

# **Planning Unit 072244 Forest Harvest Plan**

## **1. Introduction**

This Forest Harvest Plan (FHP) for Planning Unit 072244 includes maps and reports that clearly show and document the planned harvest area boundaries, roads and water crossings within the planning unit.

This plan is being submitted for appraisal, for a 5-year FHP approval under the 2016-17 Alberta-Pacific Forest Industries Inc. (Alberta-Pacific) Annual Operating Plan (AOP).

## **2. Planning Unit Specific Comments**

Planning Unit 072244 is located West of Calling Lake.

The planning unit is located in Forest Management Unit (FMU) L2. Alberta-Pacific has rights to D as deciduous landbase.

The harvest design utilizes the 2006 Spatial Harvest Sequence (SHS).

### **Integration**

This FHP is in FMU L2 and has been provided for review to the following forest operators:

Ed Bobocel Lumber (1993) Ltd. (Bobocel)

Vanderwell Contractors (1971) Ltd. (Vanderwell)

Alberta-Pacific has received their agreement for this plan on April 11, 2016.

Vanderwell, Bobocel and the Community Timber Permit Program (CTPP) are allocated portions of the coniferous AAC from the DC, C and CD cover groups.

Vanderwell holds active timber disposition CTLL020083 within portions of this planning unit.

## **Watershed**

Two Creeks (see access map in section 4) that are in Sections 20, 21, 22, 27 and 28 in Twp.72 Rge.24 W4M, are fish bearing and will be buffered accordingly.

All unsurveyed channeled creeks have been buffered and crossed as though they were fish bearing.

## **Stand Structure**

An average of 5% of the merchantable volume will be left in stand structure over the FMU. The structure will be left as layout patches, and as single trees and small clumps of timber at the operators' discretion.

## **Debris Management**

One or more of the following debris management strategies apply for blocks within this planning unit:

- Methods described in the Forest and Prairie Protection Act and Regulations, and/or
- Thinly spread slash throughout the block, and/or
- Stump side processing.

Blocks within this planning unit will not utilize the retention of debris piles as a management strategy.

The deciduous utilization standard will be 15/10. The coniferous utilization standard will be 15/11.

## **Design Comments**

During the layout phase of this operation, Alberta-Pacific looked for signs of insect or disease infestations. No signs were found.

### **3. Block Information**

The following table summarizes the volumes within Alberta-Pacific's FHP blocks.

**Landbase Volume Summary**

<b>Company</b>	<b>Area (ha)</b>	<b>Decid (m3)</b>	<b>Conif (m3)</b>	<b>Inc Conif (m3)</b>	<b>Total (m3)</b>
Alberta-Pacific	636	120,608	300	11,183	132,091

The following Alberta-Pacific FHP blocks will have their coniferous volume hauled as CTL chargeable:

07224433211

**Alberta-Pacific Deciduous First Entry Block Listing**  
(Values Affected by Rounding)

Source Id	Opening Num	Harv Season	Conif Charge	Detail Plan	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
07223407371	4072230737	F	INC		6	1,194	0	289	1,483
07223418321	4072231832	F	INC		7	1,324	0	187	1,511
07224411711	4072241171	F	INC		15	3,073	0	829	3,902
07224412831	4072241283	F	INC		6	1,059	0	118	1,177
07224412981	4072241298	F	INC	U	23	3,345	0	611	3,956
07224413521	4072241352	F	INC		15	2,725	251	498	3,474
07224415381	4072241538	F	INC		8	1,748	0	132	1,880
07224420381	4072242038	F	INC		13	2,746	0	352	3,098
07224420761	4072242076	F	INC		5	1,005	0	256	1,261
07224420781	4072242078	F	INC	U	25	5,777	0	389	6,166
07224421751	4072242175	F	INC		8	1,834	0	68	1,902
07224421861	4072242186	F	INC		5	964	0	46	1,010
07224422271	4072242227	F	INC		3	406	0	40	446
07224423821	4072242382	F	INC		19	2,967	0	756	3,723
07224424491	4072242449	N	INC		10	1,867	0	223	2,090
07224426221	4072242622	N	INC		11	2,097	0	188	2,285
07224426391	4072242639	N	INC		14	3,058	0	129	3,187
07224426411	4072242641	N	INC	U	28	3,905	0	194	4,099
07224426781	4072242678	F	INC		21	4,801	0	168	4,969
07224427451	4072242745	N	INC		10	1,957	0	79	2,036
07224427481	4072242748	T	INC		2	332	0	72	404
07224427561	4072242756	N	INC		2	325	0	11	336
07224427931	4072242793	N	INC		5	1,090	0	38	1,128
07224428551	4072242855	N	INC		5	863	0	261	1,124
07224428681	4072242868	N	INC	U	11	1,844	0	409	2,253
07224428941	4072242894	N	INC		6	1,431	0	47	1,478
07224428961	4072242896	N	INC	U	16	3,010	0	112	3,122
07224429171	4072242917	N	INC		10	2,062	0	72	2,134
07224429361	4072242936	N	INC		2	322	0	10	332
07224429481	4072242948	N	INC		19	4,386	0	140	4,526
07224429871	4072242987	N	INC		9	1,790	0	79	1,869
07224430261	4072243026	N	INC		3	623	0	143	766
07224430271	4072243027	N	INC		3	576	0	168	744
07224430461	4072243046	N	INC		3	449	0	184	633

**Alberta-Pacific Deciduous First Entry Block Listing  
(Cont.)**

(Values Affected by Rounding)

Source Id	Opening Num	Harv Season	Conif Charge	Detail Plan	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
07224430521	4072243052	N	INC	U	28	4,735	0	308	5,043
07224430661	4072243066	N	INC	U	5	720	0	36	756
07224430771	4072243077	N	INC		12	2,122	0	81	2,203
07224430841	4072243084	N	INC		10	2,114	0	98	2,212
07224431221	4072243122	T	INC		7	1,200	0	90	1,290
07224431781	4072243178	N	INC		6	1,247	0	143	1,390
07224431931	4072243193	N	INC		3	733	0	23	756
07224432151	4072243215	F	INC		13	2,841	0	119	2,960
07224432381	4072243238	F	INC		5	976	0	162	1,138
07224432551	4072243255	T	INC		35	6,867	0	824	7,691
07224432751	4072243275	N	INC		5	728	0	114	842
07224432921	4072243292	N	INC		6	951	0	152	1,103
07224433211	4072243321	N	CTL		5	697	49	196	942
07224433291	4072243329	T	INC		10	1,589	0	160	1,749
07224433571	4072243357	N	INC		3	391	0	34	425
07224433791	4072243379	N	INC		26	4,042	0	417	4,459
07224434271	4072243427	N	INC		7	1,474	0	108	1,582
07224434381	4072243438	N	INC		3	550	0	83	633
07224434511	4072243451	T	INC		3	592	0	55	647
07224434671	4072243467	T	INC		22	4,603	0	142	4,745
07224434911	4072243491	T	INC	U	12	2,760	0	109	2,869
07224434971	4072243497	T	INC		26	4,284	0	139	4,423
07224435341	4072243534	N	INC		5	993	0	30	1,023
07224435481	4072243548	N	INC		16	3,029	0	128	3,157
07224435731	4072243573	N	INC		15	3,264	0	113	3,377
07224435961	4072243596	N	INC		1	151	0	21	172
<b>Total</b>					<b>636</b>	<b>120,608</b>	<b>300</b>	<b>11,183</b>	<b>132,091</b>

The blocks in the above table with a CTL for Conif Charge will be considered Jack Pine cover type for coniferous volume chargability.

#### 4. Access and Road Information

Landuse agreements will be in place prior to use of any third party dispositions being used.

##### Planning Unit Temporary Road Information

Existing access has been utilized where possible to minimize the clearing of new Right of Way (RoW).

New access and channelled watercourse crossings will be reclaimed in order to restrict access. All terrain vehicle (ATV) access may be left to facilitate silviculture activities.

New access and channelled watercourse crossings will be reclaimed as per Section 11.3.4 of the OGRs. Road reclamation and abandonment details are listed in the AOP when the blocks and roads are scheduled.

##### Main Access and Crossings

Road No.	Class	Length (Km)	Construction Season	Crossing Location	Field Call	Navigability
07371	4W	0.84	Frozen			
11711	4W	2.49	Frozen	1215	SP	U
				1246	T	U
12831	4W	0.75	Frozen			
12981	4W	1.35	Frozen	1278	SP	U
13521	4W	1.81	Frozen	1319	E	U
15381	4W	1.04	Frozen	2214	E	U
				2215	E	U
18321	4W	0.99	Frozen			
20381	4W	1.30	Frozen	1998	E	U
				2037	E	U
				2048	E	U
20761	4W	0.14	Frozen	2087	E	U
20781	4W	0.75	Frozen	2059	T	U
				2078	E	U
21751	4W	0.90	Frozen			
21861	4W	2.44	Frozen			
22271	4W	0.36	Frozen			
23821	4W	2.33	Frozen			
24491	4S	0.17	Non-Frozen			
26221	4S	0.16	Non-Frozen			
26391	4S	0.34	Non-Frozen	2619	E	U
				2639	E	U
26411	4S	0.41	Non-Frozen			
	4W	0.06	Frozen			
26781	4W	1.42	Frozen	2679	E	U
27451	4S	0.28	Non-Frozen			
27481	4S	0.43	Non-Frozen			
27561	4S	0.08	Non-Frozen			

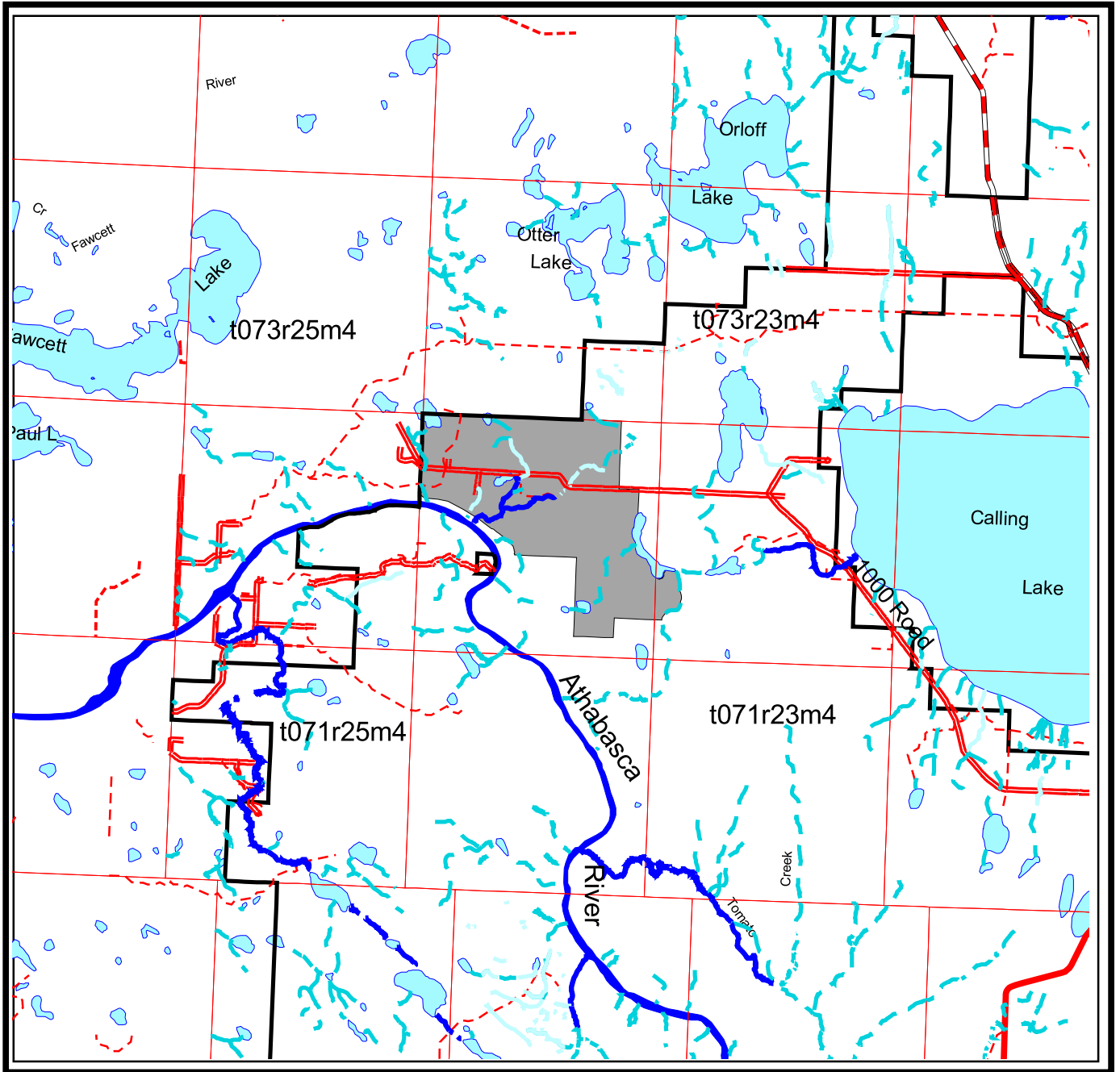
### Main Access and Crossings (Cont.)

Road No.	Class	Length (Km)	Construction Season	Crossing Location	Field Call	Navigability
27931	4S	0.11	Non-Frozen			
28551	4S	0.02	Non-Frozen			
28681	4S	0.19	Non-Frozen			
28941	4S	0.01	Non-Frozen			
28961	4S	0.82	Non-Frozen			
29171	4S	0.20	Non-Frozen			
29361	4S	0.05	Non-Frozen			
29481	4S	0.98	Non-Frozen			
29871	4S	0.02	Non-Frozen			
30261	4S	0.39	Non-Frozen			
30271	4S	0.24	Non-Frozen			
30461	4S	0.09	Non-Frozen			
30521	4S	0.76	Non-Frozen			
30661	4S	0.41	Non-Frozen			
30771	4S	0.69	Non-Frozen			
30841	4S	0.85	Non-Frozen			
31221	4S	0.57	Non-Frozen	3027	E	U
				3028	E	U
				3112	E	U
31781	4S	1.08	Non-Frozen			
31931	4S	0.58	Non-Frozen			
32151	4W	1.17	Frozen			
32381	4W	0.06	Frozen	3218	E	U
32551	4S	1.81	Non-Frozen			
32751	4S	0.17	Non-Frozen	3265	E	U
				3275	E	U
32921	4S	0.61	Non-Frozen			
33211	4S	1.32	Non-Frozen			
33291	4S	0.06	Non-Frozen			
33571	4S	0.21	Non-Frozen			
33791	4S	1.51	Non-Frozen	3319	E	U
				3419	E	U
				3439	E	U
34271	4S	1.81	Non-Frozen	3437	I	U
34381	4S	0.51	Non-Frozen	3449	E	U
34511	4S	1.24	Non-Frozen	2769	E	U
34671	4S	1.82	Non-Frozen	3464	E	U
				3466	E	U
34911	4S	0.81	Non-Frozen	2779	E	U
34971	4S	1.16	Non-Frozen	3535	E	U
35341	4S	1.13	Non-Frozen	3494	E	U
35481	4S	0.46	Non-Frozen			
35731	4S	1.22	Non-Frozen	3553	E	U
35961	4S	0.26	Non-Frozen	3594	E	U
<b>Total Class 4W:</b>		<b>20.20</b>				
<b>Total Class 4S:</b>		<b>26.04</b>				

In the above table, possible “Field Call” channelled watercourse classifications are ephemeral (E), intermittent (I), transitional (T), small permanent (SP), large permanent (LP), lake < 4 ha (SL), lake ≥ 4 ha (LL) beaver pond (B), spring (S), saturated soils (SS) or no channelled watercourse (NW). The “Navigability” rating identifies channelled watercourse as being potentially navigable (N) or potentially unnavigable (U) based on the possibility of traveling the stream with a vessel. The “Field Call” channelled watercourse classifications in the above table are based on Table 1 of the OGRs at the time, and during the conditions, when layout was conducted.

# Planning Unit 072244

## Access Map



1:250000



Alberta-Pacific  
Forest Industries Inc.

Not Surveyed  
Sport Fish Present  
Sport Fish Not Present





## **5. Non Timber Values**

### **Public Involvement**

Copies of this harvest plan are available for viewing on the Alberta-Pacific website at [www.alpac.ca](http://www.alpac.ca).

The Public Involvement for this plan was completed during this year's General Development Plan (GDP) review meetings.

No concerns have been identified through the public involvement process to date.

### **Aboriginal Consultation**

The Aboriginal Consultation for this plan was completed during the previous year's GDP review meetings.

No concerns have been identified through the Aboriginal Consultation process to date.

### **Trappers**

The holders of the following Registered Fur Management Areas (RFMA) have been contacted regarding harvesting activities within Planning Unit 072244 and their concerns have been noted below:

- 1597
- 1908
- 2795

### **Guides and Outfitters**

The holders of the following permits within Wildlife Management Unit (WMU) 511 have been notified of Alberta-Pacific's harvest plans within Planning Unit 072244 and their concerns have been noted below:

- |        |        |        |        |
|--------|--------|--------|--------|
| - 0023 | - 0066 | - 0163 | - 0209 |
| - 0260 | - 0480 | - 0559 | - 0695 |
| - 0702 | - 0759 | - 1026 | - 1139 |
| - 1203 |        |        |        |

No concerns have been identified through the Guide and Outfitter Consultation process to date.

### **Forest Recreation Groups**

There are currently no active forest recreation groups with interests within this planning unit.

## **Historical Resources**

Known historical resource sites have been addressed during the design of this plan. Lands on which historical resource sites are likely to occur will be checked prior to commencement of operations.

## **Forest Aesthetics**

No concerns have been indentified.

## **Land Use**

As per a Land Status Automated System (LSAS) land standing report dated March 30, 2016, there are currently no dispositions within this planning unit that restrict harvesting timber.

## **Wildlife**

Portions of the planning unit are within a key Wildlife and Biodiversity Zone. Operations will adhere to section 7.7.5 of the OGRs.

The following blocks have been buffered according to section 7.1.1 of the OGRs:

07224426391            07224426781

No areas of concentrated terrestrial lichens were identified during layout.

## ***Block Design***

### ***Access and Access Management***

Existing access has been utilized where possible to minimize the clearing of new RoW.

The following policies have been implemented to mitigate access management concerns:

- Temporary road systems will be closed as soon as possible after the harvesting, hauling, and silviculture activities have been completed.

If a significant delay occurs between harvesting and hauling, temporary access controls on roads will be utilized to restrict access by motorized vehicles. These controls may include the placement of logs on the road, snow berms, and/or removal of creek crossings.

- Slash rollback at strategic points (such as at the ends of the block or at the junction of the temporary road and permanent road) will be completed as soon as possible after logging to discourage access by all terrain or four wheel drive vehicles.

Since a portion of this planning unit falls within a key Wildlife and Biodiversity Zone, harvest and haul activities within in the zone are to be completed by January 15<sup>th</sup> as per the OGRs.

## 6. Spatial Harvest Sequence Summary

The table below summarizes the variance (in area) from the SHS, for Alberta-Pacific harvesting.

The variance exceeds the 20% allowable by cover type for acceptance as per the OGRs. The primary cause for the variance is steep terrain.

Within this planning unit 529.3 ha of reportable stands not in the current SHS have been added. To offset these additions there is 23.1 ha of deletions and 507.7 ha of deferrals from the SHS in Twp. 072-23-4.

### SHS Tracking

SHS Tracking	Decid. Cover Type	Sw Cover Type	Sb Cover Type	Pj Cover Type	Total Cover Type
Total SHS in Planning Unit	605.3	0.0	0.0	0.0	605.3
FHP SHS Harvest ha.	57.1	0.0	0.0	0.0	57.1
Deleted SHS ha. (reportable)	23.1	0.0	0.0	0.0	23.1
Deferred SHS ha. (reportable)	507.7	0.0	0.0	0.0	507.7
Variance % <sup>(1)</sup> (reportable)	87.7	0.0	0.0	0.0	87.7
Addition ha. (reportable)	529.3	0.0	0.0	0.0	529.3
Bypassed ha.	0.0	0.0	0.0	0.0	0.0
Total Harvest ha. <sup>(2)</sup>	586.4	0.0	0.0	0.0	586.4
SHS Variance ha. (unreportable) <sup>(3)</sup>	17.4	0.0	0.0	0.0	17.4
Additions ha. (unreportable) <sup>(4)</sup>	23.4	11.5	3.2	2.1	40.2

(1) Variance % is the reportable Deleted and Deferred SHS ha. expressed as a percentage of the Total SHS in the Planning Unit.

(2) Total Harvest ha. is the sum of FHP SHS Harvest ha. and Additions ha. (reportable).

(3) SHS Variance ha. (unreportable) are the deletions and deferrals from the SHS that are less than 2.0 ha. in size.

(4) Additions ha. (unreportable) are the additions to the FHP design that are less than 2.0 ha. in size.

## 7. Silviculture Information

The following table outlines the initial silviculture declarations for FHP blocks within Planning Unit 072244. Cover group balanced declarations will be submitted post harvest.

### Alberta-Pacific Silviculture Declarations

Source Id	Opening Num	Area (ha)	Std_ Mod	Open_ Desig	Species_ Gr	Silv_ Harv
07223407371	4072230737	6.4	D	CC	DE	CC

**Alberta-Pacific Silviculture Declarations (Cont.)**

<b>Source Id</b>	<b>Opening Num</b>	<b>Area (ha)</b>	<b>Std_ Mod</b>	<b>Open_ Desig</b>	<b>Species_ Gr</b>	<b>Silv_ Harv</b>
07223407371	4072230737	6.4	D	CC	DE	CC
07223418321	4072231832	7.3	D	CC	DE	CC
07224411711	4072241171	15.4	D	CC	DE	CC
07224412831	4072241283	6.3	D	CC	DE	CC
07224412981	4072241298	23.0	D	PC	DE	UP
07224413521	4072241352	15.3	D	CC	DE	CC
07224415381	4072241538	7.7	D	CC	DE	CC
07224420381	4072242038	12.6	D	AV	DE	CC
07224420761	4072242076	5.1	D	CC	DE	CC
07224420781	4072242078	24.8	D	PC	DE	UP
07224421751	4072242175	8.4	D	CC	DE	CC
07224421861	4072242186	4.6	D	CC	DE	CC
07224422271	4072242227	2.6	D	CC	DE	CC
07224423821	4072242382	19.2	D	AV	DE	CC
07224424491	4072242449	9.7	D	CC	DE	CC
07224426221	4072242622	11.4	D	AV	DE	CC
07224426391	4072242639	13.5	D	CC	DE	CC
07224426411	4072242641	27.7	D	PC	DE	UP
07224426781	4072242678	20.7	D	AV	DE	CC
07224427451	4072242745	9.8	D	AV	DE	CC
07224427481	4072242748	1.6	D	CC	DE	CC
07224427561	4072242756	2.2	D	CC	DE	CC
07224427931	4072242793	5.1	D	CC	DE	CC
07224428551	4072242855	4.7	D	CC	DE	CC
07224428681	4072242868	10.6	D	PC	DE	UP
07224428941	4072242894	6.5	D	AV	DE	CC
07224428961	4072242896	15.7	D	PC	DE	UP
07224429171	4072242917	10.5	D	CC	DE	CC
07224429361	4072242936	2.0	D	CC	DE	CC
07224429481	4072242948	18.8	D	CC	DE	CC
07224429871	4072242987	9.1	D	CC	DE	CC
07224430261	4072243026	3.5	D	CC	DE	CC
07224430271	4072243027	3.1	D	AV	DE	CC
07224430461	4072243046	3.3	D	AV	DE	CC
07224430521	4072243052	27.8	D	PC	DE	UP
07224430661	4072243066	5.2	D	PC	DE	UP
07224430771	4072243077	11.8	D	CC	DE	CC
07224430841	4072243084	9.7	D	AV	DE	CC
07224431221	4072243122	7.3	D	CC	DE	CC
07224431781	4072243178	5.5	D	CC	DE	CC

### Alberta-Pacific Silviculture Declarations (Cont.)

Source Id	Opening Num	Area (ha)	Std_Mod	Open_Desig	Species_Gr	Silv_Harv
07224431931	4072243193	3.2	D	CC	DE	CC
07224432151	4072243215	12.8	D	AV	DE	CC
07224432381	4072243238	4.9	D	AV	DE	CC
07224432551	4072243255	35.2	D	AV	DE	CC
07224432751	4072243275	5.1	D	CC	DE	CC
07224432921	4072243292	5.7	D	CC	DE	CC
07224433211	4072243321	5.4	D	CC	DE	CC
07224433291	4072243329	10.3	D	AV	DE	CC
07224433571	4072243357	2.8	D	CC	DE	CC
07224433791	4072243379	26.1	D	CC	DE	CC
07224434271	4072243427	6.7	D	CC	DE	CC
07224434381	4072243438	3.0	D	CC	DE	CC
07224434511	4072243451	2.7	D	AV	DE	CC
07224434671	4072243467	22.3	D	CC	DE	CC
07224434911	4072243491	12.3	D	PC	DE	UP
07224434971	4072243497	25.6	D	AV	DE	CC
07224435341	4072243534	5.1	D	CC	DE	CC
07224435481	4072243548	15.7	D	CC	DE	CC
07224435731	4072243573	15.0	D	CC	DE	CC
07224435961	4072243596	1.1	D	CC	DE	CC

In the above table, the codes for “Std\_Mod”, “Open\_Type”, “Species\_Gr” and “Silv\_Harv” are as per the Alberta Regeneration Information System (ARIS) domain codes. “AV” under “Open\_Desig” is not an ARIS code but is used internally for the tracking of understorey avoidance blocks. If a block contains adequate amounts of Balsam Fir, so that fir is an acceptable coniferous regeneration species, a code of FA is used in the “Species\_Gr”.

All deciduous blocks will be Leave for Natural (LFN). OGRs Variances

## 8. OGRs Variances

### Blocks

The lake bordering the north boundary of Block 07224426781 is less than 4.0 hectares in size and a 30 metre buffer was utilized.

The variance exceeds the 20% allowable by cover type for acceptance as per the OGRs. The primary cause for the variance is steep terrain.

The following table identifies blocks greater than 7.0 ha that may exceed 5% road disturbance once turnabouts are constructed.

### Road Percent

Source Id	% Road Class	Comments
07223418321	7	Extra road required due to rugged terrain.
07224411711	7	Narrow block and/or irregular shaped block.
07224415381	6	Narrow block and/or irregular shaped block.
07224420381	7	Extra road required due to rugged terrain.
07224420781	6	Extra road required due to rugged terrain.
07224421751	8	Narrow block and/or irregular shaped block.
07224423821	7	Narrow block and/or irregular shaped block.
07224424491	7	Narrow block and/or irregular shaped block.
07224426221	8	Narrow block and/or irregular shaped block.
07224427451	6	Narrow block and/or irregular shaped block.
07224428681	8	Narrow block and/or irregular shaped block.
07224428961	5	Extra road required; Access to other blocks.
07224429171	5	Narrow block and/or irregular shaped block.
07224429871	5	Narrow block and/or irregular shaped block.
07224430521	5	Extra road required; Access to other blocks.
07224430771	5	Narrow block and/or irregular shaped block.
07224430841	8	Extra road required; Access to other blocks.
07224431221	7	Narrow block and/or irregular shaped block.
07224432551	8	Extra road required due to rugged terrain.
07224433291	8	Narrow block and/or irregular shaped block.
07224434271	13	Narrow block and/or irregular shaped block.
07224434671	6	Extra road required; Access to other blocks.
07224434911	6	Narrow block and/or irregular shaped block.
07224434971	5	Narrow block and/or irregular shaped block.
07224435481	6	Narrow block and/or irregular shaped block.
07224435731	5	Extra road required; Access to other blocks.

The percent road class values have been achieved by rounding the road disturbance percent to the nearest whole number.

Block 07224420381 is comprised of three islands and contains 2 ha clumps of  $\geq 600$  stems/ha of White Spruce understorey at grid location 2037. Due to the size and shape of the islands this block will be protected by avoidance protection methods.

Block 07224427561 and 07224427931 contain  $\geq 600$  stems/ha of White Spruce understorey, but are too small for understorey protection methods, and will not have the understorey protected by avoidance or high intensity understorey protection. No understorey assessments will be submitted for this block.

Block 07224423821 contains 2 ha clumps of  $\geq 600$  stems/ha of White Spruce understorey at grid locations 2373 and 2382. Due to the size and shape this block will be protected by avoidance protection methods.

Block 07224426221 contains 2 ha clumps of  $\geq 600$  stems/ha of White Spruce understorey at grid location 2622. Due to the size and shape this block will be protected by avoidance protection methods.

07224426781 contains 2 ha clumps of  $\geq 600$  stems/ha of White Spruce understorey at grid location 2688. Due to the size and shape this block will be protected by avoidance protection methods.

Block 07224427451 is comprised of two islands and contains 2 ha clumps of  $\geq 600$  stems/ha of White Spruce understorey at grid location 2045. Due to the size and shape of the islands this block will be protected by avoidance protection methods.

Block 07224432151 is comprised of two islands and contains 2 ha clumps of  $\geq 600$  stems/ha of White Spruce understorey at grid location 3216. Due to the size and shape of the islands this block will be protected by avoidance protection methods.

Block 07224432551 is greater than 10ha and contains  $>2$  ha clumps of  $\geq 600$  stems/ha of White Spruce understorey at grid locations 3234, 3254 and 3267. However, due to terrain issues within the block it will not have high intensity understorey protection and will be harvested using avoidance methods.

Block 07224433291 is comprised of three islands and contains 2 ha clumps of  $\geq 600$  stems/ha of White Spruce understorey at grid location 3339. Due to the size and shape of the islands this block will be protected by avoidance protection methods.

Block 07224434971 contains 2 ha clumps of  $\geq 600$  stems/ha of White Spruce understorey at grid locations 3496 and 3518. Due to the size and shape of the area at grid location 3518 the block will be protected by avoidance protection methods. Due to the lack of contiguous understorey clumps at grid location 3518, high intensity understorey protection will not achieve desired protection targets. This block will be harvested using avoidance methods.

## Roads

### Road Comments

Road No.	Class	Comments
31781	4S	This road is within 200m of a lake at grid location at 3176