



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
Cain GNA  
Sale SW-341-2019-GF7719-01

District: S Cascade

Date: March 19, 2019

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**Cost Summary**

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$253,039.95	\$0.00	\$253,039.95
		Project Work:	\$0.00
		Advertised Value:	\$253,039.95



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**Timber Description**

**Location:** Section 7 & 8, T20S, R2E, W.M.  
Lane County, Oregon

**Stand Stocking:** 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	15	0	95

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	255	390	645
Total	255	390	645

**Comments:** Western Hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost:  
 $\$262.19/\text{MBF} = \$535/\text{MBF} - \$272.81/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:  
 $\$693.19/\text{MBF} = \$966/\text{MBF} - \$272.81/\text{MBF}$

Maple and Other Hardwoods Stumpage Price = Pond Value minus Logging Cost:  
 $\$200.19/\text{MBF} = \$473/\text{MBF} - \$272.81/\text{MBF}$

BRANDING AND PAINTING COST ALLOWANCE =  $\$2.00/\text{MBF}$

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

Equipment Move-in:  $((\$120/\text{hr} + (\$22/\text{hr} \times 1 \text{ pilot})) \times 4 \text{ hr/ move cycle} \times 4 \text{ machines} = \$2,272$

Equipment Weed Wash =  $((\$120/\text{hr} + (\$22/\text{hr} \times 2 \text{ pilots})) \times 2.5 \text{ hr wash} = \$410 \times 4 \text{ machines} = \$1,640$

Landing pull back of displaced material, installation of water bars, bucket ripping to depth of 20 inches, seeded, and weed-free strawed =  $\$400 \times 7 \text{ landings} = \$2,800$

Primary Skid Trail entrance blocked, pulling back of displaced material, installation of water bars, bucket ripping to depth of 20 inches, seeded, and weed-free strawed =  $\$4,000/\text{mi} \times 0.5 \text{ miles} = \$2,000$

Prior to wet weather season, landings and skid trails water barred =  $\$2,000$

Dust Abatement =  $(\$100/\text{hour} \times 45 \text{ day in summer}) + \$500 \text{ move-in} = \$5,000$

TOTAL Other Costs (with Profit & Risk to be added) =  $\$15,712$

Other Costs (No Profit & Risk added):

Pile Landing Slash:  $7 \text{ Landings} (7\text{hrs} @ \$150/\text{hr}) = \$1,050$

Covering Piles:  $(\$8.80/\text{pile} \times 7 \text{ piles}) + (\$22/\text{hr} \times 2 \text{ covering personnel} \times 8 \text{ hours}) = \$413.60$

TOTAL Other Costs (No Profit & Risk added):  $\$1,463.60$



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**Logging Conditions**

<b>Combination#:</b> 1	Douglas - Fir	100.00%
<b>Logging System:</b>	Track Skidder	<b>Process:</b> Feller Buncher
<b>yarding distance:</b>	Medium (800 ft)	<b>downhill yarding:</b> No
<b>tree size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF	
<b>loads / day:</b>	10	<b>bd. ft / load:</b> 3700
<b>cost / mbf:</b>	\$110.52	
<b>machines:</b>	Log Loader (B) Stroke Delimber (B) Feller Buncher w/ Delimber Track Skidder	

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### Logging Costs

Operating Seasons: 2.00	Profit Risk: 15%
Project Costs: \$0.00	Other Costs (P/R): \$15,712.00
Slash Disposal: \$0.00	Other Costs: \$1,463.60

Miles of Road

Road Maintenance: \$0.00

Dirt	Rock (Contractor)	Rock (State)	Paved
3.0	0.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.0



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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
Douglas - Fir									
\$110.52	\$1.89	\$13.61	\$83.13	\$24.36	\$35.03	\$0.00	\$2.00	\$2.27	\$272.81

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$665.12	\$392.31	\$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	645	\$392.31	\$253,039.95

**Gross Timber Sale Value**

**Recovery:** \$253,039.95

**Prepared By:** Kyle Sullivan

**Phone:** 541-285-8685

## OREGON DEPARTMENT of FORESTRY CRUISE REPORT

SALE NAME: Cain GNA

1. **Acreage Calculation:** There are 26 net cruise acres in the sale area determined by a combination of GPS traverse waypoints and ArcGIS 10.6 software.
2. **Cruise Method:** Cain GNA timber sale was cruised by ODF during the fall of 2018. A variable plot cruise was conducted on the sale area.
3. **RIGHT of WAY VOLUMES:** There is currently no right of way volume associated with this sale.
4. **Sampling Intensity:**  
# Plots 19 Total Plots (9 measured, 10 Count)  

CV (BDFT)	<u>37.5%</u>	(combined volume)
SE (BDFT)	<u>8.8%</u>	(combined volume)
CV (BDFT)	<u>59.1%</u>	(take)
SE (BDFT)	<u>13.9%</u>	(take)

As per ODF standards, total harvest volume of Douglas-fir ("take" trees) is estimated to be 645 MBF  $\pm$  90 MBF at the 68% confidence level and a sampling error of 13.9%\*. 68 times out of 100 the volume estimate will be within range of error specified.

5. **Computation Procedures:** Volume was computed using the SuperACE cruise program. Volumes reported are based on the Scribner Log Rule (West).
6. **Form Factors:** Form factors (a ratio of diameter at 4 and 16 feet) were sampled across the diameter distribution.
7. **Height Standards:** Most conifer trees were measured for total height with a Relaskop.
8. **Diameter standards:** Diameters were measured outside bark at breast height to the nearest inch.
9. **Grading System:** Trees were graded primarily as 34 foot segments lengths and according to the Official Log Scaling and Grading Rules published by the Northwest Log Rules Advisory Group.
10. **Merchantable top:** Conifer were graded to a merchantable top specified by the official log scaling rules. For all Douglas-fir, 2S segments were graded to a 12" top inside bark, 3S to a 6" top, and 4S to a 5" top (inside bark).
11. **Deductions for Cull, Defect and Breakage:** All visible field cull was removed in the cruise computation.
12. **Cruisers:** Cruising was performed by Kyle Sullivan.

\*ODF does not guarantee the volume of this or any other cruise. Prospective purchasers are advised to do their own cruise and sale volume calculations.

Chris Rudd, FFR Coordinator :

Chris Rudd

Date 1-24-2019



## PROJECT STATISTICS

	Plots	Trees	Trees Per Plot
<b>Cruise</b>	9	69	7.7
<b>Count</b>	10	70	7.0
<b>Blank</b>			
<b>Total</b>	19	139	7.3

### Final Cruise Results for 'Take' Trees

Species	Avg. DBH	BF / Acre				TOTAL MBF			
		2S	3S	4S	Total	2S	3S	4S	Total
Douglas-fir	15.5	9,804	11,467	3,544	24,814	255	298	92	645
<b>Total MBF All Species:</b>						<b>255</b>	<b>298</b>	<b>92</b>	<b>645</b>

\*ODF does not guarantee the volume of this or any other cruise. Prospective purchasers are advised to do their own cruise and sale volume calculations.

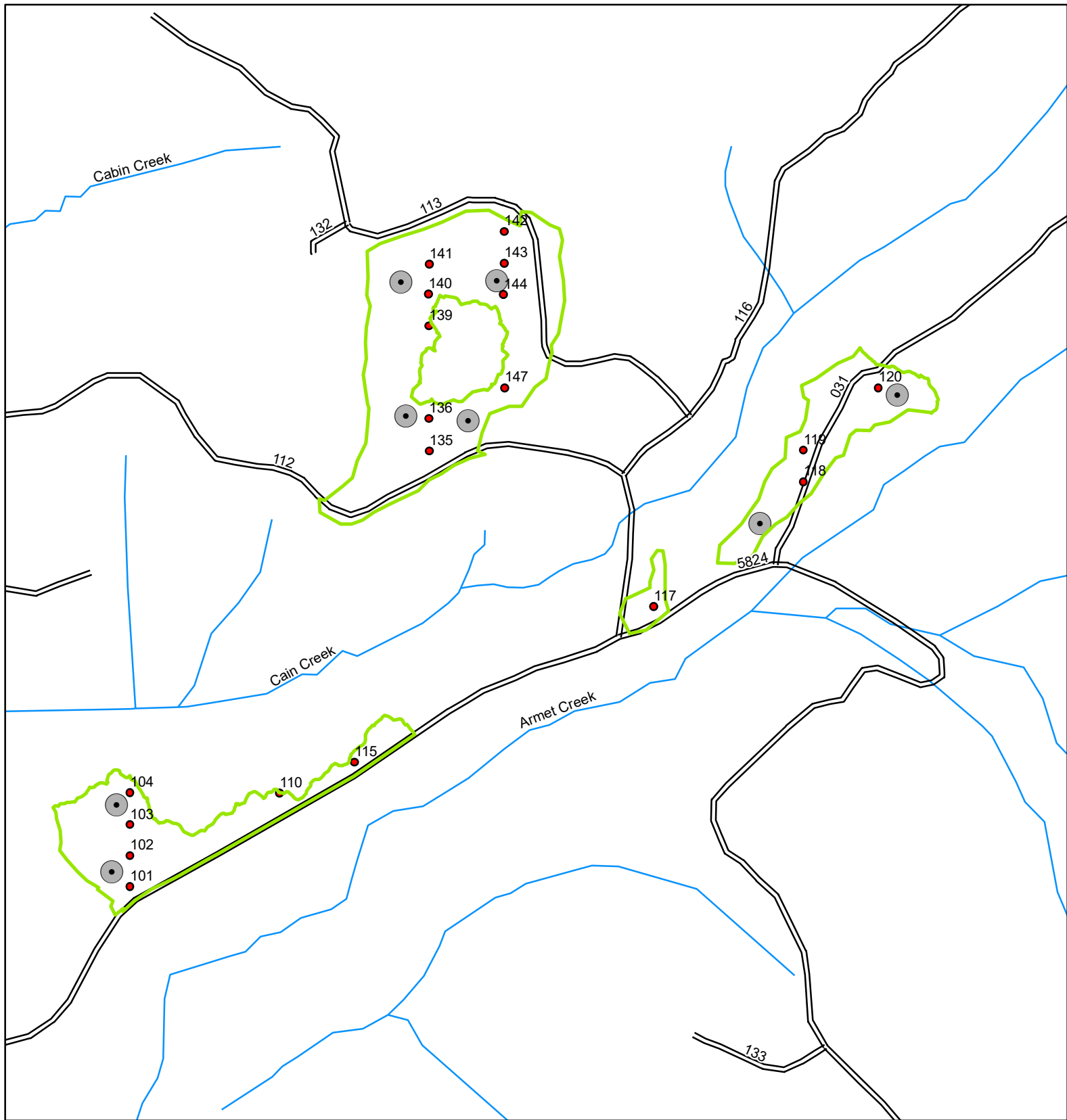
TC PSTATS			PROJECT STATISTICS							PAGE	1
Kyle Sullivan			PROJECT		CAIN			DATE		12/26/2018	
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt
20S	02E	08	1	0001		26.00		19	139	S	W
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES		PERCENT SAMPLE TREES			
TOTAL			19	139	7.3						
CRUISE			9	69	7.7	4,545		1.5			
DBH COUNT											
REFOREST											
COUNT			10	70	7.0						
BLANKS											
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
DOUG FIR-L			21	48.3	17.7	122	19.6	82.5	17,177	16,918	3,571
DOUG FIR-T			43	102.8	15.5	115	34.2	134.5	25,507	24,814	5,445
INC CED-L			3	12.0	11.8	70	2.7	9.2	857	857	232
CHERRY-L			2	11.7	8.4	28	1.6	4.5	234	234	55
TOTAL			69	174.8	15.6	108	58.5	230.7	43,776	42,824	9,303
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	
DOUG FIR-L		49.7	11.1	382	430	478					
DOUG FIR-T		50.4	7.7	279	303	326					
INC CED-L		63.6	44.0	62	110	158					
CHERRY-L				20	20	20					
TOTAL		58.7	7.1	302	325	348	138		34	15	
CL	68.1	COEFF		SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5		10	15	
DOUG FIR-L		42.8	9.6	80	88	97					
DOUG FIR-T		49.6	7.6	62	67	72					
INC CED-L		63.7	44.1	17	30	43					
CHERRY-L		7.5	7.1	4	5	5					
TOTAL		53.8	6.5	65	70	74	116		29	13	
CL	68.1	COEFF		TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5		10	15	
DOUG FIR-L		52.6	12.4	42	48	54					
DOUG FIR-T		60.2	14.2	88	103	117					
INC CED-L		338.8	79.8	2	12	22					
CHERRY-L		311.6	73.4	3	12	20					
TOTAL		53.1	12.5	153	175	197	119		30	13	
CL	68.1	COEFF		BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5		10	15	
DOUG FIR-L		49.3	11.6	73	83	92					
DOUG FIR-T		59.4	14.0	116	134	153					
INC CED-L		338.8	79.8	2	9	17					
CHERRY-L		303.7	71.6	1	4	8					
TOTAL		41.6	9.8	208	231	253	73		18	8	
CL	68.1	COEFF		NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5		10	15	
DOUG FIR-L		50.8	12.0	14,894	16,918	18,943					
DOUG FIR-T		59.1	13.9	21,359	24,814	28,270					
INC CED-L		338.8	79.8	173	857	1,541					
CHERRY-L		311.6	73.4	62	234	406					

TC PSTATS				PROJECT STATISTICS				PAGE	2	
Kyle Sullivan				PROJECT CAIN				DATE	12/26/2018	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
20S	02E	08	1	0001		26.00	19	139	S	W
CL	68.1	COEFF		NET BF/ACRE				# OF PLOTS REQ.		INF. POP.
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH		5	10	15
TOTAL			37.5	8.8	39,035	42,824	46,612	59	15	7
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
DOUG FIR-L			50.5	11.9	3,145	3,569	3,994			
DOUG FIR-T			59.2	13.9	4,686	5,446	6,206			
INC CED-L			338.8	79.8	47	232	418			
CHERRY-L			316.1	74.5	14	55	96			
TOTAL			37.9	8.9	8,473	9,303	10,132	60	15	7

Spp	S T	So rt	Gr de	Log Len	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
DF	T	DO	2M	12	5		5	.7					5					
DF	T	DO	2M	34	263	4.7	250	38.8			8	29	120	56	38			
DF	T	DO	3M	34	302	1.8	296	45.9		9	46	102	99	24	5	11		
DF	T	DO	3M	40	2		2	.3		2								
DF	T	DO	4M	15	2		2	.3		2								
DF	T	DO	4M	16	1		1	.2		1								
DF	T	DO	4M	18	1		1	.2		1								
DF	T	DO	4M	19	2		2	.2		2								
DF	T	DO	4M	20	5		5	.8		1		4						
DF	T	DO	4M	21	1		1	.1		1								
DF	T	DO	4M	22	5		5	.8		3		2						
DF	T	DO	4M	23	3		3	.4		3								
DF	T	DO	4M	24	13		13	2.0		9	4							
DF	T	DO	4M	25	1		1	.2		1								
DF	T	DO	4M	26	4		4	.6				4						
DF	T	DO	4M	28	12		12	1.8		12								
DF	T	DO	4M	30	9		9	1.4		5		4						
DF	T	DO	4M	33	9		9	1.5		9								
DF	T	DO	4M	34	6		6	.9		6								
DF	T	DO	4M	35	9		9	1.4		3			5					
DF	T	DO	4M	36	1		1	.2		1								
DF	T	DO	4M	37	3		3	.5		3								
DF	T	DO	4M	38	2		2	.2		2								
DF	T	DO	4M	39	2		2	.3		2								
DF	T	DO	4M	40	3		3	.4		3								
DF		Totals			663	2.7	645	57.9		82	49	123	128	149	66	50		
DF	L	DO	2M	12	5		5	1.2					5					
DF	L	DO	2M	34	232	2.9	225	51.3			6	13	60	51	96			
DF	L	DO	3M	34	159		159	36.2			13	44	52	35	16			
DF	L	DO	4M	13	1		1	.3		1								
DF	L	DO	4M	19	2		2	.4		2								
DF	L	DO	4M	20	4		4	.9			4							
DF	L	DO	4M	21	3		3	.6		1		2						
DF	L	DO	4M	22	6		6	1.4		4		2						
DF	L	DO	4M	24	2		2	.4		2								
DF	L	DO	4M	25	2		2	.5		2								

TC PLOGSTVB Kyle Sullivan		Log Stock Table - MBF																	
T20S R02E S08 Ty000126.00					Project:		CAIN										Page2		
					Acres		26.00										Date12/26/2018		
																	Time11:33:28AM		
S T Spp	So rt	Gr de	Log Len	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	40+
DF	L	DO	4M	26	3	3	.7					3							
DF	L	DO	4M	27	3	3	.7		3										
DF	L	DO	4M	28	2	2	.5		2										
DF	L	DO	4M	30	1	1	.3		1										
DF	L	DO	4M	34	3	3	.6		3										
DF	L	DO	4M	35	3	3	.6		3										
DF	L	DO	4M	36	2	2	.4		2										
DF	L	DO	4M	37	1	1	.3		1										
DF	L	DO	4M	39	3	3	.8		3										
DF	L	DO	4M	41	9	9	2.0		9										
DF		Totals			447	1.5	440	39.5	39	13	56	70	100	67	96				
IC	L	DO	3M	28	6	6	27.5		6										
IC	L	DO	3M	34	6	6	26.0					6							
IC	L	DO	4M	30	1	1	6.0		1										
IC	L	DO	4M	34	9	9	40.6		3		6								
IC		Totals			22		22	2.0	10	6	6								
CH	L	DO	4M	16	2	2	36.5			2									
CH	L	DO	4M	20	4	4	63.5		4										
CH		Totals			6		6	.5	4	2									
Total		All Species			1,138	2.2	1,113	100.0	135	64	185	203	249	133	146				

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
Kyle Sullivan																					
<div>T20S R02E S08 Ty000126.00</div>				Project: CAIN								Page 1									
				Acres 26.00								Date 12/26/2018									
												Time 11:33:27AM									
S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
			Def%	Gross	Net	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf				
						4-5		6-11	12-16	17+	12-20	21-30	31-35					36-99			
DF	T	DO 2M	39	4.7	10,283	9,804	255		14	79	7	2		98		33	13	191	1.18	51.3	
DF	T	DO 3M	46	1.8	11,681	11,467	298		4	83	10	4		99	1	34	9	93	0.61	122.7	
DF	T	DO 4M	15		3,544	3,544	92		76	18	6	12	51	26	11	24	5	30	0.31	116.8	
DF Totals			58	2.7	25,507	24,814	645		13	46	37	4	2	7	88	2	30	8	85	0.62	290.9
DF	L	DO 2M	52	2.8	9,132	8,873	231		8	68	24	2		98		32	13	213	1.28	41.7	
DF	L	DO 3M	36		6,124	6,124	159			68	32			100		34	10	119	0.75	51.6	
DF	L	DO 4M	12		1,922	1,922	50		78	22		14	45	10	31	27	6	35	0.35	55.6	
DF Totals			40	1.5	17,177	16,918	440		9	31	47	12	3	5	89	3	31	9	114	0.78	148.9
IC	L	DO 3M	53		458	458	12		51	49			51	49		29	6	48	0.43	9.6	
IC	L	DO 4M	47		399	399	10		38	62			13	87		15	5	27	0.51	14.5	
IC Totals			2		857	857	22		45	55			33	67		21	5	36	0.47	24.1	
CH	L	DO 4M	100		234	234	6		64	36		100				19	5	20	0.25	11.7	
CH Totals			1		234	234	6		64	36		100				19	5	20	0.25	11.7	
Totals				2.2	43,776	42,824	1,113		12	41	40	7	3	7	88	2	30	8	90	0.66	475.6



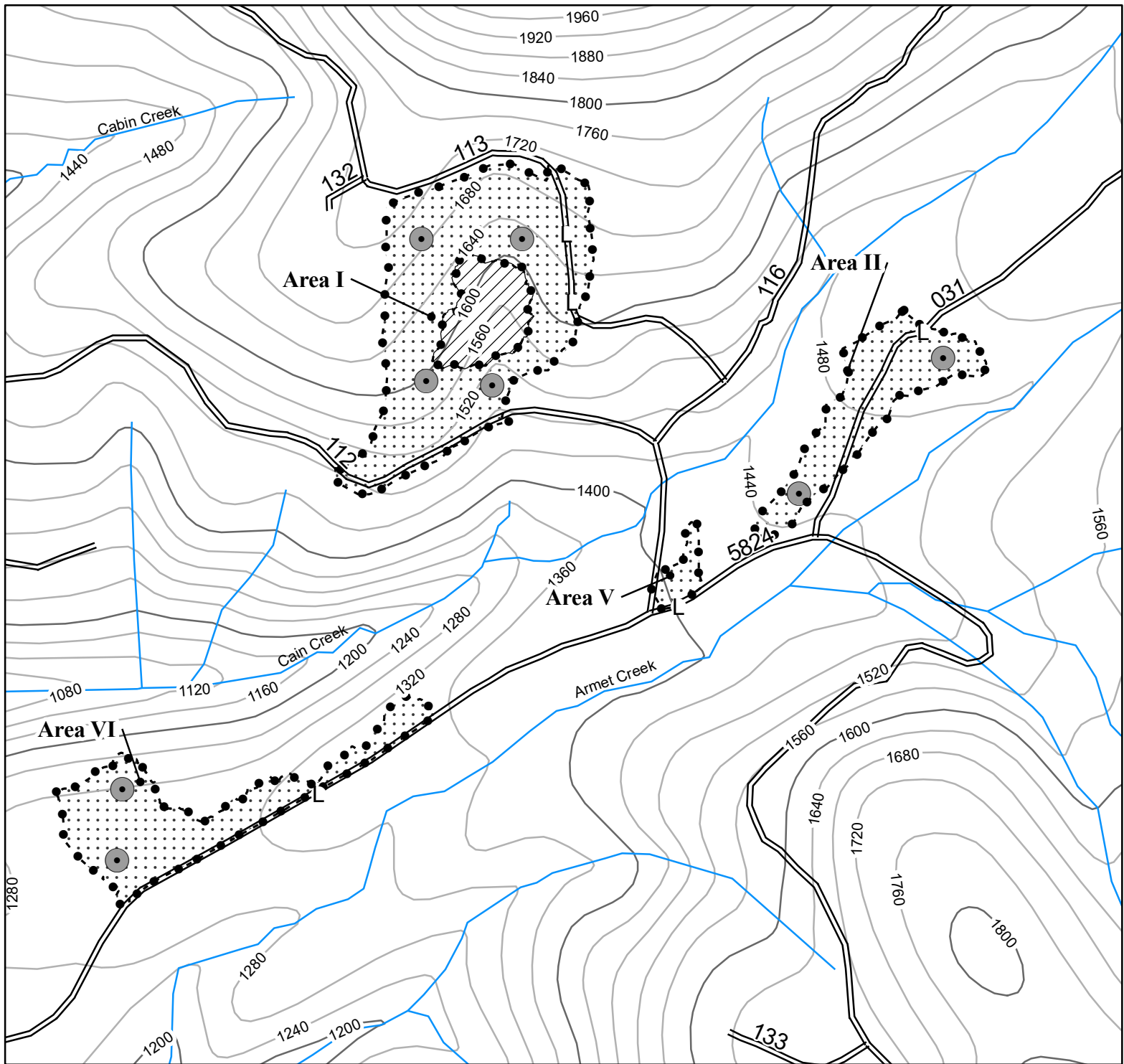
**Cain GNA TS Cruise Map**  
**125 ft. x 300 ft. Spacing**

0.25 0 0.25 Miles

### Legend

- Timber Sale Boundary
- Dominant Tree Release Gaps
- Cruise Points
- Road
- Stream





#### Legend

- Timber Sale Boundary
- No Cut
- Road
- Stream
- Dominant Tree Release Gaps
- Landing
- Ground Based Logging

## LOGGING PLAN

Sale No. SW-341-2019-GF7719-01

Cain GNA Timber Sale

Section 7 & 8, T20S, R2E, W.M.

Lane County, Oregon

Regulated Use Area EL-1

Willamette National Forest

#### Approximate Net Acres

Area 1 14

Area 2 5

Area 5 1

Area 6 6

**Total 26**

0

1,000

2,000

3,000

Feet

