



# **GOOSE PROJECT**

## **APRIL 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)

**B2GOLD BACK RIVER CORP.**

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## EXECUTIVE SUMMARY – ENGLISH

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This report presents B2Gold Back River Corp.'s (B2Gold Nunavut's) April 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) Qitiqqautiyuq 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 pitqujauhijajuq tuniluni Katimajiinnun, iluani thirtyni (30) ublunik talvannga tatqirhiutimi unniutidjutimi, uuminnga Tatqiqhiutimi Unniudjutimik. Una taiguagakhaq ilaliutiyukhaq:

- ◆ Tamaita naunaipkutit hivunihijutulu aturiaqaqtut Ilagiyaani I-mi hanayauhimayulu Munarinigagut Havaamit naunaipkutini Naunaipkut I-mi Laisiuyuup;
- ◆ Ihivgiugutit naunaiyautinik naunaiyagiangani humi maliktaungit maligaaqtut Iqainikkut kiklikhait titiraqhimayut uvani Ilangani D uvalu Ilangani F haffumani Laisimi; unalu
- ◆ Titiraqlugit qanuginiit upingaami mahaktiligaangat, nipalliqliaqqnikkut, uvalu nipalukpalaqqnikkut 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 avril 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.

This report to the Nunavut Water Board was prepared to satisfy the requirements for a Monthly Monitoring Report for April 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.

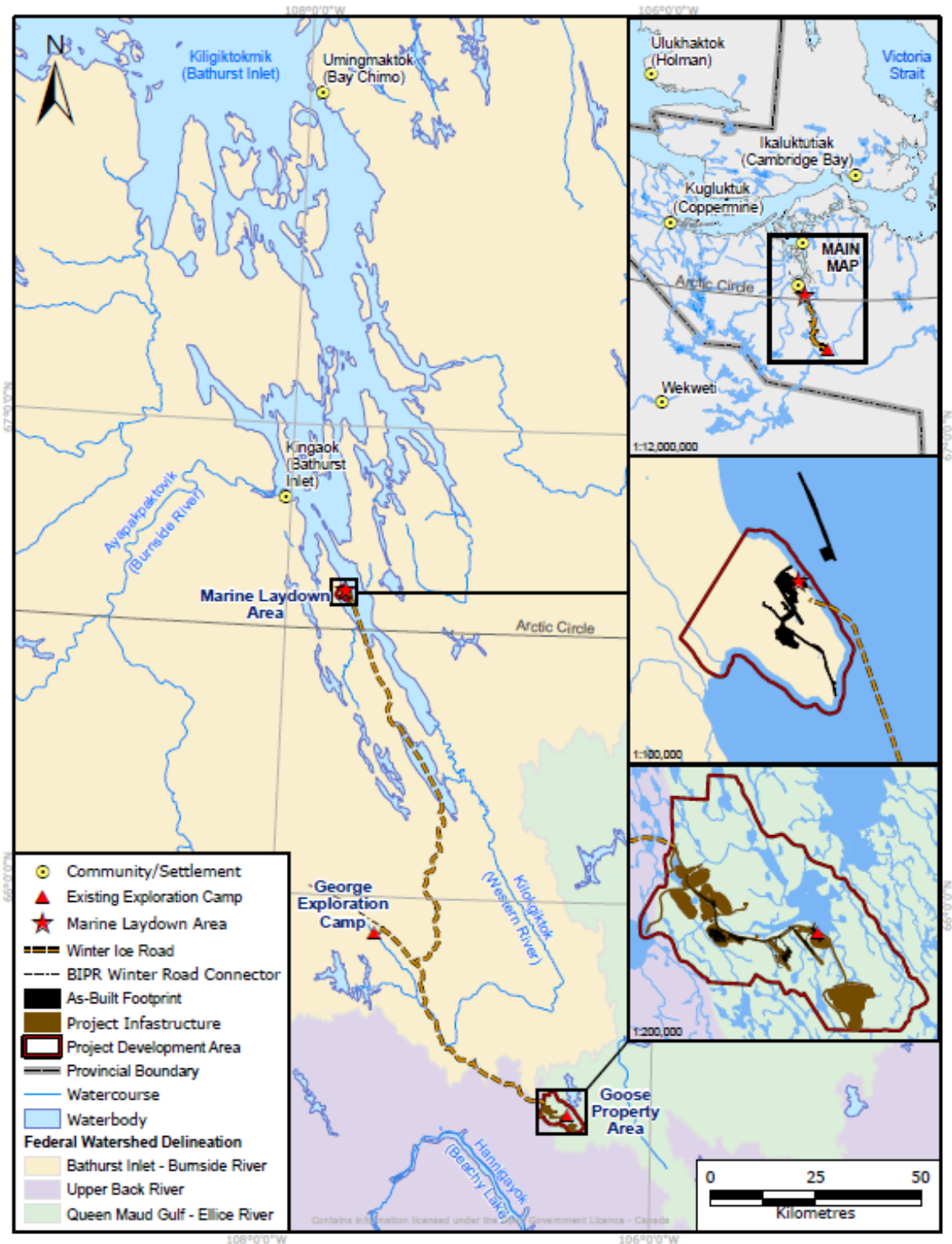


Figure 1 Goose Project Overview

## 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	64
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 17,370 m<sup>3</sup> of fresh water was used this month. Several water sources not identified in the 2023 Winter Ice Road Technical Memorandum, which was submitted to NWB prior to the 2022/2023 WIR construction, was inadvertently used this month. For these water source, available water capacity was calculated as the surface area of the water source (as determined by available GIS data) 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 have been exceeded.

**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	0	408	39,603
2	36	132	53,507
3	298	3,068	79,375
4	294	906	19,379
5	60	1,392	22,275*
6	400	2,200	25,362
8	542	3,022	113,798
9	512	1,876	53,703
10	480	1,868	29503*
11	28	556	98,188
12	360	1,066	213,902*
13	502	2,058	15,112
14	934	4,344	359,780

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> )
16	326	1,320	447,685
17	74	434	1,239,167
18	166	638	128,478
19	472	2,584	9,827
20	940	1,512	38,943
21	350	876	12,931
22	28	1,572	169,711
23	434	2,822	39,637
24	378	1,316	59,995
25	462	2,618	80,746
26	56	238	6,992
27	1,484	3,808	7,438*
28	1,638	4,340	23,951
29	546	4,396	211,044
30	924	3,892	56,674
31	0	238	17,010,361
32	1,372	12,285	868,067
33	0	931	8,643
34	1,652	8,068	32,516,148
35	0	1,736	363,392*
101	24	312	5,100*
202	254	728	8,244*
204	18	392	11,441*
281	280	280	3,656*
401	42	1,526	62,487*
8A	172	994	5,502*
8B	360	940	5,651*
9B	472	1,738	6,928*
<b>Total</b>	<b>17,370</b>	<b>85,430</b>	

**Notes:**

\*Available capacities of these lakes were calculated based on lake surface area multiplied by 10 cm. For all other lakes, available capacity was outlined in the 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 295 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 STP is not yet in operation.

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:

- a. Quantity of Waste placed within the Landfill(s) and Landfarm(s);
- b. Quantity of Waste Rock placed into, and total stored at, each Waste Storage Area and other locations approved by the Board;
- c. Dry tonnes of tailings placed into, and stored at, the Tailings Storage Facility and Tailings Facilities; and
- d. 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 with the potential to enter a freshwater waterbody was observed as conditions on site were frozen. The MLA used seawater from Bathurst Inlet and greywater from the MLA was discharged to the tundra. Freshwater was withdrawn from Goose Lake and WIR proximal water bodies for construction of the WIR. Goose Claims Group water use and waste discharge is undertaken under Water Licence 2BE-GOO2028.

#### 3.1 BRP-24 Goose Lake Intake

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

#### 3.2 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.

#### 3.3 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.