Timber Sale Appraisal
Lobo Canyon

Sale TL-341-2022-W00848-01

"STEWARDSHIP IN FORESTRY"

District: Tillamook **Date: December 28, 2021**

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$1,130,851.99	$87,647.76	$1,218,499.75
		Project Work:	($200,041.00)
		Advertised Value:	$1,018,458.75

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Lobo Canyon

Sale TL-341-2022-W00848-01

District: Tillamook

Date: December 28, 2021

Timber Description

Location:

Stand Stocking: 40%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	18	0	100
Western Hemlock / Fir	19	0	100
Alder (Red)	17	0	100

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	1,752	2,177	0	0	0	0	3,929
Western Hemlock / Fir	7	4	0	0	0	0	11
Alder (Red)	0	0	98	139	226	133	596
Total	1,759	2,181	98	139	226	133	4,536

Comments: Additional Costs – Lobo Canyon
Pond Values Used: March 2022
Region: Astoria, Forest Grove, and Tillamook

Western red cedar & other cedars stumpage price = $1,291.00/MBF - $492.01/MBF = $798.99 / 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. = $950.00

Other Costs with Profit and Risk to be added:
None. = $0.00

TOTAL Other Costs with profit and Risk to be added = $0.00

Other Costs with No Profit and Risk Added:
Move-in Machine Cleaning: $1,000/machine x 3 machines x 2 seasons = $6,000.00
Slash piling and sorting (Cable Settings): $5/ac 157 ac of cable setting = $785.00
Heliport Construction: $500/unit x 1 unit = $500.00

Ditch Cleaning and Bank Sluff Removal:
Mobilization: two times – dump truck w/ tilt bed & small excavator: $900 x 2 = $1,800.00
Small Excavator (CAT 312 or equivalent): 40 hours x $135/hour = $5,400.00
Dump truck: 40 hours x $90/hour = $3,600.00

TOTAL Other Costs no Profit and Risk added = $18,085.00

ROAD MAINTENANCE:
Spot Rocking: 20cy/MMBF/mile x 4.536 MMBF x $8.16/cy x 4.1 miles / 4,536 MBF = $.67/MBF
Interim Grading: $1,150/mile x 4.1 miles x 2 times / 4,536 MBF = $2.08/MBF
Final Maintenance Grading: $1,500/mile x 7 miles / 4,536 MBF = $2.32/MBF
Final Maintenance Compaction: $950/mile x 3 miles/ 4,536 MBF = $0.63/MBF

Total Road Maintenance: = $5.70/MBF

Timber Sale Appraisal
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"STEWARDSHIP IN FORESTRY"

District: Tillamook

Date: December 28, 2021

Logging Conditions

Combination#: 1

Douglas - Fir	94.45%
Western Hemlock / Fir	100.00%
Alder (Red)	92.67%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing

yarding distance: Long (1,500 ft) **downhill yarding:** No

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

loads / day: 6 **bd. ft / load:** 3900

cost / mbf: $332.49

machines:
Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

Combination#: 2

Douglas - Fir	5.55%
Alder (Red)	7.33%

Logging System: Shovel **Process:** Harvester Head Delimbing

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

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

loads / day: 10 **bd. ft / load:** 4200

cost / mbf: $127.24

machines:
Forwarder
Harvester

Logging Costs

Operating Seasons:	2.00	**Profit Risk:**	10%
Project Costs:	$200,041.00	**Other Costs (P/R):**	$0.00
Slash Disposal:	$0.00	**Other Costs:**	$18,085.00

Miles of Road

Road Maintenance: $5.70

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	4.2
Western Hemlock / Fir	$0.00	3.0	4.5
Alder (Red)	$0.00	2.0	4.4

Timber Sale Appraisal
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"STEWARDSHIP IN FORESTRY"

District: Tillamook **Date: December 28, 2021**

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$321.10	$5.70	$1.94	$113.10	$0.00	$44.18	$0.00	$2.00	$3.99	$492.01
Western Hemlock / Fir									
$332.49	$5.70	$1.94	$70.37	$0.00	$41.05	$0.00	$2.00	$3.99	$457.54
Alder (Red)									
$317.44	$5.70	$1.94	$107.95	$0.00	$43.30	$0.00	$2.00	$3.99	$482.32

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$779.42	$287.41	$0.00
Western Hemlock / Fir	$0.00	$604.64	$147.10	$0.00
Alder (Red)	$0.00	$629.38	$147.06	$0.00

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Lobo Canyon

Sale TL-341-2022-W00848-01

District: Tillamook

Date: December 28, 2021

Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	$0.00	$0.00
Western Hemlock / Fir	0	$0.00	$0.00
Alder (Red)	0	$0.00	$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,929	$287.41	$1,129,233.89
Western Hemlock / Fir	11	$147.10	$1,618.10
Alder (Red)	596	$147.06	$87,647.76

Gross Timber Sale Value

Recovery: $1,218,499.75

Prepared By: Sara Stack **Phone:** 503-815-7041

PROJECT SUMMARY SHEET

Sale: Lobo Canyon

CONSTRUCTION

Point	G to H	5+15	stations =	$12,244.33
Point	I to J	10+60	stations =	$31,203.35
Point	K to L	1+30	stations =	$5,018.75
Point	M to N	1+45	stations =	$4,704.88
Point	Q to R	4+70	stations =	$13,549.60
			SUBTOTAL CONSTRUCTION	**$66,720.91**

IMPROVEMENT

Point	A to B	222+85	stations =	$57,128.03
Point	C to D	111+15	stations =	$28,652.83
Point	O to P	8+65	stations =	$7,945.68
Point	S to T	21+35	stations =	$6,446.00
Point	U to V	21+35	stations =	$8,316.79
Point	Point Y	0+01	stations =	$756.10
			SUBTOTAL IMPROVEMENT	**$109,245.43**

RECONSTRUCTION

Point	E to F	6+00	stations =	$5,687.31
			SUBTOTAL RECONSTRUCTION	**$5,687.31**

SPECIAL PROJECTS

Brush	8.4	miles of road	$8,820.00
Kilchis Pit Work		4hrs excavator & 3hrs off highway dump	$1,250.00
Kilchis Elbow Pit Work		16hrs excavator & 10hrs off highway dump	$4,700.00
2 Temporary Gates		Farmer Style	$1,000.00
		SUBTOTAL SPECIAL PROJECTS	**$15,770.00**

MOVE IN **$2,616.35**

GRAND TOTAL **$200,040.00**

SUMMARY OF CONSTRUCTION COST

Sale: **Lobo Canyon** Road: **A to B**

Construction -	0+00	stations	Improvement -	222+85	stations	Reconstruction -	0+00	stations
	0.00	miles		4.22	miles		0.00	miles

CULVERTS - MATERIALS & INSTALLATION

Culverts				
50	LF of 18"	$1,000.00		
		$1,000.00		
Culvert Stakes & Markers				
1	markers	$8.00		
			TOTAL CULVERTS	**$1,008.00**

ROCK

0+00 to	30+45	370	cy. of	Crushed	@	$28.55	per c.y.=	$10,563.50	
181+85 to	222+85	1,410	cy. of	Jawrun	@	$19.38	per c.y.=	$27,325.80	
Spot Rock	As Directed	300	cy. of	Crushed	@	$8.16	per c.y.=	$2,448.00	
Culvert Backfill	182+00	25	cy. of	Crushed	@	$12.78	per c.y.=	$319.50	
Energy Dissipator	182+00	5	cy. of	Rip Rap	@	$5.56	per c.y.=	$27.80	
Landing Rock	222+85	60	cy. of	Jawrun	@	$19.77	per c.y.=	$1,186.20	
Energy Dissipator	69+60	5	cy. of	Rip Rap	@	$4.33	per c.y.=	$21.65	
								TOTAL ROCK	**$41,892.45**

SPECIAL PROJECTS

Remove Ravel	6.00	hours @	$350.00	per hour	$2,100.00	
Construct waste areas -	3.00	hours @	$280.00	per hour	$840.00	
Clean rubber water diverters	0.50	hours @	$200.00	per hour	$100.00	
Replace Carsonite rubber water diverter markers	5.00	@	$25.00	each	$125.00	
Replace rubber water diverters -	5.00	@	$432.00	each	$2,160.00	
Grade and shape road -	222.85	stations @	$22.00	per station	$4,902.70	
Subgrade protection areas -	1.00	@	$30.00	each	$30.00	
Roll subgrade w/ vibratory roller-45+40-171+60	222.85	stations @	$17.50	per station	$3,899.88	
Grass seed and fertilize -	0.25	acres @	$280.00	per acre	$70.00	
					TOTAL SPECIAL PROJECTS	**$14,227.58**

GRAND TOTAL **$57,128.03**

SUMMARY OF CONSTRUCTION COST

Sale: **Lobo Canyon** Road: **C to D**

Construction -	0+00	stations	Improvement -	111+15	stations	Reconstruction -	0+00	stations
	0.00	miles		2.11	miles		0.00	miles

CULVERTS - MATERIALS & INSTALLATION

Culverts				
60	LF of 18"	$1,200.00		
		$1,200.00		
Culvert Stakes & Markers				
6	markers	$48.00		
			TOTAL CULVERTS	$1,248.00

ROCK

0+00 to	16+15	590	cy. of	Jawrun	@	$17.36	per c.y.=	$10,242.40	
Spot Rock	As Directed	300	cy. of	Crushed	@	$15.62	per c.y.=	$4,686.00	
Culvert Backfill	0+40, 24+00	40	cy. of	Crushed	@	$12.17	per c.y.=	$486.80	
Energy Dissipator	0+40, 24+00	10	cy. of	Rip Rap	@	$17.58	per c.y.=	$175.80	
Erosion Control	97+25	10	cy. of	Jawrun	@	$18.15	per c.y.=	$181.50	
Erosion Control	10+35	10	cy. of	Jawrun	@	$18.34	per c.y.=	$183.40	
								TOTAL ROCK	$15,955.90

SPECIAL PROJECTS

Construct/Clean Ditch	39.95	stations @	$100.00	per station	$3,995.00	
Construct/Clean Ditch- Endhaul	12.45	stations @	$130.00	per station	$1,618.50	
Construct waste areas -	2.00	hours @	$180.00	per hour	$360.00	
Clean Culverts	3.00	@	$30.00	each	$90.00	
Downspout Repair	1.00	hours @	$25.00	per hour	$25.00	
Erosion Control	0.50	hours @	$350.00	per hour	$175.00	
Remove Ravel	0.50	hours @	$350.00	per hour	$175.00	
Grade and shape road -	111.15	stations @	$22.00	per station	$2,445.30	
Clean / Construct Ditchouts	5.00	@	$30.00	each	$150.00	
Roll subgrade w/ vibratory roller prior to rocking -	111.15	stations @	$17.50	per station	$1,945.13	
Remove large stumps -	4.00	lump sum @	$100.00	each	$400.00	
Grass seed and fertilize -	0.25	acres @	$280.00	per acre	$70.00	
					TOTAL SPECIAL PROJECTS	$11,448.93

GRAND TOTAL **$28,652.83**

SUMMARY OF CONSTRUCTION COST

Sale: **Lobo Canyon** Road: **E to F**

Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	6+00	stations
	0.00	miles		0.00	miles		0.11	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Widening				0.165	acres @	$860.00	per acre =	$141.90		
							TOTAL CLEARING AND GRUBBING			**$141.90**

RECONSTRUCTION: EXCAVATION -

Widening				347	cy. @	$2.00	per c.y.=	$694.00		
							TOTAL EXCAVATION			**$694.00**

RECONSTRUCTION: ENDHAUL -

Widening	0+00	to	6+00	347	cy. @	$1.13	per c.y.=	$392.11	
Spread & compact				347	cy. @	$0.50	per c.y.=	$173.50	
							TOTAL ENDHAUL		**$565.61**

ROCK

0+00 to	1+00	40	cy. of	Jawrun	@	$18.76	per c.y.=	$750.40	
Junction Rock	0+00	100	cy. of	Jawrun	@	$18.75	per c.y.=	$1,875.00	
							TOTAL ROCK		**$2,625.40**

SPECIAL PROJECTS

Construct Landing	1.00	hours @	$200.00	per hour	$200.00	
Construct waste area -	1.00	hours @	$200.00	per hour	$200.00	
Widen Approach at Point E(0+00 - 0+55)	3.00	hours @	$350.00	per hour	$1,050.00	
Grade and shape road -	6.00	stations @	$22.00	per station	$132.00	
Grass seed and fertilize -	0.28	acres @	$280.00	per acre	$78.40	
				TOTAL SPECIAL PROJECTS		**$1,660.40**

GRAND TOTAL **$5,687.31**

SUMMARY OF CONSTRUCTION COST

Sale: **Lobo Canyon** Road: **G to H**

Construction -	5+15	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.10	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		Drill & Shoot	Endhaul	
0+00		0+50	12%			$113	=			$56.50
0+50		1+05	47%			$342	=			$188.10
1+05		2+80	36%			$239	=			$418.25
2+80		4+80	48%			$342	=		$3,015.00	$3,699.00
4+80		5+15	14%			$113	=			$39.55
									TOTAL	**$4,401.40**

ROCK

0+00 to	5+15	280	cy. of	Jawrun	@	$18.84	per c.y.=	$5,275.20	
Intersection Rock	0+00	30	cy. of	Jawrun	@	$18.79	per c.y.=	$563.70	
Landing Rock	5+15	60	cy. of	Jawrun	@	$18.89	per c.y.=	$1,133.40	
								TOTAL ROCK	**$6,972.30**

SPECIAL PROJECTS

Construct Landing	1.00	hours @	$200.00	per hour	$200.00	
Grade and shape road -	5.15	stations @	$22.00	per station	$113.30	
Roll subgrade	5.15	stations @	$17.50	per station	$90.13	
Remove large stumps -	2.00	@	$200.00		$400.00	
Grass seed and fertilize -	0.24	acres @	$280.00	per acre	$67.20	
					TOTAL SPECIAL PROJECTS	**$870.63**

GRAND TOTAL **$12,244.33**

SUMMARY OF CONSTRUCTION COST

Sale: **Lobo Canyon** Road: **I to J**

Construction -	10+60	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.20	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		Drill & Shoot	Endhaul	
0+00		0+35	9%		ditch	$165	=			$57.75
0+35		1+10	57%		ditch	$1,245	=			$933.75
1+10		2+45	49%		ditch	$468	=			$631.80
2+45		3+30	33%		ditch	$320	=			$272.00
3+30		5+00	52%		ditch	$813	=		$ 1,350.00	$2,732.10
5+00		5+70	43%		ditch	$413	=		$ 660.00	$949.10
5+70		6+50	56%		ditch	$1,245	=		$ 1,810.00	$2,806.00
6+50		8+30	46%		ditch	$468	=		$ 3,635.00	$4,477.40
8+30		9+05	32%		ditch	$320	=			$240.00
9+05		10+60	12%		ditch	$178	=			$275.90
									TOTAL	**$13,375.80**

CULVERTS - MATERIALS & INSTALLATION

Culverts

30	LF of 18"	$600.00
		$600.00

Culvert Stakes & Markers

1	markers	$8.00

TOTAL CULVERTS **$608.00**

ROCK

0+00 to	10+60	600	cy. of	Jawrun	@	$19.09	per c.y.=	$11,454.00	
Junction Rock	0+00	30	cy. of	Jawrun	@	$18.99	per c.y.=	$569.70	
Landing Rock	8+30	50	cy. of	Jawrun	@	$19.15	per c.y.=	$957.50	
Landing Rock	10+60	70	cy. of	Jawrun	@	$19.20	per c.y.=	$1,344.00	
Energy Dissipator	5+70	5	cy. of	Rip Rap	@	$3.94	per c.y.=	$19.70	
Curve Widening	8+30	30	cy. of	Jawrun	@	$19.15	per c.y.=	$574.50	
Traction Rock	As Needed	25	cy. of	Crushed	@	$13.77	per c.y.=	$344.25	
								TOTAL ROCK	**$15,263.65**

SPECIAL PROJECTS

Construct Landings	2.00	hours @	$200.00	per hour	$400.00	
Grade and shape road -	10.60	stations @	$22.00	per station	$233.20	
Roll subgrade	10.60	stations @	$17.50	per station	$185.50	
Remove large stumps -	5.00	lump sum @	$200.00		$1,000.00	
Grass seed and fertilize -	0.49	acres @	$280.00	per acre	$137.20	
					TOTAL SPECIAL PROJECTS	**$1,955.90**

GRAND TOTAL **$31,203.35**

SUMMARY OF CONSTRUCTION COST

Sale: **Lobo Canyon** Road: **K to L**

Construction -	1+30	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.02	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		Drill & Shoot	Endhaul	
0+00		1+30	10%			$113	=			$146.90
									TOTAL	**$146.90**

ROCK

0+00	to	1+30	80	cy. of	Jawrun	@	$19.06	per c.y.=	$1,524.80	
Junction Rock		0+00	50	cy. of	Jawrun	@	$19.05	per c.y.=	$952.50	
Landing Rock		1+30	80	cy. of	Jawrun	@	$19.08	per c.y.=	$1,526.40	
									TOTAL ROCK	**$4,003.70**

SPECIAL PROJECTS

Construct Landing	1.00	hours @	$200.00	per hour	$200.00	
Construct waste area -	2.00	hours @	$200.00	per hour	$400.00	
Grade and shape road -	1.30	stations @	$22.00	per station	$28.60	
Roll subgrade w/ vibratory roller prior to rocking -	1.30	stations @	$17.50	per station	$22.75	
Remove large stumps -	1.00	lump sum @	$200.00		$200.00	
Grass seed and fertilize -	0.06	acres @	$280.00	per acre	$16.80	
					TOTAL SPECIAL PROJECTS	**$868.15**

GRAND TOTAL **$5,018.75**

SUMMARY OF CONSTRUCTION COST

Sale: **Lobo Canyon** Road: **M to N**

Construction -	1+45	stations	Improvement -		stations	Reconstruction -	0+00	stations
	0.03	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		Drill & Shoot	Endhaul	
0+00		1+45	15%			$134	=			$194.30
									TOTAL	**$194.30**

ROCK

0+00 to	1+45	80	cy. of	Jawrun	@	$19.17	per c.y.=	$1,533.60	
Junction Rock	0+00	50	cy. of	Jawrun	@	$19.15	per c.y.=	$957.50	
Landing Rock	1+45	70	cy. of	Jawrun	@	$19.18	per c.y.=	$1,342.60	
								TOTAL ROCK	**$3,833.70**

SPECIAL PROJECTS

Construct Landing	1.00	hours @	$200.00	per hour	$200.00	
Grade and shape road -	1.45	stations @	$22.00	per station	$31.90	
Roll subgrade w/ vibratory roller prior to rocking -	1.45	stations @	$17.50	per station	$25.38	
Remove large stumps -	2.00	lump sum @	$200.00		$400.00	
Grass seed and fertilize -	0.07	acres @	$280.00	per acre	$19.60	
					TOTAL SPECIAL PROJECTS	**$676.88**

GRAND TOTAL **$4,704.88**

SUMMARY OF CONSTRUCTION COST

Sale:	**Lobo Canyon**	Road:	**O to P**

Construction -	0+00	stations	Improvement -	8+65	stations	Reconstruction -	0+00	stations
	0.00	miles		0.16	miles		0.00	miles

ROCK

0+00 to	8+65	280	cy. of	Jawrun	@	$19.50	per c.y.=	$5,460.00	
Landing Rock	6+05	50	cy. of	Jawrun	@	$19.54	per c.y.=	$977.00	
Landing Rock	8+65	50	cy. of	Jawrun	@	$19.59	per c.y.=	$979.50	
								TOTAL ROCK	**$7,416.50**

SPECIAL PROJECTS

Clear Alders From Landings	0.50	hours @	$200.00	per hour	$100.00	
Remove ravel	0.25	hours @	$350.00	per hour	$87.50	
Grade and shape road -	8.65	stations @	$22.00	per station	$190.30	
Roll subgrade w/ vibratory roller prior to rocking -	8.65	stations @	$17.50	per station	$151.38	
					TOTAL SPECIAL PROJECTS	**$529.18**

GRAND TOTAL **$7,945.68**

SUMMARY OF CONSTRUCTION COST

Sale: **Lobo Canyon** Road: **Q to R**

Construction -	4+70	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.09	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		Drill & Shoot	Endhaul	
0+00		0+40	17%			$134	=			$53.60
0+40		2+95	45%			$336	=		$ 4,800.00	$5,656.80
2+95		4+70	11%			$113	=			$197.75
									TOTAL	**$5,908.15**

ROCK

0+00 to	4+70	290	cy. of	Jawrun	@	$15.32	per c.y.=	$4,442.80	
Intersection Rock	0+00	30	cy. of	Jawrun	@	$19.72	per c.y.=	$591.60	
Landing Rock	4+70	80	cy. of	Jawrun	@	$19.81	per c.y.=	$1,584.80	
								TOTAL ROCK	**$6,619.20**

SPECIAL PROJECTS

Construct Landing	1.00	hours @	$200.00	per hour	$200.00	
Dozer Trail Pullback	0.50	hours @	$350.00	per hour	$175.00	
Grade and shape road -	4.70	stations @	$22.00	per station	$103.40	
Roll subgrade w/ vibratory roller prior to rocking -	4.70	stations @	$17.50	per station	$82.25	
Remove large stumps -	2.00	lump sum @	$200.00		$400.00	
Grass seed and fertilize -	0.22	acres @	$280.00	per acre	$61.60	
					TOTAL SPECIAL PROJECTS	**$1,022.25**

GRAND TOTAL **$13,549.60**

SUMMARY OF CONSTRUCTION COST

Sale: **Lobo Canyon** Road: **S to T**

Construction -			Improvement -			Reconstruction -		
	0+00	stations		21+35	stations		0+00	stations
	0.00	miles		0.40	miles		0.00	miles

SPECIAL PROJECTS

Road Work As Directed By State	1.00	@	$6,250.00	per hour	$6,250.00	
Grass seed and fertilize -	0.70	acres @	$280.00	per acre	$196.00	
				TOTAL SPECIAL PROJECTS		**$6,446.00**
				GRAND TOTAL		**$6,446.00**

SUMMARY OF CONSTRUCTION COST

Sale: **Lobo Canyon** Road: **U to V**

Construction -	0+00	stations	Improvement -	21+35	stations	Reconstruction -	0+00	stations
	0.00	miles		0.40	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Side cast	0.034	acres @	$860.00	per acre =	$29.24
Widening	0.159	acres @	$860.00	per acre =	$136.74
				TOTAL CLEARING AND GRUBBING	**$165.98**

IMPROVEMENT: EXCAVATION -

Pullback	358	cy. @	$2.00	per c.y.=	$716.00
Widening	642	cy. @	$2.00	per c.y.=	$1,284.00
				TOTAL EXCAVATION	**$2,000.00**

IMPROVEMENT: ENDHAUL -

Pullback	0+00	to	0+70	42	cy. @	$3.90	per c.y.=	$163.80
Pullback	18+15	to	18+55	8	cy. @	$1.97	per c.y.=	$15.76
Pullback	18+55	to	19+40	308	cy. @	$1.94	per c.y.=	$597.52
Widening	17+70	to	20+25	615	cy. @	$1.97	per c.y.=	$1,211.55
Widening	20+25	to	21+35	27	cy. @	$1.94	per c.y.=	$52.38
Spread & compact				1000	cy. @	$0.50	per c.y.=	$500.00
							TOTAL ENDHAUL	**$2,541.01**

ROCK

Rip Rap Toe	0+35	20	cy. of	Pitrun	@	$15.65	per c.y.=	$313.00
Rip Rap Toe	0+35	30	cy. of	Riprap	@	$14.95	per c.y.=	$448.50
Fill Repair	0+35	10	cy. of	Crushed	@	$8.78	per c.y.=	$87.80
Widening	19+40	50	cy. of	Pitrun	@	$15.95	per c.y.=	$797.50
Widening	19+40	20	cy. of	Crushed	@	$9.14	per c.y.=	$182.80
							TOTAL ROCK	**$1,829.60**

SPECIAL PROJECTS

Construct waste areas -	3.00	hours @	$180.00	per hour	$540.00
Construct ditch & Endhaul -	3.65	stations @	$130.00	per station	$474.50
Grade and shape road -	21.35	stations @	$22.00	per station	$469.70
Grass seed and fertilize -	0.50	acres @	$280.00	per acre	$140.00
Mulching -	0.200	acres @	$780.00	per acre	$156.00
				TOTAL SPECIAL PROJECTS	**$1,780.20**

GRAND TOTAL **$8,316.79**

SUMMARY OF CONSTRUCTION COST

Sale: **Lobo Canyon** Road: **Point Y**

Construction -	0+00	stations	Improvement -	0+01	stations	Reconstruction -	0+00	stations
	0.00	miles		0.00	miles		0.00	miles

ROCK

Fill Armor	0+00	5	cy. of	Rip Rap	@	$6.26	per c.y.=	$31.30	
Fill Repair	0+00	20	cy. of	Jawrun	@	$15.39	per c.y.=	$307.80	
								TOTAL ROCK	**$339.10**

SPECIAL PROJECTS

Excavate & Endhaul Material	1.00	hours @	$350.00	per hour	$350.00	
Grass seed and fertilize -	0.10	acres @	$280.00	per acre	$28.00	
Mulching -	0.050	acres @	$780.00	per acre	$39.00	
					TOTAL SPECIAL PROJECTS	**$417.00**

GRAND TOTAL **$756.10**

WOLF CREEK PIT COST SUMMARY

Pit:	Wolf Creek Pit	Location:	Sec. 13, T1N, R8W, W.M.
Sale:	**Lobo Canyon**	Road:	20 c.y.
Swell:	1.40	Stockpile:	c.y.
Shirinkage	1.16	Total Truck Loads:	20 c.y.
Drill Pct.:	0%	In Place Total:	14 c.y.

Load Dump Truck:	$1.00	/cu.yd.	x	20	cu.yds. =	$20.00
					Subtotal	$20.00

TOTAL PRODUCTION COSTS	$20.00

Base Cost= $1.00 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 Energy Dissipator (Rip Rap)	3.56	1.00	1.00	5.56	5		$27.80
A to B Energy Dissipator (Rip Rap)	2.33	1.00	1.00	4.33	5		$21.65
I to J Energy Dissipator (Rip Rap)	1.94	1.00	1.00	3.94	5		$19.70
Point Y Fill Armor (Rip Rap)	4.26	1.00	1.00	6.26	5		$31.30
				Total C.Y.	20	Sub Total	$100.45

TOTAL ROCKING COSTS	$100.45

FISHERMANS ACCESS PIT COST SUMMARY

Pit:	Fishermans Access	Location:	Sec. 11, T1S, R8W, W.M.
Sale:	**Lobo Canyon**	Road:	100 c.y.
Swell:	1.40	Stockpile:	c.y.
Shirinkage	1.16	Total Truck Loads:	100 c.y.
Drill Pct.:	0%	In Place Total:	71 c.y.

Load Dump Truck:	$1.00 /cu.yd.	x	100 cu.yds.	=	$100.00
				Subtotal	$100.00
Move in Excavator	1	@	$481.86	=	$481.86
				Subtotal	$481.86
				TOTAL PRODUCTION COSTS	$581.86
Base Cost=	$5.82	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
U to V Rip Rap Toe (Pitrun)	8.13	1.70	5.82	15.65	20		$313.00
U to V Rip Rap Toe (Riprap)	8.13	1.00	5.82	14.95	30		$448.50
U to V Widening (Pitrun)	8.43	1.70	5.82	15.95	50		$797.50
				Total C.Y.	100	Sub Total	$1,559.00

TOTAL ROCKING COSTS	$1,559.00

KILCHIS PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Kilchis	Location:	Sec. 2, T1N, R8W, W.M.
Sale:	**Lobo Canyon**	Road:	4590 c.y.
Swell:	1.40	Stockpile:	c.y.
Shirinkage	1.16	Total Truck Loads:	4590 c.y.
Drill Pct.:	0%	In Place Total:	3279 c.y.

DEVELOPMENT COSTS ARE IN PROJECT No. 5

Rip Rock:	$3.00	/cu.yd.	x	3279	cu.yds.	=	$9,837.00
Push Rock:	$1.00	/cu.yd.	x	4590	cu.yds.	=	$4,590.00
Load Crusher:	$1.00	/cu.yd.	x	4590	cu.yds.	=	$4,590.00
Crush Rock:	$3.75	/cu.yd.	x	4590	cu.yds.	=	$17,212.50
Load Dump Truck:	$1.00	/cu.yd.	x	4590	cu.yds.	=	$4,590.00
Screen & Reject	$1.60	/cu.yd.	x	4590	cu.yds.	=	$7,344.00
Haul Reject Material	$2.00	/cu.yd.	x	1148	cu.yds.	=	$2,296.00
						Subtotal	$50,459.50

Move In/Set-up Jaw	1	@	$2,010.00		$2,010.00
Move in Roller and Compactor	1	@	$310.50	=	$310.50
Move in Grader	1	@	$307.14	=	$307.14
Move in Loader	1	@	$366.86	=	$366.86
Move in Excavator	2	@	$481.86	=	$963.72
Move in Trucks	3	@	$104.43	=	$313.29
Move in Water Truck	1	@	$104.43	=	$104.43
				Subtotal	$4,375.94

TOTAL PRODUCTION COSTS $54,835.44

Base Cost= $11.95 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 18185 22285 (Jawrun)	5.73	1.70	11.95	19.38	1410	$27,325.80
A to B Landing Rock (Jawrun)	6.12	1.70	11.95	19.77	60	$1,186.20
C to D 0 1615 (Jawrun)	3.71	1.70	11.95	17.36	590	$10,242.40
C to D Energy Dissipator (Rip Rap)	4.73	0.90	11.95	17.58	10	$175.80
C to D Erosion Control (Jawrun)	4.50	1.70	11.95	18.15	10	$181.50
C to D Erosion Control (Jawrun)	4.69	1.70	11.95	18.34	10	$183.40
E to F 0 100 (Jawrun)	5.11	1.70	11.95	18.76	40	$750.40
E to F Junction Rock (Jawrun)	5.10	1.70	11.95	18.75	100	$1,875.00
G to H 0 515 (Jawrun)	5.19	1.70	11.95	18.84	280	$5,275.20
G to H Intersection Rock (Jawrun)	5.14	1.70	11.95	18.79	30	$563.70
G to H Landing Rock (Jawrun)	5.24	1.70	11.95	18.89	60	$1,133.40
I to J 0 1060 (Jawrun)	5.44	1.70	11.95	19.09	600	$11,454.00
I to J Junction Rock (Jawrun)	5.34	1.70	11.95	18.99	30	$569.70
I to J Landing Rock (Jawrun)	5.50	1.70	11.95	19.15	50	$957.50
I to J Landing Rock (Jawrun)	5.55	1.70	11.95	19.20	70	$1,344.00
I to J Curve Widening (Jawrun)	5.50	1.70	11.95	19.15	30	$574.50
K to L 0 130 (Jawrun)	5.41	1.70	11.95	19.06	80	$1,524.80
K to L Junction Rock (Jawrun)	5.40	1.70	11.95	19.05	50	$952.50
K to L Landing Rock (Jawrun)	5.43	1.70	11.95	19.08	80	$1,526.40
M to N 0 145 (Jawrun)	5.52	1.70	11.95	19.17	80	$1,533.60
M to N Junction Rock (Jawrun)	5.50	1.70	11.95	19.15	50	$957.50
M to N Landing Rock (Jawrun)	5.53	1.70	11.95	19.18	70	$1,342.60
O to P 0 865 (Jawrun)	5.85	1.70	11.95	19.50	280	$5,460.00
O to P Landing Rock (Jawrun)	5.89	1.70	11.95	19.54	50	$977.00
O to P Landing Rock (Jawrun)	5.94	1.70	11.95	19.59	50	$979.50
Q to R 0 470 (Jawrun)	1.67	1.70	11.95	15.32	290	$4,442.80
Q to R Intersection Rock (Jawrun)	6.07	1.70	11.95	19.72	30	$591.60
Q to R Landing Rock (Jawrun)	6.16	1.70	11.95	19.81	80	$1,584.80
Point Y Fill Repair (Jawrun)	1.74	1.70	11.95	15.39	20	$307.80
				Total C.Y.	4590	Sub Total $85,973.40

TOTAL ROCKING COSTS $85,973.40

JORDAN STOCKPILE COST SUMMARY

Pit:	Jordan	Location:	Sec. 29 , T1N, R7W, W.M.
Sale:	**Lobo Canyon**	Road:	720 c.y.
Swell:	1.40	Stockpile:	c.y.
Shirinkage	1.16	Total Truck Loads:	720 c.y.
Drill Pct.:	0%	In Place Total:	514 c.y.

Load Dump Truck:	$1.00 /cu.yd.	x	720 cu.yds.	=	$720.00
				Subtotal	$720.00
Move in Loader	1	@	$366.86	=	$366.86
				Subtotal	$366.86
				TOTAL PRODUCTION COSTS	$1,086.86

Base Cost= $1.51 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 Spot Rock (Crushed)	3.45	3.20	1.51	8.16	300		$2,448.00
A to B Culvert Backfill (Crushed)	10.37	0.90	1.51	12.78	25		$319.50
C to D Spot Rock (Crushed)	10.91	3.20	1.51	15.62	300		$4,686.00
C to D Culvert Backfill (Crushed)	9.76	0.90	1.51	12.17	40		$486.80
I to J Traction Rock (Crushed)	10.56	1.70	1.51	13.77	25		$344.25
U to V Fill Repair (Crushed)	4.07	3.20	1.51	8.78	10		$87.80
U to V Widening (Crushed)	4.43	3.20	1.51	9.14	20		$182.80
				Total C.Y.	720	Sub Total	$8,555.15

TOTAL ROCKING COSTS	$8,555.15

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Commercial	Location:	Varies	
Sale:	**Lobo Canyon**		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.

Base Cost= $18.35 Per Cu.Yd.

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 3045 (Crushed)	7.00	3.20	18.35	28.55	370		$10,563.50
				Total C.Y.	370	Sub Total	$10,563.50

TOTAL ROCKING COSTS	$10,563.50

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

Sale: **Lobo Canyon**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
36.0	Pavement	30
0.2	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	$258.00		$4.00	0.00	8.20	8.2	$32.80	$290.80
1	Excavators (Large)	$481.86	1	$44.80	0.00	7.00	7	$313.60	$795.46
1	Tractors (D6)	$512.82	2	$7.10	0.00	5.00	5	$35.50	$548.32
2	Dump Truck (Off Hiway)	$915.27	1	$4.75	0.00	7.00	7	$66.50	$981.77
					TOTAL MOVE-IN COSTS:				$2,616.35

OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT
Lobo Canyon

1. Type of Sale

Regeneration harvest, Recovery.

2. Legal Description

Sections 7 & 18, T1N, R7W, and Sections 12 & 13, T1N, R8W, W.M., Tillamook County, Oregon.

3. Sale Acreage

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

	ACRES Gross	Net
Unit 1 (Modified Clearcut)	117	89
Unit 2 (Modified Clearcut)	116	77
Total Acres	233	166

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 and 2 were cruised utilizing a 215’ x 525’ grid.

Both 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. Each plot recorded the following data: species, diameter at breast height (DBH), bole height, form factor, and grade. Merchantable heights were recorded at 6” and 7” outside bark diameters for conifer 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

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Log lengths favored 40-foot 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 summary for each species and type. Cruise plots were cruised from November of 2021 to January of 2022. Plots landing in riparian 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	34	8.5	49.8
2	33	7.4	42.6
Total	67	6.0 (avg.)	49.3 (avg.)

6. Hidden Defect and Breakage

A 1-3% reduction was applied to conifers, and a 2-3% reduction applied to hardwood volumes for hidden defect and breakage.

7. Timber Description

Unit 1 is approximately 68 years old and is a predominantly Douglas-fir dominated stand with a moderate red alder component in the lower benches, as well as very minor amounts of western hemlock.

Unit 2 is approximately 68 years old and is dominated by Douglas-fir with a minor red alder component, and a minor amount of western hemlock, Sitka spruce, and other miscellaneous conifers. Part of this unit (less than 2 acres) was included in a previous timber sale: the 2003 Wolf's Foot timber sale, Area 5. That portion of the stand was a partial cut that reduced stocking down to approximately 40 sq. ft. of basal area.

The entire sale area burned in both the 1933 and 1939 Tillamook fires.

The sale 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	17.4	82	5
1	Red alder	17.3	50	6

2	Douglas-fir	18.5	83	5
2	Red alder	15.5	43	6
2	Western hemlock	18.9	63	5
2	Sitka spruce	16.0	20	5
2	Bigleaf maple	18.0	60	6

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

8. Cruiser Units/Dates

The timber sale was cruised by members of the Marketing Unit and the Reforestation Unit of the Tillamook District from November of 2021 to January of 2022.

9. Revenue Distribution

FDF: 100%

Tax Code: 902: 13%, 5600: 87%

Deed Numbers: 138, 159, 161, and 194

10. Attachments

Volume Summaries

Stand Tables (2)

Log Stock Tables (2)

Species, Sort, Grade Tables (2)

Logging Plan (1)

11. Stand and Log Stock Tables Species Key

DF – Douglas-fir take
RA – Red alder take
WH – Western hemlock take
SS – Sitka spruce leave
BM- Big leaf maple leave
OC—cruised snag leave

Prepared by: Sara Stack Date: 01/19/2022

T	TSPCSTGR	**Species, Sort Grade - Board Foot Volumes (Type)**	Page	1
		Project: LCAN	Date	1/19/2022
			Time	8:46:44AM

T01N R07W S07 T0100 | **T01N R07W S07 T0100**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
01N	07W	07	UNIT 1	0100	89.00	34	259	S	W

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/Lf	Logs Per /Acre
DF		CO	2	41	1.2	10,438	10,309	917		0	73	26		3		97	39	14	305	1.84	33.8
DF		CO	3	48	.1	12,126	12,112	1,078	2	85	14				0	100	40	9	116	0.79	104.0
DF		CO	4	11		2,580	2,580	230	66	34			16	20	15	49	28	5	33	0.36	77.7
DF	**Totals**			83	.6	25,144	25,001	2,225	8	45	37	11	2	3	2	94	35	8	116	0.85	215.5
RA		H	2	10		552	552	49			100			12		88	37	13	226	1.52	2.4
RA		H	3	35	.6	1,774	1,764	157		38	62		10	10		80	34	12	170	1.32	10.4
RA		H	4	55	1.5	2,796	2,753	245		86	14		25	26	7	42	25	8	58	0.85	47.8
RA	**Totals**			17	1.0	5,123	5,070	451		60	40		17	19	4	60	27	9	84	0.99	60.7
Type Totals					.6	30,267	30,071	2,676	6	47	38	9	4	6	2	88	34	8	109	0.87	276.2

TC TSTNDSUM

Stand Table Summary

Project LCAN

T01N R07W S07 T0100 | **T01N R07W S07 T0100**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page: 1
01N	07W	07	UNIT 1	0100	89.00	34	259	Date: 01/19/2022
								Time: 8:46:45AM

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.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		9	1	80	42	2.890	1.28	2.89	5.6	20.0	.46	16	58	41	14	5
DF		10	2	88	69	3.524	1.92	3.52	9.9	48.5	1.00	35	171	89	31	15
DF		11	6	83	63	8.821	5.82	8.82	14.5	40.0	3.64	128	353	324	114	31
DF		12	4	83	78	4.970	3.90	4.97	18.3	58.8	2.60	91	292	231	81	26
DF		13	6	83	83	5.927	5.46	10.08	15.3	54.7	4.38	154	551	390	137	49
DF		14	9	84	98	7.237	7.74	14.47	16.6	65.7	6.86	241	951	610	214	85
DF		15	12	84	126	7.990	9.80	19.97	20.5	86.7	11.70	410	1,731	1,041	365	154
DF		16	12	83	114	7.551	10.54	17.44	22.4	87.2	11.11	390	1,521	989	347	135
DF		17	21	81	112	11.760	18.54	25.59	27.4	99.7	19.98	701	2,551	1,778	624	227
DF		18	14	84	104	6.993	12.36	15.43	29.3	109.8	12.87	452	1,694	1,145	402	151
DF		19	26	84	114	11.256	22.16	25.83	33.2	123.2	24.43	857	3,183	2,174	763	283
DF		20	12	85	119	4.494	9.80	13.48	30.9	123.9	11.87	417	1,670	1,057	371	149
DF		21	15	83	119	5.709	13.73	15.43	37.1	138.8	16.31	572	2,141	1,452	509	191
DF		22	14	83	114	4.829	12.75	12.55	41.3	162.8	14.77	518	2,043	1,315	461	182
DF		23	9	81	119	2.776	8.01	7.07	47.3	181.3	9.52	334	1,281	848	297	114
DF		24	5	79	102	1.300	4.09	2.60	57.8	191.0	4.29	150	497	382	134	44
DF		25	5	86	123	1.198	4.09	3.12	57.1	239.2	5.07	178	745	451	158	66
DF		26	5	85	129	1.286	4.74	3.86	55.5	244.6	6.10	214	944	543	191	84
DF		27	2	86	107	.465	1.85	1.19	60.9	254.0	2.06	72	302	184	64	27
DF		28	5	84	118	1.000	4.28	2.62	58.3	249.9	4.35	153	654	387	136	58
DF		29	5	87	139	1.016	4.66	2.87	78.6	382.5	6.43	226	1,098	572	201	98
DF		30	1	83	118	.242	1.19	.48	96.3	330.0	1.33	47	159	118	41	14
DF		32	3	80	93	.439	2.45	.88	95.8	308.3	2.40	84	271	213	75	24
DF		34	1	88	97	.164	1.03	.33	121.5	425.0	1.13	40	139	101	35	12
DF		Totals	195	83	102	103.838	172.19	215.51	30.1	116.0	184.65	6,479	25,001	16,434	5,767	2,225
RA		10	1	93	100	1.695	.92	1.70	8.7	40.0	.41	15	68	36	13	6
RA		11	2	82	125	2.476	1.63	3.71	13.8	56.7	1.41	51	210	125	46	19
RA		12	2	92	86	2.243	1.76	2.24	16.0	80.0	.99	36	179	88	32	16
RA		13	3	78	46	3.877	3.57	3.88	18.2	46.1	1.94	71	179	173	63	16
RA		14	5	76	106	4.453	4.76	6.75	19.5	65.1	3.63	132	439	323	117	39
RA		15	5	84	73	3.824	4.69	4.78	20.9	81.4	2.75	100	389	244	89	35
RA		16	5	84	77	3.454	4.82	6.91	20.8	75.1	3.94	143	519	351	128	46
RA		17	9	81	54	5.832	9.19	8.42	24.0	74.3	5.56	202	626	494	180	56
RA		18	5	86	105	2.312	4.09	3.70	38.3	170.0	3.90	142	629	347	126	56
RA		19	4	86	99	1.769	3.48	3.01	33.9	158.3	2.81	102	477	250	91	42
RA		20	5	76	66	2.520	5.50	3.61	41.9	107.7	4.16	151	388	370	134	35
RA		21	4	78	61	2.061	4.96	3.39	38.2	124.7	3.56	129	422	316	115	38
RA		22	3	80	54	1.277	3.37	1.59	47.0	144.4	2.05	75	229	182	66	20
RA		23	2	27	25	5.200	15.00	5.48	39.0	34.5	5.88	214	189	524	190	17
RA		24	1	70	20	.531	1.67	.53	35.8	110.0	.52	19	58	47	17	5
RA		25	1	49	26	.959	3.27	.96	44.5	70.0	1.17	43	67	105	38	6
RA		Totals	57	75	70	44.482	72.69	60.65	26.8	83.6	44.67	1,624	5,070	3,976	1,446	451
OC		15	2	88	64	1.332	1.63									
OC		16	1	87	114	.756	1.06									
OC		20	1	88	96	.375	.82									
OC		22	1	88	134	.391	1.03									
OC		23	1	88	128	.283	.82									
OC		Totals	6	88	94	3.136	5.35									
Totals			258	81	93	151.455	250.24	276.16	29.3	108.9	229.32	8104	30,071	20,410	7,212	2,676

TC TLOGSTVB

Log Stock Table - MBF

Project: LCAN

T01N R07W S07 T0100 **T01N R07W S07 T0100**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	
01N	07W	07	UNIT 1	0100	89.00	34	259	Page 1 Date 1/19/2022 Time 8:46:43AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	2	22	11		11	.5						11						
DF		CO	2	30	13		13	.6						13						
DF		CO	2	38	10	1.5	10	.5									10			
DF		CO	2	40	894	1.3	882	39.7					4	277	314	209	79			
DF		CO	3	32	1		1	.0				1								
DF		CO	3	34	1		1	.1			1									
DF		CO	3	40	1,077	.1	1,076	48.3		18	173	249	487	134	15					
DF		CO	4	12	1		1	.0		1										
DF		CO	4	13	3		3	.1		3										
DF		CO	4	14	1		1	.0		1										
DF		CO	4	15	8		8	.4		8										
DF		CO	4	16	12		12	.5		7		5								
DF		CO	4	18	6		6	.3		6										
DF		CO	4	19	0		0	.0		0										
DF		CO	4	20	8		8	.3		6	1									
DF		CO	4	21	5		5	.2		4	1									
DF		CO	4	22	16		16	.7		9	7									
DF		CO	4	23	7		7	.3		7										
DF		CO	4	24	5		5	.2		4	1									
DF		CO	4	26	3		3	.1		3										
DF		CO	4	27	3		3	.1		3										
DF		CO	4	28	3		3	.1		2	1									
DF		CO	4	30	2		2	.1		2										
DF		CO	4	32	11		11	.5		11										
DF		CO	4	33	4		4	.2		1	3									
DF		CO	4	34	12		12	.6		7	5									
DF		CO	4	35	7		7	.3		7										
DF		CO	4	36	7		7	.3		7										
DF		CO	4	37	3		3	.2				3								
DF		CO	4	38	16		16	.7		16										
DF		CO	4	39	20		20	.9		20										
DF		CO	4	40	66		66	3.0		17	39	7	4							
DF		Totals			2,238		2,225	83.1		170	232	266	495	436	328	209	89			
RA		H	2	28	6		6	1.3						6						
RA		H	2	36	6		6	1.3						6						
RA		H	2	40	37		37	8.3						18	19					
RA		H	3	16	9		9	2.0						9						
RA		H	3	18	4		4	.8						4						
RA		H	3	20	3		3	.7					3							
RA		H	3	28	8		8	1.7							8					
RA		H	3	30	9		9	1.9					9							
RA		H	3	40	126	.7	125	27.7					48	77						
RA		H	4	12	6		6	1.3			3	3								
RA		H	4	13	9		9	1.9			9									
RA		H	4	14	2		2	.5				2								
RA		H	4	16	11		11	2.5					6		5					
RA		H	4	17	30	4.3	29	6.4				12		10	7					
RA		H	4	18	1		1	.3			1									
RA		H	4	19	3		3	.7			3									
RA		H	4	21	1	33.3	1	.1			1									

TC TLOGSTVB

Log Stock Table - MBF

Project: LCAN

T01N R07W S07 T0100 | **T01N R07W S07 T0100**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page 2
01N	07W	07	UNIT 1	0100	89.00	34	259	Date 1/19/2022
								Time 8:46:43AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	% Def	Net 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+
									Net Volume by Scaling Diameter in Inches											
RA		H	4	22	15		15	3.2				6	9							
RA		H	4	23	8		8	1.7			8									
RA		H	4	24	3		3	.6			3									
RA		H	4	27	14		14	3.1						14						
RA		H	4	28	3		3	.7				3								
RA		H	4	29	2	25.0	2	.4			2									
RA		H	4	30	22	7.4	20	4.5			10	3	7							
RA		H	4	31	4		4	.8				4								
RA		H	4	32	2		2	.3			2									
RA		H	4	33	4		4	.9			4									
RA		H	4	34	9		9	2.0					9							
RA		H	4	36	22		22	4.8					22							
RA		H	4	37	8		8	1.8			8									
RA		H	4	38	14		14	3.1			7	7								
RA		H	4	40	55		55	12.1				55								
RA		H	4	41	3		3	.7			3									
RA	Totals				456	1.0	451	16.9			62	95	113	143	39					
Total All Species					2,694		2,676	100.0		170	294	360	608	579	367	209	89			

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: LCAN

Date 1/19/2022
Time 8:36:45AM

T01N R07W S07 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
01N	07W	07	UNIT 2	0100	77.00	33	221	S	W

T01N R07W S07 T0100

Spp	S T	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Dia In	Bd Ft	CF/Lf	Logs Per /Acre
DF		CO	2	49	.4	11,587	11,542	889			52	48	2	4		94	39	16	375	2.08	30.8
DF		CO	3	41	.2	9,422	9,401	724		78	21	1		1	2	97	40	9	127	0.83	74.0
DF		CO	4	10	.8	2,241	2,224	171	59	41			13	26	2	58	31	5	37	0.34	60.1
DF	**Totals**			91	.4	23,250	23,167	1,784	6	36	34	24	2	5	1	92	36	9	141	0.93	164.8
RA		H	2	12		267	267	21			53	47	47	53			19	14	142	1.49	1.9
RA		H	3	37	1.1	783	775	60		12	88			39		61	33	12	177	1.60	4.4
RA		H	4	51	5.2	1,129	1,071	82		100			7	8	15	70	33	7	51	0.70	21.1
RA	**Totals**			8	3.1	2,180	2,113	163		55	39	6	9	25	8	58	32	8	77	0.88	27.4
WH		CO	2	66		93	93	7			100					100	40	13	240	1.35	.4
WH		CO	3	16		23	23	2		100						100	40	6	60	0.55	.4
WH		CO	4	18	16.7	29	24	2		100						100	40	6	50	1.08	.5
WH	**Totals**			1	3.3	144	140	11		34	66					100	40	8	112	1.00	1.2
SS		CO	3	100		42	42	3		100			100				19	10	70	0.97	.6
SS	**Totals**			0		42	42	3		100			100				19	10	70	0.97	.6
Type Totals					.6	25,616	25,461	1,961	5	37	35	23	3	7	2	89	36	9	131	0.92	194.0

TC TSTNDSUM

Stand Table Summary

Project **LCAN**

T01N R07W S07 T0100 **T01N R07W S07 T0100**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	07W	07	UNIT 2	0100	77.00	33	221

Page: 1
Date: 01/19/2022
Time: 8:36:45AM

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.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		10	1	85	92	2.733	1.49	2.73	12.8	60.0	.99	35	164	77	27	13
DF		11	1	85	112	2.259	1.49	4.52	13.1	55.0	1.69	59	248	130	46	19
DF		12	4	85	87	7.592	5.96	13.29	13.6	50.0	5.13	180	664	395	139	51
DF		13	1	85	105	1.617	1.49	3.23	17.4	65.0	1.61	56	210	124	43	16
DF		14	6	82	97	8.367	8.94	16.73	18.9	71.7	9.02	316	1,199	694	244	92
DF		15	6	86	110	7.288	8.94	14.58	21.6	90.8	8.96	314	1,324	690	242	102
DF		16	9	82	107	9.609	13.42	20.29	23.9	91.6	13.79	484	1,858	1,062	373	143
DF		17	5	85	114	4.729	7.45	11.35	26.0	106.7	8.43	296	1,211	649	228	93
DF		18	7	85	120	5.905	10.44	14.34	29.4	115.9	12.03	422	1,662	927	325	128
DF		19	5	82	88	3.786	7.45	5.30	32.9	111.4	4.97	174	591	383	134	45
DF		20	3	88	112	2.050	4.47	4.10	38.7	156.7	4.52	159	642	348	122	49
DF		21	6	84	112	3.719	8.94	8.68	38.7	157.9	9.58	336	1,370	738	259	105
DF		22	5	85	120	2.824	7.45	6.78	45.6	182.5	8.81	309	1,237	678	238	95
DF		23	5	87	118	2.583	7.45	6.72	48.2	207.7	9.24	324	1,395	711	249	107
DF		24	7	84	124	3.322	10.44	9.02	49.3	204.7	12.67	445	1,846	976	342	142
DF		25	3	88	112	1.312	4.47	3.06	52.5	251.4	4.58	161	770	353	124	59
DF		26	5	83	132	2.022	7.45	4.85	66.0	294.2	9.12	320	1,427	702	246	110
DF		27	2	86	126	.750	2.98	2.25	60.1	265.0	3.86	135	596	297	104	46
DF		28	4	87	114	1.394	5.96	3.49	71.0	315.0	7.05	247	1,098	543	190	85
DF		29	1	93	135	.325	1.49	.97	77.9	420.0	2.16	76	409	167	58	32
DF		30	6	85	138	1.822	8.94	5.47	78.3	372.8	12.20	428	2,038	940	330	157
DF		32	3	81	117	.801	4.47	2.40	75.8	353.3	5.19	182	849	400	140	65
DF		34	1	89	130	.236	1.49	.71	101.0	506.7	2.04	72	359	157	55	28
DF		Totals	96	84	108	77.044	143.11	164.84	33.6	140.5	157.66	5,532	23,167	12,140	4,260	1,784
RA		9	1	66	60	4.596	2.03									
RA		12	1	80	62	2.585	2.03	2.59	19.6	60.0	1.40	51	155	107	39	12
RA		13	2	75	51	4.405	4.06	4.41	19.4	30.0	2.35	86	132	181	66	10
RA		14	1	80	92	1.899	2.03	3.80	18.2	55.0	1.90	69	209	147	53	16
RA		15	2	77	72	3.309	4.06	3.31	28.9	65.0	2.63	95	215	202	74	17
RA		16	1	80	69	1.454	2.03	1.45	38.5	80.0	1.54	56	116	119	43	9
RA		17	1	83	83	1.288	2.03	2.58	21.8	85.0	1.55	56	219	119	43	17
RA		18	1	70	70	1.149	2.03									
RA		19	1	88	81	1.031	2.03	2.06	29.6	130.0	1.68	61	268	129	47	21
RA		20	2	80	58	1.861	4.06	2.79	34.9	106.7	2.68	97	298	206	75	23
RA		21	2	79	75	1.688	4.06	2.53	42.7	90.0	2.97	108	228	229	83	18
RA		24	1	82	64	.646	2.03	.65	78.5	200.0	1.40	51	129	107	39	10
RA		25	1	83	47	.596	2.03	1.19	28.7	120.0	.94	34	143	72	26	11
RA		Totals	17	76	66	26.507	34.51	27.35	28.0	77.2	21.03	765	2,113	1,619	589	163
WH		18	1	75	72	.476	.84	.48	43.3	50.0	.66	21	24	51	16	2
WH		20	1	88	105	.386	.84	.77	38.0	150.0	.94	29	116	72	23	9
WH		Totals	2	81	87	.862	1.68	1.25	40.0	111.8	1.60	50	140	123	38	11
SS		16	1	82	29	.603	.84	.60	18.4	70.0	.29	11	42	22	9	3
SS		Totals	1	82	29	.603	.84	.60	18.4	70.0	0.29	11	42	22	9	3
BM		18	2	78	79	.953	1.68									
BM		Totals	2	78	79	.953	1.68									
OC		15	1	86	91	.686	.84									
OC		16	1	86	72	.603	.84									
OC		17	1	82	55	.534	.84									

Stand Table Summary

Project LCAN

T01N R07W S07 T0100

T01N R07W S07 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	07W	07	UNIT 2	0100	77.00	33	221

Page: 2
Date: 01/19/2022
Time: 8:36:45AM

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.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
OC		20	1	81	58	.386	.84									
OC		24	1	88	123	.268	.84									
OC		Totals	5	85	77	2.477	4.21									
Totals			123	82	96	108.446	186.04	194.05	32.8	131.2	180.58	6358	25,461	13,905	4,895	1,961

TC TLOGSTVB

Log Stock Table - MBF

Project: LCAN

T01N R07W S07 T0100 **T01N R07W S07 T0100**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page 1
01N	07W	07	UNIT 2	0100	77.00	33	221	Date 1/19/2022
								Time 8:36:44AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	% Def	Net 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+
									Net Volume by Scaling Diameter in Inches											
DF		CO	2	14	9	5.3	9	.5								9				
DF		CO	2	16	8		8	.4									8			
DF		CO	2	22	8		8	.4									8			
DF		CO	2	24	11		11	.6								11				
DF		CO	2	30	15		15	.8								15				
DF		CO	2	40	842	.4	839	47.0						169	152	349	130	39		
DF		CO	3	24	4		4	.2							4					
DF		CO	3	28	1		1	.1				1								
DF		CO	3	30	3		3	.2			2	2								
DF		CO	3	32	10		10	.5			2		8							
DF		CO	3	34	3		3	.2			3									
DF		CO	3	38	5		5	.3			4	2								
DF		CO	3	40	699	.2	697	39.1			73	236	232	104	30	23				
DF		CO	4	13	1		1	.0			1									
DF		CO	4	14	0		0	.0		0										
DF		CO	4	15	0		0	.0				0								
DF		CO	4	16	2		2	.1		1		1								
DF		CO	4	17	2		2	.1		2										
DF		CO	4	19	3		3	.2		3										
DF		CO	4	20	13		13	.7		5	2	1	5							
DF		CO	4	21	2		2	.1		2										
DF		CO	4	22	3		3	.2		3										
DF		CO	4	23	3		3	.2			3									
DF		CO	4	24	3		3	.2		1	2									
DF		CO	4	25	5		5	.3		2	3									
DF		CO	4	26	12		12	.7		10	1									
DF		CO	4	27	1		1	.1			1									
DF		CO	4	28	13		13	.8		10	3									
DF		CO	4	29	2		2	.1		2										
DF		CO	4	30	1		1	.0		1										
DF		CO	4	32	2		2	.1		2										
DF		CO	4	34	2		2	.1		2										
DF		CO	4	36	11	11.9	10	.5		7	3									
DF		CO	4	37	6		6	.3		6										
DF		CO	4	38	13		13	.7		13										
DF		CO	4	39	7		7	.4		7										
DF		CO	4	40	65		65	3.6		20	45									
DF		Totals			1,790		1,784	91.0		100	146	242	245	273	186	407	145	39		
RA		H	2	14	10		10	5.9								10				
RA		H	2	22	11		11	6.7						11						
RA		H	3	22	16		16	9.8							16					
RA		H	3	25	7		7	4.4					7							
RA		H	3	40	37	1.7	37	22.5						37						
RA		H	4	18	4		4	2.6			4									
RA		H	4	20	1		1	.9			1									
RA		H	4	22	1		1	.8			1									
RA		H	4	30	7	25.0	5	3.1			5									
RA		H	4	31	14	11.8	13	7.8			5	8								
RA		H	4	36	6		6	3.7			6									
RA		H	4	38	5		5	2.9			5									

TC TLOGSTVB

Log Stock Table - MBF

Project: LCAN

T01N R07W S07 T0100 **T01N R07W S07 T0100**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	2
01N	07W	07	UNIT 2	0100	77.00	33	221	Date	1/19/2022
								Time	8:36:44AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
RA		H	4	39	4		4	2.4			4									
RA		H	4	40	44	2.5	43	26.4			21	22								
RA		Totals			168	3.1	163	8.3			53	30	7	48	16	10				
WH		CO	2	40	7		7	66.3						7						
WH		CO	3	40	2		2	16.6			2									
WH		CO	4	40	2	16.7	2	17.1			2									
WH		Totals			11	3.3	11	.5			4			7						
SS		CO	3	19	3		3	100.0					3							
SS		Totals			3		3	.2					3							
Total All Species					1,972		1,961	100.0		100	203	272	255	328	202	417	145	39		

"STEWARDSHIP IN FORESTRY"

Lobo Canyon

Volume Summary

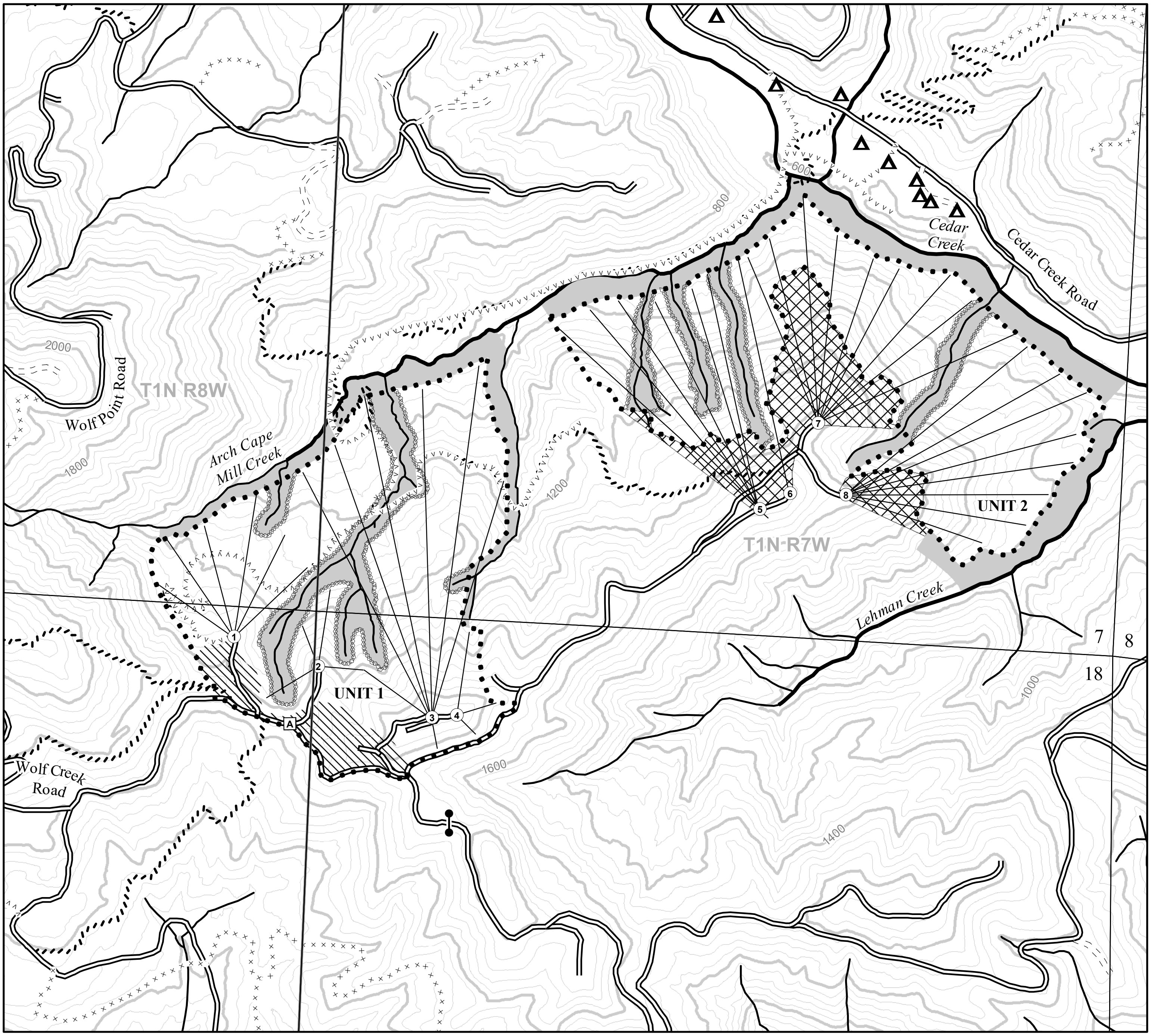
Unit 1-Harvest Type

SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
		89 acres		
Douglas-fir	25.0	2225	2%	2181
Alder	5.1	451	3%	437
Hemlock		0	1%	0
Spruce		0	1%	0
		0		0
TOTAL	30.1	2676		2618

Unit 2-Harvest Type

SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
		77 acres		
Douglas-fir	23.2	1784	2%	1748
Alder	2.1	163	2%	159
Hemlock	0.1	11	2%	11
Spruce	0.0	0	1%	0
		0		0
TOTAL	25.5	1957		1918

TOTAL SALE VOLUME	166	acres
SPECIES	Cruised Net (MBF)	Net Sale (MBF)
Douglas-fir	4009	3929
Alder	614	596
Hemlock	11	11
Spruce	0	0
	0	0
TOTAL	4634	4536



Legend

- Campsite
- Gates
- Cable Landing
- Tractor Landing
- Cable Logging
- Riparian Boundary
- Timber Sale Boundary
- Ground Based Logging
- Riparian Buffer
- Reforestation Area
- Recreation Trail
- Surfaced Road
- Unsurfaced Road
- Blocked Road
- Abandoned Road
- Type-F Stream
- Type-N Stream
- 200' Contour
- 40' Contour

LOGGING PLAN

FOR TIMBER SALE CONTRACT
TL-341-2022-W00848-01
LOBO CANYON
PORTIONS OF SECTIONS 12, 13, T1N, R8W
& SECTIONS 7, 18, T1N, R7W, W.M.
TILLAMOOK COUNTY, OREGON

Tillamook District GIS
March, 2022
This product is for informational use and may not be suitable for legal, engineering, or surveying purposes.

1:12,000
1 inch = 1,000 feet

0 250 500 1,000 1,500 2,000 Feet

N

NET ACRES

	GROUND	CABLE	TOTAL
UNIT 1	9	80	89
UNIT 2	0	77	77
TOTAL	9	157	166