



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Big Bear
Sale 341-11-53

District: Tillamook

Date: November 23, 2010

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$338,791.11	\$97,480.80	\$436,271.91
		Project Work:	\$(88,330.00)
		Advertised Value:	\$347,941.91



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timber description

Location: Portions of Sections 18 and 19, T1S, R7W and Sections 13 and 24, T1S, R8W, W.M., Tillamook County, Oregon.

Stand Stocking: 80%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	17	0	95
Alder (Red)	14	0	90

Volume by Grade	2S	3S	4S	Total
Douglas - Fir	1,167	935	281	2,383
Alder (Red)	65	43	324	432
Total	1,232	978	605	2,815



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comments: Pond Values Used: 3rd Quarter Calendar Year 2010.

Western Redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Cost
\$595/MBF = \$850/MBF - \$255/MBF

Pulp (conifer & hardwood) Price = \$41/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/MBF x 2,815 MBF = \$5,630

Snag creation: 313 snags x \$10 = \$3,130

TOTAL Other Costs (with Profit & Risk to be added) = \$8,760

Other Costs (No Profit & Risk added):

Non-project Roads:

Surfacing non-project road junctions: 1 station x 50 yards pit
run/sta. x \$6/yard = \$300

Slash Piling and Sorting: \$2.50/acre x 63 (cable) acres = \$158

Rolling dips 4 x \$150 = \$600

OHV ATV filter: \$75 x 3 filters = \$225

Trask public Safety Road Fee: \$20/MBF x 2,421 MBF (acres in Trask
Basin) = \$48,420

TOTAL Other Costs (No Profit & Risk added) = \$49,703

ROAD MAINTENANCE

Road Maintenance:

• Spot rocking (50cy/miles 3.5 miles x \$6.00/cy)/2,815 MBF =
\$0.37/MBF

• Interim Grading: \$250/mile x 3.5 miles/ 2,815 MBF = \$0.31/MBF

• Final Grading : \$500/mile x 3.5 miles/ 2,815 MBF = \$0.62/MBF

• Compaction (haul route) (185 stations x \$18/station) + \$111
move-in)/2,815 MBF = \$1.22/MBF.

Final grading and compaction includes all roads on haul route.

TOTAL ROAD MAINTENANCE COST: \$2.52/MBF



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logging conditions

combination#: 1 Douglas - Fir 63.00%
 Alder (Red) 59.24%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Shovel **Process:** Feller Buncher

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
loads / day: 7.0 **bd. ft / load:** 2,500
cost / mbf: \$82.20

machines: Feller Buncher w/ Delimber

combination#: 2 Douglas - Fir 37.00%
 Alder (Red) 40.76%

yarding distance: Medium (800 ft) **downhill yarding:** No
logging system: Cable: Small Tower <=40 **Process:** Stroke Delimber

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF
loads / day: 6.0 **bd. ft / load:** 2,500
cost / mbf: \$188.95

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



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logging costs

Operating Seasons:	2.00	Profit Risk:	10.00%
Project Costs:	\$88,330.00	Other Costs (P/R):	\$8,760.00
Slash Disposal:	\$0.00	Other Costs:	\$49,703.00

Miles of Road

Road Maintenance: \$2.52

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	2.8
Alder (Red)	\$0.00	2.0	2.2



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District: Tillamook

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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									
\$121.69	\$2.65	\$3.12	\$79.55	\$3.11	\$21.01	\$0.00	\$5.00	\$17.66	\$253.79
Alder (Red)									
\$125.72	\$2.77	\$3.12	\$159.09	\$3.11	\$29.38	\$0.00	\$5.00	\$17.66	\$345.85

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$395.96	\$142.17	\$0.00
Alder (Red)	\$0.00	\$571.50	\$225.65	\$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	2,383	\$142.17	\$338,791.11
Alder (Red)	432	\$225.65	\$97,480.80

Gross Timber Sale Value

Recovery: \$436,271.91

Prepared by: Nick Stumpf

Phone: 503-842-2545

Pulp Appraisal

Sale Name	Big Bear
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Species	Douglas-fir	Alder
Stems Per/ac.	76	46
Acres	181	181
Total Stems	13756	8326
BF/Stem, Conversion	10	10
Total MBF Per/Species	138	83
Pond Value Per/MBF	\$270	\$340
Logging + Hauling Costs	\$201.24	\$284.81
Stumpage	\$68.76	\$55.19
Tons Per/MBF, Conversion	10	10
Price Per/Ton	\$6.88	\$5.52
Total Tons Per/Species	1376	833
Total Value	\$9,458.63	\$4,595.12

	Total Price	Price/Ton	Price/MBF
	\$14,053.75	\$6.36	\$63.64
Total Less P/R35%	\$9,134.93	\$4.14	\$41.37

*Contract Price	\$41.00
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*Pulp price rounded down to nearest whole dollar



STEWARDSHIP IN FORESTRY

Big Bear

Volume Summary

Areal Modified Clear-cut				
114 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol* MBF
Douglas-fir	12.7	1445	6.5%	1350
Alder	3.0	337	11.2%	299
TOTAL	15.6	1782		1649

Area 2-Modified Clear-cut				
67 acres				
SPECIES	Gross MBF/ Acre	Gross MBF	Hidden D&B	Net Vol* MBF
Douglas-fir	16.3	1095	5.7%	1033
Alder	2.2	145	8.4%	133
TOTAL	18.5	1240		1166

TOTAL SALE VOLUME			181 acres
SPECIES	Gross Vol. (MBF)	Net Vol. (MBF)	
Douglas-fir	2540	2383	
Red Alder	482	432	
TOTAL	3022	2815	



PROJECT SUMMARY SHEET

Sale: Big Bear

CONSTRUCTION

Point	E to F	60+35	stations =	\$55,833.40
Point	G to H	7+30	stations =	\$2,456.11
Point	I to J	5+35	stations =	\$2,221.65
Point	K to L	5+55	stations =	\$2,249.59
Point	M to N	2+50	stations =	\$1,866.55
Point	O to P	9+50	stations =	\$6,090.35
SUBTOTAL CONSTRUCTION				\$70,717.65

IMPROVEMENT

Point	A to B	25+50	stations =	\$5,556.10
Point	C to D	36+20	stations =	\$5,897.78
Point	Q to R	60+00	stations =	\$5,322.00
SUBTOTAL IMPROVEMENT				\$16,775.88

MOVE IN

\$836.47

GRAND TOTAL

\$88,330.00

SUMMARY OF CONSTRUCTION COST

Sale:	Big Bear			Road:	A to B			
Construction -	0+00 0.00	stations miles	Improvement -	25+50 0.48	stations miles	Reconstruction -	0+00 0.00	stations miles

IMPROVEMENT: EXCAVATION - Road Earthwork	25.50	sta. @	\$10.00	per sta. =	\$255.00	
					TOTAL EXCAVATION	\$255.00

ROCK						
Spot Rock	*	200	cy. of	Jaw-run	@	\$10.48 per c.y.= \$2,096.00
Fill Armor/Temp. Crossing	16+50	100	cy. of	Jaw-run	@	\$10.84 per c.y.= \$1,084.00
						TOTAL ROCK
						\$3,180.00

SPECIAL PROJECTS						
Construct Temporary Stream Crossing @ 16+50		6.00	hours @	\$130.00	per hour	\$780.00
Remove Temporary Stream Crossing @ 16+50		4.00	hours @	\$130.00	per hour	\$520.00
Grade and shape road -		25.50	stations @	\$19.00	per station	\$484.50
Roll road w/ vibratory roller prior to rocking -		25.50	stations @	\$13.20	per station	\$336.60
					TOTAL SPECIAL PROJECTS	\$2,121.10

GRAND TOTAL	\$5,556.10
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SUMMARY OF CONSTRUCTION COST

Sale:

Big Bear

Road:

C to D

Construction -	0+00	stations	Improvement -	36+20	stations	Reconstruction -	0+00	stations
	0.00	miles		0.69	miles		0.00	miles

IMPROVEMENT: EXCAVATION -

Road Earthwork	36.20	sta. @	\$10.00	per sta. =	\$362.00	
					TOTAL EXCAVATION	\$362.00

ROCK

Spot Rock	400	cy. of	Jaw-run	@	\$10.50 per c.y. =	\$4,200.00
						TOTAL ROCK
						\$4,200.00

SPECIAL PROJECTS

Grade and shape road -	36.20	stations @	\$19.00	per station	\$687.80	
Proof-Roll subgrade prior to rocking	36.20	stations @	\$4.70	per station	\$170.14	
Roll road w/ vibratory roller prior to rocking -	36.20	stations @	\$13.20	per station	\$477.84	
					TOTAL SPECIAL PROJECTS	\$1,335.78

GRAND TOTAL	\$5,897.78
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SUMMARY OF CONSTRUCTION COST

Sale: **Big Bear**

Road: **E to F**

Construction -	60+35	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	1.14	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		60+35	30%			\$191		\$11,526.85
								TOTAL
								\$11,526.85

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>		Qty	Description	Unit Price	Total Price
0	LF of 18"			\$0.00	
60	LF of 42"			\$2,050.00	\$2,050.00
				<u>\$2,050.00</u>	
<u>Culvert Stakes & Markers</u>					
2	markers			\$16.00	\$16.00
				<u>\$16.00</u>	
					TOTAL CULVERTS
					\$2,876.00

ROCK

0+00	to	60+35	3,270	cy. of	Jaw-run	@	\$11.15 per c.y.=	\$36,460.50
Fill Armor		10+25	40	cy. of	Riprap	@	\$11.42 per c.y.=	\$456.80
Fill Armor		25+70	70	cy. of	Riprap	@	\$11.42 per c.y.=	\$799.40
								TOTAL ROCK
								\$37,716.70

SPECIAL PROJECTS

Fill Construction & Compaction @ 25+70	8.00	hours @	\$130.00	per hour	\$1,040.00
Grade and shape road -	60.35	stations @	\$15.50	per station	\$935.43
Roll subgrade w/ vibratory roller prior to rocking -	60.35	stations @	\$13.20	per station	\$796.62
Grass seed and fertilize -	2.77	acres @	\$220.00	per acre	\$609.40
Mulching 100 Ft. of Stream Crossing-	0.554	acres @	\$600.00	per acre	\$332.40
					<u>TOTAL SPECIAL PROJECTS</u>
					\$3,713.85

GRAND TOTAL **\$55,833.40**

SUMMARY OF CONSTRUCTION COST

Sale: **Big Bear**

Road: **G to H**

Construction -	7+30	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		7+30	10%		Outslope	\$90		\$657.00	
								TOTAL	\$657.00

ROCK									
0+00	to	1+50	140	cy. of	Jaw-run	@	\$10.82 per c.y.=	\$1,514.80	
								TOTAL ROCK	\$1,514.80

SPECIAL PROJECTS

Grade and shape road -	7.30	stations @	\$15.50	per station	\$113.15
Roll subgrade w/ vibratory roller prior to rocking -	7.30	stations @	\$13.20	per station	\$96.36
Grass seed and fertilize -	0.34	acres @	\$220.00	per acre	\$74.80
					TOTAL SPECIAL PROJECTS
					\$284.31

GRAND TOTAL **\$2,456.11**

SUMMARY OF CONSTRUCTION COST

Sale: **Big Bear**

Road: **I to J**

Construction -	5+35	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.10	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	=	\$481.50	
0+00		5+35	10%		Outslope	\$90		<u>\$481.50</u>	\$481.50
								TOTAL	

ROCK								\$1,531.60	
0+00	to	1+50	140	cy. of	Jaw-run	@	\$10.94 per c.y.=	<u>\$1,531.60</u>	\$1,531.60
								TOTAL ROCK	

SPECIAL PROJECTS										
Grade and shape road -						5.35	stations @	\$15.50	per station	\$82.93
Roll subgrade w/ vibratory roller prior to rocking -						5.35	stations @	\$13.20	per station	\$70.62
Grass seed and fertilize -						0.25	acres @	\$220.00	per acre	\$55.00
								<u>TOTAL SPECIAL PROJECTS</u>		\$208.55

GRAND TOTAL **\$2,221.65**

SUMMARY OF CONSTRUCTION COST

Sale: **Big Bear**

Road: **K to L**

Construction -	5+55	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.11	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	=	\$499.50	
0+00		5+55	10%		Outslope	\$90		<u>\$499.50</u>	\$499.50
								TOTAL	

ROCK									
0+00	to	1+50		140	cy. of	Jaw-run	@	\$10.97 per c.y. =	\$1,535.80
								<u>\$1,535.80</u>	\$1,535.80
								TOTAL ROCK	

SPECIAL PROJECTS

Grade and shape road -	5.55	stations @	\$15.50	per station	\$86.03
Roll subgrade w/ vibratory roller prior to rocking -	5.55	stations @	\$13.20	per station	\$73.26
Grass seed and fertilize -	0.25	acres @	\$220.00	per acre	\$55.00
					<u>TOTAL SPECIAL PROJECTS</u>
					\$214.29

GRAND TOTAL **\$2,249.59**

SUMMARY OF CONSTRUCTION COST

Sale:

Big Bear

Road:

M to N

Construction -	2+50	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.05	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	<u>Avg. Dist.</u> To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	\$225.00	
0+00		2+50	10%		Outslope	\$90		<u>TOTAL</u>	\$225.00

ROCK									
0+00	to	1+50	140	cy, of	Jaw-run	@	\$11.04 per c.y.=	\$1,545.60	
								TOTAL ROCK	\$1,545.60

SPECIAL PROJECTS

Grade and shape road -	2.50	stations @	\$15.50	per station	\$38.75	
Roll subgrade w/ vibratory roller prior to rocking -	2.50	stations @	\$13.20	per station	\$33.00	
Grass seed and fertilize -	0.11	acres @	\$220.00	per acre	\$24.20	
					<u>TOTAL SPECIAL PROJECTS</u>	\$95.95

GRAND TOTAL **\$1,866.55**

SUMMARY OF CONSTRUCTION COST

Sale:	Big Bear				Road:	O to P		
Construction -	9+50	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.18	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		4+00	40%		Outslope	\$243	=	\$972.00	
4+00		6+50	30%		Outslope	\$191	=	\$477.50	
6+50		9+50	10%		Outslope	\$90	=	\$270.00	
								TOTAL	\$1,719.50

ROCK									
0+00	to	6+50	380	cy. of	Jaw-run	@	\$10.53 per c.y.=	\$4,001.40	
								TOTAL ROCK	\$4,001.40

SPECIAL PROJECTS									
Grade and shape road -					9.50	stations @	\$15.50	per station	\$147.25
Roll subgrade w/ vibratory roller prior to rocking -					9.50	stations @	\$13.20	per station	\$125.40
Grass seed and fertilize -					0.44	acres @	\$220.00	per acre	\$96.80
								TOTAL SPECIAL PROJECTS	\$369.45

GRAND TOTAL **\$6,090.35**

SUMMARY OF CONSTRUCTION COST

Sale: **Big Bear**

Road: **Q to R**

<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>60+00</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
	0.00	miles		1.14	miles		0.00	miles

SPECIAL PROJECTS

Grade and shape road -	60.00	stations @	\$15.50	per station	\$930.00
Pull/Construct ditch & scatter waste material -	60.00	stations @	\$60.00	per station	\$3,600.00
Roll subgrade w/ vibratory roller prior to rocking -	60.00	stations @	\$13.20	per station	\$792.00
				TOTAL SPECIAL PROJECTS	\$5,322.00
GRAND TOTAL					\$5,322.00

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Jaw_run	Location:	NW1/4 Sec. 20, T1S, R7W, W.M.
Sale:	Big Bear	Road:	5020 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	5020 c.y.
Drill Pct.:	50%	In Place Total:	3586 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. \$3,327.32

Drill & Shoot:	\$2.50	/cu.yd.	x	1793	cu.yds.	=	\$4,482.50
Rip Rock:	\$1.90	/cu.yd.	x	1793	cu.yds.	=	\$3,406.70
Push Rock:	\$0.60	/cu.yd.	x	5020	cu.yds.	=	\$3,012.00
Load Crusher:	\$0.60	/cu.yd.	x	5020	cu.yds.	=	\$3,012.00
Crush Rock:	\$2.50	/cu.yd.	x	5020	cu.yds.	=	\$12,550.00
Load Dump Truck:	\$0.70	/cu.yd.	x	5020	cu.yds.	=	\$3,514.00

Subtotal \$33,304.52

Move In/Set-up Jaw							\$733.00
Move In and set up Drill and Compressor	1	@	\$202.78	=		\$202.78	
Move in Roller and Compactor	1	@	\$202.78	=		\$202.78	
Move in Grader	1	@	\$48.67	=		\$48.67	
Move in D-8	1	@	\$292.09	=		\$292.09	
Move in Loader	1	@	\$194.26	=		\$194.26	
Move in Excavator	1	@	\$313.95	=		\$313.95	
Move in Trucks	3	@	\$57.54	=		\$172.62	
Change Gradation							
						Subtotal	\$2,160.15

Base Cost= \$7.06 Per Cu.Yd.

TOTAL PRODUCTION COSTS \$35,464.67

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 Spot Rock (Jaw-run)	2.32	1.10	7.06	10.48	200	\$2,096.00	
A to B Fill Armor/Temp. Crossing (Jaw-r)	2.38	1.40	7.06	10.84	100	\$1,084.00	
C to D Spot Rock (Jaw-run)	2.34	1.10	7.06	10.50	400	\$4,200.00	
E to F 0 6035 (Jaw-run)	2.99	1.10	7.06	11.15	3270	\$36,460.50	
E to F Fill Armor (Riprap)	2.96	1.40	7.06	11.42	40	\$456.80	
E to F Fill Armor (Riprap)	2.96	1.40	7.06	11.42	70	\$799.40	
G to H 0 150 (Jaw-run)	2.66	1.10	7.06	10.82	140	\$1,514.80	
I to J 0 150 (Jaw-run)	2.78	1.10	7.06	10.94	140	\$1,531.60	
K to L 0 150 (Jaw-run)	2.81	1.10	7.06	10.97	140	\$1,535.80	
M to N 0 150 (Jaw-run)	2.88	1.10	7.06	11.04	140	\$1,545.60	
O to P 0 650 (Jaw-run)	2.37	1.10	7.06	10.53	380	\$4,001.40	
				Total C.Y.	5020	Sub Total	\$55,225.90

TOTAL ROCKING COSTS \$55,225.90

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

Sale: **Big Bear**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
11.0	Pavement	30
4.0	Main Lines	7
0.5	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	Excavators (Large)	\$322.38	1	\$44.80	0.00	0.00	0	\$0.00	\$322.38
1	Tractor (D8)	\$308.96	2	\$15.10	0.00	0.00	0	\$0.00	\$308.96
2	Dump Truck (10 cy +)	\$147.59		\$2.85	0.00	0.00	0	\$0.00	\$147.59
1	Water Truck (1500 Gal)	\$57.54		\$2.85	0.00	0.00	0	\$0.00	\$57.54
TOTAL MOVE-IN COSTS:								\$836.47	

TC TLOGSIVB

Log Stock Table - MBF

Project: **BIGBEAR**

T01S R07W S24 TMC

T01S R07W S24 TMC

Twp Rge Sec Tract
01S 07W 24 AREA 1

Type Acres Plots Sample Trees
MC 114.00 40 103

Page 2
Date 9/14/2010
Time 6:56:40AM

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
DL		CO	2M	40		62		62	54.4							20	41			
DL		CO	3M	32		2		2	1.4				2							
DL		CO	3M	33		3		3	3.0				2		2					
DL		CO	3M	35		2		2	1.7				2							
DL		CO	3M	40		43		43	37.3				3	2	25					12
DL		CO	4M	27		2		2	2.2			2								
DL		Totals				114		114	6.2			2	3	8	25	2		20	41	12
SL		CO	3M	20		19		19	100.0										19	
SL		Totals				19		19	1.1										19	
WL		CO	2M	40		19		19	75.0									19		
WL		CO	3M	40		6		6	22.5					6						
WL		CO	4M	13		1		1	2.5				1							
WL		Totals				25		25	1.4				1		6			19		
NL		CO	2M	40		16		16	82.4										16	
NL		CO	3M	40		3		3	17.6					3						
NL		Totals				20		20	1.1					3					16	
Total All Species						1,959	6.8	1,826	100.0		111	134	435	118	221	159	315	292	42	

TC		TSTNDSUM		Stand Table Summary												
Project														BIGBEAR		
T01S R07W S24 TMC										T01S R07W S24 TMC						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
01S	07W	24	AREA 2	MC	67.00	31	80	Date:	09/13/2011							
									Time:	11:30:31AM						
Spc	S T	Sample			Av			Average Log		Net			Totals			
		DBH	Trees	16'	FF	Ht	Tot	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Net Bd.Ft. Acre	Tons
DF		8	2	86	53	14.535	5.07	14.54	4.2	19.0	1.76	62	276	118	41	19
DF		12	1	86	70	3.230	2.54	3.23	17.1	57.0	1.58	55	184	106	37	12
DF		13	5	84	73	13.642	12.68	19.15	17.7	55.6	9.67	338	1,064	648	227	71
DF		14	6	85	87	14.172	15.22	26.04	17.7	62.2	13.13	461	1,619	880	309	108
DF		15	2	89	79	4.135	5.07	6.20	20.5	69.7	3.63	127	432	243	85	29
DF		16	5	84	83	9.043	12.68	14.49	25.4	80.8	10.48	368	1,171	702	246	78
DF		17	6	83	96	9.735	15.22	19.47	26.4	90.8	14.67	515	1,768	983	345	118
DF		18	4	83	91	5.758	10.15	11.52	26.5	83.1	8.71	305	957	583	204	64
DF		19	4	83	103	5.167	10.15	10.33	32.9	104.4	9.68	340	1,079	648	228	72
DF		20	2	81	97	2.326	5.07	4.65	35.5	104.5	4.71	165	486	316	111	33
DF		21	3	82	84	3.096	7.61	5.17	42.4	110.2	6.25	219	570	419	147	38
DF		22	2	84	116	1.922	5.07	3.84	46.6	152.0	5.11	179	584	342	120	39
DF		23	4	83	111	3.525	10.15	7.05	51.3	169.7	10.31	362	1,196	691	242	80
DF		24	2	78	98	1.615	5.07	2.42	62.2	148.8	4.30	151	361	288	101	24
DF		25	2	81	104	1.488	5.07	2.98	61.6	208.8	5.22	183	621	350	123	42
DF		26	2	83	112	1.387	5.07	2.77	62.4	215.6	4.94	173	598	331	116	40
DF		27	2	84	118	1.281	5.07	3.20	62.3	231.8	5.68	199	742	381	134	50
DF		28	2	81	109	1.182	5.07	2.36	71.9	237.7	4.84	170	562	324	114	38
DF		30	1	87	137	.517	2.54	1.55	75.8	351.5	3.35	118	545	224	79	37
DF		32	1	77	115	.454	2.54	.91	102.0	294.5	2.65	93	268	177	62	18
DF		37	1	75	123	.340	2.54	.68	145.0	489.2	2.81	99	332	188	66	22
DF	Totals		59	84	84	98.552	149.68	162.56	28.8	94.8	133.44	4,680	15,415	8,941	3,136	1,033
RA		10	2	83	46	8.872	4.84	4.44	5.4	20.0	.65	24	89	44	16	6
RA		11	1	79	72	3.474	2.42	3.47	13.0	36.0	1.25	45	125	84	30	8
RA		13	3	80	55	7.915	7.26	7.92	17.8	54.4	3.88	141	430	260	94	29
RA		14	1	85	70	2.263	2.42	2.26	26.2	72.0	1.63	59	163	109	40	11
RA		15	1	80	59	2.053	2.42	2.05	27.6	72.0	1.56	57	148	104	38	10
RA		16	3	83	66	5.198	7.26	5.20	31.8	95.3	4.55	165	496	305	111	33
RA		17	1	85	70	1.535	2.42	1.53	22.0	54.0	.93	34	83	62	23	6
RA		18	3	84	64	4.048	7.26	4.05	38.2	78.1	4.26	155	316	285	104	21
RA		20	1	85	73	1.109	2.42	1.11	45.5	126.0	1.39	50	140	93	34	9
RA	Totals		16	82	59	36.467	38.71	32.03	22.8	62.1	20.08	730	1,989	1,346	489	133
WL		18	1	90	56	.730	1.29	.73	35.0	60.0	.83	26	44	55	17	3
WL	Totals		1	90	56	.730	1.29	.73	35.0	60.0	0.83	26	44	55	17	3
HS		18	1	85	93	.730	1.29									
HS	Totals		1	85	93	.730	1.29									
OC		11	1	64	28	1.955	1.29									
OC		24	1	87	120	.411	1.29									
OC		26	1	54	21	.350	1.29									
OC	Totals		3	66	41	2.716	3.87									
Totals			80	83	77	139.195	194.84	195.32	27.8	89.3	154.36	5436	17,448	10,342	3,642	1,169

TC		TSTNDSUM		Stand Table Summary												
Project														BIGBEAR		
T01S R07W S24 TMC										T01S R07W S24 TMC						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1			Date:	09/13/2010			
01S	07W	24	AREA 1	MC	114.00	40	103	Time:	11:28:42AM							
Spc	S T	Sample			Av			Average Log		Net			Totals			
		DBH	Trees	16'	FF	Ht	Tot	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Net Bd.Ft. Acre	Tons
DF		9	1	87	79	4.753	2.10	4.75	7.3	28.5	.99	35	135	112	39	15
DF		10	1	87	42	3.850	2.10	3.85	8.1	28.5	.89	31	110	101	36	13
DF		11	3	88	76	9.546	6.30	12.73	11.5	42.8	4.19	147	544	477	168	62
DF		12	1	88	63	2.674	2.10	2.67	17.1	57.0	1.31	46	152	149	52	17
DF		13	2	87	90	4.557	4.20	6.83	16.2	57.0	3.16	111	390	360	126	44
DF		14	5	85	86	9.822	10.50	19.64	15.5	53.2	8.69	305	1,045	991	348	119
DF		15	1	88	85	1.711	2.10	3.42	18.4	66.5	1.80	63	228	205	72	26
DF		16	2	79	84	3.008	4.20	4.51	25.5	69.7	3.27	115	314	373	131	36
DF		17	1	89	86	1.332	2.10	2.66	15.8	47.5	1.20	42	127	136	48	14
DF		18	2	89	99	2.377	4.20	4.75	30.6	109.2	4.15	146	519	473	166	59
DF		19	2	78	99	2.133	4.20	4.27	31.5	66.5	3.83	134	284	436	153	32
DF		20	3	86	95	2.888	6.30	5.78	35.8	117.2	5.90	207	677	672	236	77
DF		21	1	80	90	.873	2.10	1.75	38.4	109.3	1.91	67	191	218	76	22
DF		22	4	86	112	3.182	8.40	7.16	43.9	157.3	8.96	314	1,126	1,021	358	128
DF		23	1	83	138	.728	2.10	1.46	56.9	213.8	2.36	83	311	269	94	35
DF		24	1	84	118	.668	2.10	1.34	63.8	247.0	2.43	85	330	277	97	38
DF		26	3	85	104	1.709	6.30	3.42	66.8	247.0	6.51	228	844	742	260	96
DF		28	3	81	105	1.473	6.30	2.95	72.3	220.1	6.07	213	649	692	243	74
DF		30	4	85	114	1.711	8.40	3.42	81.4	304.0	7.94	279	1,040	905	318	119
DF		32	2	85	127	.752	4.20	1.88	93.2	400.9	4.99	175	754	569	200	86
DF		33	3	80	111	1.061	6.30	2.12	108.1	386.3	6.53	229	820	745	261	93
DF		34	2	84	109	.666	4.20	1.33	112.2	429.9	4.48	149	573	511	170	65
DF		37	1	80	116	.281	2.10	.56	143.1	527.2	2.29	80	297	261	92	34
DF		40	1	80	132	.241	2.10	.72	124.5	535.2	2.56	90	386	292	102	44
DF		Totals	50	86	87	61.997	105.00	103.98	32.5	113.9	96.40	3,375	11,845	10,990	3,847	1,350
RA		10	3	87	65	7.945	4.33	7.95	6.8	24.0	1.50	54	191	171	62	22
RA		11	5	83	70	10.944	7.22	10.94	10.0	32.4	2.99	109	355	341	124	40
RA		12	5	87	62	9.196	7.22	9.20	13.8	45.0	3.49	127	414	398	145	47
RA		13	5	85	65	7.835	7.22	6.27	14.8	56.3	3.27	93	353	373	106	40
RA		14	1	90	52	1.351	1.44	1.35	18.3	81.0	.68	25	109	78	28	12
RA		15	5	89	43	5.885	7.22	4.71	19.8	72.0	2.57	93	339	292	106	39
RA		16	1	74	64	1.035	1.44	1.03	23.2	54.0	.66	24	56	75	27	6
RA		17	2	86	82	1.833	2.89	1.83	36.1	108.0	1.82	66	198	208	75	23
RA		18	1	88	77	.817	1.44	.82	39.6	135.0	.89	32	110	101	37	13
RA		19	1	93	30	.734	1.44	.73	26.9	144.0	.54	20	106	62	23	12
RA		20	3	85	62	1.986	4.33	1.32	36.6	108.0	1.33	48	143	152	55	16
RA		22	2	76	63	1.094	2.89	1.09	47.0	99.0	1.41	51	108	161	59	12
RA		24	1	70	46	.460	1.44	.46	52.3	144.0	.66	24	66	75	27	8
RA		26	1	77	55	.392	1.44	.39	88.4	189.0	.95	35	74	109	39	8
RA		Totals	36	85	63	51.506	52.00	48.10	16.7	54.5	22.77	802	2,621	2,596	914	299
DL		16	1	87	92	.716	1.00	1.43	22.3	90.0	.88	32	129	100	36	15
DL		20	1	72	105	.458	1.00	.92	39.2	120.0	.99	36	110	113	41	13
DL		32	1	82	124	.179	1.00	.36	106.1	440.0	1.04	38	158	119	43	18
DL		33	1	85	106	.168	1.00	.34	104.2	400.0	.96	35	135	110	40	15
DL		34	3	78	100	.476	3.00	.95	110.6	366.7	2.89	105	349	330	120	40
DL		45	1	74	110	.091	1.00	.18	194.4	655.0	.97	35	119	110	40	14
DL		Totals	8	81	101	2.088	8.00	4.18	67.4	239.1	7.74	281	999	882	321	114
WL		26	1	90	131	.271	1.00	.81	55.4	266.7	1.44	45	217	164	51	25
WL		Totals	1	90	131	.271	1.00	.81	55.4	266.7	1.44	45	217	164	51	25

Stand Table Summary																		
TC TSTNDSUM		Project BIGBEAR																
T01S R07W S24 TMC										T01S R07W S24 TMC								
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:										
01S	07W	24	AREA 1	MC	114.00	40	103	2	Date:	09/13/2010								
								Time:	11:28:42AM									
Spc	S T	Sample			Av			Average Log		Net			Totals					
		DBH	Trees	16'	FF	Ht	Tot	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Tons	Cunits	MBF
NL		33	1	90	110		.168	1.00	.34	115.2	510.0	.93	39	172	106	44	20	
NL		Totals			1	90	110	.168	1.00	.34	115.2	510.0	0.93	39	172	106	44	20
SL		32	1	84	74		.358	2.00	.36	84.7	470.0	.79	30	168	90	35	19	
SL		Totals			1	84	74	.358	2.00	.36	84.7	470.0	0.79	30	168	90	35	19
OC		44	1	98	32		.095	1.00										
OC		54	1	53	26		.063	1.00										
OC		60	1	54	26		.051	1.00										
OC		72	1	90	20		.035	1.00										
OC		84	1	86	62		.026	1.00										
OC		Totals			5	77	31	.270	5.00									
Totals			102	85	77		116.659	174.00	157.77	29.0	101.6	130.08	4572	16,022	14,829	5,213	1,826	



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT *Big Bear*

1. **Type of Sale**
Regeneration harvest, Recovery
2. **Legal Description**
Sections 18 and 19, T1S, R7W, & Sections 13 and 24, T1S, 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 (Modified clearcut)	119	114
Area 2 (Modified clearcut)	73	67

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

Used for calculating the advertised volume.

Gross acres, less green tree retention, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. **Cruising Procedures**

A. Cruise Method

A total of 71 variable radius plots were taken. 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 were recorded on all plots. Species were recorded on all trees, and they were measured for merchantable height, diameter, and form factor.

Cruise Statistics (Board Foot Volumes)			
Area	Number of Plots	SE (%)	CV (%)
1	40	6.4	40
2	31	7.6	42

B. Plot size

A basal area factor of 27.78 was used, and the point of tree observation was 4.5

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading 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. Heights and diameter measurement standards were to the nearest foot or 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 were determined from the plot data to meet prescription targets.

6. **Hidden and Visual Defect and Breakage**

The following percent for hidden and visual defect and breakage was applied:

Area 1 – 6.5% conifer and 11.2% hardwood

Area 2 – 5.7% conifer and 8.4% hardwood

7. **Timber Description**

Area 1 (Modified Clearcut) - This stand is approximately 55 years old, consisting of Douglas-fir with patches of Red alder. The Douglas-fir averages 17.6 inches in DBH, with an average merchantable height of 60 feet to a merchantable top (5" d.i.b.). The Red alder averages 13.6 inches in DBH, with an average merchantable height of 30 feet to a merchantable top (6" d.i.b.). This area burned in the 1933 Tillamook fire and again in the 1939 Saddle Mountain Fire and then planted / seeded in 1954-1956. Live crown ratios range from 50 to 80 percent. Understory consists of large amounts of old growth salmon berry and sword fern. Portions were thinned in 1997 with the Ziggy Bob Timber Sale.

Area 2 (Modified Clearcut) – This stand is approximately 49 years old, consisting of Douglas fir with patches of Red alder. The Douglas-fir averages 16.7 inches in DBH, with an average merchantable height of 61 feet to a merchantable top (5" d.i.b.). The Red alder averages 14.0 inches DBH, with an average merchantable height of 33 feet to a merchantable top (6" d.i.b.). This area burned in the 1933 Tillamook fire and again in the 1939 Saddle Mountain Fire and then planted / seeded in 1958-1964. Live crown ratios range from 50 to 80 percent. Understory consists of large amounts of old growth salmon berry and sword fern. Portions were thinned in 1994 with the Potato Thin Timber Sale.

8. **Cruiser Names/Dates**

Planning unit, 2008

9. **Revenue Distribution**

FDF 100%

Tax Code: 9-1, 9-2

Deed Numbers: 161, 168, 169

10. Attachments

Stand Table Summaries

Volume Summaries

Log Stock Tables

Logging Plan Map

11. Stand and Log Stock Tables Species Key

DL – Douglas-fir leave

DF – Douglas-fir take

NL – Noble fir leave

RA – Red alder take

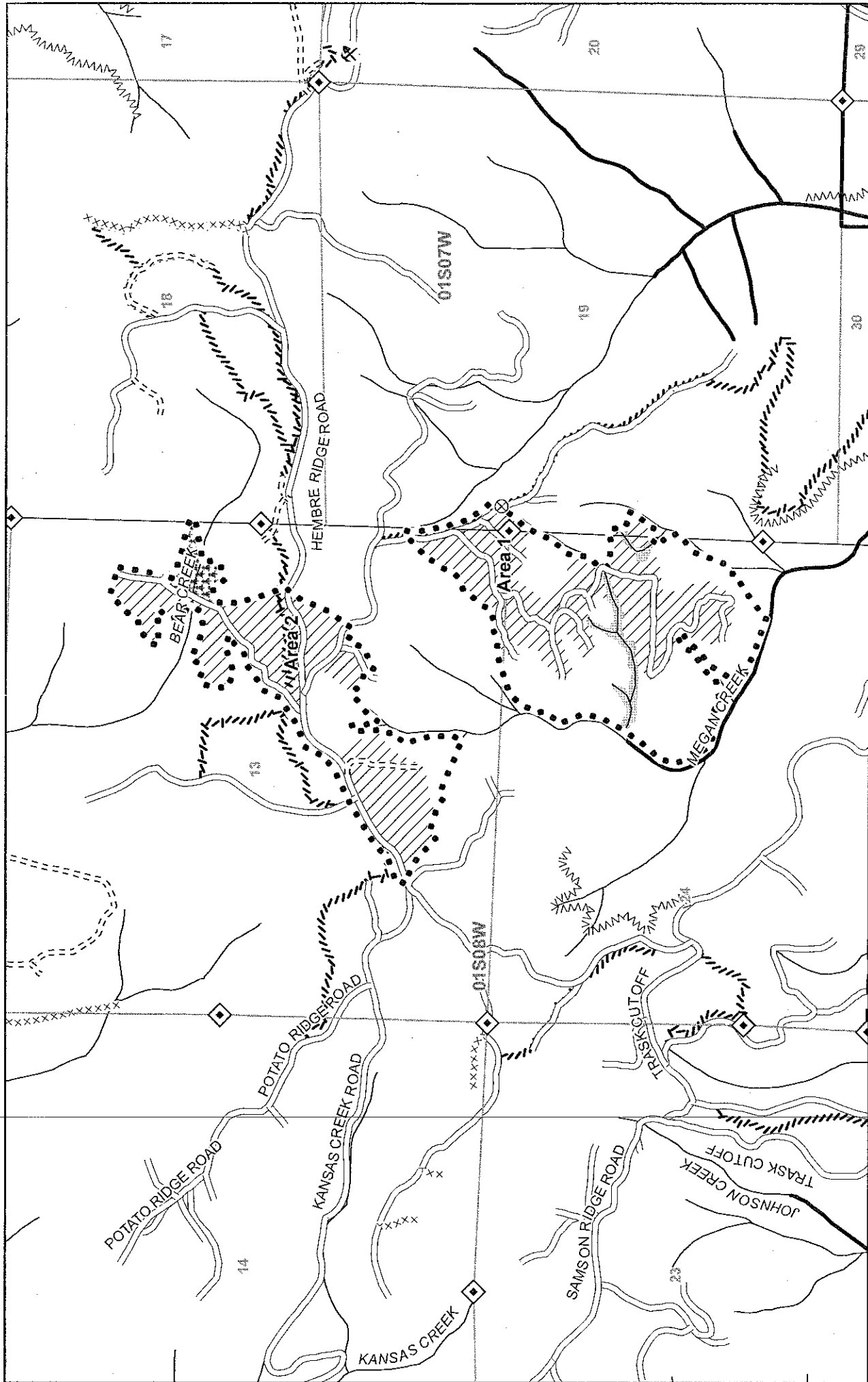
RC – Western red cedar

SL – Sitka spruce leave

WL – Western hemlock leave

HS – Hard Snag

OC - Soft Snag



<ul style="list-style-type: none"> Rock source Stock pile Waste area Bridge Gate Survey corner Domestic water supply intake Truck turn-around Helicopter landing zone Cultural site 	<ul style="list-style-type: none"> Landing Buffer Non-required thinning Cable yarding Ground yarding Helicopter yarding Downhill yarding Green tree retention area 	<ul style="list-style-type: none"> Area boundary Sale boundary Ownership boundary Perennial Type-F stream Perennial Type-N stream Unsurfaced road Paved road Abandoned road 	<ul style="list-style-type: none"> Swing road Non-project road Blocked road OHV trail Non-motorized trail Transmission line Railroad Trail filter
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LOGGING PLAN
 Timber Sale Contract No. 341-11-53
 BIG BEAR
 Portions of Sections 18 and 19, T1S, R7W,
 and Sections 13 and 24, T1S, R8W, W.M.,
 Tillamook County, Oregon

Scale: 1,000 Feet

North Arrow

Area	Type of Operation	Gross Net Acres
1	Modified clearcut	119
2	Modified clearcut	73
Total		192
		181

09/27/2010
 This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.