

District: West Oregon

Timber Sale Appraisal Strombo Combo Sale 341-09-54

Date: April 16, 2009

## cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$484,740.76	\$0.00	\$484,740.76
		Project Work:	\$(118,043.00)
		Advertised Value:	\$366,697.76

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Timber Sale Appraisal Strombo Combo Sale 341-09-54

"STEWARDSHIP IN FORESTRY"

### District: West Oregon

Date: April 16, 2009

## timber description

Location: Portions of Sections 19 & 30, T11S, R8W, and Sections 24 & 25, T11S, R9W, W.M., Lincoln County, Oregon.

#### Stand Stocking: 60%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	19	0	98

Volume by Grade	2S	3S	4S	SM	Total
Douglas - Fir	2,419	807	181	11	3,418
Total	2,419	807	181	11	3,418



#### District: West Oregon

## Timber Sale Appraisal Strombo Combo Sale 341-09-54

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comments: Pond Values Used: 1st Quarter Calender Year 2009.

Western Hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost \$80/MBF = \$250/MBF - \$170/MBF

Western Red Cedar Stumpage Price = Pond Value minus Logging Cost \$550/MBF = \$720/MBF - \$170/MBF

Red Alder and Other Hardwoods Stumpage Price = Pond Value minus Logging Cost \$245/MBF = \$415/MBF - \$170/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): Area I - Artificial Guyline Anchors - 6 @ \$250 = \$1,500 TOTAL Other Costs (with Profit & Risk to be added) = \$1,500

Other Costs (No Profit & Risk added): Firewood Sorting: 15 hrs x \$110/hr = \$1,650 Downed Wood (32 trees, 1 day) = \$300 Snag Creation (32 snags x \$75/snag) = \$2,400 TOTAL Other Costs (No Profit & Risk added) = \$4,350

SLASH
Slash Disposal
Move In = \$500
In-Unit Move = 1 hour x \$125/hour = \$125
19 hours x \$125/hour = \$2,375
TOTAL Slash Disposal = \$3,000



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# logging conditions

combination#: 1 yarding distance: logging system: tree size: loads / day: cost / mbf:	Cable: Medium Tower >40 - <70 Mature / Regen Cut (900 Bft/t		
	Log Loader (A) Tower Yarder (Medium)		
combination#: 2 yarding distance: logging system: tree size: loads / day: cost / mbf:	Cable: Medium Tower >40 - <70 Mature / Partial Cut (900 Bft/tr		
	Log Loader (A) Tower Yarder (Medium)		
combination#: 3 yarding distance: logging system: tree size: loads / day: cost / mbf: machines:	Wheel Skidder Mature / Partial Cut (900 Bft/tr	10.43% downhill yarding Process: Manua ree), 3-5 logs/MBF od. ft / load:	
combination#: 4 yarding distance: logging system: tree size: loads / day: cost / mbf:	Wheel Skidder Small / Thinning 10in (90 Bft/t	1.55% downhill yarding Process: Manua ree), 18-20 logs/MBF od. ft / load:	l Delimbing
machines:	Feller Buncher w/ Delimber		



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# logging costs

Operating Seasons:	2.00	Profit Risk:	12.00%
Project Costs:	\$118,043.00	Other Costs (P/R):	\$1,500.00
Slash Disposal:	\$3,000.00	Other Costs:	\$4,350.00

## Miles of Road

			Road Maintenance:	\$0.00
Dirt	Rock (Contractor)	Rock (State)	Paved	
0.0	4.0	0.0	0.0	

## Hauling Costs

Species	\$/MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.5



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## Date: April 16, 2009

# logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas -	Fir								
\$91.15	\$4.16	\$2.57	\$47.23	\$0.44	\$17.47	\$0.88	\$5.00	\$1.27	\$170.17

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$311.99	\$141.82	\$0.00



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## summary

Amortized			
Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00

Unamortized			
Specie	MBF	Value	Total
Douglas - Fir	3,418	\$141.82	\$484,740.76

<u>Gross Timb</u>	er Sale Value
Recovery:	\$484,740.76
Prepared by: Blake Mckinley	<b>Phone:</b> 541-929-3266

## SUMMARY OF ALL PROJECT COSTS

Sale Name:	Strombo Combo		Date: Time:	January 2009 15:44
Project #1 Road Segment	- Improvements	<u>Length</u>	<u>Cost</u>	
A to B		292.0 sta	\$55,104	
C to C1		12.0 sta	\$1,227	
D to D1		8.5 sta	\$467	
D to F		23.4 sta	\$12,742	
E to E1		13.5 sta	\$670	
E2 to E3		5.4 sta	\$281	
F to F1		17.9 sta	\$9,767	
F to G		41.6 sta	\$20,450	
G to G1		10.1 sta	\$11,213	
	TOTALS	424.4 sta		\$111,921

## Project #2 - Post Harvest Activities

Tank trap Patch rock Turn-a-round rock

TOTAL		_
Water truck	\$199	
Vibratory roller	\$304	
Grader, Cat 14-G or equiv.	\$304	
Crawler tractor, D-7 or equiv.	\$488 \$100	
<u>Move in</u>	<u>Cost</u> On-site mov	/e

TOTAL

GRAND TOTAL

#### \$118,043

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Compiled by C. Humcke / D. Wiger

Date 01/26/2009

\$4,727

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\$1,395

SALE Stror ROAD A to I		Project #1 I, ditch)		LENGTH	Improve	•	292.0 sta
IMPROVEMENT Shape subgrade (with road grade	292.0	sta. (	@\$12.28	3 /sta	=	\$3,586	
				TOTAL IM	IPROVE	MENT	\$3,586
SURFACING Spot rock (0+00 to 160+50 Spot rock	)	152 cyo 70 cyo		Cost/yd \$19.17 \$19.17	=	\$2,914 \$1,342	
(160+50 to 197+ Surface rock (4" (197+50 to Pt. B	lift)	2079 cy of		\$20.67	=	\$42,973	
Turnouts (4)		44 cy of	f 2½-0"	\$20.19	=	\$888	
Curve widening		131 cy of	f 1½-0"	\$20.67	=	\$2,708	
				TOTAL RO	оск со	ST =	\$50,825
SPECIAL PROJ Brushing (197+50 to 220+	16	hrs. (	@\$43.33	3 /hr.	=	\$693	

TOTAL SPECIAL PROJECTS= \$693

Compiled by: Date:

C. Humcke / D. Wiger Feb 11, 2009 GRAND TOTAL ====>

\$55,104

e.\*

SALE ROAD	Strombo C to C1	Combo	Projec (unsu	ct #1 rfaced, no d	itch)	LENGTH	Improve		12.0 sta
IMPROVE	MENT	With D7	dozer	or equivaler	nt				
Re-open r	oad	12.0	sta.	0	\$60.63	/sta	=	\$728	
Shape sui (with road	-	12.0	sta.	@	\$10.31	/sta	=	\$124	
						TOTAL IM	PROVEME	NT =	\$852
SURFACI Spot rock (sta. 4+20			18	cy of	Size jaw-run	Cost/yd \$20.84	=	\$375	

TOTAL ROCK COST = \$375

Date:

Compiled by: C. Humcke / D. Wiger Feb 11, 2009

GRAND TOTAL =====>

\$1,227

SALE ROAD	Strombo D to D1	Combo	Project # (unsurfa		ditch)	LENGTH	Improve		8.5 sta
IMPROVE Re-open r Shape sui (with road Improve L	road bgrade grader)	8.5 8.5	dozer or sta. sta. hrs.	equivale @ @ @	nt \$30.31 \$10.31 \$121.25	/sta /sta /hr.	= = =	\$258 \$88 \$121	

\$467 TOTAL IMPROVEMENT =

Compiled by: D. Wiger Date:

Feb 11, 2009

GRAND TOTAL =====>

\$467

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SALE ROAD	Strombo Con D to F		ct #1 aced, ditch)		LENGTH	Improve		23.4 sta
IMPROVE Shape su (with road	bgrade	23.4 sta.	@	\$12.28	/sta	=	\$287	
					TOTAL IM	PROVEN	IENT	\$287
SURFACI	NG			Size	Cost/yd			
Surface ro	ock (4" lift)	515	cy of	1½-0"	\$20.67	-	\$10,645	
Turnouts (	(1)	18	cy of	21⁄2-0"	\$20.19	=	\$363	
Fillet Rock	< (Pt. D)	36	cy of	11⁄2-0"	\$20.67	=	\$744	
		04	ov of	1½-0"	¢00.67	_	•	
Curve wid	ening	34	cy of	I 72-U	\$20.67	=	\$703	

TOTAL ROCK COST = \$12,455

Compiled by: Date:

C. Humcke / D. Wiger Jan 26, 2009 GRAND TOTAL ====>

\$12,742

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SALE ROAD	Strombo E to E1	Combo	Project (unsurf	#1 faced, no o	ditch)	LENGTH	total		13.5 sta
IMPROVE	EMENT	With D7	dozer o	or equivale	ent				
Re-open	road	2.0	sta.	@	\$60.63	/sta	=	\$121	
(0+00 to 2	2+00)								
Re-open i	road	11.5	sta.	0	\$30.31	/sta	=	\$349	
(2+00 to 1	13+50)								
Re-open l	anding	0.5	hrs.	0	\$121.25	/hr.	=	\$61	
Shape su	bgrade	13.5	sta.	@	\$10.31	/sta	=	\$139	
(with road	l grader)			-		TOTAL IN	/IPROVE	MENT =	\$670

Date:

Compiled by: C. Humcke / D. Wiger Feb 11, 2009

GRAND TOTAL ====>

\$670

SALE ROAD	Strombo ( E2 to E3	Combo	Project # (unsurfac		litch)	LENGTH	Improve		5.4 sta
IMPROVE Re-open r Improve L Shape sul (with road	oad anding bgrade	5.4 0.5	dozer or sta. hrs. sta.	equivalei @ @ @	nt \$30.31 \$121.25 \$10.31	/sta /hr. /sta		\$164 \$61 \$56	
							IPROVEME	ENT =	\$281

Date:

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Compiled by: C. Humcke / D. Wiger Feb 11, 2009

GRAND TOTAL =====>

\$281

SALE ROAD	Strombo Combo F to F1	Projeo (surfa		sta. no dito	LENGTH ch, 3.1 sta.	•		17.9 sta
IMPROVE	EMENT							
Shape su (with road	-	4.8 sta.	@	\$8.84	/sta	-	<b>\$1</b> 31	
Shape su (with roac	bgrade	3.1 sta.	@	\$12.28	/sta	=	\$38	
•	•				TOTAL IM	PROVEM	ENT =	\$169
SURFAC	NG			Size	Cost/yd			
Surface re	ock (4" lift)	383	cy of	21⁄2-0"	\$20.19	=	\$7,733	
	und rock (F1)	27	cy of	21⁄2-0"	\$20.19	=	\$545	
	und rock (sta 13+8	0) 18	cy of	Jawrun	\$19.33	=	\$348	
Junction f	•	•	cy of	21⁄2-0"	\$20.19	=	\$363	
Curve wid	lening rock	13	cy of	21⁄2-0"	\$20.19	=	\$262	
					TOTAL RO	OCK COS	Τ=	\$9,251
SPECIAL	PROJECTS							
Brushing	le of road)	8 hrs.	@	\$43.33	/hr.	=	\$347	
(NOTET SIC	e or road)				TOTAL SF	ECIAL PI	ROJECTS=	\$347

Date:

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Compiled by: C. Humcke / D. Wiger Feb 11, 2009

GRAND TOTAL ====>

\$9,767

\$11

SALE ROAD	Strombo Combo F to G	D	Proje (surfa		no ditch	)	LENGTH	Impro	ove	41.6 sta
IMPROVE Shape sub (with road Re-open la	ograde grader)	41.6 0.5	sta. hrs.		@	\$8.84 \$121.25	/sta /hr.	=	\$368 \$61	
(26+70)							TOTAL IM	PRO	/EMENT =	\$429
SURFACI						Size	Cost/yd			
Surface ro	ck (4" lift)		915	су с	of	11⁄2-0"	\$20.67	=	\$18,913	
	ind (sta 11+60)		18	су о	of	21⁄2-0"	\$20.19	=	\$363	
Curve wide	•		21	су о	f	11⁄2-0"	\$20.19	=	\$424	
Landing (s	ta 26+70)		18	су о	f	Jaw run	\$17.83	=	\$321	

TOTAL ROCK COST = \$20,021

Compiled by: Date:

C. Humcke / D. Wiger Jan 26, 2009 GRAND TOTAL =====>

\$20,450

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SALE ROAD	Strombo C G to G1	ombo	Projec (surfa		sta no ditch,	LENGTH 6.6 sta ditcl		re	10.1 sta
IMPROVE	MENT								
Re-open r	oad	10.1	sta.	0	\$24.25	/sta	=	\$245	
Drift 3+50	to 5+00	1.0	hr.	@	\$121.25	/hr.	-	\$121	
Construct (sta 5+00)	-	1.0	hr.	0	\$121.25	/hr.	=	\$121	
Drift 8+40	to 7+70	1.5	hr.	0	\$121.25	/hr.	=	\$182	
Re-open l	anding (G)	0.5	hr.	0	\$121.25	/hr.	=	\$61	
Shape sul	-	3.5	sta.	@	\$10.31	/sta	=	\$36	
Shape sul	-	6.6	sta.	@	\$16.22	/sta	=	\$107	
Compact	• ,	10.1	sta.	0	\$8.31	/sta	=	\$84	
						TOTAL IM	PROV	EMENT =	<b>\$9</b> 57
SURFACI	NG				Size	Cost/yd			
Surface ro	ock (8" lift)		422	cy of	11⁄2-0"	\$20.67	<b>=</b>	\$8,723	
Curve wid	lening rock		10	cy of	1½-0"	\$20.67	=	\$207	
Landing re	ock (2)		54	cy of	Jaw run	\$17.83	=	\$963	
Tum-a-rou	und (G)		18	cy of	21⁄2-0"	\$20.19	=	\$363	
						TOTAL RO	оск с	OST =	\$10,256

GRAND TOTAL =====>

\$11,213

Date:

Compiled by: C. Humcke / D. Wiger Feb 11, 2009

SALE Strombo Combo - Project #2 Post Harvest ROAD

SURFACING (patch rock)		Size	Cost/CY		
A to B (10 landings)	90 cy of	11⁄2-0"	\$19.17	=	\$1,725
D to F (3 landings)	27 cy of	11⁄2-0''	\$19.17	=	\$518
F to F1 (2 landings)	18 cy of	21⁄2-0"	\$18.69	=	\$336
F to G (5 landings)	45 cy of	11⁄2-0"	\$19.17	=	\$863
G to G1 (1 landings)	9 cy of	11⁄2-0''	\$19.17	=	\$173
Turn-a-round rock - Pt F1	27 cy of	21⁄2-0"	\$18.69	=	\$505
Turn-a-round rock - Pt G1	27 cy of	21⁄2-0"	\$18.69	=	\$505

### TOTAL SURFACING COST = \$4,625

### **MISCELLANEOUS PROJECTS**

Tank traps				
C to C1	0.5 hr.	0	\$68.75 /hr. =	\$34
D to D1	0.5 hr.	@	\$68.75 /hr. =	\$34
E to E1	0.5 hr.	Ō	\$68.75 /hr, =	\$34

#### TOTAL MISCELLANEOUS PROJECTS = \$102

Compiled by: Date: C. Humcke / D. Wiger Jan 26, 2009 GRAND TOTAL ====>

\$4,727

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#### TIMBER SALE SUMMARY

Sale Name: Strombo Combo 341-09-54

**Sale Type:** Area I – modified clearcut harvest: 32 net acres; Areas II and III – automark commercial thinning harvest: 100 net acres; recovery sale; 92% BOF (by volume), and 8% CSL, located in Lincoln County.

Sale Area: Portions of Sections 19 & 30, T11S, R8W, and Portions of Sections 24 & 25, T11S, R9W, W.M., Lincoln County, Oregon.

<u>Access</u>: From Philomath, travel west on Hwy. 20 for 17 miles to Burnt Woods. Turn left on Harlan-Burnt Woods Road and travel 2 miles to Burnt Woods Ridge Road (Point A). Turn right and proceed 5.3 miles to Point C which is the west side of Area II. Area I is northwest of point C on Stromboulder Road. Area III is east of Point C.

**Boundaries:** Area I is posted with "Timber Sale Boundary" signs, fluorescent pink flagging, and fluorescent red paint. Areas II and III are posted with "Timber Sale Boundary" signs and fluorescent pink flagging. The boundary between Areas II and III is posted with yellow "Area Boundary" signs and blue and white striped flagging. Patchcuts in Area II are posted with pink "Patchcut Boundary" signs and blue and white striped flagging. The Type N stream buffer in Area II is not posted.

**<u>Timber Description</u>**: The timber sale consists of three separate areas. Area I is a modified clearcut. Areas II and III are partial cuts which will be thinned from below leaving the biggest and best Douglas-fir trees. Areas I and II are natural stands. The north half of Area I and all of Areas II and III were commercially thinned 10 years ago. Area III is part of the buffer area for the Wolf Creek Progeny site.

**Area I:** This area supports a 57 year old Douglas-fir natural stand. About 100 Douglas-fir trees per acre will be harvested. The average DBH of these trees is 20 inches. Approximately 10 reserve trees per acre will remain after harvest.

**Area II:** This area supports a 57 year old Douglas-fir natural stand. The target residual basal area is 160 ft<sup>2</sup> per acre. About 64 trees per acre will be harvested. The average DBH of these "take" trees is 18 inches. Approximately 40 trees per acre will remain after harvest. The average DBH of leave trees will be approximately 25 inches. There are 9 patchcuts in the area.

**Area III:** This area supports a 36 year old Douglas-fir plantation. The target residual basal area is 50  $\text{ft}^2$  per acre. About 54 trees per acre will be harvested. The average DBH of these "take" trees is 17 inches. Approximately 20 trees per acre will remain after harvest. The average DBH of leave trees will be approximately 21 inches.

### **Topography:**

<u>Area I</u>: Slopes are moderate to steep ranging from 30-65% with a southwest aspect. <u>Area II</u>: Slopes are gentle to steep ranging from 0-65% with a south aspect. <u>Area III</u>: Slopes are gentle ranging from 0-25% with a south aspect.

**<u>Streams</u>:** The Type N stream in Area II has an unposted 25 foot horizontal buffer on either side of it. All timber within 25 feet horizontal distance on either side of the Type N stream is reserved from harvest. The upper limit of the stream is marked with a 4" x 4" aluminum tag and fluorescent pink flagging.

**<u>Reserve Trees:</u>** In Area I, in the patchcuts located in Area II, and in Area III all trees marked with fluorescent red paint are reserved from cutting. In Areas II and III, hardwoods, western hemlock and western redcedar are reserved from cutting excluding, yarding corridors and skid roads. In Area II patchcuts, hemlock and cedar are reserved from cutting but hardwoods are not reserved from cutting. In Area II, all Genetic Parent Trees marked with yellow paint are reserved from cutting. All trees within 25 feet either side of the Type N stream in Area II are reserved from cutting. All trees in the progeny area to the west of Area III are reserved from cutting.

<u>**T & E Surveys:**</u> This sale has been surveyed for northern spotted owls and marbled murrelets in 2007 and 2008, with no detections.

**Logging Methods:** Approximately 88% of the sale volume will require cable yarding; the remaining 12% can be ground skidded.

<b>Projects:</b>	No. 1 – Road Improvement	8.0	miles
	No. 2 – Post Harvest Activities		

**Other Requirements:** 15 hours of firewood sorting along roads and landings. 20 hours of slash and brush piling is required in 3 patchcuts located in Area II and all of Area III. 32 trees are required to be topped to create snags. 32 trees are to be felled to create downed wood.

#### **Cruise Summary:**

			MBF V	olume			
Area	Gross Acres	Net Acres*	Species	Gross Volume	Net Volume	% Hidden D&B	Final Adjusted Volume
I	33	32	Douglas-fir	1547	1534	3	1488
	106	93	Douglas-fir	1945	1935	3	1877
	7	7	Douglas-fir	55	54	3	53
Total	146	132	Douglas-fir	3,547	3,523		3,418

\* Net acres represent a reduction of gross acres to account for existing roads, streams, and non-thinnable areas. Acres were determined using GIS and orthophotos.

Grau	e Dy 70				
Area	Species	SM	2 Saw	3 Saw	4 Saw
I	Douglas-fir	1%	77%	19%	3%
	Douglas-fir	0%	68%	25%	7%
	Douglas-fir	0%	0%	83%	17%
Total	Douglas-fir	1%	70%	24%	5%

Grade by %

**Cruise Methods:** Areas I and II were cruised using variable radius plots and a 40 BAF prism along with a Big BAF of 160. Area III was cruised using variable radius plots and a 20 BAF prism along with a Big BAF of 40. A 2.75 by 2.75 chain grid was laid out in order to sample Area I. On each plot, all conifers were considered "take" unless reserved. A 3 by 3 chain grid was laid out in order to sample Area II. A 2 by 2 chain grid was laid out in order to sample Area III. On each plot, all conifer trees were counted and "take" trees were chosen based on which were the smallest and/or most defective. The DBH of some leave trees were measured and some were estimated. For all areas the DBH of all "take" trees was measured and take trees that were determined to be "in" using Big BAF were measured for volume and grade.

**Tree form:** Form point was at 16 feet. Form factor for each measured conifer was determined using a relaskop and the formula of number of bars at form point divided by number of bars at DBH.

<u>Measurement Standards</u>: Heights for Douglas-fir were measured to the nearest foot to a top cruise diameter of 6 inches inside bark. Diameters were measured at breast height to the nearest inch.

**<u>Grading System:</u>** All trees were graded in a maximum of 40 foot segments unless defect or length to top cruise diameter warranted otherwise.

<u>Utilization Standards</u>: For Douglas-fir a minimum log segment of 6 inches in diameter (inside bark) by 12 feet in length was used. Only trees 6 inches DBH and 12 feet in length and larger were cruised.

Hidden Defect and Breakage: A hidden D & B of 3% was applied to the stands.

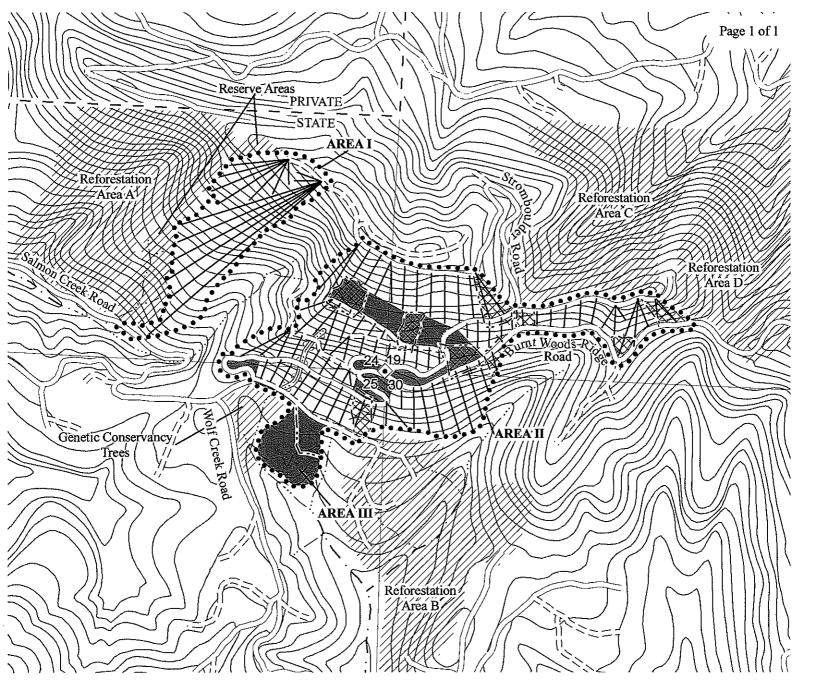
<u>**Computation Procedures:**</u> All cruise data was entered into the SuperAce program and calculated at the district office.

<u>**Cruisers/Dates:**</u> The sale areas were cruised by B. McKinley, J. Moore, D. McMinds, D. Wiger, J. Hayzlett, E. Hukari and T. O'Connor in November of 2008.

#### Signatures:

Cruise Specialist\_\_\_\_\_

Unit Forester\_\_\_\_\_



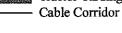
#### LEGEND

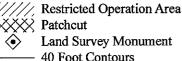
#### Boundaries

- Timber Sale Boundary
- -- Patchcut Boundary
- --- Area Boundary (Posted)
- - State Forest Property Boundary
- Roads
- Surfaced Road

===	Unsurfaced Road
Streams	
· — ·	Type F
••• ••	Type N
<u> </u>	Stream Buffer (Unposted)

Yarding Method Tractor Yarding Area



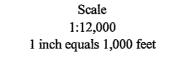


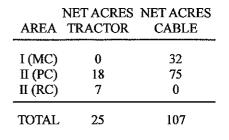
Land Survey Monument 40 Foot Contours

## LOGGING PLAN

OF TIMBER SALE CONTRACT NO. 341-09-54
STROMBO COMBO
PORTIONS OF SECTIONS 19 &30, T11S, R8W,
AND SECTIONS 24 & 25, T11S, R9W, W.M.,
LINCOLN COUNTY, OREGON

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