"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Stand Muesial
Sale 341-15-37

District: **Tillamook** **Date:** **May 14, 2014**

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$862,746.10	$216,929.29	$1,079,675.39
		Project Work:	$(282,000.00)
		Advertised Value:	$797,675.39

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District: **Tillamook** **Date:** **May 14, 2014**

timber description

Location: Portions of Sections 25, 26, 35, and 36, T1N, R8W, W.M., Tillamook County, Oregon.

Stand Stocking: 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	16	0	95
Alder (Red)	14	0	90

Volume by Grade	10" - 11"	12"+	2S	3S	4S	6" - 7"	8" - 9"	Total
Douglas - Fir	0	0	1,132	1,152	361	0	0	2,645
Alder (Red)	155	150	0	0	0	412	230	947
Total	155	150	1,132	1,152	361	412	230	3,592

District: Tillamook **Date: May 14, 2014**

comments: Pond Values Used: 1st Quarter Calendar Year 2014.

Western Hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost:
$190/MBF = $530/MBF - $340/MBF

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
$835/MBF = $1,175/MBF - $340/MBF

Pulp (Conifer and Hardwood) Price = $25/MBF

SCALING COST ALLOWANCE = $5.00/MBF

FUEL COST ALLOWANCE = $4.00/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 3,592 MBF = $7,184
Snag Creation by Girdling: $10/tree x 418 trees = $4,180
Flagger on Muesial Creek Road: 10 days x 9 hrs/day x $20/hr = $1,800
TOTAL Other Costs (with Profit & Risk to be added) = $13,164

Other Costs (No Profit & Risk added):
Non-Project Roads:
Road 1 = 465’ x $250/100’ = $1,162
Road 2 = 200’ x $200/100’ = $400
Slash Piling and Sorting: $5/acre x 197 (modified clearcut cable) acres = $985
Cover Material for Piles: 20 piles x $5/pile = $100
Remove Slash from Landings on Cedar Butte Road to Stable Locations: $500
Non-Project and Un-Surfaced Road Blocking: $50/block x 3 roads = $150
Equipment Moving Between Areas 1 and 2 (fall/winter –spring/summer operation):
3 Pieces of Equipment x 4.3 miles x 2 MPH x $100/hour = $645
Equipment Cleaning: 2 machines x $1,000 per machine x 1 season = $2,000
TOTAL Other Costs (No Profit & Risk added) = $5,942

ROAD MAINTENANCE
Road Maintenance: Cedar Butte and Muesial Creek Road haul route: 4.5 miles
Interim Grading: $250/mile x 4.5 miles x 2 times / 3,592 MBF = $ 0.63/ MBF
Final maintenance grading: $500/mile x 4.5 miles/ 3,592 MBF = $ 0.63/ MBF
Spot rocking: 20cy x 1MMBF/ 1 mile x 4.5 miles x 3.592 MMBF x

$20.00/cy / 3,592 MBF = $ 1.80/ MBF
Vibratory Roller: Cedar Butte Road (bridge to unit access road) and in-unit access: 2.9 miles x 52.8 stations/mile x $ 35.50/station = 5,436/ 3,592 MBF = $ 1.51/ MBF
Vibratory Roller: Muesial Creek Road through campground to Area 2: 2.8 miles x 52.8 stations/mile x $ 35.50/station = 5,248/ 3,592 MBF = $ 1.46/ MBF
Total Road Maintenance: $ 6.03/ MBF

"STEWARDSHIP IN FORESTRY"

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Stand Muesial
Sale 341-15-37

District: Tillamook **Date: May 14, 2014**

logging conditions

combination#: 1 Douglas - Fir 93.59%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Cable: Medium Tower >40 - <70 **Process**: Stroke Delimber
tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
loads / day: 4.2 **bd. ft / load:** 3,500
cost / mbf: $227.49

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

combination#: 2 Douglas - Fir 6.38%
Alder (Red) 6.32%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Shovel **Process**: Stroke Delimber
tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
loads / day: 8.0 **bd. ft / load:** 3,000
cost / mbf: $59.93

machines: Stroke Delimber (B)

combination#: 3 Douglas - Fir 0.04%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Cable: Medium Tower >40 - <70 **Process**: Stroke Delimber
tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
loads / day: 3.5 **bd. ft / load:** 3,200
cost / mbf: $298.58

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

combination#: 4
Alder (Red) 93.68%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Cable: Medium Tower >40 - <70 **Process**: Stroke Delimber
tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
loads / day: 4.5 **bd. ft / load:** 3,500
cost / mbf: $212.32

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

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Stand Muesial
Sale 341-15-37

District: **Tillamook** **Date:** **May 14, 2014**

logging costs

Operating Seasons:	1.00	**Profit Risk:**	15.00%
Project Costs:	$282,000.00	**Other Costs (P/R):**	$13,164.00
Slash Disposal:	$0.00	**Other Costs:**	$5,942.00

Miles of Road

Road Maintenance: $6.03

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	4.2
Alder (Red)	$0.00	3.0	3.0

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Stand Muesial
Sale 341-15-37

District: **Tillamook** **Date:** **May 14, 2014**

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
$216.83	$6.33	$1.22	$56.52	$3.66	$42.68	$0.00	$5.00	$1.65	$333.89
Alder (Red)									
$202.69	$6.63	$1.22	$82.90	$3.66	$44.56	$0.00	$5.00	$1.65	$348.31

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$660.07	$326.18	$0.00
Alder (Red)	$0.00	$577.38	$229.07	$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	2,645	$326.18	$862,746.10
Alder (Red)	947	$229.07	$216,929.29

Gross Timber Sale Value

Recovery: $1,079,675.39

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

"STEWARDSHIP IN FORESTRY"

PROJECT SUMMARY SHEET

Sale: Stand Muesial

CONSTRUCTION

Point	C to D	18+55	stations =	$18,726.03
Point	G to H	67+10	stations =	$93,127.07
			SUBTOTAL CONSTRUCTION	**$111,853.10**

IMPROVEMENT

Point	A to B	170+00	stations =	$25,719.70
Point	C to D	11+95	stations =	$6,677.42
Point	E to F	313+90	stations =	$114,175.03
Point	G to H	18+15	stations =	$14,448.51
			SUBTOTAL IMPROVEMENT	**$161,020.66**

ROCK HAUL ROUTE(S) MAINTENANCE **$6,500.00**

MOVE IN **$2,626.24**

GRAND TOTAL **$282,000.00**

SUMMARY OF CONSTRUCTION COST

Sale: **Stand Muesial** Road: **A to B**

Construction -	0+00	stations	Improvement -	170+00	stations	Reconstruction -	0+00	stations
	0.00	miles		3.22	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Scattering	0.780	acres	@	$980.00	per acre =	$764.40	
					TOTAL CLEARING AND GRUBBING		**$764.40**

IMPROVEMENT: EXCAVATION -

Road Earthwork- Ditching - Bunch Material & Scatter or End Haul	170.00	sta.	@	$50.00	per sta. =	$8,500.00	
					TOTAL EXCAVATION		**$8,500.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts					
	40	LF of 18"	$700.00		
			$700.00		
Culvert Stakes & Markers					
	1	markers	$8.00		
			$8.00	**TOTAL CULVERTS**	**$708.00**

ROCK

Culvert Backfill	50+00	10	cy. of	Crushed	@	$11.78	per c.y.=	$117.80	
Spot Rock, As Marked	0+00 to 10+00	100	cy. of	Crushed	@	$12.93	per c.y.=	$1,293.00	
Spot Rock, As Marked	48+00to170+00	650	cy. of	Crushed	@	$14.55	per c.y.=	$9,457.50	
							TOTAL ROCK		**$10,868.30**

SPECIAL PROJECTS

Grade and shape road -	170.00	stations	@	$15.50	per station	$2,635.00	
Roll subgrade w/ vibratory roller prior to rocking -	170.00	stations	@	$13.20	per station	$2,244.00	
					TOTAL SPECIAL PROJECTS		**$4,879.00**

GRAND TOTAL **$25,719.70**

SUMMARY OF CONSTRUCTION COST

Sale: **Stand Muesial** Road: **C to D**

Construction -	18+55	stations	Improvement -	11+95	stations	Reconstruction -	0+00	stations
	0.35	miles		0.23	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			
11+90		18+80	30%		Outslope	$191	=	$1,317.90	
18+80		22+60	65%	0.1	Outslope	$1,931	=	$7,337.80	
22+60		30+50	30%		Outslope	$191	=	$1,508.90	
								TOTAL	**$10,164.60**

IMPROVEMENT: CLEARING AND GRUBBING -

Scattering	0.820	acres @	$980.00	per acre =	$803.60	
				TOTAL CLEARING AND GRUBBING		**$803.60**

IMPROVEMENT: EXCAVATION -

Road Earthwork	11.95	sta. @	$30.00	per sta. =	$358.50	
				TOTAL EXCAVATION		**$358.50**

ROCK

0+00 to	30+50	2,230	cy. of	Pit-Run	@	$5.73	per c.y.=	$12,777.90	
Junction Rock	0+00	10	cy. of	Pit-Run	@	$5.49	per c.y.=	$54.90	
								TOTAL ROCK	**$12,832.80**

SPECIAL PROJECTS

Construct ditchouts -	2.00	@	$60.00	each	$120.00
Grade and shape road -	30.50	stations @	$15.50	per station	$472.75
Roll subgrade w/ vibratory roller prior to rocking -	30.50	stations @	$13.20	per station	$402.60
Grass seed and fertilize -	1.13	acres @	$220.00	per acre	$248.60
				TOTAL SPECIAL PROJECTS	**$1,243.95**

GRAND TOTAL **$25,403.45**

SUMMARY OF CONSTRUCTION COST

Sale: **Stand Muesial** Road: **E to F**

Construction -	0+00	stations	Improvement -	313+90	stations	Reconstruction -	0+00	stations
	0.00	miles		5.95	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Scattering	0.720	acres @	$980.00	per acre =	$705.60	
				TOTAL CLEARING AND GRUBBING		**$705.60**

IMPROVEMENT: EXCAVATION -

Road Earthwork- Ditching - Bunch Material & Scatter or End Haul	102.00	sta. @	$80.00	per sta. =	$8,160.00	
				TOTAL EXCAVATION		**$8,160.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts			
80	LF of 18"	$1,400.00	
		$1,400.00	
Culvert Stakes & Markers			
2	markers	$16.00	
		$16.00	
		TOTAL CULVERTS	**$1,416.00**

ROCK

0+00 to	237+00	5,300	cy. of	Crushed	@	$14.70	per c.y.=	$77,910.00
275+70 to	313+90	870	cy. of	Crushed	@	$17.45	per c.y.=	$15,181.50
Culvert Backfill	Culvert Loc.	20	cy. of	Crushed	@	$11.81	per c.y.=	$236.20
Spot Rock	As Marked	50	cy. of	Crushed	@	$12.80	per c.y.=	$640.00
							TOTAL ROCK	**$93,967.70**

SPECIAL PROJECTS

Construct ditchouts/catch basins -	10.00	@	$60.00	each	$600.00	
Grade and shape road -	313.90	stations @	$15.50	per station	$4,865.45	
Roll subgrade w/ vibratory roller prior to rocking -	313.90	stations @	$13.20	per station	$4,143.48	
Grass seed and fertilize -	1.44	acres @	$220.00	per acre	$316.80	
				TOTAL SPECIAL PROJECTS		**$9,925.73**

GRAND TOTAL **$114,175.03**

SUMMARY OF CONSTRUCTION COST

Sale: **Stand Muesial** Road: **G to H**

Construction -	67+10	stations	Improvement -	18+15	stations	Reconstruction -	0+00	stations
	1.27	miles		0.34	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	**Average Cost per Station**				
18+15		85+25	55%		Outslope	**$668**	=		$44,822.80	
									TOTAL	**$44,822.80**

IMPROVEMENT: CLEARING AND GRUBBING -

Scattering			0.670	acres @	$980.00	per acre =	$656.60		
						TOTAL CLEARING AND GRUBBING			**$656.60**

IMPROVEMENT: EXCAVATION -

Road Earthwork	0+00	to	18+15	18.15	sta. @	$40.00	per sta. =	$726.00		
							TOTAL EXCAVATION			**$726.00**

ROCK

0+00 to	85+25	3,970	cy. of	Crushed		@	$14.65	per c.y.=	$58,160.50	
Junction Rock	0+00	10	cy. of	Crushed		@	$14.04	per c.y.=	$140.40	
									TOTAL ROCK	**$58,300.90**

SPECIAL PROJECTS

Grade and shape road -	85.25	stations @	$15.50	per station	$1,321.38	
Roll subgrade w/ vibratory roller prior to rocking -	85.25	stations @	$13.20	per station	$1,125.30	
Grass seed and fertilize -	2.83	acres @	$220.00	per acre	$622.60	
				TOTAL SPECIAL PROJECTS		**$3,069.28**

GRAND TOTAL **$107,575.58**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Pit_run	Location:	NE 1/4 Sec. 35, T1N, R8W, W.M.	
Sale:	**Stand Muesial**		Road:	2240 c.y.
Swell:	1.40			
Shirinkage	1.16		Total Truck Loads:	2240 c.y.
Drill Pct.:	0%		In Place Total:	1600 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.							$1,000.00
Rip Rock:	$2.00	/cu.yd.	x	1600	cu.yds.	=	$3,200.00
Load Dump Truck:	$0.70	/cu.yd.	x	2240	cu.yds.	=	$1,568.00
					Subtotal		$5,768.00

Move in Roller and Compactor	1	@	$380.65	=	$380.65
Move in Grader	1	@	$137.24	=	$137.24
Move in Excavator	1	@	$626.91	=	$626.91
Move in Trucks	3	@	$120.51	=	$361.53
			Subtotal		$1,506.33
			TOTAL PRODUCTION COSTS		$7,274.33

Base Cost= $3.25 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
C to D 0 3050 (Pit-Run)	1.38	1.10	3.25	5.73	2230		$12,777.90
C to D Junction Rock (Pit-Run)	1.14	1.10	3.25	5.49	10		$54.90
				Total C.Y.	2240	Sub Total	$12,832.80
					TOTAL ROCKING COSTS		$12,832.80

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Cedar_Butte	Location:	NW 1/4 Sec. 14, T1N, R8W, W.M.
Sale:	**Stand Muesial**	Road:	3980 c.y.
Swell:	1.40		
Shirinkage	1.16	Total Truck Loads:	3980 c.y.
Drill Pct.:	100%	In Place Total:	2843 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.							$1,000.00
Drill & Shoot:	$2.50	/cu.yd.	x	2843	cu.yds.	=	$7,107.50
Push Rock:	$0.60	/cu.yd.	x	3980	cu.yds.	=	$2,388.00
Load Crusher:	$0.60	/cu.yd.	x	3980	cu.yds.	=	$2,388.00
Crush Rock:	$2.35	/cu.yd.	x	3980	cu.yds.	=	$9,353.00
Load Dump Truck:	$0.70	/cu.yd.	x	3980	cu.yds.	=	$2,786.00
						Subtotal	$25,022.50

Move In/Set-up Crusher					$2,900.00
Move In and set up Drill and Compressor	1	@	$380.65	=	$380.65
Move in Roller and Compactor	1	@	$20.00	=	$20.00
Move in Grader	1	@	$20.00	=	$20.00
Move in D-8	1	@	$100.00	=	$100.00
Move in Loader	1	@	$451.85	=	$451.85
Move in Excavator	1	@	$626.91	=	$626.91
Move in Trucks	3	@	$120.51	=	$361.53
Move in Water Truck	1	@	$141.66	=	$141.66
				Subtotal	$5,002.60
			TOTAL PRODUCTION COSTS		$30,025.10

Base Cost= $7.54 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
G to H 0 8525 (Crushed)	4.66	2.45	7.54	14.65	3970		$58,160.50
G to H Junction Rock (Crushed)	4.05	2.45	7.54	14.04	10		$140.40
				Total C.Y.	3980	Sub Total	$58,300.90
					TOTAL ROCKING COSTS		$58,300.90

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	South_Fork_Jordan	Location:	NE 1/4 Sec. 32, T1N, R7W, W.M.
Sale:	**Stand Muesial**	Road:	7000 c.y.
Swell:	1.40		
Shirinkage	1.16	Total Truck Loads:	7000 c.y.
Drill Pct.:	100%	In Place Total:	5000 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.							$2,200.00
Drill & Shoot:	$2.50	/cu.yd.	x	5000	cu.yds.	=	$12,500.00
Push Rock:	$0.60	/cu.yd.	x	7000	cu.yds.	=	$4,200.00
Load Crusher:	$0.60	/cu.yd.	x	7000	cu.yds.	=	$4,200.00
Crush Rock:	$2.50	/cu.yd.	x	7000	cu.yds.	=	$17,500.00
Load Dump Truck:	$0.70	/cu.yd.	x	7000	cu.yds.	=	$4,900.00
					Subtotal		$45,500.00

Move In/Set-up Crusher					$2,520.00
Move In and set up Drill and Compressor	1	@	$380.65	=	$380.65
Move in Roller and Compactor	1	@	$20.00	=	$20.00
Move in Grader	1	@	$20.00	=	$20.00
Move in D-8	1	@	$100.00	=	$100.00
Move in Loader	1	@	$451.85	=	$451.85
Move in Excavator	1	@	$626.91	=	$626.91
Move in Trucks	3	@	$120.51	=	$361.53
Move in Water Truck	1	@	$141.66	=	$141.66
			Subtotal		$4,622.60

		TOTAL PRODUCTION COSTS	$50,122.60
Base Cost=	$7.16	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 Culvert Backfill (Crushed)	4.02	0.60	7.16	11.78	10		$117.80
A to B Spot Rock, As Marked (Crushed)	3.32	2.45	7.16	12.93	100		$1,293.00
A to B Spot Rock, As Marked (Crushed)	4.94	2.45	7.16	14.55	650		$9,457.50
E to F 0 23700 (Crushed)	5.09	2.45	7.16	14.70	5300		$77,910.00
E to F 27570 31390 (Crushed)	7.84	2.45	7.16	17.45	870		$15,181.50
E to F Culvert Backfill (Crushed)	4.05	0.60	7.16	11.81	20		$236.20
E to F Spot Rock (Crushed)	3.19	2.45	7.16	12.80	50		$640.00
				Total C.Y.	7000	Sub Total	$104,836.00

	TOTAL ROCKING COSTS	$104,836.00

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

Sale: **Stand Muesial**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
36.0	Pavement	30
4.0	Main Lines	7
2.4	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	Excavators (Large)	$654.51	1	$44.80	0.00	5.00	5	$224.00	$878.51
1	Tired Backhoes/Skidders	$380.65		$3.00	0.00	5.00	5	$15.00	$395.65
1	Tractors (D7)	$589.85	2	$11.30	0.00	5.00	5	$56.50	$646.35
1	Dump Truck (10 cy +)	$153.78		$2.85	0.00	5.00	5	$14.25	$168.03
1	Dump Truck (Off Hiway)	$513.95	1	$4.75	0.00	5.00	5	$23.75	$537.70
					TOTAL MOVE-IN COSTS:				$2,626.24

OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT
Stand Muesial

1. Type of Sale
Regeneration harvest/ Right-of-Way, Recovery.

2. Legal Description
Sections 25, 26, 35, and 36, T1N, R8W, 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)	124	100
Area 2 (Modified Clearcut)	116	109
Area 3 (Right-of-Way)	5	5

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
Areas 1 and 2 were variable plot cruised and Area 3 was strip cruised. Areas 1 and 2 plot and line spacing were 350' and 700' respectively; Area 3 plots were spaced 1,056' apart. 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
On all variable plots a 27.78 BAF was used and point of tree observation was DBH. Plot size for the strip cruise was a measured 52.8' strip for every 1,056' of road length for a 5% sample.

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 calculation in Areas 1 and 2 and in Area 3 an expansion factor of 20 was used to calculate the harvest volume.

Cruise Statistics (Board Foot Volumes)			
Area	Number of Plots	SE (%)	CV (%)
1	19	9.0	38.3
2	29	11.0	58.1
3	4	64.9	113.5

6. Hidden Defect and Breakage

A reduction for hidden defect and breakage of 5% for conifers and 10% for hardwoods was applied. This was in addition to the visual defect deducted during the cruise.

7. Timber Description

The entire sale was burned in the 1933 Tillamook and 1939 Saddle Mountain Fires and the north ½ of Area 1 was burned in the 1945 Wilson River Fire. It is unknown if the areas were planted or seeded but in Area 1, 95% was reforested in 1954-55 and the remainder in 1956-57; Area 2 was 88% reforested in 1954-55 and the remainder in the 1956-57 and 1958-59 seasons; Area 3 was reforested naturally.

Additional stand management has occurred in Area 1 where the south ½ was aerially sprayed in the 1970's to control alder and in Area 2 where 13 acres was partial cut in 2002. No other stand management has occurred.

Swiss needle cast was observed in the sale area.

Sale Area	Species	DBH	Merchantable Bole Height (feet)	Merchantable top (inches inside bark)
1	Douglas-fir	17.4	66	5
	Alder	13.6	41	6
2	Douglas-fir	16.1	61	5
	Alder	14.3	41	6

3	Douglas-fir	14.0	35	5
	Alder	14.8	62	6

8. Cruiser Names/Dates

Cruised by Service Contract in 2011 and 2013, and by District personnel in 2014

9. Revenue Distribution

Deed Numbers 161, 162, 169 and 219
BOF 100%
Tax Code: 63% 56, 37% 9-2

10. Attachments

Volume Summary
Stand Tables
Log Stock Tables
Logging Plan

11. Stand and Log Stock Tables Species Key

DL – Douglas-fir leave
DF – Douglas-fir take
RA – Red alder
RC – Western red cedar
SS – Sitka spruce
WH – Western hemlock

TC TLOGSTVB

Log Stock Table - MBF

Project: DEMO

T01N R08W S25 TSALE

T01N R08W S25 TSAL

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	08W	25	AREA_1	SALE	100.00		

Page 1
Date 2/12/2014
Time 8:16:29AM

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	25	12	8.3	11	1.0								11				
DF		CO	2	32	48	5.0	46	3.8						46						
DF		CO	2	36	27	12.5	24	2.0						24						
DF		CO	2	40	483	5.7	456	38.1						160	94	202				
DF		CO	3	22	5	5.0	4	.4				4								
DF		CO	3	32	26	5.0	25	2.1				25								
DF		CO	3	33	14	14.5	12	1.0				12								
DF		CO	3	34	4	5.0	3	.3				3								
DF		CO	3	36	32	5.0	30	2.5			2	28								
DF		CO	3	38	2	5.0	2	.1			2									
DF		CO	3	40	441	5.2	418	34.9			48	121	205	28	17					
DF		CO	4	12	3	5.0	3	.2		3										
DF		CO	4	14	3	5.0	3	.3		3										
DF		CO	4	15	1	5.0	1	.1			1									
DF		CO	4	16	1	5.0	1	.1		1										
DF		CO	4	17	3	5.0	3	.2		3										
DF		CO	4	18	2	5.0	2	.1		2										
DF		CO	4	19	1	5.0	1	.1			1									
DF		CO	4	20	12	5.0	11	.9		8		4								
DF		CO	4	21	7	5.0	6	.5		1			5							
DF		CO	4	22	10	5.0	10	.8		4	2	4								
DF		CO	4	23	4	5.0	4	.3		1	2									
DF		CO	4	24	4	5.0	3	.3		3										
DF		CO	4	26	4	5.0	4	.3		3	1									
DF		CO	4	27	22	5.0	21	1.8		21										
DF		CO	4	28	3	5.0	3	.3		3										
DF		CO	4	29	4	5.0	3	.3		3										
DF		CO	4	30	17	5.0	16	1.3		14	2									
DF		CO	4	31	1	5.0	1	.1			1									
DF		CO	4	32	3	5.0	3	.2		3										
DF		CO	4	33	6	5.0	6	.5		6										
DF		CO	4	34	25	5.0	23	2.0		23										
DF		CO	4	35	6	5.0	6	.5		6										
DF		CO	4	36	10	5.0	9	.8		9										
DF		CO	4	38	3	5.0	3	.2		3										
DF		CO	4	40	21	5.0	20	1.7		12	8									
DF		Totals			1,268	5.6	1,197	60.8		135	69	201	210	258	111	213				
RA		H	2	20	43	16.3	36	5.4						8	17	11				
RA		H	3	32	12	10.0	10	1.6							10					
RA		H	3	40	78	10.0	70	10.6					58	12						
RA		H	4	12	4	10.0	4	.5			4									
RA		H	4	13	8	10.0	8	1.1			8									
RA		H	4	14	16	10.0	15	2.2			9	6								
RA		H	4	15	10	10.0	9	1.4			9									
RA		H	4	16	11	10.0	10	1.5			10									
RA		H	4	17	2	10.0	2	.3			2									
RA		H	4	18	12	10.0	11	1.6			11									
RA		H	4	19	6	10.0	5	.8			5									
RA		H	4	20	19	24.9	14	2.1			6	8								
RA		H	4	21	5	10.0	4	.6			4									

TC TLOGSTVB

Log Stock Table - MBF

Project: DEMO

T01N R08W S25 TSALE — **T01N R08W S25 TSAL**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	08W	25	AREA_1	SALE	100.00		

Page 2
Date 2/12/2014
Time 8:16:29AM

Spp	S T	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+
RA		H	4	22	36	10.0	32	4.9			16	7		9						
RA		H	4	23	12	10.0	11	1.6			11									
RA		H	4	24	8	20.5	6	1.0			3	4								
RA		H	4	25	3	10.0	3	.5			3									
RA		H	4	26	2	10.0	2	.3			2									
RA		H	4	27	16	25.9	12	1.7				12								
RA		H	4	28	15	10.0	13	2.0			13									
RA		H	4	29	5	10.0	5	.7			5									
RA		H	4	30	15	14.8	13	2.0			13									
RA		H	4	31	7	25.0	5	.8				5								
RA		H	4	32	109	13.0	95	14.3			33	52	10							
RA		H	4	34	4	25.0	3	.5			3									
RA		H	4	35	13	10.0	12	1.8			12									
RA		H	4	37	7	21.2	6	.9				6								
RA		H	4	39	18	10.0	16	2.5			16									
RA		H	4	40	269	14.6	230	34.8			102	98	30							
RA		Totals			765	13.6	661	33.6			298	198	97	29	27	11				
DL		CO	2	30	11	11.7	10	14.3									10			
DL		CO	2	40	52	5.0	50	71.6								28		21		
DL		CO	3	16	1	5.0	1	1.6					1							
DL		CO	3	27	2	5.0	2	2.2				2								
DL		CO	3	38	2	5.0	2	2.5			2									
DL		CO	3	40	6	5.0	5	7.8							5					
DL		Totals			74	6.0	69	3.5			2	2	1		5	28	10	21		
RC		CO	3	32	19		19	75.0								19				
RC		CO	4	19	2		2	8.8					2							
RC		CO	4	27	4		4	16.2						4						
RC		Totals			26		26	1.3					2	4		19				
WH		CO	3	40	7	5.0	7	100.0				7								
WH		Totals			7	5.0	7	.4				7								
SS		CO	4	20	2	5.0	2	20.0		2										
SS		CO	4	22	8	15.6	7	80.0					7							
SS		Totals			10	13.6	9	.4		2			7							
Total All Species					2,150	8.4	1,968	100.0		137	369	408	318	291	143	271	10	21		

TC TSTNDSUM

Stand Table Summary

Project **DEMO**

T01N R08W S25 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	08W	25	AREA_1	SALE	100.00		

T01N R08W S25 TSALE

Date: 02/12/201

Time: 8:18:12AM

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	1	74	56	3.310	1.46	3.31	7.8	30.0	.74	26	99	74	26	10
DF		10	2	84	63	5.361	2.92	5.36	10.3	45.0	1.57	55	241	157	55	24
DF		11	1	85	51	2.215	1.46	2.22	11.6	40.0	.73	26	89	73	26	9
DF		12	1	81	72	1.862	1.46	1.86	19.6	60.0	1.04	37	112	104	37	11
DF		13	2	83	46	3.172	2.92	3.17	16.8	40.0	1.52	53	127	152	53	13
DF		14	5	85	68	6.819	7.31	10.90	16.1	54.9	5.01	176	599	501	176	60
DF		15	6	87	89	7.200	8.77	14.40	18.7	71.5	7.68	270	1,029	768	270	103
DF		16	3	83	98	3.141	4.39	6.28	23.8	88.3	4.27	150	555	427	150	55
DF		17	6	85	90	5.621	8.77	11.24	25.1	90.8	8.05	282	1,021	805	282	102
DF		18	4	85	99	3.310	5.85	6.62	32.1	115.0	6.06	213	761	606	213	76
DF		19	8	82	97	5.989	11.70	14.21	27.7	94.8	11.20	393	1,347	1,120	393	135
DF		20	8	84	106	5.362	11.70	14.04	30.7	113.9	12.30	431	1,599	1,230	431	160
DF		21	4	84	109	2.420	5.85	6.65	33.6	128.2	6.38	224	853	638	224	85
DF		22	2	83	90	1.108	2.92	2.22	43.4	140.0	2.74	96	310	274	96	31
DF		23	2	87	106	1.032	2.92	3.09	36.5	149.9	3.22	113	464	322	113	46
DF		24	3	83	112	1.408	4.39	3.76	46.8	175.0	5.01	176	658	501	176	66
DF		25	3	85	119	1.301	4.39	3.90	44.4	186.6	4.94	173	728	494	173	73
DF		26	1	83	127	.397	1.46	1.19	53.3	223.3	1.81	63	266	181	63	27
DF		27	4	82	115	1.460	5.85	4.01	57.6	223.5	6.59	231	897	659	231	90
DF		28	3	85	107	1.038	4.39	2.77	61.0	241.3	4.82	169	669	482	169	67
DF		30	1	83	93	.298	1.46	.60	85.4	295.0	1.45	51	176	145	51	18
DF		Totals	70	84	85	63.825	102.35	121.80	28.0	103.4	97.13	3,408	12,599	9,713	3,408	1,260
RA		8	1	78	64	4.189	1.46	4.19	3.5	20.0	.41	15	84	41	15	8
RA		9	2	80	42	6.619	2.92	6.62	6.6	25.0	1.21	44	165	121	44	17
RA		10	4	75	70	10.723	5.85	10.72	13.4	47.5	3.96	144	509	396	144	51
RA		11	5	78	41	10.843	7.31	10.88	8.6	32.0	2.57	93	349	257	93	35
RA		12	6	83	68	11.266	8.77	13.13	15.6	51.3	5.61	205	674	561	205	67
RA		13	7	77	85	11.179	10.23	19.11	14.5	45.8	7.62	277	875	762	277	87
RA		14	9	82	68	12.395	13.16	16.50	19.2	59.9	8.70	317	988	870	317	99
RA		15	8	78	72	9.531	11.70	14.30	22.5	63.3	8.85	321	905	885	321	91
RA		16	8	82	58	8.390	11.70	9.44	28.4	65.5	7.36	268	618	736	268	62
RA		17	6	82	62	5.599	8.77	8.42	26.4	78.7	6.11	222	662	611	222	66
RA		18	3	83	78	2.473	4.39	4.95	26.1	93.3	3.54	129	462	354	129	46
RA		19	1	81	58	.743	1.46	1.49	22.3	80.0	.91	33	119	91	33	12
RA		20	4	80	64	2.681	5.85	4.69	32.9	85.7	4.24	154	402	424	154	40
RA		21	1	83	60	.608	1.46	.61	59.0	150.0	.99	36	91	99	36	9
RA		22	1	76	69	.554	1.46	.55	76.0	180.0	1.16	42	100	116	42	10
RA		23	2	84	59	1.036	2.92	2.07	36.2	130.1	2.06	75	270	206	75	27
RA		24	1	79	56	.465	1.46	.47	79.1	150.0	1.01	37	70	101	37	7
RA		Totals	69	80	64	99.295	100.89	128.12	18.8	57.3	66.31	2,412	7,343	6,631	2,412	734
DL		32	1	81	93	.262	1.46	.52	96.8	335.0	1.39	51	175	139	51	18
DL		34	1	78	84	.232	1.46	.46	103.0	335.0	1.31	48	155	131	48	16
DL		37	1	83	160	.196	1.46	.78	96.8	507.5	2.08	76	398	208	76	40
DL		Totals	3	81	109	.690	4.39	1.77	98.4	411.3	4.79	174	728	479	174	73
RC		29	1	68	105	.319	1.46	.64	73.4	225.0	1.10	47	143	110	47	14
RC		31	1	68	77	.279	1.46	.56	74.4	200.0	.98	42	112	98	42	11
RC		Totals	2	68	92	.598	2.92	1.20	73.9	213.3	2.08	88	255	208	88	26
SS		17	1	74	56	.928	1.46	1.86	17.3	50.0	.84	32	93	84	32	9

TC TSTNDSUM

Stand Table Summary

Project **DEMO**

T01N R08W S25 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	08W	25	AREA_1	SALE	100.00		

Date: 02/12/201
Time: 8:18:12AM

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
SS		Totals	1	74	56	.928	1.46	1.86	17.3	50.0	0.84	32	93	84	32	9
WH		18	1	76	62	.827	1.46	.83	46.4	90.0	1.23	38	74	123	38	7
WH		Totals	1	76	62	.827	1.46	.83	46.4	90.0	1.23	38	74	123	38	7
BM		27	1	73	40	.368	1.46									
BM		Totals	1	73	40	.368	1.46									
Totals			147	81	73	166.530	214.93	255.58	24.1	82.5	172.36	6153	21,092	17,236	6,153	2,109

TC TLOGSTVB

Log Stock Table - MBF

Project: DEMO

T01N R08W S25 TSALE — **T01N R08W S25 TSAL**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	08W	25	AREA_2	SALE	109.00		

Page 1
Date 4/14/2014
Time 11:41:29AM

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	20	5	5.0	5	.3							5					
DF		CO	2	30	23	5.0	21	1.5						5	6	10				
DF		CO	2	32	33	5.0	31	2.2							8	23				
DF		CO	2	36	24	5.0	23	1.6								11	12			
DF		CO	2	40	558	7.8	515	35.6						216	80	179	39			
DF		CO	3	22	2	5.0	2	.1				2								
DF		CO	3	26	3	5.0	2	.2					2							
DF		CO	3	28	11	20.4	9	.6					2		7					
DF		CO	3	30	7	5.0	7	.5					7							
DF		CO	3	32	68	6.2	64	4.4			24	19	17	4						
DF		CO	3	35	2	5.0	1	.1			1									
DF		CO	3	36	32	5.0	31	2.1			1	17	9	3						
DF		CO	3	38	2	5.0	2	.1			2									
DF		CO	3	39	2	5.0	2	.1			2									
DF		CO	3	40	569	5.5	538	37.2			149	157	213	19						
DF		CO	4	12	2	5.0	2	.1		1	0									
DF		CO	4	14	1	5.0	1	.1		1		0								
DF		CO	4	15	3	5.0	3	.2		2	1									
DF		CO	4	16	3	5.0	2	.2		2										
DF		CO	4	17	10	5.0	9	.6		9	1									
DF		CO	4	18	5	5.0	5	.3		5										
DF		CO	4	19	2	5.0	2	.1		2										
DF		CO	4	20	10	5.0	9	.7		8	1	1								
DF		CO	4	21	3	5.0	3	.2		3										
DF		CO	4	22	9	5.0	9	.6		5	3									
DF		CO	4	23	10	5.0	9	.7		9	1									
DF		CO	4	24	13	5.0	13	.9		13										
DF		CO	4	26	10	5.0	9	.6		9										
DF		CO	4	27	14	5.0	13	.9		11	3									
DF		CO	4	28	8	5.0	7	.5		7										
DF		CO	4	29	5	5.0	5	.4		4	1									
DF		CO	4	30	13	5.0	12	.8		12										
DF		CO	4	31	8	5.0	8	.5		8										
DF		CO	4	32	8	5.0	8	.5		8										
DF		CO	4	33	9	5.0	9	.6		9										
DF		CO	4	34	5	5.0	4	.3		4										
DF		CO	4	35	7	5.0	7	.5		7										
DF		CO	4	36	11	5.0	10	.7		9	2									
DF		CO	4	38	5	5.0	5	.3		5										
DF		CO	4	39	5	5.0	4	.3		4										
DF		CO	4	40	28	5.0	26	1.8		26										
DF		Totals			1,544	6.3	1,447	78.2		181	191	196	250	248	105	224	51			
RA		H	2	20	7	17.5	6	2.3						6						
RA		H	2	22	5	32.5	3	1.2							3					
RA		H	2	24	10	10.0	9	3.3							9					
RA		H	2	28	8	35.2	5	1.9							5					
RA		H	2	30	12	10.0	11	4.0						11						
RA		H	2	34	11	10.0	10	3.7							10					
RA		H	2	38	13	24.2	10	3.6								10				
RA		H	2	40	13	20.0	10	3.9							10					
RA		H	3	14	6	10.0	5	2.0							5					

TC TLOGSTVB

Log Stock Table - MBF

Project: DEMO

T01N R08W S25 TSALE — **T01N R08W S25 TSAL**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	08W	25	AREA_2	SALE	109.00		

Page 2
Date 4/14/2014
Time 11:41:29AM

Spp	S T	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+
RA		H	3	16	6	10.0	5	2.0					5							
RA		H	3	22	8	10.0	7	2.6						7						
RA		H	3	24	9	10.0	8	2.9					8							
RA		H	3	28	8	25.0	6	2.3					6							
RA		H	3	40	11	16.0	9	3.3					9							
RA		H	4	12	1	10.0	1	.2			1									
RA		H	4	16	3	32.5	2	.8						2						
RA		H	4	19	2	22.1	2	.7			1	1								
RA		H	4	20	2	10.0	2	.7			2									
RA		H	4	24	8	10.0	7	2.6			7									
RA		H	4	26	6	10.0	6	2.1			6									
RA		H	4	28	10	10.0	9	3.2			9									
RA		H	4	30	5	10.0	5	1.8			5									
RA		H	4	32	12	10.0	11	4.2				4	7							
RA		H	4	34	19	16.1	16	6.1			16									
RA		H	4	36	48	10.0	43	16.3			35	8								
RA		H	4	40	70	16.9	58	22.0			26	15	17							
RA		Totals			313	15.0	266	14.4			107	28	52	26	43	10				
DL		CO	2	36	20	5.0	19	20.0						7			12			
DL		CO	2	40	81	9.4	73	76.5							8	16	21	28		
DL		CO	3	25	1	5.0	1	.7				1								
DL		CO	3	36	1	5.0	1	1.1			1									
DL		CO	4	12	0	5.0	0	.3			0									
DL		CO	4	15	0	5.0	0	.4			0									
DL		CO	4	19	1	5.0	1	.9			0	1								
DL		Totals			105	8.4	96	5.2			2	1		7	8	16	33	28		
WH		CO	2	40	25	9.4	23	53.5								23				
WH		CO	3	40	15	5.0	14	33.2			3			11						
WH		CO	4	32	1	5.0	1	3.2	1											
WH		CO	4	40	5	5.0	4	10.1	4											
WH		Totals			46	7.4	42	2.3	6		3			11		23				
Total All Species					2,008	7.8	1,851	100.0	186		303	226	303	291	157	273	84	28		

TC TSTNDSUM

Stand Table Summary

Project **DEMO**

T01N R08W S25 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	08W	25	AREA_2	SALE	109.00		

T01N R08W S25 TSALE

Page: 1
Date: 04/14/201
Time: 11:44:52AM

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		8	1	82	46	2.549	.96	2.55	5.3	20.0	.39	14	51	42	15	6
DF		9	3	83	43	6.367	2.87	6.37	6.3	26.6	1.15	40	169	126	44	18
DF		10	3	84	65	5.341	2.87	5.34	10.4	40.3	1.58	55	215	172	60	23
DF		11	4	81	72	5.806	3.83	7.26	12.3	44.0	2.55	89	319	278	97	35
DF		12	11	83	74	13.569	10.54	19.82	13.2	47.4	7.46	262	940	813	285	102
DF		13	5	83	82	5.104	4.79	8.13	14.1	48.7	3.26	114	396	356	125	43
DF		14	5	84	88	4.494	4.79	8.09	17.6	62.3	4.06	142	504	443	155	55
DF		15	9	84	88	7.007	8.62	13.23	19.9	73.5	7.49	263	973	817	287	106
DF		16	9	83	96	6.210	8.62	12.42	22.9	82.8	8.11	285	1,028	884	310	112
DF		17	7	83	103	4.269	6.71	8.54	26.8	100.0	6.52	229	854	711	249	93
DF		18	6	83	91	3.296	5.75	6.59	27.5	98.9	5.16	181	652	562	197	71
DF		19	8	85	97	3.903	7.66	8.29	30.8	105.9	7.28	255	878	794	278	96
DF		20	12	84	105	5.292	11.50	12.34	33.1	119.3	11.65	409	1,472	1,270	445	160
DF		21	6	84	99	2.413	5.75	4.83	42.3	143.2	5.80	204	691	632	222	75
DF		22	4	82	107	1.452	3.83	3.63	39.5	136.0	4.09	143	494	445	156	54
DF		23	3	84	104	1.008	2.87	2.69	39.0	153.8	2.99	105	414	326	114	45
DF		24	3	80	86	.912	2.87	1.82	49.5	150.0	2.57	90	274	280	98	30
DF		25	10	83	104	2.842	9.58	6.83	48.8	183.5	9.51	334	1,254	1,036	364	137
DF		26	2	84	120	.520	1.92	1.56	49.9	230.0	2.22	78	359	242	85	39
DF		27	5	82	109	1.205	4.79	3.13	57.8	220.8	5.15	181	691	562	197	75
DF		28	3	82	93	.669	2.87	1.34	72.7	253.3	2.77	97	339	302	106	37
DF		29	2	80	99	.419	1.92	.84	80.2	257.5	1.91	67	216	209	73	24
DF		30	1	84	96	.194	.96	.39	86.4	295.0	.95	33	114	104	37	12
DF		31	2	84	113	.361	1.92	1.08	71.0	291.6	2.19	77	316	239	84	34
DF		32	1	83	153	.172	.96	.51	93.4	443.3	1.37	48	228	149	52	25
DF		35	1	82	96	.140	.96	.28	123.1	465.0	.98	35	130	107	38	14
DF		Totals	126	83	83	85.512	120.70	147.90	25.9	94.5	109.17	3,831	13,969	11,900	4,175	1,523
RA		10	4	83	61	7.025	3.83	5.27	11.5	50.0	1.69	61	263	184	66	29
RA		11	7	82	86	10.090	6.71	8.64	16.9	56.6	3.98	146	489	434	159	53
RA		12	2	81	68	2.548	1.92	2.55	17.6	55.2	1.24	45	141	135	49	15
RA		13	1	84	80	1.039	.96	1.04	16.7	60.0	.48	17	62	52	19	7
RA		15	4	83	55	3.198	3.83	3.20	21.0	82.2	1.85	67	263	202	73	29
RA		16	3	83	65	2.058	2.87	2.06	30.4	93.3	1.72	63	192	187	68	21
RA		17	6	83	70	3.687	5.75	4.33	29.9	108.2	3.55	130	469	387	141	51
RA		18	4	85	54	2.175	3.83	2.72	22.1	95.8	1.65	60	260	180	66	28
RA		19	3	78	58	1.460	2.87	1.46	32.1	86.7	1.29	47	126	141	51	14
RA		21	1	86	92	.418	.96	.84	38.4	145.0	.88	32	121	96	35	13
RA		22	2	57	37	.726	1.92	.36	29.0	60.0	.29	11	22	32	11	2
RA		23	1	84	102	.332	.96	.33	87.0	320.0	.80	29	106	87	31	12
RA		24	1	86	78	.305	.96	.30	86.0	320.0	.72	26	98	79	29	11
RA		25	3	74	42	.855	2.87	.85	54.9	110.9	1.28	47	95	140	51	10
RA		Totals	42	82	69	35.915	40.23	33.95	23.0	79.8	21.44	780	2,708	2,336	851	295
DL		32	2	83	98	.345	1.92	.86	79.5	315.9	1.89	69	273	206	75	30
DL		33	1	86	106	.161	.96	.48	74.5	320.0	.99	36	155	108	39	17
DL		36	1	84	127	.138	.96	.41	105.5	453.3	1.20	44	187	131	48	20
DL		38	2	79	120	.245	1.92	.74	109.4	424.1	2.21	80	312	241	88	34
DL		Totals	6	83	110	.889	5.75	2.50	91.6	371.3	6.29	229	927	686	249	101
WH		13	1	82	56	1.039	.96	1.04	21.2	40.0	.70	22	42	77	24	5
WH		20	1	87	88	.439	.96	.88	39.5	135.0	1.11	35	119	121	38	13
WH		26	1	85	98	.256	.96	.51	71.1	265.0	1.16	36	136	127	40	15

TC TSTNDSUM

Stand Table Summary

Project **DEMO**

T01N R08W S25 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	08W	25	AREA_2	SALE	109.00		

Date: 04/14/201
Time: 11:44:52AM

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
WH		29	1	83	95	.212	.96	.42	83.1	270.0	1.13	35	114	123	38	12
WH		Totals	4	84	73	1.946	3.83	2.85	45.0	143.8	4.10	128	410	447	140	45
OH		12	1	79	21	1.220	.96									
OH		13	1	80	19	1.039	.96									
OH		Totals	2	79	20	2.259	1.92									
Totals			180	83	78	126.522	172.43	187.20	26.5	96.2	141.01	4968	18,015	15,370	5,415	1,964

TC TLOGSTVB

Log Stock Table - MBF

Project: DEMO

T01N R08W S25 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	08W	25	AREA_3	0100	1.00		

T01N R08W S25 T0100

Date 4/14/2014

Time 2:13:13PM

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+
RA		H	2	40	5	10.0	4	21.2						4						
RA		H	3	40	4	10.0	3	15.9						3						
RA		H	4	15	0	10.0	0	1.8				0								
RA		H	4	18	0	10.0	0	1.8			0									
RA		H	4	21	1	10.0	1	2.7			1									
RA		H	4	24	1	10.0	1	5.3				1								
RA		H	4	29	1	10.0	1	4.4			1									
RA		H	4	32	1	10.0	1	5.3			1									
RA		H	4	39	3	10.0	2	11.5			2									
RA		H	4	40	7	10.0	6	30.1			1	2	3							
RA		Totals			23	10.0	20	81.2			6	4	6	4						
BM		H	4	27	1	10.0	1	13.6			1									
BM		H	4	29	1	32.5	1	13.6			1									
BM		H	4	31	1	10.0	1	18.2			1									
BM		H	4	32	1	10.0	1	27.3			1									
BM		H	4	37	1	10.0	1	27.3			1									
BM		Totals			5	13.9	4	15.8			4									
DF		CO	4	34	1	5.0	1	100.0	1											
DF		Totals			1	5.0	1	3.0	1											
Total All Species					28	10.5	25	100.0	1		10	4	6	4						

TC TSTNDSUM

Stand Table Summary

Project **DEMO**

T01N R08W S25 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	08W	25	AREA_3	0100	1.00		

T01N R08W S25 T0100

Page: 1
Date: 04/14/201
Time: 2:14:19PM

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
RA		10	1	80	112	20.000	10.91	40.00	7.8	40.0	8.53	310	1,600	9	3	2
RA		13	1	80	157	20.000	18.44	40.00	22.2	95.0	24.42	888	3,800	24	9	4
RA		14	1	80	45	20.000	21.38	20.00	19.4	50.0	10.66	388	1,000	11	4	1
RA		16	2	80	56	40.000	55.85	40.00	31.7	65.0	34.92	1,270	2,600	35	13	3
RA		17	1	80	85	20.000	31.52	40.00	27.0	90.0	29.72	1,081	3,600	30	11	4
RA		19	1	80	84	20.000	39.38	40.00	32.2	100.0	35.42	1,288	4,000	35	13	4
RA		22	1	80	95	20.000	52.80	40.00	46.3	150.0	50.88	1,850	6,000	51	19	6
RA		Totals	8	80	86	160.000	230.27	260.00	27.2	86.9	194.55	7,075	22,600	195	71	23
BM		11	1	80	49	20.000	13.20	20.00	11.6	30.0	6.13	231	600	6	2	1
BM		13	2	80	45	40.000	36.87	40.00	16.8	35.0	17.78	671	1,400	18	7	1
BM		19	2	80	44	40.000	78.76	40.00	37.9	60.0	40.19	1,517	2,400	40	15	2
BM		Totals	5	80	45	100.000	128.83	100.00	24.2	44.0	64.10	2,419	4,400	64	24	4
DF		14	1	82	45	20.000	21.38	20.00	18.0	40.0	10.25	360	800	10	4	1
DF		Totals	1	82	45	20.000	21.38	20.00	18.0	40.0	10.25	360	800	10	4	1
Totals			14	80	69	280.000	380.48	380.00	25.9	73.2	268.90	9853	27,800	269	99	28

"STEWARDSHIP IN FORESTRY"

Stand Muesial

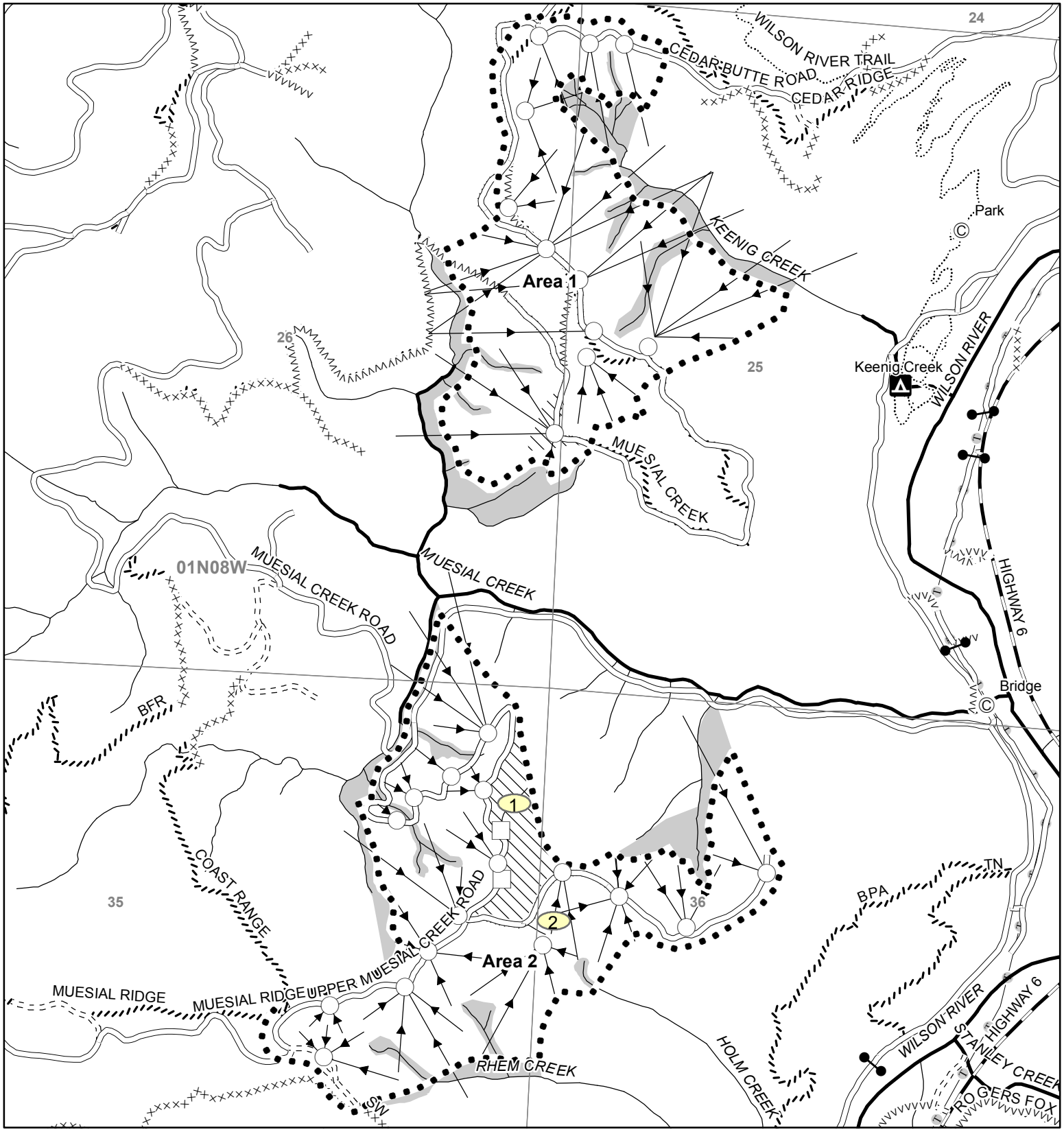
Volume Summary

Area 1-Modified Clearcut				
	100 acres			
	Cruised Net	Cruised Net	Hidden	Net Sale
SPECIES	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	12.6	1260	5%	1197
Alder	7.3	734	10%	661
TOTAL	19.9	1994		1858

Area 2-Modified Clearcut				
	109 acres			
	Cruised Net	Cruised Net	Hidden	Net Sale
SPECIES	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	14.0	1523	5%	1447
Alder	2.7	295	10%	266
TOTAL	16.7	1818		1713

Area 3-Right-of-Way				
	5 acres			
	Cruised Net	Cruised Net	Hidden	Net Sale
SPECIES	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	0.2	1	5%	1
Alder	4.6	23	10%	20
TOTAL	4.8	24		21

TOTAL SALE VOLUME	214 acres	
SPECIES	Cruised Net (MBF)	Net Sale (MBF)
Douglas-fir	2784	2645
Alder	1052	947
TOTAL	3836	3592



- Rock source
- Stock pile
- Waste area
- Bridge
- Gate
- Survey corner
- Domestic water supply intake
- Truck turn-around
- Helicopter landing zone
- Cultural site
- Landing
- Buffer
- Non-required thinning
- Cable yarding
- Ground yarding
- Helicopter yarding
- Downhill yarding
- Green tree retention area
- Restricted area
- Area boundary
- Sale boundary
- Ownership boundary
- Cable yarding
- Tractor Landing
- Yarder Landing
- 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

LOGGING PLAN

Timber Sale Contract No. 341-15-037
STAND MUESIAL
Portions of Sections 25, 26, 35, 36,
T1N, R8W, W.M.,
Tillamook County, Oregon

1,000 0 1,000 Feet

N

Area	Type of Operation	Acres Gross	Net
1	Modified Clearcut	124	100
2	Modified Clearcut	116	109
3	Right-of-Way	5	5
Total		245	214

Tillamook District GIS
4/14/2014
This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.