



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cell-Maker
Sale 341-14-62

District: West Oregon

Date: September 04, 2013

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$194,536.20	\$0.00	\$194,536.20
		Project Work:	\$(10,105.00)
		Advertised Value:	\$184,431.20



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timber description

Location: Portions of Section 15, T11S, R8W, W.M., Lincoln County, Oregon.

Stand Stocking: 40%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	16	0	95
Port Orford Cedar	13	0	95

Volume by Grade	2S	3S	4S	Total
Douglas - Fir	317	433	120	870
Port Orford Cedar	4	19	7	30
Total	321	452	127	900



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comments:

Pond Values Used:

Douglas-fir: 2nd Quarter Calendar Year 2013

Port Orford Cedar: Local Pond Values

Western Hemlock and Other Conifers Stumpage Price = Pond Value
minus Logging Cost:

\$139.28/MBF = \$490.00/MBF - \$350.72/MBF

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

\$599.28/MBF = \$950.00/MBF - \$350.72/MBF

Port Orford Cedar Stumpage Price = Local Pond Values

Red Alder and Other Hardwoods Stumpage Price = Pond Value minus
Logging Cost:

\$249.28/MBF = \$600.00/MBF - \$350.72/MBF

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$4.00/Gallon

LOG HAUL:

Douglas-fir costed to Philomath.

Port Orford Cedar costed to Riddle.

HAULING COST ALLOWANCE

Hauling costs equivalent to \$780 daily truck cost.

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

Brand & Paint: 900 MBF @ \$1/MBF = \$900

TOTAL Other Costs (with Profit & Risk to be added) = \$900

Other Costs (No Profit & Risk added):

Equipment Cleaning (Invasive Species Prevention) = \$2,000

Snag Creation: 70 snags @ \$75 ea = \$5,250

Down Wood: 55 trees ~ 3 fallers x \$430/day = \$1,290

Firewood Sorting: 3 landings @ \$100/landing = \$300

Non-Project Roads/Additional Logging Costs = \$1,600

TOTAL Other Costs (No Profit & Risk added) = \$10,440



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logging conditions

combination#: 1 Douglas - Fir 16.21%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Cable: Small Tower <=40 **Process:** Stroke Delimber
tree size: Small / Thinning 9in (70 Bft/tree), 20+ logs/MBF
loads / day: 2.0 **bd. ft / load:** 3,500
cost / mbf: \$404.89

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

combination#: 2 Douglas - Fir 11.80%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Track Skidder **Process:** Stroke Delimber
tree size: Small / Thinning 9in (70 Bft/tree), 20+ logs/MBF
loads / day: 2.5 **bd. ft / load:** 3,500
cost / mbf: \$164.37

machines: Stroke Delimber (B)

combination#: 3 Douglas - Fir 71.99%
Port Orford Cedar 100.00%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Track Skidder **Process:** Stroke Delimber
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 2.0 **bd. ft / load:** 4,000
cost / mbf: \$179.78

machines: Stroke Delimber (B)



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logging costs

Operating Seasons:	1.00	Profit Risk:	15.00%
Project Costs:	\$10,105.00	Other Costs (P/R):	\$900.00
Slash Disposal:	\$0.00	Other Costs:	\$10,440.00

Miles of Road

Road Maintenance: \$2.27

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

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	3.5
Port Orford Cedar	\$110.30	1.0	3.5

Local Pond Values

Date	Specie	Grade	Value
9/4/13	Port Orford Cedar	2S	\$565.00
9/4/13	Port Orford Cedar	3S	\$480.00
9/4/13	Port Orford Cedar	4S	\$340.00



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logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$214.46	\$2.38	\$4.87	\$67.83	\$1.00	\$43.58	\$0.00	\$5.00	\$11.60	\$350.72
Port Orford Cedar									
\$179.78	\$2.38	\$4.87	\$115.81	\$1.00	\$45.58	\$0.00	\$5.00	\$11.60	\$366.02

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$571.13	\$220.41	\$0.00
Port Orford Cedar	\$0.00	\$458.67	\$92.65	\$0.00



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summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Port Orford Cedar	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	870	\$220.41	\$191,756.70
Port Orford Cedar	30	\$92.65	\$2,779.50

Gross Timber Sale Value

Recovery: \$194,536.20

Prepared by: Joe Goldsby

Phone: 541-929-3266

SUMMARY OF ALL PROJECT COSTS

Sale Name: Cellmaker

Date: June 25, 2013

Time: 13:58

Project #1 - New Construction

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
B4 to B5	5.8 sta	\$1,223
B6 to B7	7.7 sta	\$1,334

TOTALS	13.5 sta	\$2,557
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Project #2 - Improvements

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to A1	45.0 sta	\$3,121
A2 to A3	3.1 sta	\$127
B to B1	39.5 sta	\$1,863
B2 to B3	9.5 sta	\$110

TOTALS	97.1 sta	\$5,221
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Project #3 - Post Harvest Activities

Tank traps (2)
Landing patch rock

\$850

Move in

	<u>Cost</u>	<u>On-site move</u>
Crawler tractor, D-7 or equiv.	\$488	
Grader, Cat 14-G or equiv.	\$304	
Backhoe x 2	\$608	\$77

TOTAL		\$1,477
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GRAND TOTAL **\$10,105**

Compiled by J. Doyal

Date 06/25/2013

SUMMARY OF CONSTRUCTION COST

SALE Cellmaker - Project #2 LENGTH improve 45.0 sta
 ROAD A to A1

IMPROVEMENT

Shape surface 45.0 sta. @ \$13.75 /sta = \$619
 (with road grader)

TOTAL IMPROVEMENT \$619

SURFACING

		Size	Cost/yd		
Surface rock (4"lift)	18 cy of	3-0"	\$16.48	=	\$297
(Culvert installation sta. 28+10)					
Spot Rock	90 cy of	3-0"	\$16.48	=	\$1,483

TOTAL ROCK COST = \$1,780

SPECIAL PROJECTS

Install Culvert (CPP)	1 culvert	@	\$13.00 /ft.	=	\$390
(Sta. 28+10, 18" x 30')					
Backhoe	2 hr.	@	\$77.00 /hr.	=	\$154
Clean out culverts	5 culverts	@	\$25.67 ea.	=	\$128
(inlets and outlets)					
Culvert disposal					\$50

TOTAL SPECIAL PROJECTS COST = \$722

Compiled by: J. Doyal
 Date: Jun 25, 2013

GRAND TOTAL =====> \$3,121

SUMMARY OF CONSTRUCTION COST

SALE Cellmaker - Project #2 LENGTH improve 3.1 sta
ROAD A2 to A3

IMPROVEMENT

Re-open road 3.1 sta. @ \$11.55 /sta = \$36
(with road grader)
Re-open landing 1 hr. @ \$90.75 /hr. = \$91
(with road grader at Pt. A3)

TOTAL IMPROVEMENT \$127

Compiled by: J. Doyal
Date: Jun 25, 2013

GRAND TOTAL =====> \$127

SUMMARY OF CONSTRUCTION COST

SALE Cellmaker - Project #2 LENGTH improve 39.5 sta
ROAD B to B1

IMPROVEMENT

Shape surface 39.5 sta. @ \$9.90 /sta = \$391
(with road grader)

TOTAL IMPROVEMENT \$391

SURFACING

Spot Rock 81 cy of Size 1 1/2-0" Cost/yd \$18.17 = \$1,472

TOTAL ROCK COST = \$1,472

Compiled by: J. Doyal
Date: Jun 25, 2013

GRAND TOTAL =====> \$1,863

SUMMARY OF CONSTRUCTION COST

SALE Cellmaker - Project #2 LENGTH improve 9.5 sta sta
ROAD B2 to B3

IMPROVEMENT

Shape surface 9.5 sta. @ \$11.55 /sta = \$110
(with road grader)

TOTAL IMPROVEMENT \$110

Compiled by:
Date:

J. Doyal
Jun 25, 2013

GRAND TOTAL =====> \$110

SUMMARY OF CONSTRUCTION COST

SALE Cellmaker - Project #1 LENGTH const 7.7 sta
ROAD B4 to B5

CLEARING AND GRUBBING

0.42 acres	@	\$902.00 /acre	=	\$379 road
0.10 acres	@	\$902.00 /acre	=	\$90 landing

TOTAL CLEARING AND GRUBBING = \$469

EXCAVATION

With D7 dozer or equivalent

Construct road	7.7 sta.	@	\$66.32 /sta.	=	\$511
Construct landing (Pt. B5)	2 hr.	@	\$121.25 /hr.	=	\$243

TOTAL EXCAVATION = \$754

Compiled by: J. Doyal
Date: Jun 25, 2013

GRAND TOTAL =====> \$1,223

SUMMARY OF CONSTRUCTION COST

SALE Cellmaker - Project #1 LENGTH const 5.8 sta
ROAD B6 to B7

CLEARING AND GRUBBING

0.32 acres	@	\$902.00 /acre	=	\$289 road
0.10 acres	@	\$902.00 /acre	=	\$90 landing

TOTAL CLEARING AND GRUBBING = \$379

EXCAVATION With D7 dozer or equivalent

Construct road	5.8 sta.	@	\$66.32 /sta.	=	\$385
Construct landing	2 hr.	@	\$121.25 /hr.	=	\$243

TOTAL EXCAVATION = \$628

SURFACING

			Size	Cost/yd	
Junction Patch Rock (Pt. B6)	18 cy of		1 1/2-0"	\$18.17	= \$327

TOTAL ROCK COST = \$327

Compiled by: J. Doyal
Date: Jun 25, 2013

GRAND TOTAL =====> \$1,334

SUMMARY OF CONSTRUCTION COST

SALE Cellmaker - Project #3 Post Harvest
ROAD

SURFACING

		Size	Cost/CY		
Landing patch rock (3) (A to A1)	27 cy of	3-0"	\$16.48	=	\$ 445
Landing patch rock (2) (B to B1)	18 cy of	1½-0"	\$18.17	=	\$ 327

TOTAL SURFACING COST = \$772

MISCELLANEOUS PROJECTS

Tank trap at Pt. B1	0.5 hr.	@	\$77.00 /hr. =	\$39
Tank trap at Pt. B5	0.5 hr.	@	\$77.00 /hr. =	\$39

TOTAL MISCELLANEOUS PROJECTS = \$78

Compiled by:
Date:

J. Doyal
Jun 25, 2013

GRAND TOTAL =====>

\$850

SUMMARY OF MAINTENANCE COST

SALE Cell-Maker - Final Maintenance Cost Estimate
 ROAD (Costed in appraisal, not in project costs)

Grading Move-in \$ 304.00

<u>Road Segment</u>	<u>Length</u>	<u>Cost/Sta</u>	<u>Cost</u>	<u>Mileage</u>
A to A1	45.0	\$13.75	\$618.75	0.85
B to B1	39.5	\$9.90	\$391.05	0.75
B2 to B3	9.5	\$11.55	\$109.73	0.18
Totals	94.0		\$1,119.53	1.78

Maintenance Rock:

	<u>Volume</u>	<u>Cost/CY</u>	<u>Cost</u>
1½-0"	18	\$18.17	\$327.06
3-0"	18	\$16.48	\$296.64

Grand Total \$ 2,047.23

TS Volume 900 MBF

Cost / MBF = \$2.27

NOTES:

**Cell-Maker 341-14-62
FY 2014**

TIMBER CRUISE REPORT

1. **Sale Area Location:** Portions of Section 15, T11S, R8W, W.M., Lincoln County, Oregon.
2. **Fund Distribution:**
 - a. **Fund** BOF 100%
 - b. **Tax Code**
3. **Sale Acreage by Area:**

Area	Treatment	Gross Cruise Acres	Acreage Adjustment	Gross Sale Acres	Acreage Comp. Method	Closure
1	Partial Cut	24	Gross Acre	24	Ortho photo, GIS, GPS	n/a
2	Partial Cut	30	Gross Acre	30	Ortho photo, GIS, GPS	n/a
3	Partial Cut	27	Gross Acre	27	Ortho photo, GIS, GPS	n/a
4	Partial Cut	--	Gross Acre	2	Ortho photo, GIS, GPS	n/a
5	Partial Cut	8	Gross Acre	8	Ortho photo, GIS, GPS	n/a

4. **Cruisers and Cruise Dates:** The sale area was cruised by Jim Doyal, Joe Goldsby, Evelyn Hukari, and Dave Wiger in June of 2013.
5. **Cruise Method and Computation:** The sale consists of five partial cut areas and was cruised using variable plot sampling. Areas 1 and 5 were cruised using a 20 BAF. Plots were located randomly throughout the two areas with 16 plots sampled in Area 1 and 9 plots sampled in Area 5. Trees contributing to excess basal area on each plot (above the residual basal area target of 130 ft³/acre) were measure for DBH and height. A total of 22 trees on Area 1 and 12 trees on Area 5 were measured. A standard grade, defect, and breakage were applied in these Areas. Data was entered into a variable plot density management worksheet to determine removal volumes. The removal volume in Area 4 was determined by utilizing data obtained from the Area V cruise.

Area 2 was cruised using a 40 BAF for Douglas-fir and a 20 BAF for Port Orford cedar. Plots were located 144 feet apart on north-south running lines spaced 287 feet apart. Every other plot was measured for DBH, height, grade, and defect. A total of 28 plots were sampled, with 16 count plots and 12 measure plots.

Area 3 was cruised using a 20 BAF. Plots were located 144 feet apart on north-south running lines spaced 287 feet apart. Every other plot was measured for DBH, height, grade, and defect. A total of 24 plots were sampled, with 12 count plots and 12 measure plots.

Data from Area 2 and 3 was recorded on cruise cards in field notebooks and manually entered into Atterbury Super A.C.E. -Version 2.40. The cruise data was processed by Area for volume computations and initial cruise statistics. Results were combined to produce final cruise statistics.

Stereo photos, digital ortho photos, LiDar data, and GPS data from a Garmin GPSMap 60CSx were used to map the boundaries for the sale, and ArcMap 10.1 was used to determine gross acreage.

6. Timber Description: Timber in Areas 1, 4, and 5 is 32 to 35 year-old planted Douglas-fir. Approximately 1 acre within Area 5 is 69 year-old Douglas-fir. Area 2 consists of an overstory of 75 year-old Douglas-fir. The western third of Area 2 contains an understory of planted Port Orford cedar. Area 3 primarily contains 47 year-old Douglas-fir with approximately 4 acres of 69 year-old Douglas-fir. Reserved tree species detected in the unit include red alder, western hemlock, and sitka spruce. Reserved trees were found in very small amounts through all Areas.

Port Orford cedar root disease has been detected in Area I. Measures will need to be taken to avoid introduction into Area 2.

7. Statistical analysis and stand summary: (See attached “Statistics” and “Stand Table Summary”.)

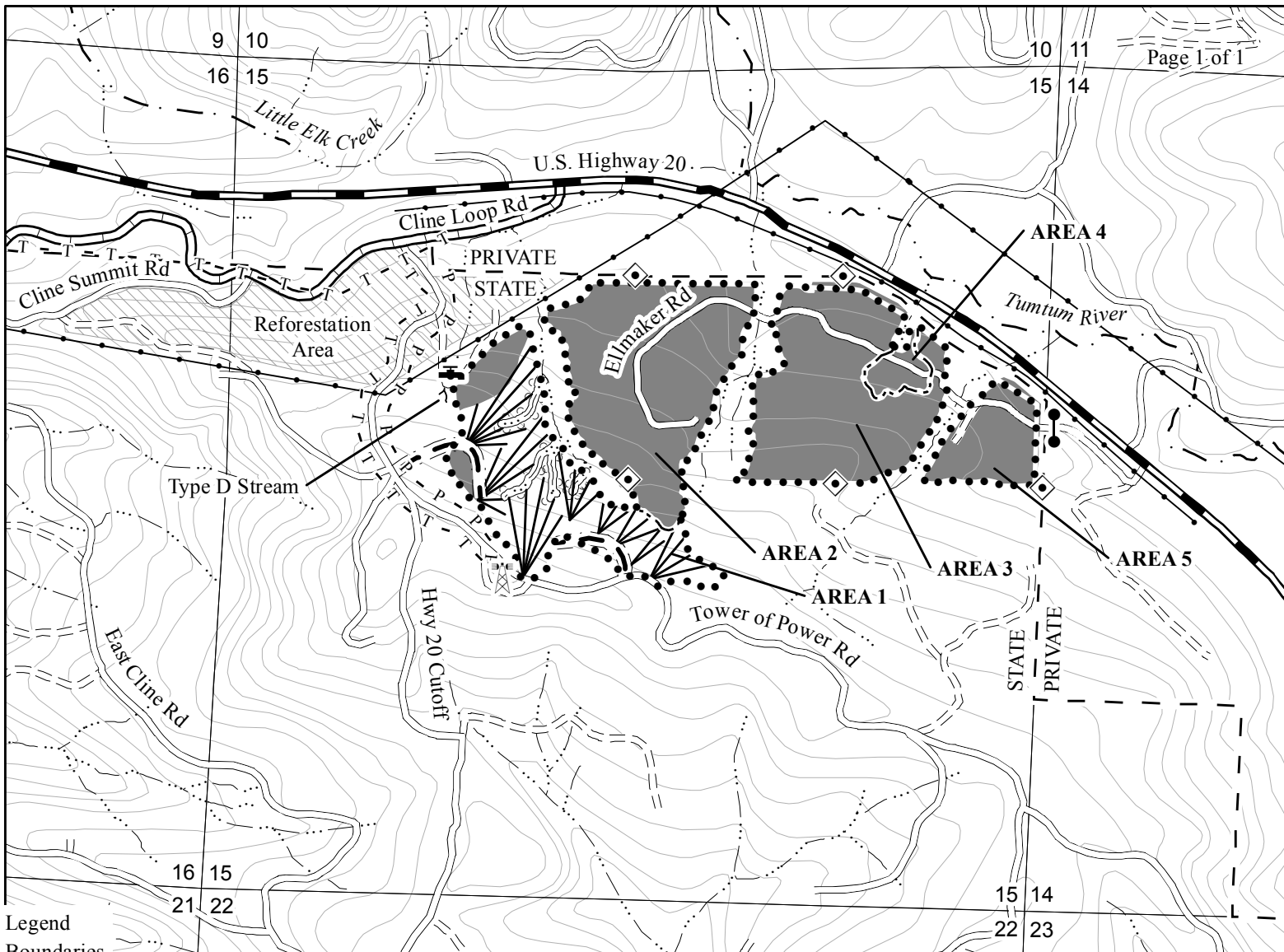
Area	Target CV	Target SE%	Actual CV	Actual SE%
2 & 3	50%	7%	48%	6.6%

NOTE: Percentages are for Net BF volume, see attached “Project Statistics” and “Type Statistics” for other values.

8. Total Volume (MBF) by Species and Grade: See attached “Stand Table Summary” and “Log Stock Table.” Volumes do not include ingrowth.

Species	Gross Cruise Volume	Net Cruise Volume	Hidden D & B	Hidden D & B (MBF)	Net Sale Volume
Area 1					
Douglas-fir	181	181	5%	9	172
Area 2					
Douglas-fir	425	419	2%	8	411
Port Orford cedar	31	31	1%	1	30
Area 3					
Douglas-fir	215	212	2%	5	207
Area 4					
Douglas-fir	17	17	5%	1	16
Area 5					
Douglas-fir	68	68	5%	4	64
Total					
Douglas-fir	906	897	--	27	870
Port Orford cedar	31	31	--	1	30

Species	DBH	Net Vol.	2-Saw	3-Saw	4-Saw	% D & B
Area 1	Grade Percentages		--	70%	30%	
Douglas-fir	11.5	172	--	120	52	5%
Area 2	Grade Percentages		54%	41%	5%	
Douglas-fir	17.4	411	222	168	21	4%
	Grade Percentages		14%	63%	23%	
Port Orford cedar	13.3	30	4	19	7	2%
Area 3	Grade Percentages		46%	43%	11%	
Douglas-fir	18.2	207	95	89	23	4%
Area 4	Grade Percentages		--	70%	30%	
Douglas-fir	14.5	16	--	11	5	5%
Area 5	Grade Percentages		--	70%	30%	
Douglas-fir	14.5	64	--	45	19	5%
Total	Grade Percentages		35%	51%	14%	--
Douglas-fir	15.6	870	317	433	120	4%
	Grade Percentages		14%	63%	23%	--
Port Orford cedar	13.3	30	4	19	7	3%



- Legend**
- Boundaries**
- Timber Sale Boundary
 - - - - Area Boundary (Posted)
 - - - State Forest Property Boundary
 - - - Right of Way (Posted)
- Roads**
- ▬ Highway
 - ▬▬ County Road
 - ▬▬▬ Surfaced Road
 - ▬▬▬▬ Unsurfaced Road
 - ▬▬▬▬▬ New Construction
- Streams**
- - · Type F Stream
 - Type D Stream
 - · · · Type N Stream
 - ▬▬▬▬ Unposted Stream Buffer
- Yarding Method**
- ▬▬▬ Tractor Yarding Area
 - ▬▬▬ Cable Corridors
 - ▬▬▬ Reforestation Area
- T - T - Buried Power Line
 P - P - Buried Fiber Optic
 — Overhead Transmission Line
- ◆ Land Survey Monument
 - Gate
 - ⊠ Domestic Water Source

LOGGING PLAN

OF TIMBER SALE CONTRACT NO. 341-14-62
 CELL-MAKER
 PORTIONS OF SECTION 15, T11S, R8W, W.M.,
 LINCOLN COUNTY, OREGON

AREA	NET ACRES	
	TRACTOR	CABLE
1 (PC)	4	18
2 (PC)	29	0
3 (PC)	26	0
4 (PC)	2	0
5 (PC)	8	0
TOTAL	69	18

This product is for informational use and may not have been prepared for or be suitable for legal, engineering or survey purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of this information.

Scale
 1:12,000

