



Timber Sale Appraisal
Van Z
Sale 341-14-25

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Date: June 26, 2013

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$167,693.28	\$13,437.60	\$181,130.88
		Project Work:	\$(70,690.00)
		Advertised Value:	\$110,440.88



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timber description

Location: Portions of Sections 3 and 10, T6S, R9W, W.M., Tillamook County, Oregon.

Stand Stocking: 40%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	11	0	95
Alder (Red)	9	0	90

Volume by Grade	3S	4S	8" - 9"	Total
Douglas - Fir	417	239	0	656
Alder (Red)	0	0	48	48
Total	417	239	48	704



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comments: Pond Values Used: 2nd Quarter Calendar Year 2013.

Western Hemlock and Other Conifers Stumpage Price = Pond Value
minus Logging Cost:
 $\$195/\text{MBF} = \$485/\text{MBF} - \$290/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Cost:
 $\$660/\text{MBF} = \$950/\text{MBF} - \$290/\text{MBF}$

Pulp (Conifer and Hardwood) Price = $\$25/\text{MBF}$

SCALING COST ALLOWANCE = $\$5.00/\text{MBF}$

FUEL COST ALLOWANCE = $\$4.00/\text{Gallon}$

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

Other Costs (with Profit & Risk to be added):
Brand and Paint: $\$2/\text{MBF} \times 704 \text{ MBF} = \$1,408$
TOTAL Other Costs (with Profit & Risk to be added) = $\$1,408$

Other Costs (No Profit & Risk added:
Non-Project Roads:
Road 1 = $2060' \times \$200/100' = \$4,120$
Road 2 = $1420' \times \$100/100' = \$1,420$
Road 3 = $430' \times \$300/100' = \$1,290$
Road 4 = $390' \times \$300/100' = \$1,170$
Equipment move in/out for second season of logging: $\$300 \times 4 =$
 $\$1,200$
TOTAL Other Costs (No Profit & Risk added) = $\$9,200$

ROAD MAINTENANCE
Road Maintenance: Haul route over Forest Service Roads 2281 and
2281115:
Spot rocking: $50\text{cy} \times \$25.00/\text{cy} / 704 \text{ MBF} = \$1.78/ \text{MBF}$
Final maintenance grading: $\$500/\text{mile} \times 2.5 \text{ miles} / 704 \text{ MBF} = \$1.78/$
MBF
In harvest area road shaping for drainage prior to road closure:
 $1.7 \text{ miles} \times \$250/ \text{mile} / 704 \text{ MBF} = \0.60
TOTAL Road Maintenance: $\$4.16/ \text{MBF}$



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logging conditions

combination#: 1 Douglas - Fir 15.00%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Cable: Small Tower <=40 **Process:** Stroke Delimber
tree size: Small / Thinning 10in (90 Bft/tree), 18-20 logs/MBF
loads / day: 3.5 **bd. ft / load:** 3,200
cost / mbf: \$253.06

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

combination#: 2 Alder (Red) 15.00%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Cable: Small Tower <=40 **Process:** Stroke Delimber
tree size: Small / Thinning 10in (90 Bft/tree), 18-20 logs/MBF
loads / day: 3.5 **bd. ft / load:** 3,172
cost / mbf: \$255.29

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

combination#: 3 Douglas - Fir 85.00%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Cut To Length **Process:** Harvester Head Delimiting
tree size: Small / Thinning 10in (90 Bft/tree), 18-20 logs/MBF
loads / day: 6.0 **bd. ft / load:** 3,400
cost / mbf: \$128.47

machines: Harvester
Forwarder

combination#: 4 Alder (Red) 85.00%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Cut To Length **Process:** Harvester Head Delimiting
tree size: Small / Thinning 10in (90 Bft/tree), 18-20 logs/MBF
loads / day: 6.0 **bd. ft / load:** 3,400
cost / mbf: \$128.47

machines: Harvester
Forwarder



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logging costs

Operating Seasons:	2.00	Profit Risk:	20.00%
Project Costs:	\$70,690.00	Other Costs (P/R):	\$1,408.00
Slash Disposal:	\$0.00	Other Costs:	\$9,200.00

Miles of Road

Road Maintenance: \$4.16

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	3.5
Alder (Red)	\$0.00	3.0	2.8



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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									
\$147.16	\$4.37	\$12.46	\$65.00	\$2.00	\$46.20	\$0.00	\$5.00	\$13.07	\$295.26
Alder (Red)									
\$147.49	\$4.58	\$12.46	\$85.12	\$2.00	\$50.33	\$0.00	\$5.00	\$13.07	\$320.05

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$550.89	\$255.63	\$0.00
Alder (Red)	\$0.00	\$600.00	\$279.95	\$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	656	\$255.63	\$167,693.28
Alder (Red)	48	\$279.95	\$13,437.60

Gross Timber Sale Value

Recovery: \$181,130.88

Prepared by: David Wells

Phone: 503-842-2545



PROJECT SUMMARY SHEET

Sale: Van Z

IMPROVEMENT

Point	A to B	44+80	stations =	\$5,224.40
Point	B to D	21+40	stations =	\$3,467.70
Point	D to F	1+50	stations =	\$896.00
Point	D to E	9+60	stations =	\$1,309.40
SUBTOTAL IMPROVEMENT				\$10,897.50

RECONSTRUCTION

Point	B to C	46+30	stations =	\$7,819.66
SUBTOTAL RECONSTRUCTION				\$7,819.66

SPECIAL PROJECTS

Road Rock (1 1/2"-0") (Forest Service Roads #2281 & 2281115)	\$1,250.00
Project No. 4 - Bridge	\$37,085.00
Project No. 5 - Move-in, Bridge Removal & Road Closures	\$11,466.00
SUBTOTAL SPECIAL PROJECTS	\$49,801.00

MOVE IN **\$2,171.84**

GRAND TOTAL **\$70,690.00**

SUMMARY OF CONSTRUCTION COST

Sale:

Van Z

Road:

A to B

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	44+80	stations	<u>Reconstruction -</u>	0+00	stations
	0.00	miles		0.85	miles		0.00	miles

IMPROVEMENT: EXCAVATION -
Ditching (Endhaul &/or Scatter)

20.00	sta. @	\$50.00	per sta. =	\$1,000.00	
TOTAL EXCAVATION					\$1,000.00

ROCK

Spot Rock *
Forest Service Road Rock (See Summary Sheet)

150	cy. of	Crushed	@	\$22.40 per c.y. =	\$3,360.00
TOTAL ROCK					\$3,360.00

SPECIAL PROJECTS

Remove gate assembly -
Grade and shape road -
Grass seed and fertilize -
Mulching -

1.00	hours @	\$88.00	per hour	\$88.00	
44.80	stations @	\$15.50	per station	\$694.40	
0.10	acres @	\$220.00	per acre	\$22.00	
0.100	acres @	\$600.00	per acre	\$60.00	
TOTAL SPECIAL PROJECTS					\$864.40

GRAND TOTAL	\$5,224.40
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SUMMARY OF CONSTRUCTION COST

Sale: **Van Z** Road: **B to C**

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	46+30	stations
	0.00	miles		0.00	miles		0.88	miles

RECONSTRUCTION: CLEARING BRUSH/TREES TO OPEN ROAD

Roadside Clearing & Scatter	0.88	miles @	\$750.00 per mile =	\$660.00	
			TOTAL CLEARING AND GRUBBING	\$660.00	

RECONSTRUCTION:

Road Earthwork (Blade subgrade where needed to log/haul)	46.30	sta. @	\$30.00 per sta. =	\$1,389.00	
			TOTAL EXCAVATION	\$1,389.00	

RECONSTRUCTION: ENDHAUL -

ROCK

0+00 to	3+60	120	cy. of	Crushed	@	\$22.40 per c.y. =	\$2,688.00
Spot Rock	*	40	cy. of	Crushed	@	\$22.40 per c.y. =	\$896.00
						TOTAL ROCK	\$3,584.00

SPECIAL PROJECTS

Bridge (See summary page)					
Construct temporary log fill/ stream crossing @ station 26+10	8.00	hours @	\$145.00 per hour	\$1,160.00	
Culvert provided by State			TOTAL SPECIAL PROJECTS	\$1,160.00	

GRAND TOTAL	\$7,819.66
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SUMMARY OF CONSTRUCTION COST

Sale: Van Z Road: B to D

Construction -	0+00	stations	Improvement -	21+40	stations	Reconstruction -	0+00	stations
	0.00	miles		0.41	miles		0.00	miles

ROCK
 Spot Rock - 140 cy. of Crushed @ \$22.40 per c.y. = \$3,136.00
TOTAL ROCK \$3,136.00

SPECIAL PROJECTS
 Grade and shape road - 21.40 stations @ \$15.50 per station = \$331.70
TOTAL SPECIAL PROJECTS \$331.70

GRAND TOTAL \$3,467.70

SUMMARY OF CONSTRUCTION COST

Sale: Van Z Road: D to E

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	9+60	stations	<u>Reconstruction -</u>	0+00	stations
	0.00	miles		0.18	miles		0.00	miles

ROCK									
Spot Rock	9+60		30	cy. of	Crushed	@	\$22.40 per c.y.=	\$672.00	
								TOTAL ROCK	\$672.00

SPECIAL PROJECTS									
Construct temporary fill @ station 9+60			4.00	hours @		\$145.00	per hour	\$580.00	
Culvert Provided by State									
Grass seed and fertilize -			0.07	acres @		\$220.00	per acre	\$15.40	
Mulching -			0.070	acres @		\$600.00	per acre	\$42.00	
								TOTAL SPECIAL PROJECTS	\$637.40

GRAND TOTAL **\$1,309.40**

SUMMARY OF CONSTRUCTION COST

Sale: Van Z Road: D to F

Construction - 0+00 stations 0.00 miles	Improvement - 1+50 stations 0.03 miles	Reconstruction - 0+00 stations 0.00 miles
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TOTAL CLEARING AND GRUBBING \$0.00

ROCK
 0+50 to 1+50 40 cy. of Crushed @ \$22.40 per c.y. = \$896.00
TOTAL ROCK \$896.00

GRAND TOTAL \$896.00

Move-In Calculations for Project Work not Including Project No. 5

Sale: Van Z

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

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Graders	\$428.57		\$3.65	0.00	0.00	0	\$0.00	\$428.57
1	Excavators (Large)	\$613.99	1	\$44.80	0.00	0.00	0	\$0.00	\$613.99
1	Tired Backhoes/Skidlers	\$423.58		\$3.00	0.00	0.00	0	\$0.00	\$423.58
1	Tractors (D6)	\$533.05	2	\$7.10	0.00	0.00	0	\$0.00	\$533.05
1	Dump Truck (10 cy +)	\$172.65		\$2.85	0.00	0.00	0	\$0.00	\$172.65
								TOTAL MOVE-IN COSTS:	\$2,171.84



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

Van Z

1. Type of Sale

Partial cut harvest, Recovery.

2. Legal Description

Sections 3 and 10, T6S, R9W, W.M., Tillamook County, Oregon.

3. Sale Acreage

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

	ACRES	
	<u>Gross</u>	<u>Net</u>
Area 1 (Partial Cut)	151	138

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 sale area was variable plot cruised. Plot and line spacing was 350' and 700' respectively. All conifers 8" DBH and greater containing 20 board feet and all hardwoods 8" 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**

All plots were measured using a 27.8 BAF and point of tree observation was 4.5 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

Take and leave trees were designated on a plot by plot basis in the office leaving the trees with the largest diameter, 100 – 120 square feet of basal area. Plot data was entered into SuperAce for computation of basal area, stand tables, and volume for each species and type.

Cruise Statistics (Board Foot Volumes)			
Area	Number of Plots	SE (%)	CV (%)
1	26	8.5	42.4

6. Hidden Defect and Breakage

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

7. Timber Description

The entire sale was harvested about 35 years ago and reforested with Douglas-fir following a site preparation slash burn. Alder, western hemlock, and sitka spruce naturally regenerated. There has been no additional timber management.

Sale Area	Species	DBH	Merchantable Bole Height (feet)	Merchantable top (inches inside bark)
1	Douglas-fir	11.0	47	5
1	Alder	9.4	28	6

8. Cruiser Names/Dates

Cruised by Tillamook District personnel in August 2011.

9. Revenue Distribution

- FDF 100%
- Tax Code: 63
- Deed Number: 186

10. Attachments

Volume Summary

Stand Table

Log Stock Tables

Logging Plan

11. Stand and Log Stock Tables Species Key

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

Stand Table Summary																
TC TSTNDSUM		Project VANZ														
T06N R09W S10 TSALE										T06N R09W S10 TSALE						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
06N	09W	10	AREA_1	SALE	138.00	26	141	Date:	03/11/2011							
								Time:	7:49:56AM							
Spec	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DL		10	3	83	66	7.504	4.15	7.50	11.5	47.4	2.37	86	356	328	119	49
DL		11	5	83	76	10.036	6.75	14.42	11.2	45.4	4.44	162	655	613	223	90
DL		12	9	81	81	14.008	11.03	21.41	14.3	49.0	8.41	306	1,049	1,161	422	145
DL		13	14	84	87	19.866	18.25	36.85	14.3	52.7	14.48	527	1,941	1,998	727	268
DL		14	12	84	87	12.980	13.76	24.96	16.8	59.6	11.52	419	1,488	1,590	578	205
DL		15	14	86	96	13.059	15.90	27.86	18.9	76.4	14.47	526	2,129	1,997	726	294
DL		16	14	85	90	11.966	16.84	23.17	22.9	85.3	14.62	532	1,977	2,018	734	273
DL		17	6	84	92	4.642	7.35	9.28	25.4	87.0	6.49	236	808	895	325	111
DL		18	6	86	99	3.628	6.41	7.26	30.8	111.7	6.14	223	810	848	308	112
DL		20	1	89	78	.490	1.07	.98	33.1	115.0	.89	32	113	123	45	16
DL		21	1	82	70	.671	1.54	1.34	31.6	100.0	1.17	.42	134	161	59	19
DL	Totals		85	84	85	98.851	103.04	175.03	17.7	65.5	85.00	3,091	11,458	11,730	4,266	1,581
DF		8	1	79	48	3.061	1.07	3.06	5.6	20.0	.49	17	61	67	24	8
DF		9	5	83	63	13.007	5.81	15.43	6.9	31.6	3.05	107	487	422	148	67
DF		10	9	84	72	20.628	11.03	26.50	9.0	35.9	6.80	239	952	938	329	131
DF		11	6	84	83	10.513	6.88	16.99	10.5	42.8	5.08	178	728	700	246	100
DF		12	8	85	91	12.081	9.49	24.16	11.3	46.7	7.81	274	1,127	1,078	378	156
DF		13	7	85	83	9.191	8.42	17.22	13.3	48.9	6.52	228	843	899	315	116
DF		14	5	86	90	5.523	5.81	11.05	16.6	62.2	5.24	184	687	723	254	95
DF		15	1	87	72	.871	1.07	1.74	16.7	70.0	.83	29	122	114	40	17
DF	Totals		42	84	77	74.875	49.58	116.15	10.8	43.1	35.81	1,256	5,007	4,942	1,734	691
RA		8	1	80	21	4.299	1.54									
RA		9	5	81	46	14.315	6.28	9.48								
RA		10	2	86	66	3.918	2.14	3.92	7.8	35.0	.84	31	137	116	42	19
RA		11	2	86	79	3.238	2.14	4.86	9.1	36.7	1.21	44	178	168	61	25
RA		12	1	89	51	1.360	1.07	1.36	14.1	50.0	.53	19	68	73	27	9
RA	Totals		11	83	49	27.130	13.16	19.61	4.8	19.5	2.59	94	383	357	130	53
WH		8	1	88	86	3.061	1.07	3.06	9.7	40.0	.95	30	122	131	41	17
WH		11	2	87	47	3.238	2.14	4.86	7.7	33.3	1.19	37	162	164	51	22
WH	Totals		3	87	66	6.299	3.21	7.92	8.5	35.9	2.14	67	284	296	92	39
Totals			141	84	77	207.154	168.98	318.71	14.1	53.8	125.54	4508	17,133	17,325	6,221	2,364



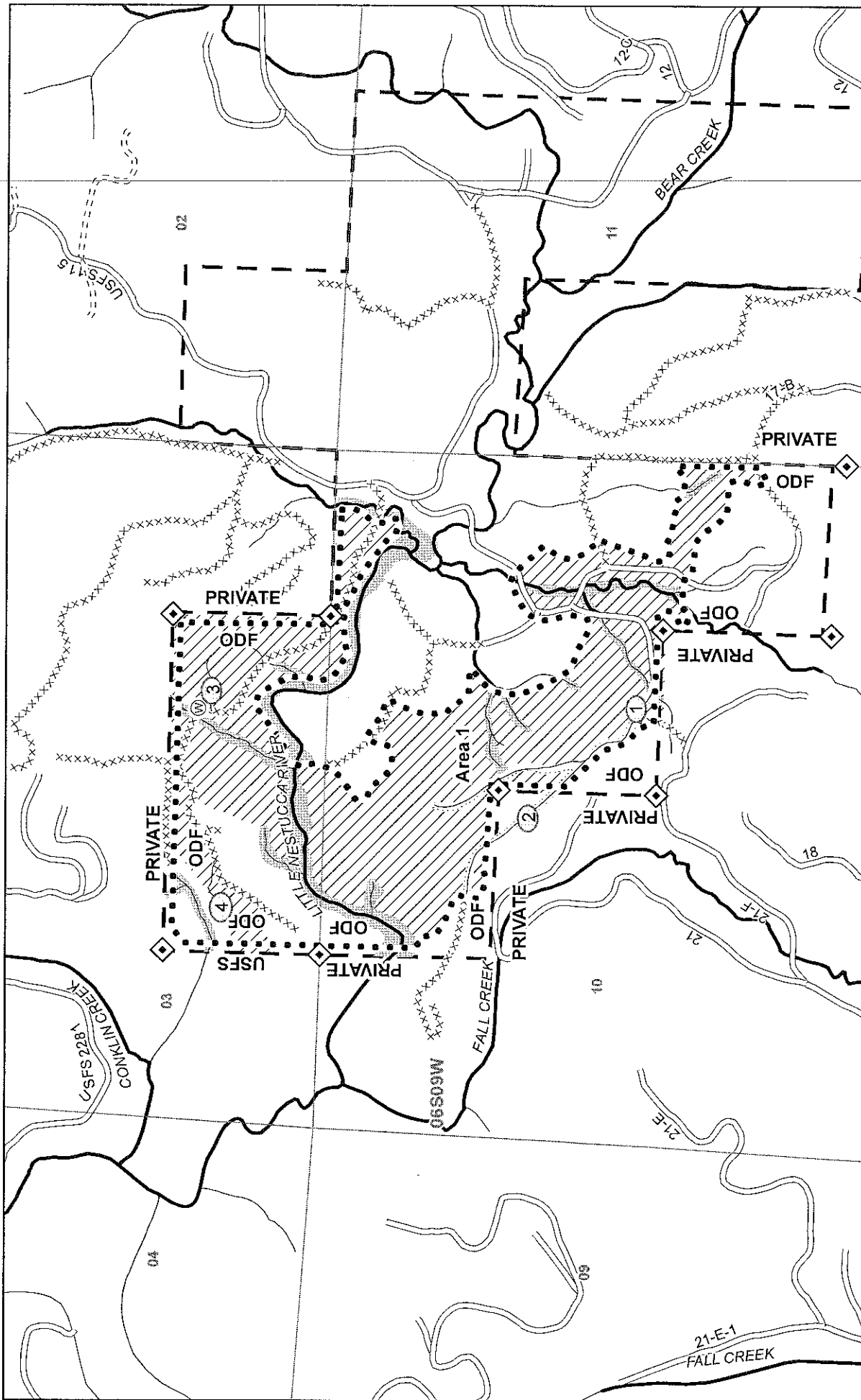
STEWARDSHIP IN FORESTRY

Van Z

Volume Summary

Area 1-Partial Cut				
138 acres				
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	5.0	691	5%	656
Alder	0.4	53	10%	48
TOTAL	5.4	744		704

TOTAL SALE VOLUME			138	acres
SPECIES	Cruised Net (MBF)	Net Sale (MBF)		
Douglas-fir	691	656		
Alder	53	48		
TOTAL	744	704		



LOGGING PLAN
 Timber Sale Contract No. 341-14-025
 VAN Z
 Portions of Sections 3 and 10
 T6S, R9W, W.M.,
 Tillamook County, Oregon

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
 Perennial Type-F stream
 Perennial Type-N stream
 Unsurfaced road
 Surfaced road
 Paved road
 Abandoned road

--A-- Swing road
 (2) Non-project road
 x x x x x Blocked road
 / / / / / OHV trail
 --- Non-motorized trail
 --- Transmission line
 +++ Railroad

Scale: 1,000 Feet

North Arrow

Type of Area Operation	Acres
1 Partial Cut	151.138

Tillamook District GIS
 3/25/2013
 This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.