

District:

Astoria

Date:

April 05, 2013

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$3,865,319.04	\$47,156.97	\$3,912,476.01
		Project Work:	\$(360,162.00)
		Advertised Value:	\$3,552,314.01

4/5/13



"STEWARDSHIP IN FORESTRY"

District: Astoria

Date:

April 05, 2013

timber description

Location: Portions of Sections 16, 17, 20, 21, and 28, T6N, R7W, W.M., Clatsop County,

Oregon.

Stand Stocking:

20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	18	0	97
Western Hemlock / Fir	. 18	0	97
Sitka Spruce	24	0	97
Alder (Red)	17	0	95

Volume by Grade	2S	38	4S	Camprur	Total
Douglas - Fir	6,405	2,154	392	0	8,951
Western Hemlock / Fir	1,502	734	66	0	2,302
Sitka Spruce	0	8	0	0	8
Alder (Red)	0	0	0	123	123
Total	7,907	2,896	458	123	11,384

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"STEWARDSHIP IN FORESTRY"

District: Astoria Date: April 05, 2013

comments: Pond Values Used: 4th Quarter Calendar Year 2012.

Expected Log Markets: Mist, OR; Clatskanie, OR; Tillamook, OR; Forest Grove, OR.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost \$801.49/MBF = \$985/MBF - \$183.51/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): 100% Branding and Painting: \$1/MBF x 11,903 MBF = \$11,903 Log Loader Slash & Landing Piling (includes Move-In and Pile Materials) = \$10,181 Machine Washing for Noxious Weed Compliance = \$2,000 TOTAL Other Costs (with Profit & Risk to be added) = \$24,084

Other Costs (No Profit & Risk added): None.

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"STEWARDSHIP IN FORESTRY"

District: **Astoria** Date:

April 05, 2013

logging conditions

combination#: 1

Douglas - Fir

17.05%

Western Hemlock / Fir

13.08%

yarding distance: Medium (800 ft)

downhill yarding:

Process: Manual Falling/Delimbing

logging system: Cable: Medium Tower >40 - <70

Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF

tree size: loads / day:

5.0

bd. ft / load:

3,300

cost / mbf:

machines:

\$209.70

Log Loader (A) Tower Yarder (Medium)

combination#: 2

Douglas - Fir

4.81%

Western Hemlock / Fir

3.69%

varding distance: Medium (800 ft)

downhill yarding:

logging system:

Shovel

Process: Manual Falling/Delimbing Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF

tree size:

7.0

bd. ft / load:

3,300

loads / day: cost / mbf:

\$108.43

machines:

Shovel Logger

combination#: 3

Douglas - Fir

22.66%

Western Hemlock / Fir Sitka Spruce

24.14%

29.00%

Alder (Red)

29.00%

yarding distance: Medium (800 ft)

downhill yarding:

logging system:

Cable: Medium Tower >40 - <70 Process: Manual Falling/Delimbing

4,500

tree size:

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

loads / day:

9.0

cost / mbf:

\$85.43

machines:

Log Loader (A) Tower Yarder (Medium)

combination#: 4

Douglas - Fir

55.48%

bd. ft / load:

Western Hemlock / Fir

59.09%

Sitka Spruce

71.00%

Alder (Red)

71.00%

4/5/13

4



"STEWARDSHIP IN FORESTRY"

District: Astoria

Date:

April 05, 2013

yarding distance: Medium (800 ft)

downhill yarding:

logging system:

Shovel

Process: Stroke Delimber

tree size:

Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF bd. ft / load:

4,500

loads / day: cost / mbf:

11.0 \$29.06

machines:

Stroke Delimber (B)

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"STEWARDSHIP IN FORESTRY"

District:

Astoria

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logging costs

Operating Seasons:

2.00

Profit Risk:

12.00%

Project Costs:

\$360,162.00

Other Costs (P/R):

\$24,084.00

Slash Disposal:

\$0.00

Other Costs:

\$0.00

Miles of Road

Road Maintenance:

\$2.67

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
Western Hemlock / Fir	\$0.00	2.0	4.0
Sitka Spruce	\$0.00	2.0	4.5
Alder (Red)	\$0.00	2.0	3.5

Local Pond Values

Date	Specie	Grade	Value
4/5/13	Douglas - Fir	2S	\$562.46
4/5/13	Douglas - Fir	38	\$528.00
4/5/13	Douglas - Fir	4S	\$513.00
4/5/13	Western Hemlock / Fir	2S	\$449.15
4/5/13	Western Hemlock / Fir	38	\$438.00
4/5/13	Western Hemlock / Fir	4S	\$433.00
4/5/13	Sitka Spruce	3S	\$427.63
4/5/13	Alder (Red)	Camprun	\$562.62

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"STEWARDSHIP IN FORESTRY"

District:

Astoria

Date:

April 05, 2013

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas -	Fir								
\$76.46	\$2.75	\$0.77	\$79.70	\$2.12	\$19.42	\$0.00	\$5.00	\$0.00	\$186.22
Western F	lemlock /	Fir							
\$69.22	\$2.75	\$0.77	\$89.66	\$2.12	\$19.74	\$0.00	\$5.00	\$0.00	\$189.26
Sitka Spru	ice								
\$45.41	\$2.75	\$0.77	\$79.70	\$2.12	\$15.69	\$0.00	\$5.00	\$0.00	\$151.44
Alder (Red	d)								
\$45.41	\$2.80	\$0.77	\$104.46	\$2.12	\$18.67	\$0.00	\$5.00	\$0.00	\$179.23

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$552.00	\$365.78	\$0.00
Western Hemlock / Fir	\$0.00	\$445.13	\$255.87	\$0.00
Sitka Spruce	\$0.00	\$427.63	\$276.19	\$0.00
Alder (Red)	\$0.00	\$562.62	\$383.39	\$0.00

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"STEWARDSHIP IN FORESTRY"

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summary

Amortized

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

Unamortized

		•	
Specie	MBF	Value	Total
Douglas - Fir	8,951	\$365.78	\$3,274,096.78
Western Hemlock / Fir	2,302	\$255.87	\$589,012.74
Sitka Spruce	8	\$276.19	\$2,209.52
Alder (Red)	123	\$383.39	\$47,156.97

Gross Timber Sale Value

Recovery:

\$3,912,476.01

Prepared by: Dave Rygell

Phone: 503-325-5451

Road Maintenance Cost Summary

 High Tide
 \$\$/MBF:
 \$2.79

 29-Nov-12
 D. Rygell

 D. Rygell
 Road segments to maintain:
 I1to I2, I3 to I4, I2 to I5, I5 to I6, I6 to I7, I7 to I8, I8 to I9, I9 to I10, I9 to I13, and I13 to I11.

 Sale: Date: By:

	_		1	_		1		,		,				
	Days	1.2		Days	1.6		Days	5.0	5.0					
Production Rates	Distance(miles)	3.0		Distance(miles)	4.0		Distance(miles)	7.5	7.5	The second secon				
Product	Miles/day	2.5		Miles/day	2.5		Miles/day	1.5	1.5					
	Production Rates	Grader		Production Rates	Grader		Production Rates	Grader	Vibratory Roller ²					\$31,790
Cost	\$1,978	\$1,590	\$1,442	\$2,378	\$1,590	\$1,442	\$5,778	\$3,486	\$2,438	\$4,628	\$4,640	\$400		
Rate	\$100	\$79	\$83	\$100	\$79	\$83	\$100	\$79	\$83	\$77	\$89	\$40		
Hours	12	œ	œ	91	∞	∞	09	20	20	20	20	10		
Times	-	2	-	1	7	_	1	2	~	_	_			
Move-in Rate	\$778	\$163	\$778	\$778	\$163	\$778	\$278	\$163	\$778	\$778	\$190			
Equipment/Rationale	Grader 14G	Dump Truck 12CY x 2	FE Loader C966	Grader 14G ¹	Dump Truck 12CY x 2	FE Loader C966	Grader 14G	Dump Truck 12CY x 2	FE Loader C966	Vibratory Roller*	Water Truck 2,500 gallon	Labor		
Type	Progressive	Operations	1st Entry	Progressive	Operations	2nd Entry	Final Road	Maintenance						Total

1) 1 mile of Grading added for use of Hamilton Creek Rd. 2) Final Road Maintenance Only

SUMMARY OF ALL PROJECT COSTS

	SOMMAN	TOT ALL TIN	OOLOI	00010	
SALE NAME:	High Tide				
PROJECT No	. 1 Sale Access and La	nding Constr	uction		
	Road segment	Length/Sta		<u>Cost</u>	
	1H,1I-1J,1K-1L,1M-1N,1O-1P,			#04.047.00	
1Y-1Z,3A-3B,3D-	3E,3F-3G,3H-3I	85.35		\$91,047.00	
	TOTALC	0E 2E			¢01.047
	TOTALS	85.35			\$91,047
DDO IECT No	o. 2 Sale Access Road II	mprovement			
PROJECT NO					
14 10 10 14 15 10	Road segment	Length/Sta		<u>Cost</u>	
11-12,13-14,15-16	,17-18,19-110,111-112,111-113	321+80		\$40,983.00	
	TOTALS				\$40,983.00
SPECIAL PRO	OJECTS:				
	<u>Descriptio</u>	<u>n</u>		Cost	
	PROJECT NO. 3 West Tid				
	PROJECT NO. 4 Tidewater L		Stockpile .	\$184,211.00	
	PROJECT NO. 5 Vacating		•	\$8,958.00 \$9,063.00	
	Project Road Maintenance			ψ9,000.00	
	TOTAL				#222 268 AA
	TOTAL				\$222,368.00
MOVE IN:	Equipmon	.+		Cost	
	Equipmen C330	<u>ıı</u>		\$1,406.00	
	Rock Trucks 3 ea.		•	\$489.00	
	Grader			\$778.00	
	Water Truck Vibratory Roller			\$190.00 \$778.00	
	Dozer			\$1,406.00	
	Skidder			\$717.00	
	TOTAL				\$5,764.00
GRAND TOTA	AL				\$360,162.00
Compiled By:	_d.mellison_			Date:	12/14/12
	LB				

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: ROAD:	High Tide 1A, 1B, 1C-1D, 1E-1F, 1G-1	_ IH, 1I-1J, 1K-1L, 1M-1N, 10	D-1P, 1Y-1X, 2A, 2B, 3A-3B, 3C, 3D-3E	, 3F-3G, 3H-3I,		NSTRUCTION:		STATIONS STATIONS	1.62
POINTS:	1C-1D(11+75), 1E-1F(13	3+70), 1G-1H(1+70), 1I-	1J(1+00), 1K-1L(15+20), 1M-1N(19	9+00), 1O-1P(12+5	50), 1Y-1Z(1+5	50), 3A-3B(4+50),	3D-3E(2+50),	3F-3G(1+00),3H-3I(1+00)
CLEARING & GRU				Acres/amount		Rate	=	Cost	
	Method			Acres/amount	X	Rate	=	Cost	
	Scatter Outside R/W G-1H, 1I-1J, 1K-1L, 1M-1N, 1	0.45.44.44.00.05.00.0	D 20 2D 2E 2E 20 2H 2I	7.70	ı î	\$1,337.00	=	\$10,294.90	
A, 1B, 1C-1D, 1E-1F, 10	G-1H, 1I-1J, 1K-1L, 1M-1N, 1	U-1P, 11-1X, ZA, ZB, 3A-3	B, 30, 3D-3E, 3F-36, 3FF-31,	7.10	۱ ^ ۱	ψ1,007.00		V 10,25 1155	
UB TOTAL FOR	CLEARING & GRUBBI	NG							\$10,295
XCAVATION									
	Material			Cy/amount	×	Rate	=	Cost	
Rocked roads	Common Drift \$\$/cuyo		1E-1F, 1K-1L, 1M-1N	7,923	×	\$1.80	=	\$14,261.40	
	Balanced Construction		J, 1K-1L, 1M-1N, 1O-1P, 1X-1Y, 3A-3B	35.95	×	\$122.00	=	\$4,385.90	
	Cutslope Rounding	1M-1N (Sta 8+00 to	9+00)	1.00	×	\$43.00	=	\$43.00	
	Embankment Compac	tion		7,923	x	\$0.70	=	\$5,546.10	
	Borrow excavation			500	×	\$4.81	=	\$2,405.00	
		11 15 15 15 11 11 1	(41 (40 (00) 4)	40		¢290.00	=	\$7.201.00	
	Landings		K-1L (12+00), 1L, , 1M-1N(5+00), 1N,	19	×	\$389.00	=	\$7,391.00	I
	10-1P (7+50), 2A, 2B,30	C, 3E, 3G, 3I, 1Z							
					j l		l		
UB TOTAL FOR I									\$34,032
ULVERT MATER Location	IALS AND INSTALLAT Dia/type	TION Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
1C-1D (5+50)	18/cpp	30	\$19.53	\$585.90					
1E-1F(5+70)	18/cpp	30	\$19.53	\$585.90					
1E-1F(11+50))	18/cpp	30	\$19.53	\$585.90					
1K-1L(4+00)	18/cpp	30	\$19.53	\$585.90					
1K-1L(4+00)	18/ccp	30	\$19.53	\$585,90				l	
	18/cpp	30	\$19.53	\$585.90					
1O-1P(0+80) 3A-3B(0+50)	18/cpp	30	\$19.53	\$585.90					
3A-3B(0+30)	Төгсөр	30	Ψ10.00	\$666.66					
						•		-	
	Other/miscellaneous:			Description		Quantity	Rate	Cost	
	Culvert stakes & mark	(Ors:	Install 6' Fiberglass Markers	@ \$20.00 each		7	\$20.00	\$140.00	
			moduli e y ledigiace mamere						\$4,241
	CILI VERT MATERIALS	S & INSTALLATION							Ψ7,241

SURFACING			D			Stations/		Rate/ sta/amt	Cost
* *	Subgrade prep:	Grade, Shape and Ditch Subgrade Compaction	Description 16'			85.35 85.35	X X X	\$24.83 \$20.19	\$2,119.24 \$1,723.22
ROAD SEGMENT	1A	Cubgrade Compassion		POINT TO POINT	Sta. to Sta.				
	Rock Size		Depth of Rock	1A Volume (CY)	n/a Number	TOTAL VOLUME	Rate/ Sta./	Cost	
Application Base Rock	and Type 6"-0" Pit-run	Location 1A	(inches)	per Landings 50	of Landings 1.00	(CY) 50	amt. \$5.88	\$294	
Total Rock for Roa	nd Segment:		1A	POINT TO POINT	Sta, to Sta.	50			\$294]
ROAD SEGMENT	1B		Depth of	1B	n/a Number	TOTAL	Rate/ Sta./	Cost	
Application	Rock Size and Type	Location	Rock (inches)	Volume (CY)	of	(CY)	amt,	4004	
Base Rock Total Rock for Roa		<u> </u> 1B	n/a 1B	Landings 50	Landings 1.00	50 50	\$5.88	\$294) \$294
ROAD SEGMENT	1C-1D	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Depth of	POINT TO POINT 1C-1D	Sta. to Sta. 0+00 to 11+75	TOTAL	Rate/	Cost	
Application	Rock Size and Type	Location	Rock (inches)	Volume (CY)	Number of	VOLUME (CY)	Sta./ amt.		
Base Rock Junctions	6"-0" Pit-run 11/2"-0" Crushed	0+00 to11+75	10 10	Station 63 Junction 22	Stations 11.75 Junctions 1.00	740 22	\$5.88 \$2.99	\$4,353 \$66	
Traction rock Turnouts	11/2"-0" Crushed	7+00-12+00	3	Station 19 Turnout 8	Stations 5.00 Turnouts 1.00	95 8	\$2.99 \$2.99	\$284 \$24	
Turnouts	6"-0" Pit-run	2+70,8+80	10	Turnout 22 Landing 22	Turnouts 2.00 Turnarounds 1.00	44 22	\$5.88 \$5.88	\$259 \$129]
Turnarounds Landings	6"-0" Pit-run 6"-0" Pit-run	10+70 1D	N/A	Landing 50	Landings 1.00	50	\$5.88	\$294]
Total Rock for Roa ROAD SEGMENT		. 10	1C-1D	POINT TO POINT	Sta, to Sta,	981			\$5,409
A1141	Rock Size		Depth of Rock	1E-1F Volume (CY)	0+00 to 13+70 Number	TOTAL VOLUME	Rate/ Sta./	Cost	
Application Base Rock	and Type 6"-0" Pit-run	Location 0+00 to13+70	(inches)	per Station 63	of Stations 13.70	(CY) 863	*amt. \$5.88	\$5,075	1
Junctions Traction rock	11/2"-0" Crushed	1E	10	Junction 22 Station 19	Junctions 1.00 Stations 5.00	22 95	\$2.99 \$2.99	\$66 \$284	
Turnouts	11/2"-0" Crushed	8+25	3	Turnout 8 Turnout 22	Turnouts 1.00 Turnouts 2.00	8 44	\$2.99 \$5.88	\$24 \$259]
Turnouts Turnarounds	6"-0" Pit-run	2+40,8+25 12+10	10	Landing 22	Turnarounds 1,00	22	\$5.88 \$5.88	\$129 \$294]
Landings Total Rock for Roa		1F	N/A 1E-1F	Landing 50	Landings 1.00	1,104	ф3,00	Φ294	J \$6,131
ROAD SEGMENT	1G-1H	Turning the second	Depth of	POINT TO POINT 1G-1H	Sta. to Sta. 0+00 to 1+70	TOTAL	Rate/	Cost	
Application	Rock Size and Type	Location	Rock (inches)	Volume (CY) per	Number of	VOLUME (CY)	Sta./ amt.	r i Maria	
Base Rock Landings	6"-0" Pit-run 6"-0" Pit-run	0+00 to1+70 1Z	10 N/A	Station 63 Landing 50	Stations 1.70 Landings 1.00	107 50	\$5.88 \$5.88	\$630 \$294	
Total Rock for Roa ROAD SEGMENT	ad Segment:	1-	1G-1H	POINT TO POINT	Sta, to Sta.	157			\$924
ROAD SEGMENT			Depth of	1I-1J	0+00 to 1+00	TOTAL VOLUME	Rate/ Sta./	Cost	
Application	Rock Size and Type	Location	Rock (inches)	Volume (CY) per	Number of	(CY)	amt,	4070	
Base Rock Junctions	6"-0" Pit-run 11/2"-0" Crushed	0+00 to 1+00	10	Station 63 junction 22	Stations 1.00 junctions 1.00	63	\$5.88 \$2.99	\$370 \$66	
Landings Total Rock for Roa	6"-0" Pit-run ad Segment:	1J	N/A 1I-1J	Landing 50	Landings 1.00	50 135	\$5.88	\$294] _ \$730
ROAD SEGMENT	1K-1L	1	Depth of	POINT TO POINT 1K-1L	Sta. to Sta. 0+00 to 15+20	TOTAL	Rate/		
Application	Rock Size and Type	Location	Rock (Inches)	Volume (CY) per	Number of	VOLUME (CY)	Sta./	Cost	
Base Rock	6"-0" Pit-run 11/2"-0" Crushed	0+00 to15+20	10	Station 63 Junction 22	Stations 15.20 Junctions 1.00	958 22	\$5.88 \$2.99	\$5,631 \$66	
Junctions Traction rock	11/2"-0" Crushed	5+00 to 8+00, 12+00-15+00	3	Station 19	Stations 6,00	114	\$2.99 \$5.88	\$341 \$259]
Turnouts Landings	6"-0" Pit-run 6"-0" Pit-run	4+50, 9+00 12+00, 1L	10 N/A	Turnout 22 Landing 50	Turnouts 2.00 Landings 2.00	100	\$5.88	\$588	
Total Rock for Roa ROAD SEGMENT			1K-1L	POINT TO POINT	Sta. to Sta.	1,238	10.5		\$6,884]
	Rock Size		Depth of Rock	1M to 1N Volume (CY)	0+00 to 19+00 Number	TOTAL VOLUME	Rate/ Sta./	Cost	
Application Base Rock	and Type 6"-0" Pit-run	Location 0+00 to 9+00	(inches)	per Station 63	of Stations 19.00	(CY) 1,197	amt. \$5.88	\$7,038	
Junctions Landings	11/2"-0" Crushed 6"-0" Pit-run		10 N/A	Junction 22 Landing 50	Junctions 1.00 Landings 2.00	22 100	\$2.99 \$5.88	\$66 \$588	
Total Rock for Roa	ad Segment:	3.00, 11,	1M to 1N	POINT TO POINT	Sta. to Sta.	1,319			\$7,692
ROAD SEGMENT	100000000000000000000000000000000000000		Depth of	10 to 1P	0+00 to 12+50	TOTAL	Rate/	Cost	
Application	Rock Size and Type	Location	Rock (inches)	Volume (CY)	Number of	VOLUME (CY)	Sta./	0125	1
Base Rock Junctions	6"-0" Pit-run 11/2"-0" Crushed		10	Station 63 junction 22	Stations 12.50 junctions 1.00	788 22	\$5.88 \$2.99	\$4,631 \$66	3
Turnouts Landings	6"-0" Pit-run 6"-0" Pit-run	4+00 7+50, 1P	10 N/A	Turnout 22 Landing 50	Turnouts 1.00 Landings 2.00	100	\$5.88 \$5.88	\$129 \$588	
Total Rock for Roa ROAD SEGMENT			10 to 1P	POINT TO POINT	Sta. to Sta.	932			\$5,414]
	Rock Size	The state of the s	Depth of Rock	1Y-1Z Volume (CY)	0+00 to 1+50 Number	TOTAL VOLUME	Rate/	Cost	
Application	and Type	Location 0+00 to1+50	(Inches)	per Station 63	of Stations 1.50	(CY) 95	amt. \$5.88	\$556	
Base Rock Landings	6"-0" Pit-run 6"-0" Pit-run	0+00 to1+50 1Z	N/A	Landing 50	Landings 1.00	50 145	\$5.88	\$294	
Total Rock for Roa ROAD SEGMENT		1	1Y-1Z	POINT TO POINT	Sta. to Sta.			[4]	9050
Application	Rock Size		Depth of Rock	2A Volume (CY)	n/a Number	TOTAL VOLUME	Rate/ Sta./	Cost	
Application Landings	and Type 6"-0" Pit-run	Location 2A	(inches)	per Landings 50	of Landings 1.00	(CY) 50	amt. \$5.88	\$294	
Total Rock for Roa ROAD SEGMENT	ad Segment:		2A	POINT TO POINT	Sta. to Sta.	50			\$294]
	Rock Size		Depth of Rock	2B Volume (CY)	n/a Number	TOTAL VOLUME	Rate/ Sta,/	Cost	
Application	and Type	Location	(Inches)	per	of	(CY)	amt. \$5.88	\$294	1
Base Rock Total Rock for Roa	6"-0" Pit-run	2A	n/a 2B	Landings 50	Landings 1.00	50 50	φυ.00	₱∠94	\$294

ROAD SEGMENT	3A-3B			POINT TO	POINT	Sta. to						
			Depth of	3A to 3	3B	0+00 to	4+50	TOTAL	Rate/	Cost		
	Rock Size		Rock	Volume	(CY)	Numb	er .	VOLUME	Sta./	003.		
Application	and Type	Location	(Inches)	per		of		(CY)	amt.			
Base Rock	6"-0" Pit-run	0+00 to 4+50	10	Station	63	Stations	4.50	284	\$5.88	\$1,667		
Base Rock	11/2"-0" Crushed	0+00 to 4+50	3	Station	19	Stations	4.50	86	\$2,99	\$256		
Junctions	11/2"-0" Crushed	3A, 3B	3	Junction	22	Junctions	2.00	44	\$2.99	\$132		
Total Rock for Roa		071, 013	3A to 3B					413			\$387	
ROAD SEGMENT			0,710 02	POINT TO	POINT	Sta. to	Sta.		3 h			
TOAD SEGMENT	1 1		Depth of	3C		N/A		TOTAL	Rate/			
	Rock Size		Rock	Volume	(CV)	Numb		VOLUME	Sta./	Cost		
Application		Location	(inches)	per		of		(CY)	amt.			
	and Type	Location	n/a	Landing	50	Landings	1.00	50	\$5,88	\$294		
andings	6"-0" Pit-run	3C		Landing	50	Landings	1.00	50	Ψ5.00	Ψ2.541	\$294	
Total Rock for Roa			3C			A1 - 4 -	04-	50	an air an an an	11.1	Ψ234	
ROAD SEGMENT	3D-3E	the state of the		POINT TO		Sta. to		1 1				
	200 A 16 3 1 1		Depth of	3D to		0+00 to		TOTAL	Rate/	Cost		
	Rock Size	0.011.000	Rock	Volume	(CY)	Numb		VOLUME	Sta./			
Application	and Type	Location	(inches)	per		of		(CY)	amt.			
Base Rock	6"-0" Pit-run	0+00 to 2+50	10	Stations	63	Stations	2.50	158	\$5.88	\$926		
Junctions	11/2"-0" Crushed	3D	10	Junction	22	Junctions	1.00	22	\$2.99	\$66		
Landings	6"-0" Pit-run	3E	n/a	Landings	50	Landings	1.00	50	\$5.88	\$294		
Total Rock for Roa			3D to 3E					230			\$1,286	
ROAD SEGMENT				POINT TO	POINT	Sta. to	Sta.	1	100000	11-11-11	-	
RUAU SEGMENT	37-30		Depth of	3F to 3		0+00 to		TOTAL	Rate/			
						Numb		VOLUME	Sta./	Cost		
Application	Rock Size		Rock	Volume		of		(CY)	amt.			
	and Type	Location	(inches)	per				63	\$5.88	\$370		
Base Rock	6"-0" Pit-run	0+00 to 1+00	10	Station	63	Stations	1.00	22	\$2.99	\$66		
Junctions	11/2"-0" Crushed	3F	10	junction	22	junctions	1.00					
Landings	6"-0" Pit-run	3G	N/A	Landing	50	Landings	1.00	50	\$5.88	\$294		
Total Rock for Roa	ad Segment:		3F to 3G					135			\$730	
ROAD SEGMENT	3H-3I	7 W - Car 1/2	90.3500	POINT TO	POINT	Sta. to		12.55	1000000	10.45 (3.47)		
And the last		3.16 3.00	Depth of	3H to	31	0+00 to	1+00	TOTAL	Rate/	Cost		
4.17	Rock Size	14.00 E-11.00	Rock	Volume	(CY)	Numb	er '	VOLUME.	Sta./	1000		
Application	and Type	Location	(Inches)	per		of		(CY)	amt.			
Base Rock	6"-0" Pit-run	0+00 to1+00	10	Station	63	Stations	1.00	63	\$5.88	\$370		
Junctions	11/2"-0" Crushed	3H	10	junction	22	Junctions	1.00	22	\$2.99	\$66		
Landings	6"-0" Pit-run	31	N/A	Landing	50	Landings	1.00	50	\$5,88	\$294		
Total Rock for Roa		- 01	3H to 3I	24,1491				135			\$730	
TOTAL ROCK TOT ROS	ad Seyment.		0111001								• •	
				Description					No.sta	Rate/sta	Cost	
	Р	ocessing:	114 to D						83.65	\$59.20	\$4,952	
				cess & Comp		U DI-				\$56.48	\$904	
			Water, Pro	cess & Comp	oact: I ract	IION KOCK			16.00	\$30,46	4904	
						THE COLUMN TWO IS NOT		u1888-2 a - 118-2 a - 118-2				
				24"-6"	6"-0"pr	4"-0"	1 1/2"-0"	3/4"-0"	Total	4		A
	SUB TOTAL FOR S	URFACING			6,525		648		7,173	J		\$42
	SPECIAL PROJEC	TS										
				De	escription				Cost	_		
										_		
										-		
	CHE TOTAL FOR	DECIAL DECLE	2									
	SUB TOTAL FOR S	PECIAL PROJECTS	·									
									Cubtotal	of Surfacing & S	nec Proi	\$42
										tal of Clearing, l		\$48,
									Subto	tai Ui Ci c aning, I	_xc.,Cuiv.	φ 40 ,
	GRAND TOTAL											\$91

Date: 11/29/2012

Compiled By: K.Berry

SUMMARY OF CONSTRUCTION COSTS

LE NAME:	High Tide					NSTRUCTION: _		STATIONS	6.09
AD: INTS:	11-12, 13-14,	15-16, 17-18, 19-	-110, 111-112, 11	1-113	IN	IPROVEMENT: _	321.80	STATIONS	6.09
		12), 13-14 (35+5	50), 15-16 (21+7	5), 17-18 (32+64), 1	19-110 (17+36),	111-112 (27+45),	111-113 (34+98	3)	
EARING & GRU					I	Data I	_	Cost	
	Method			Acres/amount	X X	Rate		Cost	
					× i		=		
					x		=		
					x		=		
					^ 1				
B TOTAL FOR	CLEARING 8	GRUBBING							
CAVATION									
SAVA NON	Material			Qty/amount	x	Rate	=	Cost	
					x		=		
(13-14)	(Sta. 11+11)	Develop Waste A	rea (C330)(Hrs)	0.25	×	\$155	=	\$38.75	
(13-14)	Place Dissipa		(C330)(Hrs)	0.75	×	\$155	=	\$116.25	
(19-110)	Place Dissipa		(C330)(Hrs)	0.15	x	\$155	=	\$23.25	
(111-112)	Construct dit	chouts (3 each)	(Cat 14G)(Hrs)	0.75	×	\$100	=	\$75,00	
					×		=		
					x		=		
					x		=		
B TOTAL FOR I	XCAVATIO	N							\$253
LVERT MATER	AL C AND IA	ISTALLATION	.1						
Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
Location	Diartype	Linear II.	Traco	0001	LOCATION	Biarrypo		1,127	
13-14 (sta 7+85)	18" CPP	40	\$19.53	\$781.20				- 	
13-14 (sta 18+50)	18" CPP	50	\$19.53	\$976.50					
13-14 (sta 19+76)	18" CPP	50	\$19.53	\$976.50					
15-i6 (sta 9+50)		40	\$19.53	\$781.20					****
	18" CPP	40	\$19.53	\$781.20					
		70							
15-16 (sta 17+00)		50		I \$976.50 II		1		3 1	J-12-7-7-1
15-16 (sta 17+00) 19-110 (sta 6+50)	18" CPP	50	\$19.53 \$19.53	\$976.50 \$781.20					
15-16 (sta 17+00) 19-110 (sta 6+50)		50 40	\$19.53 \$19.53	\$976.50 \$781.20					
15-16 (sta 17+00) 19-110 (sta 6+50)	18" CPP								
I5-I6 (sta 17+00) I9-I10 (sta 6+50)	18" CPP								
I5-I6 (sta 17+00) I9-I10 (sta 6+50)	18" CPP								
15-16 (sta 17+00) 19-110 (sta 6+50)	18" CPP				VA 11-1				
15-16 (sta 17+00) 19-110 (sta 6+50)	18" CPP								
I5-I6 (sta 17+00) I9-I10 (sta 6+50)	18" CPP								
I5-I6 (sta 17+00) I9-I10 (sta 6+50)	18" CPP 18" CPP	40				Quantity	Rate	Cost	
15-16 (sta 17+00) 19-110 (sta 6+50)	18" CPP	40		\$781.20		Quantity	Rate	Cost	
15-16 (sta 17+00) 19-110 (sta 6+50)	18" CPP 18" CPP Other/misce	40 allaneous: xes & markers:	\$19.53	\$781.20 Description Culvert Markers		Quantity 7	Rate \$20.00	Cost \$140.00	
15-16 (sta 17+00) 19-110 (sta 6+50)	18" CPP 18" CPP Other/misce	40 allaneous: xes & markers:	Replacement	\$781.20 Description Culvert Markers o I13 (Sta. 12+56,	21+26)		\$20.00	\$140.00	
15-16 (sta 17+00)	18" CPP 18" CPP Other/misce Culvert stale	ellaneous: Existing	Replacement g Culverts I11 that are miss	Description Culvert Markers to 113 (Sta. 12+56, sing markers	21+26)	7			\$6,234

BURFACING	Subgrade prep		Description					Stations/ amount	×	Rate/ sta/amt	Cost
	Saparado prop	Grade, Shape and D						321.80	×	\$24.83	\$7,990.29
		Subgrade Compacti		(I11 to I12)				27.45	X	\$20.19	\$554.22
ROAD SEGMENT	I1 to I2			POINT TO	POINT I	Sta. to	Sta.	l i			1
COAD SEGMENT	111012	1	Depth of	I1 to		0+00 to 1		TOTAL	Rate/	Cont	
	Rock Size		Rock	Volume		Numb	oer	VOLUME	Sta./	Cost	
pplication	and Type	Location	(inches)	ре		of		(CY)	amt.		
eveling Rock	11/2"-0" crushed	0+00 - 105+50	n/a	load	11	loads	19	209	\$2.99	\$625	
eveling Rock	11/2"-0" crushed	105+50-126+34	n/a	load	11	loads	4	44	\$2.99	\$132	
eveling Rock	11/2"-0" crushed	126+34-152+12	n/a	load	11	loads	5	55	\$2.99	\$164	
otal Rock for Road			11 to 12					308			\$921
OAD SEGMENT	13 to 14	1	B 41 - 4	POINT TO		Sta. to 0+00 to 3		TOTAL	Rate/		
	Rock Size		Depth of Rock	I3 to Volume		Numb		VOLUME	Sta./	Cost	
pplication		Location	(inches)	pe		of		(CY)	amt.		
urfacing Rock	and Type 11/2"-0" crushed	7+85,18+50,19+76	3	culvert	11	culverts	3	33	\$2.99	\$99	1
edding/Backfill	11/2"-0" crushed	7+85,18+50,19+76	n/a	culvert	44	culverts	3	132	\$2.99	\$395	1
ssipator Rock	24"-6" riprap	7+85,18+50,19+76	n/a	culvert	11	culverts	3	33	\$5.42	\$179	
tal Rock for Road			13 to 14					198			\$672
DAD SEGMENT	15 to 16			POINT TO		Sta. to			100		
	100000	1.4	Depth of	15 to		0+00 to 2		TOTAL	Rate/	Cost	1
plication	Rock Size		Rock	Volume		Numl		VOLUME	Sta./	100	
Electric de la companya de la compa	and Type	Location	(inches)	pe		of		(CY)	amt.	***	
action Rock	11/2"-0" crushed	0+00 - 4+00	2	station	13	stations	4	52	\$2.99	\$155 \$305	
veling Rock	11/2"-0" crushed	0.50 17.50	n/a	load	11	loads	12	132	\$2.99 \$2.99	\$395 \$66	
urfacing Rock	11/2"-0" crushed	9+50, 17+00	3 n/a	culvert culvert	11 33	culverts culverts	2	66	\$2.99	\$197	
dding/Backfill	11/2"-0" crushed 24"-6" riprap	9+50, 17+00 17+00	n/a n/a	culvert	11	culverts	1	11	\$5.42	\$60	
ssipator Rock Ital Rock for Road		1 17700	15 to 16	Luiveit		Cuiveite		283	40.72	400	J \$873
DAD SEGMENT	17 to 18		10 (0 10	POINT TO	POINT	Sta. to	Sta.	_50			1
JAD OLOMENT	7, 1010	100000000000000000000000000000000000000	Depth of	17 to		0+00 to		TOTAL	Rate/	Cost	
	Rock Size	100 (100 (100 (100 (100 (100 (100 (100	Rock	Volume		Numi		VOLUME	Sta./	Cost	
oplication	and Type	Location	(inches)	pe		of		(CY)	amt.	Y. Jan St.	
veling Rock	11/2"-0" crushed	n/a	n/a	load	11	loads	8	88	\$2.99	\$263	
tal Rock for Road			17 to 18					88			\$263
DAD SEGMENT	l9 to 110	Standard Co		POINT TO		Sta. to			a believe	1. 1	
			Depth of	19 to		0+00 to		TOTAL	Rate/	Cost	
plication	Rock Size		Rock	Volume		Numl		VOLUME	Sta./		
	and Type	Location	(inches)	pe	r 11	of culverts	1	(CY) 11	amt. \$2.99	\$33	1
rfacing Rock	11/2"-0" crushed	6+50 6+50	n/a	culvert culvert	44	culverts	1	44	\$2.99	\$132	
dding/Backfill	11/2"-0" crushed 11/2"-0" crushed	0+50	n/a n/a	load	11	loads	6	66	\$2.99	\$197	
veling Rock ssipator Rock	24"-6" riprap	6+50	n/a	culvert	11	culverts	1	11	\$5.42	\$60	
ssipator Rock tal Rock for Road		1 0,00	19 to 110	L SUIVEIL		Calverte	·	132	44.12	1	\$421
AD SEGMENT	I11 to I12			POINT TO	POINT	Sta. to	Sta.				
			Depth of	I11 to		0+00 to		TOTAL	Rate/	Cost	
anllantla=	Rock Size		Rock	Volume		Numl	ber	VOLUME	Sta./	- Coat	
pplication	and Type	Location	(Inches)	ре		of		(CY)	amt.		1
ırfacing Rock	11/2"-0" crushed		4	station	25	stations	27.45	686	\$2.99	\$2,052	
irnouts	11/2"-0" crushed		4	turnout	11	turnouts	4	44	\$2.99	\$132	
" Junction	11/2"-0" crushed	2+04	4	station	25	stations	1	25	\$2.99	\$75	
nctions	11/2"-0" crushed	Tidewater Loop	4	junction	11 n/a	junctions curves	2	22	\$2.99 \$2.99	\$66 \$66	
rve widening	11/2"-0" crushed	6+24-8+66,11+84-13+22 22+57	4 N/A	curve culvert	33	curves	1	33	\$2.99	\$99	
dding/Backfill	11/2"-0" crushed		111 to 112	Luivert		Calverts	L	832	Ψ2.00	, was	\$2,488
tal Rock for Road	I11 to I13		711 (0 112	POINT TO	POINT	Sta. to	Sta.	302		10.17	1,
J. ID GEOMENT	11.00110		Depth of	111 to		0+00 to		TOTAL	Rate/	Cost	1
	Rock Size	and produced by the	Rock	Volume	A CONTRACTOR OF THE PARTY OF TH	Num		VOLUME	Sta./	CUSE	
plication	and Type	Location	(inches)	ре		of	F-100.5	(CY)	amt.		
rfacing Rock	11/2"-0" crushed		2	station		stations	34.98	455	\$2.99	\$1,360	
rnouts	11/2"-0" crushed	6+30,10+40,17+55	2	turnout	6	turnouts	3	18	\$2.99	\$54	
rve widening	11/2"-0" crushed		2	curve	n/a	curves	9	33	\$2.99	\$99	
nctions	11/2"-0" crushed		2	junction	11	junctions	1	11	\$2.99	\$33	
veling Rock	11/2"-0" crushed		n/a	load	11	loads	18	198	\$2.99	\$592	
tal Rock for Road	Segment:		111 to 113					715	L		\$2,137
				24"-6"	6"-0"pr	4"-0"	1 1/2"-0"	1000000000	Total	1	
	SUB TOTAL FOR	SURFACING		55	o -v pi		2,501		2,556	1	
	JUD TOTAL FOR	JUNIFACING		1 33	L		2,001	1	2,000	1	
	SPECIAL PROJE	CTS									
	3E				Description	I	No. Sta.	Rate/Sta.	Cost		
				Water, Proc		pact	321.8	\$56.48	\$18,175	-	
										_	
	SUB TOTAL FOR	SPECIAL PROJECT	S							of Surfacing &	
	002 101712 1 011										

\$40,983 GRAND TOTAL Date: 12/14/2012 d.mellison Compiled By:

	ROJECT NO West Tidev				oer Sale Name:	High Tide Swell:			
ocation.		1/4, Section 18,	T6N, R7W	W.M.	- -	Shrink:	16%		
ounty:	Clatsop				- ,	11 77			
/: ate:	dmellison 10/17/12				_ L	oading Hopper			
	ROCK SIZ	E REJECT	GRADATI	ON	STOCKPILE CU. YDS.		TRUCK MEAS CU. YDS.	3	TOTAL CU. YDS.
	3/4"-0"	12%	CR	-	CO, 1DS.	_	CO. 120.		
	1-1/2"-0"	2%	CR	-		-			
	<u>4"-0"</u> 6"-0"		CR PR	-		-	6,527	_	6,527
	Borrow		RR	- -		-	500		500
	TOTAL C	UBIC YARDS	OF ROCK	:			7,027		7,027
мов		N & SET UP:							
OUIPM	ENT	QUANTITY	RATE	COST	EQUIPMENT		QUANTITY	RATE	COST
ımp Trı			\$163		Off Highway Di	ump Truck		\$553	
reening	Plants		\$553		Screening Plan			\$553	
Cat			\$1,406		Loading Hoppe	er		\$553	
Cat	mpresser		\$778	 	Loader			\$805	
ill & Co wder	mpressor		\$1,406 \$351		3 Stage Crush	er		\$2,891	
ımp Trı	ıcks	1	\$163	\$163	orage Orasin	VI		Ψ2,071	
cavato		1 1	\$1,406	\$1,406	Excavator			\$1,406	
	SUB TOTA	AL FOR MOBII IOBILIZATIO	LIZATION						\$1,569 \$1,569
CLE	ARING & G	RUBBING							
	DESCRIPT				QUANTITY	UNIT	RATE	COST	
	Clear, Load	l, Haul to Waste	Area	_	8	hr	\$155	\$1,240	
	Slash and S	Stumps (1 truck,	1 exc.)	_	8	hr	\$79	\$632	
	TOTAL C	LEARING & O	GRUBBING	G COSTS					\$1,872
EXC	AVATION								
	MATERIA	L DESCRIPTION	NC		QUANTITY	UNIT	RATE	COST	
	Overburder	n Removal (exca	avate, load	_	500	bcy			
	haul, sprea			_			2455.00	01.005	
		C330 D12 D.		_	7 6	hours hours	\$155.00 \$79.00	\$1,085 \$474	
	TOTALE	,		-			.h		\$1,559
		XCAVATION	COSIS						\$1,339
DEV	ELOP ROC	K		METHOD	%	QUANTITY	RATE	COST	
		SUMMARY		1				***	
	Туре	Cu. yd. Vol.		Ripping **	100%	7,027	\$2.07	\$14,546	
	crushed			Drill & shoot Oversize red		-	 		
	pit run borrow	6,527 500		Other		-			
	Total	7,027		Touis.		I	<u> </u>		
	reject]	octe.					\$14,546
		OCK DEVELO			\$455/br *9 bro	/ 600 a v /day	- \$2.07/o.v		Ψ1 4 ,540
	J		with a large	e excavator. (\$155/hr *8 hrs	7 000 C.y./day	- φ2.077c.y.		
MISC	ELLANEO							COST	
	DESCRIPT Quarry Win	TION terization: Wate	rbar/ slope to	o drain/ Block a	ccess roads			COST	
		C000 F	otor	#4EE 00		- hours		\$210	
	Develop W	C330 Excav	аюг	\$155.00	2	- hours		\$310	
	Develop vv	C330 Excav	ator	\$155.00	1	_		\$155	
	Seeding &	Mulching Waste		ψ100,00		- -	•	¥100	
		0.2	Acres	\$628		-		\$126	
	momus =					-		7 / 100	ቀ ደር 1
	TOTAL M	IISCELLANEO	OUS COST	S					\$591
) GRA	AND TOTAL	L:							\$20,136
-Arrame	***************************************							\$/Cubic Yard	\$2.87

SUMMARY OF ROCK DEVELOPMENT AND CRUSHING COSTS PROJECT NO. Timber Sale Name: **High Tide** Tidewater Loop No. 2 Swell: Quarry: Location: NE1/4, NE1/4, Section 21 T6N, R7W W.M. Shrink: 16% County: Clatsop Loading Hopper: Yes d.mellison By: Date: 10/18/2012 **TOTAL** STOCKPILE TRUCK MEAS ROCK SIZE REJECT **GRADATION** CU. YDS. CU. YDS. CU. YDS. 3/4"-0" CR 8,933 1-1/2"-0" 5% CR 5,000 3,133 5,800 CR 5,000 4"-0" 5% 1,500 1,500 6"-0" PR 24"-6" RR 55 36" RR TOTAL CUBIC YARDS OF ROCK: 10,000 4,688 16,288 1) MOBILIZATION & SET UP: **EOUIPMENT OUANTITY RATE COST** EQUIPMENT **QUANTITY RATE** COST 4 \$163 \$652 Off Highway Dump Truck \$553 \$553 Dump Trucks \$553 Screening Plant \$553 Screening Plants \$1,406 \$1,406 Loading Hopper \$553 \$553 D8 Cat \$778 \$778 \$805 \$805 Loader D6 Cat \$1,406 Drill & Compressor \$1,406 \$2,891 Powder \$351 \$351 3 Stage Crusher \$2,891 Dump Trucks \$163 Excavator \$1,406 \$1,406 \$1,406 Excavator \$10,800 SUB TOTAL FOR MOBILIZATION **TIMES** COST EQUIPMENT SET UP **RATE** 3 Stage Crusher \$3,439 \$3,439 Screening Plants \$293 \$293 Loading Hopper \$544 \$544 Original Calibration 1 \$4,276 SUB TOTAL FOR SET UP COSTS \$15,076 TOTAL MOBILIZATION & SET UP COSTS 2) CLEARING & GRUBBING

DESCRIPTION		QUANTITY	UNIT	RATE	COST
Windrow top of Quarry	(C330)	3	hours	\$155	\$465
Clear sides/Face of Quarry	(C330)	4	hours	\$155	\$620
Haul to bu	ırn (DJB)	4	hours	\$127	\$508
Pile & burn crusher site	STATE OF THE PROPERTY OF THE P	0.912	acres	\$2,702	\$2,464
Open Access Roads	(C330)	4	hours	\$155	\$620
Move-in Fire Truck for the burn	ing of	1	ea	\$190	\$190
piled clearing debris					

\$4,867

TOTAL CLEARING & GRUBBING COSTS

3) EXCAVATION	N.							
	IAL DESCRIPTIO	N		QUANTITY	UNIT	RATE	COST	
	top of Quarry Over							
		mmon drif	t)	1,000	cyds.	\$2.10	\$2,100	
Haul side	es of quarry overbu	rden to wa	ste	1,000	cyds.	\$2.19	\$2,190	
TOTAL	EXCAVATION (COSTS						\$4,290
4) DEVELOP RO	CK							
,			METHOD	%	QUANTITY	RATE	COST	
ROC	CK SUMMARY							
Type	Cu. yd. Vol.		Ripping	Analysis (1997)		\$2.20		
crushed	14,733	90%	Drill & shoot	100%	17,025	\$2.70	\$45,967	•
pit run	1,500	9%	Oversize red	5%	812	\$5.80	\$4,708	
rip rap	55	0%	Other					
Total	16,288							
reject	737	4.5%						Φ 5 Ω (74
TOTAL	ROCK DEVELO	PMENT	COSTS					\$50,674
CALIBRATIO	NI O TERCTENIA							
5) CALIBRATIO					NO.	\$/TEST	COST	
DESCR) Calibrate					2	\$507.00	\$1,014	
Calibrate						Ψ307.00	Ψ1,014	
Test	5				6	\$57.30	\$344	
Test						Ψ07.00	Ψ511	
1681					Emilion Company			
TOTAL	CALIBRATION	& TESTI	NG COSTS					\$1,358
6) FEEDING & L	OADING							
0) FEEDING & L	OADING		CU. YD.	1	COST		TOTAL	
DESCR	PTION		QUANTITY		CU. YD.		COST	
Dig & Fe			15,470		\$0.89		\$13,843	
<u> </u>	iod 1100K		,					
			Andrew Control	J		•		
TOTAL	FEEDING & LO	ADING C	COSTS					\$13,843
7) ROCK CRUSH	HING							
ROCI	K ROCK		CU. YD.	CRUSHER	HOURLY	RATE	TOTAL	
SIZE	TYPE		QUANTITY	TYPE	PRODUCTION	CU. YD.	COST	
3/4"-()" crushed			3 stage w/s				
1-1/2"-			8,933	3 stage w/s	110	\$3.54	\$31,590	
411.01	l amada ad		5 900	2 stoge w/s	140	\$2.48	\$14376	

5,800

2 stage w/s

4"-0"

crushed

TOTAL ROCK CRUSHING COSTS

\$14,376

\$45,966

140

\$2.48

8) STOC

STOCKPILING								
STOCKPILE								
Equipment	Hours	Rate	Total		a mi (GV)	A/GTTTT 1	m . 1	
Dozer		\$120.00		Rock	for Floor (CY)	\$/CY Haul	Total	
Compactor		\$72.00						
Grader	1	\$100.00	\$100.00					
Excavator		\$155.00						
				\$100.00			# 100	
SUB TOTAL							\$100	
			ı	" o I				
HAUL & STO		_		# of	arr rma l	D 4 MD 1	COCT	
STOCKPILE	LOCATION	1	SIZE	TRUCKS	CU. YDS.	RATE	COST	
1,			1 1/0" 0"	A	5 000	фо г 4	#30. 250	
2. Tidewater Loc			1-1/2"-0"	4	5,800	\$3.51	\$20,359	
3. Tidewater Loc	op		4"-0"	4	5,800	\$3.51	\$20,359	
4.		- Aa	,					
SUB TOTAL	,						\$40,719	
TOTAL STO	OCKPILING	GCOSTS						\$40,81
CRUSHER SITE C		TION						
DESCRIPTION			Qty	Unit	Rate		COST	
Level Crushe		(Tractor)	4	hrs.	\$158	,	\$632	
Subgrade cor		(Tractor)	3	hrs.	\$158		\$474	
Load, haul & j	place pit-run		1,500	c.y.	\$1.64	,	\$2,460	
Compaction		(Tractor)	1,500	c.y.	\$0.63	*	\$945	
		* \$3	1.54/sta./50 cy = 3	\$0.6308				
SUB TOTAL							\$4,511	
TOTAL CR	USHER SIT	E						\$4,51
)	C C C C C C C C							
) MISCELLANEOU							COST	
DESCRIPTION								
			rial at the waste	area.		,	\$1,613	
\$2.19	C.Y.	737	C.Y.	ALC: THE PARTY OF		,		
						,		
Monto Aron C	'ampaction							

10) MIS

DESCRIPTION			COST
Load, Haul, and Spread the reje	ct material at the	waste area.	\$1,613
\$2.19 \C.Y.	737 C.Y.		
Waste Area Compaction			
\$0.40 \C.Y.	1,737 C.Y.		<u>\$695</u>
Seeding & Mulching Waste Area	as, Equipment Ac	cess	
0.3 acre	a	\$628 \ acre	\$188
Final Quarry Dev., Access Road	d Const., Waterba	rring, Drainage,	
Block Quarry Access			<u> </u>
(C330)	2 hours	\$155	\$310

11) GRAND TOTAL:

\$184,211

\$2,806

\$/Cubic Yard

\$12.50

	HIGH	ITIDE					
Work Description	Vacating Costs (S	Segment V ±∪. ۲.s	/1 to V2) C330	D10 trk	Labor	Bales	Culvert
Begin vacating	0+00						
Unblock existing road			0.25		121		
Reblock existing road	7.44		0.25				
Remove Culvert and fill	5+00						
Waste fill material on site			3.5				
Remove culvert/load			0.5	0.5			
Culvert Disposal Seed & mulch				3	2	5	
Seed & mulch End Vacating	5+00						
							ļ
						ļ	
						<u> </u>	
Total Quantity Miscellaneous			111		177.5	2	
Total Quantity (Hours)			4.5	3.5	2	a s	
Hourly Rates			\$155	\$79	\$40	\$10	
Sub Total Dollars		ar Albadol Disa	\$698	\$277	\$80	\$20	
Total Dollars							\$1,074

Vacating (egment V: ±C.Y.s		D40 4-1-		Dalaa	Culved
Work Description	Station	±0.1.8	C330	D10 trk	Labor	Bales	Culvert
Begin vacating	0+00		1	2			
Unblock Road							
Block Road			0.5			**************************************	
Partial Grub stump			0.5	4			
Old culvert disposal			0.25	4			
Install Temporary Culvert	0+95						40
Purchase (18" Dia)							40
Install			2		1		
Remove Temporary Culvert/Fill		100	2	2			
Develop Stream Channel			2				
Seed and Mulch stream bank/waste					1	5	
Close and Open existing waterbar	2+68		0.5				
Remove Culvert and Fill	5+82		1				
Fill material disposal		60	1				
Develop Stream Channel			0.5				
Seed and Mulch stream bank/waste					0.5	2	
Old culvert disposal			0.25				
Close and Open existing waterbar	6+32		0.5				
Remove Culvert and Fill	7+82		3.5				
Fill material disposal		375		5			- MANAGEMENT -
Develop Stream Channel			2				
Seed and Mulch stream bank/waste					2	8	
			0.25				
Old culvert disposal	8+44	40	1				
Remove Culvert and Fill	0744	40	0.5				
Fill material disposal			0.5				
Develop Stream Channel			0.5		0.5	2	
Seed and Mulch stream bank/waste			0.25		0.5		
Old culvert disposal	0.00		0.25				
Close and Open existing waterbar	8+82	40	0.5				ļ
Remove Culvert and Fill	9+42	40	1.5				
Fill material disposal			0.5				
Develop Stream Channel			0.5				
Seed and Mulch stream bank/waste					0.5	2	
Old culvert disposal			0.25				
Close and Open existing waterbar	10+82		0.5				
Remove Culvert and Fill	11+32	60	1				
Fill material disposal			0.5	1			
Develop Stream Channel			0.5				
Seed and Mulch stream bank/waste					0.5	1	
Old culvert disposal			0.25				
Sidecast Pull Back	12+33		1		1.5	5	
Close and Open existing waterbar	13+12		0.5				
Remove slump	13+72	300	3				
Place slump material	<u> </u>		2				
Seed and much slump/waste	15+50			<u> </u>	1.5	5	
End Vacating						<u> </u>	
Construct Waterbar			0.25				
Total Quantity Hours			32.75	14	9		
Total Quantity (Misc)		975	1.65	15-4/6565		18	40
		9,19	\$155	\$79	\$40	10 20 20 20	
Hourly Rates Quantity Rate			ΨΙΟΟ	Ψ/Θ	ΨΤΟ	\$10	\$10.73
wantity rate	(ACED A 1940)[1] [1]	병의 항 경우스 가격기	\$5,076	\$1,106	\$360	\$180	\$429
Sub Total Dollars	PROPERTY OF THE PROPERTY OF THE	(1) (1) (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	1 45 11/6	1 3 1 11 10	1 7 7 7 1	1 3 1211	

	Vacatin	g Costs	(Point V	5)			
Work Description	Station	±C.Y.s	C330	D10 trk	Labor	Bales	Culvert
Begin vacating							
Block Road			1				
Remove culvert and fill		40	1.5			0-25000000	
Old culvert disposal			0.25	3			
Seed and mulch					1	3	
Total Quantity Miscellaneous	The state of	40	11.				
Total Quantity (Hours)			2.75	3.0	1	3	41. 1,1. 14.
Hourly Rates		1	\$155	\$79	\$40	\$10	
Sub Total Dollars			\$426	\$237	\$40	\$30	
Total Dollars	V.						\$733

HAUL and STOCKPILE COST

SALE NAME: High Tide

QUARRY: Tidewater Loop No. 2

ROCK TYPE: Crushed

Location 1. 0					(ONE W	AY H	AUL IN	MILE	S				
	50	MPH	30	MPH	25	MPH	20	MPH	15	MPH	10	MPH	5	MPH
													0	.10
				•										
Truck type: D12	No. 1	trucks: _		2										
Delay min.: 15	Effic	ciency:	7	5%				Ave	haul:	\$2.	00	/cy		
		_						Lo	ad:	\$0.	00	/cy		
Truck type: D12	No. 1	trucks:						Stoc	kpile:	\$1.	35	/cy		
Delay min.: 12	Effic	ciency: _	7	5%										
							_							
Truck type:		trucks: _					Pro	duction	n: cy/d	iay =	6	32		
Delay min.: 10	Effic	ciency: _	7	5%										
Location 1. 0				Haul a	nd S	tockpil	e Cos	st			\$3.34	/cy		

Location 2. Tidewater I						(ONE W	AY H	AUL IN	MILE	S				
1-1/2"-0"		50	MPH	30	MPH	25	MPH	20	MPH	15	MPH	10	MPH	5	MPH
								0.	.20	0	.43	0	.15	C	.15
Truck type:	D20	No.	trucks:												
Delay min.:	15	•	ciency:	7	5%				Ave	haul:	\$2.	61	/cy		
		•							Lo	ad:	\$0.	00	/cy		
Truck type:	D12	No.	trucks:		4				Stoc	kpile:	\$0.	90	/cy		
Delay min.:	12	Effic	ciency:	8	5%										
Truck type:	D10	No.	trucks:					Pro	duction	n: cy/d	lay =	ç	67		
Delay min.:	10	Effic	ciency:	7	5%										
Location 2.	Tidewater I	Loop			Haul a	and S	tockpil	e Cos	it		(\$3.51	/cy		

Location 3. Tidewater Loop					(ONE W	AY H	AUL IN	MILE	S				
4"-0"	50	MPH	30	MPH	25	MPH	20	MPH	15	MPH	10	MPH	5	MPH
							0.	.20	0	.43	0	.15	0	.15
Truck type: D20	No. 1	trucks: _												
Delay min.: 15	Effic	ciency:	7	5%				Ave	haul:	\$2.	61	/cy		
-		_						Lo	ad:	\$0.	00	/cy		
Truck type: D12	No. 1	trucks:		4				Stoc	kpile:	\$0.	90	/cy		
Delay min.: 12	Effic	ciency:	8	5%										
		_												
Truck type: D10	No. 1	trucks:					Pro	duction	n: cy/c	ay =	9	67		
Delay min.: 10	Effic	ciency:	7!	5%										
Location 3. Tidewater L	.oop	_		Haul a	and S	tockpil	e Cos	t			\$3.51	/cy		

SALE NAME: High Tide PROJECT:

QUARRY:

No. 2

Tidewater Loop No. 2

CRUSHED ROCK COST

DATE:

MATERIAL: Crushed

11/14/12 d.mellison

Cubic Yards Bedding Curves Total Turnout | Leveling | Junction | Segment Stations Traction Running 209 209 152+12 11 to 12 44 44 20+84 11 to 12 55 55 25+77 11 to 12 132 165 33 35+50 13 to 14 66 272 21+75 52 22 132 15 to 16 88 88 17 to 18 32+64 44 121 66 19 to 110 17+36 11 44 47 33 22 832 686 27+45 111 to 112 715 18 198 11 33 34+98 455 I11 to I13 125 95 8 22 11+75 1C to 1D 22 125 13+70 95 8 1E to 1F 1G to 1H 22 22 11 to 1J 1+00 22 136 114 1K to 1L 15+20 19+00 22 22 1M to 1N 22 22 10 to 1P 12+50 130 86 44 3A to 3B 4+50 22 22 2+50 3D to 3E 22 3F to 3G 1+00 22 22 22 3H to 3I 11+00

311 (0.3)	11700										
Grand Total		356	1,293	78	792	300	275	55	3,149	3,149	
Road	04-41	Cubic			ONE W	AY HAUL IN	MILES			Total	
Segment	Stations	Yards	50 MF	H 30 MP	H 25 MPH	20 MPH	15 MPH	10 MPH	5 MPH		
I1 to I2	152+12	209			2	3.00	0.40	0.20	0.20	6.01	
I1 to I2	20+84	44			2.01	2.00	0.40	0.20	0.20	4.81	
I1 to I2	25+77	55			1.57	2.00	0.40	0.20	0.20	4.37	
13 to 14	35+50	165			1.81	2.00	0.40	0.20	0.20	4.61	
15 to 16	21+75	272			1.36	1.50	0.40	0.20	0.20	3.66	
17 to 18	32+64	88			0.96	1.00	0.40	0.20	0.20	2.76	
19 to 110	17+36	121			0.32	0.40	0.50	0.10	0.10	1.42	
I11 to I12	27+45	832				0.06	0.10	0.05	0.05	0.26	
I11 to I13	34+98	715			0.15	0.30	0.20	0.10	0.10	0.85	
1C to 1D	11+75	125			1.55	2.00	0.40	0.20	0.20	4.35	
1E to 1F	13+70	125			1.48	2.00	0.40	0.20	0.20	4.28	
1G to 1H]	
1I to 1J	1+00	22			1.44	2.00	0.40	0.20	0.20	4.24	
1K to 1L	15+20	136			1.23	2.00	0.40	0.20	0.20	4.03	
1M to 1N	19+00	22			1.12	1.00	0.40	0.20	0.20	2.92	
10 to 1P	12+50	22			1.01	1.00	0.40	0.20	0.20	2.81	
3A to 3B	4+50	130			0.32	0.40	0.50	0.10	0.10	1.42	
3D to 3E	2+50	22			0.32	0.40	0.50	0.10	0.10	1.42	
3F to 3G	1+00	22			0.18	0.30	0.50	0.10	0.10	1.18	
3H to 3I	11+00	22			0.08	0.30	0.50	0.10	0.10	1.08	
TOTAL		3,149	l							AVERAGE	
	STA./NO.	•								HAUL	
CUBIC YARD	WEIGHTED	HAUL			0.70	0.92	0.29	0.13	0.13	2.16	
	Average Round Trip Distance (miles) 4.33										

ROCK HAUL:

Truck type:	D20	No. trucks:	3	_		
Delay min.	8	Efficiency:	85%	Ave haul:	\$2.21	/cy
				*Load:		/cy
Truck type:	D12	No. trucks:		Spread:	\$0.78	/cy
Delay min.:	6	Efficiency:	85%			

D10 Production: cy/day = 1,084 Truck type: No. trucks: Delay min.: 5 Efficiency: 85%

CRUSHED ROCK HAUL COSTS

3,149 cy @

\$2.99 /cy

PIT RUN ROCK COST

		Loop No. 2		MATE	ERIAL:	Waste		BY:	10/1 d.me	ellison
					Cubic	Yards				1
Segment	Stations	Base	Landing	Turnout	Turnaround		Waste	Misc	Total	
Overburden							500		500	1
Reject					 	-	680		680	1
							ALL CONTRACTOR OF THE PARTY OF			
Grand Total										1
Road	0/	Cubic			ONE W	AY HAUL IN	MILES			Total
Segment	Stations	Yards	50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Haul
Overburden		500							0.05	0.05
Reject		680				-			0.05	0.05
					<u> </u>					
					ļi					1
										1
TOTAL	-	1,180								AVERAGE
	STA./NO.									HAUL
CUBIC YARD V									0.05	0.05
CODIO IAIND V		···AUL	L		Δ	verage Rou	nd Trip Dista	nce (miles)	0.10	0.00

ROCK HAUL:

Truck type:	D20	No. trucks:	1		
Delay min.:	8	Efficiency:	85%	Ave haul: 0.784314	/cy
				Load: \$1.41	/cy
Truck type:	D12	No. trucks:		Compaction	/cy
Delay min.:	6	Efficiency:	85%	* Non-constitution of the second of the seco	•

Production: cy/day = 1,020

PIT RUN ROCK HAUL COSTS

cy @ \$2.19 /cy

RIP RAP ROCK COST

SALE NAME:	High Tide			DATE:	11/15/12
PROJECT:	No. 2	MATERIAL:	Rip Rap	BY:	d.mellison
QUARRY:	Tidewater Loop No. 2				

					Cubic	Yards	**************************************		, , , , , , , , , , , , , , , , , , ,	
Segment	Stations	Dissapator	Armor					Misc	Total	
13 to 14	35+50	33							33	
15 to 16	21+75	11							11	
19 to 110	17+36	11							11	
							·			

			wasseria							}
										1
Grand Total		55							55]
Road	a	Cubic			ONE W	AY HAUL IN	MILES			Total
Segment	Stations	Yards	50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Haul
13 to 14	35+50	33			1.81	2.00	0.40	0.20	0.20	4.61
15 to 16	21+75	11			1.36	1.50	0.40	0.20	0.20	3.66
I9 to I10	17+36	11	AL UNIONET		0.32	0.40	0.50	0.10	0.10	1.42
		<u> </u>								
									· · · · · · · · · · · · · · · · · · ·	1 .
]
	<u> </u>		12 W 501							-
OTAL		55								AVERAG
	STA./NO.	CU. YD.								HAUL
UBIC YARD					1.42	1.58	0.42	0.18	0.18	3.78
					Α	verage Rou	nd Trip Dista	nce (miles)	7.56	

ROCK HAUL:

Truck type:	D12	No. trucks:	3		
Delay min.:	6	Efficiency:	85%	Ave haul: \$4.03	/cy
•				Load: \$1.38	/cy
Truck type:	D10	No. trucks:		*Develop:	/cy
Delay min.:	5	Efficiency:	85%		

Production: cy/day = 470

* Development is in the crushing.

RIP RAP ROCK HAUL COSTS

55 cy @

\$5.42 /cy

PIT RUN ROCK COST

SALE NAME:	High Tide			DATE:	10/18/12
PROJECT:	4	MATERIAL:	Shot Rock	BY:	d.mellison
QUARRY:	Tidewater Loop No. 2				

				· · · · · · · · · · · · · · · · · · ·	Cubic	Yards]
Segment	Stations	Base	Landing	Turnout	Turnaround	Junction	C. Site	Misc	Total	
Crusher Site			İ				1,500		1,500]
		-,,								
]
]

Grand Total							1,500		1,500	
Road		Cubic								Total
Segment	Stations	Yards	50 MPH	30 MPH		20 MPH		10 MPH	5 MPH	1
Crusher Site		1,500	00 1111 11					0.05	0.05	0.10
Ordener elle		1,,000								1
										1
									Haran -	1
										1
										1
										1
										1
										1
										1
										1
	l									1
ΓΟΤΑL		1,500	1							AVERAGI
	STA./NO.	CU. YD.	1							HAUL
CUBIC YARD	WEIGHTE	HAUL						0.05	0.05	0.10
					Δ	verage Rou	nd Trip Dista		0.20	

ROCK HAUL:

Truck type:	D20	No. trucks:	1			
Delay min.:	8	Efficiency:	85%	Ave haul:	\$0.86	/cy
Ť		•		Load:	\$0.30	/cy
Truck type:	D12	No. trucks:	1	Spread:	\$0.48	/cy
Delay min.:	6	Efficiency:	85%			
Truck type:	D10	No. trucks:		Production: cy/day	y =	1,658
Delay min.:	5	Efficiency:	85%			

PIT RUN ROCK HAUL COSTS 1,500 cy @ \$1.64 /cy

CRUSHED ROCK COST

DATE: __ 11/19/2012 SALE NAME: _____PROJECT: High Tide BY: Kevin Berry MATERIAL: 6"-0" Pit-run No. 1 QUARRY: West Tidewater

											_
Road	C4-4!	Cubic					AY HAUL IN				Total
Segment	Stations	Yards	50 MPH	30	MPH	25 MPH	20 MPH	15 MPH	10 MPH		Haul
1A	162.0	50.0				0.9	1.1	0.8	0.3	0.2	3.30
1B	159.0	50.0				0.9	1.1	0.7	0.3	0.2	3.20
1C-1D	156.0	856.0				0.9	1.1	0.6	0.2	0.2	3.00
1Y1Z	159.0	145.0				0.9	1.1	0.7	0.4	0.2	3.30
1E-1F	155.0	979.0				0.9	1.1	0.7	0.3	0.2	3.20
1G-1H	156.0	157.0				0.9	1.1	0.7	0.3	0.2	3.20
1I-1J	164.0	113.0				0.9	1.1	0.6	0.3	0.2	3.10
1K-1L	176.0	1102.0				0.9	1.3	0.8	0.4	0.2	3.60
1M-1N	216.0	1297.0				1.1	1.6	1.0	0.5	0.3	4.50
10-1P	227.0	910.0				1.1	1.6	1.1	0.6	0.3	4.70
2A	50.0	50.0				1.0	1.3	1.0	0.4	0.2	3.90
2B	50.0	50.0				1.0	1.3	1.1	0.4	0.3	4.10
3A-3B	276.0	284.0				1.1	2.1	1.6	0.4	0.3	5.50
3C	286.0	50.0				1.1	2.1	1.7	0.5	0.3	5.70
3D-3E	281.00	208				1.1	2.1	1.7	0.4	0.3	5.60
3F-3G	281.00	113				1.1	2.1	1.7	0.5	0.3	5.70
3H-3I	289.00	113				1.1	2.1	1.8	0.5	0.3	5.80
											<u> </u>
]
]
]
	-										
	<u> </u>										
TOTAL	3,243.00	6,527	1								AVERAGE
	STA./NO.		1								HAUL
CUBIC YARD						1.0	1.4	0.9	0.4	0.2	3.9
						P	verage Rou	nd Trip Dista	ance (miles)	7.89	

ROCK HAUL:

Truck type:	D20	No. trucks:	1		
Delay min.:	8	Efficiency:	85%	Ave haul: \$4.03	/cy
·				Load: \$0.67	/cy
Truck type:	D12	No. trucks:	3	Spread: \$1.18	/cy
Delay min.:	6	Efficiency:	85%		
Truck type:	D10	No. trucks:		Production: cy/day =	621
Delay min.:	5	Efficiency:	85%		

ROCK HAUL COSTS 6,527 cy @ \$5.88 /cy

Road Maintenance after completion of Projects

High Tide 11/19/12 Sale: Date: By:

d.mellison Road Segments to Maintain: 19 to 18, 17 to 15, 15 to 12, and West Tidewater Quarry to (Cambell) Tidewater Jct.

Type	Equipment/Rationale	Move in Rate	Hours	Rate	Cost	
	Grader 14G (onsite)		28	\$100	\$2,800	
ject	Post- Project Dump Truck 12CY (2 trucks, onsite)		15	\$79	\$1,185	
Road	FE Loader C966 (onsite) *		10	\$43	\$430	
ance	Maintenance Vibratory Roller (onsite)		28	\$77	\$2,156	
	Water Truck 2500 gallon (onsite)		28	\$89	\$2,492	
Total						\$9,063

Days	2.8
Distance(miles)	2.8
Miles/day	1.0
Production Rates	irader

^{*} Rate is without operator, truck drivers will load themselves.

High Tide TIMBER CRUISE REPORT FY 2013

1. Sale Area Location: Areas 1 through 4 are located in portions of Sections 16, 17, 20, 21, and 28, T6N, R7W, W.M. Clatsop County, OR.

2. Fund Distribution:

BOF 100%

Tax Code

8-01 (100%)

3. Sale Acreage by Area:

Area	Treatment	Gross Acres	Existing R/W	GTRA	New R/W	Stream Buffer	Net Acres	Survey Method
1	Partial Cut	266	2	0	6	45	213	GIS
2	Modified Clearcut	83	5	0	0	14	64	GIS
3	Modified Clearcut	137	4	3	1	26	103	GIS
4 R/W	Right-of-way	7					7	LxW
TOTALS		493	11	3	7	85	387	

4. Cruisers and Cruise Dates:

All areas were cruised by Ty Williams, Derek Bangs, Kevin Berry, and Dave Rygell on 10/2/2012 and 10/03/2012.

5. Cruise Method and Computation:

<u>Area 1</u> is a Partial Cut and was variable plot cruised using a 33.61 BAF. These plots are located on a 5 chain by 15 chain grid, with every third plot measured and graded. A total of 32 plots were sampled, with 11 measured and graded plots, and 21 count plots. Data was collected on Corvallis MicroTechnology (CMT) data collectors, and were downloaded to the Atterbury <u>Super A.C.E.</u> program in District for computing. See the attached <u>Cruise Design</u> for more details on the cruise method. The cruise calculations were processed in the Astoria district office.

<u>Areas 2 and 3</u> are Modified Clearcut units and were variable plot cruised using a 40 BAF. These plots are located on a 4 chain by 9 chain grid, with every third plot measured and graded. A total of 42 plots were sampled, with 16 measured and graded plots, and 26 count plots.* Data was collected on Corvallis MicroTechnology (CMT) data collectors, and were downloaded to the Atterbury <u>Super A.C.E.</u> program in District for computing. See the attached <u>Cruise Design</u> for more details on the cruise method. The cruise calculations were processed in the Astoria district office.

^{*} Statistic reports "cruise" and "count" plot totals vary due to one count plots with a measured and graded snag, one count plot with a measured and graded Sitka spruce, one count plot with 2 measured and graded Red alder, and one count plot with a measured and graded Cedar leave tree.

AREA	CRUISE	TRACT	TYPE	ACRES
1	Htide	AREA1	Take	213
2 and 3	Htide	AREA23	Take	167
4 R/W	Htide	AREA1	R/W	7

6. Timber Description:

Area 1 is an "auto-mark" thinning (SDI 32) of second growth Douglas-fir approximately 40 years of age with remnant Western hemlock and Fir inclusions. The "biggest and best" trees were recorded as "leave" trees to meet a target residual basal area of 130 ft²/acre. The average Douglas-fir tree size to be harvested is 13.6 inches DBH, with an average height of 48 feet to a merchantable top (6 inch d.i.b.). The average Hemlock tree size is 21.7 inches DBH and 62 feet to a merchantable top (6 inch d.i.b.). The net volume per acre to be harvested is 10.2 MBF.

Areas 2 and 3 are modified clearcut units, approximately 70 to 80 year-old, consisting of Douglas-fir, and Western hemlock with minor amounts of Red alder, Sitka spruce, and Western red cedar. The average Douglas-fir tree size to be harvested is 24.9 inches DBH, with an average height of 92 feet to a merchantable top (6 inch d.i.b.) The average Western hemlock/true-fir tree size is 17.8 inches DBH and 63 feet to a merchantable top (6 inch d.i.b.) The average Red alder tree size 17.5 inches DBH and 60 feet to a merchantable top (6 inch d.i.b.) The average Sitka spruce is 24.0 inches DBH and 46 inches to a merchantable top (6 inch d.i.b.) The net volume per acre to be harvested is 54.1 MBF.

<u>Area 4 R/W</u> is similar to the timber description mentioned above for Area 1. The average volume (net) is approximately 25.8 MBF/acre.

7. Statistical Analysis and Stand Summary

Statistics for Stand B.F. volumes

Area	Estimated CV	Target SE%	Actual CV	Actual SE%
1 (PC)	40%	13%	47.6%	8.4%
2 and 3 (MC)	45%	8%	34.1%	5.3%

8. Volumes by Species and Log Grade:

Annrovalor

Volumes by Species and Grade for All Sale Areas: (MBF) Volumes do not include "in-growth."

Species	DBH	Net Vol.	2 Saw	3 Saw	4 Saw	Camp Run	% D & B	% Sale
Douglas-fir	18"	8,951	6,405	2,154	392			
Hemlock/True-fir	18"	2,302	1,502	734	66			
Red Alder	17"	123				123		
Spruce	24"	8		8				
TOTALS		11,384	7,907	2,896	458	123		

<i>3</i> .	Appiovais.		

repared by: Dave Rygell/D.Bangs Date: 2/06/13

Unit Forester Approval: 4/1/13

10. Attachments: Cruise Designs and Maps - 6 pages

Volume Reports - 4 pages Statistics Reports - 5 pages Log Stock Tables - 3 pages Stand Table Summary – 2 pages

CRUISE DESIGN ASTORIA DISTRICT

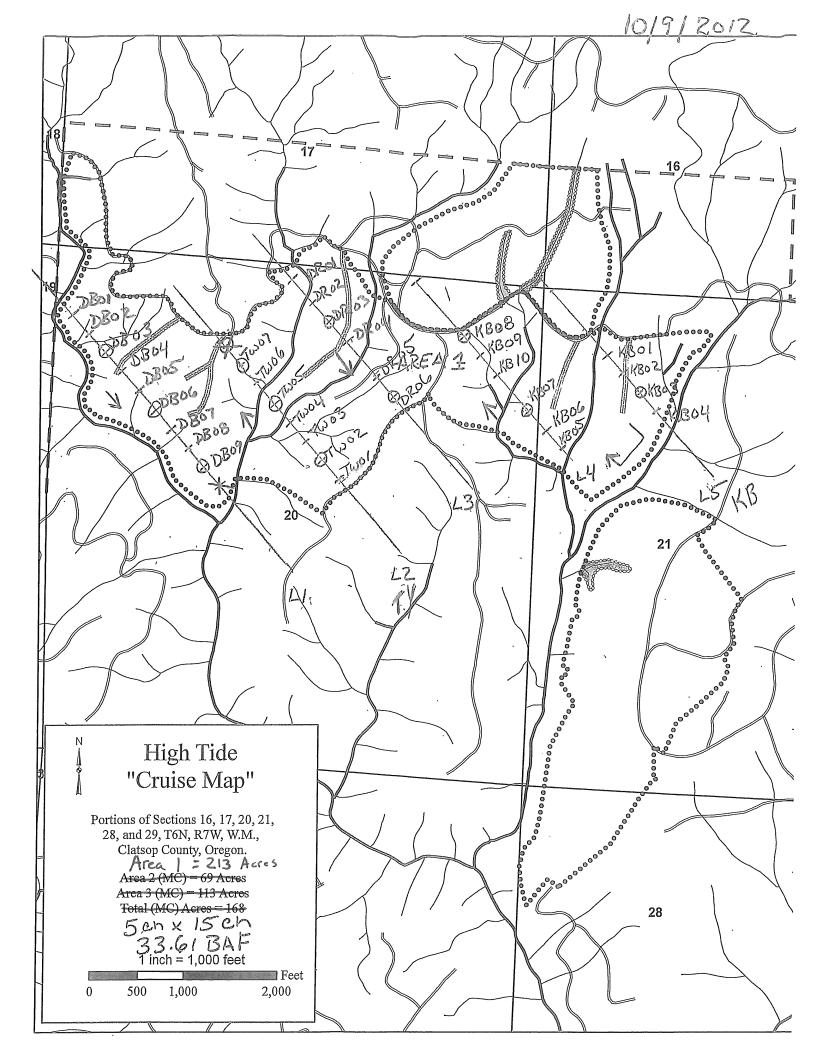
Sale Name: _	High Tide	\$100 ASSESSMENT 1.5 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	Area(s)	11	
Harvest Type:	Partial cut				
Approx. Cruise	e Acres:	223 Estimate	ed CV% <u>40</u>	Net BF	SE% Objective 13 Net BF
Planned Sale	Volume: <u>1.5</u>	MMBF Estimate	d Sale Area V	/alue/Acre:	\$2,100
Determine	"Automark" tl			•	(10 grade, 20 count); for sale value; Determine
The BA tar using yello buffer or ar leave trees	uises: BAF _ Cruis Cruis Grad get is 120 sq w paint on grad n existing roa s and count to	e Line Direction(see Line Spacing _see Plot Spacing _see/Count Ratio _see/Count Ratio _see See See See See See See See See See	15 chains 5 chains 1:2 e trees per plose all take and in and continuted tree basal are	s ot. Mark Led leave tree le. All ceda ea. Grade a	eave trees with an "L" es. If a plot lands in a ars and hardwoods are alder as camprun- nate diameter and total
O T M					

C. Tree Measurements:

- 1. Diameter: Minimum DBH to cruise is ___8_" for conifers and __10"_ for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- **2.** Bole Length: Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. Top Cruise Diameter (TCD): Minimum top outside bark for conifer is <u>7</u>" or <u>40</u> % of dob at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh.
- **4.** Form Factors: (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

- 5. Tree Segments: Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.
- 6. Species, Sort, and Grade Codes: A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Big leaf maple). Marked "wildlife trees and Conifer over 40" DBH," add an "L" to the species code (such as DL, HL, CL, etc.). B. Sort: Use code "1" (Domestic). C Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull; 9 = Utility Hardwoods: #2 Sawmill = 12" + scaling diameter; #3 Sawmill = 10 and 11"; # 4 Sawmill = 8 and 9".
- 7. Deductions: Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.
- 8. Standard Field Procedures: Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line number on the ribbon. At each plot, tie <u>yellow</u> flagging above eye level near plot center and another <u>yellow</u> flagging around a sturdy wooden stake marking plot center. On each <u>yellow</u> flagging, write the plot identification number. Between plots, along the cruise line, tie <u>blue</u> flagging at intervisible points. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in <u>yellow</u> paint.
- **9. Cruising Equipment:** Relaskop Rangefinder, Diameter Tape,Biltmore Stick, Compass, Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.
- **10.Attachments:** A. <u>Cruise Map</u> (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by	: Kevin Berry
Approved by:	Mill
Date:	10/4/2112



CRUISE DESIGN ASTORIA DISTRICT

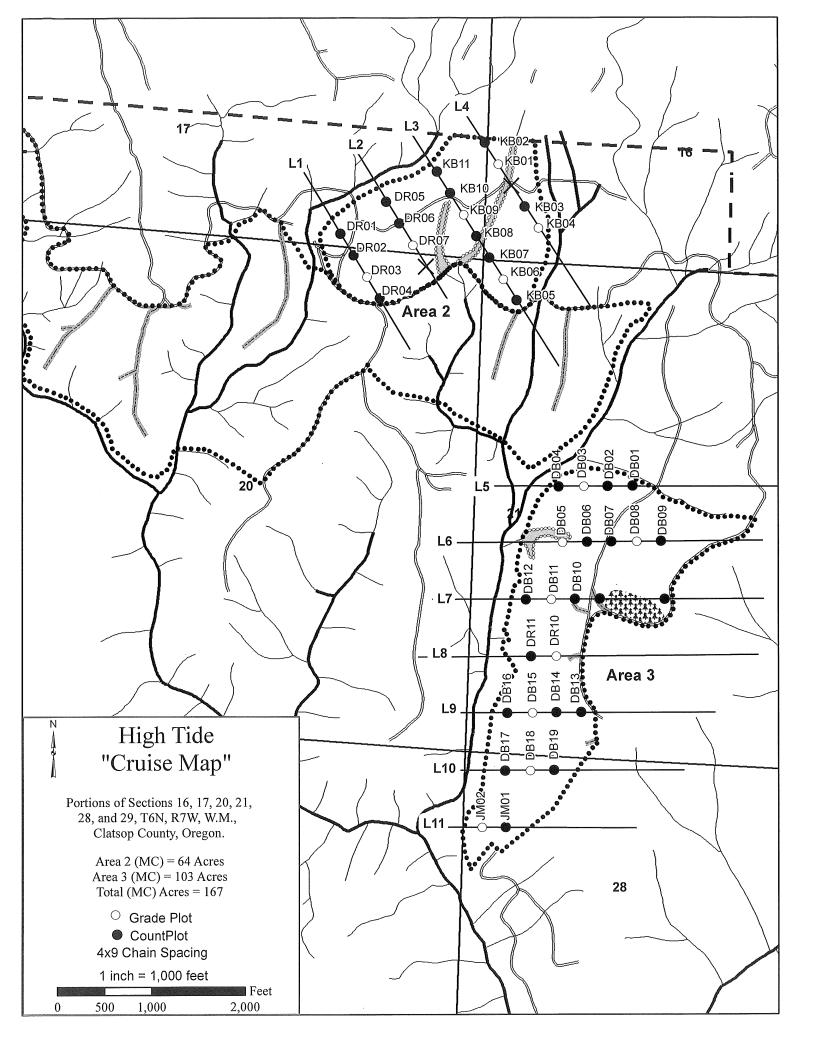
Sale Name: _	High Tide		Area(s)	2 &3	_
Harvest Type:	Modified Cle	<u>earcut</u>				
Approx. Cruise	Acres:	168 Es	timated CV%	% <u>45</u>	_Net BF SE%	Objective 8 Net B
Planned MC S	ale Volume:_	7.20 MMB	<u>F</u> Estimated	Sale Area	a Value/Acre:	\$15,750
Determine		r sale value	; Determine			grade, 31count); ecies and sizes;
B. <u>Cruise Des</u> 1. Plot Cru	ign: iises: BAF _₄	40				
					E, Area 3 E-	W
			cing9			
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		e/Count Rat				
						trees over 48"
<u>DBH as lea</u>	<u>ve. Record a</u>	Il snags as	SN and reco	ord diamet	er and total h	eight.

C. Tree Measurements:

- 1. Diameter: Minimum DBH to cruise is <u>8</u> " for conifers and <u>10"</u> for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
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- 5. Tree Segments: Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.
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- 7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.
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- **10. Attachments:** A. <u>Cruise Map</u> (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design	n by: Keyin Berry/Dave Rygell
Approved by:	Willim
Date:	9/28/12



TC	PSPCSTGR		S	pecies,	Sort G	rade - Boar	d Fo	ot Vo	olum	es (P	roject	t)						
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Spp	Trt ad	BdFt	Def%	Gross	Net	Net MBF	4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	Ft	Lf	/Acre
D D D	DOCU DO2S DO3S DO4S	71 24 5	100.0 2.5 .7	1,063 16,977 5,603 1,013	16,551 5,565 1,012	6,405 2,154 392		2 95 93	31 5 3	67	1 3 17	9 10 83	16 14 0	74 73	4 37 36 24	436 88 32	0.00 2.47 0.74 0.45	17.1 38.0 63.2 31.9
D	Totals	79	6.2	24,655	23,128	8,951		28	24	48	2	12	15	71	30	154	1.22	150.2
H H H	DOCU DO2S DO3S DO4S	65 32 3	100.0 5.0 2.7 4.3	334 4,087 1,949 178	3,882 1,896 170	1,502 734 66	0	88 100	47 12	52	2 5 24	6 9 52	11 19	81 67 24	18 36 34 20	316 88 25	0.00 1.98 0.86 0.47	5.6 12.3 21.7 6.9
Н	Totals	20	9.1	6,547	5,949	2,302	0	31	35	34	3	8	13	75	30	128	1.12	46.5
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A A	DOCU DOCR	100	100.0	14 319	319	123		39	61		3	30	11	56	6 32 27	110	0.00 1.03	.7 2.9 3.6
	Totals tals	1	4.1 6.8	333 31,555	319 29,415	123	0	39 29	26	45	3	11	15	71	30	147	1.19	200.4

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D	DO	3S	61		5,176	5,176	1,102	100			1	6	12	81	37	80	0.64	64.4
D	DO	4S	16		1,316	1,316	280	100			14	86			24	30	0.43	44.3
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н	DO	2S	83	2.0	1,453	1,424	303		32	68				100	38	500	2.47	2.8
Н	DO	3S	17		286	286	61	100			35			65	33	70	1.02	4.1
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D D	DO DO	CU 2S	84	2.6	2,170 36,389	35,452	5,920		2	26	72	1	9	16	73	7 37	473	0.00	17.9 74.9
D D	DO DO	3S 4S	14 2	1.4	5,947 564	5,866 564	980 94		89 72	11 14	14	4 27	14 73	16	65	34 22	99 40	0.90 0.55	59.5 14.0
D H	Totals DO	CU	77	7.1	45,070 770	41,881	6,994		15	24	61	2	11	16	71	31 18	252	0.00	166.3
H H H	DO DO DO	2S 3S 4S	61 35 4	5.8 2.9 4.3	7,514 4,123 411	7,078 4,002 393	1,182 668 66	0 0	86 100	52 13	48	2 2 24	7 10 52	14 21	77 67 24	36 34 20	287 90 25	1.90 0.84 0.47	24.3 44.3 15.9
H	Totals	43	21	10.5	12,818	11,473	1,916	0	34	37	30	3	10	16	72	30	117	1.06	98.3
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S	DO	3S	100		45	45	8		100						100	40	150	1.95	.3
S	Totals		0		45	45	8		100						100	40	150	1.95	.3
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T06N Twp 06N			Sec	Tract AREA1	ROW	Type 00Pe			lots 32		_	le Tree 66	s	C 1	uFt	T06 BdF W		W S20 T	OOPC
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Spp	S So T rt	Gr ad	Net BdFt	Bd. Def%	. Ft. per A Gross	cre Net	Total Net MBF	Log 4-5 6			a. 5 17+	1	g Ler 21-30	_	36-99	Ln Ft	Bd Ft	CF/ Lf	Logs Per /Acr
D	DO	CU		00.0	403											3		0.00	18
D	DO	2S	44	1.7	10,227	10,058	70		8	46	45		7	16	76	36	306	2.00	32
D	DO	3S	45	1.6	10,385	10,220	72	ç	97	3		1	5	20	74	37	87	0.73	116
D	DO	4S	11	1.5	2,471	2,433	17	10	00			16	82	2		24	29	0.45	83
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Н	DO	2S	78	.5	2,451	2,438	17			10	90		13	2	85	38	594	3.17	4
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Н	DO	4S	1		30	30	0	10	00			100				17	20	0.47]
H '	Totals		12	3.8	3,233	3,111	22	2	22	8	70	3	13	1	82	30	215	1.71	14
Туре То	otals			3.4	26,719	25,821	181	5	53	20	26	2	14	15	69	30	97	0.89	266

	TATS)JECT ROJECT		ISTICS IDE			PAGE DATE	1 2/6/2013
TWP	RGE	SC	TRACT		TYPE		A	CRES	PLOTS	TREES	CuFt	BdFt
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						TREES		ESTIMATED TOTAL		PERCENT SAMPLE		
		F	PLOTS	TREES		PER PLO	Γ	TREES		TREES		
TOT	AL		106	608		5.7						
CRU	ISE		36	202		5.6		38,791		.5		
DBH	COUNT											
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COU			64	396		6.2						
BLA			6									
100 %	6							000				
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			MPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	
	Wednesday	Т	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
	G FIR		155	75.5	18.2	63		137.0	24,655	•	5,695	5,520
	MLOCK		43	22.9	18.2	63		41.5	6,547	•	1,657	1,574
R AL			3	1.7	17.5	60		2.9	333		100	96
TOT	RUCE		1 202	.1 100.2	24.0 18.2	46 <i>63</i>		.4 181.7	20 31,555		10 <i>7,462</i>	10 <i>7,201</i>
		. 1 .		OF 100 1	HE VULU	ME WILL	J BE WII	THIN THE SAM	MPLE ERR	.OR		
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SD: DOU	68.1 1.0 G FIR	.1 1	COEFF VAR.% 98.9	S.E.% 7.9		SAMPI OW 556	LE TREF AVG 604	ES - BF HIGH 652		# OF TREES		
SD: DOU WHE	68.1 1.0 G FIR	.1 .	COEFF VAR.% 98.9 97.1	S.E.% 7.9 14.8		SAMPI OW 556 374	AVG 604 439	ES - BF HIGH 652 504		# OF TREES		
SD: DOU WHE R AL	68.1 1.0 G FIR MLOCK	.1 .	COEFF VAR.% 98.9	S.E.% 7.9		SAMPI OW 556	LE TREF AVG 604	ES - BF HIGH 652		# OF TREES		
SD: DOU WHE R AL S SPI	68.1 1.0 G FIR MLOCK DER RUCE		COEFF VAR.% 98.9 97.1 18.8	S.E.% 7.9 14.8 13.0		SAMPI OW 556 374 162	AVG 604 439 187	ES - BF HIGH 652 504 211		# OF TREES 5	10	15
SD: DOU WHE R AL S SPI TOT	68.1 1.0 G FIR MLOCK DER RUCE AL	.1 1	COEFF VAR.% 98.9 97.1 18.8	S.E.% 7.9 14.8		SAMPI OW 556 374 162 521	AVG 604 439 187	ES - BF HIGH 652 504	;	# OF TREES 5	101	15 45
SD: DOU WHE R AL S SPI TOT	68.1 1.0 G FIR MLOCK DER RUCE AL	.1 ,	COEFF VAR.% 98.9 97.1 18.8 100.7	S.E.% 7.9 14.8 13.0 7.1	L	SAMPI OW 556 374 162 521 TREES	AVG 604 439 187 560	ES - BF HIGH 652 504 211	;	# OF TREES 5 405 # OF PLOTS	101 REQ.	45 INF. POP.
SD: DOU WHE R AL S SPI TOT CL SD:	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0	.1 1	COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.%	S.E.% 7.9 14.8 13.0 7.1 S.E.%	L	SAMPI OW 556 374 162 521 TREES	AVG 604 439 187 560 6/ACRE AVG	ES - BF HIGH 652 504 211 600	;	# OF TREES 5	101	45 INF. POP.
SD: DOU WHE R AL S SPI TOT CL SD: DOU	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR	.1 ,	COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.%	S.E.% 7.9 14.8 13.0 7.1 S.E.%	L	SAMPI OW 556 374 162 521 TREES OW 67	AVG 604 439 187 560 6/ACRE AVG 75	ES - BF HIGH 652 504 211 600 HIGH 84	;	# OF TREES 5 405 # OF PLOTS	101 REQ.	15 45
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR	.1 ,	COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4	L	SAMPI OW 556 374 162 521 TREES OW 67 19	AVG 604 439 187 560 6/ACRE AVG 75 23	ES - BF HIGH 652 504 211 600 HIGH 84 27	;	# OF TREES 5 405 # OF PLOTS	101 REQ.	45 INF. POP.
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR	.1 ,	COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.%	S.E.% 7.9 14.8 13.0 7.1 S.E.%	L	SAMPI OW 556 374 162 521 TREES OW 67	AVG 604 439 187 560 6/ACRE AVG 75	ES - BF HIGH 652 504 211 600 HIGH 84	;	# OF TREES 5 405 # OF PLOTS	101 REQ.	45 INF. POP.
SD: DOU WHE R ALL S SPI TOT CL SD: DOU WHE R ALL	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER MLOCK DER RUCE	.1 ,	COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1	AVG 604 439 187 560 6/ACRE AVG 75 23 2	ES - BF HIGH 652 504 211 600 HIGH 84 27 3	;	# OF TREES 5 405 # OF PLOTS	101 REQ.	45 INF. POP.
SD: DOU WHE R ALL S SPI TOT CL SD: DOU WHE R ALL S SPI	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER MLOCK DER RUCE		COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109	:	# OF TREES 5 405 # OF PLOTS 5	101 REQ. 10	45 INF. POP. 15
SD: DOU WHE R AL S SPH TOT CL SD: DOU WHE R AL S SPH TOT	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER RUCE	.,1	COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6 93.8	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0 100	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109	:	# OF TREES 5 405 # OF PLOTS 5	101 REQ. 10	15 45 INF. POP. 15 39 INF. POP.
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR		COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6 93.8 COEFF VAR.%	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9 9.1 S.E.% 9.4	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91 BASAL OW 124	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0 100 AREA/A	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109 ACRE HIGH 150	:	# OF TREES 5 405 # OF PLOTS 5	101 REQ. 10	45 INF. POP. 15 39 INF. POP.
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE SD:	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER RUCE AL		COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6 93.8 COEFF VAR.%	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9 9.1 S.E.% 9.4 17.7	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91 BASAI OW 124 34	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0 100 AREA/A AVG 137 41	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109 ACRE HIGH 150 49	:	# OF TREES 5 405 # OF PLOTS 5	101 REQ. 10	45 INF. POP. 15
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR		COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6 93.8 COEFF VAR.% 96.6 182.6 669.7	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9 9.1 S.E.% 9.4 17.7 65.0	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91 BASAL OW 124 34 1	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0 100 AREA/A AVG 137 41 3	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109 ACRE HIGH 150 49 5	:	# OF TREES 5 405 # OF PLOTS 5	101 REQ. 10	15 45 INF. POP. 15 39 INF. POP.
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE S SPI	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 RUCE AL RUCE AL RUCE AL		COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6 93.8 COEFF VAR.% 96.6 182.6 669.7 1029.6	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9 9.1 S.E.% 9.4 17.7 65.0 99.9	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91 BASAI OW 124 34 1 0	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0 100 AREA/A AVG 137 41 3 0	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109 ACRE HIGH 150 49 5	:	# OF TREES 5 405 # OF PLOTS 5 351 # OF PLOTS 5	101 REO. 10 88 REQ. 10	15 45 INF. POP. 15 39 INF. POP. 15
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S RI R	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 RUCE AL RUCE AL RUCE AL		COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6 93.8 COEFF VAR.% 96.6 182.6 669.7	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9 9.1 S.E.% 9.4 17.7 65.0	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91 BASAL OW 124 34 1	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0 100 AREA/A AVG 137 41 3	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109 ACRE HIGH 150 49 5	:	# OF TREES 5 405 # OF PLOTS 5	101 REQ. 10	15 45 INF. POP. 15 39 INF. POP. 15
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE S SPI	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 RUCE AL RUCE AL RUCE AL		COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6 93.8 COEFF VAR.% 96.6 182.6 669.7 1029.6	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9 9.1 S.E.% 9.4 17.7 65.0 99.9	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91 BASAI OW 124 34 1 0 167	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0 100 AREA/A AVG 137 41 3 0	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109 ACRE HIGH 150 49 5		# OF TREES 5 405 # OF PLOTS 5 351 # OF PLOTS 5	101 REQ. 10 88 REQ. 10	15 45 INF. POP. 15 39 INF. POP. 15
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD:	68.1 1.0 G FIR MLOCK DER RUCE AL 1.0	.,1	COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6 93.8 COEFF VAR.% 96.6 182.6 669.7 1029.6 85.8 COEFF VAR.%	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9 9.1 S.E.% 9.4 17.7 65.0 99.9 8.3 S.E.%	L L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91 BASAL OW 124 34 1 0 167 NET B	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0 100 AREA/A AVG 137 41 3 0 182 F/ACRE AVG	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109 ACRE HIGH 150 49 5 1 197 HIGH		# OF TREES 5 405 # OF PLOTS 5 351 # OF PLOTS 5	101 REQ. 10 88 REQ. 10	15 45 INF. POP. 15 39 INF. POP. 15
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL DOU WHE R AL S SPI TOT CL DOU WHE R AL S SPI TOT	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1	.1	COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6 93.8 COEFF VAR.% 96.6 182.6 669.7 1029.6 85.8 COEFF VAR.%	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9 9.1 S.E.% 9.4 17.7 65.0 99.9 8.3 S.E.% 10.8	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91 BASAL OW 124 34 1 0 167 NET BI OW 0,622	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0 100 AREA/A AVG 137 41 3 0 182 F/ACRE AVG 23,128	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109 ACRE HIGH 150 49 5 1 197 HIGH 25,635		# OF TREES 5 405 # OF PLOTS 5 351 # OF PLOTS 5	101 REQ. 10 88 REQ. 10 73 REQ.	15 45 INF. POP. 15 39 INF. POP. 15
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 1.0 MLOCK DER RUCE AL		COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6 93.8 COEFF VAR.% 96.6 182.6 669.7 1029.6 85.8 COEFF VAR.%	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9 9.1 S.E.% 9.4 17.7 65.0 99.9 8.3 S.E.% 10.8 18.1	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91 BASAI OW 124 34 1 0 167 NET BI OW 0,622 4,871	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0 100 AREA/A AVG 137 41 3 0 182 F/ACRE AVG 23,128 5,949	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109 ACRE HIGH 150 49 5 1 197 HIGH 25,635 7,027		# OF TREES 5 405 # OF PLOTS 5 351 # OF PLOTS 5	101 REQ. 10 88 REQ. 10 73 REQ.	15 45 INF. POP. 15 39 INF. POP. 15
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT	68.1 1.0 G FIR MLOCK DER RUCE AL	.,1	COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6 93.8 COEFF VAR.% 96.6 182.6 669.7 1029.6 85.8 COEFF VAR.%	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9 9.1 S.E.% 9.4 17.7 65.0 99.9 8.3 S.E.% 10.8 18.1 64.4	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91 BASAL OW 124 34 1 0 167 NET BI OW 0,622 4,871 113	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0 100 AREA/A AVG 137 41 3 0 182 F/ACRE AVG 23,128 5,949 319	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109 ACRE HIGH 150 49 5 1 197 HIGH 25,635 7,027 525		# OF TREES 5 405 # OF PLOTS 5 351 # OF PLOTS 5	101 REQ. 10 88 REQ. 10 73 REQ.	15 45 INF. POP. 15 INF. POP. 33 INF. POP.
SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT	68.1 1.0 G FIR MLOCK DER RUCE AL 68.1 RUCE AL 68.1 RUCE AL 68.1 RUCE AL 68.1 RUCE AL		COEFF VAR.% 98.9 97.1 18.8 100.7 COEFF VAR.% 117.6 189.4 664.5 1029.6 93.8 COEFF VAR.% 96.6 182.6 669.7 1029.6 85.8 COEFF VAR.%	S.E.% 7.9 14.8 13.0 7.1 S.E.% 11.4 18.4 64.5 99.9 9.1 S.E.% 9.4 17.7 65.0 99.9 8.3 S.E.% 10.8 18.1	L	SAMPI OW 556 374 162 521 TREES OW 67 19 1 0 91 BASAL OW 124 34 1 0 167 NET BI OW 0,622 4,871 113 0	AVG 604 439 187 560 6/ACRE AVG 75 23 2 0 100 AREA/A AVG 137 41 3 0 182 F/ACRE AVG 23,128 5,949	ES - BF HIGH 652 504 211 600 HIGH 84 27 3 0 109 ACRE HIGH 150 49 5 1 197 HIGH 25,635 7,027		# OF TREES 5 405 # OF PLOTS 5 351 # OF PLOTS 5	101 REQ. 10 88 REQ. 10 73 REQ.	15 45 INF. POP. 15 INF. POP. 33 INF. POP.

TC TSTATS				STA PROJECT	TIST	TICS HTIDE			PAGE DATE 1	1 1/27/2012
TWP RGE	SECT 7	TRACT		TYPE		RES	PLOTS	TREES	CuFt	BdFt
		AREA1		00PC		213.00	32	217	1	W
06N 07W	<u> </u>	MEAI		UUFC		213.00	32	217	<u> </u>	VV
			-	TREES		ESTIMATED TOTAL		PERCENT SAMPLE		
	PLOTS	TREES		PER PLOT		TREES		TREES		
TOTAL	32	217		6.8		110000	***************************************			
CRUISE	11	67		6.1		36,711		.2		
DBH COUNT										
REFOREST										
COUNT	21	150		7.1						
BLANKS 100 %										
100 /0			STA	ND SUMMA	ARY	AND THE RESERVE OF THE PERSON				
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH		DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUGLEAV	36	76.3	16.7	52		116.6	14,380	14,063	3,879	3,879
DOUG FIR	22	85.7	13.6	48		86.1	8,472		2,506	2,506
WHEMLOCK	2	4.1	21.7	62		10.5	1,739		406	406
HEMLEAV SNAG	6 1	3.3 2.9	21.7 14.0	62 50		8.4 3.2	1,400	1,387	332	332
TOTAL	67	172.4	15.5	51		224.8	25,991	25,599	7,122	7,122
		F THE SAMPL OF 100 THE		WILL BE W	/ITHIN	THE SAMPI	LE ERROR			
C17 0/									a DEO	DIE DOD
CL: 68.1 %	COEF	F		SAMPLE '	TREE	S - BF	;	# OF TREES	S REQ.	INF. POP.
SD: 1.0	VAR.9	% S.E.%	LC	OW A	VG	HIGH	:	# OF TREES	10	15 15
SD: 1.0 DOUGLEAV	VAR.9	% S.E.% 20.0	LC	OW A 289	361	HIGH 434	:		=	
SD: 1.0 DOUGLEAV DOUG FIR	VAR.9 120.2 95.5	% S.E.% 20.0 20.8	LC	OW A 289 107	361 135	HIGH 434 163	:		=	
SD: 1.0 DOUGLEAV	VAR.9	% S.E.% 20.0	LC	289 107	361	HIGH 434	;		=	
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG	VAR.9 120.2 95.5 124.1 95.3	S.E.% 20.0 20.8 116.2 42.4	LC	DW A 289 107 487	361 135 570 845	HIGH 434 163 1,232 1,203	:	5	10	15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV	VAR.9 120.2 95.5 124.1 95.3	S.E.% 20.0 20.8 116.2 42.4 16.6	LC	DW A 289 107 487	361 135 570	HIGH 434 163 1,232	:		=	
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 %	VAR.9 120.2 95.5 124.1 95.3	% S.E.% 20.0 20.8 116.2 42.4 16.6	LC	DW A 289 107 487	361 135 570 845	HIGH 434 163 1,232 1,203 386		5 738 # OF TREE:	10	82 INF. POP.
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF	% S.E.% 20.0 20.8 116.2 42.4 16.6 F % S.E.%		289 107 487 276 SAMPLE DW A	361 135 570 845 331 TREES	HIGH 434 163 1,232 1,203 386 S - CF HIGH		738	10	82 INF. POP.
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF	% S.E.% 20.0 20.8 116.2 42.4 16.6 F % S.E.% 16.7		289 107 487 276 SAMPLE DW A	361 135 570 845 331 TREES	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106		5 738 # OF TREE:	10 185 S REQ.	82 INF. POP.
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF	% S.E.% 20.0 20.8 116.2 42.4 16.6 F % S.E.%		289 107 487 276 SAMPLE DW A 75 32	361 135 570 845 331 TREES	HIGH 434 163 1,232 1,203 386 S - CF HIGH		5 738 # OF TREE:	10 185 S REQ.	82 INF. POP.
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1		289 107 487 276 SAMPLE DW A 75 32 14	361 135 570 845 331 TREES VG 91 39	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46		5 738 # OF TREE:	10 185 S REQ.	82 INF. POP.
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLTAV SNAG TOT CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4		289 107 487 276 SAMPLE 5 DW A 75 32 14 118	361 135 570 845 331 TREES VG 91 39 125 186	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253		5 738 # OF TREE: 5	185 S REO. 10	82 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF. VAR.9 100.3 78.6 94.8 81.7	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7		289 107 487 276 SAMPLE DW A 75 32 14 118	361 135 570 845 331 TREE: VG 91 39 125 186	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235		5 738 # OF TREE: 5	185 S REO. 10	82 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 %	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7	LC	289 107 487 276 SAMPLE DW A 75 32 14 118 71 TREES/AG	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93		5 738 # OF TREE: 5 502 # OF PLOT:	185 S REO. 10	82 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7 F S.E.% S.E.%	LC	289 107 487 276 SAMPLE SOW A 75 32 14 118 71 TREES/AGOW A	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH		5 738 # OF TREE: 5	185 S REO. 10	82 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUGLEAV DOUGLEAV DOUGLEAV DOUGLEAV	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF VAR.9 45.1	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7 F S.E.% 8.0	LC	289 107 487 276 SAMPLE DW A 75 32 14 118 71 TREES/AG	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE VG 76	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH 82		5 738 # OF TREE: 5 502 # OF PLOT:	185 S REO. 10	82 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7 F S.E.% S.E.%	LC	289 107 487 276 SAMPLE COW A 75 32 14 118 71 TREES/AG	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH		5 738 # OF TREE: 5 502 # OF PLOT:	185 S REO. 10	82 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEML-AV SNAG TOTL CL: 68.1 % DOUGLEAV DOUG FIR WHEMLOCK HEML-AV SNAG TOTL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV DOUGLEAV DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF VAR.9 45.1 74.4 358.3 239.6	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7 F S.E.% 8.0 13.1 63.3 42.3	LC	289 107 487 276 SAMPLE COW A 75 32 14 118 71 TREES/ACOW A 70 74 2 2	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE VG 76 86 4 3	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH 82 97 7 5		5 738 # OF TREE: 5 502 # OF PLOT:	185 S REO. 10	82 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLSV SNAG TOUGLEAV DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOUGLEAV SNAG TOUGLEAV SNAG TOUGLEAV SNAG TOUGLEAV SNAG TOUGLEAV SNAG SD: 1.0	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF VAR.9 45.1 74.4 358.3 239.6 315.9	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7 F S.E.% 8.0 13.1 63.3 42.3 55.8	LC	DW A 289 107 487 276 SAMPLE COW A 75 32 14 118 71 TREES/ACOW A 70 74 2 2 1	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE VG 76 86 4 3 3	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH 82 97 7 5 5		738 # OF TREES 5 502 # OF PLOTS	185 S REO. 10	82 INF. POP. 15 56 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF. VAR.9 100.3 78.6 94.8 81.7 112.1 COEF. VAR.9 45.1 74.4 358.3 239.6 315.9 44.0	S.E.% 20.0 20.8 116.2 42.4 16.6 F 6 S.E.% 16.7 17.1 88.8 36.4 13.7 F 8.0 13.1 63.3 42.3 55.8 7.8	LC	DW A 289 107 487 276 SAMPLE COW A 75 32 14 118 71 TREES/ACOW A 70 74 2 2 1	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE VG 76 86 4 3	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH 82 97 7 5		5 738 # OF TREE: 5 502 # OF PLOT:	185 S REO. 10	82 INF. POP. 15 56 INF. POP. 15
DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV COL: 68.1 % SO: 1.0	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF VAR.9 45.1 74.4 358.3 239.6 315.9 44.0 COEF	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7 F S.E.% 8.0 13.1 63.3 42.3 55.8 7.8	LC	DW A 289 107 487 276 SAMPLE S DW A 75 32 14 118 71 TREES/AG DW A 70 74 2 2 1 159 BASAL A	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE VG 76 86 4 3 3 172	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH 82 97 7 5 186 CCRE		738 # OF TREE: 5 502 # OF PLOT: 5	185 S REO. 10 125 S REO. 10 19 S REO.	82 INF. POP. 15 S6 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTL CL: 68.1 % SD: 1.0 CL: 68.1 % SD: 1.0 CL: 68.1 % SD: 1.0 CK HEMLEAV SNAG TOTL CL: 68.1 % SD: 1.0	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF VAR.9 45.1 74.4 358.3 239.6 315.9 44.0 COEF	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7 F S.E.% 8.0 13.1 63.3 42.3 55.8 7.8 F	LC	DW A 289 107 487 276 SAMPLE S DW A 75 32 14 118 71 TREES/AG DW A 70 74 2 2 1 159 BASAL AL DW A	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE VG 76 86 4 3 3 172 REA/A	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH 82 97 7 5 186 CCRE HIGH		738 # OF TREE: 5 502 # OF PLOT: 5	185 S REQ. 10 125 S REQ. 10	82 INF. POP. 15 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV SNAG TOTAL	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF VAR.9 45.1 74.4 358.3 239.6 315.9 44.0 COEF VAR.9	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7 F S.E.% 8.0 13.1 63.3 42.3 55.8 7.8 F 5 S.E.% F 4.5	LC	DW A 289 107 487 276 SAMPLE S DW A 75 32 14 118 71 TREES/AG DW A 70 74 2 2 1 159 BASAL AI DW A 111	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE VG 76 86 4 3 3 172 REA/A	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH 82 97 7 5 186 CCRE HIGH 122		738 # OF TREE: 5 502 # OF PLOT: 5	185 S REO. 10 125 S REO. 10 19 S REO.	82 INF. POP. 15 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEWLOCK HEMLEAV SNAG TOTL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEWLOCK HEMLEAV SNAG TOTL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEWLOCK HEMLEAV SNAG TOTL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEWLOCK HEMLEAV SNAG TOTL SNAG TOTL CL: 68.1 % SNAG TOTL SNAG TOTL SNAG SNAG SNAG SNAG SNAG SNAG SNAG SNAG	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF VAR.9 45.1 74.4 358.3 239.6 315.9 44.0 COEF	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7 F S.E.% 8.0 13.1 63.3 42.3 55.8 7.8 F	LC	DW A 289 107 487 276 SAMPLE S DW A 75 32 14 118 71 TREES/AG DW A 70 74 2 2 1 159 BASAL AL DW A	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE VG 76 86 4 3 3 172 REA/A	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH 82 97 7 5 186 CCRE HIGH		738 # OF TREE: 5 502 # OF PLOT: 5	185 S REO. 10 125 S REO. 10 19 S REO.	82 INF. POP. 15 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLSV SNAG TOTL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLSV SNAG TOTL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLSV SNAG TOTL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTL CL: 68.1 %	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF VAR.9 45.1 74.4 358.3 239.6 315.9 44.0 COEF VAR.9 25.3 76.7 358.3 203.2	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7 F S.E.% 8.0 13.1 63.3 42.3 55.8 7.8 F S.E.% 4.5 13.6 63.3 35.9	LC	289 107 487 276 SAMPLE COW A 75 32 14 118 71 TREES/ACOW A 70 74 2 2 1 159 BASAL AI OW A 111 74	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE VG 76 86 4 3 3 172 REA/A VG 117 86 11 8	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH 82 97 7 5 5 186 CCRE HIGH 122 98 17 11		738 # OF TREE: 5 502 # OF PLOT: 5	185 S REO. 10 125 S REO. 10 19 S REO.	82 INF. POP. 15 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLSV SNAG TOUGLEAV DOUGLEAV DOUG FIR WHEMLOCK HEMLSV SNAG TOUGLEAV DOUGLEAV SNAG SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLSV SNAG TOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOUGLEAV SNAG SD: 1.0	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF VAR.9 45.1 74.4 358.3 239.6 315.9 44.0 COEF VAR.9 25.3 76.7 358.3 203.2 315.9	% S.E.% 20.0 20.8 116.2 42.4 16.6 F % S.E.% 16.7 17.1 88.8 36.4 13.7 F % S.E.% 8.0 13.1 63.3 42.3 55.8 7.8 F % S.E.% 4.5 13.6 63.3 35.9 55.8	LC	DW A 289 107 487 276 SAMPLE DW A 75 32 14 118 71 TREES/AG DW A 70 74 2 1 159 BASAL A DW A 111 74 4 5 1	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE VG 76 86 4 3 3 172 REA/A VG 117 86 11 8 3	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH 82 97 7 5 5 186 CCRE HIGH 122 98 17 11 5		738 # OF TREES 5 502 # OF PLOTS 5 77 # OF PLOTS 5	185 S REO. 10 125 S REO. 10 19 S REO. 10	82 INF. POP. 15 S6 INF. POP. 15 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CK: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF VAR.9 45.1 74.4 358.3 239.6 315.9 44.0 COEF VAR.9 25.3 76.7 358.3 203.2 315.9 38.1	% S.E.% 20.0 20.8 116.2 42.4 16.6 F % S.E.% 16.7 17.1 88.8 36.4 13.7 F % S.E.% 8.0 13.1 63.3 42.3 55.8 7.8 F % S.E.% 4.5 13.6 63.3 35.9 55.8 6.7	LC	DW A 289 107 487 276 SAMPLE DW A 75 32 14 118 71 TREES/AG DW A 70 74 2 1 159 BASAL A DW A 111 74 4 5 1	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE VG 76 86 4 3 3 172 REA/A VG 117 86 11 8	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH 82 97 7 5 5 186 CCRE HIGH 122 98 17 11		738 # OF TREE: 5 502 # OF PLOT: 5	185 S REO. 10 125 S REO. 10 19 S REO.	82 INF. POP. 15 S6 INF. POP. 15
SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SD: 1.0 DOUGLEAV DOUG FIR WHEMLOCK HEMLEAV SNAG TOTAL CL: 68.1 % SNAG TOTAL CL: 68.1 % SNAG TOTAL CL: 68.1 % SNAG TOTAL	VAR.9 120.2 95.5 124.1 95.3 136.0 COEF VAR.9 100.3 78.6 94.8 81.7 112.1 COEF VAR.9 45.1 74.4 358.3 239.6 315.9 44.0 COEF VAR.9 25.3 76.7 358.3 203.2 315.9	S.E.% 20.0 20.8 116.2 42.4 16.6 F S.E.% 16.7 17.1 88.8 36.4 13.7 F S.E.% 8.0 13.1 63.3 42.3 55.8 7.8 F 5.E.% 5.E.% 6.3 3 35.9 55.8 6.7	IC	DW A 289 107 487 276 SAMPLE S DW A 75 32 14 118 71 TREES/AG DW A 70 74 2 2 1 159 BASAL AJ DW A 111 74 4 5 1 210 NET BF/A	361 135 570 845 331 TREES VG 91 39 125 186 82 CRE VG 76 86 4 3 3 172 REA/A VG 117 86 11 88 3 225	HIGH 434 163 1,232 1,203 386 S - CF HIGH 106 46 235 253 93 HIGH 82 97 7 5 5 186 CCRE HIGH 122 98 17 11 5		738 # OF TREES 5 502 # OF PLOTS 5 77 # OF PLOTS 5	185 S REO. 10 125 S REO. 10 19 S REO. 10	82 INF. POP. 15 S6 INF. POP. 15 9 INF. POP. 15

TC TSTATS				STATIS JECT	STICS HTIDE			PAGE DATE	2 11/27/2012
TWP RGE	SECT TRA	ACT	TYP	E A	ACRES	PLOTS	TREES	CuFt	BdFt
06N 07W	20 AR	EA1	00PC	7	213.00	32	217	1	W
CL: 68.1%	COEFF		NET	BF/ACRI	Œ		# OF PLO	OTS REQ.	INF. POP.
SD: 1.0	VAR.	S.E.%	LOW	AVG	HIGH		5	10	15
DOUGLEAV	32.4	5.7	13,257	14,063	14,869				
DOUG FIR	81.0	14.3	7,232	8,438	9,645				
WHEMLOCK	358.3	63.3	628	1,711	2,794				
HEMLEAV	204.9	36.2	885	1,387	1,889				
SNAG									
TOTAL	47.6	8.4	23,449	25,599	27,750		90	23	10
CL: 68.1 %	COEFF		NET	CUFT FT	/ACRE		# OF PLOTS	REQ.	INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15
DOUGLEAV	26.7	4.7	3,696	3,879	4,062				
DOUG FIR	80.6	14.2	2,149	2,506	2,863				
WHEMLOCK	358.3	63.3	149	406	662				
HEMLEAV	200.1	35.3	215	332	449				
SNAG									
TOTAL	42.1	7.4	6,592	7,122	7,652		71	18	8

TC TST	TATS				S'] PROJE	TATIS	TICS HTIDE			PAGE DATE 2	12/6/2013
TWP	RGE	SECT	TRACT		TYPE	Α.	CRES	PLOTS	TREES	CuFt	BdFt
06N	07W	21	AREA23 TAK	TE	00CC	71	167.00	42	303	1	W
UOIN	0 / ٧٧	<u> </u>	AREAZS IAN		oocc	***************************************	107.00	42	303	1	VV
					TREES		ESTIMATED TOTAL		PERCENT SAMPLE		
		PLOTS	TREES		PER PLOT	Γ	TREES		TREES		
TOTA	AL.	42	303		7.2						
CRUI	SE	16	112		7.0		18,501		.6		
DBH	COUNT										
REFO	REST										
COUN		26	181		7.0						
BLAN											
100 %	ó										
				STA	ND SUM	MARY					
		SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG	3 FIB	75		24.9	92	22.14	199.0	45,070		9,671	9,326
	MLOCK	33		17.8	63		81.9	12,818	,	3,291	3,100
R ALI		3		17.5	60		6.7	771	-	231	223
S SPR		1		24.0	46		1.0	45		24	
TOTA	AL	112	2 110.8	21.9	78		288.6	58,705	54,139	13,216	12,672
	00.1	COE				E TREF		·	# OF TREES		INF. POP.
SD:	1.0	VAR		L	OW 929	AVG 995	HIGH		5	10	15
DOUG	J FIK MLOCK	57.0 73.0			305	350	1,061 394				
R ALI		18.8			162	187	211				
S SPR											
TOTA	A L	74.9	7.1		721	776	831		224	56	25
CL:	68.1 %	COE	FF		TREES	/ACRE		i	# OF PLOTS	S REO.	INF. POP.
SD:	1.0	VAR	% S.E.%	L	OW	AVG	HIGH		5	10	15
DOUG		57.	1 8.8		54	59	64				
	MLOCK	103.0			40	48	55				
R ALI		413.9			1	4	7				
S SPR		648.			0	0	110		67	17	7
	68.1 %	40.9 COE			DACAL	111 AREA/A	118				
SD:		VAR		Ţ	BASAL OW	AKEA/A AVG	HIGH	i	# OF PLOTS	10	INF. POP.
DOUG		56.2		L	182	199	216		5	10	13
	MLOCK	94.6			70	82	94				
R ALI		417.3			2	7	11				
S SPR		648.			0	1	2				
TOTA	AL	29.4	4.5		275	289	302		35	9	4
	68.1 %	COE				F/ACRE		i	# OF PLOTS		INF. POP.
SD:		VAR			OW	AVG	HIGH		5	10	15
DOUG		56.2			8,255	41,881	45,508				
	MLOCK	96.5			9,766	11,473	13,179				
R ALI S SPR		413.6 648.1			268 0	739 45	1,211 91				
TOTA		34.1		5		43 54,139	56,986		46	12	5
1017	1L	34.1	5.5	5.	1,272	J4,1J7	50,500		40	1 2	3

TC TSTA	TS				SI	TATIS'	FICS			PAGE	1
					PROJE		HTIDE	1.0.		DATE 1	1/27/2012
TWP 1	RGE	SECT TE	RACT		TYPE	A	CRES	PLOTS	TREES	CuFt	BdFt
06N	07W	20 Al	REA1 LEAV	E	00PC		213.00	32	125	1	W
					TREES		ESTIMATED TOTAL		ERCENT AMPLE		
1-1812-007741	West and the second	PLOTS	TREES		PER PLO	Γ	TREES	T	REES		
TOTAL		32	125		3.9				_		
CRUISI DBH CO REFOR	OUNT REST	11 21	43 82		3.9		17,585		.2		
BLANK 100 %	ζS										
				STA	ND SUM	MARY					
		SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
		TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUGI	LEAV	36	76.3	16.7	52		116.6	14,380	14,063	3,879	3,879
HEMLE	EAV	6	3.3	21.7	62		8.4	1,400	1,387	332	332
SNAG		1	2.9	14.0	50		3.2	15 700	15 150	1211	4,211
TOTAL	<u>L</u>	43	82.6	16.9	53		128.1	15,780	15,450	4,211	4,211
CONF		E LIMITS OF TIMES OUT (WILL BI	E WITHII	N THE SAMP	LE ERROR			W034000
CL: 6	58.1 [%]	COEFF			SAMPI	E TREE	S - BF	#	OF TREES	REO.	INF. POP.
	1.0	VAR.%		L	OW	AVG	HIGH		5	10	15
DOUGI		120.2	20.0		289	361	434				
HEMLE SNAG	EAV	95.3	42.4		487	845	1,203				
TOTAL	L	123.0	18.7		342	420	499		604	151	67
CL: 6	58.1 %	COEFF			SAMPI	E TREE	S - CF	#	OF TREES	REQ.	INF. POP.
SD:	1.0	VAR.%	S.E.%	L	ow	AVG	HIGH		5	10	15
DOUGI		100.3	16.7		75	91	106				
HEMLE	EAV	81.7	36.4		118	186	253				
SNAG TOTAI	L	103.0	15.7		86	102	118		423	106	47
CL: 6		COEFF							OF PLOTS		INF. POP.
SD:		VAR.%	S.E.%	r	TREES OW	ACRE AVG	HIGH	#	of PLOTS	10	1NF. POP.
DOUGI		45.1	8.0		70	76	82		<u> </u>	10	13
HEMLE		239.6	42.3		2	3	5				
SNAG		315.9	55.8		1	3	5				
TOTAL	L	40.0	7.1		77	83	88		64	16	7
CL: 6	58.1 %	COEFF			BASAL	AREA/	ACRE	#	OF PLOTS	REQ.	INF. POP.
SD:		VAR.%		L	OW	AVG	HIGH	***	5	10	15
DOUGI		25.3	4.5		111	117	122				
HEMLE	EAV	203.2	35.9		5 1	8 3	11 5				
SNAG TOTA I	r .	315.9 <i>19.4</i>	55.8 3.4		124	128	133		15	4	2
	o8.1 ™	COEFF	a na/	-		F/ACRE	шсп	#	OF PLOTS	-	INF. POP.
CL: 6	1.0	VAR.%	S.E.% 5.7		OW 3,257	AVG 14,063	HIGH 14,869		5	10	15
CL: 6		22 /		1		1,387	1,889				
CL: 6 SD: DOUGI	LEAV	32.4 204.9			885						
CL: 6	LEAV	32.4 204.9	36.2		885	1,507	.,				
CL: 6 SD: DOUGI HEMLI	LEAV EAV			1.		15,450	16,429		51	13	6
CL: 6 SD: DOUGI HEMLI SNAG	LEAV EAV L	204.9	36.2	1-	4,471	15,450	16,429	#			
CL: 6 SD: DOUGI HEMLE SNAG TOTAI	LEAV EAV L	204.9 35.9	6.3		4,471		16,429	#	51 OF PLOTS		6 INF. POP.
CL: 6 SD: DOUGI HEMLE SNAG TOTAL	LEAV EAV L 58.1 %	204.9 35.9 COEFF	6.3	L	4,471 NET C	15,450 U FT FT /	16,429 ACRE HIGH 4,062	#	OF PLOTS	REQ.	INF. POP.
CL: 6 SD: DOUGH HEMLE SNAG TOTAL CL: 6 SD:	LEAV EAV L 58.1 % 1.0 LEAV	204.9 35.9 COEFF VAR.%	36.2 6.3 S.E.%	L	4,471 NET C OW	15,450 UFT FT/ AVG	16,429 ACRE HIGH	#	OF PLOTS	REQ.	INF. POP.

TC PLOGSTVB	Log Stock Table - MBF	
T06N R07W S20 Ty00PC 7.00 T06N R07W S20 Ty00PC 213.00 T06N R07W S21 Ty00CC 167.00	Acres 387.00	Page 1 Date 2/6/2013 Time 2:28:04PM

~	G ~	·				0/	***********		NT_4 T7 *		- C - 11	- D'	4	(al			
Spp T				Def %	Net MBF	% Spc	2-3	4-5	Net Vol 6-7	<u>ume by</u> 8-9	Scalin 10-11		14-15		20-23	24-29	30-39 40+
D	DO CI			100.0	11121	Брс	2-3	4 -3	10-7		10 11	12 13	1115	10 17	20 23	2125	30 33 10
D	DO CU			100.0													
D	DO CU			100.0													
D	DO CU		l	100.0													
D	DO CU			100.0		•											
D	DO CU																
D	DO CU		24	100.0													
D	DO CU		71	100.0													
D	DO 2S	20	85	2.6	82	.9									82		
D	DO 2S	24	95	4.7	90	1.0								43	47		
D	DO 2S				142	1.6						39	2	48	52		
D	DO 2S			1.4	314	3.5					2			25	91	64	130
D	DO 2S				9	.1					9						
D	DO 2S		1,010	4.1	969	10.8					2	137	62	266	213	223	65
D	DO 2S	34	70	2.8	68	.8										68	
D	DO 2S	36	342		340	3.8						54	27	86	174		
D	DO 2S	40	4,499	2.4	4,391	49.1					117	487	447	1632	1004	705	
D	DO 3S	16	5		5	.1		- 1- 1	5		0	·		it its appro-			
D	DO 3S	17	4		4	.1					4						
D	DO 3S	20	48		48	.5				20	8	7	13				
D	DO 3S	21	7		7	.1							7				
D	DO 3S	22	32		32	.4			7	10	15						
D	DO 3S	23	16		16	.2					16						
D	DO 3S	24	14		14	.2			6		8						
D	DO 3S	25	13		13	.1				13							
D	DO 3S	26	1		1	.0					1						
D	DO 3S	27	14		14	.2			6		8						
D	DO 3S	28	74		74	.8			8		65						
D	DO 3S	29	15		15	.2				6	9						
D	DO 3S	30	23		23	.3			1	14	8						
D	DO 3S	31	7		7	.1				7							
D	DO 3S	32	256		255	2.9			138	54	29	35					
D	DO 3S	33	12		12	.1					12						
D	DO 3S	34	2		2	.0			2								
D	DO 3S	35	31		31	.4				10	22						
D	DO 3S	36	114		114	1.3			104	10							
D	DO 3S	37	23		23	.3			1	23							

	R07W S2 R07W S2			7.00		Acre	es	387	.00			·		Time		28:04F	M
S	So Gr	Log	Gross	Def	Net	% .		Net Volu	ume by	Scaling	<u>g Dia</u> n	ieter in	Inches				
Spp 7	l .			%	MBF	Spc	2-3 4-5	6-7	8-9	10-11			16-19	20-23	24-29	30-39	40-
D	DO 3	S 38	3 12		12	.1		12									
D	DO 3	S 40	1,426		1,412	15.8		475	457	429	15		36				
D	DO 3	S 41	19		19	.2				19							
D	DO 4	S 13	17		17	.2		17									
D	DO 4	S 14	1 7		7	.1		7									
D	DO 4	S 16	0		0	.0			0								
D	DO 4	S 18	1		1	.0		1									
D	DO 4	S 20	43		43	.5		24	5				14				
D	DO 4	S 21	7	3.8	7	.1		1			6						
D	DO 4	S 22	16		16	.2		16									
D	DO 4	S 23	63		63	.7		63									
D	DO 45	S 24	23		23	.3		23									
D	DO 45	S 25	15		15	.2		8			7						
D	DO 45	S 26	78		78	.9		78									
D	DO 45	S 27	8		8	.1		8									
D	DO 45	S 28	40		40	.4		40									
D	DO 45	30	73		73	.8		73									
D	DO 45	3 31	0		0	.0		0									
)	Tota	ls	9,542	6.2	8,951	78.6		1125	628	783	787	557	2151	1664	1060	196	
Н	DO C	U 3	0	100.0													
H	DO C	U 4	0	100.0													
H	DO C	U 6	38	100.0													
Η	DO C	U 8	12	100.0													
H	DO C	U 9	2	100.0													
H	DO C	J 10	33	100.0													
Η	DO C	J 25	21	100.0													
I	DO C	J 34	22	100.0													
H	DO 28	18	27		27	1.2					27						
Н	DO 28	24	45	4.3	43	1.9								43			
-I	DO 28	30	45	3.2	44	1.9							42		2		
H	DO 28	32	171	3.1	166	7.2	2				89	74					
H	DO 28	36	99		99	4.3						99					
Ŧ	DO 28	40	1,195	5.9	1,125	48.9					274	52	513	287			
I	DO 38	14	8		8	.3		8									
1	DO 38	17	4		4	.2			4								
ł	DO 38	20	22		22	.9				22]			
								I		Ī	ļ					l	

TC PLOGSTVB Log Stock Table - MBF Page 3 7.00 213.00 T06N R07W S20 Ty00PC HTIDE Project: 2/6/2013 T06N R07W S20 Ty00PC T06N R07W S21 Ty00CC Date Acres 387.00 Time 2:28:04PM 167.00

100N R07W 321 1y00CC 107.00																		
		So Gr Log rt de Len		Def	Net	%	Net Volume by Scaling Diameter in Inches											
Spp '				%	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
Н	DO 3S		9		9	.4			9									
Н	DO 3S	23	6		6	.2				5	0							
Н	DO 3S	26	40		40	1.7			8	7			25					
Н	DO 3S	28	7	13.7	6	.3				6								
Н	DO 3S	30	7		7	.3			7									
Н	DO 3S	31	8	25.0	6	.2			6									
Н	DO 3S	32	135	8.4	124	5.4		3	30	10	41		40					
Н	DO 3S	34	9		9	.4			9									
Н	DO 3S	37	13		13	.5			13									
Н	DO 3S	38	10		10	.4				10								
Н	DO 3S	40	478	1.3	471	20.5			90	140	219	23						
Н	DO 4S	12	3		3	.1			3									
Н	DO 4S	14	7		7	.3			7									
Н	DO 4S	17	0		0	.0			0									
Н	DO 4S	20	6		6	.2				6								
Н	DO 4S	22	17	17.7	14	.6			14									
Н	DO 4S	24	10		10	.4			10									
Н	DO 4S	26	10		10	.4			10									
Н	DO 4S	40	16		16	.7			16									
Н	Total	S	2,534	9.1	2,302	20.2		5	240	187	282	413	289	555	329	2		
S	DO 3S	40	8		8	100.0					8	,						
S	Total	S	8		8	.1			,		8							
A	DO CU	Г 6	5	100.0														
A	DO CR	. 18	4		4	3.1			4									
A	DO CR	. 28	37		37	30.1						37						
A	DO CR	. 35	13		13	10.8			13									
A	DO CR	. 40	69		69	56.0					32	38						
A	Total	s	129	4.1	123	1.1			17		32	75						
Total	All Speci	es	12,212	6.8	11,384	100.0		5	1382	815	1103	1275	847	2705	1993	1063	196	

TC **PSTNDSUM Stand Table Summary** Page 1 Date: 2/6/2013 T06N R07W S20 Ty00PC 7.00 Project HTIDE Time: 2:28:05PM T06N R07W S20 Ty00PC 213.00 Acres 387.00 Grown Year: T06N R07W S21 Ty00CC 167.00

Tot Average Log Net Net S Net Totals Net BA/ Sample \mathbf{FF} AvTrees/ Logs Cu.Ft. Bd.Ft. Tons/ Spc T **DBH** Trees 16' Ht Acre Acre Acre Cu.Ft. Bd.Ft. Tons Cunits **MBF** Acre Acre Acre 10 5 91 4.50 8.26 D 67 8.261 12.5 44.8 103 370 398 143 5 11 86 73 6.826 4.50 6.83 49.7 105 D 15.4 339 408 131 12 8 85 80 11.546 8.87 14.62 16.3 53.7 D 238 785 922 304 13 11 86 65 7.651 7.04 10.20 17.4 D 56.3 178 575 688 222 14 4 85 83 2.354 2.34 D 4.65 16.8 56.0 78 260 301 101 8 89 15 91 5.588 6.85 11.12 21.9 79.1 244 D 880 945 341 16 3 84 54 1.634 2.28 29.5 D 1.68 60.5 49 102 191 39 17 18 88 87 9.462 14.91 17.52 28.0 98.2 490 D 1,720 1,896 666 18 4 89 85 1.327 2.34 2.58 31.1 104.7 D 80 270 311 105 19 6 89 90 2.317 4.63 4.56 35.9 D 117.6 167 545 645 211 20 6 88 105 1.166 2.54 2.83 D 37.9 139.6 107 395 414 153 2 21 89 131 .502 1.21 1.48 41.7 181.8 D 62 269 239 104 3 D 22 89 109 .892 2.35 2.22 46.5 189.1 103 419 399 162 23 6 133 2.356 7.07 D 88 6.80 47.8 203.3 338 1,437 1,307 556 3 24 88 120 .749 2.35 1.86 D 56.1 228.5 105 426 405 165 25 4 123 2.39 87 1.026 D 3.50 65.8 274.5 157 656 609 254 26 6 87 133 1.864 6.87 5.28 D 62.5 259.4 330 1,370 1,277 530 7 27 88 133 1.744 6.93 4.94 67.1 307.9 332 1,522 D 1,284 589 28 3 89 137 .803 3.44 2.14 83.0 D 395.0 178 846 328 688 29 7 88 121 1.276 5.85 3.08 80.6 363.6 248 D 1,120 960 433 394.4 30 10 88 130 2.113 10.37 5.87 85.6 503 2,315 D 1,945 896 31 1 88 129 .218 1.15 .66 79.7 396.7 52 D 260 202 101 32 4 89 133 .626 3.50 1.87 D 88.4 439.5 165 821 639 318 33 4 88 150 .771 4.58 2.31 104.7 515.8 242 1,194 D 938 462 34 2 87 132 .363 2.29 .91 125.0 D 566.0 114 514 439 199 35 5 89 153 .533 3.56 1.60 126.7 665.2 203 D 1,064 784 412 36 5 86 141 .810 5.73 2.27 124.0 554.3 281 D 1,257 1,089 487 37 2 86 136 .307 2.29 1.07 104.4 517.1 112 D 555 434 215 38 D 1 94 112 .145 1.15 .44 112.0 640.0 49 279 189 108 42 2 D 89 134 .238 2.29 .71 149.7 786.7 107 562 414 217 D Totals 155 87 90 75.471 136.96 133.10 41.5 173.8 5,520 23,128 21,361 8,951 10 1 91 53 1.964 1.07 1.96 12.0 40.0 24 79 91 Η 30 12 87 34 1 1.364 1.07 Н 13 1 88 46 1.162 1.07 Η 14 2 86 78 1.042 1.11 2.04 19.7 70.2 40 Η 143 156 56 15 3 87 81 2.679 3.21 5.36 21.5 Η 78.1 115 419 445 162 16 4 88 82 3.068 4.28 6.14 25.1 85.0 Η 154 522 597 202 3 17 87 87 1.386 2.18 2.77 30.9 99.7 86 276 331 107 Η 1 108 Η 18 88 .606 1.07 1.21 42.5 150.0 52 182 199 70 5 19 91 69 3.122 6.15 40.1 4.21 116.5 169 490 190 Η 653 20 2 88 88 .982 1.96 39.5 Η 2.14 132.5 78 260 300 101 21 92 1 88 .445 1.07 .89 47.5 Η 175.0 42 156 164 60 23 5 103 89 1.856 5.36 5.20 45.3 155.7 235 809 911 Η 313 24 2 88 118 .682 2.14 2.05 54.0 228.3 Η 110 467 427 181 25 2 89 Η 110 .628 2.14 1.57 64.4 256.0 101 402 392 156 26 5 91 119 1.388 5.12 4.15 66.1 320.7 274 515 Η 1,332 1,062 27 1 89 122 .269 1.07 1.08 53.7 240.0 58 259 Η 224 100 28 74 .50 1 85 .250 1.07 31 Η 61.0 250.0 125 118 48 30 74 1 86 .009 .04 .02 82.0 300.0 Η 1 5 6 2 32 1 86 130 .008 .04 .02 100.7 493.3 2 Η 11 9 4 39 1 86 131 .005 .04 .02 141.0 713.3 2 Η 11 8 4 Н Totals 43 80 22.916 41.47 41.15 38.3 144.6 1,574 5,949 6.093 2,302

TC	PSTNDSU	JM				j	Stand	Table	Summa	ry			Page Date:	2 2/6/20	13
T06N	R07W S	320 Ty00F 320 Ty00F 321 Ty000	PC	7. 213. 167.			Project Acres		387.0	0			Time: Grown Yea	2:28:0 r:	5PM
S Spc T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Averag Net Cu.Ft.	ge Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Tons	Totals Cunits	MBF
A A A	16 18 19	1 1 1	87 86 87	93 64 73	.687 .543 .487	.96 .96	1.37 .54 .97	25.5 50.0 35.0	95.0 150.0 110.0		35 27 34	130 81 107		136 105 132	50 32 41
A	Totals	3	87	78	1.716	2.88	2.89	33.3	110.4		96	319		372	123
S S	24 Totals	1	82 82	54 54	.131	.41	.13	78.0 78.0	150.0		10	20		39 39	8
Totals		202	88	88	100.234	181.72	177.27	40.6	165.9		7,201	29,415		27,866	11,384

