

Planning Unit 092234

Forest Harvest Plan

1. Introduction

This Forest Harvest Plan (FHP) for Planning Unit 092234 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 092234 is located north of Wabasca and west of Chip Lake community.

The planning unit is located in Forest Management Unit (FMU) S22. Alberta-Pacific has rights to D and DC as deciduous landbase and CD and C as shared coniferous landbase.

The Community Timber Permit Program (CTPP) and Vanderwell Contractors (1971) Ltd (Vanderwell) has been allocated a portion of the coniferous Annual Allowable Cut (AAC) from the C and CD cover groups.

The harvest design utilizes the 2006 Spatial Harvest Sequence (SHS). The plan and SHS were designed to remove second entry timber within the area. The affected coniferous operator has reviewed and agreed to the deciduous design.

Integration

This FHP is in FMU S22 and has been provided for review to Vanderwell.

Alberta-Pacific has received their agreement for this plan on August 8, 2016.

Watershed

No channelled watercourses or waterbodies within this planning unit have been surveyed as fish bearing or navigable.

All unsurveyed channelled 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

Some of the blocks in this unit are outside FireSmart Community Zones as identified by AAF. 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

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 of insects or disease were identified in the field during layout.

3. Block Information

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

Landbase Volume Summary

Company	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
Alberta-Pacific Decid	1,591	278,261	2,402	30,379	311,042
Alberta-Pacific Conifer	16	816	3,224	3	4,043

Landbase Volume Summary (Harvested Blocks)

Company	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
Alberta-Pacific Decid	477	0	0	0	0

The following Alberta-Pacific FHP blocks will have their coniferous volume hauled as Forest Management Agreement (FMA) S22 primary coniferous chargeable:

09123433471 09223403371 09123431421

Block 09223417231 from the previous submission was listed to have it's coniferous volume hauled FMA and will again for this submission.

The following blocks were submitted previously as their own blocks but have been added to block 09224401891 to create a better block and road network.

09223407441 09224401441 09224401471 09224401861

The blocks in bold in the following table have been added to the plan.

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)
09122431281	4220913128	NF	INC		17	3,739	0	121	3,860
09122431421	4220913142	F	FMA	U	26	4,512	0	434	4,946
09123433471	4230913347	F	FMA		8	1,793	0	62	1,855
09123434431	4230913443	F	INC		4	892	0	39	931
09123434661	4230913466	F	INC		2	380	0	12	392
09123434861	4230913486	NF	INC		44	10,071	0	405	10,476

**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)
09123434881	4230913488	F	INC		8	1,848	0	58	1,906
09123436281	4230913628	NF	INC		55	10,199	32	585	10,816
09123436441	4230913644	F	INC		19	3,703	0	739	4,442
09123436571	4230913657	NF	INC		1	140	0	35	175
09123436661	4230913666	NF	INC		25	5,584	0	178	5,762
09223402221	4230920222	NF	INC		77	17,085	0	615	17,700
09223403221	4230920322	NF	INC		6	991	0	46	1,037
09223403371	4230920337	NF	FMA	U	125	27,829	0	1,303	29,132
09223403421	4230920342	NF	INC		4	653	0	21	674
09223405641	4230920564	NF	INC	U	265	45,410	482	4,316	50,208
09223405771	4230920577	F	INC		19	2,581	772	342	3,695
09223407481	4230920748	NF	INC	U	51	8,358	0	1,191	9,549
09223408261	4230920826	F	INC		7	815	0	379	1,194
09223408281	4230920828	NF	INC		11	2,267	0	280	2,547
09223408421	4230920842	NF	INC	U	93	19,287	4	741	20,032
09223408881	4230920888	NF	INC	U	8	1,369	0	172	1,541
09223417231	4230921723	NF	FMA	U	35	5,412	0	732	6,144
09223417811	4230921781	NF	INC		10	1,877	0	264	2,141
09223418461	4230921846	NF	INC	U	307	49,258	604	4,084	53,946
09223420131	4230922013	NF	INC		11	1,765	0	111	1,876
09223422421	4230922242	NF	INC		7	863	0	506	1,369
09224401891	4240920189	NF	INC	U	214	30,750	508	6,008	37,266
09224412261	4240921226	NF	INC	U	133	18,825	0	6,600	25,425
Total					1,591	278,261	2,402	30,379	311,042

The blocks in the above table with a FMA for Conif Charge will be considered White Spruce cover type for coniferous volume chargability.

**Alberta-Pacific Coniferous First Entry Block Listing –
White Spruce**

(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)
09223416461	4230921646	NF	FMA		13	699	3,026	3	3,728
09223421661	4230922166	NF	FMA		1	90	88	0	178
Total					15	789	3,114	3	3,906

**Alberta-Pacific Coniferous First Entry Block Listing –
Pine**

(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)
09223419421	4230921942	NF	FMA		1	27	110	0	137
Total					1	27	110	0	137

Deciduous Unscheduled Block Listing

(Values Affected by Rounding)

Source Id	Opening Num	Status	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
09123435151	4230913515	Harv Comp	3	0	0	0	0
09123435281	4230913528	Harv Comp	11	0	0	0	0
09223402111	4230920211	Harv Comp	6	0	0	0	0
09223403671	4230920367	Harv Comp	29	0	0	0	0
09223403811	4230920381	Harv Comp	9	0	0	0	0
09223403861	4230920386	Harv Comp	6	0	0	0	0
09223409481	4230920948	Harv Comp	1	0	0	0	0
09223409861	4230920986	Harv Comp	56	0	0	0	0
09223410841	4230921084	Harv Comp	1	0	0	0	0
09223410881	4230921088	Harv Comp	33	0	0	0	0
09223411441	4230921144	Harv Comp	18	0	0	0	0
09223411461	4230921146	Harv Comp	11	0	0	0	0
09223414481	4230921448	Harv Comp	59	0	0	0	0
09223415421	4230921542	Harv Comp	81	0	0	0	0
09223416881	4230921688	Harv Comp	11	0	0	0	0
09223417851	4230921785	Harv Comp	100	0	0	0	0
09223421161	4230922116	Harv Comp	6	0	0	0	0
09223421861	4230922186	Harv Comp	10	0	0	0	0
09223421871	4230922187	Harv Comp	22	0	0	0	0
09223422261	4230922226	Harv Comp	1	0	0	0	0
09223422461	4230922246	Harv Comp	3	0	0	0	0
Total			477	0	0	0	0

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 and trapper access.

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
01891	4S	1.74	Non-Frozen	0139 0765	E T	U U
02221	4S	2.21	Non-Frozen			
03221	4S	0.16	Non-Frozen			
03371	4S	3.17	Non-Frozen	0493	E	U
03421	4S	0.04	Non-Frozen			
05641	4S	4.37	Non-Frozen	0443 0535 0555	T E E	U U U
05771	4W	0.58	Frozen	0588	E	U
07481	4S	0.89	Non-Frozen			
08261	4W	0.45	Frozen	0824	E	U
08421	4S	1.35	Non-Frozen	0526	E	U
12261	4S	4.12	Non-Frozen	1238 1248 1255	E E E	U U U
16461	4S	0.35	Non-Frozen			
17231	4S	0.43	Non-Frozen	1712	E	U
18461	4S	4.57	Non-Frozen	1874 1875 1897	E E E	U U U
20131	4S	0.18	Non-Frozen	2031	SP	U
21661	4S	0.12	Non-Frozen			
22421	4S	1.72	Non-Frozen			
31281	4S	0.08	Non-Frozen	3698	E	U
31421	4W	0.50	Frozen			

33471	4W	0.59	Frozen	3378	E	U
34431	4W	0.32	Frozen			
34661	4W	0.07	Frozen			
34861	4S	1.15	Non-Frozen			

Main Access and Crossings (Cont.)

Road No.	Class	Length (Km)	Construction Season	Crossing Location	Field Call	Navigability
34881	4W	0.34	Frozen			
36281	4S	1.11	Non-Frozen	3577	NW	U
				3587	E	U
36441	4W	0.99	Frozen	3656	E	U
36571	4S	0.19	Non-Frozen			
36661	4S	1.07	Non-Frozen	3657	E	U
Total Class 4W:		3.85				
Total Class 4S:		29.01				

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.

5. Non Timber Values

Public Involvement

Copies of this harvest plan are available for viewing at www.alpac.ca.

The Public Involvement for this plan was completed during the previous year's 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 092234:

- 1634
- 2266

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

Guides and Outfitters

The holders of the following permits within Wildlife Management Unit (WMU) 518 have been notified of Alberta-Pacific's harvest plans within Planning Unit 092234.

- 0163 - 0401 - 0709 - 0834 - 0858 - 0872
- 0881 - 0956 - 0995 - 1034 - 1137

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

No known historical resource sites are located within this unit. Lands on which historical resource sites are likely to occur will be checked prior to commencement of operations.

Forest Aesthetics

No concerns have been identified.

Land Use

The following dispositions have been reviewed and contain no restrictions for timber removal at this time and do not affect the harvest design:

CNT090056 DML120150 LOC071233 LOC980322 SME080145

A Permanent Sample Plot (PSP) is located in the eastern portion of Township 92-23-4 (PSP 704). Any plots that fell within the blocks scheduled for removal have been removed from the harvest design.

Wildlife

This planning unit is within Caribou Range. Operations will adhere to the Alberta-Pacific Caribou Protection Plan submitted annually in the fall.

No areas of concentrated terrestrial lichens were identified during layout.

All known sensitive wildlife sites have been buffered according to section 7.7.6.2 of the OGRs.

Access and Access Management

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

Continuous flow roads have been designed to reduce the amount of two-way traffic through certain areas of the planning unit (i.e. Road 01891).

Continuous flow roads have been utilized in larger blocks to reduce skidding distances and cycle times. Their use outside of blocks has been minimized to control access and reduce potential wildlife disturbance.

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.

The following access control practices will also be implemented:

- 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 the planning unit falls within a Caribou Range, the timing of operations will be completed as per the Alberta-Pacific Caribou Protection Plan.

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 variance occurs within the white spruce, black spruce, and pine cover types which were not the primary focus for this plan. Effort has been made to minimize variance wherever feasible.

SHS Tracking

SHS Tracking	Decid. Cover Type	Sw Cover Type	Sb Cover Type	Pj Cover Type	Total Cover Type
Total SHS in Planning Unit	2,077.0	121.0	12.4	5.5	2,215.9
FHP SHS Harvest ha.	1,706.7	30.4	2.0	1.9	1,741.0
Deleted SHS ha. (reportable)	130.4	18.6	10.5	3.2	162.7
Deferred SHS ha. (reportable)	61.4	55.4	0.0	0.0	116.8
Variance % ⁽¹⁾ (reportable)	9.2%	61.2%	84.3%	58.3%	12.6%
Addition ha. (reportable)	239.9	7.6	0.0	0.0	247.5
Bypassed ha.	0.0	0.0	0.0	0.0	0.0
Total Harvest ha. ⁽²⁾	1,946.6	38.0	2.0	1.9	1,988.5
SHS Variance ha. (unreportable) ⁽³⁾	178.5	16.6	0.0	0.4	195.4
Additions ha. (unreportable) ⁽⁴⁾	69.1	15.6	4.3	2.1	91.1

(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 092234. Cover group balanced declarations will be submitted post harvest. The blocks in bold are added to the plan.

Alberta-Pacific Silviculture Declarations

Source Id	Opening Num	Area (ha)	Std_ Mod	Open_ Desig	Species_ Gr	Silv_ Harv
09122431281	4220913128	16.8	D	AV	DE	CC
09122431421	4220913142	25.7	D	PC	DE	UP
09123433471	4230913347	7.8	D	CC	DE	CC
09123434431	4230913443	4.0	D	CC	DE	CC
09123434661	4230913466	1.6	D	CC	DE	CC
09123434861	4230913486	44.3	D	CC	DE	CC
09123434881	4230913488	7.8	D	CC	DE	CC
09123436281	4230913628	55.0	D	CC	DE	CC
09123436441	4230913644	19.2	D	CC	DE	CC
09123436571	4230913657	1.0	D	CC	DE	CC
09123436661	4230913666	25.2	D	CC	DE	CC
09223402221	4230920222	77.2	D	CC	DE	CC
09223403221	4230920322	6.0	D	AV	DE	CC
09223403371	4230920337	125.1	D	PC	DE	UP
09223403421	4230920342	3.9	D	CC	DE	CC
09223405641	4230920564	264.6	D	PC	DE	UP
09223405771	4230920577	19.3	D	AV	DE	CC
09223407481	4230920748	50.7	D	PC	DE	UP
09223408261	4230920826	6.7	DC	CC	MX	CC
09223408281	4230920828	10.7	D	CC	DE	CC
09223408421	4230920842	93.3	D	PC	DE	UP
09223408881	4230920888	8.1	D	PC	DE	UP
09223416461	4230921646	13.3	C	CC	SW	CC
09223417231	4230921723	35.5	D	PC	DE	UP
09223417811	4230921781	10.2	D	CC	DE	CC
09223418461	4230921846	306.9	D	PC	DE	UP
09223419421	4230921942	1.4	C	CC	PN	CC
09223420131	4230922013	10.6	D	CC	DE	CC
09223421661	4230922166	1.4	CD	CC	MX	CC
09223422421	4230922242	7.1	D	CC	DE	CC
09224401891	4240920189	214.1	D	PC	DE	UP
09224412261	4240921226	132.6	D	PC	DE	UP

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). All coniferous blocks will be treated as per Appendix 4, of the FMP.

8. OGRs Variances

Blocks

The lake bordering the south boundary of block 09223407481 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. See section 6 for additional details.

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
09123433471	7	Narrow block and/or irregular shaped block.
09123434861	5	Access to other blocks.
09223402221	5	Access to other blocks.

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

Block 09223405771 is greater than 10ha and contains >2 ha clumps of ≥ 600 stems/ha of White Spruce understorey. However, due to terrain issues within the block, it will not have high intensity understorey protection and will be harvested using avoidance methods.

Roads

Road Comments

Road No.	Class	Comments
18461	4S	This road has a road grade at 15% for 80m at grid location 1921.
33471	4S	This road is within 200m of a lake at grid location 3357.