



## Project Description

October 2023

### **KENNADY NORTH PROJECT**

SOUTH MACKENZIE DISTRICT, NWT

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## Abbreviations

Term	Meaning
<b>AEP</b>	Kennady North Advanced Exploration Project and all its components
<b>AIA</b>	Archaeological Impact Assessment
<b>AGL</b>	Aurora Geosciences Ltd.
<b>AOA</b>	Archaeological Overview Assessment
<b>the Company</b>	Kennady Diamonds Inc.
<b>FS</b>	Feasibility Study
<b>GKJV</b>	Gahcho Kué Mine Joint Venture
<b>ha</b>	hectare
<b>KDI</b>	Kennady Diamonds Inc., the applicant, the proponent
<b>km</b>	kilometre
<b>MPVD</b>	Mountain Province Diamonds Inc.
<b>MVLWB</b>	Mackenzie Valley Land and Water Board
<b>the Project</b>	Kennady North Project and all its components
<b>RC</b>	Reverse Circulation
<b>REP</b>	Kennady North Regional Exploration Project and all its components

# 1 INTRODUCTION

Kennedy Diamonds Inc. (KDI or the Company) is currently exploring for diamondiferous kimberlites in the Kennady North Project area, which is located in the Northwest Territories approximately 280 kilometers (km) east-northeast of Yellowknife, immediately adjacent to the Gahcho Kué Mine (Figure 1). KDI’s interests in the Kennady North Project area consist of 99 mineral claims and 30 mineral leases totalling ~113,437 ha of land (Figure 2). KDI is a wholly owned subsidiary of Mountain Province Diamonds Inc. (MPVD). MPVD holds a 49% interest in the Gahcho Kué Mine Joint Venture (GKJV) with De Beers Group, who holds 51% interest in the GKJV and is the operating partner. Aurora Geosciences Ltd. (AGL) has been contracted by KDI to manage and operate exploration activities since the beginning of exploration in the Kennady North Project area.

KDI’s interests in the Kennady North area consist of the Kennady North Advanced Exploration Project (AEP; Type B Water Licence MV2013L2-0005; Type A Land Use Permit MV2016C0030) and the Kennady North Regional Exploration Project (REP; Type B Water Licence MV2022L2-0007; Type A Land Use Permit MVC20220019). The current term of the AEP Water Licence and Land Use Permit end on February 26<sup>th</sup> and February 15<sup>th</sup> 2024, respectively.

With this application, KDI is asking the Mackenzie Valley Land and Water Board (MVLWB) to renew the AEP Water Licence (MV2013L2-0005) and, because the Mackenzie Valley Land Use Regulations prohibit the extension of Land Use Permits beyond a term of seven years, to replace the existing AEP Type A Land Use Permit (MV2016C0030) with a new Type A Land Use Permit. KDI is also requesting an amendment to MV2013L2-0005 such that that the AEP is extended to include the areas currently separately permitted and licenced under KDI’s Regional Exploration Project (REP) Water Licence (MV2022L2-0007) and Land Use Permit (MV2022C0019). This amalgamation would result in single set of authorisations that will cover the entirety of the Kennady North Project (the Project).

In short, **KDI seeks to have a single Type B Water Licence (i.e., MV2013L2-0005) and Type A Land Use Permit that will cover all the infrastructure, equipment, and activities that are currently associated with MV2013L2-0015 and MV2016C0030 but extended the area to include the land associated with the REP (under MV2022C0019 and MV2022L2-007). KDI is also requesting that the term of MV2013L2-0005 be renewed for an additional seven years from the end of the current term (i.e., to February 26<sup>th</sup>, 2031).**<sup>1</sup> It is expected that the scope of the new Land Use Permit and Water Licence would encompass the existing Land Use Permits and Water Licences and that KDI would then close out MV2016C0030, MV2022C0019, and MV2022L2-0007.

**The amendment that is being requested is strictly administrative in nature:** The total amount of water required for the Project will not exceed the shared maximum amount currently authorized by KDI’s Type B Water Licences MV2013L2-0005 and MV2022L2-0007. Moreover, KNP scope, infrastructure, equipment, fuel and activities will remain the same as currently approved under the AEP. No additional area, infrastructure, equipment, fuel or activities are being requested beyond those already approved under the REP and AEP permits and licences. In fact, the consolidation of the existing licences and permits will reduce the cumulative quantity of fuel, equipment, and infrastructure that are currently authorized across the two projects. Further discussion on the synergies that will

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<sup>1</sup> A term of seven years is requested to align with the Mackenzie Valley Land Use Regulations governing Land Use Permits on the assumption that the new Type A Land Use Permit will be granted for a term of five years and successfully extended for two years thereafter.

occur with the amalgamation of the two projects under a single set of authorisations is provided Section 1.3. A comparison of Project scope, equipment, and fuel requirements between the existing AEP, REP, and current request can be found in Appendix A.

To facilitate the consolidation of the existing authorisations, KDI is submitting revisions to a number of the Management Plans associated with MV2013L2-0005 along with this application. The plans have been updated to reflect current standards in Management Plan structure, incorporate relevant information from the MVLWB-approved REP Management Plans, address relevant MVLWB direction, and ensure alignment with current site practices and reflect an amalgamated KNP. Additionally, the Water Management Plan has been updated to reflect recent MVLWB requirements to list all potential water sources for exploration projects. The Rock Management Plan has been updated to reflect newly acquired geochemical information and to include trenching as requested by the MVLWB during REP permitting. The Wildlife Mitigation and Monitoring, Archaeology, and Environmental Awareness Plan has been updated to reflect the approved REP Wildlife, Archaeological, and Environmental Awareness Plan and adopt current practices and recent Government of Northwest Territories guidance related to wildlife mitigation and management.

The following Management Plans have been updated for inclusion with this application:

- Engagement Plan;
- Spill Response Plan;
- Waste Management Plan;
- Water Management Plan;
- Rock Management Plan;
- Wildlife Mitigation and Monitoring, Archaeology, and Environmental Awareness Plan<sup>2</sup>; and
- Closure and Reclamation Plan.

No updates were required to the following Management Plans at this time:

- Quarry Management Plan; and
- Explosives Management Plan;

The Quarry Management Plan (version 1.0) will be updated prior to the development of the Quarry or Decline, per Part G, Condition 4 of MV2013L2-0005. The Explosive Management Plan (version 1.0) will be updated prior to the use of Explosives, per Part G, Condition 5 of MV2013L2-0005.

There have been no changes to Project Stream Crossings.

The following Management Plans will be developed in future as outlined in current licence and/or permit conditions:

- Interim Closure and Reclamation Plan;

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<sup>2</sup> The Wildlife Mitigation and Monitoring Plan submitted with the AEP application package in September 2016 has been incorporated into the approved REP Wildlife, Archaeology, and Environmental Protection Plan which was aligned with GNWT caribou monitoring guidance.

- Final Closure and Reclamation Plan;
- Groundwater Management Plan; and
- Quality Assurance and Quality Control Plan

## 1.1 Project Scope

Under the current authorisations, the AEP consists of 30 mineral leases and 50 mineral claims totaling ~65,223 hectares (ha) and the REP consists of 49 mineral claims totaling ~48,214 ha of land.

AEP Water Licence MV2013L2-0005 Part A, Item 1(a) lists the AEP scope as:

- i. Water withdrawal for camp use, industrial use, winter road Construction, and dust suppression;*
- ii. Diamond drilling, large diameter diamond drilling, and trenching;*
- iii. Construction, operation, maintenance, and Reclamation of a Sewage Treatment Facility, a Quarry, up to two Declines, all-season site roads, an all-season airstrip, multi-purpose laydown areas, and a Bulk Sample Process Plant;*
- iv. Deposit of treated Sewage and Greywater;*
- v. Deposit of Greywater into Sumps (Bob Camp and Existing Kelvin Camp);*
- vi. Deposit of Drill Cuttings into Sumps;*
- vii. Deposit of Processed Kimberlite and Wastewater into a Sump; and*
- viii. Management of Potentially Acid Generating Rock.*

Additionally, Part A, Item 1(a) of the AEP Land Use Permit MV2016C0030 lists the AEP scope as:

- I. Construction, maintenance and Reclamation of winter site access roads;*
- II. Diamond drilling, large diameter diamond drilling, and trenching;*
- III. Use and storage of explosives;*
- IV. Use of equipment, vehicles and machinery;*
- V. Fuel storage;*
- VI. Quarrying;*
- VII. Construction, operation, maintenance, and Reclamation of exploration camps; and*
- VIII. Construction, operation, maintenance, and Reclamation of a sewage treatment facility, up to two Declines, all-season site roads, an all-season airstrip, multi-purpose laydown areas, and a Bulk Sample Process Plant.*

No changes to the approved AEP scopes are being requested with this application.

Additional details on the AEP can be found in the AEP Project Description submitted with the amendment application for the AEP Water Licence and Permits in September, 2016<sup>3</sup>, and described:

- mineral exploration;
- the operation of two exploration camps (i.e., Bob and Kelvin camps);
- an expansion of Kelvin camp;

<sup>3</sup> <https://registry.mvlwb.ca/Documents/MV2013L2-0005/MV2013L2-0005%20MV2016C0030%20-%20KDI%20-%20Project%20Description.pdf>

- winter road construction and maintenance;
- fuel and explosives storage;
- bulk sampling, including an underground decline;
- the operation of a portable bulk sample plant;
- a quarry and quarry sump;
- a crusher;
- a sewage treatment plant;
- a maintenance shop;
- all-weather roads and laydowns;
- deposit of drill waste and greywater; and
- an airstrip and apron.

Additional details of the REP can be found in the REP Project Description that was submitted with the amendment application for the REP Water Licence and Land Use Permit in September 2022 and described:

- mineral exploration;
- winter road construction and maintenance; and
- use of explosives;
- fuel storage.

Comparisons of the scopes, equipment, and fuel requirements for the AEP, REP, and the amalgamated Kennady North Project (KNP) are presented in Appendix A. The proposed amalgamated KNP would have the same scope and allowances as currently approved for the AEP.

KDI intends to continue mineral exploration activities across the KNP and to advance mine planning activities that will allow KDI to complete a Feasibility Study in areas associated with the AEP, as described in the AEP Project Description submitted in September 2016.

## 1.2 Prior Screenings and Authorisations

The full scope of the Project, including all areas, activities, infrastructure, and equipment associated with this application have been previously screened and authorised.

### 1.2.1 Prior Screenings

A summary of previous screenings can be found in the Preliminary Screening Determination for MV2016C0030 and MV2013L2-0005<sup>4</sup> and in the Preliminary Screening Determination and Reasons for Decision for MV2022L2-007 and MV2022C0019.<sup>5</sup>

<sup>4</sup> <https://registry.mvlwb.ca/Documents/MV2016C0030/MV2016C0030%20%20MV2013L2-0005%20-%20KDI%20-%20Preliminary%20Screening%20Determination%20-%20Dec19-16.pdf>

<sup>5</sup> [https://registry.mvlwb.ca/Documents/MV2022L2-0007/KDI%20%20%E2%80%93%20Preliminary%20Screening%20Determination%20-%20Dec12\\_22.pdf](https://registry.mvlwb.ca/Documents/MV2022L2-0007/KDI%20%20%E2%80%93%20Preliminary%20Screening%20Determination%20-%20Dec12_22.pdf)

### 1.2.2 Prior Authorisations

The original applications for MV2022L2-0007 and MV2022C0019 were submitted on October 21, 2022 and the authorisations were issued by the MVLWB on December 23, 2022. A summary of the history of the authorisations associated with MV2013L2-0005 and MV2016C0030 can be found in Section 2.2 of the Reasons for Decision regarding KDI's most recent request to amend MV2013L2-0005.<sup>6</sup>

### 1.3 Alternatives

KDI considered applying to renew MV2013L2-0005 and replace MV2016C0030 without amendment. However, activities associated with the REP rely heavily on AEP infrastructure, including the use of the camps authorized under the AEP. Moreover, during the application process for MV2022L2-0007 and MV2022C0019, KDI committed to ensuring that total water use across both projects would not cumulatively exceed the Type B Water Licence limit of 299m<sup>3</sup>/d. With the pending expiry of the terms of the AEP Water Licence and Land Use Permit, KDI re-evaluated whether there is any benefit in separating KDI's exploration activities between AEP and REP areas given that these areas are contiguous, exploration drilling activities are analogous in nature, and the MVLWB had previously indicated for combining AEP and REP activities under a single set of authorisations due to their significant overlap. Based on these considerations, KDI has determined that there is insufficient justification to continue separating the AEP and REP at this time and significant benefits to simply expanding the AEP area to include the REP claims. Benefits of this include alignment with the MVLWB's preferences, reducing regulatory and administrative burden on all parties through the simplification of regulation and associated reporting, and the simplification of on-site project management through the consolidation of the existing Management Plans separately associated with the AEP and REP.

KDI is therefore requesting that the AEP be extended to include the REP areas under a single set of authorisations (i.e., a single Water Licence and Land Use Permit) for the KNP. No new areas, infrastructure, equipment, or activities are being proposed in this application. Additionally, as the REP activities and equipment were effectively a partial replication of AEP allowances and these REP allowances will no longer be needed with the consolidation of all claims and leases under a single set of authorizations.

KDI did not consider closing out MV2013L2-0005 and MV2016C0030 without renewal/replacement. Exploration activities are ongoing at site and KDI intends to continue working towards the development and release of a Feasibility Study for the Kelvin and Faraday kimberlites.

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<sup>6</sup> [https://registry.mvlwb.ca/Documents/MV2013L2-0005/KDI%20-%20Approval%20-%20Amendment%20-%20Dec22\\_22.pdf](https://registry.mvlwb.ca/Documents/MV2013L2-0005/KDI%20-%20Approval%20-%20Amendment%20-%20Dec22_22.pdf)



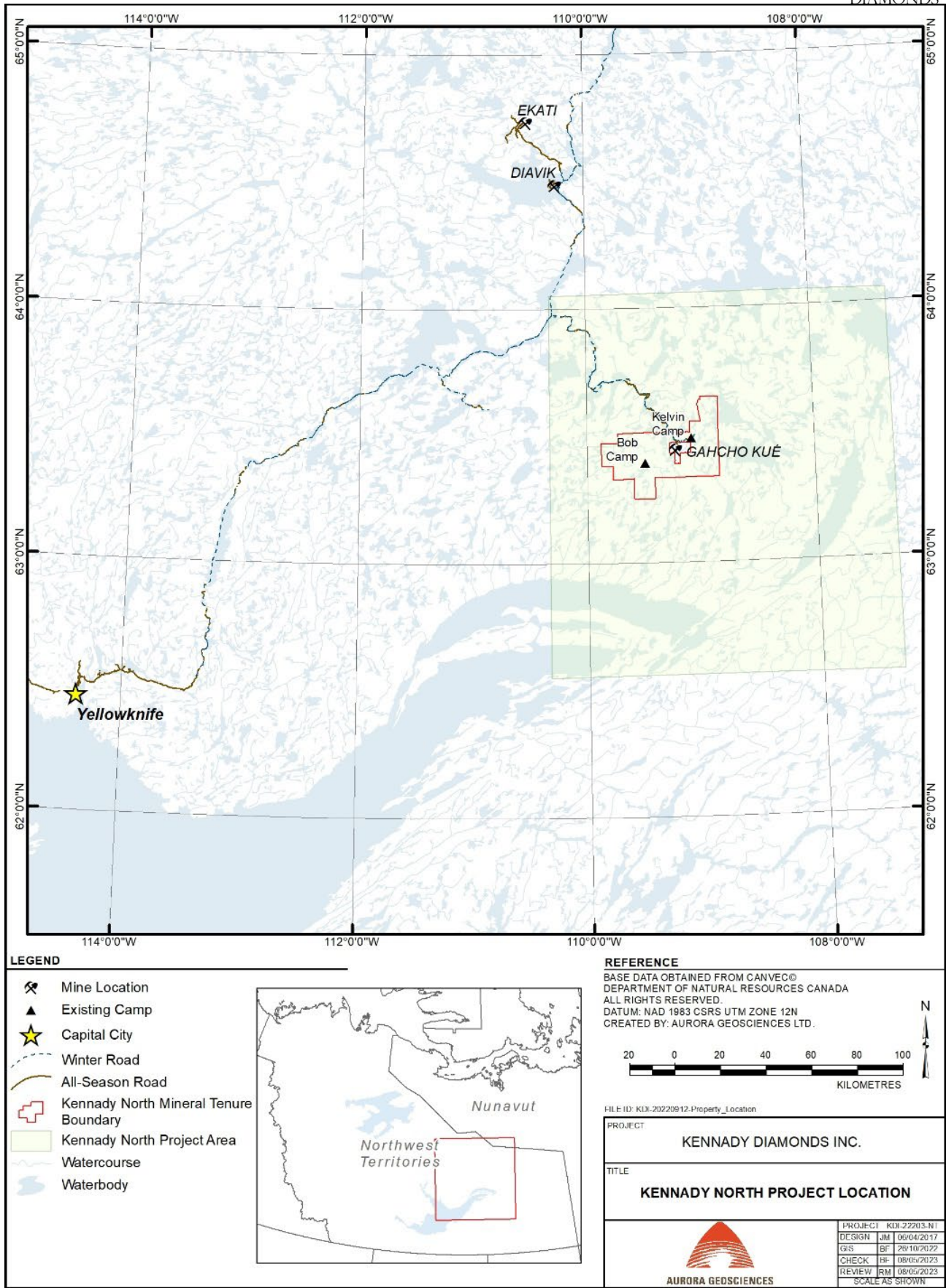


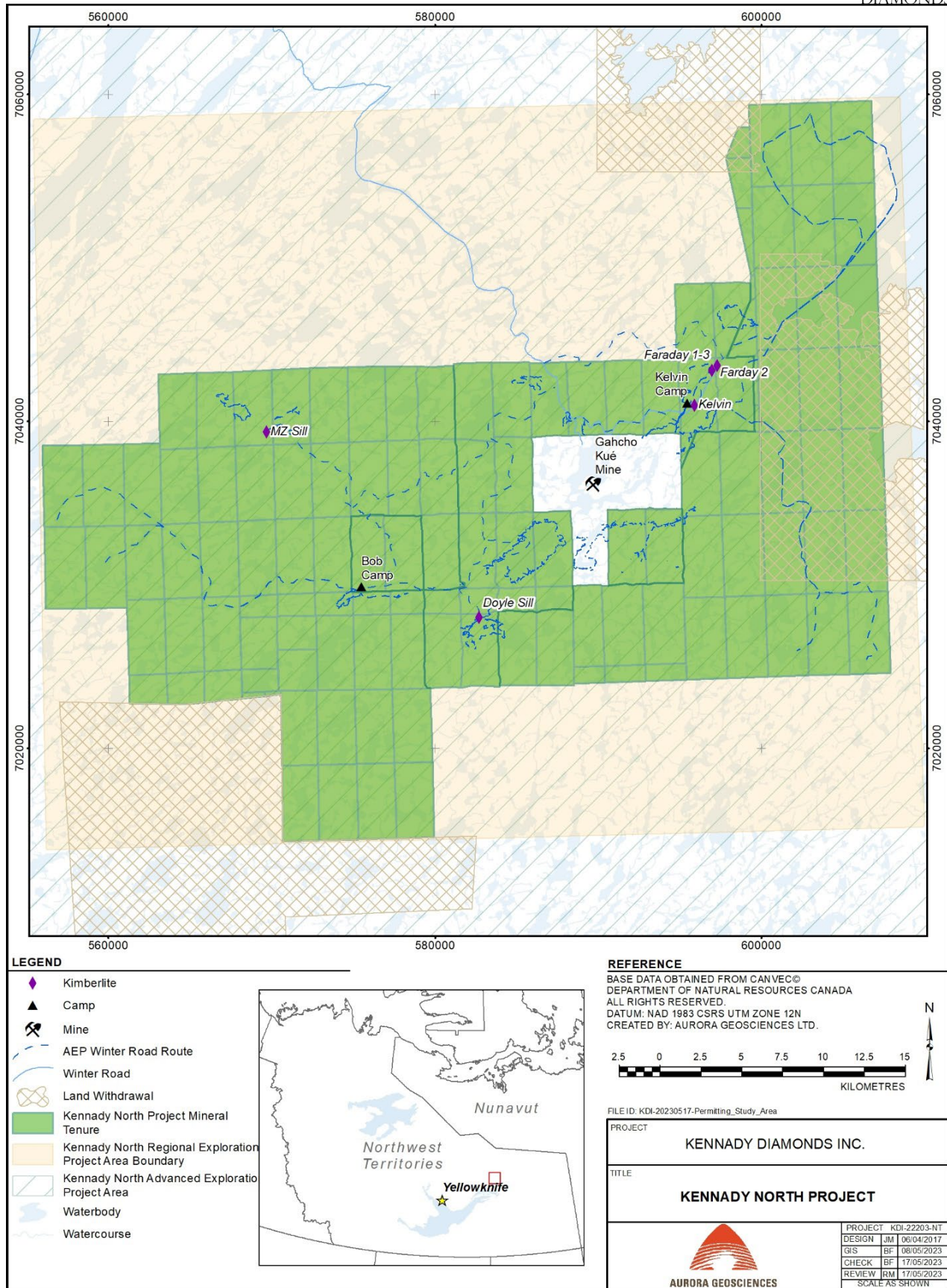
Figure 1: Kennady North Project Location

KENNEDY NORTH PROJECT

Project Description

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**Figure 2: Kennedy North Project**

## 2 LOCATION & ACCESS

The Kennady North Project is located approximately 280 km east-northeast of Yellowknife and is adjacent to the Gahcho Kué Mine, on both Tłı̄chǫ and Akaitcho Dene lands. The area has also been identified as a traditional land use area by the NWT Métis Nation and North Slave Métis Alliance.

The Project occurs in the Taiga Shield Ecozone, within the Mackay Upland High Subarctic Ecozone (Ecosystem Classification Group 2008). This ecozone is characterized by level to gently rolling terrain with bedrock exposures common throughout. It is in the transition zone between forest and tundra with the Project area occurring just north of the tree line.

Vegetation in the ecozone is dominated by shrub tundra, which is characterized by a cover of dwarf birch, mountain cranberry, Labrador tea, red bearberry, crowberry, and lichens. Stunted black spruce grows in small clumps in sheltered locales and along lake shores. Small outwash terraces and eskers are common landforms throughout.

Large game wildlife in the region include barren-ground caribou, muskox, grizzly bear, and occasionally moose. Fur-bearing animals include hare, fox, wolf, wolverine, and arctic ground squirrel. Waterfowl and avian species in the region include migratory and upland breeding birds such as grouse, ptarmigan, passerine, shorebirds, raptor, falcon, hawk, eagle, owl, loon, crane, swan, duck, and goose. Fish resources in the area include Lake Trout, Arctic Grayling, Cisco, Round Whitefish, Northern Pike, and Burbot.

Exploration activities at the Kennady North Project operate from two base camps, at Bob Lake and Kelvin Lake (Figure 3). The nearest supply and logistics center is in Yellowknife. Logistical support, labour and professional staff are supplied from Yellowknife and surrounding communities.

The site is accessed by ski- or float-equipped fixed-wing aircraft or helicopter either directly from Yellowknife or from KDI's Bob or Kelvin camps. Between January and April, the Project may be accessed via the seasonal Tibbitt to Contwoyto Winter Road, Gahcho Kué Mine spur road, and Kelvin spur road to Kelvin Camp. From approximately late January to the beginning of April, the Tibbitt to Contwoyto Winter Road connects to the Ingraham Trail at Tibbitt Lake, 70 km east of Yellowknife. The main operational use of the ice road is the resupply of the Ekati, Diavik, Snap Lake, and Gahcho Kué diamond mines. The Gahcho Kué Mine uses a 120 km spur off the Tibbitt to Contwoyto Winter Road, which is also used by KDI along with spur roads that lead to Bob or Kelvin camps. Transportation within the Project site is currently accomplished by foot traverse, vehicles (e.g., track vehicles, pickup trucks) on local trails and winter roads as well as year-round helicopter support.





**Figure 3:** Aerial photos of Bob (upper) and Kelvin (lower) Camp

### 3 CURRENT SITE CONDITIONS AND ACTIVITIES

Site layouts for Bob and Kelvin camps are provided in Figure 4 and Figure 5, respectively. The current camps each consist of plywood and semi-portable canvas and fabric structures for sleeper tents, first aid/refuge tent, kitchen, dry, core shack and office. In addition, there are structures for the power generator, waterless toilets, and general storage. A dock, fuel cache, drilling equipment yard, and waste disposal area are also included at each camp site. The total area in use is less than 2 ha per camp. Currently, the Project site hosts 50 to 100 people, operates approximately 10 months of the year, and is accessible by air and seasonal ice road.

**Each** of the AEP and REP are separately authorised to employ a combination of up to seven (7) drills of any type at any one time, including five (5) diamond or small reverse circulation (RC) drills and two (2) large RC drills. Under an amalgamated authorisation, KDI would use a maximum of up to seven (7) drills of any type at any one time, including five (5) diamond or small RC drills and two (2) large RC drills, reducing the total equipment authorized under the AEP and REP by half.

Drilling, the main activity at the site to date, has consisted of small diameter core drilling as well as large diameter RC drilling. Drilling samples are sorted and sent offsite for analysis. Drilling activity includes limited temporary structures erected nearby for core processing, a small shack with a Pacto toilet (or equivalent), use of heavy- and light-duty equipment, drummed and bulk fuel storage, and the establishment of remote fuel caches in areas proximal to active drilling areas. Workers will continue to reside in the existing Bob and/or Kelvin camps. No drilling has occurred on mineral claims or leases associated with the REP to date.

Overland winter access may occur to move heavy equipment, infrastructure, and samples around during the winter. Preliminary routes have been mapped out. Preliminary routes have been selected to minimize overland travel, maximize access to Project area extents and connect to existing established winter roads associated with the AEP; actual routing may vary depending on conditions experienced in the field. An Archaeological Overview Assessment (AOA) has been completed across all mineral claims and leases associated with the AEP and REP to assess potential impacts to heritage resources. An Archaeological Impact Assessment (AIA) has also been completed in some areas and will be undertaken for all areas identified as “high” in the AOA prior to any new land disturbances.

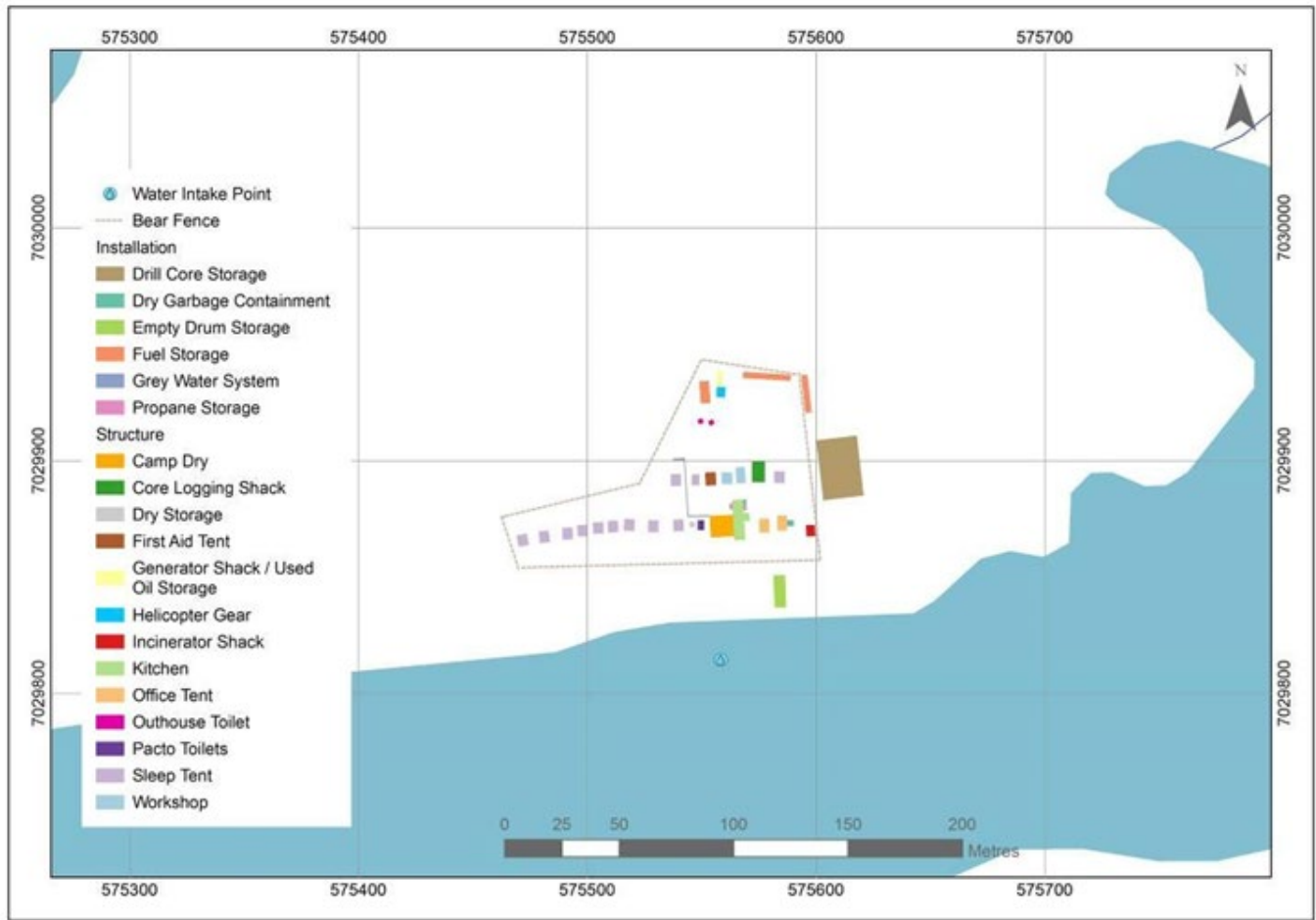
### 4 APPROVED INFRASTRUCTURE AND ACTIVITIES NOT YET UNDERTAKEN

Activities that have been additionally authorized under the AEP (MV2016C0030 & MV2013L2-0005), but not yet undertaken, include the following:

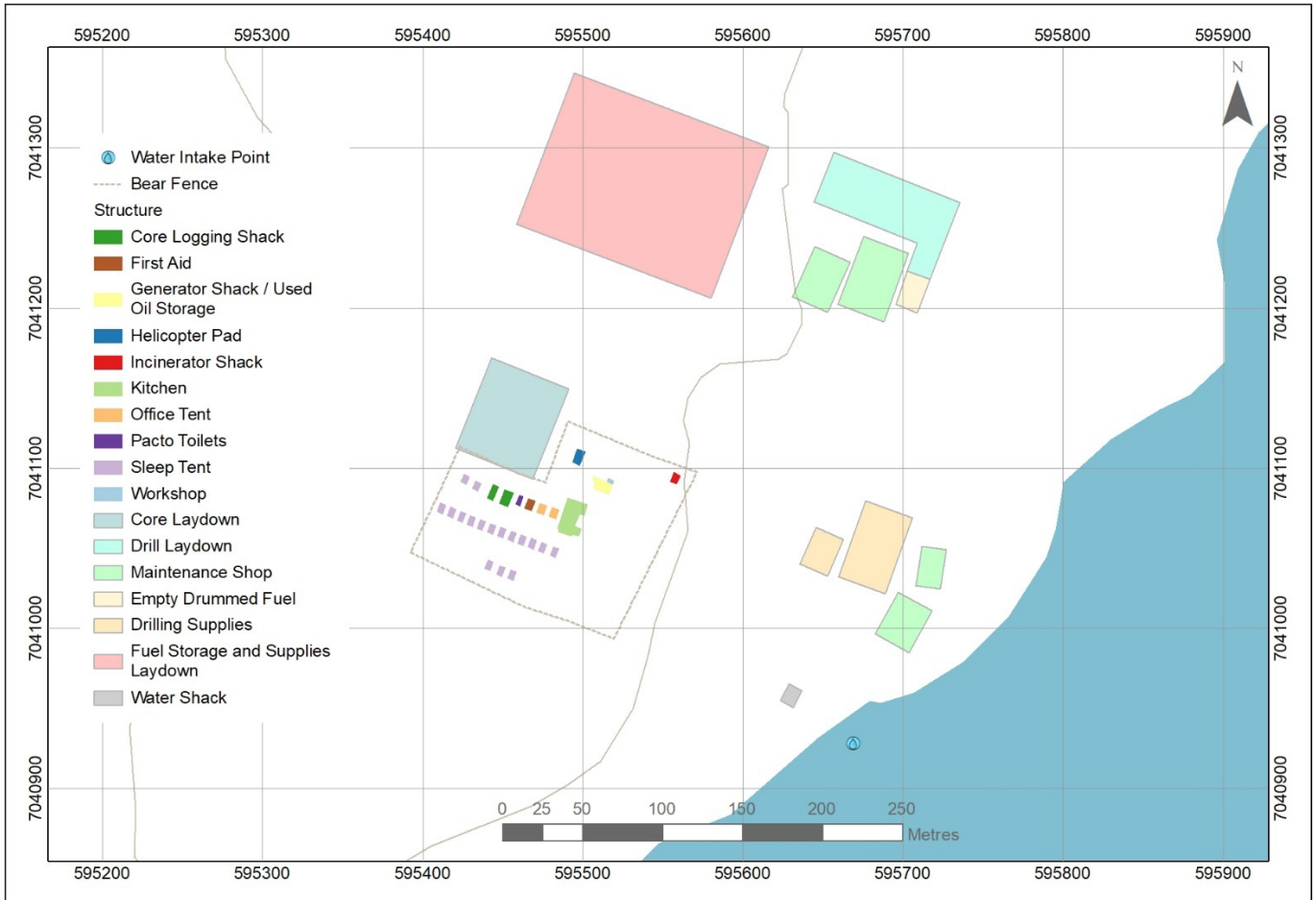
- increase in extraction from 1,200 to 5,000 tonne/yr bulk sample;
- construction and operation of underground decline(s) to access the Kelvin and Faraday kimberlite deposits for bulk sampling;
- construction of a multi-purpose laydown and camp area (approximately 5 ha);
- construction and operation of an all-season airstrip (approximately 1,650 metres [m] by 45 m) to accommodate larger aircraft for workers and resupply;
- construction of limited all-season road network linking the winter road to the laydown, airstrip, declines, dock, other infrastructure that may be constructed and drilling locations at the Faraday and Kelvin deposits;

- construction and operation of a new 140-person mobile camp on the laydown area and consolidation of existing Kelvin Camp modules with this new camp;

**Figure 4:** Existing Bob Camp Infrastructure and Site Layout



**Figure 5: Existing Kelvin Camp Infrastructure and Site Layout**



- quarrying and/or the use of cut and fill to obtain material for roads, laydown area and airstrip as necessary;
- explosives storage facility and use of explosives (including mixing and storage) for quarrying, cut/fill earthworks and construction of the decline;
- installation and operation of a portable Bulk Sample Processing Plant (< 100 tonnes/d);
- construction of a fuel storage facility; and
- increase to the size and quantity of various types of equipment (e.g., trucks, loaders, underground equipment) as well as the amount of fuel storage allowed on site in order to accommodate the proposed activities (see Appendix A for lists of equipment and fuel).

Activities authorized under the REP (MV2022L2-0007 and MV2022C0019) that have not yet been undertaken, include the following:

- Drilling;
- Mini-bulk sampling;
- Trenching;
- Use of explosives;
- Construction and use of winter roads and pads;
- Fuel storage; and
- Water use.

More detail on the activities that have been authorized can be found in the original Project Descriptions for each of the AEP and REP (see Section 1). A comparison of the scope, activities, equipment, infrastructure, and product inventories are provided in Appendix A.

No scope or activities are being proposed in this application.

## 5 FUTURE PLANS

KDI intends to continue to work towards the development of a Feasibility Study for the Kelvin and Faraday kimberlites, as described in the Project Description submitted in September 2016, while continuing to engage in exploration activities on its mineral claims and leases. KDI continues to believe in the future potential of the Project but has been delayed in executing Advance Exploration activities due to unforeseen and unpreventable circumstances related to the COVID-19 pandemic. KDI is therefore requesting that MV2013L5-0005 be renewed for a term of seven (7) years and amended to include the areas currently authorized under MV2022L2-0007. Similarly, KDI is requesting that MV2016C0030 and MV2022C0019 be combined into a single new Land Use Permit with a term of five (5) years. The renewal and amendment of the Water Licence and replacement of the Land Use Permit will allow KDI to continue to continue mine planning, exploration, and baseline data collection activities.

## 6 CONCEPTUAL SCHEDULE

Project activities will continue on a seasonal basis, although year-round operation is possible depending on conditions. Activities are expected to continue indefinitely and are based on exploration success and any future mine development. A term of five (5) years is requested for the Land Use Permit, with an anticipated extension of

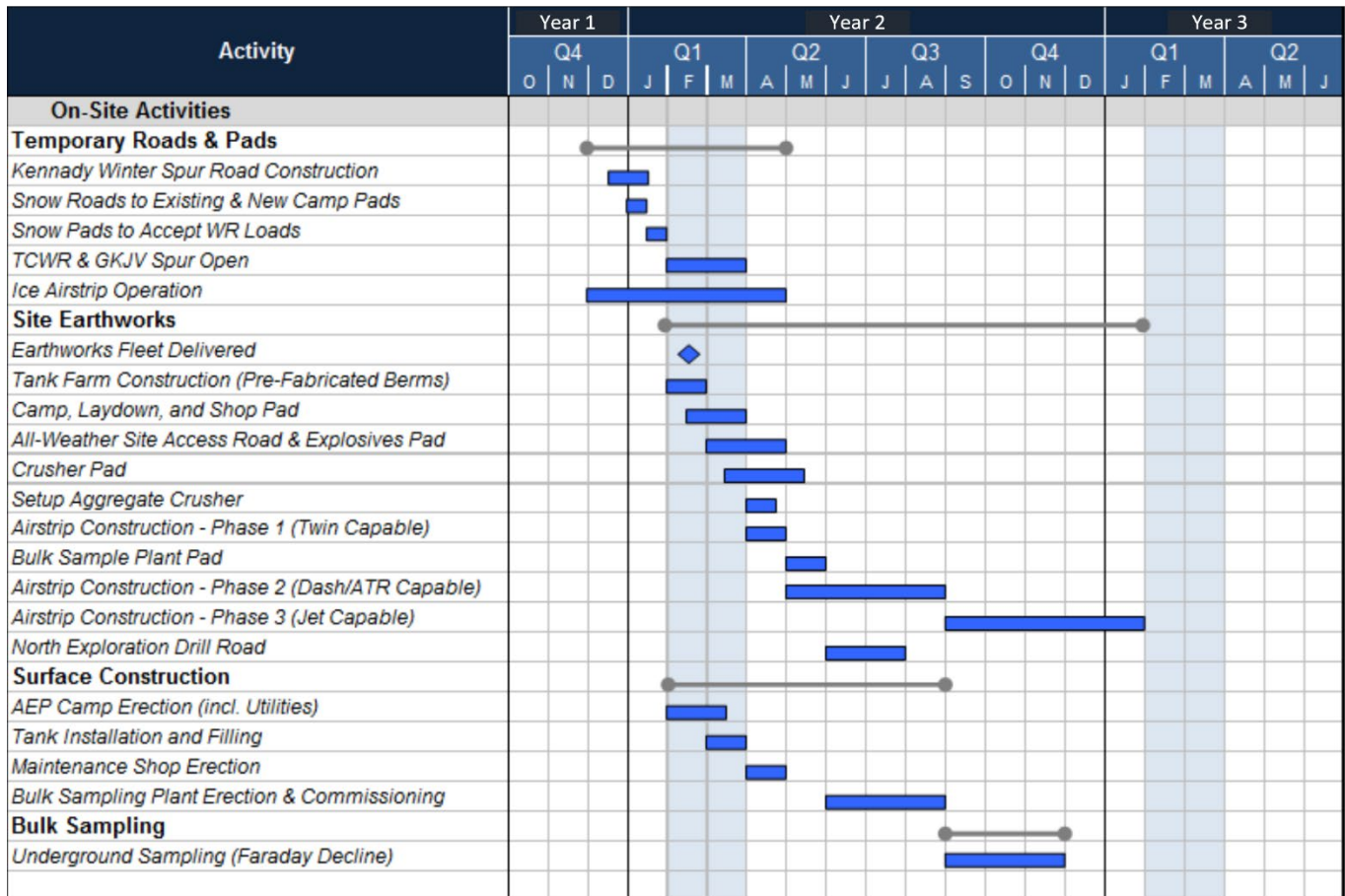


two (2) years. Correspondingly, a seven (7) year term is being requested for the Water Licence, with future coordinated renewal of both expected thereafter should there be ongoing Project success.

The Project schedule described herein is highly dependent on a number of factors including the following:

- Progressive increase of the Faraday kimberlite deposit size as confirmed by surface exploration activities.
- Capital funding availability for development of site infrastructure.
- Timing of funding to support mobilization on a given winter road.

As a result, the schedule below is conceptual in nature for the purposes of demonstrating how KDI's development plans might proceed.



## 7 BASELINE DATA

The Kennady North Project area is well-studied, in part because of its proximity to the Gahcho Kué mine. Sources of baseline data include data that was collected for the Gahcho Kué Environmental Assessment, the ongoing environmental monitoring programs at Gahcho Kué, and the Kennady North project, specifically, in recent years. This data informs both the currently approved Project activities and will also support future permitting activities. In the Water Licence and Land Use Permit application packages that were submitted for the Advanced Exploration Project in 2016, KDI included a Proposed Studies Plan. The Proposed Studies Plan outlined existing baseline data and

information, identified data and information gaps, and outlined a general plan to collect additional data and information that could inform an Environmental Assessment for a potential future mining operation. KDI additionally continues to collect baseline environmental and socioeconomic data in preparation for future permitting activities should the Project move toward development. Only a subset of the baseline studies identified in the 2016 Proposed Studies Plan are relevant to the exploration activities associated described in this application, namely:

- bathymetric data is available for nearly all of the lakes in the Kennady North Watershed (Appendix B);
- surface areas have been mapped for all of the lakes associated with the Kennady North Project to support the identification and protection of potential water sources (see Water Management Plan V2.0 included with this application);
- geological mapping of major host rock lithologies has been conducted in the Kelvin-Faraday corridor (Rock Management Plan V2.0 included with this application);
- geochemical data has been collected in the areas immediately adjacent to proposed infrastructure (see Rock Management Plan V2.0 included with this application);
- Archaeological Overview Assessments have been conducted for the entire Kennady North Project area; and
- Archaeological Impact Assessments have been conducted where project infrastructure, including winter roads, are likely to occur.

KDI will continue to engage with the appropriate regulatory authorities and Potentially Affected Parties regarding baseline data collection activities aimed at informing future permitting activities for mining operations, which are ongoing at this time.

## 8 SUPPORTING DOCUMENTS

In preparation of this application, KDI reviewed all of the Management Plans applicable to both the REP and AEP and consolidated and updated these plans to reflect the amalgamation of these projects, regulatory and community input, current site conditions, and best practices (see Section 1). KDI also reviewed supplementary documents that were submitted with the Water Licence and Land Use Permit applications in September 2016 to determine whether updates were required.

The following documents are included with this application:

- Cover Letter;
- Project Description (this document);
- Application Form, Water Licence – Non-Federal;
- Application Form, Land Use Permit;
- Financial Statements;
- Engagement Plan;
- Engagement Record (Summary and Log);
- Waste Management Plan
- Water Management Plan
- Spill Response Plan
- Rock Management Plan
- Wildlife Mitigation and Monitoring, Archaeology, and Environmental Awareness Plan;

- Closure and Reclamation Plan;
- Closure Cost Estimate and Summary;
- Shapefiles;
- Maps; and
- Proof of Eligibility

Potential environmental effects and mitigation measures have been screened previously (see Section 1). Since there is no change to the scope of the areas, activities, equipment, and infrastructure associated with the project, no additional screening is required. In some cases, mitigation measures may have been augmented to reflect modern practices and are described in the corresponding Management Plan.

## 9 ENGAGEMENT

The Company is committed to actively engaging with the Tłı̨ch̨ Government, Akaitcho Territory Government<sup>7</sup>, North Slave Métis Alliance, and NWT Métis Nation<sup>8</sup> and to ongoing engagement and communications with the Government of the Northwest Territories (GNWT), the Government of Canada, and the Mackenzie Valley Land and Water Board (MVLWB or the “Board”). The Company also engages with interested nearby communities, regulatory agencies, and Non-Governmental Organizations (NGOs) to both provide awareness and address concerns raised as a result of its exploration activities. Program-wide engagement undertaken by KDI has been ongoing for years. A fulsome engagement log is included in KDI’s MVLWB-approved Engagement Plan (Version 4.1). With this application, KDI is submitting a new version of the MVLWB-approved Engagement Plan; Version 5.0 includes only administrative updates to reflect the amalgamation of the AEP and REP and an updated engagement summary.

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<sup>7</sup> The Akaitcho Dene First Nations are comprised of the Yellowknives Dene First Nation, Łutselk’e Dene First Nation, Deninu K’ue First Nation and the Akaitcho Interim Measures Agreement Implementation Office (AIMAIO).

<sup>8</sup> The NWT Métis Nation is comprised of the Fort Resolution Métis Government, Fort Smith Métis Council, and Hay River Métis Government Council.

# **APPENDIX A: Comparison of AEP, REP and Proposed KNP Scope, Activities, Equipment and Fuel**

**Table A1. Comparison of Scopes**

<b>Land Use Permit</b>		
<b>AEP (MV2016C0030 Part A, Item 1(a))</b>	<b>REP (MV2022C0019 Part A, Item 1(a))</b>	<b>KNP - Complete Authorisation (#TBD)</b>
I. Construction, maintenance and Reclamation of winter site access roads;	e) Construction, operation and maintenance of winter road.	Construction, operation, maintenance and Reclamation of winter site access roads;
II. Diamond drilling, large diameter diamond drilling, and trenching;	a) Mineral exploration including drilling;	Mineral exploration including diamond drilling, large diameter diamond drilling, and trenching;
III. Use and storage of explosives;	c) Use of explosives;	Use and storage of explosives;
IV. Use of equipment, vehicles and machinery;	b) Use of equipment, vehicles, and machines;	Use of equipment, vehicles and machinery;
V. Fuel storage;	d) Use and storage of fuel; and	Fuel storage and use;
VI. Quarrying;		Quarrying;
VII. Construction, operation, maintenance, and Reclamation of exploration camps; and		Construction, operation, maintenance, and Reclamation of exploration camps; and
VIII. Construction, operation, maintenance, and Reclamation of a sewage treatment facility, up to two Declines, all-season site roads, an all-season airstrip, multi-purpose laydown areas, and a Bulk Sample Process Plant.		Construction, operation, maintenance, and Reclamation of a sewage treatment facility, up to two Declines, all-season site roads, an all-season airstrip, multi-purpose laydown areas, and a Bulk Sample Process Plant.
<b>Water Licence</b>		
<b>AEP (MV2013L2-0005 Part A, Item 1)</b>	<b>REP (MV2022L2-0007 Part A, Item 1)</b>	<b>KNP - Complete Authorisation (#TBD)</b>
i. Water withdrawal for camp use, industrial use, winter road Construction, and dust suppression;	g) Withdrawal of Water for drilling and winter road construction;	Water withdrawal for camp use, drilling, winter road and pad Construction and maintenance, and dust suppression;
	e) Construction and maintenance of winter roads and ice pads;	
ii. Diamond drilling, large diameter diamond drilling, and trenching;	a) Drilling;	Diamond drilling, large diameter diamond drilling, and trenching;
	b) Mini-bulk sampling;	
	c) Geochemical sampling;	
	d) Geophysical surveys;	
iii. Construction, operation, maintenance, and Reclamation of a Sewage Treatment Facility, a Quarry, up to two Declines, all-season site roads, an all-season airstrip, multi-purpose laydown areas, and a Bulk Sample Process Plant;		Construction, operation, maintenance, and Reclamation of a Sewage Treatment Facility, a Quarry, up to two Declines, all-season site roads, an all-season airstrip, multi-purpose laydown areas, and a Bulk Sample Process Plant;
	f) Fuel storage;	
iv. Deposit of treated Sewage and Greywater;		Deposit of treated Sewage and Greywater;
v. Deposit of Greywater into Sumps (Bob Camp and Existing Kelvin Camp);		Deposit of Greywater into Sumps (Bob Camp and Existing Kelvin Camp);
vi. Deposit of Drill Cuttings into Sumps;	h) Depositing of drill and core cuttings into Sumps;	Deposit of Drill and core Cuttings into Sumps;
vii. Deposit of Processed Kimberlite and Wastewater into a Sump; and		Deposit of Processed Kimberlite and Wastewater into a Sump; and
viii. Management of Potentially Acid Generating Rock.		Management of Potentially Acid Generating Rock.
	i) Discharge from Secondary Containment into the Receiving Environment; and	Discharge from Secondary Containment into the Receiving Environment; and
	j) Progressive Reclamation and associated Closure and Reclamation activities.	Progressive Reclamation and associated Closure and Reclamation activities.

**Notes:**

No changes to AEP Water Licence or Land Use Permit scopes are being requested. Some wording has been updated to reflect the more recently used wording from the REP licence and permit. recently issued REP licence and permit (noted in black text under the REP column) to better reflect current licence and permit wording.

**Table A2. Comparison of Equipment**

Equipment			Size		Proposed Use
Authorized Under AEP <sup>a</sup>	Authorized Under REP <sup>b</sup>	Amalgamated	kg	tonnes	
<b>Exploration Equipment</b>					
5 x Boyles 25A/37/56 diamond drill rigs or equivalent	5 x Boyles 25A/37/56 diamond drill rigs or equivalent	5 x Boyles 25A/37/56 diamond drill rigs or equivalent	8,600 kg ea. (including rods & casing) ea.	8.6	Drill testing potential kimberlite targets and to collect mini bulk sample of kimberlite material
1 - 2 x Bell 407 helicopter or equivalent	1 - 2 x Bell 407 helicopter or equivalent	1 - 2 x Bell 407 helicopter or equivalent	1,300 kg ea.	1.3	Drill & crew movements
1-2 x Hornet dry RC drilling rig	2 x Hornet dry RC drilling rig	1-2 x Hornet dry RC drilling rig	4,350 kg ea.	4.35	Drill testing glacial stratigraphy
2 x Inciner8 dual-chamber incinerator or equivalent	-	2 x Inciner8 dual-chamber incinerator or equivalent	1,000 kg ea.	1	Disposal of combustible waste
1-2 x Solids Removal Equipment with built in generator (25kW)	1-2 x Solids Removal Equipment with built in generator (25kW)	1-2 x Solids Removal Equipment with built in generator (25kW)	3,000 kg ea.	3	Self-contained cuttings removal equipment.
15 x Skidoo or equivalent	12 x Skidoo or equivalent	15 x Skidoo or equivalent	200 kg ea.	0.2	Camp and drill support
2 x ATV	2 x ATV	2 x ATV	500 kg ea.	0.5	Camp support
2 x 15 kW diesel generator or equivalent	2 x 15 kW diesel generator or equivalent	2 x 15 kW diesel generator or equivalent	450 kg ea.	0.45	Electrical power supply
2 x 33 kW diesel generator or equivalent	2 x 33 kW diesel generator or equivalent	2 x 33 kW diesel generator or equivalent	1000 kg ea.	1	Electrical power supply
5 x 5-10 kW gas generator or equivalent	5 x 5-10 kW gas generator or equivalent	5 x 5-10 kW gas generator or equivalent	100 kg ea.	0.1	Electrical power supply backup
5 x water pumps	5 x water pumps	5 x water pumps	25 kg ea.	0.025	Camp, construction and diamond drill water
3 x loaders	2 x loaders	3 x loaders	6,800 kg ea.	6.8	Ice road construction and maintenance
4 x Snow cat or equivalent	2 x Snow cat or equivalent	4 x Snow cat or equivalent	6,400 kg ea.	6.4	Used to move drills, materials and personnel around the property as well used to build and maintain ice roads and ice airstrips
10 x Pickup truck	2 x Pickup truck	10 x Pickup truck	4,000 kg ea.	4	To move people along proposed ice roads on the property
2 x Plough truck or equivalent	-	2 x Plough truck or equivalent	17,700 kg ea.	17.7	Ice road construction and maintenance
3 x Water truck or equivalent	-	3 x Water truck or equivalent	11,250 kg ea.	11.25	Ice road construction and maintenance
2 x Grader or equivalent	1 x Grader or equivalent	2 x Grader or equivalent	21,700 kg ea.	21.7	Ice road construction and maintenance
2 x Dozer or equivalent	1 x Dozer or equivalent	2 x Dozer or equivalent	10,000 kg ea.	10	Ice road construction and maintenance
2 x skid-steers or equivalent	2 x skid-steers or equivalent	2 x skid-steers or equivalent	5000 kg ea.	5	Bulk sample loading and ice strip maintenance
15 x Transport tractor-trailer combinations	-	15 x Transport tractor-trailer combinations	16,000 kg ea. empty	16	To transport freight to and from the property along ice roads
1 x portable compressed air rock drill with gasoline generator or equivalent	-	1 x portable compressed air rock drill with gasoline generator or equivalent	900 kg	0.9	Used to drill holes to set explosives for blasting rock for bulk sample trench (possible future activity)
1 x excavator	1 x excavator	1 x excavator	10,000 kg	10	To move material for trench bluk sample (possible future activity)
2-3 x Larger diameter RC drilling rig or equivalent	2 x Larger diameter RC drilling rig or equivalent	2-3 x Larger diameter RC drilling rig or equivalent	25,000 kg ea.	2.5	For recovery of large kimberlite bulk samples
2 x snow-making machinery	1 x snow-making machinery	2 x snow-making machinery	10,000 kg ea.	10	Ice road construction and maintenance
2 50 tonne track excavator (CAT 345 or equivalent)	-	2 50 tonne track excavator (CAT 345 or equivalent)	45,000 kg ea.	45	For site development (e.g., pads, roads, airstrip, decline)
2 x 20 tonne track excavator (CAT 320 or equivalent)	-	2 x 20 tonne track excavator (CAT 320 or equivalent)	22,000 kg ea.	22	For site development (e.g., pads, roads, airstrip, decline, snow loading)
4 x 40 tonne articulated haul truck (CAT740 or equivalent)	-	4 x 40 tonne articulated haul truck (CAT740 or equivalent)	33,000 kg ea.	33	For site development (e.g., pads, roads, airstrip, decline)
2 x tracked bulldozer (CAT D7 or equivalent)	-	2 x tracked bulldozer (CAT D7 or equivalent)	33,000 kg ea.	33	For site development (e.g., pads, roads, airstrip, decline, snow clearing)
1 x front-end wheel loader (CAT 966 or equivalent)	1 x front-end wheel loader (CAT 966 or equivalent)	1 x front-end wheel loader (CAT 966 or equivalent)	22,000 kg ea.	22	For site development (e.g., pads, roads, airstrip, decline)
1 x motor grader (CAT 140m or equivalent)	-	1 x motor grader (CAT 140m or equivalent)	20,000 kg	20	For site development (e.g., pads, roads, airstrip, decline)
1 x Vibratory compactor (CAT CS-56 or equivalent)	-	1 x Vibratory compactor (CAT CS-56 or equivalent)	12,500 kg	12.5	For site development (e.g., pads, roads, airstrip, decline)
2 x rock drill (Sandvik DX800 or equivalent)	-	2 x rock drill (Sandvik DX800 or equivalent)	14,900 kg ea.	14.9	For site development (e.g., pads, roads, airstrip, decline)
1 x mobile aggregate crushing plant	-	1 x mobile aggregate crushing plant	40,000 kg	40	For site development (e.g., pads, roads, airstrip, decline)

Additional Support Equipment required for Advanced Exploration					
1 x Incinerator (Ecowaste Solutions CA- 100 or equivalent)	-	1 x Incinerator (Ecowaste Solutions CA- 100 or equivalent)	6,500 kg	6.5	For Larger Capacity Camp
1 x Mechanics Service Truck (F550 or equivalent)	-	1 x Mechanics Service Truck (F550 or equivalent)	15,000 kg	15	Servicing or Repairing Equipment
1 x Fuel & Lube Truck (Kenworth T800 or equivalent)	-	1 x Fuel & Lube Truck (Kenworth T800 or equivalent)	15,000 kg	15	Fueling and Lubrication of Equipment
2 x Tool Carrier / Forklift (CAT 930 or equivalent)	-	2 x Tool Carrier / Forklift (CAT 930 or equivalent)	14,000 kg ea.	14	Snow clearing, freight handling, bulk sample bag handling, AN bag handling
2 x skid steer (CAT 252 or equivalent)	-	2 x skid steer (CAT 252 or equivalent)	5,000 kg ea.	5	Quarry stemming and small materials handling, bulk sample bag handling
6 x 350 k BTU Heaters (Frost Fighters IDF350 or equivalent)	-	6 x 350 k BTU Heaters (Frost Fighters IDF350 or equivalent)	200 kg ea.	0.2	Localized heat
6 x Light Plants (Ingersoll Rand L6 or equivalent)	-	6 x Light Plants (Ingersoll Rand L6 or equivalent)	400 kg ea.	0.4	Localized lighting
4 x Light Trucks (Ford F350 or equivalent)	-	4 x Light Trucks (Ford F350 or equivalent)	4,000 kg ea.	4	Additional transportation for supervision, crews and site inspections, ambulance
1 X 15 to 30 passenger bus (Micro Bird G5 or equivalent)	-	1 X 15 to 30 passenger bus (Micro Bird G5 or equivalent)	5,000 kg	5	Crew Transportation
1 x Blasters Trucks (Ford F350 or equivalent)	-	1 x Blasters Trucks (Ford F350 or equivalent)	4,000 kg	4	Truck dedicated to explosives handling per regulations
1 x Roll off truck (Western Star 4900 or equivalent)	-	1 x Roll off truck (Western Star 4900 or equivalent)	8,000 kg	8	Multi-use truck with roll on and roll off attachments (potable water tanks, waste water tank, waste bin etc.)
1 x Crane (Tadano GR550XL or equivalent)	-	1 x Crane (Tadano GR550XL or equivalent)	14,000 kg	14	Winter Road Offload, Erecting Bulk Sample Plant, shops, camp and major equipment repairs
1 x HDPE Pipe Fusing Machine (McElroy Rolling 250 or equivalent)	-	1 x HDPE Pipe Fusing Machine (McElroy Rolling 250 or equivalent)	1250 kg	1.25	Water line fusing
3 - 6 x 700kW to 350 kW diesel fired generators	-	3 - 6 x 700kW to 350 kW diesel fired generators	30,000 kg ea.	30	Primary power supply for camp and laydown pad infrastructure
Decline bulk sample equipment required for Advanced Exploration					
2 x Underground LHD (Load, Haul Dump - Atlas Copco ST1030 or equivalent)	-	2 x Underground LHD (Load, Haul Dump - Atlas Copco ST1030 or equivalent)	26,300 kg ea.	26.3	Scoop for mucking after basting
2 x Underground haul truck (Atlas Copco MT20 or equivalent)	-	2 x Underground haul truck (Atlas Copco MT20 or equivalent)	28,830 kg ea.	28.83	Moving material into and out of the decline
1 x Underground jumbos (drills - Atlas Copco Boomer 282 or equivalent)	-	1 x Underground jumbos (drills - Atlas Copco Boomer 282 or equivalent)	18,300 kg	18.3	Ground support installation
1 x Underground Drill (Atlas Copco Simba ME7 or equivalent)	-	1 x Underground Drill (Atlas Copco Simba ME7 or equivalent)	17,000 kg	17	Drilling for blasts
1 x Scissor Deck (J&S SLX6100 or equivalent)	-	1 x Scissor Deck (J&S SLX6100 or equivalent)	15,400 kg	15.4	Working platform for installing ground support
2 x Underground Vehicle (Toyota Landcruiser or equivalent)	-	2 x Underground Vehicle (Toyota Landcruiser or equivalent)	3,000 kg ea.	3	Decline access crew vehicle, repair vehicle, blasters vehicle
2 x Utility Vehicle (Kubota RTV X1140 or equivalent)	-	2 x Utility Vehicle (Kubota RTV X1140 or equivalent)	1,075 kg ea.	1.075	Decline Utility Vehicle
1 x Mine Ventilation System	-	1 x Mine Ventilation System	800 kg	0.8	Decline ventilation
2 x 350kw to 500kw diesel fired generators	-	2 x 350kw to 500kw diesel fired generators	20,000kg ea.	20	Decline power supply

Notes:

The Kennady North Project will only require AEP equipment quantities; no additional REP equipment quantities are being retained. Project amalgamation will result in a cumulative reduction in equipment needs for the combined Kennady North Project.

**Table A3: Comparison of Fuel**

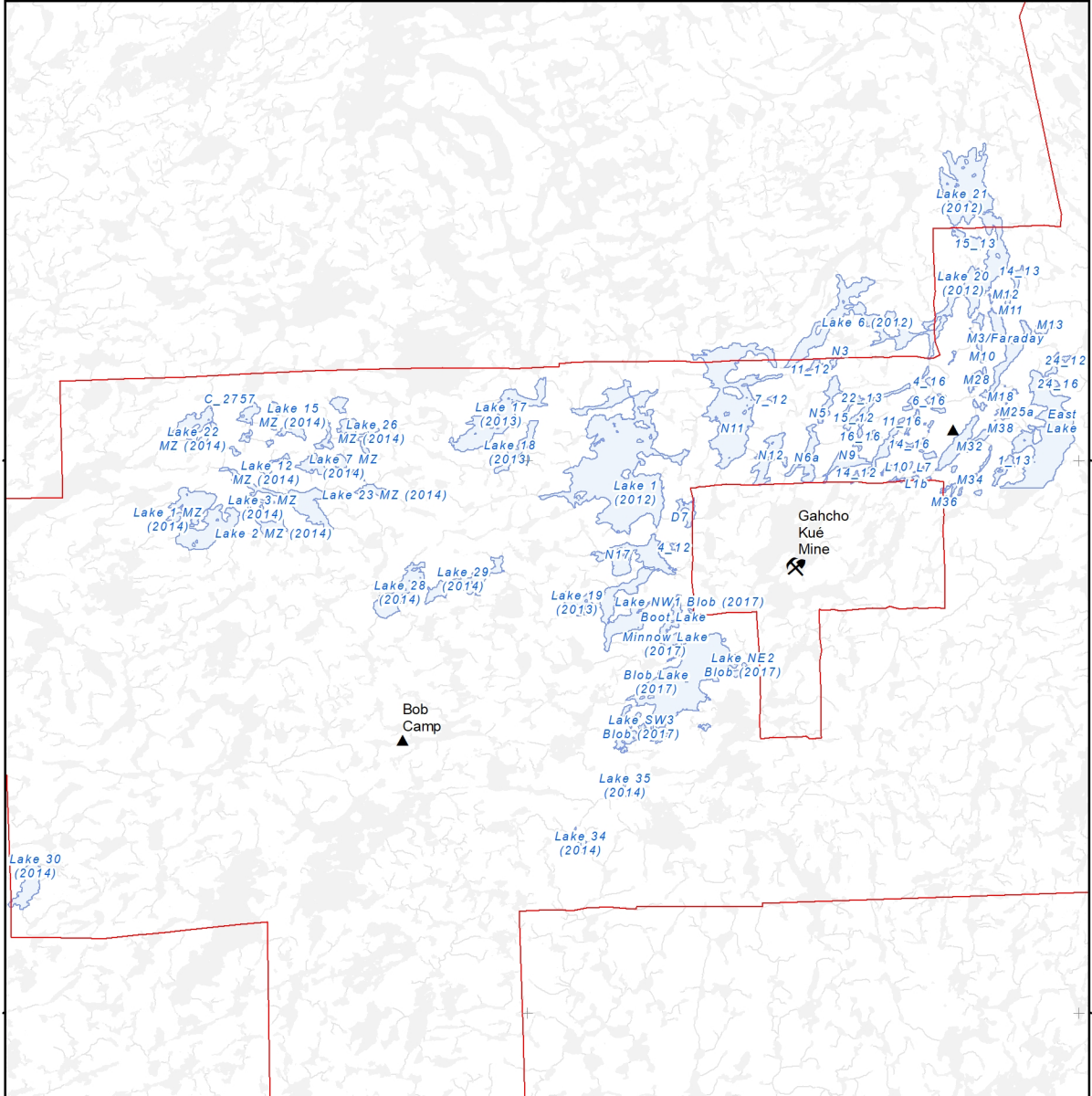
Material	Maximum Amount		
	AEP	REP	KNP - Complete Authorisation
<b>diesel</b>	2,000,000 L (205 L drums or bulk storage tanks)	30,750 L (150 X 205 L drums)	2,000,000 L (205 L drums, bulk storage tanks, or ECCC approved tanks)
<b>gasoline</b>	20,000 L (205 L drums, or 10 jerry cans)	6,300 L (30 X 205 L drums, 6 jerry cans)	20,000 L (205 L drums, 10 jerry cans, or ECCC approved tanks)
<b>aviation fuel</b>	102,500 L (205 L drums)	24,600 L (120 X 205 L drums)	102,500 L (205 L drums, or ECCC approved tanks)
<b>propane</b>	50 X 45 kg (45 kg cylinders or bulk storage tanks)	1,000 lbs (10 X 100 lb cylinders)	50 X 45 kg (45 kg cylinders or bulk storage tanks)
<b>Kerosene</b>	100L (5L container or other)	-	100L (5L container or other)
<b>various lubricants, greases and coolants</b>	21,000 L (5 gallon pails)	50 gal (5 gal pails)	21,000 L (5 gallon pails or other)

Notes:

The Kennady North Project will only require AEP fuel quantities; no additional REP fuel quantities are being retained. Project amalgamation will result in a cumulative reduction in fuel needs for the combined Kennady North Project.



## APPENDIX B: Map of Lakes Surveyed for Bathymetry

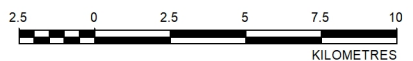


**LEGEND**

- Camp
- Mine
- Property Boundary
- Lake with Bathymetry Completed
- Watercourse
- Waterbody

**REFERENCE**

BASE DATA OBTAINED FROM CANVEC©  
 DEPARTMENT OF NATURAL RESOURCES CANADA  
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 DATUM: NAD 1983 CSRS UTM ZONE 12N  
 CREATED BY: AURORA GEOSCIENCES LTD.



FILE ID: KDI-20230510-Lakes\_with\_Bathy

PROJECT	KENNADY DIAMONDS INC.
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TITLE	<b>KENNADY NORTH PROPERTY LAKES WITH BATHYMETRIC DATA</b>
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<p><b>AURORA GEOSCIENCES</b></p>	PROJECT	KDI-22203.NT
	DESIGN	JM 06/04/2017
	GIS	BF 08/05/2022
	CHECK	BF 10/05/2023
	REVIEW	RM 10/05/2023
SCALE AS SHOWN		