



# **GOOSE PROJECT**

## **DECEMBER 2023 MONTHLY REPORT**

**In compliance with:**  
Water Licence 2AM-BRP1831 (Amendment No.1)

**Prepared by:**  
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**Submitted to:**  
Nunavut Water Board (NWB)

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## EXECUTIVE SUMMARY – ENGLISH

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This report presents B2Gold Back River Corp.'s (B2Gold Nunavut's) December 2023 Monthly Monitoring Report for Water Licence 2AM-BRP1831 (Amendment No.1), also referred to as the Licence, issued by the Nunavut Water Board (NWB).

As set out in Part I, Item 18 of the Licence, B2Gold Nunavut is required to submit to the Board, within thirty (30) days following the month being reported, a Monthly Report. This report shall include:

- ◆ All data and information required by Part I and generated by the Monitoring Program in the Tables of Schedule I of the Licence;
- ◆ An assessment of data to identify areas of non-compliance with regulated Discharge parameters referred to in Part D and Part F of the Licence; and
- ◆ Documentation of conditions during spring freshet, major rain events, and periods of sustained precipitation including flow measurements, photographs, and notes.



## AULAPKAIYINI NAITTUQ – INUINNAQTUN

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Una uniudjut pidjutigiyaat B2Gold Back River Corp.'s (B2Gold Nunavut's) Ubluiqtirvia 2023 Tatqighiutini Munaridjutikkut Uniudjutit haffumunga Imakkut Laisia 2AM-BRP1831 (Ihuaqhaqtauyuq No.1), taiyauvaktuqlu Laisimik, tuniyauyuq hapkunanga Nunavunmi Imaliqiyit Katimayiinin (NWB).

Iliuraqtauhimajumi uvani Ilangani I, Item 18 uumani Laisimi, B2Gold Nunavut pitqujauhimajuq tuniluni Katimajiinnun, iluani thirtyni (30) ublunik talvannga tatqirhiutimi unniutidjutimi, uuminnga Tatqiqhiutimi Unniudjutimik. Una taiguagakhaq ilaliutiyukhaq:

- ◆ Tamaita naunaipkutit hivunihijutilu aturiaqaqtut Ilagiyaani I-mi hanayauhimayulu Munarinigagut Havaamit naunaipkutini Naunaipkut I-mi Laisiuyuup;
- ◆ Ihivgiugutit naunaiyautinik naunaiyagiangani humi maliktaungitut maligagaqtut Iqainikkut kiklikhait titiraqhimayut uvani Ilangani D uvalu Ilangani F haffumani Laisimi; unalu
- ◆ Titiraqlugit qanuginiit upingaami mahaktiligaangat, nipalliqliaqnikkut, uvalu nipalukpalaanikkut ilaayut kuuknikkut aktilaangit, piksat, uvalu titiraqhimayut.

## RÉSUMÉ EXÉCUTIF – FRANÇAIS

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Ce rapport présente le Rapport Mensuel de Suivi de B2Gold Back River Corp. (B2Gold Nunavut) de décembre 2023 pour le Permis de l'Eau 2AM-BRP1831 (Amendement No.1) aussi appelé (le Permis) délivré par la Nunavut Water Board (NWB).

Comme indiqué dans la Partie I Article 18 du Permis, B2Gold Nunavut a l'obligation de soumettre au Conseil dans les trente (30) jours suivant le mois concerné, un Rapport Mensuel. Ce rapport devra contenir:

- ◆ Toutes les données et informations requises par la Partie I et générées par le Programme de Suivi dans les tableaux de l'Annexe I du Permis;
- ◆ Une évaluation des données pour identifier les zones de non-conformité avec les paramètres de Décharge réglementés mentionnés dans la Partie D et la Partie F du Permis ;  
et
- ◆ Une documentation des conditions pendant la crue printanière, les événements de pluie majeure, et les périodes de précipitations soutenues, y compris des mesures de débit, des photographies et des notes.

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## ACRONYMS AND ABBREVIATIONS

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B2Gold Nunavut	B2Gold Back River Corporation
the Licence	Water Licence 2AM-BRP1831 (Amendment No.1)
MLA	Marine Laydown Area
The Goose Mine	Refers to the mining operation being developed within the Goose Claims Group, and includes the open pits, the underground mine, and the on-site infrastructure such as the WRSAs, tailings storage facilities, power infrastructure, and process plant
The Goose Project	Encompasses the Goose Claims Group, Goose Mine, the WIR and the MLA
STP	Sewage Treatment Plant
WIR	Winter Ice Road
WRSA	Waste Rock Storage Area

## 1. INTRODUCTION

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The Goose Mine is a gold mine located within the western Kitikmeot Region of southwestern Nunavut. It is situated approximately 400 km southwest of Cambridge Bay, 95 km southeast of the southern end of Bathurst Inlet (Kingaok), and 520 km northeast of Yellowknife, Northwest Territories, as illustrated in Figure 1. The Mine is located predominantly within the Queen Maud Gulf Watershed.

This report to the Nunavut Water Board was prepared to satisfy the requirements for a Monthly Monitoring Report for December 2023 for B2Gold Back River Corp.'s (B2Gold Nunavut's) Goose Project in accordance with Part I, Item 18 of Water Licence 2AM-BRP1831 (Amendment No.1), also referred to as the Licence).

As required by Part I, Items 16 and 17, all analyses were performed in an accredited laboratory according to ISO/IEC Standard 17025 and conducted as described in the most recent edition of "*Standard Methods for the Examination of Water and Wastewater*" or by other such methods approved by an Analyst.

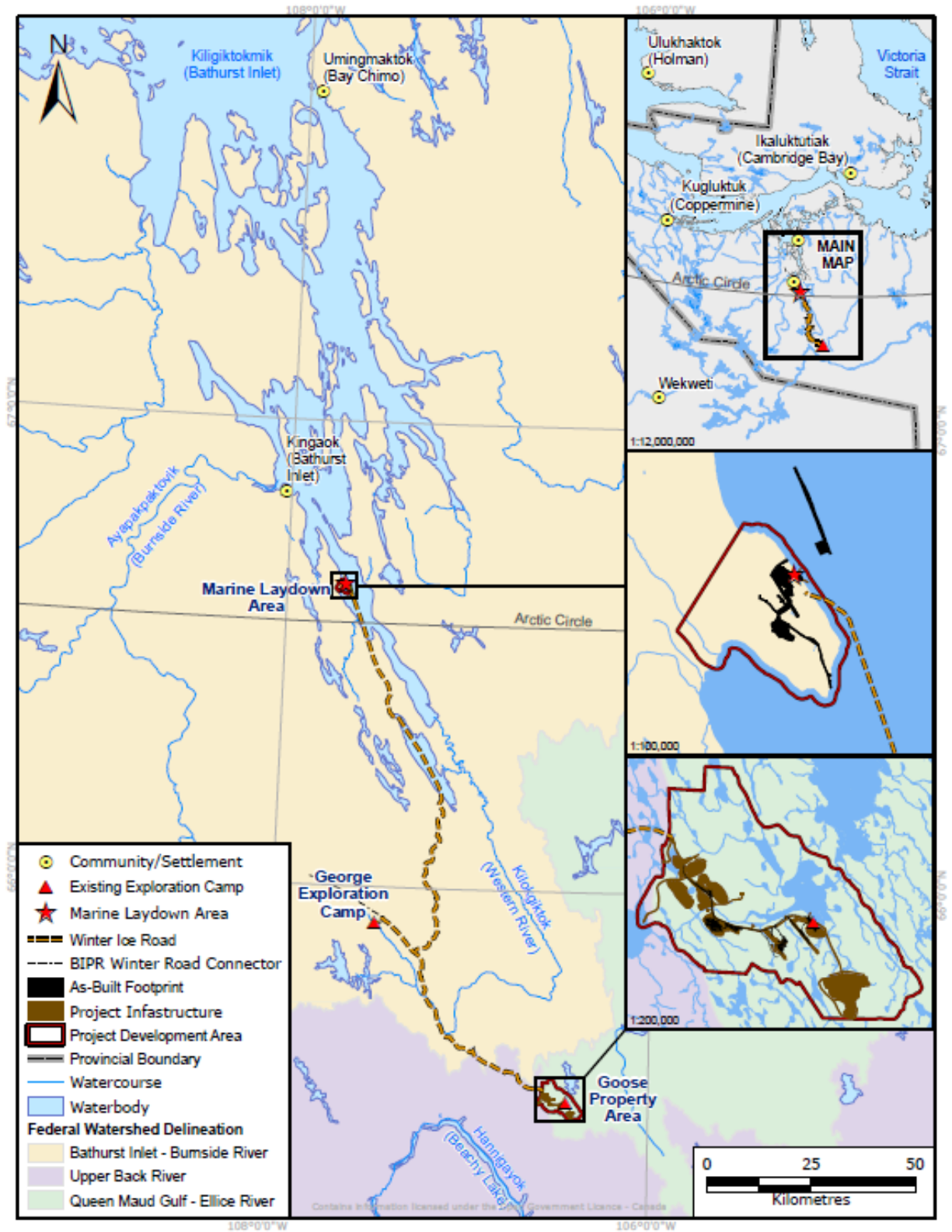


Figure 1 Goose Project Overview

## 2. REGULATORY REQUIREMENTS AND STATUS

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### 2.1 PART I, Item 5

The Licensee shall, at least sixty (60) days prior to a change in Project Phase (Construction, Operations Stages), submit to the Board a written notification of the intent to change Project phase as per Part B, Item 9. Notifications may be provided separately or in accordance with the monthly monitoring report as per Part I, Item 18.

#### **Compliance Status:**

No change in Project Phase will occur over the next 60 days.

### 2.2 PART I, Item 8

The Licensee shall measure and record the following on a Monthly basis in cubic metres or as otherwise stated:

- a. The volume of fresh Water obtained from Big Lake;
- b. The volume of fresh Water obtained from Goose Lake;
- c. The volume of fresh Water obtained from MLA Pond S1, Pond S2, Lake 3, and Lake 4;
- d. The volume of fresh Water obtained from Llama Lake, Umwelt Lake, and other Water bodies approved by the Board for dewatering;
- e. The volume of fresh Water obtained from each Water source for the Interconnection Winter Ice Road and Winter Ice Road Service/Emergency Camps;
- f. The volume of Reclaim Water obtained from the Primary Water Pond, Tailings Storage Facility and/or Tailings Facilities for process Water at the process plant or alternative treatment system;
- g. The estimated volume of Greywater and Sewage released to the environment and/or to the Tailings Storage Facility and Tailings Facilities;
- h. The volume of sludge removed from the STP and the location and method of disposal;
- i. The volume of Effluent discharged from Landfarms, Fuel Tank Farms, and Fuel Storage Facilities;
- j. The estimated volume of Contact Water, WRSA Effluent, Ore Stockpile Effluent, or other Effluent/Water streams pumped into the Primary Water Pond, Tailings Storage Facility, Tailings Facilities, and/or transferred between ponds or facilities; and
- k. The volume of Effluent discharged at the Final Discharge Point.

#### **Compliance Status:**

The following is to comply with Part I, Item 8(a, b, c, d, e, f, g, h, i, j, and k). The volumes of water obtained from Big Lake, Goose Lake, MLA Pond S1, MLA Pond S2, MLA Lake 3, MLA Lake 4, Llama Lake, Umwelt lake, and other water bodies approved for dewatering are provided in Table 2-1. The MLA used

seawater withdrawn from Bathurst Inlet. Goose Claims Group water use is undertaken under Water Licence 2BE-GOO2028.

**Table 2-1 Volumes of Water Obtained from Approved Sources this Month**

Source	Volume Used (m <sup>3</sup> )
Big Lake	0
Goose Lake	1,550
MLA Pond S1	0
MLA Pond S2	0
MLA Lake 3	0
MLA Lake 4	0
Llama Lake	0
Umwelt Lake	0
Other water bodies approved for dewatering	0

The volume of water obtained from each Winter Ice Road (WIR) water source this month is provided in Table 2-2. A total of 10,185 m<sup>3</sup> of fresh water was used this month. Some water sources not identified in the Winter Ice Road Technical Memorandum, which was submitted to NWB prior to the 2023/2024 WIR construction, were used this month. For these water sources, available water capacity has been retroactively calculated to determine whether these withdrawals could have had a negative impact on the water sources. To calculate available water capacities, the surface area of the water source (as determined by available GIS data) was multiplied by 10 cm. This calculation is considered protective of the lake habitat and has been previously used to determine water withdrawal capacity in both Nunavut and the Northwest Territories. No prescribed or calculated available water capacities were exceeded this month.

**Table 2-2 Volumes of Water Obtained from Winter Ice Road Water Sources this Month**

Source	Volume Used this Month (m <sup>3</sup> )	Cumulative Volume Used this WIR Season (m <sup>3</sup> )	Available Capacity (m <sup>3</sup> )
1	837	837	39,603
2	776	776	53,507
24	46	46	59,995
2A	302	302	8,600*
2B	158	158	10,549*
2C	588	588	8,149*
3	1,332	1,332	79,375
32	275	275	868,067
32 Pond 1	273	273	2,766*
34	4,690	4,690	32,516,148
4	551	551	19,379

Source	Volume Used this Month (m <sup>3</sup> )	Cumulative Volume Used this WIR Season (m <sup>3</sup> )	Available Capacity (m <sup>3</sup> )
4A	181	181	74,890*
5	42	42	22,275*
Goose	122	122	608,700*
Unknown	12	12	8,244*
<b>Total</b>	<b>10,185</b>	<b>10,185</b>	

**Notes:**

\* Available capacities were calculated based on lake surface area multiplied by 10 cm. Available capacity for Goose Lake is the total allowable water use for all purposes as defined in the Licence.

For all other lakes available capacity was that outlined in the 2025 WIR Technical Memorandum.

No reclaim water was obtained from these facilities for process Water at the process plant or alternative treatment system this month. These facilities have not yet been commissioned.

Approximately 1,550 m<sup>3</sup> of treated effluent was released from the Goose Sewage Treatment Plan (STP) to the tundra this month (see also Section 3). Approximately 317 m<sup>3</sup> of greywater was discharged to the tundra from the MLA this month (see also Section 3). Goose Claims Group greywater discharge is undertaken under Water Licence 2BE-GOO2028.

The volume of compressed, dewatered sludge removed from the Goose STP is estimated to be less than 30 m<sup>3</sup> this month.

No effluent was discharged from Landfarms, Fuel Tank Farms, or Fuel Storage Facilities this month.

The Primary Water Pond, Tailings Storage Facility, and Tailings Facilities have not yet been constructed.

No effluent was discharged at the Final Discharge Point this month. Per Part F, Item 16 of the Licence, an Effluent Discharge Plan will be submitted to the Board at least 120 days prior to discharge of Effluent subject to Part F, Item 21 of the Licence.

## 2.3 PART I, Item 9

The Licensee shall measure and record the following on a Monthly basis in tonnes:

- Quantity of Waste placed within the Landfill(s) and Landfarm(s);
- Quantity of Waste Rock placed into, and total stored at, each Waste Storage Area and other locations approved by the Board;
- Dry tonnes of tailings placed into, and stored at, the Tailings Storage Facility and Tailings Facilities; and
- Quantity of ore stockpiled and ore processed through the processing plant.

### Compliance Status:

The following is to comply with Part I, Item 9(a, b, c, and d). Non-hazardous wastes aligned with wastes identified as being suitable for landfilling on site are being temporarily stored in the Goose Quarry until the Goose WRSA Landfill is developed. There was no waste placed in the temporary Quarry Landfill this

month. No material was placed in either the Goose (BRP-51) or MLA (BRP-44) Landfarm this month; these facilities are not yet commissioned.

The Waste Rock Storage Areas have not yet been constructed.

The Tailings Storage Facility and Tailings Facilities have not yet been constructed. No tailings have been generated to date.

No ore was stockpiled or processed this month.

## 2.4 PART I, Item 20

No additional monitoring has been imposed by the Inspector this month.

### 3. SCHEDULE I REQUIREMENTS

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The following is to comply with Part 1, Item 4, which requires the licensee to undertake the Monitoring Program provided in Table 1 and Table 2 of Schedule I.

A summary of monitoring activities completed this month to fulfill the requirements outlined in the Tables of Schedule I of the Licence is provided below. Non-compliances are identified where applicable.

No site seepage or runoff was observed this month. The MLA used seawater from Bathurst Inlet and greywater from the MLA was discharged to the tundra. The Goose STP was in use, with treated sewage effluent released to the tundra. Freshwater was withdrawn under this Licence from Goose Lake as well as several WIR proximal water bodies. Goose Claims Group water use and waste discharge is undertaken under Water Licence 2BE-GOO2028.

#### 3.1 BRP-17 Goose Property Sewage Treatment Plant

The Goose Property STP discharges treated effluent to land in a manner to allow further over land treatment of the effluent prior to entering the freshwater receiving environment. The volume of treated sewage effluent discharged to the tundra this month is reported in Section 2.2. No flow or water was available for sampling at sampling location BRP-17 due to frozen conditions and the relatively small daily volumes discharged.

#### 3.2 BRP-24 Goose Lake Intake

The total volume withdrawn from Goose Lake under this Licence this month is reported in Section 2.2.

#### 3.3 BRP-42 MLA Greywater

The volume of greywater discharged at the MLA is reported in Section 2.2. No water was available for sampling at the sampling location downstream of the discharge point (BRP-42), likely due to frozen conditions combined with the limited volume of discharge.

#### 3.4 BRP-I Interconnection Winter Ice Road Proximal Water Bodies

The volume of water withdrawn from each lake for the WIR and WIR service/emergency camps is reported in Section 2.2.