Hub-and-Spoke Complex - Chibougamau

Declaration and preliminary information

Doré Copper Mining Corp.

November 2022
16-02109750.000-1002-EN-R-0100-00

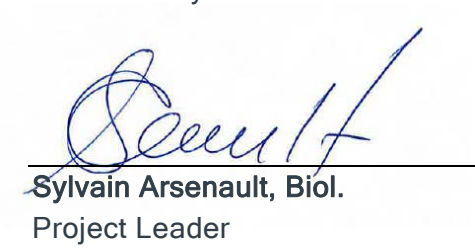
ENGLOBE

Doré Copper Mining Corp.

Prepared by:

Martin Pérusse, M.Sc.
Project Leader
Environmental Studies and Climate Change

Reviewed by:



Sylvain Arsenault, Biol.
Project Leader
Environmental Studies and Climate Change

Production team

Doré Copper Mining Corp.

President and Chief Executive Officer	Ernest Mast, Eng.
General Manager	Jean Tanguay, Geol.
Chief Operating Officer	Nick Kwong, Eng.

Englobe Corp.

Project Leader	Sylvain Arsenault
Impact Assessment Expert	Philippe Charest-Gélinas
Impact Assessment Expert	Martin Pérusse
Mapping/GIS	Jérémy Poulin, Geomatics Tech.
Publishing	Geneviève Desbiens, Editor

Revisions and publications log

REVISION No.	DATE	DESCRIPTION
0A	August 2, 2022	Preliminary version published for comments
0B	September 13, 2022	Preliminary version published with comments
00	November 2022	Final version

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1 Introduction

1.1 Proponent identity

Doré Copper Mining Corp. is listed on the TSX Venture Exchange (TSX-V) since the closing of its eligible transaction in December 2019 and stands out as a copper-gold exploration and development company in the Chibougamau area in Québec, Canada. The company, through its wholly-owned subsidiary, CBay Minerals Inc., has consolidated a large portfolio of properties in the prolific Lac Doré/Chibougamau and Joe Mann mining camps, which have produced 1,6 billion pounds of copper and 4.4 million ounces of gold. The company aims to be the next copper producer in Québec by implementing a hub-and-spoke operation model with multiple high-grade copper-gold assets feeding its centralized mill.

Doré Copper Mining Corp.

130 King St. W., Suite 1800

Toronto, ON, M5X 1E3

(416) 792-2229

– Reference person: Ernest Mast, President and Chief Executive Officer

1.2 Identity of the consultant commissioned by the proponent

Englobe Corp. (Englobe) is one of the largest companies in soils, materials and environment in Canada. Englobe offers a wide range of integrated services, based on the principles of sustainable development. The company was founded more than 60 years ago in Canada and has more than 2,500 employees (engineers, professionals, technicians and technical support staff) in 69 business places in Canada. Englobe has 38 analytical laboratories, 20 contaminated soil treatment and material recycling facilities as well as 3 organic waste treatment centres (food waste, grass clippings, municipal sludge, etc.).

Englobe Corp.

505 Parc-Technologique Boulevard, Suite 200

Québec (QC) G1P 4S9

- Sylvain Arsenault, Project Leader
  - Email: sylvain.arsenault@englobecorp.com
  - Phone: (418) 781-0191 (ext.: 105415)
  - Cell.: (418) 805-0168

2 Location and work schedule

2.1 Project title

Title: Hub-and-Spoke Complex - Chibougamau.

2.2 Project location

The project is located within the Chibougamau area, just over 5 km south-east of the town, in the administrative region of Nord-du-Québec. It is also located on the Eeyou Istchee James Bay territory, which is occupied by several Cree communities including the Oujé-Bougoumou Cree Nation.

More precisely, the project is located within two non-continuous areas, which are the Copper Rand concentrator and tailings facility that is located north of Chibougamau Lake and adjacent to the Doré Lake. The other area has two locations at the south end of Chibougamau Lake with Devlin is on the west side and Corner Bay on the east side. (see Map 1).

The main transportation route is Highway 167, which connects this region to the Lac-Saint-Jean region, further south. In addition to Chibougamau, the region also includes the town of Chapais, further west of the area along Highway 113 as well as the Cree village of Oujé-Bougoumou, which are both located about 40 km from the project.

The centre point of each of the three project sites are:

- Copper Rand: 49° 52' 44.48" N, 74° 16' 50.84" W ;
- Corner Bay: 49° 44' 36.15" N, 74° 14' 23.99" W;
- Devlin: 49° 45' 22.90" N, 74° 20' 3.64" W.

2.3 Targeted area description

The Copper Rand site, located north, consists of a mining lease, 19 mining concessions as well as 147 mineral titles, covering 6,398 ha (Figure 1).

For its part, the Devlin – Corner Bay area, located southeast, consists of a mining lease and 111 mineral titles, covering 5,446 ha (Figure 2).

These areas are completely owned by CBay Minerals Inc., a subsidiary of Doré Copper Mining Corp. (DCMC).

The Copper Rand site is located just about 5 km southeast of Chibougamau. It is part of a peninsula surrounded by Doré Lake and Chibougamau Lake respectively located northwest and southeast. The site is mostly anthropogenic since it was subject to mine operations between 1959 and the end of 2008. Since the end of the operations in 2008, the company has carried out the weekly, quarterly, and annual monitoring of the water from the tailings site final effluent. Also, the company assured to continue the Environmental Effects Monitoring (EEM) programme and the sampling for the 7th cycle was performed in June and September 2022. The site of the former industrial complex will support the new required facilities for the project while the 131 ha tailings site located about 1 km further south will be used to support the mine tailings produced by the new facilities.

The Devlin – Corner Bay site is in the extreme south of Chibougamau Lake. This area is mainly a forest and logging environment. Although mine operations and bulk sampling activities have been performed, there was no exploitation on this site. Both sites will include an underground mine and the associated facilities. Nevertheless, there will be no tailings site nor mill since all the activities related to ore and tailings treatment will be concentrated in the Copper Rand anthropogenic area.

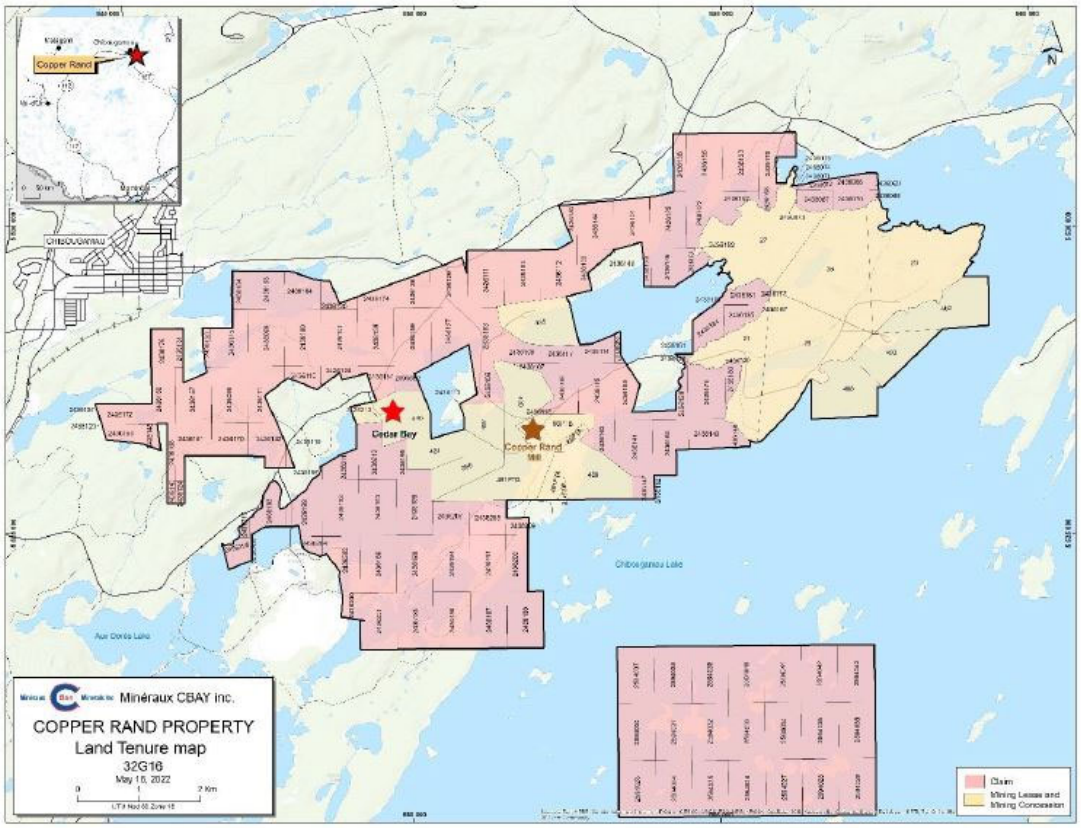
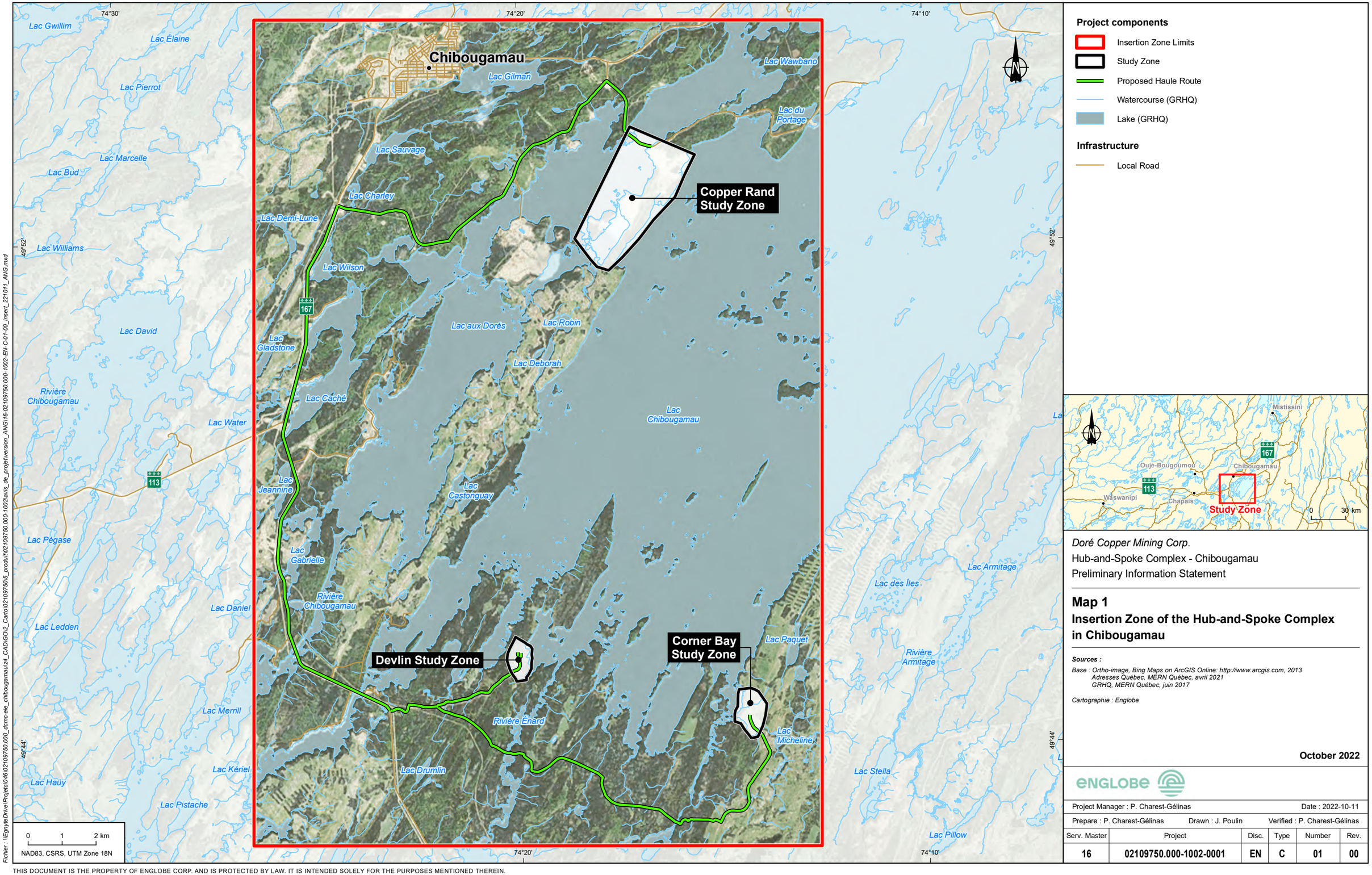


Figure 1: Copper Rand property



Project components

- Insertion Zone Limits
- Study Zone
- Proposed Haule Route
- Watercourse (GRHQ)
- Lake (GRHQ)

Infrastructure

- Local Road

Doré Copper Mining Corp.

Hub-and-Spoke Complex - Chibougamau

Preliminary Information Statement

Map 1

Insertion Zone of the Hub-and-Spoke Complex in Chibougamau

Sources :

Base : Ortho-image, Bing Maps on ArcGIS Online: http://www.arcgis.com, 2013
Adresses Québec, MERN Québec, avril 2021
GRHQ, MERN Québec, juin 2017

Cartographie : Englobe

October 2022

eNGLOBe

Project Manager : P. Charest-Gélinas				Date : 2022-10-11	
Prepare : P. Charest-Gélinas	Drawn : J. Poulin			Verified : P. Charest-Gélinas	
Serv. Master	Project	Disc.	Type	Number	Rev.
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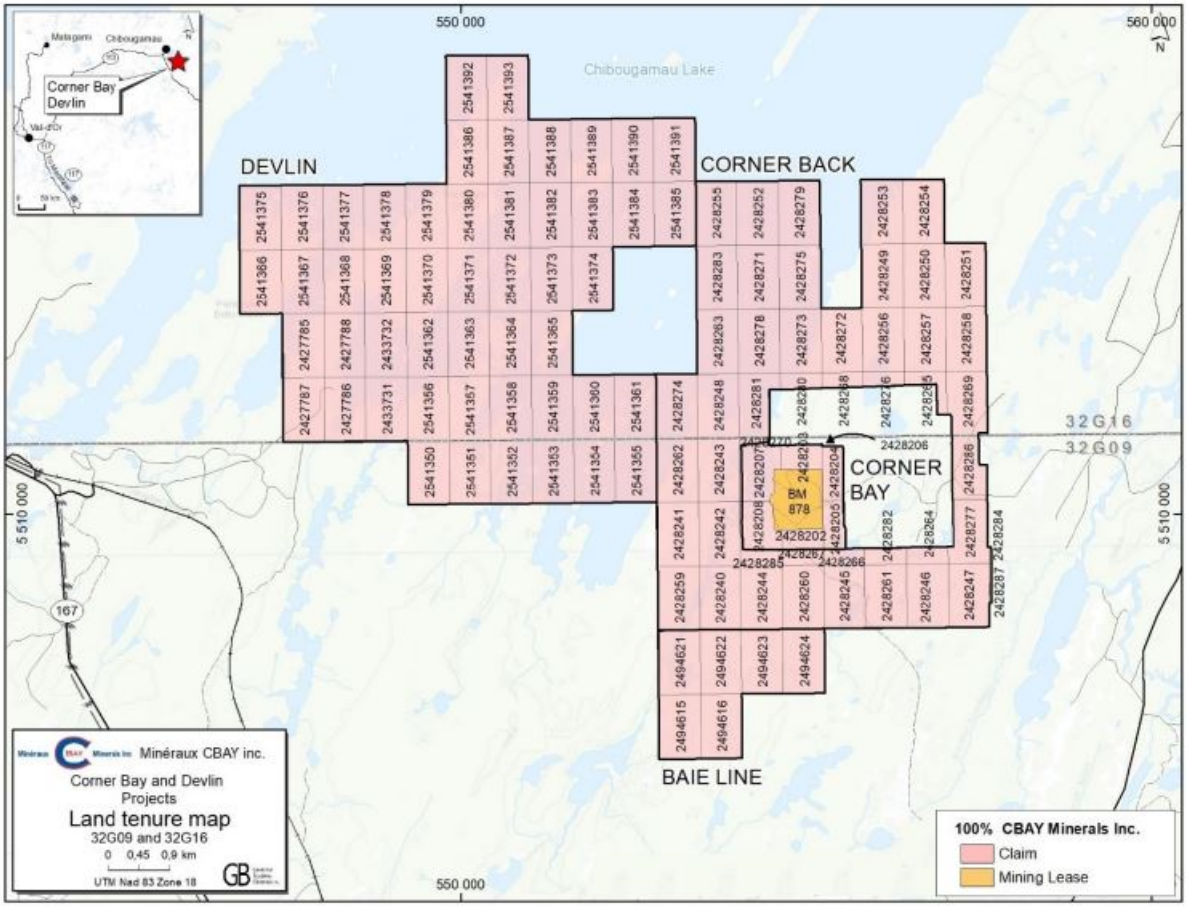


Figure 2: Corner Bay – Devlin property

2.4 Work schedule

In the project development's current stage, the work schedule for the studies and steps required for the project is described below.

The main schedule milestones are as follows:

- Recent exploration and definition of the concept: 2017-2022 ;
- Preliminary economic evaluation: Q2 2022 ;
- Preliminary information submission: Q4 2022 ;
- Feasibility study: Q2 2024 ;
- Environmental and social studies as well as environmental and social impact assessment (ESIE): 2022-2023 ;
- ESIE submission: Q1 2024 ;
- COMEX procedure: Q1 2024 to Q2 2025 ;
- Governmental decree procurement: Q4 2025 ;
- Authorizations and start of the construction; 2026 ;
- Start of the exploitation: 2026.

3 Regulation

The project is subject to the environmental impact assessment procedure in Québec, as provided for under the *Environment Quality Act* (EQA), since it is a mining development (EQA, Section 153, Schedule A). Moreover, given its location in a northern environment, the procedure of Chapter II of the EQA applies to the project, along with that of the James Bay and Northern Québec Agreement. Furthermore, the project does not launch the federal process for impact assessments under the *Impact Assessment Act*.

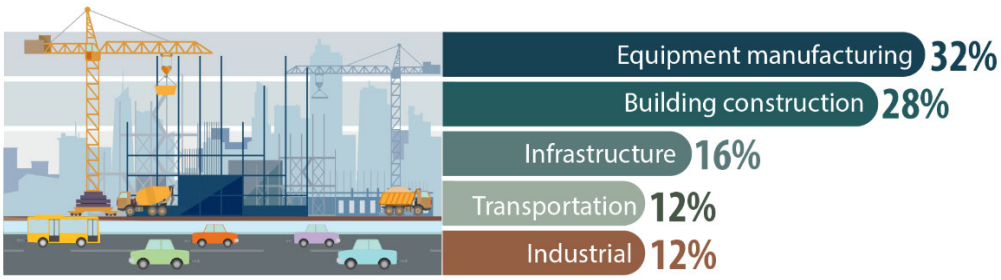
In this context, the first step of the procedure is to prepare and submit to the Administrator the preliminary information statement. This document contains the basin information enabling to understand the project nature and scope. The Administrator, which is the ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs (MELCCFP), submit the statement to the Environmental and Social Impact Evaluating Committee (COMEV), for analysis and assessment. Under its assessment, the COMEV will issue a directive and send it to the Administrator. The latter forward it to the proponent. This project directive represents for the proponent its plan specifying the scope that the latter should give to the ESIE.

On this basis, the ESIE is done by the proponent and sent to the MELCC. Then,a copy is forwarded to the Environmental and Social Impact Review Committee (COMEX) for review. As per the process, including public consultations, the COMEX will issue a directive to the Administrator for final decision and issuance of a certificate of authorization. According to the project nature, other governmental authorizations should subsequently be obtained under provincial and federal jurisdictions.

4 Project objectives and justification

4.1 World copper market

Copper is a metal used in a variety of industrial sectors such as manufacturing and construction (Figure 3).



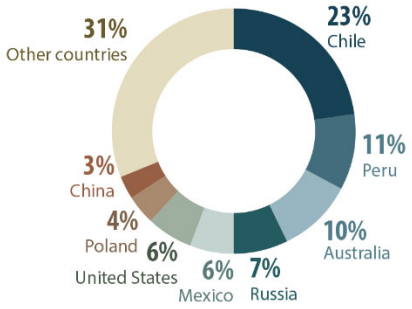
https://www.nrcan.gc.ca/our-natural-resources/minerals-mining/minerals-metals-facts/copper-facts/20506

Figure 3: Global uses of copper in 2020 (taken from Government of Canada, 2022)

Furthermore, the current green energy transition is increasing demand for copper due to its use in electricity networks, electronics and clean technologies such as electric vehicles and cleaner energy supplies. Besides, among the 17 required metals in low-carbon technologies, copper is the only one that is required for all types of energies, which means that copper demand will remain strong, regardless of the energy transition scenario or rate of change (World Bank Group, 2020).

Globally, copper production is distributed across several countries. In 2020, the main producer countries were Chile, Peru, China, the Democratic Republic of the Congo and the United States, these countries representing 60% of world production (Figure 4). Canada remains a small producer,

representing 2.9% of world production in 2020. Concerning world reserves, these are also distributed all around the world.



https://www.nrcan.gc.ca/our-natural-resources/minerals-mining/minerals-metals-facts/copper-facts/20506

Figure 4: World reserves of copper, by country, 2020 (provisional data) (taken from Government of Canada, 2022)

World copper demand shows an increase of 1.8% by the end of the decade (DCMC, 2022), which is comparable to two new large mines each year.

Thus, the demand for copper as well as prices are expected to be sustained over the next few years (see Figure 5, copper demand in thousands of tonnes).

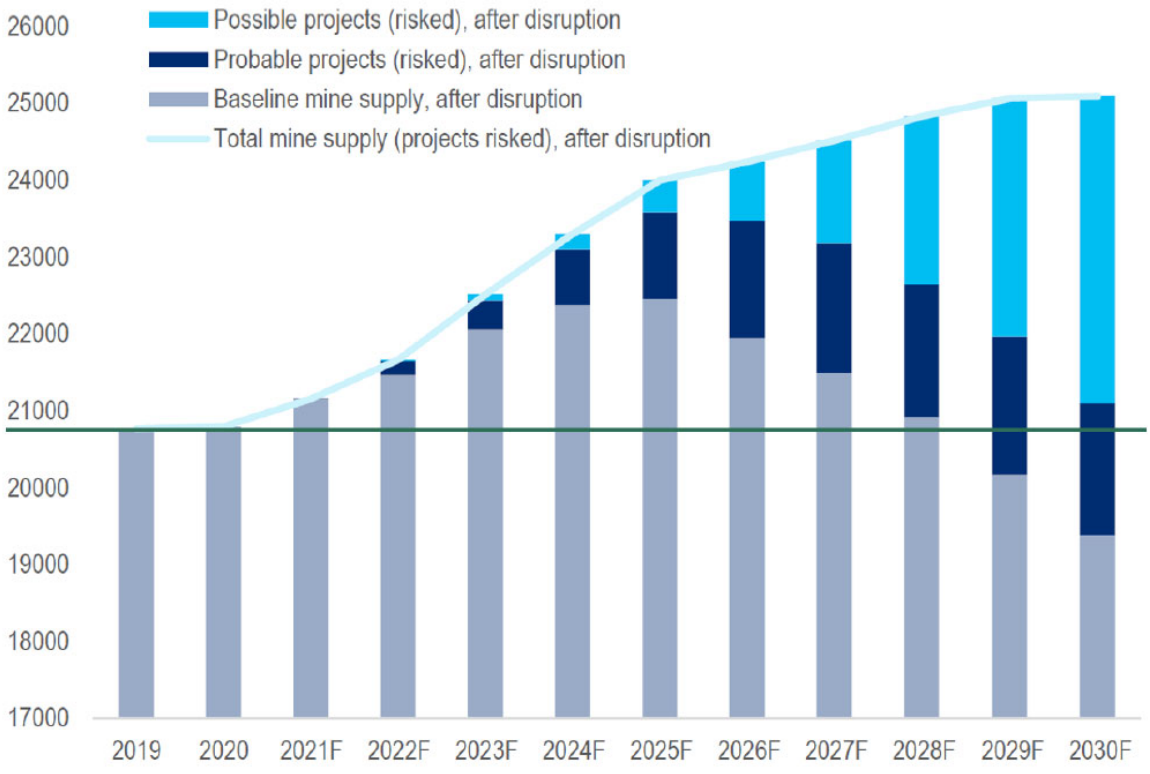


Figure 5: Annual copper supply – Demand projection to 2030 (taken from DCMC, 2022)

4.2 Québec objectives

SUSTAINABLE MOBILITY - 2018

In 2018, the Government of Québec made public its *Politique de mobilité durable* (Government of Québec, 2018). Sustainable mobility is intended for the transportation of people and goods, in a framework compatible with human and ecosystem health. Sustainable mobility particularly implies the smallest carbon footprint mobility. In this context, the Government of Québec is aiming to significantly reduce fossil-fuel consumption and to develop the ground transportation equipment sector to support the implementation of sustainable mobility.

LITHIUM-ION BATTERY SECTOR - 2019

In support of sustainable mobility, Propulsion Québec released in 2019 a study assessing the development potential of the lithium-ion battery industry in Québec (Propulsion Québec, 2019). Indeed, to address climate change, the world has entered a new era regarding the transportation industry marked by electric and autonomous vehicles.

To succeed, this transformation will have to notably rely on battery production to support the growth of the global electric vehicle market. The race is thus launched for innovative governments and companies to position themselves in this market.

Obviously, Québec has undeniable advantages allowing the province to position itself as one of the players in this transformation. We think of our proximity to automobile manufacturers, to its stable and clean hydroelectric power, to the core of businesses already operating, to the academic expertise as well as with the workforce and the diversified mineral resources required and available in Québec.

In that context, the strong global demand related to this sector combined with Québec's strengths imply the creation of opportunities that Québec would be able to seize. Among these, the development and strengthening of the capacities of core resource producers as mineral resources seem to be one of the keys allowing Québec to take its place among the lithium-ion battery sector players and play fully a part in energy transition.

DEVELOPMENT OF CRITICAL AND STRATEGIC MINERALS - 2020

The transformation of the global economy and the rise of new technologies cannot be carried out without the mineral resource sector's contribution. It is in this perspective that the Government of Québec outlined, in 2020, its *Québec Plan for the Development of Critical and Strategic Minerals 2020-2025* (QPDCSM) (Government of Québec, 2020a). Critical and strategic minerals, including copper, is of economic importance for key economic sectors, involve a high risk for supply, while not having commercial substitutes.

Due to its critical and strategic mineral reserves, Québec is disposed to develop these mineral resources to meet supply needs both in Québec and internationally.

For this purpose, the QPDCSM will support research and development to accelerate the acquisition of knowledge, will promote the implementation of these emerging sectors as well as new mining sites and support transformation and recycling throughout Québec's territory to support the development of a value-added product industry and benefit from Québec's mineral resources.

GREEN ECONOMY - 2020

The objectives regarding transportation, new technologies and mineral resource development fall within a wider framework of electrification of the economy and fight against climate change. It is in this effort that the Government of Québec released in 2020 its *2030 Plan for a Green Economy – Framework Policy on Electrification and the Fight against Climate Change* (Government of Québec, 2020b).

Throughout the challenge of climate change, the Government of Québec wants to make the climate change fight/mitigation and adaptation a major lever for transformation and economic development.

Electrification of Québec's economy, particularly in the transportation sector, will be the centre of this huge project and will be supported by a key advantage, the clean energy accessibility, with 99% of its energy coming from renewable sources.

Eventually, the objective is to lead Québec to carbon neutrality by 2050. It is the reason why this transition as well as electrification of Québec's economy will involve different sectors of Québec society: transportation, land use planning, industries, buildings, agricultural production, waste management, electricity exports and bioenergy, to name a few.

The mineral resources in Québec's underground will be one of the means of achieving the electrification of Québec's economy.

ENERGY TRANSITION, INNOVATION AND EFFICIENCY - 2022

Electrification is at the core of the fight against climate change since almost 70% of the greenhouse gas emissions in Québec are from energy sources and are mostly related to fossil fuel consumption. The key to the success of the fight against climate change thus depends on the energy transition success, hence the *Plan directeur en transition, innovation et efficacité énergétiques du Québec - Mise à niveau 2026* (Government of Québec, 2022).

Energy transition guiding principles are based on three pillars: the total reduction of energy consumption, energy efficiency and direct electrification of all possible activities.

This energy transition will involve several sectors of Québec's society, including land-use planning, transportation and mobility, industries, residential, commercial and institutional buildings, autonomous electrical systems, green hydrogen and bioenergies as well as technical innovation.

Various measures will also focus on Québec's society to achieve all these components and allow for a just transition. It is thus estimated that the path towards carbon neutrality will be a source of sustainable innovations that will benefit the communities.

EEYOU ISTCHEE TERRITORY AND CREE NATION

Since the first agreement between the Government of Québec and the Cree Nation, the James Bay and Northern Québec Agreement in 1975, several subsequent agreements allowed to confirm the nation to nation collaboration and the emphasis on territory's Cree governance. These include the Paix des Braves in 2002, the *Agreement on Governance in the Eeyou Istchee James Bay Territory between the Cress of Eeyou Istchee and The Government of Québec* in 2012 and more recently La Grande Alliance in 2020.

We should also specify that the *Cree Nation Mining Policy* adopted in 2010 aiming at developing a standardized, consistent and effective approach for Cree involvement in mining projects based on three pillars: promotion and support of mining activities, mining and sustainable practices as well as transparency and collaboration process (Grand Council of the Crees [Eeyou Istchee]/Cree Nation Government, 2022).

More recently, La Grande Alliance is a memorandum of understanding that will enable to plan and execute a 30-year infrastructure program aiming at facilitating the transportation of goods and people as well as increase the natural resource value of the territory while lowering transportation expenses (La Grande Alliance, 2022). Among others, the program implementation will ultimately allow Québec to position itself as an important player of the global mining sector for critical minerals.

Although having economic objectives, this program presents a balanced approach where environmental and social objectives will be involved, notably by the development of protected areas and by the improvement of participation and quality of life conditions of communities.

This memorandum of understanding confirms the vision for the development of the territory where the Cree Nation governance is expressed.

4.3 Project objectives

As previously mentioned, the global market is changing while the transition to electrification of the economy to a greener economy is in progress. Such a transition will require several changes and transformations for many areas of the global economy, but also for communities. Moreover, regarding communities, climate change impacts and the necessary adaptation fight for such a transition.

Although advisable, civil society just as much as governments have clearly proven that this transition will be demanding regarding time and resources. Indeed, dependency on fossil fuel being closely related to the development of our societies, will require actions at all levels of society to advance their replacement.

Nevertheless, regardless of the chosen scenario and especially the rate at which this fossil fuel alternative scenario will begin to materialize, the use of critical and strategical minerals remains essential. The World Bank has very clearly outlined (World Bank Group, 2020), copper is central, whatever the chosen energy strategy since copper is required in all forms of energies.

It is in this unique transformation and transition context that the Hub-and-Spoke Complex – Chibougamau project is implemented. The latter is built on three main objectives:

– Meet global copper market by participating in copper concentrate supply ;
– Respond to the appeal of the Government of Québec by supporting Québec's positioning strategy in this energy transition and by participating actively through the development of a critical mineral project in Québec, copper, which is necessary to supply Québec and other transformation plants ;
– Develop a project that respects the governance and values of the territory as well as the Cree Nation of Eeyou Istchee.

Furthermore, Doré Copper Mining Corp. has an offtake agreement with Ocean Partners for the sale of its future concentrate copper production produced through the project (Doré Copper Mining Corp., 2022). This agreement demonstrates the potential of the project and the copper market demand.

5 Project overview

The information regarding the project overview is mainly taken from the most recent technical report (NI 43-101) for the preliminary economic assessment (Doré Copper Mining Corp., 2022).

5.1 Project alternatives considered

As part of the project development and the environmental and social impact assessment (ESIA) preparation, several alternatives will be analyzed. These scenarios will analyze three types of alternatives: site (identification of the sites that will develop), arrangement (identification of the location and footprint of facilities) and technology alternatives (identification of equipment choices and procedures) alternatives.

This alternative analysis aims to make the best possible choices for the project that are technically achievable according to their economic profitability and their capacity to minimize environmental and social impacts.

These scenarios as well as their analysis will be outlined and elaborated in the ESIA.

5.2 Site history

DEVLIN

The Devlin property was discovered in 1972 and was subject to exploration programs until 1981 when a bulk sample was taken from the mine.

A pre-feasibility study was carried out in 1982, which was followed by some work and various owner changes, until its acquisition in 2013 by Cbay Minerals.

Figure 6: Work site - Devlin

CORNER BAY

The Corner Bay site was subject to an initial exploration between 1956 and 1982 that allowed the Corner Bay deposit discovery. Then, several exploration programs were carried out over the decades that followed, through owner changes.

Over this period, studies aiming at determining the exploration potential have also been performed, as a pre-feasibility study carried out by Riocanex in 1984 and a technical report made by Campbell in 2006, before the bankruptcy of the latter in 2009. Following a resource estimate made by CBay Minerals in 2012, the property remained quite inactive until its acquisition in 2017 by AmAuCu Mining Corp., which is Doré Copper Mining Corp.'s predecessor. Since the acquisition, DCMC completed about 100,000 m of drilling and increased the mineral resource estimate by almost 6 times.

An access ramp, leading to underground infrastructure, a surface water management basin as well as levelled and compacted running and working areas, was left from the previous works carried out on the site. (Figure 7). A bulk sample was taken from the deposit and treated at the Copper Rand concentrator.

Figure 7: Current work site condition - Corner Bay

COPPER RAND

Deposits on the Copper Rand property were discovered in 1927. Several exploration works were carried out over the decades that followed, over owner changes. Mining production occurred from the late 1950s. The Copper Rand mine was the largest past producing mine and operated from 1959 to 2008 at the time the mine and the industrial complex closed in December 2008.

The Copper Rand site comprises the largest tailings facility as well, constructed in the 1970s (Figure 8). This facility is 131 ha and contains approximately 13 Mt of tailings. In addition to the tailings facility, the industrial complex is on the site.

Figure 8: Tailings facility – Copper Rand

5.3 Geology, exploration and resource estimate

5.3.1 Geology

The Corner Bay and Devlin deposits are located at the northeastern extremity of the Abitibi subprovince, in the Superior province of the Canadian Shield. Throughout the world, the Abitibi subprovince is considered as one of the largest and best-preserved greenstone belts and has several gold and base metal deposits. The total value of the minerals produced in this subprovince was estimated to be greater than $120 billion 2005.

5.3.2 Summary of the recent exploration works

At the Devlin – Corner Bay property, surveys were conducted in 2020 and 2021 and geophysical survey have been carried out in 2021. Downhole surveys identified a zone of weak mineralization and limited potential extensions of existing mineralized zones along strike at Corner Bay. Geophysical surveys did not allow to identify any economic mineralization. The exploration potential at Corner Bay remains moderate since the company identified the limits of the mineralization to the north and south. The deposit is open at depth and, moreover, there is a potential for finding parallel zones of mineralization.

Drilling at Corner Bay was carried out between 1973 and 2008 by previous operators, which drilled 254 holes. Doré Copper and its predecessor (AmAuCu) carried out several drilling programs from 2017 to 2021, by drilling 70 holes. The 2022 drilling program at Corner Bay is ongoing.

Drilling at Devlin was carried out in two periods: from 1974 to 1982 and from 2013 to 2014, for a total of 177 holes. Doré Copper has not yet carried out any exploration drilling program at Devlin. Nonetheless, in 2021-2022, Doré Copper drilled seven holes totalling 669 m from the same platform for metallurgical testing and ore sorting.

Doré Copper drilled eight holes totalling 2 850 m to the north of the Copper Rand property in 2021.

5.3.3 Mineral resources

The mineral resource estimates for the sites of Corner Bay, dated 2022, and Devlin, dated 2021, have been assessed and presented in the context of the recent preliminary economic study as part of the project (tables 1 and 2). The metals of interest at these sites are copper as well as minor amounts of by-products made of gold, silver and molybdenum, whose potential will be subject to an analysis during the feasibility study.

Table 1: Mineral resources – Devlin site

	Tonnage 000 t	Grade % Cu	Grade g/t Au	Contained metal Mlb Cu	Contained metal 000 oz Au
Measured	121	2.74	0.29	7.3	1.1
Indicated	654	2.06	0.19	29.7	4.0
Inferred	484	1.79	0.17	19.2	2.7

Table 2: Mineral resources - Corner Bay site

	Tonnage 000 t	Grade % Cu	Grade g/t Au	Contained metal Mlb Cu	Contained metal 000 oz Au
Indicated	2,677	2.66	0.26	157	22
Inferred	5,858	3.44	0.27	442	51

5.4 General layout of the proposed alternatives

The project is defined according to two distinct but complementary sectors:

- The Devlin – Corner Bay sector:
  - dedicated to mining where two underground mines and ancillary facilities will be located;
- The Copper Rand sector:
  - dedicated to ore processing and tailings management where the industrial complex and tailings facility will be located.

5.4.1 Devlin – Corner Bay area

The overall plan for the Devlin – Corner Bay facilities is presented in Maps 2 and 3 (Appendix 1).

In addition to the access ramp, the main infrastructures will be: waste rock piles, topsoil piles, water treatment installations, various buildings, roads and parking. The general installation plan for the Corner Bay and Devlin area is presented in maps 2 and 2 of Appendix 1.

The waste rock stockpile at Corner Bay is larger than the Devlin stockpile because of the ore sorter at the Corner Bay site. This will treat Corner Bay and Devlin material prior to sending it to the Copper Rand concentrator. The Corner Bay site also has a stockpile to receive potential acid generating waste rock.

As the Corner Bay and Devlin sites are not directly connected, a round-about route using highway 167 is presently required. In order to avoid this long route, a road will be established mainly using existing logging roads to shorten the distance between the sites and avoid the use of highway 167.

5.4.2 Copper Rand area

The overall plan for the Copper Rand facilities is shown in Map 4 (Appendix 1).

As previously mentioned, the Copper Rand site will include facilities to permanently receive, process and store tailings. The design of the site is to allow for new installations essentially in the same footprint as the current.

As a result, very few new buildings will be required on the site of the industrial complex since the strategy will be to focus on the rehabilitation of existing buildings, including the concentrator building, storage facilities and other buildings of various functions.

Similarly, the tailings facility will also be located in the footprint of the former tailings facility currently present and located approximately one kilometre southwest of the industrial complex.

5.5 Planned activities in the construction phase

The various construction activities required prior to commissioning will be described in detail in the ESIA.

These construction activities will include:

- Field preparation work;
- Deforestation and levelling;
- Dewatering of underground workings;
- Management and maintenance of vehicles and equipment;

– The construction of the required facilities and buildings;
– Upgrading existing and retained facilities;
– Water and discharge management;
– Hazardous materials management;
– The management of residual materials produced;
– Management of required goods and services.

Preliminary, the preparatory work required by all the activities prior to the start of the extraction will last 6 months for Devlin and 12 months for Corner Bay. For the Copper Rand Industrial Complex, repairs and upgrades will take place over a period of approximately 12 months.

5.6 Mining infrastructure during the production phase

5.6.1 Devlin – Corner Bay mining area

The mining infrastructure will be located in the Devlin – Corner Bay area where two underground mines will be put into operation.

DEVLIN

At Devlin, access to the deposit will require the widening of the existing ramp (305 m) and existing galleries (364 m) to 5 m wide and 5 m high. The ramp will then be divided into two main accesses (east access and west access) to allow access to all parts of the mine.

Two mining methods are chosen for the Devlin deposit: 1) the mining method known as *drift and fill with slash* ; and 2) the room and pillar method with partial recovery of the pillar.

All underground mobile equipment will be diesel equipment.

Each proposed mine will have permanent and mobile refuge stations. An emergency exit access will be installed in the ventilation chimney to accommodate staff while allowing ventilation of levels and sub-levels.

The ventilation was designed using VentSim Visual software and the airflow requirements will comply with *the Regulation respecting occupational health and safety in Québec mines* , chapter S-2.1, r. 14.

Compressed air is required underground for various underground equipment, including portable drilling equipment, and general mine needs. Each mine site will have a new surface compressed air system that will include air compressors, an air dewatering system, vertical tanks, purifiers and other required valves and indicators.

The site includes an ore storage area (1,000 tonnes) and two waste rock piles. These two waste rock piles can store non-acid generating and potentially acid-generating materials with a combined capacity of 123,433 tonnes. The size of the temporary ore pile is small since it is a transfer area between the haul trucks of ore arriving from the underground mine and road transport trucks.

Topsoil, excavated during site preparation, will be stored north of the staff parking lot on the overburden pile. This material may be used for the restoration and rehabilitation of the site after its closure.

The mining water management and treatment infrastructure will include a 1,800m^3 mining wastewater collection basin, an autonomous containerized or mobile water treatment plant, and a 600 m^3 polishing basin. The mine water from the underground mine will be pumped to the wastewater collection basin that feeds the treatment plant, which will then send the treated water to the polishing basin before discharging it to the natural environment. Domestic wastewater will be collected in holding tanks and will be disposed of off-site by a specialized local contractor.

Other surface facilities include, but are not limited to, the following:

- Gatehouse (guard post – security);
- Employee parking;
- Offices for mining operations personnel;
- Maintenance workshop;
- Diesel refueling station;
- Petroleum tanks (liquid products);
- Storage containers;
- Air compressor.
- Powder magazines.
- Electrical substation

CORNER BAY

The underground operation at Corner Bay will use the existing portal and the approximately two kilometres of galleries extending over three levels to a depth of 115 m. The existing main ramp will be widened to 5.5 m wide by 5.0 m high to accommodate transport trucks.

Mining with the long hole method was chosen for the Corner Bay deposit. Two long hole operating options were chosen for Corner Bay: long holes with pillars and Avoca.

It is currently planned that the mobile equipment will be diesel powered. Nevertheless, the use of electric mining equipment is being assessed as part of the feasibility study.

As with Devlin, underground mining at Corner Bay will feature a combination of permanent and mobile refuges stations. All levels are connected by sub-levels that can be used as emergency exits. These sub-levels will be strictly reserved for the movement of personnel between levels in the event of an emergency evacuation.

The ventilation was designed using VentSim Visual software and the airflow requirements will comply with *the Regulation respecting occupational health and safety in Québec mines*, chapter S-2.1, r. 14.

Compressed air is required underground for various underground equipment, including portable drilling equipment, and general mine needs. Each mine site will have a surface compressed air system that will include air compressors, an air dewatering system, vertical tanks, purifiers and other required valves and indicators.

The site provides for an ore storage area of 7,000 tonnes and two piles of waste rock, for both non-acid generating and potentially acid generating materials, with a combined capacity of 2.9 Mt. All potentially acid generating materials will be moved underground before production ends.

The Corner Bay site will be equipped with ore sorting equipment to optimize transportation to the mill (significant reduction in trucking, greenhouse gases and tailings volume) and the utilization of the concentrator. To achieve this, the site will require a series of small storage piles for ore extracted first from operations in the Devlin area and then from Corner Bay. Storage areas for non-economic and pre-concentrated waste rock will also be provided. The footprint of these infrastructures will be optimized and reduced as much as possible, providing only sufficient capacity to allow efficient operation of the ore crushing and sorting facilities.

Topsoil, excavated during site preparation, will be stored north of the waste rock pile. This material may be used for the reclamation of the site at closure.

The site will include infrastructure for water management and treatment. They will include a 3,600^{m3} mining wastewater collection basin, an autonomous containerized or mobile water treatment plant and a 1,200 m3 polishing basin.

The mine water from the underground mine will be pumped to the wastewater collection basin that feeds the water treatment plant, which will then send the treated water to the polishing basin before discharging it into the natural environment. A pump located in the polishing basin will allow the recirculation of water for the operation of the mine.

Domestic wastewater (greywater or black water) will be collected in retention tanks and will then be disposed of off-site by a specialized local contractor.

The size of the water collection basin is designed to store three days of mine pumping, while the size of the polishing basin is designed to hold one-third of the capacity of the collection basin. Both water collection and polishing basins will be equipped with membranes to isolate their contents with the natural environment and the underlying soils.

Other surface facilities include, but are not limited to, the following:

- Gatehouse (guard post - security);
- Employee parking;
- Administrative offices
- Offices for mining operations staff and cloakroom;
- Maintenance workshop;
- Storage building;
- Diesel refueling station;
- Petroleum tanks (liquid products);
- Ore sorter;
- Crushers and conveyors;
- Air compressors;
- Powder magazines.
- Electrical substation

5.6.2 Copper Rand ore processing area

5.6.2.1 Processing infrastructure

The current Copper Rand site is occupied by an industrial complex from the historical mining period that includes the following buildings: concentrator, laboratory, warehouse, garage, administrative building, power sub station and other facilities.

The majority of buildings and equipment currently in use will be rehabilitated to accommodate future mining facilities. The crushing equipment in the concentrator will be replaced by the crushing system at Corner Bay. Storage silos will be converted into a 1,125m^2 dome to receive the ore, as well as a covered hopper and conveyor to feed the concentrator. A 350 m^2 expansion of the concentrator building will be carried out to accommodate the tailings filtration plant. Changes will be made to the current concentrator, including the replacement of a rod mill and four ball mills with a single new modern ball mill. A conditioning tank will also be added while the concentrate filtration capacity will be increased.

The Copper Rand concentrator will be fed by ore from Corner Bay and Devlin. The Corner Bay crushing plant will have a nominal production rate of 3,600 t/d and the mill will have a nominal capacity of 2,240 t/d, although not fully utilized for this project, assuming a grinding size of 80% passing 100 microns. With an average copper content of 2.61% produced by mines, the concentrate production is

estimated at an average of 85,475 t/year at 23.7% copper. The combined recovery of the ore sorter and ore processing is estimated at 93.3% copper.

Mineral Recovery is carried out in two stages: crushing and processing the ore. The crushing circuit consists of a primary jaw crusher, a secondary cone crusher and an integrated ore sorting circuit. The grinding circuit consists of a single closed-loop primary ball mill with a hydrocyclone and two Knelson-type gravity concentrators. The flotation circuit consists of rougher and scavenger cells, and three stages of cleaning , and a ball mill coupled with a hydrocyclone for regrinding purposes.

The final concentrate, which consists of a combination of the products from the gravity separation circuit and the third flotation cleaning bench, is thickened before passing through a filter press to obtain a concentrate with a moisture content of 8%. The copper concentrate will then be transported off-site. The concentrate produced will either be transported to a smelter in Quebec or to the Port of Quebec to be shipped to international smelters.

5.6.2.2 Waste rock and tailings disposal infrastructure

The dry stack filtered tailings facility required for the new operation will be located on the site of the former existing tailings facility (Figure 9). Thus, as with the industrial complex, this strategy will keep deforestation and the need for new spaces to a minimum. The current tailings area is 131 ha in area and contains about 13 Mt of tailings.

Access to the dry stack tailings facility will be via an existing mining transport road and a light vehicle access road. The existing access road to the former Copper Rand tailings facility will be used as a transportation route. The access road through a wooded area east of the tailings facility will be upgraded to allow for use by light vehicles only.

The dry stack filtered tailings will be transported to the site with articulated trucks, then dumped and placed with a dozer. Layers 0.3 to 0.5 m thick will be compacted at the targeted dry density using a roller compactor.

The new tailings facility will therefore be built on top of the existing tailings facility. A platform will be built on the surface of the existing tailings to facilitate the construction of the new pile. It will have a total area of about 40 ha. A membrane will be installed over the entire surface to waterproof the area and avoid any water exchange between the new tailings facility and the old one. This new pile of filtered residues will build on the natural topography to the east of it which forms a hill. Phased construction is proposed to minimize the footprint of the ground installation and the amount of water in contact with the operating area, as well as to promote gradual restoration. The pile will be built with an external slope of 10H: 1V, with horizontal benches of 7 m and vertical landings of 5 m. The final elevation of the new dry stack tailings will be 398.0 m, which corresponds to the highest altitude reached by the adjacent hill. In this way, the new stacked tailings will be able to harmonize with the natural topography of the hill, which promotes the visual integration of this new infrastructure into the landscape.

The proposed facility has an expansion capacity of approximately 12 Mt of tailings, representing an increase of 7.5 Mt over the current design of 4.5 Mt. The amount of tailings to be produced over the life of the 10.5-year mine is 3.62 Mt.

An evolving surface water management system will be built and modified over time to separate contact water from the new tailings facility. The objectives of the new water management infrastructure are to:

- Separately manage the water around the new pile (non-contact) and the water with a high sediment content in order to minimize the volume of water to be collected and requiring treatment on site;
- Collect potentially acidogenic contact waters containing metals, with a high sediment content, which could otherwise alter the water quality of the receiving environment;
- Protect mine infrastructure from damage caused by unmanaged runoff;

– Ensure effective treatment to meet applicable environmental requirements prior to release to the receiving environment, including by reducing the load of suspended solids.

Contact water with a high total suspended solids content (TSS) will be generated when precipitation or runoff comes into contact with the filtered residues. This contact water will be collected during operations and treated with ditches and culvert systems to allow water quality to meet environmental requirements before being discharged into the existing Copper Rand polishing pond (southwest portion of the former tailings facility). Runoff from the new filtered tailings facility will need to be mitigated through the use of sustainable, non-erodable surfaces to prevent or reduce potential erosion until reclamation. Filtration curtains or baffles will be put in place as emergency measures to mitigate or reduce the concentration of sediment in the water. A system for non-contact water drift using collecting ditches and infrastructure for contact water management will be designed based on the cumulative volume of water from a critical downpour (based on a 24-hour rain shower) and the average snowmelt over a 30-day period (the amount of snow is the maximum expected for a 100-year recurrence).

Thus, the water management infrastructure for this site will include the following components:

– Diversion and surface water collection ditches for non-contact water;
– Diversion and surface water collection ditches within the footprint of the new tailings facility;
– Water containment structures with high sediment/contact content, including the installation of some culverts;
– A water collection basin; and
– A water treatment plant.

Figure 9 : Proposed tailings management facility

For groundwater, it is possible that small amounts of water may seep into the base of the new tailings pond and need to be collected to avoid degradation of groundwater quality. A system for intercepting water infiltration will be integrated into the platform of the new park. This system will include:

- A 2 mm thick LLDPE geomembrane sloping towards the water collection basin with high sediments/contact water;
- Drainage tubes located at the same sand layer resting on the geomembrane, allowing water infiltration to flow to the contact water collection basin;
- Wells to monitor and monitor groundwater quality in the former Copper Rand tailings and the surrounding environment.

5.6.3 Production schedule

The mining plan provides for a 365-day, 24 hour work schedule.

The production schedule is based on a hub-and-spoke model where the Corner Bay deposit is the main source of ore to supply the Copper Rand industrial complex. In addition to the Corner Bay site, the Devlin site will be added to the production cycle over a shorter period of time. The production schedule can be summarized as follows:

– Devlin and Corner Bay operation from year 1 to year 4;

– Continuation of Corner Bay operations until year 11.

The majority of production (over 80%) will come from the Corner Bay site. Depending on the results of exploration work at other sites, additional production from other sites could be considered on a radial complex basis. However, additional work and analysis will be required to determine their economic potential. For this reason, the preliminary information framework as submitted includes only the Devlin - Corner Bay areas as sites supplying Copper Rand. If one or more complementary sites prove positive, a new environmental assessment procedure would be applied to them.

5.7 Related activities

5.7.1 Road access

DEVLIN

Provisions are in place to improve the existing road to allow safe access and transportation of mine production to the Corner Bay mine site for crushing and sorting of minerals before being transported to the Copper Rand mill. The new transportation route from Devlin Mine to Corner Bay Mine will be 15.1 km long, 14.6 km shorter than the existing road connection between the two sites.

In order to minimize risks to on-site staff, a dedicated transport road has been included in the site layout that isolates road transport truck traffic from the rest of the site.

CORNER BAY

Provisions are planned for a new transportation route, built primarily through improvements to existing forest roads that will reduce the round-trip transportation distance between the Corner Bay mine and the Copper Rand mill sites by 19 km. This approach also provides a more direct route between the Devlin Mine and the Corner Bay Mine, which is advantageous as all production from the Devlin Mine will be transported to the Corner Bay Mine site for crushing and sorting before being transported to the Copper Rand mill.

A bypass forest road had been planned in the development of the site to allow public access to the existing forest road beyond the mine site.

In order to minimize risks to staff on the site, a dedicated transport road has been included in the site layout that isolates road transport truck traffic from the rest of the site. In addition, in order to reduce risks, independent roads have been included in the site layout for commercial vehicle traffic to and from the ramp gate.

COPPER RAND

Road access from the Devlin – Corner Bay operating areas to the Copper Rand Industrial Complex will use existing roads, including Highway 167 and the Campbell Road, located south of Chibougamau to avoid truck traffic within the city.

Access to the tailings facility will be via a combination of private access roads. The current access road to the tailings facility will be used as a towpath by an articulated truck to transport the filtered

tailings. Access to the park and the associated water treatment plant will be by light vehicle via the access road located in the forest area east of the park.

5.7.2 Energy supply and management

DEVLIN ET CORNER BAY

Both sites will be connected to Hydro-Québec's grid. Studies will be carried out to determine the best connection scenario.

An allocation has also been made for a backup generator capable of powering the mine's dewatering system as well as limited ventilation of the mine.

COPPER RAND

Electricity from the processing plant will be supplied by Hydro-Québec.

An average electricity demand of 40.75 GWh is estimated for crushing and processing plants.

5.8 Activities planned in the closure phase

5.8.1 Closure requirements

Quebec regulatory authorities have established requirements for the closure and rehabilitation of mine sites in the province of Quebec. A person who carries out exploration or mining work is required, under the *Mining Act*, to submit a rehabilitation and restoration plan to the MERN for approval and must carry out the work provided for in the plan within three years of the end of mining activities on the site. Approval of the plan is conditional on the release of the mining lease and the commencement of mining activities.

In addition to the *Mining Act*, in 2017 the MERN published the *Guidelines for the Development of Mine Closure Plans in Quebec*, which detail the Minister's requirements for mine rehabilitation work. The main objectives of this work, as stipulated by the MERN, are as follows:

- Eliminate unacceptable health risks and ensure public safety;
- Limit the production and spread of contaminants that can damage the receiving environment and, in the long term, aim to eliminate all forms of maintenance and monitoring;
- Restoration of the site to a visually acceptable condition; and
- Rehabilitation of infrastructure areas, excluding the tailings facility and waste rock piles, to a condition consistent with future use (rehabilitation).

In addition, in accordance with *the Mining Act*, the proposed work must include the following:

- Rehabilitation and restoration of accumulation areas;
- Geotechnical soil stabilization;
- Securing surface openings and pillars;
- Water treatment; and
- Work related to roads.

Indirect costs, such as engineering, supervision costs and site monitoring must also be taken into account.

A financial guarantee covering the expected costs of completing the work proposed in the closure plan as well as a contingency representing 15% to 30% of the closure costs must be presented before the

start of mining operations and is retained until the restoration and rehabilitation work has been carried out to the satisfaction of the MERN.

The closure plan must be reviewed every five years or whenever changes in mining activities warrant a revision of the content or cost estimate of the closure plan.

5.8.2 Closure concept

The proposed reclamation work for the Devlin, Corner Bay and Copper Rand mill and tailings sites is as follows:

- The dismantling of all buildings and surface infrastructure, including water management infrastructure, i.e. ditches and ponds, unless it is demonstrated that they will be necessary for future use;
- Securing the mine openings, including shafts and access ramps to underground construction sites;
- The remediation and revegetation of all the areas concerned, in particular the industrial zone of each site;
- Environmental assessment of sites as well as excavation and management of contaminated soils;
- The restoration of the tailings facility to ensure geotechnical stability and revegetation of waste rock piles at the Devlin and Corner Bay sites; and
- The restoration of the Copper Rand tailings facility to control erosion and to prevent the production or spread of contaminants to ensure the geotechnical stability of deposited tailings.

The proposed work is planned to ensure that the sites return to a natural appearance and integrate with the surrounding environment, while limiting the production and transport of contaminants and erosion.

Post-closure monitoring programs, as required by the MERN, will need to be conducted to ensure the physical and geochemical stability of the site and to assess the need for additional remedial action. Estimated post-closure costs should include geotechnical monitoring, water quality monitoring and agronomic monitoring programs.

The closure plan will be detailed in the ESIA.

5.8.3 Environmental monitoring and follow-up

A monitoring program will be planned to ensure effective supervision of construction activities.

Environmental monitoring during the project will ensure compliance with environmental commitments and obligations. It will focus on compliance with laws, regulations and other environmental considerations, including Directive 019, enacted in the various government permits, as well as taking into account the conditions of the certificate of authorization.

Similarly, a follow-up program will be developed. The monitoring program will take into account the results of the impact assessment and the application of mitigation measures, and in particular any significant residual impacts or for which there would be uncertainties.

These programs will be detailed in the ESIA.

6 Public information and consultation processes

6.1 Communication processes

In the interest of transparency, DCMC undertook a corporate communication process very early in order to inform local communities of the project. These communication activities targeted the city of Chibougamau, various organizations representing this city as well as the Cree community of Oujé-Bougoumou. The main objective is to provide the community with information on the nature of the project and the different stages and studies that will be carried out.

In this context, several meetings have taken place since 2019. On November 17, 2021, a meeting with the Oujé-Bougoumou Band Council introduced the Englobe consultant who was selected to conduct the ESIA. Another meeting was held with the Oujé Bougoumou Band Council on July 12th when the results of the PEA were presented.

6.2 Information and consultation processes

In addition to the corporate communications activities carried out under the responsibility of DCMC, an information and consultation process specific to the ESIA is also planned.

6.2.1 General approach

The consultations planned as part of the mining project under study are intended to link the project with the population in order to promote the best possible harmonization of the project and its integration into the receiving environment. The consultation will help build the link between the project

and the host environment and will ensure a link with the impact assessment and the final evaluation of the project.

In this context, the planned consultations are aimed at achieving four specific objectives:

– Provide data on the company and the project in a transparent way so that the population has access to all relevant and useful information;
– Better understand the nature of the work and use of the territory by the natural environment, in connection with the current and future activities of the community;
– Allow the population to share and voice their potential concerns about the project;
– Engage with and consult with the public on the project,potential impacts and mitigation measures.

The overall approach is based on three key principles:

– Information: provide the information required for the understanding of the project;
– Consultation: present the choices and impacts as well as exchange in order to allow the expression of questions and concerns;
– Decision: feedback on the final decisions and solutions adopted.

In order to reflect the evolution of project design and knowledge of the environment, the strategy for deploying the consultations will be gradual. Initially, the approach will be targeted at specific stake holders in the community and Oujé-Bougoumou. This will be carried out in the context of prior private or semi-private meetings. These will make it possible to understand how the project is initially perceived as well as to identify potential issues.

The first step therefore aims to inform the company and provide him with useful basic data to propose the best possible project that meets the objectives of the company and the expectations of the population.

Once this stage is completed, the next stage of deployment will target a wider range of groups as well as the general population. This step, which will involve an optimized project, will thus offer a better chance of establishing a constructive climate, while remaining open to suggestions and modifications.

6.2.2 First Nations, key communities and stakeholders

A preliminary list of individuals, groups, organizations, as well as local and First Nations communities involved in the project was developed. This list, presented in Table 3, includes local and regional stakeholders interested in the project, the issues raised, the benefits and potential impacts of the project. This preliminary list will be refined and validated during the implementation of the ESIA.

Table 3 : Preliminary list of key communities and stakeholders

Group	Stakeholders or community members
Elected officials and public administration	Ville de Chibougamau
	Ville de Chapais
First Nations	Nation crie d'Oujé-Bougoumou
	Utilisateurs du territoire : maîtres de trappes, etc.
	Le Grand Conseil des Cris (Eeyou Istchee) et le Gouvernement de la Nation Crie
Nearby companies	Compagnies forestières
Socio-economic organizations	Chambre de commerce Chibougamau-Chapais
	Centre de formation professionnelle de la Baie-James
	Carrefour jeunesse-emploi
	Centre de santé de Chibougamau
	Table régionale des organismes communautaires
Recreational tourism organizations	Club Auto-neige Chibougamau
	Club de VTT Chibougamau inc.
	Centre de villégiature Marina Chibougamau
	Association touristique régionale de la Baie-James
	Pourvoiries et établissements de villégiatures
	Association chasse et pêche Chibougamau inc.

7 Potential issue and impact description

7.1 Main characteristics of the impacted environment

The impacted environment is essentially composed of forest environments and water bodies. The only agglomeration nearby is the city of Chibougamau more than 5 km to the north, while the city of Chapais and the Cree village of Oujé-Bougoumou are located nearly 40 km to the west. As for the Cree community of Mistissini, it is located more than 60 km to the north.

7.1.1 Devlin – Corner Bay Area

There are no settlements near the Devlin – Corner Bay area. The area is entirely forested and several forest roads and felling dot the area. The sites of Devlin – Corner Bay are about 6 km from each other and are connected by a network of roads mainly used for forestry and recreational activities among others.

A set of chalets and the Marina Chibougamau Resort are located about 4 km west of the Devlin site. Hunting and fishing, and snowmobiling in winter are the main activities carried out. There are no houses in the immediate vicinity, although cottages are present around Lake Chibougamau.

The Devlin site is located on the shores of Lake Chibougamau, and is composed mainly of forest dominated by resinous species. Several wetlands, swamps and peatlands, cover the infrastructure site and the surrounding study area. There are no major rivers in the area planned to receive the infrastructure. Only a permanent stream is present, 800 m from the site planned for the operation, and it visibly drains a wetland. Impacts of the timber cutting are visible on and around the work site, in particular due to the ruts left by the machinery in the portion between the planned infrastructure and the main road.

The Corner Bay site is also composed mainly of wooded natural areas, although the large portion of the area targeted for the establishment of the infrastructure necessary for the operation of the underground mine is already disturbed by former mining activities. Indeed, an area of a few hectares is already deforested, levelled and covered with a running surface since underground bulk sampling work was carried out there in 2008. Among the remains of these operations are the presence of a water management basin, the flooded access ramp near the lake and some small abandoned buildings. Around these already developed portions are several wetlands, mainly swamps and wooded peatlands. Forestry activities have also taken place around this site, leaving behind stands mixed mainly in the old fallings and surrounded by stands of mature softwood.

The nearest permanent watercourse to the Corner Bay operating site is located approximately 400 m from the planned facilities and is the outlet for Micheline Lake. A few intermittent streams are also found in the area.

Although a few forest roads are present between the two sites, it is planned that a new section of transport road will be built to connect the two sites. This approach will minimize the distance of travel, but will also aim to avoid the use of Highway 167 for the transportation between the sites. The environment where the new section of road will be inserted is generally similar to that of the two sites, with mostly wooded areas or logging. The presence of wetlands and some streams is also listed.

It should be noted that detailed flora and wildlife inventories are underway for the summer period of 2022 and will be used to describe the integration environment of all the components of the project within the framework of the ESIA.

The Devlin – Corner Bay sector is within the boundaries of trapping lot O-59 of the community of Oujé-Bougoumou.

7.1.2 Copper Rand

The entire area is surrounded by bodies of water, with Lac aux Dorés to the north and Lake Chibougamau to the south. A little more than five km to the north, we find the city of Chibougamau.

The Copper Rand site is essentially the former mining and processing site of a series of companies that eventually become Campbell Resources. Indeed, this sector is strongly marked by copper and gold mining, which lasted from 1959 to 2008. Many industrial facilities are still present there. It therefore has only a few environments in its natural state.

The site targeted by the infrastructure update and operation of the tailings facility is more than 150 ha, most of which corresponds to the industrial complex and the former tailings facility located between the two lakes. A wooded border extends between the plant and tailings facility areas targeted by the hub-and-spoke project. This environment is essentially a wooded embankment between Lakes aux Dorés and Chibougamau and has been the subject of some anthropogenic interventions in the past, including the construction of access roads and roads.

No permanent watercourse is present. The southwestern portion of the former tailings facility consists of a basin surrounded by dikes built in the 1970s. This portion of the tailings facility has been used as a polishing pond and an outlet allows surface water to be discharged to Lac aux Dorés.

Roads are present on the Copper Rand site and provide access to recreational areas on both sides of the site, but also to areas used for forestry work and the former Principale Mine to the south. A cottage is located directly in the study area of this area, as well as some camps or cottages. These different components will be part of the sensitive receptors studied in the project's impact assessment.

The Copper Rand sector is within the boundaries of trapping lot O-59 of the community of Oujé-Bougoumou.

7.2 Project footprint

It is planned that three different zones will be used to adequately define the boundaries of the project and its potential impacts. These areas will be delimited according to the valued components of the environment, the nature of the potential impacts and their scope, as well as the presence of sensitive receptors likely to be affected by nuisances under the ESIA.

In a preliminary way, the different areas that will be delineated in the ESIA will cover the following elements:

- **Project insertion zone:** aims to cover all the components of the hub-and-spoke mining project and its integration environment, including the roads used for transport and the main components of the human environment that may be affected by the project, including the city of Chibougamau and certain trapping lots used by members of the Cree community of Oujé-Bougoumou;
- **Study Area:** The three study areas will be aligned around the main infrastructure at the Copper Rand, Devlin and Corner Bay sites. They will encompass the valued components of the receiving environment likely to be affected by the impacts of the project. The main sectoral studies on biophysical components, as well as sensitive receptors used in predictive studies (air quality, sound environment, etc.) will be consistent with these areas;
- **Site of the works:** area where the infrastructure of the projects is located. This zone corresponds to the encroachment of the project in the integration environment and will therefore be associated with potential habitat losses.

This approach is intended to be an effective way to be able to present the potential impacts of the project according to their location, but especially in a context where the operating sites are distant from the treatment plant and the tailings facility. Therefore, the level of detail in the description of impacts and in the studies inherent to the receiving environment will vary by area; the site of the works being the area where the information will be the most accurate and detailed, while the area of insertion of the project will cover more global aspects of land use, traffic and quality of life. For its part, the study area will aim to provide the studies necessary to understand the potential impacts of the project within a sufficiently large radius around the work sites.

The project insertion area is presented in Section 2.2 (Map 1), while the study areas and work sites for the two operating sites are presented in Appendix 1 (Maps 5 and 6).

7.3 Key preliminary issues

At the preliminary information stage, the impact assessment has only just begun, so the issues as well as the impacts have not been thoroughly assessed. As a result, the assessment of key issues remains preliminary.

This first assessment is based on both a preliminary understanding of the project and the receiving environment, as well as knowledge from similar projects. Thus, the preliminary issues identified are as follows:

- **Control of the project's footprint** – in order to minimize encroachment, especially in natural habitats;
- **Maintaining the quality of surface water and groundwater** – in order to avoid any deterioration of water, which is the basis of many functions and activities;
- **Maintaining land use** – in order to avoid any conflict of use or loss of territories that are the subject of traditional activities or significant to local communities;
- **Maximizing local and regional economic benefits** – to allow communities that will potentially experience certain negative impacts to take advantage of the project's presence to make socio-economic gains.

7.4 Potential preliminary impacts

The approach recommended for the impact assessment involves the analysis of the interactions between the sources of impacts of the project and the valued components of the environment. Once these interactions are identified, the significance of the impacts are assessed through a series of criteria such as intensity, duration and extent of impacts. Mitigation measures are also planned to minimize impacts and compensation measures can be planned in the case of significant residual impacts.

By considering the characteristics of the project and those of the receiving environment, certain aspects will help minimize and control impacts, including:

- The two mines in the Devlin – Corner Bay sector will be underground so that their footprint will be limited and short-lived in the case of Devlin;
- Waste rock will be reintroduced into mines to backfill open sites and minimize final surface storage;
- No processing of ore that produces tailings will be carried out in the Devlin – Corner Bay sector, but only in the Copper Rand sector;
- Copper Rand infrastructure will be installed within the existing industrial complex and tailings pond;
- The two mines in the Devlin – Corner Bay sector are located south of Lake Chibougamau, nearly 20 km from Chibougamau and nearly 40 km from Oujé-Bougoumou;

In this context, the potential preliminary impacts are described below.

7.4.1 Physical environment

The objective with respect to the physical environment will be to limit and control impacts on the soil, air and water components, in order to avoid and minimize contamination of the environment.

The potential impacts on the physical components are as follows:

- Potential changes in local hydrology;
- Potential effects on the availability and quality of surface water;
- Potential effects on suspended solids in streams due to runoff and erosion;
- Risks of potential contamination of the aquatic environment by the final effluent;
- Potential local effects due to accidental spills of petroleum products or other contaminants;
- Potential effects on groundwater quantity and quality;
- Potential local effects on air quality due to particulate emissions;
- Potential local effects on the noise environment during operations.

7.4.2 Biological environment

The objective with respect to the biological environment will be to limit the footprint of the project and its effects on natural habitats.

The potential impacts on the biological components are as follows:

- Potential losses of vegetation and wetlands;
- Potential introduction of invasive alien species;
- Potential loss of wildlife habitat;

– Potential losses of floral and wildlife species with special status;
– Disturbance and potential displacement of wildlife due to nuisances generated by facilities;
– Potential disturbance or loss of fish habitat.

7.4.3 Human environment

The objective with respect to the human environment will be to control the negative effects and nuisances on the occupation of the land and the exploitation of resources by local and Cree communities.

The potential impacts on human components are as follows:

– Potential local changes in land and resource use by local and Cree communities;
– Potential increase in local road traffic;
– Potential local disruption of traditional, historical and archaeological sites;
– Potential local effects associated with noise, traffic and particulate matter nuisances;
– Potential visual effects on the landscape at Copper Rand;
– Potential local and regional impacts of economic impacts on local and Cree communities.

8 Green house gas emissions

The project will be an overall source of greenhouse gas (GHG) emissions due to the planned nature of industrial mining activities. These GHG emissions will be observed in both the construction and operation phases. The detailed calculation of GHG emissions will be carried out as part of the environmental and social impact study.

8.1 Sources of emissions during the construction phase

In the construction phase, GHG emissions will come from a few specific sources. Of these, mobile vehicles (travel) and construction equipment will be a source throughout this phase.

In addition to mobile vehicles, it is construction activities that will generate GHG emissions. These activities include: the use of explosives, deforestation and preparation of forest sites and roads, and the loss of forest carbon stocks as a result of deforestation.

In general, the construction phase emits few GHGs, especially given its short duration. In terms of the loss of forest carbon stocks, it can be relatively large. This is why the project will optimize the reuse of anthropogenic surfaces already deforested on the sites.

8.2 Sources of emissions during the operational phase

In the operational phase, GHG emissions will also come from mobile vehicles and travel throughout this phase.

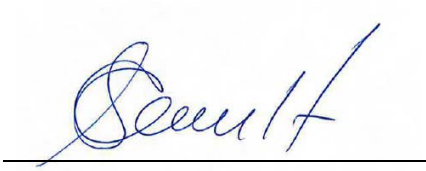
In addition to mobile vehicles, the required operating activities and equipment will be sources of GHG emissions. These activities and equipment include: stationary equipment (generators and others), the use of explosives, excavation activities, processes and the transportation of ore.

Unlike the construction phase, the operation phase will be longer, resulting in a longer duration of GHG emissions. For this reason, the use of electricity will be preferred while the sites will be

connected to Hydro-Québec's grid. Thus, various scenarios to maximize the use of electricity will be analyzed to minimize GHG emissions.

9 Statement and signature

I declare that the documents and information provided in this preliminary information form are accurate to the best of my knowledge.



Sylvain Arsenault, Biol.
Project Leader
Environmental Studies and Climate Change
Englobe Corp.

10 References

Doré Copper Mining Corp. (DCMC), 2022. *Ni 43-101 Technical Report. Preliminary Economic Assessment for the Chibougamau Hub-and-Spoke Complex*. Quebec, Canada. 477 p.

Government of Canada, 2022. *Copper Facts*. Internet site visited July 2022. [Online]: https://www.nrcan.gc.ca/our-natural-resources/minerals-mining/minerals-metals-facts/copper-facts/20506.

Government of Quebec, 2018. *Transporter le Québec vers la modernité - Politique de mobilité durable – 2030*. Ministère des Transports, de la Mobilité durable et de l'Électrification des transports. 54 p.

Government of Quebec, 2020a. *Critical and Strategic Minerals – Québec plan for the development of critical and strategical minerals 2020-2025*. Ministère de l'Énergie et des Ressources naturelles. 24 p.

Government of Quebec, 2020b. *2030 Plan for a Green Economy – Framework policy on electrification and the fight against climate change*. Ministère de l'Environnement et de la Lutte contre les changements climatiques. 128 p.

Government of Quebec, 2022. *Conjuguer nos forces pour un avenir énergétique durable - Plan directeur en transition, innovation et efficacité énergétiques*. 2026 upgrade. Ministère de l'Énergie et des Ressources naturelles. 124 p.

Grand Council of the Crees (Eeyou Istchee)/Cree Nation Government, 2022. *Towards Sustainable Development of Mineral Resources in Eeyou Istchee*. [Online]: https://www.cngov.ca/environment/mining/.

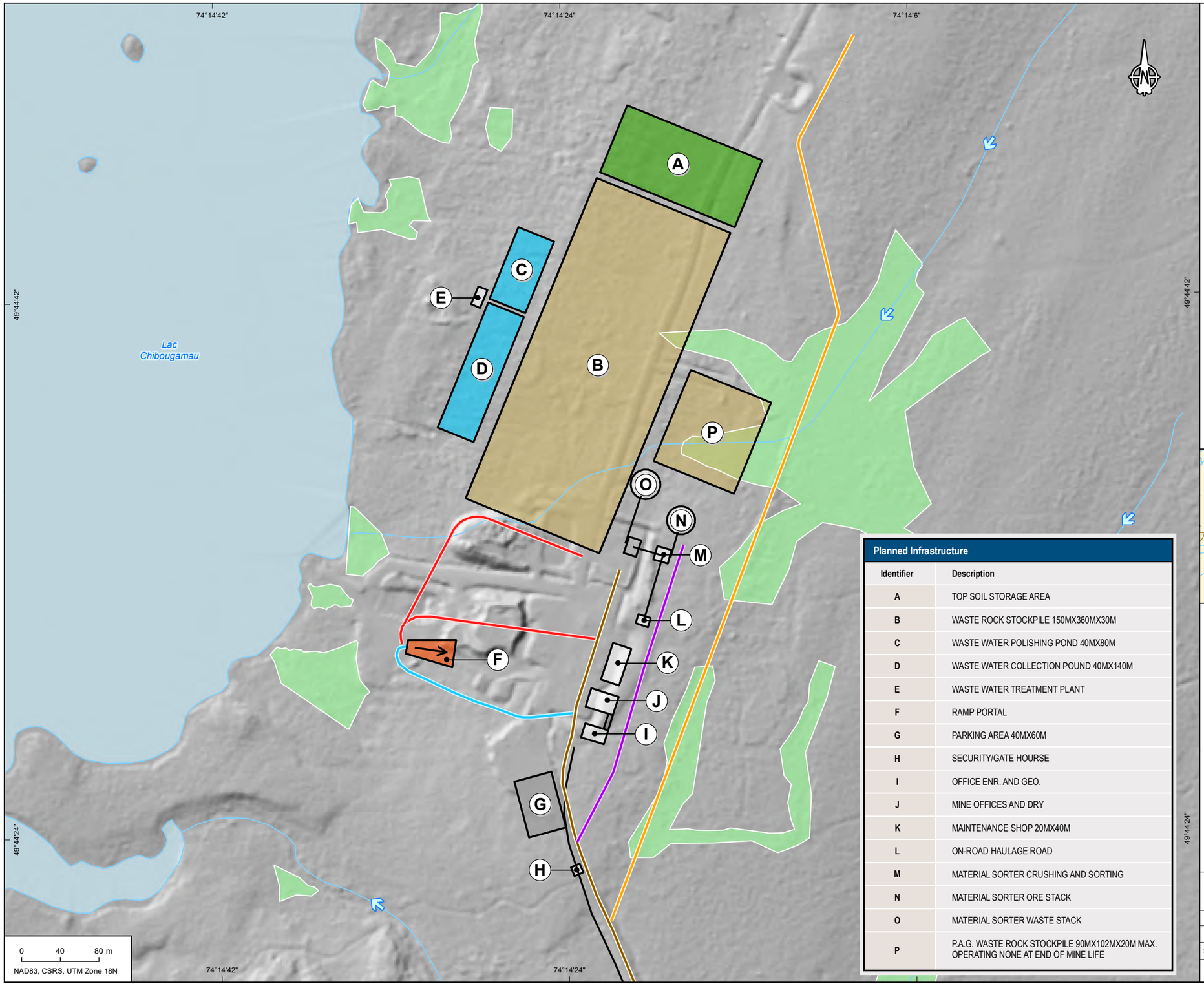
La Grande Alliance, 2022. [Online]: https://www.lagrandealliance.quebec/.

Propulsion Québec, 2019. *Lithium-ion Battery Sector – Developing a promising sector for Quebec's economy*. 46 p.

World Bank Group, 2020. *Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition*. International Bank for Reconstruction and Development, Washington, USA. 112 p.

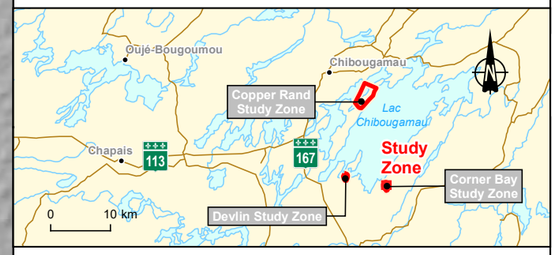
Appendix A
Maps

ENGLOBE



Project components

- Planned Infrastructure
- Access Road
- By-Pass Road
- Light Vehicule Acces Road
- Ore Haulage Road
- Haulage Truck Road
- Watercourse (GRHQ)
- Lake (GRHQ)
- Wetland
- Flow



Planned Infrastructure

Identifier	Description
A	TOP SOIL STORAGE AREA
B	WASTE ROCK STOCKPILE 150MX360MX30M
C	WASTE WATER POLISHING POND 40MX80M
D	WASTE WATER COLLECTION POUND 40MX140M
E	WASTE WATER TREATMENT PLANT
F	RAMP PORTAL
G	PARKING AREA 40MX60M
H	SECURITY/GATE HOURSE
I	OFFICE ENR. AND GEO.
J	MINE OFFICES AND DRY
K	MAINTENANCE SHOP 20MX40M
L	ON-ROAD HAULAGE ROAD
M	MATERIAL SORTER CRUSHING AND SORTING
N	MATERIAL SORTER ORE STACK
O	MATERIAL SORTER WASTE STACK
P	P.A.G. WASTE ROCK STOCKPILE 90MX102MX20M MAX. OPERATING NONE AT END OF MINE LIFE

Doré Copper Mining Corp.

Hub-and-Spoke Complex - Chibougamau

Preliminary Information Statement

Map 2

Corner Bay Planned Infrastructure

Sources :

Base : Orthophoto, résolution 4 cm @ Blumetric, 2022
Ortho-image, Bing Maps on ArcGIS Online: http://www.arcgis.com, 2013
GRHQ, MERN Québec, juin 2017

Inventaires : Éconord, 2021
Cartographie : Englobe

October 2022

eNGLOBE

Project Manager : P. Charest-Gélinas — Date : 2022-10-11

Prepare : P. Charest-Gélinas — Drawn : J. Poulin — Verified : P. Charest-Gélinas

Serv. Master	Project	Disc.	Type	Number	Rev.
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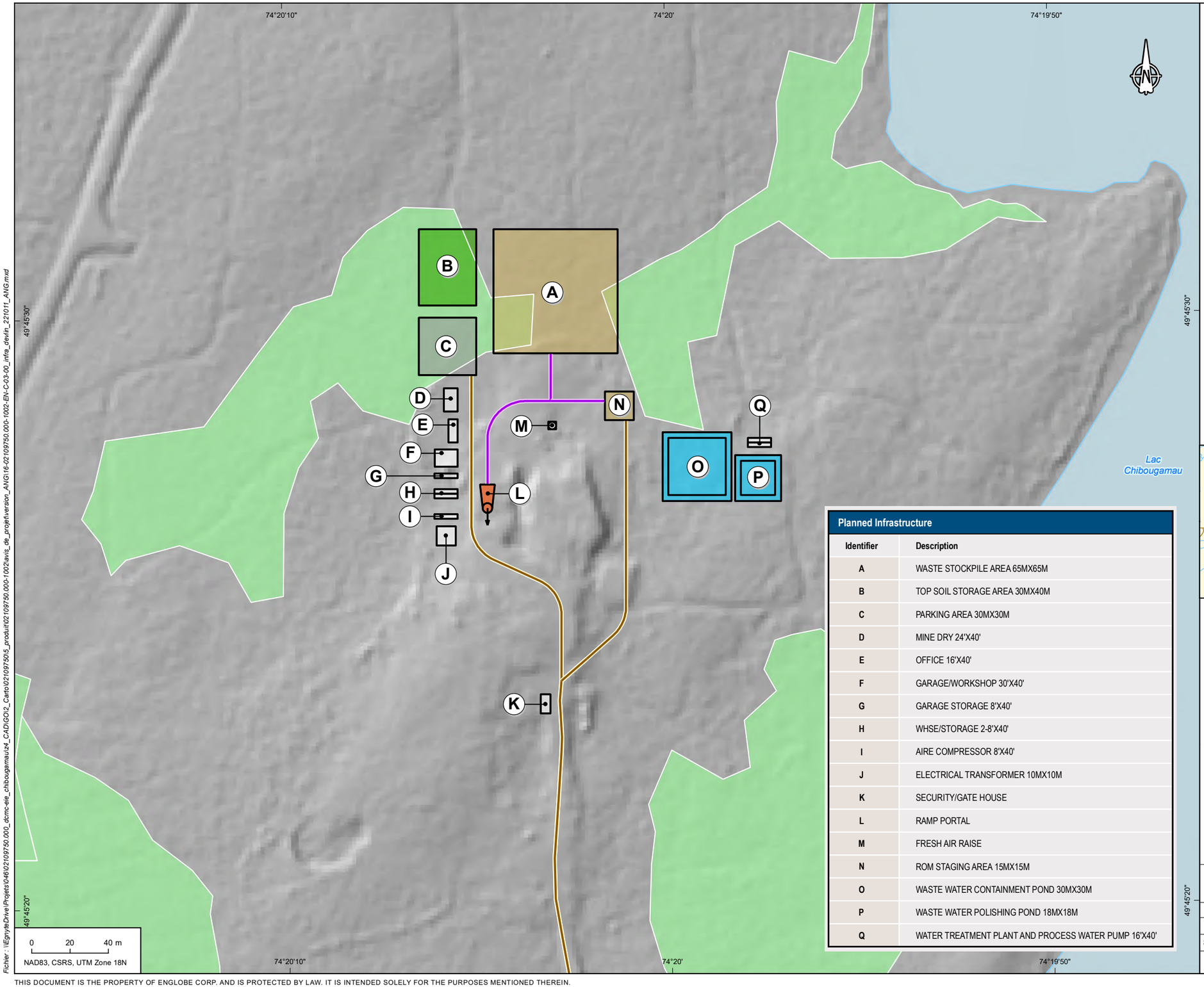
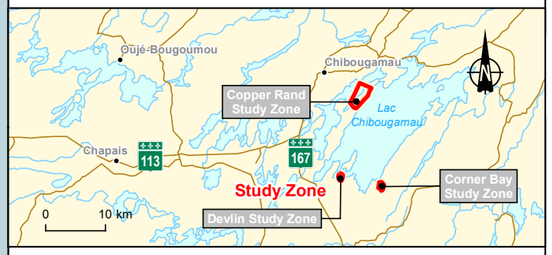


Project components

- Planned Infrastructure
- Access Road
- Ore Haulage Road
- Wetland



Planned Infrastructure

Identifier	Description
A	WASTE STOCKPILE AREA 65MX65M
B	TOP SOIL STORAGE AREA 30MX40M
C	PARKING AREA 30MX30M
D	MINE DRY 24'X40'
E	OFFICE 16'X40'
F	GARAGE/WORKSHOP 30'X40'
G	GARAGE STORAGE 8'X40'
H	WHSE/STORAGE 2-8'X40'
I	AIRE COMPRESSOR 8'X40'
J	ELECTRICAL TRANSFORMER 10MX10M
K	SECURITY/GATE HOUSE
L	RAMP PORTAL
M	FRESH AIR RAISE
N	ROM STAGING AREA 15MX15M
O	WASTE WATER CONTAINMENT POND 30MX30M
P	WASTE WATER POLISHING POND 18MX18M
Q	WATER TREATMENT PLANT AND PROCESS WATER PUMP 16'X40'

Doré Copper Mining Corp.

Hub-and-Spoke Complex - Chibougamau

Preliminary Information Statement

Map 3
Devlin Planned Infrastructure

Sources :

Base : Orthophoto, résolution 4 cm @ Blumetric, 2022
Ortho-image, Bing Maps on ArcGIS Online: http://www.arcgis.com, 2013
GRHQ, MERN Québec, juin 2017

Inventaires : Éconord, 2021
Cartographie : Englobe

October 2022

eNGLOBE

Project Manager : P. Charest-Gélinas					Date : 2022-10-11
Prepare : P. Charest-Gélinas	Drawn : J. Poulin				Verified : P. Charest-Gélinas
Serv. Master	Project	Disc.	Type	Number	Rev.
16	02109750.000-1002-0001	EN	C	03	00

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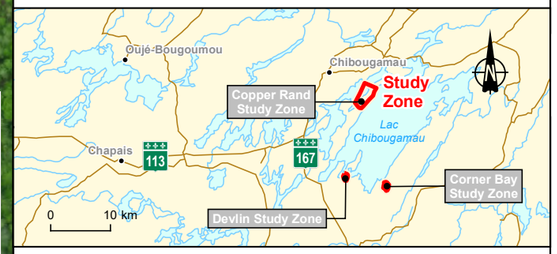
Project components

- Infrastructure
- Lake (GRHQ)



Infrastructures

Identifier	Description
A	ASSAY LABORATORY & CORE SHACK
B	GENERATORS ROOM
C	COMPRESSORS ROOM
D	OLD VENTILATION BUILDING
E	ADMINISTRATION AND GATE BUILDING
F	STORAGE BUILDING
G	STORAGE BUILDING TO BE DISMANTLE
H	MECHANICAL SHOP - GARAGE
I	USED OILS BUILDING
J	CARPENTRY
K	OLDS MINES OFFICES & DRY ROOM
L	OLD COPPER RAND HEADFRAME
M	OLD COPPER RAND HOIST
N	MILL BUILDING
O	DOME & WASTE STOCKPILE
P	FILTER PRESS BUILDING
Q	ORE HOPPER BUILDING
R	DOME & ORE STOCKPILE

Doré Copper Mining Corp.

Hub-and-Spoke Complex - Chibougamau

Preliminary Information Statement

Map 4
Copper Rand's Actual and Planned Infrastructure

Sources :

Base : Orthophoto, résolution 4 cm @ Blumetric, 2022
Ortho-image, Bing Maps on ArcGIS Online: http://www.arcgis.com, 2013
GRHQ, MERN Québec, juin 2017

Cartographie : Englobe

October 2022

ENGLOBE

Project Manager : P. Charest-Gélinas — Date : 2022-10-12

Prepare : P. Charest-Gélinas — Drawn : J. Poulin — Verified : P. Charest-Gélinas

Serv. Master	Project	Disc.	Type	Number	Rev.
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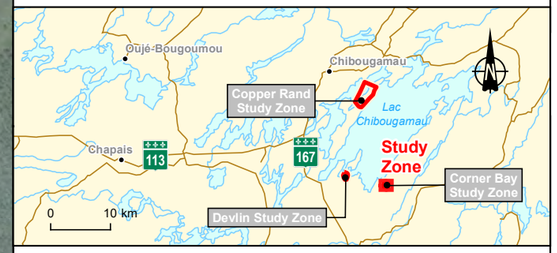
Project components

- Study Zone (100,12 ha)
- Working Site (27,28 ha)
- Planned Infrastructure
- Access Road
- Watercourse (GRHQ)
- Lake (GRHQ)
- Flow



Doré Copper Mining Corp.

Hub-and-Spoke Complex - Chibougamau

Preliminary Information Statement

Map 5

Corner Bay's Study Zone

Sources :

Base : Orthophoto, résolution 4 cm @ Blumetric, 2022
Ortho-image, Bing Maps on ArcGIS Online: http://www.arcgis.com, 2013
GRHQ, MERN Québec, juin 2017

Cartographie : Englobe

October 2022

ENGLOBE

Project Manager : P. Charest-Gélinas				Date : 2022-10-11	
Prepare : P. Charest-Gélinas	Drawn : J. Poulin			Verified : P. Charest-Gélinas	
Serv. Master	Project	Disc.	Type	Number	Rev.
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74°20'24"
74°20'
74°19'36"
49°45'36"
49°45'12"

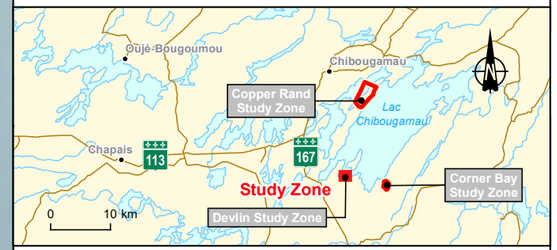
Lac Chibougamau

Lac Chibougamau

0 55 110 m
NAD83, CSRS, UTM Zone 18N

Project components

- Study Zone (70,17 ha)
- Working Site (4,28 ha)
- Planned Infrastructure
- Access Road
- Watercourse (GRHQ)
- Lake (GRHQ)
- Flow



Doré Copper Mining Corp.
Hub-and-Spoke Complex - Chibougamau
Preliminary Information Statement

Map 6
Devlin's Study Zone

Sources :

Base : Orthophoto, résolution 4 cm @ Blumetric, 2022
Ortho-image, Bing Maps on ArcGIS Online: http://www.arcgis.com, 2013
GRHQ, MERN Québec, juin 2017

Cartographie : Englobe

October 2022

ENGLOBE

Project Manager : P. Charest-Gélinas				Date : 2022-10-11	
Prepare : P. Charest-Gélinas	Drawn : J. Poulin			Verified : P. Charest-Gélinas	
Serv. Master	Project	Disc.	Type	Number	Rev.
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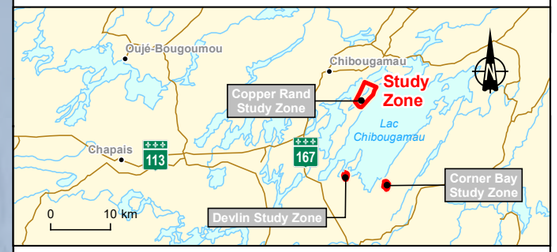
74°18'40"
74°17'20"
74°16'
49°53'20"
49°52'
Lac aux Dorés
Tailings Storage Facility
Lac Chibougamau
0 180 360 m
NAD83, CSRS, UTM Zone 18N

Project components

- Study Zone (750,93 ha)
- Working Site (178,27 ha)
- Planned Infrastructure
- Watercourse (GRHQ)
- Lake (GRHQ)
- Flow



Doré Copper Mining Corp.
Hub-and-Spoke Complex - Chibougamau
Preliminary Information Statement

Map 7
Copper Rand's Study Zone

Sources :

Base : Orthophoto, résolution 4 cm @ Blumetric, 2022
Ortho-image, Bing Maps on ArcGIS Online: http://www.arcgis.com, 2013
GRHQ, MERN Québec, juin 2017

Cartographie : Englobe

October 2022

ENGLOBE

Project Manager : P. Charest-Gélinas					Date : 2022-10-11
Prepare : P. Charest-Gélinas	Drawn : J. Poulin				Verified : P. Charest-Gélinas
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