



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Box - GNA
Sale KL-341-2022-GF8517-01

District: Klamath/Lake

Date: March 23, 2022

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$566,756.02	\$0.00	\$566,756.02
		Project Work:	(\$99,339.59)
		Advertised Value:	\$467,416.43



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Timber Description

Location:

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
White Fir	15	0	95
Ponderosa Pine	15	0	95
Lodgepole Pine	12	0	90

Volume by Grade	Camprun	6" - 11"	12"-15"	Total
White Fir	2,444	0	0	2,444
Ponderosa Pine	0	632	323	955
Lodgepole Pine	273	0	0	273
Total	2,717	632	323	3,672

Comments: Pond Values Used: Lakeview Pond Values, January 2022.

Log Markets: Klamath Falls and Medford.

Other Costs (no Profit & Risk):None

Other Costs (with Profit & Risk to be added): None

ROAD MAINTENANCE

Move-in: \$400.00

General Road Maintenance: 3 miles x \$211.00 per mile x 1 bladings = \$633.00

Total Road Maintenance: \$1,033.00, \$0.28 per Mbf



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Logging Conditions

Combination#: 1 White Fir 100.00%
 Ponderosa Pine 100.00%
 Lodgepole Pine 100.00%

Logging System: Wheel Skidder **Process:** Feller Buncher

yarding distance: Medium (800 ft) **downhill yarding:** Yes

tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF

loads / day: 10 **bd. ft / load:** 4000

cost / mbf: \$94.92

machines: Log Loader (B)
 Stroke Delimber (B)
 Feller Buncher w/ Delimber
 Tire Skidder



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Logging Costs

Operating Seasons: 1.00	Profit Risk: 10%
Project Costs: \$99,339.59	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$0.00

Miles of Road

Road Maintenance: \$0.28

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

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
White Fir	\$0.00	4.0	4.2
Ponderosa Pine	\$0.00	4.0	4.0
Lodgepole Pine	\$0.00	4.0	3.8



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
White Fir									
\$94.92	\$0.29	\$1.20	\$75.00	\$0.00	\$17.14	\$0.00	\$0.00	\$0.00	\$188.55
Ponderosa Pine									
\$94.92	\$0.29	\$1.20	\$78.75	\$0.00	\$17.52	\$0.00	\$0.00	\$0.00	\$192.68
Lodgepole Pine									
\$94.92	\$0.31	\$1.20	\$86.85	\$0.00	\$18.33	\$0.00	\$0.00	\$0.00	\$201.61

Specie	Amortization	Pond Value	Stumpage	Amortized
White Fir	\$0.00	\$360.00	\$171.45	\$0.00
Ponderosa Pine	\$0.00	\$313.53	\$120.85	\$0.00
Lodgepole Pine	\$0.00	\$320.00	\$118.39	\$0.00



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Summary

Amortized

Specie	MBF	Value	Total
White Fir	0	\$0.00	\$0.00
Ponderosa Pine	0	\$0.00	\$0.00
Lodgepole Pine	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
White Fir	2,444	\$171.45	\$419,023.80
Ponderosa Pine	955	\$120.85	\$115,411.75
Lodgepole Pine	273	\$118.39	\$32,320.47

Gross Timber Sale Value

Recovery: \$566,756.02

Prepared By: Chris Weekly

Phone: 541-883-5681

Box – GNA
KL-341-2022-GF8517-01
Cruise Report



SALE NAME: Box – GNA

LEGAL DESCRIPTION:

Located in Portions of Section 25, Township 38 South, Range 20 East, and Portions of Sections 30 and 31, Township 38 South, Range 21 East, Willamette Meridian, Lake County, Oregon.

BOUNDARY LINES:

Unit boundaries are posted with “Timber Sale Boundary” signs, marked with fluorescent orange paint and fluorescent orange flagging. Boundaries following roads may not be marked.

ACREAGE:

Net Sale Acreage:	488 Acres
Optional Unit Acreage:	12 Acres
Gross Sale Acreage:	500 Acres

Mapping was accomplished using a handheld GPS with the data run using ArcMap 10.6.

TREATMENT:

The Timber Sale is a purchaser select, partial cut harvest.

CRUISE METHOD:

Variable plot cruise with a ratio of two count plots for every measure plot. Fixed plot cruise for all sub-merchantable material (5.0” to 9.0”) DBH for all Areas.

BASAL AREA FACTOR:

All plots were cruised with either a 13.61 or 20 Basal Area Factor. Prism factor was determined based on conditions on and around the cruised plot.

PLOT DESIGNATION:

Plot centers were established at every plot with pink flag wire stakes with the corresponding plot number. Blue and white stripped flagging was attached to the nearest available tree branch.

SAMPLE SIZE CALCULATIONS:

57 plots were taken. 18 measured and 39 count.

TREE HEIGHT:

All trees were measured to a fixed diameter outside bark. This height is usually taken as high up the bole as possible, where the cruiser can clearly see the bole, and the taper remains constant (usually 6 or 8 inches). The log segments are broken out and graded accordingly.

MINIMUM D.B.H:

5.0" DBH.

DIAMETER STANDARDS:

1" diameter class

BTR:

Standard ratios were used. See attached species tables.

FORM FACTOR:

Form factor was measured or estimated at 16' for each tree. Each tree was assigned its own FF.

FORM POINT:

All trees were sighted at DBH.

VOLUME COMPUTATION:

All cruise data was input and run at the district on Atterbury's Super Ace program.

FINAL CRUISE RESULTS:

CV%	SE%	ACRES
64.5	8.5	488

TIMBER DESCRIPTION

RESIDUAL STAND CONDITION:

Cruise resulted in an average basal area across the Timber Sale Area of 75 sqft/acre well above the targeted average of 40 sqft/acre. The large number of constrained trees (greater than 21" DBH) make it unlikely that the target basal area can be achieved stand wide.

SAWLOG VOLUME:

This volume was obtained from the variable plot cruise. All material graded camprun. See grade table for minimum standards.

TOTAL SAWLOG VOLUME

Species	Ave. DBH	Acres	Gross Vol/Acre (bf)	Net Vol/Acre (bf)	Net Sale Vol (Mbf)
White fir	14.5	488	5,147	5,009	2,444
Ponderosa pine	14.5	488	2,025	1,956	955
Lodgepole pine	12.2	488	559	559	273
	Total		7,731	7,524	3,672

Optional Unit

Species	Ave. DBH	Acres	Gross Vol/Acre (bf)	Net Vol/Acre (bf)	Net Sale Vol (Mbf)
White fir	14.5	12	5,147	5,009	60
Ponderosa pine	14.5	12	2,025	1,956	23
Lodgepole pine	12.2	12	559	559	7
	Total		7,731	7,524	90

**TOTAL NET SAWLOG VOLUME: 3,672 Mbf
(3,762 Mbf with Optional Area)**

GREEN PULP VOLUME:

This volume was obtained by combining material from the fixed plot cruise (5.0” – 9.0” DBH) with material from the variable plot cruise.

All material was graded green pulp, see grade table for minimum standards.

FIXED PLOT CRUISE

Species	Acres	Vol/Acre (bf)	Sale Vol (Mbf)
White fir	488	338	165
Ponderosa pine	488	88	43
Lodgepole pine	488	79	39
Western Juniper	488	9	4
Total		514	251

VARIABLE PLOT CRUISE

Species	Acres	Vol/Acre (bf)	Sale Vol (Mbf)
White fir	488	129	63
Ponderosa pine	488	283	138
Western Juniper	488	24	12
Total		436	213

TOTAL GREEN PULP VOLUME: 464 Mbf

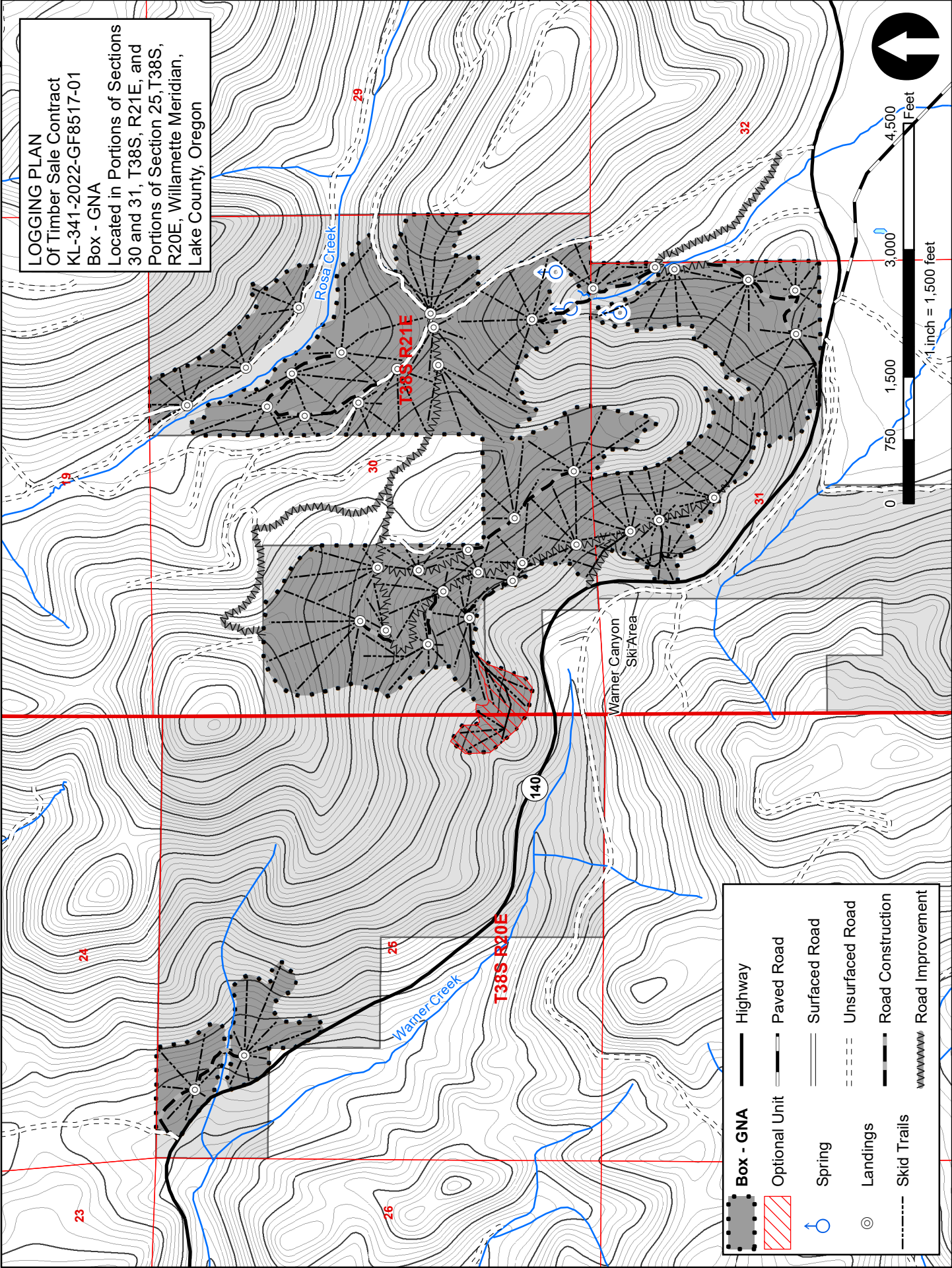
TC TSTATS				STATISTICS				PAGE	1	
				PROJECT BOX		DATE		9/29/2021		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
038	021	30	GNA	VARI	488.00	57	302	1	E	
				TREES	ESTIMATED TOTAL	PERCENT SAMPLE				
				PLOTS	TREES	PER PLOT	TREES	TREES		
TOTAL		57	302	5.3						
CRUISE		18	111	6.2	47,133		.2			
DBH COUNT										
REFOREST										
COUNT		38	186	4.9						
BLANKS		1								
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHITE F	66	54.1	14.5	34	16.2	61.8	5,276	5,138	1,233	1,233
P PINE	36	30.6	14.5	34	9.2	35.0	2,308	2,239	571	571
LP PINE	7	9.5	12.2	29	2.2	7.7	559	559	134	134
OC	2	2.4	9.0	18	0.4	1.1	24	24	7	7
TOTAL	<i>111</i>	<i>96.6</i>	<i>14.2</i>	<i>33</i>	<i>28.0</i>	<i>105.5</i>	<i>8,167</i>	<i>7,960</i>	<i>1,946</i>	<i>1,946</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHITE F		91.8	11.3	128	144	161				
P PINE		64.1	10.7	87	97	108				
LP PINE		58.8	23.9	50	66	81				
OC										
TOTAL		<i>91.4</i>	<i>8.7</i>	<i>112</i>	<i>123</i>	<i>133</i>	<i>333</i>	<i>83</i>	<i>37</i>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHITE F		81.0	10.0	30	33	36				
P PINE		58.3	9.7	22	24	27				
LP PINE		44.0	17.9	13	16	18				
OC										
TOTAL		<i>79.7</i>	<i>7.6</i>	<i>27</i>	<i>29</i>	<i>31</i>	<i>254</i>	<i>63</i>	<i>28</i>	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHITE F		116.4	15.4	46	54	62				
P PINE		105.6	14.0	26	31	35				
LP PINE		266.6	35.3	6	9	13				
OC		558.7	73.9	1	2	4				
TOTAL		<i>56.3</i>	<i>7.5</i>	<i>89</i>	<i>97</i>	<i>104</i>	<i>127</i>	<i>32</i>	<i>14</i>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHITE F		112.9	14.9	53	62	71				
P PINE		102.5	13.6	30	35	40				
LP PINE		267.1	35.3	5	8	10				
OC		558.7	73.9	0	1	2				
TOTAL		<i>56.1</i>	<i>7.4</i>	<i>98</i>	<i>106</i>	<i>113</i>	<i>126</i>	<i>31</i>	<i>14</i>	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHITE F		117.4	15.5	4,340	5,138	5,937				
P PINE		104.7	13.9	1,928	2,239	2,549				
LP PINE		266.0	35.2	362	559	756				
OC		558.7	73.9	6	24	41				
TOTAL		<i>64.5</i>	<i>8.5</i>	<i>7,280</i>	<i>7,960</i>	<i>8,640</i>	<i>166</i>	<i>42</i>	<i>18</i>	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	BOX			DATE	9/29/2021	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
038	021	30	GNA	VARI	488.00		57	302	1	E
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHITE F		115.8	15.3	1,044	1,233	1,423				
P PINE		103.1	13.6	493	571	649				
LP PINE		266.8	35.3	87	134	181				
OC		558.7	73.9	2	7	12				
TOTAL		62.3	8.2	1,785	1,946	2,106	155	39	17	

T038 R021 S30 TVARI **T038 R021 S30 TVARI**
Twp Rge Sec Tract Type Acres Plots Sample Trees **Page 1**
038 021 30 GNA VARI 488.00 57 111 **Date 9/29/2021**
Time 8:01:12AM

Spp	T	S	So	Gr	Log	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	30-39
WF		CR	CR		16	371	2.9	360	14.4			133	94		31	102				
WF		CR	CR		24	258		258	10.3			73	116		68					
WF		CR	CR		28	221	3.6	213	8.5			102			29	81				
WF		CR	CR		32	1,662	2.9	1,614	64.4			136	358		495	230	111	284		
WF		CR	GP		10	18		18	.7		18									
WF		CR	GP		12	37		37	1.5			21	16							
WF		CR	GP		18	8		8	.3		8									
WF		Totals				2,575	2.6	2,507	64.6		26	465	584	592	342	213	284			
PP		CR	CR		12	34		34	3.1					15	19					
PP		CR	CR		16	292	1.9	287	26.3			55	105		53	50	24			
PP		CR	CR		24	138	1.9	136	12.4					34	102					
PP		CR	CR		28	29		29	2.7			29								
PP		CR	CR		32	494	5.2	469	42.9			32	161	148	128					
PP		CR	GP		10															
PP		CR	GP		12	47		47	4.3			30	17							
PP		CR	GP		16	9		9	.8		9									
PP		CR	GP		18	24		24	2.2		7		17							
PP		CR	GP		19	8		8	.7		8									
PP		CR	GP		20	40		40	3.7			15		25						
PP		CR	GP		21	11		11	1.0		11									
PP		Totals				1,126	3.0	1,092	28.1		18	16	161	301	274	300	24			
LP		CR	CR		16	99		99	36.1				65	34						
LP		CR	CR		24	54		54	19.7			24	30							
LP		CR	CR		32	120		120	44.2				51	69						
LP		Totals				273		273	7.0			24	145	103						
OC		CR	GP		17	12		12	100.0		12									
OC		Totals				12		12	.3		12									
Total All Species						3,986	2.5	3,884	100.0		30	42	650	1030	970	642	237	284		

LOGGING PLAN
 Of Timber Sale Contract
 KL-341-2022-GF8517-01
 Box - GNA
 Located in Portions of Sections
 30 and 31, T38S, R21E, and
 Portions of Section 25, T38S,
 R20E, Willamette Meridian,
 Lake County, Oregon



	Box - GNA		Highway
			Paved Road
	Spring		Surfaced Road
	Landings		Unsurfaced Road
	Skid Trails		Road Construction
			Road Improvement