



**FIRST MINING
GOLD**

SPRINGPOLE GOLD PROJECT



PROJECT DESCRIPTION EXECUTIVE SUMMARY

Submitted to:

Canadian Environmental Assessment Agency

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EXECUTIVE SUMMARY

The Springpole Property (“Property”) is located in northwestern Ontario, approximately 110 km northeast of the Municipality of Red Lake in northwest Ontario, Canada (Figure 2-1). The Town of Ear Falls is south of the Property and the Municipality of Sioux Lookout is situated southeast of the Property, as shown in Figure 2-1. The Property is within the Red Lake Mining District, Casummit Lake area and is presented on Ontario Base Maps 54005690, 55005690, 56005690, 54005680, 55005680, 56005680, 54005670, 55005670, 56005670 (1:20,000 scale). The Property is entirely within the Trout Lake Forest Sustainable Forest License (“SFL”).

The Property has a long exploration history and has been explored intermittently for gold since the 1920s. Gold Canyon Resources Inc. (“GCU”) obtained the Property in 1995, completing a positive Preliminary Economic Assessment (“PEA”) on the Springpole Deposit (“Deposit”) in 2013, concluding a Class Environmental Assessment (“EA”) for an access corridor in 2014 and further expanding its land position until it was acquired in 2015 by First Mining Gold Corp. (“FMG”). First Mining Gold Corp. was previously named First Mining Gold Corp. GCU initiated technical studies in preparation for an EA and these studies have been continued by FMG. FMG completed an updated PEA in September 2017 and is beginning engagement and consultation for the development of the Deposit into a mine. The Property is a “greenfield” and has not hosted Advanced Exploration or development activities.

1. Project Information

The Springpole Gold Project (“Project”) concept is to develop, operate and eventually decommission a bulk tonnage open pit mine and mill using open pit mining and conventional processing methods to produce gold and silver. Development / construction, operation and decommissioning are considered one undertaking for the purpose of this Project Description document. The maximum ore production capacity of the open pit mine is 60,000 tonnes per day (“TPD”) and the maximum ore input capacity of the mill is 44,000 TPD. Key Project components include an all-weather access road (~20 to 40km in length, depending on road building by the forestry company that operates the Trout Lake Forest SFL), a 60km long transmission line to connect to the provincial grid, a tailings management facility (“TMF”), waste rock pile, shops, explosives facility and camp. The objective of the Project is to produce gold (doré bullion) for commercial sale. The mine development plan contemplates open pit mining with a mine plan to mine a total of 151 Mt of mineralized material (139 Mt of processing plant feed) and 319 Mt of waste (2.1:1 overall strip ratio mined and 2.4:1 strip ratio for material processed) over a 12 year mine production life, including stockpile reclamation. The current life of mine plan focuses on achieving steady plant feed production rates, and mining of higher grade material early in schedule, as well as balancing grade with an average grade of the plant feed estimated at 1.00 g/t of gold and 5.33 g/t of silver.

Latitude and longitude coordinates for key Project components are summarized below.

-) Plant Site Centroid: N 51° 23' 33.236" and W 92° 16' 29.820"
-) Main Pit Centroid: N 51° 23' 33.571" and W 92° 17' 24.549"
-) Start (southernmost point) of Access Road: N 51° 23' 22.583" and W 92° 15' 27.376 "
-) End (northernmost point) of Access Road: N 51° 23' 45.084" and W 92° 18' 2.877"
-) Start (southernmost point) of Transmission Line: N 51° 9' 5.617" and W 92° 14' 54.693"

) End (northernmost point) of Transmission Line: N 51° 23' 50.451" and W 92° 17' 33.656"

Project facilities are situated on a combination of patented land, leased mining claims, staked mining claims (the process to convert these claims into mining leases will be initiated), private land (patented or leased) that FMG has an option to acquire and Crown owned shoreline reserves and lake bottom. Land tenure is presented in Figure 1-1.

The study area boundaries for the Project will be defined as the EA for the Project progresses. For the purpose of this document, the below terms are used to help the reader understand the Project and the existing setting where it is proposed.

) Project Area: This is an undefined area used to describe the local extent of the Project and generally includes the area shown on the figures in this document.

) Project Site: This is the area that underlies the Project components, it is the land where the Project will be situated.

Key Project Components

A conceptual base case arrangement for key Project components that is regarded as feasible based on preliminary engineering is shown in Figures 3-2A and 3-2B. Project components have been arranged to avoid known archaeological and biophysical values. With the exception of the open pits, the arrangement of Project components will be refined as engineering, technical studies and consultation progress. Key Project components are discussed below.

Open Pits (starter pit and main pit)

The main pit and starter pit perimeters are presented in Figure 3-2A. The open pits have a surface area of approximately 140 hectares ("ha"). The maximum ore production capacity of the mine is 60,000 TPD. The proposed processing rate of 13 million tonnes ("Mt") per year was used, along with deposit and pit geometry constraints, to estimate the mining equipment fleet needed. The mine development plan contemplates two (2) open pits to mine a total of 151 Mt of mineralized material (139 Mt of processing plant feed) and 319 Mt of waste rock over a twelve-year mine production life, including stockpile reclamation to provide feed for the mill.

Waste Rock Piles

The waste rock facility is planned adjacent to the final pit limits, as generally shown in Figure 3-2A. The waste rock piles have a total surface area of approximately 450 ha. The waste rock facility would be built in a series of lifts in a "bottom-up" approach, and the facility would be constructed by placing material at its natural angle of repose (approximately 1.5H:1V) with safety berms spaced at regular intervals giving an overall operational slope of 2:1. The total design capacity of the waste rock facility is 430 Mt.

Non-acid generating ("NAG") waste rock that does not pose a risk of acid generation or metal leaching will be segregated from potentially acid generating ("PAG") waste rock and managed separately. NAG waste rock will be utilized for construction purposes.

Given the deposit configuration and extraction sequence, no backfilling into previously mined out areas has been planned for the open pits. Backfilling of open pits will be implemented if required to manage PAG waste rock.

Coffer Dams

Three (3) coffer dams with a combined length of approximately 510 m will be constructed in Springpole Lake to allow the north basin of the lake to be dewatered. This is required to develop the main pit.

Sediment Repository

Sediment is proposed to be stored in the dewatered portion of Springpole Lake, as indicated in Figure 3-2A. Sediment will be pumped to this location, to the extent practical. Sediment that cannot be accommodated within this footprint would be stored at a contingency sediment repository on land. Material that cannot be pumped would be removed using conventional heavy equipment.

Plant Site

The surface area for the Plant Site is approximately 25 ha and will accommodate the below listed buildings.

-) General Maintenance Shop
-) Emergency Response Building
-) Mine Maintenance Shop
-) Light Vehicle Maintenance Shop
-) Assay Laboratory
-) Warehousing and Storage
-) Office Complex
-) Mine Truck Shop
-) Waste management building
-) Potable water treatment system
-) Sewage treatment system
-) Fuel storage and distribution system
-) Processing Plant(Mill)

Ore Pad and Crushing Plant

The temporary pile of coarse (run-of-mine) ore will be located immediately west of the Plant Site (refer to Figure 3-2C) and will occupy approximately 5 ha.

Process Plant (also referred to as mill)

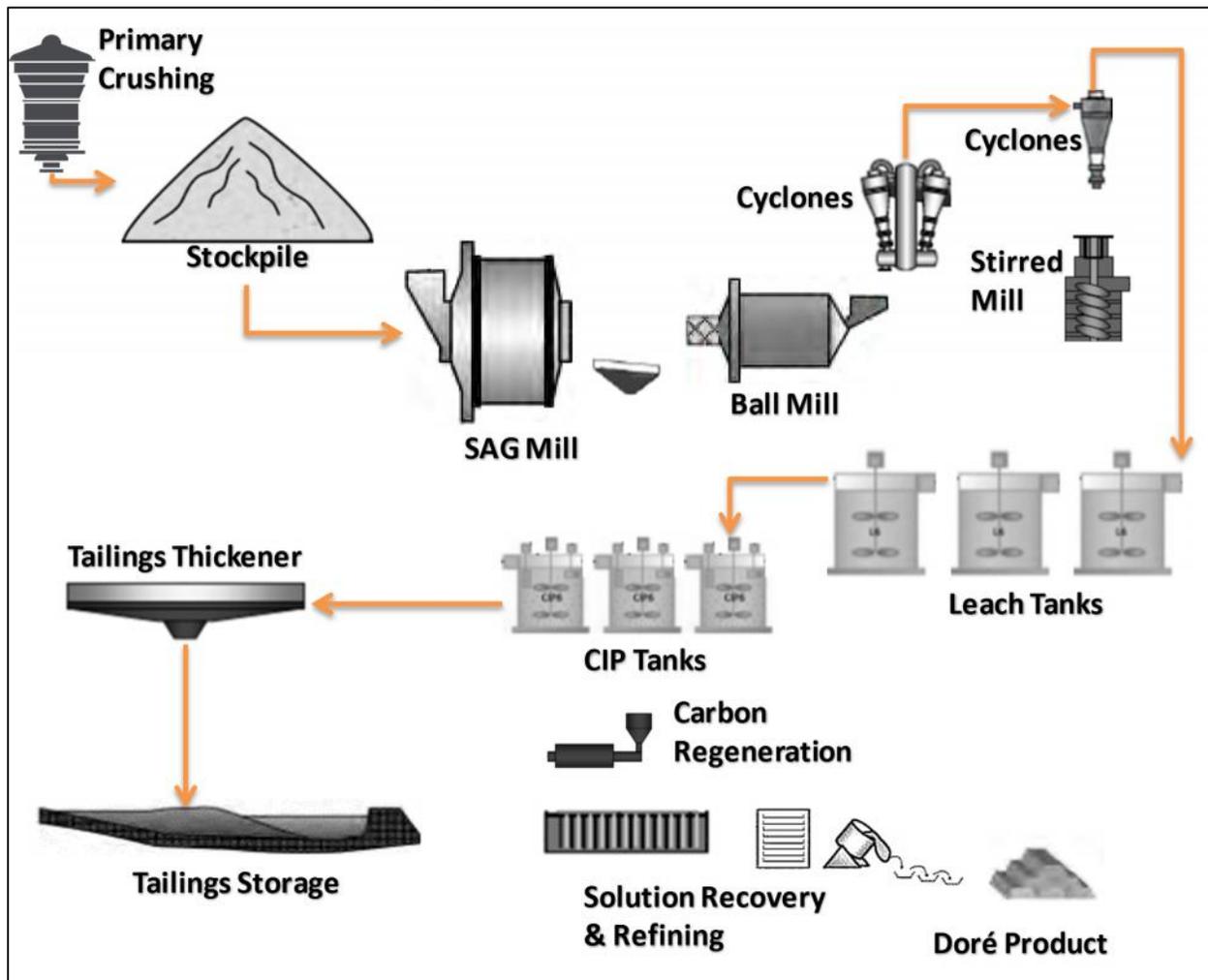
The mill process will be conventional crushing and grinding followed by conventional whole feed leaching with cyanide. The process plant will have a maximum ore input capacity of 44,000 TPD and will be situated at the Plant Site.

Based on the engineering to date, the mill process would be conventional crushing and grinding followed by conventional whole feed leaching with cyanide. The expected process flowsheet for the Project is

shown in Diagram 1-1, based on test work results to date. Reagents to be used in the flowsheet are listed below.

-) Sodium cyanide for gold leaching and carbon stripping,
-) Lime for pH control of cyanide leaching,
-) Hydrochloric acid for carbon stripping,
-) Sodium hydroxide for carbon stripping (after acid wash),
-) Flocculant for thickening of feed and possibly tailings,
-) Sulphur dioxide for cyanide destruction, and
-) Copper sulphate for cyanide destruction.

Diagram 1-1: Mill Process Flowsheet



Tailings Management Facility

The preferred TMF footprint is presented in Figure 3-2A, Figure 3-2C and can contain 139 Mt of tailings. This TMF footprint is the preferred alternative for the base case Project for the reasons listed below.

-) Minimizes terrestrial spatial extent to the extent practicable (385 ha).
-) Minimizes removal of waterbodies and avoid deposition in Springpole Lake. Overprinting of waterbodies and the required water discharge volumes to Springpole Lake is discussed later in this document.
-) It is within same watershed as the rest of the Project footprint (Springpole Lake watershed).
-) Avoids known sensitive sites.
-) Provides the potential to gravity drain or decant water from the TMF to the dewatered portion of Springpole Lake, thereby containing any sort of accidental release in the event of overtopping during an extreme rainfall or snowmelt event.

Due to the flat topographical relief of the Project area, the tailings will be contained by a ring dam which will prevent migration of tailings and any free water.

Runoff and Seepage Collection System

A perimeter runoff and seepage collection system will collect all storm water and seepage discharges from the Project Site, as per the requirements of the Metal Mining Effluent Regulations (“MMER”).

Wastewater Treatment Facility and Discharge System

Surplus water at the Project Site that is not needed for the Process Plant will be treated in a treatment plant at the Plant Site and discharged to Springpole Arm via an underwater diffuser for optimal mixing at the general location shown in Figure 3-2A.

Road

This document distinguishes between road uses and access restrictions, as described below. The transmission line will generally share the same corridor as the roads.

-) *On-site haul road:* This is a private road on the mine site and will be built by FMG, as shown in Figure 3-2A. The on-site haul roads are a total of ~4 km in length.
-) *Private access road:* This ~20 km segment of road extends from the on-site haul road to the Birch River crossing and is shown in Figure 3-2B. This segment of road will be built by FMG and is situated on either patented land or leased mining claims and is effectively private land.
-) *Public access road:* This ~20 km segment of road extends from the Birch River crossing in a southwesterly direction to the Wenasaga Road. Although FMG envisions building this road if it is not already constructed by the forestry company that holds the Sustainable Forest License for the Trout Lake Forest, this road is eventually intended to be part of a public road network of the Trout Lake Forest.

Aggregate Pit and Quarries

Potential aggregate pits with temporary access roads are identified in Figure 3-2A. Rock may also be

quarried from within the waste rock pile and TMF footprints. Aggregate and quarry rock will be used to construct the Project key components listed below:

-) Cofferdams;
-) Tailings dams;
-) All-weather access road and on-site haul roads;
-) Plant site; and
-) Aggregate for concrete.

Table 1-1 summarizes potential aggregate extraction areas that are shown in Figure 3-2A. These potential aggregate deposits have been identified using air photo interpretation and have not been ground-truthed. The extent to which the aggregate pits will be developed will depend on the actual aggregate contained, fill requirements for the Project based on detailed engineering, feedback received during the EA process, the approvals process under the *Aggregate Resources Act* and the fish habitat creation required by fishery offsets under Section 35 and Section 36 (and Schedule 2 of MMER) of the Fisheries Act. Aggregate will also be used for construction of the Project site and for periodic road maintenance. Aggregate will not be extracted for commercial sale. Aggregate will not be stockpiled, it will be extracted on an as needed basis. Aggregate pit dewatering would be discharged locally, in the watershed where the aggregate deposit is located. Fish habitat improvement measures would be implemented in the vicinity of the aggregate deposit as they are mined out. Potential areas of fish habitat creation are shown in Figure 3-3.

Table 1-1: Summary of Potential Aggregate Deposits

Potential Identifier in Figure 3-2A	Aggregate Deposit	Surface Area (hectares)	Potential Extraction Volume ⁽¹⁾ (cubic meters)
A1		11.6	463,510
A2		1.9	77,126
A3		6.7	266,037
A4		71.4	2,857,746
A5		3.7	146,219
A6		7.8	312,272
A7		6.1	245,765
A8		3.4	135,153
A9		14.6	585,366
A10		13.5	540,871
A11		39.1	1,564,531
A12		4.3	171,145
A13		31.5	1,258,232
A14		32.2	1,286,579
A15		3.5	139,039
A16		13.7	546,680
A17		14.6	585,158

Potential Identifier in Figure 3-2A	Aggregate Deposit	Surface Area (hectares)	Potential Extraction Volume ⁽¹⁾ (cubic meters)
A18		4.3	172,651
A19		89.9	3,594,595
A20		5.8	233,132
A21		9.2	368,034
A22		9.0	359,972
A23		8.9	356,363
A24		1.6	62,780
A25		37.3	1,491,900
A26		4.0	159,466
A27		8.1	323,749

(1) Assumed extraction volume of four (4) meters depth.

Transmission Line

A ~60 km long by 23 m wide right-of-way will be cleared, grubbed and prepared for the installation of a 115 kV wood pole transmission line from the Project Site to the existing E1C transmission line owned by Hydro One Networks Inc., as generally shown in Figure 3-2B. This new transmission line would be constructed, owned and operated by FMG. The transmission line will generally follow the road corridor, as shown in Figure 3-2B.

Landfill

A landfill will be required to dispose of solid non-hazardous waste such as packaging and waste from the camp.

Explosives Supply

FMG will evaluate explosives supply options during the EA process. Explosives may be delivered to site on an as-needed basis and stored until required, in accordance with regulatory requirements. Alternatively, an explosives production facility will be constructed at the Project Site by an independent turnkey supplier. This feature is not shown in figures because alternative locations have not yet been identified.

Camp and Accommodations

These will be modular structures that will be transported to site and then connected together. The camp will accommodate ~300 people in single rooms with dormitory style washrooms. This facility will also contain a kitchen and recreation facilities.

Key Project Activities

This section lists key Project activities.

Timber Removal, Aggregate Deposit Development and Road Upgrade: It is necessary to harvest timber in accordance with MNRF requirements. This would be done during winter months to minimize impacts to the avian community. FMG would collaborate with the forestry company that holds the Sustainable Forest

License for the Trout Lake Forest to the extent practical.

Coffer Dam Construction and Lake Dewatering: It is necessary to construct coffer dams and dewater the north basin of Springpole Lake in order to develop the main pit. Once the coffer dams are constructed, water from the north basin dewatered area would be pumped to Springpole Lake and possibly Birch Lake. The north basin of Springpole Lake proposed to be dammed and dewatered totals 152 ha, representing approximately 6.1% of the entire surface area of Springpole Lake. Figure 3-2A presents the portion of the lake proposed to be dammed and dewatered.

Overprinting of Small Waterbodies: Overprinting of small waterbodies by the waste rock pile(s) and TMF will likely be required due to the volume of material involved. The characteristics of the small waterbodies is discussed later in this document.

Establish All-Weather Access Road & Transmission Line: Road construction will consist of clearing and/or widening an approved corridor (or widening of existing corridors), prior to the placing of an approximately 0.5m thick compacted sub-base layer sourced from locally developed and approved aggregate sources. Major water crossings will likely be in place prior to commencing construction due to road construction associated with the Forest Management Plan (FMP) and/or trail construction associated with the Springpole Gold Access Corridor Project. Generally, roads will be 12 m wide and gravel surfaced.

Water Management: During operations, surface water would be diverted from entering the drained portion of Springpole Lake to the extent practical. Management of direct precipitation and seepage into the pit would be included in the mine dewatering activities.

The Project Site is laid out to utilize the main pit as a secondary containment facility, effectively collecting runoff and seepage from the waste rock pile, the plant site, the starter pit, the sediment repository and the TMF. These areas of the Project Site all overflow to the main pit via engineered drainage channels. Runoff ditches and the TMF spillway would drain to the main pit area rather than risk an uncontrolled release of runoff to the environment during an extreme spate event.

Mine water would be directed to the TMF to ensure adequate supply of water for the process plant. Alternatively, mine water would be pumped to a containment pond that is located within the dewatered portion of Springpole Lake.

Domestic sewage will be consolidated and treated using a treatment plant before it is discharged to the TMF for use as process water, in accordance with a sewage Environmental Compliance Approval (“ECA”) from MOECC.

Overall Project Development and Production Schedule

Following the completion of EA processes, acquisition of approvals and successful financing, the overall Project schedule is below.

) Years 1 and 2 (construction): Installation of coffer dams in Springpole Lake and pit dewatering

area.

- J Year 3 (production): Processing plant is commissioned and achieves ~50% of its name plate throughput on an annual basis. A total of 6.0 Mt of mineralized plant feed and 57 Mt of waste are scheduled.
- J Year 4: Process plant feed achieves its annual name plate production target of 13.1 Mt per year. There will be 48 Mt of waste stripping resulting in a strip ratio of 3.7 (waste rock to ore).
- J Years 5 to 8: Mineralized material is mined primarily from Phase 1 and Phase 2. Stripping decreases from 48 Mt per year in Year 3 to 20 Mt per year in Year 7.
- J Years 9 to 12: Development rock stripping reduces to less than 10 Mt per year and strip ratios below 1 (development rock to ore) until waste mining is complete in Year 11.
- J Years 12 and 13: Reclaim ore from stockpile to feed mill.
- J Post Year 13 (closure): Closure activities and post closure monitoring, as per Ontario Regulation 240/00, which contains the Mine Rehabilitation Code of Ontario. Depending on the strategy to implement progressive rehabilitation, flood the open pits and re-establish the north basin of Springpole Lake, the closure work is anticipated to take approximately 10 to 15 years.

2. Proponent Information

Name of Proponent: First Mining Gold Corp.

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3. Key Environmental Aspects

Emissions to the environment are listed below and are key environmental aspects.

Air Contaminant Emissions: The EA will evaluate air emission sources associated with the Project. This will involve the quantification of air emission sources and a prediction of air quality surrounding the Project Site using accepted dispersion models under conservative operational scenarios. Air quality at the boundary of FMG's property will have to be demonstrated to meet federal and provincial air quality criteria. This modeling process is iterative and may identify the need for additional unique abatement measures to reduce emissions. Air emission sources are listed below.

-) Emissions from mobile equipment with internal combustion engines.
-) Temporary diesel fired equipment and generators during the construction phase, to be replaced with grid power.
-) Internal combustion engines in mobile equipment. It is presently envisioned that equipment will be fired with diesel but liquefied natural gas is under evaluation.
-) Propane fired combustion heating units.
-) Fugitive dust emissions from drilling, blasting, crushing, traffic and material handling.
-) Sample preparation, fire assay and wet chemistry processes in assay lab.
-) Reagent mixing, cyanide destruction process and smelting furnace in process plant.

In accordance with industry best practices and regulatory requirements, FMG shall implement a Best Management Practices Plan for the Control of Fugitive Dust that incorporates applicable modern practices that are recognized by the Ministry of Environment and Climate Change (“MOECC”) as well as Environment and Climate Change Canada (“ECCC”).

Greenhouse gases (“GHG”) will be emitted throughout the construction and operation phases of the Project. The most significant GHG emissions are generated by mobile diesel-fired equipment, blasting and propane-fired heaters. Equipment quantities from the Project were estimated from the 2017 Preliminary Economic Assessment and typical mining equipment configurations from similar operations. The GHG emission estimate during the construction phase was based on an operation of 300 days per year. The GHG emission estimate during the operation phase was based on mining for 365 days per year. Quantities of GHGs emitted from each phase of the project were calculated using published emission factors from the United States Environmental Protection Agency and Environment Canada. Total GHG emissions are reported as carbon dioxide equivalents (CO₂e), calculated by multiplying the emission rate of each substance (carbon dioxide, methane and nitrous oxide) by its global warming potential relative to carbon dioxide. A literature search for annual GHG emission rates for industry, provincial and federal sectors was completed. Calculated GHG emissions for the Project were compared to the industry, provincial and federal annual emission targets. The results of this analysis are presented in Table 3-1.

The location of emission sources at a conceptual level of detail are presented in Figure 3-2A and Figure 3-2C (Plant Site, open pits, fugitive dust sources from road, rock pile and TMF).

Table 3-1: Summary of GHG Emissions

Project Phase	Industry Projection ¹	Ontario Targets ²	Canada Targets ³	Industry Projection ¹	Ontario Targets ²	Canada Targets ³
	2020	2030	2020	2020	2030	2020
	58 Mt ⁴	62 Mt	155 Mt	58 Mt ⁴	62 Mt	155 Mt
Construction	0.132	0.132	0.132	0.132	0.132	0.132
	0.228%	0.213%	0.085%	0.115%	0.021%	0.025%
Operations	0.327	0.327	0.327	0.327	0.327	0.327
	0.564%	0.527%	0.211%	0.284%	0.053%	0.062%

(1) Ministry of the Environment and Climate Change, Ontario’s Climate Change Update, September 2014.

- (2) Environmental Commissioner of Ontario. Feeling the Heat: Greenhouse Gas Progress Report 2015, July 2015.
- (3) Environment and Climate Change Canada. Canadian Environmental Sustainability Indicators: Progress Toward Canada's Greenhouse Gas Emissions Reduction Target, 2016.
- (4) Projections are million tonnes; Mt of CO₂ equivalent units per year.
- (5) During the operations phase, it was assumed that diesel-fired generators with an aggregate capacity of 5 MW would supply the Project with electricity for 3 months until grid power is available.

Noise Emissions: Construction phase noise would be generated by mobile equipment and development of on-site quarries. Mining and surface crushing activities will be a source of noise throughout the operation phase. Noise source modelling will be carried out and noise-related environmental effects will be fully considered and mitigated where appropriate.

Liquid Discharges: Sources of liquid discharges are below.

-) Mine water from open pits.
-) Tailings water from mill and TMF.
-) Collected runoff and seepage from Project Site (ore pile waste rock piles, Plant Site, etc.).
-) Treated domestic sewage from sewage treatment plant.
-) Wash water (wash bays at maintenance shops).

The above noted sources of water will be directed to the TMF or the process plant, depending on its quality; if it is of acceptable quality to meet regulatory requirements, some may be discharged to the approved discharge point. At the TMF, tailings solids will be settled and residual chemicals in the water column will be passively removed. Surplus water during operations, including general site runoff, will be monitored, treated if necessary, and discharged in accordance with the requirements of the MMER and applicable provincial approvals.

Where practical and in compliance with MMER as well as provincial approvals, engineered drainage channels will be constructed to divert non-contact, clean surface water runoff from around Project Site to natural drainages.

Waste Management

Solid, non-hazardous waste (e.g. containers, packaging) will be deposited in dedicated bins that are supplied and transported by a licensed carrier in accordance with their Waste Management System Environmental Compliance Approval and disposed of at an approved off-site landfill that is licensed by MOECC pursuant to the Environmental Protection Act. FMG is evaluating the establishment of its own small landfill in accordance with Ontario Regulation 232/98 east of the TMF.

Bulk products such as reagents and petroleum products will be obtained in returnable containers. Where returnable containers are not practical, products will be procured in metal containers to the maximum extent practical. Separate bins will be kept at the Project Site in order to recycle scrap metal and other material as is practical.

Used petroleum product containers will be returned to suppliers or recycled off-site. Used equipment batteries will be recycled at an approved recycling facility.

Hydrocarbon contaminated soil will be identified and managed in consultation with MOECC staff and in accordance with *Environmental Protection Act* requirements.

Liquid wastes that require off-site disposal will be stored in 205 L drums and/or 1000 L cubes and in accordance with MOECC guidance documents.

Drums/cubes will be located in designated intermodal shipping containers and/or designated structures to exclude contact with precipitation. There will be no underground waste storage tanks at the Project Site. Waste will be disposed of in accordance with the *Environmental Protection Act* and using a Generator Registration Number (“GRN”) for the Project Site and HWIN manifests. Hazardous liquid waste that is generated will be removed and disposed of by a licensed carrier and receiver under a GRN on a regular basis so that the Project Site is not considered to be a waste transfer site under the *Environmental Protection Act*. Used oil filters will be crushed and completely drained prior to recycling with scrap metal.

4. Existing Environment

The distance from Springpole Camp to the nearest protected areas are below. These are shown in Figure 2-1 and protected areas and Areas of Natural or Scientific Interest in the region are shown in Figure 7-1.

-) Trout Lake Provincial Natural Reserve: 79.4 km.
-) St. Raphael Provincial Park: 97 km.

To the knowledge of FMG, there have been no regional studies for the area.

Regional Climate, Air Quality and Noise

An automated weather station was installed adjacent to the existing camp location to monitor local climate patterns and provide a basis for future atmospheric emissions modeling. Long-term regional weather stations that will be used to characterize the historical weather in the vicinity of the Project are listed below.

-) The Red Lake Airport Station is located approximately 110 km southwest of the Project Site and provides historic weather data dating back to 1953. Hourly temperature, dew point, relative humidity, wind direction, wind speed, visibility, pressure and weather is available.
-) The Pickle Lake Airport Station is approximately 145 km southeast of the Project Site and provides historic weather data dating back to 1953. Hourly temperature, dew point, relative humidity, wind direction and pressure is available.

Average temperatures normally range from a low in February of -19.6°C to a high in July of between 18.1°C and 23.3°C. The average annual precipitation for the year is 640.2 mm, with the expected minimum precipitation being 18.6 mm in February, and the expected maximum being 97.7 mm in June. At the Red Lake weather station, monthly wind speeds for the area are generally stable throughout the year, averaging approximately 9.4 to 12.8 km/h. The prevailing winds are generally from the northwest, which would direct air and noise emissions away from the nearest receptors located to the northwest and northeast of the Project Site.

Precipitation

Monthly mean precipitation data were collected for nine (9) stations surrounding the Springpole site, using Canadian Climate Normals 1971-2000 (from Environment Canada). Only stations with more than 18 years of complete data and located within 200 km of the Project Site were utilized. Along with the precipitation data, site coordinates and elevation were also obtained.

Mean annual precipitation was calculated for each station, and a graph of mean annual precipitation versus latitude was created. The mean annual precipitation for the Springpole site was determined to be 704 mm. Table 4-1 presents the rainfall distribution.

The 1 in 25 years 24-hour storm rainfall was estimated to be 80 mm based on Atlas of Canada extreme rainfall statistics.

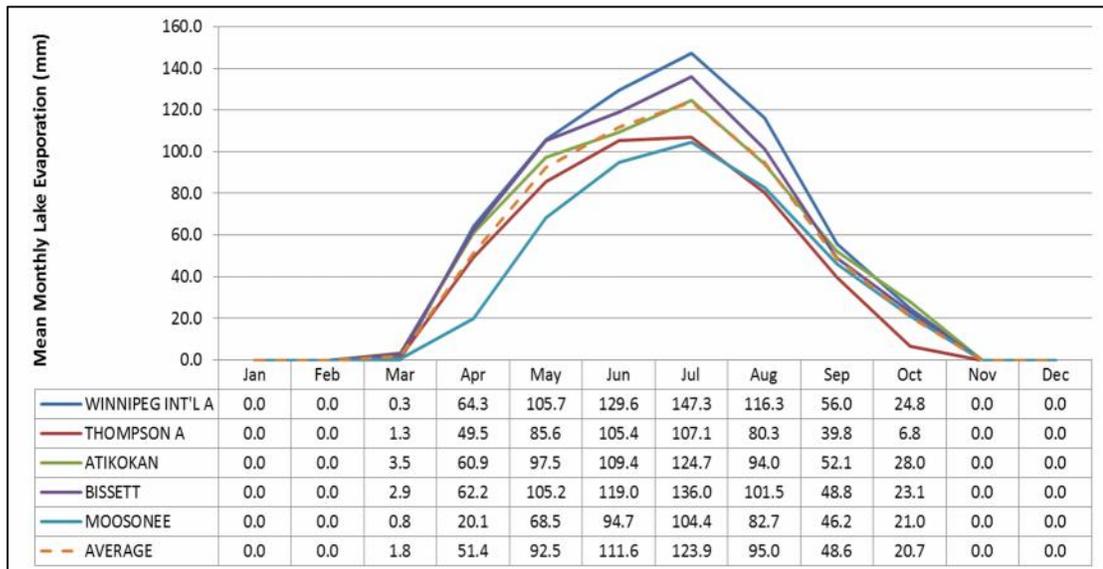
Table 4-1: Average Monthly Run-Off and Precipitation Distribution

Month	Run-Off Distribution	Precipitation Distribution
January	4.3%	4.3%
February	3.4%	3.4%
March	3.5%	4.6%
April	8.9%	5.7%
May	15.1%	9.1%
June	14.3%	14.8%
July	12.8%	13.7%
August	9.8%	12.7%
September	8.8%	12.4%
October	7.9%	8.3%
November	6.3%	6.5%
December	4.9%	4.5%

Lake Evaporation

Lake evaporation was calculated using the WREVAP version 1.0 evaporation estimating software. Monthly mean calculated lake evaporation, mean monthly precipitation and daily bright sunshine hours was obtained for five (5) weather stations surrounding the Project Site from Canadian Climate Normals 1951 to 1980 (from Environment Canada). This data was inserted into the WREVAP software to obtain the calculated evaporation in mm and the monthly evaporation distribution for each of the surrounding stations. The average evaporation and evaporation distribution of the five stations will be utilized as the site evaporation. This is presented in Image 4-1. The average annual evaporation is 546 mm.

Image 4-1: Mean Monthly Lake Evaporation for Five Stations Around the Springpole Site



Air Quality and Noise

The Project Site is located in a remote area of northwestern Ontario. There are no anthropogenic sources of industrial air emissions adjoining the Property. Potential nearby sources of noise and air emissions include forest fires, combustion products from heating oil and propane that are used for residential and recreational purposes at the numerous tourist lodges and periodic timber harvesting activities in the Trout Lake Forest SFL.

There are no historical records for air quality and noise in the area immediately surrounding the Project Site. As part of the EA process and baseline data collection program, the need for these surveys will be addressed as per previously issued EIS guidelines for similar mineral development projects. These data will be included in the EIS submission(s) to regulatory agencies.

The National Air Pollution Surveillance Network and the Ontario Ministry of the Environment and Climate Change (MOECC) have the following air quality monitoring stations listed below in Table 4-2.

Table 4-2: Summary of Existing Air Quality Monitoring Stations

Station	Coordinates	Land Use	Distance from Site	Parameters	Frequency	Years of Data
Pickle Lake Airport (65901)	51.4522, -90.2175	Undeveloped Rural	145 km SE	O ₃	Weekly	2012-2006
Experimental Lakes (64001)	49.6639, -93.7211	Forest	216 km SW	O ₃	Weekly	2014-1898
Winnipeg (70119)	49.8981, -97.1465	Commercial	380 km SW	NO ₂ , O ₃ , CO	Weekly	2016-1978
				NO, NO _x	Weekly	2016-1992
				SO ₂	Weekly	2016- 2009, 1992-1978
				PM ₁₀	Weekly	2016-1993
				PM _{2.5}	Weekly	2016-2000
Thunder Bay (60809)	48.3794, -89.2902	Residential	400 km SE	NO ₂ , NO, NO _x	Hourly and Weekly	2016-2006
				PM _{2.5} , O ₃	Hourly and Weekly	2016-2004
Thunder Bay (60807)	48.3730, -89.2916	Residential	400 km SE	NO ₂ , NO, NO _x	Weekly	2003-1987
				SO ₂ , CO, O ₃	Weekly	2003-1986
				PM _{2.5}	Weekly	2003-2001

Baseline air quality can be conservatively estimated at the Project Site using existing monitoring stations found in Thunder Bay, Pickle Lake Airport and Experimental Lakes.

Baseline noise data is not available and on-site measurements are planned in 2018 to address this data gap. The baseline data will be sufficient to support acoustic modeling to predict effects surrounding the Project Site.

Topography

The Property is underlain by glaciated terrain characteristics of a large part of the Canadian Shield. Land areas are generally of low relief with less than 30 m of local elevation. Tree cover consists of mature spruce, balsam, birch, and poplar. Black spruce and muskeg swamps occupy low-lying areas. Glacial till is generally less than 1 m in thickness. Outcrops are limited and small and are generally covered by a thick layer of moss or muskeg. Land areas are separated by a series of interconnected shallow ponds and lakes. The average elevation in the Project Site is 395 m above sea level.

Geochemistry

An initial assessment of acid rock drainage (“ARD”) potential has been completed. Findings are summarized below.

-) Based on defensible interpretation criteria, approximately 64% of samples were expected to remain net acid neutralizing indefinitely.
-) Approximately 36% of samples were theoretically predicted to eventually become acidic after some lag time that required kinetic testing to be further evaluated. This included both ore-grade and waste-grade samples. Kinetic tests are being initiated to confirm or reject these predictions.

Two (2) representative composite ore samples were subjected to static tests followed by kinetic testing (2 humidity cells) that lasted 168 weeks. Findings are summarized below.

-) Neither sample turned acidic during the 168 week test, with pH ranging from 7 to 8.
-) Semi-quantitative estimates of sulphide and neutralization depletion times for the two (2) samples suggest the samples will ultimately turn acidic after more than 60 and 100 years, respectively.
-) Under neutral pH conditions, metal leaching was low to negligible.

Vegetation and Soils

The Property is part of the Lac Seul Upland, which extends eastward from Lake Winnipeg in Manitoba to the Albany River in northwestern Ontario. Forest composition on the Property is typical of the Lac Seul Upland. Dominant tree species include; trembling aspen, black spruce, white birch, balsam fir, white spruce and jack pine. Understory ground cover species composition and abundance is typical of mesic mixed-wood boreal sites, and lacks microhabitats likely to harbor rare vascular plant species. A variety of common, early successional graminoids and herbaceous ground cover plants are prevalent on areas of the Property where mature timber has been removed or where the canopy is open and the ground is exposed to light. Natural re-vegetation and succession has been observed to be rapid at the Property in areas of historical exploration.

Findings from baseline field programs are summarized below.

-) The soil baseline assessment did not discover any unexpected land conditions or soil characteristics.
-) The potential for metal leaching is low and the nutrient content of the soils is moderate.

-) None of the provincially significant species listed in the Natural Heritage Information Center database have been encountered.

Wetlands

There are no records of regionally or provincially significant wetlands that occur in the region surrounding the Project Site. A field campaign by DST Consulting Engineers in 2012 did not identify significant wetlands in the vicinity of the Project. Wetlands in the Project Area are shown in Figure 7-3. Findings from the study are below:

-) Habitat types that were identified as wetland habitats encountered during the 2012 vegetation assessment are classified as poor to intermediate swamps;
-) The fen wetland type occupied 57.2% of the wetland areas assessed. The dominant vegetation form was narrow emergent;
-) Small areas of marsh dominated by submerged vegetation are prominent on Springpole Lake
-) Provincially significant and locally significant species were identified in seven (7) of the wetlands assessed;
-) No Provincially significant wetlands were identified within the study area under the Ontario Wetland Evaluation System; and
-) The pH of the soil samples was found to be fairly acidic (averaging about 5) while the nitrogen and organic carbon content of the soils was found to be typical of soils with substantial decomposing organic matter.

Hydrology

Springpole Lake flows southeast via Birch and river systems to the Albany River and ultimately drains to James Bay. The surface area of Springpole Lake is 2,477.5 ha. The main tributary to the lake is the Birch River, which flows through the east-west section of the lake, which is referred to as Springpole Arm (Figure 3-1). Birch River connects Birch Lake and Springpole Lake via a series of smaller lakes. Birch Lake has a surface area of 10,858 ha. The area of the Birch River watershed upstream from Springpole Lake is approximately 1,054 km² based on MNRF's Ontario Flow Assessment Tool website tool.

Surface Water Quality

Surface water generally meets Provincial Water Quality Objectives (PWQO) established by the MOECC with conditions that are typical of undeveloped oligotrophic lakes in northwestern Ontario including limited nutrient availability, low turbidity and sufficient dissolved oxygen concentrations to support fish populations in the hypolimnion.

Hydrogeology

The hydrogeology of the region is predominantly controlled by the exposed bedrock or the overlying cover of native clay soil. Shallow ground water flow is assumed to be similar to surface drainage, primarily originating at the heights of land and flowing radially downslope.

Ground Water Quality

Sample results from baseline field campaigns are discussed below.

- J Sample results were below the MOECC's Table 8 criteria (criteria for Generic Site Conditions for Use within 30 m of a Water Body in a Potable Groundwater Condition, as per Ontario Regulation 153/04).
- J Sample results were below MOECC's Aquatic Protection Values ("APV").

Fish Community and Habitat

Waterbodies and watercourses in the Project Area can be organized in to one of three (3) categories based on the size or type of aquatic system.

- J First Category: Large waterbodies, including Springpole Lake, Birch Lake and Seagrave Lake which range in surface area from 1,300 to 10,900 ha. These large lakes are all cold-water lakes that support a similar fish community including walleye, northern pike, yellow perch, lake trout and lake whitefish among other non-game species. Fish caught are presented in Table 4-3 and lakes are shown in Image 1.
- J Second category: Small unnamed lakes surrounding the project, all of which are less than 20 ha in surface area. Some of these small lakes support fish populations but species diversity is limited. Common species in small waterbodies sampled to date include yellow perch, northern pike, brook stickleback and finescale dace. Fish caught are presented in Table 4-4 and lakes are shown in Image 2.
- J Third category: Small tributary water courses flowing in to Springpole Lake. Many of these are ephemeral, of those that have year-round flow only some support accessible fish habitat. Species common in these small tributaries are generally representative of the baitfish community of the connected lakes and ponds (Second category). However, some may be utilized seasonally by larger bodied fish. These small tributaries are shown in Image 3.

Aquatic Species at Risk ("SAR") have not been identified in the study area and Springpole Lake is a part of a larger system of lakes that are well connected and provide fish passage throughout.

Table 4-3: Fish Catch in Lakes

Lake	Springpole	Birch	Seagrave
Area (ha)	2,477	10,858	1,330
Lake Trout	X	X	X
Lake Whitefish	X	X	X
Walleye	X	X	X
Northern Pike	X	X	X
Yellow Perch	X	X	X
Rock Bass	X		
White Sucker	X	X	X
Burbot	X	X	X
Lake Herring		X	X
Shorthead Redhorse		X	
Greater Redhorse		X	
Emerald Shiner		X	
Blacknose Shiner		X	
Spottail Shiner		X	
Iowa Darter		X	
Log Perch		X	
Mottled Sculpin		X	

Table 4-4: Fish Catch in Small Waterbodies

Small Waterbody (refer to Image 2)	Northern Pike	White Sucker	Yellow Perch	Brook Stickleback	Iowa Darter	Finescale Dace	Fathead Minnow	Northern Redbelly	Spottail Shiner
Unnamed Lake L-1	X	X	X						
Unnamed Lake L-2	X	X	X						X
Unnamed Lake L-3				X		X		X	
Unnamed Lake L-4	No catch								
Unnamed Lake L-5				X	X	X	X		
Unnamed Lake L-6	No catch								
Unnamed Lake L-10	X		X						
Unnamed Lake L-11	X		X						
Unnamed Lake L-12				X	X				
Unnamed Lake L-13				X	X				
Unnamed Lake L-14	X		X						

Image 1: Regional Context for Fisheries Assessment

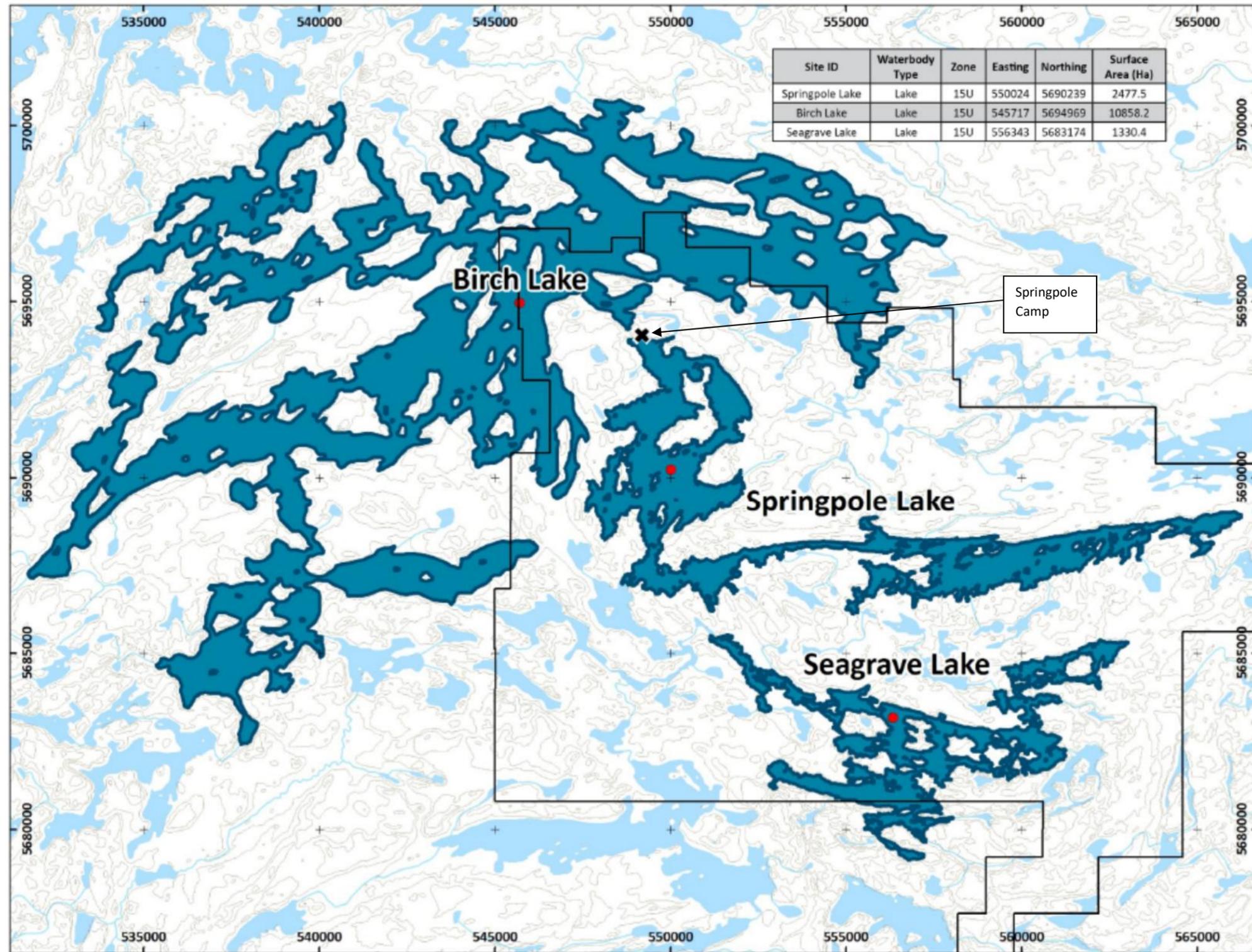


Image 2: Small Waterbodies

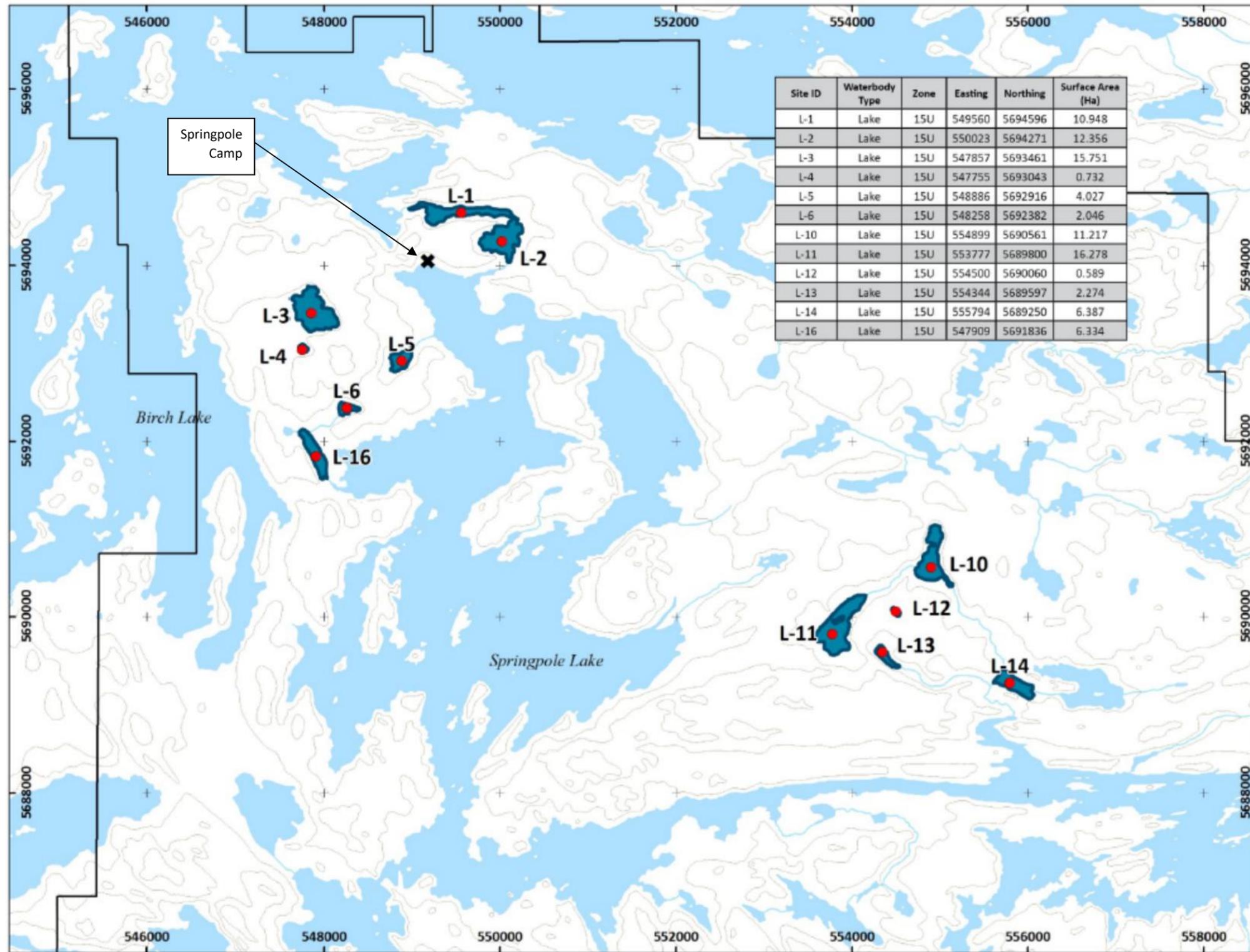
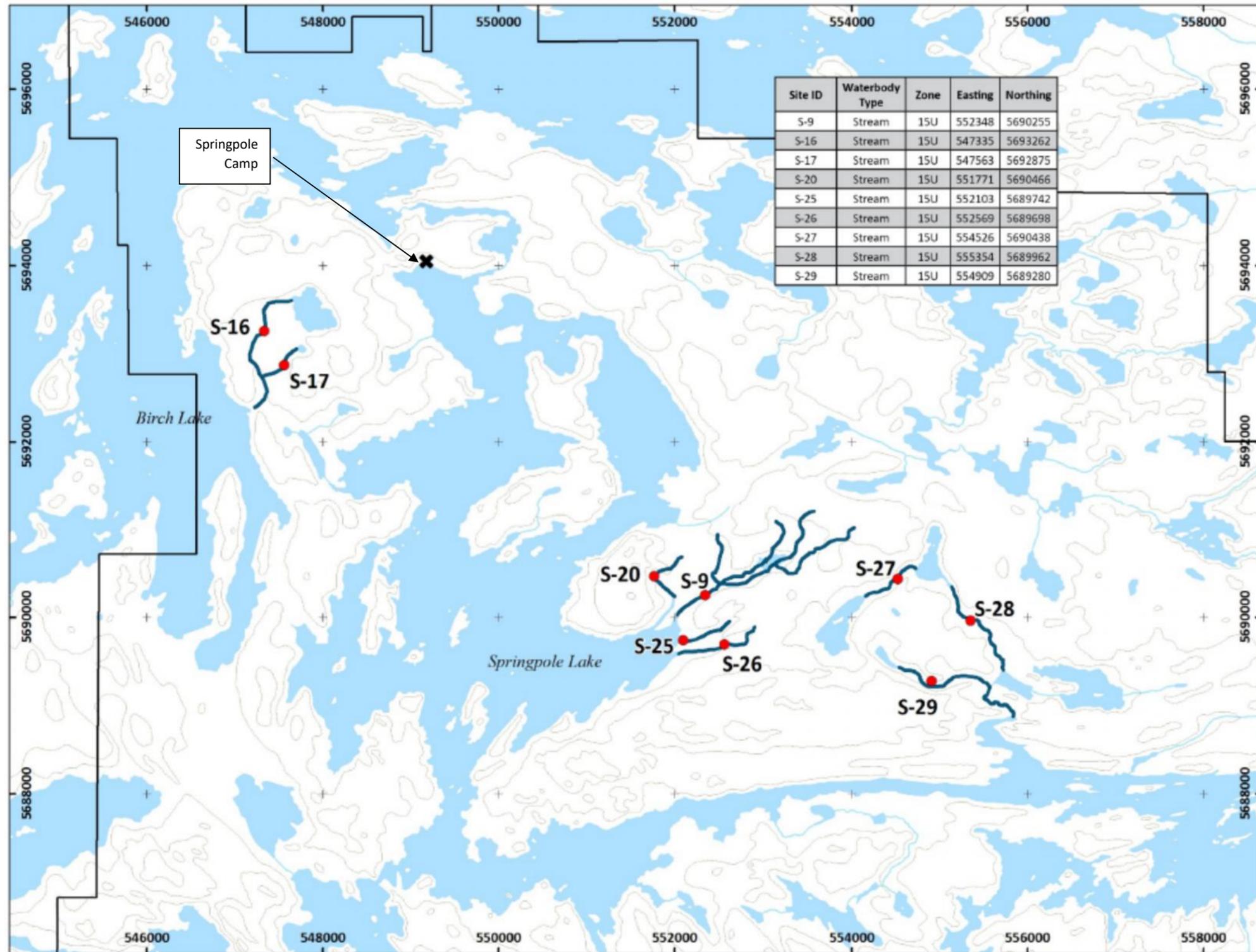


Image 3: Small Watercourses



Wildlife and Avifauna

Findings from the baseline studies to date related to SAR are below.

Whip-poor-will

-) None observed during breeding bird surveys.
-) It is the proponents understanding that Whip-poor-will require open areas interspersed with mixed woods. These areas are not known to occur at the Project Site.
-) No suitable habitat present on site.
-) Project Site is located outside current known range.

Wolverine

-) Tracks of one individual observed on Springpole Lake in February 2011. The individual had dug into a beaver lodge on the south arm of Springpole Lake.
-) Prefers large contiguous "intact" conifer dominated stands.
-) No known key habitat features in Project Site.
-) Winter use has been confirmed through track observations, no known denning sites.

Northern Myotis/Little Brown Myotis

-) Five (5) out of the six (6) monitoring locations where the ultrasonic recorders were deployed detected Northern Myotis and four of the six locations recorded Little Brown Myotis. Ultrasonic recorders only indicate presence/absence as opposed to quantity.
-) Some of the Ecosites identified by the Ecological Land Classification system that are suitable habitat are present at the Project Site, therefore, it is possible that roost trees are also present on site. Individuals are likely using some trees as roost trees in the Project Area.

Woodland Caribou

-) The Project area is within the Churchill Caribou Range.
-) Caribou require large contiguous "intact" conifer dominated stands, islands and peninsulas. This habitat is present at the Project Site, north of Springpole Arm in particular, and is regarded as a significant subrange habitat feature.
-) Historically caribou have wintered east and south of Springpole Lake, then dispersed northward and southwestward during the snow-free season, likely for calving.
-) The Project Area contains known wintering areas, calving/nursery areas and summering areas. Potential corridors or travel routes leading from wintering areas surrounding Springpole Lake to calving areas located on Birch Lake and smaller lakes to the south.
-) Setbacks from significant habitat features are presented in Figure 3-2A.

Findings from the baseline studies to date regarding significant wildlife habitat are below.

Habitats of Seasonal Concentrations of Animals

-) Winter deer yards: There are no known winter deer yards within the study area.
-) Late winter moose habitat: Late winter moose habitat is abundant throughout the study area and may be directly impacted by the Project Site. However, moose populations in this portion of the Trout Lake Forest are inherently low (0-0.2 per km²) and the wildlife management objectives in this area focus on caribou.

-) Colonial bird nesting sites: The only colonial nesting birds located within the study area were Bonaparte's gulls.
-) Waterfowl stopover and staging areas: There are no known waterfowl stopover and staging areas within the study area.
-) Waterfowl nesting sites: A ring-necked duck nest was located near the Springpole camp. There are no species of waterfowl considered to be "at risk" in Canada or Ontario, however, ringnecked ducks are considered to be high priority for conservation planning. Potential nest sites for ring-necked duck are not considered rare within the Project Area (grassy sites within 200 m of water). There is no evidence of nest fidelity in ring-necked ducks, nor does this site support large concentrations of nesting waterfowl, other species of conservation concern, or a variety of waterfowl species.
-) Shorebird migratory stopover areas, Landbird migratory stopover areas, Raptor winterfeeding and roosting areas, Turkey vulture summer roosting areas, Reptile hibernacula, Bat hibernacula: None of the features are known to occur within the study area.

Rare Vegetation Communities or Specialized Habitats for Wildlife

-) Old-growth or mature forest stands – MNR's Significant Wildlife Habitat Technical Guide indicates that forest stands that are 120 year old or older ("old growth"), can be significant. The more significant "old growth" stands are those comprised of rare species or on rare ecosites (i.e. black ash or cedar swamps on very rich sites). None of these stands have been found to occur within the study area.
-) Moose calving areas: There are a number of moose calving sites located within the study area, outside of the Project Site.
-) Moose aquatic feeding areas ("MAFA"): Two (2) MAFAs occur within the study area, but are outside the Project Site.
-) Mineral licks: A mineral lick has been identified within the study area, it is located on an island in Springpole Lake south of the Project Site.
-) Mink, otter, marten and fisher denning sites: There are no known mink, otter or fisher denning sites within the area.

Habitats of Species of Conservation Concern

No habitat of the provincially rare species listed below was located during field investigations.

-) Bobcat
-) Northern Long-eared bat
-) Yellow-Headed Blackbird
-) Northern Mockingbird
-) Black-billed Magpie
-) Red-Headed Woodpecker
-) Great Gray Owl
-) Black Tern
-) Foster's Tern
-) Bald Eagle
-) Prairie Heath Aster
-) Prairie Golden Aster
-) Gray-Stemmed Goldenrod

-) Inland Rush
-) Fir Clubmoss
-) Mountain Parsley
-) Mudwort
-) Prairie Spikemoss

Human Environment

The Red Lake area has been an historic mining camp since the gold rush of the 1920s, and it currently has five (5) active mining projects and numerous decommissioned / abandoned mines situated within the Municipality of Red Lake. The mining and mineral development sector is the largest employer in the region.

Letters of support for the Springpole Gold Project were received by GCU from the Township of Ear Falls and the Municipality of Red Lake, which are the two (2) proximal municipalities to the Project. FMG is commencing additional outreach with these municipalities, as well as the Municipality of Sioux Lookout.

The region hosts remote tourism operations and seasonal camps, particularly on Birch Lake which is situated upstream of the Project Site. Other Remote tourism lakes in the general vicinity of the Project Site include Birch, Seagrave, Bertha, Deaddog, Gull, Fawcett and Christina (refer to Figure 3-2B). Other proximal seasonal residences are located south of the Project, on Johnson Island (refer to Figure 5-1).

The Project is within the Trout Lake Forest SFL and forestry activities are on-going in the region, in accordance with the *Crown Forest Sustainability Act*.

Archaeological Resources

Assessment work led by a licensed professional archaeologist with input from proximal First Nations has identified archaeological sites in the vicinity of the Project Site. Large setbacks from these sensitive sites have been maintained in the base case general arrangement in Figure 3-2A. An objective of the on-going consultation process with the engaged Indigenous communities will identify any additional sites so that they can be considered for preservation in the Project planning process.

5. Federal Involvement and Potential Project Changes Related to Federal Legislation

Federal Financial Support and Federal Lands: There is no proposed or anticipated federal financial support associated with the Project.

There are no federal lands required or proposed to be used to construct or operate the Project. The nearest federal lands are listed below.

-) Camp to Lac Seul First Nation (reserve): 120 km
-) Camp to Cat Lake First Nation (reserve): 40 km
-) Camp to Wabauskang First Nation (reserve): 125 km
-) Camp to Slate Falls Settlement: 45 km

There are no other federal lands in the vicinity of the Project. The Slate Falls First Nation settlement lands located east of the Project Site (refer to Figure 2-1) are not classified federal reserve land at this time.

No environmental changes on federal lands, lands outside of Ontario, or land outside of Canada are expected as a result of the Project.

Fisheries Act

The base case Project requires the temporary dewatering of the north basin of Springpole Lake during the operational phase of the Project.

-) The north basin of Springpole Lake is good quality fish habitat that supports lake trout, walleye, northern pike and other cool and cold-water species. Lake trout are present in the North Basin year-round but are most abundant in this area during the summer months, as it provides a deep, cold-water refuge. For species such as walleye and northern pike, that reside above the hypolimnion, there does not appear to be any unique or limiting habitat present that would indicate the isolation and draining of the north basin would result in losses in fish productivity that would be disproportionately greater than the area of habitat that is removed. Summer habitat is more limited for cold-water species like lake trout and whitefish. The north basin is one of three (3) basins in Springpole Lake that have sufficient depth to provide summer habitat for cold-water species. The telemetry data indicate that lake trout utilize at least three (3) of these basins during the summer when thermal stratification is established. Lake trout spawning areas have been identified adjacent to each of the three (3) basins. The physical characteristics of the dewatered portion of Springpole Lake are described in Table ES.3.

Due to the volume of waste rock and tailings associated with the base case Project, it will ultimately be necessary to overprint some small waterbodies. The physical characteristics of these waterbodies are summarized in Table ES.3.

It is noted that fishery offset would be required pursuant to Section 35 of the *Fisheries Act* and also a listing in Schedule 2 of MMR. These are further discussed in Table 4-5.

Table 4-5: Summary of Affected Waterbodies in Project Footprint

Affected Lake	Surface Area (m ²)	Volume (m ³)	Average Depth (m)	Image Reference	Duration of Effect	Relevant Section of Fisheries Act
Springpole Lake (north basin)	1,580,000	21.7 million	Refer to bathymetric map in Figure 5-1	1	Temporary; the north basin will be returned at closure with a modified lake bottom where pit and coffer dams are located.	Section 35
L-5	49,641	77,447	1.6	2	Permanent (overprinted by waste rock facility)	Section 36 and Schedule 2 of MMER
L-6 ⁽¹⁾	27,947	25,395	0.9	2		
L-10	114,865	146,376	1.3	2	Permanent (overprinted by tailings management facility)	Section 36 and Schedule 2 of MMER
L-11	173,359	66,486	0.4	2		
L-12	8,257	21,832	2.6	2		
L-13	25,332	32,936	1.3	2		
L-14	70,786	40,614	0.6	2		

(1) As indicated in Table 4-4, no fish caught during field work.

(2) Field data from the assessed small watercourses shown in Image 3 are being collated and will be described during the EA process. Based on preliminary assessment, approximately 5,100 meters of streams / ephemeral streams will be overprinted by the TMF and waste rock pile.

Species at Risk (Species at Risk Act)

Since the Project is not located on federal lands, only aquatic species listed as endangered, threatened or extirpated are protected under the federal *Species at Risk Act*. No aquatic SAR have been documented in the vicinity of the Project to date. Based on known distributions and habitat requirements, aquatic SAR are not anticipated to exist within the immediate Project Site.

Migratory Birds (Migratory Birds Convention Act)

The *Migratory Birds Convention Act* and its regulations protect migratory birds, their eggs and nests.

The development of the Project would involve timber harvesting as well as clearing and grubbing of the Project footprint. These activities have the potential to affect migratory birds and their habitat. Mitigation measures that may be employed may include, but are not limited to, those that are listed in the bullets below.

-) Conservation of significant habitat features by modifying the development footprint.
-) Modifying the activities and/or the timing of activities at the Project Site. This may include avoiding earthworks / clearing activities outside the existing footprint during the period when migratory birds could be present and these work windows would be established with input from MNRF.

-) Habitat enhancement and/or creation (*e.g.* planting appropriate vegetation and targeted silvicultural prescriptions; vehicle and equipment management to reduce likelihood of collisions; management of off-road vehicles to reduce likelihood of disturbance to ground nests; set-aside areas for habitat creation; nest creation; etc.) at the Property or elsewhere in the region off of FMG-controlled lands.
-) Mitigation measures would be implemented in a multi-species context as necessary. Mitigation measures would be implemented with input from MNRF and in accordance with any permits that may be issued pursuant to the *Endangered Species Act*.

6. Potential Effects on Indigenous Peoples

The Project Site is not located within or adjacent to any First Nation reserves or settlements, however it is within several traditional territories. The potential effects on Indigenous peoples, including effects on areas of cultural importance or specific uses, will be determined as the EA progresses. FMG anticipates that Traditional Knowledge and/or Traditional Land Use studies will be undertaken by Indigenous communities as a result of the Project.

Table 6-1 provides a brief overview of the likely adverse environmental effects of the Project, with emphasis on the effects of key federal interest. Key biophysical attributes identified in Table 6-1 are based on current information from workers at site, consultation with First Nations and stakeholders, as well as previous baseline studies conducted at the Property from 2011 through 2017. Additional baseline studies and modeling will commence in 2018 to refine characterization of the existing environment in the Project Area, defining study areas (for each Valued Component) and support the overall issue scoping process for the EA (federal and provincial). A key element of the planned supplemental environmental baseline studies will be to better describe the area in terms of species at risk (“SAR”) or any species with special conservation status (provincial or federal).

Table 6-1 provides an overview of potential Project-related changes to the environmental components identified under Section 5 of CEAA 2012. It also identifies potential changes to components of the environment within federal jurisdiction (*i.e.* fish and fish habitat, aquatic species, and birds) and potential changes to the environment that would occur on federal or transboundary lands, as well as the potential effects of environmental changes on Indigenous peoples. It considers potential changes to the environment that are directly linked or necessarily incidental to federal decisions that enable the Project to proceed, and associated effects on health and socio-economic conditions, physical and cultural heritage, and resources of historical, archaeological, paleontological or architectural significance.

Potential environmental interactions are also identified in Table 6-1 based on a hypothetical scenario in which no mitigation or environmental management planning is applied. Table 6-1 discusses how these potential Project-related environmental interactions will be addressed in the EIS, which will present a more realistic scenario that includes proposed mitigation and environmental management measures to avoid, reduce or eliminate potential Project-related environmental effects. Table 6-1 also outlines potential mitigation measures based on preliminary Project planning and design and these will be refined during the course of the EA.

The scope of the EIS will focus on the assessment of potential adverse environmental effects of the Project on the Valued Components (“VCs”). VCs are environmental attributes associated with the Project that are of special value or interest to Indigenous peoples, regulatory agencies, the Proponent, resource managers, scientists, key stakeholders, and/or the general public. The term “Environment” is defined to include not only ecological systems, but also human, social, cultural, and economic conditions that are affected by changes in the biophysical environment. VCs therefore include ecological, social, and economic systems that comprise the environment. Preliminary proposed VCs that will be used to assess effects to environmental components identified under CEAA 2012 are presented in Table 6-1 where applicable.

The potential environmental effects of Project activities and components will be assessed using a standard framework to facilitate assessment of effects on each VC. Evaluation tables and matrices will be used to document the assessment. Residual Project-related environmental effects (*i.e.* those environmental effects that remain after the planned mitigation measures have been applied) will be characterized for each VC using standard criteria (*i.e.* magnitude, geographic extent, duration, frequency, reversibility, and context). The significance of residual Project-related environmental effects will then be determined based on standards or thresholds (*i.e.* significance rating criteria) for each VC.

Table 6-1: Environmental Effects of the Project Related to Section 5 of CEAA 2012 and Sections 17-19 of the Prescribed Information for the Description of Designated Project Regulations

Relevant Section(s) of CEAA 2012	Relevant Section of Regulations ⁽¹⁾	Applicable Valued Component ⁽²⁾	Potential Environmental Interaction ⁽³⁾	Potential Mitigation and/or Management ⁽⁴⁾	How Potential Environmental Interactions Will be Addressed in EIS
<p>5(1)(a)(i) and 5(1)(a)(ii)</p> <p>fish, fish habitat, aquatic species</p>	<p>17: A description of any changes that may be caused, as a result of carrying out the Project, to:</p> <p>(a) fish and fish habitat as defined in subsection 2(1) of the Fisheries Act; (b) aquatic species, as defined in subsection 2(1) of the Species at Risk Act</p>	<p>Fish and Fish Habitat</p> <p>Surface Water</p>	<p>The Project Site contains several fish-bearing watercourses and waterbodies (refer to Section 5.1.9). Routine Project activities could result in changes to fish and fish habitat as defined in section 2(1) of the <i>Fisheries Act</i> due to the potential environmental interactions listed below.</p> <ul style="list-style-type: none"> J The Project has potential to adversely affect fish if Project-related hydrological and/or hydrogeological changes affect the quality or quantity of fish habitat. J Liquid discharges from the Project have potential to adversely affect fish habitat and fish health if they cause a reduction in water quality in receiving waters frequented by fish. Discharge or seepage of mining effluents has potential to cause changes to surface water and sediment quality that could potentially lead to indirect or direct effects on fish (<i>i.e.</i> toxicity, bioaccumulation, avoidance behaviour to a chemical gradient, alteration of planktonic and benthic communities). The exposure and weathering of some mine materials may also cause degradation of fish habitat due to acid generation and/or leaching of contaminants into waters frequented by fish. J Construction, excavation, and dewatering and/or infilling of waterbodies have potential to cause injury or mortality to fish. This includes the temporary dewatering of the north basin of Springpole Lake for the life of the mine, the temporary dewatering of aggregate extraction areas and the overprinting of the water bodies within the TMF and waste rock pile footprints. J Alterations to stream channels have potential to cause injury or mortality to fish, as well as to affect fish mobility and fish habitat. J If any blasting occurs near fish-bearing waters, vibration from the detonation of explosives have potential to cause injury or mortality to fish. J An accidental spill or release to the environment originating from a Project activity or component would have potential to result in changes to fish and fish habitat, including: <ul style="list-style-type: none"> J Injury, mortality, and/or reduced health for fish. J Reduced availability and quality of fish habitat 	<ul style="list-style-type: none"> J Design for limitation of construction footprint to the extent practical to minimize loss of fish habitat and disturbance of riparian areas. J Design for installation of culverts so as to prevent the creation of barriers to fish movement, and maintenance of bankfull channel functions and habitat functions. These measures include: <ul style="list-style-type: none"> o Embedment; o re-instatement of low flow channel and native substrates; o proper sizing; and o maintenance of adequate channel slope. J Design for avoidance of in-water work during applicable DFO and MNRF restricted activity timing windows. J Design for limitation of the duration of all in-water work to the extent practical and conducting in-stream work during periods of lower flow to the extent practical, to allow work in water to be isolated from flows and to avoid wet, windy, and rainy periods that may increase erosion and sedimentation. J Design for undertaking all in-water activities, or installation of associated in-water structures, such that interference with fish passage, reduction in channel width, or reduction in flows is limited. J Design for planning of activities and works in waterbodies such that loss or disturbance to aquatic habitat is limited and sensitive habitats are avoided to the extent practical. J Design for activities near water such that materials such as fuels, lubricants, paint, blasting agents, rust solvents, degreasers, grout, or other chemicals do not enter a waterbody. J Design for treating and handling building material used in water in a manner to prevent the release or leaching of substances into the water that may be deleterious to fish. J Plan for prompt stabilization of shorelines/banks disturbed by activities associated with the Project to prevent erosion and/or sedimentation, preferably through revegetation with native species appropriate for the site J Design for qualified environmental professional to confirm that applicable permits for relocating fish are obtained and to capture fish trapped within an isolated/enclosed area at the work site and relocate them to an appropriate location in the same waters (<i>i.e.</i> fish removals from North Basin of Springpole Lake and small waterbodies that will be overprinted). J Design for avoidance of use of explosives in or near water where possible, and compliance with DFO's <i>Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters</i> (Wright and Hopky 1998) if blasting is undertaken near fish-bearing waters. J Design of sewage treatment plant and water management facilities to treat effluent to levels that will not be acutely toxic in the effluent, will not have chronic 	<ul style="list-style-type: none"> J Potential Project-related environmental effects on fish and fish habitat will be assessed primarily in the context of the Fish and Fish Habitat VC, but will also be indirectly considered in the context of the Surface Water VC. J The assessment will include the identification of standard and VC-specific mitigation measures to reduce or eliminate Project-related environmental effects; characterization of residual Project-related environmental effects; and determination of the significance of residual Project-related environmental effects. J The EIS will also consider accidental events and assess the potential effects of an accidental spill or release to the environment on

			<p>(including water quality).</p> <p>J Physical work in water, such as the installation of an effluent diffuser, a freshwater pump intake, water crossings and the coffer dams in Springpole Lake.</p> <p>Section 2(1) of SARA defines ‘aquatic species’ as comprising fish and marine plants as defined under sections 2(1) and 47 of the <i>Fisheries Act</i>, respectively. The Project is not expected to result in any changes to aquatic species as defined under SARA other than fish (i.e., the Project will not result in any changes to marine plants) due to the lack of any anticipated potential interaction between the Project and the marine environment. However, the potential Project- related changes to fish habitat identified above include potential changes to freshwater aquatic plants as components of fish habitat.</p> <p>Reduced water quality in Springpole Lake; loss or alteration of potential fish spawning habitat (e.g., sedimentation and reduced flows), temporary removal of north basin of Springpole Lake, removal of small water bodies within Project footprint.</p> <p>Site drainage and erosion from exposed soils; effluent treatment and discharge; containment of accidental spills; water taking; stream/water crossings (access road, power line and haul roads) Increased flows in Springpole Lake; sedimentation as a result of site exposed soils and erosion on site; alteration and loss of wetlands in the project area to support the siting of infrastructure.</p> <p>Temporary removal of north basin of Springpole Lake, removal of small water bodies within Project footprint. Sedimentation as a result of site exposed soils and erosion on site; increased flows in Springpole Lake.</p>	<p>toxicity outside the mixing zone, and will meet applicable federal and provincial guidelines outside the mixing zone.</p> <p>J Design for pipeline intake and outlet structures to prevent entrainment or impingement of fish and to prevent scour erosion.</p> <p>J Design for water intake structures in accordance with DFO’s <i>Freshwater Intake End-of-Pipe Fish Screen Guideline</i> (DFO 1995).</p> <p>J Design for limitation of access to waterbodies and banks to protect riparian vegetation and limit bank erosion.</p> <p>J Design for use of temporary crossing structures or other practices to cross streams or waterbodies with steep and highly erodible banks and beds (e.g. dominated by organic materials and silts).</p> <p>J Design for operation of machinery on land (above the high-water mark), on ice, or from a floating barge whenever possible, in a manner that limits disturbance to the banks and bed of the waterbody.</p> <p>J Plan for maintenance of equipment to be used in water in a clean condition, free of fluid leaks and aquatic invasive species</p> <p>J Plan for washing, refueling, and servicing machinery and storing fuel and other materials for the machinery in such a way as to prevent deleterious substances from entering the water</p> <p>J Plan for development and implementation of Project-specific environmental management plans and monitoring programs, including a Surface Water Monitoring and Management Plan, an Erosion and Sediment Control Plan and development of Emergency Response and Spill Prevention and Contingency Plans for implementation in the event of an accident or malfunction.</p> <p>J Plan for development and implementation of a Project-specific Explosives Management Plan to reduce risk of lethal or sub-lethal effects on fish, changes in bank stability and composition, and sedimentation.</p> <p>J Plan for implementation of any additional mitigation measures outlined for the Surface Water VC.</p> <p>J Design for detoxification of cyanide (used to process the ore and extract gold) in effluent prior to discharge to TMF.</p> <p>J Minimize Project footprint; avoid permanent waterbodies to the extent practical and implement fishery offsetting plan where this is not practical.</p> <p>J Engineer ore and rock placement facilities to contain runoff for treatment; accidental spill contingency plans to avoid releasing contaminants reaching a natural waterbody; fuel and other hazardous materials storage and handling; buffer zones and erosion control practices.</p>	<p>the Fish and Fish Habitat VC and Surface Water VC.</p> <p>J The assessment will be based on desktop information, the judgement of the Project Team and the subject matter experts (Fish and Fish Habitat VC, Surface Water VC), and the results of relevant environmental baseline studies carried out in support of the EIS, including associated baseline field data.</p>
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Relevant Section(s) of CEAA 2012	Relevant Section of Regulations ⁽¹⁾	Applicable Valued Component ⁽²⁾	Potential Environmental Interaction ⁽³⁾	Potential Mitigation and/or Management ⁽⁴⁾	How Potential Environmental Interactions Will be Addressed in EIS
5(1)(a)(iii) migratory birds	17: A description of any changes that may be caused, as a result of carrying out the project, to: (c) migratory birds, as defined in subsection 2(1) of the Migratory Birds Convention Act, 1994.	Wildlife and Wildlife Habitat	<p>The Project Site may provide habitat for various species of migratory birds (refer to Section 5.1.10). Routine Project activities could result in changes to migratory birds as defined in section 2(1) of MBCA due to the following potential interactions with the environment:</p> <ul style="list-style-type: none">)] If conducted during the breeding bird season, site preparation activities (<i>e.g.</i> clearing and grubbing) have potential to cause injury or mortality to migratory birds, their nestlings, and their eggs, as well as to damage or destroy their nests. Project construction also has potential to result in alteration or loss of habitat for migratory birds.)] Noise, vibration, and air emissions (<i>e.g.</i> dust) during Project construction and operation have potential to adversely affect habitat quality for migratory birds and could cause behavioral effects (<i>e.g.</i>, avoidance / displacement).)] Artificial night lighting during Project operation has potential to attract and/or disorient nocturnally migrating birds, and could cause an increased risk of injury or mortality from exhaustion and/or collisions with Project infrastructure. Any migratory birds attracted to the Project site by artificial night lighting could also be exposed to other threats such as predation or interactions with Project vehicles and equipment.)] An accidental spill or release to the environment originating from a Project activity or component would have potential to result in changes to migratory birds, including: <ul style="list-style-type: none">)] Injury, mortality, and/or reduced health for migratory bird species.)] Reduced availability and quality of migratory bird habitat.)] The potential environmental effects described above for migratory birds could affect secure species as well as species at risk protected under SARA. 	<ul style="list-style-type: none">)] Design for use of down-lighting, a technique of directing night lighting downward, to reduce light effects on wildlife adjacent to the Project Site.)] Design for scheduling vegetation clearing and site preparation activities outside the breeding period for migratory birds. If activities that could result in incidental take cannot be avoided, FMG will develop and implement a Project-specific Bird Nest Mitigation Plan that outlines how risk of incidental take will be managed in accordance with ECCC guidance. This plan would be developed in consultation with ECCC and MNRF.)] Plan for flagging environmentally sensitive areas (<i>e.g.</i> roosts, stick nests, etc.) prior to clearing and construction, and evaluation of the features for additional mitigation measures (<i>e.g.</i> setbacks).)] Plan for retention of actual or potential habitat trees where safe and technically feasible to do so. If removal is required, removal activities will be scheduled, to the extent practical, outside the core maternity roosting season for birds and bats. If habitat tree removal or general tree clearing is required during the maternity roosting period, a qualified biologist will review the trees to make a determination on occupancy before removal.)] Plan for maintenance of the Project Site in a manner that reduces the risk that wildlife will encounter potential hazards, such as ropes, wires and holes. 	<ul style="list-style-type: none">)] Potential Project-related environmental effects on migratory birds will be assessed primarily in the context of the Wildlife and Wildlife Habitat VC.)] The assessment will include the identification of standard and VC-specific mitigation measures to reduce or eliminate Project-related environmental effects; characterization of residual Project-related environmental effects; and determination of the significance of residual Project-related environmental effects.)] The EIS will also consider accidental events and will assess the potential effects of an accidental spill or release to the environment on the Wildlife and Wildlife Habitat VC.)] The assessment will be based on desktop information, the judgement of the subject matter expert for the Wildlife and Wildlife Habitat VC, and the results of environmental baseline studies carried out in support of the EIS, including associated baseline field data (<i>e.g.</i> Birds, Acoustics, and Ambient Lighting technical data reports).

Relevant Section(s) of CEAA 2012	Relevant Section of Regulations ⁽¹⁾	Applicable Valued Component ⁽²⁾	Potential Environmental Interaction ⁽³⁾	Potential Mitigation and/or Management ⁽⁴⁾	How Potential Environmental Interactions Will be Addressed in EIS
5(1)(b)(i) Environmental Effects Occurring on Federal Lands	18: Description of any changes to the environment that may occur, as a result of carrying out the project, on federal lands,	Atmospheric Environment Surface Water	<p>The Project, located within the Province of Ontario, will be situated on lands that are comprised of patented land (mining and surface rights), leased land and mining claims held by FMG.</p> <p>Due to the location of the Project, it is not anticipated to result in any changes to the environment on federal lands. The Project is not located near any provincial, federal, territorial or national borders. The Project is located more than 30 km to the nearest federal lands at Cat Lake First Nation (reserve land) and Slate Falls First Nation (settlement land, not federal reserve land at this time). The Project does not affect any major waterway with direct connectivity to other jurisdictions.</p>	Implement any required mitigation measures outlined for the Atmospheric Environment VC and the Surface Water VC.	<ul style="list-style-type: none">) Potential Project-related environmental effects on federal lands will be assessed primarily in the context of the Atmospheric Environment VC and the Surface Water VC.) The EIS will not assess any other environmental effects occurring on federal lands due to the lack of anticipated interaction between the Project and any other aspect of the environment on federal lands.) The EIS will also consider accidental events and assess the potential effects of an accidental spill or release to the environment on the Atmospheric Environment VC and Surface Water VC.) The assessment will be based on desktop information, the judgement of the Project team and the subject matter experts (Atmospheric Environment VC; Surface Water VC), and the results of relevant environmental baseline studies carried out in support of the EIS, including associated baseline field data. Air quality modelling to be conducted in support of the EIS will not include the modelling of acid deposition or speciated volatile organic compounds, as these are not considered to be pathways for Project-related environmental effects.

Relevant Section(s) of CEEA 2012	Relevant Section of Regulations ⁽¹⁾	Applicable Valued Component ⁽²⁾	Potential Environmental Interaction ⁽³⁾	Potential Mitigation and/or Management ⁽⁴⁾	How Potential Environmental Interactions Will be Addressed in EIS
5(1)(b)(ii) Transboundary Environmental Effects	18: Description of any changes to the environment that may occur, as a result of carrying out the project in a province other than the province in which the project is proposed to be carried out or outside Canada.	Atmospheric Environment Surface Water	<p>The Manitoba provincial border is located approximately 200 km west of the Project Site. This is the shortest distance between the Project and any transboundary lands.</p> <p>Due to the location of the Project, it is not anticipated to result in any changes to the environment in a province other than Ontario or outside of Canada. The Project is not located near any provincial, federal, territorial or national borders. The Project is located more than 200 km from the Manitoba border and more than 300 km from the United States border. The Project does not affect any major waterway with direct connectivity to other jurisdictions.</p> <p>As shown in Image 5-7, the direction of surface water flow from the Project Site is away from the Manitoba border, thereby reducing the potential for transboundary environmental effects on water.</p> <p>The prevailing wind direction primarily comes from the northwest and secondarily from the west. Atmospheric emissions associated with the Project are therefore considered generally unlikely to be transported into Manitoba to a measurable degree.</p> <p>With the exception of potential transboundary environmental effects on the atmospheric environment associated with Project-related emissions of criteria air contaminants and greenhouse gases, the Project is not expected to result in any changes to the environment that would occur on federal lands, in another province, or outside of Canada. An accidental spill or release to the environment originating from a Project activity or component would similarly not be expected to result in any environmental effects occurring on federal or transboundary lands given the separation distance and the extent of the potential accidental release (e.g. fire).</p> <p>The Project will likely result in adverse environmental effects restricted to the Province of Ontario</p> <p>The Project will create atmospheric emissions from the combustion of fossil fuels for vehicle and equipment operations as well as fugitive dust emissions. Power to the Project will be provided by a transmission from the existing Hydro One grid south of the Project site.</p>	Implement any required mitigation measures outlined for the Atmospheric Environment VC and the Surface Water VC.	<ul style="list-style-type: none">)] Potential Project-related environmental effects on federal lands will be assessed primarily in the context of the Atmospheric Environment VC and the Surface Water VC.)] The EIS will not assess any other environmental effects occurring on federal lands due to the lack of anticipated interaction between the Project and any other aspect of the environment outside the province of Ontario.)] The assessment will include the identification of standard and VC-specific mitigation measures to reduce or eliminate Project-related environmental effects; characterization of residual Project-related environmental effects; and determination of the significance of residual Project-related environmental effects.)] The EIS will also consider accidental events and assess the potential effects of an accidental spill or release to the environment on the Atmospheric Environment VC and Surface Water VC.)] The assessment will be based on desktop information, the professional judgement of the EA Study Team, and the results of relevant environmental baseline studies carried out in support of the EIS, including associated baseline field data. Air quality modelling to be conducted in support of the EIS will not include the modelling of acid deposition or speciated volatile organic compounds, as these are not considered to be pathways for Project-related environmental effects.

Relevant Section(s) of CEAA 2012	Relevant Section of Regulations ⁽¹⁾	Applicable Valued Component ⁽²⁾	Potential Environmental Interaction ⁽³⁾	Potential Mitigation and/or Management ⁽⁴⁾	How Potential Environmental Interactions Will be Addressed in EIS
<p>5(1)(c)(i) 5(2)(b)(i)</p> <p>Health and Socio-Economic Conditions for Indigenous Peoples</p>	<p>19 Information on the effects on Aboriginal peoples of any changes to the environment that may be caused as a result of carrying out the project, including effects on health and socioeconomic conditions,</p>	<p>Traditional Land and Resource Use</p> <p>Employment and Business</p> <p>Regional and Community Services and Infrastructure</p>	<p>The Project Site is used by various Indigenous land and resource users. Routine Project activities could result in the following changes to the environment that have potential to affect health and socio-economic conditions for Indigenous peoples:</p> <ul style="list-style-type: none">)] Project activities and components have potential to affect the availability of lands and resources for commercial or recreational fishing and hunting/trapping activities and/or other recreational uses currently carried out by Indigenous peoples.)] Project-related requirements and the influx of Project personnel could increase the demand for local services and infrastructure, thereby potentially affecting the quality or availability of these amenities for Indigenous (and non-Indigenous) residents of the region.)] The Project has potential to adversely affect human health if liquid discharges from the Project degrade the quality of water resources or if Project-related hydrologic changes affect the quality or quantity of surface water resources (there are no known local users of ground water in the watershed). Effluent discharge from the Project will affect water quality in the receiving waterbody, which could affect downstream water users of water for drinking purposes.)] Air, noise, and light emissions from the Project have potential to disturb nearby human receptors and pose a nuisance.)] Emission and dispersion of chemicals from Project activities have the potential to affect air quality, as well as soil and surface water quality (through deposition), which could potentially affect human health (e.g., through contamination of drinking water resources or species of fish, wildlife, or plants that are consumed by Indigenous or non- Indigenous peoples).)] The Project is also expected to have economic benefits, including training, employment, and contracting opportunities, for Indigenous and non-Indigenous peoples.)] The expenditures and employment associated with Project activities will affect local, regional, and provincial economic conditions through all phases of the Project. In addition to having positive economic effects, the Project could adversely affect labour and economy, for example by contributing to local or regional labour shortages or interacting negatively with the economic activities of other sectors, such as tourism or forestry. 	<ul style="list-style-type: none">)] Implement any required mitigation measures outlined for the following VCs : Traditional Land and Resource Use; Employment and Business; Regional and Community Services and Infrastructure.)] Implement engineered runoff and seepage collection system to prevent uncontrolled water discharges, and implementation of a treatment system to ensure water discharges meet effluent criteria that are protective of the receiving waterbody and downstream users. This will protect downstream water users who may use water as a raw water source for drinking water purposes. 	<ul style="list-style-type: none">)] Potential Project-related environmental effects on health and socio-economic conditions for Indigenous and non-Indigenous peoples will be assessed in the context of the following VCs: Traditional Land and Resource Use; Employment and Business; Regional and Community Services and Infrastructure.)] The assessment will include the identification of standard and VC-specific mitigation measures to reduce or eliminate Project-related environmental effects; characterization of residual Project-related environmental effects; and determination of the significance of residual Project-related environmental effects.)] The EIS will also consider accidental events and will assess the potential effects of an accidental spill or release to the environment on these VCs.)] A Human Health and Ecological Risk Assessment (“HHERA”) will be undertaken as the Project progresses. The HHERA will be completed using standard risk assessment protocols in use in Canada and Ontario. Calculations consistent with regulatory expectations and requirements will be completed and, where local receptor assumptions (e.g. land-use patterns, country food consumption rates, etc.) are unavailable, parameters recommended by Health Canada and ECCC will be used to characterize human and ecological receptor interactions with the local environment.)] The assessment will be based on desktop information; traditional knowledge, the judgement of the Project team and subject matter experts; the results of the HHERA; the results of environmental baseline studies carried out in support of the EIS, including associated informant interviews and baseline field data.

Relevant Section(s) of CEAA 2012	Relevant Section of Regulations ⁽¹⁾	Applicable Valued Component ⁽²⁾	Potential Environmental Interaction ⁽³⁾	Potential Mitigation and/or Management ⁽⁴⁾	How Potential Environmental Interactions Will be Addressed in EIS
<p>5(1)(c)(ii) 5(1)(c)(iv) 5(2)(b)(ii) 5(2)(b)(iii)</p> <p>Physical and cultural heritage, and resources of historical, archaeological, paleontological or architectural significance.</p>	<p>19 Information on the effects on Aboriginal peoples of any changes to the environment that may be caused as a result of carrying out the project, including effects on physical and cultural heritage, and resources of historical, archaeological, paleontological or architectural significance.</p>	<p>Heritage Resources</p> <p>Traditional Land and Resource Use</p>	<p>Archaeological and heritage resources have potential to occur at the Project Site.</p> <p>Routine Project activities could result in the following changes to the environment that have potential to affect the physical and cultural heritage of Indigenous or non-Indigenous peoples, and/or to affect any structure, site, or thing of historical, archaeological, paleontological or architectural significance to Indigenous or non- Indigenous peoples:</p> <ul style="list-style-type: none">) Although the Project will be designed to avoid ground disturbance at sites where resources of cultural, historical, archaeological, paleontological, or architectural significance are known to be located, there is potential for Project-related ground disturbance (including excavation and blasting) to occur where previously unrecorded resources may be present. Such resources, if present, could be disturbed, damaged or destroyed by the Project.) An accidental spill or release to the environment originating from a Project activity or component could result in changes to the environment that could affect physical and cultural heritage, or resources of historical, archaeological, paleontological, or architectural significance for Indigenous and non- Indigenous peoples.) Effluent discharge and water withdrawal could potentially affect water levels in areas of shoreline sites. This is not anticipated given the large lake surface area and watershed areas compared to the water withdrawals and discharges. 	<ul style="list-style-type: none">) Setbacks have been established around known archaeological sites in an effort to minimize potential effects due to physical disturbance (refer to Figure 3-2A). Further mitigation measures will be developed during the course of the EA process.) Design for licensed archaeologist to undertake archaeological and heritage values assessment in accordance with Ministry of Tourism, Culture and Sport (“MTCS”) guidelines.) Design for a licensed archaeologist to undertake any salvage of architectural and/or historical resources that may be required) Plan for training of staff in the recognition of basic archaeological artifacts such as Indigenous material culture, and Euro-Canadian material culture and also on the potential and documented historic use and occupation of the Project Site.) Effective implementation of a Chance Find Procedure and training of all staff. Components of the procedure are listed below. <ul style="list-style-type: none"> o Notifying the MTCS and ceasing all Project-related ground disturbance within a 20 m radius of where the suspected archaeological resources is found, pending further direction from the MTCS. o Retaining a licensed archaeologist approved or designated by the Historic Resources Branch to conduct further investigation if required (in consultation with the MTCS). o Notifying designated contact people at First Nations. o Leaving the remains and any associated artifacts in place and undisturbed until the arrival of personnel designated by the MTCS and Ontario Provincial Police as appropriately qualified to take further action with respect to the exhumation and removal of human remains and associated artifacts 	<ul style="list-style-type: none">) Potential Project-related effects will be assessed in the context of the Heritage Resources VC as well as the Traditional Land and Resource Use VC.) The assessment will include the identification of standard and VC-specific mitigation measures to reduce or eliminate Project-related environmental effects; characterization of residual Project-related environmental effects; and determination of the significance of residual Project-related environmental effects.) The EIS will also consider accidental events and, will assess the potential effects of an accidental spill or release to the environment on the Heritage Resources VC.) Archaeological values assessment work was undertaken in 2012 to 2013 with participation of local First Nation technicians. Supplemental work will be undertaken to fill any data gaps during the course of the EA process.) The assessment will be based on desktop information, the judgement of Project team and the subject matter expert (Licensed Professional Archaeologist), the results of the supplemental archaeological assessment including associated field data.

Relevant Section(s) of CEAA 2012	Relevant Section of Regulations ⁽¹⁾	Applicable Valued Component ⁽²⁾	Potential Environmental Interaction ⁽³⁾	Potential Mitigation and/or Management ⁽⁴⁾	How Potential Environmental Interactions Will be Addressed in EIS
<p>5(1)(c)(iii) Current Use of Lands and Resources for Traditional Purposes by Indigenous Peoples</p>	<p>19 Information on the effects on Aboriginal peoples of any changes to the environment that may be caused as a result of carrying out the project, including effects on current use of lands and resources for traditional purposes by Indigenous peoples</p>	<p>Traditional Land and Resource Use Environmental Health</p>	<p>The Project Site is used and has the potential to be used for traditional purposes by Indigenous land and resource users. The Project may therefore require access to, use or occupation of, or the exploration, development and production of lands and resources currently used for traditional purposes by Indigenous peoples.</p> <p>Routine Project activities could result in the following changes to the environment that have potential to affect the current use of lands and resources for traditional purposes by Indigenous peoples:</p> <ul style="list-style-type: none">)] Project activities and components have potential to affect the availability of lands (including travel routes) and resources currently used by Indigenous peoples for traditional purposes such as fishing, hunting/trapping, and gathering.)] The influx of Project personnel could increase the recreational demand for lands and resources that are currently used by Indigenous peoples for traditional purposes, thereby potentially affecting the quality or availability of these lands and resources for Indigenous peoples.)] The Project has potential to adversely affect the quality or availability of fish species of traditional importance to Indigenous peoples (including species that are currently fished by Indigenous harvesters for traditional purposes) if liquid discharges from the Project degrade the quality of fish habitat.)] Air, noise, and light emissions from the Project have potential to disturb wildlife species of traditional importance to Indigenous peoples and affect their movement, thereby potentially affecting their availability for current use by Indigenous peoples (e.g. hunting/trapping). This could potentially include furbearers (e.g. marten, fox, wolf, etc.) and ungulates such as moose.)] Emission and dispersion of chemicals from Project activities have the potential to affect air quality, as well as soil and surface water quality (through deposition). Thus, the Project has potential to adversely affect the quality or availability of fish, wildlife, and plant species of traditional importance to Indigenous peoples (including species that are currently fished, hunted/trapped, and gathered by Indigenous peoples for traditional purposes) if the Project results in the 	<ul style="list-style-type: none">)] Design for obtaining all necessary patents, mining leases, licences of occupation, land use permits and staked claims in areas that are overlapped by the Project.)] Design for use of signage around the perimeter of the Project to alert local land and resource users of the presence of the Project and its facilities.)] Design for use of only as much lighting as is necessary for safe and efficient Project activities, use of directional light fixtures to avoid the transmission of light outside of the Project Site and positioning of portable lighting equipment to limit visibility at nearby receptors to the extent feasible.)] Design for installation of noise mitigation measures (e.g. muffler systems) on construction and other mobile equipment, and proper maintenance of equipment)] Design for completion of all timber removal in accordance with Ontario's <i>Crown Forest Sustainability Act</i>.)] Design for engagement of local land and resource users to address, to the extent possible, issues related to the removal and inaccessibility of lands and resources within the Project Site.)] Design for engagement of local boaters to address navigation issues as well as access and safety issues related to navigation along watercourses affected by the Project, including consultation regarding the need to provide marked portages to circumvent obstructions.)] Design for implementation of work schedules for Project construction workers (12 hours per day, seven days per week) will deter workers from hunting and fishing locally outside of working hours during a shift.)] Design for prohibition of workers from engaging in recreational land and resource at the Project Site during all Project phases.)] Design for selection of equipment and/or design of acoustical enclosures to limit overall noise emissions.)] Design for prohibition of employees from bringing firearms or fishing gear to site to limit competition for wildlife and fish species of value to land and resource users.)] Plan for consideration of land and resource uses during preparation of the Closure Plan)] Plan for communication of Project activities, locations and timing throughout construction, operation and closure to affected land and resource users, interest groups, the provincial government, and local authorities leading up to construction and throughout the life of the Project. 	<ul style="list-style-type: none">)] Potential Project-related environmental effects on the current use of lands and resources for traditional purposes by Indigenous peoples will be assessed in the context of the Traditional Land and Resource Use VC and also the Environmental Health VC.)] The assessment will include the identification of standard and VC-specific mitigation measures to reduce or eliminate Project-related environmental effects; characterization of residual Project-related environmental effects; and determination of the significance of residual Project-related environmental effects.)] The EIS will also consider accidental events and, in particular, will assess the potential effects of an accidental spill or release to the environment on the Traditional Land and Resource Use VC.)] Supplemental traditional knowledge and traditional use and occupancy studies are anticipated to be required during the course of the EA process.)] The assessment will be based on desktop information, the judgement of the Project team, the results of the above noted traditional knowledge and use studies and the results of primary data collection including interviews and baseline field data.

			<p>degradation of their habitats or the contamination of these resources.</p> <ul style="list-style-type: none">) Effluent discharge from the Project will affect water quality in the receiving waterbody, which could affect downstream water users.) An accidental spill or release to the environment originating from a Project activity or component would have potential to result in changes to the environment that could affect the current use of lands and resources for traditional purposes by Indigenous peoples. 	<ul style="list-style-type: none">) Implement engineered runoff and seepage collection system to prevent uncontrolled water discharges, and implementation of a treatment system to ensure water discharges meet effluent criteria that are protective of the receiving waterbody and downstream users. This will protect downstream water users who may use water as a raw water source for drinking water purposes.) Design for implementation of one or more of the below listed mitigation measures for plant harvesting sites within the Project Site. <ul style="list-style-type: none"> o avoidance through Project design o avoidance through timing of Project activities and potential scheduling of construction during periods of least effect. 	
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Relevant Section(s) of CEAA 2012	Relevant Section of Regulations ⁽¹⁾	Applicable Valued Component ⁽²⁾	Potential Environmental Interaction ⁽³⁾	Potential Mitigation and/or Management ⁽⁴⁾	How Potential Environmental Interactions Will be Addressed in EIS
5(2)(a) Other Changes to the Environment Directly Related or Necessarily Incidental to a Federal Authority's Exercise of a Power or Performance of a Duty or Function in Support of the Project	n/a	Fish and Fish Habitat Wildlife and Wildlife Habitat	<p>Various federal authorities may need to exercise a power or perform a duty or function to allow the Project to proceed (refer to Section 5.8). Routine Project activities could result in the following other changes to the environment directly related or necessarily incidental to a federal authority's exercise of a power or performance of a duty or function in support of the Project:</p> <ul style="list-style-type: none">) If a license, certificate, or permit from NRCan is required under the <i>Explosives Act</i>, the potential changes to the environment that would be directly related or necessarily incidental to this regulatory approval would be limited to the potential effects summarized above that could result from Project- related blasting.) If authorization from DFO is required under section 35(2) of the <i>Fisheries Act</i> for serious harm to fish that are part of a commercial, recreational or Aboriginal ("CRA") fishery or that support a CRA fishery, the potential changes to the environment that would be directly related or necessarily incidental to this regulatory approval are limited to the potential effects summarized above with respect to fish and fish habitat, socio-economic conditions (i.e., potential Project-related effects on the abundance or distribution of commercially or recreationally important fish species), and Indigenous traditional use (i.e. potential Project- related effects on the abundance or distribution of traditionally important fish species).) Overprinting of water frequented by fish by tailings and mine rock stockpiles (or other deleterious material) will require a listing under Schedule 2 of the Metal Mine Effluent Regulation, pursuant to the <i>Fisheries Act</i>. Potential areas of impact include tailings management facility ("TMF") and waste rock repositories.) If a permit from ECCC is required under section 19 of the Migratory Birds Convention Act for the collection of migratory birds, their nests, or their eggs, the potential changes to the environment that would be directly related or necessarily incidental to this regulatory approval would be limited to disturbance of migratory birds, their nests, or their eggs; potential injury or mortality of collected migratory birds; and potential damage or destruction of collected nests and eggs. <p>If a permit from ECCC or DFO is required under section 73(1) of SARA for engaging in activities affecting a SARA-listed aquatic and/or migratory bird species and/or their residences (e.g. nests), the potential changes to the environment that would be directly related or necessarily incidental to this regulatory approval would be limited to the potential effects summarized above with respect to fish, fish habitat, and migratory birds.</p>	<p>Plan for implementation of any required mitigation measures outlined for the Fish and Fish Habitat, and Wildlife and Wildlife Habitat VCs.</p> <p>Integrate mitigation and management into Project design.</p>	<ul style="list-style-type: none">) Other potential changes to the environment directly related or necessarily incidental to a federal authority's exercise of a power or performance of a duty or function in support of the Project will be assessed in the context of the Fish and Fish Habitat and Wildlife and Wildlife Habitat VCs.) The assessment will include the identification of standard and VC-specific mitigation measures to reduce or eliminate Project-related environmental effects; characterization of residual Project-related environmental effects; and determination of the significance of residual Project-related environmental effects.) The EIS will also consider accidental events and, will assess the potential effects of an accidental spill or release to the environment on the Fish and Fish Habitat and Wildlife and Wildlife Habitat VCs.) The assessment will be based on desktop information, the professional judgement of the EA Study Team, and the results of relevant environmental baseline studies, including associated baseline field data.

(1) Prescribed Information for the Description of Designated Project Regulations

(2) Refer to Section 6.4 for list of the currently proposed Valued Components. The Valued Components that are carried into the EA process will be refined based on feedback from First Nations, government agencies and stakeholders.

(3) Interactions discussed are without any mitigation or management to avoid, reduce or eliminate adverse effects.

(4) Mitigation measures listed in the table are preliminary and will be refined during EA process

Selection of Valued Components

With input from Indigenous communities, non-Indigenous stakeholders and other interested parties, FMG is seeking to identify components of the environment that are especially valued. The identification of VCs is particularly important because it is not practical or feasible to adopt a 'study everything' approach. During the EA process, potential adverse environmental effects to these VCs will need to be described for each phase of the Project. FMG welcomes feedback from all interested parties regarding components of the environment that are of importance to them so that these may be considered in the on-going baseline studies and in the environmental effects analysis that will be undertaken in the EA process.

A preliminary list of VCs that have been developed on a presumptive basis is provided in Table 6-2, along with the rationale for each VC. These proposed VCs have been included in this document in an effort to provide examples of VCs to readers and also due to the considerations listed below.

-) The interactions discussed in Table 6-1 describe how Project components and activities may interact with the environment.
-) Regulatory guidance and requirements.
-) Issues raised by regulatory agencies, Indigenous groups, stakeholders and the public during the ownership of the Project by GCU and the more recent engagement by FMG.
-) Existing environmental conditions in the region where the Project is located and interconnections between the biophysical and socio-economic environment.
-) Experience and lessons learned from similar mining projects in Ontario.

FMG emphasizes that this list of proposed VCs is preliminary and that VCs will be selected with input from all stakeholders as consultation and engagement for the Project progress. Given that FMG intends to voluntarily commence an individual provincial EA that may necessitate its own VCs, the VCs described herein focus on areas of federal responsibility.

Table 6-2: Proposed Valued Components and Rationale

Proposed Valued Component	Rationale
Atmospheric Environment	<p>Potential Project-related effects on atmospheric environment for the purposes of this assessment include changes to air quality and greenhouse gases. The atmospheric environment has been selected as a VC in consideration of regulatory requirements, the potential sensitivity of human health to air quality, potential effects on enjoyment of property (e.g., nuisance effects resulting from effects on air quality), and the potential deposition of air contaminants in soil, vegetation, and water as pathways to humans and wildlife.</p> <p>Project-related acoustic and light emissions will be addressed as factors potentially affecting the <i>Wildlife and Wildlife Habitat</i> as well as <i>Traditional Land and Resource Use</i> VCs.</p>
Surface Water	<p>Proposed as a VC because it is critical to the function of human and non-human biota. Surface water supports industrial, commercial and recreational uses, has cultural value and is subject to regulated discharge limits (water quality criteria). This VC will address surface water quality, surface water quantity and the relationship to ground water flow and ground water quality that will be discussed in the Project Description portion of the EIS.</p>
Wildlife and Wildlife Habitat	<p>Proposed as a VC due to their potential to interact with Project activities and because they are considered by the proponent, the public, Indigenous communities, the scientific community, and government agencies to have ecological, aesthetic, recreational, economic, and cultural importance. For the purposes of this assessment the term ‘wildlife’ refers to birds, mammals and amphibians, and includes Species at Risk (“SAR”) such as woodland caribou.</p>
Fish and Fish Habitat	<p>Fish and fish habitat have been selected as a VC for assessment because fish and their habitats are key indicators of fisheries sustainability and productivity. This VC includes fish that are part of a commercial, recreational or Aboriginal fishery and fish that support such a fishery (e.g. prey species including invertebrates), as defined in the <i>Fisheries Act</i>. Fish habitat means waters on which fish depend directly or indirectly to carry out their life processes. These include spawning, nursery, rearing, migration and feeding areas. These habitats are described in terms of their physical, chemical, and biological attributes including water quality, sediment quality, substrate composition, aquatic plant communities and benthic invertebrate communities.</p>
Plant Communities and Wetlands	<p>This proposed VC encompasses the vegetated state of the natural environment. These communities are classified as ecosite community types, where assessment of classification includes dominant vascular plants, soil type(s), climatic, and hydrological conditions that support them. This is proposed as a VC for assessment because of the critical role in supporting biodiversity and traditional use by Indigenous communities, as well as their contributions to ecosystem functions at a local and regional landscape.</p>
Employment and Business	<p>This proposed VC includes local and regional economy, employment, and business. This is proposed as a VC for assessment because employment and business support the economic livelihoods of local and Indigenous residents, and provide associated social benefits related to employment and income.</p>
Regional and Community Services and Infrastructure	<p>This proposed VC includes housing and temporary accommodations, health and emergency services, recreation and entertainment services and infrastructure, and provincial and municipal services and infrastructure, energy and communications infrastructure (utilities) and roads. This is proposed as a VC for assessment because the in-migration of Project workers and their families, Project-related business growth, and Project activities will increase demands for community services and infrastructure during the construction and operation phases, which has the potential to exceed present capacities.</p>
Heritage Resources	<p>Heritage resources are human and natural resources created by activities from the past that remain to inform present and future societies of that past. Heritage resources include archaeological, architectural and historical, and paleontological resources. Heritage resources have been selected as a VC to meet regulatory requirements and in recognition of the interest of provincial and federal agencies who are responsible for the effective management of these resources and potentially affected Indigenous communities and stakeholders that have an interest in the preservation and management of heritage resources related to their history and culture.</p>
Traditional Land and Resource Use	<p>Proposed as a VC because of the potential for the Project to affect traditional activities, occupancy, sites and resources identified by Indigenous communities.</p>
Environmental Health	<p>Proposed as a VC because of the inherent importance to the wellbeing of humans, food security, the natural environment as well as the related environmental and safety regulatory requirements.</p>

7. Engagement with Indigenous Communities

FMG is in the process of commencing consultation for the development of the Project. This document will be used as a discussion tool to formally initiate consultation and engagement regarding the development of the Project. Government agencies previously identified the following communities as having an interest in the Project Area.

-) Lac Seul First Nation
-) Cat Lake First Nation
-) Wabauskang First Nation
-) Slate Falls First Nation
-) Métis Nation of Ontario (notification)

Distances from Springpole Camp to the engaged First Nations are below.

-) Camp to Lac Seul First Nation (reserve): 120 km
-) Camp to Cat Lake First Nation (reserve): 40 km
-) Camp to Wabauskang First Nation (reserve): 125 km
-) Camp to Slate Falls Settlement: 45 km

It is FMG's position that consultation is an ongoing process and as such FMG will work with interested stakeholders and identified Indigenous communities during the life of the Project to share information on the Project and address concerns.

GCU engaged the First Nations of Cat Lake, Slate Falls and Lac Seul, who were identified to GCU by the Crown in 2009 as the affected First Nations with respect to the Project Site. On May 22, 2012, Chiefs from these First Nations signed an internal protocol agreement, in which they agreed to work together for the purpose of engagement and agreement negotiations with GCU.

A Working Committee, with members from each of these First Nations, met on a regular basis to discuss the progress of the Project and the development of an agreement between GCU and these First Nations that would allow the Project to be developed with the support of these First Nations, while respecting their Indigenous and Treaty Rights. Following the acquisition of the Project from GCU, FMG has engaged in ongoing discussions with this Working Committee.

In January 2017, the First Nations of Cat Lake, Slate Falls and Lac Seul entered into a Shared Territory Protocol agreement. These three (3) First Nations are known collectively as the Shared Territory Protocol Nations ("STPN"). In the fall of 2017 Lac Seul First Nation and Wabauskang First Nation also entered into a Shared Territory Protocol. FMG has committed to engage with these First Nations under the terms of their respective protocols.

FMG is in the process of commencing consultation for the development of the Project and, as such, has not consulted regarding the development of this document that FMG intends to use to initiate the EA process. Preliminary comments provided during previous engagement that relate to the development of the Deposit are listed below. Preliminary comments/concerns received to date about the Project include

potential environmental effects, effects on traditional land uses, contracting and employment opportunities, synergies with a road to Cat Lake First Nation, access restrictions and concerns regarding SAR.

Preliminary engagement to date, including key comments and concerns, is summarized in Table 7-1.

Table 7-1: Summary of Indigenous Engagement Conducted for the Project

Date	Means of Engagement	Key Topics	Comments or Concerns	Response from Proponent ⁽¹⁾
Cat Lake First Nation				
28 May 2013	Open House for Access Corridor Project	<ul style="list-style-type: none">) Introductions) General Information regarding Access Corridor Project and Area of Intensified Exploration Activities (vicinity of mine site) 	<ul style="list-style-type: none">) Chemical spraying during road construction) Notification to First Nations if there is a spill) Exploration agreement should be in place) The road building should be a 4 party process: MNR, forestry, proponent and First Nations. There is synergy with the proposed permanent road to CLFN.) Connections to existing and planned forestry roads.) Will First Nations contractor build the road) Interest in training and employment opportunities associated with the road construction and also the operating mine life.) Concerns regarding draining of lake if a mine is developed) Concern over reduction of trapline due to leasing additional mining claims.) Portage between Birch and Springpole Lakes) Excessive traffic on road and risk to wildlife) Would like to see a working group be formed for the mine EA) Two (2) traditional harvesting periods were identified: 1 week in August for trout fishing and 1 week in late September for moose hunting) Worker could not bring firearm to work at the proponent's Springpole camp) Need to organize a trip to Springpole camp for youth; need drill core to bring to school 	<ul style="list-style-type: none">) No (pesticide) spraying would be completed as part of road.) Protocol Nations' Band Office would be notified in the event of a spill) Proponent is continuing to fund and participate in the process to reach an Exploration Agreement) Proponent shall continue its effort to collaborate with other parties and recognizes the synergies with a permanent road to CLFN) GCU shall collaborate with other parties regarding improvements to the road network in the region) Road construction work will be tendered and subject to a competitive bid process.) Proponent would work to maximize employment and contracting with local First Nations) Temporary draining of the lake would be subject a new EA and permitting process with its own terms and conditions in addition to industry standards and best practices.) Proponent will mitigate impacts and provide accommodation as appropriate. The mine would be a temporary land use, the land will be restored to a productive use after closure.) Continue to use the portage give proponent equipment the right of way at all times) Reviewed the anticipated light traffic schedule, as well as speed limits and other mitigation measures) Proponent agreed that a working group should be formed for the mine EA) Proponent is open to modifying or suspending its activities during this time; open to having workers from CLFN be off work during this important time) Rights are recognized by the proponent, but no hunting in the area of the mine site due to safety reasons) Proponent to organize education packages for the school, including "Mining Matters" education program, and organize the trip to the camp if there is interest
5 December 2017	Meeting with Chief and Council	<ul style="list-style-type: none">) Introductions) General Project information) Exploration permit 	<ul style="list-style-type: none">) Impacts to fish spawning and fish habitat from geotechnical and exploration drilling on Springpole Lake 	<ul style="list-style-type: none">) Mitigate by timing of drilling; implement turbidity monitoring during the drilling program
	Community Open House	<ul style="list-style-type: none">) Introductions) General Project information) Exploration permit) Schedule follow-up workshops in Q1 2018 	<ul style="list-style-type: none">) Portage between Birch and Springpole Lakes) Loss of fish habitat 	<ul style="list-style-type: none">) Provide new portage route or try to preserve existing one) Provide compensation for temporary loss of fish habitat) Continuing with fish community monitoring and telemetry program
Lac Seul First Nation				
11 June 2013	Open House for Access Corridor Project	<ul style="list-style-type: none">) Introductions) General Information regarding Access Corridor Project and Area of Intensified Exploration Activities (vicinity of mine site) 	<ul style="list-style-type: none">) If a mine is built, will there be another EA) Potential effects on Species at Risk) Connections to existing and planned forestry roads) Will First Nations contractor build the road) Interest in training and employment opportunities associated with the road construction and also the operating mine life 	<ul style="list-style-type: none">) There would be another EA for a mine) Baseline studies have been completed to identify relevant species and important habitat so that mitigation measures can be developed and applied) The proponent shall collaborate with other parties regarding improvements to the road network in the region) Road construction work will be tendered and subject to a competitive bid process

			<ul style="list-style-type: none">) Concern over water crossings and water quality) Concern over restricted access due to the gate on the road 	<ul style="list-style-type: none">) Proponent would work to maximize employment and contracting with local First Nations) Road will be monitored by the proponent according to MNR standards and in accordance with any approvals) Proponent cannot restrict access on Crown land, community members would be allowed to access the area using the same methods they used before the road was in place
December 2017	e-mails and phone conversations	<ul style="list-style-type: none">) Community meeting in December 2017 postponed to early 2018 due to occurrence at Lac Seul First Nation) Logistics for community wide meeting 	Not applicable	Not applicable
Slate Falls First Nation				
27 May 2013	Open House for Access Corridor Project	<ul style="list-style-type: none">) Introductions) General Information regarding Access Corridor Project and Area of Intensified Exploration Activities (vicinity of mine site) 	<ul style="list-style-type: none">) Road decommissioning, what if another party wants the road in place) Chemical spraying during road construction) If a mine is built, will there be another EA) Potential effects on SAR) Will First Nations contractor build the road) Interest in training and employment opportunities associated with the road construction and also the operating mine life) Concerns regarding draining of lake if a mine is developed) Sturgeon present in Gull Lake and Springpole Arm) Avoid impacts to CLFN trails in the area west of Durkin Lake 	<ul style="list-style-type: none">) Other party could complete the permitting to take over responsibility for the road) No (pesticide) spraying would be completed as part of road) Yes, there will be another EA if a mine development is proposed) Baseline studies have been completed to identify relevant species and important habitat so that mitigation measures can be developed and applied. No whip-poor-will or plant species on SAR list identified) Road construction work will be tendered and subject to a competitive bid process.) Proponent would work to maximize employment and contracting with local First Nations) Temporary draining of the lake would be subject a new EA and permitting process with its own terms and conditions in addition to industry standards and best practices) This additional fisheries information will be shared within the proponent's study team) Proponent will avoid impeding access to these trails
December 2017	e-mails and phone conversations	<ul style="list-style-type: none">) Logistics for community wide meeting in Q1 2018 	Not applicable	Not applicable
Wabauskang First Nation				
14 December 2017	Meeting with Resource Committee and representatives	<ul style="list-style-type: none">) Introductions) General Project information) Review Wabauskang First Nation Communication and Accommodation Protocol and discuss next steps 	<ul style="list-style-type: none">) Fish and fish habitat loss 	<ul style="list-style-type: none">) Compensation to be provided for loss of fish habitat) Continue with fish community monitoring and telemetry program).

GCU was proponent during the engagement that occurred in 2013. Other engagement was by FMG.

8. Public Consultation

FMG is in the process of commencing consultation for the development of the Project and, as such, has not consulted regarding the development of this document that FMG intends to use to initiate the EA process.

Potentially affected stakeholders have been identified based on previous permitting and EA processes for work on the Property. Stakeholders include remote tourism operators, seasonal residences, forestry interests, environmental groups, local municipalities and education / training organizations. Consultation with the key agencies listed below is anticipated, additional stakeholders will be identified as the Project progresses.

-) Provincial Agencies: MOECC; MNRF; Ministry of Northern Development and Mines; Ministry of Tourism, Culture and Sport; Ministry of Transportation; Ministry of Economic Development and Trade; Ministry of Municipal Affairs and Housing; Ministry of Labour; Ontario Provincial Police; Hydro One Networks Inc., Independent Electricity System Operator and the Ontario Energy Board.
-) Federal Agencies: ECCC; Aboriginal Affairs and Northern Development Canada; Canadian Environment Assessment Agency; Natural Resources Canada; Health Canada, Fisheries and Oceans Canada and Transport Canada.
-) Local Agencies/Interest Groups: Municipality of Red Lake; Municipality of Sioux Lookout; Township of Ear Falls; Trout Lake Forest Local Citizen’s Committee; Lac Seul Forest Local Citizen’s Committee; Trout Forest Tourist Outfitters; Domtar; Wildlands League; Confederation College; remote tourism operators and owners of seasonal residences.

Additional stakeholders may be identified as the Project progresses. Based on GCU records, comments and concerns received during previous consultation include effects on SAR such as caribou, effects on remote tourism, opportunities for contracting and employment, as well as effects on water quality and fisheries.

Engagement and consultation that was undertaken during the preparation of the Project Description is summarized in Table 8-1

Table 8-1: Engagement with Regulatory Agencies During Preparation of Project Description

Date	Means of Engagement	Key Discussion Topics
Ministry of Environment and Climate Change		
Dec 2017, Jan and Feb 2018 and on-going	Meetings, emails, phone conversations with Environmental Assessment Branch (Andrew Evers, Agni Papagiorgiou). Anna Maria Cross, Peter Brown)	<ul style="list-style-type: none">) Voluntary agreement for individual EA and commencing the process.) Discuss benefits of coordination with federal EA process.) Provide notice regarding forthcoming (federal) EA processes for development of the Project.
Ministry of Natural Resources and Forestry		
Nov and Dec. 2017 and on-going	Meetings, emails, phone conversations with Red Lake District Office (Grame Swanwick,	<ul style="list-style-type: none">) Permitting for the winter road to the Project site, particularly the Overall Benefit permit for caribou.

Date	Means of Engagement	Key Discussion Topics
	Myles Perchuk, Megan Park, Charlie Mattina)) Courtesy notice regarding forthcoming EA processes for development of the Project.
Ministry of Northern Development and Mines		
Nov and Dec. 2017 and on-going	Meetings, emails, phone conversations with Thunder Bay Office (Bryce Voca, Scott Burgess)) Project summary.) Permitting for exploration activities.) Courtesy notice regarding forthcoming EA processes for development of the Project.
Department of Fisheries and Oceans (Canada)		
Jan. 2018 and on-going	Meetings, emails, phone conversations with Edmonton Office (Stephanie Martens, Brandi Mogge, Alexandra Sorockoff)) Project summary.) Review baseline fisheries data and existing conditions.) Fishery offset for open pit development (Section 35 Fisheries Act).) Courtesy notice regarding forthcoming EA processes for development of the Project.

Note: First Nations were not engaged specifically regarding the development of the Project Description document. Engagement with First Nations is described in Section 7

9. Regulatory Approvals

The federal *Regulations Designating Physical Activities* identifies the physical activities that could require completion of a federal EA. It is anticipated that the below sections apply to the Project:

“16. The construction, operation, decommissioning and abandonment of a new:

(b) metal mill with an ore input capacity of 4,000 TPD or more

(c) rare earth element mine or gold mine, other than a placer mine, with an ore production capacity of 600 TPD or more”.

The area surrounding the Project has not been subject to a regional environmental study.

Key federal permits required for Project development include Authorization(s) under the *Fisheries Act*, approvals under the *Navigation Protection Act*, a requirement for listing on Schedule 2 of MMR, licenses under the *Explosives Act*, *Nuclear Safety Control Act* and *Transportation of Dangerous Goods Act*. At this time no approvals under the *Species at Risk Act* are anticipated.

FMG intends to voluntarily initiate an individual provincial EA and coordinate it with the federal EA process to the extent practical. The provincial EA needs to be completed before permits can be issued by provincial agencies for the Project.

Provincial environmental approvals may include Mine Closure Plan (*Mining Act*), Permits to Take Water (*Ontario Water Resources Act*), Environmental Compliance Approvals (*Environmental Protection Act and Ontario Water Resources Act*), Work Permits (*Public Lands Act and Lakes and Rivers Improvement Act*),

Land Use Permits or other form of tenure (*Public Lands Act*), Aggregate Permits (*Aggregate Resources Act*), SAR Screenings and Overall Benefit Permits (*Endangered Species Act*), Forest Resource Licenses (*Crown Forest Sustainability Act*) and Archaeological Clearances (*Ontario Heritage Act*).

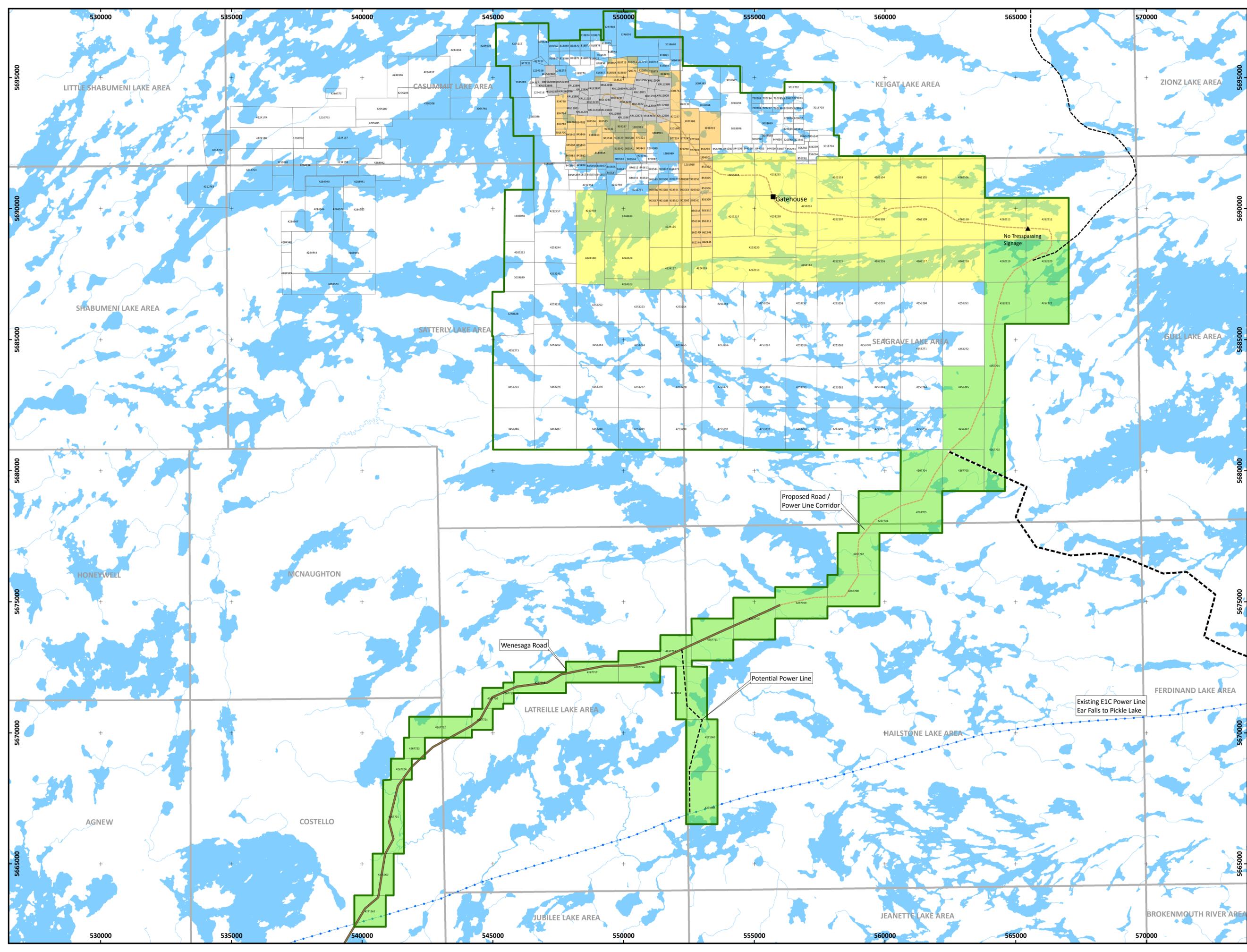
10. Closing Remarks

FMG maintains an open-door policy and welcomes feedback regarding all aspects and potential future phases of the Project. FMG contact people are identified in Section 2. It is hoped that an open-door policy will identify potential impacts and concerns so that they can be proactively evaluated and resolved as part of the EA. As well, it is hoped that an open-door policy will help identify potential collaborations and “win-win” opportunities during future potential phases of the Project.

FMG intends to keep all interested parties up-to-date regarding the Project and its on-going economic evaluation.

FMG wishes to create a lasting positive legacy and shall seek opportunities to strengthen the communities, infrastructure and businesses in the region. As well, FMG recognizes that mining is an interim land use and fully believes that the impacts associated with active periods of a mineral development project can be effectively mitigated such that there is a net benefit to the region prior to returning the land to a productive, aesthetically pleasing and ecologically functional land use upon closure. Figure 3-3 provides a conceptual general arrangement of the Project Site post closure.

Figures



Property Reference

Red Lake
Thunder Bay
Sault Ste. Marie
Orogon

Project Location

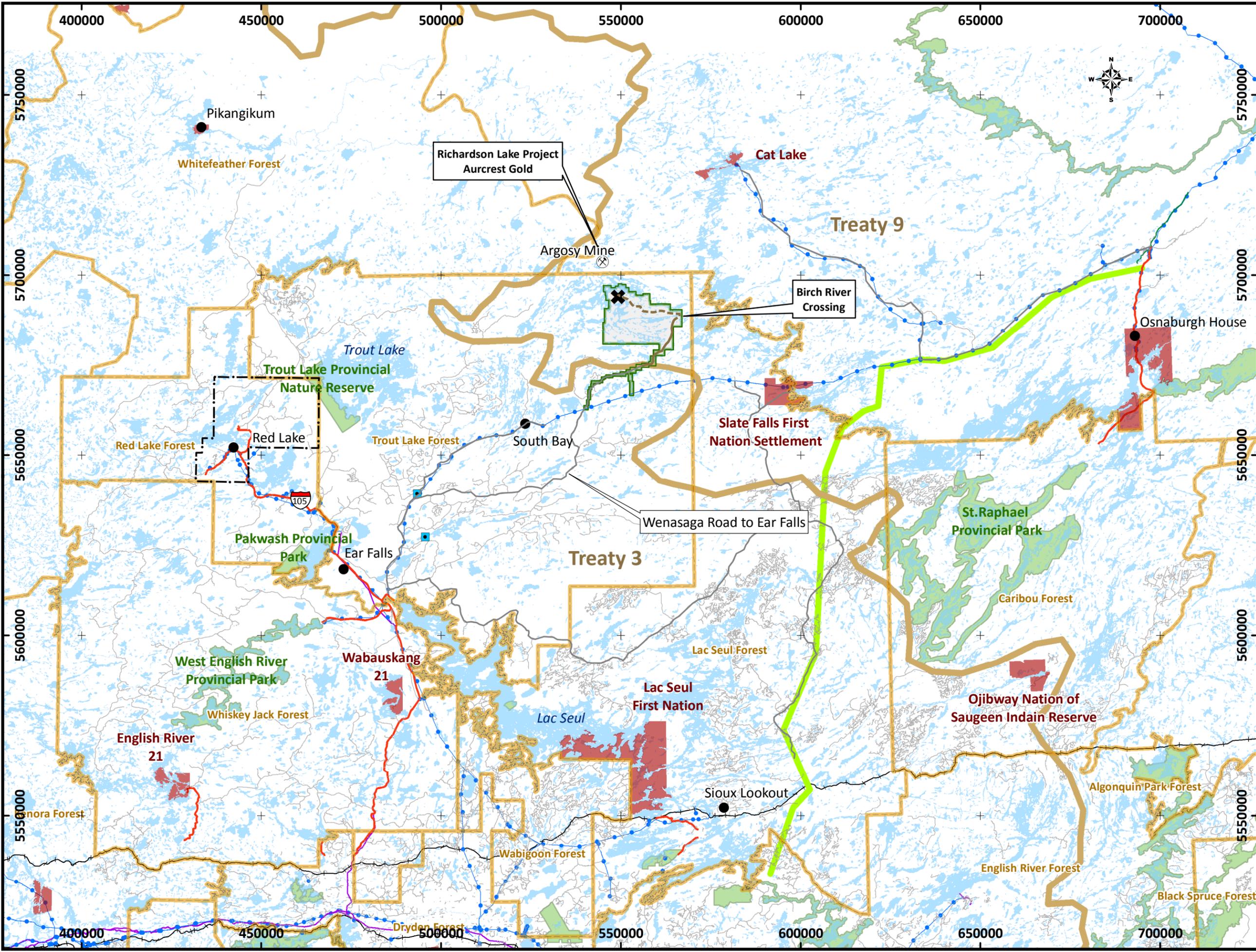
Scale 1 : 65,000 NAD83, UTM zone15 Jan. 2018

0 Kilometers 5

FIRST MINING GOLD

Springpole Gold Project
Kenora District, Ontario
Figure 1-1
Land Tenure

Logging Road	Patents
Proposed Road	Unpatented Claims
Forestry Road	Claims to Lease
Power Line	Phase 1
Springpole Property Outline	Phase 2
	Phase 3



Property Reference



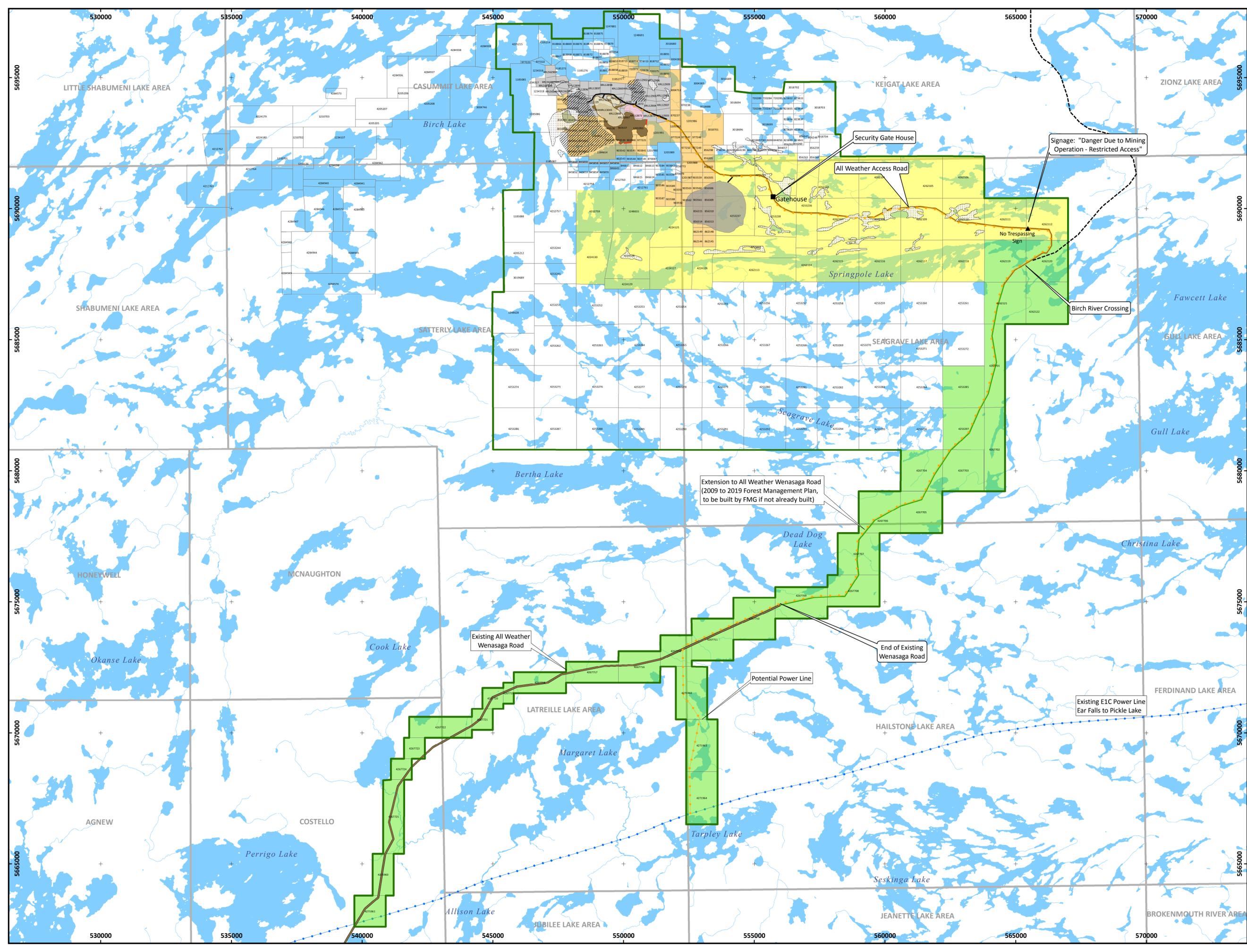
- ✕ Camp Location
- Town
- Waterpower Site
- Access Road to Springpole
- - - Gold Project (Provincial EA Completed)
- Wenasaga Road (Approved in Trout Lake Forest Management Plan)
- Logging Road
- Treaty Boundary (Source: Grand Council Treaty 3 Website)
- Highway
- Electricity Transmission Line
- Natural Gas Pipeline
- Proposed Watay Power Transmission Line
- Springpole Property Outline
- Forest Management Unit
- First Nation Treaty
- - - Red Lake Municipality Boundary
- Provincial Park

FIRST MINING GOLD

Springpole Gold Project
 Kenora District, Ontario
 Figure 2-1
 Property Location Map

Scale 1 : 975,000 NAD83, UTM zone15 Jan. 2018

0 Kilometers 50



Property Reference

North Arrow

- Existing Power Line
- Coffey Dam
- Potential Aggregate Source
- Pit
- Plant Site & Shops
- Tailings Management
- Waste Rock
- Dewatered Basin
- Springpole Property Boundary
- Patents
- Unpatented Claims

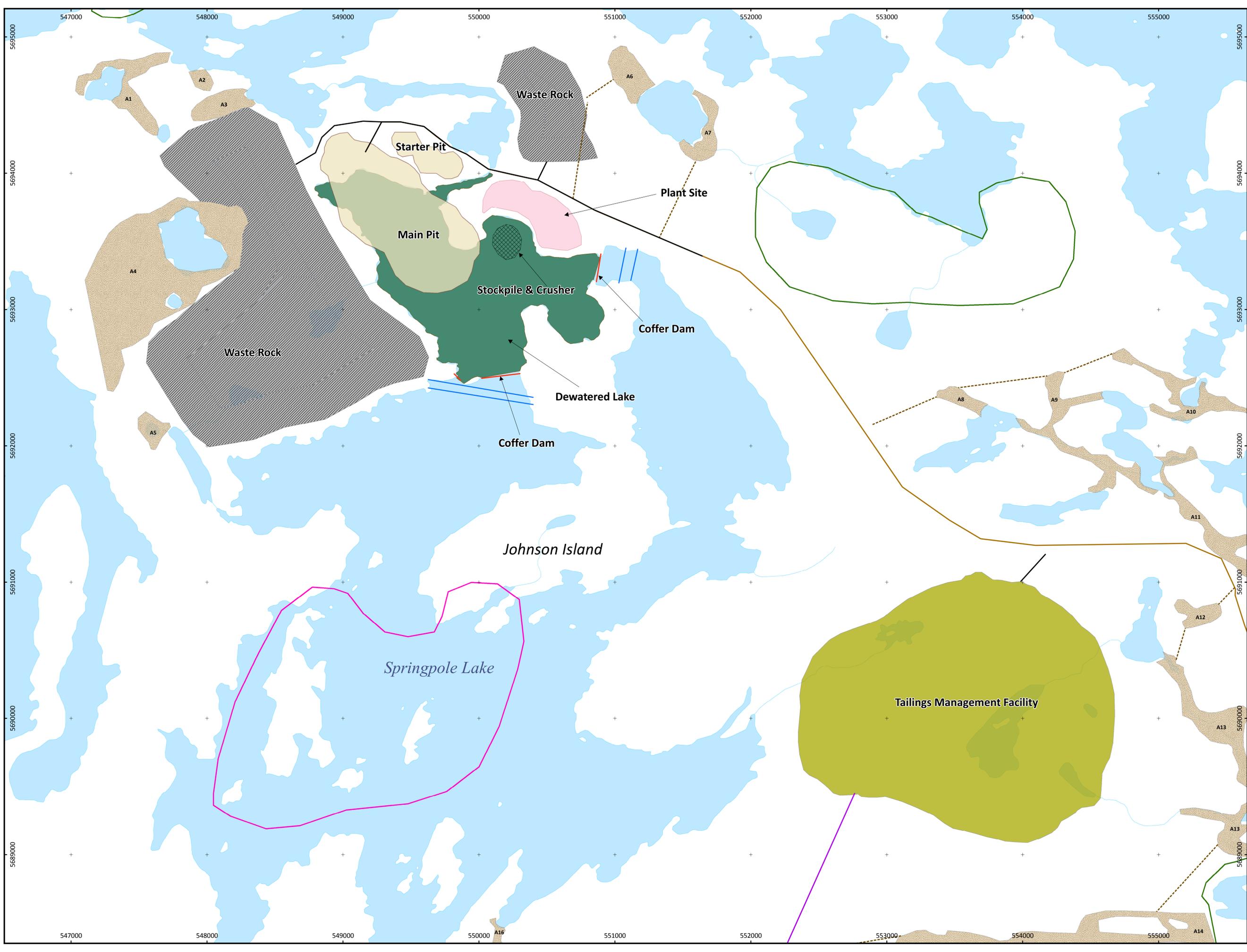
Claims to Lease

- Phase 1
- Phase 2
- Phase 3

FIRST MINING GOLD

Springpole Gold Project
 Kenora District, Ontario
 Figure 3-2B
 Conceptual Arrangement - Production Phase
 Scale 1 : 65,000 NAD83, UTM zone15 Nov.2017

0 Kilometers 5



Property Reference



- Coffers Dam
- Silt Curtain
- Effluent Pipeline Corridor
- On-Site Haul Road
- - - Temporary Road*
- Road & Power Line Corridor
- Potential Aggregate Source
- Open Pit
- Plant Site & Shops
- Stockpile & Crusher
- Tailings Management Facility
- Waste Rock
- Dewatered Area
- Archaeological Setback
- Potential Caribou Habitat Feature

*Temporary Road would only be built if proximal aggregate deposit is developed.



Springpole Gold Project

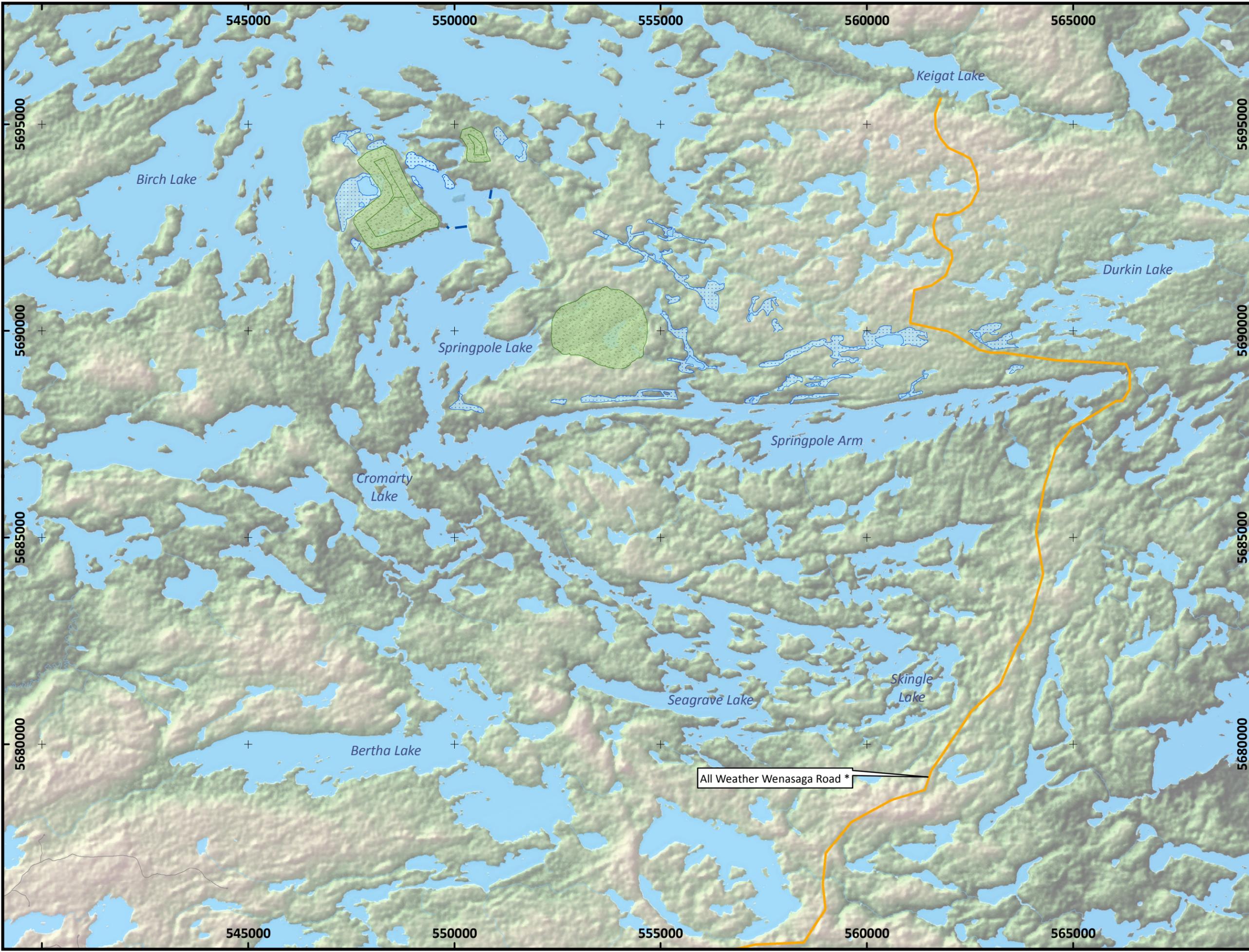
Kenora District, Ontario

Figure 3-2C

Mine Site General Arrangement

Scale 1 : 65,000 NAD83, UTM zone15 Nov.2017





Property Reference

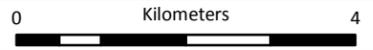


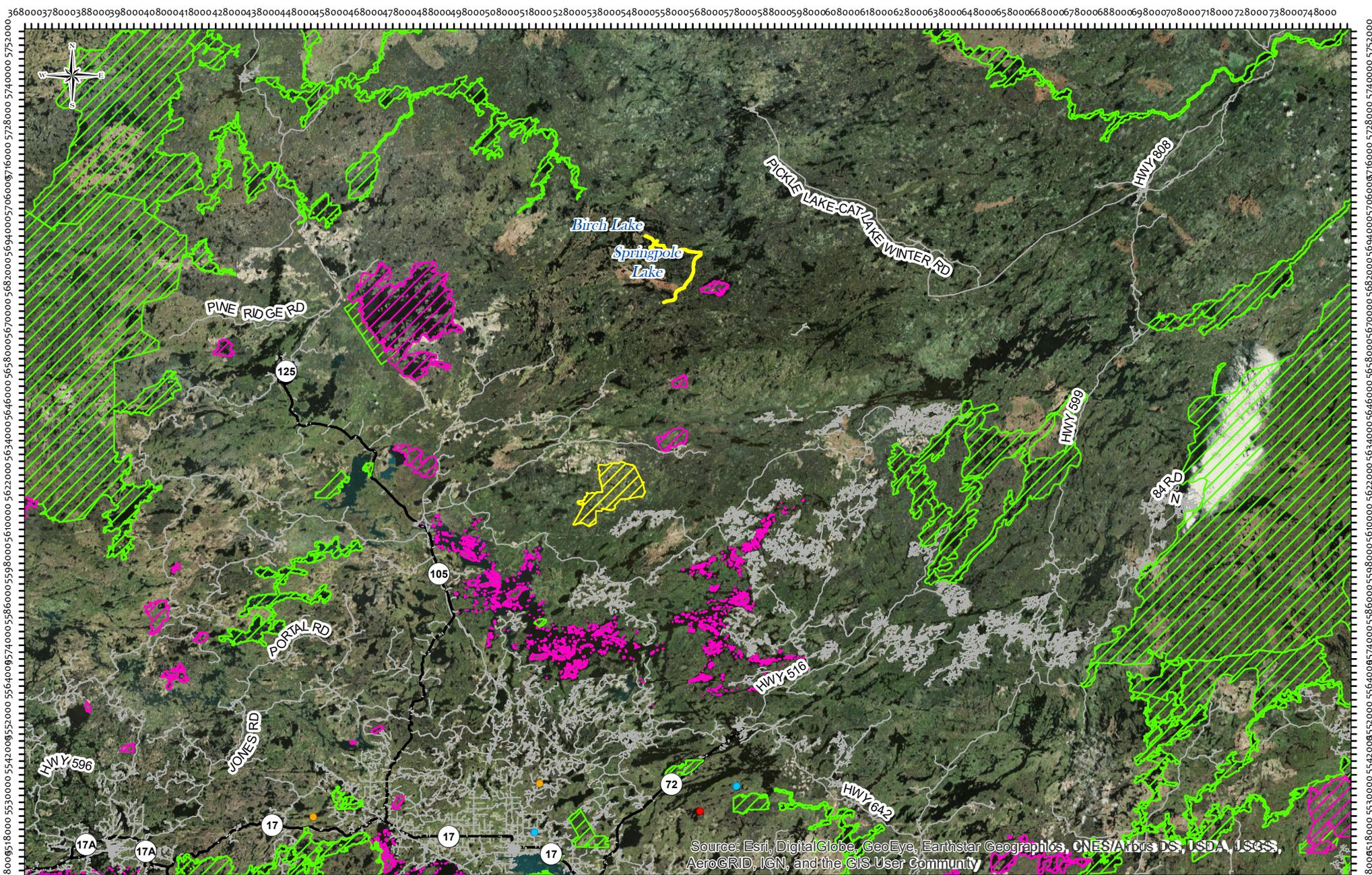
-  Forestry Road* (Power Line Removed)
 -  Potential New Spawning Shoal (created by coffer dam decommissioning - evaluation in progress)
 -  Sloped & Vegetated
 -  Potential New Fish Habitat (created by developing aggregate pit below water table)
- * Trout Lake Forest Management Plan



Springpole Gold Project
 Kenora District, Ontario
 Figure 3-3
 Conceptual General Arrangement
 Closed Out

Scale 1 : 85,000 NAD83, UTM zone15 Nov.2017





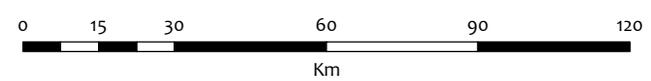
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Road
- Highway
- Access Corridor
- Designated Old Growth Forest
- Significant Valley
- Significant Woodland
- ▨ Provincial Parks - Regulated
- ▨ Conservation_Reserve
- ▨ Whitemud River ANSI



Protected Areas



1:1,485,978
 Projection: NAD 1983 UTM Zone 15N
 Date created: 2018-01-21

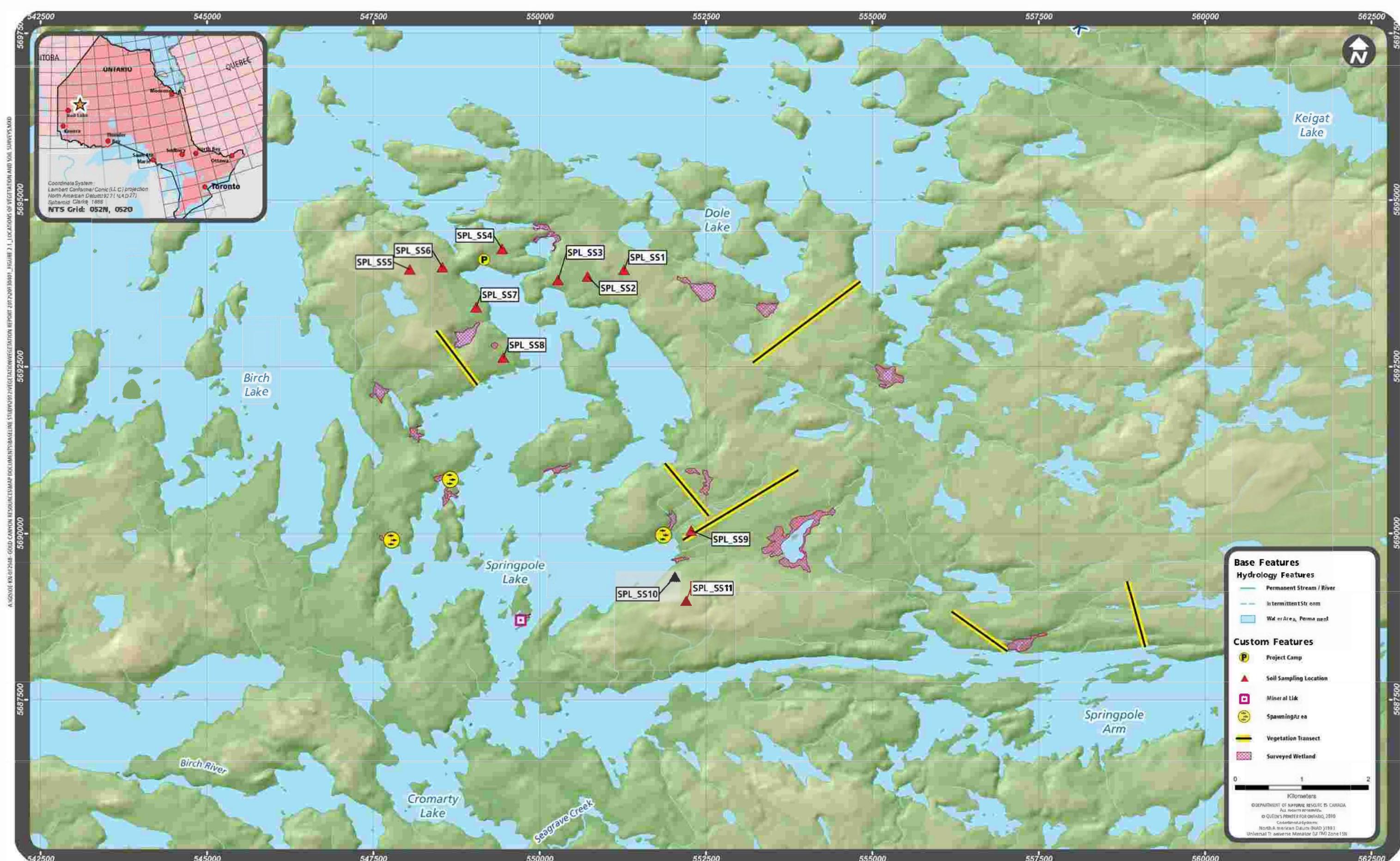


Figure 7-3: Locations of Vegetation, Wetland and Soil Surveys as well as Significant Wildlife Features Springpole Gold Project