



Timber Sale Appraisal  
NW Combo  
Sale 341-11-33

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Date: August 02, 2010

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**cost summary**

	<b>Conifer</b>	<b>Hardwood</b>	<b>Total</b>
<b>Gross Timber Sale Value</b>	\$1,033,676.67	\$79,238.76	\$1,112,915.43
		<b>Project Work:</b>	\$(419,090.00)
		<b>Advertised Value:</b>	\$693,825.43



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**timber description**

**Location:** Portions of Sections 17, 18, 19, 20, 29, and 30, T2N, R7W, and portions of Section 13, T2N, R8W, W.M., Tillamook County, Oregon.

**Stand Stocking:** 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	14	0	95
Alder (Red)	11	0	90

Volume by Grade	10" - 11"	12"+	2S	3S	4S	6" - 7"	8" - 9"	Total
Douglas - Fir	0	0	880	5,957	1,782	0	0	8,619
Alder (Red)	60	19	0	0	0	451	74	604
Total	60	19	880	5,957	1,782	451	74	9,223



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**District: Tillamook**

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**comments:** Pond Values Used: 2nd Quarter Calendar Year 2010.

Western Red Cedar & Other Cedars Stumpage Price = Pond Value minus  
Logging Cost  
 $\$558/\text{MBF} = \$900/\text{MBF} - \$342/\text{MBF}$

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$700 daily truck cost.

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

Brand and Paint:  $\$2.00/\text{mbf} \times 9,223\text{mbf} = \$18,446$

Tractor swing:

Area 1: 24 acres x 11.6 MBF/ acre x  $\$27.25/\text{MBF} = \$7,586$

Area 3: 14 acres x 14.8 MBF/ acre x  $\$50.88/\text{MBF} = \$10,542$

Area 4: 31 acres x 27.2 MBF/ acre x  $\$28.33/\text{MBF} = \$23,888$

Area 5: 15 acres x 21.6 MBF/ acre x  $\$60.53/\text{MBF} = \$19,612$

Area 6: 2 acres x 13.8 MBF/ acre x  $\$22.73/\text{MBF} = \$627$

Total swing: \$ 62,255

Truck Assist:

Area 5 (Road M to N): 8 ac x 20.4 MBF/ ac x  $\$20/\text{MBF} = \$3,264$

Area 6 (Road K to L): 6 ac x 13.1 MBF/ ac x  $\$20/\text{MBF} = \$1,572$

Total truck assist: \$4,836

Yarder Swing (move yarder to swing landing):

Area 3: 900' x ( $\$18/100$  feet) = \$162

Area 4: 500' x ( $\$18/100$  feet) = \$ 90

Area 5: 800' x ( $\$18/100$  feet) = \$ 144

Area 6: 500' x ( $\$18/100$  feet) = 90

Total Yarder swing: \$486

Snag creation by girdling at base: 728 trees x  $\$10/\text{tree} = \$7,280$

TOTAL Other Costs (with Profit & Risk to be added) = \$93,303

Other Costs (No Profit & Risk added):

Non-project Roads:

Area 1 (Non-project road 1): 800' x  $\$75/\text{sta} = \$600$

Move-in costs (2 additional move-ins for distance between units  
and seasonal snow):  $\$300/\text{piece of equipment} \times 3, \text{ twice} = \$1,800$

Slash Piling and sorting Areas 2, 3, 4, 5, and 7:  $\$2.50/\text{acre} \times$   
364 acres = \$910

TOTAL Other Costs (No Profit & Risk added) = \$3,310

ROAD MAINTENANCE

Road Maintenance: West Fork Wilson, Rogers, Fire Break 8, North  
Fork Wilson Roads

Interim Grading:  $\$250/\text{mile} \times 6.5 \text{ miles} \times 8 \text{ times} / 9,223 \text{ MBF} = \$$   
 $1.41/\text{MBF}$

Spot rocking:  $20\text{cy}/\text{mile} \times \$15.00/\text{cy} \times 9.2\text{mmbf} \times 6.5 \text{ miles} / 9,223$   
 $\text{MBF} = \$1.95/\text{MBF}$

Final Grading:  $\$500/\text{mile} \times 17.4 \text{ miles} / 9,223 \text{ MBF} = \$0.94/\text{MBF}$



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Compaction: ((170 of stations x \$18/station) + \$111  
move-in)/9223= \$0.34  
TOTAL ROAD MAINTENANCE COSTS: \$4.64/MBF



"STEWARDSHIP IN FORESTRY"

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District: Tillamook

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## logging conditions

**combination#: 1**                    Douglas - Fir                    71.72%  
    Alder (Red)                    78.01%

**yarding distance:** Long (1,500 ft)                    **downhill yarding:** No  
**logging system:** Cable: Large Tower >=70                    **Process:** Stroke Delimber  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 5.3                    **bd. ft / load:** 3,200  
**cost / mbf:** \$225.63

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

**combination#: 2**                    Douglas - Fir                    12.53%  
    Alder (Red)                    21.99%

**yarding distance:** Short (400 ft)                    **downhill yarding:** No  
**logging system:** Cable: Large Tower >=70                    **Process:** Stroke Delimber  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 9.0                    **bd. ft / load:** 3,200  
**cost / mbf:** \$132.87

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

**combination#: 3**                    Douglas - Fir                    13.94%

**yarding distance:** Medium (800 ft)                    **downhill yarding:** No  
**logging system:** Cable: Large Tower >=70                    **Process:** Stroke Delimber  
**tree size:** Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF  
**loads / day:** 4.0                    **bd. ft / load:** 3,200  
**cost / mbf:** \$298.96

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

**combination#: 4**                    Douglas - Fir                    1.82%

**yarding distance:** Short (400 ft)                    **downhill yarding:** No  
**logging system:** Track Skidder                    **Process:** Manual Delimiting  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 8.0                    **bd. ft / load:** 3,200  
**cost / mbf:** \$54.63

**machines:** Feller Buncher w/ Delimber



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**logging costs**

Operating Seasons:	2.00	Profit Risk:	15.00%
Project Costs:	\$419,090.00	Other Costs (P/R):	\$93,303.00
Slash Disposal:	\$0.00	Other Costs:	\$3,310.00

**Miles of Road**

Road Maintenance: \$4.64

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	3.8
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>									
\$221.12	\$4.87	\$0.95	\$56.06	\$10.12	\$43.97	\$0.00	\$5.00	\$0.36	\$342.45
<b>Alder (Red)</b>									
\$205.24	\$5.10	\$0.95	\$69.75	\$10.12	\$43.67	\$0.00	\$5.00	\$0.36	\$340.19

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$462.38	\$119.93	\$0.00
Alder (Red)	\$0.00	\$471.38	\$131.19	\$0.00



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summary

**Amortized**

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	8,619	\$119.93	\$1,033,676.67
Alder (Red)	604	\$131.19	\$79,238.76

**Gross Timber Sale Value**

Recovery: \$1,112,915.43

Prepared by: David Wells

Phone: 503-842-2545





STEWARDSHIP IN FORESTRY

## NW Combo

### Volume Summary

Area 1-Partial Cut				
43 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol* MBF
Douglas-fir	11.6	499	5%	469
<b>TOTAL</b>	<b>11.6</b>	<b>499</b>		<b>469</b>

Areas 2-Modified Clear-cut				
86 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol* MBF
Douglas-fir	28.9	2484	5%	2344
<b>TOTAL</b>	<b>28.9</b>	<b>2484</b>		<b>2344</b>

Areas 3-Modified Clear-cut				
93 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol* MBF
Douglas-fir	10.8	1008	5%	951
Alder	3.9	366	10%	319
<b>TOTAL</b>	<b>14.8</b>	<b>1374</b>		<b>1270</b>

Areas 4-Modified Clear-cut				
103 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol* MBF
Douglas-fir	25.6	2638	5%	2506
Alder	1.6	160	10%	144
<b>TOTAL</b>	<b>27.2</b>	<b>2798</b>		<b>2650</b>

Areas 5-Modified Clear-cut				
68 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol* MBF
Douglas-fir	20.1	1370	5%	1299
Alder	1.5	100	10%	90
<b>TOTAL</b>	<b>21.6</b>	<b>1470</b>		<b>1389</b>



"STEWARDSHIP IN FORESTRY"

## NW Combo

### Volume Summary

Areas 6-Partial Cut				
68 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol* MBF
Douglas-fir	13.8	939	5%	889
<b>TOTAL</b>	13.8	939		889

Areas 7-Modified Clear-cut				
14 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol* MBF
Douglas-fir	12.3	172	5%	161
Alder	4.2	59	10%	51
<b>TOTAL</b>	16.5	231		212

TOTAL SALE VOLUME			475	acres
SPECIES	Gross Vol. (MBF)	Net Vol. (MBF)*		
Douglas-fir	9110	8619		
Red Alder	685	604		
<b>TOTAL</b>	9795	9223		

\* includes hidden and visible defect deducted during the cruise



**PROJECT SUMMARY SHEET**

Sale: NW Combo

**CONSTRUCTION**

Point	I to J	60+30	stations =	\$215,902.41
Point	K to L	14+15	stations =	\$14,556.88
Point	M to N	4+95	stations =	\$9,667.84
<b>SUBTOTAL CONSTRUCTION</b>				<b>\$240,127.13</b>

**IMPROVEMENT**

Point	A to B	41+00	stations =	\$56,467.00
Point	E to F	26+00	stations =	\$6,252.30
Point	O to P	60+30	stations =	\$4,130.61
<b>SUBTOTAL IMPROVEMENT</b>				<b>\$66,849.91</b>

**RECONSTRUCTION**

Point	C to D	10+25	stations =	\$1,598.10
Point	E to F	31+30	stations =	\$13,294.41
Point	G to H	11+90	stations =	\$7,552.58
Point	I to J	26+60	stations =	\$38,660.53
<b>SUBTOTAL RECONSTRUCTION</b>				<b>\$61,105.62</b>

**SPECIAL PROJECTS**

Crushed Rock Stockpile / Waste Area				\$43,680.00
<b>SUBTOTAL SPECIAL PROJECTS</b>				<b>\$43,680.00</b>

**MOVE IN**

\$7,327.34

**GRAND TOTAL** \$419,090.00

## ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Crushed	Location:	NE 1/4, SE 1/4, Sec.24, T2N, R8W, W.M.
Sale:	<b>NW Combo</b>	Road:	7485 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage:	1.16	Total Truck Loads:	7485 c.y.
Drill Pct.:	75%	In Place Total:	5346 c.y.

Pit Development & Cleanup including Access Road, Clearing and grubbing of Waste Area adjacent to pit, place overburden in Waste Area, spread and compact. \$3,734.08

Drill & Shoot:	\$2.50	/cu.yd.	x	4010	cu.yds.	=	\$10,025.00
Rip Rock:	\$1.90	/cu.yd.	x	1336	cu.yds.	=	\$2,538.40
Load Shot Rock:	\$0.70	/cu.yd.	x	7485	cu.yds.	=	\$5,239.50
Load Crusher:	\$0.60	/cu.yd.	x	7485	cu.yds.	=	\$4,491.00
Crush 1 1/2" Rock:	\$3.00	/cu.yd.	x	3000	cu.yds.	=	\$9,000.00
Crush 4" Rock:	\$2.35	/cu.yd.	x	4485	cu.yds.	=	\$10,539.75
Load Dump Truck:	\$0.70	/cu.yd.	x	7485	cu.yds.	=	\$5,239.50

Subtotal \$50,807.23

Move In/Set-up Crusher	1	@	\$2,520.00	=	\$2,520.00
Move In and set up Drill and Compressor	1	@	\$1,028.48	=	\$1,028.48
Move in Roller and Compactor	1	@	\$1,028.48	=	\$1,028.48
Move in Grader	1	@	\$406.37	=	\$406.37
Move in Loader	1	@	\$1,612.28	=	\$1,612.28
Move in Excavator	1	@	\$2,063.10	=	\$2,063.10
Move in Trucks	4	@	\$349.87	=	\$1,399.48
Move in Water Truck	1	@	\$411.25	=	\$411.25
Change Gradation	1	@	\$210.00	=	\$210.00

Subtotal \$10,679.44

Base Cost 1 1/2"= \$9.62 Per Cu.Yd.  
 Base Cost 4"= \$7.01

TOTAL PRODUCTION COSTS \$61,486.67

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
I to J 0 8690 (4" Crush)	3.36	2.45	7.01	12.82	4070	\$52,177.40
I to J Landing Rock (4" Crush)	4.04	2.45	7.01	13.50	80	\$1,080.00
I to J Junction Rock (4" Crush)	2.69	2.45	7.01	12.15	30	\$364.50
I to J Energy Dissipators (Riprap)	3.36	1.40	0.60	5.36	55	\$294.80
Stockpile Rock (1 1/2" Crushed)	2.19	0.00	9.62	11.81	3000	\$35,430.00
Stockpile Pad (4" Crushed)	3.06	2.45	7.01	12.52	250	\$3,130.00
				Total C.Y.	7485	Sub Total <span style="border-bottom: 1px solid black;">\$92,476.70</span>

TOTAL ROCKING COSTS \$92,476.70

## ROCK PIT DEVELOPMENT AND COST SUMMARY

Pit:	Pit_run		Location:	NE 1/4, NW 1/4, Sec.18, T2N, R7W, W.M.
Sale:	<b>NW Combo</b>		Road:	2590 c.y.
Swell:	1.40		Stockpile:	c.y.
Shrinkage	1.16		Total Truck Loads:	2590 c.y.
Drill Pct.:	20%		In Place Total:	1850 c.y.

Pit Development & Cleanup including Clearing and grubbing of				\$1,399.38
Waste Area @ adjacent to pit, place overburden				
in Waste Area, spread and compact.				
Drill & Shoot:	\$2.50 /cu.yd.	x	370 cu.yds.	= \$925.00
Rip Rock:	\$1.90 /cu.yd.	x	1480 cu.yds.	= \$2,812.00
Load Dump Truck:	\$0.70 /cu.yd.	x	2590 cu.yds.	= \$1,813.00
Subtotal				\$6,949.38

Within Area Move In and set up Drill and Compressor	5.6	miles @	\$46.00	/mile =	\$257.60
Within Area Move in Roller and Compactor	5.6	miles @	\$5.00	/mile =	\$28.00
Within Area Move in D-8	5.6	miles @	\$15.00	/mile =	\$84.00
Within Area Move in Excavator	5.6	miles @	\$36.00	/mile =	\$201.60
Within Area Move in Water Truck	5.6	miles @	\$3.00	/mile =	\$16.80
Subtotal					\$588.00

Base Cost=	\$2.91	Per Cu.Yd.			TOTAL PRODUCTION COSTS	\$7,537.38
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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
E to F 2600 5730 (Pit-run)	1.83	1.10	2.91	5.84	1690	\$9,869.60
E to F Landing Rock (Pit-Run)	2.08	1.10	2.91	6.09	100	\$609.00
G to H 0 1190 (Pit-run)	2.00	1.10	2.91	6.01	670	\$4,026.70
G to H Landing Rock (Pit-Run)	2.09	1.10	2.91	6.10	100	\$610.00
G to H Junction Rock (Pit-run)	1.91	1.10	2.91	5.92	30	\$177.60
					Total C.Y.	2590
					Sub Total	\$15,292.90

	TOTAL ROCKING COSTS	\$15,292.90
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## ROCK PIT DEVELOPMENT AND COST SUMMARY

Pit:	Pit_Run2	Location:	SW 1/4, SE 1/4, Sec.13, T2N, R8W, W.M.
Sale:	<b>NW Combo</b>	Road:	3000 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	3000 c.y.
Drill Pct.:	20%	In Place Total:	2143 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.	\$1,064.40
Drill & Shoot:	\$2.50 /cu.yd. x 429 cu.yds. = \$1,072.50
Rip Rock:	\$1.90 /cu.yd. x 1714 cu.yds. = \$3,256.60
Load Dump Truck:	\$0.70 /cu.yd. x 3000 cu.yds. = \$2,100.00

Subtotal \$7,493.50

Within Area Move In and set up Drill and Compressor	5.8	miles @	\$46.00	/mile =	\$266.80
Within Area Move in Roller and Compactor	5.8	miles @	\$5.00	/mile =	\$29.00
Within Area Move in D-8	5.8	miles @	\$15.00	/mile =	\$87.00
Within Area Move in Excavator	5.8	miles @	\$36.00	/mile =	\$208.80
Within Area Move in Water Truck	5.8	miles @	\$3.00	/mile =	\$17.40
				Subtotal	\$609.00

TOTAL PRODUCTION COSTS \$8,102.50

Base Cost= \$2.70 Per Cu.Yd.

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 4100 (Pit-run)	1.31	1.10	2.70	5.11	2980	\$15,227.80
A to B Culvert Backfill (Pit-run)	0.97	0.60	2.70	4.27	10	\$42.70
A to B Energy Dissipator (Riprap)	0.97	1.40	0.60	2.97	10	\$29.70
				Total C.Y.	3000	Sub Total <span style="float: right;">\$15,300.20</span>

TOTAL ROCKING COSTS \$15,300.20

## Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **NW Combo**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
47.0	Pavement	30
16.0	Main Lines	7
16.0	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	\$1,489.61		\$46.00	0.00	0.00	0	\$0.00	\$1,489.61
1	Roller (sheepsfoot) & Compactors	\$1,028.48		\$5.00	0.00	0.00	0	\$0.00	\$1,028.48
1	Excavators (Med.)	\$1,674.38		\$35.50	0.00	0.00	0	\$0.00	\$1,674.38
1	Tractor (D8)	\$1,917.08	2	\$15.10	0.00	0.00	0	\$0.00	\$1,917.08
2	Dump Truck (10 cy +)	\$867.92		\$2.85	0.00	0.00	0	\$0.00	\$867.92
1	Water Truck (1500 Gal)	\$349.87		\$2.85	0.00	0.00	0	\$0.00	\$349.87
<b>TOTAL MOVE-IN COSTS:</b>									<b>\$7,327.34</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<b>NW Combo</b>		Road: <b>A to B</b>					
Construction -	0+00 0.00	stations miles	Improvement -	41+00 0.78	stations miles	Reconstruction -	0+00 0.00	stations miles
<b>IMPROVEMENT: CLEARING AND GRUBBING -</b>								
Endhaul -				0.700	acres @	\$1,500.00	per acre =	\$1,050.00
							<b>TOTAL CLEARING AND GRUBBING</b>	<b>\$1,050.00</b>
<b>IMPROVEMENT: EXCAVATION -</b>								
Road Earthwork				41.00	sta. @	\$40.00	per sta. =	\$1,640.00
Widening	8+00	to	12+15	2550	cy. @	\$2.90	per c.y. =	\$7,395.00
Widening	12+40	to	14+20	300	cy. @	\$2.25	per c.y. =	\$675.00
Widening	14+45	to	17+30	1033	cy. @	\$2.38	per c.y. =	\$2,458.54
Widening	21+15	to	22+30	300	cy. @	\$2.38	per c.y. =	\$714.00
Widening	23+05	to	24+90	1450	cy. @	\$2.44	per c.y. =	\$3,538.00
							<b>TOTAL EXCAVATION</b>	<b>\$16,420.54</b>
<b>IMPROVEMENT: ENDHAUL -</b>								
Widening	8+00	to	12+15	2550	cy. @	\$3.42	per c.y. =	\$8,721.00
Widening	12+40	to	14+20	300	cy. @	\$3.50	per c.y. =	\$1,050.00
Widening	14+45	to	17+30	1033	cy. @	\$3.57	per c.y. =	\$3,687.81
Widening	21+15	to	22+30	300	cy. @	\$3.72	per c.y. =	\$1,116.00
Widening	23+05	to	24+90	1450	cy. @	\$3.78	per c.y. =	\$5,481.00
Spread & compact				5633	cy. @	\$0.25	per c.y. =	\$1,408.25
							<b>TOTAL ENDHAUL</b>	<b>\$21,464.06</b>
<b>CULVERTS - MATERIALS &amp; INSTALLATION</b>								
<u>Culverts</u>								
		28	LF of 18"	\$490.00		0	LF of 24"	\$0.00
				\$490.00				\$0.00
<u>Culvert Stakes &amp; Markers</u>								
				0	stakes			\$0.00
				1	markers			\$8.00
				\$8.00				\$8.00
							<b>TOTAL CULVERTS</b>	<b>\$498.00</b>
<b>ROCK</b>								
0+00 to	41+00		2,980	cy. of	Pit-run	@	\$5.11 per c.y. =	\$15,227.80
Culvert Backfill	14+45		10	cy. of	Pit-run	@	\$4.27 per c.y. =	\$42.70
Energy Dissipator	14+45		10	cy. of	Riprap	@	\$2.97 per c.y. =	\$29.70
							<b>TOTAL ROCK</b>	<b>\$15,300.20</b>
<b>SPECIAL PROJECTS</b>								
Construct waste areas -				2.00	hours @	\$130.00	per hour	\$260.00
Grade and shape road -				41.00	stations @	\$19.00	per station	\$779.00
Roll subgrade w/ vibratory roller prior to rocking -				41.00	stations @	\$13.20	per station	\$541.20
Grass seed and fertilize -				0.70	acres @	\$220.00	per acre	\$154.00
							<b>TOTAL SPECIAL PROJECTS</b>	<b>\$1,734.20</b>
							<b>GRAND TOTAL</b>	<b>\$56,467.00</b>



## SUMMARY OF CONSTRUCTION COST

Sale: **NW Combo** Road: **C to D**

<u>Construction -</u>	<u>0+00</u> stations <u>0.00</u> miles	<u>Improvement -</u>	<u>0+00</u> stations <u>0.00</u> miles	<u>Reconstruction -</u>	<u>10+25</u> stations <u>0.19</u> miles
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**RECONSTRUCTION: CLEARING AND GRUBBING -**  
Endhaul -

0.33	acres @	\$1,500.00 per acre =	\$495.00	
<b>TOTAL CLEARING AND GRUBBING</b>				<b>\$495.00</b>

**RECONSTRUCTION: EXCAVATION -**  
Road Earthwork

10.25	sta. @	\$14.00 per sta. =	\$143.50	
<b>TOTAL EXCAVATION</b>				<b>\$143.50</b>

**SPECIAL PROJECTS**

Remove log cribbing @ 3+90 -	5.00	hours @	\$130.00	per hour	\$650.00
Grade and shape road -	10.25	stations @	\$14.00	per station	\$143.50
Roll subgrade w/ vibratory roller -	10.25	stations @	\$13.20	per station	\$135.30
Grass seed and fertilize -	0.14	acres @	\$220.00	per acre	\$30.80
<b>TOTAL SPECIAL PROJECTS</b>					<b>\$959.60</b>

<b>GRAND TOTAL</b>	<b>\$1,598.10</b>
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## SUMMARY OF CONSTRUCTION COST

Sale: **NW Combo** Road: **E to F**

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	26+00	stations	<u>Reconstruction -</u>	31+30	stations
	0.00	miles		0.49	miles		0.59	miles

**RECONSTRUCTION: CLEARING AND GRUBBING -**  
Endhaul -

1.440	acres @	\$1,500.00	per acre =	\$2,160.00	
<b>TOTAL CLEARING AND GRUBBING</b>					<b>\$2,160.00</b>

**RECONSTRUCTION: EXCAVATION -**  
Widening

1140	cy. @	\$1.90	per c.y. =	\$2,166.00	
<b>TOTAL EXCAVATION</b>					<b>\$2,166.00</b>

**RECONSTRUCTION: ENDBAUL -**

Widening	0+00	to	0+00	680	cy. @	\$1.87	per c.y. =	\$1,271.60
Spread & compact				680	cy. @	\$0.25	per c.y. =	\$170.00
<b>TOTAL ENDBAUL</b>								<b>\$1,441.60</b>

**CULVERTS - MATERIALS & INSTALLATION**

	<u>Culverts</u>				
	<u>Culvert Stakes &amp; Markers</u>				
	0 stakes		\$0.00		
	3 markers		\$24.00		
			\$24.00		
<b>TOTAL CULVERTS</b>					<b>\$24.00</b>

**ROCK**

26+00	to	57+30	1,690	cy. of	Pit-run	@	\$5.84	per c.y. =	\$9,869.60
Landing Rock		57+30	100	cy. of	Pit-Run	@	\$6.09	per c.y. =	\$609.00
<b>TOTAL ROCK</b>									<b>\$10,478.60</b>

**SPECIAL PROJECTS**

Re-shape dented culvert inlet @ 2+40, 20+40 -	1.00	hours @	\$28.00	per hour	\$28.00				
Construct waste areas -	2.00	hours @	\$130.00	per hour	\$260.00				
Construct landing -	1.00	@	\$250.00	each	\$250.00				
Pull ditch across road -	26.00	stations @	\$25.00	per station	\$650.00				
Grade and shape road -	31.30	stations @	\$15.50	per station	\$485.15				
Grade and shape road (rocky) -	26.00	stations @	\$20.00	per station	\$520.00				
Roll subgrade w/ vibratory roller prior to rocking -	57.30	stations @	\$13.20	per station	\$756.36				
Remove large stumps @ 36+60, 38+50, 43+00, 44+00 -	1.00	lump sum @	\$250.00		\$250.00				
Grass seed and fertilize -	0.35	acres @	\$220.00	per acre	\$77.00				
<b>TOTAL SPECIAL PROJECTS</b>									<b>\$3,276.51</b>

<b>GRAND TOTAL</b>	<b>\$19,546.71</b>
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## SUMMARY OF CONSTRUCTION COST

Sale: **NW Combo** Road: **G to H**

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	0+00	stations	<u>Reconstruction -</u>	11+90	stations
	0.00	miles		0.00	miles		0.23	miles

**RECONSTRUCTION: CLEARING AND GRUBBING -**

Endhaul -	0.490	acres @	\$1,500.00	per acre =	\$735.00	
					<b>TOTAL CLEARING AND GRUBBING</b>	<b>\$735.00</b>

**RECONSTRUCTION: EXCAVATION -**

Road Earthwork	996.00	cy. @	\$1.40	per c.y. =	\$1,394.40	
					<b>TOTAL EXCAVATION</b>	<b>\$1,394.40</b>

**ROCK**

0+00 to	11+90	670	cy. of	Pit-run	@	\$6.01	per c.y. =	\$4,026.70	
Landing Rock	11+90	100	cy. of	Pit-Run	@	\$6.10	per c.y. =	\$610.00	
Junction Rock	0+00	30	cy. of	Pit-run	@	\$5.92	per c.y. =	\$177.60	
								<b>TOTAL ROCK</b>	<b>\$4,814.30</b>

**SPECIAL PROJECTS**

Construct landing -	1.00	@	\$250.00	each	\$250.00	
Grade and shape road -	11.90	stations @	\$14.00	per station	\$166.60	
Roll subgrade w/ vibratory roller -	11.90	stations @	\$13.20	per station	\$157.08	
Grass seed and fertilize -	0.16	acres @	\$220.00	per acre	\$35.20	
					<b>TOTAL SPECIAL PROJECTS</b>	<b>\$608.88</b>

<b>GRAND TOTAL</b>	<b>\$7,552.58</b>
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## SUMMARY OF CONSTRUCTION COST

Sale: **NW Combo** Road: **I to J**

Construction -	60+30 1.14	stations miles	Improvement -	0+00 0.00	stations miles	Reconstruction -	26+60 0.50	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	To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	
0+00		60+30			Ditch	\$2,830	=	\$170,649.00
								<b>TOTAL</b>
								<b>\$170,649.00</b>

**RECONSTRUCTION:** CLEARING AND GRUBBING -

Endhaul -	1.220	acres @	\$1,500.00	per acre =	\$1,830.00		
							<b>TOTAL CLEARING AND GRUBBING</b>
							<b>\$1,830.00</b>

**RECONSTRUCTION:** EXCAVATION -

Fills	1200	cy. @	\$0.45	per c.y.=	\$540.00		
Excavation	4000	cy. @	\$1.80	per c.y.=	\$7,200.00		
							<b>TOTAL EXCAVATION</b>
							<b>\$7,740.00</b>

**RECONSTRUCTION:** ENDHAUL -

Widening	0+00	to	0+00	2800	cy. @	\$3.01	per c.y.=	\$8,428.00
Spread & compact				2800	cy. @	\$0.25	per c.y.=	\$700.00
								<b>TOTAL ENDHAUL</b>
								<b>\$9,128.00</b>

**CULVERTS - MATERIALS & INSTALLATION**

<u>Culverts</u>		182	LF of 18"	\$3,185.00	102	LF of 24"	\$2,754.00
		0	LF of 30"	\$0.00	34	LF of 36"	\$1,168.98
				\$3,185.00			
<u>Culvert Stakes &amp; Markers</u>							
		0	stakes	\$0.00			
		11	markers	\$88.00			
				\$88.00			
							<b>TOTAL CULVERTS</b>
							<b>\$7,195.98</b>

**ROCK**

0+00 to	86+90	4,070	cy. of	4" Crush	@	\$12.82	per c.y.=	\$52,177.40
Landing Rock	86+90	80	cy. of	4" Crush	@	\$13.50	per c.y.=	\$1,080.00
Junction Rock	0+00	30	cy. of	4" Crush	@	\$12.15	per c.y.=	\$364.50
Energy Dissipators	0+00	55	cy. of	Riprap	@	\$5.36	per c.y.=	\$294.80
								<b>TOTAL ROCK</b>
								<b>\$53,916.70</b>

**SPECIAL PROJECTS**

Construct landing -	1.00	@	\$250.00	each	\$250.00		
Grade and shape road -	86.90	stations @	\$15.50	per station	\$1,346.95		
Proof-Roll subgrade prior to rocking	86.90	stations @	\$4.70	per station	\$408.43		
Roll subgrade w/ vibratory roller prior to rocking -	86.90	stations @	\$13.20	per station	\$1,147.08		
Grass seed and fertilize -	3.19	acres @	\$220.00	per acre	\$701.80		
Mulching -	0.415	acres @	\$600.00	per acre	\$249.00		
							<b>TOTAL SPECIAL PROJECTS</b>
							<b>\$4,103.26</b>

**GRAND TOTAL** **\$254,562.94**

## SUMMARY OF CONSTRUCTION COST

Sale: **NW Combo** Road: **K to L**

Construction -	14+15	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.27	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	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	
0+00		14+15			Outslope	\$960	=	\$13,584.00
								<b>TOTAL \$13,584.00</b>

**SPECIAL PROJECTS**

Construct waste areas -	1.50	hours @	\$130.00	per hour	\$195.00
Construct landing -	1.00	@	\$250.00	each	\$250.00
Grade and shape road -	14.15	stations @	\$14.00	per station	\$198.10
Roll subgrade w/ vibratory roller -	14.15	stations @	\$13.20	per station	\$186.78
Grass seed and fertilize -	0.65	acres @	\$220.00	per acre	\$143.00
<b>TOTAL SPECIAL PROJECTS</b>					<b>\$972.88</b>
<b>GRAND TOTAL</b>					<b>\$14,556.88</b>

## SUMMARY OF CONSTRUCTION COST

Sale: **NW Combo** Road: **M to N**

Construction -	4+95	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.09	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>	=	\$9,009.00	
0+00		4+95			Outslope	\$1,820	=	\$9,009.00	
								<b>TOTAL</b>	<b>\$9,009.00</b>

**SPECIAL PROJECTS**

Construct waste areas -	1.50	hours @	\$130.00	per hour	\$195.00
Construct landing -	1.00	@	\$250.00	each	\$250.00
Grade and shape road -	4.95	stations @	\$14.00	per station	\$69.30
Roll subgrade w/ vibratory roller -	4.95	stations @	\$13.20	per station	\$65.34
Grass seed and fertilize -	0.36	acres @	\$220.00	per acre	\$79.20
					<b>TOTAL SPECIAL PROJECTS</b>
					<b>\$658.84</b>
<b>GRAND TOTAL</b>					<b>\$9,667.84</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<b>NW Combo</b>			Road:	<b>O to P</b>			
<u>Construction -</u>	0+00 0.00	stations miles	<u>Improvement -</u>	60+30 1.14	stations miles	<u>Reconstruction -</u>	0+00 0.00	stations miles

**SPECIAL PROJECTS**

Pull ditch -	30.00	stations @	\$80.00	per station	\$2,400.00
Grade and shape road -	60.30	stations @	\$15.50	per station	\$934.65
Process w/ vibratory roller -	60.30	stations @	\$13.20	per station	\$795.96
<b>TOTAL SPECIAL PROJECTS</b>					<b>\$4,130.61</b>
<b>GRAND TOTAL</b>					<b>\$4,130.61</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>NW Combo</u>	Road:	<u>Stockpile-WasteArea</u>
<b>ROCK</b>			
Stockpile Rock	0+00	3,000	cy. of
Stockpile Pad		250	cy. of
		1 1/2"	Crushed
		4"	Crushed
		@	
		@	
		\$11.81	per c.y.=
		\$12.52	per c.y.=
			\$35,430.00
			\$3,130.00
			<b>TOTAL ROCK</b>
			<b>\$38,560.00</b>
<b>SPECIAL PROJECTS</b>			
Construct waste area -		7.00	hours @
Construct Stockpile/Crushing pad -		3.00	hours @
Shape Stockpile -		3000.00	cy @
Grass seed and fertilize -		1.00	acres @
Mulching -		1.000	acres @
		\$130.00	per hour
		\$130.00	per hour
		\$1.00	per cy
		\$220.00	per acre
		\$600.00	per acre
			\$910.00
			\$390.00
			\$3,000.00
			\$220.00
			\$600.00
			<b>TOTAL SPECIAL PROJECTS</b>
			<b>\$5,120.00</b>
			<b>GRAND TOTAL</b>
			<b>\$43,680.00</b>



Stand Table Summary																
TC TSTNDSUM		Project NWCOMBO														
TT2N RR7W S18 TSALE											TT2N RR7W S18 TSAL					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
T2N	R7W	18	AREA1	SALE	43.00	10	57	Date:	07/01/2010							
								Time:	8:43:32AM							
S Spe	T	Sample DBH	FF Trees	Av Ht 16'	Trees/ Acres	BA/ Acres	Logs Acres	Average Log		Tons/ Acres	Net Cu.Ft. Acres	Net Bd.Ft. Acres	Totals			
								Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
DL		8	1	84	60	11.459	4.00	11.46	5.9	30.0	1.84	67	344	79	29	15
DL		14	1	84	65	3.742	4.00	3.74	23.8	70.0	2.45	89	262	105	38	11
DL		15	7	84	88	22.816	28.00	42.37	19.8	76.2	23.00	838	3,227	989	360	139
DL		16	2	85	100	5.730	8.00	11.46	24.6	95.0	7.73	282	1,089	332	121	47
DL		17	1	83	86	2.538	4.00	5.08	25.6	90.0	3.58	130	457	154	56	20
DL		18	1	78	118	2.264	4.00	6.79	23.5	86.7	4.40	160	589	189	69	25
DL		19	1	84	103	2.032	4.00	4.06	36.8	110.0	4.11	149	447	177	64	19
DL		20	3	86	94	5.500	12.00	11.00	36.8	125.0	11.16	405	1,375	480	174	59
DL		21	1	87	84	1.663	4.00	3.33	38.7	135.0	3.54	129	449	152	55	19
DL		22	2	81	115	3.031	8.00	7.58	41.0	148.0	8.54	311	1,121	367	134	48
DL		23	1	78	112	1.386	4.00	4.16	37.9	133.3	4.33	157	555	186	68	24
DL		24	2	80	101	2.546	8.00	5.09	56.1	175.0	7.86	286	891	338	123	38
DL		26	1	74	134	1.085	4.00	3.25	51.6	180.0	4.62	168	586	199	72	25
DL		30	1	77	122	.815	4.00	2.44	64.7	256.7	4.35	158	627	187	68	27
DL	Totals		25	83	88	66.606	100.00	121.82	27.3	98.7	91.50	3,329	12,018	3,935	1,432	517
DF		9	1	83	53	9.054	4.00	9.05	6.8	28.5	1.75	62	258	75	26	11
DF		10	1	85	73	7.334	4.00	7.33	11.6	38.0	2.42	85	279	104	36	12
DF		11	1	84	83	6.061	4.00	12.12	9.1	38.0	3.16	111	461	136	48	20
DF		12	6	83	75	30.558	24.00	45.84	12.7	42.2	16.59	582	1,935	713	250	83
DF		13	3	84	90	13.019	12.00	26.04	13.8	50.7	10.21	358	1,319	439	154	57
DF		14	6	83	86	22.451	24.00	41.16	17.5	56.1	20.51	720	2,311	882	309	99
DF		15	2	83	87	6.519	8.00	13.04	19.2	61.8	7.15	251	805	308	108	35
DF		16	2	81	104	5.730	8.00	11.46	24.4	85.5	7.97	280	980	343	120	42
DF		17	1	86	98	2.538	4.00	5.08	27.5	104.5	3.98	140	530	171	60	23
DF		18	1	85	103	2.264	4.00	4.53	32.2	99.8	4.16	146	452	179	63	19
DF		20	1	80	131	1.833	4.00	5.50	29.1	98.2	4.57	160	540	196	69	23
DF		21	2	79	119	3.326	8.00	8.32	38.1	123.5	9.01	317	1,027	388	136	44
DF	Totals		27	83	83	110.685	108.00	189.46	16.9	57.5	91.48	3,211	10,896	3,934	1,381	469
WL		13	1	91	70	4.340	4.00	8.68	12.6	55.0	3.49	109	477	150	47	21
WL		16	1	90	68	2.865	4.00	5.73	19.3	80.0	3.53	110	458	152	47	20
WL		18	1	87	72	2.264	4.00	4.53	24.3	85.0	3.52	110	385	151	47	17
WL	Totals		3	90	70	9.468	12.00	18.94	17.4	69.7	10.54	329	1,321	453	142	57
NL		19	1	83	119	2.032	4.00	6.09	26.2	93.3	3.83	159	569	165	69	24
NL	Totals		1	83	119	2.032	4.00	6.09	26.2	93.3	3.83	159	569	165	69	24
RL		12	1	85	50	5.093	4.00	5.09	12.6	50.0	1.77	64	255	76	28	11
RL	Totals		1	85	50	5.093	4.00	5.09	12.6	50.0	1.77	64	255	76	28	11
Totals			57	84	84	193.884	228.00	341.40	20.8	73.4	199.13	7093	25,058	8,562	3,050	1,077

Stand Table Summary																
TC TSTNDSUM		Project NWCOMBO														
TT2N RR7W S18 TSALE										TT2N RR7W S18 TSAL						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
T2N	R7W	18	AREA2	SALE	86.00	18	127	Date:	07/01/2011							
								Time:	8:47:08AM							
Spc	S T	Sample		Av		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		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
DF		8	1	86	60	6.366	2.22	6.37	5.9	28.5	1.06	37	181	91	32	16
DF		9	6	82	65	30.181	13.33	25.15	8.5	36.1	6.07	213	908	522	183	78
DF		10	10	85	72	40.744	22.22	44.82	10.6	39.7	13.49	473	1,780	1,160	407	153
DF		11	9	83	88	30.305	20.00	50.51	11.2	42.4	16.13	566	2,143	1,387	487	184
DF		12	18	85	79	50.930	40.00	87.71	11.5	41.4	28.82	1,012	3,629	2,479	870	312
DF		13	16	85	79	38.574	35.56	69.92	13.6	46.5	27.09	951	3,252	2,330	818	280
DF		14	12	83	85	24.945	26.67	47.81	16.1	54.1	21.91	769	2,587	1,884	661	222
DF		15	14	84	83	25.352	31.11	47.08	19.1	63.9	25.62	898	3,011	2,204	773	259
DF		16	11	85	85	17.507	24.44	35.01	21.1	76.9	21.10	740	2,691	1,815	637	231
DF		17	5	83	94	7.049	11.11	14.10	25.7	88.3	10.33	362	1,246	889	311	107
DF		18	10	83	86	12.575	22.22	22.64	28.6	92.9	18.46	647	2,103	1,587	557	181
DF		19	3	85	99	3.386	6.67	7.90	29.3	101.8	6.60	231	804	567	199	69
DF		20	2	84	110	2.037	4.44	5.09	32.4	110.2	4.70	165	561	404	142	48
DF		21	1	84	109	.924	2.22	2.77	31.0	110.8	2.45	86	307	211	74	26
DF		22	3	85	111	2.525	6.67	6.73	38.9	150.8	7.48	262	1,016	643	225	87
DF		23	2	84	90	1.540	4.44	3.08	48.6	147.2	4.27	150	454	367	129	39
DF		25	1	73	65	.652	2.22	1.30	42.6	90.2	1.58	56	118	136	48	10
DF		27	1	84	82	.559	2.22	1.12	64.5	209.0	2.06	72	234	177	62	20
DF		33	1	74	122	.374	2.22	.75	91.5	304.0	1.94	68	227	167	59	20
DF		Totals	126	84	80	296.525	280.00	479.86	16.2	56.8	221.16	7,759	27,252	19,020	6,673	2,344
NL		15	1	85	53	1.811	2.22	1.81	24.1	40.0	1.05	44	72	90	38	6
NL		Totals	1	85	53	1.811	2.22	1.81	24.1	40.0	1.05	44	72	90	38	6
Totals			127	84	80	298.336	282.22	481.67	16.2	56.7	222.21	7803	27,324	19,110	6,711	2,350

TC		Stand Table Summary														
Project													NWCOMBO			
TT2N RR7W S18 TSALE											TT2N RR7W S18 TSAL					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
T2N	R7W	18	AREA3	SALE	93.00	14	65	Date:	07/01/2010							
								Time:	8:50:25AM							
Spc	S 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
DF		8	3	83	52	24.555	8.57	24.56	4.1	19.0	2.87	101	467	267	94	43
DF		9	2	85	66	12.935	5.71	12.93	6.9	28.5	2.54	89	369	237	83	34
DF		12	6	85	80	21.649	17.14	32.56	12.9	43.3	11.98	420	1,410	1,114	391	131
DF		13	3	87	83	9.117	8.57	15.13	14.9	49.3	6.44	226	747	598	210	69
DF		14	3	86	96	7.872	8.57	15.74	17.4	63.2	7.83	275	995	728	255	93
DF		15	5	86	96	11.934	14.29	23.87	18.3	66.6	12.45	437	1,589	1,158	406	148
DF		16	6	87	98	12.331	17.14	24.66	21.5	81.6	15.14	531	2,011	1,408	494	187
DF		17	3	87	93	5.548	8.57	11.10	23.6	83.9	7.47	262	931	695	244	87
DF		18	1	91	101	1.547	2.86	3.09	31.7	118.7	2.80	98	367	260	91	34
DF		19	2	87	92	2.902	5.71	5.80	28.0	97.4	4.96	163	565	461	151	53
DF		20	1	87	92	1.378	2.86	2.76	30.6	95.0	2.40	84	262	223	78	24
DF		21	1	87	98	1.177	2.86	2.35	33.2	114.0	2.23	78	268	207	73	25
DF		22	1	84	100	1.082	2.86	2.16	34.7	128.3	2.14	75	278	199	70	26
DF		23	1	84	112	.957	2.86	1.91	54.9	199.5	3.00	105	382	279	98	36
DF		28	1	79	119	.693	2.86	1.39	74.2	232.7	2.93	103	322	272	96	30
DF	Totals		39	85	79	115.675	11.43	180.03	16.9	60.9	87.18	3,047	10,963	8,107	2,834	1,020
RA		8	1	82	58	8.185	2.86	8.19	6.0	27.0	1.35	49	221	126	46	21
RA		9	6	82	55	38.804	17.14	38.80	8.6	31.5	9.13	332	1,222	849	309	114
RA		10	1	77	70	5.238	2.86	5.24	9.8	36.0	1.40	51	189	131	48	18
RA		11	2	86	71	8.659	5.71	8.66	14.0	45.0	3.34	121	390	310	113	36
RA		12	3	81	78	10.913	8.57	14.55	14.7	45.0	5.89	214	655	548	199	61
RA		14	2	86	47	5.345	5.71	5.35	20.1	45.0	2.95	107	241	274	100	22
RA		15	1	77	72	2.328	2.86	2.33	34.9	72.0	2.23	81	168	208	76	16
RA		16	1	83	58	2.046	2.86	2.05	28.2	90.0	1.58	58	184	147	54	17
RA		18	1	79	80	1.617	2.86	3.23	26.8	72.0	2.38	87	233	222	81	22
RA	Totals		18	82	62	83.136	5.143	88.39	12.5	39.6	30.27	1,101	3,502	2,815	1,024	326
WL		9	1	86	17	6.467	2.86	6.47	4.6	20.0	.96	30	129	89	28	12
WL		10	2	86	54	10.477	5.71	10.48	7.0	25.0	2.35	74	262	219	68	24
WL		11	2	83	61	8.659	5.71	8.66	11.2	35.0	3.11	97	303	289	90	28
WL		15	2	89	67	4.656	5.71	4.66	24.0	60.0	3.58	112	279	333	104	26
WL		17	1	87	72	1.813	2.86	1.81	34.9	90.0	2.02	63	163	188	59	15
WL	Totals		8	86	51	32.072	22.86	32.07	11.7	35.4	12.02	376	1,137	1,118	349	106
Totals			65	84	69	230.883	185.71	300.49	15.1	51.9	129.47	4524	15,601	12,041	4,207	1,451

TC TSTNDSUM		Stand Table Summary														
Project NWCOMBO											TT2N RR7W S18 TSAL					
TT2N RR7W S18 TSALE											Page: 1					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Date:	07/01/2010							
T2N	R7W	18	AREA4	SALE	103.00	19	95	Time:	8:53:49AM							
Spc	S T	Sample			Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
		DBH	Trees	FF 16'					Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DF		8	1	92	86	6.031	2.11	6.03	7.5	38.0	1.28	45	229	132	46	24
DF		9	2	90	87	9.531	4.21	14.30	8.4	41.2	3.41	120	589	351	123	61
DF		10	4	86	72	15.518	8.42	23.24	8.7	39.6	5.79	203	920	596	209	95
DF		11	3	88	86	9.570	6.32	19.14	10.5	44.3	5.72	201	849	589	207	87
DF		12	8	88	90	21.444	16.84	42.89	11.7	46.3	14.34	503	1,986	1,477	518	205
DF		13	7	90	104	15.995	14.74	31.99	17.2	74.0	15.70	551	2,366	1,617	567	244
DF		14	7	88	106	13.735	14.74	27.47	18.4	73.4	14.44	507	2,017	1,487	522	208
DF		15	10	88	104	17.155	21.05	34.31	20.9	80.3	20.42	716	2,754	2,103	738	284
DF		16	6	90	111	9.146	12.63	19.90	23.1	93.6	13.07	459	1,862	1,346	472	192
DF		17	7	84	102	9.349	14.74	20.03	26.5	94.4	15.16	532	1,891	1,561	548	195
DF		18	6	88	112	7.148	12.63	16.68	27.7	105.2	13.16	462	1,754	1,355	475	181
DF		19	6	87	111	6.415	12.63	12.83	34.0	120.3	12.42	436	1,544	1,279	449	159
DF		21	3	89	120	2.626	6.32	7.88	34.3	153.1	7.70	270	1,206	793	278	124
DF		22	1	82	126	.798	2.11	2.39	38.1	148.8	2.60	91	356	267	94	37
DF		23	2	87	126	1.459	4.21	4.38	42.0	175.7	5.24	184	769	540	189	79
DF		25	2	86	112	1.235	4.21	3.09	52.5	205.2	4.62	162	634	475	167	65
DF		26	1	83	115	.571	2.11	1.14	72.8	275.5	2.37	83	315	244	86	32
DF		27	2	83	120	1.059	4.21	3.18	53.2	218.5	4.81	169	694	496	174	71
DF		28	2	89	134	.985	4.21	2.95	61.9	277.1	5.21	183	819	537	188	84
DF		29	1	91	128	.450	2.11	1.35	73.3	345.2	2.82	99	466	290	102	48
DF		36	1	82	113	.298	2.11	.60	135.0	532.0	2.29	80	317	236	83	33
DF	Totals	82	88	98		150.518	172.63	295.76	20.5	82.3	172.56	6,055	24,355	17,774	6,236	2,506
RA		10	3	84	78	11.580	6.32	11.58	14.2	54.0	4.53	165	625	466	170	64
RA		11	2	85	65	6.380	4.21	6.38	16.1	54.0	2.82	102	345	290	106	35
RA		12	1	85	64	2.681	2.11	2.68	19.6	54.0	1.45	53	145	149	54	15
RA		14	2	85	55	3.939	4.21	3.94	23.4	54.0	2.53	92	213	261	95	22
RA		16	1	55	86	1.508	2.11	1.51	17.2	45.0	.71	26	68	73	27	7
RA	Totals	9	83	70		26.087	18.95	26.09	16.8	53.5	12.03	438	1,395	1,239	451	144
WL		11	1	85	53	3.190	2.11	3.19	11.1	40.0	1.14	35	128	117	37	13
WL		14	2	87	80	3.939	4.21	7.88	17.1	72.5	4.32	135	571	445	139	59
WL		19	1	86	93	1.069	2.11	2.14	30.8	105.0	2.11	66	225	217	68	23
WL	Totals	4	86	71		8.198	8.42	13.21	17.9	69.9	7.56	236	923	779	243	95
Totals		95	87	93		184.802	200.00	335.05	20.1	79.5	192.16	6729	26,653	19,793	6,931	2,745

Stand Table Summary

Project NWCOMBO

TT2N RR7W S18 TSALE

TT2N RR7W S18 TSAL

Twp Rge Sec Tract  
T2N R7W 18 AREA5

Type Acres Plots Sample Trees  
SALE 68.00 10 42

Page: 1  
Date: 07/01/2010  
Time: 9:00:54AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DF		8	1	86	56	11.459	4.00	11.46	4.6	19.0	1.52	53	218	103	36	15
DF		9	2	94	94	18.108	8.00	36.22	5.9	33.2	6.09	214	1,204	414	145	82
DF		10	4	91	92	29.796	16.00	52.26	8.3	42.0	12.42	436	2,195	844	296	149
DF		12	1	90	85	5.357	4.00	10.71	11.3	42.7	3.45	121	458	234	82	31
DF		13	2	90	100	8.903	8.00	17.81	14.7	61.2	7.47	262	1,090	508	178	74
DF		14	1	88	118	4.024	4.00	8.05	20.0	85.5	4.59	161	688	312	110	47
DF		15	1	89	116	3.259	4.00	6.52	23.0	90.3	4.27	150	588	290	102	40
DF		16	4	89	111	11.509	16.00	25.74	23.3	96.3	17.12	601	2,479	1,164	408	169
DF		17	7	86	105	17.737	28.00	33.00	27.2	101.4	25.56	897	3,346	1,738	610	228
DF		18	4	79	103	9.054	16.00	15.84	30.9	122.1	13.97	490	1,935	950	333	132
DF		19	6	86	106	12.280	24.00	26.57	33.4	118.6	25.30	888	3,151	1,721	604	214
DF		20	1	84	121	1.833	4.00	5.50	33.6	136.2	5.27	185	749	358	126	51
DF		22	2	82	113	3.031	8.00	6.06	48.6	156.8	8.40	295	950	571	200	65
DF		25	1	80	75	1.173	4.00	1.17	59.0	38.0	1.97	69	45	134	47	3
DF		Totals	37	88	97	137.524	148.00	256.91	18.8	74.3	137.39	4,821	19,097	9,342	3,278	1,299
RA		9	2	79	45	18.108	8.00	18.11	7.8	31.5	3.89	142	570	265	96	39
RA		16	2	82	64	5.730	8.00	8.59	23.9	63.0	5.65	206	541	384	140	37
RA		17	1	79	60	2.538	4.00	2.54	42.3	81.0	2.95	107	206	201	73	14
RA		Totals	5	80	50	26.376	20.00	29.24	15.5	45.1	12.50	455	1,317	850	309	90
Totals			42	87	89	163.900	168.00	286.15	18.4	71.3	149.88	5275	20,414	10,192	3,587	1,388

TC TSTNDSUM		Stand Table Summary														
Project NWCOMBO											TT2N RR7W S18 TSALE					
TT2N RR7W S18 TSALE											TT2N RR7W S18 TSAL					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
T2N	R7W	18	AREA6	SALE	68.00	11	58	Date:	07/01/2010							
								Time:	9:03:59AM							
Spc	T	DBH	Sample Trees	FF	Av Ht	Trees/Acre	BA/Acre	Logs/Acre	Average Log		Net Tons/Acre	Net Cu.Ft./Acre	Net Bd.Ft./Acre	Totals		
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DL		13	1	91	110	3.826	3.64	7.65	17.3	80.0	3.65	133	612	248	90	42
DL		16	2	89	108	5.209	7.27	10.42	25.0	102.5	7.17	261	1,068	488	177	73
DL		17	2	91	124	4.641	7.27	11.62	24.7	101.9	7.88	287	1,184	536	195	81
DL		18	6	91	116	12.441	21.82	29.00	29.1	119.9	23.22	844	3,478	1,579	574	236
DL		19	1	93	116	1.847	3.64	3.69	36.9	155.0	3.75	136	573	255	93	39
DL		20	1	90	116	1.667	3.64	5.00	31.2	143.3	4.29	156	717	292	106	49
DL		21	5	92	120	7.531	18.18	21.08	33.7	158.5	19.52	710	3,343	1,327	483	227
DL		22	4	88	126	5.510	14.55	13.78	43.5	189.0	16.47	599	2,603	1,120	407	177
DL		23	2	89	129	2.500	7.27	7.50	42.6	194.0	8.78	319	1,455	597	217	99
DL		24	1	92	121	1.157	3.64	3.47	42.6	206.7	4.07	148	718	277	101	49
DL		26	1	83	118	.986	3.64	1.97	72.8	290.0	3.95	144	572	269	98	39
DL		28	1	89	129	.850	3.64	2.55	59.2	263.3	4.15	151	672	282	103	46
DL		Totals	27	90	118	48.167	98.18	117.73	33.0	144.3	106.90	3,887	16,994	7,269	2,643	1,156
DF		12	1	92	88	4.630	3.64	9.26	10.9	42.7	2.87	101	396	195	69	27
DF		13	1	91	91	3.945	3.64	7.89	14.1	52.2	3.18	112	412	216	76	28
DF		14	4	91	103	13.677	14.55	27.35	18.0	72.9	14.03	492	1,993	954	335	136
DF		15	4	90	101	11.933	14.55	23.87	20.9	84.3	14.20	498	2,012	966	339	137
DF		16	5	91	105	13.223	18.18	26.45	23.6	93.3	17.79	624	2,467	1,210	425	168
DF		17	5	89	96	11.677	18.18	23.35	26.1	98.9	17.34	609	2,309	1,179	414	157
DF		18	3	86	107	6.128	10.91	12.26	28.1	98.1	9.80	344	1,202	666	234	82
DF		19	2	90	124	3.694	7.27	9.23	31.7	125.4	8.33	292	1,158	566	199	79
DF		20	1	88	111	1.667	3.64	3.33	40.8	147.2	3.88	136	491	264	92	33
DF		28	1	88	128	.850	3.64	2.55	57.6	247.0	4.19	147	630	285	100	43
DF		Totals	27	90	102	71.424	98.18	145.55	23.1	89.8	95.62	3,355	13,071	6,502	2,282	889
BM		13	1	82	25	3.945	3.64	3.95	11.2	20.0	1.17	44	79	79	30	5
BM		14	2	84	44	6.803	7.27	6.80	18.9	40.0	3.41	129	272	232	88	19
BM		16	1	79	47	2.604	3.64	2.60	27.9	50.0	1.92	73	130	131	49	9
BM		Totals	4	82	39	13.353	14.55	13.35	18.4	36.0	6.50	245	481	442	167	33
Totals			58	89	102	132.944	210.91	276.63	27.1	110.4	209.02	7488	30,546	14,214	5,092	2,077

Stand Table Summary																
TC TSTNDSUM		Project NWCOMBO														
TT2N RR8W S18 TSALE										TT2N RR8W S18 TSAL						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1	Date:	07/01/2016	Time:	9:06:52AM			
T2N	R8W	18	AREA7	SALE	14.00	8	30									
Spc	T	DBH	Sample Trees	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Cu.Ft. Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
								Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
DF		9	1	86	84	11.318	5.00	11.32	9.7	38.0	3.13	110	430	44	15	6
DF		10	3	85	58	27.502	15.00	27.50	9.7	34.8	7.70	267	958	108	37	13
DF		13	2	77	90	10.849	10.00	16.27	17.1	50.7	7.82	279	825	110	39	12
DF		15	1	86	100	4.074	5.00	8.15	20.1	76.0	4.62	164	619	65	23	9
DF		16	2	82	104	7.162	10.00	14.32	24.7	83.1	10.08	353	1,191	141	49	17
DF		17	1	83	117	3.172	5.00	9.52	21.0	79.2	5.68	200	753	79	28	11
DF		19	1	84	110	2.539	5.00	5.08	37.5	123.5	5.41	191	627	76	27	9
DF		20	2	87	121	4.584	10.00	13.75	30.1	115.6	11.81	414	1,589	165	58	22
DF		21	1	85	84	2.079	5.00	4.16	38.7	128.2	4.59	161	533	64	23	7
DF		22	1	81	125	1.894	5.00	5.68	36.6	139.3	5.93	208	792	83	29	11
DF		23	1	88	119	1.733	5.00	5.20	42.0	180.5	6.22	218	938	87	31	13
DF		25	1	86	112	1.467	5.00	4.40	47.3	199.5	5.95	208	878	83	29	12
DF		27	1	81	117	1.258	5.00	3.77	52.6	199.5	5.66	199	753	79	28	11
DF		30	1	87	105	1.019	5.00	2.04	86.5	308.7	5.02	176	629	70	25	9
DF	Totals		19	84	86	80.649	95.00	131.16	24.0	87.8	89.62	3,148	11,515	1,255	441	161
RA		9	1	81	52	11.318	5.00	11.32	8.0	27.0	2.48	90	306	35	13	4
RA		11	1	84	98	7.576	5.00	7.58	18.5	63.0	3.86	140	477	54	20	7
RA		13	3	80	57	16.273	15.00	16.27	19.1	45.0	8.58	310	732	120	43	10
RA		14	2	83	51	9.354	10.00	14.03	11.7	33.0	4.49	164	463	63	23	6
RA		18	2	86	67	5.659	10.00	11.32	23.5	76.5	7.36	266	866	103	37	12
RA		19	1	94	59	2.539	5.00	5.08	26.2	99.0	3.67	133	503	51	19	7
RA		21	1	80	63	2.079	5.00	4.16	19.5	63.0	2.24	81	262	31	11	4
RA	Totals		11	83	62	54.799	55.00	69.75	17.0	51.7	32.69	1,185	3,609	458	166	51
Totals			30	83	76	135.448	150.00	200.91	21.6	75.3	122.32	4332	15,124	1,712	607	212

TC TLOGSTVB

Log Stock Table - MBF

Project: NWCOMBO

TT2N RR7W S18 TSAL

TT2N RR7W S18 TSAL

Twp Rge Sec Tract Type Acres Plots Sample Trees  
 T2N R7W 18 AREA1 SALE 43.00 10 57

Page 1  
 Date 7/1/2010  
 Time 8:39:14AM

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	40+
DF		CO	2		40		50	7.7	46	9.9				46								
DF		CO	3		32		42	5.0	40	8.5			27	12								
DF		CO	3		40		283	6.3	265	56.6			67	146	52							
DF		CO	4		15		3	5.0	3	.7			3									
DF		CO	4		17		5	5.0	5	1.1			5									
DF		CO	4		18		8	5.0	8	1.6			4									
DF		CO	4		20		10	5.0	9	2.0			9									
DF		CO	4		21		1	5.0	1	.3			1									
DF		CO	4		22		5	5.0	5	1.0			5									
DF		CO	4		23		4	5.0	4	.9			4									
DF		CO	4		24		5	5.0	5	1.0			5									
DF		CO	4		25		8	5.0	8	1.6			8									
DF		CO	4		27		12	5.0	12	2.5			12									
DF		CO	4		28		12	5.0	11	2.4			11									
DF		CO	4		30		7	5.0	6	1.3			6									
DF		CO	4		35		13	5.0	12	2.7			12									
DF		CO	4		36		6	5.0	6	1.3			6									
DF		CO	4		40		24	5.0	23	4.8			16	7								
DF		Totals					499	6.0	469	43.5			107	105	159	52	46					
DL		CO	2		32		7		7	1.3					7							
DL		CO	2		40		204	1.6	201	38.8					97	85	19					
DL		CO	3		15		2		2	.3					2							
DL		CO	3		20		7		7	1.4				7								
DL		CO	3		30		6		6	1.1				6								
DL		CO	3		32		28		28	5.4				6	5	17						
DL		CO	3		38		3	16.7	3	.5				3								
DL		CO	3		40		193		193	37.3				19	75	99						
DL		CO	4		16		2		2	.4			2									
DL		CO	4		18		1		1	.2			1									
DL		CO	4		22		3		3	.5			3									
DL		CO	4		24		12		12	2.3			6		6							
DL		CO	4		25		1		1	.3				1								
DL		CO	4		26		3		3	.6			3									
DL		CO	4		28		4		4	.8			4									
DL		CO	4		29		17		17	3.3			17									
DL		CO	4		30		7		7	1.3			7									
DL		CO	4		32		2		2	.5			2									
DL		CO	4		33		6		6	1.1			6									
DL		CO	4		34		5		5	1.0			5									
DL		CO	4		36		5		5	1.0			5									
DL		CO	4		40		3		3	.7			3									
DL		Totals					521		517	48.0			64	29	99	117	104	85	19			
WL		CO	3		32		34		34	59.9				17	17							
WL		CO	3		40		15		15	25.7					15							
WL		CO	4		18		2		2	3.4			2									
WL		CO	4		19		4		4	6.6			4									
WL		CO	4		21		2		2	4.3			2									
WL		Totals					57		57	5.3			8	17	32							



TC TLOGSTVB

**Log Stock Table - MBF**

Project: **NWCOMBO**

**TT2N RR7W S18 TSAL**

**TT2N RR7W S18 TSAL**

<b>Twp</b>	<b>Rge</b>	<b>Sec</b>	<b>Tract</b>	<b>Type</b>	<b>Acres</b>	<b>Plots</b>	<b>Sample Trees</b>	<b>Page</b>	<b>2</b>
T2N	R7W	18	AREA1	SALE	43.00	10	57	<b>Date</b>	7/1/2010
								<b>Time</b>	8:39:14AM

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	24-29	30-39	40+
RL		H	4		25	11		11	100.0				11										
RL		Totals				11		11	1.0				11										
NL		CO	2		40	17		17	71.4					17									
NL		CO	3		40	6		6	25.0			6											
NL		CO	4		12	1		1	3.6		1												
NL		Totals				24		24	2.3		1	6			17								
Total All Species						1,111	3.1	1,077	100.0		180	140	285	201	168	85	19						

TC TLOGSTVB

Log Stock Table - MBF

Project: NWCOMBO

TT2N RR7W S18 TSAL

TT2N RR7W S18 TSAL

Twp Rge Sec Tract Type Acres Plots Sample Trees  
 T2N R7W 18 AREA2 SALE 86.00 18 127

Page 1  
 Date 7/1/2010  
 Time 8:45:20AM

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	24-29	30-39
DF		CO	2		40	236	6.3	221	9.4					106	82	33						
DF		CO	3		25	14	5.0	13	.6					13								
DF		CO	3		32	434	6.6	405	17.3			136	165	96	9							
DF		CO	3		36	26	5.0	25	1.1			25										
DF		CO	3		39	4	5.0	4	.2			4										
DF		CO	3		40	1,176	5.4	1,112	47.4			407	394	311								
DF		CO	4		14	4	5.0	3	.1		3											
DF		CO	4		15	6	5.0	5	.2		5											
DF		CO	4		16	36	5.0	34	1.5		34											
DF		CO	4		17	19	5.0	18	.8		18											
DF		CO	4		18	38	5.0	36	1.6		31		5									
DF		CO	4		19	31	5.0	29	1.2		29											
DF		CO	4		20	36	5.0	34	1.5		33		1									
DF		CO	4		21	24	5.0	23	1.0		23											
DF		CO	4		22	12	5.0	11	.5		11											
DF		CO	4		23	7	5.0	6	.3		6											
DF		CO	4		24	17	5.0	16	.7		16											
DF		CO	4		25	32	9.0	29	1.2		29											
DF		CO	4		26	16	5.0	16	.7		12		4									
DF		CO	4		27	10	5.0	10	.4		10											
DF		CO	4		28	22	5.0	21	.9		21											
DF		CO	4		29	29	5.0	27	1.2		27											
DF		CO	4		31	15	5.0	14	.6		14											
DF		CO	4		32	22	5.0	21	.9		21											
DF		CO	4		33	23	5.0	22	.9		22											
DF		CO	4		34	17	5.0	16	.7		16											
DF		CO	4		35	9	5.0	9	.4		9											
DF		CO	4		36	14	5.0	13	.6		13											
DF		CO	4		37	19	5.0	19	.8		19											
DF		CO	4		38	22	5.0	21	.9		21											
DF		CO	4		39	26	5.0	24	1.0		24											
DF		CO	4		40	89	5.0	85	3.6		78		7									
DF		Totals				2,484	5.7	2,344	99.7		547	583	564	420	115	82	33					
NL		CO	4		40	6		6	100.0		6											
NL		Totals				6		6	.3		6											
Total All Species						2,490	5.6	2,350	100.0		553	583	564	420	115	82	33					



TT2N RR7W S18 TSAL TT2N RR7W S18 TSAL  
 Twp Rge Sec Tract Type Acres Plots Sample Trees Page 2  
 T2N R7W 18 AREA3 SALE 93.00 14 65 Date 7/1/2010  
 Time 8:48:44AM

Spp	T	S	So	Gr	Log	Gross	% Def	Net	% Spe	Net Volume by Scaling Diameter in Inches											
										MBF	MBF	Spe	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23
WL		8	4	24		15		15	13.8			15									
WL		8	4	27		12		12	11.4			12									
WL		9	UT	15		12		12	11.4			12									
WL		9	UT	29		16		16	15.2			16									
WL		Totals				106		106	7.3			91	15								
Total All Species						1,564	7.2	1,451	100.0		235	392	387	273	70	71	24				

TC		TLOGSTVB		Log Stock Table - MBF																	
				Project: NWCOMBO																	
TT2N RR7W S18 TSAL										TT2N RR7W S18 TSAL											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1												
T2N	R7W	18	AREA4	SALE	103.00	19	95	Date	7/1/2010												
								Time	8:52:11AM												
Spp	T	S	So	Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches											
										MBF	Def	MBF	Spe	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19
DF		8	2	32		25	5.0	24	1.0						24						
DF		8	2	40		406	5.0	386	15.4					28	132	159	67				
DF		8	3	32		209	5.0	198	7.9			30	109	34	24						
DF		8	3	36		20	5.0	19	.7			19									
DF		8	3	37		7	5.0	7	.3			7									
DF		8	3	40		1,489	5.0	1,414	56.4			190	477	480	189	52	27				
DF		8	4	13		4	5.0	4	.2		4										
DF		8	4	16		6	5.0	6	.2			6									
DF		8	4	17		13	5.0	13	.5		7	6									
DF		8	4	18		7	5.0	7	.3		5	2									
DF		8	4	19		31	5.0	30	1.2		23	5	2								
DF		8	4	20		6	5.0	5	.2		5										
DF		8	4	21		10	5.0	10	.4		6	3									
DF		8	4	22		10	5.0	10	.4		10										
DF		8	4	23		6	5.0	5	.2		3	2									
DF		8	4	24		21	5.0	20	.8		20										
DF		8	4	25		13	5.0	12	.5		11	2									
DF		8	4	26		5	5.0	5	.2		5										
DF		8	4	27		28	5.0	26	1.0		26										
DF		8	4	28		4	5.0	4	.2		4										
DF		8	4	29		8	5.0	8	.3		8										
DF		8	4	30		16	5.0	15	.6		13	2									
DF		8	4	31		14	5.0	13	.5		13										
DF		8	4	33		22	5.0	21	.9		21										
DF		8	4	34		32	5.0	31	1.2		22	9									
DF		8	4	35		30	5.0	29	1.1		29										
DF		8	4	36		19	5.0	18	.7		12	6									
DF		8	4	37		33	5.0	31	1.2		31										
DF		8	4	39		7	5.0	7	.3		7										
DF		8	4	40		136	5.0	129	5.1		79	50									
DF		Totals				2,638	5.0	2,506	91.3		364	339	588	514	241	207	159	95			
RA		8	R	31		13	10.0	12	8.2			12									
RA		8	R	33		20	10.0	18	12.5			18									
RA		8	R	35		8	10.0	7	4.9			7									
RA		8	R	36		12	10.0	11	7.6			11									
RA		8	R	38		24	10.0	21	14.9			21									
RA		8	R	40		29	10.0	26	18.0			26									
RA		8	R	44		54	10.0	49	33.9			49									
RA		Totals				160	10.0	144	5.2			144									
WL		8	3	32		18		18	19.2			18									
WL		8	3	40		50		50	52.8				50								
WL		8	4	17		4		4	4.3			4									
WL		8	4	21		3		3	3.5			3									
WL		8	4	26		6		6	6.4			6									
WL		8	4	30		13		13	13.8			13									
WL		Totals				95		95	3.5			27	18	50							
Total All Species					2,893	5.1	2,745	100.0		364	509	606	565	241	207	159	95				

TC TLOGSTVB

**Log Stock Table - MBF**

Project: **NWCOMBO**

TT2N RR7W S18 TSAL

TT2N RR7W S18 TSAL

Twp Rge Sec Tract Type Acres Plots Sample Trees  
 T2N R7W 18 AREA5 SALE 68.00 10 42

Page 1  
 Date 7/1/2010  
 Time 8:59:13AM

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	24-29	30-39
DF		8	2	40		30	5.0	28	2.2					28								
DF		8	3	32		191	5.0	181	14.0			146	36									
DF		8	3	39		9	5.0	9	.7			9										
DF		8	3	40		893	5.3	845	65.1			79	109	332	297	28						
DF		8	4	14		3	5.0	3	.2			3										
DF		8	4	16		27	5.0	25	1.9		25											
DF		8	4	17		14	5.0	13	1.0		13											
DF		8	4	19		3	5.0	3	.2			3										
DF		8	4	20		7	5.0	7	.5		7											
DF		8	4	21		20	5.0	19	1.5		14		5									
DF		8	4	22		6	5.0	6	.5		6											
DF		8	4	23		16	5.0	15	1.1		15											
DF		8	4	25		15	5.0	14	1.1		14											
DF		8	4	29		15	5.0	14	1.1			14										
DF		8	4	32		9	5.0	8	.6		8											
DF		8	4	34		6	5.0	5	.4		5											
DF		8	4	36		3	5.0	3	.2		3											
DF		8	4	40		105	5.0	100	7.7		28	72										
DF		Totals				1,370	5.2	1,299	93.5		139	324	149	332	326	28						
RA		8	R	16		12	10.0	11	12.4			11										
RA		8	R	20		4	10.0	4	3.9			4										
RA		8	R	32		23	10.0	21	23.5				21									
RA		8	R	33		31	10.0	28	30.9			28										
RA		8	R	40		29	10.0	26	29.3			12	14									
RA		Totals				100	10.0	90	6.5			55	14	21								
Total All Species						1,469	5.5	1,388	100.0		139	379	163	353	326	28						

TC		TLOGSTVB		Log Stock Table - MBF																	
				Project: NWCOMBO																	
TT2N RR7W S18 TSAL										TT2N RR7W S18 TSAL											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1												
T2N	R7W	18	AREA6	SALE	68.00	11	58	Date	7/1/2010												
								Time	9:02:28AM												
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
DL		8	2		40		397	.4	395	34.2					219	176					
DL		8	3		31		4		4	.4			4								
DL		8	3		32		100		100	8.6			39	49	11						
DL		8	3		36		39		39	3.4			10	30							
DL		8	3		40		498	.2	497	43.0			42	48	113	229	66				
DL		8	4		13		2		2	.1		2									
DL		8	4		15		3		3	.2		3									
DL		8	4		16		7		7	.6		2	5								
DL		8	4		18		2		2	.1			2								
DL		8	4		19		5		5	.4			5								
DL		8	4		21		4		4	.3		2	2								
DL		8	4		22		16		16	1.4			3		13						
DL		8	4		23		3		3	.2			3								
DL		8	4		24		4		4	.3			4								
DL		8	4		34		6		6	.5		6									
DL		8	4		35		10		10	.9		10									
DL		8	4		36		7		7	.6		7									
DL		8	4		37		7		7	.6		7									
DL		8	4		38		6		6	.5		6									
DL		8	4		40		9		9	.8		9									
DL		8	UT		22		30		30	2.6							30				
DL		Totals						1,158		1,156	55.6		44	88	87	192	253	285	205		
DF		8	2		40		35	5.0	33	3.7							33				
DF		8	3		32		83	5.0	79	8.9			11	59	9						
DF		8	3		40		671	5.5	634	71.4			39	97	359	139					
DF		8	4		16		9	5.0	8	.9		6	2								
DF		8	4		20		10	5.0	9	1.0		8	1								
DF		8	4		21		3	5.0	3	.3		3									
DF		8	4		22		5	5.0	4	.5		4									
DF		8	4		23		5	5.0	5	.6		5									
DF		8	4		24		6	5.0	6	.6		6									
DF		8	4		26		9	5.0	8	1.0		4	4								
DF		8	4		28		4	5.0	4	.4		4									
DF		8	4		32		16	5.0	15	1.7		15									
DF		8	4		33		17	5.0	16	1.8		16									
DF		8	4		35		8	5.0	8	.9		8									
DF		8	4		36		7	5.0	7	.8		7									
DF		8	4		37		5	5.0	5	.6		5									
DF		8	4		39		8	5.0	8	.9		8									
DF		8	4		40		38	5.0	36	4.1		6	30								
DF		Totals						939	5.4	889	42.8		105	76	108	419	148		33		
BM		8	4		20		5		5	16.4			5								
BM		8	4		28		7		7	21.2			7								
BM		8	4		36		14	16.7	12	35.3			12								
BM		8	R		35		9		9	27.1			9								
BM		Totals						35	6.6	33	1.6		33								
Total All Species								2,132	2.6	2,077	100.0		150	197	195	611	401	285	238		

TC		TLOGSIVB		Log Stock Table - MBF																		
				Project: NWCOMBO																		
TT2N RR8W S18 TSAL										TT2N RR8W S18 TSAL												
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1													
T2N	R8W	18	AREA7	SALE	14.00	8	30	Date	7/1/2010													
								Time	9:05:23AM													
Spp	T	S	So	Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches												
										MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23
DF		CO	2		40	43	6.9	40	24.7					7		33						
DF		CO	3		32	16	5.0	15	9.4			3	3	7	3							
DF		CO	3		35	3	16.9	2	1.5					2								
DF		CO	3		36	1	5.0	1	.7				1									
DF		CO	3		38	5	5.0	5	3.1			5										
DF		CO	3		40	72	6.7	67	41.6			9	12	18	21	7						
DF		CO	4		16	1	5.0	1	.5		1											
DF		CO	4		17	1	5.0	1	.3			1										
DF		CO	4		18	1	5.0	1	.4				1									
DF		CO	4		19	0	5.0	0	.3			0										
DF		CO	4		22	1	5.0	1	.4		1											
DF		CO	4		26	4	5.0	4	2.3		4											
DF		CO	4		27	1	5.0	1	.6		1											
DF		CO	4		28	2	5.0	2	1.3		2											
DF		CO	4		29	3	5.0	3	1.9		3											
DF		CO	4		33	2	5.0	2	1.3		2											
DF		CO	4		36	5	5.0	5	3.0		5											
DF		CO	4		40	11	5.0	11	6.8		11											
DF		Totals				172	6.4	161	76.1		30	17	16	27	31	7	33					
RA		H	2		18	6	10.0	6	11.4							6						
RA		H	3		20	5	17.5	4	7.8					4								
RA		H	3		30	7	20.0	6	11.3					6								
RA		H	4		20	5	15.5	4	8.0			1			3							
RA		H	4		21	6	19.6	5	9.8				1	4								
RA		H	4		22	3	10.0	3	5.1			3										
RA		H	4		25	6	10.0	5	10.6			5										
RA		H	4		27	8	10.0	7	13.5				7									
RA		H	4		29	2	28.0	1	2.5			1										
RA		H	4		38	5	25.0	3	6.8			3										
RA		H	4		40	7	10.0	7	13.2			7										
RA		Totals				59	14.9	51	23.9			20	8	4	13		6					
Total All Species						232	8.6	212	100.0		30	38	24	30	43	7	39					





# OREGON DEPARTMENT OF FORESTRY

## CRUISE REPORT

### NW Combo

1. **Type of Sale**

Modified Clear-cut/ Thinning, Recovery

2. **Legal Description**

Portions of Sections 17, 18, 19, 20, 29, and 30, T2N, R7W, and portions of Section 13, T2N, R8W, W.M. Tillamook County, Oregon

3. **Sale Acreage**

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

	ACRES	
	<u>Gross</u>	<u>Net</u>
Area 1 (Partial Cut)	44	43
Area 2 (Modified Clear-cut)	90	86
Area 3 (Modified Clear-cut)	97	93
Area 4 (Modified Clear-cut)	114	103
Area 5 (Modified Clear-cut)	74	68
Area 6 (Partial Cut)	72	68
Area 7 (Modified Clear-cut)	17	14

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**

A total of 90 variable radius plots were taken on all sale Areas. Plots in Areas 1 and 2 were cruised on a 490' square grid, in Areas 3, 4, 5, and 6 plots were spaced 350' apart and lines were 700' apart, and in Area 7 on a 300' square grid.

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. Species were recorded on all trees, and they were measured for merchantable height, diameter and form factor.

**B. Plot size**

A 40 BAF was used on all plots. The point of observation was 4.5 feet.

### C. Grading System

All trees were graded according to Columbia River Log Scaling Rules. Tree heights were recorded to a 6 inch top outside bark for all conifers and 7 inches outside bark for hardwoods; or three tenths (0.3) of DBH for all species, whichever was greater. Log lengths all favored 40 feet for all species. Height and diameter measurement standards were to the nearest foot or nearest inch respectively.

#### 5. Computation Procedure

Plot data was entered into SuperAce for computation of basal area, stand tables, and volume for each species and type. Take and leave trees for Areas 1 and 6 were determined from the plot data to meet prescription targets.

Cruise Statistics (Board Foot Volumes)			
Area	Number of plots	SE(%)	CV (%)
1	10	15.6	46.9
2	18	10.5	43.3
3	14	16.7	60.2
4	19	10.7	45.2
5	10	12.9	38.8
6	11	14.0	44.4
7	8	34.7	91.9
Total (all areas)	90	6.0	56.7

#### 6. Hidden Defect and Breakage

A hidden defect and breakage of 5% was applied to conifers and 10% to hardwoods.

#### 7. Timber Description

The stands were burned in the 1933 and 1945 fires and then planted/ seeded in 1959-1961. Current age is 50 years old. There has been no stand management in the areas following planting except for pre-commercially thinning part of Area 6, and alder release and commercial thinning in Area 7. The area is primarily stocked with Douglas-fir with alder confined to the draws. Douglas-firs have grown densely with a short live crown ratios, alder quality is variable because of its natural growth.

#### 8. Cruiser Names/Dates

Areas 3, 4, 5, and 6 were contract cruised in October 2007 and Areas 1, 2, and 7 were cruised by ODF personnel in June 2010.

#### 9. Revenue Distribution

FDF 100%

Tax Code: 56

Deed Numbers: 35, 295

10. **Attachments**

Stand Tables

Volume Summary

Log Stock Tables

Logging Plan

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

DL – Douglas-fir leave

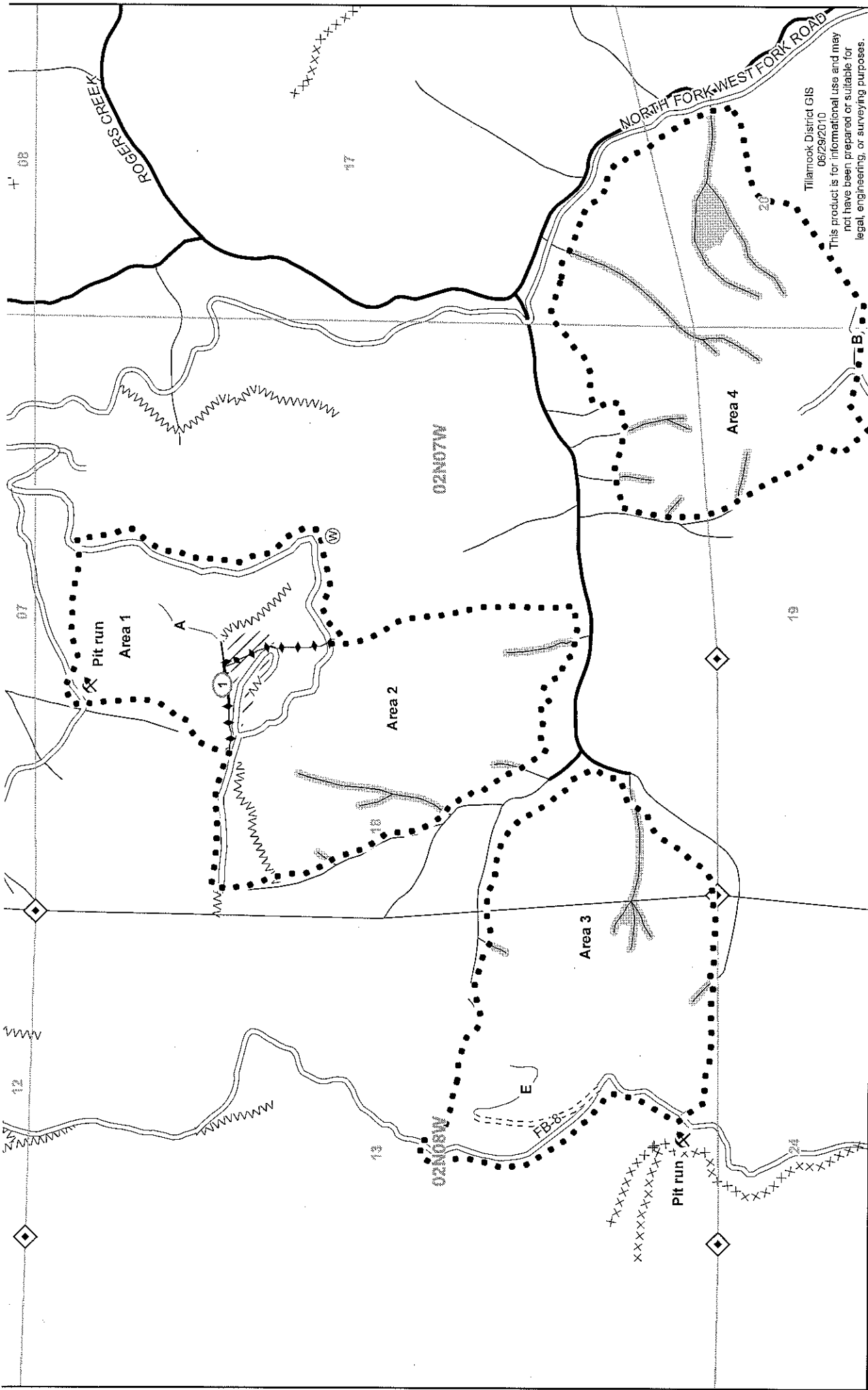
DF – Douglas-fir take

NL – Noble fir leave

RL – Red alder leave

RA – Red alder take

WL – Western hemlock leave



**Rock source**  
 Stock pile  
 Waste area  
 Bridge  
 Gate  
 Survey corner  
 Domestic water supply intake  
 Truck turn-around  
 Helicopter landing zone  
 Cultural site

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

**Area boundary**  
 Sale boundary  
 Ownership boundary  
 Perennial Type-F stream  
 Perennial Type-N stream  
 Unsurfaced road  
 Surfaced road  
 Paved road  
 Abandoned road

**Swing road**  
 Non-project road  
 Blocked road  
 Road construction  
 OHV trail  
 Non-motorized trail  
 Transmission line  
 Railroad

**Area Operation**

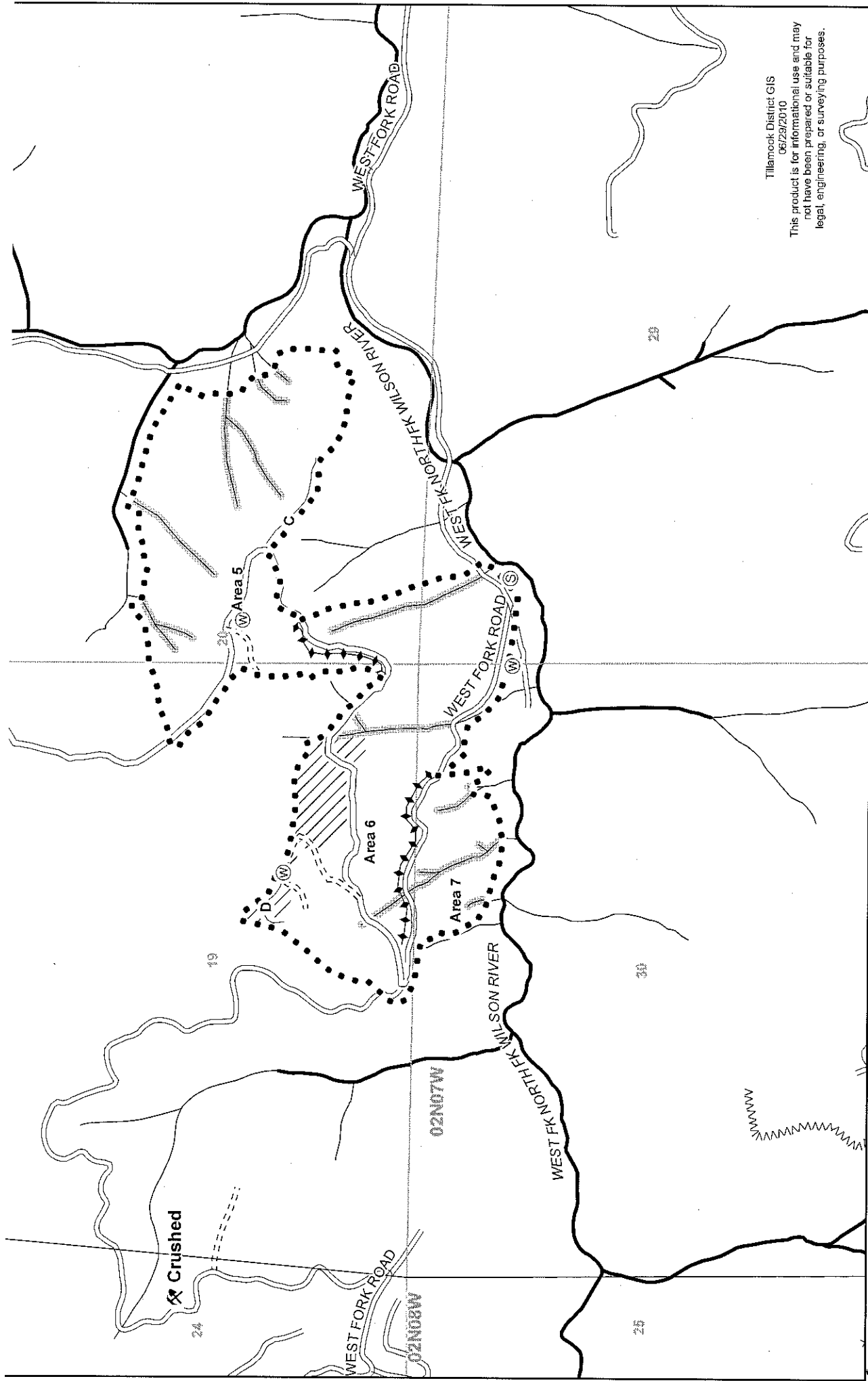
Area	Type of Operation	Gross	Net
1	Partial cut	44	43
2	Modified clearcut	90	86
3	Modified clearcut	97	93
4	Modified clearcut	114	103
5	Modified clearcut	74	68
6	Partial cut	72	68
7	Modified clearcut	17	14
<b>Total</b>		<b>508</b>	<b>475</b>

**LOGGING PLAN**  
 Timber Sale Contract No. 341-11-33  
 NW Combo  
 Portions of Section 13, T2N, R8W,  
 and Sections 17, 18, 19, 20, 29 and 30,  
 T2N, R7W, W.M.,  
 Tillamook County, Oregon

Tillamook District GIS  
 06/29/2010  
 This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.

Scale: 1,000 Feet

North Arrow



Tillamook District GIS  
06/29/2010  
This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.

**LOGGING PLAN**  
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Tillamook County, Oregon

1,000 0 1,000 Feet

Type of		Acres	
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<b>Total</b>		<b>508</b>	<b>475</b>

- Rock source
- Stock pile
- Waste area
- Bridge
- Gate
- Survey corner
- Domestic water supply intake
- Truck turn-around
- Helicopter landing zone
- Crushed area
- Landing
- Buffer
- Non-required thinning
- Cable yarding
- Ground yarding
- Helicopter yarding
- Downhill yarding
- Green tree retention area
- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream
- Perennial Type-N stream
- Unsurfaced road
- Surfaced road
- Paved road
- Abandoned road
- Swing road
- Non-project road
- Blocked road
- Road construction
- OHV trail
- Non-motorized trail
- Transmission line
- Railroad