



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
Spaur Phipps  
Sale 341-12-35

District: Tillamook

Date: August 08, 2011

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**cost summary**

	<b>Conifer</b>	<b>Hardwood</b>	<b>Total</b>
<b>Gross Timber Sale Value</b>	\$249,128.54	\$110,129.95	\$359,258.49
		<b>Project Work:</b>	\$(46,110.00)
		<b>Advertised Value:</b>	\$313,148.49



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**timber description**

**Location:** Portions of Sections 35 and 36, T1N, R7W and Sections 1 and 2, T1S, R7W, W.M., Tillamook County, Oregon.

**Stand Stocking:** 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	13	0	95
Western Hemlock / Fir	13	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	227	355	404	0	0	986
Western Hemlock / Fir	0	0	0	290	186	0	0	476
Alder (Red)	23	17	0	0	0	467	46	553
Total	23	17	227	645	590	467	46	2,015



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comments: Pond Values Used: 2nd Quarter Calendar Year 2011.

Western redcedar & Other Cedars Stumpage Price = Pond Value minus  
Logging Cost  
 $\$650/\text{MBF} = \$950/\text{MBF} - \$300/\text{MBF}$

Pulp (Conifer and Hardwood) Price =  $\$26.00/\text{MBF}$

SCALING COST ALLOWANCE =  $\$5.00/\text{MBF}$

FUEL COST ALLOWANCE =  $\$4.00/\text{Gallon}$

HAULING COST ALLOWANCE

Hauling cost equivalent to  $\$740$  daily truck cost.

Other Costs (Profit and Risk to be added):

Branding and Painting:  $\$2/\text{MBF} \times 2016 \text{ MBF} = \$4,032$

TOTAL Other Costs (Profit and Risk to be added) =  $\$4,032$

Other Costs (No Profit and Risk added):

Slash Piling and Sorting:  $\$2.50/\text{acre cable harvest} \times 90 \text{ acres} =$   
 $\$225$

Cover Material for Piles:  $10 \text{ piles} \times \$5/\text{pile} = \$50$

Motorcycle Filters:  $3 \text{ filters} \times \$75/\text{filter} = \$225$

Trail Clearing:  $\$40/\text{station} \times 13/\text{stations} = \$520$

TOTAL Other Costs (No Profit and Risk added) =  $\$1,020$

ROAD MAINTENANCE

Maintenance Rock:  $(\$9.50/\text{cu. yd.} \times 8.9 \text{ miles} \times 20 \text{ cu.}$   
 $\text{yd./MMBF/mile} \times 2.016 \text{ MMBF})/2016 \text{ MBF} = \$1.69/\text{MBF}$

Final Maintenance:

Grading -  $\$500/\text{Mile} \times 8.9 \text{ miles} \times 1 \text{ grading}/2016 \text{ MBF} = \$2.21/\text{MBF}$

Vibratory Roller:  $\$17.75/\text{station} \times 52.8 \text{ stations/mile} \times 8.9$   
 $\text{miles}/2,016 = \$4.14/\text{MBF}$

TOTAL Maintenance Cost =  $\$8.04/\text{MBF}$



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logging conditions

combination#: 1            Douglas - Fir                            25.00%  
                                  Western Hemlock / Fir                15.00%  
                                  Alder (Red)                                50.00%

yarding distance: Long (1,500 ft)                                **downhill yarding:** No  
 logging system: Cable: Large Tower >=70                        **Process:** Stroke Delimber  
 tree size: Small / Thinning 10in (90 Bft/tree), 18-20 logs/MBF  
 loads / day: 4.0    **bd. ft / load:** 3,500  
 cost / mbf: \$273.33

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

combination#: 2            Douglas - Fir                            35.00%  
                                  Western Hemlock / Fir                45.00%  
                                  Alder (Red)                                25.00%

yarding distance: Long (1,500 ft)                                **downhill yarding:** No  
 logging system: Cable: Small Tower <=40                        **Process:** Stroke Delimber  
 tree size: Small / Thinning 10in (90 Bft/tree), 18-20 logs/MBF  
 loads / day: 6.0    **bd. ft / load:** 3,500  
 cost / mbf: \$134.96

machines: Log Loader (A)  
 Stroke Delimber (A)  
 Tower Yarder (Small)

combination#: 3            Douglas - Fir                            40.00%  
                                  Western Hemlock / Fir                40.00%  
                                  Alder (Red)                                25.00%

yarding distance: Short (400 ft)                                        **downhill yarding:** No  
 logging system: Track Skidder                                        **Process:** Stroke Delimber  
 tree size: Small / Thinning 10in (90 Bft/tree), 18-20 logs/MBF  
 loads / day: 6.0    **bd. ft / load:** 3,500  
 cost / mbf: \$68.49

machines: Stroke Delimber (B)



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**logging costs**

Operating Seasons:	1.00	Profit Risk:	15.00%
Project Costs:	\$46,110.00	Other Costs (P/R):	\$4,032.00
Slash Disposal:	\$0.00	Other Costs:	\$1,020.00

**Miles of Road**

Road Maintenance: \$8.04

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

**Hauling Costs**

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	3.3
Western Hemlock / Fir	\$0.00	3.0	3.3
Alder (Red)	\$0.00	3.0	3.0



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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>									
\$142.96	\$8.44	\$2.18	\$102.38	\$2.00	\$38.69	\$0.00	\$5.00	\$0.51	\$302.16
<b>Western Hemlock / Fir</b>									
\$129.13	\$8.44	\$2.18	\$68.25	\$2.00	\$31.50	\$0.00	\$5.00	\$0.51	\$247.01
<b>Alder (Red)</b>									
\$187.53	\$8.84	\$2.18	\$78.65	\$2.00	\$41.88	\$0.00	\$5.00	\$0.51	\$326.59

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$478.97	\$176.81	\$0.00
Western Hemlock / Fir	\$0.00	\$404.14	\$157.13	\$0.00
Alder (Red)	\$0.00	\$525.74	\$199.15	\$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
Alder (Red)	0	\$0.00	\$0.00

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	986	\$176.81	\$174,334.66
Western Hemlock / Fir	476	\$157.13	\$74,793.88
Alder (Red)	553	\$199.15	\$110,129.95

**Gross Timber Sale Value**

Recovery: \$359,258.49

Prepared by: David Luttrell

Phone: 503-815-7025



PROJECT SUMMARY SHEET

Sale: Spaur Phipps

CONSTRUCTION

Point	C to D	7+65	stations =	\$19,768.74
<b>SUBTOTAL CONSTRUCTION</b>				<b>\$19,768.74</b>

IMPROVEMENT

Point	A to B	6+95	stations =	\$9,436.27
Point	E to F	6+25	stations =	\$6,695.58
Point	G to H	3+60	stations =	\$6,748.97
<b>SUBTOTAL IMPROVEMENT</b>				<b>\$22,880.82</b>

MOVE IN \$3,460.44

GRAND TOTAL \$46,110.00



## SUMMARY OF CONSTRUCTION COST

Sale:

**Spaur Phipps**

Road:

**A to B**

Construction -	0+00	stations	Improvement -	6+95	stations	Reconstruction -	0+00	stations
	0.00	miles		0.13	miles		0.00	miles

**IMPROVEMENT: CLEARING AND GRUBBING -**

Scattering	0.160	acres @	\$980.00	per acre =	\$156.80
					<b>TOTAL CLEARING AND GRUBBING</b>
					<b>\$156.80</b>

**IMPROVEMENT: EXCAVATION -**

Road Earthwork	6.95	sta. @	\$10.00	per sta. =	\$69.50
					<b>TOTAL EXCAVATION</b>
					<b>\$69.50</b>

**ROCK**

0+00 to	6+95	560	cy. of	Pit-Run	@	\$8.57	per c.y. =	\$4,799.20
Landing Rock	2+00 / 6+95	370	cy. of	Pit-Run	@	\$8.57	per c.y. =	\$3,170.90
								<b>TOTAL ROCK</b>
								<b>\$7,970.10</b>

**SPECIAL PROJECTS**

Remove & End Haul Existing Sidecast: 3+40 to 3+90	2.00	hours @	\$200.00	per hour	\$400.00
Construct 2 Landings @ 2+00 & 6+95	2.00	lump sum @	\$285.00	per landing	\$570.00
Construct ditchouts -	0.00	@	\$60.00	each	\$0.00
Grade and shape road -	6.95	stations @	\$15.50	per station	\$107.73
Roll subgrade w/ vibratory roller prior to rocking -	6.95	stations @	\$13.20	per station	\$91.74
Grass seed and fertilize -	0.32	acres @	\$220.00	per acre	\$70.40
					<b>TOTAL SPECIAL PROJECTS</b>
					<b>\$1,239.87</b>

**GRAND TOTAL** **\$9,436.27**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Spaur Phipps**

Road:

**C to D**

Construction -	7+65	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.14	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		0+45	70%		Outslope	\$2,193	=	\$986.85	
0+45		0+58	74%		Outslope	\$2,193	=	\$285.09	
0+58		1+09	60%		Outslope	\$1,493	=	\$761.43	
1+09		1+61	70%		Outslope	\$2,193	=	\$1,140.36	
1+61		2+15	60%		Outslope	\$1,493	=	\$806.22	
2+15		2+83	65%		Outslope	\$1,832	=	\$1,245.76	
2+83		3+09	45%		Outslope	\$269	=	\$69.94	
3+09		3+34	60%		Outslope	\$1,493	=	\$373.25	
3+34		3+85	60%		Outslope	\$1,493	=	\$761.43	
3+85		4+15	80%		Outslope	\$3,072	=	\$921.60	
4+15		5+25	55%		Outslope	\$689	=	\$757.90	
5+25		5+88	45%		Outslope	\$269	=	\$169.47	
5+88		7+65	20%		Outslope	\$139	=	\$246.03	
<b>TOTAL</b>									<b>\$8,525.33</b>

**CULVERTS - MATERIALS & INSTALLATION**

Culverts	38	LF of 18"	\$665.00	0	LF of 24"	\$0.00
Culvert Stakes & Markers	1	markers	\$8.00			
			\$8.00			
<b>TOTAL CULVERTS</b>						<b>\$673.00</b>

**ROCK**

0+00 to	7+65	630	cy. of	Pit-Run	@	\$8.57 per c.y.=	\$5,399.10
Landing Rock	7+65	185	cy. of	Pit-Run	@	\$8.87 per c.y.=	\$1,640.95
Energy Dissipator	2+90	20	cy. of	Riprap	@	\$8.87 per c.y.=	\$177.40
Bedding/Backfill	2+90	20	cy. of	Pit-Run	@	\$8.07 per c.y.=	\$161.40
<b>TOTAL ROCK</b>							<b>\$7,378.85</b>

**SPECIAL PROJECTS**

End-Push for culvert fill: 2+40 to 3+40	1.00	stations @	\$240.00	per station	\$240.00
Grade and shape road -	7.65	stations @	\$15.50	per station	\$118.58
End-Push from 5+25 to 6+95	1.70	stations @	\$140.00	per station	\$238.00
Roll subgrade w/ vibratory roller prior to rocking -	7.65	stations @	\$13.20	per station	\$100.98
Remove large stumps -	1.00	lump sum @	\$2,340.00		\$2,340.00
Grass seed and fertilize roadway	0.70	acres @	\$220.00	per acre	\$154.00
<b>TOTAL SPECIAL PROJECTS</b>					<b>\$3,191.56</b>

**GRAND TOTAL** **\$19,768.74**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Spaur Phipps**

Road:

**E to F**

Construction -	0+00	stations	Improvement -	6+25	stations	Reconstruction -	0+00	stations
	0:00	miles		0:12	miles		0:00	miles

**IMPROVEMENT: CLEARING AND GRUBBING -**

Widening	0.08	acres @	\$660.00	per acre =	\$52.80
Scattering	0.29	acres @	\$980.00	per acre =	\$284.20
<b>TOTAL CLEARING AND GRUBBING</b>					<b>\$337.00</b>

**IMPROVEMENT: EXCAVATION -**

Widening	554	cy. @	\$1.40	per c.y. =	\$775.60
<b>TOTAL EXCAVATION</b>					<b>\$775.60</b>

**IMPROVEMENT: ENDHAUL -**

Widening	0+00	to	0+25	36	cy. @	\$1.20	per c.y. =	\$43.20
Widening	0+25	to	1+25	482	cy. @	\$1.20	per c.y. =	\$578.40
Widening	1+25	to	1+50	36	cy. @	\$1.20	per c.y. =	\$43.20
Spread & compact				554	cy. @	\$0.25	per c.y. =	\$138.50
<b>TOTAL ENDHAUL</b>								<b>\$803.30</b>

**ROCK**

0+00 to	6+25	460	cy. of	Pit-Run	@	\$8.87	per c.y. =	\$4,080.20
<b>TOTAL ROCK</b>								<b>\$4,080.20</b>

**SPECIAL PROJECTS**

Grade and shape road -	6.25	stations @	\$15.50	per station	\$96.88
Construct ditch: 0+00 to 1+50	1.50	stations @	\$75.00	per station	\$112.50
Roll subgrade w/ vibratory roller prior to rocking -	6.25	stations @	\$13.20	per station	\$82.50
Remove large stumps -	1.00	lump sum @	\$390.00		\$390.00
Grass seed and fertilize -	0.08	acres @	\$220.00	per acre	\$17.60
<b>TOTAL SPECIAL PROJECTS</b>					<b>\$699.48</b>

**GRAND TOTAL** **\$6,695.58**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Spaur Phipps**

Road:

**G to H**

Construction -	0+00	stations	Improvement -	3+60	stations	Reconstruction -	0+00	stations
	0:00	miles		0:07	miles		0:00	miles

**IMPROVEMENT: EXCAVATION -**

Road Earthwork	3.60	sta. @	\$25.00	per sta. =	\$90.00	
					<b>TOTAL EXCAVATION</b>	<b>\$90.00</b>

**ROCK**

0+00 to	3+60	330	cy. of	Pit-Run	@	\$8.87	per c.y. =	\$2,927.10
Junction Rock	0+00 to 0+50	85	cy. of	Pit-Run	@	\$8.87	per c.y. =	\$753.95
								<b>TOTAL ROCK</b>
								<b>\$3,681.05</b>

**SPECIAL PROJECTS**

Clear & Grub Waste Area	8.00	hours @	\$145.00	per hour	\$1,160.00
Grade and shape road -	3.60	stations @	\$15.50	per station	\$55.80
Roll subgrade w/ vibratory roller prior to rocking -	3.60	stations @	\$13.20	per station	\$47.52
Remove large stumps -	1.00	lump sum @	\$1,300.00		\$1,300.00
Grass seed and fertilize roadway and waste area	0.63	acres @	\$220.00	per acre	\$138.60
Mulching waste area	0.46	acres @	\$600.00	per acre	\$276.00
					<b>TOTAL SPECIAL PROJECTS</b>
					<b>\$2,977.92</b>

**GRAND TOTAL** **\$6,748.97**

## ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Pit run	Location:	Sec. , TN, RW, W.M.
Sale:	<b>Spaur Phipps</b>	Road:	2660 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage:	1.16	Total Truck Loads:	2660 c.y.
Drill Pct.:	0%	In Place Total:	1900 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. \$2,602.12

Rip Rock:	\$1.90 /cu.yd.	x	1900 cu.yds.	=	\$3,610.00
Push Rock:	\$0.60 /cu.yd.	x	2660 cu.yds.	=	\$1,596.00
Load Dump Truck:	\$0.70 /cu.yd.	x	2660 cu.yds.	=	\$1,862.00

Subtotal \$9,670.12

Move in Roller and Compactor	1	@	\$527.85	=	\$527.85
Move in Grader	1	@	\$217.54	=	\$217.54
Move in D-8	1	@	\$941.16	=	\$941.16
Move in Loader	1	@	\$785.71	=	\$785.71
Move in Excavator	1	@	\$1,046.83	=	\$1,046.83
Move in Trucks	4	@	\$172.63	=	\$690.52
Move in Water Truck	1	@	\$202.91	=	\$202.91

Subtotal \$4,412.52

TOTAL PRODUCTION COSTS \$14,082.64

Base Cost= \$5.29 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 0 695 (Pit-Run)	2.18	1.10	5.29	8.57	560	\$4,799.20
A to B Landing Rock (Pit-Run)	2.18	1.10	5.29	8.57	370	\$3,170.90
C to D 0 765 (Pit-Run)	2.18	1.10	5.29	8.57	630	\$5,399.10
C to D Landing Rock (Pit-Run)	2.18	1.40	5.29	8.87	185	\$1,640.95
C to D Energy Dissipator (Riprap)	2.18	1.40	5.29	8.87	20	\$177.40
C to D Bedding/Backfill (Pit-Run)	2.18	0.60	5.29	8.07	20	\$161.40
E to F 0 625 (Pit-Run)	2.18	1.40	5.29	8.87	460	\$4,080.20
G to H 0 360 (Pit-Run)	2.18	1.40	5.29	8.87	330	\$2,927.10
G to H Junction Rock (Pit-Run)	2.18	1.40	5.29	8.87	85	\$753.95
				Total C.Y.	2660	Sub Total
						<span style="border: 1px solid black; padding: 2px;">\$23,110.20</span>

TOTAL ROCKING COSTS \$23,110.20

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

Sale: **Spaur Phipps**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
36.0	Pavement	30
5.2	Main Lines	7
7.6	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	Graders	\$789.43		\$3.65	0.00	0.00	0	\$0.00	\$789.43
1	Excavators (Large)	\$1,074.43	1	\$44.80	0.00	0.00	0	\$0.00	\$1,074.43
1	Tractor (D8)	\$996.36	2	\$15.10	0.00	0.00	0	\$0.00	\$996.36
2	Dump Truck (10 cy +)	\$427.59		\$2.85	0.00	0.00	0	\$0.00	\$427.59
1	Water Truck (1500 Gal)	\$172.63		\$2.85	0.00	0.00	0	\$0.00	\$172.63
<b>TOTAL MOVE-IN COSTS:</b>								<b>\$3,460.41</b>	



## OREGON DEPARTMENT OF FORESTRY CRUISE REPORT *Spaur Phipps*

### 1. Type of Sale

Regeneration harvest, Recovery

### 2. Legal Description

Portions of Sections 35 and 36, T1N, R7W and Sections 1 and 2, T1S, R7W, 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 (Clearcut)	114	104

#### 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 13 plots were taken. Cruise lines and plots were placed to obtain representative sampling throughout the sale area. All trees were recorded by species, merchantable height, form, and diameter class. Diameters were measured to the nearest inch and heights to the nearest foot. Conifers less than 8" DBH and hardwoods less than 9" DBH were not sampled.

#### B. Plot size

All plots were variable radius plots. A BAF of 40 was used for all species. The point of tree observation was 4.5 feet.

#### C. Grading System

Tree heights were measured to a 6" merchantable top for conifers, and 7" for hardwoods. All measurements were outside the bark. All species were graded using Columbia River Log Scaling and Grading Bureau rules, favoring a 40' log.

### 5. Computation Procedure

The volumes and statistics for the timber cruised were computed using SuperACE 2004, developed by Atterbury Consultants, Inc. All conifers 8 inches

DBH and greater containing 20 net board feet and all hardwoods 9 inches DBH and greater containing 30 net board feet were recorded on all plots. Species were recorded on all trees, and they were graded and measured for merchantable height, diameter, and form factor. The standard error and the coefficient of variation for the cruise as based on net board feet per acre shown in the table below.

Area	C.V. (%)	S.E. (%)
1	80.3	23.2

**6. Hidden Defect and Breakage**

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

**7. Timber Description**

The entire sale area was burned in the 1933 Wolf Creek Fire. The sale area is predominantly composed of Douglas-fir, western hemlock and red alder. Only about 3 acres of the alder was aerially sprayed. About 30 acres on the upper slopes of the sale was commercially thinned between 2000-2001 with Phipps Wilson. There is no planting or seed history data for the sale although the timber appears to be about 50 years old.

	DBH	Bole Height	Merch Top
<b>Area 1</b>			
Douglas-fir (48%)	13.4	51	5"
Western hemlock (24%)	12.9	58	5"
Alder (28%)	11.6	41	6"

**8. Cruiser Names/Dates**

Rios, February, 2010

**9. Revenue Distribution**

FDF 100%

Tax Code: 9-2

Deed Numbers: 159, 161

**10. Attachments**

Stand Table

Volume Summaries

Log Stock Tables

Logging Plan



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

DL – Douglas-fir leave  
DF – Douglas-fir take  
NF – Noble fir reserved  
RA – Red alder take  
RC – Western red cedar reserved  
SS – Sitka spruce reserved  
WL – Western hemlock leave  
WH – Western hemlock take

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

T01S R07W S01 TMC

T01S R07W S01 TMC

Twp Rge Sec Tract Type Acres Plots Sample Trees Page  
 01S 07W 01 31 MC 104.00 13 71 Date 7/20/2011  
 Time 7:17:26AM

Spp	S T	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
DF	CO	2	40	252	2.7	246	23.6					125	121				
DF	CO	3	32	36		36	3.4				11	24					
DF	CO	3	40	336		336	32.4			107	56	174					
DF	CO	4	13	2		2	.2		2								
DF	CO	4	16	8		8	.8		8								
DF	CO	4	17	10		10	1.0		10								
DF	CO	4	19	17		17	1.6		17								
DF	CO	4	20	14		14	1.4		14								
DF	CO	4	21	13		13	1.3		13								
DF	CO	4	22	3		3	.3		3								
DF	CO	4	23	4		4	.3		4								
DF	CO	4	24	57		57	5.5		57								
DF	CO	4	26	23		23	2.2		23								
DF	CO	4	31	4		4	.4		4								
DF	CO	4	32	203		203	19.6		47	156							
DF	CO	4	35	4		4	.3		4								
DF	CO	4	40	50		50	4.8		26	24							
DF	CO	4	41	9		9	.9		9								
DF	Totals			1,046		1,039	47.1		241	287	67	198	125	121			
RA	H	3	16	18		18	2.9						18				
RA	H	3	32	52	4.4	50	8.0			24	25						
RA	H	3	40	27		27	4.4			27							
RA	H	4	17	14		14	2.4		14								
RA	H	4	20	6		6	1.0		6								
RA	H	4	21	16		16	2.6		16								
RA	H	4	22	12		12	2.0		12								
RA	H	4	23	16		16	2.6		16								
RA	H	4	24	10		10	1.7		10								
RA	H	4	30	17		17	2.7		17								
RA	H	4	32	29		29	4.7		29								
RA	H	4	37	35		35	5.7		35								
RA	H	4	40	368	.9	365	59.3		365								
RA	Totals			621		615	27.9		521	51	25		18				
WH	CO	3	32	57		57	11.4			57							
WH	CO	3	40	248		248	49.4			139	76	33					
WH	CO	4	21	20		20	4.0		20								
WH	CO	4	24	33		33	6.6		33								
WH	CO	4	26	22		22	4.5		22								
WH	CO	4	28	7		7	1.5		7								
WH	CO	4	29	10		10	2.1		10								
WH	CO	4	30	12		12	2.4		12								
WH	CO	4	32	91		91	18.2		91								
WH	Totals			501		501	22.7		196	196	76	33					
DL	CO	2	40	32		32	64.9					32					
DL	CO	3	40	12		12	24.3			12							
DL	CO	4	40	5		5	10.8		5								
DL	Totals			49		49	2.2		5	12		32					

TC TLOGSTVB

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

T01S R07W S01 TMC

T01S R07W S01 TMC

<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>
01S	07W	01	31	MC	104.00	13	71	<b>Date</b>	<b>7/20/2011</b>
								<b>Time</b>	<b>7:17:26AM</b>

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
Total All Species						2,217		2,205	100.0		247	1004	327	299	189	139					

T01S R07W S01 TMC T01S R07W S01 TMC  
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt  
 01S 07W 01 31 MC 104.00 13 71 S W

S Spp	So T	Gr rt	Gr ad	Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Bd Ft	CF/ Lf	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF	CO	2		23	2.7	2,427	2,362	246	100				100				40	242	1.71	9.8
DF	CO	3		36		3,577	3,577	372	100				10 90				39	101	0.74	35.3
DF	CO	4		41		4,054	4,054	422	57	43		12	24	50	14	27	35	0.33	116.2	
<b>DF</b>	<b>Totals</b>			47	.6	10,059	9,993	1,039	23	53	24	5	10	24	62	31	62	0.56	161.2	
RA	H	3		15	2.4	929	907	94	81	19		19		52	29	32	91	0.83	10.0	
RA	H	4		85	.7	5,044	5,011	521	100				4	14	6	77	34	52	0.46	97.2
<b>RA</b>	<b>Totals</b>			28	.9	5,973	5,918	615	97	3		6	12	13	69	33	55	0.49	107.2	
WH	CO	3		60		2,929	2,929	305	89	11				19	81	38	112	0.75	26.2	
WH	CO	4		40		1,888	1,888	196	100				54	46		27	41	0.36	46.5	
<b>WH</b>	<b>Totals</b>			23		4,816	4,816	501	94	6		21	30	49		31	66	0.53	72.8	
DL	CO	2		64		307	307	32	100				100				40	240	1.66	1.3
DL	CO	3		25		115	115	12	100				100				40	90	1.27	1.3
DL	CO	4		11		51	51	5	100				100				40	40	0.53	1.3
<b>DL</b>	<b>Totals</b>			2		473	473	49	11	24	65				100	40	123	1.15	3.8	
<b>Type Totals</b>					.6	21,321	21,201	2,205	11	74	15	4	13	21	62	32	61	0.54	345.1	

TC		TSTNDSUM		Stand Table Summary												
Project														SPHIPPS		
T01S R07W S01 TMC										T01S R07W S01 TMC						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1		Date:	07/20/201				
01S	07W	01	31	MC	104.00	13	71	Time:	7:21:18AM							
Spc	S T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	Totals			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.		Net Bd.Ft.	Tons	Cunits	MBF		
DF		9	3	84	75	21.738	9.23	28.70	6.8	32.4	5.57	195	931	579	203	97
DF		10	2	84	74	11.892	6.15	18.14	6.9	33.4	3.59	126	607	373	131	63
DF		11	3	84	94	13.987	9.23	27.97	9.4	43.3	7.52	264	1,212	782	274	126
DF		12	2	85	77	7.835	6.15	11.75	13.0	50.0	4.34	152	588	452	158	61
DF		13	3	84	86	10.014	9.23	16.69	15.7	56.0	7.49	263	935	779	273	97
DF		14	2	84	63	5.757	6.15	5.76	21.8	50.0	3.57	125	288	371	130	30
DF		16	1	81	110	2.204	3.08	4.41	26.2	95.0	3.30	116	419	343	120	44
DF		17	3	84	87	5.856	9.23	11.71	22.5	78.3	7.50	263	917	780	274	95
DF		18	3	84	81	5.224	9.23	10.45	25.8	86.7	7.69	270	905	800	281	94
DF		19	2	82	130	3.125	6.15	9.38	26.0	95.0	6.95	244	891	723	254	93
DF		20	2	83	83	2.894	6.15	5.79	33.7	107.3	5.55	195	621	578	203	65
DF		22	1	82	99	1.220	3.08	2.44	44.1	155.0	3.07	108	378	319	112	39
DF		23	2	84	92	2.133	6.15	4.27	50.4	162.5	6.13	215	693	637	224	72
DF		24	1	83	86	1.022	3.08	2.04	49.1	145.0	2.86	100	296	298	104	31
DF		26	1	83	88	.868	3.08	1.74	58.4	180.0	2.88	101	312	300	105	32
DF		Totals	31	84	83	95.769	95.38	161.24	17.0	62.0	78.02	2,738	9,993	8,114	2,847	1,039
RA		9	1	73	41	6.965	3.08	6.96	5.4	20.0	1.04	38	139	108	39	14
RA		10	4	78	83	23.175	12.31	23.18	15.1	60.0	9.61	350	1,391	1,000	364	145
RA		11	6	78	80	28.429	18.46	28.43	15.9	56.2	12.45	453	1,599	1,295	471	166
RA		12	4	75	67	15.805	12.31	15.80	17.6	52.4	7.63	278	828	794	289	86
RA		13	4	78	79	13.353	12.31	16.69	20.0	58.0	9.16	334	968	952	347	101
RA		14	2	76	63	5.757	6.15	8.63	16.3	46.7	3.83	141	403	398	146	42
RA		16	1	80	79	2.204	3.08	4.41	21.3	70.0	2.57	94	309	268	97	32
RA		19	1	78	91	1.563	3.08	3.13	24.9	90.0	2.14	78	281	223	81	29
RA		Totals	23	77	75	97.249	70.77	107.23	16.5	55.2	48.44	1,764	5,918	5,037	1,835	615
WH		10	2	84	78	11.283	6.15	16.92	10.7	50.0	5.78	181	846	601	188	88
WH		12	2	85	100	7.835	6.15	15.67	12.3	50.0	6.19	194	784	644	201	81
WH		13	2	84	73	6.676	6.15	10.01	16.7	60.0	5.36	167	601	557	174	62
WH		14	2	84	104	5.974	6.15	11.95	18.4	77.4	7.03	220	925	731	228	96
WH		15	2	84	97	5.191	6.15	10.38	20.9	84.7	6.96	217	879	724	226	91
WH		16	1	84	96	2.348	3.08	4.70	22.9	90.0	3.44	108	423	358	112	44
WH		19	1	85	86	1.563	3.08	3.13	33.9	115.0	3.39	106	359	353	110	37
WH		Totals	12	84	89	40.870	36.92	72.76	16.4	66.2	38.16	1,192	4,816	3,969	1,240	501
DL		21	2	84	76	2.558	6.15	3.84	46.1	123.3	4.87	177	473	506	184	49
DL		Totals	2	84	76	2.558	6.15	3.84	46.1	123.3	4.87	177	473	506	184	49
OC		10	1	86	98	5.641	3.08									
OC		16	2	76	44	4.464	6.15									
OC		Totals	3	82	74	10.105	9.23									
Totals		71	81	80		246.550	218.46	345.06	17.0	61.4	169.48	5872	21,201	17,626	6,106	2,205



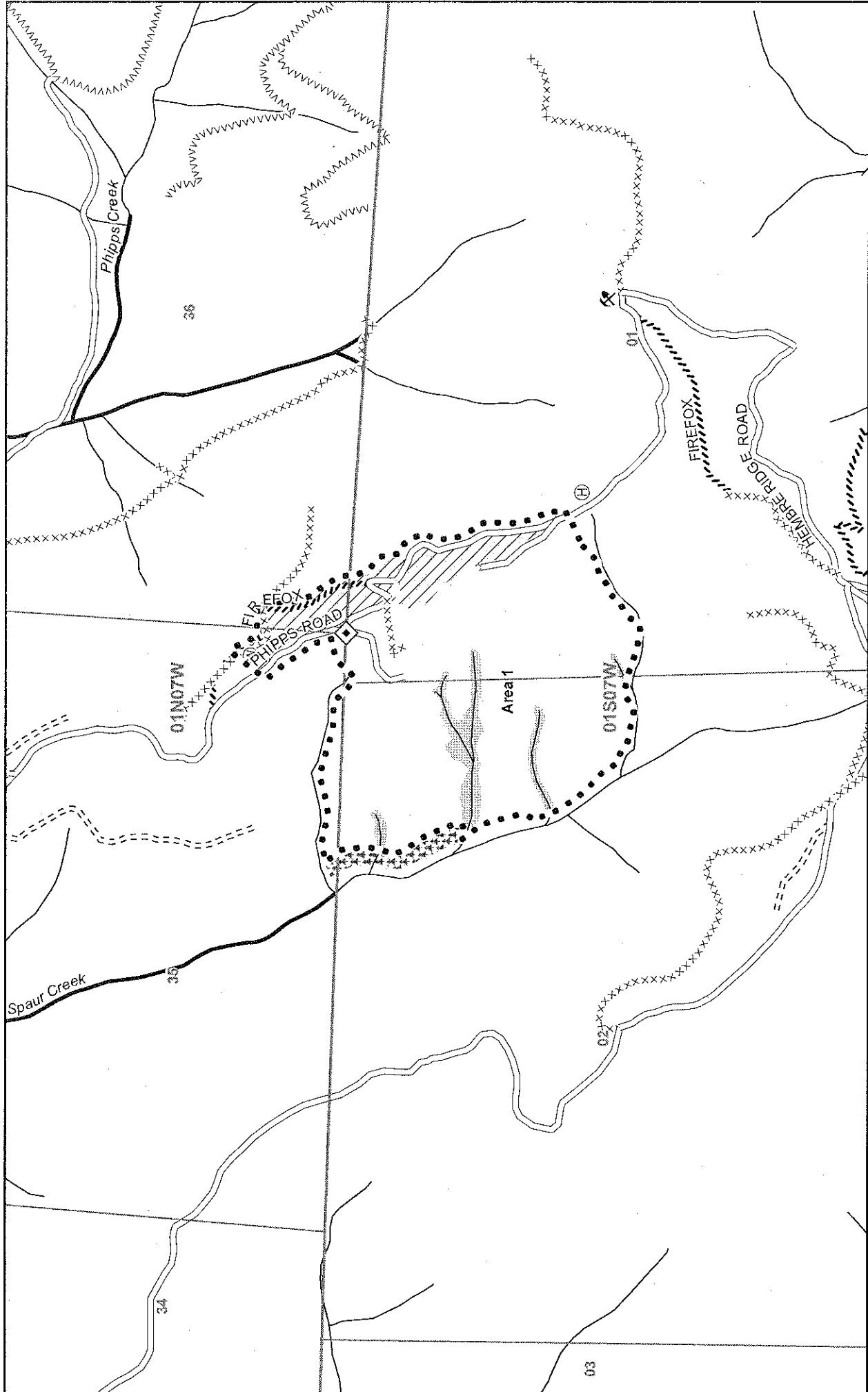
"STEWARDSHIP IN FORESTRY"

## Spaur Phipps

### Volume Summary

Area 1-Modified Clearcut				
104 acres				
SPECIES	Gross MBF/Acre	Gross MBF	Hidden & Visible D&B	Net Vol MBF
Douglas-fir	10.6	1046	6%	986
Hemlock	4.8	501	5%	476
Spruce		0	5%	0
Noble Fir		0	5%	0
Alder	6.0	621	11%	553
<b>TOTAL</b>	<b>21.4</b>	<b>2168</b>		<b>2016</b>

TOTAL SALE VOLUME			104	acres
SPECIES	Gross Vol. (MBF)	Net Vol. (MBF)		
Douglas-fir	1046	986		
Hemlock	501	476		
Spruce	0	0		
Noble Fir	0	0		
Red Alder	621	553		
<b>TOTAL</b>	<b>2168</b>	<b>2016</b>		



**LOGGING PLAN**  
 Timber Sale Contract No. 341-12-035  
 SPAUR PHIPPS  
 Portions of Sections 35 and 36  
 T1N, R7W, and Sections 1 and 2  
 T1S, R7W, W.M.,  
 Tillamook County, Oregon

Tillamook District GIS  
 07-06-2011  
 This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.

Type of Operation	Acres
1 Modified	114
104	104
<b>Total</b>	<b>218</b>

**Legend:**

- Rock source: (X symbol)
- Stock pile: (O symbol)
- Waste area: (W symbol)
- Bridge: (B symbol)
- Gate: (G symbol)
- Survey corner: (S symbol)
- Domestic water supply intake: (D symbol)
- Truck turn-around: (T symbol)
- Helicopter landing zone: (H symbol)
- Cultural site: (C symbol)
- Landing: (L symbol)
- Buffer: (B symbol)
- Non-required thinning: (N symbol)
- Cable yarding: (C symbol)
- Ground yarding: (G symbol)
- Helicopter yarding: (H symbol)
- Downhill yarding: (D symbol)
- Green tree retention area: (G symbol)
- Restricted area: (R symbol)
- Area boundary: (A symbol)
- Sale boundary: (S symbol)
- Ownership boundary: (O symbol)
- Perennial Type-F stream: (F symbol)
- Perennial Type-N stream: (N symbol)
- Unsurfaced road: (U symbol)
- Surfaced road: (S symbol)
- Paved road: (P symbol)
- Abandoned road: (A symbol)
- Swing road: (S symbol)
- Non-project road: (N symbol)
- Blocked road: (B symbol)
- OHV trail: (O symbol)
- Non-motorized trail: (N symbol)
- Transmission line: (T symbol)
- Railroad: (R symbol)