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POST-EA INFORMATION PACKAGE INCLUDING AN UPDATED PROJECT DESCRIPTION ALL SEASON ROAD TO PRAIRIE CREEK MINE



APPENDIX 11-1

SUBMITTED IN SUPPORT OF:

Water Licences MV/PC2014L8-0006, and
Land Use Permits MV/PC2014F0013

SUBMITTED TO:

Mackenzie Valley Land and Water Board
Yellowknife, NT X1A 2N7

Parks Canada,
Nahanni National Park Reserve
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SUBMITTED BY:

Canadian Zinc Corporation
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February 2019

PRAIRIE CREEK ACCESS ROAD

ROAD CLOSURE AND RECLAMATION PLAN

NOVEMBER 2018



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Revision History

Revision	Description	Revised By (Initials)	Revision Date
A	Initial Version	Allnorth	2015
B	Updated Content	Tetra Tech	2018-11-30

Review and Approval

The following signatures indicate that the undersigned have read and agreed to the contents of this document, and that they approve and accept its distribution and use.

Description	Authority	Signature	Date
Document Owner	David Harpley VP Environment & Permitting		2018-11-30
Reviewed by: Full Name, Job Title			
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Distribution List

This Plan and the most recent revisions have been distributed to:

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PLAIN ENGLISH SUMMARY

The purpose and scope of this Closure and Reclamation Plan (CRP) is to describe the plan for the closure and reclamation of the Prairie Creek Mine All-Season Road (ASR) and other parts of the Project such as the camps, bridges and culverts and any contaminated sites that may still be there at the end of life of the Project.

This CRP outlines the approaches and concepts that will be used to meet the overall goal of returning the lands affected by the Project to healthy and self-sustaining environments for plants, trees, wildlife and fish and the continued use of the land for traditional harvesting, hunting and cultural activities by the people using the area. The Plan also recognizes the special importance of protecting and restoring the land crossed by the road in the Nahanni National Park Reserve area (NNPR).

Progressive reclamation will take place throughout the access road construction and operations period to help to reduce soil erosion and the length of time a site is disturbed. Reclamation of the cleared right-of-way (ROW) beside the road can be helped by leaving tree and shrub roots in place during clearing. Monitoring the performance of progressive reclamation efforts will be carried out during the long-term operations period. Lessons learned will be applied during final closure and reclamation of the road.

As opportunities for progressive reclamation are identified, Canadian Zinc Corporation (CZN) is committed to engaging with the potentially-affected Indigenous groups, regulators and land managers to obtain advice on the kinds of progressive reclamation activities to be carried out. The results and lessons learned from the long-term progressive reclamation efforts, as well as reclamation trials and monitoring programs will be used by CZN and the interested Parties to help with the development of clear reclamation objectives, measurable targets and timelines for final closure and reclamation planning and adaptive management for the access road.

One of the greatest challenges related to the future closure and reclamation of the access road relates to the physical properties of the road, which will be built mainly with sand, aggregate, crushed rock. As a result, the road surface will be a “high and dry” environment which will be a challenge to revegetate.

To help restore the access road and affected areas around the Project to a more natural environment, CZN is proposing to mix mulched organic matter into the road surface during ripping and scarification activities that will happen during road closure and reclamation.

The main source of this organic matter will come from the grubbing and mulching of slash, vegetation and non-usable timber generated during the initial ROW clearing that will take place at the beginning of winter road construction followed by ASR construction. CZN’s plan is to place and store the mulched organic matter in separate mounds (piles) along the ROW for this future use. The organic material in these mounds is expected to break down (compost) over the life of the Project and produce good organic matter with natural nutrients needed for the eventual reclamation of the road.

Mixing this mulched local material into the loosened-up road bed will help to retain moisture and provide nutrients and possibly local root/seed stock needed to encourage natural and enhanced revegetation processes so that the lands affected by the Project can be returned to healthy and self-sustaining environments for plants, trees, wildlife, fish and water quality.

As part of final closure, all buildings, garbage, petroleum products and equipment will be removed from the road. Bridges and culverts will be removed carefully to avoid sedimentation, and the stream beds and banks will be re-established. Where culverts are removed, cross ditches will be constructed across the road to maintain natural drainage.

The CRP is a living Plan that will be updated throughout the life of the Project to adapt to and build-in any useful lessons learned (in terms of both the Project, Traditional Knowledge, experience obtained from progressive reclamation and new technologies) that will be gained over the coming years.

Canadian Zinc looks forward to sharing this Plan (currently a draft) for *engaging with representatives of the Nahanni Butte Dene Band, Liidlii Kué First Nation, and Dehcho First Nations* to discuss and if necessary clarify and add to the current closure principles and objectives of this Plan as well as any other parts of the Plan that parties are interested in contributing to.

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LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Canadian Zinc Corporation (CZN) and their agents. Tetra Tech Canada Inc. (Tetra Tech) does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than CZN, or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this document is subject to the Limitations on the Use of this Document attached in the Appendix or Contractual Terms and Conditions executed by both parties.

LIST OF ACRONYMS

Acronyms/Abbreviations	Definition
AANDC	Aboriginal Affairs and Northern Development Canada
ASR	All Season Road
CRP	Closure and Reclamation Plan
CZN	Canadian Zinc Corporation
DFO	Department of Fisheries and Oceans
GNWT	Government of the Northwest Territories
ha	Hectares
INAC	Indian and Northern Affairs Canada
km	kilometre
m	metre
M	million
Mine	Prairie Creek Mine
NNPR	Nahanni National Park Reserve
MVERB	Mackenzie Valley Environmental Review Board
MVLWB	Mackenzie Valley Land and Water Board
NWT	Northwest Territories
ROMP	Road Operations and Maintenance Plan
ROW	Right-of-Way

GLOSSARY

Bedrock	The consolidated rock (harder than 3 Moh's scale of hardness) underlying the Earth's surface. Bedrock can be encountered at depths ranging from the Earth's surface to hundreds of metres below, depending on the level of exposure to erosion.
Borrow Pit	Pit created to provide earth materials to be used as fill at another site.
CCME	Canadian Council of Ministers of the Environment is an inter-governmental organization through which members establish national environmental standards for various issues such as waste management, air and water quality.
Cross-Ditch	Shallow trench excavated across a road to drain water in the downslope direction.
Cross Drain	Pipe that extends through the roadbed to drain water from the uphill side of the road.
Cut and Fill	Construction practice in which earth materials are excavated from part of an area and used as fill in adjacent areas.
Freshet	Rapid rise in stream flow due to runoff from snowmelt during spring.
Ground Ice	Ice present in ground materials. It dominates the geotechnical properties of the material and can cause terrain instability if it melts.
Grubbing	Removal of stumps, roots, brush and excess organic matter from the route.
Hydrology	The study water and its movement on land and it the atmosphere, and the effects it has on the earth's surface.
Permafrost	Ground frozen for at least two consecutive years. Continuous permafrost is defined as an area where at least 90% of the land area is underlain by permafrost. Discontinuous permafrost is defined as an area where 10 to 90% of the land area is underlain by permafrost.
Progressive Reclamation	Action that can be taken during operations before permanent closure to take advantage of cost and operating efficiencies by using resources available from ongoing operations. Enhances environmental protection and shortens the time frame for achieving reclamation objectives.
Quarry	A type of open-pit development from which building materials are often extracted.
Riparian	Area of land adjacent to a stream, river, lake or wetland containing vegetation that, due to the presence of water, is distinctly different from the vegetation of adjacent upland areas.
Ripping	Ripping is a common practice to break up a road surface using a ripper attached to bulldozer. The ripping process helps to loosen up the road material, which is important for reclamation and revegetation processes.
Riprap	Layer of large stones or broken rock placed on an embankment for erosion control and protection.
Scarifying	Scarifying is the process of breaking up hard or compacted materials such as a gravel road, typically using the scarifier on a grader. Scarifying typically involves loosening up of the top 6 inches of a road surface
Slash	Woody debris, such as branches, logs and brush, that remains on the ground after clearing has been completed.

1.0 INTRODUCTION

This Closure and Reclamation Plan (CRP) was prepared for Canadian Zinc Corporation (CZN) by Tetra Tech Canada Inc. (Tetra Tech). The CRP builds on a previous draft plan developed by Allnorth Consultants Ltd. (2015) and serves to provide a strategic plan for the effective closure and rehabilitation of the Prairie Creek Mine All-Season Road (ASR) and associated infrastructure.

This plan is at a conceptual stage as the ASR has not yet been permitted. The construction of the ASR represents a major infrastructure development that would benefit the Mine and provide road access into the Nahanni National Park Reserve (NNPR) year-round. However, as noted by the MVRB in their Environmental Assessment and Reasons for Decision Report for the Prairie Creek Mine All-Season Road (MVRB 2017):

“The record shows a number of different land uses in the Project area, including: traditional harvesting and cultural activities, hunting by people who travel in from outside the Dehcho, tourism, and recreation”,

and,

“the developer needs to successfully close and reclaim the road to maintain values of NNPR for future generations. In the Review Board’s opinion, the road, especially the portion within NNPR, should be closed and reclaimed in a manner suitable for future uses of the area, and guided by applicable values, standards, guidelines, and laws.

This position resulted in the MVRB issuing the following Suggestion 14-1 to CZN pertaining to closure and reclamation planning for the road:

“In order to prevent post-closure impacts from the All-Season Road, the developer should:

- *define clear closure principles in consultation with potentially-affected Aboriginal groups, including Nahanni Butte Dene Band, Liidlii Kué First Nation, and Dehcho First Nations, and applicable regulators and land managers; and*
- *incorporate pre-disturbance information (including vegetation, wildlife, and permafrost conditions) into closure and reclamation planning”.*

As a result, CZN understands that the current requirement is to consider the full closure of the road and associated infrastructure and the reclamation of all areas disturbed by the Project.

1.1 Company Name, Location and Mailing Address

Head Office:

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Prairie Creek Mine:

Iridium 9555 Satellite Phone 1 (yellow) 011-8816-315-30998

Iridium 9505A Satellite Phone 2 (black) 011-8816-315-30997

Iridium 9505A Satellite Phone 3 (orange) 011-8816-315-30996

Ground-To-Air Radio Handheld FREQ 122.800

1.2 Purpose and Scope

The purpose and scope of this CRP is to provide a strategic plan for the effective closure and reclamation of the Prairie Creek Mine ASR alignment and associated infrastructure. The CRP outlines the approaches and concepts that will be implemented to achieve the overall goal of returning the land impacted by the ASR to technically viable and, where practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities following the end of CZN Project activities. It is also understood that for the NNPR, general conformance with the Principles and Guidelines for Ecological Restoration in Canada's Protected Natural Areas (Parks Canada 2008) will be especially important.

The CRP is a living document that will be updated throughout the life of the Project to adapt to and incorporate any changes (in terms of both the Project or available technologies) that may arise. This will also include the results of ongoing engagement with the potentially-affected Indigenous groups, including Nahanni Butte Dene Band, Lidlili Kué First Nation, and Dehcho First Nations, and applicable regulators and land managers.

The CRP is linked to a number of other CZN environmental management plans including:

- Road Operations and Maintenance Plan
- Specific Borrow Pit Development Plans
- Permafrost Management Plan
- Sediment and Erosion Control Plan
- Wildlife Management and Monitoring Plan
- Rare Plant Management Plan
- Invasive Species Management Plan
- Spill Contingency Plan
- Health, Safety and Emergency Response Plan.

Details of the road, together with the schedule of road construction and operations, are provided in the CZN Road Operations and Maintenance Plan (ROMP). A map book of the road is provided in Appendix A.

1.3 CZN Environmental Policy

It is CZN's policy to achieve and maintain a high standard of environmental care in conducting its business as a resource company, and through its developments, contribute to sustaining society's material needs. Canadian Zinc's approach to environmental management seeks continuous improvement in performance by incorporating evolving scientific knowledge and community expectations into its operations.

Specifically, it is CZN's policy to:

- Comply with and adopt the spirit of all applicable laws, regulations and standards, and where laws do not adequately protect the environment, apply standards that minimize any adverse environmental impacts resulting from its operations, products and services.
- Communicate openly and in a timely manner with government on environmental issues, and contribute to the development of policies, legislation and regulations that may affect CZN and its operations.

- Recognize local communities as stakeholders and engage with them in a process of open consultation and timely communication regarding environmental management issues and impacts and seek to involve them in decision making and implementation.
- Ensure that employees and suppliers of goods and services are informed about this policy and that they are aware of their environmental responsibilities in relation to CZN's business.
- Develop and implement management systems to identify, control and monitor potential environmental risks arising from operations, and be prepared to respond to adversity.

1.4 Closure and Reclamation Plan Goal and Principles

1.4.1 Closure Goal

The closure goal is the guiding statement and starting point for closure and reclamation planning. Consistent with the Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories (MVLWB/AANDC 2013), the recently updated Northern Land Use guidelines for Roads and Trails and Pits and Quarries (GNWT 2015a and b) and the Principles and Guidelines for Ecological Restoration in Canada's Protected Natural Areas (Parks Canada 2008):

The overall goal of the CRP is to provide the basis for the eventual closure and reclamation of the ASR and associated infrastructure that will return the site and affected areas around the Project to technically viable and, where practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities following the end of CZN Project activities.

1.4.2 Closure Principles

This closure goal will be supported by the four general closure principles outlined in MVLWB/AANDC (2013):

- physical stability
- chemical stability
- no long-term active care requirements
- future uses (including aesthetics and values).

1.4.2.1 Physical Stability

Consistent with the guidelines, the ASR alignment and associated infrastructure will be modified at closure to be physically stable and not pose a hazard to humans, wildlife, aquatic life, or environmental health and safety.

1.4.2.2 Chemical Stability

It is anticipated that any spills of products transported on the access road will be progressively cleaned up and remediated in accordance with the CZN Spill Contingency Plan. As a result, no risks to water quality, wildlife or human environmental health and safety are expected to remain following closure and reclamation of the Project.

1.4.2.3 No Long-Term Active Care

Canadian Zinc will strive to achieve a closure condition that will not require long-term active care and maintenance. Thus, any post-closure monitoring is expected to be limited to a defined period of time.

1.4.2.4 Future Uses

Canadian Zinc will strive to achieve closure conditions that are compatible with the surrounding lands and water bodies upon completion of the closure activities. Throughout the life of the Project, CZN is committed to engaging with the potentially-affected Indigenous groups and applicable regulators and land managers to seek their input regarding future uses in relation to the access road and the future closure thereof.

1.4.3 Parks Canada Principles and Guidelines

To the extent possible, CZN is also committed to conformance with Parks Canada's Principles and Guidelines for Ecological Restoration in Canada's Protected Natural Areas (Parks Canada 2008), especially within the NNPR. As noted in Parks Canada (2008):

"Ecological restoration is an intentional activity that initiates or accelerates recovery of an ecosystem with respect to function (processes), integrity (species composition and community structure) and sustainability (resistance to disturbance and resilience)".

Parks Canada recommends adhering to the following three guiding principles for achieving ecological restoration in Canada's protected natural areas:

- **Effective** in restoring and maintaining ecological integrity
- **Efficient** in using practical and economic methods to achieve functional success
- **Engaging** through implementing inclusive processes and by recognizing and embracing interrelationships between culture and nature.

Parks Canada defines ecological restoration as *"the process of assisting the recovery of an ecosystem that has been degraded or damaged"* with the objective of restoring ecological integrity. Within Parks Canada's protected areas, ecological integrity is defined as *"a condition that is determined to be characteristic of its natural region and is likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change and supporting processes"* (Canada National Parks Act 2000).

1.5 Regulatory Requirements and Guidelines

The main regulatory requirements and guidelines pertaining to the closure and reclamation of the ASR alignment and associated infrastructure include:

- Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories (MVLWB/AANDC 2013).
- Mine Site Reclamation Guidelines for the Northwest Territories (INAC 2007)
- Northern Land Use Guidelines – Access: Roads and Trails (GNWT Lands 2015a)
- Northern Land Use Guidelines – Pits and Quarries (GNWT Lands 2015b)
- Principles and Guidelines for Ecological Restoration in Canada's Protected Natural Areas (Parks Canada 2008).

2.0 PROJECT DESCRIPTION

Canadian Zinc is planning to operate the Prairie Creek Mine. The Mine is located at approximately 61° 33' north latitude and 124° 48' west longitude adjacent to Prairie Creek, a tributary of the South Nahanni River, south-west NWT (Figure 1).

A 170 km ASR connecting the Mine (at Km 0) to the Liard Highway via the Nahanni Butte access road (Figure 2) will generally follow the alignment of a previously permitted Winter Road, while reflecting the terrain, site characteristics, and road specifications suitable and preferred for the ASR. Approximately half of the proposed ASR (85 km between Km 17-102) is located within the NNPR. The NNPR, a world heritage site, is known for its globally-significant karst terrain, as well as the South Nahanni River, a Canadian Heritage River. Approximately half of the ASR alignment will directly overlap with the alignment of the permitted Winter Road.

Construction of the ASR will take approximately three years to complete. Initial winter roads will be built to gain access to the Mine, allow further investigation of the ASR alignment in order to complete detailed design, and to provide access for ASR construction. CZN's intent is to build the initial winter roads on the ASR alignment as much as possible to minimize the total extent of disturbance

The ASR will cross approximately 18 major streams with clear span bridges or large diameter culverts, and 85 minor streams with culvert diameters ranging from 800 mm to 2,000 mm based on the size of the stream. Construction of the ASR will be supported by temporary camps at Km 23 (Sundog), Km 39 (Cat Camp), Km 65, Km 87 (Tetcela Camp), Km 120 (Grainger Gap), Km 151 or Km 158, and Km 177.5. The camps at Km 39 (Cat), Km 87 (Tetcela) and Km 120 (Grainger) will likely be retained in a reduced form to support ongoing road maintenance.

Borrow sources have been identified all along the road route to provide material for the road sub-grade (fill) and surfacing (gravel). 86 borrow sources have been defined for use in road construction, with another 30 as back-up in the event any of the 86 are subsequently found to be unsuitable. Currently, approximately 44 of the 86 borrow sources are considered preferred locations and about nine of these sources may require blasting and/or crushing activities. Blasting may also be required along the ASR alignment at a number of locations such as Km 5, Km 23, Km 25 to Km 29, Km 32, and Km 36 to Km 37. Some of the surfacing borrow sources will be retained to support road maintenance. The remainder will be closed and reclaimed immediately after road construction. Most borrow sources are proximal to, or within the road corridor. Some will require short access roads.

Water sources will be utilized in winter for winter road construction and during summer for dust control. Water sources have been defined at Km 0 (the Mine), Km 39 (Cat Camp), Km 60 (Mosquito Lake), Km 70, Km 100, Km 121 (Gap Lake), Km 139, Km 141 and the Liard River. Winter water extraction from lakes will be conducted in conformance with DFO's water withdrawal protocol, limiting extraction to less than 10% of lake volume. Summer water extraction from lakes will similarly be limited to avoid significant water level drawdown and will be monitored using installed staff gauges.

2.1 Project Setting

The currently permitted Winter Road and approximate location of the proposed ASR, including major realignments, is shown in Figure 2. The access road will be located in the southwestern Northwest Territories (NWT). The road will begin at the Nahanni Butte access road and pass through the Mackenzie Mountains and the NNPR to the Prairie Creek mine site. Approximately half of the 170 km access road will pass through NNPR (Figure 2). From the Nahanni Butte access road, the ASR crosses lowland terrain and the Liard River before passing through a gap in the Front Range (Grainger Gap), crossing the Silent Hills (Wolverine Pass), Fishtrap

Creek and the Tetcela River before ascending and crossing the Ram Plateau. Thereafter, the road enters the Mackenzie Mountains and follows Sundog Creek, Funeral Creek and Prairie Creek to reach the Mine.

2.1.1 Terrain Physiography and Vegetation

The proposed route of the ASR passes through a variety of natural regions including valleys, Sub-Alpine Shrub and Alpine Tundra (max elevation of 1,530 m AMSL), Riparian Alluvial habitat, open-forest parkland, muskeg, and mixed forest. The road alignment crosses terrain that includes discontinuous permafrost and karst, with the potential occurrence of thermokarst, sinkholes, debris flows and thaw slumps, as well as rock fall, rock slides and snow avalanches in mountainous terrain. The route is underlain by sedimentary rock sequences generally consisting of combinations of limestone, dolostone, siltstone, shale and mudstone.

The road area is located primarily within the Taiga Cordillera and Taiga Plains Ecozones of the NWT and is characterized by several significant topographic features (e.g., Mackenzie Mountains, the Nahanni Range and the Liard floodplain). This has resulted in an array of growing conditions, and consequently, numerous vegetation species assemblages (Ecosystem Classification Group 2007). Wildfires occasionally occur in the region and have influenced forested ecosystems throughout much of the landscape.

2.1.2 Surface Waters

The main surface water basins crossed by the ASR alignment are, from west to east, Prairie Creek, Sundog Creek, Tetcela River, Fishtrap Creek, an unnamed creek, Grainger River, and the Liard River (Figure 2).

Seasonal hydrological characteristics of the various larger streams crossed by the ASR generally mirror the pattern of Prairie Creek, for which there is a good and lengthy record. Higher monthly flows occur in the spring and summer coincident with freshet and summer storms. The annual low flow month is typically March when flows are approximately 50 times less than in June. Peak flows observed in the area occur during intense summer rainfall events. Freeze-up usually begins in mid-October, and spring thaw in mid-April.

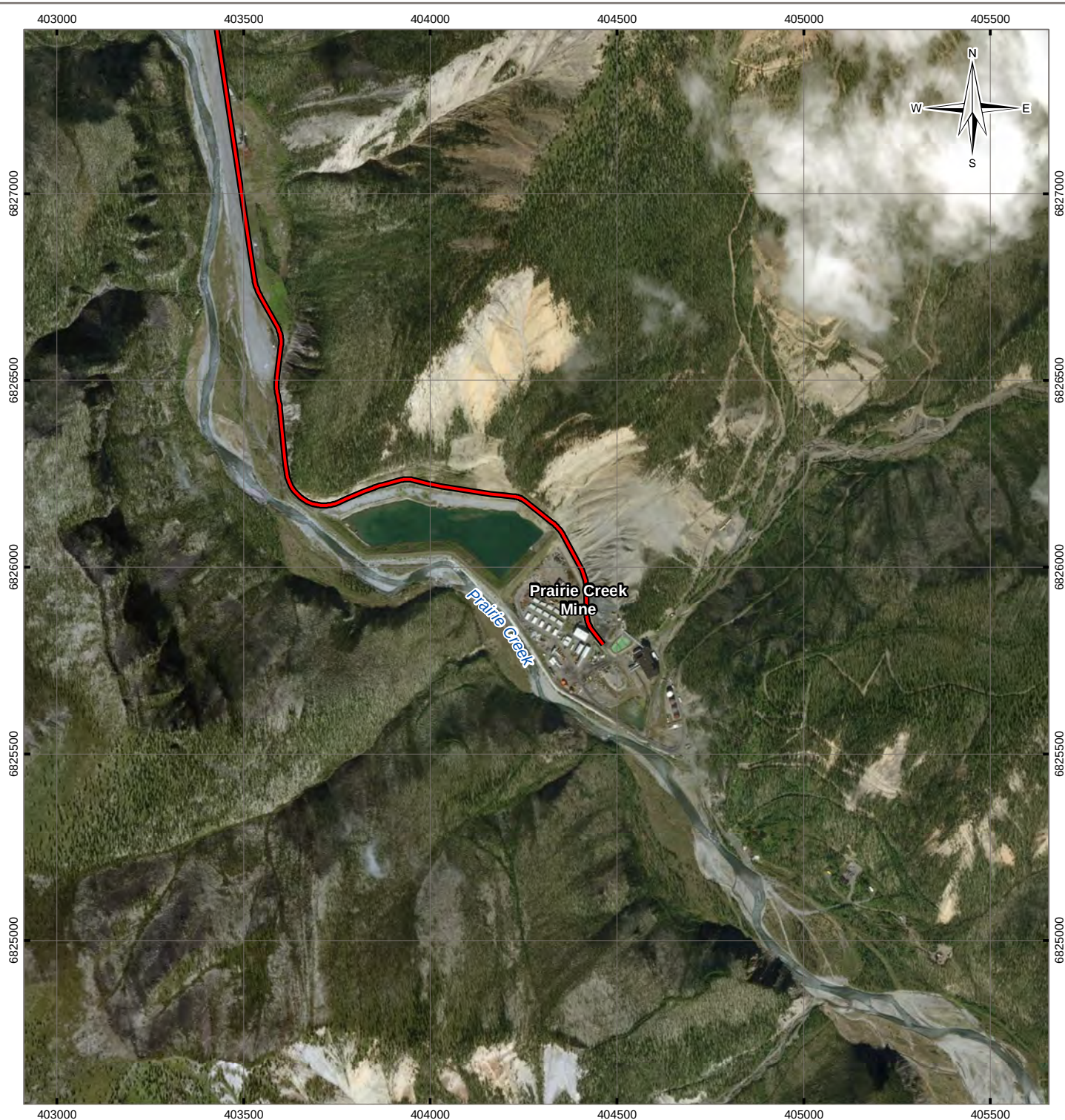
2.1.3 Fish and Wildlife

Both bull trout and mountain whitefish spawn in Prairie Creek upstream of the mine site, the former most likely in Funeral Creek. Arctic grayling is known to inhabit lower Prairie Creek and many other creeks and rivers in the area. Bull trout have not been found east of the Prairie basin. In total, there are 13 stream crossings along the ASR alignment where the presence of fish has been confirmed or is suspected.

Wildlife species at risk or maybe at risk that are potentially present along the ASR corridor include boreal woodland caribou, northern mountain woodland caribou, wood bison, grizzly bear and collared pika. In addition, five bird species at risk occur or may potentially occur in the area including Peregrine Falcon, Short-eared Owl, Common Nighthawk, Olive-sided Flycatcher, Bank Swallow. and Canada Warbler.

Additional wildlife species that have known distributions along or near the ASR include Dall's sheep, moose and furbearers (including grey wolf, beaver, marten and wolverine). A number of waterfowl species, including Trumpeter Swan, frequent the area of the ASR alignment; the Project area contains habitat for breeding and/or staging for short periods during annual migration. In addition to waterfowl, raptors are expected to occur and nest near the entire ASR alignment, and documented occurrences include Golden Eagle, Bald Eagle, Peregrine Falcon, American Kestrel, Red-tailed Hawk, Northern Harrier, and Gyrfalcon.

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LEGEND

 Proposed Prairie Creek Access Road



NOTES

Base data source:
Imagery from ESRI; DigitalGlobe (2016).

STATUS
ISSUED FOR REVIEW

PRAIRIE CREEK ACCESS ROAD

Prairie Creek Mine Overview

PROJECTION

NWT Lambert

DATUM

NAD83

CLIENT



Scale: 1:15,000



FILE NO.

EARC03145-01_Figure1.mxd



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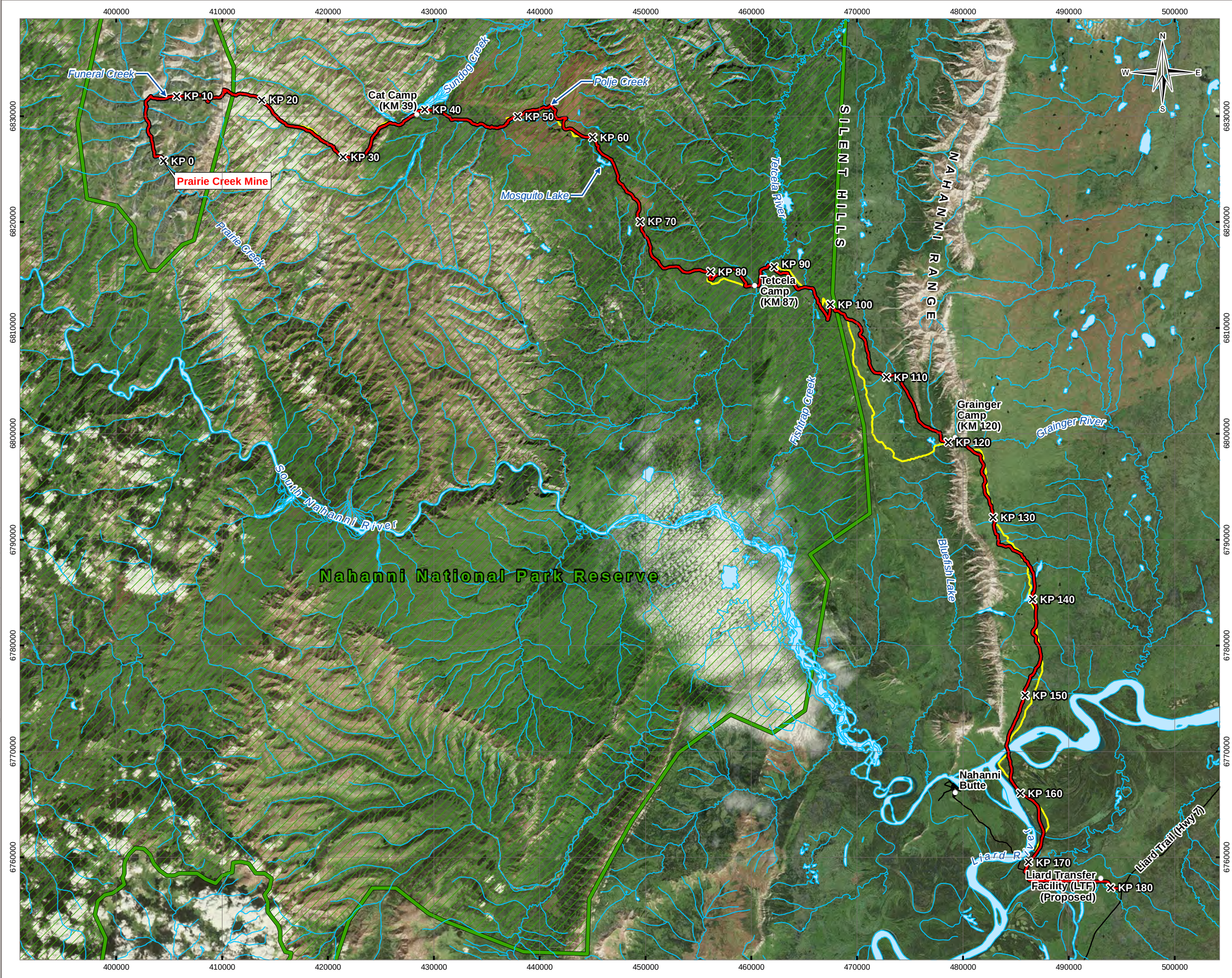
November 21, 2018

PROJECT NO.

ENG.EARC03145-01

Figure 1

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LEGEND

- ✕ Access Road Kilometre Marker
- Proposed Prairie Creek Access Road
- Proposed Winter Road Alignment
- Existing Road
- Nahanni National Park Reserve Boundary
- Watercourse
- Waterbody

NOTES

Base data source:
Road alignment provided by AllNorth (July 2018)
Existing roads from CanVec (1:150,000)
Watercourses from CanVec (1:250,000)

STATUS
ISSUED FOR REVIEW

PRAIRIE CREEK ACCESS ROAD

Proposed Access Road Alignment

PROJECTION UTM Zone 10		DATUM NAD83		CLIENT CANADIAN ZINC CORPORATION	
Scale: 1:350,000 					
FILE NO. EARC03145-01_Figure2.mxd					
OFFICE TL-VANC		DWN SL	CKD BB	APVD RH	REV 0
DATE November 21, 2018		PROJECT NO. ENG.EARC03145-01			

Figure 2

3.0 PROGRESSIVE RECLAMATION

As described in the Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories (MVLWB/AANDC 2013), progressive reclamation takes place prior to permanent closure to reclaim components and/or decommission facilities that no longer serve a purpose. These activities can be completed during operations with the available resources to reduce future reclamation costs, minimize the duration of environmental exposure, and enhance environmental protection. Progressive reclamation is expected to help shorten the time for achieving final closure objectives and will provide valuable experience on the effectiveness of certain measures that might be implemented during permanent closure.

Canadian Zinc is committed to progressive reclamation of the ASR alignment, stream crossing sites, borrow sites during the road operations period where-ever this strategy can be successfully employed. Within a few years following initial construction, and throughout the operating period prior to deactivation, it is assumed that the ASR alignment will be stable in terms of slope stability, runoff management and sediment control.

To stabilize cut and fill slopes, it may be necessary to place large woody debris or boulders on the slopes, with silt fence used as necessary until vegetation becomes established.

Mulched organic matter produced during the initial road clearing and construction phase, and certified northern weed-free seed mix(es) (within the NNPR, provided they are approved for use by Parks Canada), as well as potentially locally-sourced seeds, will be applied to facilitate revegetation and the restoration of ecosystem functions of disturbed terrain as and where appropriate. There are numerous advantages and benefits to using commercial seed mixes that cannot be obtained by using local seed alone. Please refer to this link for further details: <http://nwtresearch.com/research-projects/agriculture/nwt-seed-project>

Typical short-term reclamation objectives that will be implemented include:

- Progressive reclamation of disturbed areas within the footprint area of the ASR and associated infrastructure during operations as soon as they are no longer required for operational purposes.
- Progressive remediation of hydrocarbon-contaminated soils as may be associated with the construction and operation of the ASR and associated infrastructure.
- Effective implementation of CZN's Sediment and Control Plan to minimize risks of erosion or sediment loss as a result of on-site runoff.
- Stabilization of ASR side-slopes and borrow source slopes to maintain safe working conditions and to facilitate progressive reclamation activities.
- Removal and disposal or re-purposing of camp infrastructure and materials as appropriate, when no longer required.
- Revegetation (natural and active revegetation) of previously disturbed terrain (as appropriate) to facilitate the return of such areas to self-sustaining ecosystems compatible with a healthy environment.
- Monitoring the performance of progressive reclamation efforts including reclamation trials.

As opportunities for progressive reclamation are identified, CZN is committed to engaging with the potentially-affected Indigenous groups and applicable regulators and land managers; and regulators to seek their input in the implementation of the proposed progressive reclamation activities. The results of future progressive reclamation activities will be reported as required to these parties and any lessons learned from progressive reclamation will inform adaptive management and future closure planning for the Project.

4.0 TEMPORARY CLOSURE

Temporary closure occurs when a mining operation ceases with the intent of resuming activities in the near future. Temporary closures could last for a period of weeks, months or even years. It is possible that for reasons of force majeure, prevailing economic conditions or others unforeseen, the Prairie Creek Mine Project operations may need to be suspended or temporarily closed.

During such times, the main objectives will be to ensure the ongoing protection of the environment, compliance with existing regulatory requirements and security and safety of site infrastructure, the access road (ASR) and other associated infrastructure. To meet these objectives, specific measures that will be implemented for the access road will include:

- Implementation of road access controls.
- Maintenance of environmental protection systems and appropriate associated monitoring as required for ongoing compliance with regulations, licences and permits.
- Securing of ASR camps and associated infrastructure.
- Regular monitoring and maintenance of all ASR bridges, culverts and infrastructure to maintain their integrity and required function.
- Securing and monitoring of hazardous materials and explosives or removing them as appropriate.
- Maintenance of human resources to meet applicable employee needs.
- Maintenance of financial security as per regulatory requirements and obligations.

5.0 CLOSURE AND RECLAMATION

5.1 Reclamation Goals

The CRP for the ASR alignment and associated infrastructure is based on a “design for closure” approach, with the ultimate goal being a “walkaway” design. The closure and reclamation of this Project will be conducted in accordance with the terms and conditions of the anticipated MVLWB Land Use Permit and Water Licence and accepted closure and reclamation practices in the NWT, as previously outlined in Section 1.5 of this CRP.

The general reclamation goals are to:

- Protect public health and safety;
- Minimize the adverse effects of the Project on the environment;
- Establish conditions that lead to acceptable long-term physical and chemical stability of the reclaimed areas;
- Establish conditions that are appropriate for the surrounding environment and identified end land uses; and
- Return the affected areas around the Project to technically viable and, where practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities. following the end of CZN Project activities.

These goals will be supported by the four closure principles of physical stability, chemical stability, no long-term active care requirements, and future uses (including aesthetics and values) and Parks Canada's guiding principles for achieving ecological restoration in Canada's protected natural areas.

5.2 Reclamation Strategies

5.2.1 Planning for Closure – Mulching

One of the greatest challenges related to the future closure and reclamation of the access road (ASR) relates to the physical properties of the road, which will be comprised primarily of relatively inert sands, aggregate, crushed rock, etc. The road will also typically represent a “high and dry” environment.

CZN agrees with Parks Canada's stated opinion that sites with gravel fill, or little to no organic content in the soil have low revegetation potential; vegetation that establishes on gravel fill is usually more similar to vegetation on gravel river bars or stony, steep slopes than to surrounding undisturbed vegetation (Densmore et al 2000). Furthermore, without additional site-specific measures to improve soil structure and nutrients (ex. surface preparation, adding organics, soil amendments) plant growing conditions may be limited. To assist in returning the access road and affected areas around the Project to technically viable and, where practicable, self-sustaining ecosystems, CZN is proposing to incorporate mulched organic matter into the road surface during ripping and scarification activities associated with road closure and reclamation. The incorporation of such mulched local material into the loosened-up road bed will assist in conserving moisture and introducing nutrients and possibly local root/seed stock needed to facilitate natural and enhanced revegetation processes leading to the eventual restoration of ecological integrity for the reclaimed road alignment. This approach would not be used between Km 0-40 since this terrain is naturally rocky and/or alluvial.

The primary source of organic matter to be used during the closure and reclamation phase will be derived from the grubbing and mulching of slash, vegetation and non-merchantable timber generated during the initial right-of-way (ROW) clearing to be undertaken at the beginning of winter road and subsequent ASR construction. The current plan is to place and store the mulched organic matter in discrete mounds established along the ROW for this future use. The organic materials in these mounds is anticipated to compost in-situ during the life of the Project and generate valuable organic matter enriched in nutrients needed for the eventual reclamation of the road.

To the extent possible, the overall long-term intent of the ASR reclamation and revegetation efforts will be to achieve a degree of ecological integrity that complements the vegetation cover units found adjacent environment to the road alignment (Appendix B).

5.2.2 Main Access Road

The reclamation process would be applied to the 170 km of ASR alignment. The Nahanni Butte access road will remain active for continued access to the Nahanni Butte community. It is assumed that all features related to road construction and operation will ultimately be deactivated and reclaimed to conform with the requirements of the various Project authorizations and the applicable federal and territorial guidelines.

All borrow areas, related access trails/roads, and any required site disturbance outside of the defined ROW, will be deactivated and reclaimed once they are no longer required. The borrow areas and pits will typically be reclaimed in conformance with the respective borrow pit closure plans.

The basic approach to road closure will be to retain the subgrade and gravel surface but will include ripping and scarification of the road surface, incorporation of organic mulch, and grading and slope flattening as appropriate to promote the re-establishment of natural vegetation.

The access road reclamation process will include:

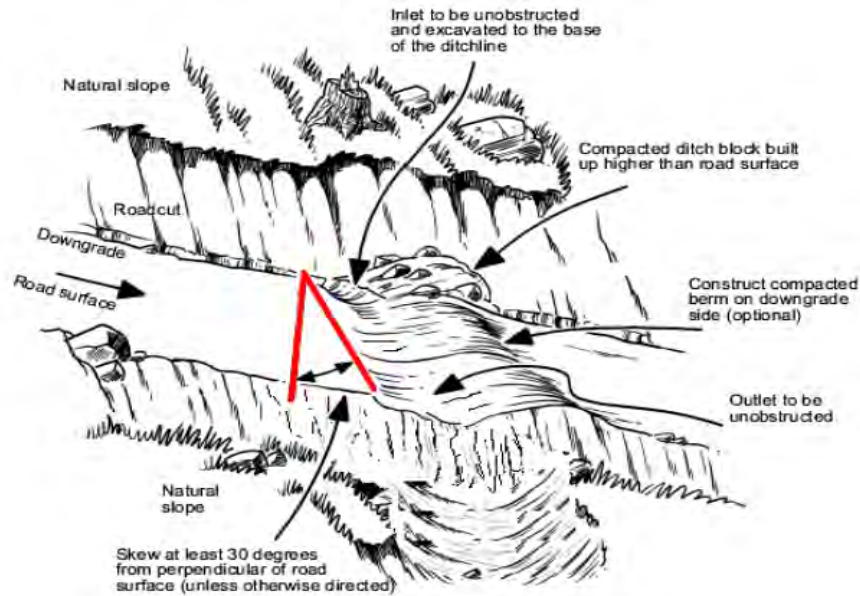
- Establishment or installation of structures that will prevent ongoing access to the area (e.g., gates, berms, bridge removal).
- Removal of all culverts and the restoration / re-contouring / re-establishment of natural drainage patterns within the ROW.
- Re-contouring of larger, significant cut/fill slopes to ensure long-term stability and to minimize silt and sediment transport.
- Outsloping or insloping of the road surface as appropriate.
- Partial or full road fill pullback of road sections experiencing ongoing slope stability, saturated and weeping cut slopes, slumping ditches, and road settling problems. The partial or full road fill pullback would place the “fill” portion of the road base against the cut slope to stabilize the slope and return it closer to its natural state. Any stripped or overburden material available locally would then be placed overtop the mineral soil. This process would be considered the reverse order from the original road construction.
- Stabilization of wet, weeping, saturated, unstable cut slopes and erosion-prone stream banks.
- Ripping, scarification and incorporation of mulched organic matter and historically stripped overburden into the road to enhance natural revegetation of the road footprint.
- Local Plant salvage and transplant into the roughened and mulched road surface.
- Application of certified northern weed-free seed mix(es) (within the NNPR, provided they are approved for use by Parks Canada), as well as potentially locally-sourced seeds, will be applied to facilitate revegetation and the restoration of ecosystem functions of disturbed terrain as and where appropriate. There are numerous advantages and benefits to using commercial seed mixes that cannot be obtained by using local seed alone.
- Installation of cross drainage ditches on remaining road running surfaces to minimize future erosion / sedimentation potential at a frequency of:
 - (i) < 6 % road grade – as needed
 - (ii) 6% to 10% road grade – as needed, minimum every 100 m
 - (iii) 10% to 15% road grade – as needed, minimum every 50 m
- The removal of “overland” construction sections which cross larger wetland complexes. Available woody log debris and excess subgrade material will be pulled back and disposed of along appropriate sections of the remaining road subgrade.

5.2.3 Deactivation without Pullback

For most sections of the road, side-slopes will be absent and no significant pullback of cut material will be required. Road grades of less than approximately 6% may not require runoff control. However, grades in excess of 6% may need runoff management structures on a site-specific basis. Effective runoff management can be achieved with the installation of structures such as cross-ditches and/or waterbars. These measures are further described as follows.

5.2.3.1 Cross-Ditches

A cross-ditch is a simple way of passing channeled runoff from the upslope side of the road bed to the downslope side. Figure 3 illustrates the structure of a typical cross-ditch. For larger ditches, it may be necessary to dissipate flows at the ditch outlet to avoid erosion. This can be achieved by placing boulders in the outlet area.

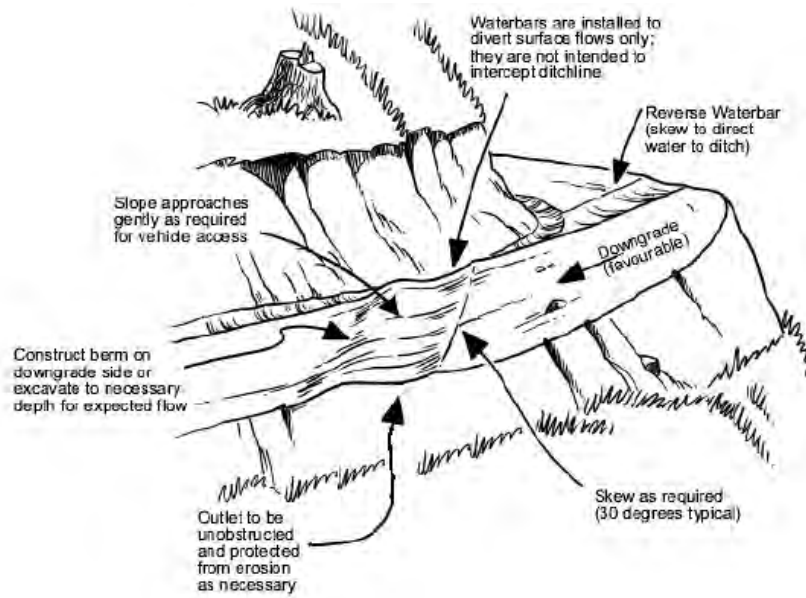


Source: British Columbia Forest Road Engineering Manual (BC. 2016)

Figure 3: Schematic of Typical Cross-Ditch

5.2.3.2 Waterbars

Another runoff passage structure that can and will be utilized is a waterbar (Figure 4). This type of drainage structure may or may not be combined with a cross-ditch. Waterbars are intended to reduce the impact of surface water flowing down the road surface on grade, causing erosion and sedimentation.

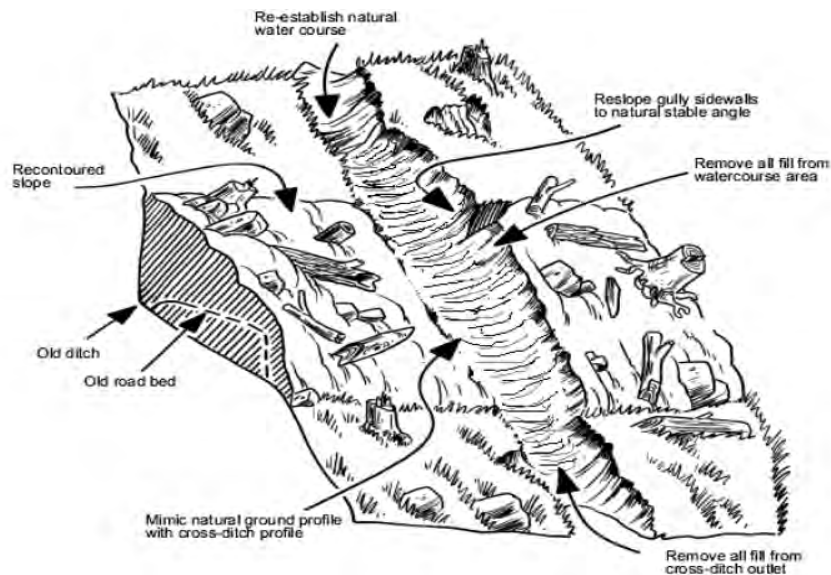


Source: British Columbia Forest Road Engineering Manual (BC. 2016)

Figure 4: Schematic of a Typical Waterbar

5.2.4 Deactivation with Pullback

Road sections with significant cuts are likely to be deactivated by pulling back cut material from downslope, re-contouring and stabilizing the material. Runoff may need to be passed across the filled sections using structures. This might involve a cross-ditch, as shown below. To avoid erosion of the ditch, it might be filled with coarse rock to act as a french drain.



Source: British Columbia Forest Road Engineering Manual (BC. 2016)

Figure 5: Schematic of Cross-Ditch in Fill Pullback

For cut slopes needed prior to deactivation, pullback areas may require the placement of large woody debris or boulders on the slopes, with silt fence used as necessary, until vegetation has been established. Some cut areas may have internal drainage ditches to carry upslope runoff or seepage during road operations. If flows are likely to continue after pullback, water conveyance can be continued by filling the ditch with rock prior to pullback to create a trench drain. For localized areas of excessive seepage, more rock can be placed to create a blanket drain.

5.2.5 Stream Crossings

The intent of the reclamation process at all stream crossings is to return the disturbed area to a natural state which will require no long-term maintenance. Generally, riparian areas typically re-generate naturally within a few years of disturbance. Therefore, consideration must be given to whether additional site disturbance to restore the streamside has a net benefit. The reclamation process at stream crossing sites may include:

- Pullback of fill material within the riparian zone and re-contouring of slopes to the natural setting and grades, de-compacting soils as necessary to promote revegetation.
- Complete removal of stream crossing structures, either bridge(s) or culvert.
- All bridge structure materials constructed with unnatural materials (concrete, steel, plastics) will be hauled away for salvage. Natural materials such as wood decks will be removed from site and disposed of at a designated location if not suitable for salvage and reuse.
- All culverts (metal or plastic) will be removed from site and disposed of at an approved designated location.
- Stripped/overburden/woody debris material originally mulched and stored within proximity of the crossing will be placed over the disturbed area to enhance natural revegetation processes.
- Implement additional erosion and sedimentation measures as required to ensure short and long-term erosion and sedimentation protection.

For the restoration of natural drainage, several general approaches are described which will likely be used. Culverts will be removed, and if upslope flow is expected to continue at a particular removal location, a passage structure will need to be built, which might be an armoured swale or re-creation of an original creek bed, or a cross-ditch or cross-drain. Culverts will typically be removed in winter or during dry summer periods.

Any damage to stream banks will be repaired, with stabilization as necessary, preferably using woody debris or boulders. If significant compaction of soils has occurred, scarification may be needed to promote natural or enhanced revegetation. Abutments will need to be removed or pushed back a suitable distance from the creek.

5.2.6 Camps and Laydown Areas

Operations phase camp facilities will typically include a small (8-10 person) camp a diesel-fed generator with fuel storage tank capacity up to 4,500 L, a double-chamber garbage incinerator plus an ash bin, and a sewage tank or sump. In addition, fuel for the construction fleet will be stored in tanks. For example, Rowe's Construction uses two double-walled enviro-tanks for diesel with 90,000 L capacity each, as well as a smaller 20,000 L enviro-tank split between diesel and gas. In addition, there will be small containers (up to 20 L) of motor oil to top up engines.

During the long-term operations period, maintenance vehicles would be fuelled from enviro-tanks on halftone service/monitoring vehicles. A trailer and small genset may be retained at the operations phase camps, with a storage tank no greater than 500 L.

The reclamation process at camps and laydown areas is anticipated to include:

- Removal of all structures and components for reuse, recycling or disposal in an approved manner.
- Removal and disposal of all unnatural materials to a designated and approved location. Natural materials such as lumber will be disposed of in accordance with NWT and local regulations and guidelines.
- Re-contouring of cut/fill slopes to ensure long-term stability.
- Soils in areas that have been compacted by traffic from heavy equipment or other vehicles will be ripped and/or scarified to reduce surface compaction and to facilitate subsequent revegetation of the disturbed areas.
- Stripped/overburden/woody debris material and/or mulch originally removed and stored within proximity of the disturbed area will be placed over the disturbed area to enhance natural revegetation.
- Application of erosion and sedimentation measures as required to ensure short- and long-term erosion and sedimentation management.

5.2.7 Liard River Barge Crossing

The reclamation process at the Liard River Barge Crossing is anticipated to include:

- Removal of all structures and components for recycling.
- Removal and disposal of all unnatural materials to a designated and approved location. Natural materials such as lumber to be disposed of in accordance with NWT and local regulations and laws.
- Re-contouring of cut/fill slopes to ensure long-term stability.
- Soils in areas that have been compacted by traffic from heavy equipment or other vehicles will be ripped or scarified to reduce surface compaction and aid in the revegetation of the disturbed area.
- Stripped/overburden/woody debris material original removed and stored within proximity of the disturbed area will be placed over the disturbed area to enhance the natural revegetation process.
- Apply any additional erosion and sedimentation measures as required to ensure short and long-term erosion and sedimentation protection.

5.3 Reclamation Trials

Reclamation trials will be undertaken during the long-term access road operations phase in conjunction with the progressive reclamation program that will be implemented. The primary purpose of the trials will be to develop a database pertaining to the experiences gained in the progressive reclamation and revegetation of road side-slopes, areas of erosion and other terrain disturbed by the Project during the long-term operations phase. Conceptually, the reclamation trials are expected to consider:

- effects of soil cover on plant growth for a particular land unit;
- effects of mixing organic and mineral soil;
- success of establishment of various vegetation prescriptions;
- effects of fertilizer mixtures and rates of application;

- existence and rate of encroachment of native species;
- effects of water content of soil;
- effects of drainage characteristics of soil;
- soil characteristics measurements:
 - pH
 - organic carbon content
 - texture/particle size distribution
 - salinity (sodium adsorption ratio)-electro-conductivity (EC)
 - total N and other nutrients

The details of the proposed reclamation trials program are anticipated to be developed in conjunction with ongoing engagement with the potentially-affected Indigenous groups, the applicable regulators and land managers. Lessons learned from the reclamation trials will be applied directly to final closure and reclamation planning and adaptive management for the Prairie Creek Mine ASR.

5.4 Monitoring

An inspection and monitoring program will be established starting when reclamation commences that will continue post closure. Disturbed areas would be considered stable when, under normal conditions:

- Revegetation is occurring, consistent with the revegetation objectives established for the ASR.
- Surface water is being contained and managed with no significant erosion or sedimentation.
- No slope or soil stability issues exist.

The time required for stability would vary on a site-by-site basis. Periodic environmental monitoring will be undertaken to assess the progress of reclamation and determine the need for follow-up works and adaptive management. The monitoring frequency to be implemented will be based on the progress of reclamation.

During the initial one to two years general inspections would be conducted periodically (i.e., three to four per year) or as required (following major storm events). Low over-flights, specifically over key areas where problems might be expected to occur, are proposed to allow for inspection. Key areas for inspection include locations where pullback has occurred and the switch-backs in the Silent Hills. Most of the road is expected to be relatively stable. The amount and frequency of post-closure monitoring required is expected to diminish as reclamation activities near completion and the results of monitoring and adaptive management indicate that environmental performance is meeting the established reclamation objectives and closure criteria that CZN anticipates will be developed with the assistance of regulatory agencies and Indigenous Parties.

The results of the ongoing monitoring will continue to be reported as required to these parties and any lessons learned from the monitoring program will inform adaptive management and future closure planning for the Project. It is understood that environmental monitoring will continue until such time as it can be established that the overall closure goal has been met, based on discussions with regulatory agencies and Indigenous Parties. Once this has been achieved, CZN would seek final clearance to permanently abandon the Project area.

5.5 Adaptive Management

Adaptive Management is a systematic, rigorous approach designed to link environmental monitoring to management actions. Adaptive management will help to evaluate the success of reclamation and revegetation programs, confirm that they are resilient to the site-specific environmental conditions and have stabilized and are performing as expected. The determination will include assessment of both the reclamation works and the downstream receiving environment.

The results and lessons learned from the long-term progressive reclamation efforts, reclamation trials and monitoring programs will be used by CZN, regulatory agencies and Indigenous Parties to inform the development of appropriate reclamation objectives, measurable targets and timelines for final closure and reclamation planning and adaptive management for the Prairie Creek Mine ASR.

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APPENDIX A

ALL-SEASON ROAD MAP BOOK



LEGEND

- Access Road Kilometre Marker
- ✦ 2018 Borehole (Tetra Tech, 2018)
- ⬢ 2014 Borehole (Tetra Tech EBA, 2014)
- ✦ 2012 Borehole (SNC-Lavalin, 2012)
- ⬢ 2014 Testpit (Tetra Tech EBA, 2014)
- ⬢ 2014 Testpit (Allnorth, 2014)
- 📍 Camp/Laydown
- ✕ Watercourse Crossing
- ▬ Prairie Creek Access Road (November 2018)
- ▬ Potential Permafrost Section
- ▬ Proposed Winter Road Alignment
- ▭ Nahanni National Park Reserve Boundary
- ▭ Potential Borrow Source
- ~ Contour (40 m)
- Watercourse
- Waterbody



NOTES
Base data source: CanVec; GeoBase.
Base imagery source: DigitalGlobe, 2016

STATUS
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PRAIRIE CREEK ACCESS ROAD

Map Book

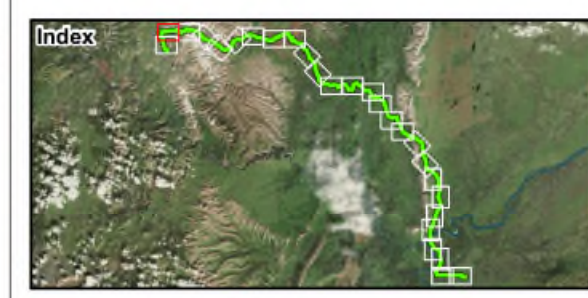
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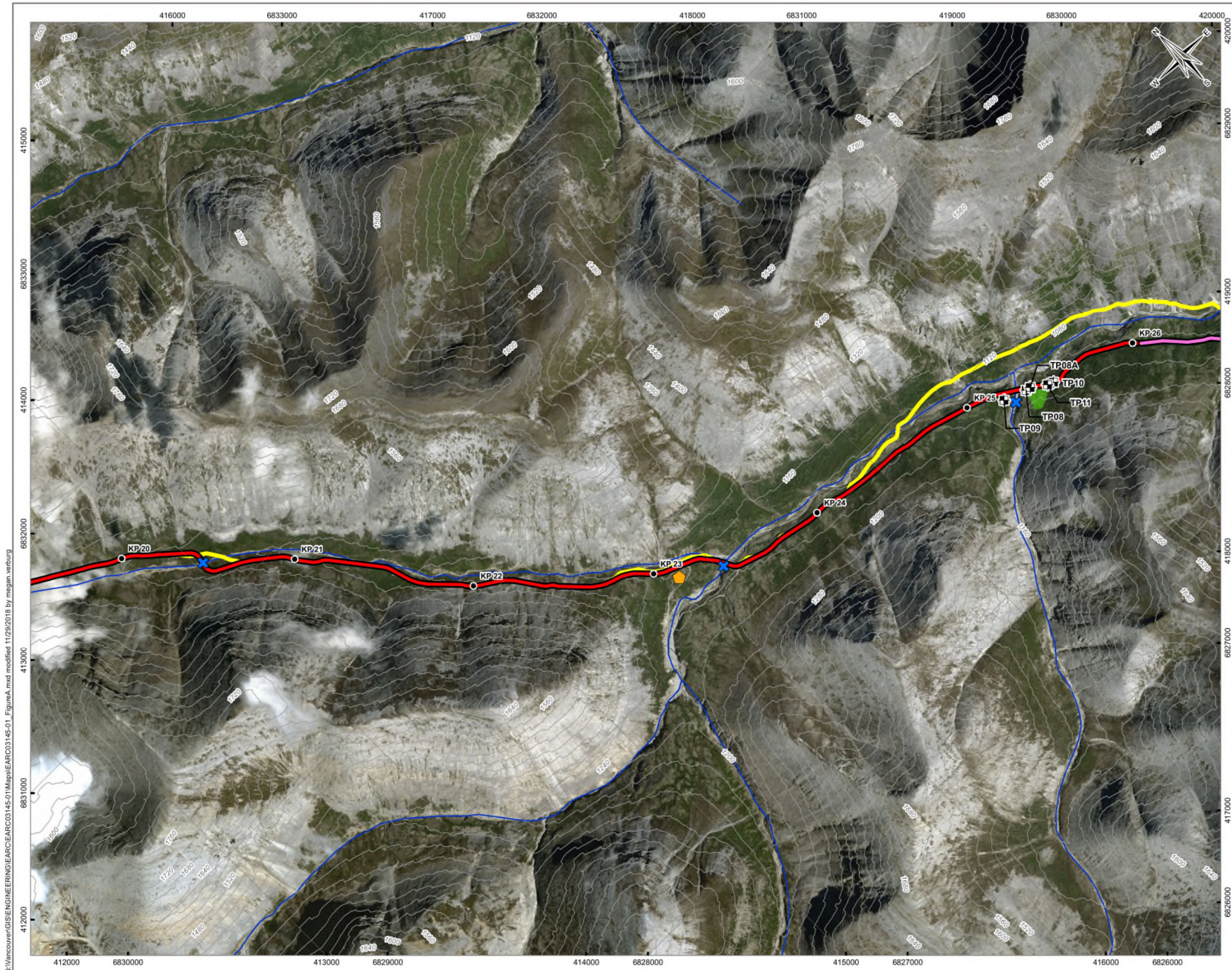
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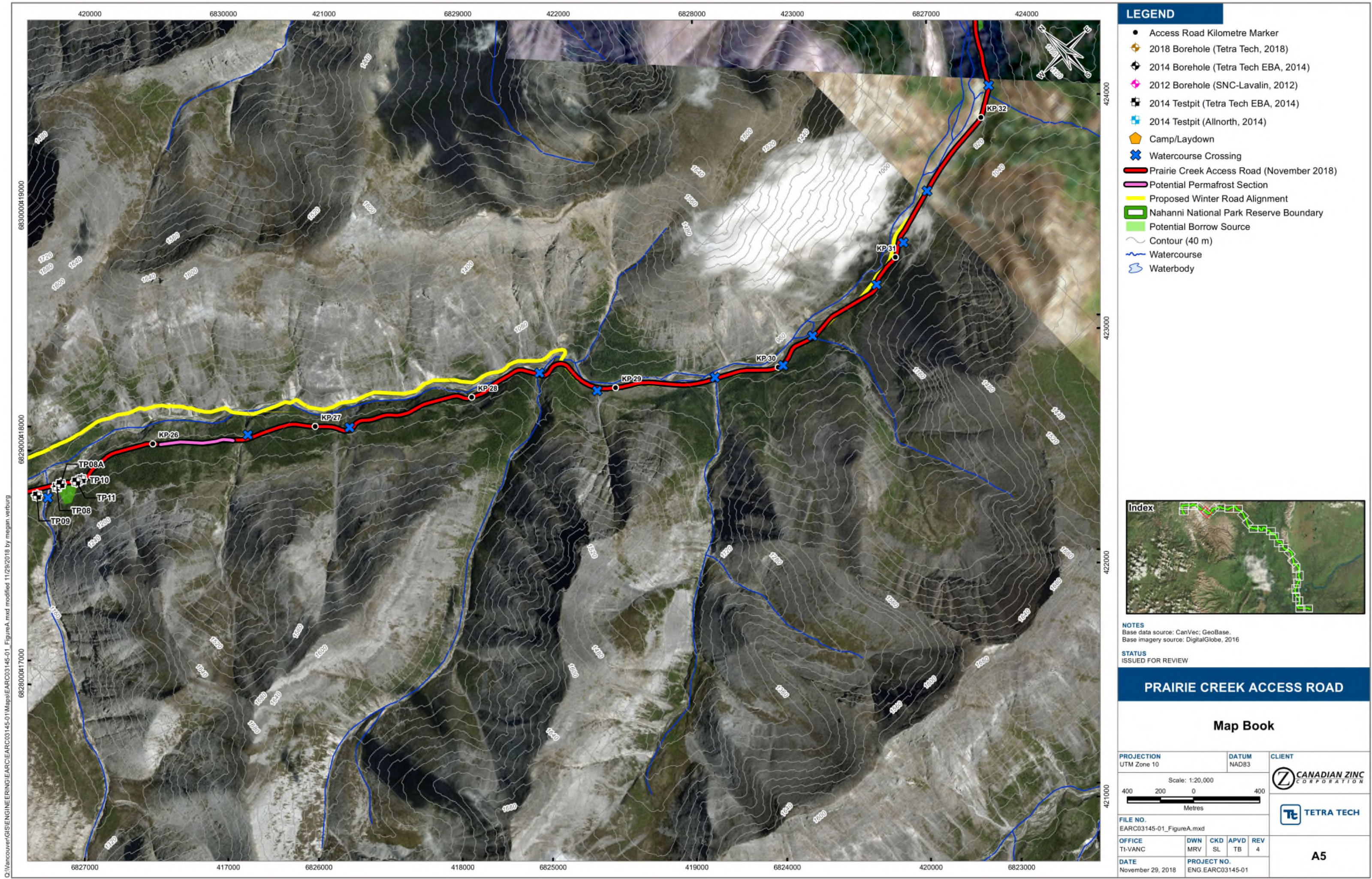
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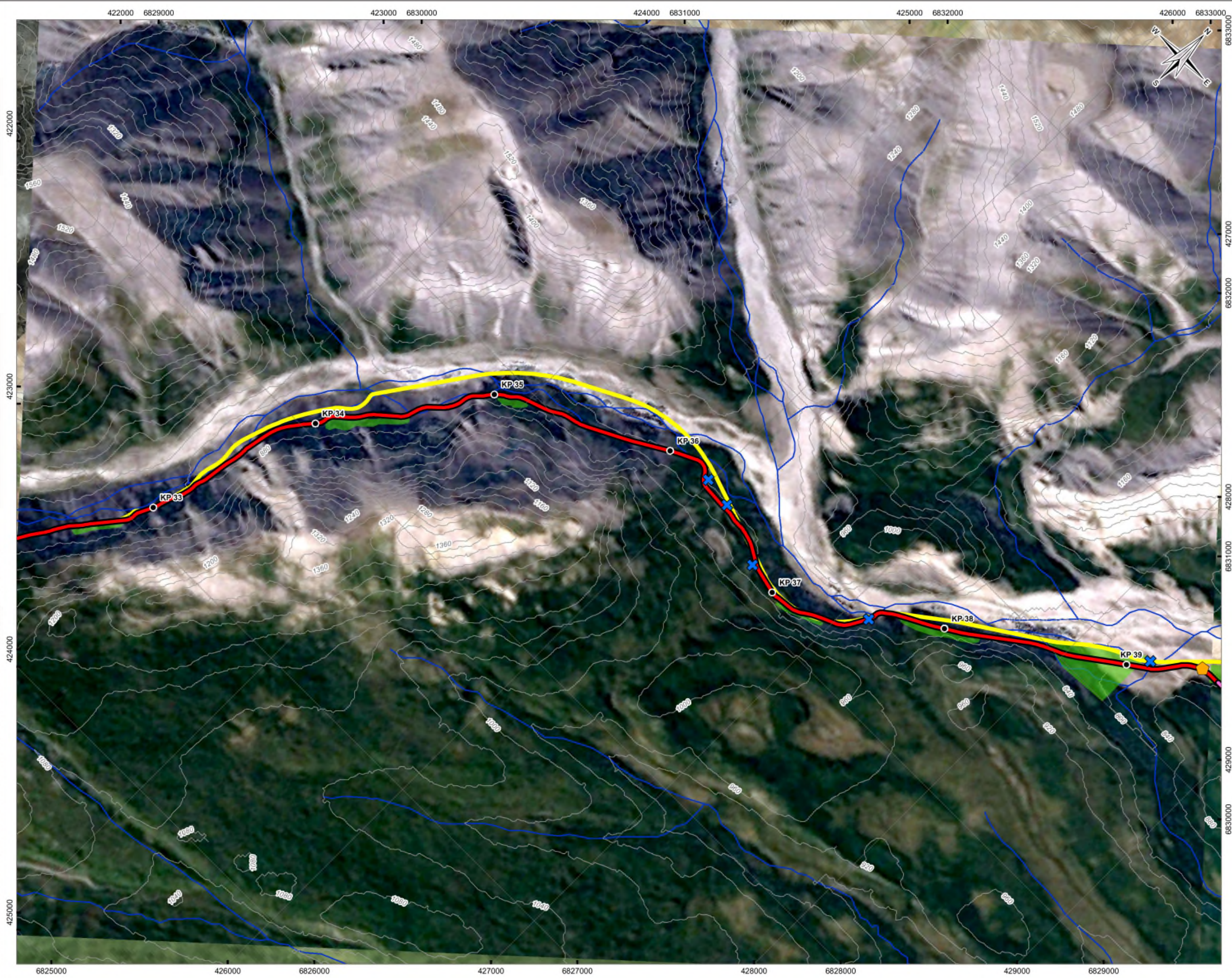
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- 🌊 Waterbody

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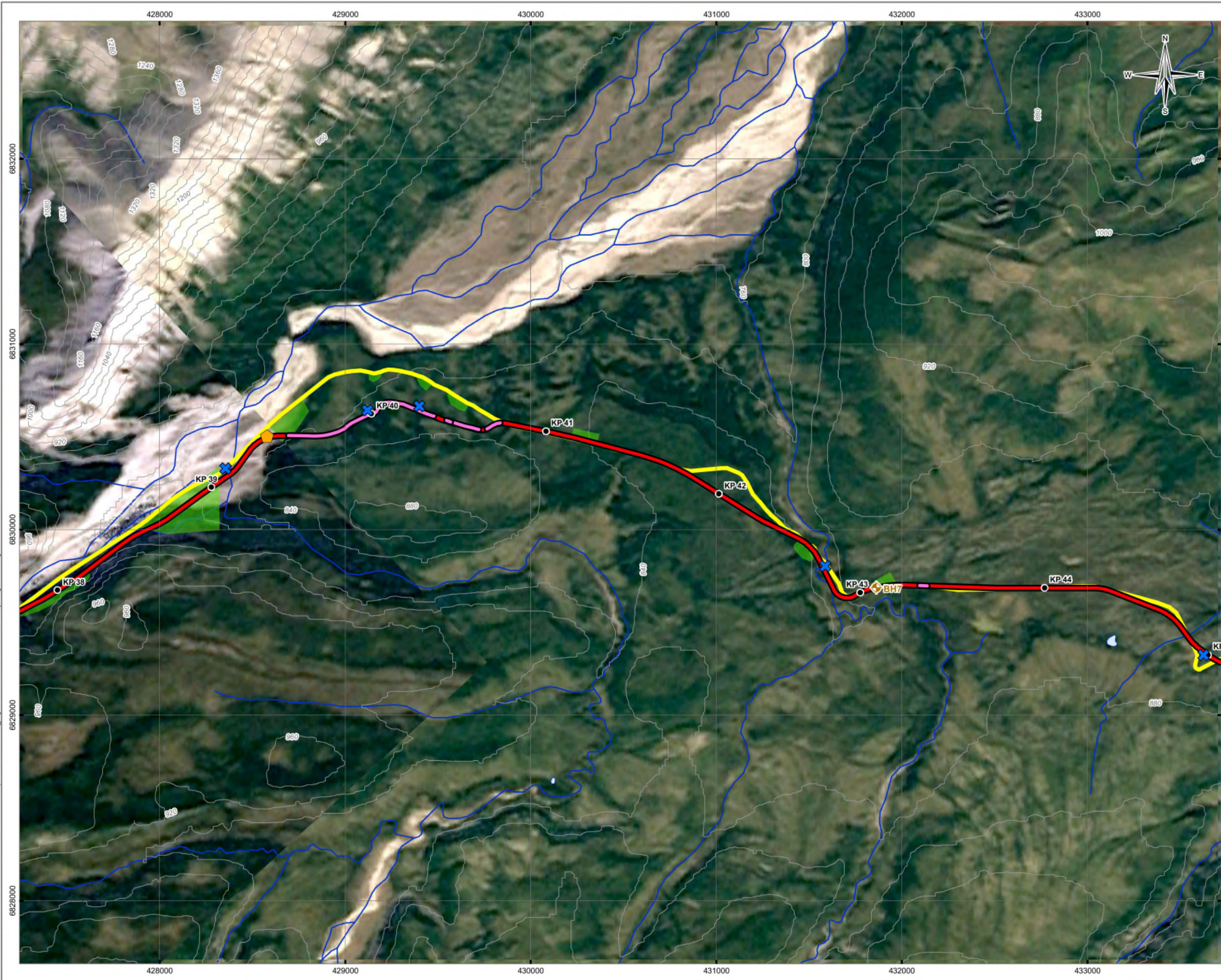
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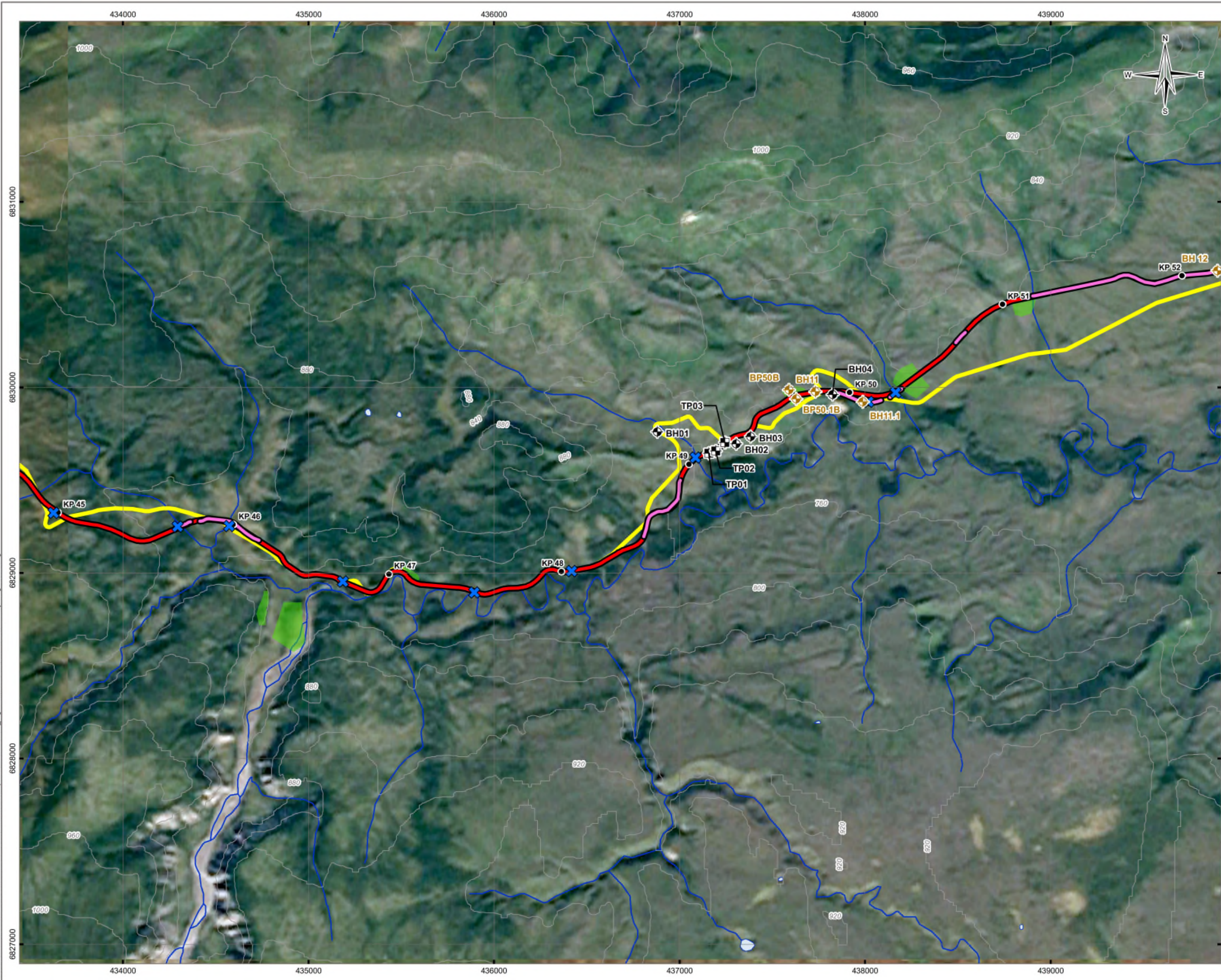
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- Potential Permafrost Section
- Proposed Winter Road Alignment
- ▭ Nahanni National Park Reserve Boundary
- ▭ Potential Borrow Source
- Contour (40 m)
- Watercourse
- Waterbody



NOTES
 Base data source: CanVec; GeoBase.
 Base imagery source: Google Earth, 2016

STATUS
 ISSUED FOR REVIEW

PRAIRIE CREEK ACCESS ROAD

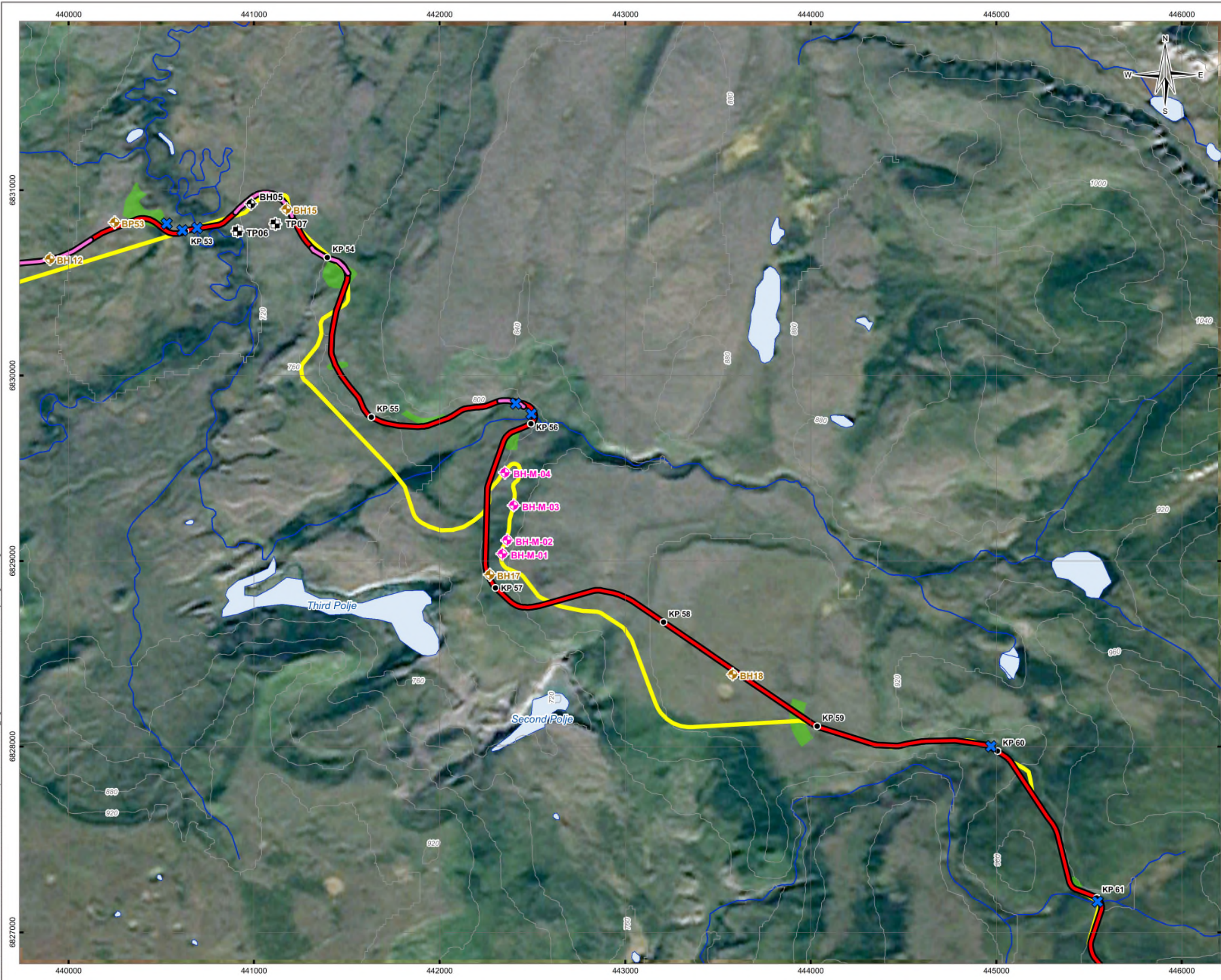
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DATE November 29, 2018		PROJECT NO. ENG.EARC03145-01		REV 4	

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LEGEND

- Access Road Kilometre Marker
- ◆ 2018 Borehole (Tetra Tech, 2018)
- ◆ 2014 Borehole (Tetra Tech EBA, 2014)
- ◆ 2012 Borehole (SNC-Lavalin, 2012)
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- ▭ Potential Borrow Source
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- Watercourse
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NOTES

Base data source: CanVec; GeoBase.
Base imagery source: Google Earth, 2016

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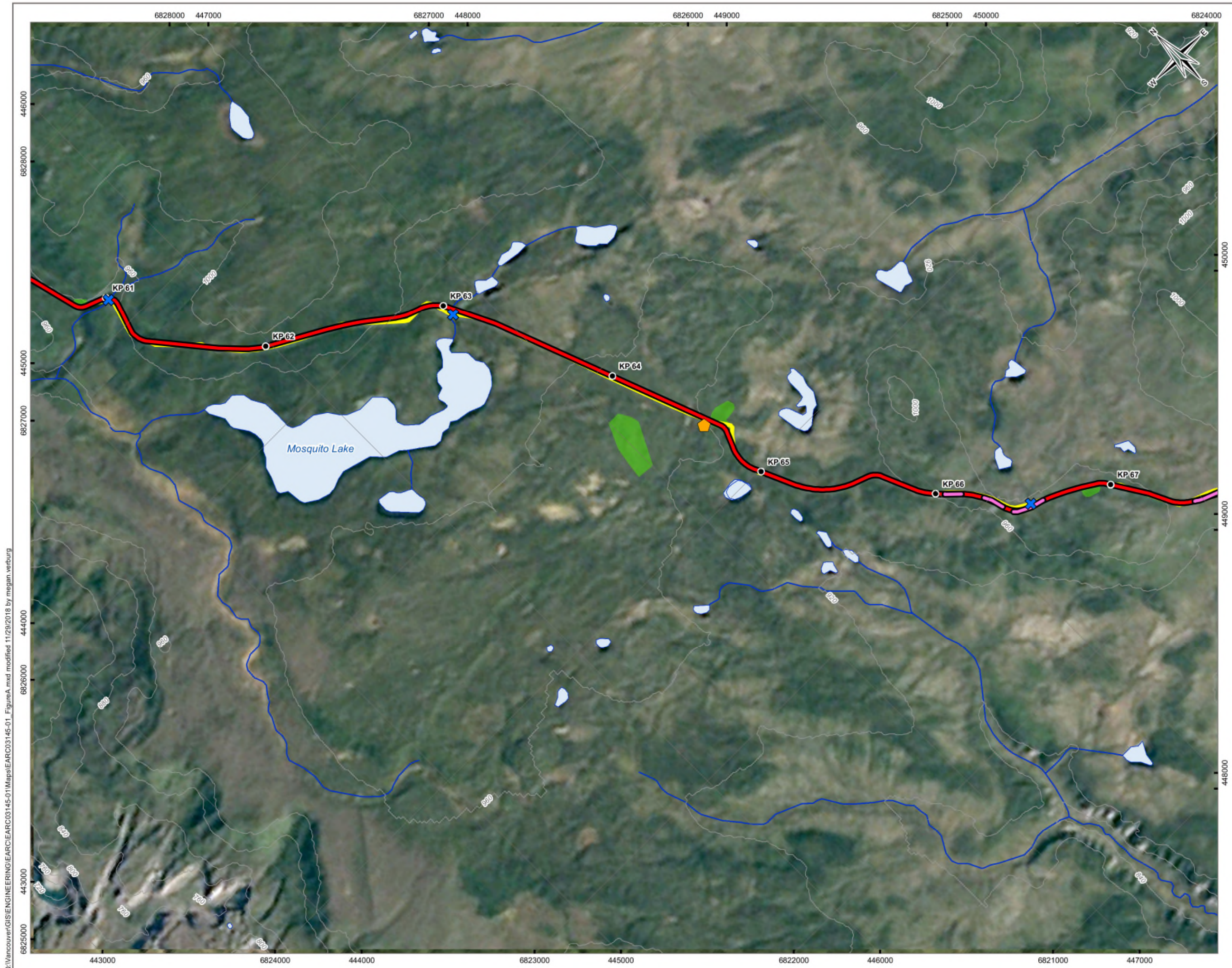
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PRAIRIE CREEK ACCESS ROAD

Map Book

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DATE November 29, 2018	PROJECT NO. ENG.EARC03145-01				

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LEGEND

- Access Road Kilometre Marker
- ⬢ 2018 Borehole (Tetra Tech, 2018)
- ⬢ 2014 Borehole (Tetra Tech EBA, 2014)
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NOTES

Base data source: CanVec; GeoBase.
Base imagery source: Google Earth, 2016

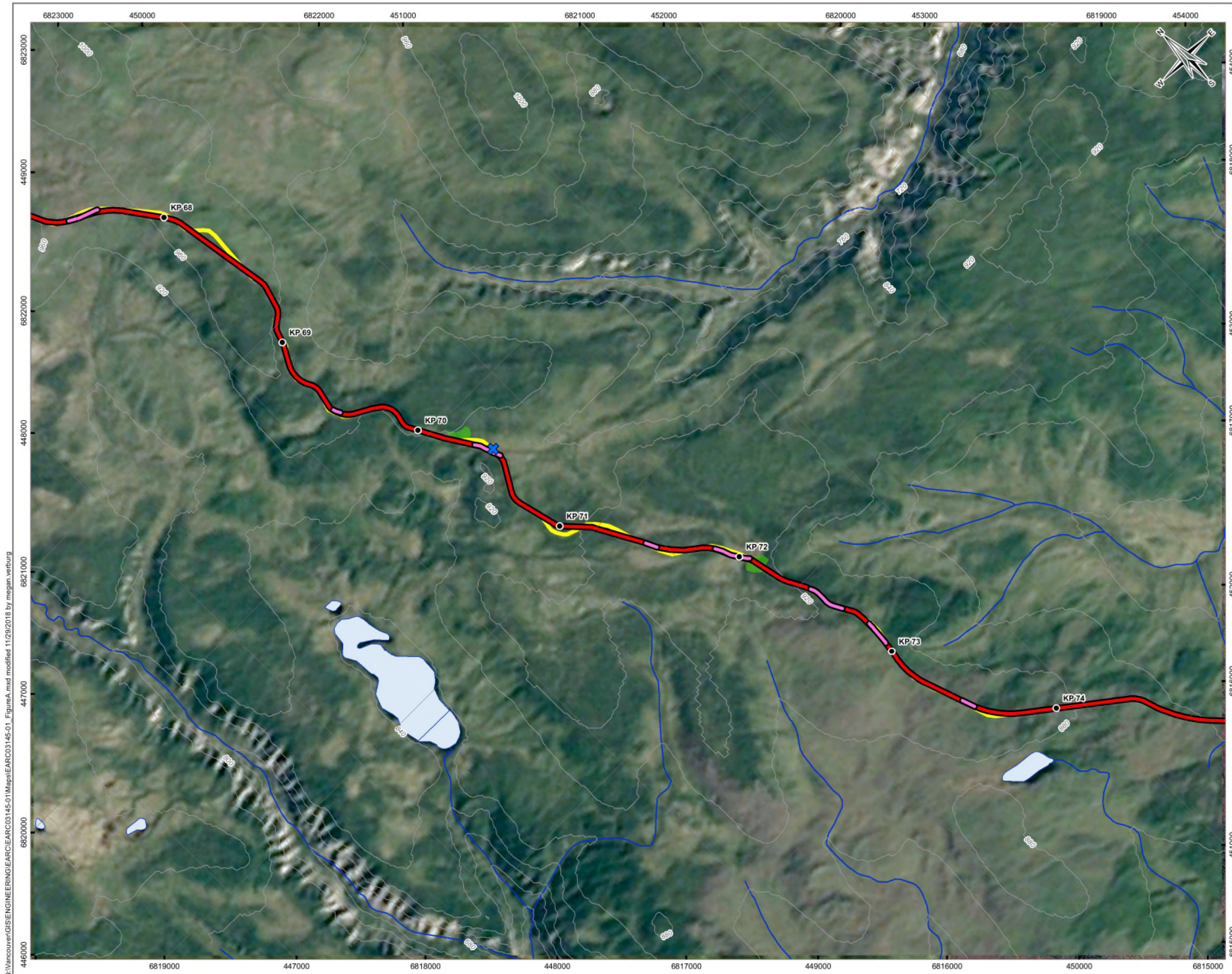
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- ⬢ 2014 Borehole (Tetra Tech EBA, 2014)
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NOTES

Base data source: CanVec; GeoBase.
Base imagery source: Google Earth, 2016

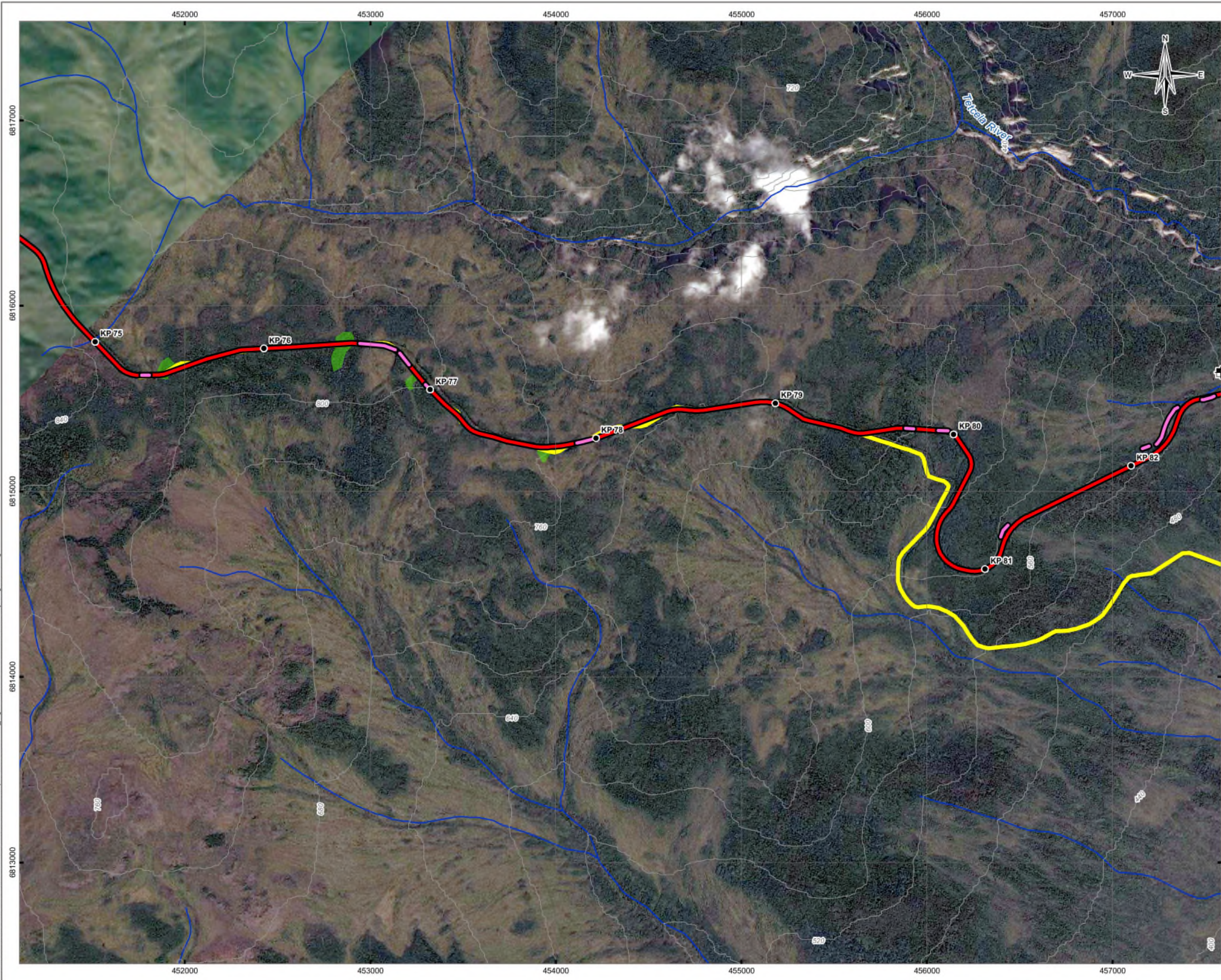
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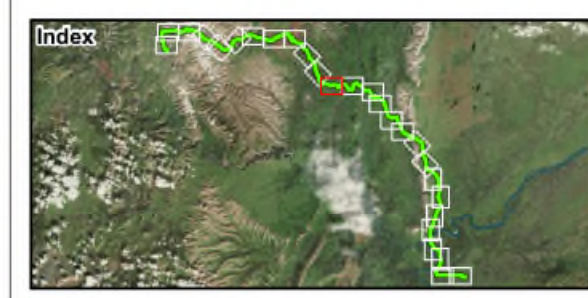
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- 🔵 Waterbody



NOTES
Base data source: CanVec; GeoBase.
Base imagery source: Bing Maps Aerial

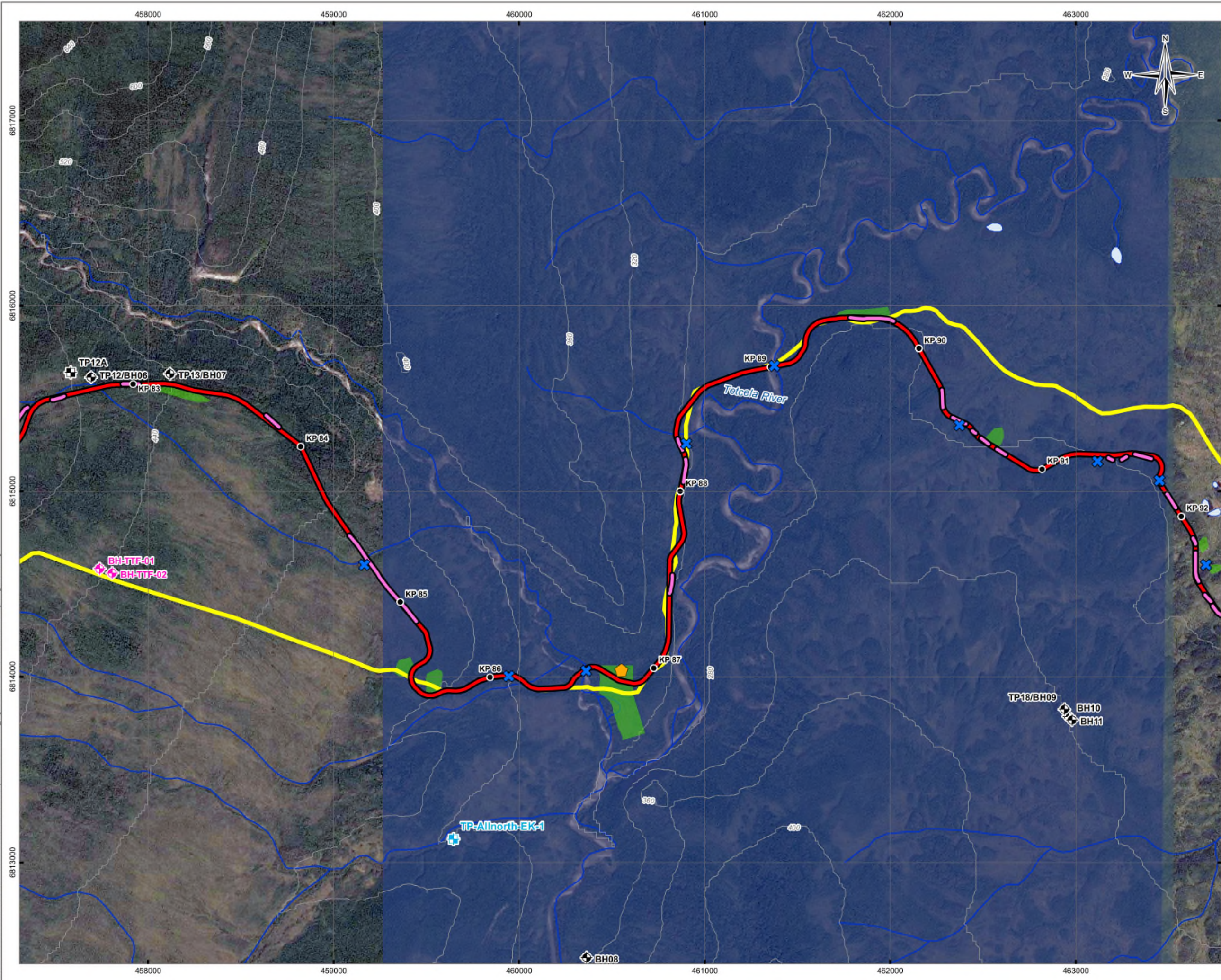
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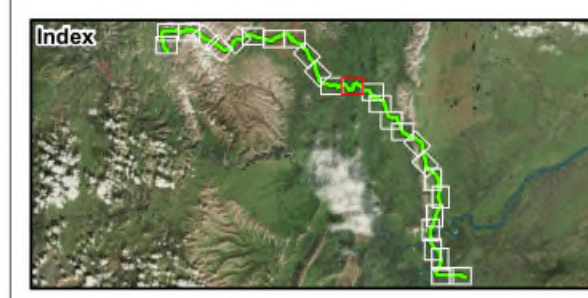
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LEGEND

- Access Road Kilometre Marker
- ⬮ 2018 Borehole (Tetra Tech, 2018)
- ⬮ 2014 Borehole (Tetra Tech EBA, 2014)
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NOTES
Base data source: CanVec; GeoBase.
Base imagery source: Bing Maps Aerial

STATUS
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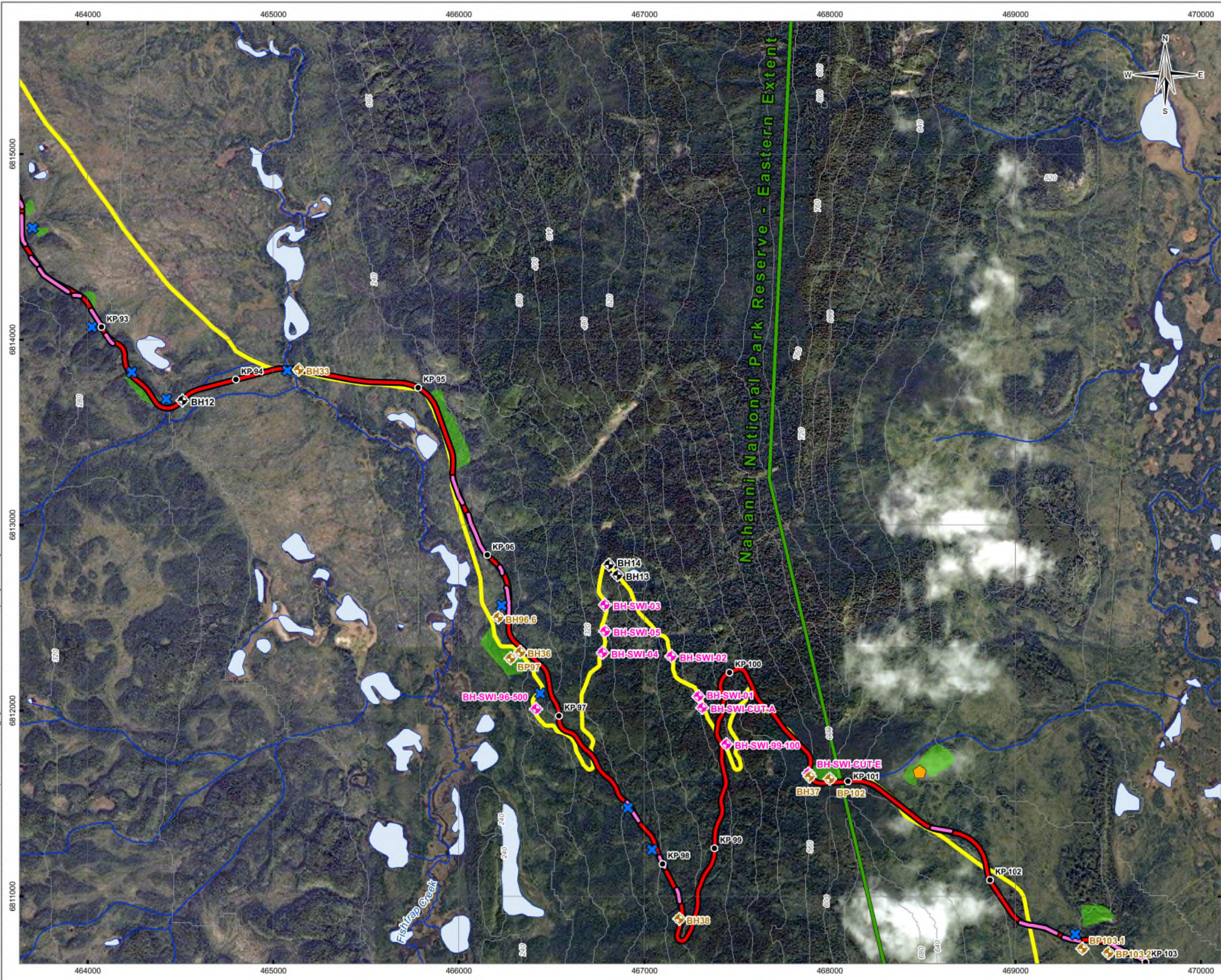
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LEGEND

- Access Road Kilometre Marker
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NOTES
Base data source: CanVec; GeoBase.
Base imagery source: Bing Maps Aerial

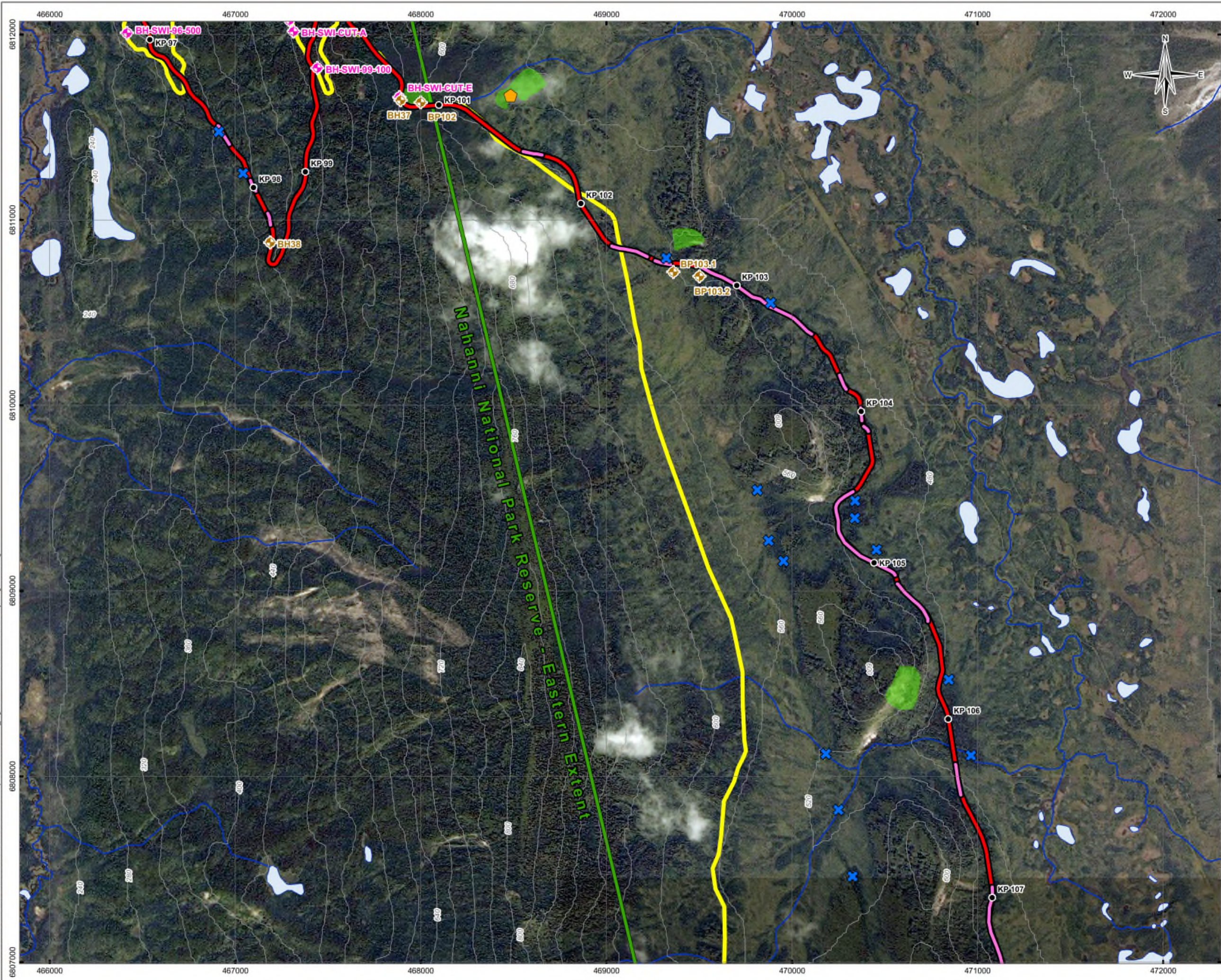
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PRAIRIE CREEK ACCESS ROAD

Map Book

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LEGEND

- Access Road Kilometre Marker
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NOTES
Base data source: CanVec; GeoBase.
Base imagery source: Bing Maps Aerial

STATUS
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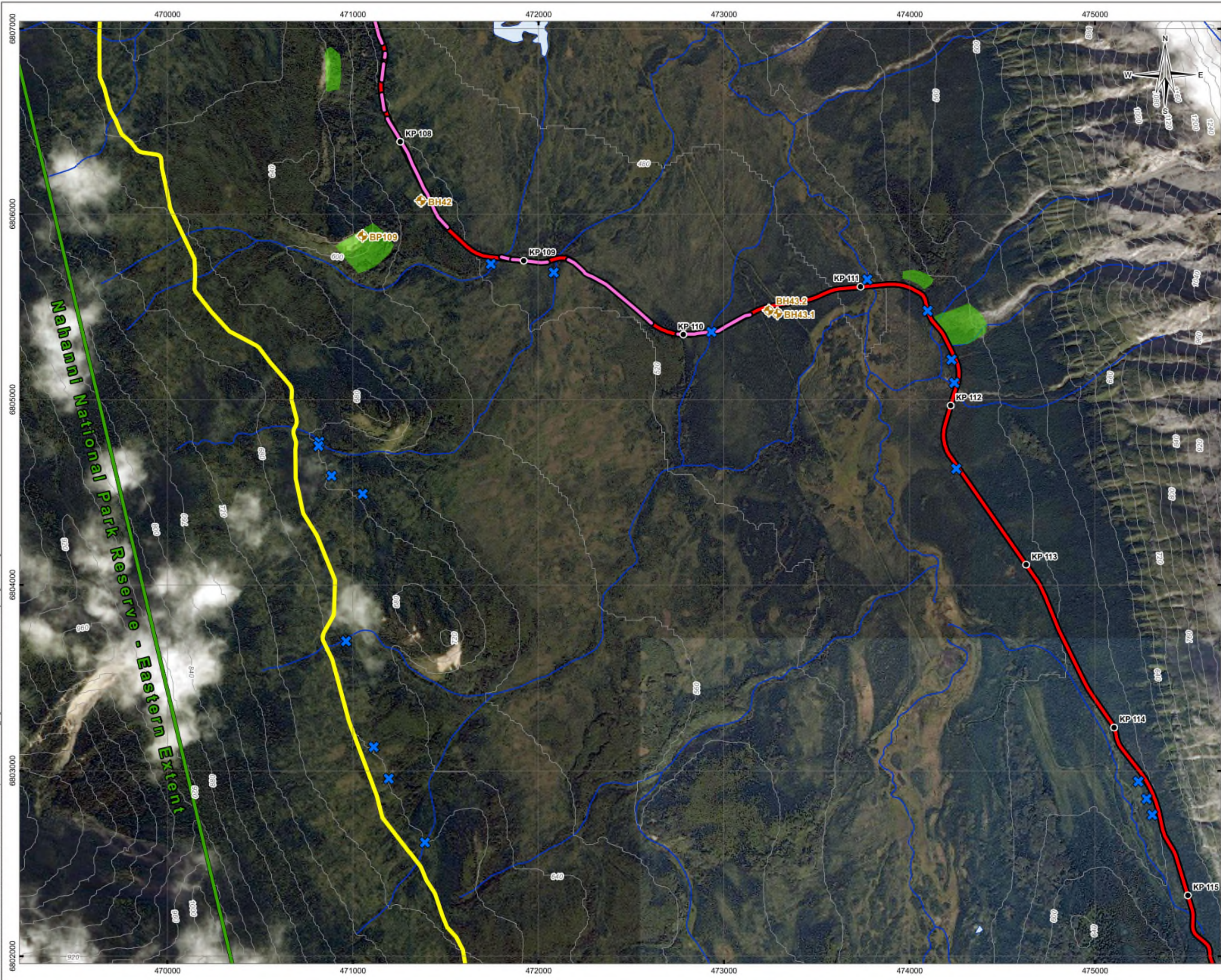
PRAIRIE CREEK ACCESS ROAD

Map Book

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LEGEND

- Access Road Kilometre Marker
- ⬮ 2018 Borehole (Tetra Tech, 2018)
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NOTES
Base data source: CanVec; GeoBase.
Base imagery source: Bing Maps Aerial

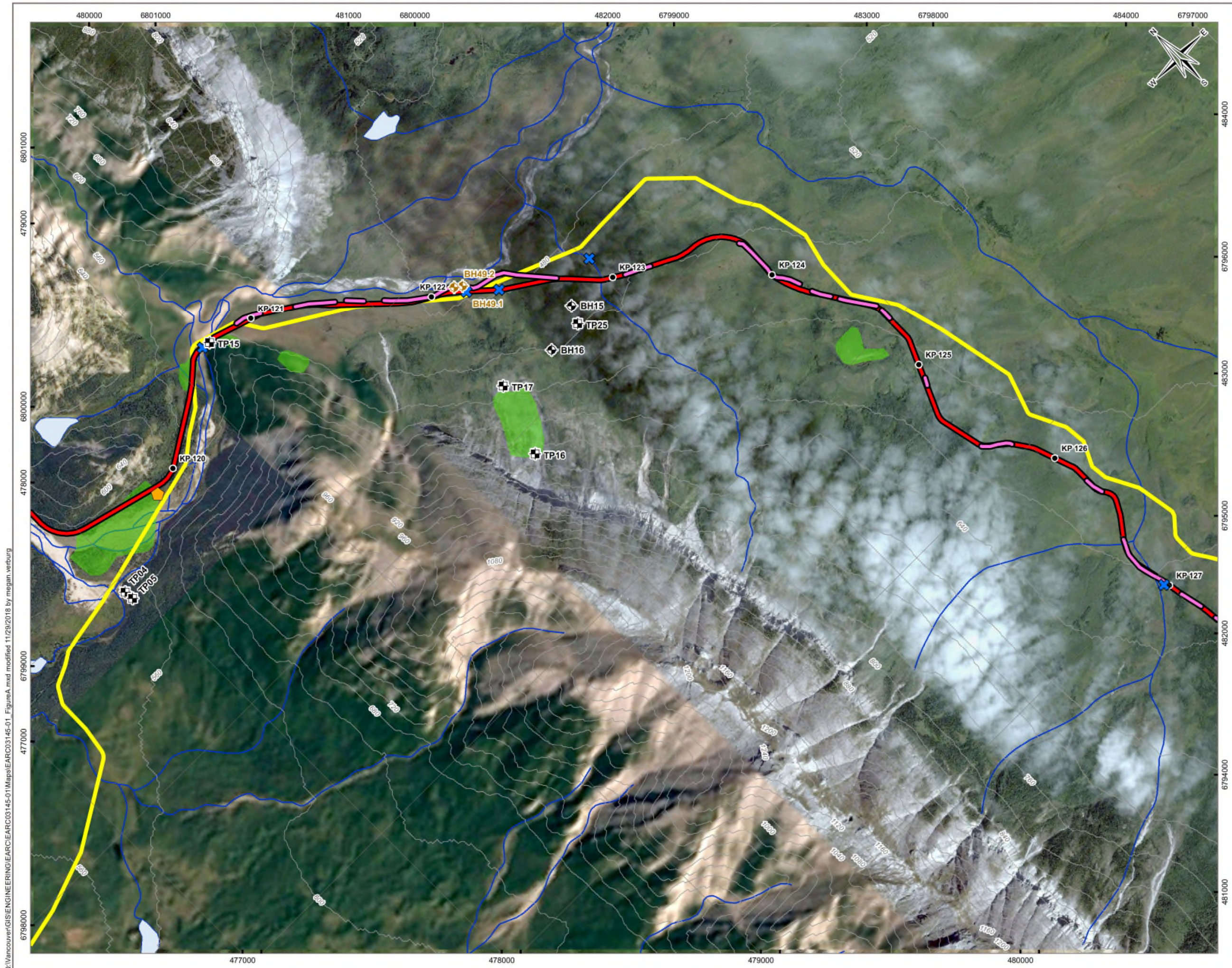
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PRAIRIE CREEK ACCESS ROAD

Map Book

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LEGEND

- Access Road Kilometre Marker
- ✦ 2018 Borehole (Tetra Tech, 2018)
- ⬢ 2014 Borehole (Tetra Tech EBA, 2014)
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NOTES

Base data source: CanVec; GeoBase.
Base imagery source: Google Earth, 2007

STATUS

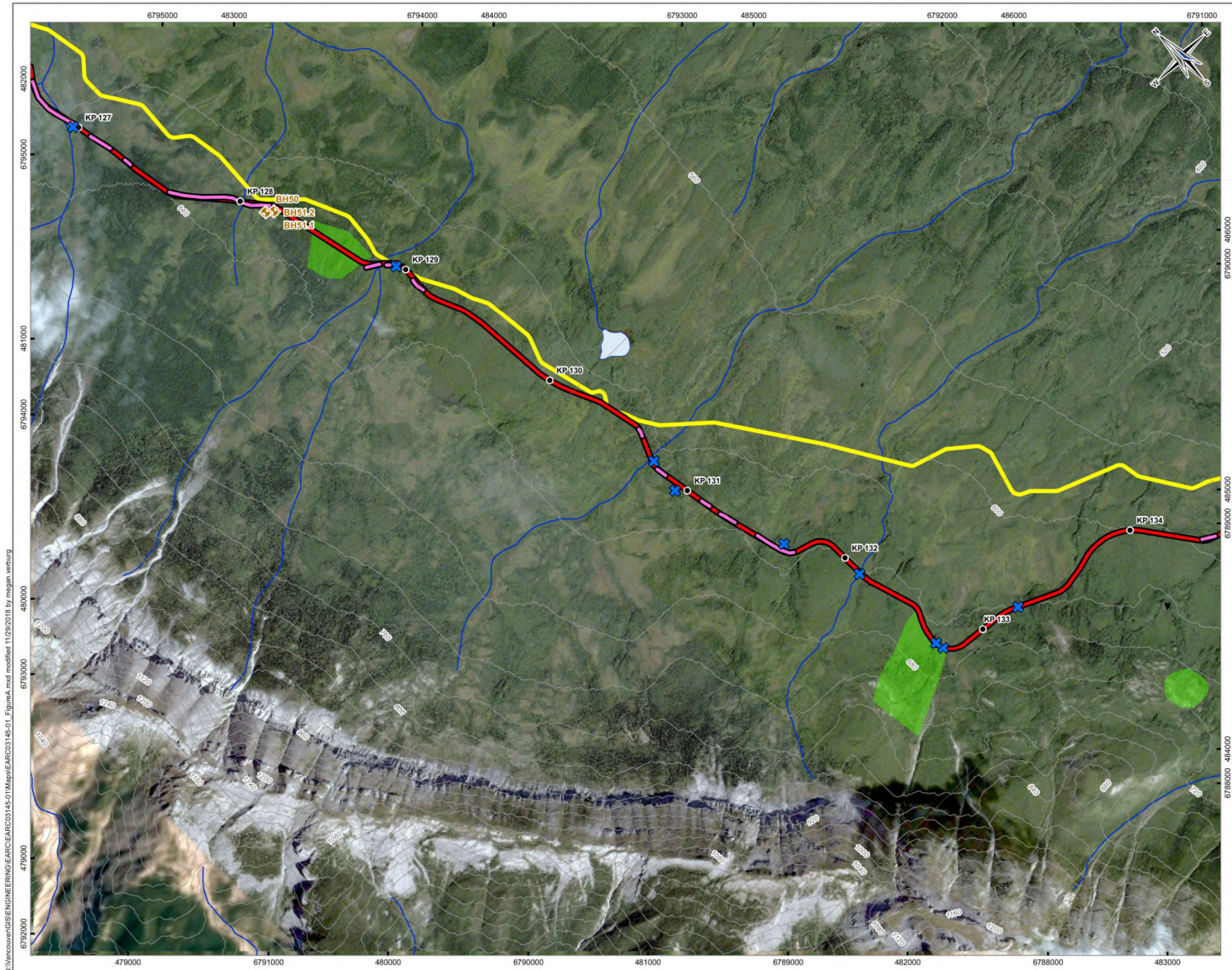
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PRAIRIE CREEK ACCESS ROAD

Map Book

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LEGEND

- Access Road Kilometre Marker
- ⬢ 2018 Borehole (Tetra Tech, 2018)
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NOTES

Base data source: CanVec; GeoBase.
Base imagery source: Google Earth, 2007

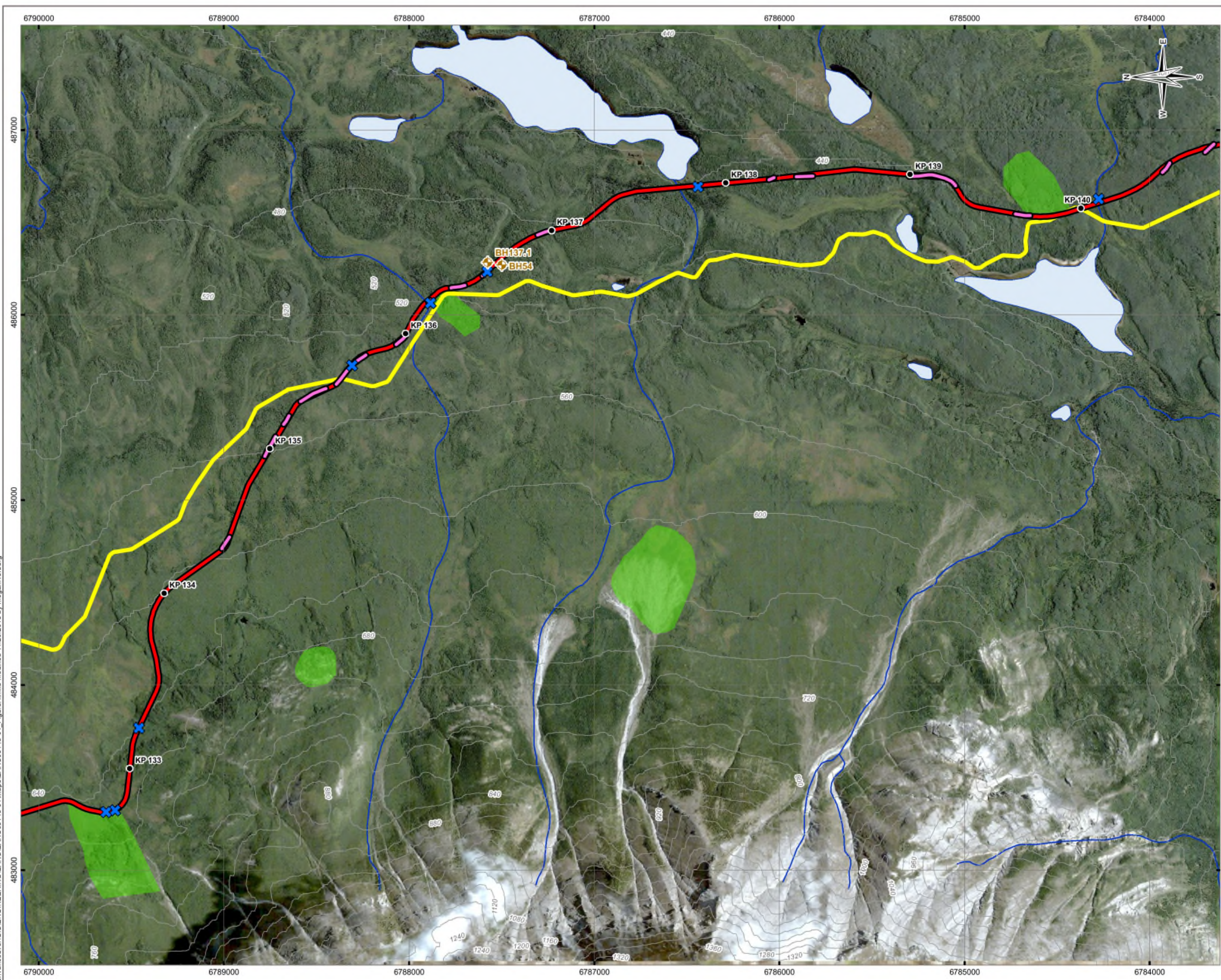
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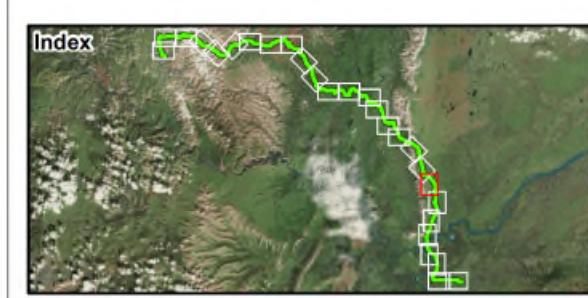
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LEGEND

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- 📍 2018 Borehole (Tetra Tech, 2018)
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- 📏 Contour (40 m)
- 🌊 Watercourse
- 💧 Waterbody



NOTES
Base data source: CanVec; GeoBase.
Base imagery source: Google Earth, 2007

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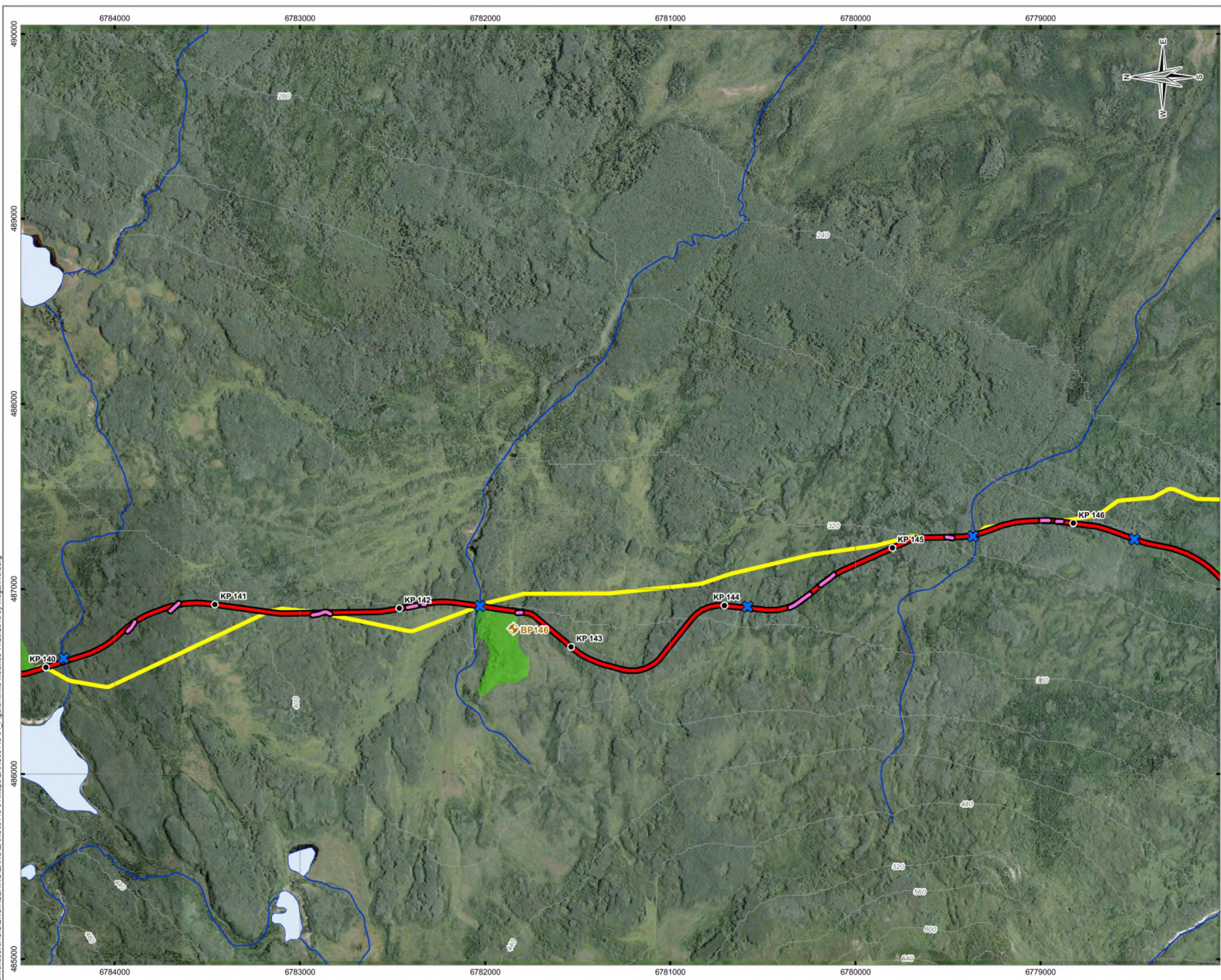
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Map Book

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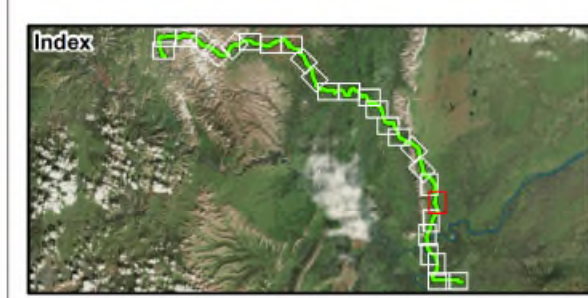
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LEGEND

- Access Road Kilometre Marker
- 📍 2018 Borehole (Tetra Tech, 2018)
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Base imagery source: Google Earth, 2007

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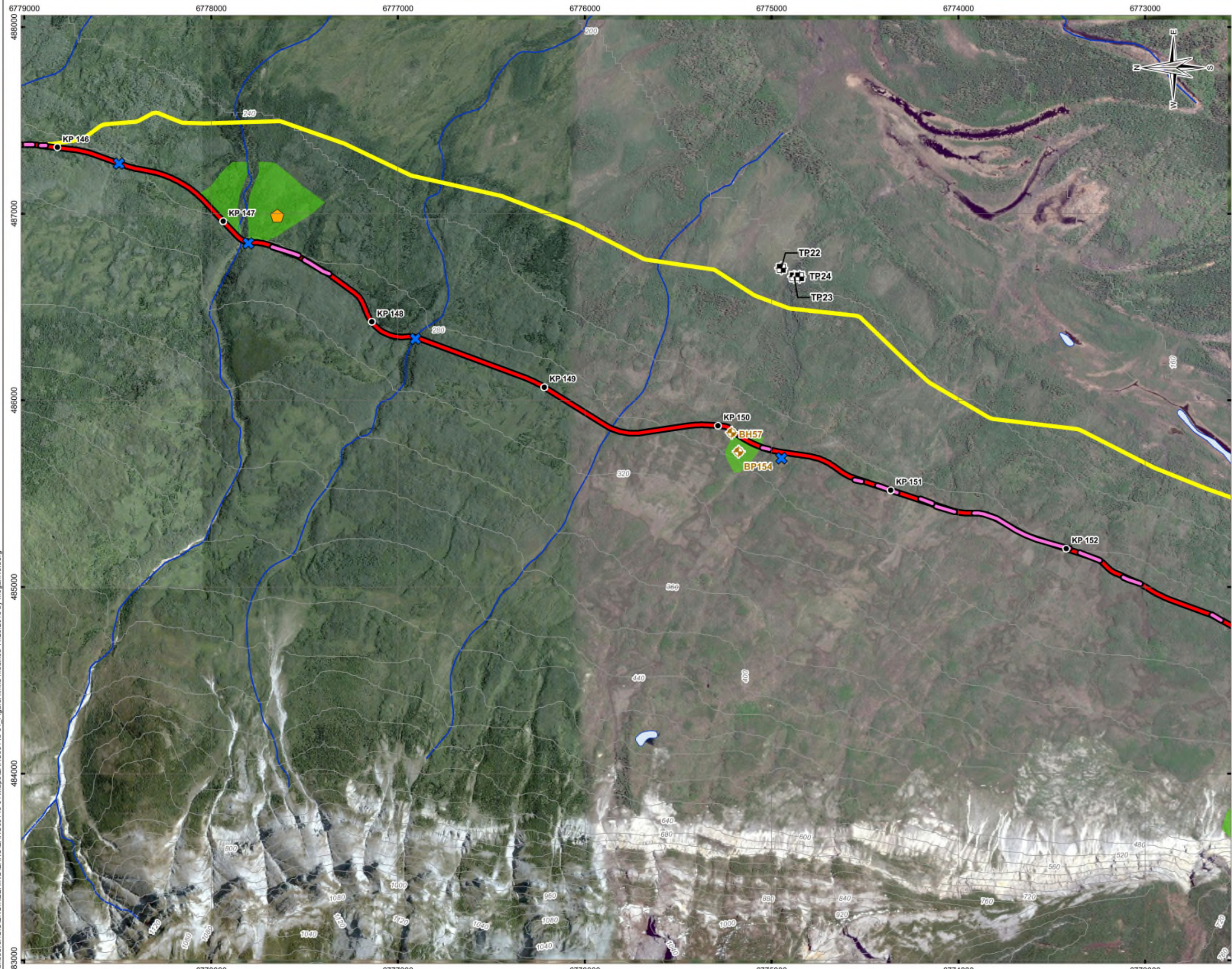
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Map Book

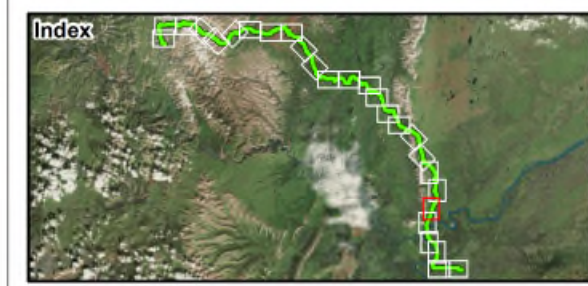
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- LEGEND
- Access Road Kilometre Marker
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Base imagery source: Google Earth, 2007-2015

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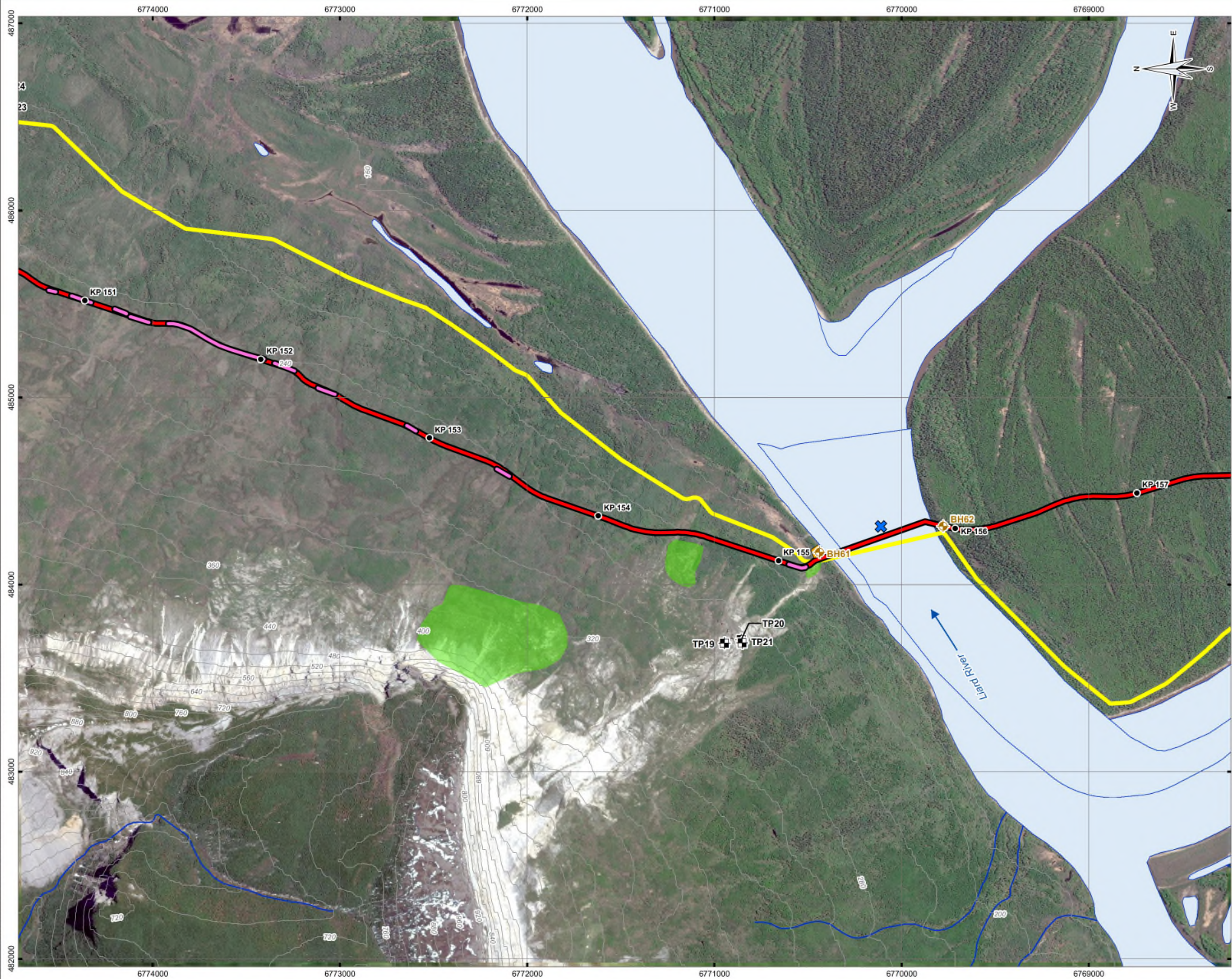
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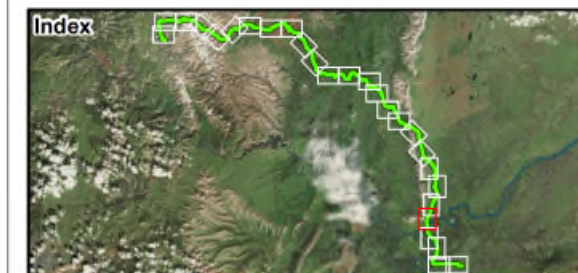
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LEGEND

- Access Road Kilometre Marker
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Base imagery source: Google Earth, 2015

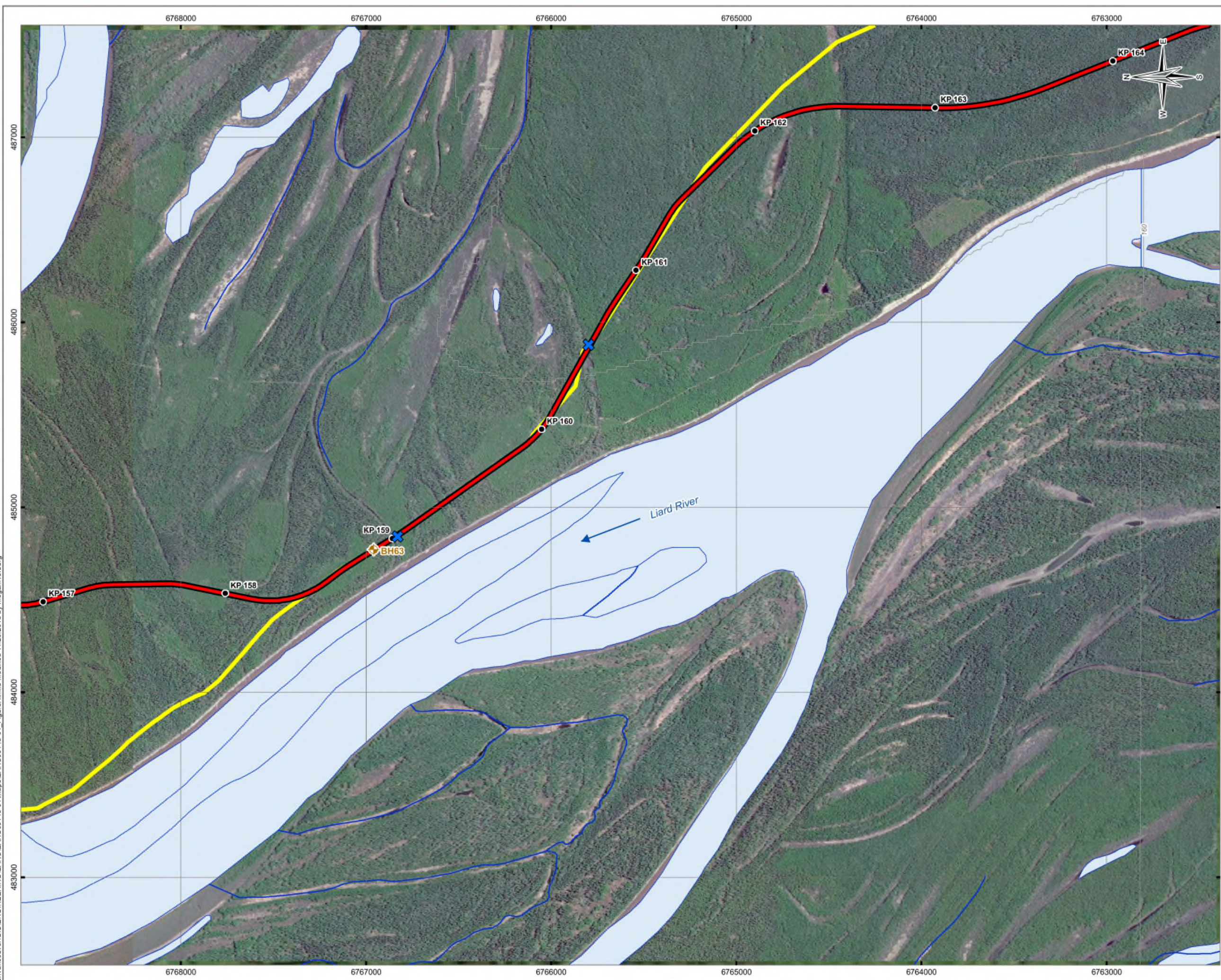
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PRAIRIE CREEK ACCESS ROAD

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Base data source: CanVec; GeoBase.
Base imagery source: Google Earth, 2015

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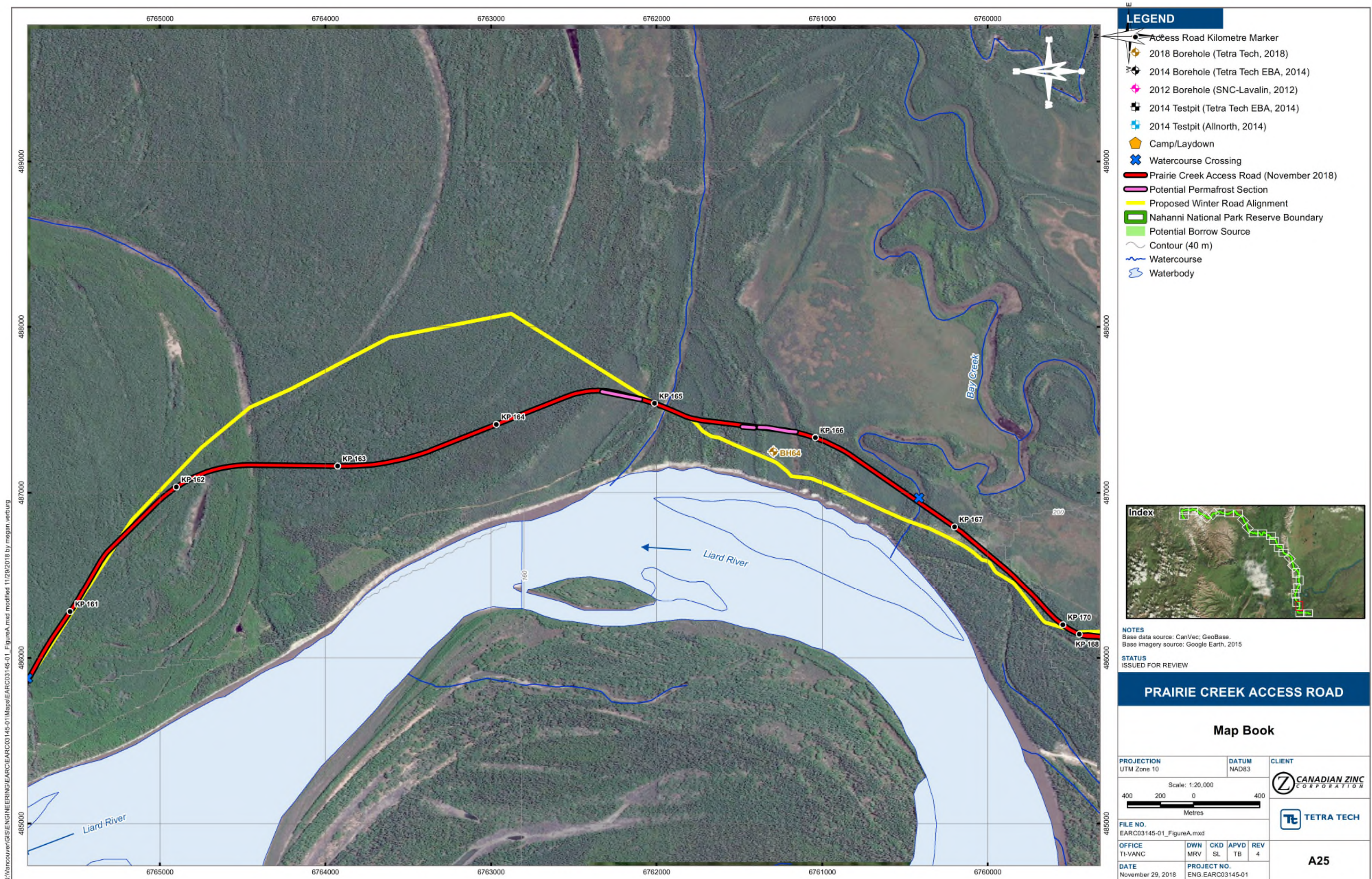
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PRAIRIE CREEK ACCESS ROAD

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LEGEND

- Access Road Kilometre Marker
- ✦ 2018 Borehole (Tetra Tech, 2018)
- ⬢ 2014 Borehole (Tetra Tech EBA, 2014)
- ✦ 2012 Borehole (SNC-Lavalin, 2012)
- ⬢ 2014 Testpit (Tetra Tech EBA, 2014)
- ⬢ 2014 Testpit (Allnorth, 2014)
- 📍 Camp/Laydown
- ✕ Watercourse Crossing
- ▬ Prairie Creek Access Road (November 2018)
- ▬ Potential Permafrost Section
- ▬ Proposed Winter Road Alignment
- ▭ Nahanni National Park Reserve Boundary
- ▭ Potential Borrow Source
- Contour (40 m)
- Watercourse
- Waterbody



NOTES
Base data source: CanVec; GeoBase.
Base imagery source: Google Earth, 2007-2015

STATUS
ISSUED FOR REVIEW

PRAIRIE CREEK ACCESS ROAD

Map Book

PROJECTION UTM Zone 10		DATUM NAD83		CLIENT CANADIAN ZINC CORPORATION	
Scale: 1:20,000 400 200 0 400 Metres				TETRA TECH	
FILE NO. EARC03145-01_FigureA.mxd					
OFFICE TI-VANC		DWN MRV	CKD SL	APVD TB	REV 4
DATE November 29, 2018		PROJECT NO. ENG.EARC03145-01			
					A26

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LEGEND

- Access Road Kilometre Marker
- ✚ 2018 Borehole (Tetra Tech, 2018)
- ⬮ 2014 Borehole (Tetra Tech EBA, 2014)
- ✚ 2012 Borehole (SNC-Lavalin, 2012)
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- ▭ Potential Borrow Source
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- ~ Watercourse
- ~ Waterbody

Index

NOTES

Base data source: CanVec; GeoBase.
Base imagery source: Bing Maps Aerial

STATUS

ISSUED FOR REVIEW

PRAIRIE CREEK ACCESS ROAD

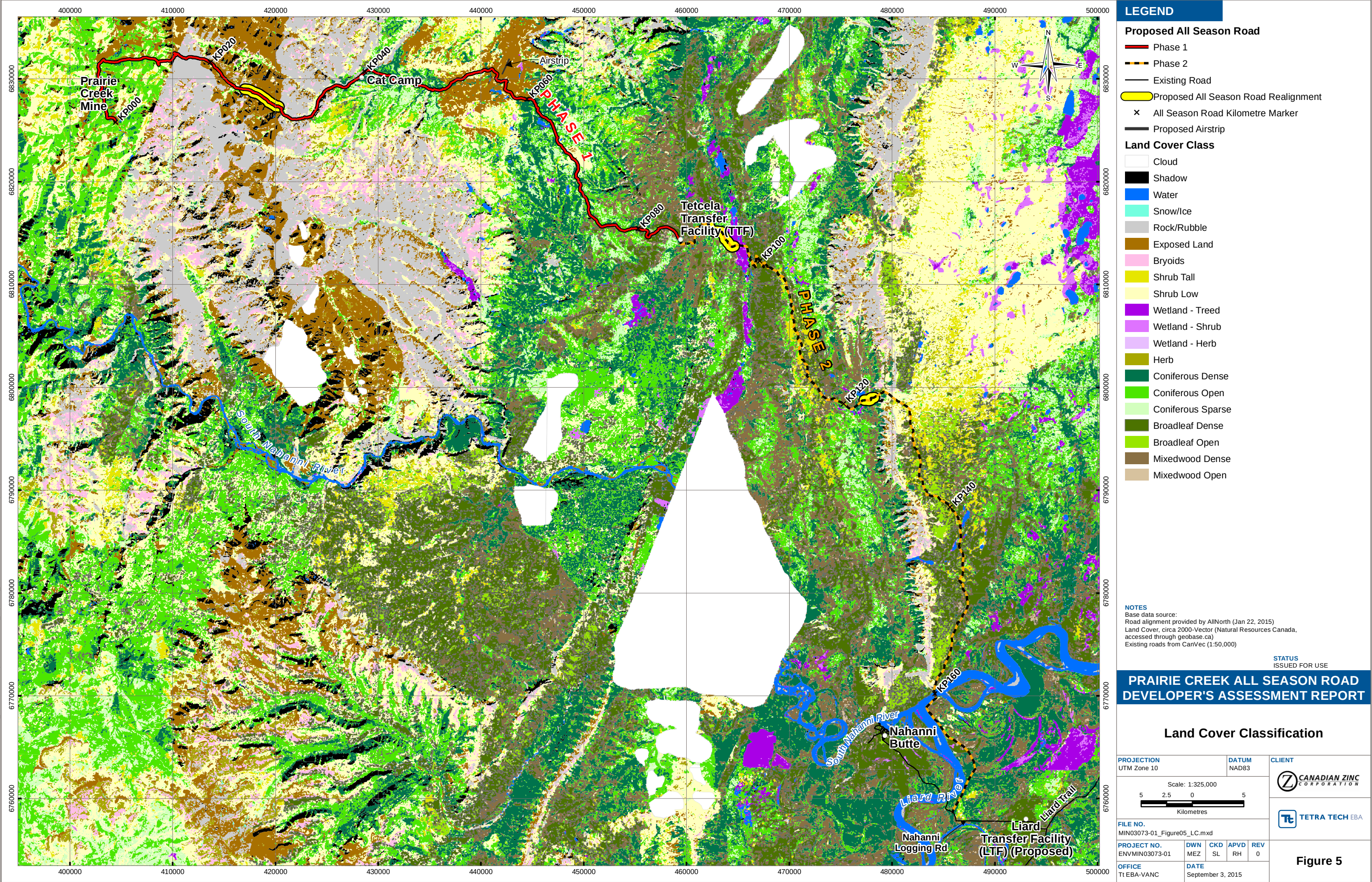
Map Book

PROJECTION UTM Zone 10	DATUM NAD83	CLIENT CANADIAN ZINC CORPORATION
Scale: 1:20,000 400 200 0 400 Metres		TETRA TECH
FILE NO. EARC03145-01_FigureA.mxd		
OFFICE TI-VANC	DWN MRV	CKD SL
DATE November 29, 2018	APVD TB	REV 4
PROJECT NO. ENG.EARC03145-01		A27

APPENDIX B

LAND COVER MAP

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APPENDIX C

LIMITATIONS ON THE USE OF THIS DOCUMENT

LIMITATIONS ON USE OF THIS DOCUMENT

GEOENVIRONMENTAL

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PRAIRIE CREEK ACCESS ROAD

