



Northland Forest Products Ltd.
and
Alberta Pacific Forest Industries Inc.

Forest Harvest Plan

Compartment: "Surface Mineable Area – A15-
SMA"

Planning Unit: "097124"

FMA 9100029 & CTLA150005

Forest Harvest Plan – 097124(20-25)

Date Submitted: 2020/10/29

Forest Harvest Plan

PU097124

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Report

1.0 Introduction

Alberta – Pacific Forest Industries Inc. (Alberta – Pacific) and Northland Forest Products Ltd. (Northland) have prepared a Forest Harvest Plan (FHP) for the harvest of deciduous and coniferous stands within Planning Unit 097124.

Planning Unit 097124 is comprised of 22 proposed coniferous cutblocks and 8 proposed deciduous cutblocks with a total area of 594.2 ha, within Forest Management Unit (FMU) A15, within the Surface Mineable Area (SMA).

The companies have identified two potential camp locations for logging operations within this Planning Unit. The temporary camps are in blocks FB09712436721

(Lat 6368714.67, Long 452058.0211) and FB09712436051 (Lat 6368984.1751, Long - 450731.2654), each with an area of 0.5 hectares and can be viewed in the FHP Overview Map. The campsites will be reclaimed as indicated in Section 11.3.4.4 of the Northeast Alberta Timber Harvesting Planning and Operating Ground Rules (OGRs).

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 Registered Forestry Professionals employed by Alberta-Pacific and Northland.

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 2020-21 Alberta-Pacific and Northland Annual Operating Plan (AOP).

2.1 Operating Ground Rules

Planning Unit 097124 has been designed in accordance with the Northeast Alberta Operating Ground Rules (OGRs), revised 2018. Alberta – Pacific and Northland are requesting certain 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 in Appendix A outlining the expected volumes of the area.

4.1 Utilization

Alberta – Pacific and Northland adheres to the 15/10 utilization standard for coniferous and deciduous trees, this includes the incidental.

4.2 Field Verification

The proposed blocks were ground verified by a field layout team. 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 variance findings of the layout team have been noted in the corresponding section of this report.

4.3 Understory Assessment

For this Planning Unit there was very little understory observed during the block and road layout process. If white spruce understory is encountered within deciduous blocks during operations it will be protected utilizing the avoidance method.

4.4 Structure Retention

Alberta – Pacific will leave an average of 5% merchantable volume as structure retention throughout the FMU and Northland will leave an average of 3%. This retention will be left in the following methods:

- Laid out patches
- Mapped patches (planned with GIS desktop)
- Individual trees
- Small clumps left at the operators' discretion

4.5 Debris Management

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

5.0 Watercourse Protection

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, Table 2.

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. The list of watercourse crossings can be found in Appendix B – *Watercourse Crossing Summary Table*.

6.0 Road Information

Overview maps have been attached showing roads in accordance with Section 3.4.6. 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 of the OGRs. To enable for silviculture activities, all-terrain vehicle (ATV) access may be left throughout the harvest area. The list of roads can be found in Appendix C – *Road Attributes Table*.

7.0 Land Use Information

A search of the Geographic Land Information Management Planning System (GLIMPS) and Digital Integrated Dispositions (DIDs) yielded active dispositions within the FHP harvest area. 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 harvest area will restrict harvest operations in the FHP.

The FHP design incorporates pipeline crossings for temporary class 4 roads. The agreements will be in place prior to the construction of these crossing. Below is a land use table with the various disposition holders in the area.

Land Use Summary Table

Disposition Number	Disposition Holder	Disposition Type
LOC070539	BP CANADA ENERGY GROUP ULC	LOC
LOC140439	CANADIAN NATURAL RESOURCES LIMITED	LOC
LOC942561		LOC

8.0 Integration with Other Forest Users

8.1 Integration with Other Harvest Operators

This is an integrated plan between the FMA holder and CTL holder; both companies have validated the plan.

8.2 Registered Fur Management Areas (RFMAs)

There are 3 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.

Registered Fur Management Areas Table

RFMA ID	Notification Method	Contact Method
2016	Letter	Mail
94	Letter	Mail
850	Letter	Mail

8.3 Wildlife Management Unit(s) (WMU)

Planning Unit 097124 is location within WMU 531. 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.

8.4 Indigenous Groups

During the General Development Plan (GDP) process, Alberta – Pacific and Northland completes a consultation with indigenous groups every year. There have not been any issues identified for the Planning Unit 097124 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 and Northland follow 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 and Northland 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

None of the planned cutblocks in this FHP are within mapped Caribou Ranges.

9.2 Key Wildlife and Biodiversity Zone (KWBZ)

Planning Unit 097124 is located within a Key Wildlife and Biodiversity Zone and will adhere to section 7.7.5 of the OGRs. The following table is a list of blocks that are within the KWBZ.

Key Wildlife and Biodiversity Zone Table

<i>Source ID</i>	<i>Opening Number</i>	<i>Block Area</i>
FB09711431001	4110973100	16.2
FB09712425591	4120972559	9.0
FB09712433361	4120973336	11.7
FB09712434791	4120973479	16.4
FB09712435491	4120973549	3.4
FB09712435641	4120973564	15.4
FB09712436051	4120973605	7.7

FB09712436721	4120973672	19.1
NB09712425284	4120972528	0.9
NB09712426764	4120972676	4.5
NB09712427244	4120972724	15.8
NB09712427564	4120972756	33.1
NB09712427934	4120972793	12.2
NB09712433514	4120973351	23.4
NB09712433944	4120973394	187.8
NB09712434094	4120973409	19.0
NB09712434384	4120973438	17.1
NB09712434974	4120973497	51.9
NB09712435394	4120973539	5.2
NB09712435514	4120973551	22.4
NB09712435694	4120973569	7.3
NB09712435804	4120973580	1.8
NB09712436004	4120973600	4.6
NB09712436264	4120973626	3.7
NB09712436644	4120973664	39.5
NB09712436694	4120973669	33.7
NB09712436834	4120973683	3.2
NB09811406034	4110980603	1.9
NB09811406104	4110980610	5.5
NB09812402104	4120980210	0.6

9.3 Other Species

All known sensitive wildlife sites have been buffered in accordance with Section 7.7.5.2 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 or moderate historical significance (historical resource sites), have been removed from the harvest design.

Upon completion of cutblock and road layout, a second review of the harvest blocks, and temporary class 4 roads is completed 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 and Northland will take the appropriate action to protect these sites.

9.5 Forest Health

During the layout stage and field verification stage, a team evaluated the current state of the forest health in the FHP area and found varying levels of blowdown damage. It is estimated that 20% volume loss on average can be expected within this Planning Unit.

10.0 SHS Information / Variance Summary

Variances from the Spatial Harvest Sequence (SHS) within the Planning Unit boundary are not required, as SHS variances are exempt from the SMA.

11.0 Silviculture Information

No reforestation liability requirements exist within the SMA.

12.0 OGR Deviations

12.1 Road Deviations

The first of the following tables outlines the blocks which are greater than 7 hectares, with potentially more than 5% road disturbance. The second table goes into detail where the roads go within 100m of a large permanent creek due to operational constraints.

Road Percent Deviations Table

Source ID	Opening Number	Block Area (ha)	Harvest Season (Frozen/ Non-Frozen)	Road Percentage	Road Percentage Reason
FB09711431001	4140771851	16.2	Frozen	5.9	Narrow/Irregular block shape
FB09712433361	4150770855	11.7	Frozen	6.6	Access to other blocks
FB09712434791	4150770890	16.4	Frozen	5.1	Access to other blocks
FB09712435641	4150771601	15.4	Frozen	5.0	Narrow/Irregular block shape
FB09712436721	4150771669	19.1	Frozen	5.9	Narrow/Irregular block shape
NB09712427564	4150771777	33.1	Frozen	5.3	Narrow/Irregular block shape
NB09712435514	4150772120	22.4	Frozen	5.8	Narrow/Irregular block shape
NB09712435694	4150772129	7.3	Frozen	10.9	Access to other blocks

13.0 Validation by Registered Forest Practitioner

Plan prepared and submitted on behalf of Alberta-Pacific and Northland.



Dennis Froese, RPF

ALBERTA-PACIFIC FOREST INDUSTRIES INC.



Darcy Sulz, RPF

NORTHLAND FOREST PRODUCTS LTD

Appendix A: Block Summary Table

Coniferous Blocks - NFPL							
Source ID	Opening Number	Harvest Season (Frozen/ Non-Frozen)	Area (ha)	Conifer Volume (m ³)	Aris Code	Incidental Deciduous Volume (m ³)	Total Volume (m ³)
NB09712425284	4120972528	Frozen	0.9	79	SAw	53	132
NB09712426764	4120972676	Frozen	4.5	898	Sw	278	1,176
NB09712427244	4120972724	Frozen	15.8	4,205	Sw	509	4,715
NB09712427564	4120972756	Frozen	33.1	5,867	SAw	3,683	9,550
NB09712427934	4120972793	Frozen	12.2	2,148	SAw	1,432	3,580
NB09712433514	4120973351	Frozen	23.4	4,366	SAw	2,342	6,708
NB09712433944	4120973394	Frozen	187.8	27,835	SAw	21,421	49,256
NB09712434094	4120973409	Frozen	19.0	3,452	Sw	2,256	5,707
NB09712434384	4120973438	Frozen	17.1	3,183	Sw	1,538	4,722
NB09712434974	4120973497	Frozen	51.9	9,872	Sw	4,650	14,522
NB09712435394	4120973539	Frozen	5.2	967	Sw	530	1,498
NB09712435514	4120973551	Frozen	22.4	4,368	Sw	1,767	6,135
NB09712435694	4120973569	Frozen	7.3	1,350	Sw	465	1,815
NB09712435804	4120973580	Frozen	1.8	158	SAw	100	258
NB09712436004	4120973600	Frozen	4.6	707	Sw	496	1,203
NB09712436264	4120973626	Frozen	3.7	689	Sw	127	816
NB09712436644	4120973664	Frozen	39.5	4,300	AwS	6,091	10,391
NB09712436694	4120973669	Frozen	33.7	5,991	Sw	2,383	8,374
NB09712436834	4120973683	Frozen	3.2	779	Sw	85	864
NB09811406034	4110980603	Frozen	1.9	326	SAw	145	471
NB09811406104	4110980610	Frozen	5.5	882	SAw	345	1,227
NB09812402104	4120980210	Frozen	0.6	149	AwS	37	187
		Total	495.4	82,571		50,734	133,305

Appendix A: Block Summary Table

Deciduous Blocks - ALPac						
Source ID	Opening Number	Harvest Season (Frozen/Non-Frozen)	Area (ha)	Deciduous Volume (m ³)	Incidental Conifer Volume (m ³)	Total Volume (m ³)
FB09711431001	4110973100	Frozen	16.2	4,367	659	5,026
FB09712425591	4120972559	Frozen	9.0	2,038	81	2,119
FB09712433361	4120973336	Frozen	11.7	1,818	863	2,681
FB09712434791	4120973479	Frozen	16.4	3,600	1,103	4,703
FB09712435491	4120973549	Frozen	3.4	758	231	989
FB09712435641	4120973564	Frozen	15.4	2,354	549	2,903
FB09712436051	4120973605	Frozen	7.7	1,380	220	1,600
FB09712436721	4120973672	Frozen	19.1	4,538	1,021	5,560
		Total	98.9	20,852	4,727	25,579

Appendix B: Watercourse Crossing Summary Table

Road ID	Road Crossing Number	Stream Class
CNRL2000	2659	Ephemeral
	2739	Small Perm
	2759	Ephemeral
CNRL2559	2578	Beaver Pond
	3660	Intermittent
CNRL2676	2507	Beaver Pond
CNRL3100	2599	Beaver Pond
CNRL3394	3338	Ephemeral
	3366	Intermittent
	3403	Intermittent
	3436	Transitional
	3451	Transitional
	3474	Transitional
CNRL3497	3508	Intermittent
CNRL3539	3539	Intermittent
CNRL3549	0260	Transitional
CNRL3600	3590	Intermittent
CNRL3664	3670	Intermittent
DLO910875	2529	Beaver Pond
DLO961526	3697	Ephemeral
LOC140439	3527	Transitional
	3528	Transitional
	3537	Ephemeral
	3555	Ephemeral
LOC942561	2508	Beaver Pond
	3602	Beaver Pond

Appendix C: Road Attributes Table

Road ID	Road Classification	Haul Season	FCODE	Class	Length, m
DLO910875	Temp	Frozen	Winter Road	4	977
DLO961526	Temp	Frozen	Winter Road	4	1,909
LOC070539	Temp	Frozen	Winter Road	4	503
LOC140439	Temp	Frozen	Winter Road	4	2,467
LOC942561	Temp	Frozen	Winter Road	4	1,939
CNRL0409	Temp	Frozen	Winter Road	4	308
CNRL0610	Temp	Frozen	Winter Road	4	101
CNRL1000	Temp	Frozen	Winter Road	4	1,498
CNRL2000	Temp	Frozen	Winter Road	4	5,691
CNRL2559	Temp	Frozen	Winter Road	4	475
CNRL2676	Temp	Frozen	Winter Road	4	148
CNRL2724	Temp	Frozen	Winter Road	4	915
CNRL2756	Temp	Frozen	Winter Road	4	694
CNRL2793	Temp	Frozen	Winter Road	4	1,516
CNRL3100	Temp	Frozen	Winter Road	4	789
CNRL3336	Temp	Frozen	Winter Road	4	667
CNRL3351	Temp	Frozen	Winter Road	4	103
CNRL3394	Temp	Frozen	Winter Road	4	9,218
CNRL3438	Temp	Frozen	Winter Road	4	623
CNRL3479	Temp	Frozen	Winter Road	4	956
CNRL3497	Temp	Frozen	Winter Road	4	2,075
CNRL3539	Temp	Frozen	Winter Road	4	461
CNRL3549	Temp	Frozen	Winter Road	4	516
CNRL3551	Temp	Frozen	Winter Road	4	905
CNRL3564	Temp	Frozen	Winter Road	4	98
CNRL3600	Temp	Frozen	Winter Road	4	271
CNRL3626	Temp	Frozen	Winter Road	4	951
CNRL3664	Temp	Frozen	Winter Road	4	1,936
CNRL3669	Temp	Frozen	Winter Road	4	407
CNRL3672	Temp	Frozen	Winter Road	4	516
				Total	39,637