2021 Annual Water License Report

Kennady North Advanced Exploration Project (AEP)
Kennady Diamonds Inc.
MV2013L2-0005
South Mackenzie District, NWT

prepared for:

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1 INTRODUCTION

Kennady Diamonds Inc. (KDI) is currently exploring for diamondiferous kimberlites in the Kennady North project area located in the Northwest Territories approximately 280 kilometers (km) east–northeast of Yellowknife (Figure 1). The KDI property consists of 20 mineral leases and 58 mineral claims, totaling 165,942.78 acres or 67,154.66 hectares (ha). Activities on the site are regulated by a Class A Land Use Permit (MV2016C0030) and a Type B Water License (MV2013L2-0005), as issued by the Mackenzie Valley Land and Water Board (MVLWB).

The Kennady North Project (the Project) operates from two exploration camps, Bob Camp and Kelvin Camp (Figures 1 & 2) which support exploration activities such as geophysical surveys, geochemical surveys, and drilling. Bob Camp was left unoccupied for the duration of 2021. In 2021, Kelvin Camp hosted up to 16 people and operated in the winter, summer, and fall. Activities in 2021 consisted of the sampling of existing core, stored at Kelvin Camp, environmental baseline, and monitoring programs, during the spring summer and fall, as well as a surficial till sampling program during the summer and fall.

This report fulfills license MV2013L2-0005 Part B, condition 12 which reads:

"*12. Beginning March 31, 2017, and no later than every March 31 thereafter, the Licensee shall submit an Annual Water Licence Report to the Board. The Report shall be in accordance with Schedule 1, item 1*."

The report is organized according to sections outlined in Schedule 1.

2 SUMMARY OF EXPLORATION ACTIVITIES

Despite acquiring an amended license for advanced exploration including industrial use of water, construction of a larger camp, airstrip, all-season roads, and process plant, in 2021 KDI continued to operate the project as a modest exploration program with no additional works or undertakings. As such, activities on site were very similar to those of previous years.

The focus of the 2021 operations at Kennady North was environmental baseline work and exploration level surficial till sampling. A 34-day Country Rock Characterization program of old drill core occurred during April and May 2021 by Aurora Geosciences under the direction of Golder Associates (Golder). From April to September various baseline environmental studies were preformed by Golder. During July, August and September a surficial till sampling program was conducted across the project area via helicopter with a four-person sampling crew. The camp closed down on September 19th. No drilling occurred in 2021.

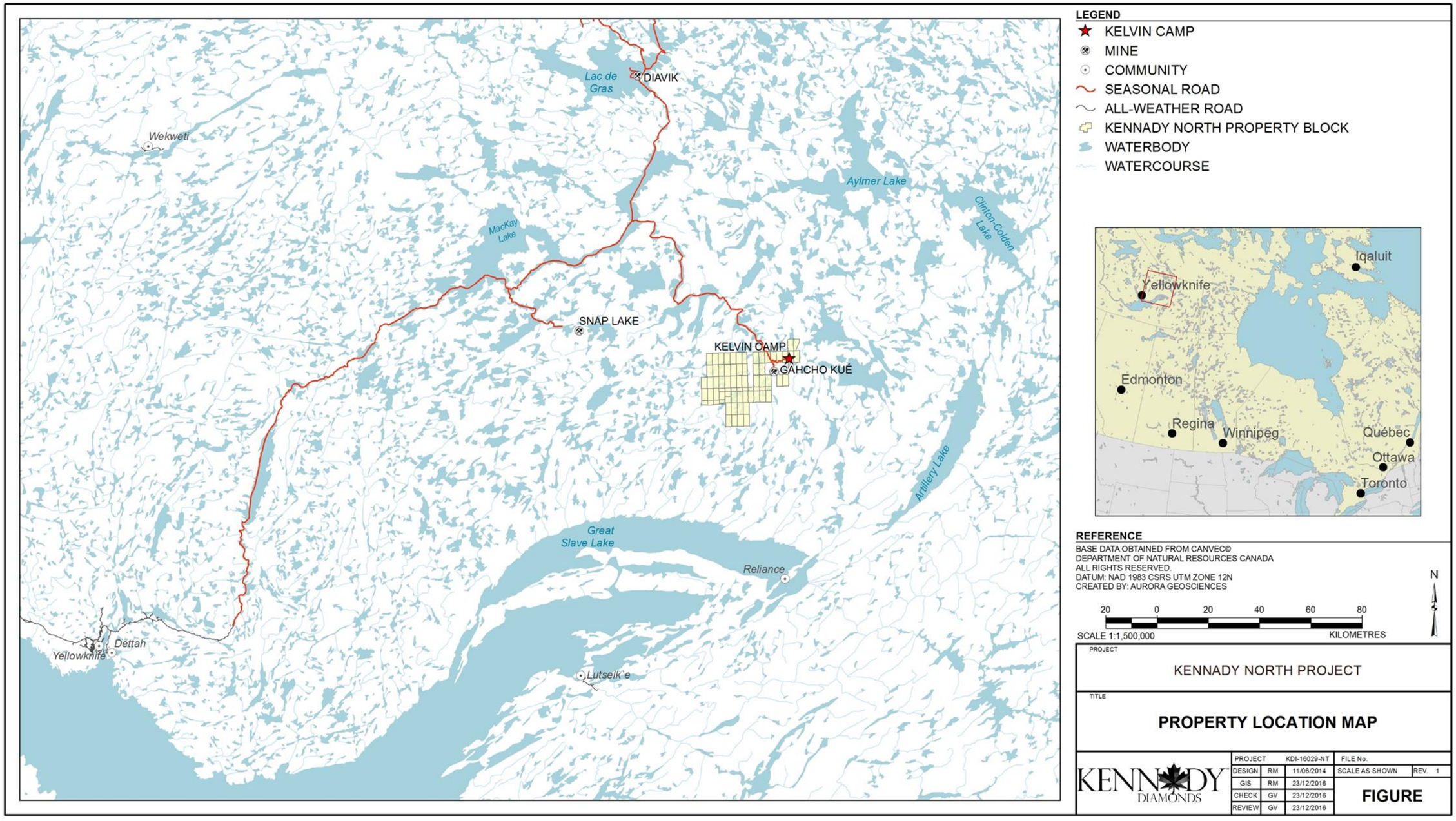


Figure 1: Regional location of Kennady North Exploration Project

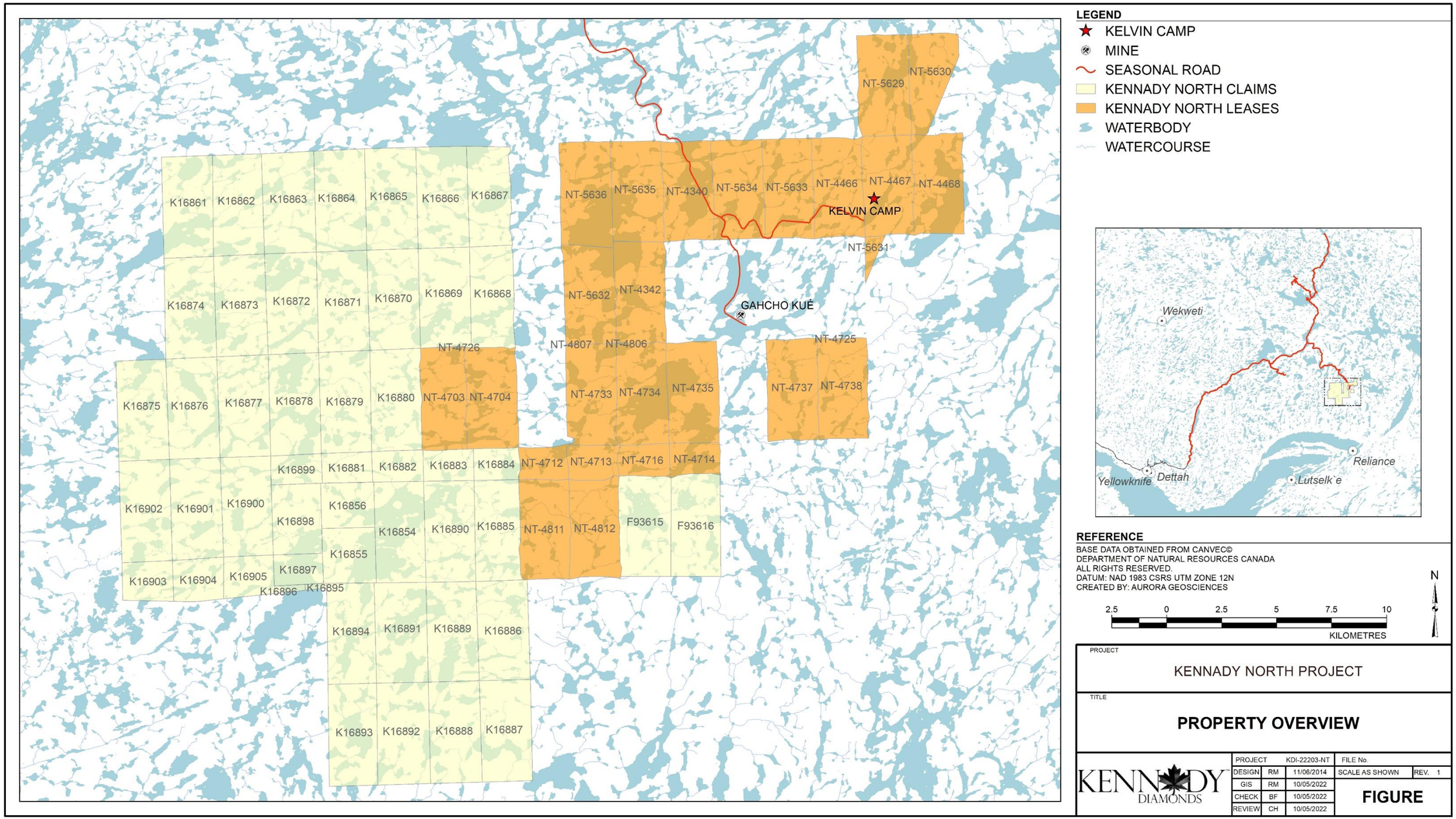


Figure 2 Location of Camps and Property Overview for Kennady North Exploration Project

3 ENGAGEMENT PLAN

KDI submitted an administrative update to the Board-approved Engagement Plan (Version 3.1[1]) along with the 2021 Annual Water Licence Report. The revised Engagement Plan (Version 3.2) includes updated corporate contact information, minor corrections to existing typos, and an updated Engagement Record. A copy of the Engagement Plan with the changes from Version 3.1[2] to 3.2 tracked is available upon request.

Engagement activities in 2021 included virtual meetings, written notification of KDI's intention to apply for a two-year extension to Land Use Permit MV2016C0030, update letters to community leadership, and community newsletters. KDI intends to undertake similar engagement activities in 2022.

4 CONSTRUCTION

There were no construction activities associated with Part E of the License in 2021. No engineered structures were designed or constructed. A 40 x 60 foot fabric structure was removed from site over the spring and summer season. Equipment and infrastructure on site remain similar to previous years and was consistent with a modest exploration program.

5 MODIFICATIONS

There were no modifications to approved activities nor major maintenance conducted under Part F of the License in 2021.

6 WASTE MANAGEMENT PLAN

There were no updates or changes to the Waste Management Plan version 3.1[3] approved by the Board.

Summaries of non-hazardous and hazardous waste associated with the project can be found in Table 1 below.

6.1 CAMP

6.1.1 Solid Waste

General camp waste is estimated using the GNWT MACA standard of 0.015 m^3 of waste generated per person per day. No solid waste was deposited on site during the course of the year. Putrescible and camp

[1] http://registry.mvlwb.ca/Documents/MV2013L2-0005/MV2013L2-0005%20MV2016C0030%20-%20KDI%20-%20Updated%20Engagement%20Plan%20-%20V3-1%20-%20May17-17.pdf

[2] http://registry.mvlwb.ca/Documents/MV2013L2-0005/MV2013L2-0005%20MV2016C0030%20-%20KDI%20-%20Updated%20Engagement%20Plan%20-%20V3-1%20-%20May17-17.pdf

[3] http://registry.mvlwb.ca/Documents/MV2016C0030/MV2016C0030%20MV2013L2-0005%20-%20KDI%20-%20Waste%20Management%20Plan_V3.0.pdf

waste was shipped from camp and disposed of at the Yellowknife Solid Waste Facility. Scrap wood and cardboard was incinerated in a burn box on site.

Non-regulated hazardous waste consists of ashes from incinerating waste, used oil and oil filters, used rags and absorbent matting, household batteries, and any general debris that may contain hydrocarbons. This material is shipped off-site and delivered to KBL Environmental for disposal. There were no incinerator ashes generated in 2021 as the incinerator was not used.

Regulated dangerous goods consist of unusable fuel and empty aerosol containers. This waste is shipped off-site and delivered to KBL Environmental for disposal.

Table 1 Summary of waste associated with the project

Month	General Camp Waste (kg)	Non-Regulated Hazardous Waste (m^3)	Regulated Dangerous Goods (m^3)	
			Flammable Liquid-Fuel	Aerosols-Processable
January	Not Occupied	Not Occupied	Not Occupied	Not Occupied
February	Not Occupied	Not Occupied	Not Occupied	Not Occupied
March	Not Occupied	Not Occupied	Not Occupied	Not Occupied
April	3.84	0.3	0	0
May	0.48	0	0	0
June	3.17	0	0	0
July	3.80	0.3	0	0
August	4.64	0.3	0	0
September	3.93	0.4	0	0.3
October	Not Occupied	Not Occupied	Not Occupied	Not Occupied
November	Not Occupied	Not Occupied	Not Occupied	Not Occupied
December	Not Occupied	Not Occupied	Not Occupied	Not Occupied
Total	**19.86**	**1.3**	**0**	**0.3**

6.1.2 Liquid Waste

Grey water is discharged into a French Box sump adjacent to the kitchen-dry building at Kelvin Camp, located at 595590E, 70421214N (NAD83, UTM Zone 12 N). The total volume of grey water waste was estimated to be 58.05 m^3. Grey water consists of dishwater, laundry water, and personal ablutions discharge. It is approximated as 80% of all water pumped for camp use. The monthly production of grey water is listed in Table 2

Table 2 Summary of Grey Water generated at Kelvin and Bob Camps

Month	Volume of grey water (m^3)	
	Kelvin Camp	Bob Camp
January	Not Occupied	Not Occupied
February	Not Occupied	Not Occupied
March	Not Occupied	Not Occupied
April	13.50	Not Occupied
May	4.02	Not Occupied
June	9.78	Not Occupied
July	10.32	Not Occupied
August	12.82	Not Occupied
September	7.61	Not Occupied
October	Not Occupied	Not Occupied
November	Not Occupied	Not Occupied
December	Not Occupied	Not Occupied
Total	**58.05**	**0**
Percent Increase/ Decrease from Last year	-94.54%	

6.2 DRILLING

No drilling took place in 2021.

7 ROCK MANAGEMENT PLAN

There was no quarry or decline at site, as such according to Part G of the license a Rock Management Plan was not required in 2021.

8 QUARRY MANAGEMENT PLAN

Quarrying and the use of explosives were not required at site, as such according to Part G of the license a Quarry Management Plan was not required in 2021.

9 EXPLOSIVE MANAGEMENT PLAN

There were no explosives stored or handled at site, as such according to Part G of the license an Explosive Management Plan was not required in 2021.

10 GROUNDWATER MONITORING PLAN

The project did not operate a decline, and as such according to Part G of the license, did not have a need to develop a groundwater monitoring plan in 2021.

11 SPILL CONTINGENCY PLAN

There were no changes to the Spill Contingency Plan 3.0[4] in 2021.

A single reportable spill occurred on Monday, April 12, 2021, at 10:30am and was immediately reported to ENR via the spill hotline. The reporting time on April 12, 2021, was 11:15 am. The spill information is listed below. The spill was immediately cleaned up and an internal investigation was conducted with mitigating measures implemented to ensure an accident like this did not happen again.

Spill-Status
Lead Agency: GNWT - Department of Lands
Occurrence Date/Time: Monday, April 12, 2021 - 10:30
Received Method: Phone
Involved Parties Type: Other
Potential Spill: No

Spill Information
Spill Number: 2021119
Spill Region: North Slave
Spill Location Description: Kelvin Camp 63 29 06N 109 04 58W
Geolocation: Geolocation is 63.477051150916516, -109.1341366723247
Land Sea Indicator: Land
Spill Source: Drum or Barrel
Spill Cause: Breakage
Product Spilled: Petroleum - fuel oil (jet A, diesel, turbo A, heat)
Product Spilled Description: Diesel
Spill Quantity: 150.00
Measurement: Litres

Supporting Information
Land Use Permit Number: MV2016C0030
Water User Permit Number: MV2013-L2/0005
U.N. Number: 1202

Reporter Information
Reporting Date and Time: Monday, April 12, 2021 - 11:15

A number of non-reportable spills were documented and reported to the inspector on a monthly basis. No reportable spills occurred in 2021.

[4] http://registry.mvlwb.ca/Documents/MV2016C0030/MV2016C0030%20MV2013L2-0005%20-%20KDI%20-%20Spill%20Contingency%20Plan_V3.0.pdf

12 INTERIM CLOSURE AND RECLAMATION PLAN

No revisions were made to the Interim Closure and Reclamation Plan in 2021

Below is a summary of closure and reclamation activities undertaken at site in 2021.

A general cleanup from 2020 and 2021 winter activities was undertaken during late spring and summer of 2021. A 40 x 60-foot fabric structure was dismantled and removed from site during the spring and summer of 2022.

13 WATER USE

Licensed water volume withdrawal: 299 m^3 per day, 109,135 m^3 per year
Total volume withdrawn for 2021: 72.58 m^3

Table 3 Water Consumption at Kelvin Camp and drill rigs

Month	Volume used for camp (m^3)	
	Kelvin Camp	Bob Camp
January	-	-
February	-	-
March	-	-
April	16.87	-
May	5.03	-
June	12.23	-
July	12.90	-
August	16.03	-
September	9.51	-
October	-	-
November	-	-
December	-	-
Total	72.58	0.0

Percent Increase/Decrease from Last Year: -73.58%

- Camp water pumped during 2021 for Kelvin Camp was sourced from Kelvin Lake in the vicinity of 595931E, 7041018N.
- Average daily water usage in Kelvin camp was 0.7 m^3

14 BOARD REQUESTS - WASTE MANAGEMENT AND WATER USE

There were no requests for additional information from the MVLWB with respect to waste management and water use.

15 METERS & DEVICES

This section summarizes the status of meters and devices used for water volume tracking. In camp, Sensus SR II™ water meters are used to measure all water pumped into the storage tanks.

16 SURVEILLANCE NETWORK PROGRAM

The need for an SNP program was not triggered under Part G, item 7 because neither a sewage treatment facility or decline was commissioned.

17 INSPECTIONS

There was one inspection under water use permit MV2013L2-0005 in 2021. There was one inspection under land user permit MV2016C0030 in 2021.

June 29, 2021[5]:

It was noted by inspectors that the reported spill (file number 2021119) had been properly cleaned and no hydrocarbon impacts were observed. It was also noted that the fuel drums required repositioning in order to comply with Condition #79 of the land use permit. Also noted was that garbage removal was required at the site of open burn pit. These issues were addressed and remediated as shown in the email sent my Marc Ellemers on July 22, 2021. **July 8, 2021:** David-Scott McQuinn completed a water report on site with Marc Ellmers. Nothing of importance was noted and therefore no report was given in respect to the inspection.

[5] https://registry.mvlwb.ca/Documents/MV2016C0030/KDI%20-%20Inspection%20Report%20-%20June%202021%20-%20Jul15_21.pdf

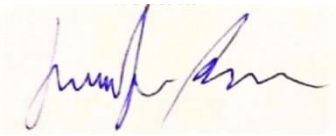
18 UPDATED PROJECT SCHEDULE

Activity / Event	Date
Winter Drilling	January 9 to April 14, 2017
Summer Drilling Begins	July 5, 2017
Water quality & flow studies	April to September 2017
Archeology Studies	July to August 2017
KDI Community Contribution Program launch	November, 2017
Winter exploration program	January to May 2018
Summer Geotech Drilling	September 2018
Renewed Winter Drilling	February to May 2019
Continued Exploration and Environmental	Summer/Fall 2019
Winter Drilling and Fall Camp Maintenance	Winter/Fall 2020
Environmental Baseline and Surficial sampling	Winter/Summer/Fall 2021
Continued Exploration and Environmental	Winter/Summer/Fall 2022

19 OTHER PLANS & STUDIES

None.

Respectfully submitted,
Aurora Geosciences Ltd.



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