Timber Sale Appraisal
Clay Pigeon
Sale TL-341-2017-13-

District: Tillamook **Date: July 05, 2016**

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$1,370,111.41	$62,573.94	$1,432,685.35
		Project Work:	($302,400.00)
		Advertised Value:	$1,130,285.35

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Timber Description

Location: Portions of Sections 17, 18, 20, 21, and 22, T2S, R7W, W.M., Tillamook County, Oregon.

Stand Stocking: 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	18	0	95
Western Hemlock / Fir	21	0	95
Alder (Red)	15	0	95

Volume by Grade	2S	3S	4S	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	2,281	1,774	471	0	0	0	0	4,526
Western Hemlock / Fir	18	0	1	0	0	0	0	19
Alder (Red)	0	0	0	6	23	109	83	221
Total	2,299	1,774	472	6	23	109	83	4,766

Comments: Pond Values Used: 2nd Quarter Calendar year 2016.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
$880.09/MBF = $1,175/MBF - $294.91/MBF

SCALING COST ALLOWANCE = $5.00/MBF

FUEL COST ALLOWANCE = $3.00/Gallon

HAULING COST ALLOWANCE
Hauling costs equivalent to $780 daily truck cost.

Other Costs (with Profit & Risk to be added):
Brand and Paint: $2/MBF x 4,766 MBF = $9,532
Snag Creation, Girdling at Base: $10/tree x 420 trees = $4,200
Directional Falling, Area 1 OHV trails: 6,800' linear, 22 acres x 114 trees/acre x $3/tree = $7,524
Haulback Area 2 corner: 5 acres x 21.6 MBF/acre x $75/MBF = $8,100
TOTAL Other Costs (with Profit & Risk to be added) = $29,356

Other Costs (No Profit & Risk added):
Machine Cleaning: $1,000/machine x 3 = $3,000
Transport Cost Between Areas 1 and 2: 3 machines x $400/ machine = $1,200
Heliport Construction: 6 hours machine loader time for slash moving @ $110/hour = $660
Trail Clearing with Bobcat E32 or similar in Area 2: $1,000
Cover Materials for Piles: $5/pile x 8 piles = $40
Slash Piling and Sorting (Cable Ground): $5/acre x 123 acres = $615
Ditch Cleaning and Bank Sluff Removal:
Mobilization: two times – dump truck w/tilt bed & small excavator: $890 x 2 = $1,780
Small Excavator (Cat 312 or equivalent): 40 hours @ $95/hour = $3,800
Dump Truck: 40 hours @ $70/hour = $2,800
TOTAL Other Costs (No Profit & Risk added) = $14,895

ROAD MAINTENANCE:
Spot Rocking:
S Fk Trask, E Fk Trask, Steampot Ridge Roads: 30cy/mmbf/mile x 4.766 MMBF x $13.00/cy x 8.1 miles/ 4,766 MBF = $3.16/ MBF

Grading:
S Fk Trask, E Fk Trask, Steampot Ridge Roads: $250/ mile x 8.1 miles x 3 times/ 4,766 MBF = $1.27/MBF
Final Maintenance Grading: $500 x 8.1 miles/4,766 MBF = $0.85/MBF
Final Maintenance Compaction: $950/mile x 8.1 miles/4,766 MBF = $1.61/MBF
TOTAL Road Maintenance = $6.89/MBF

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Logging Conditions

Combination#: 1 Douglas - Fir 44.94%

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

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

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 6.7 **bd. ft / load:** 4200

cost / mbf: $213.22

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

Combination#: 2 Douglas - Fir 11.78%

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

yarding distance: Medium (800 ft) **downhill yarding:** Yes

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 5 **bd. ft / load:** 4000

cost / mbf: $375.00

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

Combination#: 3 Douglas - Fir 43.28%
Western Hemlock / Fir 100.00%
Alder (Red) 50.00%

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

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

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 9 **bd. ft / load:** 3800

cost / mbf: $92.75

machines: Stroke Delimber (B)

Combination#: 4 Alder (Red) 50.00%

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

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

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 6.5 **bd. ft / load:** 3800

cost / mbf: $242.92

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

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Logging Costs

Operating Seasons:	2.00	**Profit Risk:**	12%
Project Costs:	$302,400.00	**Other Costs (P/R):**	$29,356.00
Slash Disposal:	$0.00	**Other Costs:**	$14,895.00

Miles of Road

Road Maintenance: $6.89

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	4.5
Western Hemlock / Fir	$0.00	3.0	4.2
Alder (Red)	$0.00	3.0	3.2

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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
$180.15	$7.23	$1.84	$60.67	$6.16	$30.73	$0.00	$5.00	$3.13	$294.91
Western Hemlock / Fir									
$92.75	$7.23	$1.84	$65.00	$6.16	$20.76	$0.00	$5.00	$3.13	$201.87
Alder (Red)									
$167.84	$7.23	$1.84	$85.31	$6.16	$32.21	$0.00	$5.00	$3.13	$308.72

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$596.52	$301.61	$0.00
Western Hemlock / Fir	$0.00	$466.32	$264.45	$0.00
Alder (Red)	$0.00	$591.86	$283.14	$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	4,526	$301.61	$1,365,086.86
Western Hemlock / Fir	19	$264.45	$5,024.55
Alder (Red)	221	$283.14	$62,573.94

Gross Timber Sale Value

Recovery: $1,432,685.35

Prepared By: David Wells **Phone:** 503-842-2545

PROJECT SUMMARY SHEET

Sale: Clay Pigeon

CONSTRUCTION

Point	A to B	9+90	stations =	$11,540.11
Point	I to J	19+90	stations =	$29,288.41
			SUBTOTAL CONSTRUCTION	**$40,828.52**

IMPROVEMENT

Point	E to F	269+10	stations =	$202,039.45
Point	G to H	16+50	stations =	$13,394.35
Point	K to L	18+60	stations =	$523.30
Point	O to P	1+00	stations =	$1,978.50
Point	Q	0+00	stations =	$5,482.80
			SUBTOTAL IMPROVEMENT	**$223,418.40**

RECONSTRUCTION

Point	A to B	17+40	stations =	$19,852.89
Point	C to D	11+00	stations =	$14,078.66
Point	M to N	4+75	stations =	$1,857.78
			SUBTOTAL RECONSTRUCTION	**$35,789.33**

MOVE IN **$2,363.75**

GRAND TOTAL **$302,400.00**

SUMMARY OF CONSTRUCTION COST

Sale: **Clay Pigeon** Road: **A to B**

Construction -	9+90 stations	Improvement -	0+00 stations	Reconstruction -	17+40 stations
	0.19 miles		0.00 miles		0.33 miles

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

Station	to	Station	Average Sideslope	Avg. Dist. To W.A. (mi.)	Outslope Ditch	Cost per Station			
0+00		2+35	18%		Ditch	$168	=	$395	
19+75		27+30	7%			$74	=	$559	
								TOTAL	**$954**

RECONSTRUCTION: CLEARING AND GRUBBING -

Widening	0.068	acres @	$660.00	per acre =	$44.88	
Scattering	0.480	acres @	$980.00	per acre =	$470.40	
				TOTAL CLEARING AND GRUBBING		**$515.28**

RECONSTRUCTION: EXCAVATION -

Road Earthwork	17.40	sta. @	$15.00	per sta. =	$261.00	
Widening	285	cy. @	$1.65	per c.y.=	$470.25	
				TOTAL EXCAVATION		**$731.25**

CULVERTS - MATERIALS & INSTALLATION

Culverts								
80	LF of 18"	$1,400		0	LF of 24"	$0		
		$1,400				$0		
Culvert Stakes & Markers								
2	markers	$16						
		$16				**TOTAL CULVERTS**		**$1,416**

ROCK

0+00	to	2+35	240	cy. of	Jaw Run	@	$13.29	per c.y.=	$3,190
2+35	to	19+75	650	cy. of	Jaw Run	@	$13.50	per c.y.=	$8,775
19+75	to	27+30	630	cy. of	Jaw Run	@	$13.60	per c.y.=	$8,568
Cross Drain Backfill/bedding		20cy/x-dra	40	cy. of	Crushed	@	$4.36	per c.y.=	$174
Cross Drain energy dissipator		10+50	5	cy. of	Riprap	@	$13.00	per c.y.=	$65
Junction Widening		0+00	50	cy. of	Jaw Run	@	$13.14	per c.y.=	$657
Landing Rock		6+03	75	cy. of	Jaw Run	@	$13.23	per c.y.=	$992
Landing Rock		12+20	60	cy. of	Jaw Run	@	$13.33	per c.y.=	$800
Landing Rock		19+77	100	cy. of	Jaw Run	@	$13.44	per c.y.=	$1,344
Landing Rock		27+30	50	cy. of	Jaw Run	@	$13.56	per c.y.=	$678
								TOTAL ROCK	**$25,243**

SPECIAL PROJECTS

Clean Ditchlines	17.08	stations @	$60.00	each	$1,025
Construct Landings	3.00	@	$250.00	each	$750
Construct Ditchouts	1.00	@	$60.00	each	$60
Grade and shape road -	27.30	stations @	$15.50	per station	$423
Grass seed and fertilize -	1.25	acres @	$220.00	per acre	$275
				TOTAL SPECIAL PROJECTS	**$2,533**

GRAND TOTAL **$31,393**

SUMMARY OF CONSTRUCTION COST

Sale: **Clay Pigeon** Road: **C to D**

Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	11+00	stations
	0.00	miles		0.00	miles		0.21	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Widening	0.101	acres @	$660.00	per acre =	$66.66	
Scattering	0.300	acres @	$980.00	per acre =	$294.00	
				TOTAL CLEARING AND GRUBBING		**$360.66**

RECONSTRUCTION: EXCAVATION -

Widening	424	cy. @	$1.40	per c.y.=	$593.60	
				TOTAL EXCAVATION		**$593.60**

CULVERTS - MATERIALS & INSTALLATION

Culverts

80	LF of 18"	$1,400.00	0	LF of 24"	$0.00	
		$1,400.00			$0.00	

Culvert Stakes & Markers

2 markers		$16.00				
		$16.00			**TOTAL CULVERTS**	**$1,416.00**

ROCK

0+00 to	11+00	630	cy. of	Jaw Run	@	$13.83	per c.y.=	$8,712.90	
Junction	As Marked	30	cy. of	Jaw Run	@	$11.02	per c.y.=	$330.60	
Culvert Backfill/bedding	As Marked	40	cy. of	Crushed	@	$4.50	per c.y.=	$180.00	
								TOTAL ROCK	**$9,223.50**

SPECIAL PROJECTS

Construct ditchouts -	1.00	@	$60.00	each	$60.00	
Clean Ditches	12.20	@	$60.00	each	$732.00	
Remove vegetative material from road	11.00	stations @	$115.00	per station	$1,265.00	
Grade and shape road -	11.00	stations @	$15.50	per station	$170.50	
Roll subgrade w/ vibratory roller prior to rocking -	11.00	stations @	$13.20	per station	$145.20	
Grass seed and fertilize -	0.51	acres @	$220.00	per acre	$112.20	
				TOTAL SPECIAL PROJECTS		**$2,484.90**

GRAND TOTAL **$14,078.66**

SUMMARY OF CONSTRUCTION COST

Sale: **Clay Pigeon** Road: **E to F**

Construction -	0+00	stations	Improvement -	269+10	stations	Reconstruction -	0+00	stations
	0.00	miles		5.10	miles		0.00	miles

TOTAL ENDHAUL **$0.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

340	LF of 18"	$5,950.00	0	LF of 24"	$0.00	
		$5,950.00			$0.00	

Culvert Stakes & Markers

0	stakes	$0.00	
11	markers	$88.00	
		$88.00	

TOTAL CULVERTS **$6,038.00**

ROCK

0+00 to	173+10	6,040	cy. of	Crushed	@	$26.68	per c.y.=	$161,147.20
Culvert Backfill/bedding	20cy/X drain	220	cy. of	Crushed	@	$7.19	per c.y.=	$1,581.80
Landing Rock	78+45	100	cy. of	Jaw Run	@	$9.86	per c.y.=	$986.00
Helicopter Pad	110+91	100	cy. of	Jaw Run	@	$11.47	per c.y.=	$1,147.00
Stockpile	62+00	1,000	cy. of	Crushed	@	$12.76	per c.y.=	$12,760.00
Pre & Post Rock Haul	As Directed	300	cy. of	Crushed	@	$12.44	per c.y.=	$3,732.00
Energy Dissipator	5cy/Culvert	50	cy. of	Riprap	@	$9.92	per c.y.=	$496.00
Energy Dissipator	9+75	5	cy. of	Riprap	@	$10.57	per c.y.=	$52.85

TOTAL ROCK **$181,902.85**

SPECIAL PROJECTS

Develop Waste Areas	6.00	hours @	$145.00	per hour	$870.00
Develop Helicopter Pad	4.00	hours @	$145.00	per hour	$580.00
Clean Ditches Scatter	99.46	stations @	$60.00	per station	$5,967.60
Clean Ditches Endhaul	51.81	stations @	$100.00	per station	$5,181.00
Construct ditchouts -	11.00	@	$25.00	each	$275.00
Remove culverts from state lands	2.00	@	$192.50	total	$192.50
Grass seed and fertilize -	2.00	acres @	$220.00	per acre	$440.00

TOTAL SPECIAL PROJECTS **$14,098.60**

GRAND TOTAL **$202,039.45**

SUMMARY OF CONSTRUCTION COST

Sale: **Clay Pigeon** Road: **G to H**

Construction -	0+00	stations	Improvement -	16+50	stations	Reconstruction -	0+00	stations
	0.00	miles		0.31	miles		0.00	miles

CULVERTS - MATERIALS & INSTALLATION

Culverts

30	LF of 18"	$525.00	0	LF of 24"	$0.00
		$525.00			$0.00

Culvert Stakes & Markers

0	stakes	$0.00
1	markers	$8.00
		$8.00

TOTAL CULVERTS **$533.00**

ROCK

0+00 to	16+50	640	cy. of	Jaw Run	@	$9.94	per c.y.=	$6,361.60
Culvert Backfill/bedding	2+30	20	cy. of	Crushed	@	$7.64	per c.y.=	$152.80
Junction	0+00	20	cy. of	Jaw Run	@	$9.81	per c.y.=	$196.20
Landing Rock	8+92	50	cy. of	Jaw Run	@	$9.95	per c.y.=	$497.50
Landing Rock	16+50	100	cy. of	Jaw Run	@	$10.07	per c.y.=	$1,007.00

TOTAL ROCK **$8,215.10**

SPECIAL PROJECTS

Clean Ditchlines(endhaul)	4.50	stations @	$100.00	per station	$450.00
Clean Ditchlines(scatter)	6.82	stations @	$60.00	per station	$409.20
Widen Access-	2.00	hours @	$250.00	per hour	$500.00
Construct ditchouts -	4.00	@	$60.00	each	$240.00
Construct Landings	2.00	@	$250.00	each	$500.00
Remove vegetative material from road	16.50	stations @	$115.00	per station	$1,897.50
Grade and shape road -	16.50	stations @	$15.50	per station	$255.75
Roll subgrade w/ vibratory roller prior to rocking -	16.50	stations @	$13.20	per station	$217.80
Grass seed and fertilize -	0.80	acres @	$220.00	per acre	$176.00

TOTAL SPECIAL PROJECTS **$4,646.25**

GRAND TOTAL **$13,394.35**

SUMMARY OF CONSTRUCTION COST

Sale: **Clay Pigeon** Road: **I to J**

Construction -	19+90	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.38	miles		0.00	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	Endhaul			
0+00		19+90	10%		Ditch	$143	$0	=	$2,845.70	
									TOTAL	**$2,845.70**

CULVERTS - MATERIALS & INSTALLATION

Culverts							
90	LF of 18"	$1,575.00		0	LF of 24"	$0.00	
		$1,575.00				$0.00	
Culvert Stakes & Markers							
3	markers	$24.00					
		$24.00				**TOTAL CULVERTS**	**$1,599.00**

ROCK

0+00 to	19+90	1,570	cy. of	Jaw Run	@	$12.32	per c.y.=	$19,342.40	
Junction	0+00	30	cy. of	Jaw Run	@	$9.79	per c.y.=	$293.70	
Pullout	0+00	60	cy. of	Jaw Run	@	$9.79	per c.y.=	$587.40	
Landing Rock	7+13, 7+95	100	cy. of	Jaw Run	@	$9.99	per c.y.=	$999.00	
Landing Rock	19+90	200	cy. of	Jaw Run	@	$10.32	per c.y.=	$2,064.00	
								TOTAL ROCK	**$23,286.50**

SPECIAL PROJECTS

Grade and shape road -	19.90	stations @	$15.50	per station	$308.45	
Roll subgrade w/ vibratory roller prior to rocking -	19.90	stations @	$13.20	per station	$262.68	
Load and endhaul material to Vegetation Waste Area	5.00	hours @	$145.00	per hour	$725.00	
Grass seed and fertilize -	0.914	acres @	$220.00	per acre	$201.08	
Mulching -	0.100	acres @	$600.00	per acre	$60.00	
					TOTAL SPECIAL PROJECTS	**$1,557.21**

GRAND TOTAL **$29,288.41**

SUMMARY OF CONSTRUCTION COST

Sale: **Clay Pigeon** Road: **K to L**

Construction -	0+00	stations	Improvement -	18+60	stations	Reconstruction -	0+00	stations
	0.00	miles		0.35	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Roadside Brushing	0.35	miles	@	$600.00	per mile =	$210.00
					TOTAL CLEARING AND GRUBBING	**$210.00**

SPECIAL PROJECTS

Clean outlet and ditchout at 0+25	1.00	@		$25.00	each	$25.00
Grade and shape road -	18.60	stations	@	$15.50	per station	$288.30
					TOTAL SPECIAL PROJECTS	**$313.30**

GRAND TOTAL **$523.30**

SUMMARY OF CONSTRUCTION COST

Sale: **Clay Pigeon** Road: **M to N**

Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	4+75	stations
	0.00	miles		0.00	miles		0.09	miles

ROCK

Junction	0+00	100	cy. of	Jaw Run	@	$10.10	per c.y.=	$1,010.00	
								TOTAL ROCK	**$1,010.00**

SPECIAL PROJECTS

Remove vegetative material from road	4.75	stations @	$115.00	each	$546.25	
Grade and shape road -	4.75	stations @	$15.50	per station	$73.63	
Construct Waterbar -	2.00	@	$25.00	each	$50.00	
Block Road -	1.00	@	$80.00	each	$80.00	
Roll subgrade w/ vibratory roller prior to rocking -	4.75	stations @	$13.20	per station	$62.70	
Grass seed and fertilize -	0.16	acres @	$220.00	per acre	$35.20	
				TOTAL SPECIAL PROJECTS		**$847.78**

GRAND TOTAL **$1,857.78**

SUMMARY OF CONSTRUCTION COST

Sale: **Clay Pigeon** Road: **O to P**

Construction -	0+00	stations	Improvement -	1+00	stations	Reconstruction -	0+00	stations
	0.00	miles		0.02	miles		0.00	miles

ROCK

0+00	to	1+00	50	cy. of	Crushed	@	$13.19	per c.y.=	$659.50	
Junctions		0+00,1+00	100	cy. of	Crushed	@	$13.19	per c.y.=	$1,319.00	
									TOTAL ROCK	**$1,978.50**

GRAND TOTAL **$1,978.50**

SUMMARY OF CONSTRUCTION COST

Sale: **Clay Pigeon** Road: **Q to R**

Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.00	miles		0.00	miles		0.00	miles

CULVERTS - MATERIALS & INSTALLATION

Culverts

60	LF of 30"	$2,160.00	0	LF of 36" $0.00
		$2,160.00		$0.00

Culvert Stakes & Markers

1	markers	$8.00
		$8.00

TOTAL CULVERTS **$2,168.00**

ROCK

Culvert Bedding/backfill	Point Q	50	cy. of	Crushed	@	$7.73	per c.y.=	$386.50
Energy Dissipator	Point Q	10	cy. of	Riprap	@	$10.42	per c.y.=	$104.20
Fill	Point Q	150	cy. of	Pitrun	@	$10.12	per c.y.=	$1,518.00
							TOTAL ROCK	**$2,008.70**

SPECIAL PROJECTS

Excavate and endhaul material	4.00	hours @	$250.00	per hour	$1,000.00
Construct waste areas -	1.00	hours @	$145.00	per hour	$145.00
Remove culverts from state lands	0.00	@	$152.90	total	$152.90
Grass seed and fertilize -	0.01	acres @	$220.00	per acre	$2.20
Mulching -	0.010	acres @	$600.00	per acre	$6.00
				TOTAL SPECIAL PROJECTS	**$1,306.10**

GRAND TOTAL **$5,482.80**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	EFK Trask	Location:	Sec. 7, T2S, R7W, W.M.		
Sale:	**Clay Pigeon**		Road:		370 c.y.
Swell:	1.40		Stockpile:		c.y.
Shirinkage	1.16		Total Truck Loads:		370 c.y.
Drill Pct.:	0%		In Place Total:		264 c.y.

Load Dump Truck:		$0.70	/cu.yd.	x	370	cu.yds. =	$259.00
						Subtotal	$259.00
Move in Loader		1	@		$338.00	=	$338.00
						Subtotal	$338.00
						TOTAL PRODUCTION COSTS	$597.00
Base Cost=	$1.61	Per Cu.Yd.					

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 Backfill/bedding (Crushed)	2.15	0.60	1.61	4.36	40		$174.40
C to D Culvert Backfill/bedding (Crushed)	2.29	0.60	1.61	4.50	40		$180.00
E to F Culvert Backfill/bedding (Crushed)	4.98	0.60	1.61	7.19	220		$1,581.80
G to H Culvert Backfill/bedding (Crushed)	5.43	0.60	1.61	7.64	20		$152.80
Q to R Culvert Bedding/backfill (Crushed)	5.52	0.60	1.61	7.73	50		$386.50
				Total C.Y.	370	Sub Total	$2,475.50
						TOTAL ROCKING COSTS	$2,475.50

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Toll Pit	Location:	Sec. 16, T2S, R7W, W.M.
Sale:	**Clay Pigeon**	Road:	7490 c.y.
Swell:	1.40	Stockpile:	c.y.
Shirinkage	1.16	Total Truck Loads:	7490 c.y.
Drill Pct.:	100%	In Place Total:	5350 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. $1,160.00

Drill & Shoot:	$2.50	/cu.yd.	x	5350	cu.yds.	=	$13,375.00
Push Rock:	$1.20	/cu.yd.	x	7490	cu.yds.	=	$8,988.00
Load Crusher:	$0.70	/cu.yd.	x	7490	cu.yds.	=	$5,243.00
Crush Rock:	$2.80	/cu.yd.	x	7490	cu.yds.	=	$20,972.00
Load Dump Truck:	$0.70	/cu.yd.	x	7490	cu.yds.	=	$5,243.00
Oversize Reduction:	$4.50	/cu.yd.	x	75	cu.yds.	=	$337.50

Subtotal $55,318.50

Move In/Set-up Crusher					$4,994.00
Move In and set up Drill and Compressor	1	@	$288.65	=	$288.65
Move in Roller and Compactor	1	@	$288.65	=	$288.65
Move in D-8	1	@	$449.35	=	$449.35
Move in Loader	1	@	$338.00	=	$338.00
Move in Excavator	1	@	$490.89	=	$490.89
				Subtotal	$6,849.54

TOTAL PRODUCTION COSTS $62,168.04

Base Cost Pitrun/rip rap= $8.30 Per Cu.Yd.

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 0 17310 (Crushed)	15.93	2.45	8.30	26.68	6040	$161,147.20
E to F Stockpile (Crushed)	4.16	0.30	8.30	12.76	1000	$12,760.00
E to F Pre & Post Rock Haul (Crushed)	1.69	2.45	8.30	12.44	300	$3,732.00
O to P 0 100 (Crushed)	2.44	2.45	8.30	13.19	50	$659.50
O to P Junctions (Crushed)	2.44	2.45	8.30	13.19	100	$1,319.00

Total C.Y. 7490 Sub Total $179,617.70

TOTAL ROCKING COSTS $179,617.70

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Steampot Pit	Location:	Sec. 22, T2S, R7W, W.M.		
Sale:	**Clay Pigeon**		Road:		5805 c.y.
Swell:	1.40		Stockpile:		c.y.
Shirinkage	1.16		Total Truck Loads:		5805 c.y.
Drill Pct.:	100%		In Place Total:		4146 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.							$1,740.00
Drill & Shoot:	$2.50	/cu.yd.	x	4146	cu.yds.	=	$10,365.00
Push Rock:	$0.70	/cu.yd.	x	5805	cu.yds.	=	$4,063.50
Load Crusher:	$0.70	/cu.yd.	x	4955	cu.yds.	=	$3,468.50
Crush Rock(3"):	$2.70	/cu.yd.	x	960	cu.yds.	=	$2,592.00
Crush Rock(4"):	$2.40	/cu.yd.	x	3995	cu.yds.	=	$9,588.00
Load Dump Truck:	$0.70	/cu.yd.	x	5805	cu.yds.	=	$4,063.50
Oversize Reduction:	$4.50	/cu.yd.	x	581	cu.yds.	=	$2,614.50
						Subtotal	$38,495.00

Move In/Set-up Crusher					$1,799.00
Move In and set up Drill and Compressor	1	@	$288.65	=	$288.65
Move in Roller and Compactor	1	@	$288.65	=	$288.65
Move in Grader	1	@	$80.30	=	$80.30
Move in Loader	1	@	$338.00	=	$338.00
Move in Excavator	1	@	$490.89	=	$490.89
Move in Trucks	3	@	$87.94	=	$263.82
Move in Water Truck	1	@	$103.37	=	$103.37
				Subtotal	$3,652.68

TOTAL PRODUCTION COSTS	$42,147.68

Base Cost= $7.26 Per Cu.Yd.

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 0 235 (Jaw Run)	4.93	1.10	7.26	13.29	240		$3,189.60
A to B 235 1975 (Jaw Run)	5.14	1.10	7.26	13.50	650		$8,775.00
A to B 1975 2730 (Jaw Run)	5.24	1.10	7.26	13.60	630		$8,568.00
A to B Cross Drain energy dissipator (Ri	4.94	0.80	7.26	13.00	5		$65.00
A to B Junction Widening (Jaw Run)	4.78	1.10	7.26	13.14	50		$657.00
A to B Landing Rock (Jaw Run)	4.87	1.10	7.26	13.23	75		$992.25
A to B Landing Rock (Jaw Run)	4.97	1.10	7.26	13.33	60		$799.80
A to B Landing Rock (Jaw Run)	5.08	1.10	7.26	13.44	100		$1,344.00
A to B Landing Rock (Jaw Run)	5.20	1.10	7.26	13.56	50		$678.00
C to D 0 1100 (Jaw Run)	5.47	1.10	7.26	13.83	630		$8,712.90
C to D Junction (Jaw Run)	2.66	1.10	7.26	11.02	30		$330.60
E to F Landing Rock (Jaw Run)	1.50	1.10	7.26	9.86	100		$986.00
E to F Helicopter Pad (Jaw Run)	1.76	2.45	7.26	11.47	100		$1,147.00
E to F Energy Dissipator (Riprap)	1.86	0.80	7.26	9.92	50		$496.00
E to F Energy Dissipator (Riprap)	2.51	0.80	7.26	10.57	5		$52.85
G to H 0 1650 (Jaw Run)	1.58	1.10	7.26	9.94	640		$6,361.60
G to H Junction (Jaw Run)	1.45	1.10	7.26	9.81	20		$196.20
G to H Landing Rock (Jaw Run)	1.59	1.10	7.26	9.95	50		$497.50
G to H Landing Rock (Jaw Run)	1.71	1.10	7.26	10.07	100		$1,007.00
I to J 0 1990 (Jaw Run)	3.96	1.10	7.26	12.32	1570		$19,342.40
I to J Junction (Jaw Run)	1.43	1.10	7.26	9.79	30		$293.70
I to J Pullout (Jaw Run)	1.43	1.10	7.26	9.79	60		$587.40
I to J Landing Rock (Jaw Run)	1.63	1.10	7.26	9.99	100		$999.00
I to J Landing Rock (Jaw Run)	1.96	1.10	7.26	10.32	200		$2,064.00
M to N Junction (Jaw Run)	1.74	1.10	7.26	10.10	100		$1,010.00
Q to R Energy Dissipator (Riprap)	2.06	1.10	7.26	10.42	10		$104.20
Q to R Fill (Pitrun)	2.06	0.80	7.26	10.12	150		$1,518.00
				Total C.Y.	5805	Sub Total	$70,775.00

TOTAL ROCKING COSTS	$70,775.00

Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Clay Pigeon**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
12.0	Pavement	30
6.0	Main Lines	7
2.0	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
0	Drill & Compressor	$0.00		$46.00	0.00	0.41	0.41	$0.00	$0.00
1	Brush Cutter	$305.90		$4.00	0.00	0.28	0.28	$1.12	$307.02
0	Graders	$0.00		$3.65	0.00	0.00	0	$0.00	$0.00
0	Loader (Small)	$0.00	1	$3.55	0.00	0.00	0	$0.00	$0.00
0	Loader (Med. & Large)	$0.00	1	$9.00	0.00	0.00	0	$0.00	$0.00
0	Rollers (smooth/grid) & Compactors	$0.00		$5.00	0.00	0.00	0	$0.00	$0.00
0	Excavators (Small)	$0.00		$22.00	0.00	0.00	0	$0.00	$0.00
0	Excavators (Med.)	$0.00		$35.50	0.00	0.00	0	$0.00	$0.00
1	Excavators (Large)	$500.09	1	$44.80	2.50	7.00	4.5	$201.60	$701.69
0	Tired Backhoes/Skidders	$0.00		$3.00	0.00	0.00	0	$0.00	$0.00
1	Tractors (D6)	$376.74	0	$7.10	2.50	7.00	4.5	$31.95	$408.69
0	Tractors (D7)	$0.00	2	$11.30	0.00	0.00	0	$0.00	$0.00
0	Tractor (D8)	$0.00	2	$15.10	0.00	0.00	0	$0.00	$0.00
0	Dump Truck (10 cy +)	$0.00		$2.85	0.00	0.00	0	$0.00	$0.00
2	Dump Truck (Off Hiway)	$802.83	1	$4.75	2.50	7.00	4.5	$42.75	$845.58
1	Water Truck (1500 Gal)	$87.94		$2.85	2.50	7.00	4.5	$12.83	$100.77
0	Water Truck (2500 Gal)	$0.00		$2.85	0.00	0.00	0	$0.00	$0.00
0	Jaw	$1,066.00							
0	2-Stage Crusher	$1,597.00							
0	3-Stage Crusher	$2,489.00							

TOTAL MOVE-IN COSTS:	$2,363.75

OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT
Clay Pigeon

1. Type of Sale
Regeneration harvest, Recovery

2. Legal Description
Portions of Sections 17, 18, 20, 21 and 22, T2S, R7W, W.M., Tillamook County, Oregon.

3. Sale Acreage

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

	ACRES	
	Gross	Net
Area 1 (Modified Clearcut)	108	93
Area 2 (Modified Clearcut)	144	107

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
The timber sale areas were variable plot cruised. Plot and line spacing in Area 1 was 350' and 350' and in Area 2, 350' and 700'. All conifers 8" DBH and greater containing 20 board feet and all hardwoods 10" DBH and greater containing 30 board feet were recorded. Species, DBH (to the nearest inch), merchantable bole length (to the nearest foot), form factor, and defect were recorded for all trees. Merchantable heights were recorded to 6" and 7" outside bark for conifers and hardwoods respectively.

B. Plot size
A BAF of 27.78 was used on all of the plots and the point of tree observation was four feet.

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

5. Computation Procedure

Plot 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.

Net sale acreage was used for volume computation. Net acreage is the gross acreage (the area within the posted sale boundary) minus the posted buffer areas and roads.

The cruise data was grown forward with adjustments made for the reduced growth effects of Swiss Needle Cast. Sale areas 1 and 2 were grown forward to June 2016.

Cruise Statistics (Board Foot Volumes)			
Area	Number of Plots	SE (%)	CV (%)
1	34	6.8	39.6
2	21	9.9	44.1
Total	55	7.3	54.4

6. Hidden Defect and Breakage

A reduction of 1% and 2% was applied to conifers and hardwoods respectively.

7. Timber Description

Areas 1 and 2 were burned in the 1933 Tillamook and 1939 Saddle Mountain Fires and additionally Area 1 was burned in the 1951 North Fork Fire and the northern ¾ of Area 2 was burned in the 1958 Elkhorn Fire.

The stands were re-established by seeding. Area 1 was seeded in 1952-53 and again in 1966-67. In Area 2 the majority of the unit was seeded in 1951-52 and a small portion of the western side was seeded in 1951-52, 1961-62, and 1968-69.

The alder in the NW ¼ of Area 1 was aerially sprayed in the 1970's resulting in short boles and multiple tops. The majority of Area 2 was commercially thinned with the Steampot Thin completed in 1994. A small portion on the west side of the Area 2 was thinned by Steamed Pigeon, completed in 2002.

Sale Area - Species	DBH	Merchantable Bole Height	Merchantable Top
Area 1 – Douglas-fir	17.6	73	5"
Area 1 - Hemlock	21	101	5"
Area 1 – Alder	13.4	48	6"
Area 2 – Douglas-fir	17.9	72	5"
Area 2 - Alder	17.2	52	6"

8. Cruiser Names/Dates

Area 1, Service contract July 2015, additional cruise by District staff March 2016
Area 2, Service contract June 2014

9. Revenue Distribution

FDF 100%

Tax Code: 9-1

Deed Numbers: 169

10. Attachments

Volume Summary

Stand Tables

Log Stock Tables

Logging Plan Map

11. Stand and Log Stock Tables Species Key

DF – Douglas-fir take
DL – Douglas-fir leave (snags)
RA – Red alder take
WH – Western hemlock take

FI TLOGSTVB

Log Stock Table - MBF

Project: CLAYP

T02S R07W S17 TSALE

T02S R07W S17 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02S	07W	17	528_A1_GROW	SALE	93.00	34	228

Page 1
Date 4/4/2016
Time 2:21:43PM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		*	*	32	14		14	.6			14									
DF		CO	2	16	2		2	.1						2						
DF		CO	2	20	10		10	.5						10						
DF		CO	2	22	7		7	.3								7				
DF		CO	2	27	4		4	.2								4				
DF		CO	2	29	8		8	.4						8						
DF		CO	2	32	28	4.6	27	1.2						7	20					
DF		CO	2	34	8		8	.4						8						
DF		CO	2	38	10	3.5	9	.4								9				
DF		CO	2	40	860	1.8	845	39.2						292	354	146	42	11		
DF		CO	3	18	3		3	.1					3							
DF		CO	3	20	1		1	.0				1								
DF		CO	3	22	6		6	.3						6						
DF		CO	3	26	5	7.7	5	.2						5						
DF		CO	3	28	3		3	.1			1	2								
DF		CO	3	30	8		8	.4					8							
DF		CO	3	32	151	.8	150	7.0			9	88	47	7						
DF		CO	3	34	13		13	.6			1	12								
DF		CO	3	35	13	4.3	12	.6				6	7							
DF		CO	3	36	1		1	.1				1								
DF		CO	3	37	1		1	.1			1									
DF		CO	3	38	3		3	.1			2	2								
DF		CO	3	40	782	1.1	774	35.9			106	196	364	98	10					
DF		CO	4	13	0		0	.0	0											
DF		CO	4	14	1		1	.0	1											
DF		CO	4	15	7		7	.3	7		1									
DF		CO	4	16	7		7	.3	5		2									
DF		CO	4	17	1		1	.1				1								
DF		CO	4	18	11		11	.5	10		1									
DF		CO	4	19	6		6	.3	5		1									
DF		CO	4	20	5		5	.3	5											
DF		CO	4	21	6		6	.3	5		1									
DF		CO	4	22	6		6	.3	5		1									
DF		CO	4	23	5		5	.2	5											
DF		CO	4	24	15	2.0	15	.7	15											
DF		CO	4	25	4		4	.2	4											
DF		CO	4	26	2		2	.1	2											
DF		CO	4	27	11		11	.5	9		2									
DF		CO	4	28	10		10	.5	9		1									
DF		CO	4	29	4		4	.2	3		1									
DF		CO	4	30	5		5	.2	4		1									
DF		CO	4	31	7		7	.3	7											
DF		CO	4	32	18		18	.8	18											
DF		CO	4	33	15		15	.7	15											
DF		CO	4	34	1		1	.1	1											
DF		CO	4	35	8		8	.4	8											
DF		CO	4	36	15		15	.7	15											
DF		CO	4	37	5		5	.2	5											
DF		CO	4	38	2		2	.1	2											
DF		CO	4	39	7		7	.3	7											
DF		CO	4	40	55		55	2.6	47		7									

FI TLOGSTVB

Log Stock Table - MBF

Project: CLAYP

T02S R07W S17 TSALE

T02S R07W S17 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02S	07W	17	528_A1_GROW	SALE	93.00	34	228

Page 2
Date 4/4/2016
Time 2:21:43PM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		Totals			2,183	1.3	2,155	93.8		221	151	308	429	443	383	166	42	11		
RA		H	2	16	5		5	5.2							5					
RA		H	2	40	15	11.4	14	14.5						14						
RA		H	3	30	7	9.1	6	6.8					6							
RA		H	3	40	19	6.1	17	18.5					17							
RA		H	4	28	3		3	2.7			3									
RA		H	4	31	6		6	6.1			6									
RA		H	4	32	7		7	7.6			7									
RA		H	4	35	5		5	5.3			5									
RA		H	4	39	7		7	7.6			7									
RA		H	4	40	27	9.8	24	25.9			17	7								
RA		Totals			101	6.1	94	4.1			45	7	24	14	5					
DL		CO	3	40	24	2.4	23	82.0				7	16							
DL		CO	4	17	1		1	4.0		1										
DL		CO	4	28	2		2	6.0		2										
DL		CO	4	38	2		2	8.0		2										
DL		Totals			29	2.0	28	1.2		5		7	16							
WH		CO	2	26	4		4	23.2						4						
WH		CO	2	40	13		13	71.4								13				
WH		CO	4	28	1		1	5.4		1										
WH		Totals			19		19	.8		1				4		13				
Total All Species					2,331	1.5	2,296	100.0		227	196	323	470	461	388	179	42	11		

FI TSTNDSUM

Stand Table Summary

Project **CLAYP**

T02S R07W S17 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02S	07W	17	528_A1_GROW	SALE	93.00	34	228

T02S R07W S17 TSALE

Date: 04/04/201(

Time: 2:21:42PM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		9		90	120	3.662	1.66	7.42	7.0	41.4	1.49	52	308	138	49	29
DF		10		82	59	4.449	2.49	4.51	10.5	34.5	1.35	47	156	125	44	14
DF		11		83	45	2.451	1.66	2.48	10.5	36.3	.74	26	90	69	24	8
DF		12		85	77	6.179	4.98	10.44	12.6	50.8	3.75	132	530	349	122	49
DF		13		85	92	2.633	2.49	5.34	14.4	57.0	2.19	77	304	203	71	28
DF		14		85	87	8.323	9.13	16.10	17.2	64.6	7.88	276	1,041	733	257	97
DF		15		86	97	7.250	9.13	14.69	20.1	81.5	8.41	295	1,197	782	274	111
DF		16		85	94	9.848	14.11	19.37	23.5	87.3	12.97	455	1,691	1,206	423	157
DF		17		87	101	14.368	23.24	30.68	27.1	104.8	23.71	832	3,216	2,205	774	299
DF		18		86	104	7.323	13.28	15.77	29.8	112.7	13.38	469	1,778	1,244	437	165
DF		19		86	99	4.930	9.96	9.99	33.1	118.3	9.41	330	1,182	875	307	110
DF		20		85	103	6.303	14.11	14.28	36.4	132.8	14.80	519	1,896	1,376	483	176
DF		21		85	106	5.044	12.45	12.61	36.4	136.1	13.06	458	1,716	1,215	426	160
DF		22		86	107	5.515	14.94	14.90	38.0	152.0	16.12	566	2,265	1,500	526	211
DF		23		85	105	3.925	11.62	9.09	46.8	182.3	12.13	426	1,657	1,128	396	154
DF		24		85	100	3.090	9.96	7.04	52.5	195.3	10.54	370	1,376	980	344	128
DF		25		84	119	.712	2.49	2.16	45.4	192.2	2.80	98	416	260	91	39
DF		26		84	116	.439	1.66	1.33	51.6	210.7	1.96	69	281	183	64	26
DF		27		80	110	1.017	4.15	2.47	64.8	234.0	4.57	160	579	425	149	54
DF		28		82	103	.189	.83	.38	79.7	284.9	.87	31	109	81	28	10
DF		29		81	120	.353	1.66	.89	65.8	283.9	1.68	59	254	156	55	24
DF		30		85	109	.330	1.66	.67	96.7	414.4	1.84	65	277	171	60	26
DF		31		78	103	.154	.83	.15	220.2	953.8	1.02	34	147	94	32	14
DF		32		83	109	.434	2.49	1.03	94.3	375.9	2.76	97	386	257	90	36
DF		33		86	113	.136	.83	.41	82.1	390.2	.97	34	162	90	32	15
DF		37		82	118	.108	.83	.33	106.7	490.4	1.00	35	161	93	33	15
DF		Totals		85	96	99.164	172.61	204.56	29.4	113.3	171.38	6,013	23,172	15,938	5,592	2,155
RA		10		86	69	2.945	1.65	2.96	11.2	47.0	.91	33	139	85	31	13
RA		11		85	92	2.434	1.65	2.45	17.0	62.6	1.14	42	153	106	39	14
RA		12		89	64	2.045	1.65	2.06	16.5	57.4	.93	34	118	87	32	11
RA		13		85	39	.871	.83	.88	16.1	31.3	.39	14	27	36	13	3
RA		14		89	95	.751	.83	.76	31.1	104.4	.65	23	79	60	22	7
RA		15		83	83	.654	.83	.66	27.3	104.4	.50	18	69	46	17	6
RA		16		86	77	1.726	2.48	1.74	38.8	132.2	1.85	67	230	172	63	21
RA		18		88	89	1.363	2.48	.91	37.9	156.5	.95	35	143	89	32	13
RA		21		85	70	.334	.83	.34	65.6	167.0	.61	22	56	56	21	5
RA		Totals		86	76	13.124	13.23	12.75	22.6	79.6	7.93	288	1,015	737	268	94
DL		16		85	91	1.738	2.49	3.52	23.1	86.3	2.23	81	304	208	76	28
DL		Totals		85	91	1.738	2.49	3.52	23.1	86.3	2.23	81	304	208	76	28
WH		21		94	119	.332	.83	1.01	38.5	197.5	1.24	39	200	116	36	19
WH		Totals		94	119	.332	.83	1.01	38.5	197.5	1.24	39	200	116	36	19
Totals				86	94	114.358	189.16	221.85	28.9	111.3	182.78	6422	24,691	16,999	5,972	2,296

FI TLOGSTVB

Log Stock Table - MBF

Project: CLAYP

T02S R07W S22 TSALE

T02S R07W S22 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02S	07W	22	452_A2_GROW	SALE	117.00	21	115

Page 1
Date 4/5/2016
Time 6:40:38AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	2	15	13		13	.5								13				
DF		CO	2	18	6		6	.2							6					
DF		CO	2	24	14	9.4	13	.5								13				
DF		CO	2	32	55		55	2.3						37		18				
DF		CO	2	40	1,329	3.1	1,287	53.3						209	307	625	147			
DF		CO	3	20	3		3	.1				3								
DF		CO	3	28	2		2	.1				2								
DF		CO	3	32	119	3.8	114	4.7			18	60	36							
DF		CO	3	33	3	16.7	2	.1			2									
DF		CO	3	36	3		3	.1				3								
DF		CO	3	37	3		3	.1			3									
DF		CO	3	40	714	1.9	700	29.0			141	184	375							
DF		CO	4	16	17		17	.7		14	2									
DF		CO	4	18	15		15	.6		9	4	1								
DF		CO	4	20	15		15	.6		10	2	3								
DF		CO	4	21	2		2	.1		2										
DF		CO	4	22	13		13	.5		12	2									
DF		CO	4	23	2		2	.1		2										
DF		CO	4	24	11		11	.4		2		8								
DF		CO	4	26	2		2	.1		2										
DF		CO	4	27	4		4	.2		2	2									
DF		CO	4	28	15		15	.6		15										
DF		CO	4	32	45	11.2	40	1.6		30	10									
DF		CO	4	34	15	8.8	14	.6		14										
DF		CO	4	36	21		21	.9		21										
DF		CO	4	38	3		3	.1		3										
DF		CO	4	39	4		4	.2		4										
DF		CO	4	40	39		39	1.6		39										
DF		Totals			2,485	2.7	2,417	93.2		182	187	264	411	245	313	668	147			
RA		*	*	32	41		41	31.0			41									
RA		H	2	16	10	18.2	8	6.3							8					
RA		H	2	32	50	4.1	48	36.6						15	33					
RA		H	2	40	36	3.3	35	26.2						35						
RA		Totals			137	3.7	132	5.1			41			50	42					
DL		CO	3	40	36	3.3	35	78.4					35							
DL		CO	4	34	5		5	10.8		5										
DL		CO	4	40	5		5	10.8		5										
DL		Totals			45	2.6	44	1.7		10			35							
Total All Species					2,667	2.8	2,593	100.0		191	228	264	446	295	354	668	147			

FI TSTNDSUM

Stand Table Summary

Project **CLAYP**

T02S R07W S22 TSALE

T02S R07W S22 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02S	07W	22	452_A2_GROW	SALE	117.00	21	115

Page: 1
Date: 04/05/201(
Time: 6:39:39AM

Spc	ST	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		8		88	68	3.713	1.36	3.81	6.8	32.1	.73	26	122	86	30	14
DF		9		88	86	2.934	1.36	3.01	10.2	42.8	.87	31	129	102	36	15
DF		10		90	73	4.753	2.72	4.87	12.1	42.8	1.68	59	208	196	69	24
DF		11		86	108	3.928	2.72	8.05	9.8	42.8	2.54	79	345	298	93	40
DF		12		90	72	9.902	8.17	13.53	12.9	49.5	4.97	175	670	581	205	78
DF		13		86	108	2.812	2.72	5.76	16.7	66.9	2.73	96	386	319	113	45
DF		14		87	104	2.425	2.72	4.97	19.3	80.2	2.72	96	399	319	112	47
DF		15		89	108	4.263	5.50	10.90	19.2	87.7	5.96	210	956	697	246	112
DF		16		89	115	4.641	6.81	11.42	24.1	106.1	7.81	275	1,211	913	322	142
DF		17		87	116	4.934	8.17	11.80	28.3	114.6	9.48	334	1,353	1,109	391	158
DF		18		85	104	2.934	5.45	6.01	31.4	116.4	5.36	189	700	627	221	82
DF		19		87	87	3.291	6.81	7.42	29.9	116.7	6.29	222	866	736	259	101
DF		21		87	119	3.565	8.17	9.74	35.3	144.4	9.77	344	1,407	1,143	403	165
DF		22		86	119	2.156	5.45	6.63	33.8	140.9	6.37	224	934	745	262	109
DF		23		88	122	2.455	6.81	6.54	45.0	193.4	8.35	294	1,265	977	344	148
DF		24		88	102	4.043	12.26	9.21	46.5	193.1	12.39	428	1,778	1,450	501	208
DF		25		87	106	2.888	9.54	6.77	55.0	224.7	10.56	372	1,520	1,235	435	178
DF		26		88	112	1.901	6.81	5.07	55.2	240.3	7.93	279	1,218	928	327	142
DF		27		86	102	2.812	10.90	6.49	61.5	246.7	11.32	399	1,600	1,325	467	187
DF		28		85	110	.652	2.72	1.67	64.7	254.6	3.07	108	425	359	126	50
DF		29		90	112	.606	2.72	1.55	72.8	346.7	3.21	113	538	376	132	63
DF		30		85	101	1.413	6.81	3.19	80.8	302.5	7.31	257	964	855	301	113
DF		31		83	116	.528	2.72	1.35	82.9	329.5	3.19	112	446	373	131	52
DF		32		87	72	.247	1.36	.51	77.1	256.8	1.11	39	130	130	46	15
DF		33		83	108	.232	1.36	.24	57.2	96.3	.39	14	23	45	16	3
DF		34		90	113	.655	4.09	1.79	96.5	484.2	4.90	173	866	573	202	101
DF		35		89	99	.206	1.36	.42	122.3	470.8	1.46	52	198	171	60	23
DF		Totals		88	99	74.889	137.63	152.72	32.7	135.3	142.47	4,999	20,658	16,669	5,849	2,417
RA		11		82	88	1.928	1.35	1.93	15.2	45.4	.81	29	88	95	34	10
RA		13		58	31	1.381	1.35	1.38	21.3	63.4	.81	29	88	95	34	10
RA		16		94	100	.911	1.35	.92	41.8	206.2	1.06	39	190	124	45	22
RA		19		86	74	1.440	2.69	.73	23.6	97.7	.47	17	71	55	20	8
RA		20		87	80	.646	1.35	.65	48.0	195.3	.86	31	128	101	37	15
RA		22		86	73	.529	1.35	.53	55.5	165.5	.81	29	88	95	34	10
RA		23		86	75	1.446	4.04	1.46	62.1	267.7	2.50	91	392	292	106	46
RA		27		87	69	.345	1.35	.35	85.1	253.8	.81	29	88	95	34	10
RA		Totals		82	73	8.628	14.82	7.95	37.2	142.3	8.13	296	1,132	951	346	132
DL		16		84	108	1.857	2.72	3.81	27.0	99.0	2.82	103	377	330	120	44
DL		Totals		84	108	1.857	2.72	3.81	27.0	99.0	2.82	103	377	330	120	44
Totals				87	96	85.374	155.18	164.47	32.8	134.8	153.42	5397	22,166	17,951	6,315	2,593

"STEWARDSHIP IN FORESTRY"

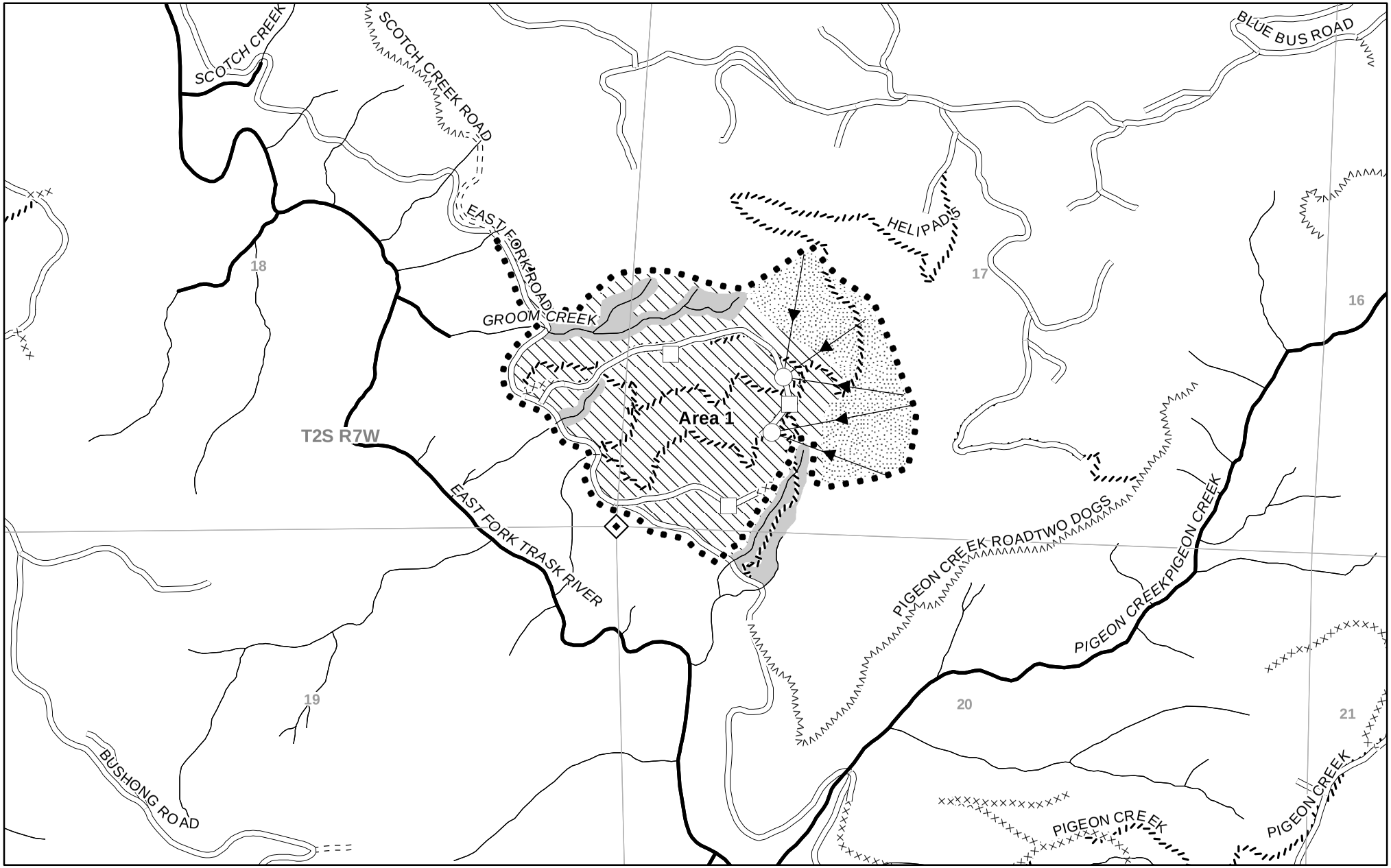
Clay Pigeon

Volume Summary

Area 1-Modifed Clearcut				
		93 acres		
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Douglas-fir	23.2	2155	1%	2133
Hemlock	0.2	19	1%	19
Alder	1.0	94	2%	92
TOTAL	24.4	2268		2244

Areas 2-Modified Clearcut				
		117 acres		
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Douglas-fir	20.7	2417	1%	2393
Alder	1.1	132	2%	129
TOTAL	21.8	2549		2522

TOTAL SALE VOLUME	210 acres	
SPECIES	Cruised Net (MBF)	Net Sale (MBF)
Douglas-fir	4572	4526
Hemlock	19	19
Red Alder	226	221
TOTAL	4817	4766



Rock source
Stock pile
Waste area
Bridge
Gate
Survey corner
Domestic water supply intake
Truck turn-around
Helicopter landing zone
Cultural site

Buffer
Non-required thinning
Cable yarding
Ground yarding
Helicopter yarding
Downhill yarding
Green tree retention area

Restricted area
Area boundary
Sale boundary
Ownership boundary
Fish stream
Non-fish stream
Unsurfaced road
Surfaced road
Paved road
Abandoned road

Swing road
Non-project road
Blocked road
OHV trail
Non-motorized trail
Transmission line
Railroad
Cable yarding
Ground Landing
Yarder Landing

LOGGING PLAN

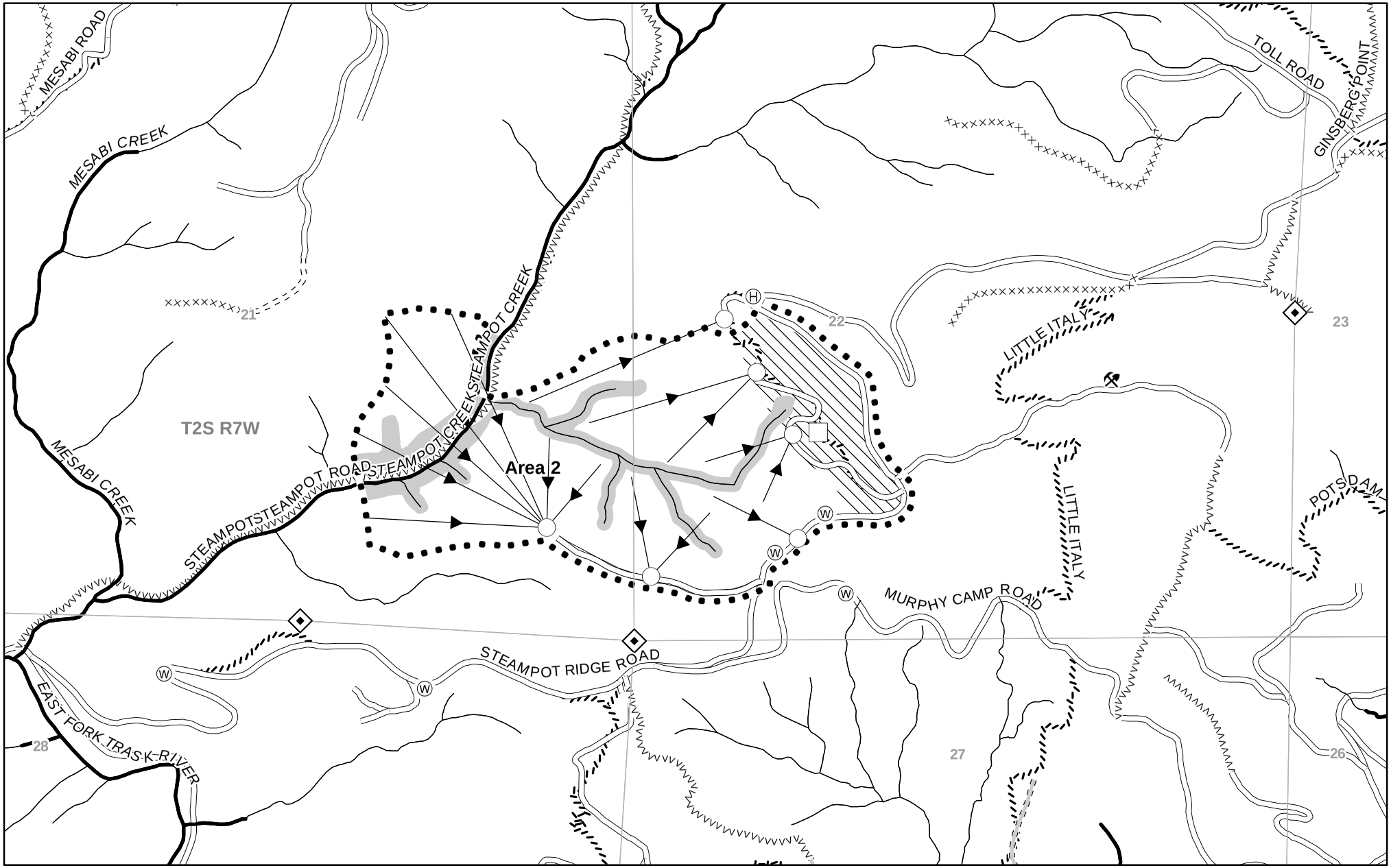
Timber Sale Contract No. 341-17-13
CLAY PIGEON
Portions of Sections 17, 18, 20, 21, & 22
T2S, R7W, W.M.,
Tillamook County, Oregon

N

1,000 0 1,000 Feet

Area	Type of Operation	Acres Gross	Net
1	Modified Clearcut	108	93
2	Modified Clearcut	144	117
Total		252	210

Tillamook District GIS
5/17/2016
This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.



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T2S, R7W, W.M.,
Tillamook County, Oregon

1,000 0 1,000 Feet

N

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