



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
Star White  
Sale 341-15-11

District: Tillamook

Date: September 10, 2014

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**cost summary**

	<b>Conifer</b>	<b>Hardwood</b>	<b>Total</b>
<b>Gross Timber Sale Value</b>	\$699,231.96	\$302,765.58	\$1,001,997.54
		<b>Project Work:</b>	\$(422,600.00)
		<b>Advertised Value:</b>	\$579,397.54



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**timber description**

**Location:** Portions of Sections 2, 3, 10, and 11, T1N, R9W, W.M., Tillamook County, Oregon.

**Stand Stocking:** 20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	15	0	95
Western Hemlock / Fir	18	0	95
Sitka Spruce	17	0	95
Alder (Red)	12	0	90

Volume by Grade	10" - 11"	12"+	2S	3S	4S	6" - 7"	8" - 9"	Total
Douglas - Fir	0	0	345	1,553	553	0	0	2,451
Western Hemlock / Fir	0	0	50	395	55	0	0	500
Sitka Spruce	0	0	0	74	62	0	0	136
Alder (Red)	327	29	0	0	0	1,122	511	1,989
Total	327	29	395	2,022	670	1,122	511	5,076



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**comments:** Pond Values Used: 2nd Quarter Calendar Year 2014.

Western redcedar and Other Cedars Stumpage Price = Pond Value  
minus Logging Cost:

\$750/MBF = \$1,050/MBF - \$300/MBF

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

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$4.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$780 daily truck cost.

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

Brand and Paint: \$2/MBF x 5,076 MBF = \$10,152

Machine Cleaning: \$1,000/machine x 2 machines = \$2,000

TOTAL Other Costs (with Profit & Risk to be added) = \$12,152

Other Costs (No Profit & Risk added):

Area 3: Truck snubbing, \$61/MBF x 1,798 MBF = \$109,678

Area 3: Tractor swing, \$28/MBF x 533 MBF = \$14,924

Area 3: Sidecast pull back and vacating of road C to D (tractor  
swing) = \$750

Additional move-in: 3 pieces of equipment x \$300 each = \$900

Non-project Road Construction

Road 1: 8.3 stations x \$ 150/ station = \$1,245

Road 2: 1.8 stations x \$ 150/ station = \$ 270

Road 3: 3.5 stations x \$ 150/ station = \$525

Road 4: 4.0 stations x \$ 150/ station = \$600

Approach Rock for Non-project Spurs (1, 2, 3, and 4): 4 approaches  
x 40 yds/approach x \$15/yd = \$2,400

Slash Piling and Sorting (Cable Ground): \$5/acre x 306 acres =  
\$1,530

Heliport slash sorting: 1 heliport x \$500/heliport = \$500

Cover materials for piles: \$5/pile x 20 piles = \$100

TOTAL Other Costs (No Profit & Risk added) = \$ 133,422

ROAD MAINTENANCE:

Spot rocking Kilchis Forest Road: 20 cy/MMBF/mile x \$6.00/cy x  
5.076 MMBF x 8.1 miles / 5,076 MBF = \$0.97/MBF

Interim Maintenance Grading: \$250 x 11.2 miles/5,076 MBF x 4 times  
= \$2.21/MBF

Final Maintenance Grading: \$500 x 11.2 miles/5,076 MBF = \$1.10/MBF

Final Maintenance Compaction: \$950/mile x 11.2 miles/ 5,076 MBF =  
\$2.10/MBF

Incline Road install 10 Road Dips (Exhibit J) x \$100 each/ 5,076 =  
\$0.20/MBF

TOTAL Road Maintenance: \$6.58/MBF



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**logging conditions**

combination#: 1                      Douglas - Fir                      95.00%

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

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

combination#: 2                      Douglas - Fir                      5.00%

**yarding distance:** Short (400 ft)                      **downhill yarding:** No  
**logging system:** Shovel                      **Process:** Stroke Delimber  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 7.5                      **bd. ft / load:** 3,500  
**cost / mbf:** \$54.79

**machines:** Stroke Delimber (B)

combination#: 3

                                 Alder (Red)                      100.00%  
**yarding distance:** Medium (800 ft)                      **downhill yarding:** No  
**logging system:** Cable: Medium Tower >40 - <70                      **Process:** Stroke Delimber  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 4.2                      **bd. ft / load:** 3,200  
**cost / mbf:** \$251.49

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

combination#: 4                      Western Hemlock / Fir                      100.00%  
                                 Sitka Spruce                      100.00%



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<b>yarding distance:</b>	Medium (800 ft)	<b>downhill yarding:</b>	No
<b>logging system:</b>	Cable: Medium Tower >40 - <70	<b>Process:</b>	Stroke Delimber
<b>tree size:</b>	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
<b>loads / day:</b>	4.8	<b>bd. ft / load:</b>	3,400
<b>cost / mbf:</b>	\$204.91		
<b>machines:</b>	Log Loader (A) Stroke Delimber (A) Tower Yarder (Medium)		



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**logging costs**

<b>Operating Seasons:</b>	2.00	<b>Profit Risk:</b>	15.00%
<b>Project Costs:</b>	\$422,600.00	<b>Other Costs (P/R):</b>	\$12,152.00
<b>Slash Disposal:</b>	\$0.00	<b>Other Costs:</b>	\$133,422.00

**Miles of Road**

Road Maintenance: \$6.58

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

**Hauling Costs**

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	3.5
Western Hemlock / Fir	\$0.00	3.0	3.6
Sitka Spruce	\$0.00	3.0	3.2
Alder (Red)	\$0.00	3.0	3.2



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**logging costs breakdown**

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
<b>Douglas - Fir</b>									
\$218.86	\$6.91	\$1.73	\$67.83	\$2.39	\$44.66	\$0.00	\$5.00	\$26.28	\$373.66
<b>Western Hemlock / Fir</b>									
\$204.91	\$6.91	\$1.73	\$65.94	\$2.39	\$42.28	\$0.00	\$5.00	\$26.28	\$355.44
<b>Sitka Spruce</b>									
\$204.91	\$6.91	\$1.73	\$74.18	\$2.39	\$43.52	\$0.00	\$5.00	\$26.28	\$364.92
<b>Alder (Red)</b>									
\$251.49	\$7.24	\$1.73	\$77.72	\$2.39	\$51.09	\$0.00	\$5.00	\$26.28	\$422.94

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$620.98	\$247.32	\$0.00
Western Hemlock / Fir	\$0.00	\$505.30	\$149.86	\$0.00
Sitka Spruce	\$0.00	\$498.16	\$133.24	\$0.00
Alder (Red)	\$0.00	\$575.16	\$152.22	\$0.00



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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	2,451	\$247.32	\$606,181.32
Western Hemlock / Fir	500	\$149.86	\$74,930.00
Sitka Spruce	136	\$133.24	\$18,120.64
Alder (Red)	1,989	\$152.22	\$302,765.58

**Gross Timber Sale Value**

Recovery: \$1,001,997.54

Prepared by: David Wells

Phone: 503-842-2545





**PROJECT SUMMARY SHEET**

Sale: Star White

**CONSTRUCTION**

Point	E to F	25+55	stations =	\$33,854.42
Point	G to H	2+35	stations =	\$3,228.90
Point	I to J	54+30	stations =	\$128,644.31
Point	K to L	8+65	stations =	\$20,540.26
<b>SUBTOTAL CONSTRUCTION</b>				<b>\$186,267.89</b>

**IMPROVEMENT**

Point	A to B	70+50	stations =	\$84,636.65
Point	C to D	10+75	stations =	\$22,097.80
Point	M to N	8+85	stations =	\$604.65
Point	O to P	94+70	stations =	\$12,486.00
<b>SUBTOTAL IMPROVEMENT</b>				<b>\$119,825.10</b>

**RECONSTRUCTION**

Point	E to F	46+45	stations =	\$102,019.53
Point	O to P	15+50	stations =	\$6,055.04
<b>SUBTOTAL RECONSTRUCTION</b>				<b>\$108,074.57</b>

**SPECIAL PROJECTS**

Project 4. Install & purchase gate @ sta. 2+00 on A to B.				\$3,100.00
<b>SUBTOTAL SPECIAL PROJECTS</b>				<b>\$3,100.00</b>

**MOVE IN**

**\$5,332.44**

**GRAND TOTAL** **\$422,600.00**

## SUMMARY OF CONSTRUCTION COST

Sale:	<b>Star White</b>					Road:	<b>A to B</b>			
<u>Construction -</u>	0+00 0.00	stations miles	<u>Improvement -</u>	70+50 1.34	stations miles	<u>Reconstruction -</u>	0+00 0.00	stations miles		
<b>IMPROVEMENT: CLEARING AND GRUBBING -</b>										
Widening				1.000	acres @	\$1,500.00	per acre =	\$1,500.00		
Scattering/End-Haul Stumps				4.860	acres @	\$1,500.00	per acre =	\$7,290.00		
								<b>TOTAL CLEARING AND GRUBBING</b>	<b>\$8,790.00</b>	
<b>IMPROVEMENT: EXCAVATION, DRILL &amp; SHOOT (cost are weighted average) -</b>										
Road Earthwork				70.50	sta. @	\$100.00	per sta. =	\$7,050.00		
Widening				5500	cy. @	\$2.50	per c.y. =	\$13,750.00		
Landing Widening	41+60	to	42+90	300	cy. @	\$2.50	per c.y. =	\$750.00		
Landing Widening	61+75	to	62+85	500	cy. @	\$2.50	per c.y. =	\$1,250.00		
								<b>TOTAL EXCAVATION</b>	<b>\$22,800.00</b>	
<b>IMPROVEMENT: ENDHAUL -</b>										
Widening	0+00	to	70+50	5500	cy. @	\$2.61	per c.y. =	\$14,355.00		
Landing Widening	41+60	to	42+90	300	cy. @	\$2.50	per c.y. =	\$750.00		
Landing Widening	61+75	to	62+85	500	cy. @	\$2.86	per c.y. =	\$1,430.00		
Spread & compact				6300	cy. @	\$0.25	per c.y. =	\$1,575.00		
								<b>TOTAL ENDHAUL</b>	<b>\$18,110.00</b>	
<b>CULVERTS - MATERIALS &amp; INSTALLATION</b>										
<u>Culverts</u>										
	60	LF of 18"		\$1,050.00		60	LF of 24"	\$1,620.00		
				\$1,050.00				\$1,620.00		
<u>Culvert Stakes &amp; Markers</u>										
	4	markers		\$32.00						
				\$32.00					<b>TOTAL CULVERTS</b>	<b>\$2,702.00</b>
<b>ROCK</b>										
0+00 to	30+00		1,080	cy. of	Crushed	@	\$16.10	per c.y. =	\$17,388.00	
Culvert Backfill	4 Loc. 10 CY/Cul		40	cy. of	Crushed	@	\$9.33	per c.y. =	\$373.20	
Landing Rock 8" Lift	41+60 to 42+90		180	cy. of	Crushed	@	\$16.47	per c.y. =	\$2,964.60	
Landing Rock 8" Lift	61+75 to 62+85		160	cy. of	Crushed	@	\$16.81	per c.y. =	\$2,689.60	
Spot Rock	As Marked		300	cy. of	Crushed	@	\$16.46	per c.y. =	\$4,938.00	
Energy Dissipator	4 Loc. 10 CY/Cul.		40	cy. of	Riprap	@	\$8.50	per c.y. =	\$340.00	
								<b>TOTAL ROCK</b>	<b>\$28,693.40</b>	
<b>SPECIAL PROJECTS</b>										
Construct Ditchouts -				10.00	@	\$50.00	each	\$500.00		
Grade and shape road -				70.50	stations @	\$15.50	per station	\$1,092.75		
Roll subgrade prior to rockng (optional equipment) -				70.50	stations @	\$13.20	per station	\$930.60		
Remove culverts from state lands				2.00	@	\$362.50	total	\$362.50		
Grass seed and fertilize -				1.85	acres @	\$220.00	per acre	\$407.00		
Mulching -				0.414	acres @	\$600.00	per acre	\$248.40		
								<b>TOTAL SPECIAL PROJECTS</b>	<b>\$3,541.25</b>	
<b>GRAND TOTAL</b>								<b>\$84,636.65</b>		

## SUMMARY OF CONSTRUCTION COST

Sale: **Star White**

Road: **C to D**

<u>Construction -</u>	<u>0+00</u>	<u>stations</u>	<u>Improvement -</u>	<u>10+75</u>	<u>stations</u>	<u>Reconstruction -</u>	<u>0+00</u>	<u>stations</u>
	0.00	miles		0.20	miles		0.00	miles

<b>IMPROVEMENT:</b> CLEARING AND GRUBBING - Scattering	0.740	acres @	\$1,500.00	per acre =	<u>\$1,110.00</u>	
					<b>TOTAL CLEARING AND GRUBBING</b>	<b>\$1,110.00</b>
<b>IMPROVEMENT:</b> EXCAVATION - Widening/Full Bench Const.	4000	cy. @	\$2.00	per c.y. =	<u>\$8,000.00</u>	
					<b>TOTAL EXCAVATION</b>	<b>\$8,000.00</b>
<b>IMPROVEMENT:</b> ENDHAUL - Widening/Full Bench Const. Spread & compact	4000	cy. @	\$2.97	per c.y. =	\$11,880.00	
	4000	cy. @	\$0.25	per c.y. =	<u>\$1,000.00</u>	
					<b>TOTAL ENDHAUL</b>	<b>\$12,880.00</b>
<b>SPECIAL PROJECTS</b> Grass seed and fertilize -	0.49	acres @	\$220.00	per acre	<u>\$107.80</u>	
					<b>TOTAL SPECIAL PROJECTS</b>	<b>\$107.80</b>
<b>GRAND TOTAL</b>						<b>\$22,097.80</b>

## SUMMARY OF CONSTRUCTION COST

Sale: **Star White**

Road: **E to F**

Construction -	25+55 0.48	stations miles	Improvement -	0.00	stations miles	Reconstruction -	46+45 0.88	stations miles
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**CONSTRUCTION:** CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope or Activity	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		6+80	Fill		Crown	\$400	=	\$2,720.00	
6+80		10+45	35%		Outslope	\$191	=	\$697.15	
28+00		43+10	45%		Outslope	\$269	=	\$4,061.90	
								<b>TOTAL</b>	<b>\$7,479.05</b>

**RECONSTRUCTION:** CLEARING AND GRUBBING -

Clearing	4.790	acres @	\$500.00	per acre =	\$2,395.00	
Scattering/End-Haul Stumps	2.310	acres @	\$1,500.00	per acre =	\$3,465.00	
					<b>TOTAL CLEARING AND GRUBBING</b>	<b>\$5,860.00</b>

**RECONSTRUCTION:** EXCAVATION -

Widening	10+45	to	28+00	6800	cy. @	\$2.00	per c.y.=	\$13,600.00	
Widening	43+10	to	47+85	3300	cy. @	\$2.00	per c.y.=	\$6,600.00	
Widening	47+85	to	67+50	1300	cy. @	\$1.75	per c.y.=	\$2,275.00	
Fill Const./Turnaround	67+50	to	72+00	6800	cy. @	\$0.65	per c.y.=	\$4,420.00	
								<b>TOTAL EXCAVATION</b>	<b>\$26,895.00</b>

**RECONSTRUCTION:** ENDHAUL -

Widening	10+45	to	28+00	6800	cy. @	\$1.35	per c.y.=	\$9,180.00	
Widening	43+10	to	47+85	3300	cy. @	\$1.99	per c.y.=	\$6,567.00	
Widening	47+85	to	67+50	1300	cy. @	\$2.09	per c.y.=	\$2,717.00	
Spread & compact				11400	cy. @	\$0.25	per c.y.=	\$2,850.00	
								<b>TOTAL ENDHAUL</b>	<b>\$21,314.00</b>

**CULVERTS - MATERIALS & INSTALLATION**

<u>Culverts</u>	150	LF of 18"	\$2,625.00	90	LF of 24"	\$2,430.00	
				40	LF of 36"	\$1,320.00	
				40	LF of 48"	\$2,575.00	
			<u>\$2,625.00</u>			<u>\$6,325.00</u>	
<u>Culvert Stakes &amp; Markers</u>							
	10	markers	\$80.00				
			<u>\$80.00</u>				
						<b>TOTAL CULVERTS</b>	<b>\$9,030.00</b>

**ROCK**

0+00 to	72+00	3,350	cy. of	Crushed	@	\$16.12	per c.y.=	\$54,002.00	
Truck Turnaround 8" Lift	70+70 to 72+00	270	cy. of	Crushed	@	\$16.61	per c.y.=	\$4,484.70	
Culvert Backfill/Bedding	7+25	60	cy. of	Crushed	@	\$10.06	per c.y.=	\$603.60	
Culvert Backfill/Bedding	9+40	100	cy. of	Crushed	@	\$10.19	per c.y.=	\$1,019.00	
Culvert Backfill/Bedding	8 Loc. 10 CY/Cul.	80	cy. of	Crushed	@	\$9.96	per c.y.=	\$796.80	
Energy Dissipator	10 Loc. 10 CY/Cul.	100	cy. of	Riprap	@	\$9.07	per c.y.=	\$907.00	
								<b>TOTAL ROCK</b>	<b>\$61,813.10</b>

**SPECIAL PROJECTS**

Construct waste areas near 0+00 -	5.00	hours @	\$130.00	per hour	\$650.00	
Grade and shape road -	72.00	stations @	\$15.50	per station	\$1,116.00	
Roll subgrade w/ vibratory roller prior to rocking -	72.00	stations @	\$13.20	per station	\$950.40	
Grass seed and fertilize -	2.57	acres @	\$220.00	per acre	\$565.40	
Mulching -	0.335	acres @	\$600.00	per acre	\$201.00	
					<b>TOTAL SPECIAL PROJECTS</b>	<b>\$3,482.80</b>

**GRAND TOTAL** **\$135,873.95**

## SUMMARY OF CONSTRUCTION COST

Sale: **Star White**

Road: **G to H**

Construction -	2+35	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.04	miles		0.00	miles		0.00	miles

**CONSTRUCTION:** CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist.</u> <u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>	=		
0+00		2+35	45%		Outslope	\$269	=	\$632.15	
								<b>TOTAL</b>	<b>\$632.15</b>

**CULVERTS - MATERIALS & INSTALLATION**

<u>Culverts</u>	30	LF of 18"	\$525.00		
			\$525.00		
<u>Culvert Stakes &amp; Markers</u>					
	1	markers	\$8.00		
			\$8.00		
				<b>TOTAL CULVERTS</b>	<b>\$533.00</b>

**ROCK**

0+00	to	2+35	100	cy. of	Crushed	@	\$16.05	per c.y.=	\$1,605.00	
Junction Rock (8" Lift)		0+00	10	cy. of	Crushed	@	\$16.03	per c.y.=	\$160.30	
Energy Dissipator		1+95	10	cy. of	Riprap	@	\$9.23	per c.y.=	\$92.30	
									<b>TOTAL ROCK</b>	<b>\$1,958.90</b>

**SPECIAL PROJECTS**

Grade and shape road -	2.35	stations @	\$15.50	per station	\$36.43	
Roll subgrade w/ vibratory roller prior to rocking -	2.35	stations @	\$13.20	per station	\$31.02	
Grass seed and fertilize -	0.11	acres @	\$220.00	per acre	\$24.20	
Mulching -	0.022	acres @	\$600.00	per acre	\$13.20	
					<b>TOTAL SPECIAL PROJECTS</b>	<b>\$104.85</b>

**GRAND TOTAL** **\$3,228.90**

## SUMMARY OF CONSTRUCTION COST

Sale: **Star White**

Road: **I to J**

Construction -	54+30	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	1.03	miles		0.00	miles		0.00	miles

**CONSTRUCTION:** CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope or Activity	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=			
0+00		19+00	70%	0.5	Outslope	\$2,000	=	\$38,000.00		
19+00		24+30	60%	0.8	Outslope	\$1,500	=	\$7,950.00		
24+30		25+45	Through Cut	0.8	Outslope	\$2,120	=	\$2,438.00		
25+45		30+85	55%	0.9	Outslope	\$950	=	\$5,130.00		
30+85		39+50	50%		Outslope	\$459	=	\$3,970.35		
39+50		41+50	Fill		Outslope	\$830	=	\$1,660.00		
41+50		45+15	50%	1.2	Outslope	\$1,273	=	\$4,646.45		
45+15		48+30	Cut & Fill		Outslope	\$800	=	\$2,520.00		
48+30		52+05	55%	1.3	Outslope	\$2,088	=	\$7,830.00		
52+05		53+80	Fill		Outslope	\$800	=	\$1,400.00		
53+80		54+30	Land. Const.		Outslope	\$1,200	=	\$600.00		
Spread & compact at waste area						14000	cy. @	0.25	per c.y.=	\$3,500.00
<b>TOTAL</b>									<b>\$79,644.80</b>	

<b>ROCK</b>									
0+00	to	54+30	2,540	cy. of	Crushed	@	\$17.28	per c.y.=	\$43,891.20
Landing Rock (8" Lift)		54+30	90	cy. of	Crushed	@	\$17.45	per c.y.=	\$1,570.50
Junction Rock (8" Lift)		0+00	20	cy. of	Crushed	@	\$16.90	per c.y.=	\$338.00
<b>TOTAL ROCK</b>									<b>\$45,799.70</b>

<b>SPECIAL PROJECTS</b>									
Construct waste areas -			4.00	hours @		\$130.00	per hour	\$520.00	
Construct ditchouts -			10.00	@		\$60.00	each	\$600.00	
Grade and shape road -			54.30	stations @		\$15.50	per station	\$841.65	
Roll subgrade w/ vibratory roller prior to rocking -			54.30	stations @		\$13.20	per station	\$716.76	
Grass seed and fertilize -			2.37	acres @		\$220.00	per acre	\$521.40	
TOTAL SPECIAL PROJECTS									<b>\$3,199.81</b>

**GRAND TOTAL** **\$128,644.31**

## SUMMARY OF CONSTRUCTION COST

Sale: **Star White**

Road: **K to L**

Construction -	8+65	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.16	miles		0.00	miles		0.00	miles

**CONSTRUCTION:** CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope or Activity	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=		
0+00		4+50	60%	0.9	Outslope	\$1,955	=	\$8,797.50	
4+50		8+00	50%		Outslope	\$459	=	\$1,606.50	
8+00		8+65	Land. Const.		Outslope	\$1,200	=	\$780.00	
								<b>TOTAL</b>	<b>\$11,184.00</b>

**ROCK**

0+00	to		8+60	420	cy. of	Crushed	@	\$17.25 per c.y.=	\$7,245.00	
Landing Rock			8+30	100	cy. of	Crushed	@	\$17.31 per c.y.=	\$1,731.00	
									<b>TOTAL ROCK</b>	<b>\$8,976.00</b>

**SPECIAL PROJECTS**

Grade and shape road -	8.65	stations @	\$15.50	per station	\$134.08	
Roll subgrade w/ vibratory roller prior to rocking -	8.65	stations @	\$13.20	per station	\$114.18	
Grass seed and fertilize -	0.60	acres @	\$220.00	per acre	\$132.00	
					<b>TOTAL SPECIAL PROJECTS</b>	<b>\$380.26</b>

**GRAND TOTAL** **\$20,540.26**

## SUMMARY OF CONSTRUCTION COST

Sale: **Star White**

Road: **M to N**

Construction -	0+00	stations	Improvement -	8+85	stations	Reconstruction -	0+00	stations
	0.00	miles		0.17	miles		0.00	miles

**IMPROVEMENT: EXCAVATION -**

Road Earthwork (Rip road surface with dozer or grader)	8.85	sta. @	\$25.00	per sta. =	\$221.25	
				<b>TOTAL EXCAVATION</b>		<b>\$221.25</b>

**SPECIAL PROJECTS**

Construct Block to Motorized Vehicles -	2.00	hours @	\$50.00	each	\$100.00	
Construct waterbars -	4.00	@	\$30.00	each	\$120.00	
Grass seed and fertilize -	0.41	acres @	\$220.00	per acre	\$90.20	
Mulching -	0.122	acres @	\$600.00	per acre	\$73.20	
				<b>TOTAL SPECIAL PROJECTS</b>		<b>\$383.40</b>

**GRAND TOTAL** **\$604.65**



## SUMMARY OF CONSTRUCTION COST

Sale:	<b>Star White</b>			Road:			<b>O to P</b>			
<u>Construction -</u>	0+00 0.00	stations miles	<u>Improvement -</u>	94+70 1.79	stations miles	<u>Reconstruction -</u>	15+50 0.29	stations miles		
<b>IMPROVEMENT: EXCAVATION -</b>										
Road Earthwork - Ditching	59+10	to	63+40	4.30	sta. @	\$80.00	per sta. =	\$344.00		
Road Earthwork - Ditching	85+00	to	94+70	9.70	sta. @	\$80.00	per sta. =	\$776.00		
Widening	56+35	to	58+35	200	cy. @	\$2.00	per c.y.=	\$400.00		
							<b>TOTAL EXCAVATION</b>		<b>\$1,520.00</b>	
<b>IMPROVEMENT: ENDHAUL -</b>										
Widening	56+35	to	58+35	200	cy. @	\$1.73	per c.y.=	\$346.00		
Spread & compact				200	cy. @	\$0.25	per c.y.=	\$50.00		
							<b>TOTAL ENDHAUL</b>		<b>\$396.00</b>	
<b>RECONSTRUCTION: CLEARING AND GRUBBING -</b>										
Scattering/End-Haul Stumps				1.850	acres @	\$1,500.00	per acre =	\$2,775.00		
							<b>TOTAL CLEARING AND GRUBBING</b>		<b>\$2,775.00</b>	
<b>RECONSTRUCTION: EXCAVATION -</b>										
Road Earthwork				15.50	sta. @	\$100.00	per sta. =	\$1,550.00		
							<b>TOTAL EXCAVATION</b>		<b>\$1,550.00</b>	
<b>CULVERTS - MATERIALS &amp; INSTALLATION</b>										
		<u>Culverts</u>	90	LF of 18"		\$1,575.00		60	LF of 24"	\$1,620.00
						\$1,575.00				\$1,620.00
		<u>Culvert Stakes &amp; Markers</u>	5	markers		\$40.00				
						\$40.00				
							<b>TOTAL CULVERTS</b>			<b>\$3,235.00</b>
<b>ROCK</b>										
Culvert Backfill	5 Loc. 10 CY/Cul.		50	cy. of	Crushed	@	\$6.52 per c.y.=	\$326.00		
Spot Rock	As Marked		400	cy. of	Crushed	@	\$11.64 per c.y.=	\$4,656.00		
Fill Armor/Widen	64+90		20	cy. of	Riprap	@	\$4.67 per c.y.=	\$93.40		
							<b>TOTAL ROCK</b>		<b>\$5,075.40</b>	
<b>SPECIAL PROJECTS</b>										
Construct waste areas -			1.00	hours @		\$130.00	per hour	\$130.00		
Grade and shape road -			110.20	stations @		\$15.50	per station	\$1,708.10		
Roll subgrade w/ vibratory roller prior to rocking -			110.20	stations @		\$13.20	per station	\$1,454.64		
Remove culverts from state lands			2.00	@		\$362.50	total	\$362.50		
Grass seed and fertilize -			1.52	acres @		\$220.00	per acre	\$334.40		
							<b>TOTAL SPECIAL PROJECTS</b>		<b>\$3,989.64</b>	
							<b>GRAND TOTAL</b>		<b>\$18,541.04</b>	

## ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Rock Source: Stockpile Location: NE 1/4 Sec. 33, T1N, R9W, W.M.  
 Sale: Star White Road: 340 c.y.

Load Dump Truck: \$0.70 /cu.yd. x 340 cu.yds. = \$238.00

Subtotal \$238.00

Move in Loader 1 @ \$822.97 = \$822.97

Subtotal \$822.97

Base Cost= \$3.12 Per Cu.Yd.

**TOTAL PRODUCTION COSTS \$1,060.97**

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B Culvert Backfill (Crushed)	5.61	0.60	3.12	9.33	40	\$373.20
E to F Culvert Backfill/Bedding (Crushed)	6.04	0.90	3.12	10.06	60	\$603.60
E to F Culvert Backfill/Bedding (Crushed)	6.07	1.00	3.12	10.19	100	\$1,019.00
E to F Culvert Backfill/Bedding (Crushed)	6.24	0.60	3.12	9.96	80	\$796.80
G to H Culvert Backfill (Crushed)	6.41	0.60	3.12	10.13	10	\$101.30
O to P Culvert Backfill (Crushed)	2.80	0.60	3.12	6.52	50	\$326.00
				Total C.Y.	340	Sub Total \$3,219.90

**TOTAL ROCKING COSTS \$3,219.90**

## ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Crushed	Spruce Crk. Pit	Location:	SW 1/4 Sec. 22, T1N, R9W, W.M.
Sale:	<b>Star White</b>		Road:	9190 c.y.
Swell:	1.40		Stockpile:	c.y.
Shrinkage	1.16		Total Truck Loads:	9190 c.y.
Drill Pct.:	50%		In Place Total:	6564 c.y.

Pit Development & Cleanup including Clearing and grubbing of waste area & pit area, placing & spreading overburden in waste area, construction of pit access roads, and pit drainage control.				\$4,500.00
Drill & Shoot:	\$2.50 /cu.yd.	x	3282 cu.yds.	= \$8,205.00
Rip Rock:	\$1.90 /cu.yd.	x	3282 cu.yds.	= \$6,235.80
Push Rock:	\$0.70 /cu.yd.	x	9190 cu.yds.	= \$6,433.00
Load Crusher:	\$0.70 /cu.yd.	x	9190 cu.yds.	= \$6,433.00
Crush Rock:	\$2.50 /cu.yd.	x	9190 cu.yds.	= \$22,975.00
Load Dump Truck:	\$0.70 /cu.yd.	x	9190 cu.yds.	= \$6,433.00
Oversize Reduction:	\$4.50 /cu.yd.	x	950 cu.yds.	= \$4,275.00
			Subtotal	\$65,489.80

Move In/Set-up Crusher				\$2,000.00
Move In and set up Drill and Compressor	1	@	\$610.00	= \$610.00
Move in Roller and Compactor	1	@	\$700.00	= \$700.00
Move in Grader	1	@	\$250.00	= \$250.00
Move in D-8	1	@	\$825.00	= \$825.00
Move in Excavator	1	@	\$900.00	= \$900.00
Move in Trucks	3	@	\$150.00	= \$450.00
Move in Water Truck	1	@	\$175.00	= \$175.00
Change Gradation				
			Subtotal	\$5,910.00

Base Cost=	\$7.77	Per Cu.Yd.		TOTAL PRODUCTION COSTS \$71,399.80
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Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B 0 3000 (Crushed)	5.88	2.45	7.77	16.10	1080	\$17,388.00
A to B Landing Rock 8" Lift (Crushed)	6.25	2.45	7.77	16.47	180	\$2,964.60
A to B Landing Rock 8" Lift (Crushed)	6.59	2.45	7.77	16.81	160	\$2,689.60
A to B Spot Rock (Crushed)	6.24	2.45	7.77	16.46	300	\$4,938.00
A to B Energy Dissipator (Riprap)	5.10	1.40	2.00	8.50	40	\$340.00
E to F 0 7200 (Crushed)	5.90	2.45	7.77	16.12	3350	\$54,002.00
E to F Truck Turnaround 8" Lift (Crushed)	6.39	2.45	7.77	16.61	270	\$4,484.70
E to F Energy Dissipator (Riprap)	5.67	1.40	2.00	9.07	100	\$907.00
G to H 0 235 (Crushed)	5.83	2.45	7.77	16.05	100	\$1,605.00
G to H Junction Rock (8" Lift) (Crushed)	5.81	2.45	7.77	16.03	10	\$160.30
G to H Energy Dissipator (Riprap)	5.83	1.40	2.00	9.23	10	\$92.30
I to J 0 5430 (Crushed)	7.06	2.45	7.77	17.28	2540	\$43,891.20
I to J Landing Rock (8" Lift) (Crushed)	7.23	2.45	7.77	17.45	90	\$1,570.50
I to J Junction Rock (8" Lift) (Crushed)	6.68	2.45	7.77	16.90	20	\$338.00
K to L 0 860 (Crushed)	7.03	2.45	7.77	17.25	420	\$7,245.00
K to L Landing Rock (Crushed)	7.09	2.45	7.77	17.31	100	\$1,731.00
O to P Spot Rock (Crushed)	1.42	2.45	7.77	11.64	400	\$4,656.00
O to P Fill Armor/Widen (Riprap)	1.27	1.40	2.00	4.67	20	\$93.40
				Total C.Y.	9190	Sub Total \$149,096.60

	TOTAL ROCKING COSTS	\$149,096.60
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## Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Star White**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
12.0	Pavement	30
16.0	Main Lines	7
6.0	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Drill & Compressor	\$764.13		\$46.00	0.00	0.00	0	\$0.00	\$764.13
1	Excavators (Small)	\$610.65		\$22.00	0.00	3.00	3	\$66.00	\$676.65
1	Excavators (Large)	\$1,091.51	1	\$44.80	0.00	3.00	3	\$134.40	\$1,225.91
1	Tractor (D8)	\$996.10	2	\$15.10	0.00	3.00	3	\$45.30	\$1,041.40
2	Dump Truck (10 cy +)	\$497.44		\$2.85	0.00	3.00	3	\$17.10	\$514.54
1	Dump Truck (Off Hiway)	\$885.07	1	\$4.75	0.00	3.00	3	\$14.25	\$899.32
1	Water Truck (1500 Gal)	\$201.94		\$2.85	0.00	3.00	3	\$8.55	\$210.49
<b>TOTAL MOVE-IN COSTS:</b>									<b>\$5,332.44</b>



## OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

### *Star White*

#### 1. Type of Sale

Regeneration harvest, Recovery

#### 2. Legal Description

Sections 2, 3, 10, and 11, T1N, R9W, W.M., Tillamook County, Oregon.

#### 3. Sale Acreage

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

	ACRES	
	<u>Gross</u>	<u>Net</u>
<b>Area 1 (Clearcut)</b>	146	118
<b>Area 2 (Clearcut)</b>	110	96
<b>Area 3 (Clearcut)</b>	140	112

#### Gross Acres

Area within the Timber Sale Boundary signs.

#### Net acres

*Used for calculating the advertised volume.*

Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

#### 4. Cruising Procedures

##### A. Cruise Method

The sale was variable full plot cruised using a spacing of 350' between plots and 700' between lines. All conifers 8 inches DBH and greater containing 20 net board feet and all hardwoods 10 inches DBH and greater containing 30 net board feet were recorded on all plots. Species were recorded on all trees and measured for merchantable bole height, diameter, and form factor.

Merchantable heights were recorded to 6" and 7" outside bark for conifers and hardwoods respectively.

Area	# Plots	CV%	SE%
1	22	39.9	8.7
2	19	49.0	11.6
3	19	39.9	9.4
Total	60	43.4	5.6

**B. Plot size**

A basal area factor of 33.61 was used on Areas 1 and 2 and a BAF of 40 used on Area 3. The point of observation was 4.5 feet.

**C. Grading System**

All species were graded using Columbia River Log Scaling and Grading Bureau rules favoring a 40' log.

**5. Computation Procedure**

The volumes for the timber cruise were computed using SuperACE 2008, developed by Atterbury Consultants, Inc. SuperACE has calculated basal areas, advertised volumes, volume summary, log stock tables, and stand tables for each species and type.

**6. Hidden Defect and Breakage**

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

**7. Timber Description**

All of the sale areas were burned in the 1933 Tillamook fire. It is unknown if portions of the sale areas were planted or seeded but 60% of Area 1, 80% of Area 2, and 30% of Area 3 received reforestation work in 1965-66. Alder was sprayed in Areas 1 and 2 in 1977. There has been no additional stand management.

<b>Sale Area – Species</b>	<b>DBH</b>	<b>Merchantable Bole Height</b>	<b>Merchantable Top</b>
Area 1: Douglas-fir	17	59	5"
Area 1: Alder	12	44	6"
Area 1: Western Hemlock	17	68	5"
Area 1: Sitka Spruce	15	30	5"
Area 2: Douglas-fir	14	57	5"
Area 2: Alder	12	37	6"
Area 2: Western Hemlock	19	69	5"
Area 2: Sitka Spruce	13	11	5"
Area 3: Douglas-fir	14	49	5"
Area 3: Alder	12	38	6"
Area 3: Western Hemlock	22	91	5"
Area 3: Sitka Spruce	20	46	5"

**8. Cruiser Names/Dates**

Service Contract, April 2008

**9. Revenue Distribution**

FDF 100%

Tax Code: 56

Deed Numbers: 161, 162, 230

**10. Attachments**

Volume Summaries

Stand Tables

Log Stock Tables

Logging Plan Map

**11. Stand and Log Stock Tables Species Key**

DL – Douglas-fir leave

DF – Douglas-fir take

RA – Red alder

SL – Sitka spruce leave

SS – Sitka spruce take

WL – Western hemlock leave

WH – Western hemlock take





**Log Stock Table - MBF**

**Project: DEMO**

**T01N R09W S02 TSALE**

**T01N R09W S02 TSAL**

**Twp Rge Sec Tract**  
**01N 09W 02 AREA\_1**

**Type Acres**  
**SALE 118.00**

**Plots Sample Trees**

**Page 2**  
**Date 6/25/2014**  
**Time 8:22:45AM**

SPP	T	S	So	Gr	Log	Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches										
											2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
DF	1	D	D		22		5	100.0													
DF	Totals						647	10.5	579	27.5		72	32	123	54	54	42	178	25		
WH	8	3			32		36	10.4	32	11.5			19			14					
WH	8	3			36		6	5.0	6	2.0					6						
WH	8	3			40		219	5.0	208	74.1			36	37	34	11	64	26			
WH	8	4			13		1	5.0	1	.4			1								
WH	8	4			14		7	5.0	6	2.2			6								
WH	8	4			16		5	5.0	4	1.6			4								
WH	8	4			18		3	5.0	3	1.0			3								
WH	8	4			21		3	5.0	3	1.0			3								
WH	8	4			27		2	5.0	1	.5			1								
WH	8	4			28		3	5.0	3	1.2			3								
WH	8	4			32		2	5.0	2	.8			2								
WH	8	4			34		5	5.0	4	1.5			4								
WH	8	4			38		6	5.0	6	2.1			6								
WH	Totals						298	5.7	281	13.3			52	38	37	53	11	64	26		
DL	8	2			40		176	5.0	167	92.6						7	21	58	82		
DL	8	3			32		6	5.0	6	3.2						6					
DL	8	4			13		2	5.0	1	.8			1								
DL	8	4			23		2	5.0	1	.8			1								
DL	8	4			29		2	5.0	2	1.1			2								
DL	8	4			33		3	5.0	3	1.5			3								
DL	Totals						190	5.0	181	8.6			3	5		13	21	58	82		
SS	8	3			32		6	11.8	5	18.4				5							
SS	8	4			18		1	5.0	1	4.3			1								
SS	8	4			26		10	5.0	9	35.8			9								
SS	8	4			30		7	5.0	6	24.3			6								
SS	8	4			32		5	5.0	5	17.2			5								
SS	Totals						28	6.3	26	1.2			17	5	5						
SL	8	3			30		9	20.0	7	21.0							7				
SL	8	3			40		26	12.5	23	66.5							23				
SL	8	4			16		2	11.0	2	6.1			1		1						
SL	8	4			20		1	25.0	1	2.8			1								
SL	8	4			30		2	33.3	1	3.6			1								
SL	Totals						40	15.4	34	1.6			3		1		30				
Total All Species							2,357	10.5	2,109	100.0		72	655	465	251	108	76	292	109	82	

**Log Stock Table - MBF**

**Project: DEMO**

**T01N R09W S02 TSALE**

**T01N R09W S02 TSAL**

**Twp Rge Sec Tract Type Acres Plots Sample Trees Page**  
**01N 09W 02 AREA\_2 SALE 96.00 Date 6/25/2014**  
**Time 9:00:59AM**

Spp	T	S	So	Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches										
										MBF	Def	MBF	Spce	2-3	4-5	6-7	8-9	10-11	12-13	14-15
DF		D	D		9															
DF		8	2		40	73	5.0	70	7.5						17	33	19			
DF		8	3		32	120	5.0	114	12.3			59	26	6	11	12				
DF		8	3		40	573	5.5	541	58.4			167	267	61	46					
DF		8	4		12	2	5.0	2	.2		2									
DF		8	4		14	9	5.0	9	1.0		9									
DF		8	4		15	15	5.0	14	1.6		14	1								
DF		8	4		16	18	5.0	17	1.9		17									
DF		8	4		17	9	5.0	8	.9		8									
DF		8	4		18	13	5.0	12	1.3		12									
DF		8	4		19	12	5.0	11	1.2		8	3								
DF		8	4		20	26	5.0	24	2.6		24									
DF		8	4		21	2	5.0	2	.2		2									
DF		8	4		22	6	5.0	6	.6		6									
DF		8	4		23	6	5.0	6	.6		4	1								
DF		8	4		24	20	5.0	19	2.0									19		
DF		8	4		25	3	5.0	3	.3			3								
DF		8	4		26	2	5.0	2	.2		2									
DF		8	4		27	4	5.0	4	.4		4									
DF		8	4		28	3	5.0	3	.3		3									
DF		8	4		30	12	5.0	12	1.2		12									
DF		8	4		34	3	5.0	3	.3		3									
DF		8	4		36	2	5.0	2	.2			2								
DF		8	4		40	44	5.0	42	4.5		42									
DF	1	D	D		15	9	100.0													
DF		Totals				987	6.1	926	65.4		173	233	296	67	57	29	33	19	19	
RA		8	3		28	16	19.0	13	3.3				13							
RA		8	R		14	16	10.0	15	3.8		15									
RA		8	R		16	6	10.0	6	1.5		6									
RA		8	R		17	10	10.0	9	2.3		9									
RA		8	R		18	2	10.0	2	.5		2									
RA		8	R		20	5	10.0	5	1.3		5									
RA		8	R		22	28	22.4	22	5.6		22									
RA		8	R		25	4	40.0	2	.6		2									
RA		8	R		28	16	10.0	14	3.7		14									
RA		8	R		30	19	10.0	17	4.4		17									
RA		8	R		31	16	10.0	14	3.6		14									
RA		8	R		32	87	16.6	73	18.9		24	39	11							
RA		8	R		34	5	28.0	4	1.0		4									
RA		8	R		35	15	28.0	11	2.7		11									
RA		8	R		36	34	20.1	27	7.0		27									
RA		8	R		40	176	12.7	154	39.9		79	30	45							
RA		Totals				455	15.2	386	27.2		249	69	68							
WH		8	3		40	60	7.5	56	85.8			17			20	19				
WH		8	4		25	5	5.0	5	7.0		5									
WH		8	4		29	2	5.0	2	2.9		2									
WH		8	4		32	3	5.0	3	4.3		3									
WH		Totals				70	7.2	65	4.6		9	17			20	19				

**Log Stock Table - MBF**  
**Project: DEMO**

**T01N R09W S02 TSALE**

**T01N R09W S02 TSAL**

**Twp Rge Sec Tract Type Acres Plots Sample Trees Page**  
**01N 09W 02 AREA\_2 SALE 96.00 Date 6/25/2014**  
**Time 9:00:59AM**

Spp	T	S	So	Gr	Log	Gross	% Def	Net	% Spc	Net Volume by Scaling Diameter in Inches										
										MBF	MBF	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23
SL		8	3	40		36	20.3	29	87.8						10			18		
SL		8	4	14		1		1	2.2			1								
SL		8	4	36		4	11.5	3	10.0					3						
SL		Totals				40	19.2	33	2.3			1		3	10			18		
SS		8	4	15		6	5.0	6	79.7		6									
SS		8	4	32		2	24.0	2	20.3			2								
SS		Totals				8	9.6	7	.5		6	2								
Total All Species						1,560	9.2	1,417	100.0		179	493	381	136	57	53	62	19	19	18



**Log Stock Table - MBF**

**Project: DEMO**

**T01N R09W S02 TSALE**

**T01N R09W S02 TSAL**

**Twp Rge Sec Tract**  
**01N 09W 02 AREA\_3**

**Type Acres Plots Sample Trees**  
**SALE 112.00**

**Page 2**  
**Date 6/25/2014**  
**Time 8:32:43AM**

Spp	T	S	So	Gr	Log	Gross	% Def	Net	% Spc	Net Volume by Scaling Diameter in Inches									
										MBF	MBF	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19
SS		8	4	40		24	5.0	22	21.8			22							
SS		Totals				115	10.7	103	5.4			37		33		33			
WH		8	2	40		57	11.5	50	32.7						15			35	
WH		8	3	32		8	5.0	8	5.1				8						
WH		8	3	40		101	16.0	85	55.0			13		51		21			
WH		8	4	13		4	5.0	4	2.6			4							
WH		8	4	34		2	5.0	2	1.3			2							
WH		8	4	35		5	5.0	5	3.3			5							
WH		Totals				178	13.3	154	8.0			11	13	8	51		36		35
SL		8	3	40		16		16	95.2							16			
SL		8	4	14		1		1	4.8			1							
SL		Totals				17		17	.9			1				16			
WL		8	2	40		62	11.2	55	96.6							19			36
WL		8	4	40		2	5.0	2	3.4			2							
WL		Totals				64	11.0	57	3.0			2				19			36
DL		8	2	40		48	5.0	45	93.9							15			31
DL		8	4	29		3	5.0	3	6.1				3						
DL		Totals				51	5.0	48	2.5				3			15			31
Total All Species						2,131	9.9	1,919	100.0		188	461	471	246	139	35	277		101

TC		Stand Table Summary											T01N R09W S02 TSALE			
TSTNDSUM		Project DEMO											T01N R09W S02 TSALE			
Twp		Rge	Sec	Tract	Type	Acres	Plots	Sample Trees			Page:	1				
01N		09W	02	AREA_1	SALE	118.00					Date:	06/25/2014				
											Time:	8:23:46AM				
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits	MBF
RA		8	3	84	49	13.352	4.66	13.35	5.4	23.3	1.97	73	312	233	86	37
RA		9	7	85	70	24.617	10.88	28.13	9.2	42.5	7.07	258	1,196	834	304	141
RA		10	6	85	83	17.091	9.32	25.64	9.7	42.2	6.80	249	1,082	803	293	128
RA		11	9	86	92	21.187	13.98	32.96	12.5	47.9	11.28	410	1,577	1,331	484	186
RA		12	9	84	74	17.803	13.98	29.67	12.8	48.0	10.40	379	1,424	1,227	447	168
RA		13	4	88	94	6.742	6.21	13.48	15.6	63.8	5.79	211	860	684	249	101
RA		14	5	85	73	7.267	7.77	14.53	14.7	53.0	5.89	214	770	695	253	91
RA		15	4	87	87	5.064	6.21	8.86	22.9	82.9	5.58	203	734	659	239	87
RA		16	4	86	81	4.451	6.21	7.79	24.5	85.7	5.23	191	668	618	225	79
RA		17	2	86	85	1.971	3.11	3.94	27.4	97.5	2.96	108	384	349	127	45
RA		18	2	82	61	1.758	3.11	3.52	22.1	72.5	2.14	78	255	253	92	30
RA		20	2	82	55	1.424	3.11	1.42	51.0	75.0	1.98	73	107	234	86	13
RA		22	1	84	23	.589	1.55	.59	29.8	30.0	.48	18	18	57	21	2
RA		26	1	76	60	.421	1.55	.84	48.5	125.0	1.12	41	105	133	48	12
RA	Totals		59	85	76	123.738	91.66	184.74	13.6	51.4	68.72	2,504	9,492	8,108	2,954	1,120
DF		10	1	84	64	2.801	1.53	2.80	11.6	40.0	.92	32	112	109	38	13
DF		11	2	85	72	4.630	3.06	6.94	10.7	36.7	2.13	75	255	251	88	30
DF		12	1	83	63	1.945	1.53	1.95	14.7	40.0	.82	29	78	96	34	9
DF		13	1	90	71	1.657	1.53	3.31	11.3	40.0	1.07	38	133	126	44	16
DF		14	2	87	85	2.858	3.06	5.72	15.9	60.0	2.60	91	343	307	107	40
DF		15	2	83	82	2.490	3.06	4.98	17.9	62.5	2.54	89	311	300	105	37
DF		16	4	84	72	4.377	6.11	7.66	20.0	60.0	4.36	153	460	515	181	54
DF		18	1	83	101	.865	1.53	1.73	31.2	110.0	1.54	54	190	182	64	22
DF		20	2	87	92	1.401	3.06	2.80	34.3	115.0	2.74	96	322	323	113	38
DF		21	1	73	93	.635	1.53	1.27	38.2	105.0	1.38	48	133	163	57	16
DF		23	1	76	95	.529	1.53	1.06	46.4	115.0	1.40	49	122	165	58	14
DF		24	1	87	107	.486	1.53	.97	55.4	210.0	1.53	54	204	181	64	24
DF		25	3	84	116	1.344	4.58	4.03	42.9	170.0	4.93	173	686	582	204	81
DF		26	1	84	106	.414	1.53	.83	66.0	230.0	1.56	55	191	184	65	22
DF		27	1	88	134	.384	1.53	1.15	61.7	293.3	2.03	71	338	239	84	40
DF		29	3	85	114	.999	4.58	2.33	74.6	275.7	4.96	174	643	585	205	76
DF		30	2	79	105	.622	3.06	1.24	83.6	262.5	2.97	104	327	350	123	39
DF		31	1	86	132	.291	1.53	.87	80.6	366.7	2.01	70	321	237	83	38
DF	Totals		30	84	82	28.730	45.83	51.66	28.2	100.0	41.49	1,455	5,167	4,896	1,717	610
WH		10	1	89	71	2.801	1.53	5.60	7.3	40.0	1.31	41	224	154	48	26
WH		12	1	86	101	1.945	1.53	3.89	13.5	55.0	1.68	53	214	199	62	25
WH		15	1	85	89	1.245	1.53	2.49	19.6	70.0	1.56	49	174	184	57	21
WH		17	1	90	89	.969	1.53	1.94	26.6	105.0	1.65	51	204	194	61	24
WH		18	2	88	89	1.729	3.06	3.46	28.3	102.5	3.13	98	354	370	116	42
WH		19	1	83	93	.776	1.53	1.55	35.9	125.0	1.78	56	194	210	66	23
WH		20	1	88	136	.700	1.53									
WH		26	1	90	134	.414	1.53	1.24	61.1	296.7	2.43	76	369	287	90	44
WH		29	1	82	134	.333	1.53	1.00	75.0	343.3	2.40	75	343	283	88	40
WH		32	1	75	120	.274	1.53	.82	76.7	266.7	2.01	63	219	238	74	26
WH		33	1	71	122	.257	1.53	.77	83.7	273.3	2.07	65	211	244	76	25
WH	Totals		12	87	94	11.444	18.33	22.77	27.5	110.1	20.02	626	2,506	2,362	738	296
DL		36	3	82	125	.655	4.58	1.96	96.3	425.0	5.20	189	835	614	223	98
DL		39	2	88	148	.368	3.06	1.10	134.0	705.0	4.07	148	779	480	175	92
DL	Totals		5	84	133	1.023	7.64	3.07	109.9	525.8	9.27	337	1,614	1,094	398	190

TC		TSTNDSUM		Stand Table Summary													
Project										DEMO							
T01N R09W S02 TSALE										T01N R09W S02 TSALE							
Twp	Rge	Sec	Tract		Type	Acres	Plots	Sample Trees			Page:	2					
01N	09W	02	AREA_1		SALE	118.00					Date:	06/25/2014					
											Time:	8:23:46AM					
Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	Totals				
		DBH	Trees	FF				Ht	16'		Tot	Net Cu.Ft.	Net Bd.Ft.	Tons	Cunits	MBF	
SL		32	1	86	89	.274	1.53	.55	87.0	285.0	1.24	48	156	146	56	18	
SL		33	1	49	72	.257	1.53	.26	150.0	40.0	1.00	39	10	118	46	1	
SL		36	1	64	82	.216	1.53	.43	92.0	155.0	1.03	40	67	122	47	8	
SL		45	1	49	84	.138	1.53	.28	212.7	200.0	1.53	59	55	180	69	7	
SL		Totals		4	64	82	.885	6.11	1.51	122.1	190.7	4.80	185	289	567	218	34
SS		10	1	88	58	2.801	1.53	2.80	9.6	30.0	.70	27	84	83	32	10	
SS		14	1	82	54	1.429	1.53	1.43	19.0	40.0	.71	27	57	83	32	7	
SS		22	1	59	60	.579	1.53	.58	64.6	70.0	.97	37	41	115	44	5	
SS		29	1	49	72	.333	1.53	.67	72.7	80.0	1.25	48	53	148	57	6	
SS		Totals		4	81	58	5.142	6.11	5.47	25.6	42.9	3.63	140	235	429	165	28
DF	1	11	1	80	71	2.315	1.53				.89			105			
DF	1	14	1	81	61	1.429	1.53				.93			110			
DF		Totals		2	80	67	3.744	3.06			1.82			215			
Totals			116	85	78	174.706	178.74	269.22	19.5	71.7	149.75	5246	19,302	17,671	6,190	2,278	

TC		TSTNDSUM		Stand Table Summary												
Project														DEMO		
T01N R09W S02 TSALE										T01N R09W S02 TSALE						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1		Date:	06/25/2014				
01N	09W	02	AREA_2	SALE	96.00			Time:	9:02:05AM							
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s			
		DBH	Trees	FF				Ht	Tot		Net	Net	Cu.Ft.	Bd.Ft.	Tons	Cunits
DF		9	1	87	60	4.004	1.77	4.00	9.7	40.0	1.11	39	160	106	37	15
DF		10	3	86	74	9.730	5.31	19.46	6.7	35.0	3.72	131	681	357	125	65
DF		11	3	86	76	8.041	5.31	13.40	9.6	38.0	3.65	128	509	351	123	49
DF		12	11	87	82	24.775	19.46	45.05	11.4	44.0	14.64	514	1,982	1,406	493	190
DF		13	7	87	85	13.434	12.38	26.87	13.2	51.4	10.13	355	1,382	972	341	133
DF		14	5	85	83	8.274	8.84	14.89	16.5	57.8	7.02	246	860	674	237	83
DF		15	5	86	90	7.207	8.84	14.41	18.3	69.0	7.51	264	995	721	253	95
DF		16	4	86	88	5.068	7.08	10.14	20.0	70.0	5.78	203	709	555	195	68
DF		17	2	88	96	2.245	3.54	4.49	25.4	97.5	3.24	114	438	311	109	42
DF		18	1	86	83	1.001	1.77	2.00	22.3	70.0	1.28	45	140	122	43	13
DF		19	2	90	99	1.797	3.54	3.59	31.8	110.0	3.26	114	395	313	110	38
DF		20	2	88	97	1.622	3.54	3.24	34.5	117.5	3.18	112	381	306	107	37
DF		21	1	84	80	.735	1.77	1.47	32.5	80.0	1.36	48	118	130	46	11
DF		23	1	87	80	.613	1.77	1.23	32.2	100.0	1.13	39	123	108	38	12
DF		25	2	84	57	1.038	3.54	1.56	49.0	140.0	2.17	76	218	209	73	21
DF		26	1	79	74	.480	1.77	.96	47.5	155.0	1.30	46	149	125	44	14
DF		27	1	82	118	.445	1.77	1.33	51.3	206.7	1.95	68	276	187	66	26
DF		33	1	87	135	.298	1.77	.89	83.2	433.3	2.12	74	387	203	71	37
DF		34	1	81	115	.281	1.77	.56	116.6	450.0	1.86	65	253	179	63	24
DF		Totals	54	86	82	91.087	95.52	169.55	15.8	59.9	76.42	2,681	10,156	7,336	2,574	975
RA		8	1	84	36	5.068	1.77	5.07	4.6	20.0	.65	23	101	62	23	10
RA		9	2	79	47	8.008	3.54	8.01	7.0	25.0	1.55	56	200	148	54	19
RA		10	3	83	65	9.730	5.31	9.73	12.1	40.0	3.27	118	389	314	113	37
RA		11	3	86	64	8.041	5.31	8.04	14.8	56.7	3.28	119	456	315	115	44
RA		12	8	80	63	18.018	14.15	22.52	14.8	44.0	9.13	333	991	876	320	95
RA		13	3	88	63	5.757	5.31	7.68	16.4	57.5	3.46	126	441	332	121	42
RA		14	6	84	70	9.928	10.61	16.55	17.1	57.0	7.76	283	943	745	271	91
RA		16	2	85	52	2.534	3.54	3.80	20.2	63.3	2.11	77	241	203	74	23
RA		17	4	76	63	4.489	7.08	6.73	28.9	68.3	5.35	194	460	514	187	44
RA		19	1	83	78	.898	1.77	1.80	30.6	100.0	1.51	55	180	145	53	17
RA		20	2	80	40	1.622	3.54	1.62	39.4	40.0	1.75	64	65	168	61	6
RA		Totals	35	82	60	74.094	61.91	91.55	15.8	48.8	39.82	1,448	4,467	3,823	1,390	429
WH		14	1	90	88	1.655	1.77	3.31	17.5	70.0	1.87	58	232	179	56	22
WH		23	1	87	105	.613	1.77	1.23	52.5	205.0	2.06	64	251	198	62	24
WH		25	1	89	100	.519	1.77	1.04	56.9	220.0	1.89	59	228	181	57	22
WH		Totals	3	89	94	2.787	5.31	5.57	32.5	127.6	5.82	181	711	558	174	68
SL		36	1	82	84	.250	1.77	.50	100.2	225.0	1.30	50	113	125	48	11
SL		47	1	82	108	.147	1.77	.29	239.5	770.0	1.83	70	226	175	68	22
SL		Totals	2	82	93	.397	3.54	.79	151.7	426.5	3.13	120	339	300	116	33
SS		10	1	60	29	3.243	1.77	3.24	5.1	20.0	.43	17	65	41	16	6
SS		28	1	83	52	.414	1.77	.41	72.0	40.0	.77	30	17	74	29	2
SS		Totals	2	63	32	3.657	3.54	3.66	12.7	22.3	1.20	46	81	115	45	8
DF	1	18	1	80	17	1.001	1.77				.53			51		
DF		Totals	1	80	17	1.001	1.77				0.53			51		
Totals			97	84	71	173.023	171.59	271.12	16.5	58.1	126.92	4478	15,755	12,184	4,299	1,512



TC		TSTNDSUM											Stand Table Summary			
Project													DEMO			
T01N R09W S02 TSALE											T01N R09W S02 TSALE					
Twp	Rge	Sec	Tract		Type	Acres	Plots	Sample Trees			Page:	1				
01N	09W	02	AREA_3		SALE	112.00					Date:	06/25/2014				
											Time:	8:33:48AM				
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s			
		DBH	Trees	FF				Ht	16'		Tot	Net	Net	Cu.Ft.	Bd.Ft.	Tons
DF		8	1	75	34	6.031	2.11	6.03	2.4	10.0	.42	15	60	47	16	7
DF		9	3	83	57	14.296	6.32	14.30	6.8	30.0	2.77	97	429	310	109	48
DF		10	1	85	67	3.860	2.11	3.86	10.4	40.0	1.14	40	154	128	45	17
DF		11	2	86	71	6.380	4.21	6.38	14.2	50.0	2.59	91	319	290	102	36
DF		12	3	88	77	8.042	6.32	16.08	10.5	43.3	4.81	169	697	539	189	78
DF		13	3	85	79	6.852	6.32	13.70	11.9	46.7	4.65	163	640	520	183	72
DF		14	7	84	81	13.785	14.74	27.57	14.8	53.6	11.62	408	1,477	1,301	456	165
DF		15	4	85	92	6.862	8.42	13.72	18.6	68.8	7.26	255	944	813	285	106
DF		16	4	83	81	6.031	8.42	10.55	20.7	68.6	6.20	218	724	695	244	81
DF		17	1	84	95	1.336	2.11	2.67	25.1	85.0	1.91	67	227	214	75	25
DF		18	2	88	97	2.383	4.21	4.77	26.8	95.0	3.63	128	453	407	143	51
DF		19	2	79	96	2.138	4.21	4.28	30.5	85.0	3.70	130	364	415	146	41
DF		24	2	85	95	1.340	4.21	3.35	39.8	108.0	3.81	133	362	427	149	41
DF		25	1	79	94	.618	2.11	1.24	54.3	165.0	1.91	67	204	214	75	23
DF		26	3	87	119	1.713	6.32	4.57	55.5	237.5	7.22	254	1,085	809	284	122
DF		28	1	82	64	.492	2.11	.98	53.9	170.0	1.51	53	167	169	59	19
DF		31	2	80	104	.803	4.21	1.61	86.0	252.5	3.94	138	406	442	155	45
DF		33	1	80	76	.354	2.11	.35	94.0	40.0	.95	33	14	106	37	2
DF		34	1	81	58	.334	2.11	.67	75.2	255.0	1.43	50	170	160	56	19
DF		Totals	44	84	75	83.651	92.63	136.68	18.4	65.1	71.48	2,509	8,895	8,005	2,810	996
RA		8	4	80	38	24.125	8.42	24.12	4.9	25.0	3.35	119	603	375	133	68
RA		9	2	83	68	9.531	4.21	9.53	10.8	50.0	2.84	103	477	318	116	53
RA		10	2	82	80	7.720	4.21	7.72	13.9	55.0	2.95	107	425	331	120	48
RA		11	2	82	58	6.380	4.21	6.38	14.1	45.0	2.48	90	287	278	101	32
RA		12	4	86	77	10.722	8.42	16.08	15.1	56.7	6.70	244	911	750	273	102
RA		13	1	79	54	2.284	2.11	2.28	19.0	60.0	1.19	43	137	134	49	15
RA		14	2	90	96	3.939	4.21	7.88	19.3	82.5	4.17	152	650	467	170	73
RA		15	5	81	69	8.578	10.53	12.01	24.8	72.9	8.19	298	875	918	334	98
RA		16	4	82	63	6.031	8.42	10.55	20.5	61.4	5.96	217	648	668	243	73
RA		17	3	80	73	4.007	6.32	8.01	23.3	71.7	5.14	187	574	575	209	64
RA		22	2	82	66	1.595	4.21	2.39	50.0	130.0	3.29	120	311	369	134	35
RA		Totals	31	82	62	84.910	65.26	106.97	15.7	55.1	46.27	1,680	5,898	5,183	1,881	661
WH		17	1	90	128	1.336	2.11	4.01	23.3	103.3	2.99	93	414	334	105	46
WH		20	1	88	108	.965	2.11	1.93	40.8	135.0	2.52	79	261	282	88	29
WH		27	1	87	109	.529	2.11	1.59	53.3	176.7	2.71	85	281	303	95	31
WH		35	1	86	149	.315	2.11	.95	111.0	520.0	3.36	105	492	376	118	55
WH		Totals	4	88	121	3.145	8.42	8.47	42.7	170.8	11.57	362	1,447	1,296	405	162
SS		16	2	83	63	3.016	4.21	3.02	33.3	70.0	2.61	100	211	292	112	24
SS		19	1	84	53	1.069	2.11	1.07	43.3	60.0	1.20	46	64	135	52	7
SS		20	2	86	85	1.930	4.21	3.86	31.4	90.0	3.16	121	347	354	136	39
SS		27	1	83	56	.529	2.11	.53	61.0	30.0	.83	32	16	93	36	2
SS		28	1	80	68	.492	2.11	.98	55.0	170.0	1.41	54	167	158	61	19
SS		29	1	88	80	.459	2.11	.92	56.0	175.0	1.33	51	161	149	58	18
SS		Totals	8	84	68	7.496	16.84	10.38	39.1	93.1	10.55	406	967	1,181	455	108
WL		36	1	88	158	.298	2.11	.89	123.8	596.7	3.54	111	533	397	124	60
WL		Totals	1	88	158	.298	2.11	.89	123.8	596.7	3.54	111	533	397	124	60
DL		41	1	79	145	.230	2.11	.69	139.1	656.7	2.64	96	452	295	107	51
DL		Totals	1	79	145	.230	2.11	.69	139.1	656.7	2.64	96	452	295	107	51

TC		TSTNDSUM		Stand Table Summary													
Project										DEMO							
T01N R09W S02 TSALE										T01N R09W S02 TSALE							
Twp	Rge	Sec	Tract		Type	Acres	Plots	Sample Trees			Page:	2					
01N	09W	02	AREA_3		SALE	112.00					Date:	06/25/2014					
											Time:	8:33:48AM					
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s				
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.		Net Bd.Ft.	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF	
SL		33	1	75	95	.354	2.11	.71	90.8	210.0	1.67	64	149	187	72	17	
SL		Totals		1	75	95	.354	2.11	.71	90.8	210.0	1.67	64	149	187	72	17
DF	1	14	1	87	24	1.969	2.11				.66			74			
DF		Totals		1	87	24	1.969	2.11			0.66			74			
DF	2	19	1	80	47	1.069	2.11				1.29			144			
DF		Totals		1	80	47	1.069	2.11			1.29			144			
Totals			92	83	69	183.123	193.68	264.79	19.7	69.3	149.66	5227	18,341	16,762	5,854	2,054	



"STEWARDSHIP IN FORESTRY"

## Star White

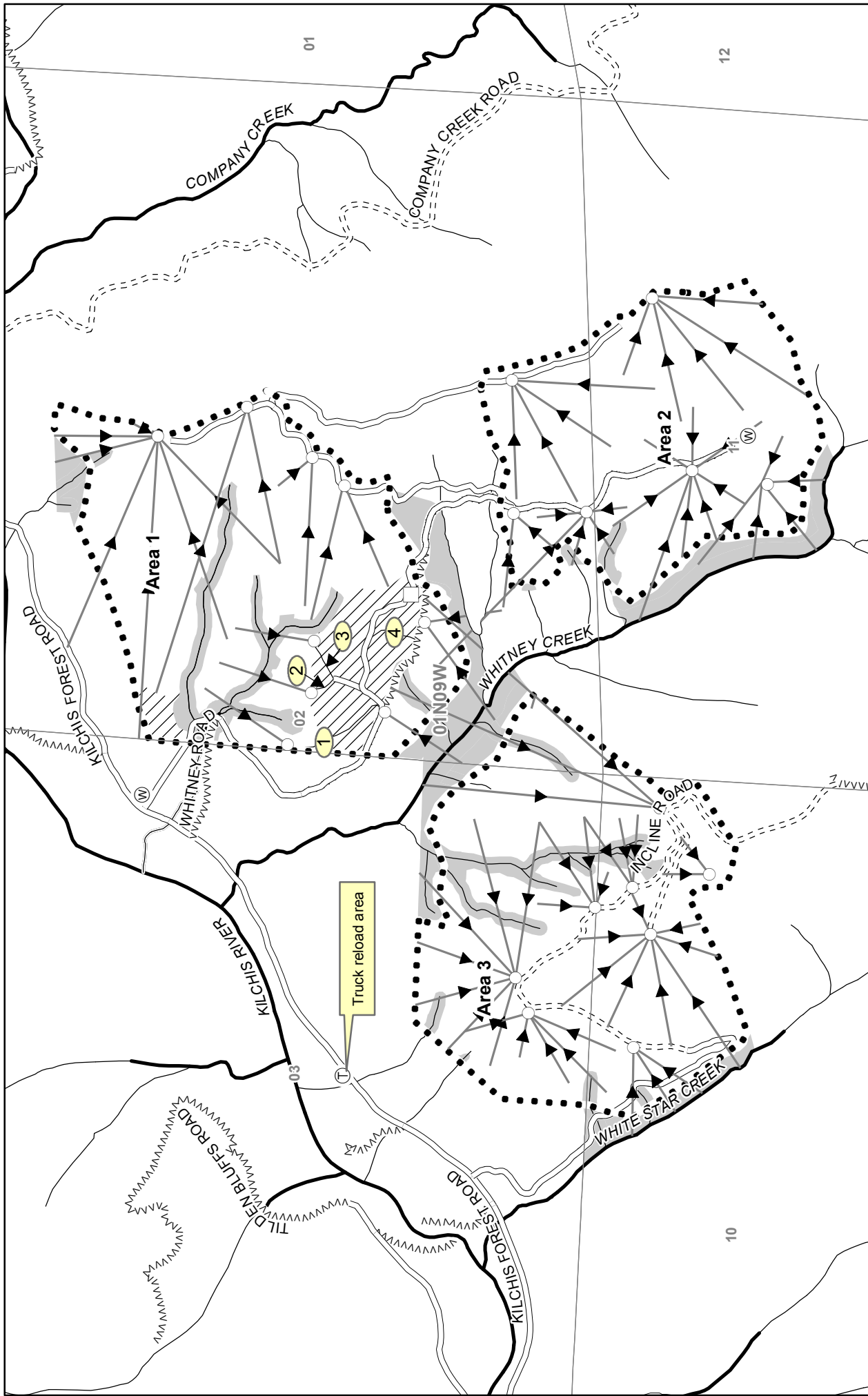
### Volume Summary

Area 1-Modified Clear-cut				
118 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol MBF
Douglas-fir	5.2	610	5%	579
Hemlock	2.5	296	5%	281
Spruce	0.2	28	5%	26
Alder	9.5	1120	10%	1008
<b>TOTAL</b>	<b>17.4</b>	<b>2054</b>		<b>1894</b>

Areas 2-Modified Clear-cut				
96 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol MBF
Douglas-fir	10.2	975	5%	926
Hemlock	0.7	68	5%	65
Spruce	0.1	8	5%	7
Alder	4.5	429	10%	386
<b>TOTAL</b>	<b>15.4</b>	<b>1480</b>		<b>1384</b>

Areas 3-Modified Clear-cut				
112 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol MBF
Douglas-fir	8.9	996	5%	946
Hemlock	1.4	162	5%	154
Spruce	1.0	108	5%	103
Alder	5.9	661	10%	595
<b>TOTAL</b>	<b>17.2</b>	<b>1927</b>		<b>1798</b>

TOTAL SALE VOLUME		
	<b>326</b>	<b>acres</b>
SPECIES	Gross Vol. (MBF)	Net Vol. (MBF)
Douglas-fir	2581	2451
Hemlock	526	500
Spruce	144	136
Red Alder	2210	1989
<b>TOTAL</b>	<b>5461</b>	<b>5076</b>



	Rock source		Swing road
	Stock pile		Non-project road
	Waste area		Blocked road
	Bridge		OHV trail
	Gate		Non-motorized trail
	Survey corner		Transmission line
	Domestic water supply intake		Railroad
	Truck turn-around		Cable yarding
	Helicopter landing zone		Tractor Landing
	Cultural site		Yarder Landing

	Restricted area
	Area boundary
	Sale boundary
	Ownership boundary
	Fish stream
	Non-fish stream
	Unsurfaced road
	Surfaced road
	Paved road
	Abandoned road

	Buffer
	Non-required thinning
	Cable yarding
	Ground yarding
	Helicopter yarding
	Downhill yarding
	Green tree retention area

**LOGGING PLAN**  
**Timber Sale Contract No. 341-15-011**  
**STAR WHITE**  
 Portions of Sections 2, 3, 10, and 11  
 T1N, R9W, W.M.,  
 Tillamook County, Oregon

1,000 0 1,000 Feet

N

Area	Operation	Acres
1	Modified clearcut	146
2	Modified clearcut	110
3	Modified clearcut	140
<b>Total</b>		<b>396</b>

Tillamook District GIS  
 7/28/2014

This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.