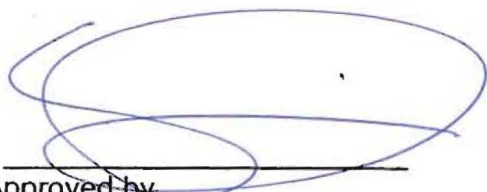


2014 Little Fox Lake Fuelwood II Timber Harvest Plan

Carmacks Annual Limit Region

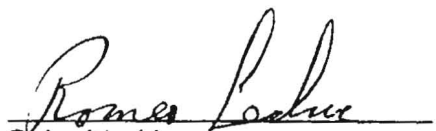
Date Prepared:

November 21, 2013



Approved by
Lyle Dinn, Director Forest Management Branch

Feb 18, 2014
Date



Submitted by
Romeo Leduc, Duke Ventures Ltd.

Dec 18 / 13
Date

1. Introduction

1.1. *Background*

The Little Fox Lake Fuel Wood #2 THP is located north of Whitehorse at kilometer 260 on the North Klondike Highway. The THP area is the traditional territories for Champagne and Aishihik First Nation, Little Salmon Carmacks First Nation, Kwanlin Dun First Nation, and the Ta'an Kwach'an Council. The THP area has fire killed spruce stands from the 1998 Fox Lake fire. The volume includes both standing dead and blown down. There are some scattered spruce and aspen seedlings throughout the area, and a general grass, herb, and shrub layer. The estimated average volume is 45m³/ha.

1.2. *Eco-region and Drainages*

This THP is located within the Lebarge Plateau eco-district (Southern Lakes Pelly Mountains Eco-regions, EBA, Nov. 2003) or the Yukon Central Plateau eco-region, and Yukon headwaters drainage. Forests are found below continuous tree line or lowland shrub communities. Balsam poplar are predominantly found along fluvial systems in the eastern portions of this zone. Forests are mostly white spruce, and lodgepole pine. Aspen is common and most likely associated with disturbance. Subalpine fir can be found at the higher elevations in this zone but is not common. Black spruce is uncommon in this eco-region. Soils are predominantly tills (brunisols) on rolling topography.

1.3. *Socio-economic Values*

Whitehorse is home to approximately 26,418 people (June 2010). The major economic drivers in the area are government and the service industry. The burning of wood for heat is still a very important heating method in Yukon. The gathering and use of fuel wood is a culturally and economically significant within the Yukon Territory. The forests in the Whitehorse region provide significant ecological and aesthetic values, cultural and heritage values, recreational values, and other non-timber values. Whitehorse's forests can sustain a vibrant, small-scale forest industry that provides timber for local markets, energy, economic opportunity, and employment for the region's residents. Many of the residents of Whitehorse rely on fuel wood harvesting as an economical heating alternative throughout the winter. There is a well-developed fuelwood industry centered on the Whitehorse area.

2. Planning Area Description

The total area identified is 371 ha with approximately 6895m³ (see Table 1). Other fuel wood harvesting opportunities will be identified through additional operating units as the project progresses.

TABLE 1: Operating Unit Description

Operating Units	Estimated Volume/ Hectare (m ³ /ha)	Slope (%)	Aspect	Block Size (ha)	Total Volume Available for Harvest(m ³)	Species	Average Stem Height (m)
1	45	20	S	371	6,695	Spruce	16

Note: This is an estimated volume; areas may have higher/lower volume.

2.1. Wildlife

All site plans and operational development must be consistent with current wildlife standards¹ available from Forest Management Branch (FMB). These standards were developed to ensure well thought-out and balanced planning occurs with respect to wildlife and forest resources. Throughout the preliminary reconnaissance and consultation, no significant wildlife concerns were noted. This area does not conflict with any fish or wildlife management plans. Moose, black and grizzly bears use the area, however this area is outside any recognized caribou ranges. Elk also use this area. Wildlife use is increasing as the available cover and forage increases. There will be a minimum of 10% snag retention within harvest blocks for wildlife and coarse woody debris.

TABLE 2: Summary of Key Management Objectives – Wildlife

O.U #	Management Objectives to Note
	All site plans and operational development must be consistent with the Yukon Forest Resources Act, Wildlife Features Standard.
1	10% snag retention within harvest blocks for wildlife and coarse woody debris

2.2. Riparian and Water Resources

All site plans and operational development must be consistent with current riparian

¹ YUKON FOREST RESOURCES ACT, Wildlife Features Standards and Guidelines.

management standards 2 available from Forest Management Branch. The Forest Resources Act standards address riparian management guidelines. There is one small unclassified stream that flows northwest through this THP (see Appendix 3 Map). A stream assessment will be conducted if necessary to determine the presence or absence of fish.

TABLE 3: Summary of Key Management Objectives – Riparian

O.U #	Management Objectives to Note
	Required to identify all stream and lake classes and apply the Riparian Management Area Zones according to the FMB riparian management standards.
1	<p>The following riparian feature can be identified on in Appendix 3 map.</p> <ul style="list-style-type: none"> • one small stream <p>There may be other stream classes not identified in the THP. When developing the site plan a walk thru of the proposed harvest block will identify any other streams and ephemeral draws that may require application of riparian standards.</p>

2.3. Visual Impacts

Visual impacts are low. Although much of the area is on slopes, harvesting is all within burnt stands and not in established green forest. Harvest blocks will be irregular in shape and there will not be complete removal of the stand structure. This will minimize the visual contrast of the harvested blocks. This THP is totally out of site of the Klondike Highway. Folds in the land and an established “green up” of shrubs and herbs will soften the visual impact

TABLE 4: Summary Key Management Objectives- Visual Impacts

O.U #	Management Objectives to Note
	All harvesting occurs within burnt stands and not established green forest, thus visual impact is low.
1	All blocks will be irregular shaped blocks with variable retention (10% snags) to minimize contrast of harvested blocks.

2.4. Heritage and Archaeological Sites

Yukon Archaeological Sites Inventory and Yukon Historic Sites Inventory will be conducted to identify any historic or archaeological sites within the Little Fox Lake Fuel Wood #2 THP.

The adjacent Little Fox Lake THP was surveyed and the following information was provided in the report. This area has never been systematically surveyed. Because the area has been burned over, above ground features such as caches or cabins likely no longer exist and would not be a concern. Much of the area is rugged terrain and archaeological potential is limited. The small streams in OU 1 are not a significant concern. Heritage concerns on these areas will be addressed through the riparian buffer. It is likely that the Little Fox Lake Fuel Wood #2 THP would contain similar findings due to its adjacency and similar features. Yukon

² YUKON FOREST RESOURCES ACT, Riparian Management on Streams and Lakes.

Government Archaeologist, Tourism and Culture has reviewed this project area and there are no heritage resources concerns with this specific THP application. The planned archaeological overview survey will provide specific findings which can be mitigated through the site plan. Further, an archaeological impact assessment will be conducted as directed by the overview recommendations particularly in areas where all season access routes are planned.

TABLE 5: Summary Key Management Objectives- Heritage and Archaeological Sites

O.U #	Management Objectives to Note
	Archaeological potential in the adjacent area is limited. Much of the area is rugged terrain and above ground features such as caches or cabins likely no longer exist due to fire.
1	Archeological overview assessment was conducted to identify the need for impact assessments. Impact assessments will provide guidance for site plan development and mitigations required for protection of heritage and archaeological sites. Note no archeological assessment required if harvesting in winter only.

2.5. Soil Conservation

All harvesting operations must follow current FMB soil conservation standards. These standards will ensure that the integrity of soils is maintained. Harvesting will only be permitted during summer if soil conditions are not sensitive to displacement, erosion or compaction. New access will also need to be constructed. Due to fine textured soils and diverse conditions present, this will need to be closely monitored by operators to ensure that they are within the soil conservations standards set by the FMB.

TABLE 6: Summary Key Management Objectives- Soils Conservation

O.U #	Management Objectives to Note
	Harvesting will only be permitted during summer if soil conditions are not sensitive to displacement, erosion or compaction.
1	Fine textured soils exist with OU 1. Soil Conservation Standard will be used to help determine season of harvest during Site Plan development and approval.

2.6. Traditional Land Users

No traditional land uses such as hunting and berry picking areas were identified while developing the THP. There is a registered trapping concession within the THP. TKC is retaining the right to hold this as a Category A trap line as per the Administrative Overlap Agreement signed by TKC, KDFN, CTFN and CAFN as well as Chapter 16 of TKC's Final agreement.

TABLE 7: Summary Key Management Objectives- Traditional Land Users

O.U #	Management Objectives to Note
	No traditional land uses such as hunting and berry picking area were identified while developing the THP. One registered trapping concession is within the THP.
1	No special considerations

3. Silviculture

3.1. *Harvesting*

Harvesting activities identified in the site plan needs to address the management objectives described in the Little Fox Lake THP (see Section 2, 3, and 4). Harvesting activities including season of operability, harvest system, block design and other operational details will be described in the site plan.

3.2. *Reforestation*

Due to the intensity of the 1998 Fox Lake fire there are minimum green spruce retention remaining adjacent or within the operating units. Regeneration surveys of the older operating units of the Fox Lake commercial planning area have shown minimal restocking. This includes white spruce, black spruce and aspen with some scattered lodgepole pine. Management objectives for stocking standards and acceptable tree species for reforestation of the operating units will be considered and will be set when site plans are approved.

All green coniferous residual stands must be retained in block design. Aspen stands locations adjacent or within blocks must be identified.

All block designs must follow FMB protection of natural regeneration standards.

The schedule for a post-harvest establishment survey(s) will be outlined as part of the site plan for each harvest block. Natural regeneration is the preferred option with planting being used to supplement natural regeneration when directed by FMB.

TABLE 8: Summary Key Management Objectives- Reforestation

O.U #	Management Objectives to Note
	Management objectives for stocking standards and acceptable tree species for reforestation of the operating units will be considered and will be set when site plans are approved.
	When approved, all block designs must follow FMB protection of natural regeneration standards.
	Primary reforestation is natural regeneration. Secondary reforestation is planting when directed by FMB.
1	All green coniferous residual stands must be retained in block design. Aspen stands locations adjacent or within blocks must be noted. Post-harvest surveys to be completed within 10 years after completion of harvesting.

3.3. **Site Plans**

Site plans, which are part of the cutting permit, will address the following operational details; soils, season of operability, slopes and special concerns, stand and site conditions, roads and landings descriptions, riparian buffers, management objectives, site prescription, and the reforestation plan.

The operational details are provided in the site plan. This is completed in advance of the cutting permit. The cutting permit and site plan will address the details of the harvest blocks including operator specific requirements, block locations, design, and fuelwood volume within the designated operating units.

4. **Access Management Considerations**

New road access will be required to reach the OUs identified in this THP. When approved, standards for road construction and decommissioning will apply to all roads within the THP. Any new road development may trigger an assessment by the Yukon Environmental and Socio-economic Assessment Board.

The approved site plan will dictate when harvesting may occur and any seasonal access requirements and constraints. Access corridors have been identified within the THP (see Appendix 3). Depending on final design and construction plans, various types of roads may be considered. Note; alternative routes can be identified by the proponent. All access routes need to be approved within the site plan. FMB will consider a road strategy that minimizes the road density, environmental impacts and provides efficient access to timber within the THP. All final watercourse crossings will be subject to meeting all legislative requirements such as those under the Waters Act and other Department of Fisheries (DFO) authorizations. Gates are planned to be used to protect roads from damage during wet weather, to allow for the management of wildlife and to ensure public safety.

TABLE 9: Summary Key Management Objectives- Access Management

O.U #	Management Objectives to Note Alternative routes can be identified by proponent. All access routes need to be approved with site plan. FMB will consider a road strategy that minimizes the road density, environmental impacts and provides efficient access to timber within the THP. All new road development will trigger an assessment by the Yukon Environmental and Socio-economic Assessment Board. Gates are planned to be used to protect roads from damage during wet weather, to allow for the management of wildlife, and to ensure safety. The final design and construction plans would support either winter or dry weather roads.
1	One proposed access all-weather route has been Identified via block 16 (in the approved Little Fox Lake THP) at the south end of Little Fox Lake then up on a bench 150 meters west of Little Fox Lake into O.U. 19 then west to cross an unnamed creek with a free-span bridge. (see Appendix 3) Alternative routes can be identified by the proponent. All access routes need to be approved within the site plan.

5. Appendices

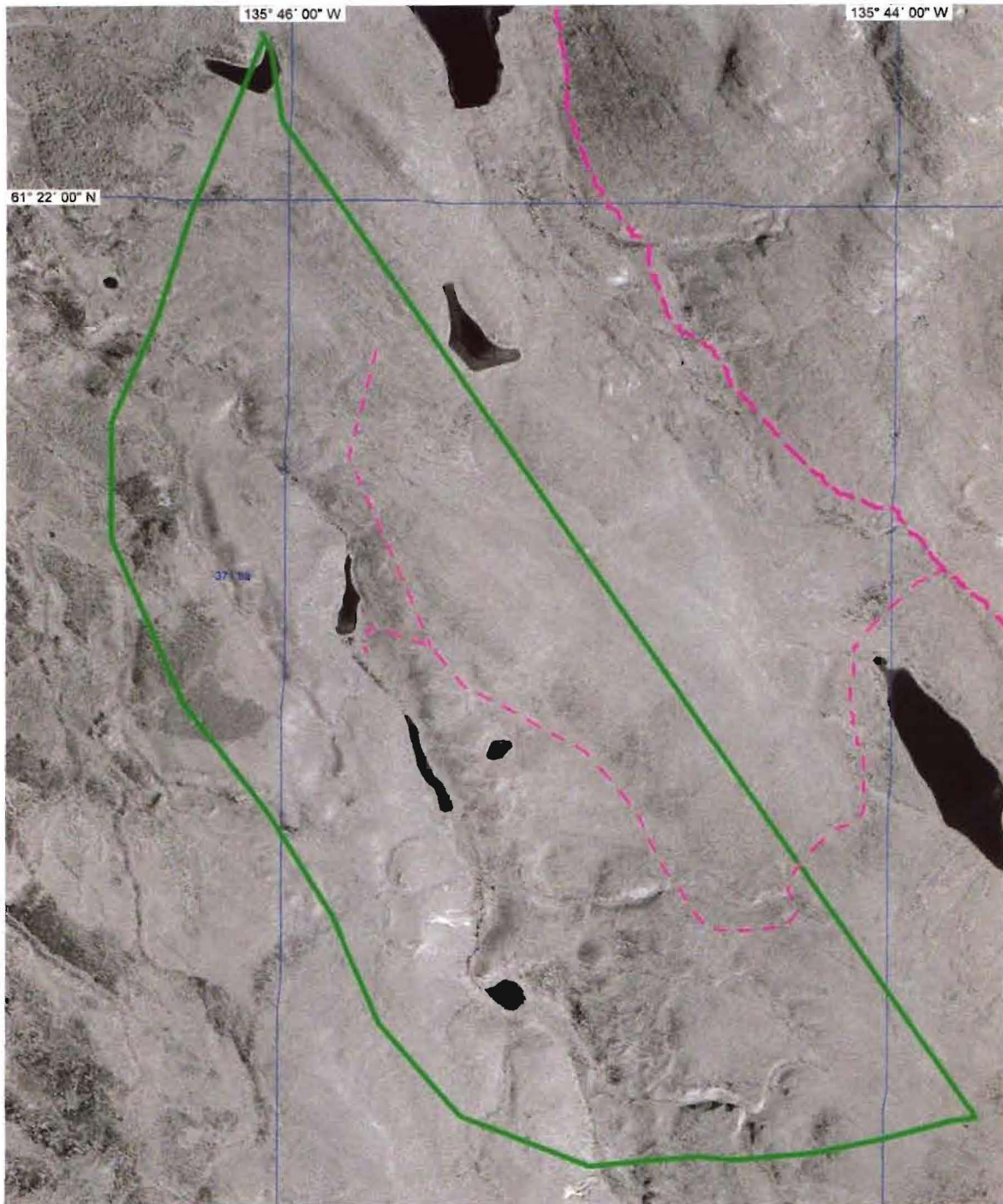
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| Appendix 1: | Little Fox Lake Fuelwood #2 Timber Harvest Plan on an air photo |
| Appendix 2: | Little Fox Lake Fuelwood #2 Timber Harvest Plan viewed from a plane |
| Appendix 3: | Fox Lake Overview Map |
| Appendix 4: | Representations |

Appendix 1:

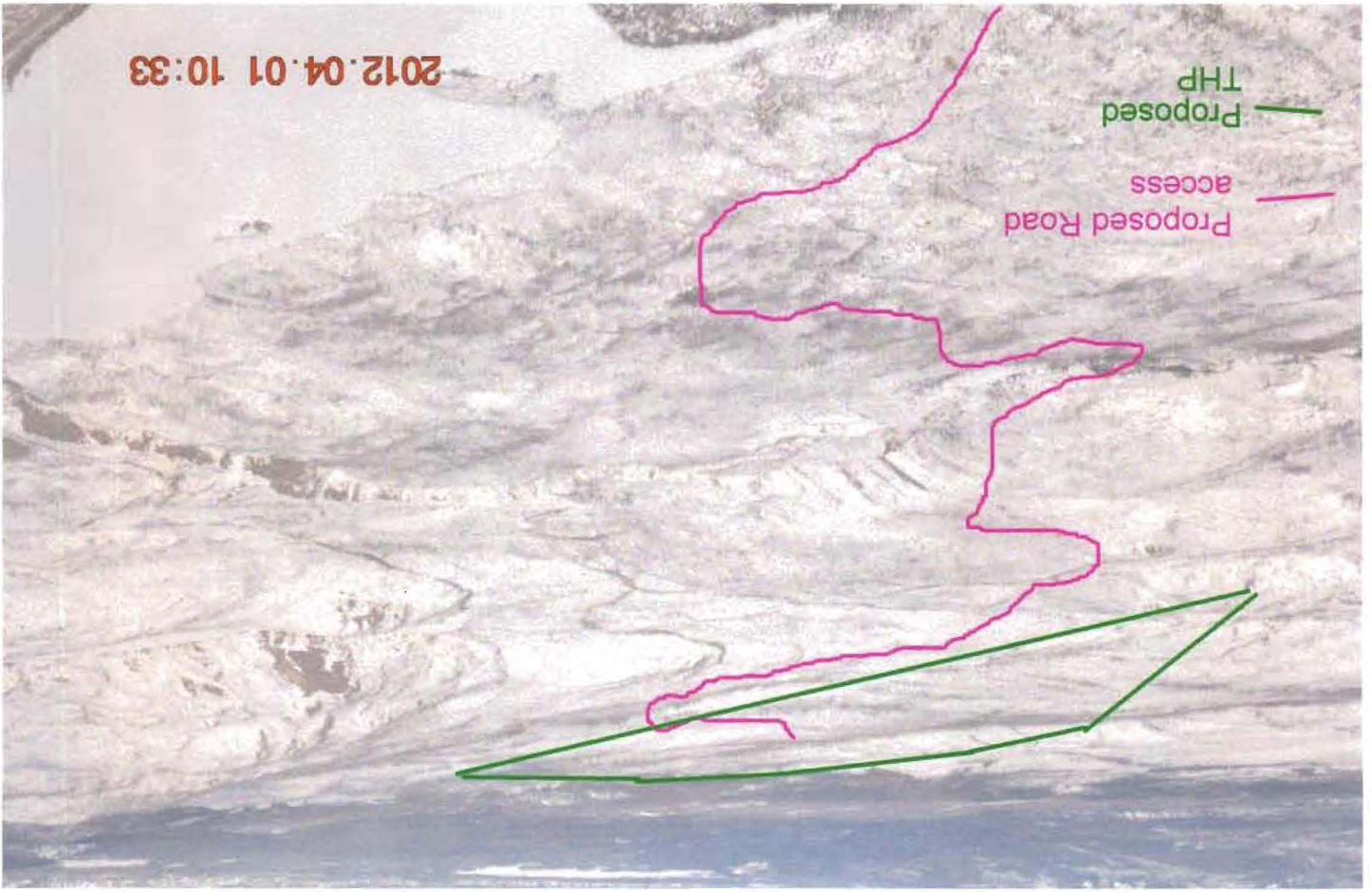
Little Fox Lake Fuel wood #2 Timber Harvest Plan on an air photo

NAD83 6/26/2013

Little Fox #2 THP on Air Photo



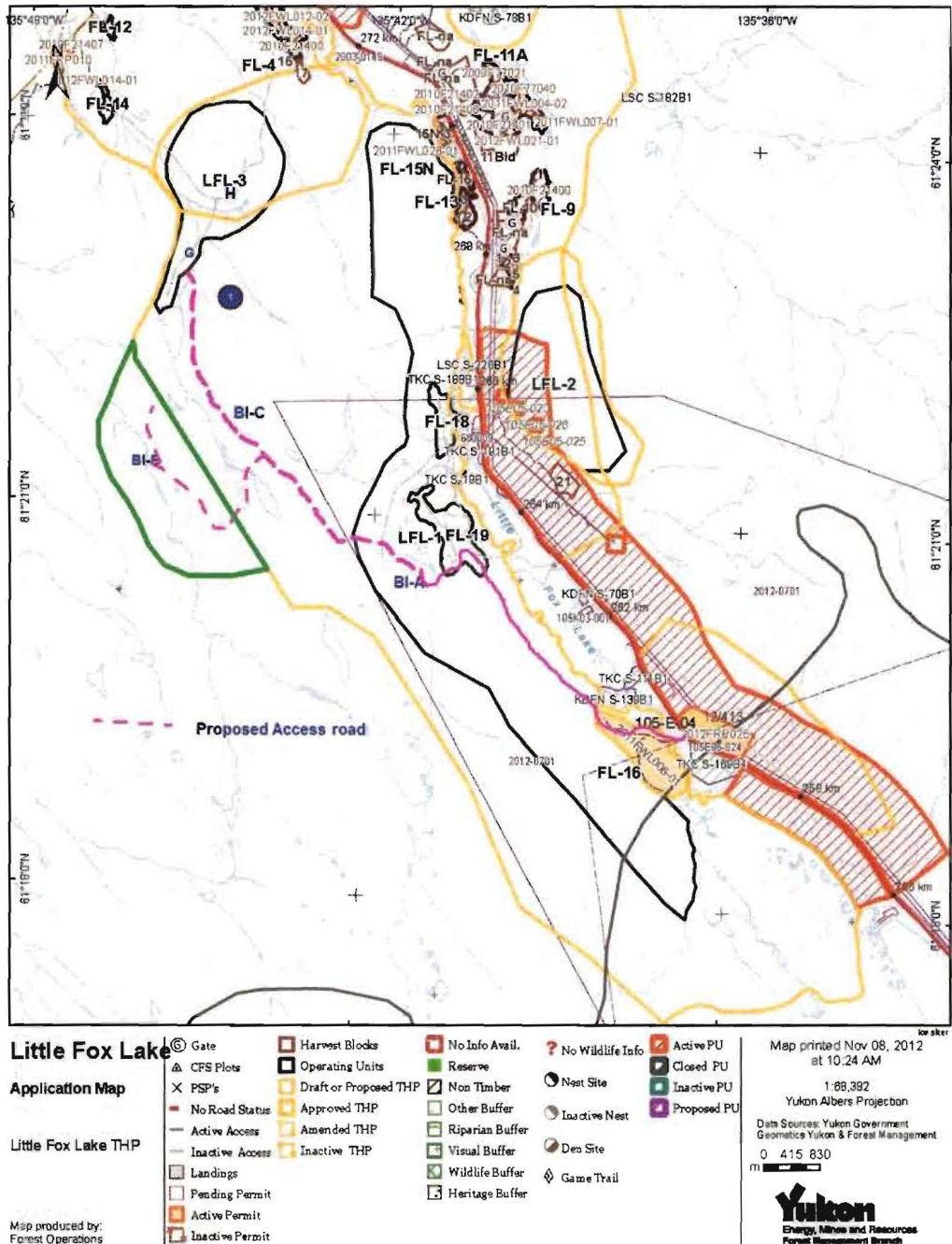
Appendix 2
Little Fox Lake Fuel wood #2 Timber Harvest Plan viewed from a plane



Appendix 3: Fox Lake Overview Map

NAD83 6/26/2013

Little Fox #2 THP on FMB app Map



Appendix 4:
Representation Summary

2013 Little Fox Lake Fuel Wood #2 Timber Harvesting Plan

Prepared: May 13, 2013.

Prepared by: Romeo Leduc Proponent

A total of three comments were received during the notification period on the Little Fox Lake Fuel Wood #2 Timber Harvesting Plan held from October 18, 2013 to November 18, 2013.

The following table contains a summary of the comments received, with responses to the comment and how the comment has been addressed.

Topic	Name/ Organization	Recommendation	Consultation Recommendation Response	How comment/s have been addressed.
2.0 Planning Area Description: Section 2.1 Wildlife	Frank Patch Environmental Affairs, Yukon Government	<p>The relevant <i>Forest Resources Act</i> standards and guidelines for wildlife features shall be implemented at the project location</p> <p>There are no critical wildlife concerns for the area covered by the THP as it is primarily for post-fire timber salvage operations. There are no wildlife key areas, no known mineral licks or raptor nests, and it is all at lower elevations away from any sheep/goat habitat and their potential movement corridors. Should mineral licks, stick nests, or bear dens be encountered, they should be avoided and the local regional biologist should be contacted</p> <p><u>Habitat</u> Standing trees and snags with occupied tree cavities should be maintained.</p>	<p>FMB will ensure operations shall be in accordance with the <u>Wildlife Features Standards and Guidelines</u></p> <p>These guidelines include standards regarding encountering mineral licks, stick nests, or bear dens, and habitat in occupied tree cavities</p> <p>Fuel storage and handling shall be done in accordance with the Yukon Environment Act and its applicable regulations</p>	<p>All FMB standards will be used to guide the development of the specific projects and their associated site plans. Terms in cutting permits reflect obligations regarding:</p> <p>WILDLIFE / HERITAGE / OTHER FEATURES,</p> <p>DISPOSAL – GARBAGE AND SOLID WASTE</p> <p>PETROLEUM STORAGE</p>

Topic	Name/ Organization	Recommendation	Consultation Recommendation Response	How comment/s have been addressed.
		<p><u>Waste and Fuel- Wildlife attractants</u> The proponent shall keep all bear attractants, in a manner that prevents access by bears and other wildlife, until properly disposed of in accordance with the <i>Solid Waste Regulation</i></p> <p>The proponent shall at all times have on site sufficient spill clean-up equipment and materials in readiness to clean-up all spills of petroleum products on site.</p> <p>The proponent is required to report all spills to the 24-hour Yukon Spill Report Centre at 867-667-7244. Collect calls are accepted. A spill is a release of a hazardous substance into the natural environment that is abnormal in quantity or quality in accordance with the <i>Spills Regulations</i></p>	Fuel storage and handling shall be done in accordance with the Yukon Environment Act and its applicable regulations	<p>Terms in cutting permits reflect obligations regarding: DISPOSAL – GARBAGE AND SOLID WASTE</p> <p>PETROLEUM STORAGE</p>

Topic	Name/ Organization	Recommendation	Consultation Recommendation Response	How comment/s have been addressed.
2.0 Planning Area Description: Section 2.4 Heritage and Archaeological Sites	Ruth Gotthardt Yukon Government Archaeologist, Tourism and Culture	Confirming that Yukon Gov't Archaeologist Tourism and Culture have previously reviewed the Fox Lake project area and there are no heritage resources concerns with this specific THP application.	Section 2.4 has been updated to reflect Archaeologist comments of no heritage resources concerns with this specific THP	THP section 2.4 has been updated please see page 6 for revision

Topic	Name/ Organization	Recommendation	Consultation Recommendation Response	How comment/s have been addressed.
2.0 Planning Area Description: Section 2.6 Traditional land Users	Natalie Leclerc Land Use Planning Coordinator Ta'an Kwäch'än Council	The information on RTC 223 is not assigned at this time requires an update. TKC is retaining the right to hold this as a Category A trap line as per the Administrative Overlap Agreement signed by TKC, KDFN,CTFN and CAFN as well as Chapter 16 of TKC's Final agreement.	Section 2.6 will be updated to reflect TKC right to hold as a Category A trapline	THP section 2.6 has been updated please see page 7 for revision
4.Access Management Considerations	Frank patch Environmental Affairs, Yukon Government	The public shall be prevented from accessing the proponent's road network. The road shall be deactivated and reclaimed upon the completion of the project. The road should be posted with signage advising that the road is for intended users only.	FMB will be issuing a Forest Resources Road Agreement and approved Site plan to proponent as part of the cutting permit package. The Road Agreement identifies Road use – limitations to who is authorized to use road. Gate will be installed Forest Road agreement	FMBs Road Agreement standards and Site plans will be used to guide the development of access management

Topic	Name/ Organization	Recommendation	Consultation Recommendation Response	How comment/s have been addressed.
		The proponent shall ensure effective temporary and permanent erosion and sediment control measures are implemented on disturbed areas during and after construction to prevent erosion and sedimentation.	<p>identifies the proponents use and restrictions with gating procedures.</p> <p>Signs will be posted identifying Road as a Forest Resources Road and restrictions of it usage.</p> <p>Road Agreement includes standards for Road construction, maintenance and decommissioning.</p> <p>Road Agreement identifies erosion control measures to be taken.</p> <p>In addition the approved site plan identifies conditions in regards to Access Management which includes standards for location, type of road and erosion control standards</p>	