



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
South Marlow Switch  
Sale 341-09-27

District: Coos

Date: May 19, 2008

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**cost summary**

	<b>Conifer</b>	<b>Hardwood</b>	<b>Total</b>
<b>Gross Timber Sale Value</b>	\$498,101.47	\$48,514.80	\$546,616.27
		<b>Project Work:</b>	\$(61,814.00)
		<b>Advertised Value:</b>	\$484,802.27



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**timber description**

Location: Portions of Sections 29 and 32, T24S, R11W, W.M., Coos County, Oregon.

Stand Stocking: 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	21	0	90
Western Hemlock / Fir	24	0	90
Red Cedar	14	0	90
Alder (Red)	15	0	90

Volume by Grade	10" - 11"	12"+	2S 12"+	3S	3S 12"+	4S	6" - 7"	8" - 9"	SM	Total
Douglas - Fir	0	0	1,543	409	159	68	0	0	91	2,270
Western Hemlock / Fir	0	0	0	4	13	0	0	0	0	17
Red Cedar	0	0	0	3	0	0	0	0	0	3
Alder (Red)	19	40	0	0	0	0	41	20	0	120
Total	19	40	1,543	416	172	68	41	20	91	2,410



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comments: Pond Values Used: 1st Quarter Calendar Year 2008.

HAULING

Hauling costs equivalent to \$700 daily truck cost.

Other Costs (Profit and Risk to be added):

Felling of Unmerch Material: \$1/tree x 40 trees = \$40

Directional Felling/Tree Jacking: \$2/tree x 1,000 trees = \$2,000

Locate Corridors and Skid Roads: \$5/corridor x 20 corridors = \$100

Brand & Paint Logs: \$1/MBF x 2,454 MBF = \$2,454

Loader Time for Firewood Stacking: \$75/hour x 8 hours = \$600

Tree Topping: \$100/tree x 41 trees = \$4,100

Additional Fire Equipment: 1 Season x \$1,000 per season = \$1,000

Fish Log Stock Pile: Yarding & Decking - \$62/log x 55 logs = \$3,410

Fish Log Stock Pile: Special Handling - \$8/log x 55 logs = \$440

TOTAL Other Costs (Profit and Risk to be added) = \$14,144



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**logging conditions**

**combination#: 1**

	Douglas - Fir	100.00%
	Western Hemlock / Fir	100.00%
	Red Cedar	100.00%
	Alder (Red)	100.00%

**yarding distance:** Long (1,500 ft)      **downhill yarding:** No

**logging system:** Cable: Large Tower >=70      **Process:** Manual Delimiting

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

**loads / day:** 12.0      **bd. ft / load:** 4,500

**cost / mbf:** \$68.40

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



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**logging costs**

<b>Operating Seasons:</b>	1.00	<b>Profit Risk:</b>	15.00%
<b>Project Costs:</b>	\$61,814.00	<b>Other Costs (P/R):</b>	\$14,144.00
<b>Slash Disposal:</b>	\$0.00	<b>Other Costs:</b>	\$0.00

**Miles of Road**

Road Maintenance: \$0.00

Dirt	Rock (Contractor)	Rock (State)	Paved
1.0	2.0	0.0	0.0

**Hauling Costs**

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.5
Western Hemlock / Fir	\$0.00	3.0	4.5
Red Cedar	\$0.00	3.0	4.5
Alder (Red)	\$0.00	3.0	3.5

**Local Pond Values**

Date	Specie	Grade	Value
5/19/08	Alder (Red)	8" - 9"	\$545.00
5/19/08	Alder (Red)	10" - 11"	\$605.00
5/19/08	Alder (Red)	12"+	\$680.00
5/19/08	Alder (Red)	6" - 7"	\$460.00



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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>									
\$68.40	\$2.90	\$1.82	\$49.60	\$5.87	\$19.29	\$0.00	\$2.00	\$0.00	\$149.88
<b>Western Hemlock / Fir</b>									
\$68.40	\$2.90	\$1.82	\$49.60	\$5.87	\$19.29	\$0.00	\$2.00	\$0.00	\$149.88
<b>Red Cedar</b>									
\$68.40	\$2.90	\$1.82	\$49.60	\$5.87	\$19.29	\$0.00	\$2.00	\$0.00	\$149.88
<b>Alder (Red)</b>									
\$68.40	\$2.90	\$1.82	\$63.77	\$5.87	\$21.41	\$0.00	\$2.00	\$0.00	\$166.17

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$367.71	\$217.83	\$0.00
Western Hemlock / Fir	\$0.00	\$204.41	\$54.53	\$0.00
Red Cedar	\$0.00	\$1,050.00	\$900.12	\$0.00
Alder (Red)	\$0.00	\$570.46	\$404.29	\$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
Red Cedar	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

**Unamortized**

Specie	MBF	Value	Total
Douglas - Fir	2,270	\$217.83	\$494,474.10
Western Hemlock / Fir	17	\$54.53	\$927.01
Red Cedar	3	\$900.12	\$2,700.36
Alder (Red)	120	\$404.29	\$48,514.80

**Gross Timber Sale Value**

Recovery: \$546,616.27

Prepared by: Gloria Clary

Phone: 541-267-1757

**SUMMARY OF CONSTRUCTION COST  
South Marlow Switch**

**Project 1A: Road and Landing Construction**

Point: B to C      Length: 620'      Type: 14' subgrade no ditch

Excavator (remove stumps, pioneer)	<u>10</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$1,200.00</u>
Cat time	<u>20</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$2,400.00</u>
Laborer	<u>20</u>	hrs at	<u>\$30.00</u>	per hour	<u>\$600.00</u>
Grader	<u>2</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$150.00</u>

**Total Project 1A:      \$4,350.00**

**Project 1B: Landing Construction**

Point: D

Excavator	<u>30</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$3,600.00</u>
Cat time (prep & shape waste area)	<u>15</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$1,800.00</u>
Drill and Shoot	<u>20</u>	hrs at	<u>\$250.00</u>	per hour	<u>\$5,000.00</u>
Dump Truck - haul to Pts A & B (.6 mi RT)	<u>25</u>	hrs at	<u>\$95.00</u>	per hr	<u>\$2,375.00</u>
Laborer	<u>25</u>	hrs at	<u>\$30.00</u>	per hour	<u>\$750.00</u>

**Total Project 1B:      \$13,525.00**

**Project 1C: Road and Landing Construction**

Points: F to G      Length: 900'      Type: 14' subgrade no ditch

(includes landing at Pt H)

Excavator (remove stumps, pioneer)	<u>20</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$2,400.00</u>
Cat time - construction	<u>30</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$3,600.00</u>
Laborer	<u>30</u>	hrs at	<u>\$30.00</u>	per hour	<u>\$900.00</u>
Grader	<u>2</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$150.00</u>

**Total Project 1C:      \$7,050.00**

**Project 1D: Landing Construction**

Point: J

Excavator	<u>5</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$600.00</u>
Cat time	<u>5</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$600.00</u>
Laborer	<u>5</u>	hrs at	<u>\$30.00</u>	per hour	<u>\$150.00</u>

**Total Project 1D:      \$1,350.00**

**Move-in**

Equipment	Miles	hrs/RT	Lowboy Rate/hr	Total
Excavator	20	3	\$95.00	\$285.00
Cat	20	3	\$95.00	\$285.00
Grader	20	2	\$95.00	\$190.00
Dump Truck	20	2	\$95.00	\$190.00
Dump Truck	20	2	\$95.00	\$190.00
Drill & Comp	20	3	\$95.00	\$285.00

**Total Move-in:      \$1,425.00**

**Project 1 Total      \$27,700.00**



**SUMMARY OF CONSTRUCTION COST  
South Marlow Switch**

**Project 2A: Road Improvement**

Points: A to E      Length: 5490'      Type: 14' subgrade no ditch

Excavator to remove small slides, brush and small trees	<u>10</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$1,200.00</u>
Dump Truck to haul material to Pt A	<u>5</u>	hrs at	<u>\$95.00</u>	per hour	<u>\$475.00</u>
Cat time to shape road surface	<u>5</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$600.00</u>
Laborer	<u>10</u>	hrs at	<u>\$30.00</u>	per hour	<u>\$300.00</u>
Grader to smooth road surface	<u>5</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$375.00</u>

**Total Project 2A:      \$2,950.00**

**Project 2B: Road Improvement**

Points: E to F      Length: 680'      Type: 14' subgrade no ditch

**Excavation**

Excavator to remove small trees/brush	<u>3</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$360.00</u>
Cat time to shape road surface	<u>3</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$360.00</u>
Laborer	<u>3</u>	hrs at	<u>\$30.00</u>	per hour	<u>\$90.00</u>
Grader to smooth road surface	<u>2</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$150.00</u>

**Total Project 2B:      \$960.00**

**Project 2C: Road and Landing Improvement**

Points: E to I      Length: 1480'      Type: 14' subgrade no ditch

**Excavation**

Excavator to remove small trees/brush	<u>5</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$600.00</u>
Cat time to shape road & landing	<u>5</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$600.00</u>
Laborer	<u>5</u>	hrs at	<u>\$30.00</u>	per hour	<u>\$150.00</u>
Grader to smooth road surface	<u>2</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$150.00</u>

**Total Project 2C:      \$1,500.00**

**Project 2 Total      \$5,410.00**

**Project 3: Big Saddle Rock Stockpile**

Location:                    10 mi on 1000 Rd  
Measured amount:        1200 cu yds  
Size:                         1 1/2" - 0"

Cost per cu yd at crusher:                    \$12.25      per yd  
Haul cost per cu yd (2.4 hr. RT):            \$10.67      per yd  
Piling and shaping cost per cu yd:            \$1.00      per yd

Total cost per cu yd:                         \$23.92      per yd  
Total cu yds:                                        1200      yards

Total Cost for Stockpile rock:                \$28,704.00

**Project 3 Total      \$28,704.00**

**Total Project Costs      \$61,814.00**



## TIMBER SALE SUMMARY

South Marlow Switch

1. **Type of sale:** Final harvest; Recovery, Sealed Bid.
2. **Boundary Lines:** Sale boundaries are marked on the ground with "Timber Sale Boundary" posters, red paint, and red flagging at locations shown on the Exhibit A.
3. **Revenue Distribution:** 100% BOF; 100% Coos County.
4. **Sale Acreage:** The total sale area is 81 net acres. Grouped green trees and buffer areas are posted outside the sale area and are not included in the net acreage calculation. The acreage was determined using orthophoto imagery on the ARCVIEW Geographic Information System program.
5. **Volume by Species, Fund, and County:** See attached table.
6. **Grade by Percent:**

Species	3 Peeler	S M	2 Saw (12"+)	Big 3 Saw	3 Saw (10-11")	4 Saw (8-9")	(6-7")
Douglas-fir	-----	4 %	68 %	7 %	18 %	3 %	-----
Red Alder	-----	-----	33 %	-----	16 %	17 %	34 %
Western Red Cedar	-----	-----	-----	-----	100 %	-----	-----
Western Hemlock	-----	-----	-----	75 %	25 %	-----	-----

7. **Cruise:** The unit was variable plot cruised using the Big BAF cruise design with two strata (a mature and young stand), which consisted of 114 nested plots. For the mature stand each plot consists of both a full 40 BAF count plot and a full 360 BAF measure plot, and the young stand 20 BAF and 90 BAF. The 20/40 BAF plot was used to tally the number of trees by species to determine the stand basal area. The 20/40 BAF plot was then used to select hardwoods and minor species to cruise and the 90/360 BAF plot to select Douglas-fir trees to cruise. Selected trees were cruised for diameter at breast height, height, grade and defect. Seventy Douglas-fir Big BAF trees were cruised for diameter, height, grade and defect. The cruise was analyzed using the SuperACE cruising program.

### A. Cruise Summary Data:

Diameter	Top Diameter	Form Point	Form Factor	CV %	SE %
D4H	Total Height	Conifer: 16' Hardwood: 16'	Estimated or measured on all trees	53.3	7.3

B. Stand Summary:

Species	D4H	Trees per Acre	Basal Area (ft <sup>2</sup> /ac)	BF per acre
Douglas-fir	21	64	175	28,182
Red Alder	15	16	21	1,487
Western Cedar	14	1.1	1.2	36
Western Hemlock	24	1	3.1	207

C. Green Tree Retention Summary: Most green trees were posted outside of the timber sale, except scattered trees which will be removed from the cruise. These scattered trees are marked with a "W" in red.

**8. Timber Description:** The timber sale has two stands that are moderately stocked of approximately 102 and 75 year old second growth and 38 year old third growth Douglas-fir, of good to average quality, with red alder, western red cedar and western hemlock in the understory. Conifers range from 60 to 182 feet tall while hardwoods are about 28 to 90 feet.

**9. Topography:** The unit ranges from 20% to 90% slope. There are a few benches as well as steep drainages throughout the sale areas. There is a large bench on Area 1.

**10. Logging Method:** The sale will be mostly cable logged uphill with single-end suspension over the unit; full suspension will be required over designated streams and RMAs. A motorized carriage will be required to obtain the necessary suspension. On Area 1 there will also be ground operations where topography allows. Tail trees may need to be placed for yarding the sale area as approved in the operations plan.

**11. Access:** From Coos Bay, proceed east on Coos River Highway for 14 miles to the 1000 Rd, proceed for 1 mile to the 1100 Rd. and then go 1 ½ miles up to the timber sale area.

**12. Projects:**

Project No. 1: Road and Landing Construction

Project No. 2: Road and Landing Improvement

Project No. 3: Rock Stockpile

## NET VOLUMES AND ACREAGE

SALE AREA & SPECIES		Tree cnt. 100% Units	NET VOLUMES (MBF)							Total Vols.	Vol. per Acre
			By County and Fund								
			Coos			Douglas					
Area	Spec		CSL	BOF	Total	CSL	BOF	Total			
I, II	D-fir			2270	2270			0	2270	28.02	
III, IV	Hdwd			120	120			0	120	1.48	
	Cedar			3	3			0	3	0.04	
	Spruce				0			0	0	0.00	
	Hemlock			17	17			0	17	0.21	
<b>TOTALS</b>				0	2410	2410	0	0	0	2410	

**TOTAL SALE VOLUME BY SPECIES**

Douglas-fir	<u>2270</u>	MBF
Hemlock	<u>17</u>	MBF
Cedar	<u>3</u>	MBF
Spruce	<u>0</u>	
Hardwoods	<u>120</u>	MBF
Total	<u>2410</u>	MBF

Report by: South Marlow Switch

Date: 06/18/2007

Unit For. *Roman Kline* 6/19/2007  
Date

Asst. Dist. For. *Dreg Krainovich* 6.19.2007  
Date

**UTILITY VOLUME NOT SHOWN TO PROVIDE FOR RETENTION OF DOWN LOGS  
NO INGROWTH INCLUDED**

**ACREAGE BY COUNTY (to nearest acre)**

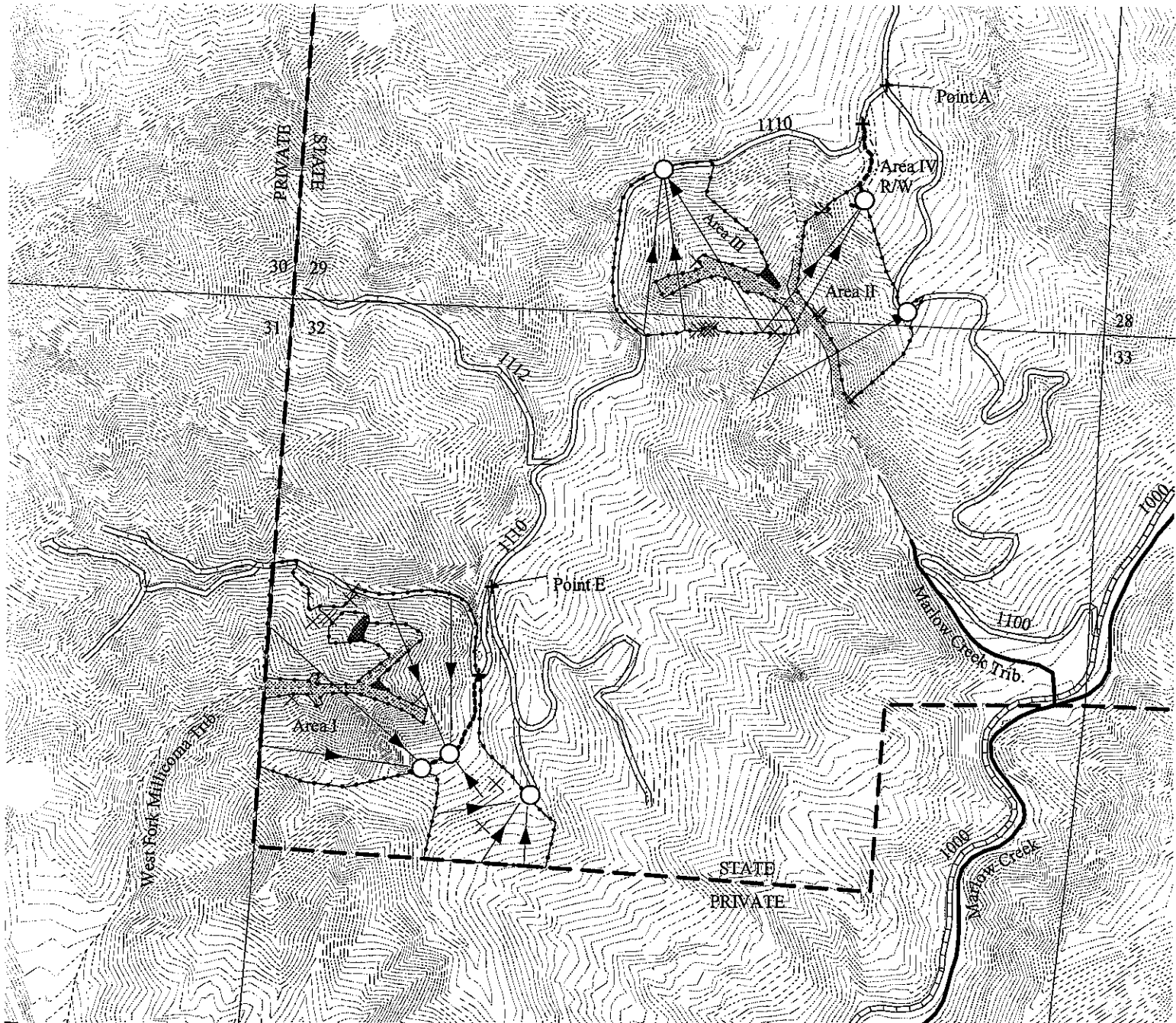
Sale Area	Coos County						Douglas County						TOTAL ACRES
	CSL			BOF			CSL			BOF			
	Conifer cc	Conifer pc	Hard wood	Conifer cc	Conifer pc	Hard woods	Conifer cc	Conifer pc	Hard woods	Conifer cc	Conifer pc	Hard woods	
I				47									47
II				14									14
III				20									20
SUM	0	0	0	81	0	0	0	0	0	0	0	0	81

cc- clearcut

pc- partial cut

BOF - Board of Forestry

CSL - Common School Land



**LEGEND**

- Landing
- + Project Point
- ▭ Posted Sale Boundary
- ▭ Elliott State Forest Boundary
- Roads**
- ▭ State Maintained Road
- ▭ Purchaser Maintained Road
- ▭ New Road Construction
- ▭ Right of Way Boundary
- ▭ Yarding Corridor
- Streams**
- ▭ Type F
- ▭ Type N Perennial
- ▭ Type N Seasonal
- ▭ Stream Buffer
- ▭ Green Tree Retention Group
- × Green Tree Retention Single
- ▭ Contours: 20 Foot

**APPROXIMATE ACREAGE**

AREA I	47
AREA II	14
AREA III	20
<b>TOTAL</b>	<b>81</b>

**LOGGING PLAN**

**SOUTH MARLOW SWITCH**  
 341-09-27  
**PORTIONS OF SECTIONS 29 & 32**  
**T24S, R11W**  
**COOS COUNTY, OREGON**  
**APPROXIMATELY 81 NET HARVEST ACRES**

**APPROX. SCALE: 1" = 1000'**

