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Forest Harvest Plan

Planning Unit 092214



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Report

1.0 Introduction

Alberta – Pacific Forest Industries Inc. (Alberta – Pacific) has prepared a Forest Harvest Plan (FHP) for the harvest of deciduous and coniferous stands within Planning Unit 092214.

Planning Unit 092214 is located off the Chip Lake Road within Forest Management Unit (FMU) S22.

Copies of this Forest Harvest Plan are available on the Alberta – Pacific website, at www.alpac.ca

2.0 General Planning Unit Information / Design Considerations

This FHP has been validated by a Registered Forestry Professional of Alberta- Pacific.

This FHP 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 2019-2020 Alberta-Pacific Annual Operating Plan (AOP).

Alberta- Pacific is submitting the remaining blocks for Planning Unit 092214. Alberta-Pacific did a partial submission in order to allow for operations to commence.

2.1 Operating Ground Rules

Planning Unit 092214 has been designed to adhere to the Northeast Alberta Operating Ground Rules (OGRs). Alberta – Pacific is requesting deviations from the OGRs, due to field verified factors. These requests, along with corresponding information are listed under the section *OGR Deviations*.

3.0 Maps

Individual block maps have been included in the submission package, outlining the information pertinent to these blocks. A Planning Unit overview map and a Spatial Harvest Sequence (SHS) Planning Unit map have been included in the submission package. These maps can be viewed in the *Appendices* of this document.

4.0 Block Information

A *Block Summary Table* has been included below outlining the expected volumes of the harvest area.

4.1 Utilization

Alberta – Pacific will be using the 15/10 utilization standard for deciduous and coniferous volume within the FHP.

4.2 Field verification

The proposed blocks were ground verified by a field layout team during the fall/winter of 2018. The layout team provided planning support to assess timber quality, sensitive and historical sites, operability of the harvest area, and classification of water courses within the Planning Unit boundary. Where applicable, the findings of the layout team have been noted in the corresponding section of this report.

4.3 Understory Assessment

White Spruce understory within deciduous landbase will be protected utilizing high effort understory protection in stands identified as greater than 600stems/ha. Any blocks found to have understory amounting to between 400 stems/ha and 600 stems/ha will be protected utilizing the avoidance method.

Blocks requiring understory protection or understory avoidance are noted within the *Block Summary Table*.

Block Summary Table

Table 1: Block Summary Table

This table provides a brief description of the proposed harvest blocks within the Planning Unit.

Deciduous Blocks						
Source ID	Opening Number	Harvest Season (Frozen/ Non- Frozen)	Area (ha)	Deciduous Volume (m³)	Incidental Conifer Volume (m³)	Total Volume (m³)
FB09022435551*	4220903555	F	30.1	3374.5	3553.7	6928.2
FB09121407461	4210910746	F	50.7	6433.3	6396.3	12829.7
FB09121407841	4210910784	F	2.1	519.7	87.1	606.8
FB09121408191	4210910819	F	3.9	880.8	112.8	993.6
FB09121408291	4210910829	F	7.8	1660.2	287.9	1948.1
FB09121409331*	4210910933	F	21.9	4045.7	1090.8	5136.5
FB09121416171	4210911617	F	9.2	1126.6	1476.4	2602.9
FB09121416351	4210911635	F	31.6	3686.3	5137.7	8824.0
FB09121418461	4210911846	F	6.2	772.5	798.0	1570.5
FB09121418481	4210911848	F	16.0	1848.7	2330.4	4179.1
FB09121418711	4210911871	F	21.3	2630.2	3040.1	5670.3
FB09121419451	4210911945	F	3.0	498.7	98.3	597.0
FB09121430161	4210913016	F	5.3	917.2	212.2	1129.4
FB09121430231	4210913023	F	1.8	168.8	160.4	329.2
FB09122412261	4220911226	F	9.0	1153.1	772.2	1925.4
FB09122413681	4220911368	F	7.7	1773.4	225.4	1998.8
FB09122414531*	4220911453	F	42.2	6277.9	2445.3	8723.2
FB09122422471*	4220912247	F	19.8	3226.1	689.9	3916.0
FB09122424321*	4220912432	F	24.8	3298.6	3313.9	6612.5
FB09122424661*	4220912466	F	31.5	3087.1	4796.8	7883.9
FB09122424831	4220912483	F	7.1	648.0	1158.9	1806.9
FB09122425821	4220912582	F	40.0	2708.0	6779.9	9487.9
FB09220420171*	4200922017	F	20.5	3578.6	764.9	4343.5
FB09220417621*	4200921762	F	60.2	11447.7	2748.8	14196.6
FB09220405951	4200920595	F	5.4	1221.1	261.9	1483.0
FB09220419521*	4200921952	F	22.1	3596.9	554.1	4151.0
FB09220407751	4200920775	F	1.2	281.3	26.1	307.5
FB09221423911	4200922391	F	8.6	1869.1	447.2	2316.3
FB09220406551*	4200920655	F	73.0	13391.9	4378.6	17770.5
FB09220408251	4200920825	F	8.9	2040.5	188.3	2228.7

	Deciduous Blocks (Cont'd)					
Source ID	Opening Number	Harvest Season (Frozen/ Non- Frozen)	Area (ha)	Deciduous Volume (m³)	Incidental Conifer Volume (m³)	Total Volume (m³)
FB09220407541*	4200920754	F	61.5	12482.2	2095.4	14577.6
FB09220405491	4200920549	F	9.8	1829.8	430.4	2260.2
FB09220420111*	4200922011	F	122.0	23135.4	3666.9	26802.3
FB09220407921*	4200920792	F	16.2	2916.5	242.5	3159.0
FB09220429651*	4200922965	F	7.1	1291.8	323.5	1615.3
FB09220429961*	4200922996	F	25.6	5733.8	635.9	6369.6
FB09220430481*	4200923048	F	11.9	2173.5	576.9	2750.4
FB09220431251*	4200923125	F	20.2	4176.2	771.2	4947.4
FB09220431421*	4200923142	F	3.6	648.3	134.5	782.8
FB09220431581*	4200923158	F	112.1	22674.2	4943.6	27617.8
FB09220431841*	4200923184	F	120.1	22416.0	5588.8	28004.9
FB09220432591*	4200923259	F	88.0	19169.5	2667.0	21836.5
FB09220432731*	4200923273	F	5.5	1002.3	134.0	1136.3
FB09221421651*	4210922165	F	27.7	5361.2	1699.8	7061.0
FB09221421771*	4210922177	F	59.0	11360.3	3506.2	14866.5
FB09221422871*	4210922287	F	14.5	2619.9	1282.9	3902.7
FB09221423751*	4210922375	F	87.7	18121.1	5871.7	23992.8
FB09221426341*	4210922634	F	56.8	11048.5	4369.7	15418.2
FB09221426791*	4210922679	F	31.4	6233.0	1881.1	8114.1
FB09221427221*	4210922722	F	8.0	1611.8	573.9	2185.8
FB09221427641*	4210922764	F	174.6	33400.7	14859.6	48260.3
FB09221428781*	4210922878	F	75.6	14599.3	3744.2	18343.5
FB09221435631*	4210923563	F	51.6	10500.4	3528.8	14029.2
FB09221435871*	4210923587	F	14.0	1713.8	1210.1	2923.9
FB09221436221*	4210923622	F	19.8	4081.5	1234.0	5315.5
FB09221436481*	4210923648	F	49.2	4362.2	598.0	4960.2
FB09320406151*	4200930615	F	7.6	1361.6	268.2	1629.7
FB09320406761*	4200930676	F	25.6	5471.8	1335.0	6806.8
Total			1,899.4	339,659.3	122,508.0	462,167.3

^{*} Understory Block: White Spruce understory within deciduous landbase will be protected utilizing high effort understory protection in stands identified as greater than 600stems/ha. Any blocks found to have understory amounting to between 400 stems/ha and 600 stems/ha will be protected utilizing the avoidance method.

<u>4.4 Structure Retention</u>

Alberta – Pacific will leave an average of 5% merchantable volume as structure retention throughout the FMU. This 5% will be left in the following methods:

- Laid out patches
- Individual trees
- Small clumps left at the operators' discretion

4.5 Debris Management

Planning Unit 092214 is situated within Alberta's Fire Control Zone number 46 as identified by Alberta Agriculture and Forestry (AAF). A portion of this Planning Unit falls within the Chipewyan Lake Community FireSmart zone and shall comply with section 7.3.4 within the OGRs.

Debris management of the Planning Unit will be accomplished in a manner consistent with Section 7.3 of the OGRs.

5.0 Watercourse Protection

During the preliminary planning of Planning Unit 092214, potential watercourses were identified using wet areas mapping, LiDAR data, aerial imagery, as well as the available AVI data.

Where harvest blocks are in proximity to any potential watercourses, the field layout team conducted field assessments utilizing the methodology and classification standards outlined in Section 6.0 of the OGRs. Any confirmed watercourses have been buffered in accordance with the OGRs Section 6.0.

Any deviations from the OGRs in relation to the watercourse buffers are noted in this report; please refer to the *OGR Deviations* section of the report for further information.

Watercourse Crossing Summary Table

Table 2: Watercourse Crossing Summary

A list of road crossings over field verified watercourses within the Planning Unit.

Road ID	Watercourse Classification	Crossing ID
LOC760921	Transitional	3588
RB09022435551	Transitional	3541
LOC760921	Transitional	3012
RB09022435551	Small Permanent	1893
RB09022435551	Small Permanent	188
RB09022435551	Small Permanent	2123
LOC760921	Small Permanent	3589
LOC760921	Small Permanent	1812
RB09022435551	Beaver Pond	1198
RB09121407461	Beaver Pond	3563
RB09121407461	Beaver Pond	607
RB09122412261	Ephemeral	1248
RB09121407461	Ephemeral	737
LOC760921	Ephemeral	3587
LOC760921	Ephemeral	608
LOC760921	Ephemeral	1818
RB09022435551	Ephemeral	3553
RB09022435551	Ephemeral	3542
RB09122414531	Ephemeral	1208
RB09122422471	Ephemeral	2690
RB09220406551	Ephemeral	679
RB09220419521	Small Permanent	1943
RB09220419521	Intermittent	1962
LOC760921	Transitional	753
LOC801473	Ephemeral	949
LOC801473	Beaver Pond	1542
FB09221423751a	Large Permanent	2402
FB09221423751a	Large Permanent	2412
RB09221428781a	Large Permanent	2706
FB09220429651a	Ephemeral	3264
FB09221436221	Ephemeral	3600

6.0 Road Information

Overview maps have been attached showing roads in accordance with Section 3.4.7. of the OGRs; all spatial data requirements have also been included with this submission.

Roads will be constructed, maintained, and reclaimed in a manner consistent with Section 11.3 of the OGRs.

When new access is necessary, reclamation processes will adhere to Section 11.3.4, Section 11.3.4.3 and Section 11.3.4.4 of the OGRs. To enable for silviculture activities, all-terrain vehicle (ATV) access may be left throughout the harvest area.

Planning Unit 092214 is located within caribou range and will adhere to section 11.5 of the OGRs.

Road Attributes Table

Table 3: Road Attributes

Summary of the proposed inter-block roads of the Planning Unit.

Road ID	Road Classification	Haul Season (Non- Frozen/Frozen)	Length, m
RB09022435551	Temporary	Frozen	11537.8
RB09121407461	Temporary	Frozen	2499.6
RB09121407841	Temporary	Frozen	657.0
RB09121408191	Temporary	Frozen	367.6
RB09121408291	Temporary	Frozen	445.4
RB09121409331	Temporary	Frozen	808.4
RB09121416171	Temporary	Frozen	1030.3
RB09121416351	Temporary	Frozen	455.0
RB09121418461	Temporary	Frozen	329.0
RB09121418481	Temporary	Frozen	262.8
RB09121418711	Temporary	Frozen	490.4
RB09121419451	Temporary	Frozen	427.0
RB09121430231	Temporary	Frozen	62.4
RB09122412261	Temporary	Frozen	1747.7
RB09122414531	Temporary	Frozen	1891.4
RB09122422471	Temporary	Frozen	3244.7
RB09122424321	Temporary	Frozen	1542.2
RB09122424661	Temporary	Frozen	1178.6
RB09122424831	Temporary	Frozen	14.4
RB09122425821	Temporary	Frozen	6.5

Road ID	Road Classification	Haul Season (Non- Frozen/Frozen)	Length, m
RB09220405491	Temporary	Frozen	412.9
RB09220405951	Temporary	Frozen	751.4
RB09220408251	Temporary	Frozen	1002.8
RB09220417621	Temporary	Frozen	1877.0
RB09220420111	Temporary	Frozen	1093.7
RB09220405491	Temporary	Frozen	870.7
RB09220406551	Temporary	Frozen	829.2
RB09220406551	Temporary	Frozen	121.0
RB0922040792	Temporary	Frozen	655.7
RB0922041762	Temporary	Frozen	114.8
RB0922042011	Temporary	Frozen	1907.1
RB0922042011	Temporary	Frozen	727.6
RB0922042011	Temporary	Frozen	336.3
RB0922042011	Temporary	Frozen	287.6
RB09220406551	Temporary	Frozen	86.5
RB09220407541	Temporary	Frozen	322.4
RB09220407541	Temporary	Frozen	611.4
RB09220407541	Temporary	Frozen	317.4
RB09220407541	Temporary	Frozen	643.4
RB09220407541	Temporary	Frozen	1113.7
RB09220419521	Temporary	Frozen	1789.5
RB09220419521	Temporary	Frozen	245.4
RB09221423911	Temporary	Frozen	502.7
LOC801473	Temporary	Frozen	2745.5
RB09220406551	Temporary	Frozen	1439.1
RB09220406551	Temporary	Frozen	254.3
RB09220406551	Temporary	Frozen	108.0
RB09220420111	Temporary	Frozen	663.6
RB09220420171	Temporary	Frozen	791.9
LOC760921	Temporary	Frozen	4626.8
LOC790479	Temporary	Frozen	1436.6
LOC820872	Temporary	Frozen	2080.8
MSL802156	Temporary	Frozen	112.5
LOC820873	Temporary	Frozen	449.5
MSL821372	Temporary	Frozen	109.3
LOC801473	Temporary	Frozen	1349.0
MSL821373	Temporary	Frozen	106.2

Road ID	Road Classification	Haul Season (Non- Frozen/Frozen)	Length, m
RB09220420171	Temporary	Frozen	76.7
RB09220420111	Temporary	Frozen	224.4
RB09220420111	Temporary	Frozen	167.3
RB09220420111	Temporary	Frozen	195.9
RB09220407921	Temporary	Frozen	499.5
RB09220408251	Temporary	Frozen	97.8
RB09220407751	Temporary	Frozen	106.8
RB09220406551	Temporary	Frozen	307.7
RB09220405951	Temporary	Frozen	221.8
LOC801473	Temporary	Frozen	1378.9
FB09220429651	Temporary	Frozen	5191.2
FB09220430481	Temporary	Frozen	1497.2
FB09220432591	Temporary	Frozen	106.8
FB09221422871	Temporary	Frozen	898.7
FB09221423751	Temporary	Frozen	2577.3
FB09221426341	Temporary	Frozen	261.1
FB09221427641	Temporary	Frozen	185.8
FB09221428781	Temporary	Frozen	2814.3
FB09221435631	Temporary	Frozen	3856.4
FB09221436221	Temporary	Frozen	1105.8
FB09221436481	Temporary	Frozen	492.0
FB09320406151	Temporary	Frozen	972.1
FB09320406761	Temporary	Frozen	5413.6
FB09221421651	Temporary	Frozen	4866.6

7.0 Land Use Information

A search of the Geographic Land Information Management and Planning System (GLIMPS) and Digital Integrated Dispositions (DIDs) yielded active dispositions within the FHP. Any necessary agreements with the disposition holder will be in place prior to the commencement of harvest operations. None of the dispositions within the FHP will restrict harvest operations in the FHP.

Land Use Summary Table

Table 4: Land Use Summary Table

Active dispositions in the Planning Unit

Disposition Number	Disposition Holder	Disposition Type
PLA013638	CANADIAN NATURAL RESOURCES LIMITED	Pipeline
PLA910016	BONAVISTA ENERGY CORPORATION	Pipeline
PLA910848	BONAVISTA ENERGY CORPORATION	Pipeline
PLA910082	BONAVISTA ENERGY CORPORATION	Pipeline
PLA860101	CANADIAN NATURAL RESOURCES LIMITED	Pipeline
PLA840810	CANADIAN NATURAL RESOURCES LIMITED	Pipeline
PLA860101	CANADIAN NATURAL RESOURCES LIMITED	Pipeline
PLA860101	CANADIAN NATURAL RESOURCES LIMITED	Pipeline
PLA860101	CANADIAN NATURAL RESOURCES LIMITED	Pipeline
PLA820641	CANADIAN NATURAL RESOURCES LIMITED	Pipeline
PLA820641	CANADIAN NATURAL RESOURCES LIMITED	Pipeline
PLA890784	CANADIAN NATURAL RESOURCES LIMITED	Pipeline
PLA820640	CANADIAN NATURAL RESOURCES LIMITED	Pipeline
PLA820641	CANADIAN NATURAL RESOURCES LIMITED	Pipeline
PLA840810	CANADIAN NATURAL RESOURCES LIMITED	Pipeline
PLA820641	CANADIAN NATURAL RESOURCES LIMITED	Pipeline

The FHP design incorporates pipeline crossings, for temporary roads. The agreements will be in place prior to the construction of these crossings.

8.0 Integration with Other Forest Users

8.1 Integration with Other Harvest Operators

Vanderwell Contractors Ltd. has a timber quota within this FMU; they have been contacted in regards to this plan and provided sign-off on Sept. 27, 2019.

8.2 Registered Fur Management Areas (RFMAs)

There are 6 RFMAs within the FHP who will be affected by operations. Notification letters were sent to the respective RFMA holders, any requests from any RFMA holder have been considered, and, where possible, the harvest design has been planned to accommodate the request.

Trapper Areas Table

Table 5: Trapper Areas Table

RFMA holders affected by harvest operations.

RFMA ID	Notification Method	Contact Method
775	Letter	Mail
161	Letter	Mail
2799	Letter	Mail
827	Letter	Mail
892	Letter	Mail
6	Letter	Mail

8.3 Wildlife Management Unit(s) (WMU)

Planning Unit 092214 is located within WMU 518. The Guides and Outfitters operating within this unit have been sent notification, via registered mail, on the FHP design, as well as a timeline for the commencement of harvest operations. Any requests from Guides and Outfitters have been considered, and, where possible, the harvest design has been planned to accommodate the request.

Guide and Outfitters Table

Table 6: Guide and Outfitters

List of Guide and Outfitters active in 518.

OG ID Number	Date	Contact Method
OG ID 709 G	28-Feb-18	Letter
OG ID 295 G	28-Feb-18	Letter
OG ID 872 G	28-Feb-18	Letter
OG ID 1053G	28-Feb-18	Letter
OG ID 453 GW	28-Feb-18	Letter
OG ID 344 G	28-Feb-18	Letter
OG ID 401 GW	28-Feb-18	Letter
OG ID 1034 G	28-Feb-18	Letter
OG ID 858 G	28-Feb-18	Letter
OG ID 1236 G	28-Feb-18	Letter
OG ID 1252 G	28-Feb-18	Letter
OG ID 163 G	28-Feb-18	Letter
OG ID 834 G	28-Feb-18	Letter
OG ID 881 GW	28-Feb-18	Letter
OG ID 938 G	28-Feb-18	Letter
OG ID 956 G	28-Feb-18	Letter

8.4 Indigenous Groups

During the General Development Plan (GDP) process, Alberta – Pacific completes a consultation with indigenous groups every year. There have not been any issues identified for the Planning Unit 092214 FHP submission.

8.5 Other Forest Users

There are no other forest user groups operating within the Planning Unit area.

8.6 Forest Aesthetics

As outlined in Section 5.5. of the OGRs, Alberta – Pacific follows the objective to mitigate the impact of timber operations on the visual quality of the forest landscape. This FHP is not adjacent to any park or recreational areas, and no other aesthetics

concerns have been noted to date by other forest users. Alberta – Pacific will strategically locate retention areas adjacent to Class I, II, and III roads, minimizing line of sight where possible.

9.0 Species and Areas of Concern

9.1 Woodland Caribou

Planning Unit 092214 is located within caribou range and will adhere to section 7.7.2 of the OGRs.

9.2 Key Wildlife and Biodiversity Zone (KWBZ)

Planning Unit 092214 is not located within a Key Wildlife and Biodiversity Zone.

9.3 Other Species

All known sensitive wildlife sites have been buffered in accordance with Section 7.7.6.2 of the OGRs.

9.4 Sensitive Sites

A review of the block design and landscape of the FHP was completed by professional archaeologists. Any sites identified as being of high historical significance (historical resource sites), have been removed from the harvest design.

Upon completion of field verification, a second review of the harvest blocks, and temporary roads were conducted to identify potential conflicts, and to determine if any further changes are required to the Planning Unit.

There were no signs of rare plants, or diseases identified, including signs of terrestrial lichen.

If any sites are identified post submission, Alberta – Pacific will take the appropriate action to protect these sites.

9.5 Forest Health

During the field verification of the FHP harvest area, a team evaluated the current state of the forest health in the FHP harvest area, as outlined in Section 10.1 of the OGRs.

If any sites are identified post submission, Alberta – Pacific will take the appropriate action to protect these sites as per Section 10.1.2 of the OGRs.

10.0 OGR Deviations

10.1 Road Deviations

The following table outlines the blocks which are greater than 7 hectares, with potentially more than 5% road disturbance.

Table 7: Road Percent Deviations Table

Road deviations which contain blocks that are greater than 7 hectares, with potentially more than 5% road disturbance.

Source ID	Opening Number	Road Percentage	Reasoning
FB09121407841	4210910784	4.6	Limited decking along main haul route
FB09121416171	4210911617	4.9	Access to other blocks
FB09121419451	4210911945	4.9	Limited decking along main haul route
FB09121408191	4210910819	5.4	Access to other blocks
FB09121409331	4210910933	5.6	Limited decking along main haul route
FB09122412261	4220911226	5.9	Access to other blocks
FB09121408291	4210910829	6.2	Limited decking along main haul route
FB09220405951	4200920595	6.5	Access to other blocks
FB09220407751	4200920775	8.0	Access to other blocks
FB09221423911	4200922391	5.1	Access to other blocks
FB09220408251	4200920825	6.2	Access to other blocks
FB09220407921	4200920792	4.7	Access to other blocks
FB09220430481	4200923048	7.94	Narrow/irregular block
FB09221426341	4210922634	5.87	Narrow/irregular block
FB09221435871	4210923587	5.69	Narrow/irregular block

11.0 Validation by Registered Forest Practitioner

Plan prepared and submitted on behalf of Alberta Pacific Forest Industries Inc.

ALBERTA-PACIFIC FOREST INDUSTRIES INC.

Bernie Belland, RPFT

Woodlands Operations Planner

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