



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Mill Cat
Sale 341-15-52

District: West Oregon

Date: September 30, 2014

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,363,411.12	\$26,120.64	\$1,389,531.76
Project Work:			\$(182,732.00)
Advertised Value:			\$1,206,799.76



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District: West Oregon

Date: September 30, 2014

timber description

Location: Portions of Sections 17, 18, 19, and 20, T11S, R8W, and portions of Sections 34 and 35, T11S, R9W, W.M., Lincoln County, Oregon.

Stand Stocking: 20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	34	0	95
Alder (Red)	15	0	95

Volume by Grade	2S	3S	4S	Camprun	SM	Total
Douglas - Fir	3,228	762	54	0	22	4,066
Alder (Red)	0	0	0	104	0	104
Total	3,228	762	54	104	22	4,170



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comments: Pond Values Used: 3rd Quarter Calendar Year 2014.

Western Hemlock and Other Conifers Stumpage Price = Pond Value
minus Logging Cost
 $\$217.73/\text{MBF} = \$525/\text{MBF} - \$307.27/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Cost (NOTE: Cedar must be scaled)
 $\$832.73/\text{MBF} = \$1,140/\text{MBF} - \$307.27/\text{MBF}$

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$4.00/Gallon

LOG HAUL:

Conifer costed to Philomath.
Hardwood costed to Eugene.

HAULING COST ALLOWANCE

Hauling costs equivalent to \$780 daily truck cost.

Other Costs (with Profit & Risk to be added):

Log Branding & Painting: 4,170 MBF @ \$1/MBF = \$4,170
Down Wood: 78 trees - 2 days faller @ \$430/day = \$860
TOTAL Other Costs (with Profit & Risk to be added) = \$5,030

Other Costs (No Profit & Risk added):

Firewood Sorting: 5 hrs @ \$115/hr = \$575
Snag Creation: 78 snags @ \$75 each = \$5,850
Equipment Cleaning (Invasive Species) = \$2,000
TOTAL Other Costs (No Profit & Risk added) = \$8,425

SLASH DISPOSAL

Move-in: \$1,500
Project Work: 56 hrs @ \$150/hr = \$8,400
TOTAL Slash Disposal = \$9,900



"STEWARDSHIP IN FORESTRY"

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District: West Oregon

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logging conditions

combination#: 1 Douglas - Fir 60.16%
 Alder (Red) 100.00%

yarding distance: Long (1,500 ft) **downhill yarding:** No
logging system: Cable: Large Tower >=70 **Process:** Manual Falling/Delimbing
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 4.0 **bd. ft / load:** 4,500
cost / mbf: \$205.19

machines: Log Loader (A)
 Tower Yarder (Large)

combination#: 2 Douglas - Fir 39.84%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Cable: Large Tower >=70 **Process:** Manual Falling/Delimbing
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 6.0 **bd. ft / load:** 4,500
cost / mbf: \$136.79

machines: Log Loader (A)
 Tower Yarder (Large)



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Mill Cat
Sale 341-15-52

District: West Oregon

Date: September 30, 2014

logging costs

Operating Seasons:	1.00	Profit Risk:	12.00%
Project Costs:	\$182,732.00	Other Costs (P/R):	\$5,030.00
Slash Disposal:	\$9,900.00	Other Costs:	\$8,425.00

Miles of Road

Road Maintenance: \$4.34

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	4.5
Alder (Red)	\$0.00	2.0	3.5



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Mill Cat
Sale 341-15-52

District: West Oregon

Date: September 30, 2014

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$177.94	\$4.56	\$1.05	\$81.25	\$1.21	\$31.92	\$2.37	\$5.00	\$2.02	\$307.32
Alder (Red)									
\$205.19	\$4.56	\$1.05	\$104.46	\$1.21	\$37.98	\$2.37	\$5.00	\$2.02	\$363.84

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$642.64	\$335.32	\$0.00
Alder (Red)	\$0.00	\$615.00	\$251.16	\$0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
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Sale 341-15-52

District: West Oregon

Date: September 30, 2014

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	4,066	\$335.32	\$1,363,411.12
Alder (Red)	104	\$251.16	\$26,120.64

Gross Timber Sale Value

Recovery: \$1,389,531.76

Prepared by: Jim Doyal

Phone: 541-929-3266

SUMMARY OF ALL PROJECT COSTS

Sale Name: Mill Cat

Date: September 2014

Time: 16:19

Project #1 - New Construction

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
B1 to B2	12.8 sta	\$11,918
B3 to B4	12.1 sta	\$11,501

TOTALS

24.9 sta

\$23,419

Project #2 - Improvements

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to A1	33.8 sta	\$14,105
A1 to A2	113.8 sta	\$5,493
A1 to B	128.0 sta	\$6,038
B to B1	25.3 sta	\$10,537
C to C1	138.9 sta	\$2,654
C1 to C2	20.9 sta	\$364
C2 to C3	44.6 sta	\$613
C3 to D	63.0 sta	\$1,020
D to D1	51.0 sta	\$505
E to E1	6.7 sta	\$66
F to F1	3.3 sta	\$33

TOTALS

629.3 sta

\$41,428

Project #3 - Bridge Installation

\$115,743

Project #4 - Post Harvest Activities

Turnaround rock

\$443

Move in

	<u>Cost</u>	<u>On-site move</u>
Crawler tractor, D-7 or equiv.	\$488	
Grader, Cat 14-G or equiv.	\$304	
Water Truck	\$199	
Backhoe	\$304	\$50
Vibratory roller	\$304	\$50

TOTAL

\$1,699

GRAND TOTAL

\$182,732

Compiled by J. Doyal

Date 09/04/2014

SUMMARY OF CONSTRUCTION COST

SALE	Mill Cat	- Project #2	LENGTH	improve	33.8 sta
ROAD	A to A1				

IMPROVEMENT

Shape surface (with road grader)	33.8 sta.	@	\$13.75 /sta	=	\$465
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TOTAL IMPROVEMENT	\$465
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SURFACING

Surface rock (4"lift)	747 cy of	Size 1½-0"	Cost/yd \$18.26	=	\$13,640
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TOTAL ROCK COST =	\$13,640
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Compiled by:	J. Doyal
Date:	Sep 4, 2014

GRAND TOTAL =====>	\$14,105
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SUMMARY OF CONSTRUCTION COST

SALE	Mill Cat	- Project #2	LENGTH	improve	113.8 sta
ROAD	A1 to A2				

IMPROVEMENT

Shape surface (with road grader)	113.8 sta.	@	\$13.75 /sta	=	\$1,565
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TOTAL IMPROVEMENT	\$1,565
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SURFACING

Spot rock (100 CY/mi)	216 cy of	Size 1½-0"	Cost/yd \$16.76	=	\$3,620
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TOTAL ROCK COST =	\$3,620
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SPECIAL PROJECTS

Clean out culverts (inlets and outlets) (Sta. 42+60 to Pt. A2)	12 culverts	@	\$25.67 ea.	=	\$308
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TOTAL SPECIAL PROJECTS COST =	\$308
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Compiled by:	J. Doyal
Date:	Sep 4, 2014

GRAND TOTAL =====>	\$5,493
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SUMMARY OF CONSTRUCTION COST

SALE ROAD	Mill Cat A1 to B	- Project #2	LENGTH improve	128.0 sta
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IMPROVEMENT

Shape surface (with road grader)	128.0 sta.	@	\$13.75 /sta	=	\$1,760
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TOTAL IMPROVEMENT	\$1,760
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SURFACING

Spot rock	243 cy of	Size 1½-0"	Cost/yd \$16.76	=	\$4,073
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TOTAL ROCK COST =	\$4,073
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SPECIAL PROJECTS

Clean out culverts (inlets and outlets) (Sta. 104+40 to B)	8 culverts	@	\$25.67 ea.	=	\$205
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TOTAL SPECIAL PROJECTS COST =	\$205
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Compiled by:	J. Doyal
Date:	Sep 4, 2014

GRAND TOTAL =====>	\$6,038
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SUMMARY OF CONSTRUCTION COST

SALE	Mill Cat	- Project #2	LENGTH	improve	25.3 sta
ROAD	B to B1				

IMPROVEMENT

Shape surface (with road grader)	25.3 sta.	@	\$13.75 /sta	=	\$348
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TOTAL IMPROVEMENT	\$348
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SURFACING

Surface rock (4"lift)	558 cy of	Size 1½-0"	Cost/yd \$18.26	=	\$10,189
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TOTAL ROCK COST =	\$10,189
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Compiled by:	J. Doyal
Date:	Sep 4, 2014

GRAND TOTAL =====>	\$10,537
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SUMMARY OF CONSTRUCTION COST

SALE	Mill Cat	- Project #1	LENGTH	const	12.8 sta
ROAD	B1 to B2				

CLEARING AND GRUBBING

0.71 acres	@	\$1,313.31 /acre	=	\$932 road
0.10 acres	@	\$1,010.24 /acre	=	\$101 landing

TOTAL CLEARING AND GRUBBING = \$1,033

EXCAVATION

With D7 dozer or equivalent

Construct road	12.8 sta.	@	\$74.28 /sta.	=	\$951
Construct landing	2 hr.	@	\$135.80 /hr.	=	\$272
Shape subgrade (with road grader)	12.8 sta.	@	\$11.55 /sta	=	\$148
Compact subgrade (with vibratory roller)	12.8 sta.	@	\$9.31 /sta	=	\$119

TOTAL EXCAVATION = \$1,490

SURFACING

		Size	Cost/yd		
Base rock (8" lift)	540 cy of	jaw-run	\$16.57	=	\$8,948
Landing rock	27 cy of	jaw-run	\$16.57	=	\$447

TOTAL ROCK COST = \$9,395

Compiled by: J. Doyal
Date: Sep 4, 2014

GRAND TOTAL =====> \$11,918

SUMMARY OF CONSTRUCTION COST

SALE	Mill Cat	- Project #1	LENGTH	const	12.1 sta
ROAD	B3 to B4				

CLEARING AND GRUBBING

0.67 acres	@	\$1,313.31 /acre	=	\$880 road
0.10 acres	@	\$1,010.24 /acre	=	\$101 landing

TOTAL CLEARING AND GRUBBING = \$981

EXCAVATION

With D7 dozer or equivalent

Construct road	12.1 sta.	@	\$74.28 /sta.	=	\$899
Construct landing	2 hr.	@	\$135.80 /hr.	=	\$272
Shape subgrade (with road grader)	12.1 sta.	@	\$11.55 /sta	=	\$140
Compact subgrade (with vibratory roller)	12.1 sta.	@	\$9.31 /sta	=	\$113

TOTAL EXCAVATION = \$1,424

SURFACING

		Size	Cost/yd		
Base rock (8" lift)	513 cy of	jaw-run	\$16.57	=	\$8,500
Landing rock	27 cy of	jaw-run	\$16.57	=	\$447
Jxn fillet rock	9 cy of	jaw-run	\$16.57	=	\$149

TOTAL ROCK COST = \$9,096

Compiled by: J. Doyal
Date: Sep 4, 2014

GRAND TOTAL =====> \$11,501

SUMMARY OF CONSTRUCTION COST

SALE ROAD	Mill Cat C to C1	- Project #2	LENGTH improve	138.9 sta
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IMPROVEMENT

Shape surface (with road grader)	138.9 sta.	@	\$13.75 /sta	=	\$1,910
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TOTAL IMPROVEMENT	\$1,910
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SPECIAL PROJECTS

Clean out culverts (inlets and outlets)	29 culverts	@	\$25.67 ea.	=	\$744
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TOTAL SPECIAL PROJECTS COST =	\$744
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Compiled by:	J. Doyal
Date:	Sep 4, 2014

GRAND TOTAL =====>	\$2,654
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SUMMARY OF CONSTRUCTION COST

SALE ROAD	Mill Cat C1 to C2	- Project #2	LENGTH improve	20.9 sta
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IMPROVEMENT

Shape surface (with road grader)	20.9 sta.	@	\$13.75 /sta	=	\$287
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TOTAL IMPROVEMENT	\$287
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SPECIAL PROJECTS

Clean out culverts (inlets and outlets)	3 culverts	@	\$25.67 ea.	=	\$77
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TOTAL SPECIAL PROJECTS COST =	\$77
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Compiled by:	J. Doyal
Date:	Sep 4, 2014

GRAND TOTAL =====>	\$364
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SUMMARY OF CONSTRUCTION COST

SALE	Mill Cat	- Project #2	LENGTH	improve	44.6 sta
ROAD	C2 to C3				

IMPROVEMENT

Shape surface (with road grader)	44.6 sta.	@	\$13.75 /sta	=	\$613
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TOTAL IMPROVEMENT	\$613
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Compiled by:	J. Doyal
Date:	Sep 4, 2014

GRAND TOTAL =====>	\$613
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SUMMARY OF CONSTRUCTION COST

SALE	Mill Cat	- Project #2	LENGTH	improve	63.0 sta
ROAD	C3 to D				

IMPROVEMENT

Shape surface (with road grader)	63.0 sta.	@	\$13.75 /sta	=	\$866
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TOTAL IMPROVEMENT	\$866
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SPECIAL PROJECTS

Clean out culverts (inlets and outlets)	6 culverts	@	\$25.67 ea.	=	\$154
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TOTAL SPECIAL PROJECTS COST =	\$154
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Compiled by:	J. Doyal
Date:	Sep 4, 2014

GRAND TOTAL =====>	\$1,020
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SUMMARY OF CONSTRUCTION COST

SALE	Mill Cat	- Project #2	LENGTH	improve	51.0 sta
ROAD	D to D1				

IMPROVEMENT

Shape surface (with road grader)	51.0 sta.	@	\$9.90 /sta	=	\$505
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TOTAL IMPROVEMENT	\$505
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Compiled by:	J. Doyal	GRAND TOTAL =====>	\$505
Date:	Sep 4, 2014		

SUMMARY OF CONSTRUCTION COST

SALE	Mill Cat	- Project #2	LENGTH	improve	6.7 sta
ROAD	E to E1				

IMPROVEMENT

Shape surface (with road grader)	6.7 sta.	@	\$9.90 /sta	=	\$66
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TOTAL IMPROVEMENT	\$66
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Compiled by:	J. Doyal	GRAND TOTAL =====>	\$66
Date:	Sep 4, 2014		

SUMMARY OF CONSTRUCTION COST

SALE ROAD	Mill Cat F to F1	- Project #2	LENGTH improve	3.3 sta
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IMPROVEMENT

Shape surface (with road grader)	3.3 sta.	@	\$9.90 /sta	=	\$33
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TOTAL IMPROVEMENT	\$33
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Compiled by:
Date:

J. Doyal
Sep 4, 2014

GRAND TOTAL =====>	\$33
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Project No. 3

SUMMARY OF CONSTRUCTION COST

Wolf Creek Bridge

Materials

Wingwalls	4	@	\$ 3,000.00	ea	\$12,000	
Backwalls, and sills					\$11,000	
Slabs	168	LF	@	\$286.00 /LF	\$48,048	
Surface rock 1 1/2-0"	108	cy	@	\$19.80 /cy	\$2,138	
Base rock 2 1/2-0"	108	cy	@	\$19.32 /cy	\$2,087	
Sill level rock	18	cy	@	\$18.30 /cy	\$329	
Riprap (24"-12")	333	cy	@	\$24.06 /cy	\$8,012	
TOTAL MATERIALS						\$83,614

Equipment

35 ton crane	12	hrs.	@	\$156.80 /hr.	\$1,882	
Excavator	34	hrs.	@	\$148.34 /hr.	\$5,044	
Dozer (D4)	12	hrs.	@	\$89.60 /hr.	\$1,075	
Vibratory roller	12	hrs.	@	\$81.92 /hr.	\$983	
TOTAL EQUIPMENT						\$8,984

Labor

General labor x 2	100	hrs.	@	\$48.53 /hr.	\$4,853	
TOTAL LABOR						\$4,853

Professional Services

Bridge design and site plans	TOTAL SERVICES					\$8,000
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Move-In

35 ton crane					\$2,500	
Excavator x 2					\$1,505	
Dozer					\$547	
Vibratory roller					\$340	
TOTAL MOVE-IN						\$4,892

Misc. Expenses

Culvert disposal						\$400
Profit and Risk						\$5,000

GRAND TOTAL \$ 115,743

SUMMARY OF CONSTRUCTION COST

SALE Mill Cat - Project #4 Post Harvest
ROAD

SURFACING

		Size	Cost/CY		
Turnaround rock Pt. B2	27 cy of	2½-0"	\$16.42	=	\$ 443

TOTAL SURFACING COST = \$443

Compiled by:
Date:

J. Doyal
Sep 4, 2014

GRAND TOTAL =====> \$443

SUMMARY OF MAINTENANCE COST

SALE Mill Cat - Final Maintenance Cost Estimate
ROAD *(Costed in appraisal, not in project costs)*

Grading Move-in \$ 400

Road Segment	Length	Cost/Sta	Cost	Mileage
Grade - Outsloped	85.9	\$9.90	\$850.41	1.63
Grade - Crowned	568.3	\$13.75	\$7,814.13	10.76
Totals	654.2		\$8,664.54	12.39

Maintenance Rock:

	Volume	Cost/CY	Cost
1½-0"	459	\$19.64	\$9,014.76
3-0"	0	\$19.30	\$0.00

Grand Total \$ 18,079.30

TS Volume 4,170 MBF

Cost / MBF = \$4.34

NOTES:

Rock Haul Cost Computation

SALE NAME: DATE: Sep 4, 2014
ROAD NAME: CLASS: Medium
ROCK SOURCE: 18 CY truck
Route: Pit to Hwy 20 to Cline Creek to Pt. B1

TIME Computation:

Road speed time factors:

1.	55 MPH	27.4	MRT	29.9 minutes
2.	50 MPH	2.0	MRT	2.4 minutes
3.	45 MPH	2.0	MRT	2.7 minutes
4.	40 MPH		MRT	0.0 minutes
5.	35 MPH		MRT	0.0 minutes
6.	30 MPH		MRT	0.0 minutes
7.	25 MPH	2.9	MRT	7.0 minutes
8.	20 MPH	2.9	MRT	8.7 minutes
9.	15 MPH		MRT	0.0 minutes
10.	10 MPH		MRT	0.0 minutes
11.	05 MPH		MRT	0.0 minutes

Dump or spread time per RT 0.50 minutes

Total hauling cycle time for this setting
(100% efficiency) 51.20 minutes

Operator efficiency correction 0.85 60.24 minutes

Job efficiency correction 0.90 66.93 minutes

Truck capacity (CY) 18.00 3.72 min/CY

Loading time, delay time per CY 0.25 min/CY

TIME (minutes) per cubic yard 3.97 min/CY

COST per CY computation

Cost of truck and operator per hour \$90.22 /hr.

Cost of truck and operator per minute \$1.50 /min

Cost per CY \$5.96 /CY

Spread and compact Water truck, Grader & Roller \$1.50 /CY

Size	Cost/Yd (Pit)	Cost Delivered w/o processing	Cost Delivered with processing
1½ - 0"	\$ 10.80	\$16.76	\$18.26
2½ - 0"	\$ 10.46	\$16.42	\$17.92
Jaw Run	\$ 9.11	\$15.07	\$16.57

Note: Pit costs April 2012 Wild Rose Quarry

Rock Haul Cost Computation

SALE NAME:
ROAD NAME:
ROCK SOURCE:
Route:

DATE: Sep 4, 2014
CLASS: Medium
9 CY truck

TIME Computation:

Road speed time factors:

1.	55 MPH	27.4	MRT	29.9 minutes
2.	50 MPH	2.0	MRT	2.4 minutes
3.	45 MPH	2.0	MRT	2.7 minutes
4.	40 MPH		MRT	0.0 minutes
5.	35 MPH		MRT	0.0 minutes
6.	30 MPH		MRT	0.0 minutes
7.	25 MPH	2.9	MRT	7.0 minutes
8.	20 MPH	2.9	MRT	8.7 minutes
9.	15 MPH		MRT	0.0 minutes
10.	10 MPH		MRT	0.0 minutes
11.	05 MPH		MRT	0.0 minutes

Dump or spread time per RT	0.50	minutes
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Total hauling cycle time for this setting
(100% efficiency) 51.20 minutes

Operator efficiency correction	0.85	60.24 minutes
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Job efficiency correction	0.90	66.93 minutes
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Truck capacity (CY)	9.00	7.44	min/CY
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Loading time, delay time per CY	0.25	min/CY
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TIME (minutes) per cubic yard 7.69 min/CY

COST per CY computation

Cost of truck and operator per hour	\$68.88 /hr.
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Cost of truck and operator per minute	\$1.15 /min
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Cost per CY	\$8.84 /CY
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Spread and compact	Water truck, Grader & Roller	\$1.50 /CY
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Size	Cost/Yd (Pit)	Cost Delivered w/o processing	Cost Delivered with processing
1½ - 0"	\$ 10.80	\$19.64	\$21.14
2½ - 0"	\$ 10.46	\$19.30	\$20.80
Jaw Run	\$ 9.11	\$17.95	\$19.45

TIMBER CRUISE SUMMARY

Sale Name: Mill Cat 341-15-52

Sale Type: The Sale Area is a modified clearcut.

Sale Area: Portions of Sections 17, 18, 19, & 20, T11S, R8W and Sections 34 & 35, T11S, R9W, W.M., Lincoln County, Oregon.

Cruise Summary:

MBF Volume							
Area	Gross Acres	Net Acres*	Species	Gross Volume	Net Volume	% Hidden D & B	Final Adjusted Volume
I	66	47	Douglas-fir	2,743	2,658	8%	2,445
			Red alder	115	113	8%	104
II	38	31	Douglas-fir	1,714	1,689	4%	1,621
Totals	104	78		4,572	4,460		4,170

NOTE: Big leaf maple 8 mbf

*Net acres represent a reduction of gross acres to account for stream buffers, road right-of-ways, and green tree areas. Acres were determined using the ODF-GIS system and Lidar data.

Grade by Percent						
Area	Species	Special Mill	2-Saw	3-Saw	4-Saw	Camprun
I	Douglas-fir	0%	81%	18%	1%	-
	Red alder					100%
II	Douglas-fir	1%	77%	20%	2%	-

Cruise Methods: On the conifer type, data was taken using variable radius plots using a 40 BAF plot factor. Diameters were measured on all trees. Trees were then selected using a BAF of 128 to select trees for height measurement and grade (average of one tree per plot).

Green tree retention areas were not cruised.

Tree Form: A form point of 16' was used for all species. Form factors were measured on all grade trees using a relaskop to get the number bars at form point divided by bars at D+4 to calculate the form factor. One plot was shot at 32' with form factor taken at 32' because of visibility in a portion of Area II.

Measurement Standards: Heights were measured to the nearest foot to a top cruise diameter of 6 inches outside bark or 30 to 40% of Form Point for Douglas-fir. Red alder and big leaf maple were measured to a top cruise diameter of 7 inches outside bark or to the point where the shape of the top would not contain a minimum length log segment.

Grading System: All trees were graded in 40 foot segments unless breakage, defect, or length to top of grade cruise diameter warranted otherwise.

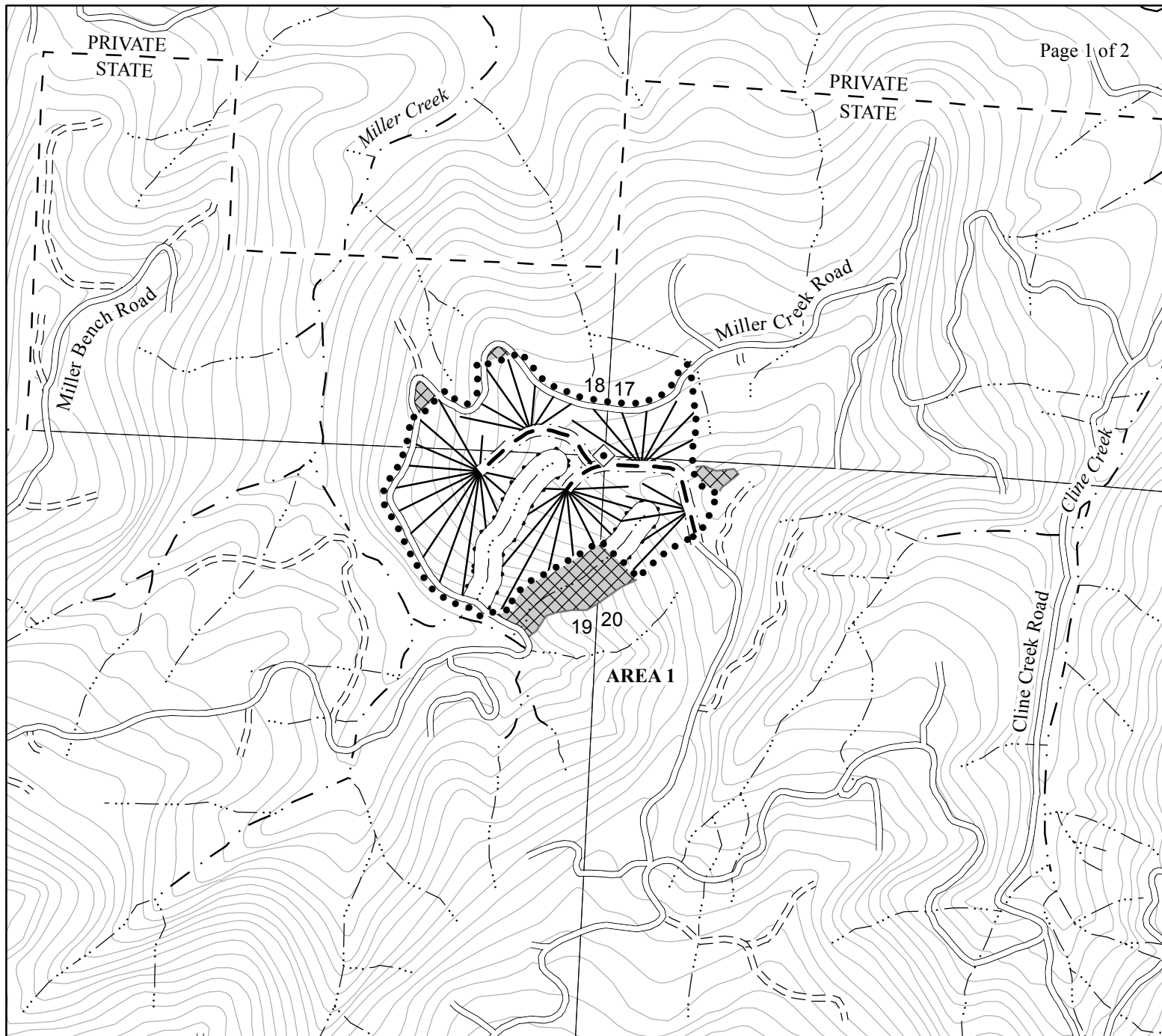
Utilization Standards: The minimum log diameter used for Douglas-fir was 6 inches and for hardwoods was 7 inches in diameter (inside bark). The minimum segment length was 13 feet (12 feet plus 1 foot of trim).

Hidden Defect and Breakage: A hidden D&B of 8% was applied to the Douglas-fir and hardwood volumes in Area I. A hidden D&B of 4% was applied to Douglas-fir volume in Area II. The Hidden D&B values are slightly higher than normal because of some steep, broken terrain that may lead to an increase in breakage and more phellinus pini (red ring rot / white speck) than is common for sales in the District.

Computation Procedures: The cruise volumes were computed using SuperAce 2004 and then adjusted using an in-house Big BAF program. Reserve trees were tallied as leave trees and processed separately from the take trees. No ingrowth was added to the volumes.

Cruisers/Dates: Blair, Doyal, Hukari, Humcke, McMinds, Oconnor, Roby, and Wiger in May and June of 2011.

Signature: Unit Forester: _____



LOGGING PLAN

Legend

Boundaries

- Timber Sale Boundary
- — State Forest Property Boundary
- == Right of Way (Posted)

Roads

- ==== Surfaced Road
- == Unsurfaced Road
- New Construction

Streams

- — · Type F Stream
- Type N Stream
- Posted Stream Buffer

- Cable Corridors

- ◆ Land Survey Monument

- Green Tree Retention Area

OF TIMBER SALE CONTRACT NO. 341-15-52
MILL CAT
PORTIONS OF SECTIONS 17, 18, 19 and 20, T11S, R8W,
& SECTIONS 34 & 35, T11S, R9W, W.M.,
LINCOLN COUNTY, OREGON

This product is for informational use and may not have been prepared for or be suitable for legal, engineering or survey purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of this information.

Scale

1:12,000



AREA	NET ACRES	
	TRACTOR	CABLE
1 (MC)	0	47
2 (MC)	0	31
TOTAL	0	78





LOGGING PLAN

Legend

- Boundaries**
- Timber Sale Boundary
 - — State Forest Property Boundary

Roads

- ==== Surfaced Road
- == == Unsurfaced Road

Streams

- — · Type F Stream
- — ··· Type N Stream

— Cable Corridors

◆ Land Survey Monument

▨ Green Tree Retention Area

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TOTAL	0	78



Created By: Blake McKinley
bmckinley@odf.state.or.us
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