.2	59.2	4.49	158	513	490	172	56												
DF		15	3	88	105		1.886	2.32	2.52	24.2	112.5	1.74	61	283	189	66	31												
DF		16	14	86	118		7.737	10.80	21.00	21.3	87.1	12.72	446	1,829	1,387	487	199												
DF		17	9	85	118		4.406	6.94	13.22	22.3	91.5	8.39	294	1,209	915	321	132												
DF		18	14	86	116		6.113	10.80	15.72	27.7	109.2	12.42	436	1,716	1,353	475	187												
DF		19	13	86	114		5.095	10.03	12.93	31.3	121.8	11.52	405	1,576	1,256	441	172												
DF		20	20	84	117		7.074	15.43	19.81	32.1	123.9	18.10	635	2,455	1,973	692	268												
DF		21	16	85	119		5.133	12.35	14.44	34.9	138.7	14.35	503	2,002	1,564	549	218												
DF		22	14	84	118		4.092	10.80	10.82	39.2	152.4	12.09	424	1,649	1,318	462	180												
DF		23	18	87	119		4.814	13.89	13.11	43.5	188.0	16.25	570	2,463	1,771	622	268												
DF		24	11	84	124		2.702	8.49	8.11	44.3	184.5	10.22	359	1,496	1,114	391	163												
DF		25	8	85	116		1.811	6.17	4.75	51.0	224.3	6.91	242	1,066	753	264	116												
DF		26	13	84	128		2.721	10.03	7.33	55.6	238.6	11.60	407	1,748	1,265	444	190												
DF		27	8	86	130		1.553	6.17	4.66	61.0	270.0	8.09	284	1,258	882	310	137												
DF		28	8	84	134		1.444	6.17	4.15	65.9	281.3	7.79	273	1,168	850	298	127												
DF		29	6	84	125		1.009	4.63	2.52	70.7	314.7	5.08	178	794	554	194	87												
DF		30	4	82	128		.629	3.09	1.26	68.6	325.0	2.46	86	409	268	94	45												
DF		31	4	82	120		.589	3.09	1.33	88.6	342.2	3.35	117	453	365	128	49												
DF		32	4	83	148		.553	3.09	1.24	98.6	407.8	3.50	123	507	381	134	55												
DF		33	1	90	132		.130	.77	.26	132.6	685.0	.98	34	178	107	38	19												
DF		34	3	81	136		.367	2.32	1.10	87.4	353.3	2.74	96	389	299	105	42												
DF		35	1	89	137		.115	.77	.35	108.2	593.3	1.07	37	206	116	41	22												
DF		40	1	90	145		.088	.77	.27	148.2	856.7	1.12	39	227	122	43	25												
DF		Totals	210	85	109		77.562	162.05	184.93	34.5	142.1	181.84	6,381	26,271	19,821	6,955	2,864												
RA		10	3	75	158		4.244	2.32	4.24	9.3	30.0	1.08	39	127	118	43	14												
RA		11	2	84	49		2.339	1.54	2.34	10.1	40.0	.65	24	94	71	26	10												
RA		12	1	78	74		.983	.77	.98	15.7	50.0	.42	15	49	46	17	5												
RA		14	1	80	80		.722	.77	.72	15.2	30.0	.30	11	22	33	12	2												
RA		Totals	7	78	110		8.287	5.40	8.29	10.8	35.2	2.46	89	292	268	97	32												
BM		19	1	66	46		.392	.77																					
BM		Totals	1	66	46		.392	.77																					
OC		19	1	79	45		.392	.77																					
OC		20	1	85	67		.354	.77																					
OC		Totals	2	82	55		.746	1.54																					
Totals		220	84	108			86.987	169.77	193.21	33.5	137.5	184.30	6470	26,563	20,089	7,053	2,895												

TC TLOGSTVB				Log Stock Table - MBF																
				Project: STEAMPOT																
T02S R07W S28 T0100										T02S R07W S28 T0100										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1											
02S	07W	28	880	0100	109.00	36	220	Date	12/7/2020											
									Time	7:42:18AM										
Spp	S	So	Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches											
									MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19
DF	CO	2	16		12		12	.4									12			
DF	CO	2	24		8		8	.3								8				
DF	CO	2	30		7	4.8	7	.2						7						
DF	CO	2	38		11		11	.4								11				
DF	CO	2	40		1,717	.7	1,704	59.5					499	387	681	95	43			
DF	CO	3	16		3		3	.1						3						
DF	CO	3	22		2		2	.1					2							
DF	CO	3	27		1		1	.0				1								
DF	CO	3	32		24		24	.8				3	21							
DF	CO	3	33		1		1	.0			1									
DF	CO	3	34		22		22	.8				3	18							
DF	CO	3	35		3		3	.1				3								
DF	CO	3	36		112	.6	111	3.9			44	46	12				9			
DF	CO	3	38		22		22	.8				22								
DF	CO	3	39		1		1	.0			1									
DF	CO	3	40		755	.7	750	26.2			86	219	398	29	14	5				
DF	CO	4	11																	
DF	CO	4	12		3		3	.1		3										
DF	CO	4	13		0		0	.0		0										
DF	CO	4	14		1		1	.0		1										
DF	CO	4	15		2		2	.1		1	1									
DF	CO	4	16		25		25	.9		15	8	1	1							
DF	CO	4	17		32		32	1.1		27	4									
DF	CO	4	18		4		4	.1		4										
DF	CO	4	19		4		4	.1		1	3									
DF	CO	4	20		10		10	.4		5	6									
DF	CO	4	21		3		3	.1						1		2				
DF	CO	4	22		3		3	.1		3										
DF	CO	4	23		5		5	.2		3	1	1								
DF	CO	4	24		18		18	.6		8	10									
DF	CO	4	26		2		2	.1		2										
DF	CO	4	28		6		6	.2		6										
DF	CO	4	30		10		10	.3		10										
DF	CO	4	31		2		2	.1		2										
DF	CO	4	32		6		6	.2		6										
DF	CO	4	34		12		12	.4		12										
DF	CO	4	36		3		3	.1		3										
DF	CO	4	38		15		15	.5		15										
DF	CO	4	40		15		15	.5		15										
DF	Totals				2,882		2,864	98.9		141	166	299	452	529	410	707	116	43		
RA	H	4	20		24		24	75.7			14	10								
RA	H	4	24		2		2	7.4			2									
RA	H	4	32		5		5	16.8			5									
RA	Totals				32		32	1.1			22	10								
Total All Species					2,914		2,895	100.0		141	187	310	452	529	410	707	116	43		

T	TSPCSTGR									Species, Sort Grade - Board Foot Volumes (Type)										Page 1	
	Project: STEAMPOT									Date 11/30/2020		Time 4:23:05PM									
T02S R07W S26 T0100														T02S R07W S26 T0100							
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
02S	07W	26	594	0100	106.00	41	252	S	W												
S So Gr T rt ad Spp			% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
			Def%	Gross	Net	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf				
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft			
DF	CO	2	61	.4	16,799	16,726	1,773			71	29	0		2	98	40	15	328	1.85	51.1	
DF	CO	3	31	.0	8,467	8,465	897		95	5		1	3	3	93	39	9	114	0.78	74.0	
DF	CO	4	8		1,913	1,913	203	84	16			17	28	19	36	28	5	31	0.36	62.0	
DF	Totals		100	.3	27,179	27,104	2,873	6	31	45	18	2	3	4	92	35	9	145	1.00	187.0	
Type Totals				.3	27,179	27,104	2,873	6	31	45	18	2	3	4	92	35	9	145	1.00	187.0	

TC		TSTNDSUM													Stand Table Summary														
															Project			STEAMPOT											
T02S R07W S26 T0100															T02S R07W S26 T0100														
Twp		Rge		Sec		Tract		Type			Acres		Plots		Sample Trees			Page:		1									
02S		07W		26		594		0100			106.00		41		252			Date:		11/30/2020									
															Time:		4:23:06PM												
S	T	Sample		FF	Ht	Av	Trees/	BA/	Logs	Average Log		Net		Net	Bd.Ft.	T o t a l s													
		DBH	Trees							16'	Tot	Acres	Acres			Acres	Net	Net	Tons/	Cu.Ft.	Tons	Cunits	MBF						
Spc																													
DF		9	1	89	74		2.780	1.23	2.78		8.0	40.0		.63	22	111		67	24		12								
DF		11	2	85	69		3.723	2.46	3.72		11.8	40.0		1.25	44	149		132	46		16								
DF		12	2	83	77		3.128	2.46	4.69		13.4	43.3		1.79	63	203		190	67		22								
DF		13	3	86	94		3.998	3.69	6.66		18.0	68.0		3.41	120	453		362	127		48								
DF		14	7	85	95		8.044	8.60	13.79		20.0	76.7		7.85	275	1,057		832	292		112								
DF		15	4	85	108		4.004	4.91	8.01		21.4	81.3		4.88	171	651		517	181		69								
DF		16	7	87	106		6.158	8.60	13.20		22.7	91.3		8.54	300	1,205		906	318		128								
DF		17	5	90	113		3.897	6.14	8.57		27.5	112.7		6.72	236	966		712	250		102								
DF		18	9	88	106		6.256	11.06	12.51		31.7	124.4		11.31	397	1,557		1,198	420		165								
DF		19	10	88	118		6.239	12.28	14.97		33.0	131.7		14.09	494	1,971		1,493	524		209								
DF		20	12	89	119		6.757	14.74	18.58		31.9	135.5		16.88	592	2,517		1,789	628		267								
DF		21	12	84	119		6.128	14.74	16.85		34.6	137.3		16.63	583	2,313		1,762	618		245								
DF		22	10	86	118		4.653	12.28	12.10		41.3	172.3		14.26	500	2,085		1,511	530		221								
DF		23	10	87	125		4.257	12.28	12.35		42.9	187.6		15.09	530	2,316		1,600	561		246								
DF		24	13	86	120		5.073	15.97	12.87		50.8	213.5		18.64	654	2,749		1,975	693		291								
DF		25	10	86	127		3.604	12.28	9.73		53.6	231.1		14.86	521	2,249		1,575	553		238								
DF		26	8	84	124		2.665	9.83	6.66		61.0	255.5		11.58	406	1,702		1,227	431		180								
DF		27	6	85	125		1.854	7.37	4.94		60.2	256.3		8.48	298	1,267		899	315		134								
DF		30	2	84	114		.500	2.46	1.00		92.6	352.5		2.64	93	353		280	98		37								
DF		31	1	86	135		.234	1.23	.70		79.3	356.7		1.59	56	251		169	59		27								
DF		32	2	79	134		.440	2.46	1.10		93.0	370.0		2.92	102	407		309	108		43								
DF		34	1	80	122		.195	1.23	.39		122.8	480.0		1.36	48	187		145	51		20								
DF		36	1	83	134		.174	1.23	.52		94.2	440.0		1.40	49	229		148	52		24								
DF		37	1	83	138		.165	1.23	.33		97.5	470.0		.91	32	155		97	34		16								
DF		Totals		139	86	109	84.926	170.75	187.04		35.2	144.9		187.70	6,586	27,104		19,896	6,981		2,873								
Totals				139	86	109	84.926	170.75	187.04		35.2	144.9		187.70	6586	27,104		19,896	6,981		2,873								

TC TLOGSTVB				Log Stock Table - MBF																																			
				Project: STEAMPOT																																			
T02S R07W S26 T0100										T02S R07W S26 T0100																													
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		Page		1																					
02S		07W		26		594		0100		106.00		41		252		Date		11/30/2020																					
																Time		4:23:05PM																					
S				So Gr		Log		Gross		%		Net		%		Net Volume by Scaling Diameter in Inches																							
Spp T				rt de		Len		MBF		Def		MBF		Spc		2-3		4-5		6-7		8-9		10-11		12-13		14-15		16-19		20-23		24-29		30-39		40+	
DF				CO		2 16		4				4		.2										4						20									
DF				CO		2 32		20				20		.7																									
DF				CO		2 34		13				13		.4								13																	
DF				CO		2 38		19				19		.6														19											
DF				CO		2 40		1,725		.4		1,717		59.8								479		460		664		114											
DF				CO		3 15		9				9		.3								9																	
DF				CO		3 17		1				1		.0								1																	
DF				CO		3 21		1				1		.0						1																			
DF				CO		3 22		8				8		.3								8																	
DF				CO		3 28		4				4		.1				4																					
DF				CO		3 30		10				10		.3						10																			
DF				CO		3 31		11				11		.4										11															
DF				CO		3 34		7				7		.2										7															
DF				CO		3 35		12				12		.4						12																			
DF				CO		3 36		20				20		.7						20																			
DF				CO		3 37		2				2		.1				2																					
DF				CO		3 38		11				11		.4						5		6																	
DF				CO		3 40		800		.0		799		27.8				106		319		348		19		7													
DF				CO		4 12		1				1		.0		0		1																					
DF				CO		4 13		2				2		.1		2																							
DF				CO		4 14		3				3		.1		1		2																					
DF				CO		4 15		2				2		.1		1		1																					
DF				CO		4 16		3				3		.1		3																							
DF				CO		4 17		15				15		.5		11		4																					
DF				CO		4 18		1				1		.0		1																							
DF				CO		4 19		6				6		.2		5		1																					
DF				CO		4 20		1				1		.0		1																							
DF				CO		4 21		12				12		.4		5		7																					
DF				CO		4 22		4				4		.2		4				1																			
DF				CO		4 23		4				4		.1		1		3																					
DF				CO		4 24		8				8		.3		7		1																					
DF				CO		4 25		6				6		.2		6																							
DF				CO		4 26		3				3		.1		1		2																					
DF				CO		4 27		7				7		.3		7																							
DF				CO		4 28		6				6		.2		6																							
DF				CO		4 29		3				3		.1		3																							
DF				CO		4 30		3				3		.1		3																							
DF				CO		4 31		3				3		.1		3																							
DF				CO		4 33		14				14		.5		14																							
DF				CO		4 34		12				12		.4		12																							
DF				CO		4 35		10				10		.4		10																							
DF				CO		4 36		2				2		.1		2																							
DF				CO		4 38		8				8		.3		8																							
DF				CO		4 40		63				63		2.2		53		9																					
DF				Totals				2,881				2,873		100.0		171		144		369		373		533		468		703		114									
Total All Species								2,881				2,873		100.0		171		144		369		373		533		468		703		114									

T	Species, Sort Grade - Board Foot Volumes (Type)										Page 1								
	Project: STEAMPOT										Date	12/1/2020							
											Time	7:33:08AM							
T02S R07W S25 T0100										T02S R07W S25 T0100									
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt										
02S	07W	25	589	0100	89.00	36	209	S	W										
S So Gr T rt ad Spp		% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
		Def%	Gross	Net	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf			
									</										

TC		TSTNDSUM													Stand Table Summary																									
															Project													STEAMPOT												
T02S R07W S25 T0100																												T02S R07W S25 T0100												
Twp		Rge		Sec		Tract				Type		Acres		Plots		Sample Trees		Page:		1																				
02S		07W		25		589				0100		89.00		36		209		Date:		12/01/2020																				
																		Time:		7:33:09AM																				
S Spc	T	Sample		FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s																										
		DBH	Trees						Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF																								
DF		9	4	87	67	6.987	3.09	6.99	5.9	25.0	1.17	41	175	104	37	16																								
DF		10	4	86	72	5.659	3.09	5.66	10.4	45.0	1.68	59	255	150	53	23																								
DF		11	3	86	84	3.508	2.32	7.02	9.7	45.0	1.95	68	316	173	61	28																								
DF		12	5	84	79	4.913	3.86	6.88	13.7	45.7	2.68	94	314	239	84	28																								
DF		13	4	91	67	3.349	3.09	3.35	9.3	40.0	.89	31	134	79	28	12																								
DF		14	7	83	86	5.053	5.40	8.66	19.6	70.8	4.85	170	614	432	151	55																								
DF		15	5	84	94	3.144	3.86	6.29	18.1	74.0	3.24	114	465	288	101	41																								
DF		16	11	82	95	6.079	8.49	12.16	23.6	84.1	8.17	287	1,022	727	255	91																								
DF		17	4	88	85	1.958	3.09	3.92	23.0	85.0	2.57	90	333	228	80	30																								
DF		18	5	92	116	2.183	3.86	4.37	31.6	130.0	3.94	138	568	350	123	51																								
DF		19	10	82	98	3.919	7.72	7.84	24.9	85.0	5.57	196	666	496	174	59																								
DF		20	12	87	108	4.244	9.26	9.20	37.6	139.6	9.86	346	1,284	878	308	114																								
DF		21	20	85	108	6.416	15.43	13.15	41.9	152.9	15.71	551	2,012	1,398	491	179																								
DF		22	12	88	116	3.508	9.26	8.48	43.1	181.7	10.41	365	1,541	927	325	137																								
DF		23	14	87	115	3.744	10.80	8.56	47.8	196.3	11.66	409	1,680	1,038	364	149																								
DF		24	20	86	117	4.913	15.43	12.04	49.8	209.4	17.09	599	2,520	1,521	534	224																								
DF		25	16	86	116	3.622	12.35	8.38	56.8	233.5	13.56	476	1,956	1,207	423	174																								
DF		26	17	85	116	3.558	13.12	8.58	57.7	232.4	14.11	495	1,995	1,256	441	178																								
DF		27	5	87	114	.970	3.86	1.94	68.2	269.0	3.77	132	522	336	118	46																								
DF		28	5	77	129	.902	3.86	2.53	63.4	235.0	4.57	160	594	406	143	53																								
DF		29	4	89	135	.673	3.09	2.02	69.6	336.7	4.01	141	680	357	125	60																								
DF		30	6	81	117	.943	4.63	2.04	84.1	325.4	4.90	172	665	436	153	59																								
DF		31	2	84	124	.294	1.54	.88	74.5	325.0	1.88	66	287	167	59	26																								
DF		32	5	89	120	.691	3.86	2.07	62.1	320.0	3.67	129	663	326	115	59																								
DF		33	1	88	118	.130	.77	.39	86.4	420.0	.96	34	164	85	30	15																								
DF		34	1	89	120	.122	.77	.37	91.1	470.0	.95	33	173	85	30	15																								
DF		Totals	202	86	97	81.484	155.88	153.74	35.1	140.5	153.80	5,397	21,595	13,689	4,803	1,922																								
RA		12	1	67	68	.983	.77	.98	8.0	30.0	.22	8	29	19	7	3																								
RA		14	1	80	72	.722	.77	.72	15.8	60.0	.31	11	43	28	10	4																								
RA		19	1	66	74	.392	.77	.39	34.6	60.0	.37	14	24	33	12	2																								
RA		20	1	90	75	.354	.77	.71	28.7	110.0	.56	20	78	50	18	7																								
RA		Totals	4	74	71	2.450	3.09	2.80	18.9	62.1	1.46	53	174	130	47	15																								
NL		21	1	91	125	.321	.77	.96	37.2	176.7	.86	36	170	76	32	15																								
NL		Totals	1	91	125	.321	.77	.96	37.2	176.7	0.86	36	170	76	32	15																								
OC		16	1	85	68	.553	.77																																	
OC		26	1	89	104	.209	.77																																	
OC		Totals	2	86	78	.762	1.54																																	
Totals			209	85	96	85.017	161.28	157.51	34.8	139.3	156.12	5486	21,939	13,895	4,882	1,953																								

TC TLOGSTVB				Log Stock Table - MBF																	
				Project: STEAMPOT																	
T02S R07W S25 T0100										T02S R07W S25 T0100											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1												
02S	07W	25	589	0100	89.00	36	209	Date	12/1/2020												
										Time	7:33:07AM										
Spp	T	S	So Gr	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	CO	2	16			4		4	.2					4							
DF	CO	2	18			10		10	.5							10					
DF	CO	2	20			11		11	.6							11					
DF	CO	2	22			39		39	2.0									39			
DF	CO	2	30			6	8.9	6	.3							6					
DF	CO	2	31			9		9	.4					9							
DF	CO	2	37			6		6	.3					6							
DF	CO	2	38			18		18	.9							18					
DF	CO	2	40			1,133	.1	1,132	58.9						188	379	469	84	11		
DF	CO	3	22			9		9	.5					9							
DF	CO	3	29			4		4	.2			4									
DF	CO	3	30			6		6	.3				6								
DF	CO	3	34			55		55	2.8			2		52							
DF	CO	3	36			6		6	.3				6								
DF	CO	3	38			6		6	.3					6							
DF	CO	3	40			472	.5	470	24.5			142	149	161	12	7					
DF	CO	4	12			1		1	.1			1	1								
DF	CO	4	13			3		3	.2		1	1	1	0							
DF	CO	4	14			22		22	1.1			9	0	12							
DF	CO	4	15			1		1	.1		1										
DF	CO	4	16			12		12	.6		9		2								
DF	CO	4	17			5		5	.3		3	2									
DF	CO	4	18			5		5	.3		5										
DF	CO	4	19			3		3	.2		3										
DF	CO	4	21			7		7	.4		3	3									
DF	CO	4	22			1		1	.1		1										
DF	CO	4	23			2		2	.1			2									
DF	CO	4	26			3		3	.2		3										
DF	CO	4	28			8		8	.4		8										
DF	CO	4	30			8		8	.4		8										
DF	CO	4	32			6		6	.3		6										
DF	CO	4	33			6		6	.3		6										
DF	CO	4	34			6		6	.3		6										
DF	CO	4	36			14		14	.7		14										
DF	CO	4	38			6		6	.3		6										
DF	CO	4	40			13		13	.7		13										
DF Totals						1,926		1,922	98.4		97	167	165	241	218	387	513	84	50		
RA	H	4	25			3		3	16.9			3									
RA	H	4	28			7	4.3	7	44.7			1				6					
RA	H	4	37			4		4	24.9			4									
RA	H	4	39			2		2	13.5			2									
RA Totals						16	2.0	15	.8		10					6					
NL	CO	2	40			10		10	67.9							10					
NL	CO	3	40			4		4	28.3					4							
NL	CO	4	23			1		1	3.8		1										
NL Totals						15		15	.8		1			4		10					
Total All Species						1,957		1,953	100.0		98	176	165	245	218	403	513	84	50		



"STEWARDSHIP IN FORESTRY"

Steampot

Volume Summary

Unit 1-Modified Clearcut				
109 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	26.27	2864	1%	2835
Hemlock		0	1%	0
Spruce		0	1%	0
Noble Fir		0	1%	0
Alder	0.29	32	2%	31
TOTAL	26.6	2895.4		2866

Unit 2-Modified Clearcut				
106 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	27	2873	1%	2844
Hemlock		0	1%	0
Spruce		0	1%	0
Noble Fir		0	1%	0
Alder		0	2%	0
TOTAL	27	2873		2844

Unit 3-Modified Clearcut				
89 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	21.6	1922	1%	1903
Hemlock		0	1%	0
Spruce		0	1%	0
Noble Fir		0	1%	0
Alder	0.2	15	2%	15
TOTAL	21.8	1937		1918



"STEWARDSHIP IN FORESTRY"

Steampot

Volume Summary

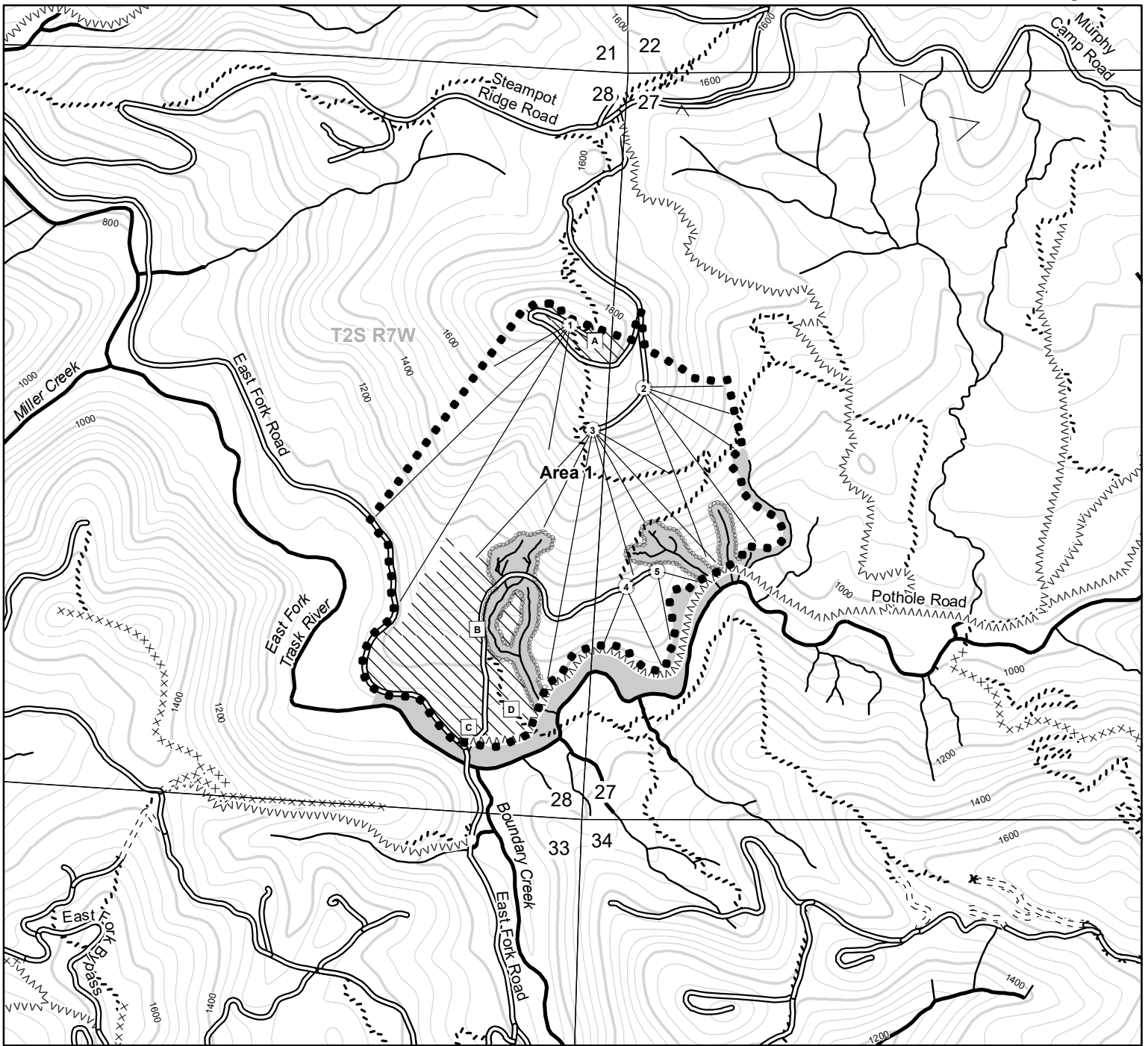


"STEWARDSHIP IN FORESTRY"

Steampot

Volume Summary

TOTAL SALE VOLUME			304	acres
SPECIES	Cruised Net (MBF)		Net Sale (MBF)	
Douglas-fir	7659		7582	
Hemlock	0		0	
Spruce	0		0	
Noble Fir	0		0	
Red Alder	47		46	
TOTAL	7706		7628	



LOGGING PLAN

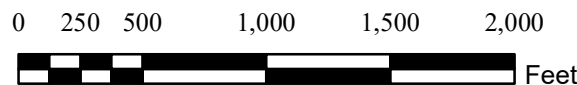
FOR TIMBER SALE CONTRACT TL-341-2022-W00505-01
STEAMPOT
PORTIONS OF SECTIONS 24, 25, 26, 27, & 28, T2S, R7W, W.M.
TILLAMOOK COUNTY, OREGON

Tillamook District GIS
April, 2021

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

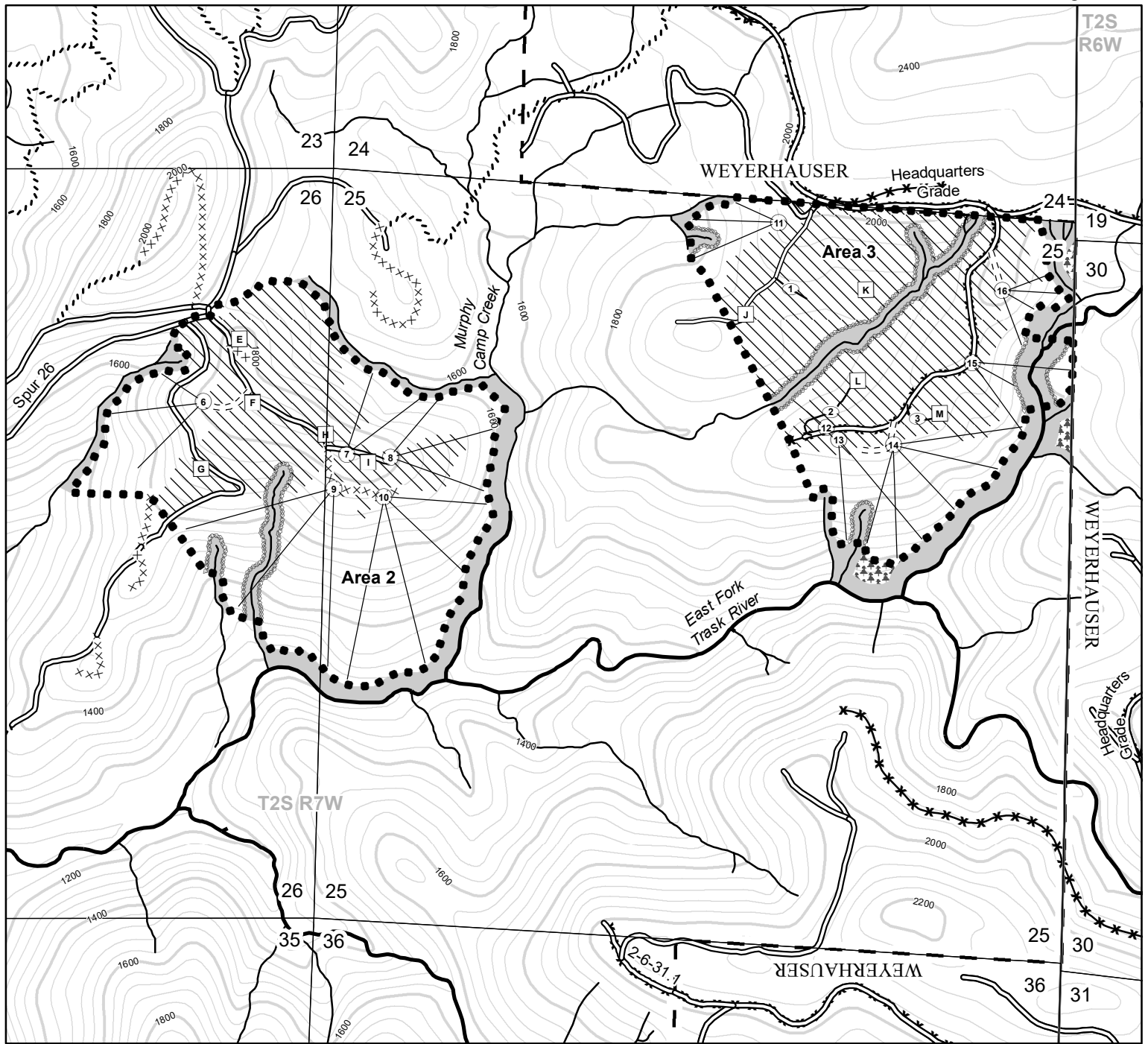
1:12,000

1 inch = 1,000 feet



NET ACRES

	GROUND	CABLE	TOTAL
UNIT 1	23	86	109
UNIT 2	38	68	106
UNIT 3	58	31	89
TOTAL	119	185	304



- Riparian boundary
- Timber Sale Boundary
 - Cable Landing
 - Tractor Landing
- Non-project Construction
- Ground Yarding
- Green Tree Retention Area
- Cable Logging
- Type-F Stream
- Type-N Stream
- Historic Roads
- Surfaced Road
- Blocked Road
- Recreation Trail
- 40' Contour
- 200' Contour
- Riparian Buffer
- ODF Ownership Line
- Sections

LOGGING PLAN

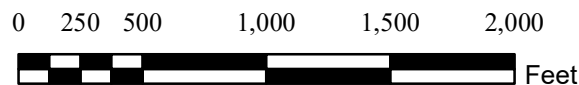
FOR TIMBER SALE CONTRACT TL-341-2022-W00505-01
STEAMPOT
PORTIONS OF SECTIONS 24, 25, 26, 27, & 28, T2S, R7W, W.M.
TILLAMOOK COUNTY, OREGON

Tillamook District GIS
April, 2021

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