

District: Forest Grove

Date: October 04, 2007

cost summary

	Conifer	Hardwood	Total	
Gross Timber Sale Value	\$577,251.74	\$6,751.21	\$584,002.95	
Williams and the second se	· ····································	Project Work:	\$(68,320.00)	
		Advertised Value:	\$515,682.95	

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"STEWARDSHIP IN FORESTRY"

District: Forest Grove

Date: October 04, 2007

timber description

Location: Portions of Section 28, T4N, R6W, W.M., Clatsop County, Oregon.

Stand Stocking: 20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)	
Douglas - Fir	14	0	98	
Western Hemlock / Fir	13	0	98	
Alder (Red)	12	0	95	

Volume by Grade	2\$	38	48	Camprur	Total
Douglas - Fir	278	1,098	474	0	1,850
Western Hemlock / Fir	49	841	328	0	1,218
Alder (Red)	0	0	0	17	17
Total	327	1,939	802	17	3,085

comments: Pond Values Used: 3rd Quarter Calender Year 2007.

Western Red Cedar Stumpage Price = Pond Value minus Logging Cost \$778/MBF = \$1,000/MBF - \$222/MBF

HAULING

Hauling costs equivalent to \$700 daily truck cost.

Other Costs (with Profit & Risk to be added): Brand and Paint: $$1/MBF \times 3,085 \ MBF = $3,085$ 122, snags will be created by tree topping @ \$55 per tree = \$6,710 15 Intermediate supports @ \$100.00 a piece = \$1,500 TOTAL Other Costs (with Profit & Risk to be added) = \$11,295

Other Costs (No Profit & Risk to be added):
Machine time to block/waterbar roads and skid trails, and to pile
and sort fire wood; 20 hours @ \$110/hr. = \$2,200
TOTAL Other Costs (No Profit & Risk added) = \$2,200

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"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal **Gregorian Cant** Sale 341-08-15

Date:

October 04, 2007

logging conditions

combination#: 1

District:

Douglas - Fir

30.00%

Western Hemlock / Fir

30.00%

Alder (Red)

30.00%

yarding distance: Medium (800 ft) logging system:

Forest Grove

downhill yarding:

bd. ft / load:

4,000

4,000

tree size:

Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF

6.0

loads / day: cost / mbf:

\$139.34

machines:

Log Loader (A)

Stroke Delimber (A) Tower Yarder (Medium)

combination#: 2

Douglas - Fir

70.00%

Western Hemlock / Fir

70.00%

Alder (Red)

70.00%

yarding distance: Short (400 ft)

downhill yarding:

Shovel

Process: Manual Delimbing

logging system: tree size:

Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day:

5.0 bd. ft / load:

cost / mbf:

\$125.23

machines:

Shovel Logger



"STEWARDSHIP IN FORESTRY"

District: Forest Grove

Date:

October 04, 2007

logging costs

Operating Seasons:

2.00

Profit Risk:

15.00%

Project Costs:

\$68,320.00

Other Costs (P/R):

\$11,295.00

Slash Disposal:

\$0.00

Other Costs:

\$2,200.00

Miles of Road

Road Maintenance:

\$0.00

Dirt	Rock (Contractor)	Rock (State)	Paved	
0.0	0.0	4.0	0.0	

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.0
Western Hemlock / Fir	\$0.00	3.0	4.0
Alder (Red)	\$0.00	2.0	3.2



"STEWARDSHIP IN FORESTRY"

District: Forest Grove

Date:

October 04, 2007

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas -	Fir								
\$129.46	\$3.35	\$2.84	\$51.73	\$3.66	\$28.66	\$0.00	\$2.00	\$0.71	\$222.41
Western F	lemlock /	Fir						·	
\$129.46	\$3.35	\$2.84	\$51.73	\$3.66	\$28.66	\$0.00	\$2.00	\$0.71	\$222.41
Alder (Red	d)								
\$129.46	\$3.44	\$2.84	\$99.87	\$3.66	\$35.89	\$0.00	\$2.00	\$0.71	\$277.87

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Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$463.05	\$240.64	\$0.00
Western Hemlock / Fir	\$0.00	\$330.84	\$108.43	\$0.00
Alder (Red)	\$0.00	\$675.00	\$397.13	\$0.00



"STEWARDSHIP IN FORESTRY"

District: Forest Grove

Date:

October 04, 2007

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	1,850	\$240.64	\$445,184.00
Western Hemlock / Fir	1,218	\$108.43	\$132,067.74
Alder (Red)	17	\$397.13	\$6,751.21

Gross Timber Sale Value

Recovery:

\$584,002.95

Prepared by: Andrew Walker

Phone: 503-359-7465

PROJECT COST SUMMARY SHEET

	Timber Sale:	Gregor	ian Cant	
CONSTRUCTION	•	Project No. 1	İ	
ı	Road Segment	Length	Cost	
-	A-B	42 + 00	\$12,259.65	
	C-D	16 + 35	\$3,358.50	
		58 + 35 st	· ·	
		1.11 miles	\$	
	<u>S</u> I	UBTOTAL CO	NSTRUCTION	\$15,618.15
SURFACING		Project No. 2	2	
Road Segment	Amount	Туре	Cost	
A-B	2,636 cy	4" - 0	\$33,793.52	
C-D	1,068 cy	4" - 0	\$13,814.74	
Total	3,704 cy	4" - 0		
		SUBTOTAL	SURFACING	\$47,608.26
SPECIAL PROJE	CTS			
Project No. 3	Grass seed, fert	ilize and		
mulch areas of dis	turbed soil.		\$597.00	
Project No. 4	Removal of pun	cheon		
debris out of strea	m bed.		\$2,516.70	
	SUBT	OTAL SPECIA	AL PROJECTS	\$3,113.70
MOVE IN				<u>\$1,976.00</u>
		TOTAL AL	L PROJECTS	\$68,316.11
		<u>TO</u>	TAL CREDITS	\$68,320.00

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Gergo	rian Cant		Road:		A to	οВ	
Construction	- <u>42+00</u> 0.80	_stations _miles		lmp	orovement -	0+00 0.00	_stations _miles	
CLEARING AND GRU	BBING -							
Scattering		3.86	acres @		per acre =	\$3,401.65 D GRUBBING		\$3,401.65
EXCAVATION -				TOTAL OLL	.,	5 0,1000,110	•	Ψ0,-01.00
Road		42.00	sta @	\$30.00	per sta =	\$1,260.00		
Landing		1.00	ea @	\$280.00	per sta =	\$280.00		
Grade and roll (outslope)		0.00	mi @	\$900.00	per mi =	\$0.00		
Grade, ditch and roll		0.80	mi @	\$1,515.00	per mi =	\$1,212.00		
Drift		2.00	sta @	\$140.00	per sta =	\$280.00	_	
					TOTAL E	EXCAVATION	Ī	\$3,032.00
CULVERTS - MATER	IALS & I	<u>ISTALLATIO</u>	<u>ON</u>					
Culverts								
	2 LF of 18'				LF of 24"	\$960.00		
) LF of 30'	,			LF of 36"	\$0.00		
) LF of 42'				LF of 48"	\$0.00		
') LF of 54'			U	LF of 60"_	\$0.00	-	
Half Rou	nde	\$4,794.00				\$960.00		
	us LF of 21'	\$0.00		0	LF of 30"	\$0.00		
) LF of 36'				LF of 42"	\$0.00		
	LF of 48'	•			LF of 54"	\$0.00		
) LF of 60'				LF of 66"	\$0.00		
		\$0.00	'	J		\$0.00	-	
Culvert S	takes	*				42.22		
•	stakes	\$72.00						
					TOTA	L CULVERTS		\$5,826.00
SURFACING- 10) " deep =	56 cy/sta						
Subgrade 2,352	cy of	4" - 0"	@	\$12.82	per cy =	\$30,152.64		
Curve Widening 50	cy of		<u>@</u>		per cy =	\$641.00		
Turnouts 168	3 cy of		@	\$12.82	per cy =	\$2,153.76		
Landing 56	cy of	4" - 0"	@	\$12.82	per cy =	\$717.92		
Junction 10	•		@		per cy =	\$128.20		
Misclaneous	_ ′	24" - 12"	@	\$12.82	per cy =	\$0.00	_	
Total = 2,636	5				TÖTAL	SURFACING		\$33,793.52
SPECIAL PROJECTS								
Grass seed and fertilize are		ed soil.		acres x \$22		\$213.40		
Mulching within 100' of stream	ıms		0.50	acres x \$60	0 / acre	\$300.00		
						\$0.00		
						\$0.00	_	****
				TOT	AL SPECIAI	L PROJECTS		\$513.40
					TOTAL	COST =	\$46	,566.57
								·

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Gregor	ian Cant		. Road:		C to	D
Construction -	16+35	stations		Imp	rovement -	0+00	stations
	0.31	miles		·		0.00	miles
CLEARING AND GRUE	PRING	-					
Scattering AND GROU	- טאווטכ	1.50		ድስያለ ለሰ		P4 470 00	
Scattering		1.50	acres @		per acre =	\$1,470.00 D GRUBBING	\$1,470.0
EXCAVATION -				TOTAL OLL	-71/11/0 71/	O GRODDING	\$1,470.00
Road		16.35	sta @	\$90.00	per sta =	\$1,471.50	
Landing		1.00	sta @		per sta =	\$90.00	
Grade and roll (outslope)		0.19	mi @		per mi =	\$171.00	
Grade, ditch and roll		0.13	_	\$1,200.00		\$156.00	
Drift		0.00	sta @		persta =	\$0.00	
_,		0.00	0	4100.00	•	EXCAVATION	\$1,888.50
CULVERTS - MATERI	AI S & IA	ISTALLATIO	∩Ni				
Culverts	, LO & II.		<u> </u>				
	LF of 18"	\$0.00		0	LF of 24"	\$0.00	
_	LF of 30"	*****			LF of 36"	\$0.00	
	LF of 42"	-			LF of 48"	\$0.00 \$0.00	
	LF of 54"	•			LF of 60"	\$0.00	
· ·	LI 013+	\$0.00		U	LI 0100	\$0.00	
Half Round	ds	Ψ0.00				Ψ0.00	
	LF of 21"	\$0.00		0	LF of 30"	\$0.00	
	LF of 36"				LF of 42"	\$0.00	
	LF of 48"				LF of 54"	\$0.00	
	LF of 60"				LF of 66"	\$0.00	
·		\$0.00		·	_, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	\$0.00	
Culvert Sta	akes	,,,,,,				*	
0	stakes	\$0.00					
					TOTA	L CULVERTS	\$0.00
SURFACING- 10	" deep =	56 cy/sta					
Subgrade 916			@	£42 O4	nor ou =	¢44 047 00	
Curve Widening 30	•		@ @		per cy = per cy =	\$11,847.86 \$388.20	
Turnouts 56	•	4" - 0"			per cy =	\$724.64	
Landing 56	•		@ @		per cy =	\$724.64 \$724.64	
Junction 10	cy of		@		per cy =	\$129.40	
Misclaneous 0	-	24" - 12"	@		per cy =	\$0.00	
Total = 1,068	Cy Oi	24 - 12	w	ψ12. 34		SURFACING	\$13,814.74
CDECIAL DECLECTO							4 , 1
SPECIAL PROJECTS			0.00		0 (200.55	
Grass seed and fertilize area	s of disturb	ea soil.	0.38	acres x \$22	0 / acre	\$83.60	
						\$0.00	
						\$0.00	
				TOT	AL SPECIA	\$0.00 L PROJECTS	\$83.60
					"		7-010
					TOTAL	COST =	\$17,256.84

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Gregorian Cant	.	Point:	E	
SPECIAL PROJEC	<u>TS</u>				
Excavate & Load	700	су @	\$1.24 per cy =	\$868.06	
Haul	700	cy @	\$1.82 per cy =	\$1,276.04	
Compact Waste Area	700	cy @	\$0.25 per cy =	\$175.00	
Grass seed and fertilize	areas of disturbed soil.	0.38	acres x \$220 / acre	\$83.60	
Mulching within 100' of s	streams	0.19	acres x \$600 / acre	\$114.00	

TOTAL PROJECT COST = \$2,516.70

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Timber Sale: Gregorian Cant
Pit Name: West Mac

Swell:	1.30			1-1/2"-0 (trk m	easure)	су
Shrinkage:	1.16	-		4"-0 (trk measi		3,704 cy
Drill Pct.:	100%	_		Jaw Run (trk m	neasure)	су
		-		Total Truck Ya	rdage:	3,704 cy
				Total In Place	Yardage:	2,849 cy
					-	
Scalp & Clear	Overburden:	\$150.00	_	0 hr	=	\$0.00
Drill & Shoot:		\$2.50		2,849_cy	=	\$7,122.50
Strip Rock:		\$0.00		0 cy	=	\$0.00
Push Rock:		\$0.70		3,704_cy	=	\$2,592.80
Oversize Redu	iction:	\$4.50		<u>570</u> cy	=	\$2,565.00
Load Crusher:		\$0.70		3,704 cy	=	\$2,592.80
Crushing (1-1/2	•	\$2.50		0 cy	=	\$0.00
Crushing (4" -	•	\$2.35		3,704_cy	=	\$8,704.40
Crushing (Jaw	Run):	\$0.00		0 cy	==	\$0.00
Screening		\$0.75	_ •	0 cy	=	\$0.00
Waste Reject		\$0.85		0 cy	=	\$0.00
Build and Shap		\$0.65		0 cy	=	\$0.00
Load Dump Tri	uck:	\$0.70	./cy x	3,704 cy	=	\$2,592.80
					Subtotal	\$26,170.30
Move in Crush	er					\$1,597.00
Set up Crusher	•					\$1,598.00
Move in and se	et up Drill and Cor	mpressor				\$279.00
Move in Excav	•	'				\$463.00
Move in D-8						\$433.00
Move in Loade	rs					\$394.00
Clean Up Pit						\$300.00
•	s (\$65/2000 cy)	\$65.00	cy/2000cy x	2 test	s	\$130.00
Change Grada	`	-				\$0.00
•					Subtotal	\$5,194.00
						.
BASE COST	\$8.47/cy	-	TO1	TAL PRODUCTI	ON COST_	\$31,364.30

MOBILIZATION COST SUMMARY

Gregorian Cant Timber Sale:

MILEAGE FACTORS

_	_				
ce Factor	1.07	1.15	1.31	1.40	1.48
Distance	22	09	20	75	80
istance Factor	0.58	35.00	0.82	0.91	1.00
Distar	45	16	40	45	20

MILEAGE FACTOR =

	EQUIPMENT	Base	Move in	Within Area Move	Begin	End	Total	Within Area	Total
S	DESCRIPTION	Cost	Cost	(\$/mile)	Mileage	Mileage	Miles	Cost	Cost
0	Drill & Compressor	\$241	\$0.00						\$0.00
_	Graders	\$241	\$241.00	\$7.33	0	0	0	\$0.00	\$241.00
0	Loader (1.5 - 2.5 cy)	\$241	\$0.00	\$8.42	0	0	0	\$0.00	\$0.00
0	Loader (3 cy +)	\$387	\$0.00	\$9.56	0	0	0	\$0.00	\$0.00
_	Rollers & Compactors	\$241	\$241.00	\$14.25	0	0	0	\$0.00	\$241.00
-	Excavators	\$533	\$533.00	\$36.60	0	0	0	\$0.00	\$533.00
0	Large Backhoes	\$533	\$0.00	\$5.53	0	0	0	\$0.00	\$0.00
0	Small backhoes	\$241	\$0.00	\$4.84	0	0	0	\$0.00	\$0.00
_	Tractors (D5 - D7)	\$385	\$385.00	\$18.47	0	0	0	\$0.00	\$385.00
0	Tractors (D8)	\$533	\$0.00	\$25.53	0	0	0	\$0.00	\$0.00
က	Dump Truck (12 cy)	\$144	\$432.00	\$2.88	0	0	0	\$0.00	\$432.00
0	Belly Dump	\$158	\$0.00	\$3.68	0	0	0	\$0.00	\$0.00
	Water Truck (3000 gal)	\$144	\$144.00	\$2.88	0	0	0	\$0.00	\$144.00

\$1,976.00 TOTAL MOBILIZATION COSTS =

TIMBER SALE SUMMARY

Gregorian Cant Contract No. 341-08-15

- 1. <u>Type of Sale</u>: Auto-mark partial cut (PC-H) in Area 1. Area 2 is (R/W). The sale is recovery, sealed bid auction.
- 2. Revenue Distribution: 100% BOF, Clatsop County. Tax Code 8-01.
- 3. <u>Sale Acreage</u>: Area 1 is 122 net acres. Area 2 is 4 acres of (R/W) in net acres. Acreage was determined using GIS.

SPECIES	2 SAW	<u>3 SAW</u>	4 SAW	SPECIES TOTAL
Douglas-fir Area 1 Area 2 (R/W)	258 20	1,065 33	457 17	1,780 70
Hemlock / Other Conifers (Area 1) Area 2 (R/W)	42 7	821 20	313 15	1,176 42
Alder / Other Hardwoods		17		17
TOTAL:				3,085

- 4. <u>Cruise Data</u>: Area 1 was variable-plot cruised with full plots. Plot data was taken from SLI and transferred into SuperACE for computing cruise information. The right of way volume for Area 2, new road construction, was calculated using the combined take and leave tree volumes from Area 1. A conifer top cruise diameter of 7 inches DOB was used. Cruise statistics: DF take trees: CV =67 %, SE =11.3 %.
- 5. <u>Timber Description</u>: Areas 1 and 2 are medium to well stocked, unmanaged stands of Douglas-fir and Hemlock with a minor component of other conifer and hardwoods. The stands ages range from approximately 55-64 years old. The average DF take-tree DBH is 14.3 inches. Estimated DF take-tree volume for Area 1 averages 14.8 MBF per acre. For all leave trees in Area 1; the quadratic mean DBH is 21 inches, an average of 50 trees/acre and 17.1MBF per acre of conifer.
- **6.** Topography and Logging Method: The topography ranges from 1800ft to 2100ft with average slope being approximately 45%. The sale area is roughly 30% cable yarding and 70% ground based yarding (percentages are based on MBF harvested).

7. Access: West on Highway 26 (Sunset Hwy.) to McGregor Road, Northeast on McGregor Road to sale areas.

8. Projects:

Project No. 1	Constructing 1.11 miles of new road:	\$ 15,618.15
Project No. 2	Surfacing 1.11 miles of road:	\$ 47,608.26
Project No. 3	Grass seed and fertilize:	\$ 597.00
Project No. 4	Removal of puncheon debris out of stream bed:	\$ 2,516.70

Move in cost: \$ 1,976.00

Total Project Cost: \$68,316.11

9. Other Costs:

Other Costs with (P/R):

Brand and paint (\$1.00/MBF):	\$ 3,085.00
Intermediate Supports/ Tail Tree Rigging (15 @ \$100.00 each):	\$ 1,500.00
Tree topping @ (\$55/tree):	\$ 6,710.00

Total (P/R): \$ 11,295.00

Other Costs (No P/R):

Total (No P/R):

TOTAL:

Skid Trail/firewood sorting /Slash Piling (20 hrs. @ \$110.00/hr): \$2,200.00

\$ 2,200.00

\$13,495.00

CRUISE REPORT Gregorian Cant 341-08-15

- 1. Acreage Calculation: Area 1 has 122 net acres. Area 2 is 4 net acres of R/W. All acres were determined using ArcView computer program.
- 2. Cruise Method: The area was fixed plot cruised by the Stand Level Inventory (SLI) by IRM contract cruisers. Four Portions of the stand make up the sale. The plots were cruised using a 33.6, BAF. Take trees and saw grades were assigned based on the height, diameter and damage measurements provided by the SLI cruise. Data from plots within the sale were done using the Superace 98 program.

3. Sampling Intensity:

Area 1	Estimated	Actual
CV	65%	67%
SE	12.2%	11.3%
No. of Plots	23	35
Take Trees/Plot	7	8

- 4. Form Factors: Form factors were estimated using a form point of 16 feet.
- 5. Height Standards: Merchantable heights were estimated to the nearest foot.
- 6. Diameter Standards: Diameters were measured outside bark at breast height to the nearest inch.
- 7. Grading System: All trees were graded favoring 40 foot segments.
- **8. Merchantable Top:** Conifer merchantable tops were measured to 7 inches, hardwood to 8 inches or 25% of DOB.
- 9. Computation Procedures: Volumes for Area 1 were computed using the Super Ace 2004 program.
- **10. Deductions:** Two percent of the conifer volume was subtracted from the computed volumes to account for hidden defect and breakage.
- **11. Cruisers:** The sale was cruised by IRM contract cruisers in September 2005. Office calculations were prepared by Drew Walker in April 2007.

12. Signatures:	_1	
Prepared by:	Drew walks	— 7/31/07
	Drew Walker	Date
Unit Forester:	Cirk Marcy	7/31/07
	Erik Marcy	Date /

Residual Stand Specifications <u>Gregorian Cant</u> 341-08-15

All Areas

Residual OMD assumption -21 inches. Target Relative Density -26

	Minimum	Target	Maximum
Relative Density	24	26	28
Basal Area	110	120	130
Trees per Acre	46	50	54

RD = BA/ (sq. root of DBH)

BA = (sq. root of DBH) (RD)

 $BA/Tree = (pi (r^2))/144 sq. in.$

TPA = (BA/Acre)/(BA/Tree)

