


# Lapie Burn Timber Harvest Plan



## FOREST MANAGEMENT BRANCH

  
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Submitted by  
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Date

  
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Date

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## **Executive Summary**

This Timber Harvesting Plan (THP) has been prepared to meet the requirements of the new Forest Resources Act (FRA) and implementation of the legislation on January 31, 2011.

Under the new legislation a THP is required prior to the issuance of any timber harvesting licence or forest resources permit > 25 m<sup>3</sup>. (FRA, Section 29(4)(ii).)

The Lapie Burn THP identifies fuelwood harvesting opportunities in one of several areas where fuelwood harvesting has occurred historically in the Region.

The THP identifies roughly 140 hectares of operable ground with an estimated salvageable volume of over 7,000 m<sup>3</sup>.

The THP sets targeted operating goals for the assessment of forest harvesting applications so that cumulative effects of multiple licences can be addressed.

All applicants for timber harvesting will be required to meet the submission requirements of the new legislation (FRA, Sec19(1)). The applications for harvesting licences require notification to the affected First Nation and public in the area of the application. The First Nation and public may make representations to the Branch Director on the application for a period of no less than 30 days, (FRA, Section 18).

In addition, applications that trigger a Yukon Environmental and Socio-economic Assessment require submission to the local Development Office in Watson Lake for public review prior to issuance.

## **1.0 Introduction**

### **1.1 Background**

Forest Management Branch (FMB) initiated an informal review of Forest Planning Areas during the summer of 2009. Contact was made with the local Natural Resource Officer, members of the Ross River Dena Council and Faro Town Council to gauge interest and determine historical use of forest resources at the local level.

During April of 2010, FMB contacted local wood cutters in both Faro and Ross River to review preferred harvesting areas and weigh future plans for business development in order to determine the size and scope of local harvesting to be included in the planning.

A follow up meeting was held with the Ross River Dena Council on April 13<sup>th</sup>, to provide information related to the new legislation that was being developed and the requirements for planning under the new Forest Resources Act. Discussions included a review of the overview maps with historical and new areas that were proposed for harvesting.

Maps of proposed harvesting areas were sent to Yukon Heritage, Archeology Branch and to Yukon Department of Environment with a request for comment and identification of values that may be impacted within the proposed harvest zones.

In May of 2010, a letter of notification was sent to Chief Jack Caesar of the Ross River Dena Council, informing the council that ground reconnaissance would be initiated in the immediate future and contact names were provided for any questions and inquiries.

In late June 2010, an FMB forestry team conducted ground and aerial reconnaissance of the proposed operating units to map areas, review potential or existing access, estimate volumes and perform ecological assessments of vegetation and soils and to note any potential conflicts or seasonal concerns that would restrict development.

On November 18, 2010, draft maps of the proposed fuelwood harvesting were presented at a regular meeting of the Ross River Dena Council. Comments from council and suggestions for further discussions with other stakeholders were noted and have been included.

A draft of the THP was prepared using information collected from conversations and meetings as well as the field reconnaissance. Notification was provided to the public, First Nation and other stakeholders for review and comment during the period of May 20 to June 20, 2011.

This final THP incorporates submissions received during the review period and has been approved for implementation as a Forest Management Branch planning document.

## **1.2 Eco-region and Drainages**

The Planning Area lies within the Boreal Cordilleran Ecozone, primarily in the Yukon Plateau-North Ecoregion. Along the western boundary it transitions to the Pelly Mountains Ecoregion.

Northern boreal forests exist at elevations up to 1500 m above sea level. White spruce in a matrix of dwarf willow, birch, ericaceous shrubs, and, occasionally, lodgepole pine forms extensive open forests, particularly in the northwestern portion of the ecoregion. Black spruce, scrub willow, birch, and mosses are found on poorly drained sites. Alpine fir and lodgepole pine occur in higher subalpine sections. Extensive discontinuous permafrost with a medium ice content is widespread decreasing to sporadic discontinuous permafrost along the southwestern edge of the region.

The THP area lies in close proximity to Ross River in the Lapie River drainage, which flows northerly into the Pelly River.

## **1.3 Socio-Economic Considerations**

Ross River residents practice forest resource harvesting to support subsistence lifestyles and utilize timber as a domestic and commercial heating source.

This THP will allow the local fuelwood harvesting to continue under the new legislative regime in support of those who use and supply product for these identified purposes.

However small an impact this may currently be, economic development and diversification is a goal of Ross River. With support for planning and sustainable forest resource use, the opportunity to develop a larger economic base in forest management is presented.

## **2.0 Planning Area Identification**

The Lapie Burn occurred in 1994 and has seen salvaging of fuelwood timber by the community ever since. Many areas within the burn are still used for personal use fuelwood opportunities. The THP will establish operational goals and help to coordinate the salvage of remaining material in the burn.

The proposed commercial harvesting area has been developed primarily by one operator over the past few years. The topography is rolling to broken and is more suitable for a commercial operator with heavier equipment. Some road and trail development is necessary to access and fully utilize the large volume of timber available in the area.

The targeted area within the THP is about 140 ha with salvageable volume estimated in excess of 7,000 m<sup>3</sup>.

Refer to Appendix A and B for location details.

### **2.1 Ecosystem and Stand Composition**

The existing stand is in early seral stage development following the fire disturbance of 1994.

Ground cover consists of grasses, herbs and forbs with brush and tree cover of willows, aspen and minor amounts of white spruce scattered throughout.

Topography is rolling to broken on this upland bench on the north-east side of Mount Cook.

Soils consist primarily of unsorted medium textured glacial material with a coarse fragment content of 40-60%. Moisture regime is generally mesic to dry with small collection or wet areas in small localized areas.

### **2.2 Wildlife**

The height of land to the south west of the THP area, Mount Cook, is a year round home for a small population of thin horn sheep. During consultation it was requested that harvesting operations maintain a buffer between the sheep range. The topography is quite steep in the sheep range and is physically removed from the timber concentrated closer to the valley floor so this accommodation was easily met.

No other key habitat features have been identified in the proposed harvesting area.

### **2.3 Biodiversity**

The 1994 fire, a natural occurrence, is prevalent in this boreal natural disturbance zone. Since the fire disturbance the area has reverted to early seral stage vegetative cover consisting of grasses, forbs and herbs with a developing tree cover of willows, aspen and a minor component of white spruce.

Proposed development will impact less than 10% of the burn area and salvage of timber will focus on the larger pieces of dead and down timber. Typically small diameter stems, tops and branches will be left on site as coarse woody debris.

Harvesting of green timber will not be permitted and regeneration, where established, will be protected during operations.

With natural processes dominating the majority of the burn area and the relatively small scale of salvage, biodiversity in the area should not be negatively impacted.

### **2.4 Riparian and Water Resources**

The Lapie River is classified as fish bearing, but is more than 200 m from the proposed harvesting area minimizing the impact of any disturbance on water quality and fish habitat.

The wetland complex and lakes to the north of the proposed harvest area will have riparian management areas established in accordance to the THPOG guidelines, (or future Management Standards set under the FRA) providing protection and connectivity along these important travel corridors and habitat areas.

Protection of the riparian area from disturbance will reduce or eliminate negative impacts to water resources and fish habitat as well as maintaining terrestrial edge habitat around these sensitive areas.

### **2.5 Recreation and Visual Impact**

The Canol Road is a tourist route used during summer months as the road is closed during the winter. The THP sits on the opposite side of Mount Cook and is visually screened from views along this travel corridor.

The Lapie river is used by river enthusiasts during the summer months but the elevated bench above the river where harvesting will occur is obscured by trees along the rivers edge and the difference in elevation.

No negative impacts on recreational activities or the visual landscape is anticipated.

## **2.6 Cultural Heritage and Archeological Sites**

Elevated heritage resource potential exists around the lake complex to the north of the operating unit and along the Lapie River (YG Heritage Overview, 2010). A surface resource assessment is recommended in these areas if for timber harvesting only. An archeological site assessment is suggested if there is road development within these areas. The recommendations will be followed during licence application, although these areas are more likely to be avoided during the layout of harvest areas.

Ross River Dena Council provided comments on the area during consultation and expressed no concerns with the location and plans as proposed. Additional cultural information may be included at any time during the planning process and incorporated into final plans or permits.

During forest operations any previously unknown heritage or archeological artifacts found or unearthed shall require the operator to cease operations in the vicinity of the find and report the find to the Natural Resource Officer and Yukon Heritage Branch for assessment.

## **2.7 Traditional Land Users**

The THP is located within the Ross River group concession trap-line held by families of the Ross River Dena.

This THP does not hinder or take away First Nation rights as outlined in Section 43 of the *Forest Resources Regulation*.

## **2.8 Other**

There are no higher level land use plans in the THP area and no other issues of concern related to forest resources use have been identified at this time.

### **3.0 Harvesting Section**

Applicants for timber harvesting licences and cutting permits will be required to submit plans and maps outlining harvesting layout and road construction, products and any manufacturing details, seasonal constraints and how the goals and standards of this THP are being met.

Each license application will be referred to the Ross River Dena Council and the public for 30 day review and comment. If the project requires a screening under YESAA, the project will need to be submitted to the Designated Office in Watson Lake for review.

#### **3.1 Area and Volume Summary**

The aerially mapped operating unit of 140 hectares, outlined in orange on the THP map, indicates the approximate area where salvageable volumes of timber exist. Some areas will have volumes exceeding 100m<sup>3</sup> per hectare but due to topographical constraints and isolated wet ground not all of the area can be developed and accessed so 50 m<sup>3</sup> per hectare was used as an estimate of volume applicable to the entire unit. This provides an estimate of 7,000 m<sup>3</sup> of timber for the proposed THP.

#### **3.2 Harvest Scheduling and Season**

Harvest scheduling will be constrained by the ground conditions in areas applied for and submitted in Site Plans.

As the dead timber is no longer standing, it may be difficult to identify after snow fall so it is conducive to allow harvesting during dry conditions in late summer through to frozen conditions in the winter.

Winter harvesting may increase the volumes available in the THP by allowing access during frozen conditions into and across areas that would be too wet during non-frozen conditions.

### **4.0 Access Management**

Proposed access development will require the upgrading of the existing road to improve alignment and safety along a short section to overcome a topographic break and reach timber on an elevated bench.

Additional new roads necessary to reach all areas of the operating unit will minimize disturbance with narrow single lane (4m wide) roads. Grubbing material from construction as well as harvesting debris will be saved and re-spread across the road running surface upon completion of operations, decommissioning and closure of the road.

If seasonal or permitting conditions require, roads may be gated to restrict access.

All users of Forest Resource Roads constructed under this THP will be required to have a Forest Resource Road Permit. (FRR Section 60(2))

## **5.0 Monitoring Plan**

Monitoring plans identified at this time include the administrative post harvest stocking surveys and review of operations to licence terms and conditions.

There is no research or scientific activity proposed for the monitoring and development of a formal adaptive management strategy for this THP.

## **6.0 References and Acronyms**

Timber Harvest Planning and Operating Guidebook, Department of Indian Affairs and Northern Development, 1999. (THPOG)

Heritage Resources Overview Assessment Reports, Yukon Tourism and Culture, Heritage Resources Unit, Christian Thomas, 2010.

**FMB** – Forest Management Branch of the Department of Energy, Mines and Resources, Yukon Government.

**FRA** – Forest Resources Act

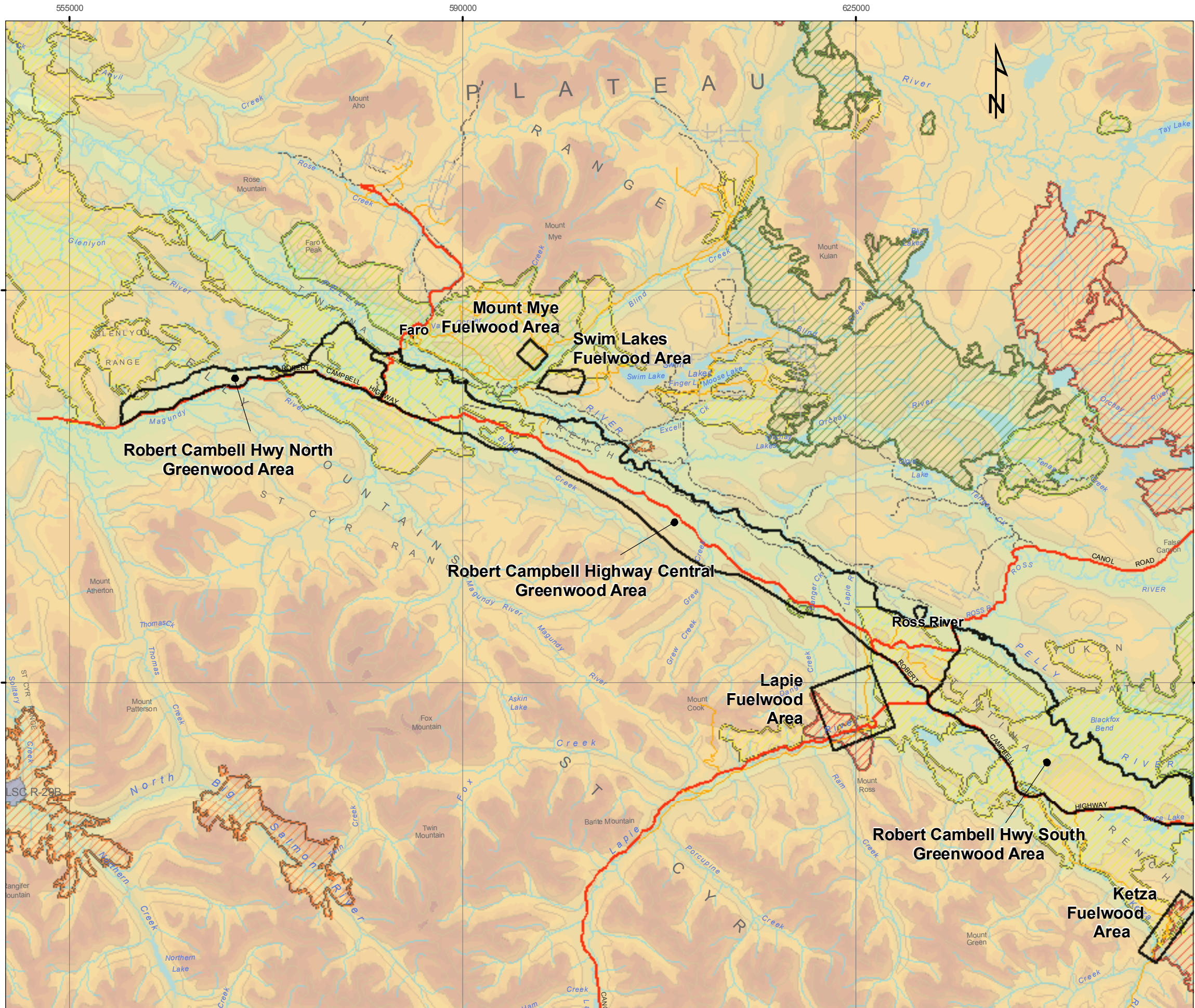
**FRR** – Forest Resources Regulation

**THP** – Timber Harvest Plan

**YESAA** – Yukon Environmental and Socio-economic Assessment Act.

## **Appendix A**

### **Map 1 – Faro - Ross River THP Overview**



# Faro & Ross River THP Overview - Map 1



## Legend

- Timber Harvest Plan Areas

Road

Limited-use road

Trail

Cut line
- 1940

1950

1960

1970

1980

1990

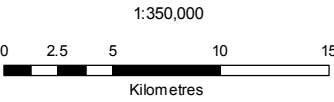
2000
- A - Surface and Subsurface Rights

B - Subsurface Rights

FS - Fee Simple

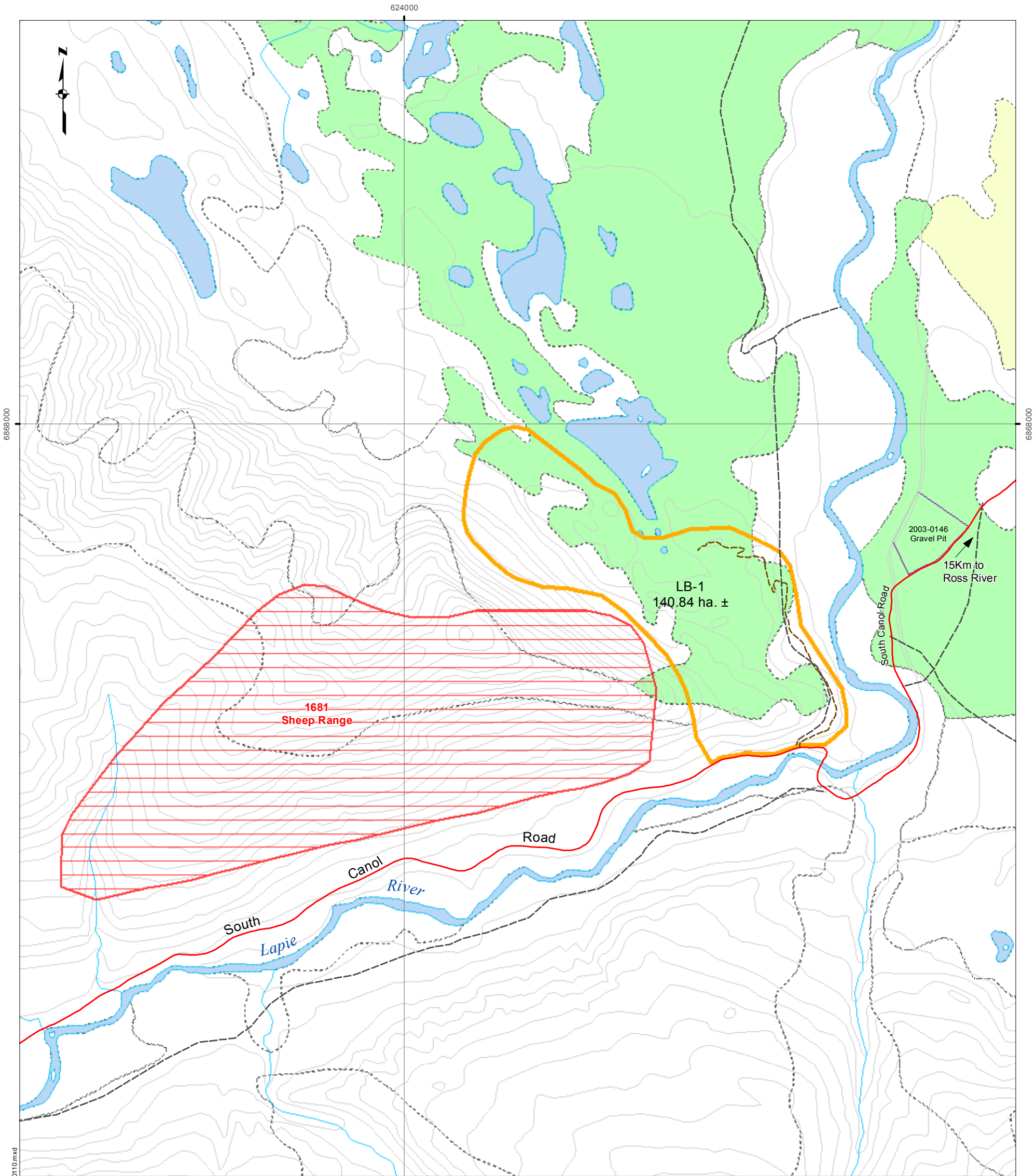
Date: 11 August, 2010  
Projection: NAD 1983 UTM Zone 8  
Contact Information: Greg Cowman, Area Forester, 456-3805

Digital Data Sources  
1:250,000 National Topographic Database (NTDB) features downloaded from spatial data warehouse - [www.geogratis.gc.ca](http://www.geogratis.gc.ca). Her Majesty the Queen in Right of Canada, Department of Natural Resources. All rights reserved.  
Digital Elevation Models (30 metre and 90 metre) provided by Yukon Government Geomatics spatial data warehouse - [www.geomaticsyukon.ca](http://www.geomaticsyukon.ca).



## **Appendix B**

**1:20,000 Lapie Burn THP Map**



J:\Operations\Forest\_Practices\Timber\_Harvest\_Project\Kaska\RossRiver\MXD\LapieBurn\_FuelWood\_Area\_2011\_0110.mxd

**Project Specific Features**

- Permanent Sampling Plots
- Proposed Access Route
- Existing Access Routes
- Harvest Blocks
- Timber Harvest Plan Area
- Fire History
- Thinhorn Sheep Key Area

**Administrative Features**

- Surveyed Parcel
- Agriculture Tenure
- Land Disposition
- Notations
- First Nation Settlement Lands
- Category A
- Category B
- Fee Simple

**Forest Openings**

- Patch Cut
- Partial Cut
- Patch Cut with Retention
- Landing
- Island

**Forest Cover**

- Non Forested
- White Spruce
- Lodgepole Pine
- Alpine Fir
- Black Spruce
- Balsam Poplar
- Trembling Aspen
- White Birch
- Larch

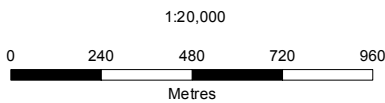
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Contact: 456-3805  
Date: July 8, 2011  
Projection: NAD 1983 UTM Zone 8

**Digital Data Sources**

1:50,000 Canvec features downloaded from spatial data warehouse - [www.geogratis.gc.ca](http://www.geogratis.gc.ca). Her majesty the Queen in Right of Canada, Department of Natural Resources. All rights reserved.

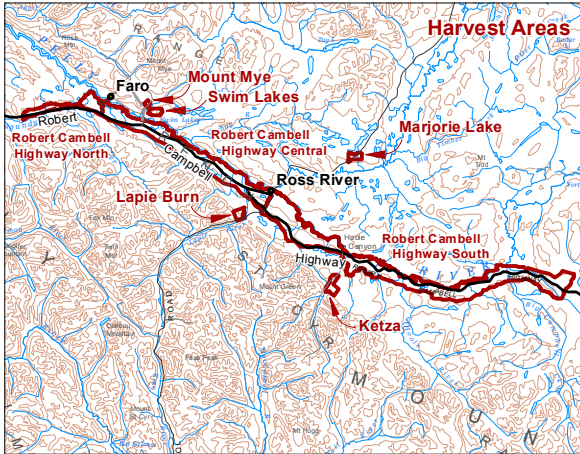
Original map design by EDI Environmental Dynamics Inc. Fall 2009.

Digital Elevation Models (30 metre and 90 metre) provided by Yukon Government Geomatics spatial data warehouse - [www.geomaticsyukon.ca](http://www.geomaticsyukon.ca).



**Timber Harvest Plan Area  
Faro - Ross River**

**Lapie Burn**



**Yukon**  
Energy, Mines and Resources

**Forest  
Management  
Branch  
Yukon Territory**

**Appendix C:**  
**Representation Summary**

Name of Plan	Ketza Burn Timber Harvest Plan
Prepared Date	July 5, 2011
Prepared by	Greg Cowman, Area Forester
Review Period	May 20 to June 20, 2011

Comments were received from:

- YG, Department of Environment

YG Department of Environment had no comments related to wildlife within this THP, indicating no concerns with harvesting as proposed in the Draft document.

## **Appendix D**

### **Heritage Resources Overview Report**

## Heritage Resources Overview Assessment Report

Administration			
<b>Permit Number</b>	10-010ASR	<b>Report Author</b>	Christian Thomas
<b>Permit Holder</b>	Christian Thomas		
<b>Heritage Resources Unit Contact</b>	Ruth Gotthardt Yukon Archaeologist  Christian Thomas Development Assessment Archaeologist	<b>Contact Information</b>	867-667-5983 <a href="mailto:ruth.gotthardt@gov.yk.ca">ruth.gotthardt@gov.yk.ca</a>  867-456-6102 <a href="mailto:christian.thomas@gov.yk.ca">christian.thomas@gov.yk.ca</a>

Application			
<b>Type</b>	Lapie Fuelwood Area	<b>Number</b>	Harvest Areas A and B
<b>Proponent</b>	Greg Cowman Forest Management Branch Energy Mines & Resources	<b>Contact</b>	Box 2703, Whitehorse, YT, Canada, Y1A 2C6 ☎ 456-3805 <a href="mailto:greg.cowman@gov.yk.ca">greg.cowman@gov.yk.ca</a>

Geographic Reference			
<b>NTS Map sheet</b>	105 F/15	<b>Area (ha)</b>	
<b>UTM Lat/Long</b>		<b>Elevation (m)</b>	800 - 1370
<b>Ecoregion</b>	Pelly Mountains	<b>Map Attached</b>	Figure 1

First Nation(s)			
<b>First Nation(s)</b>	Ross River Dena Council	<b>Contact(s)</b>	Lands and Resources Department

Survey Description			
<b>Survey Date(s)</b>	August 25, 2010	<b>Survey Type</b>	Overview Assessment
<b>Survey Crew</b>			

Management Summary
An overview assessment of the planning area has resulted in the determination of several areas of elevated potential for the presence of heritage resources such as archaeological and historic sites. A heritage resource inventory and assessment is recommended for all of Harvest area A and parts of Harvest Area B that are adjacent to the Lapie River, the Canol Road and several small lakes.

Archaeological Potential Methodology
Heritage resource potential was determined by identifying site presence indicators using resources including the Yukon Archaeological Sites Database, the Yukon Historic Sites Database, low resolution orthographic images, and spatial mapping of water courses, water bodies and wetlands.
Site databases were used to determine whether or not sites are located within the project areas or to

determine if sites are present in areas similar to that of the project. Orthographic images were used to determine locations of prominent topography suitable for the presence of heritage resources. Spatial data on the location of water bodies, watercourses or wetlands is used to define geographic areas or corridors that generally have higher potential for site presence. Heritage resource potential is determined by assessing project development areas that intersect with land that is within 100 m of a heritage resource indicator.

### Overview Results

**Known Sites:** A review of the Archaeological and Historic Sites Databases indicates that no archaeological sites are located in the Lapie Fuelwood Area. It should be stressed that a heritage resource inventory has not been completed adjacent areas so the regional potential is not well understood.

**Heritage Resource Potential:** Harvest Area A is located adjacent to the Lapie River and the Canol Road. Few heritage resource inventories have been completed in the region so it is difficult to accurately characterize the heritage resource potential. Regardless, the entirety of the Harvest Area A is considered to have moderate to high potential for the presence of archaeological sites and historic sites related to the traditional uses by the Kaska, the 20<sup>th</sup> century fur trade and the development of the Canol Road (Figure 1).

Harvest Area B is larger (277 ha) and is located on the north slope of Mount Cook adjacent to a section of the Lapie River, several small lakes to the west of the river and the Canol Road. Two sections of Harvest Area B overlap with areas of elevated heritage resource potential. These sections include an area adjacent to the small lakes as well as an extended area along the Lapie River. Elevated potential was determined based on the suspected presence of flat terraces or hills overlooking the above noted water features using low resolution (15 m pixel) orthographic images. High resolution aerial photographs of the area were not available at the time of the overview so the presence of these topographic features cannot be confirmed. Highlighted areas in Figure 1 are considered to have elevated potential for the presence of archaeological sites and historic sites related to traditional Kaska occupations, the 20<sup>th</sup> century fur trade and the development of the Canol Road.

### Previous Disturbances / Exposures:

### Potential Impacts

The project proposes to cut timber in Harvest Areas A and B of the Lapie Fuelwood Area. Impacts to heritage resources can be characterized as surficial in nature and would negatively impact any resource on or above the ground surface such as historic structures, features or culturally modified trees. Rarely would subsurface resources, such as buried archaeological sites, be impacted by wood cutting. If new roads or graded landings are developed in areas of elevated archaeological site potential (Figure 1) those activities could impact subsurface heritage resources.

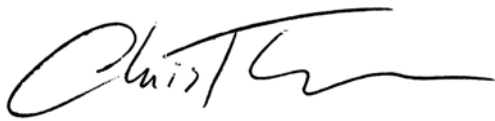
### Recommendations

A heritage resource inventory is recommended for Harvest Area A. If the project involves wood cutting (only) then a surface resource assessment is recommended. If new roads are to be built and archaeological site assessment is recommended.


A heritage resource inventory is recommended for portions of Harvest Area B that intersect with areas of elevated heritage resource potential. If the project involves wood cutting (only) then a surface resource assessment is recommended. If new roads are to be built and archaeological site assessment is recommended.


Any sites discovered as a result of future assessment projects shall be managed to territorial standards.

Signed:



Christian Thomas, M.A. (Anthropology) B.A. (Archaeology)  
Development Assessment Archaeologist  
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# Map

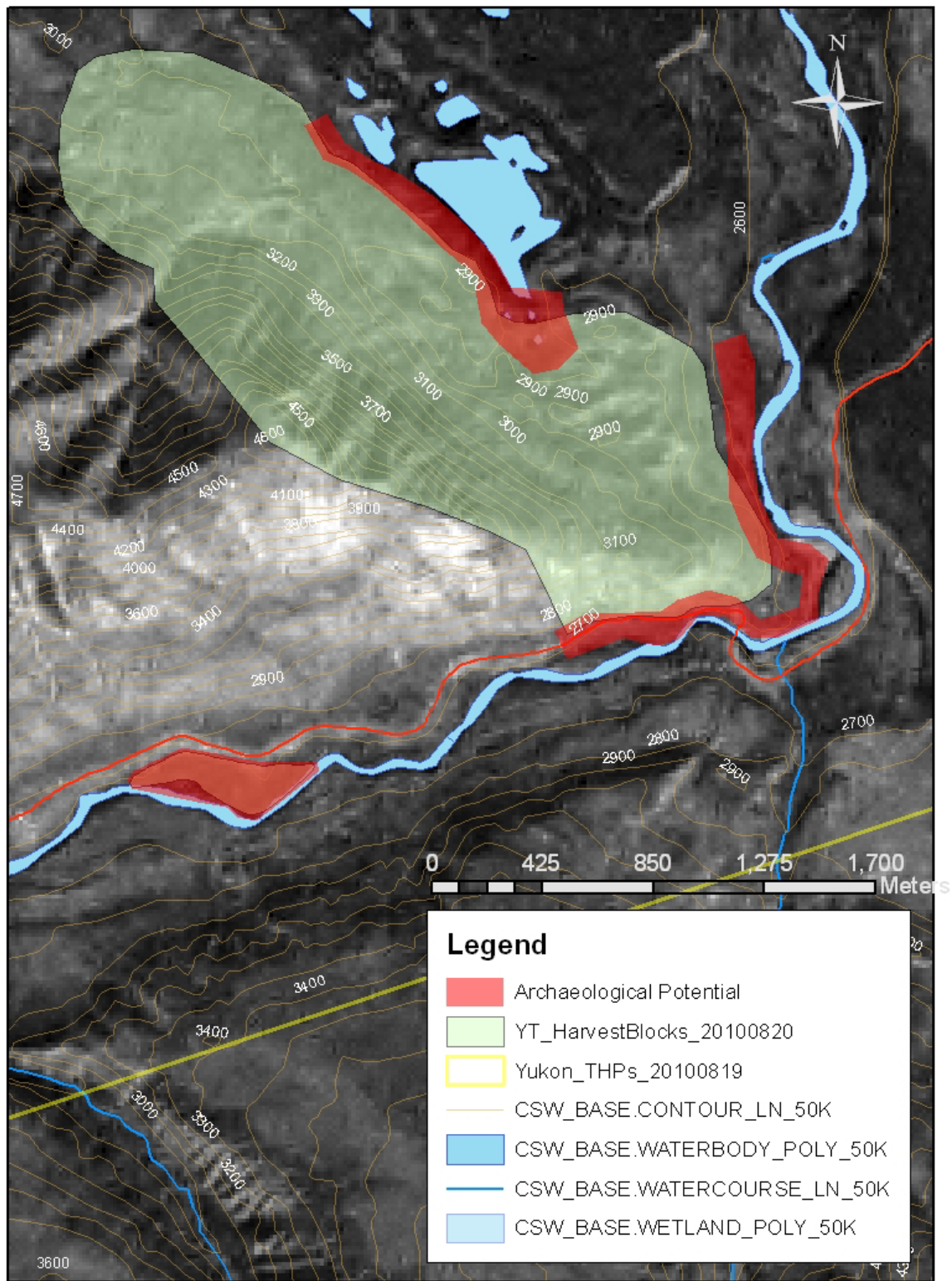


Figure 1: Orthographic image of study area showing areas of elevated archaeological and historic site potential. Quad 105 F/13.