2020 Annual Water License Report

Kennady North Advanced Exploration Project (AEP)

Kennady Diamonds Inc.

MV2013L2-0005

South Mackenzie District, NWT

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1 INTRODUCTION

Kennady Diamonds Inc. (KDI) is currently exploring for diamondiferous kimberlites within the Kennady North Project (the project) area located in the Northwest Territories approximately 280 kilometers (km) east–northeast of the city of Yellowknife, NT (Figure 1). At the time of writing the report, 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 (the license; MV2013L2-0005), as issued by the Mackenzie Valley Land and Water Board (MVLWB).

The Project currently operates two exploration camps, Kelvin Camp (Figure 1; Figure 2) and Bob Camp, which support exploration activities such as geology, geophysical and geochemical surveys, as well as reverse circulation and diamond drilling. Bob Camp was left unoccupied for the duration of 2020. In 2020, Kelvin Camp (595442 E, 7041096 N) hosted up to 18 people, operated four months of the year, and was accessed by air and a seasonal ice road/trail. Drilling, the main activity at the site in 2020, consisted of HQ3 diameter core drilling (1 drill hole). Drill core are sorted, with kimberlite shipped off-site for further analysis.

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 License 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 2020 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.

Activity on the Kennady North Project during 2020 consisted of a 28-day geotechnical diamond drilling program, bathymetric and resistivity geophysical surveys, mineral claim staking and a geochemical sampling survey. Several other operations, including environmental wildlife monitoring, geotechnical data logger collection, and logistical tasks, such as a large fuel haul were also completed. Winter operations in 2020 were completed with fixed-wing aircraft landing on the Kelvin Lake ice airstrip, as well as a winter trail established along the location of the usual Kelvin spur winter road, from Kelvin camp to the Gahcho Kué spur winter road. The property was accessed via helicopter in September 2020.

3 ENGAGEMENT PLAN

There were no modifications in 2020 to the Engagement Plan version 3.1[1] approved by the board.

4 CONSTRUCTION

There were no construction activities associated with Part E of the License in 2020. No engineered structures were designed or constructed. 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 2020.

6 WASTE MANAGEMENT PLAN

There were no updates or changes to the Waste Management Plan version 3.1[2] approved by the Board.

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

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 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 2020 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.

[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/MV2016C0030/MV2016C0030%20MV2013L2-0005%20-%20KDI%20-%20Waste%20Management%20Plan_V3.0.pdf

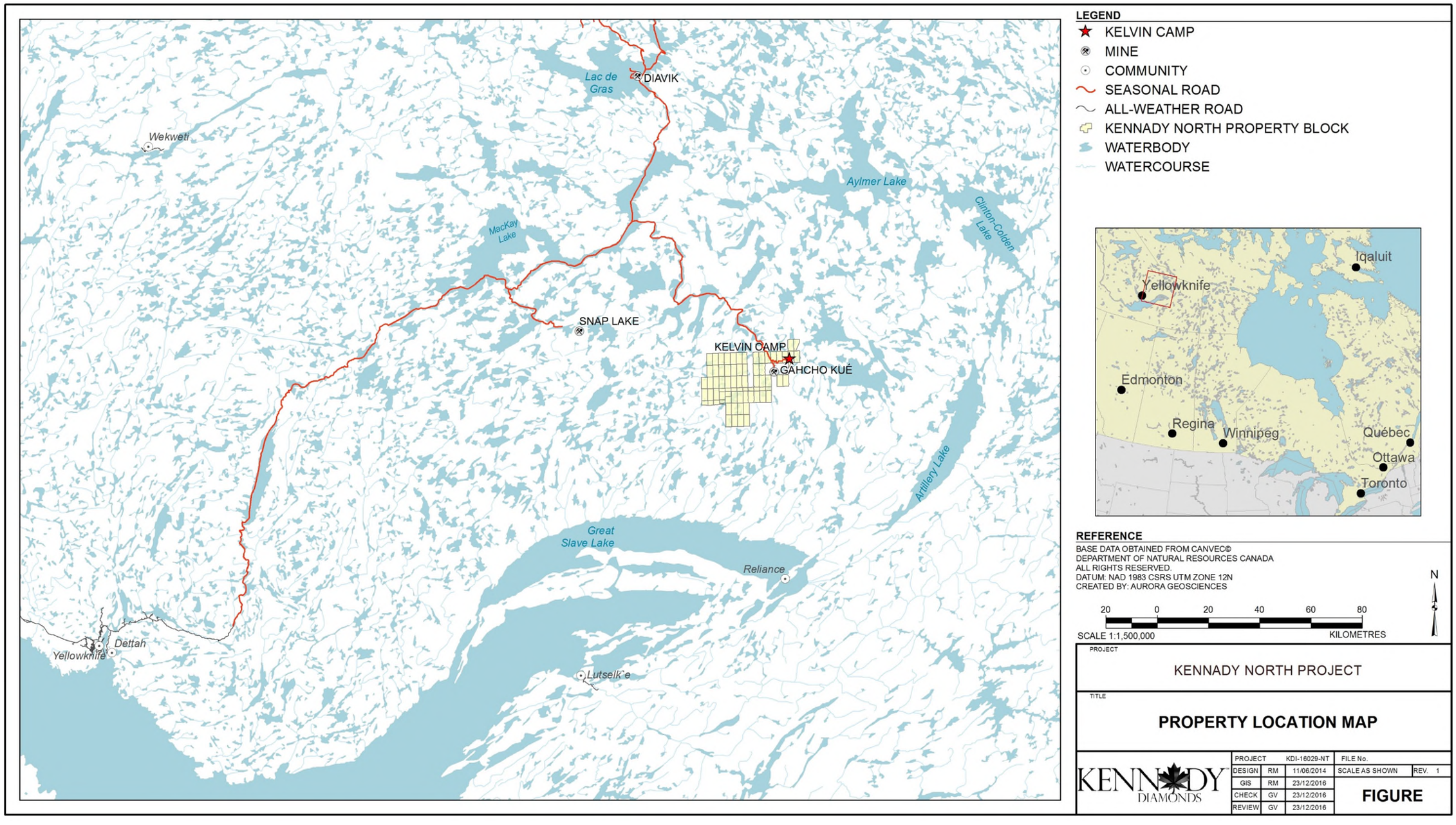

Figure 1: Regional Location of Kennady North Exploration Project.

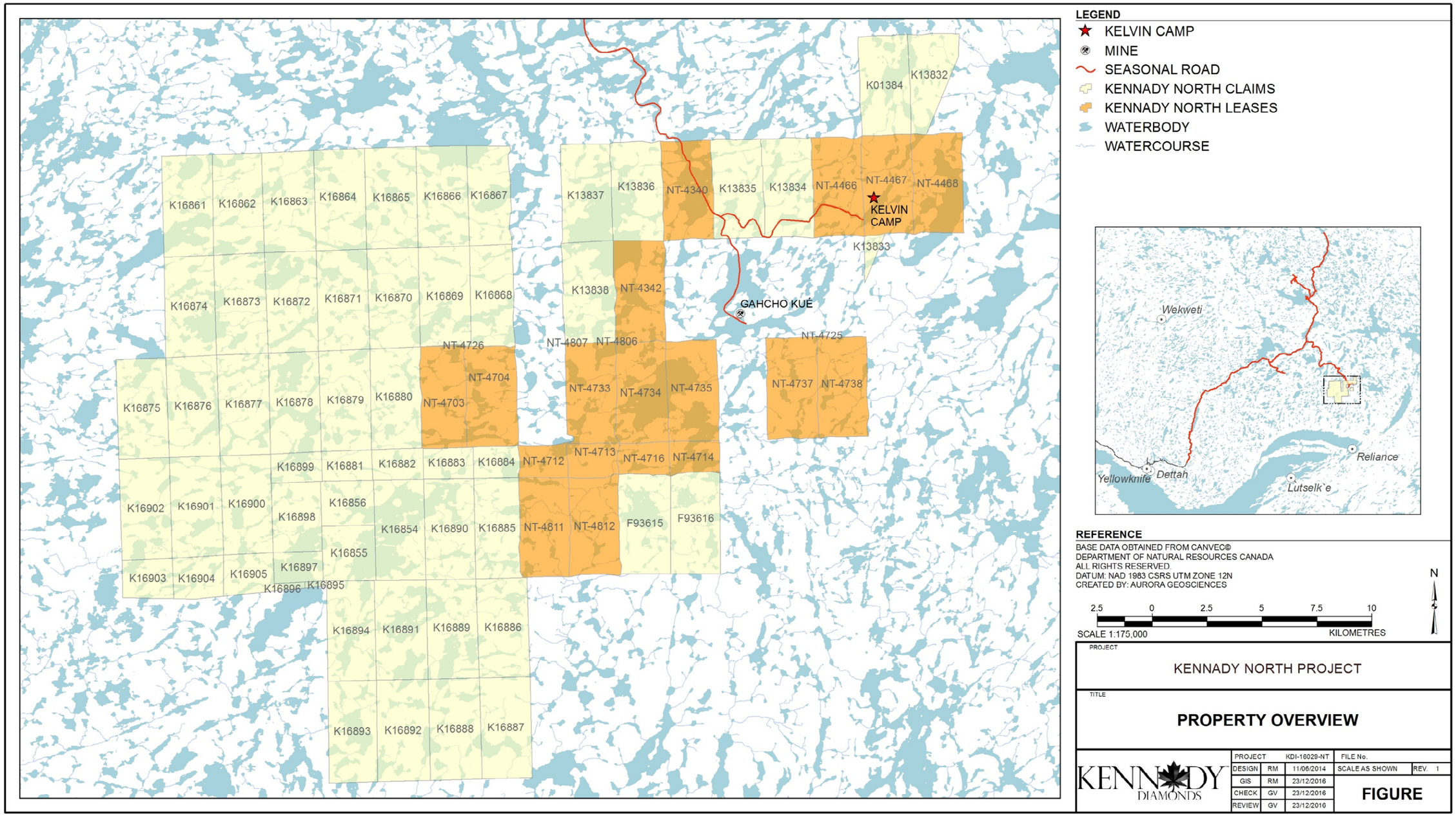

Figure 2: Location of Camps and Property Overview for Kennady North Exploration Project.

Table 1: Summary of waste associated with the project.

Month	General Camp Waste (m^3)	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	2.0	0.0	0.0	0.0
March	6.8	0.5	0.1	0.0
April	0.4	0.1	0.2	0.1
May	Not Occupied	Not Occupied	Not Occupied	Not Occupied
June	Not Occupied	Not Occupied	Not Occupied	Not Occupied
July	Not Occupied	Not Occupied	Not Occupied	Not Occupied
August	Not Occupied	Not Occupied	Not Occupied	Not Occupied
September	0.5	0.0	0.0	0.0
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	**9.8**	**0.6**	**0.3**	**0.1**

6.1.2 Liquid Waste

Grey water is discharged into a "french drain" 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 29.84 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 camp.

Month	Volume of grey water (m^3)
January	Not Occupied
February	1.98
March	25.74
April	1.54
May	Not Occupied
June	Not Occupied
July	Not Occupied
August	Not Occupied
September	0.46
October	Not Occupied
November	Not Occupied
December	Not Occupied
Total	**29.84**
Percent Increase/ Decrease from Last year	-40.14%

6.2 DRILLING

A total of 1.45 m^3 of drill cuttings were produced as a byproduct of diamond drilling (a summary is presented in Table 3). Cuttings were stored in two small sumps (locations of which are listed in Table 4), all of which are located more than 100 m from the ordinary high-water mark of any watercourse (a summary is presented in Table 3).

Table 3: Drill cuttings production by month.

Month	Drill Cuttings (m^3)
February	-
March	1.45
April	-
May	-
June	-
July	-
August	-
September	-
October	-
November	-
December	-
Total	**1.45**

Table 4: Cuttings sump locations.

Location Name	NAD 83 UTM Zone 12N	
	Easting	Northing
Kelvin Sump 1	595572	7041133
KDI-20-001 Sump	595668	7041095

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 2020.

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 2020.

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 2020.

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 2020.

11 SPILL CONTINGENCY PLAN

There were no changes to the Spill Contingency Plan version 3.0[3] in 2020.

A number of non-reportable spills were documented and reported to the inspector on a monthly basis. No reportable spills occurred in 2020.

12 INTERIM CLOSURE AND RECLAMATION PLAN

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

All drill holes are backfilled with cement to the ground surface to prevent movement of groundwater. Any drill casing left in the ground is cut off at, or just below, the ground surface to help restore the original appearance of the drill site and remove trip hazards.

13 WATER USE

Licensed water volume withdrawal: 299 m^3 per day, 109,135 m^3 per year.
Total volume withdrawn for 2020: 274.78 m^3.

Table 5: Water Consumption at Camp and drill rigs.

Month	Volume used for camp (m^3)		Volume used for drills (m^3)	Total Volume (m^3)
	Kelvin Camp	Bob Camp	KDI-20-001	
January	-	-	-	**-**
February	1.98	-	-	**1.98**
March	25.74	-	237.06	**262.80**
April	1.54	-	-	**1.54**
May	-	-	-	**-**
June	-	-	-	**-**
July	-	-	-	**-**

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

Month	Volume used for camp (m^3)		Volume used for drills (m^3)	Total Volume (m^3)
	Kelvin Camp	Bob Camp	KDI-20-001	
August	-	-	-	**-**
September	0.57	-	-	**0.57**
October	-	-	-	**-**
November	-	-	-	**-**
December	-	-	-	**-**
Total	**37.72**	**0.0**	**237.06**	**274.78**
Percent Increase/Decrease from Last Year				-61.69%

- Camp water pumped during 2020 for Kelvin Camp was sourced from Kelvin Lake in the vicinity of 595931E, 7041018N.
- Average daily water usage in Kelvin camp was 5.09 m^3.
- Average water consumption at the drills was 8.78 m^3 per drill per day.

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.

At the drills, electronic flow meters are used to track water volumes. Meter values are recorded, and the meters are reset at the end of every 12-hour shift. At the reverse-circulation drills, a single meter is used to measure the total water drawn from the lake. At the diamond drills, two meters are used (see Figure 3) to measure the total volume drawn from the lake, as well as the fresh water not used in drilling that is returned to the lake. No reverse circulation drilling occurred during 2020.

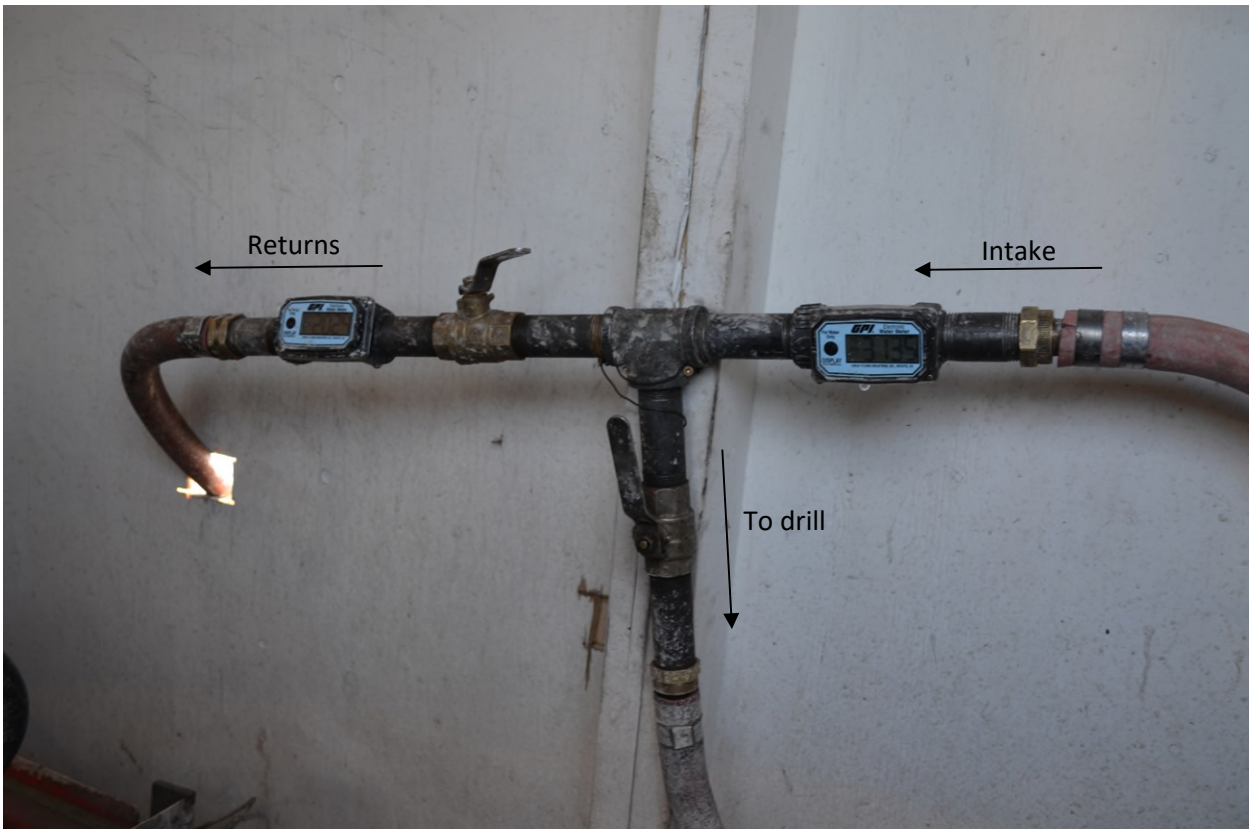

Figure 3: Water meter on drill rig.

16 SURVEILLANCE NETWORK PROGRAM

The need for a Surveillance Network Program was not triggered under Part G, item 7 because neither a sewage treatment facility nor decline was commissioned.

17 INSPECTIONS

There were no inspections under water use permit MV2013L2-0005 in 2020, nor under land use permit MV2016C0030 in 2020.

18 UPDATED PROJECT SCHEDULE

Table 6: 2020-2021 Project Activity Schedule.

Activity / Event	Date
Winter Camp Opening/Ice Construction	February 17 to March 1, 2020
Winter Diamond Drilling	March 2 to 28, 2020
Winter Fuel Haul operations	March 22 to 26, 2020
Winter Geophysics surveys	March 3 to 29, 2020

Winter Geotechnical Monitoring program	March 30 to 31, 2020
Winter Mineral Claim Staking	April 1 to 3, 2020
Winter Camp Closure	April 4, 2020
Summer Camp Opening	September 7, 2020
Summer Geochemical Sampling survey	September 8 to 12, 2020
Summer Camp Closure	September 12, 2020
Winter Camp Opening/Maintenance	*March-April 2021*
Summer Exploration Program	*August-September 2021*

19 OTHER PLANS & STUDIES

- A 1-day environmental program conducted by Golder Associates Inc. in September 2020
- A 2-week country rock characterization drill core sampling program in 2021
- A 2-week environmental program to be conducted by Golder Associates Inc. in 2021

Respectfully submitted,
Aurora Geosciences Ltd.

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Reviewed by

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