



**FIRST MINING
GOLD**

SPRINGPOLE GOLD PROJECT



PROJECT DESCRIPTION

Environmental Assessment Registration

Pursuant to the Canadian Environmental Assessment Act 2012

PROJECT DESCRIPTION of a Designated Project

Submitted to:

Canadian Environmental Assessment Agency

Prepared by:

First Mining Gold Corp.

Suite 1800 – 925 West Georgia Street

Vancouver, British Columbia

V6C 3L2

February 2018

TABLE OF CONTENTS

TABLE OF CONTENTS	II
LIST OF TABLES.....	IV
LIST OF FIGURES (IN APPENDIX 1).....	VI
DEFINITION OF TERMS AND ACRONYMS	XIV
NOTICE TO READERS	XXI
1.0 INTRODUCTION.....	1-1
1.1 Project Name and General Description.....	1-1
1.1.1 Designated Activities	1-1
1.2 Proponent Information	1-1
1.3 Co-Proponent Information.....	1-2
1.4 Consultation Overview.....	1-2
1.5 Rationale for the Project	1-5
1.6 Environmental Assessment Processes and Purpose of Registration	1-6
1.7 Requirement to Integrate EA Process into Economic Evaluation	1-6
1.8 Recent Activities and Milestones	1-7
2.0 PROJECT DESCRIPTION	2-1
2.1 Property Description and Location	2-2
2.1.1 Proximity to Municipalities.....	2-3
2.1.2 Proximity to any Permanent, Seasonal or Temporary Residences.....	2-3
2.1.3 Proximity to Permanent or Seasonal Commercial Operations.....	2-3
2.1.4 Proximity to any Indigenous Traditional Lands or Sites of Cultural Significance	2-3
2.1.5 Proximity to Federal Lands	2-4
2.1.6 Proximity to Surface Waters	2-4
2.2 Alternatives to the Project.....	2-4
2.2.1 Potential Collaboration Opportunities.....	2-4
2.2.2 Infrastructure Improvement Opportunities.....	2-5
2.3 Land Tenure	2-7
2.3.1 Jubilee Gold Claims and Royalty	2-7
2.3.2 Leased Claims from Shirley Frahm.....	2-7
2.3.3 Lease Claims from Springpole Group	2-7
2.3.4 Claims Leased from the Crown.....	2-7
2.4 Mineral Resource Estimates	2-8
2.5 Mining Methods and Production.....	2-9
2.6 Overall Project Development and Production Schedule.....	2-9
3.0 PROJECT PHASES	3-1
3.1 Construction and Development.....	3-1
3.1.1 Timber Removal, Aggregate Deposit Development and Road Upgrade....	3-1
3.1.2 Cofferdam Construction	3-2
3.1.3 Fish Removal and North Basin Dewatering.....	3-4
3.1.4 Sediment Management.....	3-5
3.1.5 Buildings and Plant Site Infrastructure	3-5
3.1.6 Tailings Management Facility (TMF).....	3-5
3.1.7 Site Access Road and Haulage Road Network	3-6

3.1.8	Process Plant	3-7
3.1.9	Buildings.....	3-9
3.1.10	Power Supply and Communications	3-11
3.1.11	Runoff and Seepage Collection System.....	3-12
3.2	Production, Operation and Maintenance.....	3-12
3.2.1	Open Pit	3-12
3.2.2	Rock Storage Facilities	3-14
3.2.3	Tailings Management	3-14
3.2.4	Water Management	3-15
3.2.5	Roads	3-15
3.3	Summary of Emissions to Air, Land and Water.....	3-16
3.3.1	Emissions to Air.....	3-16
3.3.2	Greenhouse Gas Emissions	3-16
3.3.3	Waste Management.....	3-17
3.3.4	Water Management and Emissions to Water.....	3-18
3.4	Closure and Reclamation.....	3-19
3.4.1	Waste Rock Pile (NAG waste rock)	3-19
3.4.2	Waste Rock Pile (PAG waste rock).....	3-20
3.4.3	Starter Pit	3-20
3.4.4	Main Pit and Cofferdams.....	3-20
3.4.5	Tailings Management Facility	3-20
4.0	OVERALL PROJECT SCHEDULE.....	4-1
4.1	Environmental Assessment and Permitting Schedule.....	4-1
4.2	Life of Mine Development Plan and Schedules.....	4-2
4.3	Decommissioning and Abandonment Schedule.....	4-4
4.4	Labour Force and Occupations.....	4-5
4.5	Capital and Operating Costs.....	4-7
4.5.1	Mine Equipment Capital Cost	4-7
4.5.2	Process Plant Capital Costs	4-8
4.5.3	Infrastructure Costs	4-9
4.5.4	Tailings Management, Lake Dewatering and Cofferdam Costs	4-10
4.5.5	Mine Operating Costs	4-13
4.5.6	Process Plant Operating Costs.....	4-14
4.5.7	Tailings, Cofferdam and Surface Water Management Operating Costs	4-14
5.0	ENVIRONMENTAL EFFECTS	5-1
5.1	Environmental Setting.....	5-1
5.1.1	Regional Climate	5-2
5.1.2	Air Quality and Noise	5-4
5.1.3	Geology and Topography	5-6
5.1.4	Vegetation and Soils.....	5-9
5.1.5	Wetlands	5-10
5.1.6	Hydrology	5-11
5.1.7	Hydrogeology	5-11
5.1.8	Surface Water Quality	5-12
5.1.9	Fish Community and Habitat.....	5-12
5.1.10	Wildlife and Avifauna	5-19

5.1.11	Human Environment.....	5-22
5.1.12	Archaeological and Cultural Heritage Resources.....	5-23
5.2	Potential Changes Related to Federal Legislation	5-24
5.2.1	Fish and Fish Habitat (Fisheries Act)	5-24
5.2.2	Species at Risk (Species at Risk Act)	5-27
5.2.3	Migratory Birds (Migratory Birds Convention Act)	5-27
5.3	Potential Environmental Effects to the Biophysical Environment.....	5-28
5.4	Financial Support.....	5-29
5.5	Potential Effects on Indigenous Peoples.....	5-40
5.5.1	Currently Known Uses and Future Access Restrictions	5-41
5.5.2	Assessment of Potential Downstream Effects.....	5-41
5.6	Environmental Management and Protection	5-43
5.6.1	Protection of Sensitive Sites	5-43
5.6.2	Environmental Design Basis	5-43
5.6.3	Environmental, Health and Safety Management System	5-44
5.7	Project Documents	5-44
5.8	Other Required Environmental Approvals and Permits	5-44
6.0	ENGAGEMENT AND CONSULTATION.....	6-1
6.1	Indigenous Communities	6-1
6.1.1	Comments and Concerns to Date.....	6-3
6.1.2	Currently Known Traditional Land Uses.....	6-6
6.1.3	Indigenous Consultation and Engagement Plan	6-7
6.2	Public Stakeholders	6-9
6.2.1	Comments and Concerns to Date.....	6-9
6.2.2	Public Consultation and Engagement Plan	6-10
6.3	Government Agencies	6-11
6.4	Selection of Valued Components.....	6-12
7.0	CLOSING REMARKS.....	7-1
8.0	REFERENCES.....	8-1

LIST OF DIAGRAMS

Diagram 1-1: Road Use and Decommissioning Timeline.....	1-9
Diagram 3-1: Process Flowsheet.....	3-9

LIST OF TABLES

Table 1-1: Summary of Direction from Government Regarding Indigenous Consultation..	1-3
Table 1-2: Engagement with Regulatory Agencies During Preparation of Project	1-5
Description	
Table 1-3: Recent Activities and Milestones.....	1-10
Table 2-1 Alternative Ways to Implement Project.....	2-6

Table 2-2 Mineral Resource Statement, Springpole Gold Project.....	2-9
Table 3-1: Summary of Potential Aggregate Deposits.....	3-2
Table 3-2: Major Open Pit Equipment Requirements.....	3-13
Table 3-3: Summary of GHG Emissions.....	3-17
Table 3-4: Alternative Effluent Discharge Points.....	3-19
Table 4-1: Benchmarking Timeline for Environmental Assessment and Approval Process.....	4-1
Table 4-2: Proposed LOM Open Pit Production Schedule.....	4-3
Table 4-3: Summary of Potential Operations Phase Positions.....	4-6
Table 4-4: Open Pit Equipment Capital Cost Summary.....	4-8
Table 4-5: Springpole Processing Plant Capital Cost Estimate.....	4-9
Table 4-6: Summary of Infrastructure Capital Cost and Sustaining Capital.....	4-10
Table 4-7: Summary of Key TMF Construction Quantities.....	4-11
Table 4-8: Summary of Cofferdam and Lake Dewatering Construction Quantities.....	4-11
Table 4-9: Summary of TMF Cost Estimate.....	4-13
Table 4-10: Summary of Cofferdam and Lake Dewatering Costs.....	4-13
Table 4-11: Springpole Mine Operating Unit Costs.....	4-14
Table 4-12: Springpole Process Plant Operating Cost Estimate.....	4-14
Table 5-1: Average Monthly Runoff and Precipitation Distribution.....	5-3
Table 5-2: Summary of Existing Air Quality Monitoring Stations.....	5-5
Table 5-3: Fish Catch in Lakes.....	5-15
Table 5-4: Fish Catch in Small Waterbodies.....	5-15
Table 5-5: Summary of Affected Waterbodies within Project Site.....	5-25
Table 5-6: Environmental Effects of the Project Related to Section 5 of CEEA 2012 and Sections 17-19 of the Prescribed Information for the Description of Designated Project Regulations	5-30
Table 5-7: Summary of Effluent Dilution Scenarios.....	5-35
Table 5-8: Required Federal Approvals.....	5-38
Table 5-9: Required Provincial Approvals.....	5-39
Table 5-10: Potential Environment Interaction Matrix.....	Appendix 4
Table 5-11: Potential Interactions Between Project Activities And Valued Components During Construction And Operational Phases.....	Appendix 4
Table 5-12: Potential Interactions Between Project Activities And Valued Components During Closure And Accident/Malfunction/Unplanned Events.....	Appendix 4
Table 6-1: Engagement Log Example.....	6-1
Table 6-2: Indigenous Community Contacts.....	6-2
Table 6-3: Summary of Indigenous Engagement Conducted for the Project.....	6-4
Table 6-4: Proposed Valued Components and Rationale.....	6-14

LIST OF IMAGES

Image 1-1: Aerial View of Camp Site.....	1-8
Image 3-1: Cofferdam Design Details.....	3-3
Image 3-2: Location of Perimeter Runoff and Seepage Collection Ponds.....	3-12

Image 5-1: Springpole Camp.....	5-2
Image 5-2: Mean Monthly Lake Evaporation for Five Stations Around the Springpole Site..	5-4
Image 5-3: Springpole Gold Project – Regional Geology.....	5-8
Image 5-4: Regional Context for Fisheries Assessment.....	5-16
Image 5-5: Small Waterbodies.....	5-17
Image 5-6: Small Watercourses.....	5-18
Image 5-7: Watershed Locations.....	5-42

LIST OF FIGURES (IN APPENDIX 1)

1-1	Land Tenure
2-1	Project Location Plan
3-1	Pre-Development Conditions
3-2A and 3-2B	Conceptual General Arrangement – Production Phase
3-2C	Mine Site General Arrangement
3-3	Conceptual General Arrangement – Closure
5-1	Springpole Lake Bathymetric Map
5-2	Study Areas for Previous Terrestrial Baseline Studies
5-3	Local Gauging Stations
5-4	Regional Gauging Stations
5-5	Ground Water Monitoring Locations
5-6	Surface Water Monitoring

LIST OF APPENDICES

Appendix 1	Figures
Appendix 2	Photographs
Appendix 3	Stakeholder Contact List
Appendix 4	Table 5-10 to Table 5-12: Environment Interaction Matrices
Appendix 5	2013 Comments from Shared Territory Protocol Nations
Appendix 6	Values Maps and Figures from 2012-2014 Class EA Process for Access Road Corridor

Table of Concordance with CEAA 2012 Regulation SOR/2012-148 (“Regulation”) and Guide to Preparing a Description of a Designated Project under the Canadian Environmental Assessment Act, 2012 (“Guide”)

Regulation Clause	Guide Section	Regulation Requirement	Guide Requirement	PD Section(s)
General Information				
1	1.2 (a)	Name of the Project	Name of the designated project.	1.1
1	1.1	Nature of the Project	Nature of designated project.	1.1,1
1	1.1	Proposed location of the Project	Proposed location of project.	2.1
2	1.2	Name of the Proponent and contact information, and the name and contact information of their primary representative for the purpose to the project description	Provide proponent contact information: b) name of the proponent c) Address of the proponent d) Chief Executive Officer or equivalent (include name, official title, email address and telephone number) e) principal contact person for the purposes of the project description (include name, official title, email address and telephone number).	1.2
3	1.3	A description of and the results of any consultations undertaken with any jurisdiction and other parties including Aboriginal peoples and the public	Provide a list of any jurisdictions and other parties including Aboriginal groups and the public that were consulted during the preparation of the project description. (A description of the result of any consultations is to be provided in Sections 6 and 7).	1.4
4	1.4	The environmental assessment and regulatory requirements of other jurisdictions	Provide other relevant information: a) Provide information on whether the designated project is subject to the environmental assessment and/or regulatory requirements of another jurisdiction(s).	1.6 5.8
4.1	1.5	A description of any environmental study that is being or has been conducted of the region where the project is to be carried out	Provide information on whether the designated project will be taking place in a region that has been the subject of a regional environmental study.	5.0 No regional study
Project Information				
5	2.1	A description of the project’s context and objectives	Provide the following information to the extent that it is available or applicable: 1. Provide a general description of the project, including the context and objectives of the project.	1.5
6	2.2	The provisions in the schedule to the <i>Regulations Designating Physical Activities</i> describing the project in whole or in part.	2. Indicate the provisions in the <i>Regulations Designating Physical Activities</i> setting out the designated activities that describe the project in whole or in part.	1.1.1

Regulation Clause	Guide Section	Regulation Requirement	Guide Requirement	PD Section(s)
7	2.3(a)	A description of the physical works that are related to the project including their purpose, size and capacity	Provide a description of the components associated with the proposed project, including: a) Physical works with the designated project (e.g., large buildings, other structures, such as bridges, culverts, dams, marine transport facilities, mines, pipelines, power plants, railways, roads, and transmission lines) including their purpose, approximate dimensions, and capacity. Include existing structures or related activities that will form part of or are required to accommodate or support the designated project.	1.1.1 2.5 Section 3
8	2.3(b)	The anticipated production capacity of the project and a description of the production processes to be used, the associated infrastructure and any permanent or temporary structures	Anticipated size or production capacity of the designated project, with reference to thresholds set out in the Regulations Designating Physical Activities, including a description of the production processes to be used, the associated infrastructure and any permanent or temporary structures.	1.1.1 2.0 3.1.7
	2.3(c)		If the designated project, or one of its components, is an expansion, describe the size and nature of the expansion.	N/A
9	2.3(d)	A description of all activities to be performed in relation to the project	A description of physical activities that are incidental to the designated project.	Section 3
10	2.4	A description of any waste that is likely to be generated during any phase of the project and of a plan to manage that waste	Provide a description of any solid, liquid, gaseous, or hazardous wastes likely to be generated during any phase of the designated project and of plans to manage those wastes, including the following: a) Sources of atmospheric contaminant emissions during the designated project phases (focusing on criteria air contaminants and greenhouse gases, or other non-criterial contaminants that are of potential concern) and location of emissions; b) Sources and location of liquid discharges; and, c) Types of wastes and plans for their disposal (e.g., landfill, licensed waste management facility, marine waters, or tailing containment facility)	3.3

Regulation Clause	Guide Section	Regulation Requirement	Guide Requirement	PD Section(s)
11	2.5	A description of the anticipated phases of and the schedule for the project's construction, operation, decommissioning and abandonment	<p>Provide a description of the timeframe in which the development is to occur and the key project phases, including the following:</p> <p>a) Anticipated scheduling, duration and staging of key project phases, including preparation of the site construction, operation and decommissioning and abandonment,</p> <p>b) Main activities in each phase of the designated project that are expected to be required to carry out the proposed development (e.g., activities during site preparation or construction might include, but are not limited to, land clearing, excavating, grading, de-watering, directional drilling, dredging and disposal of dredge sediments, infilling and installing structures).</p>	<p>2.6</p> <p>Section 3</p> <p>4.1</p> <p>4.2</p> <p>4.3</p>
12	3.0	A description of the Project's location, including	Provide a description of the designated project's location, including:	2.1
(a)	3.1	Its geographic coordinates	1. Coordinates (i.e., longitude/latitude using international standard representation in degrees, minutes, seconds) for the centre of the facility, or for a linear project, provide the beginning and end points.	2.1
(b)	3.1	Site maps produced at an appropriate scale in order to determine the project's overall location and the spatial relationship of project components	<p>2. Site map/plan(s) depicting location of the designated project components and activities. The map/plan(s) should be at an appropriate scale to help determine the relative size of the proposed components and activities.</p> <p>3. Map(s) at an appropriate scale showing the location of the designated project components and activities relative to existing features, including but not limited to:</p> <p>a) watercourses and waterbodies with names where they are known</p> <p>b) linear and other transportation components (e.g., airports, ports, railways, roads, electrical power transmission lines and pipelines)</p> <p>c) other features of existing or past land use (e.g., archaeological sites, commercial development, houses, industrial facilities, residential areas and any waterborne structures);</p> <p>d) location of Aboriginal groups, settlement land (under a land claim agreement) and, if available, traditional territory</p>	<p>Figures in Appendix 1 and Appendix 6</p>

Regulation Clause	Guide Section	Regulation Requirement	Guide Requirement	PD Section(s)
(b)	3.1	Site maps produced at an appropriate scale in order to determine the project's overall location and the spatial relationship of project components	<ul style="list-style-type: none"> e) federal lands (as defined in CEEA 2012) including, but not limited to national Parks, national Historic sites, and reserve lands f) nearby communities g) permanent seasonal or temporary residences h) fisheries and fishing areas (i.e., Aboriginal, commercial and recreational) i) environmentally sensitive areas (e.g., wetlands and protected areas, including migratory bird sanctuary reserves, marine protected areas, National Wildlife areas) j) provincial and international boundaries. 	Figures in Appendix 1 and Appendix 6
(c)	3.2	The legal description of land to be used for the project, including the title, deed or document and any authorization relating to a water lot	Legal Description of land to be used for the designated project, including the title, deed or document and any authorization relating to a water lot.	2.3 Figure 1-1
(d)	3.1	The project's proximity to any permanent, seasonal or temporary residences	5. Proximity of the designated project to: <ul style="list-style-type: none"> a) any permanent, seasonal or temporary residences. 	5.0 2.1.2
(e)	3.1	The project's proximity to reserves, traditional territories as well as lands and resources currently used for traditional purposes by Aboriginal peoples	<ul style="list-style-type: none"> b) traditional territories, settlement land (under a land claim agreement) as well as lands and resources currently used for traditional purposes by Aboriginal peoples. 	2.1.4 5.5 6.1 Figure 2-1
(f)	3.1	The project's proximity to federal lands	<ul style="list-style-type: none"> c) any federal lands. 	2.1.5
	3.2		<p>Land and Water Use</p> <p>To the extent that is known at this time, describe the ownership and zoning of land and water that may be affected by the project, including the following:</p> <ul style="list-style-type: none"> a) Zoning designations b) current land ownership, including sub-surface rights c) Any applicable land use, water use (including ground water), resource management or conservation plans within and near the Project Site. 	2.1 2.3

Regulation Clause	Guide Section	Regulation Requirement	Guide Requirement	PD Section(s)
	3.2		d) Describe whether the designated project is going to require access to, use or occupation of, or the exploration, development or production of lands and resources currently used for traditional purposes by Aboriginal peoples.	5.5 6.1
Federal Involvement				
13	4.0	A description of any financial support that federal authorities are, or may be, providing to the project	1. Describe if there is any proposed or anticipated federal financial support that federal authorities are, or may be, providing to the designated project.	N/A 5.4
14		A description of any federal land that may be used for the purpose of carrying out the project	2. Describe any federal lands (as defined per CEAA 2012) that may be used for the purpose of carrying out the designated project. This is to include any information on any granting of interest in federal land (i.e., easement, right of way or transfer of ownership).	N/A
15		A list of permits, licences or other authorizations that may be required under any Act of Parliament to carry out the project	Detail any federal legislative or regulatory requirements that may be applicable, including a list of permits, licences or other authorizations that may be required to carry out the designated project.	5.8
Environmental Effects				
16	5.1	A description of the physical setting	Using existing knowledge and available information provide an overview of the following: 1. A description of the physical setting, including the physical components in the area that may be adversely affected by the project (e.g., air, terrain, water).	5.1
16	5.1	A description of the biological setting	2 A description of the biological setting, including the biological components in the area that may be adversely affected by the project (e.g., fish, vegetation, wildlife, including migratory birds, and known habitat use).	5.1
17	5.2	A description of any changes that may be caused, as a result of carrying out the project, to:	A description of any changes that may be caused as a result of carrying out the designated project to:	
(a)	(a)	Fish and fish habitat as defined in subsection 2(1) of the Fisheries Act	Fish and fish habitat, as defined in the Fisheries Act.	5.2.1 Table 5-6

Regulation Clause	Guide Section	Regulation Requirement	Guide Requirement	PD Section(s)
(b)	(b)	Aquatic species, as defined in subsection 2(1) of the Species at Risk Act	Marine plants as defined in the Fisheries Act.	5.2.2 Table 5-6
(c)	(c)	Migratory birds, as defined in subsection 2(1) of the Migratory Birds Convention Act, 1994	Migratory Birds as defined in the MBCA, 1994.	5.2.3 Table 5-6
18	5.3	A description of any changes to the environment that may occur, as a result of carrying out the project, on federal lands, in a province other than the province in which the project is proposed to be carried out or outside of Canada	A description of any changes to the environment that may occur, as a result of carrying out the project, on federal lands, in a province other than the province in which the project is proposed to be carried out or outside of Canada.	3.3 (GHG) 5.2 5.3 5.5 Table 5-6 Table 5-10
19	5.4	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 socio-economic conditions, physical and cultural heritage, the current use of lands and resources for traditional purposes or on any structure, site or thing that is of historical, archaeological, paleontological or architectural significance	A description of the effects on Aboriginal peoples of any changes to the environment that may be caused as a result of carrying out the designated project, including effects on health and socio-economic conditions, physical and cultural heritage, the current use of lands and resources for traditional purposes, or any structure, site or thing that is historical, archaeological, paleontological or architectural significance.	5.5 Table 5-6 Table 5-10
Proponent Engagement and Consultation with Aboriginal Groups				
	6.0		Provide the following information to the extent that it is available or applicable.	
	6.1		A list of Aboriginal groups that may be interested in, or potentially affected by, the designated project.	1.4 6.1
	6.2		A description of the engagement or consultation activities carried out to date with Aboriginal groups including: a) names of Aboriginal groups engaged or consulted to date with regard to the project; b) date(s) each Aboriginal group was engaged or consulted; and, c) means of engagement or consultation (e.g., community meetings, mail or telephone).	1.4 6.1

Regulation Clause	Guide Section	Regulation Requirement	Guide Requirement	PD Section(s)
	6.3		An overview of key comments and concerns expressed by Aboriginal groups identified or engaged to date, including any responses provided to these groups.	6.1 Appendix 5
	6.4		A consultation and information gathering plan that outlines the ongoing and proposed Aboriginal engagement or consultation activities, the general schedule for these activities and the type of information to be collected (or, alternatively, an indication of why such engagement or consultation is not required).	6.1.3
	6		The proponent is encouraged to provide background information on Aboriginal groups potential or established Aboriginal or treaty rights. The proponent is also encouraged to provide information on the impact area of the designated project and how it overlaps with uses by Aboriginal groups that have potential or established Aboriginal or treaty rights.	5.5.1 6.1.2
Consultation with the Public and Other Parties (other than Aboriginal consultation included above)				
	7.0		Provide the following information to the extent that it is available or applicable.	
	2		An overview of key comments and concerns expressed to date by stakeholders and any responses that have been provided.	6.2.1
	3		An overview of any ongoing or proposed stakeholder consultation activities.	6.2.2
	4		A description of any consultations that have occurred with other jurisdictions that have environmental assessment or regulatory decisions to make with respect to the project.	1.4 and 7.0
Summary				
20	8.0	A summary of the information required under Sections 1 to 19	...include an executive summary that summarizes the information identified in Sections 1 to 7 of this Guide. The executive summary is to be prepared and submitted to the Agency in both English and French.	Project Description Summary Document
N/A – Not Applicable				

DEFINITION OF TERMS AND ACRONYMS

ABA: Acid base accounting. ABA tests are used to assess the risk of acid generation from sulphide oxidation by determining the acid potential (“AP”) which is a calculated value based upon sulphide content, and neutralization potential (“NP”) which is measured by reacting the sample with alkali. More details can be found in *Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials* (MEND, 2009).

Access Corridor Project: The undertaking to develop a land based access corridor to the Springpole Gold Project Site. Refer to press release regarding completion of Class EA for this undertaking: <http://goldcanyon.mwnewsroom.com/press-releases/gold-canyon-fulfills-environmental-assessment-for--tsx-venture-gcu-201405070944140001> This undertaking has completed the requisite provincial Class EA process and is currently at the permitting stage.

Acid generation: Acid generation is a natural process that is essentially oxidation of sulphides, particularly pyrite and pyrrhotite. On exposure to oxygen and water these sulphides produce oxidation products - sulphuric acid and metal sulphates and hydroxides, and surface waters become acidic if sufficient acid-neutralizing minerals such as calcite or dolomite are not present. The acidic water from metal mines frequently carries with it elevated concentrations of heavy metals such as zinc, copper and nickel and high levels of dissolved sulphates of aluminum iron and magnesium. Severe acid mine drainage can contain over 100 g/l dissolved salts (<http://wvmdtaskforce.com/proceedings/95/95FEA/95FEA.HTM>).

AO: Area of Concern, as defined by the Ministry of Natural Resources in their publication titled *Timber Management Guidelines for the Protection of Fish Habitat* (MNRF, 1988). This term is also used in MNRF (2010). This is a shoreline buffer that is reserved along watercourses to prevent effects to the watercourse from the inland development.

APV: Aquatic Protection Values. MOE (2011B) provides scientifically defensible Aquatic Protection Values which represent metal concentrations in surface water (with no dilution applied) below which no adverse toxicological effects are expected. Aquatic Protection Values are considered to be protective of all freshwater aquatic organisms.

ARD: Acid rock drainage.

CALA: Canadian Association for Laboratory Accreditation

CCME: Canadian Councils of Ministers of the Environment.

Code: The Mine Rehabilitation Code of Ontario, as provided in Ontario Regulation 240/00 (as amended).

Construction Aggregate: This includes the following categories of material:

-) glacial deposits (overburden) originating from within the Project footprint
-) material imported from off-site sources approved pursuant to the *Aggregate Resources Act*
-) development rock from the open pits and quarried rock that is verified to not pose a chemical stability risk using government approved criteria.

CRA: Commercial, recreational or Aboriginal, used in reference to a fishery.

Deposit: Mineralized deposits at Springpole Property. Currently, these are known to comprise the East Zone, Main Zone, East Extension Zone, Camp Zone and the Portage Zone. Exploration and resource definition work is currently in progress and this on-going work may expand these known zones and identify new zones. For the purpose of this document, this term is used to define the known zones and future potential zones.

Designated Substance: As defined in the Ontario *Occupational Health and Safety Act*

Development Rock: Refers to the rock that will be mined to access the ore and does not contain economic concentrations of gold and silver.

DFO: Department of Fisheries and Oceans

DO: Dissolved oxygen (in water).

DST: DST Consulting Engineers

EA: Environmental assessment

ECCC: Environment and Climate Change Canada

ECA: Environmental Compliance Approval, as defined and issued by the Ministry of the Environment.

EDF: Environmental Design Flood, the large runoff event that a sewage works can contain and subsequently discharge without an accidental or unplanned release.

EEM: Environmental Effects Monitoring, a requirement under the federal *Metal Mining Effluent Regulations*.

EHS: Environment, health and safety

EIS: Environmental impact statement

ELC: Ecological Land Classification

Environment: means the components of the Earth, and includes

- (a) land, water and air, including all layers of the atmosphere;
- (b) all organic and inorganic matter and living organisms;
- (c) the interacting natural systems that include components referred to in (a) and (b); and
- (d) the socio-cultural and economic environment affected by an undertaking.

ESR: Environmental Study Report, the document that was produced by GCU to complete MNRF's Class EA process for the Springpole Access Corridor Project. Refer to 2014 press release. <http://goldcanyon.mwnewsroom.com/press-releases/gold-canyon-fulfills-environmental-assessment-for--tsx-venture-gcu-201405070944140001>

Exploration: Exploration, or mineral exploration, is the process of finding ore (*i.e.* commercially viable concentrations of minerals) to extract for a profit. Although it involves mineral prospecting, the process of mineral exploration and economic evaluations of mineral deposits is much more involved, requiring the involvement of a variety of professionals and the management of compliance with applicable government legislation. Commonly applied "rules of thumb" suggest that one in every 10,000 mineralized occurrences advance to a positive economic evaluation and become a mine. Exploration techniques are described herein under "advanced exploration" and "preliminary exploration."

FMG: First Mining Gold Corp.

FMP: Forest Management Plan

FMP Approved Road: This term is used to refer to the existing Wenasaga Road as well as the extension to the road corridor that is proposed for construction in the 2014-2019 Trout Lake Forest FMP (refer to Figure 3-1). This term also refers to further extensions that may be constructed according to post-2019 FMPs and have been publicly presented as part of the forest management planning process (refer to Figures 2-1 and 2-2 of Final ESR, included in Appendix 7 for convenience).

FRI: Forest Resource Inventory

g: gram

g/t: gram per tonne

GCU: Gold Canyon Resources Inc.

GHG: Greenhouse gas(es)

GIS: Geographic Information System

GRN: Generator Registration Number, as defined pursuant to *Environmental Protection Act*.

ha: hectares

HHERA: Human Health and Ecological Risk Assessment

Horizon: Horizon Archaeology, an archaeological consulting company.

IDF: Inflow design flood, the extreme runoff event that a dam spillway is engineered to pass to prevent dam overtopping.

IPWQO: Interim Provincial Water Quality Objective, as defined in MOE (1994A).

km: Kilometre(s)

koz: thousand ounces

kt: thousand tonnes

LCC: Local Citizens' Committee, typically refers to volunteer stakeholder group involved with the Forest Management Plans for Sustainable Forest Licenses / Forest Management Areas.

LNG: Liquefied natural gas

LOM: Life of Mine

LRIA: *Lakes and Rivers Improvement Act*. This acronym is used herein in reference to approvals for dams pursuant to Sections 17 to 19 of the Act.

m: Metres

MAFA: Moose aquatic feeding area

Mine: As defined pursuant to the Ontario *Mining Act*.

MISA: Municipal and Industrial Strategy for Abatement, referring to Regulations promulgated under the provincial *Environmental Protection Act*.

ML: Metal leaching, used to refer to rock that poses a potential risk of leaching metals.

mm: Millimetre

MMER: Metal Mining Effluent Regulations, promulgated under the federal *Fisheries Act*

MNDM: Ontario Ministry of Northern Development, Mines and Forests

MNO: Métis Nation of Ontario

MNRF: Ontario Ministry of Natural Resources and Forestry

MOECC: Ontario Ministry of the Environment and Climate Change

MOL: Ministry of Labour

Moz: Million ounces

Mt: Million tonnes

MTCS: Ministry of Tourism, Culture and Sport

MTO: Ministry of Transportation

NAG: Non-acid generating. NAG may be used in reference to ore, waste rock, tailings and quarry rock (excavated rock from a quarry area within the TMF and/or waste rock pile footprints).

NGO: Non-governmental organization

NHIC: Natural Heritage Information Centre

NPR: Neutralization Potential Ratio, calculated by dividing Neutralization Potential by Acidity Potential during the ABA test (refer to ABA).

NRCan: Natural Resources Canada

NRVIS: Natural Resources and Values Information System

NSR: Net smelter return

OFAT: Ontario Flow Assessment Tool, used herein to refer to an online hydrologic database from MNRF <http://www.gisapplication.lrc.gov.on.ca/OFAT/Index.html?site=OFAT&viewer=OFAT&locale=en-US>

OLT: Ontario Landscape Tool

oz: troy ounce

PAG: Potentially acid generating. PAG may be used in reference to ore, waste rock, tailings and quarry rock (excavated rock from a quarry area).

PEA: Preliminary economic assessment. This is the first evaluation of the economic viability of a mineral deposit. If positive, next steps typically include refinements to this economic evaluation such as a pre-feasibility study and a feasibility study. The updated PEA for the Springpole Gold Project is available at https://www.firstminingfinance.com/resources/reports/2CF019-000_Springpole_PEA_Update_20171026.pdf

PM: Particulate Matter, a regulated air quality contaminant.

Process Material: This term is defined by the Ontario Ministry of the Environment in their publication

titled *Protocol for Conducting a Storm Water Control Study* (MOE, 1994C). For the purpose of this document, this includes ore, development rock and tailings. This term does not include Construction Aggregate because this material does not pose a chemical stability risk and will be used for construction purposes as described herein.

Production Decision: A Production Decision is a decision whether or not to develop a mineralized deposit into a commercially producing mining operation. In some instances, this decision follows and EA and permitting process. Typically, a feasibility study that accurately defines the economic viability of a mineralized deposit is required to support a Production Decision.

Project: The Project comprises the construction, operation and closure of an open pit gold mine and conventional gold recovery mill, as described in this document.

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

Project Site: This is the area that underlies the Project components, it is the land where the Project will be situated. This is generally shown in Figure 3-2.

Property: Springpole Property, as defined in Figure 1-1. The Property is comprised of the patents and the adjoining mining claims held by FMG. FMG is in the process of leasing of selected mining claims within the Property in accordance with Section 81 of the *Mining Act*.

PWQO: Provincial Water Quality Objectives for the protection of surface water resources in Ontario, as defined in MOE (1994B).

RPF: Registered Professional Forester

SAR: Species at Risk.

SFE: Shake flask extraction test. The SFE tests described herein used slightly acidic deionized water to leach soluble constituents from pulverized samples using a liquid to solid ratio of 3:1 (by weight). In accordance with the standard protocol, the prepared mixture is continuously agitated and left to react for 24 hours, after which time the leachate is filtered (0.45 micron filter) and analyzed for metal content. This static test that is further described in *Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials* (MEND, 2009).

SFL: Sustainable Forest License, used in reference to the Trout Lake Forest management area.

Shoreline Buffer: This term refers to the Area of Concern, as defined in MNRF (1988) and more recently in MNRF (2010). This is a setback where no development will occur.

SRK: SRK Consulting Inc. SRK is the author of the PEA.

Starter Pit: The open pit that is situated east of the main pit and on land, as shown in Figure 3-2.

STPN: Shared Territory Protocol Nations of Cat Lake, Slate Falls and Lac Seul First Nations

t: tonne

TFTO: Trout Forest Tourism Operators, a self identified group of remote tourism operators with outposts in the Trout Lake Forest management area.

TMF: Tailings Management Facility. Tailings are the fine materials left over after the crushing, grinding, and extraction of valuable minerals from slurried ore. Tailings Management Facility must be engineered to manage both the solids fraction and the water fraction of tailings slurry.

TPD: Tonnes per day, generally refers to tonnes of dry material.

TSSA: Technical Standards and Safety Association.

VC: Valued (environmental) Component. VCs have been a fundamental aspect of Environmental Assessments for several decades (Beanlands and Duinker 1983). VCs are selected by project proponents, based on a comprehensive issue scoping process and are used to provide a practical focus for any detailed environmental effects analysis of a project. A VC can be any biophysical, socio-economic or socio-cultural aspect of the environment. VCs must be selected because it is not practical or reasonable to gather baseline data and conduct effects analysis for all environmental components that may be affected by a project.

WSC: Water Survey of Canada

NOTICE TO READERS

This Project Description document is being shared with Indigenous communities, non-Indigenous stakeholders and government agencies to facilitate discussions regarding the Springpole Gold Project (“Project”) and future environmental assessment (“EA”) processes for the Project.

This document provides an update regarding on-going field and technical work and presents a preliminary, plain-language description of future potential phases of the Project. In order to facilitate a meaningful discussion regarding the Project, this document provides a preliminary assessment of the alternative ways to implement major Project components associated with the potential production and closure phases of the Project.

This document should not be regarded as being inclusive of all information that may be requested by interested parties nor is it presented as an optimized, detailed description of future potential phases of the Project. FMG will endeavour to understand and address any received comments during the planning for future potential development. This document is intended to be read in its entirety and is not intended to have excerpts read, quoted or interpreted out of context. To the extent practical, this document uses plain language terms that can be easily researched using publicly available internet resources.

It is intended that the federal and provincial EA processes be initiated for the development of the Project. In parallel with the process of commencing the EA, FMG is undertaking an outreach process to gain an improved understanding of the issues, concerns and collaboration opportunities associated with the Project.

-) This document has been prepared in accordance with “*Prescribed Information for the Description of a Designated Project Regulations*.” Following submission of this document, FMG anticipates confirmation from the Canadian Environmental Assessment Agency regarding the applicability of the Canadian Environmental Assessment Act (CEAA 2012).
-) The information gathered from this document review will help support the development of Terms of Reference for the individual provincial EA process that FMG intends to voluntarily initiate.

A summary of the engagement and consultation by the previous owner of the Project is included herein for context. FMG intends to use this document to facilitate formal discussion and consultation regarding the Project.

1.0 INTRODUCTION

The consultation and issue scoping initiatives for the on-going exploration phase of the Springpole Gold Project (“Project”) has resulted in numerous comments regarding future potential construction, production and closure phases. As committed to during environmental assessment (“EA”), consultation and permitting processes for the previous exploration work and access corridor development by Gold Canyon Resources Inc. (“GCU”), First Mining Gold Corp. (“FMG”) has prepared this Project Description (“PD”) to describe future potential Project phases in order to begin gathering comments and developing mitigation measures for any concerns. As well, FMG wishes to identify mutually beneficial opportunities with the Indigenous communities, local tourism operators and other interested parties as FMG believes that a collaborative review of the future potential phases of the Project would facilitate a meaningful discussion and help FMG develop a Project that would be welcomed in the region.

It is intended that the federal and provincial EA processes be initiated for the development of the Project once FMG has progressed this initial outreach process and has an improved understanding of the issues, concerns and collaboration opportunities associated with the Project.

1.1 Project Name and General Description

The project name is the **Springpole Gold Project**.

The Project concept is to develop a bulk tonnage mine and mill using open pit mining and conventional processing methods to produce gold and silver. Based on the preliminary guidance in SRK (2017), the maximum ore production capacity of the open pit is 60,000 TPD and the maximum ore input capacity of the mill is 44,000 TPD. These maximum capacities slightly surpass the PEA guidance to provide flexibility as the economic evaluation of the Deposit progresses towards a definitive feasibility study and also to prevent a potential compliance issue if future optimizations increase the capacities above what is described in the PEA.

1.1.1 Designated Activities

The federal *Regulations Designating Physical Activities* identifies the physical activities that could require completion of a federal EA. The following sections may 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

1.2 Proponent Information

FMG is a publicly traded company with a focus on defining the resource and advancing the technical evaluation of the Springpole Property (“Property”) area. The Property is located in northwestern Ontario and is presented in Figure 1-1. The Property has a long exploration history and been explored intermittently for gold since the 1920s. GCU obtained the Property in 1998, exploring the Property and expanding its land position until it was acquired by 2015 by FMG.

FMG is currently publicly traded on the Toronto Stock Exchange. The head office of the company is located at:

First Mining Gold Corp.
Suite 1800-925 West Georgia Street
Vancouver, BC V6C 3L2

Tel: 884.306.8827

Web: www.firstmininggold.com

e-mail: info@firstmininggold.com

The Chief Executive Officer for FMG is:

Mr. Jeff Swinoga
Telephone: 844.306.8827
jeff@firstmininggold.com

The primary FMG contact person for the purpose of this document is:

Mr. Giovanni (John) Sferrazza
Manager, Permitting and Environmental Assessments
Telephone: 705.929.5245
john@firstmininggold.com

1.3 Co-Proponent Information

There are no co-proponents for the Project.

1.4 Consultation Overview

The previous project owners (GCU) and more recently FMG have made it a priority to work with local Indigenous communities to identify and protect Indigenous values and sensitive sites, and FMG is committed to carrying out meaningful and good faith consultation with the Indigenous communities that may be affected by the Project. GCU, and now FMG, have maintained an open-door policy and have provided notices and updates regarding activities on the Project. During the archaeological and biological assessment work that commenced in 2011 and more recently in 2017, the project owners hired technicians from the Cat Lake, Slate Falls, and Lac Seul First Nations to help complete the assessment work.

Going forward with the forthcoming EA process, FMG will seek direction from the federal and provincial governments regarding the Indigenous communities that are to be engaged by FMG. Previous direction from the federal and provincial governments regarding Indigenous consultation is summarized below in Table 1-1.

Table 1-1: Summary of Direction from Government Regarding Indigenous Consultation

EA Process or Permit	Scope of EA Process or Permit	Year(s)	Government Agency	Direction Regarding Indigenous Consultation
Class Environmental (Category C) Assessment for Access Corridor Project	1. Development, operation and decommissioning of access road 2. Intensified exploration and field investigations in and around Springpole Lake.	2012 to 2014	MNRF	<ul style="list-style-type: none">) Cat Lake First Nation) Slate Falls First Nation) Lac Seul First Nation) Wabauskang First Nation) Métis Nation of Ontario) Procedural aspects of consultation delegated to GCU for all communities
Navigable Waters Protection Act Approval	Construction of span bridge over Birch River (Birch River crossing is shown in Figures 2-1 and 3-1)	2013	Transport Canada	<ul style="list-style-type: none">) Cat Lake First Nation) Slate Falls First Nation) Lac Seul First Nation) Wabauskang First Nation) Métis Nation of Ontario) No procedural aspects of consultation delegated to GCU
Exploration Permits (various)	Preliminary Exploration Activities in the field (defined in <i>Mining Act</i>)	2015 to 2017	MNDM	<ul style="list-style-type: none">) Cat Lake First Nation) Slate Falls First Nation) Lac Seul First Nation) Wabauskang First Nation) Métis Nation of Ontario) No procedural aspects of consultation delegated to GCU in 2015) Procedural aspects of consultation with Cat Lake First Nation delegated to FMG in 2017

FMG opened an office in Sioux Lookout to elevate its presence and facilitate outreach with local stakeholders regarding the Project. Consistent with standard industry practice and government information requirements, consultation and engagement efforts will be documented in an Engagement Log and shared with government agencies as requested. Consultation with Indigenous communities, regulatory agencies and other stakeholders will be ongoing throughout the life of the Project.

Consultation with the government agencies listed below is anticipated.

Provincial Agencies

-) Ministry of Northern Development and Mines (MNDM)
-) Ministry of the Environment and Climate Change (MOECC)
-) Ministry of Natural Resources and Forestry (MNRF)
-) Ministry of Tourism, Culture and Sport
-) Ministry of Municipal Affairs and Housing
-) Ministry of Labour
-) Ontario Provincial Police
-) Hydro One Networks Inc.
-) Ontario Energy Board
-) Independent Electricity Systems Operator

Federal Agencies

-) Indigenous Affairs and Northern Affairs Canada (“IANAC”)
-) Canadian Environment Assessment Agency (“CEA Agency”)
-) Natural Resources Canada (“NRCan”)
-) Transport Canada
-) Health Canada
-) Fisheries and Oceans Canada (“DFO”)
-) Transport Canada
-) Environment and Climate Change Canada (“ECCC”)

Local Agencies/Interest Groups

-) Municipality of Sioux Lookout
-) Municipality of Red Lake
-) Township of Ear Falls
-) Wildlands League
-) Trout Forest Tourism Operators
-) Domtar (SFL holder for Trout Lake Forest)
-) Obishikokaang Resources Corporation (SFL holder for Lac Seul Forest)

This PD will be used to facilitate discussions regarding the Project and advance the engagement process with Indigenous communities, government agencies and public stakeholders. The current stakeholder contact list is provided in Appendix 3.

Engagement and consultation that was undertaken during the preparation of the Project Description is summarized in Table 1-2.

Table 1-2: 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, Myles Perchuk, Megan Park, Charlie Mattina)	<ul style="list-style-type: none">) Permitting for the winter road to the Project site, particularly the Overall Benefit permit for caribou.) 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)	<ul style="list-style-type: none">) 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)	<ul style="list-style-type: none">) 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 6.1

1.5 Rationale for the Project

The Project is a prospective gold deposit that contains 4.9 million ounces of gold and 25.31 million ounces of silver (30 Oct 2017 news release). Development of this deposit in a responsible manner that respects Indigenous communities, regional stakeholders and environmental protection best practices is aligned with recent provincial government mandates, as summarized below.

-) **Project is aligned with provincial government objectives:** Ontario recognizes the importance of mineral development opportunities to northern Ontario, as summarized in below.

- In the 2011 publication titled “Forward. Together: The Ontario Liberal Plan for Northern Ontario,” the current Liberal government has published an objective of opening at least eight (8) new mines in the next 10 years (www.ontarioliberal.ca/OurPlan/pdf/ruralnorthern/north_platform_mini.pdf).
- Section 2.3.8(g) of *The Growth Plan for Northern Ontario* (2011), developed pursuant to Ontario’s *Places to Grow Act*, provides for “enabling new mining opportunities.”

) **A producing mine is good for the economy:** A producing mine would be significant to the local economy and taxation base. While the actual characteristics of potential future production will be defined in the PEA, benchmarking of other large tonnage, surface gold mining projects across the province suggest that the construction phase jobs would be on the order of >500, the production phase jobs would be on the order of 200 and the capital cost for the project would be on the order of \$725 million. The employment created would likely represent a >10% increase in the current total primary and manufacturing industry employment level in the Red Lake / Ear Falls region and, to a lesser extent in more distant communities including Sioux Lookout, Dryden and Kenora. The provincial and federal governments would be principal beneficiaries, through new revenues generated through employee income taxes and other employee-related government-mandated contributions (*e.g.* to Canada Pension Plan, Employment Insurance Program, Employee Health Tax and Workplace Safety and Insurance Board). These senior levels of government would also enjoy additional revenues through value-added sales, corporate income, capital and other taxes levied on the corporation. The most proximal municipalities of Ear Falls and Red Lake have expressed support for the Project during the Class EA process for the Access Corridor. These benefits do not include the charitable donations, infrastructure upgrades and contributions to the local and Indigenous communities that are commonplace with large scale resource development projects once a revenue stream is achieved, in accordance with the tenets of modern corporate social responsibility.

1.6 Environmental Assessment Processes and Purpose of Registration

This document is being submitted to the Canadian Environmental Assessment Agency to support a decision on the applicability of the *Canadian Environmental Assessment Act* (CEAA 2012).

The information gathered through the review of this document will support the development of Terms of Reference for the individual provincial EA process that FMG intends to initiate on a voluntarily basis due to the issues that were identified during the EA process for the Access Corridor that relate to the Project.

In addition to the completion of the federal and provincial EA processes, the Project will require federal and provincial authorizations that are outlined in Section 5.8.

1.7 Requirement to Integrate EA Process into Economic Evaluation

In parallel with the on-going exploration, field investigations, resource definition work and technical studies, FMG intends to advance the economic evaluation of the Deposit. Comprehensive economic evaluations provide clarity regarding the costs (capital costs, operating costs, closure costs) to develop a

mineral deposit and also the sensitivity of its economic viability to factors such as commodity prices, electricity costs, fuel costs, labour costs, IBA costs and changing taxation rates. A comprehensive economic evaluation is necessary for a proponent to make a Production Decision (refer to Definition of Terms and Acronyms) for a mineral deposit.

If a project emerges from the EA process and the regulatory agencies do not select the “no-go” alternative, then any unique commitments, preferred alternatives and site-specific mitigation measures that arise from the EA processes become commitments for the life of the project. Project proponents need to integrate these site-specific obligations arising from the EA process into a comprehensive economic evaluation to determine how the associated costs affect the economic viability of the Project. In order for FMG to prepare an accurate and comprehensive economic evaluation of the Deposit, the requisite EA processes must be materially complete. As a result, FMG is commencing the EA processes for the development of the Deposit into a producing mine.

1.8 Recent Activities and Milestones

Previous preliminary exploration work on the Property has comprised of surface diamond drilling, geophysical and geochemical surveys, geological mapping and exploration trail development. There has been no Advanced Exploration (as defined in the *Mining Act*) at the Property.

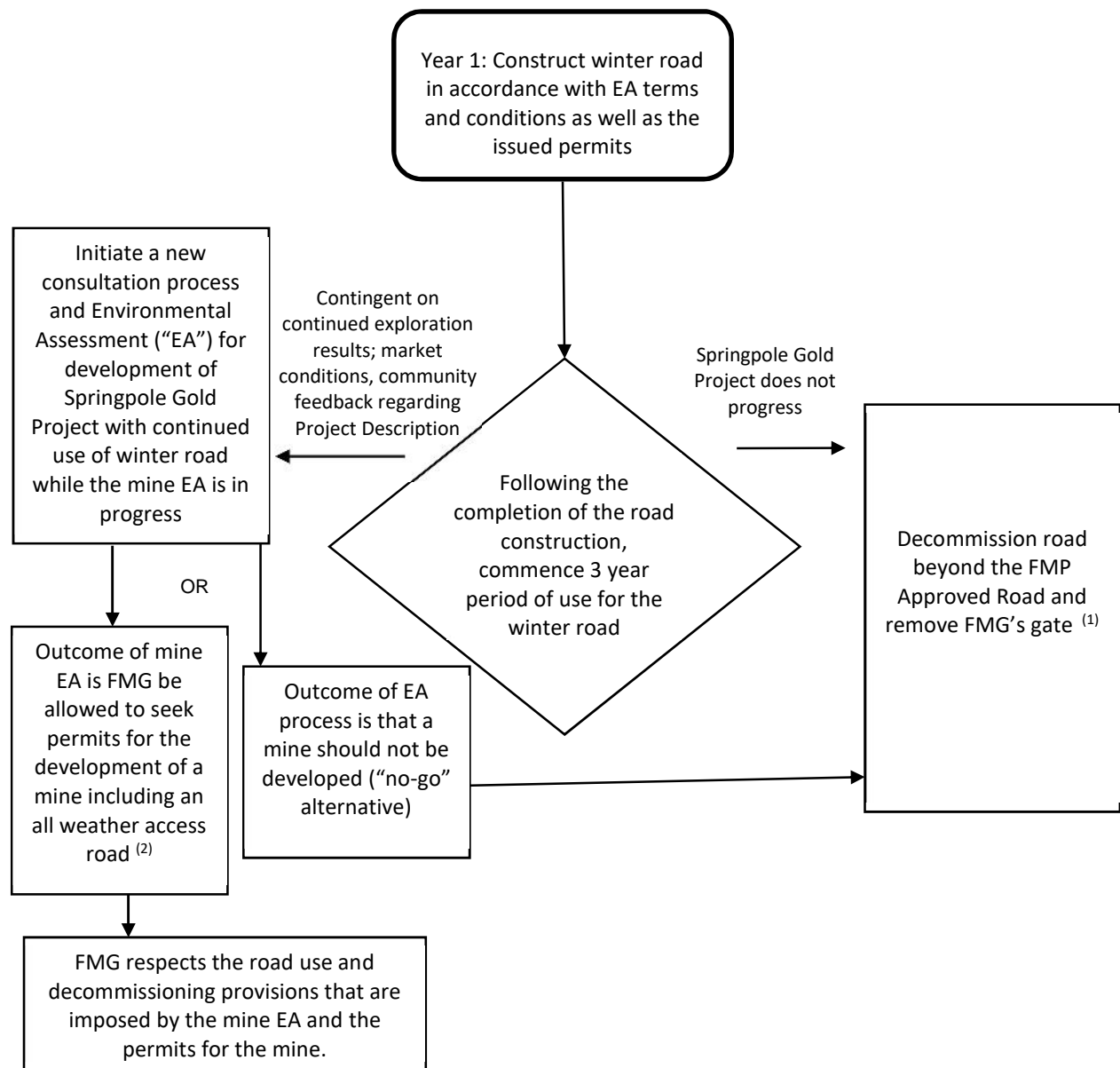
Supporting infrastructure that is currently in place on the patents that adjoin the north shore of Springpole Lake includes a temporary ~50-person tent camp with cookhouse, sewage treatment plant, domestic water supply, storage, helipad and ancillary laydown areas. Photograph 1-1 below is a northward view of the temporary camp site on the north shore of Springpole Lake. This infrastructure would be removed if the Project proceeds to development because it is within the shell of the main pit.

Photograph 1-1: Aerial View of Camp Site



The Property has historically had fly-in access with seasonal ice road access via Birch Lake and South Bay Mine road, which connects with Highway 105 near Ear Falls. In 2014, GCU concluded an EA process to allow GCU to seek the permits to construct a temporary winter road to facilitate the on-going exploration and resource definition work at the Project. FMG is continuing this permitting process at the present time. The road will be temporary in nature, pending the results of the economic evaluation of the Project and the forthcoming mine EA, as summarized below in Diagram 1-1. FMG's obligations for the road and its decommissioning would be enshrined in a Memorandum of Understanding that is in accordance with MNRF policy, with financial assurance provided. The temporary road represents an expenditure on the order of \$1.5 million, a small portion of the estimated \$725 million to build the mine (SRK, 2017), and a decision to pursue the construction of the road should not be interpreted as a positive Production Decision.

Diagram 1-1: Road Use and Decommissioning Timeline



(1) If a third party acquires FMG's interest in the road beyond the FMP Approved Road (refer to Definition of Terms and Acronyms) and obtains any necessary approvals from MNRF, then the relevant portion(s) of the road beyond the FMP Approved Road would remain in place.

(2) One of the key Project components associated with a mine is an all weather access road. This

The timeline for recent activities and milestones are presented below in Table 1-3.

Table 1-3: Recent Activities and Milestones ⁽¹⁾

Activity ⁽¹⁾	2012	2013	2014	2015	2016	2017	2018	Post 2018
Exploration and resource definition work.								
Permitting for limited use access road (Springpole Gold Access Corridor Project)								
Updated National Instrument 43-101 Compliant Resource Estimate to quantify ounces of gold and silver in Deposit								
Completion of positive PEA								
On-going baseline technical studies; updated values mapping and integration of sensitive sites into planning of on-going field activities and future potential developments.								
Updated PEA ⁽²⁾								
Updated economic evaluations (<i>i.e.</i> Pre-Feasibility Study, Feasibility Study)								
Access road construction and use in accordance with Class EA (completed) and issued permits (applications in progress)								

(1) Activities are contingent on permit acquisition, market conditions, commodity prices, feedback from Indigenous communities and stakeholders.

(2) Refer to FMG website.

As indicated in Table 1-3, GCU and then FMG have been conducting extensive baseline technical studies since 2010 to gather information regarding the local and regional environment. GCU and now FMG have strived to identify values and sensitive sites so that current field activities and preliminary plans for future Project phases may avoid these areas. These efforts are further described in Section 5.

2.0 PROJECT DESCRIPTION

At a conceptual level of detail, this section provides a base case description of the Project that is regarded as feasible based on a preliminary technical evaluation but is subject to change as new information is gathered, engineering is refined and feedback is received through on-going outreach and issues scoping.

The Project concept is to develop a bulk tonnage mine and mill using open pit mining and conventional milling and processing methods to produce gold and silver. The maximum ore production capacity of the mine is 60,000 TPD and the maximum ore input capacity of the mill is 44,000 TPD, as described in Section 1.1. Project features for the operational (production) phase of the Project are presented in Figure 3-2. In addition to typical ancillary infrastructure, planned off-site Project components include a transmission line for grid power, all-weather access road and camp. The Figures in Appendix 1 identify potential developments in the region that are not a part of the Project and are outside the control of FMG. These features are presented herein for context and to help scope future cumulative effects assessments for this EA process.

FMG regards the Project as a routine, low risk, conventional mineral development project involving equipment, technology, skills and work methods that are proven and commercially available on the scale that is required for the Project.

Approach to Project Planning and Guiding Principles

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 surrounding region prior to returning the land to a productive, aesthetically pleasing and ecologically functional land use upon closure.

FMG is developing guiding principles regarding the planning for future potential phases of the Project. The guiding principles that have been developed to date are summarized below.

-) Adopt a watershed management approach and situate the Project footprint within a single watershed (Springpole Lake watershed) and avoid situating Project components within the Birch Lake watershed to the extent practical.
-) Proactively and collaboratively identify values (biophysical, socio-cultural) as well as special sites and adopt a progressive, transparent approach to site planning that avoids these areas to the extent practical.
-) Implement a precautionary approach to development that utilizes best available technology that is economically achievable to reduce potential environment, health and safety risks.
-) Minimize fresh water consumption, minimize (ground water and surface water) inflows to the mine, maximize water recycling and minimize effluent discharge.
-) Minimize the terrestrial footprint to the extent possible.
-) Minimize the spatial extent of the effluent plume to the extent possible.

-) Prepare an adaptive strategy to manage potential environmental effects that may be identified through ongoing monitoring and consultation programs that are carried out during the life of the Project.
-) Implement a closure strategy that returns the site to a productive land use post closure and implement progressive closure to the extent possible during the production phase of the Project.
-) Achieve a net overall benefit to the environment and the community as a result of the Project.
-) Minimize the risk of spills or accidental releases to the environment.

2.1 Property Description and Location

The Project lies approximately 110 km northeast of the Municipality of Red Lake in northwest Ontario, Canada (Figure 2-1). The Project is currently serviced by a temporary tent-based camp on a small land bridge between Springpole Lake and Birch Lake. The latitude and longitude coordinates are:

Latitude	N 51° 23' 44.3"
Longitude	W 92° 17' 37.4"
Average Elevation	395 m

Project components are shown in Figures 3-2A and 3-2B. Latitude and longitude coordinates for 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"

During late spring, summer, and early fall, the Project camp is accessible by floatplane direct to Springpole Lake. All fuel, food, and material supplies are flown in from Red Lake or Sioux Lookout, Ontario, and from Winnipeg, Manitoba; with flight distances of 110 km, 150 km, and 370 km, respectively. The closest all season forestry access roads to the project are the Joyce Road to the northwest, and the Wenasaga Road to the south. During winter, an ice road approximately 85 km long can be constructed from Washagomis Lake to a point on Birch Lake about 1 km north of the Springpole camp, which is located on the north shore of Springpole Lake (Figure 3-1). The majority of the existing winter road corridor is formed by lakes and ponds and require long ice crossings. During breakup in spring and freeze-up in fall, the Project camp is only accessible by helicopter.

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 and south of the lands that are subject to the Cat Lake First Nation and Slate Falls First Nation Land Use Plan (Cat Lake First Nation et al., 2011). The Property is not subject to Ontario's *Far North Act*.

The use of the lands within and adjoining the Property is generally wilderness / recreation and natural

resource extraction (i.e. mineral development, forestry). The Property has been subject to preliminary exploration activities explored on an intermittent basis since the 1920s. The MNR Crown Land Use Policy Atlas indicates that the area is designated as a General Use Area (G2514). The Project Area lies within MNR EcoDistricts 3S-2 and 3S-4 and within the Upper Albany - Cat tertiary watershed. There are currently no known amendments in progress in the map area.

2.1.1 Proximity to Municipalities

The Project lies 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.

2.1.2 Proximity to any Permanent, Seasonal or Temporary Residences

Seasonal residences are present on Birch Lake, which is upstream of the Project, and also south of the Project footprint on Johnson Island (refer to Figure 5-1 for location of Johnson Island).

2.1.3 Proximity to Permanent or Seasonal Commercial Operations

There are numerous tourism businesses operating in the region, including KaBeelo Lodge, Fort Frances Northern Wilderness Outfitters, Hidden Bay Lodge, KayAir Service, True North Outpost and Camps, Green Airways, Birch Lake Lodge and Red Pine Lodge and Outposts. 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).

Domtar currently holds the Sustainable Forest License (“SFL”) for the Trout Lake Forest and is active in the region. The planned extension of the Wenasaga Road, as described in the 2014-2019 Trout Lake Forest Management Plan (“FMP”), connects with the southeast portion of the Property (refer to Figures 2-1 and 3-1). This portion of the Wenasaga Road and the planned extension is within the vast 2011 wildfire area and so harvesting will need to commence in the near-term in order to salvage the standing timber before it is rendered uneconomic due to decay.

2.1.4 Proximity to any Indigenous Traditional Lands or Sites of Cultural Significance

The Property straddles Treaty 9 and Treaty 3 boundary, as generally presented in Figure 2-1. The Property is also overlain by registered trap lines that FMG understands are held by a family from Cat Lake First Nation.

Horizon Archaeology (“Horizon”) completed a Stage 1 archaeological assessment in 2012 for a large study area that encompasses the Project Area generally shown in Figure 1-1 and the two (2) potential access corridors that were subject to the provincial Class EA that was completed between 2012 and 2014. With participation of First Nation technicians (Cat Lake, Slate Falls, Lac Seul), Horizon then completed Stage 2 and Stage 3 assessment work to evaluate the “high potential” areas that were identified in the Stage 1 study. This work identified archaeological values so that these could be avoided by the Project. The general areas that host archaeological values that will be continue to be avoided by Project activities are presented in Figure 3-2A.

2.1.5 Proximity to Federal Lands

Distances from Springpole Camp to the reserve lands of 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

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.

2.1.6 Proximity to Surface Waters

The Deposit overlies and surrounds the northern headwater portion of Springpole Lake. Birch Lake is north of the Project Site and is positioned upstream of Springpole Lake, as it drains into Springpole Arm (refer to Figure 3-1).

Both Springpole and Birch Lakes are part of the Albany River system, which flows eastward into the Cat River and then northward into Hudson Bay via the Albany River. The Property is underlain by glaciated terrain characteristic of a large part of the Canadian Shield. Land areas are generally of low relief with less than 30 m of local elevation and are separated by a series of interconnected, shallow lakes.

2.2 Alternatives to the Project

The Project would involve the economic development of the mineral Deposit. The alternative ways to implement the Project that are currently under evaluation are listed below in Table 2-1. FMG welcomes feedback regarding the alternative ways to implement the Project, for each component of the Project and each phase of the Project (*e.g.* construction, production, closure). The list in Table 2-1 is not intended to limit comments or constrain the scope of the EA processes, it is simply a disclosure of the list of alternatives that GCU began considering and FMG is now evaluating.

2.2.1 Potential Collaboration Opportunities

The Project presents unique potential collaboration opportunities with other stakeholders. Potential collaboration opportunities may include, but are not necessarily limited to, the items listed below.

-) NAG Waste Rock from Open Pit Stripping: Barren waste rock from the open pits that does not pose a risk of acid generation or metal leaching will be produced during the life of the open pit. Some of this rock will be utilized for construction purposes and the rest will be stockpiled. The rock that is stockpiled could be made available for use as an aggregate. There are precedent examples for this sort of waste rock use elsewhere in northern Ontario.
-) Power Line: If a power generation project were to be developed in the region, some or all of the power line could remain post-closure to facilitate the delivery of the generated power to the Hydro One grid.

- J) On-Site Camp and Accommodations: Depending on land tenure, these facilities could be left in place and transferred to a third party to be used as part of a sustainable business following the closure of the Project.
- J) Road: The access road could eventually expand the ability of the tourism operators to “drive-in” modes of operation rather than solely a “fly-in” mode of operation.
- J) Industrial tourism: The production phase of the Project presents potential opportunities for industrial tourism. The FMG team is aware of operating mines that have offered tours to nearby tourism lodges to enhance these businesses and allow them to offer a unique experience to their guests. In the case of the Project, the tourist operators can offer opportunities for their guests to tour an operating mine in a nearby watershed while they are enjoying their fishing and outdoor recreation experience.
- J) Camp and Accommodations: There are opportunities for the Project operator to house some Project staff at proximal lodges, which would provide an additional revenue stream for the operators.

FMG welcomes feedback regarding these and other potential collaboration opportunities from interested parties.

2.2.2 Infrastructure Improvement Opportunities

During the current exploration and evaluation phase, FMG shall continue to seek opportunities to improve infrastructure as part the Project to meet operational needs and also to improve capacity in the region for existing communities and future developments. Opportunities may include but are not necessarily limited to those listed below.

- Electricity generation and transmission
- Communication infrastructure and emergency response services / emergency preparedness
- Roads
- Natural gas pipeline infrastructure, including considerations for compressed natural gas and/or liquefied natural gas (“LNG”)

FMG welcomes feedback from interested parties.

Table 2-1: Alternative Ways to Implement Project

Project Component	Alternatives Under Consideration
Fuel for mining equipment and generators	<ul style="list-style-type: none">) Diesel.) Compressed natural gas and / or liquefied natural gas (“LNG”).
All Weather Access Road	<ul style="list-style-type: none">) Connect to Wenasaga Road identified in Trout Lake Forest Management Plan, via the Birch River Crossing shown in Figure 3-2B.) Connect to Polar Road identified in Trout Lake Forest Management Plan and/or the road network in the Lac Seul Forest.
Energy Supply	<ul style="list-style-type: none">) Connection to Hydro One grid (Ear Falls).) Connection to Hydro One grid (existing E1C power line following reinforcement of the grid by Watay Power Project).) On-site generation (diesel, liquefied natural gas, biomass) with waste heat recovery.) Collaboration with Cat Lake First Nation and AurCrest Gold Inc. (to be determined).
Sediment management	<ul style="list-style-type: none">) Upstream of coffer dam, within dewatered area of Springpole Lake.) Placement within TMF.) Repository within Springpole Lake watershed west of pit.) Repository within Springpole Lake watershed east of pit.
Communication system	<ul style="list-style-type: none">) Land line connection to infrastructure near Ear Falls or other community.) Wireless communication system.
Overall benefit measures for caribou and habitat	<ul style="list-style-type: none">) FMG is seeking feedback regarding linear developments (roads, trails, corridors) that can be rehabilitated in the region.) FMG is seeking other technically defensible measures to achieve an overall benefit.
Closure of Project Infrastructure	<ul style="list-style-type: none">) Should the camp, road, communication system, power line and landfill remain for use by other parties or be removed.
Fish habitat improvement measures	<ul style="list-style-type: none">) FMG is seeking feedback regarding alternative methods to create fish habitat or improve the regional fishery.
Management of NAG Waste Rock from Open Pit Stripping	<ul style="list-style-type: none">) Offer NAG waste rock from open pit stripping for off-site use. This does not include aggregate or quarry rock that is removed from the TMF and waste rock pile footprints during the construction phase. Aggregate and quarry rock will be used for Project site construction.) Barren waste rock to remain at Project Site and rehabilitated in accordance with applicable legislation (<i>i.e. Mining Act</i>).
Management of PAG waste rock (<i>i.e.</i> waste rock that poses a risk of acid generation and / or metal leaching)	<ul style="list-style-type: none">) Backfill pits; placement beneath cover of NAG fill in main pit under Springpole Lake.) Placement on surface beneath engineered dry cover.) Placement on surface, perpetual collection and treatment of runoff.
Management of PAG tailings that pose a risk of acid generation and / or metal leaching	<ul style="list-style-type: none">) Thickening and subsequent placement beneath waste rock and/or sediment cover in main pit.) Consolidation and placement on surface beneath engineered dry cover.) Consolidation and placement on surface, perpetual collection and treatment of runoff.
TMF footprint ⁽¹⁾	<ul style="list-style-type: none">) Dedicated repository east of Springpole Lake with large vertical extent and small spatial extent.) Dedicated repository east of Springpole Lake with small vertical extent and large spatial extent.
Source of construction aggregate	<ul style="list-style-type: none">) Use of tailings solids for construction (of tailings containment berms) vs. development of borrow pits.) Use of waste rock for construction vs. development of borrow pits and/or quarries.

(1) The alternative TMF footprints described herein are limited because FMG is envisioning that all Project components will be within the Springpole Lake watershed, not the Birch Lake watershed, and that the Project components will maintain a setback from values and sensitive sites.

2.3 Land Tenure

FMG acquired 100% of the Project 2015 when it completed the acquisition of GCU. When the Project was acquired from GCU, it consisted of 30 patented mining claims and 300 unpatented, contiguous mining claims and six (6) leased unpatented mining claims, totaling an area of approximately 32,448 ha.

2.3.1 Jubilee Gold Claims and Royalty

GCU had acquired ownership of five patented mining claims in 1993 (11229, 11230, 11231, 12868, and 12869) covering a total area of 96.54 ha from Milestone Exploration Limited, a predecessor entity by way of amalgamation of Jubilee Gold Inc. (Jubilee). As a result of its acquisition of GCU, FMG is subject to this royalty agreement with Jubilee.

2.3.2 Leased Claims from Shirley Frahm

10 patented mining claims (11233-11235, 12896-12901, and 13043) covering a total area of 182.25 ha are leased from Shirley Frahm. These 10 patented claims are fee simple parcels with mining and surface rights attached to all 10 patented claims registered, together with the notices of lease, with the Land Registry Office in Kenora, Ontario. The lease is for a term of 21 years less one day and terminates on April 14, 2031. The lease stipulates FMG is to pay all applicable property taxes related to the 10 claims during the lease term. FMG has the right to access the 10 claims to conduct mining operations and produce all ores, minerals, and metals that are or may be found therein or thereon.

2.3.3 Lease Claims from Springpole Group

FMG has an option and lease to a further 15 patented mining claims (11236, 12867, 12871-12874, 12902-12909) covering a total area of 310.19 ha from a group of individuals and/or companies collectively referred to as the "Springpole Group". These 15 patented claims are fee simple parcels with mining and surface rights attached to all 15 patented claims registered, together with the notice of option and lease, with the Land Registry Office, Kenora, Ontario.

2.3.4 Claims Leased from the Crown

A total of 300 contiguous unpatented mining claims covering approximately 31,776 ha make up the greater area of the Property and were staked directly by the previous property owners and are now held by FMG. Figure 1-1 shows the general location of the claims. GCU initiated the process and FMG is in the final stages of leasing the phase 1 mining claims (surface and mining rights) in accordance with Section 81 of the *Mining Act*. FMG is currently evaluating additional mining claims to be leased using the same provision of the *Mining Act* so that the Project footprint is on either patented or leased land.

FMG plans to initiate the process to secure tenure using the provisions of the *Public Lands Act* (i.e. Land Use Permit, easement, sale) for Crown shoreline reserves around Springpole Lake where development is planned. FMG is planning consultation with MNRF regarding the document titled *Application Review and Land Disposition Process* (July 2008) and Appendix A of the document that deals with Crown land disposition on lake trout lakes.

2.4 Mineral Resource Estimates

The Project is comprised of three (3) distinct domains: East Extension, Camp zone and Portage zones.

- J The East Extension zone lies to the east of Camp and Portage and is strike-oriented approximately 105° (N105°E). The zone exhibits erratic gold mineralization with slightly clustered “bonanza” grade drill hole intercepts intermixed with lower grade and barren intercepts.
- J The Camp zone lies to the north and, where the two domains overlap, above the Portage zone. The Camp zone strikes approximately 120° (N120°E) and part of the zone is very similar in character to East Extension with highly erratic grades showing very little spatial organization.
- J The Portage zone is by far the most significant domain, extending from beneath the southern extent of the Camp zone for more than 1,500 m to the southeast. Other than location, the Portage zone exhibits few similarities with the other two domains. Also in contrast with East Extension and Camp, Portage has significant silver mineralization closely associated with gold. Drill-tested mineralization is extremely continuous with very little evidence of isolated erratic higher-grade intervals. As drilled, Portage represents a zone of largely disseminated mineralization striking 135° (S45°E) and extending from the surface to a depth of over 400 m, on average approximately 150 m in width and over 1,500 m in length.

The revised mineral resource estimate (March 17, 2017) was based on a gold price of \$1,400/oz and a silver price of \$15/oz, both considered reasonable economic assumptions by SRK. To establish a reasonable prospect of economic extraction in an open pit context, the resources were defined within an optimized pit shell with pit walls set at 45°. Assumed recoveries of 80% for gold and 60% for silver were used. (Note: A silver recovery assumption of 85% was used for mine design and evaluation based on more recent data.) Mining costs were estimated at \$2/tonne (t) of total material, processing costs estimated at \$12/t and general and administrative (G&A) costs estimated at \$2/t. A cut-off grade of 0.4 g/t gold was calculated, and is considered to be an economically reasonable value corresponding with breakeven mining costs. Approximately 90% of the revenue for the proposed project is derived from gold and 10% from silver.

The mineral resources in this report were estimated using the current 2014 Canadian Institute of Mining, Metallurgy and Petroleum standards, definitions and guidelines. The updated resource estimate is summarized in Table 2-2 below.

Table 2-2: Mineral Resource Statement, Springpole Gold Project

Category	Quantity (Mt)	Grade		Contained Metal	
		Au (g/t)	Ag (g/t)	Au (Moz)	Ag (Moz)
Open Pit**					
Indicated	139.1	1.04	5.4	4.67	24.19
Inferred	11.4	0.63	3.1	0.23	1.12

Source: Springpole Gold Project, Northwestern Ontario, SRK Consulting, March 17, 2017

Note: Mineral resources are reported in relation to a conceptual pit shell. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate. All composites have been capped where appropriate.

**Open pit mineral resources are reported at a cutoff grade of 0.4 g/t gold. Cutoff grades are based on a gold price of \$1,400/oz and a gold processing recovery of 80% and a silver price of \$15/oz and a silver processing recovery of 60%.

2.5 Mining Methods and Production

The Project concept is to develop a bulk tonnage project, using open pit mining and conventional milling and processing methods to produce gold and silver. The maximum ore production capacity of the mine is 60,000 TPD (refer to Section 1.1) with a total of 151.4 Mt of mineralized material mined, and 138.5 Mt processed, during the life of mine (“LOM”). The production plan incorporates stockpiling of low grade material in order to maximize the mill feed grade in the earlier years of the project. Reclamation of the stockpiled low grade mineralized material once mining of in-situ mineralized material is completed has been restricted to 59% of material (18.5 Mt low grade processed of 31.4 Mt low grade stockpiled), to limit costs of the consequent expansion of the tailings management facility (“TMF”). The average overall strip ratio (the ratio of waste rock to economic mineralized rock) of the mine is approximately 2.1:1 over the life-of-mine, 2.4:1 for the material processed, and the average grade of the plant feed is estimated at 1.00 g/t of gold and 5.33 g/t of silver.

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 LOM plan focuses on achieving steady plant feed production rates, and mining of higher grade material early in schedule, as well as balancing grade.

2.6 Overall Project Development and Production Schedule

The maximum planned total material mining rate (ore plus waste rock) during the LOM is approximately 180,000 TPD, while the average total mining rate was planned to be 120,000 TPD.

Indicated and inferred mineral resources were used in the LOM plan, with indicated mineral resources making up 93% of the total LOM tonnage processed. The resources calculated included an estimated external dilution for each zone. Inferred mineral resources are considered too speculative geologically to have the economic considerations applied to them to be categorized as mineral reserves. There is no certainty that the inferred mineral resources will be upgraded to a higher resource category.

-) **Year 1 and year 2 (construction):** Installation of coffer dams in Springpole Lake and pit dewatering area.
-) **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.
-) **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 (development rock to ore).
-) **Year 5 to year 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.
-) **Year 9 to year 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.
-) **Year 12 and year 13:** Reclaim ore from stockpile to feed mill.
-) **Post Year 13 (closure):** Closure activities and post closure monitoring, as per Ontario Regulation 240/00, which contains the Mine Rehabilitation Code of Ontario.

3.0 PROJECT PHASES

Section 3 provides information related to the envisioned construction, production (operation) and closure (decommissioning) phases of the Project. The provided information is preliminary in nature and is primarily taken from SRK (2017). The description provided herein is for a base case Project that is subject to change as new information becomes available during the EA process, engineering details are refined and feedback is received from Indigenous communities, government agencies and stakeholders. Project components are presented in Figures 3-2A, 3-2B and 3-2C.

3.1 Construction and Development

Upon completion of “issued for construction” engineering drawings for the relevant Project component, procurement packages would be released for the Project component so that the necessary goods and services could be secured. Construction of each Project component would be itemized on an integrated schedule for the entire Project. Construction of Project components are generally discussed below based on the conceptual engineering details that are available. Note, the temporary camp and all existing infrastructure on the north shore of Springpole Lake would be removed because this area is within the main pit.

3.1.1 Timber Removal, Aggregate Deposit Development and Road Upgrade

-) 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.
-) Aggregate deposits would be developed to facilitate an upgrade to the winter access road to an all-weather road standard (refer to Section 3.1.7). Aggregate would also be used for construction of the on-site haul roads, coffer dams and the plant site. Table 3-1 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 3-1: 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
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.

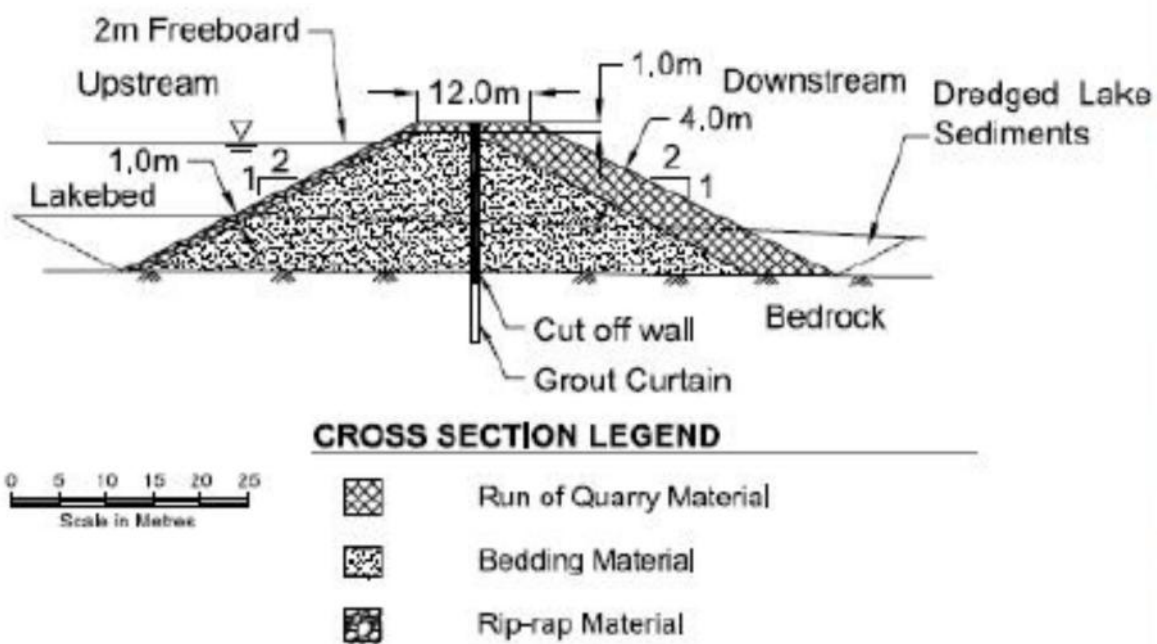
3.1.2 Coffer Dam Construction

-) The dikes will be constructed with a 12 m wide crest which will act as an access road during construction in wet conditions and the sides of the dikes will slope at angle of repose.
-) 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. The coffer dams will be constructed to an elevation of 391 m above mean sea level, which allows three (3) m of freeboard above the lake level.
-) To allow sufficient time to construct the coffer dams and dewater the contained portion of Springpole Lake, the coffer dams would be constructed approximately two (2) years before mining starts. Mine sequencing does not allow mine waste rock to be available for coffer dam

construction. A dedicated rock quarry would therefore have to be developed. Quarries would be proposed immediately west of Springpole Lake, beneath the footprint of the waste rock pile and also within the tailings management facility (“TMF”) footprint east of Springpole Lake (refer to Figure 3-2). This would help minimize the overall terrestrial footprint of the Project.

-) In order to avoid the need to completely dewater Springpole Lake, the coffer dams would be constructed under wet conditions. Therefore, silt curtains would be deployed upstream and downstream of the coffer dam locations to prevent sediment escape.
-) Prior to the placement of fill material, the foundation of the dam would be dredged to remove any soft lakebed sediments. The rock fill material would then be placed, and then the low-permeability cutoff wall would be built through the completed coffer dam and extend approximately 5 m into bedrock to prevent seepage. Cofferdam conceptual design details are provided in Image 3-1.

Image 3-1: Cofferd Dam Design Details



With respect to the coffer dam component and temporary pond / lake removal component of the Project, there are numerous historic mining sector precedents and other more modern projects at the permitting stage that involve the construction of coffer dams and/or diversion or removal of waterbodies. A partial list of precedents is provided in the bullets below.

-) Steeprock iron mines, Ontario.
-) Pamour Pit expansion, Ontario
-) Kapuskasing Mine, Ontario

-) Snap Lake Mine, Northwest Territories
-) Meadowbank Mine, Nunuvut
-) Hammond Reef mine (permitting phase), Ontario
-) Côté Gold Project (permitting phase), Ontario
-) Lake St. Joseph Iron mine (proposed), Ontario.

In addition to having long established reference documents from government agencies and industry organizations to provide guidance regarding the design, construction and operation of coffer dams, there are contractors and project managers available in eastern Canada who are experienced in such undertakings. As with all components of the Project, FMG would utilize experienced designers and builders for the coffer dam component of the Project.

The north basin of Springpole Lake would have to be temporarily isolated and dewatered in order to develop the main pit. There are also small un-named ponds and watercourses within the proposed TMF, waste rock and overburden / sediment footprints that would be permanently removed by the development of the Project. FMG's intent is to adhere to precedents from the Department of Fisheries and Oceans ("DFO") and ensure no net loss of fish habitat as a result of the Project.

3.1.3 Fish Removal and North Basin Dewatering

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 3-2 presents the portion of the lake proposed to be dammed and dewatered.

An estimated 21.7 Mm³ of water will have to be drained from the area of Springpole Lake within the dewatering dikes. Of this, 80% (17.4 Mm³) is estimated to be clean water which can be discharged directly over the dewatering dikes into Springpole Lake. The remaining 4.3 Mm³ (20%) is assumed to be 'murky' (*i.e.* have suspended solids higher than the allowable discharge limits). The murky water will be treated to remove suspended solids and be pumped to the environment via an approved discharge point. Steps will be taken during the dewatering process to reduce the amount of sediments that become suspended in the water, including silt curtains around the water intake area. An engineering evaluation would be undertaken to ensure the pumping rates do not cause erosion in the receiving lakes. Water would be introduced to the receiving lakes in a manner that dissipates energy and minimizes the potential of erosion at the sites of discharge. The level of the receiving lakes would not rise beyond natural fluctuations and the undertaking would be managed to minimize any changes to the turbidity of lake water.

Due to Project economic considerations, it is preferred that this small portion of Springpole Lake be dewatered within one year of dike completion. In order to dewater this part of the lake in this time period, the dewatering flow rate will be 0.6 m³/s (assuming dewatering 365 days per year and 24 hours per day). This dewatering rate is within the range of other planned and actual lake dewatering rates at similar mining projects (BHP 1995, 1999, and 2001; Diavik 2003; Agnico-Eagle 2010; De Beers 2010). Additionally, literature from other lake dewatering projects indicates that dewatering during the winter months results

in less suspended solids. Preliminary hydrological evaluations by SRK indicate that the 0.6 m³/s dewatering rate is possible.

Consistent with precedents, fish would be removed from the north basin of Springpole Lake that would be dewatered. In addition, fish would be removed from the small ponds within the TMF and waste rock pile footprints. Removed fish would be released in accordance with guidance from government agencies. Removal methods would include a combination of non-destructive netting methods, minnow traps and electrofishing if necessary for small waterbodies.

3.1.4 Sediment Management

Sediment is proposed to be stored in the dewatered portion of Springpole Lake, as indicated in Figure 3-2. Sediment will be pumped to this location, to the extent practical. Sediment may be thickened prior to deposition. 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.

3.1.5 Buildings and Plant Site Infrastructure

Remaining Project components involve common construction activities and techniques. Infrastructure locations are generally presented in Figure 3-2. The power line that would supply power to the Project would be shown in Figure 3-2B. Refer to Section 3.1.10 for additional information regarding the transmission line.

3.1.6 Tailings Management Facility (TMF)

The preferred TMF footprint is presented in Figure 3-2. This TMF footprint is preferred for the reasons listed in the bullets below.

-) Minimize terrestrial spatial extent to the extent practical (385 ha).
-) Minimize removal of waterbodies and avoids deposition in Springpole Lake. Overprinting of waterbodies and the required water discharge volumes to Springpole Lake is discussed in Section 5.1 and 5.2, with a summary in Table 5-6.
-) Within same watershed as rest of 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.

Preliminary design assumptions and/or criteria were taken into consideration for the preliminary TMF design are provided below.

-) Approximately 139 Mt of tailings will be produced throughout the 12 year LOM. The surface area of the TMF is approximately 365 ha.
-) Tailings characterization testwork has not been carried out, so for volumetric calculations,

conservative estimates for tailings density were assumed.

- J In addition to tailings, the tailings facility will contain soft lake bed sediments excavated from the coffer dam foundations and pit area; an estimated 3.1 Mm³ (assuming 4 m deep sediments in the pit area and 5 m deep sediments under the coffer dams).
- J Minimum design criteria will be in accordance with Canadian Dam Safety Regulations (CDA 2007) and the Dam Safety Guidelines from the MNRF.
- J Initial tailings dam construction will use locally sourced aggregate and run of quarry material and subsequent lifts will use run of mine NAG waste rock for construction.
- J The Project is located in the low seismic hazard zone of Canada. Therefore, at this stage, there has been no consideration for specific design elements to address seismicity.
- J Detailed geotechnical and hydrogeological characterization testwork has not yet been carried out to evaluate foundation conditions. The designs presented herein are based on engineering judgment considering visual observation of surficial conditions during the site visits by SRK.
- J The site has a net negative water balance during an average year.
- J The site generally has little natural relief offering limited opportunities for natural containment of tailings. The overall topography ranges from about 385 to 415 masl.
- J There is competing interest in the available surface area for the placement of mine waste rock.
- J Preliminary geochemical testing carried out on the tailings suggests that the tailings will become acid generating after more than 60 years and secure environmental containment will be required, in accordance with Ontario Regulation 240/00 (as amended), which contains the Mine Rehabilitation Code of Ontario. Since the containment dams are expected to be founded on competent bedrock a complete under liner is not included in the base case design.

Due to the flat topographical relief of the Project Site, the tailings will be contained by a ring dam which will prevent migration of tailings, lake bed sediments, and any free water. The tailings facility is designed such that the dams will remain at the initial starter dam height of 2 m, except in the areas where a higher dam is required to contain lake bed sediments (contingency management plan for sediment from dewatered portion of Springpole Lake) or prevent the tailings from encroaching on nearby lakes.

To minimize pre-production capital costs, the ring dam will be periodically raised over the LOM as required.

3.1.7 Site Access Road and Haulage Road Network

This document distinguishes between road uses and access restrictions, as described below. The transmission line will generally share the same corridor as the roads, as described in 3.1.10.

- J **On-site haul road.** This is a private all-weather 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.
- J **Private access road.** This ~20 km segment of all-weather 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, is situated on either patented land or land that has been leased in accordance with Section 81 of the *Mining Act*.

-) **Public access road.** This ~20 km segment of all weather road extends from the Birch River crossing in a southwesterly direction to the existing all weather 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. Prior to this road becoming part of the public road network in the Trout Lake Forest Management Plan, FMG will follow gate requirements and access restrictions imposed by the Class EA that it completed for the temporary winter road (refer to Springpole Gold Access Corridor Project in Definition of Terms and Acronyms).

The existing Wenasaga Road is an all weather road approved in the Trout Lake Forest Sustainable Forest License (“SFL”) and the extension to the vicinity of the Birch River crossing is to be an all-weather road as well, as per the Trout Lake Forest Management Plan. It is unclear when the forestry company that holds the SFL will build the extension to the Wenasaga Road. When the forestry company extends the Wenasaga road to the area of the Birch River crossing, it is plausible that the road will already be built to a winter road standard by FMG and they will simply have to upgrade it to all weather status. If the forestry company has not built the all weather Wenasaga Road by the time FMG builds the Project (assuming the Project proceeds), FMG will upgrade the winter road to all-weather road status (subject to the alternatives assessment discussed in Table 2-1). Domtar holds the Trout Lake Forest SFL at the present time.

Proposed access restrictions are discussed in Section 6.1.2. The primary normal design vehicles for the road are Super B-Train trucks for hauling of supplies and equipment. Heavy equipment and oversize vehicles will occasionally use the road, especially during the construction phase.

Road construction will consist of clearing and grubbing of the corridor (or widening of existing corridors), prior to placing of an approximately 0.5 m thick compacted sub-base layer sourced from locally developed and approved aggregate sources. Based on an initial review of the alignment using low resolution topographical mapping, it is anticipated that only basic cut/fill techniques will be required to construct the road. Major water crossings will likely be in place prior to commencing construction due to road construction associated with the FMP and/or trail construction associated with the Springpole Gold Access Corridor Project. Generally, roads will be 12 m wide and made of aggregate.

Routine surface water management along all roads will be done through crowning of the roads. In 11 key areas along the Access Corridor road, surface water will be allowed to cross the road via 0.45 m diameter corrugated steel culverts. No culverts have been identified for the single lane access roads.

3.1.8 Process Plant

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 3-1, based on testwork results to date. Recent testing was done without consideration of gravity recovery and accordingly, it is omitted from the flowsheet shown below.

Due to the relative hardness, consistency and poor integrity of the mineralized zones, it is likely that a

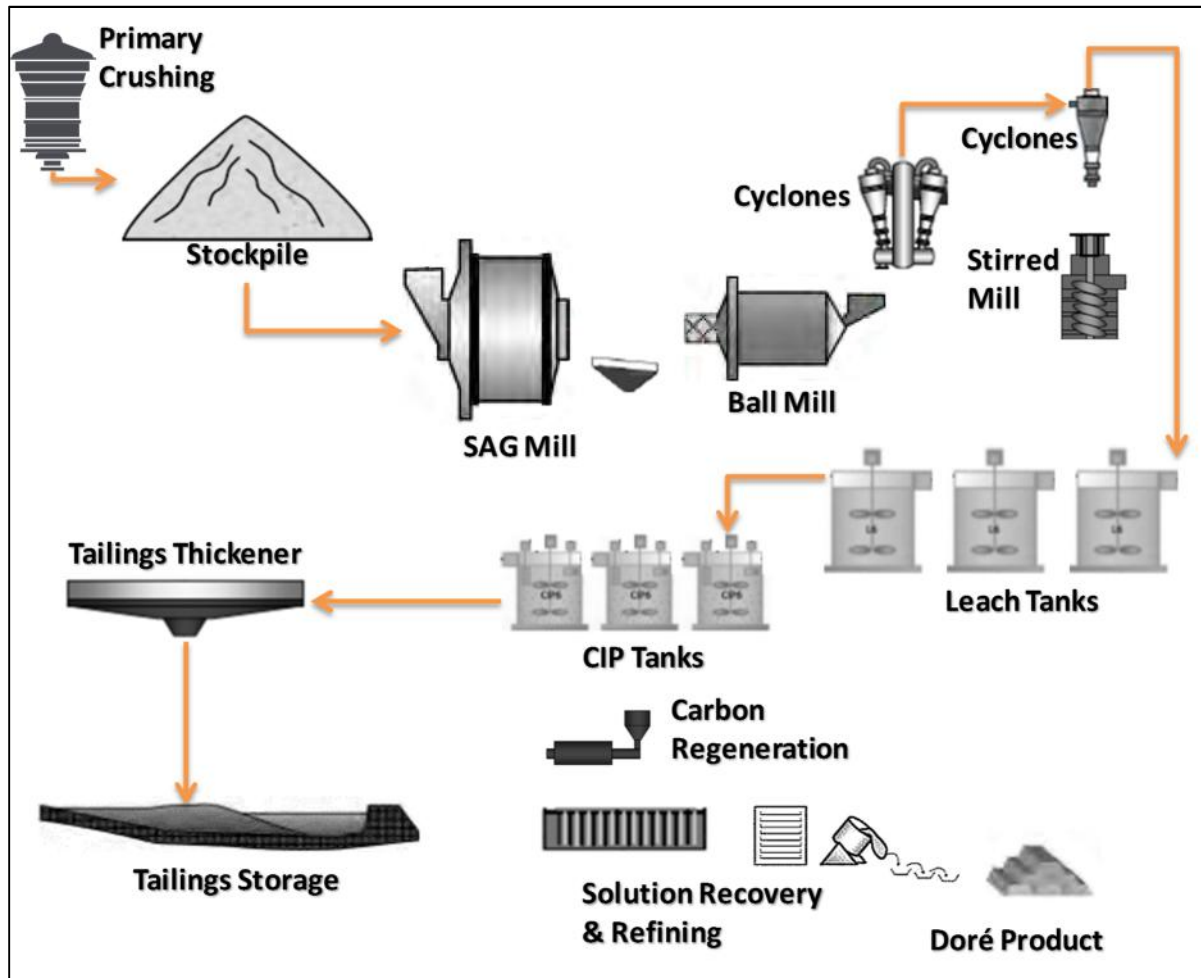
conventional semi-autogenous grinding mill followed by ball mill will be used to an 80% passing size of 70µm. Multi-stage crushing could be considered, but handling the likely wet and incompetent feed will make slurry processing easier after only one stage of primary crushing.

Grinding cyclone overflow will pass over a trash screen and be thickened prior to cyanide leaching. This circuit will likely comprise of a primary stage of aeration and leaching followed by secondary carbon in pulp tanks. The target residence time for cyanidation should be 36 hours. Cyanide consumption will be moderate at around 0.8 kg/t. Leach tailings will report to cyanide destruction prior to leaving the building shell.

Gold loaded carbon will go to stripping and reactivation prior to being returned to the CIP circuit. Pregnant strip solution will report to electrowinning where the gold sludge will be sent to the furnace for recovery as doré bullion. 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 3-1: Mill Process Flowsheet



3.1.9 Buildings

The buildings discussed below will be of modular design or consist of fully contained prefabricated components. They will be shipped to site either as complete units or will require minimal on-site construction, plumbing and electrical work. Building dimensions are not yet available because the Project is at a PEA level of engineering detail. With the exception of the camp and explosives production facility, buildings will be situated within the Plant Site that is shown in Figure 3-2A. The surface area for the Plant Site is approximately 25 ha.

General Maintenance Shop

-) This is a pre-engineered, insulated sprung structure with a concrete slab on-grade. This facility will be used for general facility maintenance and upkeep.

Waste Management Building

-) This open floor plan structure will be used for sorting and handling all the waste produced from building construction and operation activities. Recyclable materials (e.g. steel) would be stored until removed from site to a recycling facility. Industrial liquid waste (e.g. waste oil, antifreeze,

oily fuel) will be transported off-site.

Emergency Response Building

-) This will be a framed structure will house all the equipment and facilities to handle site emergencies.

Mine Maintenance Shop

-) This is a framed structure that will be used for general service for mine site surface infrastructure, haul trucks and heavy equipment as well as light vehicles. The building will be equipped with overhead cranes, workbenches and equipment, as well as areas allocated to permit maintenance and fabrication activities.

Light Vehicle Maintenance Shop

-) This pre-engineered sprung structure with a concrete slab on-grade will be used for the maintenance of light vehicles. This building will also be equipped with overhead cranes, workbenches and equipment, as well as areas allocated to permit maintenance and fabrication activities.

Assay Laboratory

-) This building will be a framed structure and it will have areas allocated for sample preparation and analyses. The assay laboratory is a climate controlled, "clean" building.
-) Wastes from the lab contain some metal values and so waste is consolidated with feed for the process plant.

Warehousing and Storage

-) This will be another pre-engineered insulated sprung structure with a concrete slab on-grade. This building will handle all inventories on-site and house stock that must be protected from the environment. It will be associated with a lay-down yard for larger pieces of equipment and materials.

Potable Water Treatment Plant

-) This will be a packaged reverse osmosis treatment plant. The treatment plant will be self-contained within shipping containers.

Sewage Treatment Plant

-) This will also be a packaged bio-reactor treatment plant with a sludge filter press. It is assumed the Sewage Treatment Plant will be contained within shipping containers.

Effluent Treatment Plant

-) The effluent treatment plant will be housed within or adjacent to the process plant building.

Fuel Storage

-) Substantial storage of fuel will not be required on-site due to the easy access to the nearby highway. Some fuel storage will be required for the mine, haul, and light vehicle fleets, as well as for the heavy equipment and production of ammonium nitrate/fuel oil, a bulk explosive. It has been assumed a ~5,000 m³ fuel tank farm, within a suitably-sized secondary containment structure, would be constructed at the Project Site. This structure would be shipped as pre-formed panels and trussed which will require on-site erection and fabrication.

Office Complex

-) Several administration buildings will be required. These will be modular buildings with interior furnishings to allow for all the administrative and day-to-day activities needed for the mine to operate.

Mine Truck Shop

-) This will also be a framed structure used to service the mining fleet for mine specific operations. This building will also be equipped with overhead cranes, workbenches and equipment, as well as areas allocated to permit maintenance and fabrication activities.

Camp

-) This will be composed of modular structures that will be transported to site then connected together. The camp will accommodate 300 people in single rooms with dormitory style washrooms. This facility will also contain a kitchen, a mess hall and recreation facilities. This Project component is not shown in figures because alternative locations have not yet been identified and evaluated.

Explosives (Emulsion Production Facility)

-) 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 NRCan minimum permissible distances and Ontario Regulation 854. Alternatively, an explosives production facility will be constructed at the Project Site by an independent turnkey supplier. This Project component is not shown in figures because alternative locations have not yet been identified and evaluated.

3.1.10 Power Supply and Communications

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 corridor for the E1C transmission line, as generally shown in Figure 3-2B. This new transmission line would be constructed, owned and operated by FMG. The transmission line will extend from the Plant Site to the E1C transmission line owned by Hydro One Networks Inc., generally following existing road corridors (refer to Section 3.1.7 for description of roads). The southernmost segment of the power line deviates from the adjoining access road corridor, as shown in Figure 3-2B.

FMG plans to evaluate potential grid upgrades, collaboration opportunities and alternatives to this base case for power supply.

Communications will be provided by a fiberoptic cable that extends alongside the transmission line. FMG

is also evaluating a satellite service and a cellular tower at the Project Site.

3.1.11 Runoff and Seepage Collection System

A perimeter runoff and seepage collection system will collect all storm water and seepage discharges from the Project Site, in accordance with MMER requirements. These installations will be prioritized because it is understood that the Project will become subject to MMER once construction commences. Conceptual locations for perimeter ponds are shown below in Image 3-2. The design for the ponds and ditch system will be presented in the EIS, after the engineering detail is improved.

Image 3-2: Location of Perimeter Runoff and Seepage Collection Ponds



(1) Collection ponds are cross-hatched and shown in blue; collection ditches connect the ponds.

3.2 Production, Operation and Maintenance

A conceptual general arrangement drawing of the Project Site during operations is presented in Figure 3-2. Project components and operating details for the base case production phase are generally discussed below based on the preliminary engineering details that are available at this time.

3.2.1 Open Pit

The main pit and starter pit perimeters are presented in Figure 3-2. The open pits have a surface area of approximately 140 ha.

Table 3-2 summarizes the assumed, all diesel, major open pit equipment requirements are based on similar sized open pit operations. The proposed processing rate of 13 Mt/yr was used, along with deposit

and pit geometry constraints, to estimate the mining equipment fleet needed. The fleet has an estimated maximum capacity of 180,000 TPD total material (ore and waste rock), which would be sufficient for the LOM plan.

Table 3-2: Major Open Pit Equipment Requirements

Equipment Type	Number of Units
311 mm diameter Rotary, Crawler Drill	4
40 m ³ Front Shovel	5
217 T Haul Truck	15
D10-class 17.3' blade	3
834H-class 15.2' blade	3
16H-class Grader	1
14H-class Grader	3
90 t Water Truck	1

The 311 mm diameter blast hole drills are planned to perform all of the production drilling in the mine (both mineralized and waste rock), as well as in the mineralized zones to allow for better definition drilling. The main loading and haulage fleet is planned to consist of 217-tonne haul trucks, loaded primarily with the diesel powered 40 m³ front shovels.

As pit conditions dictate, the fleet of track dozers are planned to rip and push material to the excavators and maintain the waste dumps and stockpiles.

The following additional equipment will be required to support mining operations:

-) Explosives storage and delivery equipment. Rather than explosives storage, an emulsion production plant may be constructed at the Project Site that respects minimum setback standards established by Natural Resources Canada.
-) Field maintenance vehicles
-) Light vehicles for personnel transportation
-) Light plants
-) Portable aggregate plant
-) All-terrain crane
-) Utility excavator
-) Wheel Loader

) Tele-handler or Lift Truck

3.2.2 Rock Storage Facilities

The waste rock facility is planned to be located immediately 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. Overprinting of waterbodies and required water discharge volumes to Springpole Lake is discussed in Section 5.1 and 5.2, with a summary provided in Table 5-6.

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.

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.

The waste rock pile will be set back ~60 m from the existing shoreline of Springpole Lake. Barren waste rock that does not pose a risk of acid generation or metal leaching (“NAG waste rock”) will be segregated from other waste rock (“PAG waste rock”) and managed separately. NAG waste rock will be utilized for construction purposes and may be sold to third parties for other construction purposes.

A potential optimization to the Project is to utilize NAG waste rock for TMF construction purposes and place it as it is mined to avoid re-handling. This optimization may require adjustment to width of dams to ensure that they can be constructed using the larger mining equipment rather than smaller, contractor owned equipment.

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

Overprinting of waterbodies and required water discharge volumes to Springpole Lake is discussed in Section 5.1 and 5.2, with a summary in Table 5-6.

3.2.3 Tailings Management

Roughly 139 Mt of thickened tailings (about 60% solids by mass) will be centrally discharged at a site located about 5 km southeast of the proposed mill site. This results in an estimated 87 Mm³ of tailings to be stored, based on conservative estimates for a tailings density of 1.6 t/m³. The centrally discharged tailings will have a positive beach angle of 4% from a central discharge point. This assumed beach angle would be confirmed with testwork during later studies on the Project.

Tailings will be thickened and pumped via two 400 mm diameter heat traced and insulated HDPE pipelines to the tailings management facility, over a distance of 5.6 km. The tailings will be discharged via a single

spigot located in a tower at the centre of the facility. This spigot point will continuously be raised and rotated as deposition advances. A 150 mm diameter heat traced and insulated HDPE return water pipeline will lead back to the process plant.

Overprinting of waterbodies and required water discharge volumes to Springpole Lake is discussed in Section 5.1 and 5.2, with a summary in Table 5-6.

3.2.4 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 ECA from MOECC.

3.2.4.1 Groundwater Inflows to the Pit

During operations, inflow rates will be a function of pit-development shape, volume and rate of excavation, as well as hydraulic conductivity of the bedrock and the hydraulic gradient between the mine and surrounding surface water sources (lakes). Estimates of potential inflow rates to the pit were made at an “order of magnitude” accuracy level using analytical methods (Dupuit 1863). Hydraulic conductivity values were derived from preliminary testwork that was undertaken by SRK in a separate geotechnical data acquisition program for the proposed open pit. Given the location of the pit relative to the surrounding lakes, and the limited information on geology and structure currently available, a conservative approach was taken in estimating the pit-inflow. Inflow rates were estimated to reach a maximum of approximately 10,500 m³/day.

3.2.5 Roads

The unpaved road surface will require ongoing maintenance consisting of re-grading and topdressing the running surface to reduce the wear on the haul truck and heavy equipment tires. Topdressing will be sourced from the local borrow sources used during construction. For the purpose of the cost estimate, it has been assumed that, on average, at least 3 cm of new topdressing will be applied annually to the running surface of the road. Water crossings will be inspected regularly and maintained to prevent

potential obstructions and wash-outs.

Roads details, access restrictions and lengths are provided in Section 3.1.7.

3.3 Summary of Emissions to Air, Land and Water

CEAA (2012) requires a description of any solid, liquid, gaseous, or hazardous wastes likely to be generated during any phase of the Project and plans to manage those wastes.

3.3.1 Emissions to Air

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 the 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.
-) Temporary diesel fired equipment and generators during the construction phase, to be replaced with grid power.
-) 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.
-) Mill reagent mixing, cyanide destruction process and smelting furnace in process plant.

In accordance with industry best practices and MOECC requirements, FMG shall implement a Best Management Practices Plan for the Control of Fugitive Dust and Noise that incorporates applicable practices listed in MOE (2009) and Environment Canada (2009).

3.3.2 Greenhouse Gas Emissions

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 SRK (2017) 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 3-3.

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

Table 3-3: 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.

3.3.3 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.

Licensed contractors working on the Project will be responsible for managing hazardous materials in accordance with applicable government legislation. FMG will arrange for proper disposal of hazardous waste generated by contractors while working on-site and waste will be disposed of using the GRN for the Project.

3.3.4 Water Management and Emissions to Water

This section supplements the information provided in Section 3.2.4.

A perimeter runoff and seepage collection system will collect all storm water / seepage discharges from the Project Site, in accordance with MMER requirements. Sources of wastewater will be consolidated in the TMF. Surplus water in the TMF that is not required for process plant operation will be treated and discharged to Springpole Lake. This is consistent with FMG’s intent to avoid the Birch Lake watershed due to stakeholder comments and reflects the impracticalities of establishing a pipeline corridor to any watershed other than Springpole Lake. FMG has undertaken a preliminary evaluation of alternative discharge locations in Springpole Lake and these are summarized below in Table 3-4.

The preliminary preferred effluent discharge point is alternative #3 in Table 3-4 and this location is generally shown in Figure 3-2A. To maximize effluent mixing, an in-water diffuser off of lake bottom is planned at this time. A detailed evaluation of alternative discharge points and configurations will be undertaken as part of the EA process. Consideration will be given to minimizing erosion, maximizing dilution, minimizing the extent of the mixing zone (MOE, 1994B) as well as the risk of chemo-stratification and potential changes to the photic zone.

Table 3-4: Alternative Effluent Discharge Points

Alternative	Advantages	Disadvantages
1.South of East Coffe Dam (East Basin of Springpole Lake)	Very close to effluent treatment plant at process plant site	Very little flow into this basin (very small watershed area), little dilution and poor mixing
2.South of West Coffe Dam (West Basin of Springpole Lake)	Close to effluent treatment plant at process plant site	Little flow into this basin (small watershed area), little dilution and poor mixing. Proximity to spawning shoal.
3.Springpole Arm (south of TMF)	Comparatively large flow of water (large watershed), increased dilution and mixing. Lowest risk of chemo-stratification and pooling of poorly mixed effluent on lake bottom.	Far from process plant site. Requires development of additional corridor beyond the TMF footprint

Effluent discharge will only be undertaken in accordance with MMER, Ontario Regulation 560/94 and the receiver-based effluent limits that are imposed by MOECC in the ECA. The process of deriving receiver based effluent limits are well established and described in MOE (1994A) and MOE (1994B). Based on the detailed influent characterization and receiver-based effluent limits that are derived with input from MOECC and government agencies, the effluent treatment plant will be designed. Sources of wastewater are listed below.

-) Open pit dewatering.
-) Site runoff and seepage collected in perimeter containment structures.
-) Treated domestic sewage.
-) Washwater from the maintenance shop will be recycled.
-) Mill process water is a re-circulating load between the process plant and the TMF. Some water will be lost as porewater in deposited tailings. There will be a surplus of water in the TMF due to precipitation inputs (direct precipitation and site runoff) and mine dewatering.

A detailed evaluation of effluent treatment methods will be undertaken as part of the EA process. Consideration will be given to reliability, ease of operation, risk of process upsets and residuals from the treatment process that will require management.

3.4 Closure and Reclamation

General closure work will include the activities listed below. Post closure conditions are presented in Figure 3-3.

-) Removal of assets that can be salvaged for re-sale.
-) Demolition and recycling and/or disposal of infrastructure, subject to preferred alternatives that emerge from the EA process (refer to Table 2-1).
-) Remediation of any hydrocarbon contaminated soil.
-) Vending certain infrastructure in-situ (refer to Table 2-1 for discussion regarding alternatives under assessment and potential opportunities).
-) Removal and disposal of any wastes from the site.
-) Rehabilitation of the small landfill in accordance with MOECC requirements.
-) Removal and Rehabilitation of linear developments (roads, power line, effluent pipelines, drainage ditches)

Rehabilitation measures for specific Project components are provided in the following subsections.

3.4.1 Waste Rock Pile (NAG waste rock)

-) Contouring of waste rock pile embankments to ensure stable slopes and placement of overburden and/or lake sediment over waste rock pile to the extent practical.
-) Re-vegetation of the placed material using ground cover species and plantings of native plant species.

3.4.2 Waste Rock Pile (PAG waste rock)

Testwork is on-going to determine what, if any, excavated materials will be PAG. Presently, FMG is proactively planning for a need to manage some PAG waste rock. During the production phase of the Project, it is anticipated that FMG would identify and consolidate PAG materials within the starter pit (below the water table), reclaim pond and adjacent to the main pit. At closure, these repositories for PAG materials would likely be managed using conventional mitigation techniques as summarized below and allowed pursuant to Ontario Regulation 240/00 (as amended), which contains the Mine Rehabilitation Code of Ontario.

-) Place PAG waste rock and/or PAG tailings in the starter pit, below the water table, for sub-aqueous deposition to prevent acid generation.
-) Place PAG waste rock and/or PAG tailings in the main pit, below the water table, for sub-aqueous deposition to prevent acid generation.

3.4.3 Starter Pit

-) FMG anticipates that the starter pit could be rehabilitated during the life of the mine by backfilling it with PAG materials for sub-aqueous disposal and then capping it with overburden prior to re-vegetation. Further analysis is planned to validate this concept.

3.4.4 Main Pit and Cofferdams

-) An engineering assessment is being initiated to determine how well the flooded open pit will mix with the overlying lake. Rehabilitation work would be undertaken carefully to ensure the water column in the pit will mix and will not be meromictic or become anoxic. This may require the creation of a lake bottom at a proper depth so that it is useable fish habitat. Methods to create this lake bottom at the proper depth could include backfilling with sediment/waste rock to the desired elevation and/or anchoring an engineered mat covering with a thin cover of sediment. Further analysis is planned to validate this concept.
-) When the above noted activities have been completed, pumping from the main pit will cease and water will be allowed to re-enter the drained lake bed and the upper portions of the main pit. FMG is evaluating measures to flood the pit as quickly as possible.
-) Once the lake has reached the natural lake level the coffer dams will be breached and lowered to below the water surface. Before breaching of the coffer dams, silt curtains will be installed. These silt curtains will remain in-place until water sediments reach acceptable levels. FMG is evaluating ways to establish spawning shoals on, or in the vicinity of, the lowered coffer dams.
-) The extent of fish habitat in the Project Area will be increased compared with the pre-development condition after the dewatered portion of Springpole Lake is restored.

3.4.5 Tailings Management Facility

-) Once mining operations cease, the perimeter dam surrounding the impounded tailings would be flattened and contoured to allow for natural drainage and ensure no ponding of water on the TMF surface. If there are no chemical stability risks associated with tailings (*i.e.* metal leaching or acid generation), the tailings would be covered with a simple soil cover from the overburden and

sediment stockpile. Material may be trucked to the TMF or sediment may be pumped to the TMF. The covered tailings surface would be re-vegetated using local plant species as well as commercially available, non-invasive species intended to improve soil fertility and prevent erosion until local plant species infill and take over. In the event that tailings are confirmed to pose a risk of acid generation and/or metal leaching, an engineered cover that is designed in accordance with Ontario Regulation 240/00 (as amended) would be placed over the TMF.

-) Perimeter seepage collection systems would be decommissioned when seepage volumes have decreased to negligible volumes.

With the exception of the north rim of the main pit, the Project footprint will generally maintain a ~60 m setback from the shore of Springpole Lake. This shoreline buffer will partly preserve the ecological function of this sensitive area during the life of the mine and will facilitate a rapid return to pre-development conditions post closure when the coffer dams are breached and the north portion of Springpole Lake is returned. The inputs of organic matter and the water filtration function of these areas would help maintain good water quality in Springpole Lake and accelerate the establishment of lake sediment that will largely be removed by the development of the main pit.

At the end of the closure work, the Project Site will be physically and chemically stable, in accordance with Ontario Regulation 240/00 (as amended), which contains the Mine Rehabilitation Code of Ontario.

4.0 OVERALL PROJECT SCHEDULE

This Section presents the schedule for the EA, permitting, construction, operation and decommissioning phases of the Project.

4.1 Environmental Assessment and Permitting Schedule

A generalized timeline, with milestone decisions, for a typical EA and approval process based on a benchmarking of modern precedents is presented below in Table 4-1.

Table 4-1: Benchmarking Timeline for Environmental Assessment and Approval Process ⁽¹⁾

Description of Activity	Year 1	Year 2	Year 3	Year 4	Year 5+
Preparation of Project Description; initial consultation and engagement; establish Environmental Impact Statement (“EIS”) Guidelines and Terms of Reference for provincial EA process.					
Continued baseline studies; fill gaps in dataset following issuance of EIS Guidelines and/or Terms of Reference.					
Identify valued environmental components that will be the focus of the impact predictions in the EA; identify significance criteria; prepare EIS for submission to government agencies/; continued engagement and consultation.					
Review by stakeholders and regulatory agencies; provision of information requests for proponent to address.					
Address information requests and finalize EIS.					
Decision by regulatory agencies & Ministers whether the proposed project should be allowed to proceed to permit application process.					
Commencement of permit application process that respects the preferred alternatives and unique terms and conditions that emerge from the EA process. The duration of this permit application process typically ranges from 6 to 18 months for provincial permits & federal permits, with 2+ years for a Schedule 2 MMER listing from the federal government.					

(1) Based on benchmarking of publicly available documents for recent mining sector projects that are similar in nature.

Construction phase would follow the completion of the necessary EA processes, acquisition of the relevant permits, successful financing and a positive Production Decision.

4.2 Life of Mine Development Plan and Schedules

Based on the guidance in the PEA and pending future changes, the construction phase would be on the order of two (2) to three (3) years and the production phase would be on the order of 12 years. Further details are provided below.

-) **Construction and Lake Dewatering Phase (2 years):** Installation of coffer dams in Springpole Lake and dewatering pit area; construct mill and surface infrastructure.
-) **Year 1:** 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.
-) **Year 2:** 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 (development rock: ore).
-) **Year 3 to year 7:** 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 seven (7).
-) **Year 8 to year 11:** Waste rock stripping reduces to less than 10 Mt per year and strip ratios below 1 (Waste rock : ore) until development rock mining is complete in year 11.
-) **Year 11 and year 12:** Reclaim stockpiled ore to feed the mill.

The maximum planned total material mining rate during the LOM is approximately 180,000 TPD, while the average total mining rate of total material is planned to be 120,000 TPD. Indicated and inferred mineral resources were used in the LOM plan, with indicated mineral resources making up 93% of the total LOM tonnage processed.

The Project is planned to produce a total of 139 Mt of plant process feed and 319 Mt of waste over a 12 year mine operating life. Table 4-2 summarizes process tonnages, development rock tonnages, and strip ratio by period. The mine is estimated to produce an average of 360 koz of gold and 2,000 koz of silver annually for years two (2) through nine (9).

Table 4-2: Proposed LOM Open Pit Production Schedule

Item	Units	Total	Year											
			1	2	3	4	5	6	7	8	9	10	11	12
Mineralized Material Mined to Mill	kt	119,974	5,999	13,135	13,139	13,130	13,138	12,347	13,140	13,140	13,140	8,758	908	0
Mineralized Material Stockpiled	kt	31,435	1,797	3,458	3,566	3,591	3,250	4,069	5,563	3,403	1,844	825	68	0
Total Mineralized Material Mined	kt	151,408	7,796	16,593	16,705	16,721	16,388	16,416	18,703	16,543	14,984	9,583	976	0
Waste Mined	kt	319,002	57,204	48,407	48,295	48,279	43,612	43,584	20,758	6,414	2,090	324	36	0
Total Material Mined	kt	470,411	65,000	65,000	65,000	65,000	60,000	60,000	39,462	22,956	17,074	9,907	1,012	0
Stockpile Reclaim	kt	18,555	0	0	0	0	0	0	0	0	0	4,382	12,232	1,940
Mill Feed	kt	138,528	5,999	13,135	13,139	13,130	13,138	12,347	13,140	13,140	13,140	13,140	13,140	1,940

4.3 Decommissioning and Abandonment Schedule

The decommissioning (closure) phase would be on the order of five (5) years. Post closure monitoring of the Project Site would continue for on the order of 25 years following the completion of the rehabilitation work to ensure closure objectives are being met. A closure plan for the Project will be developed for the entire Project in accordance with Ontario's *Mining Act* and the Code. Financial assurance will be provided by FMG with the closure plan so that the Ontario has sufficient funds to rehabilitate the entire Project.

Conceptually, the closure of the Project will consist of the following main components:

-) Removal of assets that can be salvaged for re-sale.
-) Demolition and recycling and/or disposal of infrastructure.
-) Remediation of any hydrocarbon contaminated soil.
-) Surplus chemicals and other hazardous materials will be removed and stored in designated temporary storage facilities within the facility footprint until such time that they can be resold or disposed of at a licensed off-site facility.
-) Vending certain infrastructure in-situ such as power lines, power generation equipment and camps (refer to Section 2.2 and discussion regarding alternatives under assessment and potential opportunities).
-) Removal and disposal of any wastes from the site and infrastructure that cannot be salvaged and re-used.
-) Rehabilitation of the landfill.
-) Reclamation of all impacted areas. Following any required re-grading, an appropriate cover for the tailings management facility, as well as any remaining waste rock storage piles, will be developed and constructed.
-) The open pit will be allowed to flood and, once the water quality is acceptable, the coffer dams will be breached and the pit area will again form part of Springpole Lake. FMG is currently evaluating timelines for flooding the pit and re-establishing the drained portion of Springpole Lake as quickly as possible.
-) The impacted areas including the tailings and waste rock covers will be vegetated with an appropriate seed mixture designed to enhance natural re-vegetation of the site. Progressive rehabilitation would be implemented as practical during the production phase of the Project to minimize the work required at the end of the mine life.

Post closure conditions are presented in Figure 3-3.

With the exception of the main pit, the Project footprint will generally maintain a ~60 m setback from the shore of Springpole Lake during the operational phase. This shoreline buffer will partly preserve the ecological function of this sensitive area during the life of the mine and will facilitate a rapid return to pre-development conditions post closure when the coffer dams are breached and the north portion of Springpole Lake is prepared and flooded. The inputs of organic matter and the water filtration function of these areas would help maintain good water quality in Springpole Lake and accelerate the establishment of lake sediment that will largely be removed by the development of the main pit.

4.4 Labour Force and Occupations

If the Project proceeds beyond the current exploration and evaluation phase, the Project proponent will develop a staffing plan and operating philosophy for the construction, production and closure phases of the Project. Generally, mine operators are as self-sufficient as possible and only rely on contractors for specialized Project requirements.

Given that the Project is envisioned to be an open pit and not an underground mine, FMG anticipates that there would be an opportunity to employ workers that have been displaced from the forestry sector following the downturn in that sector since ~2005. Furthermore, FMG anticipates an opportunity to improve the local workforce with skills that would be transferable to other sectors such as heavy construction, trucking, forestry and other workplaces.

FMG is aware that it will have to compete with other employers and mining projects across the continent to attract and retain its workforce. As such, the Project management team would develop attractive schedules providing flexibility to workers that require it, excellent accommodation arrangements and competitive compensation packages. Consistent with current industry practice, the Project proponent will be committed to a drug and alcohol free workplace that promotes healthy lifestyle choices as a core company value.

Table 4-3 below presents a list of potential production phase positions based on a benchmarking of other mining operations. Note, qualifications have been summarized from available postings for similar positions recently posted on the internet. FMG has not undertaken an evaluation of the positions required for the Project and the list is preliminary and subject to change as better information becomes available. Salaries for these positions have a range of approximately \$40,000 per year to \$170,000 per year, based on a 2014 benchmarking of mining sector positions available from <https://www.mihir.ca/careers>

Table 4-3: Summary of Potential Operations Phase Positions ⁽¹⁾

Department	Position	Education Requirements ⁽²⁾	Number Required
Technical and Administration	Mine General Manager	College or University	1
	Administrative Assistant	Grade 12 minimum	2
	Safety Coordinator	College or University	2
	Environmental Coordinator	College or University	2
	Community Liaison Coordinator	Grade 12 minimum	1
	Human Resources	College or University	2
	Information Technology / Information Services	College or University	2
	Controller	College or University	1
	Cost accountant, accounts payable	College or University	2
	Purchaser, receiver, warehouse	College or University	6
	Security	Grade 12 minimum	8
Occupational Health Nurse	College or University	2	
Mine	Chief Engineer	College or University	1
	Mine Engineer	College or University	2
	Mine Planning	College or University	1
	Mine Technologist	College or University	4
	Surveying	College or University	4
	Chief Geologist	College or University	1
	Mine Geologist	College or University	2
	Mine Superintendent	Grade 12 minimum	1
	General Foremen, Supervisors	Grade 12 minimum	4
	Leaders	Grade 12 minimum	8
	Miners (includes drill technicians; drillers, blasters, service supervisors; truck drivers; Shovel operators; dozer and loader operators)	Grade 12 minimum	30+
	Labourer	Grade 12 (or less)	8
	Trainer	Grade 12 minimum	2
Mill	Mill Superintendent	Grade 12 minimum	1
	General Foremen, Supervisors	Grade 12 minimum	6
	Metallurgist	College or University	2
	Operators	Grade 12 minimum	20+
	Labourer	Grade 12 minimum	4
	Assayers	College or University	4
	Assay lab and metallurgical lab technicians	Grade 12 minimum	10
	Trainer	Grade 12 minimum	1
Maintenance	Maintenance Superintendent	College or University	1
	Maintenance Planner	College or University	2
	Supervisor	Grade 12 minimum	4
	Electrical & Instrumentation	Grade 12 minimum	8
	Millwright / Mechanic	Grade 12 minimum	20+
	Custodial / Janitorial / General Maintenance / Kitchen	Grade 12 (or less)	10+

- (1) The list of production phase positions and the numbers of these positions are preliminary and are subject to change as better information becomes available.
- (2) Education requirements are based on MNDM publication titled "*Occupations in Mineral Exploration and Mining*"

4.5 Capital and Operating Costs

This Section summarizes capital and operating costs, as presented in the updated PEA that was published in 2017.

4.5.1 Mine Equipment Capital Cost

The open pit mining activities for the Springpole pit were assumed to be undertaken by an owner-operated fleet as the basis for this preliminary document with the fleet having an estimated maximum capacity of 180,000 TPD total material, which would be sufficient for the proposed LOM plan.

The open pit equipment capital cost (including sustaining and replacement costs) required to achieve the target processing rate is summarized below in Table 4-4. Mining cost service information, as well as factors based on experience, were taken into consideration in determining the open pit capital cost estimate. No equipment was considered as lease.

The ancillary equipment includes light trucks and service vehicles, backhoes, and fuel trucks, along with a number of other required open pit mining support equipment.

Table 4-4: Open Pit Equipment Capital Cost Summary

Item	Unit Cost (\$M)	Initial Units	Replace Units	Total Units	Total Cost (\$M)
Crawler-Mounted, Rotary Tri-Cone, 12.25-in Dia.	4	3	1	4	17
Diesel, 40-cu-yd Front Shovel	14	4	1	5	72
240-ton class Haul Truck	4	14	1	15	59
D10-class 17.3' blade	1	3		3	4
834H-class 15.2' blade	1	3		3	3
16H-class 16' blade	1	1		1	1
14H-class 14' blade	1	3		3	2
100 ton class (20,00 gal.)	2	1		1	2
Subtotal Primary					159
Subtotal Ancillary					6
Subtotal Miscellaneous					2
Total Equipment & Misc.					167
Spares Inventory @ 5%					8
Contingency @ 10%					18
TOTAL MINE CAPITAL					193

4.5.2 Process Plant Capital Costs

SRK prepared an estimate of capital costs for a process plant to treat Springpole ore based on testwork results to date. This estimate should be considered accurate to $\pm 40\%$.

The process flowsheet includes crushing, grinding, CIP leaching as well as gold recovery via activated carbon to produce doré bullion. Table 4-5 summarizes the process plant capital cost estimate of \$252 million $\pm 40\%$. The estimate is based largely on comparative methods with similar leach plants and adjusted for local conditions and material hardness. Note that no specific sustaining capital costs has been assumed. All ongoing expenditure is assumed to be covered by operating costs.

Table 4-5: Springpole Processing Plant Capital Cost Estimate

Item	\$ million
Comminution	84
Leaching	42
Thicken/Filter	17
General & Admin	18
EPCM @ 24% of direct costs	38
Working Capital	24
Contingency @ 13.5% of above	30
Total	252

*Notes: cost estimates are considered accurate to \pm 40% at this time
EPCM = Engineering, Procurement, Construction & Management*

This estimate includes working capital of \$24 million (or 10% of the pre-contingency total) and a 13.5% contingency.

4.5.3 Infrastructure Costs

A PEA level cost estimate (accurate to \pm 40%) has been developed for Project infrastructure. Material take-off for earthworks (*e.g.* roads) is based on first principles calculations using averaged sections. Building costs are based on typical building sizes for similar operations using an in-house SRK database and engineering judgment. Site specific vendor quotes have not been obtained. Project indirect costs are assumed to be 30% and a contingency of 40% applies to the direct costs.

A summary of these costs is presented in Table 4-6. An additional \$7.8 M is estimated to be spent as sustaining capital over the life of the Project.

Table 4-6: Summary of Infrastructure Capital Cost and Sustaining Capital

Item	Initial Capital (\$ million)
Two Lane Access Road (including Stream Crossings)	\$9.68
Single Lane Access Roads	\$1.01
Maintenance (All Roads)	\$0.72
General Maintenance Shop ¹	\$1.71
Waste Management Facility ¹	\$1.36
Emergency Response Building ¹	\$0.38
Mine Maintenance Shop ¹	\$1.07
Light Vehicle Maintenance Shop ¹	\$1.71
Assay Laboratory ¹	\$2.55
Warehouse – Storage ¹	\$1.24
300 – Person Camp ¹	\$20.14
Water Treatment Plant ¹	\$0.64
Sewage Treatment Plant ¹	\$0.80
Fuel Storage ¹	\$1.16
Office Complex ¹	\$1.83
Mine Truck Shop ¹	\$8.79
Power Line ¹	\$10.83
Sub-Total DIRECTS	\$66.16
Indirects (30%)	\$19.85
Contingency (40%)	\$26.47
TOTAL	\$112.48

4.5.4 Tailings Management, Lake Dewatering and Cofferdam Costs

A PEA level cost estimate (accurate to $\pm 40\%$) has been developed for the TMF and coffer dams. Primary material take-offs based on the designs presented in the PEA were calculated using Global Mapper. Total quantities for each structure are presented in Table 4-7 and Table 4-8.

Table 4-7: Summary of Key TMF Construction Quantities

Element	Unit	Year -2	LOM Total
Type A fill material (ROQ)	m ³	82,800	3,866,588
Type B fill material (bedding)	m ³	47,325	72,405
Footprint of Dam	m ²	185,500	663,180
Excavated Material (Type C material)	m ³	119,250	119,250
Crush Rock for Bedding	m ³	47,325	72,765
Bituminous Geomembrane	m ²	89,350	172,950
Concrete	m ³	398	398
Tailings Pipeline (2-400mm HDPE)	m	11,200	11,200
Water Reclaim Pipeline (1-150mm HDPE)	m	5,600	5,600
Heat Trace (pipelines)	m	16,700	16,700

Figure 3-2C presents conceptual coffer dam details.

Table 4-8: Summary of Cofferdam and Lake Dewatering Construction Quantities

Element	Unit	Year 1 of Construction Phase	Year 2 of Construction Phase
Type A fill material (ROQ)	m ³	52,000	0
Type B fill material (Bedding)	m ³	129,800	0
Type D fill material (Rip-Rap)	m ³	12,600	0
Lake bed sediments	m ³	130,700	0
Silt Curtain (Primary and Secondary)	m ²	28,000	0
Slurry Wall (Plastic Concrete)	m ²	4,800	0
Grout Curtain	m	260	0
Water (to dewater)	m ³	0	21,684,000

Assumptions have been made about haul distances, road grades, material properties, productivity, labour rates, fleet type and equipment & materials rates. These assumptions were based on engineering judgment, past project experience and supplemented with conventional costing databases. Key assumptions are summarized below.

-) Construction will be done by a dedicated specialist contractor using their own fleet of equipment.
-) A fleet of five 40 t (19.85 m³) CAT 740 haul trucks will be used.
-) A CAT 980 loader and a CAT 345 excavator will be used to load the haul trucks at the rock quarry (borrow source).
-) Due to mine sequencing, waste rock will not be available for construction of the coffer dams or TMF dams. Local rock quarries will be developed and are assumed to be within 5 km of their intended use. Costs include quarry development, drilling, blasting, crushing and screening as appropriate.
-) The overburden thickness is unknown, but expected to be limited. Local till within the confines of the TMF is therefore assumed to not be a viable construction source.
-) Barges will be utilized for dredging activities.
-) In the absence of geotechnical investigations for the dykes, it has been assumed that a grout curtain will be installed to create a suitable seal.
-) Costs do not include construction of access roads from the mill or haul roads from potential quarries (these costs are included in the infrastructure cost estimate).
-) Costs for the tailings thickeners and both tailings and reclaim water pumps are excluded here. Those costs are included in the processing capital cost.
-) Lake dewatering costs are considered to be capital cost.
-) Indirect costs have been assumed to be 30% of the direct costs.
-) A contingency of 40% of direct costs was applied.

The coffer dams must be constructed at least two (2) years before mine production starts to provide enough time for lake dewatering. Since the TMF will be used as the settling basin during this time, it will be constructed at the same time. Table 4-9 and Table 4-10 summarize these costs.

Table 4-9: Summary of TMF Cost Estimate

Item	Initial (\$M)	Sustaining (LOM) (\$ Million)
Direct Costs	16	35
Indirect Costs (30%)	5	11
Contingency (40%)	6	14
Total Costs	27	60

Table 4-10: Summary of Cofferdam and Lake Dewatering Cost

Item	\$ Million
Direct Costs	
Cofferdam	19
Earthworks	12
Liner Deployment	2
Other	4
Dewatering	2
Indirect costs @ 40% of Direct Costs	6
Contingency @ 30%	8
Total Dewatering Capital Cost	32

4.5.5 Mine Operating Costs

The open pit mining activities for the Project were assumed to be primarily undertaken by the owner as the basis for the PEA. The cost estimate was built from first principles, input from FMG, as well as SRK experience of similar sized open pit operations. Equipment efficiency was estimated based on on-site conditions (*e.g.* estimated haul routes for each phase). Local labour rates (for operating, maintenance, and supervision/technical personnel) and estimates on diesel fuel pricing (\$0.78/L) were used for the mining cost estimate.

The open pit mining costs were calculated as an average between mineralized material and waste rock. The unit cost estimate for this project as shown in Table 4-11 is \$1.67/t mined.

Table 4-11: Springpole Mine Operating Unit Costs

Open Pit Mine Operating Unit Cost	LOM Cost (\$M)	Unit Cost (\$/tore)	Unit Cost (\$/tmm)
Drilling	47	0.34	0.11
Blasting	95	0.68	0.22
Loading	187	1.35	0.43
Hauling	234	1.69	0.53
Roads/Dumps/Support Equipment	92	0.66	0.21
General Mine/Maintenance	32	0.23	0.07
Supervision & Technical	47	0.34	0.11
Total Open Pit Operating Cost	733	5.29	1.67

The mining cost estimates encompass open pit and dump operations, road maintenance, mine supervision and technical services.

4.5.6 Process Plant Operating Costs

A comparative estimate was made by SRK for the process plant operating cost of \$8.95/t ± 40% (excluding tailings and general and administrative costs). Table 4-12 summarizes the breakdown of operating expenses by area.

Table 4-12: Springpole Process Plant Operating Cost Estimate

Expense Item	\$/t of Process Feed
Labour	1.13
Supplies	4.91
Equipment Operation	1.45
Tailings	1.46
Total	8.95

An electrical power unit cost of \$0.08/kWh was assumed for this project which was factored in with the material hardness and relatively fine primary grind requirements. Grinding media and liner wear were considered typical.

4.5.7 Tailings, Cofferdam and Surface Water Management Operating Costs

Operating costs for the TMF consist of operating the secondary thickener, and subsequently pumping tailings from the secondary thickener to the central TMF discharge point. This discharge point has to be

raised over the LOM. This cost equates to \$1.46/t of mill feed. The cost of pumping tailings slurry to the secondary thickener, and subsequently pumping recycled water back to the mill, is included in the mill operating costs.

No operating costs were included for the coffer dams. It is assumed that any water seeping through the dykes will be included in the mining water management costs. Yearly operating costs for surface water management are estimated to be \$142,000, assuming pumps are operating 50% of the time.

5.0 ENVIRONMENTAL EFFECTS

Baseline and technical studies were initiated by GCU in 2011 in order to define constraints to current activities and to support potential future EA processes, effects assessment and permit applications. These studies have been continued by FMG. Technical studies to date have focused on data collection and not detailed effects predictions. On-going areas of study during the current data collection program are described in Section 5.1.

5.1 Environmental Setting

The Project Site is in the Trout Lake Forest Management area and is subject to the Trout Lake Forest Management Plan, pursuant to the *Crown Forest Sustainability Act* that is administered by MNRF. The region hosts remote tourism outposts 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 Seagrave, Bertha, Deaddog, Gull, Fawcett and Christina (refer to Figure 3-2B).

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. Publicly available government values maps are provided in Appendix 6 for convenience.

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

To the knowledge of FMG, there have been no regional studies for the area. An environmental assessment is in progress for the Watay Power (transmission line) Project, to the south.

Cat Lake First Nation and Slate Falls First Nation prepared a joint land use plan in 2011 with support from MNRF.

Baseline environmental work has been ongoing in the Project Area since 2011. Further details and copies of reports will be included in future Environmental Impact Statement (“EIS”) documents. The only development on the Property is the camp site on the north shore of Springpole Lake and this is shown in Image 5-1. Additional photos of the camp site and water crossing locations are provided in Appendix 2. The Property is considered a greenfield site and has only been subject to preliminary exploration activities.

As part of the EA process and baseline data collection program, the need for supplemental surveys will be addressed as per previously issued EIS guidelines for similar mineral development projects. The data will be included in the EIS submissions to regulatory agencies.

Image 5-1: Springpole Camp



5.1.1 Regional Climate

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.

The closest climate station to the Project Site is located at the nearby Red Lake airport, approximately 120 km to the west-southwest. 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.

5.1.1.1 Precipitation

Monthly mean precipitation data were collected for nine (9) stations surrounding the Springpole site, using Canadian Climate Normals 1971-2000 (Environment Canada 2012). 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 5-1 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 (Hogg and Carr 1985).

Table 5-1: Average Monthly Run-Off and Precipitation Distribution

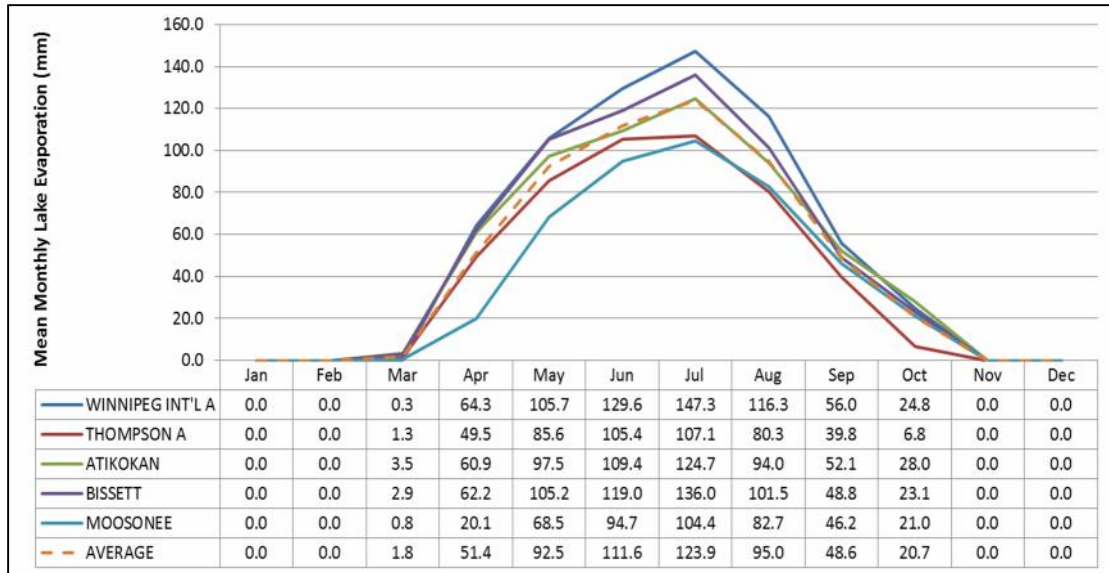
Month	Run-Off Distribution	Precipitation Distribution
January	4.3%	4.3%
February	3.4%	3.4%
March	3.5%	4.6%
April	8.9%	5.7%
May	15.1%	9.1%
June	14.3%	14.8%
July	12.8%	13.7%
August	9.8%	12.7%
September	8.8%	12.4%
October	7.9%	8.3%
November	6.3%	6.5%
December	4.9%	4.5%

5.1.1.2 Lake Evaporation

Lake evaporation was calculated using the WREVP 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 (Environment Canada 1982a, 1982c, 1982c). This data was inserted into the WREVP 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 5-2. The average annual evaporation is 546

mm.

Image 5-2: Mean Monthly Lake Evaporation for Five Stations Around the Springpole Site



5.1.2 Air Quality and Noise

The Project Site is located in a remote area of northwestern Ontario. There are no adjoining anthropogenic sources of industrial air emissions. 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 5-2.

Table 5-2: 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 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.

5.1.3 Geology and Topography

The following excerpt is quoted from Devaney (2001b) and provides the most concise geologic description of the regional geology of the Springpole-Birch Lake area:

The Birch-Uchi Greenstone Belt (Figure 6.1 of SRK, 2017) is the portion of the Uchi Sub-province with an arcuate, concave to the southeast, (i.e., a major oroclinal bend between the Red Lake and Meen-Dempster portions of the sub-province). Studies of the southern part of the Birch-Uchi greenstone belt as a rootless greenstone belt only a few kilometres thick, have revealed a long (ca. 3.0 to 2.7 Ga), multistage history of crustal development. Based on mapping, litho-geochemistry, and radiometric dating, the supracrustal rocks of the greenstone belt were subdivided into three stratigraphic group-scale units (listed in decreasing age): the Balmer, Woman and Confederation assemblages. This three-part subdivision was applied to most of the Uchi Subprovince. The Confederation assemblage is thought to be a continental margin (Andean-type) arc succession, versus the less certain tectono-stratigraphic context of the other assemblages. Workers performing recent and ongoing studies of the southern Birch-Uchi greenstone belt and the Red Lake greenstone belt (i.e. the Western Uchi Subprovince NATMAP Project) have proposed some modifications and additions to the Balmer-Woman-Confederation stratigraphic scheme. As discussed herein, some relatively small conglomeratic units likely form a synorogenic, discontinuously distributed, post-Confederation assemblage in the Birch-Uchi greenstone belt. Radiometrically dated plutons within the Birch-Uchi greenstone belt are of post-Confederation assemblage, ca. 2725-2700 Ma age.

The northern margin of the Birch-Uchi greenstone belt forms a pattern of sub-regional scale cusps of supracrustal strata alternating with batholiths. Basaltic units are prominent around the periphery of the greenstone belt and may be part of the Woman assemblage but the accuracy of this stratigraphic assignment is unknown. Based on a ca. 2740 Ma age of Shabumeni Lake [intermediate to felsic fragmental] volcanic rocks at a site near the northern greenstone belt margin, suggested that Confederation assemblage age rocks make up the bulk of the greenstone belt.

It is noteworthy that in many of the regional geology descriptions of the Birch-Uchi Greenstone Belt, especially those in the vicinity of Springpole and Birch Lakes, the structural geology is poorly understood. Many authors make relatively brief mention of the complexities that dominate the geology and geomorphology of the low lying areas. However, the Archean Orogenic gold deposit model developed by various authors has been applied to the mineral deposits of the Archean Superior Province. Recent concise summaries of these orogenic gold deposits can be found: Groves et al. (1998), Hagemann and Cassidy (2000), Goldfarb et al. (2005), and Robert et al. (2005).

Orogenic gold deposits are epigenetic, structurally controlled gold deposits that are hosted in orogenic belts. They are generally accepted as having formed during late stages of continental collision. Most of the discovered orogenic gold deposits in the world occur in greenstone belts situated on the margins or within Archean cratons in North America, Australia, and southern Africa.

Regional geology is presented in Image 5-3.

The Deposit has been extensively studied during past programs, Property geology is presented in Zabev (2004) and Armstrong et al. (2006).

The following subsections summarize the geology interpreted from field observations and petrographic analysis of drill core from the 2009 re-logging program and from drill core produced during the 2010 and 2011 programs.

Trachyte Porphyry Intrusive

-) A polyphase alkali, trachyte intrusive displaying autolithic breccia textures lies at the heart of the Project. The intrusive is comprised of a system of multiple phases of trachyte believed to be part of the roof zone of a larger syenite intrusive, as fragments displaying phaneritic textures were observed from deeper drill cores in the southeast portion of the Portage zone. Early intrusive phases consist of megacrystic feldspar phenocrysts, up to 5 cm long, of albite and orthoclase feldspar in an aphanitic groundmass. Successive phases show progressively finer grained porphyritic texture while the final intrusive phases are aphanitic.
-) In 2009 and 2010, GCU carried out petrographic studies (Saunders and McIntosh 2009, 2010) of historic drill core and drill core from the drill holes SP10-001 through SP11-006. The study confirmed trachyte intrusive is the dominant lithology within the Project Area and is a host to mineralization. Interpretation of the intrusive complex is complicated by a mixture of overprinted regional and local metamorphic events related to burial and tectonism.
-) Pervasive alteration and metamorphism have reduced the original porphyry intrusive to a complex alteration assemblage dominated by sericite, biotite, pyrite, calcite/dolomite, and quartz. Primary igneous textures are remarkably well preserved in places and give indications to the possible genesis of the initial phase of gold mineralization. Within the country rocks to the north and east are trachyte and lamprophyre dykes and sills that source from the trachyte - or syenite-porphyry intrusive system.

Confederation Age Volcanic and Siliciclastic Rocks

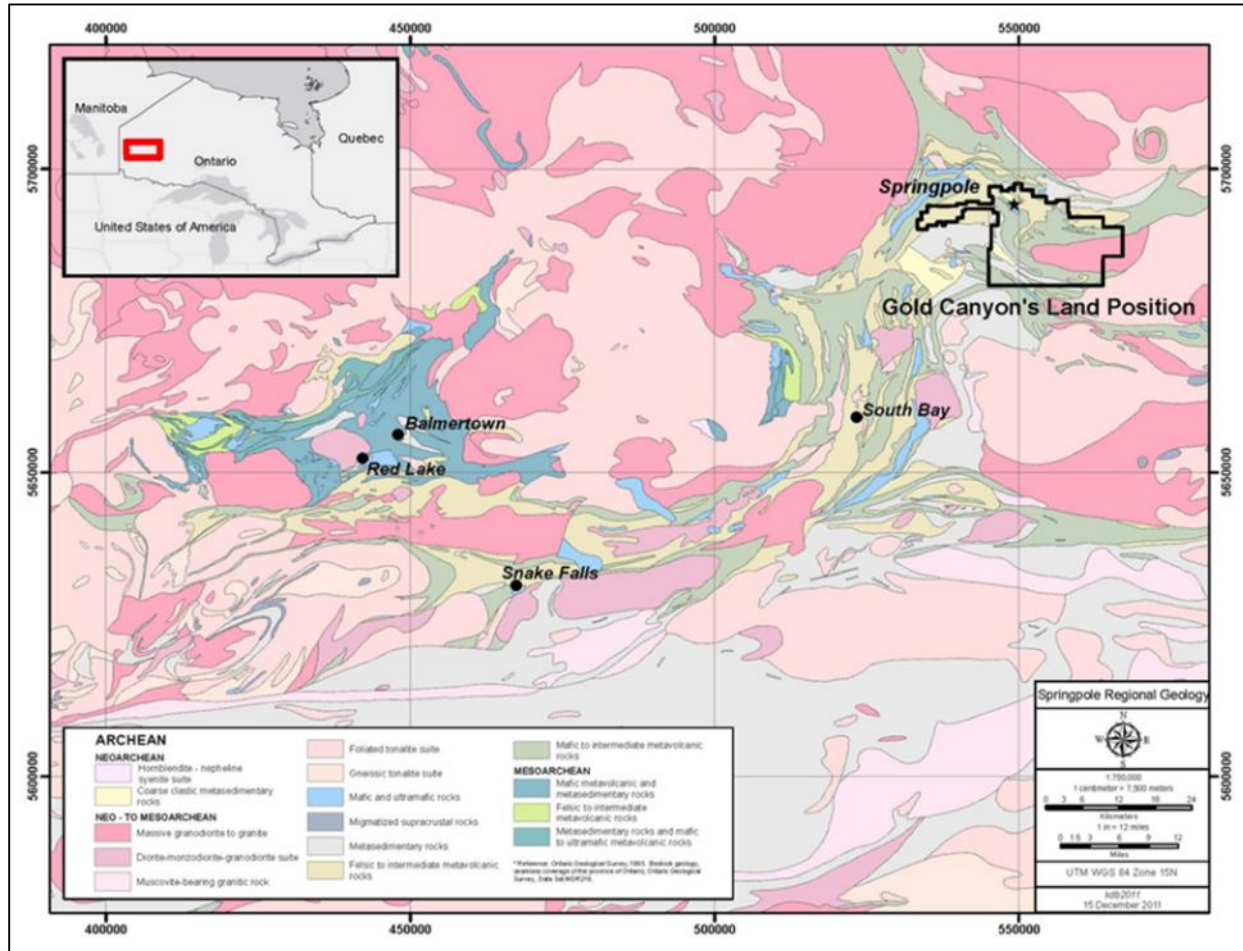
-) The country rocks pre-date the alkali intrusive and are composed of a complex sequence of altered and metamorphosed intermediate andesitic volcanic rocks and associated volcanoclastics, siliciclastic sedimentary rocks, chemical sediments including banded iron formation ("BIF"), and coarse pebble conglomerates. Devaney (2001a) indicates that the sediments are likely of the Confederation assemblage dating at around 2,740 Ma, representing the proximal portions of a mixed volcanic-sedimentary basin.

Timiskaming-type" Conglomerates

-) Barron (1996) states pebble conglomerate outcrops between Springpole Lake and Birch Lake contain clasts of the trachyte porphyry, suggesting that the "Timiskaming-type" conglomerates postdate intrusion. Devaney (2001a) suggests these arcuate form conglomerates represent late

orogenic, deformed, dextral sense strike-slip (pull-apart) basins of “Timiskaming-type,” late Archean, post Confederation assemblage age rocks.

Image 5-3: Springpole Gold Project – Regional Geology



(Source: Ontario Geological Survey 2000) Note: Land Position has increased since map was produced

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.

5.1.3.1 Geochemistry

Minesite Drainage Assessment Group (A Division of Morwijk Enterprises Ltd.) was engaged to undertake an initial assessment of acid rock drainage (“ARD”) potential and this included the selection and static testing of 184 samples of rock in the vicinity of the open pits. 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, mostly from the Portage Zone.
-) Kinetic tests are recommended to confirm or reject these predictions.

GCU engaged SGS to prepare two (2) representative composite ore samples that were carefully selected for metallurgical testing. These samples were subjected to static tests followed by kinetic testing (2 humidity cells) that lasted 168 weeks. Chem-Dynamics was engaged to interpret the data and 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.

Supplemental sampling will be undertaken to fill data gaps as part of the EA process.

5.1.4 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, and white spruce and jack pine. Understory ground cover species composition and abundance is typical of mesic mixedwood 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.

Soils for the Project Area are described in several Ontario Geological Survey publications and Northern Ontario Engineering Terrain studies.

-) Based on Ministry of Northern Development and Mines *Quaternary Geology of Ontario, West Central Sheet, Map 2554* (Scale 1:1,000,000), subsurface conditions in the region consist of undifferentiated till of predominantly sand to silty sand.
-) Based on Ministry of Northern Development and Mines *Bedrock Geology of Ontario, West Central Sheet, Map 2542* (Scale 1:1,000,000), bedrock geology at the site consists of mafic metavolcanic and metasedimentary rocks and minor iron formation.

There is generally low to moderate relief in the vicinity of the Project, with generally dry uplands and poorly-drained lowland valleys with thick accumulations of organic soils. Glacial till is generally less than 1 m in thickness. In this region, soils are predominately grey wooded and podsoles on well-drained sites as well as peats and gleysols in poorly-drained areas. The installation of overburden monitoring wells in

accordance with Ontario Regulation 903 in 2013, using hand equipment, have identified deposits of clay soils in the vicinity of the Project Site and along the shoreline of Springpole Lake (excluding Springpole Arm). Soil from these boreholes was sampled by Pinchin Environmental and analyzed by a CALA accredited laboratory for baseline metal concentrations.

Ecological Land Classification communities present at the Project Site are listed below.

- Deciduous Forests (FOD)
- Mixedwood Forests (FOM)
- Coniferous Forests (FOC)
- Deciduous Swamp (SWD)
- Mixedwood Swamps(SWM)
- Coniferous Swamps (SWC)

A field campaign was undertaken by DST Consulting Engineers in 2012 to evaluate vegetation and soils in the vicinity of the Project Site. Findings are summarized below.

-) Provincial Ecosite B049 is the most common ecosite in the forest (38 % of stands)
-) The Upland habitat areas constituted 71 % of the vegetation survey plots, while riparian areas and wetlands were 19.4 % and 9.7 %, respectively
-) The soil baseline 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.
-) Schreber's moss (*Pleurozium schreberi* (Brid.) Mitt.) is the dominant ground cover in upland sites assessed within the study area
-) Riparian sites assessed within the study area are dominated by shrubs
-) Riparian areas had the maximum species richness, upland areas had the maximum species evenness
-) None of the provincially significant species listed in the NHIC database were encountered during the field surveys

5.1.5 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 (Appendix 6). 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 emergents
-) Small areas of marsh dominated by submerged vegetation are prominent on Springpole Lake
-) Provincially significant and locally significant species were identified in seven of the wetlands assessed
-) No Provincially significant wetlands were identified within the study area under the Ontario Wetland Evaluation System

- J 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.

5.1.6 Hydrology

As previously described the Deposit overlies a portion of Springpole Lake. Regionally, 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 1054 km² based on MNRF's OFAT website tool.

Periodically between 2011 and 2017, automated gauging stations were established in the watersheds in the Project Area to monitor stream depth. The watersheds are presented in Figures 5-3 and 5-4. Manual measurements of flow and depth were taken periodically throughout the year as well. The manual measurements and stream depth recordings will be used to produce a stage-discharge curve for each gauging station that will be used to estimate flow.

5.1.7 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.

There is no site specific data available for quaternary/overburden geology. From experience in other areas of the Canadian Shield, bedrock is typically scoured with deposits of glacial till varying in thickness from 1 m to up to 10 m in pockets. Soft lake sediments may vary in thickness between 1 m to 10 m.

Ground Water Quality

Pinchin Environmental mobilized to the Project Site in 2013 and installed overburden monitoring wells using a Pionjar 120 Percussion Drill, in accordance with Ontario Regulation 903. Soil samples were collected from boreholes as well and analyzed for metal content. Wells were developed and sampled following installation. Boreholes generally identified clayey silt soils below an organic horizon. In 2017, North Rock Environmental completed sampling at these five (5) overburden ground water monitoring wells (MW1 to MW5) and at six (6) exploration boreholes (DDH1, DDH2, BL-235, BL08-235, SP11-102, and SP11-064) shown in Figure 5-5 using good scientific practices. Samples were analyzed by a CALA accredited laboratory. Sample results are described below.

- J Sample results were below 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").

Bulk Conductivity of Bedrock Unit

Field investigations to determine the bulk conductivity of the bedrock unit that hosts the Deposit have been initiated.

- J) 2013: SRK completed 20 packer tests in seven (7) geotechnical core holes drilled within the proposed pit footprint and collected hydrogeological observations.
- J) 2017: North Rock Environmental completed rising head tests at wells DDH1, DDH2, SP11-064, SP11-102, BL-235, and BL08-385 for future assessment of the hydraulic conductivity of the aquifer. Tests were completed by measuring rising static water level in each well over time, immediately following the rapid removal of water from the well casing.

The bulk conductivity of the bedrock unit is required to effectively predict ground water seepage into the open pits, which is a significant input to the site wide water balance.

5.1.8 Surface Water Quality

Surface water monitoring has occurred on a quarterly basis throughout the study area on Springpole, Seagrave, and Birch lakes as well as small unnamed ponds between Springpole and Birch lake. Sampling began in winter 2011 and has continued since that time at various stations. Sediment and benthic invertebrate collections occurred in the fall of 2011 on Springpole, Seagrave, and Birch lakes as well as small unnamed ponds between Birch and Springpole lakes.

Results from this sampling program have been compared against the Ontario Provincial Water Quality Objectives (“PWQOs”) in (MOE, 1994). The PWQOs are chemical and physical indicators that have been set to establish a measurable level of water quality that is protective of all aquatic life and life cycle stages. Surface water generally met PWQOs with conditions that are typical of oligotrophic lakes in Northwestern Ontario including limited nutrient availability, low turbidity and sufficient dissolved oxygen concentrations to support fish populations in the hypolimnion. Surface water stations are shown in Figure 5-6.

5.1.9 Fish Community and Habitat

FMG has continued environmental programs that GCU initiated with C.Portt and Associates in an effort to provide the necessary data to inform any future consultation, planning, EA or permitting for the Project. A primary focus of the environmental monitoring program has been a fish habitat and community assessment including habitat mapping, the identification of critical habitats (*e.g.* spawning locations) and delineating the spatial extent of fish habitat during high water periods.

In general terms, the purpose of the fisheries assessment program has been to describe the fish community and assess fish habitat. Also, where deemed necessary through ongoing consultation with regulatory agencies and in accordance with applicable policy and guidelines: the distribution, abundance and characterization of fish by species and life stage. These data can also be used to identify potential Project related impacts and develop strategies to eliminate or mitigate impacts through proactive design. Additionally, it can aid development of appropriate long-term monitoring plans to assess the effectiveness of design or mitigation measures should the Project advance to development, operation and closure phases. More specifically, the objectives of the sampling program were:

-) Document and map the type, extent and utilization of fish habitat within the Project Site.
-) Collect baseline data sets for the selected waterbodies that meet the requirements of section 27.1 of the Metal Mining Effluent Regulations, recent EIS Guidelines for metal mining projects issued pursuant to CEAA 2012, and fisheries offsetting plans.
-) Confirm and characterize the fish community composition and relative abundance of species within the selected waterbodies.

Lakes typical of Fisheries Management Zone 4 (where Springpole Lake is located) are characterized by intermediate mean depths, and medium mean surface area (Cano and Parker, 2007). Many lakes in the zone have stained water and intermediate morphoedaphic index scores. These stained lakes represent one of two general fish community types found in the region, a cool-water community, with the other community type being cold-water. Cool-water communities are most often found in more productive, shallow waters and are characterized by fish species with optimum growth occurring between 15°C and 25°C. Common sport fish in cool-water communities include Walleye (*Sander vitreus*), Northern Pike (*Esox lucius*), Smallmouth Bass (*Micropterus dolomieu*), and Muskellunge (*Esox masquinongy*). Springpole Lake is representative of a cold-water fish community. Cold-water communities are found in clear, cold, deep oligotrophic lakes and support fish species with optimal growth temperatures below 15°C. Lake Trout (*Salvelinus namaycush*), and Lake Whitefish (*Coregonus culpeaformis*) are common sport fish in cold-water lakes. The fish community structure can be diverse in cold-water lakes and may contain species that are more commonly associated with cool-water lakes such as Walleye, and Northern Pike, both of which occur in Springpole Lake.

Major components of the fisheries investigations completed to date have included:

-) Sonar investigations of the north basin to characterize depth, bottom hardness, and substrate,
-) Approximately 60 bottom (Ponar) grabs to field truth the bottom hardness information from sonar,
-) Preparation of a side-scan sonar mosaic of the north basin,
-) Oblique aerial photographs of the near-shore/shoreline around the north basin to assist in the characterization of habitat,
-) Netting with large mesh gillnets throughout Springpole Lake in an attempt to capture lake sturgeon,
-) Seining in near-shore areas,
-) Acoustic tagging of walleye and lake trout in 2012, and ongoing monitoring of movements using fixed location receivers,
-) Spawning surveys, using underwater lights at night, for lake trout and lake whitefish in the autumn,
-) Spawning surveys for northern pike and walleye in spring,
-) Habitat and fish community characterization of smaller lakes, ponds and creeks in the surrounding area that are likely to be affected by mining operations,

-) water quality investigations including depth, temperature and dissolved oxygen (“DO”) profiles at selected locations and laboratory analyses of water samples from Springpole and other nearby lakes,
-) Aquatic toxicity testing, and
-) Fish tissue analysis.

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

-) First category: Large waterbodies; including Springpole Lake, Birch Lake and Seagrave Lake which range in surface area from 1300 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 5-3 and lakes are shown in Image 5-4.
-) Second category: Small unnamed lakes within and around the Project Site, 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 5-4 and lakes are shown in Image 5-5.
-) 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. However some may be utilized seasonally by larger bodied fish. These small tributaries are shown in Image 5-6.

Aquatic 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 5-3: 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 5-4: Fish Catch in Small Waterbodies

Small Waterbody (refer to Image 5-5)	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 5-4: Regional Context for Fisheries Assessment

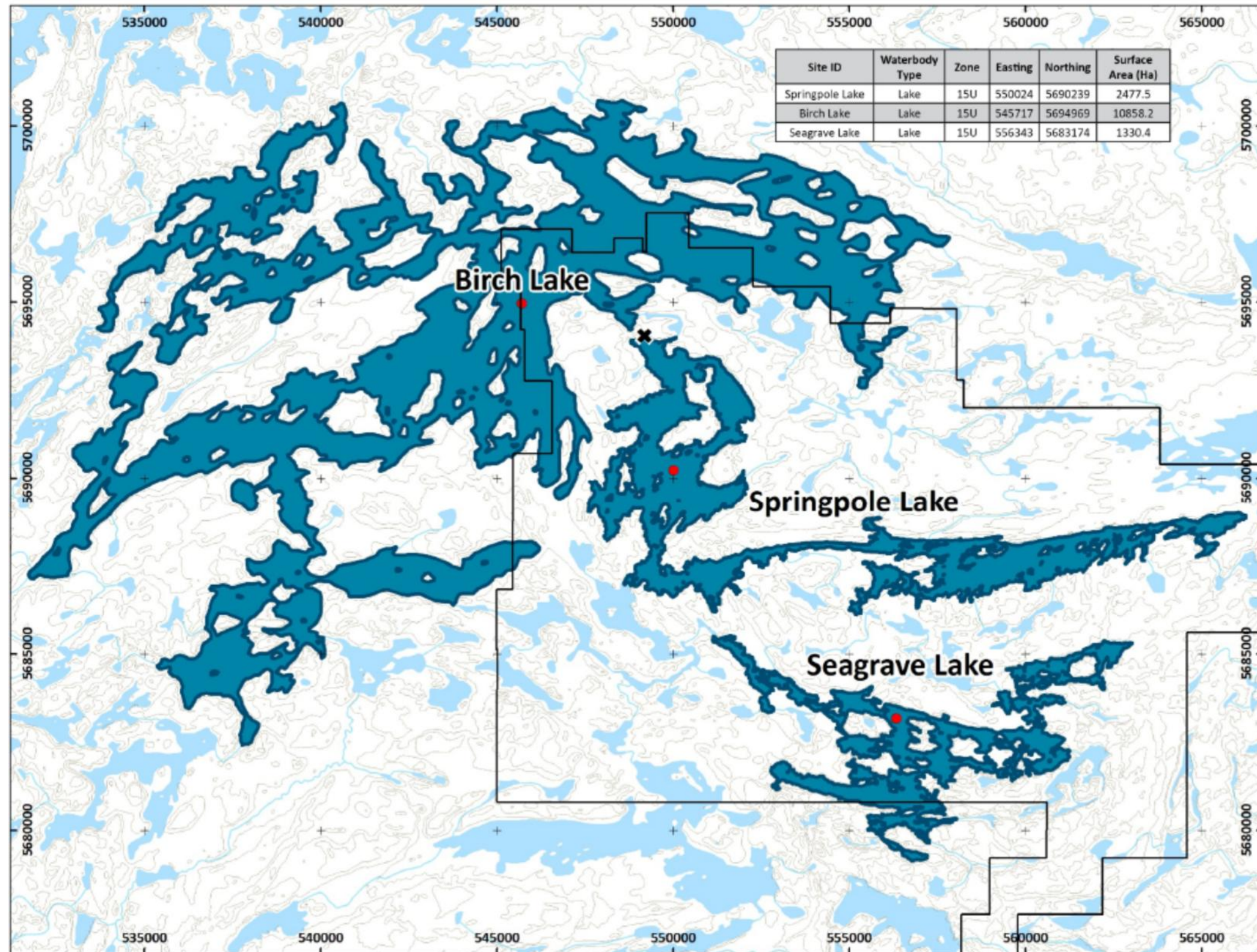


Image 5-5: Small Waterbodies

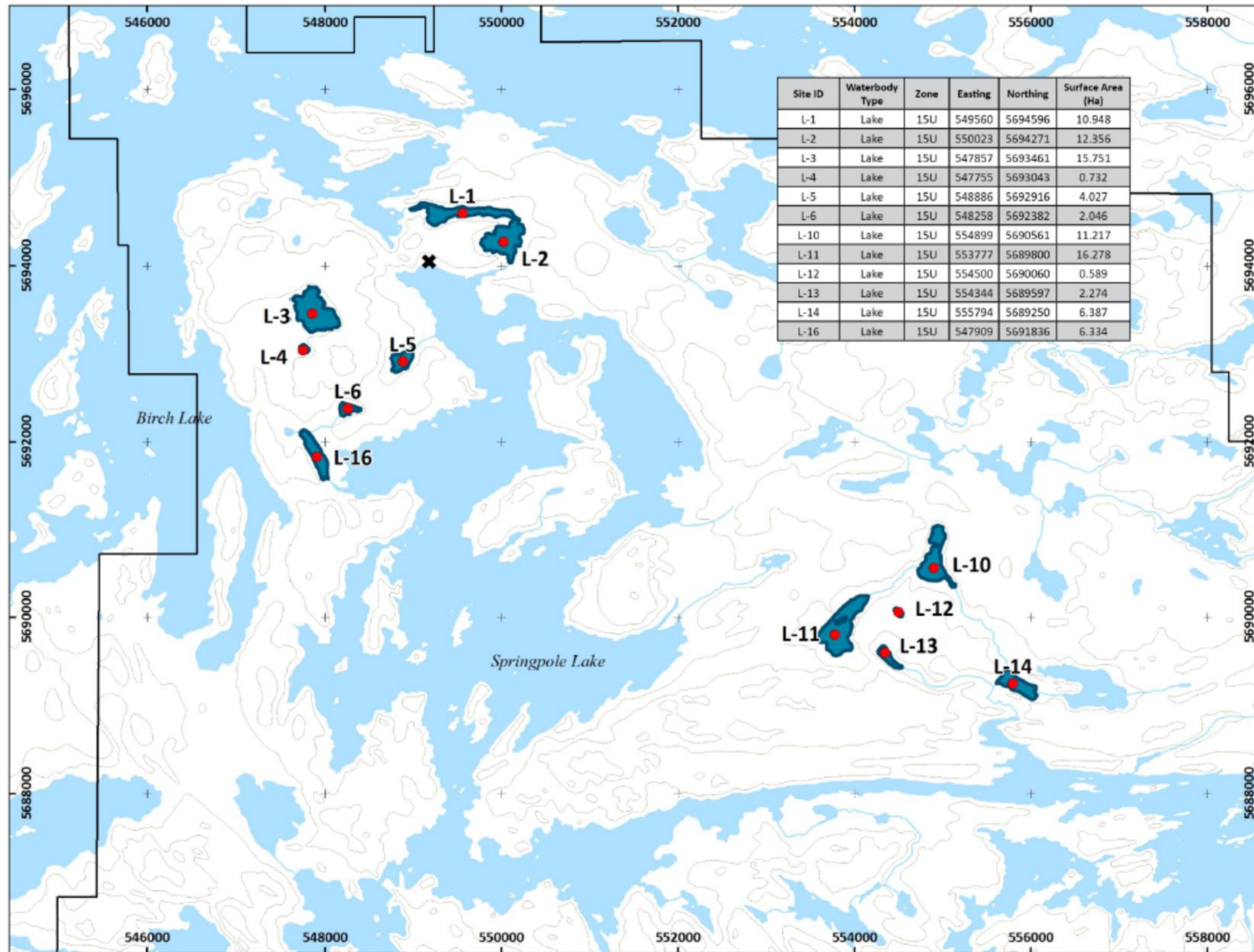
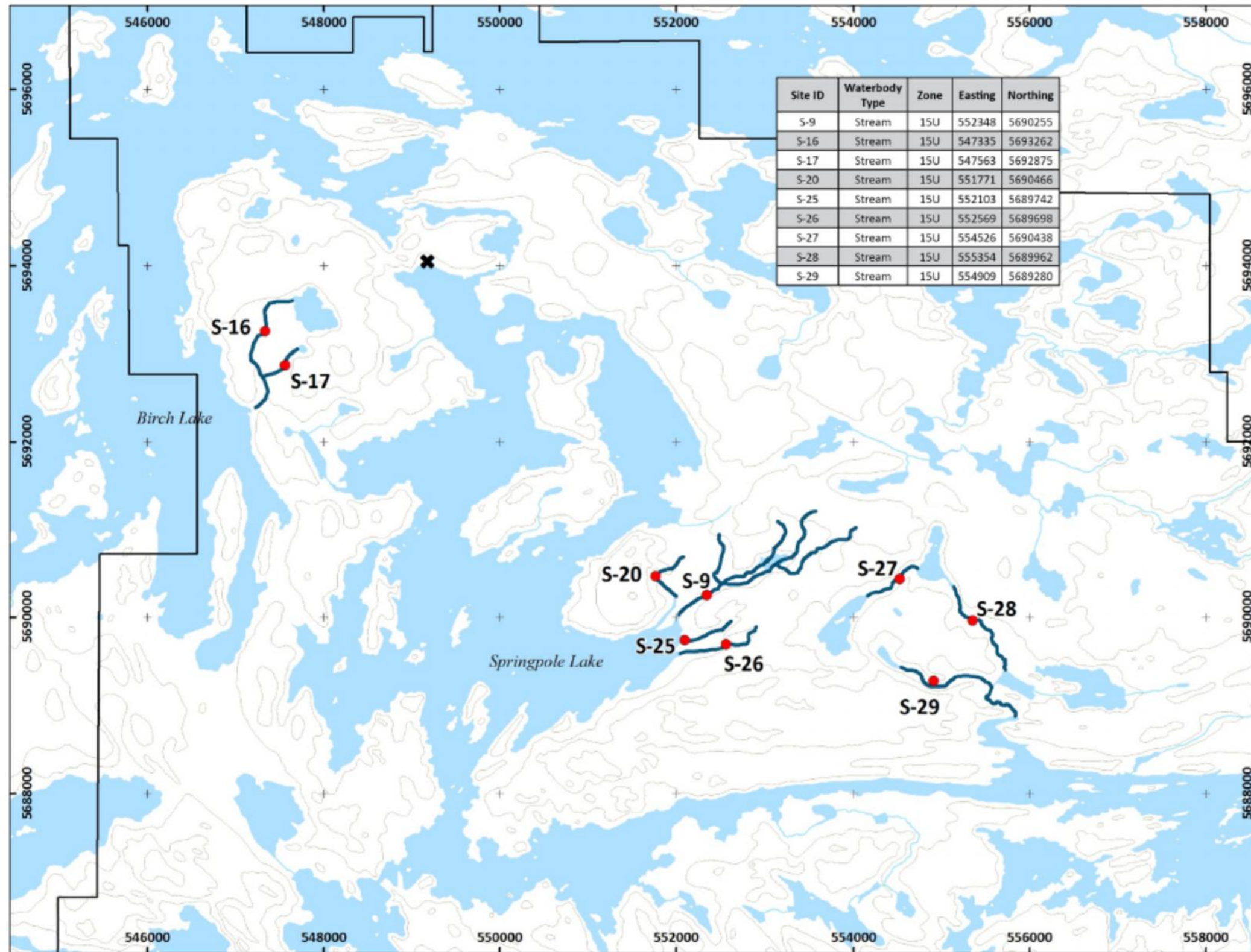


Image 5-6: Small Watercourses



5.1.10 Wildlife and Avifauna

Desktop and field baseline work has been ongoing in the Project Area since 2011. The local and regional study area is generally presented in Figure 5-2. Study areas will be further rationalized in the EA process and any data gaps filled.

To properly characterize the natural environment of the study area, a number of data sources were consulted including; environmental baseline data collected in 2011/2012, correspondence with Red Lake MNRF, Natural Heritage Information Center, Species at Risk Ontario database, Ontario Breeding Bird Atlas, MNRF Natural Resources Values Information System, Trout Lake Forest Management Plan, and digital Forest Resource Inventory (“FRI”) data for the Trout Lake forest. FRI data was not available for the entire study area. Wildlife habitat modelling for selected species was completed through the use of the Ontario Landscape Tool (“OLT”) for those portions of the study area that had FRI data. The OLT uses Landscape Scripting Language, which is a proprietary tool for Geographic Information Systems (“GIS”) developed by the MNRF. The OLT relies on forest unit information provided through digital FRI data, to develop prescriptive indicators such as conifer age class distribution and landscape cover, as well as evaluative indicators of wildlife habitat quality and distribution. These evaluative indicators include the spatial identification of wildlife habitat for seven (7) focal wildlife species including; Woodland Caribou (*Rangifer tarandus*), Moose (*Alces alces*), Marten (*Martes americana*), Lynx (*Lynx canadensis*), Snowshoe Hare (*Lepus americanus*), Fisher (*Martes pennanti*) and Northern Flying Squirrel (*Glaucomys sabrinus*), as well as many species of songbirds.

Field work was undertaken in 2011/2012, with a supplemental ungulate aerial survey in winter 2013.

Findings from the study related to species at risk are below.

Whip-poor-will

-) None observed by DST 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 on site.
-) No suitable habitat present on site
-) 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 the lake.
-) Large contiguous “intact” conifer dominated stands.
-) No known key habitat features.
-) Winter use has been confirmed through track observations, no known denning sites. Not a lot of information available.

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.

FMG is seeking opportunities to create an overall benefit for caribou and other SAR that may be present. Measures may include but are not necessarily limited to those that are listed below.

-) Rehabilitation of linear (*e.g.* roads, trails, utility corridors) and historical developments.
-) Public education regarding the relevant SAR to increase awareness and conservation efforts in the region.
-) Conduct and/or fund monitoring programs to increase the understanding about the relevant SAR, which would facilitate the refinement and implementation of management plans.
-) 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 or preservation; etc.) at the Property or elsewhere in the region off of FMG-controlled lands.

Findings from the study 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 (MNR 2009b).
-) 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 (NAWMP 2004). Potential nest sites for ring-necked duck are not considered rare within the study area (grassy sites within 200 m of water (MNR 2010)). 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 (*Fraxinus nigra*), 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 (“MAFAs”): 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 study area.

Habitats of Species of Conservation Concern

No habitat of the provincially rare species listed below was located during field investigations (DST, 2013) using guidance in MNR (2000).

-) 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

Habitat and values maps are provided in Appendix 6.

5.1.11 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.

Contingent on successful financing, the on-going near-term exploration and evaluation work would result in annual expenditures on the order of millions to tens of millions of dollars. Based on experience to date, at least two thirds of these expenditures would accrue to the surrounding region and support the local economy.

A producing mine is the objective of every exploration project and establishing new mines is a provincial government objective.

-) A producing mine would be significant to the local economy and taxation base. While the actual characteristics of the potential production phase could differ from this, benchmarking of other gold mining projects across the province suggest that the employment created would represent a >10% increase in the current total primary and manufacturing industry employment level in the Red Lake / Ear Falls region. The Project also presents employment and contracting opportunities for local First Nation communities.
-) The provincial and federal governments would be principal beneficiaries, through new revenues generated through employee income taxes and other employee-related government-mandated contributions (*e.g.* to Canada Pension Plan, Employment Insurance Program, Employee Health Tax and Workplace Safety and Insurance Board). These senior levels of government would also enjoy additional revenues through value-added sales, corporate income, capital and other taxes levied on the corporation.
-) These benefits do not include the voluntary contributions to the local and Indigenous communities that are commonplace with large scale resource development projects once a revenue stream is achieved, consistent with the tenets of modern corporate social responsibility.

Ontario recognizes the importance of mineral development opportunities to northern Ontario, as summarized in Section 1.

The Project represents a significant economic opportunity that, if developed, would create well-paying, long-term employment opportunities in the region, positively contributing to the local economy, community and government tax base.

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 Sioux Lookout.

During the EA, consultation and approvals process for the on-going preliminary exploration work, GCU and then FMG received a great deal of interest in the employment and contracting opportunities associated with future potential phases of the Project. This document is intended to start providing greater clarity regarding these opportunities based on the information that is currently available from the PEA and from a preliminary benchmarking of similar mining projects.

Pending feedback regarding the Project and contingent on improved confidence in the economic viability of the Project, FMG would seek to implement a process similar to the one outlined below to help local communities prepare for employment opportunities associated with the Project.

1. Identify opportunities at the Project to potential workers and interested parties through a simple job and contract registry.
2. Identify potential funding sources for potential workers to attend educational institutions.
3. Potential workers obtain training and attend educational institutions.
4. Potential workers obtain experience (co-op placements, summer jobs, etc.).
5. Potential workers become qualified and equipped to compete for desired position.

5.1.12 Archaeological and Cultural Heritage Resources

Assessment work led by a licensed professional archaeologist (Horizon Archaeology), and completed in accordance with the guidelines from the MTCS, has identified archaeological sites in the Project Area. Large setbacks from these sensitive sites have been maintained in the base case general arrangement in Figure 3-2. 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.

The identification and protection of Indigenous values and sensitive sites has been a priority for GCU and now FMG. In addition to maintaining an open-door policy and providing regular notice and updates regarding its activities, extensive, collaborative assessment work was completed in 2012 and is summarized below.

-) GCU hired technicians from Cat Lake, Slate Falls and Lac Seul First Nations to participate alongside the licensed professional archaeologists from Horizon to complete the archaeological assessment of the eastern corridor and general area north of Springpole Arm.
-) Dr. David Slattery from Horizon Archaeology conducted Open House information sessions in the Protocol Nation communities in May to solicit feedback on Traditional Knowledge for the archaeological survey.
-) In the Stage 1 assessment one technician participated in the visual documentation of most of the study area.

-) In Stages 2 and 3, the technicians were involved in a hands-on assessment of the locations identified as having archaeological potential, and were responsible for finding a significant portion of the artifacts discovered. These technicians served as liaisons to their communities and participated in the Open House information session conducted in Cat Lake First Nation in June 2012.
-) Archaeologically significant sites were identified in the vicinity of the Birch River crossing and also south of Dole Lake. These findings were presented by Dr. David Slattery of Horizon via open-house style information sessions to the communities of Cat Lake First Nation on 27 June 2012 and to Slate Falls and Lac Seul First Nations on 30 July 2012.
-) On 7 August 2012, the Chiefs of the STPN consented to the Stage 3 archaeological assessment work for both of these archaeological sites. Horizon completed the Stage 3 work for both of these sites with support from the Indigenous technicians.
-) After the Stage 3 assessment was completed, to better define the spatial extent of these archaeological sites, GCU then modified the Access Corridor to avoid these sensitive sites.

GCU, and now FMG, has developed a Chance Find Procedure and has integrated it into the site-specific orientation that all site personnel receive prior to commencing work.

5.2 Potential Changes Related to Federal Legislation

Baseline environmental and archaeological studies are critical to the planning and permitting phase of the Project. FMG and its consultants intend to scope and conduct these studies in collaboration with First Nations and interested parties. As well, FMG intends to continue to employ technicians from local First Nations to complete any supplemental baseline and archaeological field programs.

Supplemental baseline studies, predictive modeling and effects assessment will commence in 2018 to better characterize the existing environment in the Project Area and support the overall issue scoping for the federal and provincial EA processes.

5.2.1 Fish and Fish Habitat (Fisheries Act)

The base case Project requires the removal of small water bodies within the TMF and waste rock pile footprints, as well as the temporary dewatering of the north basin of Springpole Lake during the operational phase of the Project.

North Basin of Springpole Lake (refer to Figures 3-1 and 5-1)

The north basin of Springpole Lake is good quality fish habitat that supports lake trout, walleye, northern pike and other cool and coldwater 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, coldwater 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 coldwater 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 5-6.

Small Unnamed Waterbodies (refer to Image 5-5)

Due to the volume of waste rock and tailings associated with the Project, it will ultimately be necessary to overprint some small waterbodies. The physical characteristics of these small waterbodies are summarized in Table 5-5.

Table 5-5: Summary of Affected Waterbodies in Project Site

Affected Lake / Pond	Surface Area (m ²)	Volume (m ³)	Average Depth (m)	Figure / 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	3-1 and 5-1	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	Image 5-5	Permanent (overprinted by waste rock facility)	Section 36 and Schedule 2 of MMER
L-6 ⁽¹⁾	27,947	25,395	0.9	Image 5-5		
L-10	114,865	146,376	1.3	Image 5-5	Permanent (overprinted by tailings management facility)	Section 36 and Schedule 2 of MMER
L-11	173,359	66,486	0.4	Image 5-5		
L-12	8,257	21,832	2.6	Image 5-5		
L-13	25,332	32,936	1.3	Image 5-5		
L-14	70,786	40,614	0.6	Image 5-5		

(1) As indicated in Table 5-2, no fish caught during 2017 field work

Small Tributary Watercourses (refer to Image 5-6)

The TMF will overprint portions of streams 9, 25, 26, and 27 and potentially a small portion of Stream 29. Stream 25 is ephemeral and it is likely that the upper reaches of Stream 26 are ephemeral as well. Streams 9, 27 and 29 are low gradient watercourses with active and/or abandoned beaver dams and all three (3) appear to have permanent flow. Substrates are fine with the exception of the lower portion of Stream 9 which has areas of cobble and boulder substrate. In total, approximately 5,000 m of streams will be overprinted by the TMF and waste rock pile. Field data from the assessed small watercourses shown in Image 5-6 continue to be reviewed and will be described during the EA process.

In total, 11 fish species have been captured in the lower reaches of Stream 9 including young-of-the-year Northern Pike. No fish sampling has been conducted in Stream 25, as it is usually dry. White Sucker and Finescale Dace have been captured in Stream 26. Yellow Perch and Blacknose Shiner have been captured in Stream 27.

The waste rock pile will overprint pond 6, which is small, shallow and based on the fact that no fish have been captured despite considerable sampling effort, fishless. Although base mapping shows a watercourse joining Lakes 6 and 16, there is no defined channel present.

Potential Fishery Offset Measures

FMG is evaluating potential fishery offset measures, including guidance in the 2013 DFO document titled *Fisheries Productivity Investment Policy: A Proponent's Guide to Offsetting*. This document provides direction, along with publications by DFO's Canadian Science Advisory Secretariat, on developing out-of-kind offsetting measures using equivalency analyses such as the habitat suitability indices used for fishery offsets for other mine projects in northwestern Ontario.

As the DFO policy states "It can be more complicated to measure and compare losses caused by the project with offsetting gains when an out-of-kind approach is adopted, but in some cases greater productivity gains may be achieved through this approach." The DFO policy allows the use of complementary measures in the fishery offset, such as investments in data collection and scientific research related to maintaining or enhancing the productivity of recreational fisheries. FMG intends to explore potential collaborations with other parties and the use of complementary measures in the fishery offset. FMG is also evaluating MNRF policy as it relates to lake trout lakes.

Fish habitat creation opportunities that are being evaluated are listed below.

-) Creation of littoral and epilimnetic habitat through excavation of land areas surrounding existing watercourses (i.e. extraction of aggregate below the water table in selected areas). Low lying aggregate deposits have been identified and are shown in Figure 3-2. Conceptual details of these areas after they are mined out and modified to be fish habitat are provided in Figure 3-3. Note the surface area of these areas of potential new habitat surpass the surface areas of the small water bodies that would be removed by the TMF and waste rock piles.
-) Creation of hypolimnetic habitat in the west and/or east basins of Springpole Lake (refer to Figure 5-4) by dredging.
-) Creation of spawning shoals when coffer dams are decommissioned.
-) Creation of habitat in starter pit and improving connectedness of fish habitat in the Project Area.

The creation of littoral and epilimnetic habitat would offset the isolation and draining of this type of habitat that is in the north basin and its alteration. Fill material will be required in order to construct the coffer dams necessary to isolate the north basin of Springpole Lake and it is proposed that the source areas be selected, excavated and managed in a way that creates productive littoral zone and epilimnetic habitat. Additional shallow-water habitats (potentially spawning shoals) could be created during coffer

dam construction or decommissioning, FMG plans to evaluate this further.

Dredging to increase the hypolimnetic volume in Springpole Lake would be considered to offset the isolation and draining of the deep habitat in the north basin and its alteration. The dredging would remove soft sediment/overburden and increase the volume of water below the thermocline creating additional cold, well-oxygenated summer habitat.

Note that any proposal is planned to be refined based on consultation and outreach with First Nations, local remote tourism industry, public stakeholders and regulatory agencies.

It is noted that fishery offset would be required pursuant to Section 35 of the *Fisheries Act* and also Section 2 of MMER. FMG intends to advance discussions with DFO and ECCC to define a base case fishery offset that complies with *Fisheries Act* policies that it can take to First Nations and stakeholders for comment. Based on preliminary feedback to date, stakeholders need to understand the fishery offset package as part of the EA decision making process. Stakeholders need clarity on the fishery offset package as this will affect their decision whether to support the Project. Should the fishery offset, as maybe amended, be regarded as acceptable at the end of the consultation process, stakeholders want the details of the fishery offset to be a clear, enforceable commitment that emerges from the EA and permitting process.

5.2.2 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 SARA. 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.

Terrestrial SAR are described in Section 5.1.10.

5.2.3 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.

- J Mitigation measures would be implemented in a multi-species context as necessary. Mitigation measures would be implemented with input from MNR and in accordance with any permits that may be issued pursuant to the *Endangered Species Act*.

5.3 Potential Environmental Effects to the Biophysical Environment

Table 5-6 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 5-6 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 5-6 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 5-6 based on a hypothetical scenario in which no mitigation or environmental management planning is applied. Table 5-6 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 5-6 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 5-6 where applicable and generally discussed in Section 6.4.

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 5-6 also includes key information on the concerns associated with greenhouse gas emissions and potential transboundary issues that need to be considered in the EA. As stated above, supplemental baseline studies and modeling will be initiated in 2018 to support the assessment of potential adverse environmental effects on the atmospheric environment which will include greenhouse gas emissions as well as noise and atmospheric emissions.

To supplement Table 5-6, Table 5-10 in Appendix 4 provides a preliminary environment interaction matrix. Tables 5-11 and 5-12 are preliminary interaction matrices for each phase of the Project and are included in Appendix 4.

5.4 Financial Support

There is no financial support being provided to the Project by any federal authorities at the present time.

Table 5-6: 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">)] The Project has potential to adversely affect fish if Project-related hydrological and/or hydrogeological changes affect the quality or quantity of fish habitat.)] 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.)] 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.)] Alterations to stream channels have potential to cause injury or mortality to fish, as well as to affect fish mobility and fish habitat.)] If any blasting occurs near fish-bearing waters, vibration from the detonation of explosives have potential to cause injury or mortality to fish.)] 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:)] Injury, mortality, and/or reduced health for fish. 	<ul style="list-style-type: none">)] Design for limitation of construction footprint to the extent practical to minimize loss of fish habitat and disturbance of riparian areas.)] 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 o maintenance of adequate channel slope)] Design for avoidance of in-water work during applicable DFO and MNRF restricted activity timing windows.)] 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.)] 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.)] 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.)] 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.)] 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.)] 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)] 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).)] 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)] 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">)] 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.)] 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

			<p> <ul style="list-style-type: none"> J Reduced availability and quality of fish habitat (including water quality). 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>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 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>	<p>toxicity outside the mixing zone, and will meet applicable federal and provincial guidelines outside the mixing zone.</p> <ul style="list-style-type: none"> J Design for pipeline intake and outlet structures to prevent entrainment or impingement of fish and to prevent scour erosion. J Design for water intake structures in accordance with DFO’s <i>Freshwater Intake End-of-Pipe Fish Screen Guideline</i> (DFO 1995). J Design for limitation of access to waterbodies and banks to protect riparian vegetation and limit bank erosion. 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). 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. J Plan for maintenance of equipment to be used in water in a clean condition, free of fluid leaks and aquatic invasive species 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 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. 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. J Plan for implementation of any additional mitigation measures outlined for the Surface Water VC. J Design for detoxification of cyanide (used to process the ore and extract gold) in effluent prior to discharge to TMF. J Minimize Project footprint; avoid permanent waterbodies to the extent practical and implement fishery offsetting plan where this is not practical. 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>environment on the Fish and Fish Habitat VC and Surface Water VC.</p> <ul style="list-style-type: none"> 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.
--	--	--	--	---	--

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 behavioural 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"> J 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. J 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. J 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. J 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 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)(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"> J 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. J 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. 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 the Atmospheric Environment VC and Surface Water VC. J 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 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. 	
--	--	--	--	--	--

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 licence, 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

5.5 Potential Effects on Indigenous Peoples

Section 12(e) of the regulations for “*Prescribed Information for the Description of a Designated Project*” address federal interests in “*the project’s proximity to reserves, traditional territories as well as lands and resources currently used for traditional purposes by Indigenous peoples*”. Land, water and resource use activities are an important and integral part of the culture and lifestyles of many Indigenous people and these can be affected by development of the Project both directly and indirectly.

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.

Distances from the existing 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

FMG will fully consider the concerns and issues associated with potential adverse environmental effects, as appropriate, to the Indigenous Peoples in terms of proximity, historic resources, land and resource use, physical and social effects (including health) on their communities, as well as economy, employment, cultural heritage and business in the Project are, in the EA process.

Potential adverse environmental effects on Indigenous peoples use of the area near the Project, as a result of changes to the environment due to Project activities, could include, but not necessarily be limited to, the items listed below. This list has been generated based on feedback that was received during previous engagement regarding exploration permitting and the provincial class EA for the Access Corridor (refer to Section 6.1).

-) Possible loss of habitat used by ungulate species which are a traditional food source for Indigenous peoples.
-) Potential loss of habitat used by fish which are a traditional food source for Indigenous peoples.
-) Potential loss of access to country foods due to Project related access restrictions.
-) Potential loss of cultural heritage resources due to direct or indirect Project activities.
-) Loss of traditional portage route from Birch Lake to Springpole Lake.
-) Habitat loss for furbearers along registered trap line that hosts the Project footprint.
-) Increased competition for traditional food supplies due to influx of new residents and/or temporary workers to the region.
-) Increased housing prices due to influx of new residents and/or temporary workers to the region.

FMG has prepared a working draft Indigenous consultation plan that is summarized in Section 6.1 and will continue to meet with Indigenous groups to provide information on the planned Project to gather appropriate information on the biophysical and social environment, to obtain feedback, and to document their interests and concerns. As appropriate to support the EA, baseline studies will be undertaken to collect information regarding Indigenous Peoples in terms of socio-economic conditions, land use, and heritage and historic resources. Baseline information will be collected through meetings with Indigenous groups and governments, information available from published sources (e.g. Statistics Canada; Indigenous and Northern Affairs Canada, federal Indigenous and Treaty Rights Information System, Provincial Archaeology Office) and primary data collection in the field.

5.5.1 Currently Known Uses and Future Access Restrictions

Refer to Section 6.1.

5.5.2 Assessment of Potential Downstream Effects

This section discusses effluent dilution and the location at which the effluent plume would no longer be detected. This analysis is provided to demonstrate the limited potential for effects on traditional territories that are downstream of the Project and Springpole Lake.

-) Surplus water from the Project will be discharged to Springpole Lake at an estimated rate of 10,500 m³/day during a low flow condition, this is the estimated groundwater seepage into the open pit (SRK, 2017) and does not consider water that is lost to pore spaces in deposited tailings. The water in the lake is expected to meet the PWQO a short distance away from the discharge location, this will be a condition of the Environmental Compliance Approval from MOECC and consistent with MOECC policy regarding receiver-based effluent criteria described in MOE (1994A) and MOE (1994B).
-) The discharge volume was compared to the mean annual flow and 7 day average low flow with a 20 year return period (7Q20) at the outlet of Springpole Lake and three (3) other downstream locations. The volume of discharge was expressed as a percentage of the mean annual and 7Q20 flow at each location, as summarized in Table 5-7.
-) The mean annual flow and seven day 20 year low flow (7Q20) were estimated for the Cat River below Wesleyan Lake Water Survey of Canada ("WSC") station using the long-term data record (48 years). Data from three (3) WSC stations in the region, with similarly sized catchments, were used to estimate the mean annual and 7Q20 flow at the outlet of Springpole Lake, on the Cat River at the outlet of Fawcett Lake and on the Cat River at the outlet of Bamaji Lake on the basis of drainage area.

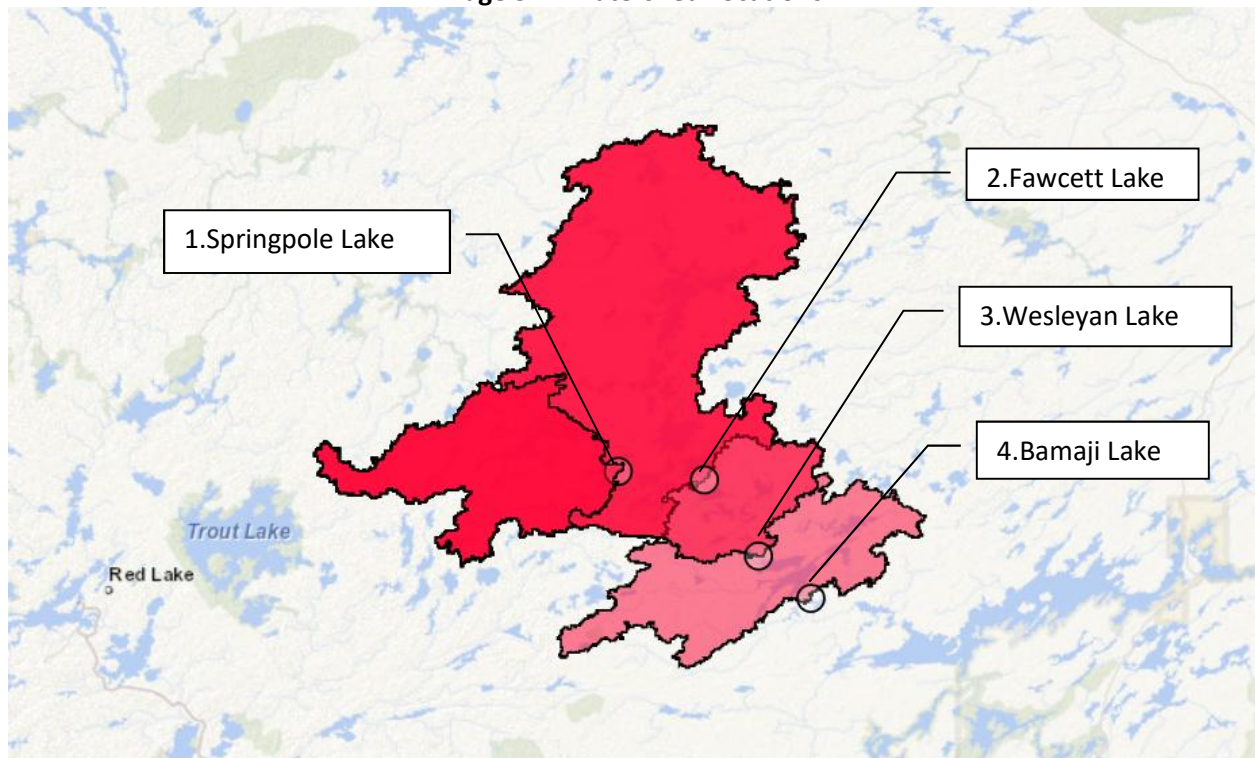
The results of the analysis are summarized in Table 5-7.

Table 5-7: Summary of Effluent Dilution Scenarios

Watershed	Drainage Area (km ²)	Mean Annual Flow (m ³ /day)	Discharge Water as a Percentage of Mean Annual Flow	7Q20 Low Flow (m ³ /day)	Discharge Water as a Percentage of 7Q20 Low Flow
1. Birch River at Springpole Lake Outlet	1,367	1,085,290	1.0%	223,096	4.7%
2. Cat River at outlet of Fawcett Lake	4,753	3,747,499	0.3%	739,187	1.4%
3. Cat River below Wesleyan Lake (WSC station)	5,390	4,140,420	0.3%	910,656	1.2%
4. Cat River at outlet of Bamaji Lake	6,747	5,315,261	0.2%	1,049,293	1.0%

The daily discharge of 10,500 m³/day is estimated to be 1% of the flow at the outlet of Springpole Lake during mean annual flow conditions and up to 4.7% during 7Q20 flow conditions. The daily discharge will be less than 1% during mean annual flow conditions at all other points downstream. Under 7Q20 flow conditions, the daily discharge will be less than 1% of the flow on the Cat River downstream of the outlet of Bamaji Lake. The locations described in Table 5-7 are shown in Image 5-7.

Image 5-7: Watershed Locations



5.6 Environmental Management and Protection

This section describes the general approach to protect the environment and minimize impacts.

5.6.1 Protection of Sensitive Sites

It is FMG's intention to continue on-going refinements to a values map to show the location of any biological, archaeological and cultural-heritage values so that these areas can be protected during the current exploration work and also during future potential phases of the Project. The archaeological and biological assessment work to date has resulted in the creation of a working draft constraints map that is reflected in the preliminary Project arrangement in Figure 3-2A.

With participation of First Nation technicians (Cat Lake, Slate Falls, Lac Seul), DST initiated a desktop review and on-going field campaign that commenced to identify biological values in the vicinity of the Project Site that warrant consideration and may pose a constraint to future potential development activities. Woodland caribou have been identified as the SAR that is of most concern.

5.6.2 Environmental Design Basis

Preliminary environmental design criteria will be developed for Project features that have the potential to release pollutants to air, water and land. Strategies to be included in the environmental design basis include, but are not necessarily limited to, those listed below.

) Emissions to Air

- Strategic positioning and abatement for noise sources that include, but are not necessarily limited to fans, compressors, generators, crushers, pneumatic transfer systems and mobile equipment.
- Strategic positioning and abatement for point sources and non-point sources of air emissions.
- Strategic positioning of light sources to minimize light pollution.

) Emissions to Water

- Mine and process water management system and associated management system for residuals from the water treatment process.
- Domestic sewage management systems for black water and grey water.
- Management system for wastewater from equipment wash bays, surface shops and service buildings.
- Management system for runoff from areas of site where precipitation and snowmelt have contacted ore and/or waste rock.
- Management system for runoff from areas of site where precipitation and snowmelt have not contacted ore and/or waste rock.
- Situate the Project footprint within the Springpole Lake watershed and avoid siting infrastructure in the Birch Lake watershed.

) Emissions to Land

- Ore management system, including provisions to minimize spillage and trackout.
- Waste rock management system, including provisions to minimize spillage and trackout.
- Solid and liquid waste management system.
- Petroleum products management system.
- Spill prevention and response system

In addition to above noted engineered Project features, FMG will develop robust monitoring programs and proactive adaptive management plans to mitigate environmental impacts that are identified by the monitoring program.

5.6.3 Environmental, Health and Safety Management System

FMG will develop a comprehensive environmental, health and safety (“EHS”) management system to address the EHS needs of the Project based on the results of the Environmental Impact Statement. The range of plans and programs comprising the EHS Management System may include but are not limited to the measures listed below.

-) Environmental Protection Plan – addressing environmental protection and pollution prevention practices;
-) Emergency Response and Contingency Plan – addressing situations of accidents, malfunctions and unplanned events;
-) Environmental Awareness and Education Plan – addressing worker and visitor needs with respect to species of concern, sensitive areas and sensitive periods for fisheries, wildlife and cultural resources in the Project Area;
-) Community Engagement Plan – addressing information sharing, identification of issues and concerns, and optimizing employment and business benefits;
-) Monitoring and Follow-up Plan – addressing regulatory compliance monitoring requirements with respect to conditions of permits, authorizations and approvals as well as any identified follow-up needed as a result of the EIS findings; and
-) Auditing and Continuous Improvement Plan – addressing overall EHS performance and striving for continuous improvement in EHS matters.

5.7 Project Documents

NI 43-101 technical report and updated PEA by SRK is filed with SEDAR.

5.8 Other Required Environmental Approvals and Permits

FMG intends to voluntarily initiate an individual provincial EA and harmonize it with the federal EA process to the extent practical.

The federal government approvals that are anticipated to be required are listed in Table 5-8.

The provincial government approvals that are anticipated to be required are listed in Table 5-9.

Table 5-8: Required Federal Approvals

Permit/License	Applicable Act	Responsible Agency	Description
Harmful Alteration, Disruption or Destruction of Fish Habitat,	<i>Fisheries Act</i>	Fisheries and Oceans Canada	Based on sensitivity analysis of fish and fish habitat authorization may be required for the: <ul style="list-style-type: none"> - Establish of stockpile(s) and tailings storage facility; - In water structures such as for fresh water taking; - Watercourse diversions if applicable; and - Mine dewatering groundwater effects that would cause fish disruption to watercourses supporting fisheries.
Works in Navigable Waters	<i>Navigation Protection Act (formerly Navigable Waters Protection Act)</i>	Transport Canada	Alteration of navigable waters (e.g. coffer dam in Springpole Lake) and crossing of navigable waters with transmission line and access road(s).
Schedule 2 Listing, Metal Mining Effluent Regulation	<i>Fisheries Act</i>	Environment and Climate Change Canada	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 Fisheries Act. Potential areas of impact include tailings storage and waste rock repository.
Manufacturing, storage, and transportation of explosives	<i>Explosives Act</i>	Natural Resources Canada	Any explosives magazine, manufacturing facility, and transportation require a federal permit, pursuant to Section 6 and Section 7. If facility is owned by licensed explosives contractor, permit will be issued to them.
Migratory Birds	<i>Migratory Birds Convention Act</i>	Environment and Climate Change Canada	Prohibition, harm, or disturbance to migratory birds
Transportation of Dangerous Goods	<i>Transportation of Dangerous Goods Act</i>	Transport Canada	Permits of equivalent level of safety.
Species at Risk	<i>Species at Risk Act</i>	Environment and Climate Change Canada	Harm, or disturbance to species as designated under the <i>Species at Risk Act</i> .
Radioisotope License	Nuclear Safety Control Act	Canadian Nuclear Safety Commission	Authorization for Nuclear Density Gauges / X-ray analyzer in process plant

Table 5-9: Required Provincial Approvals

Permit/License	Applicable Act	Responsible Agency	Description
Permit to Take Water	<i>Ontario Water Resources Act</i>	MOECC	Thunder Lake tributaries (Nursery Ponds) fresh water taking
	<i>Ontario Water Resources Act</i>	MOECC	Mine dewatering
	<i>Ontario Water Resources Act</i>	MOECC	Other areas (construction minor takings, dewatering aggregate sources below water table, tailings storage area construction)
	<i>Ontario Water Resources Act</i>	MOECC	Potable Water
Environmental Compliance Approval	<i>Environmental Protection Act</i>	MOECC	Industrial Sewage, including but not limited to mine/mill water treatment discharging into the environment (tailings, pit water, run-off etc.).
	<i>Environmental Protection Act</i>	MOECC	Air/Noise, including but not limited to air emissions and noise, such as mill processes, on-site works, and haul trucks.
	<i>Environmental Protection Act</i>	MOECC	Waste Disposal, for operation of a landfill or waste transfer site
Work Permit/Letter of Authority	<i>Lakes and Rivers Improvement Act, Public Lands Act</i>	MNRF	Access roads and water crossings
	<i>Lakes and Rivers Improvement Act, Public Lands Act</i>	MNRF	Tailings Management Facility
	<i>Lakes and Rivers Improvement Act, Public Lands Act</i>	MNRF	Various
Land Use Permit / Sale of Crown Land / License of Occupation (lake bottom)	<i>Public Lands Act</i>	MNRF	To obtain tenure for long-term facilities on Crown land, such as for a transmission line, or shoreline structures (dock, pumphouse, pipeline). Consultation with MNRF planned regarding shoreline tenure at north end of main pit, given that the shoreline will be mined as part of the main pit Consultation with MNRF planned regarding tenure for lake bottom where main pit is located
Forest Resource License	<i>Crown Forest Sustainability Act</i>	MNRF	Clear merchantable timber (if any).
Authority to Haul	<i>Crown Forest Sustainability Act</i>	MNRF	Hauling of merchantable timber (if any).
SAR Overall Benefits Permit	<i>Endangered Species Act</i>	MNRF	Control of activities related to SAR (barn swallows, caribou, bats etc.) to be fully defined at later date.
Aggregate Resource License	<i>Aggregate Resource Act</i>	MNRF	Extraction of aggregate for construction purposes.
Various Permits	<i>Various</i>	MNRF	Scientific collection permits (including fish collection, and salvage), authorization of wildlife interference.
Entrance Permit and Encroachment Permit	<i>Public Transportation and Highway Improvement Act; Highway Traffic Act</i>	MTO	May not be applicable as no major road upgrades are planned at this time.
Closure Plan	<i>Mining Act</i>	MNDM	For mine construction/production including that related to the eventual decommissioning of the Springpole Gold Project.
Clearance Letter	<i>Heritage Act</i>	MTC	Confirmation that appropriate archeological studies and mitigation, if required have been completed for the Project.

(1) Class EA process would be required pursuant to MNRF (2003) and Ontario Regulation 116/01 (Electricity Projects Regulation), but these will be replaced by the voluntary provincial individual EA

6.0 ENGAGEMENT AND CONSULTATION

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. The previous consultation for the permits and EA processes listed in Table 1-1 has been helpful to identify issues associated with the development of the Project into a mine and this is regarded as a starting point for future discussions. 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.

Consistent with standard industry practice and government information requirements, consultation and engagement efforts will be documented in a dedicated Engagement Log for each community or stakeholder and shared with government agencies as requested, subject to confidentiality agreements. An example Engagement Log is provided below in Table 6-1.

Table 6-1: Engagement Log Example

Engagement & Consultation Activities Log						
Reference number ⁽¹⁾	Nature / type of consultation ⁽²⁾	Date	Email / Phone / fax / Meeting / Letter	Participants	Summary of communication / issues raised	Comments/ follow-up actions

(1) This reference number corresponds to the supporting materials (meeting minutes or notes, presentation materials, attendance sheets, email correspondence, etc.) that are maintained with the Record of Engagement Log.

(2) This is an indication of what the engagement relates to: EA process, discussion regarding a specific issue, closure plan, permit to take water, environmental compliance approval, employment opportunities, procurement and contracting opportunities, non-routine or upset condition, confidential matter, development plans, exploration plans, press release, logistics / scheduling, or other.

6.1 Indigenous Communities

Table 1-1 summarizes previous consultation directions from government agencies and this has consistently included Cat Lake First Nation, Slate Falls First Nation, Lac Seul First Nation, Wabauskang First Nation and the Métis Nation of Ontario. Contact information is provided below in Table 6-2.

Table 6-2: Indigenous Community Contacts

Community	Contact Person	Mailing Address	Telephone Number	E-Mail Address / Website
Cat Lake First Nation	Chief Ernie Wesley	Cat Lake First Nation P.O. Box 81 Cat Lake ON P0V 1J0	(807) 347-2100	http://firstnation.ca/cat-lake
Slate Falls First Nation	Chief Lorraine Crane	48 Lakeview Drive Slate Falls ON P0V 3C0	(807) 737-5700	www.slatefalls.firstnation.ca
Wabauskang First Nation	Chief Joanne Petiquan-Moore	PO Box 418 Ear Falls ON, P0V1T0	(807) 529-3007	http://www.firstnation.ca/wabauskang
Lac Seul First Nation	Chief Clifford Bull	Lac Seul First Nation P.O. Box 100 Hudson ON P0V 1X0	(807) 582-3503	www.lacseulfirstnation.ca
Metis Nation Ontario – Region 1	Carla Koski	Lands, Resources and Consultation Branch 426 Victoria Avenue Fort Frances, Ontario P9A 2C3	(613) 798-1488	www.metisnation.org

Shared Territory Protocol Nations (“STPN”)

GCU engaged the First Nations of Cat Lake, Slate Falls, Lac Seul, who were identified to GCU by the Crown in 2009 as the affected First Nations with respect to the Project Site. GCU and now FMG have reviewed the community based land use plan prepared jointly by Cat Lake and Slate Falls First Nations (Cat Lake First Nation et al., 2011).

On 22 May 2012, Chiefs from these First Nations signed an internal protocol agreement, in which they agreed to work together for the purpose of 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 entered into a Shared Territory Protocol. FMG has committed to engage with these First Nations under the terms of their respective protocols.

6.1.1 Comments and Concerns to Date

FMG is in the process of commencing consultation for the development of the Project. This section summarizes the key comments and concerns to date regarding the development of the Project, based on the historic consultation related to the Access Corridor Project EA process and permits listed in Table 1-1 and also the preliminary meetings held in late 2017. Preliminary engagement to date is described in Table 6-3.

Shared Territory Protocol Nations (Cat Lake, Slate Falls, Lac Seul)

Historic comments from 2013 regarding the Project during the time of GCU’s ownership are provided in Appendix 5 and summarized in Table 6-3. These are regarded as a starting point for FMG to understand issues and concerns regarding the development of the Project. FMG does not have specific details of this engagement (names, dates, means of engagement), but relevant information will be tracked in an Engagement Log going forward.

Wabauskang First Nation

GCU also completed introductory meetings with Wabauskang First Nation. In 2014 GCU co-funded a “Traditional Knowledge and Land Use Study” in the area of the Springpole Gold Access Corridor Project. The study remains the property of Wabauskang First Nation and a copy has been provided to MNDM and MNRF.

Métis Nation of Ontario

MNRF and MNDM directed GCU to consult Métis Nation of Ontario (“MNO”) as part of the EA for the Access Corridor Project that was initiated in 2012. Consultation has periodically been undertaken regarding exploration permits and permits for the Access Corridor. GCU had an introductory meeting with the MNO to provide information about the Project and has provided notification of the project to the Lands and Resources Branch of the MNO. FMG is also committed to providing update meetings on the Project as it progresses.

Table 6-3: 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 	<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">) Interest in training and employment opportunities associated with the road construction and also the operating mine life) 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).

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

6.1.2 Currently Known Traditional Land Uses

The potential environmental effects of the Project on Indigenous communities, including effects on areas of cultural importance or specific uses, will be determined as the Project progresses. FMG anticipates that TK and/or TLU studies will be undertaken by Indigenous communities as a result of the Project.

Currently known traditional land uses in the area of the Project are listed below.

-) Portage route between Birch Lake and Springpole Lake, located immediately West of the Springpole camp location.
-) Use of traditional portages between Springpole and Cromarty Lake as well as Cromarty Lake and Satterly Lake. The portages are used to access and hunt/fish the Birch/Springpole Lakes area including Seagrave Lake, Cromarty/Satterly and the Birch River.
-) Boat/portage access to Springpole Lake at the downstream outlet of the Birch River. This path allows for boat access to this area via Gull/Fawcett Lakes and eventually Cat Lake and Cat Lake First Nation.
-) Snowmobile/canoe route from Springpole Lake to Cat Lake First Nation via Birch Lake.
-) Annual Cat Lake First Nation moose hunt in September. This includes groups of hunters on both Springpole and Birch Lake.
-) Use of trap line that covers the Project Area by a family from Cat Lake First Nation. Family members are in the Springpole area at least twice a year for hunting and fishing.
-) Use of archaeological sites generally presented in Figure 3-2A.

Once the mine site is developed, access to the Project Site would be restricted for safety reasons and would not be available for traditional activities unless special arrangements were made in advance with FMG. The currently planned access restrictions are further described below.

-) The “access road” gatehouse location is shown in Figure 3-2B and will be on mining leases. Only authorized personnel will be allowed past (west) of the gatehouse for safety reasons.
-) Warning signs will be posted along the shoreline of Birch Lake north of the main pit to advise people to not travel into the mine site, and also along the shore of Springpole lake in the vicinity of the effluent pipeline corridor (refer to Figure 3-2A).
-) Using Figure 3-2A for reference purposes, the fencing /signage would extend from the east end of the “site road” westward to the “waste rock pile,” encircle the outer waste rock pile perimeter and then cross the coffer dams and Johnson Island to connect with the start of the fence along the “site road.” This fencing is necessary to keep the public out of the blast radius of the pit and the high traffic areas of the plant site.
-) For safety reasons, FMG would seek that a no hunting zone be established at the approximate outer boundary of the polygon formed by the patents, Phase 1 mining leases and the Phase 2 mining leases, as shown in Figure 3-2B. However, FMG will discuss a process with interested members of the Indigenous community for them to access the Project Area and conduct traditional activities while ensuring the safety of themselves and others.

Regarding access restrictions in addition to FMG’s gatehouse (refer to Figure 3-2B), FMG would abide by access restrictions imposed by MNR through the Trout Lake Forest Management Plan and seek travel permits as required for roads that are deemed private roads in the Forest Management Plan. FMG has no

control over the access restrictions that are controlled by MNRF. FMG also notes the reservations on title to the Crown for the establishment of roads, and would revise the location of the gatehouse as may be reasonable to accommodate new roads required by the Crown.

6.1.3 Indigenous Consultation and Engagement Plan

FMG has developed an Engagement Plan for the Project. The Engagement Plan is a living document and will be reviewed regularly and updated as needed during the life of the Project. The Engagement Plan is discussed further below.

Objectives

The intent of the Engagement Plan is to provide a process for meaningful engagement with Indigenous communities throughout the life of the Project.

Effective and meaningful communication/engagement requires building trust between the Project team and Indigenous communities, enhancing awareness of the Project, and providing flexible consultation opportunities, issues resolution and feedback.

Cornerstone strategies of the Engagement Plan are listed below:

-) understanding the communications needs, capabilities and resources of the community;
-) identifying key community working contacts;
-) involving Indigenous communities early in the Project planning phase;
-) tracking consultation and engagement activities using the Engagement Log (refer to Table 6-1);
-) being open and transparent;
-) providing clear, concise and relevant information;
-) focusing timing of engagement and consultation activities at key information collection milestones and decision milestones;
-) demonstrating how ideas/issues/concerns from previous consultations have or will be addressed;
-) providing flexible communication tools to provide information and receive feedback;
-) evaluating and improving the consultation and engagement program at key milestones to review applicability and success of the Engagement Plan; and
-) adapting the Engagement Plan to the changing needs of communities.

Communications Overview

FMG will be responsible for tracking communications through an Engagement Log & Stakeholder Database to document the on-going dialogue. Information to be collected is listed below:

-) time and date of inquiry;
-) method of inquiry (for example via email, regular mail, telephone call, website, etc.);
-) name of person making inquiry;
-) name of person receiving inquiry;
-) nature of issue, concern or comment;
-) FMG response; and
-) follow-up (if required).

Key Communication Tools

Communication tools will be utilized during the life of the Project are listed below:

-) Project notices published in local newspapers;
-) Direct mailings to communities;
-) Public Information Centres (Open House - presentation board format);
-) Public Information Centre comment forms;
-) Project website;
-) Focussed e-mails;
-) One-on-one meetings, presentations, e-mails and phone conversations with stakeholders;
-) newsletters and/or Frequently Asked Questions; and
-) Environmental Monitors and/or Liaisons.

Key Engagement Activities for Indigenous Communities

-) Contact lists: A contact list of all Indigenous communities participating in the Project will be maintained throughout the duration of the Project.
-) Issues Scoping Meetings: FMG is undertaking ongoing meetings with communities throughout the development of the Project.
-) Engagement in Baseline Studies: GCU, and now FMG, have engaged technicians from the STPNs to supplement field teams in collecting environmental and archaeological baseline information. A key role of the Environmental Monitor is to help communicate environmental findings to the communities during open houses.
-) Project Committees: FMG is considering a Project committee to facilitate discussions with the communities. Possible terms of reference for the committee may include traditional knowledge, environment, employment and contracting opportunities, mitigating identified issues, as well as education and training. The decisions to form committees and determine potential focus of discussions will be determined with the communities as the Project progresses.
-) Engagement in TK/TLU Studies: TK/TLU studies will be facilitated by each respective community Environmental Monitor in each community.
-) Public Information Centres (Open Houses): FMG-organized Open Houses will be held within each First Nation community, as appropriate. Open houses for MNO will be held at appropriate venue(s) in locations to be determined in collaboration with the communities. These would be in addition to any community-organized open houses that FMG would participate in.
 - o Event #1 is anticipated following the development of the Project Description. This event will provide an overview of the Project, studies to be undertaken and the EA processes to be followed.
 - o Event #2 is anticipated to occur once preliminary results of the baseline studies, effects assessment and proposed mitigation measures are available. It will also provide an overarching summary of the Project and the processes followed (including outlining other permits and approvals). Notices will be advertised and mailed directly to communities at least two (2) weeks prior to the open house event.
-) Notice and Radio Announcements: Notices associated with the Open Houses and EA process (commencement/submission) will be advertised in local newspapers (that have general circulation in the Indigenous community if available). Radio announcements of specific community events will also be aired as appropriate.

- J Circulation of Draft Documents (environmental baseline reports and EA): FMG will circulate copies of draft documents for review and comment. Where possible, these documents will be provided to Indigenous communities prior to public release. FMG will work with communities to determine appropriate timelines. FMG will review and gather feedback on results of baseline studies, evaluation and selection of alternatives, potential effects and mitigation measures and closure planning.
- J General Meetings/Presentation: FMG will continue to undertake face-to-face meetings/presentations with communities and/or Chief and Council, as appropriate, through the EA and ultimately construction, operation and closure of the Project.
- J Newsletter: Newsletters will be developed by FMG at key Project milestones and will be circulated electronically and made available on the Project website.
- J Project Website: FMG will maintain a Project website throughout the duration of the Project.
- J Open Door Policy: FMG will be equipped to receive input via email, telephone, regular mail or in person at its office in Sioux Lookout or Toronto.

6.2 Public Stakeholders

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.

A list of potentially affected stakeholders is provided in Appendix 3. Additional stakeholders may be identified as the Project progresses.

6.2.1 Comments and Concerns to Date

Based on GCU records from the consultation that was completed for the access road class EA, the issues and concerns that have been identified to date during the exploration phase consultation are summarized below. Although these concerns were identified during an EA for an access road corridor, they are helpful to scope issues for the mine EA. FMG does not have detailed records from this consultation to provide herein.

- J Project proponent needs a good neighbour policy.
- J Impacts on outfitters and their employees due to loss of remoteness value.
- J Environmental degradation and water quality.
- J Width of access corridor and effect on viewscape.
- J Avoid creating new access to remote lakes.
- J Noise from road building.
- J Traffic volume & timing.
- J Opportunities for working together.
- J Social issues created in Cat Lake First Nation as a result of all-weather access road to their community (drug smuggling).
- J Noise and light pollution from the work site disturbs fishing outpost guests.
- J Impacts to fish habitat, particularly in the vicinity of the Birch River crossing.
- J Impact to water quality in Springpole and Birch Lakes during exploration and mining phases of the Project.
- J Increased access to the area resulting in increased break-ins and vandalism of remote cabins;

-) Impacts to caribou and their habitat.
-) Increased angling pressure on Springpole Lake due to Project personnel.

Based on GCU records, the supportive comments regarding the development of a mine received to date during the exploration phase consultation are summarized below:

-) No opposition to the Project as long as no outfitters are unreasonably impacted.
-) Project would be good for economy in the region and would create more of a tax base.
-) Commitment to a net overall benefit for the environmental and biological values in the region is acknowledged.
-) A land-based access corridor would provide improved safety for workers accessing the Springpole Gold Project.
-) Stakeholders want to see the Springpole Gold Project proceed, which would be good for the local area.
-) One route servicing two (2) industries (mining and forestry) is an efficient and effective way to reduce potential cumulative impact in this area.
-) The proposed access road is in a good location and will be good for the area.
-) The proposed road corridor is located well for Cat Lake in relation to their future construction of an all-weather road.
-) Interest in job opportunities at the Springpole Gold Project.

6.2.2 Public Consultation and Engagement Plan

The intent of the Engagement Plan is to provide a process for meaningful engagement with stakeholders for the life of the Project. FMG's objectives, strategies and communication tools are listed in Section 6.1.3.

Key Engagement Activities

-) Contact lists: A contact list of all Project stakeholders will be maintained throughout the duration of the Project.
-) Issues Scoping Meetings: FMG is undertaking ongoing meetings with communities throughout the development of the Project.
-) Project Committees: FMG is considering a Project committee to facilitate discussions with interested stakeholders.
-) Public Information Centres (Open Houses): FMG-organized Open Houses will be held in Ear Falls and Sioux Lookout.
 - o Event #1 is anticipated following the development of the Project Description. This event will provide an overview of the Project, studies to be undertaken and the EA processes to be followed.
 - o Event #2 is anticipated to occur once preliminary results of the baseline studies, effects assessment and proposed mitigation measures are available. It will also provide an overarching summary of the Project and the processes followed (including outlining other permits and approvals). Notices will be provided at least two (2) weeks prior to the open house event.
-) Notice and Radio Announcements: Notices associated with the Open Houses and EA process (commencement/submission) will be advertised in local newspapers. Radio announcements of specific community events will also be aired as appropriate.

-) Circulation of Draft Documents (environmental baseline reports and EA): FMG will circulate copies of draft documents for review and comment to interested stakeholders. FMG will review and gather feedback on results of baseline studies, evaluation and selection of alternatives, potential effects and mitigation measures and closure planning.
-) General Meetings/Presentation: FMG will continue to undertake face-to-face meetings/presentations with stakeholders, as appropriate, through the EA and ultimately construction, operation and closure of the Project.
-) Newsletter: Newsletters will be developed by FMG at key Project milestones and will be circulated electronically and made available on the Project website.
-) Project Website: FMG will maintain a Project website throughout the duration of the Project.
-) Open Door Policy: FMG will be equipped to receive input via email, telephone, regular mail or in person at its office in Sioux Lookout or Toronto.

6.3 Government Agencies

Consultation was initiated with government agencies regarding the Access Corridor Project in Q1 2012 and this continued until it concluded in 2014. Consultation is in progress with MNRF regarding the permitting process for the Access Corridor. Consultation has periodically been undertaken regarding exploration permits and permits for the Access Corridor, as indicated in Table 1-1.

MNDM has been engaged the purpose of organizing an inter-agency meeting regarding the Springpole Gold Project early in 2018. Following this meeting and the identification of primary contact people at each agency, it is anticipated that regular follow-up meetings with the government review team will be undertaken to provide updates, share information and seek alignment on Project plans.

In the near-term, FMG will endeavor to advance consultation with the below noted government agencies regarding the development of the Project.

Ontario Government:

-) Ministry of Environment and Climate Change
-) Ministry of Natural Resources and Forestry
-) Ministry of Northern Development and Mines
-) Ministry of Transportation
-) Ministry of Energy and Ontario Energy Board
-) Ministry of Tourism and Culture
-) Ontario Energy Board, Hydro One and Independent Electricity System Operator

Federal Government

-) Canadian Environmental Assessment Agency
-) Fisheries and Oceans Canada
-) Environment and Climate Change Canada
-) Transport Canada
-) Natural Resources Canada

Municipal Governments:

-) Ear Falls

-) Sioux Lookout
-) Red Lake
-) Dryden

Consultation with government agencies will be scheduled as early as possible regarding the below noted regulatory processes.

-) Confirm federal EA requirement with the *Canadian Environmental Assessment Agency*.
-) Voluntarily initiate individual provincial EA with MOECC.
-) Advance discussions with DFO and MNR regarding fishery offset required by Section 35 of *Fisheries Act*.
-) Advance discussions with ECCC regarding fishery offset required by Section 36 of *Fisheries Act* (amendment to Schedule 2 of MMER) and the design basis to meet MMER requirements for seepage and runoff collection.
-) Advance discussions with MOECC regarding water management and effluent discharge.
-) Advance discussions with MNR regarding Overall Benefit measures for caribou.
-) Advance discussions with MNDM regarding the leasing of the mining claims that are required to accommodate the Project footprint.
-) Advance discussions with Hydro One and IESO regarding a grid connection.

6.4 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 Valued Components (“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 6-4, 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 5-6 and the interaction matrices in Appendix 4 that identify 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 6-4: 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>

7.0 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 1. It is hoped that an open door policy will identify potential impacts and concerns so that they can be proactively evaluated and resolved. 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. Regarding near-term Project plans, FMG intends to advance the action items listed below.

-) Incorporate any feedback from this document into on-going baseline studies, VC selection, alternatives assessment scoping and preliminary Project planning.
-) Refine volume estimates and engineering details to validate preliminary concepts for sediment, waste rock, tailings and PAG material management.
-) Complete the permitting and construct the winter road to access the Project Site and facilitate on-going work to define and evaluate the Deposit. Evaluate collaboration opportunities with other parties interested in adding to the road network in the region.
-) Identify opportunities for fish habitat improvements.
-) Identify alternative measures to achieve an overall benefit to caribou and caribou habitat.
-) Evaluate energy supply alternatives and potential collaboration opportunities.
-) Engage interested parties about the formation of a stakeholder working group.
-) Refine the economic evaluation of the Project. FMG published an updated PEA in 2017, but a feasibility study will be required for a Production Decision to be made.
-) Commence federal and provincial individual EA processes for the development of the Project. As indicated in Section 1.7, preferred alternatives, site-specific commitments and impact mitigation measures that typically arise from an EA process need to be clearly understood and incorporated into a feasibility study in order for it to be accurate.

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.

8.0 REFERENCES

Agnico-Eagle, 2010: Meadowbank—Project Situation and the Impact in the Community, (PowerPoint Presentation).

Armstrong T., Puritch E., Yassa A., 2006: Technical Report and Resource Estimate on the Springpole Lake Gold Property, Red Lake Mining Division, Northwestern Ontario for Gold Canyon Resources Inc., P & E Mining Consultants.

Barron, K.M., 1996: The Petrological and Metallogenic Significance of the Alkaline Igneous Centre at the Springpole Gold Prospect, Northwestern Ontario: Ph.D. Thesis for Department of Earth Sciences, University of Western Ontario, London, Ontario.

Beanlands, G. and P. Duinker. 1983. An Ecological Framework for Environmental Impact Assessment in Canada. Institute for Resource and Environmental Studies, Dalhousie University. 127 pp.

BHP Diamonds Inc. 1995: NWT Diamonds Project, Project Description, Volume I, Section 2 – Project Description. Issued by BHP. 1995. Available at:
<http://www.monitoringagency.net/LinkClick.aspx?fileticket=OAJ78I26YDQ%3D&tabid=111&mid=580>
(accessed Jan 2013)

BHP Diamonds Inc. 2001: Ekati Diamond Mine, Water Licence N7L2-1616 Amendment to Allow Dewatering of Fox Lake and Subsequent Mining of the Fox Kimberlite Pipe, Information Package, January 2001.

Canadian Council of Resource and Environment Ministers (CCREM), 1987. Canadian Water Quality Guidelines. Task Force on Water Quality Guidelines, Winnipeg MB.

Canadian Council for Ministers for the Environment (CCME), 2007. Canadian Environmental Quality Guidelines, Update 7.0.

Cano, T. and Parker, S. 2007. Characterization of Northwest Region Management Zones: Sport Fish Populations and Exploitation. Ontario Ministry of Natural Resources. Northwest Science and Information, Thunder Bay, Ontario. Technical Report TR-140. 63 p.

Cat Lake First Nation, Slate Falls Nation, and Ontario Ministry of Natural Resources (Cat Lake First Nation et al.), 2011: Cat Lake – Slate Falls Community Based Land Use Plan, “Niigaan Bimaadiziwin” – A Future Life.

COSEWIC 2006. COSEWIC assessment and update status report on the lake sturgeon *Acipenser fulvescens* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 107 pp.

De Beers Canada Inc. 2010: Gahcho Kue Project Environmental Impact Statement, Section 3 – Project Description. Project Number 09-1365-1004. December 2010.

Devaney, J.R., 2001a: Stratigraphy of Epiclastic and Volcaniclastic Facies Units, Northern Birch-Uchi Greenstone belt, Uchi SUBPROVINCE; Ontario Geological Survey, Open File Report 6030, 49p.

Devaney, J.R. 2001b: Sedimentology and Volcanology of Selected Tectonized Stratigraphic Units, Southern Birch-Uchi Greenstone Belt, Uchi Subprovince; Ontario Geological Survey, Open File Report 6031, 47p.

Department of Fisheries and Oceans (DFO), 1995. *Freshwater Intake End-of Pipe Fish Screen Guideline*

Diavik Diamond Mines Inc., 2003: Diavik Constructing the Legacy, the Story of the Construction of the Diavik Diamond Mine, March 2003.

DST Consulting Engineers Inc. (DST), 2013. *Biological Constraints Report for Springpole Gold Access Corridor Project Alternatives Assessment*. Prepared for Gold Canyon Resources Inc.

Dupuit, J., 1863: Etudes Theoriques et Pratiques Sur le Mouvement Des Eaux Dans Les Canaux Decouverts et a Travers les Terrains permeables, 2eme Edition; Dunot, Paris,

Environment Canada. 1982a: Mean Rainfall, Canadian Climate Normals 1951-1980 Volume 3: Precipitation. 1982.

Environment Canada. 1982b: Total Bright Sunshine, Canadian Climate Normals 1951-1980 Volume 7: Bright Sunshine Isolation. 1982.

Environment Canada. 1982c: Calculated Lake Evaporation (mm), Canadian Climate Normals 1951-1980 Volume 9: Soil Temperature, Lake Evaporation, days with....blowing snow, hail, fog, smoke or haze, frost. 1982. Gold Canyon Resources Inc., 2012: Springpole Gold Access Corridor Project: Draft Environmental Study Report, October 2012

Environment Canada, August 1995. *Regionalization of Low-flow Characteristics – Northeastern and Northwestern Ontario*.

Environment Canada, 2009. *Environmental Code of Practice for Metal Mines*.

Goldfarb, R.J., Baker, T., Dube, B., Groves, D.I., Craig, J.R. Hart, Gosselin, P., 2005: Distribution, Character, and Genesis of Gold Deposits in Metamorphic Terranes in Society of Economic Geologists, 100 Hundredth Anniversary Volume 1905-2005, pp. 407-450.

Groves, D.I., Goldfarb, R.J., Gebre-Mariam, M., Hagemann, S.G. and Robert, F. 1998: Orogenic Gold Deposits: a Proposed Classification in the Context of Their Crustal Distribution and Relationship to Other Gold Deposit Types; Ore Geology Reviews, v.13, p.7–27.

Hagemann, S.G. and Cassidy, K.F. 2000: Archean orogenic Lode Gold Deposits; Society of Economic Geologists, Reviews in Economic Geology, v.13, p.9-68.

Hogg, W. D. and Carr, D. A., 1985. Rainfall Frequency Atlas for Canada. Environment Canada, Atmospheric Environment Services, 1985.

MEND, 2009. *Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials*; MEND report 1.20.1, December, 2009.

Ministry of the Environment (MOE), 1994A. *Deriving Receiving Water Based, Point Source Effluent Requirements for Ontario Waters*.

Ministry of Environment (MOE), 1992B. Ontario's Water Quality Development Process. Aquatic Criteria Development Committee. Water Resources Branch. Toronto, Ontario, Ontario. Ministry of the Environment.

Ministry of the Environment (MOE), 1994B. *Water Management: Policies Guidelines Provincial Water Quality Objectives of the Ministry of the Environment and Energy*.

Ministry of the Environment (MOE), 1994C. *Protocol for Conducting a Storm Water Control Study*.

Ministry of the Environment and Energy (MOEE), 1996. Scientific Criteria Document for the Development of a Provincial Water Quality Objective for Cobalt (Stable Isotope).

Ministry of the Environment (MOE), 2005. *PTTW Manual*.

Ministry of the Environment (MOE), 2009. *Procedure for Preparing an Emission Summary and Dispersion Modeling Reports*.

Ministry of the Environment (MOE), 2011A. *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*.

Ministry of the Environment (MOE), 2011B. *Rationale for the Development of Soil and Ground Water Standards for Use at Contaminated Sites in Ontario*.

Ministry of Natural Resources (MNRF), 1988. *Timber Management Guidelines for the Protection of Fish Habitat*.

Ministry of Natural Resources (MNRF), 1995. *Environmental Guidelines for Access Roads and Water Crossings*.

Ministry of Natural Resources (MNRF), 1996. *MNRF Guidelines for Culverts Installed in the Winter*.

Ministry of Natural Resources (MNRF), 1986. Guidelines for Providing Furbearer Habitat in Timber Management.

Ministry of Natural Resources (MNRF), 1996. Forest Management Guidelines for the Provision of Marten Habitat.

Ministry of Natural Resources (MNRF), 2000. Significant Wildlife Habitat Technical Guide.

Ministry of Natural Resources (MNRF), 2003. *A Class Environmental Assessment for MNRF Resource Stewardship and Facility Development Projects.*

Ministry of Natural Resources (MNRF), 2009a. Ontario's Woodland Caribou Conservation Plan.

Ministry of Natural Resources (MNRF), 2009b. Cervid Ecological Framework.

Ministry of Natural Resources (MNRF), 2009c. Ecosites of Ontario.

Ministry of Natural Resources (MNRF), 2010. Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales – Background and Rationale for Direction.

Ministry of Natural Resources (MNRF), 2011. *Ontario Dam Safety Guidelines.*

Ministry of Natural Resources (MNRF), 2012. Interim Policy Guidance for Assessing Development Proposals in the Continuous Distribution for Caribou in Ontario. Draft March 2012.

Robert, F.K., Poulsen, H., Cassidy, K.F., Hodgson, C.J., 2005: Gold Metallogeny of the Superior and Yilgarn Cratons in Society of Economic Geologists, 100 Hundredth Anniversary Volume 1905-2005, pp. 1001-1034.

Saunders, R. and McIntosh A., 2009: Petrographic Analysis of Selected Core Samples, Springpole Property, Ontario. Internal Report, Gold Canyon Resources Inc.

Saunders, R. and McIntosh A., 2010: Petrographic Analysis of Selected Drill Core Samples, Springpole 2010 Winter Core Program. Internal Report, Gold Canyon Resources Inc.

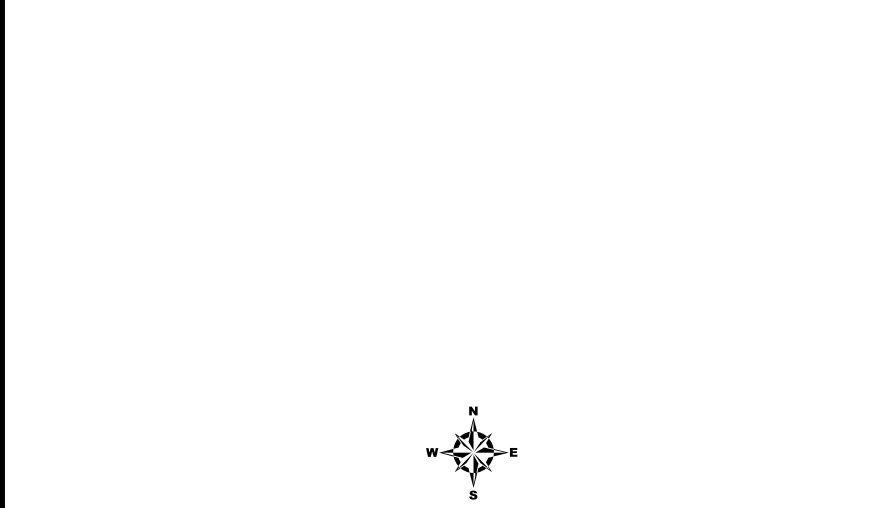
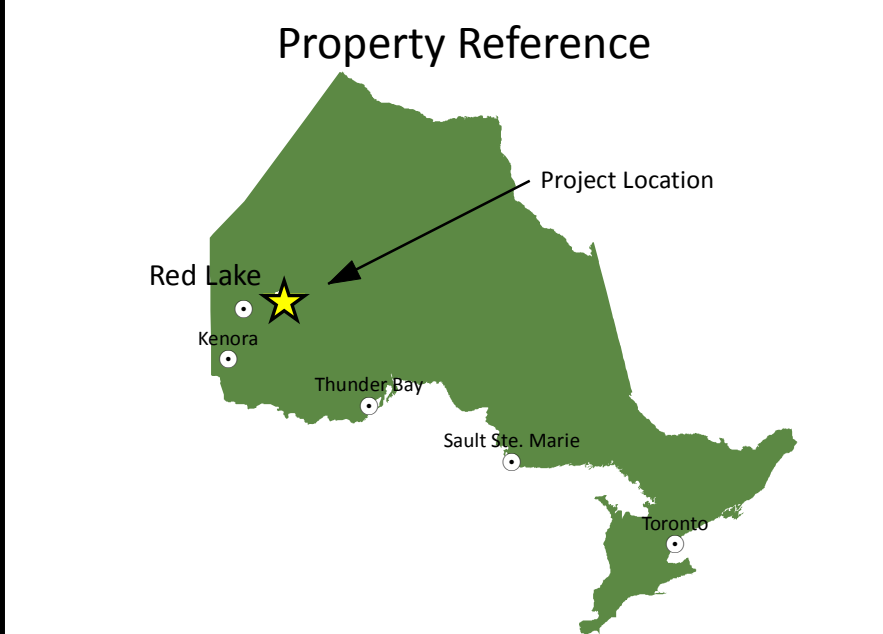
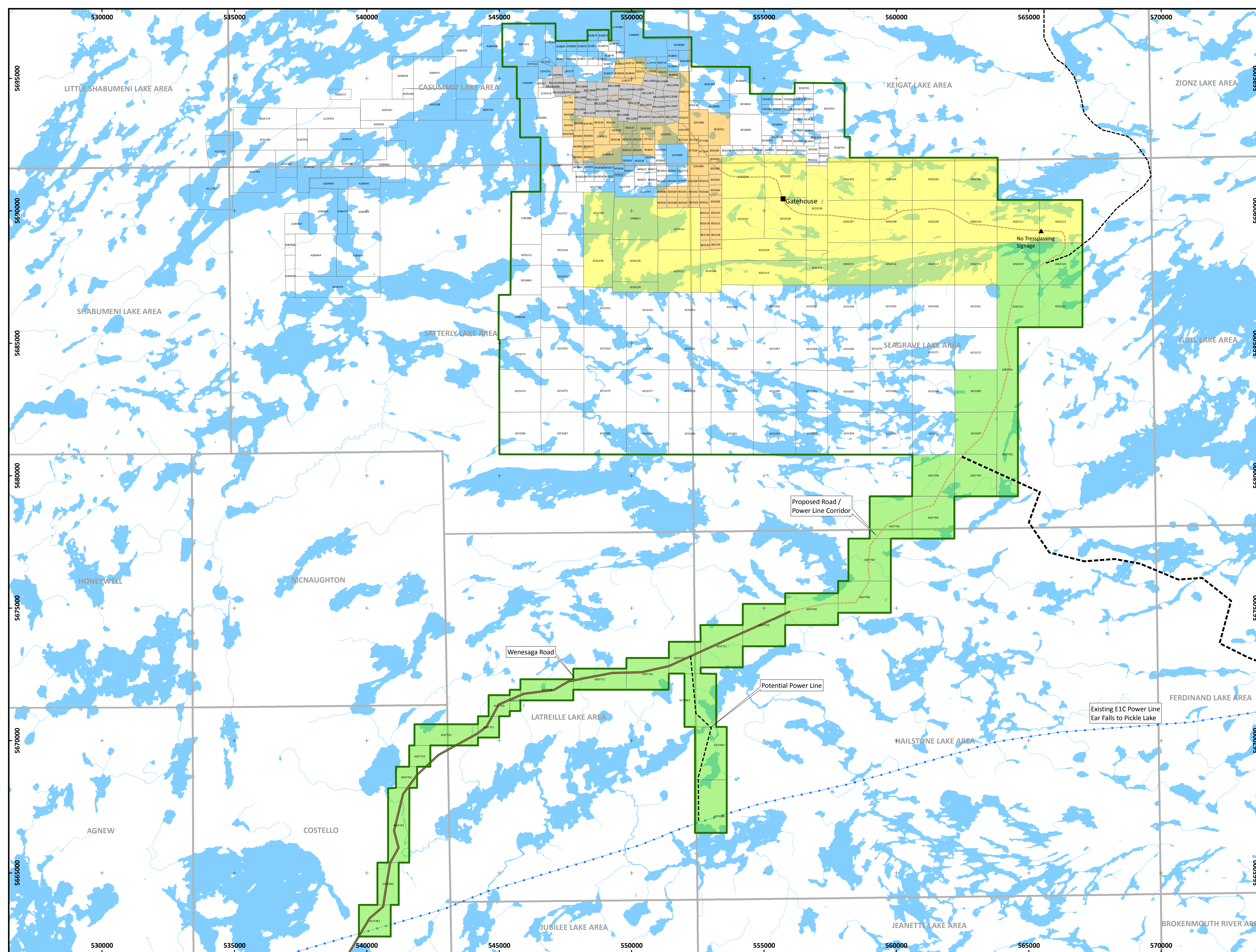
SRK Consulting (Canada) Inc. (SRK), 2013. Preliminary Economic Assessment for the Springpole Gold Project, Ontario, Canada. Report prepared for Gold Canyon Inc. by 183 p + appendices.

SRK Consulting (Canada) Inc. (SRK), 2017. Preliminary Economic Assessment Update for the Springpole Gold Project, Ontario Canada. Prepared for First Mining Finance Corp. 82 p + appendices.


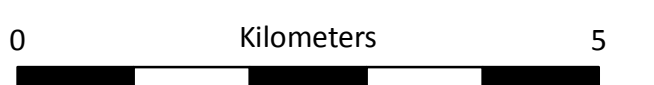
Wright, D. and Hopky, G., 1998. *Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters.* Canadian Technical Report of Fisheries and Aquatic Sciences 2107.

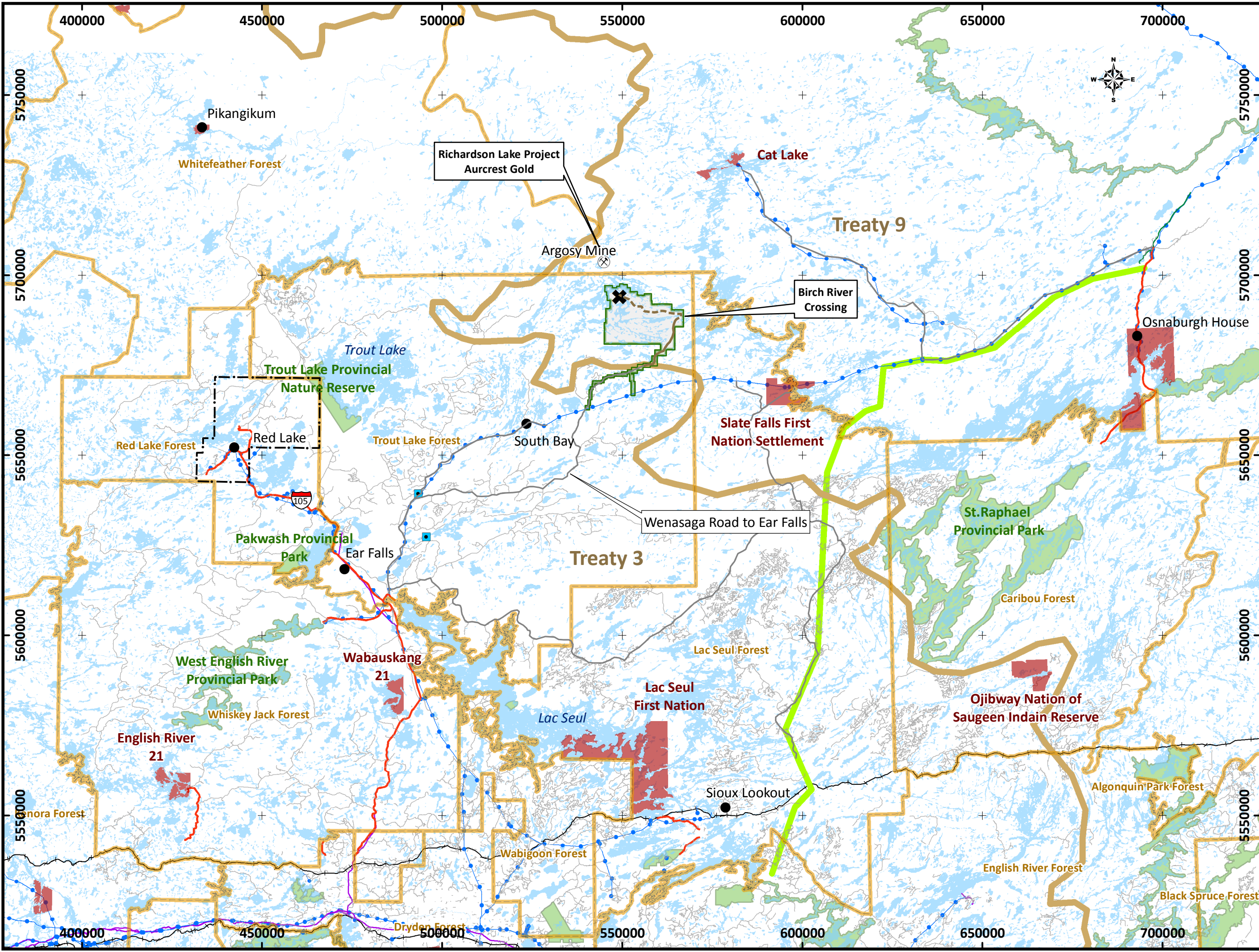
Zabev B., 2004: Technical Report on the Springpole Lake Property, Red Lake Mining Division, NW Ontario for Gold Canyon Resources Inc.

Appendix 1
Figures



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


FIRST MINING GOLD
Springpole Gold Project
 Kenora District, Ontario
Figure 1-1
Land Tenure
 Scale 1 : 65,000 NAD83, UTM zone15 Jan. 2018




Property Reference



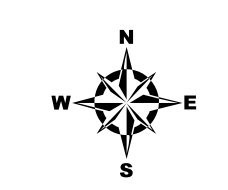
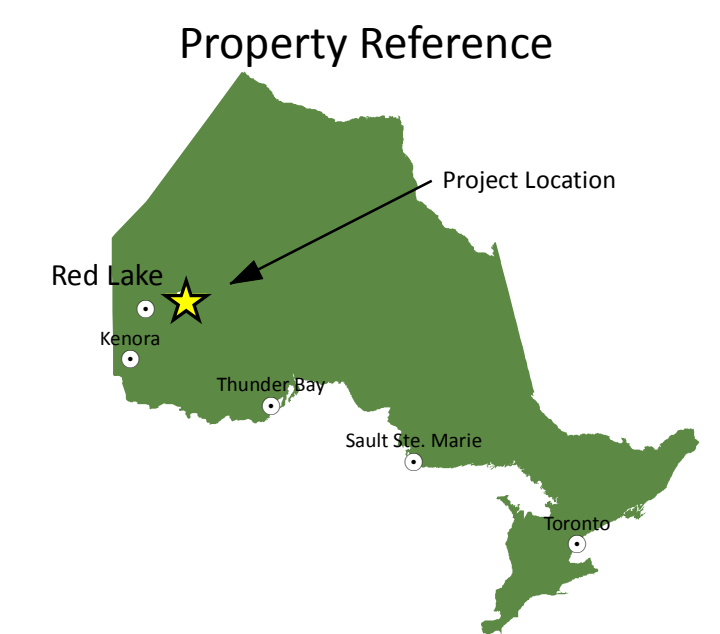
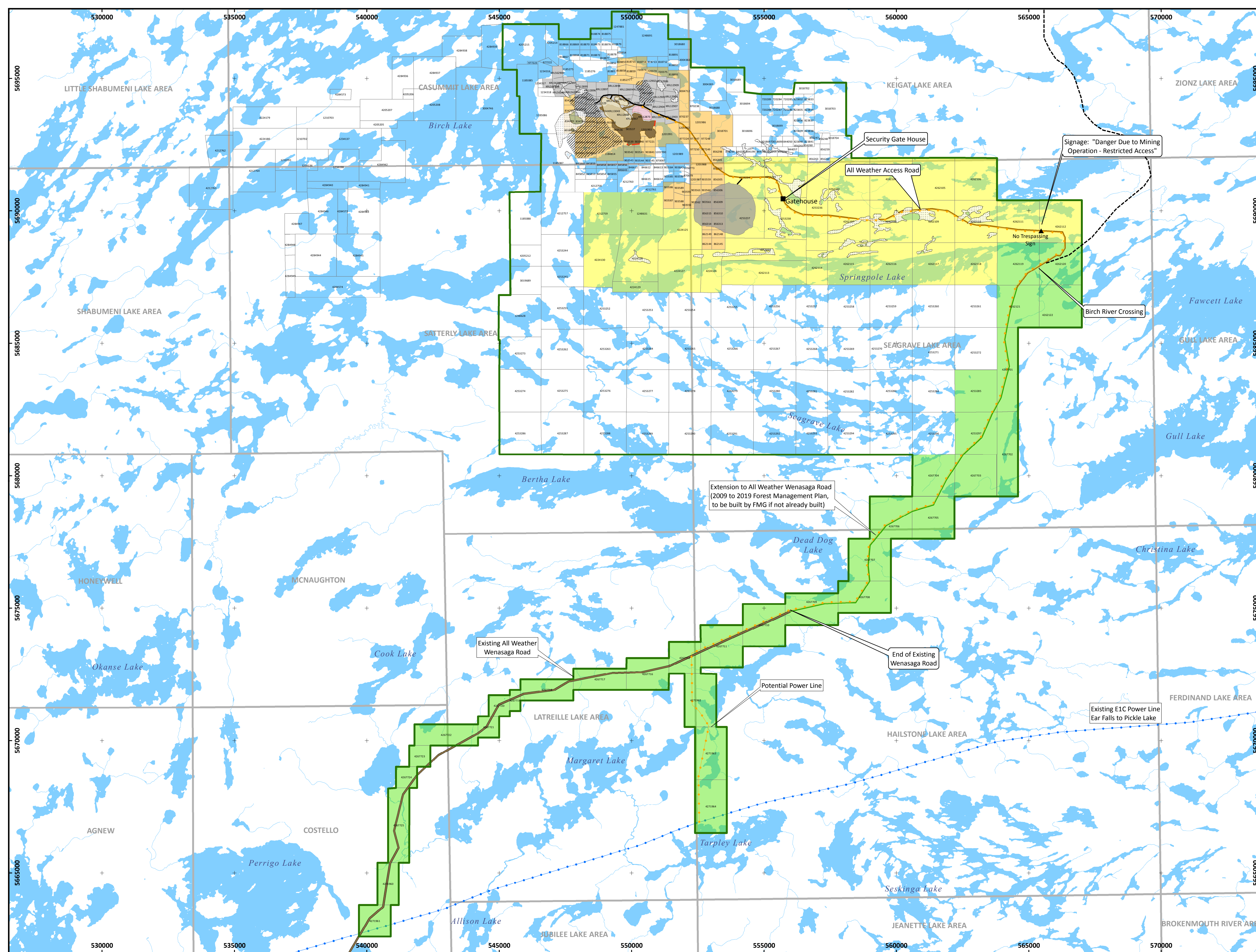
- Camp Location
- Town
- Waterpower Site
- Access Road to Springpole
- Gold Project (Provincial EA Completed)
- Wenasaga Road (Approved in Trout Lake Forest Management Plan)
- Logging Road
- Treaty Boundary (Source: Grand Council Treaty 3 Website)
- Highway
- Electricity Transmission Line
- Natural Gas 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

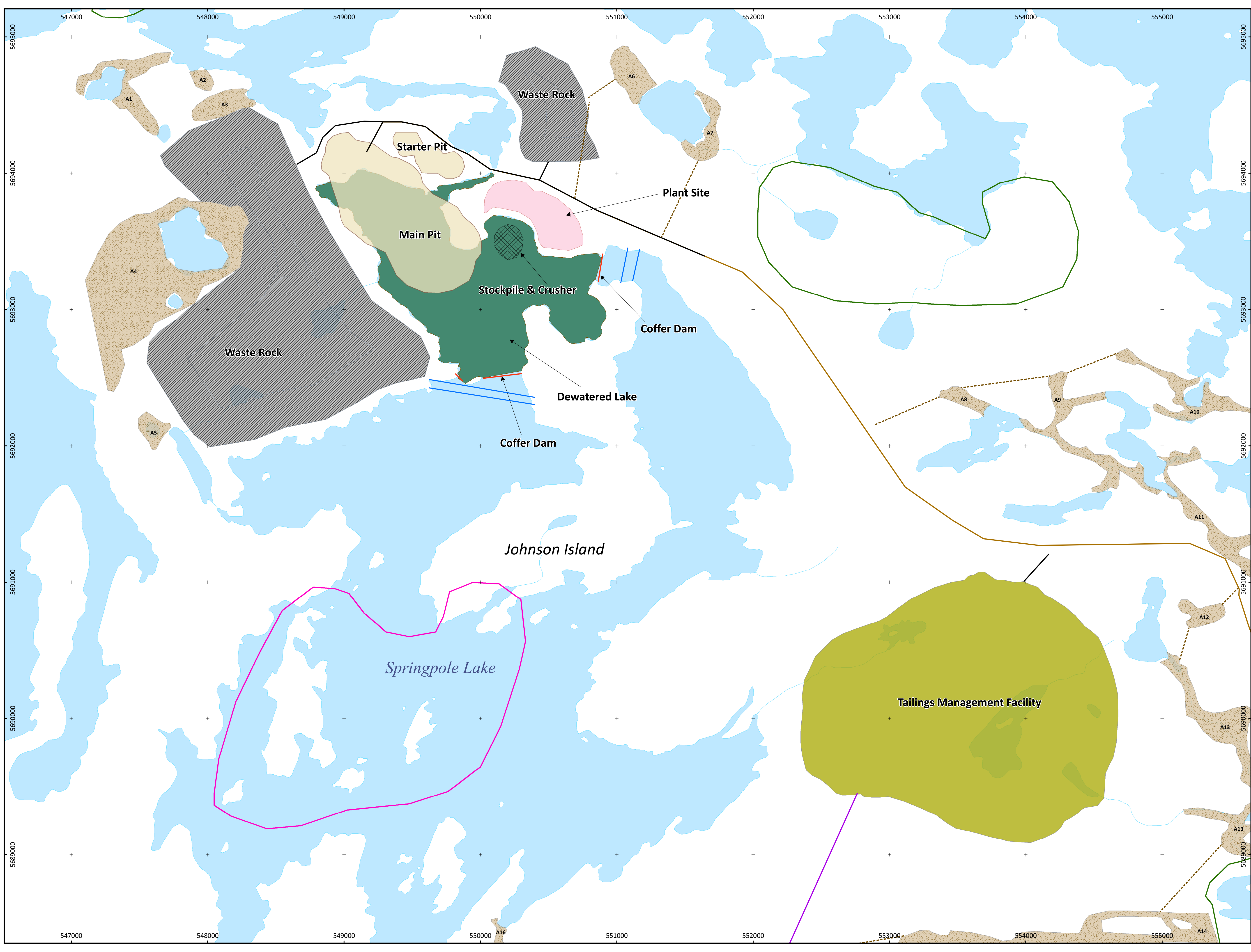


- Existing Power Line
- Coffer Dam
- Potential Aggregate Source
- Pit
- Plant Site & Shops
- Tailings Management
- Waste Rock
- Dewatered Basin
- Springpole Property Boundary
- Patents
- Unpatented Claims
- Claims to Lease**
- Phase 1
- Phase 2
- Phase 3

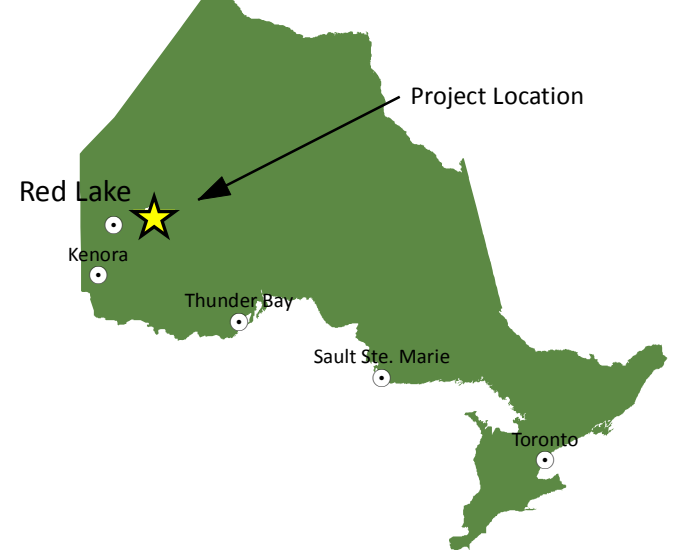
FIRST MINING GOLD

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

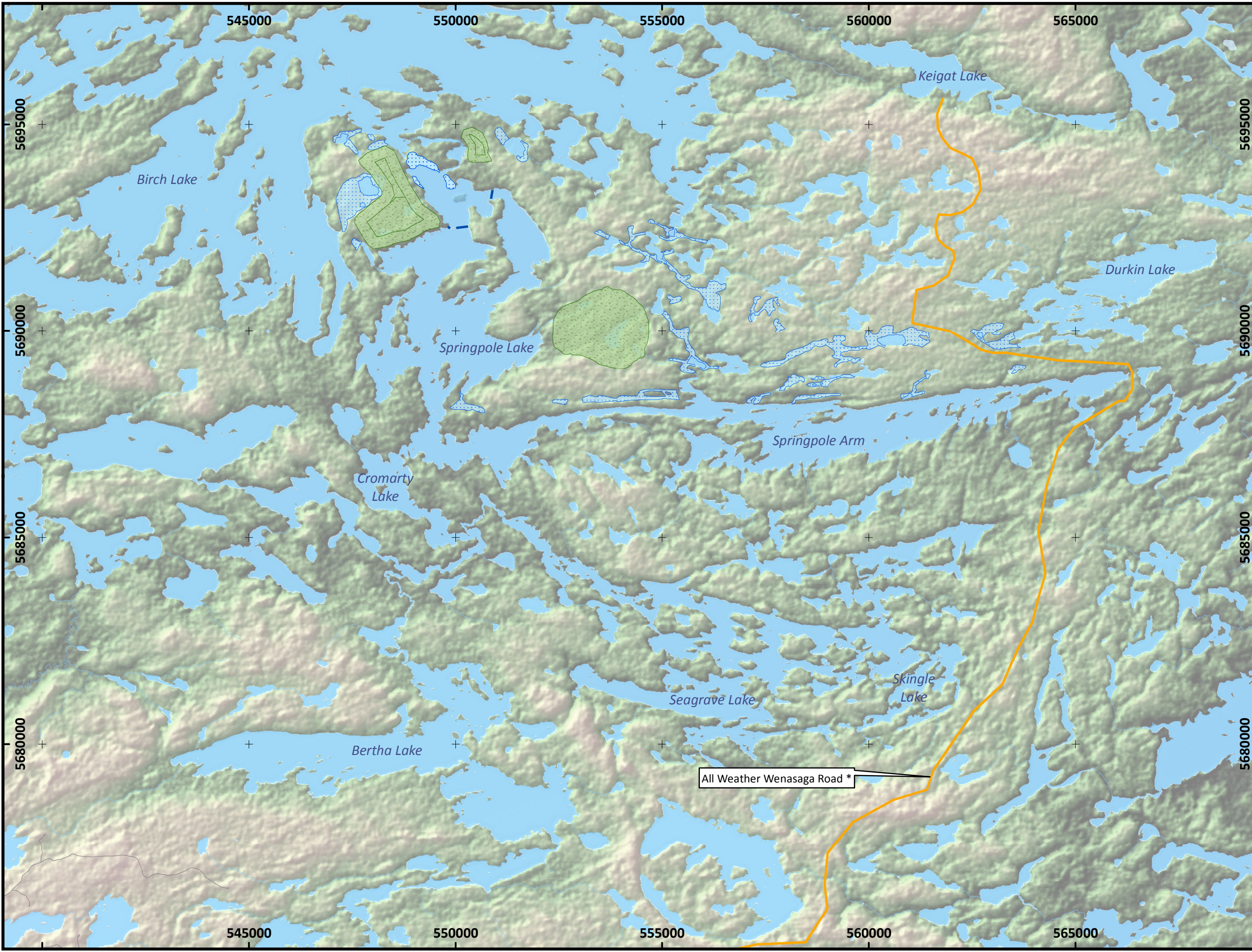
Kenora District, Ontario

Figure 3-2C

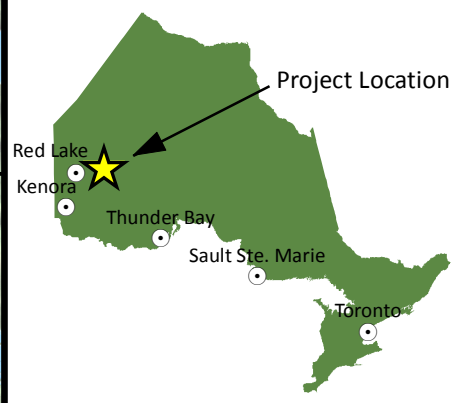
Mine Site General Arrangement

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





Property Reference

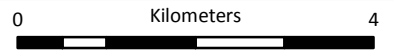


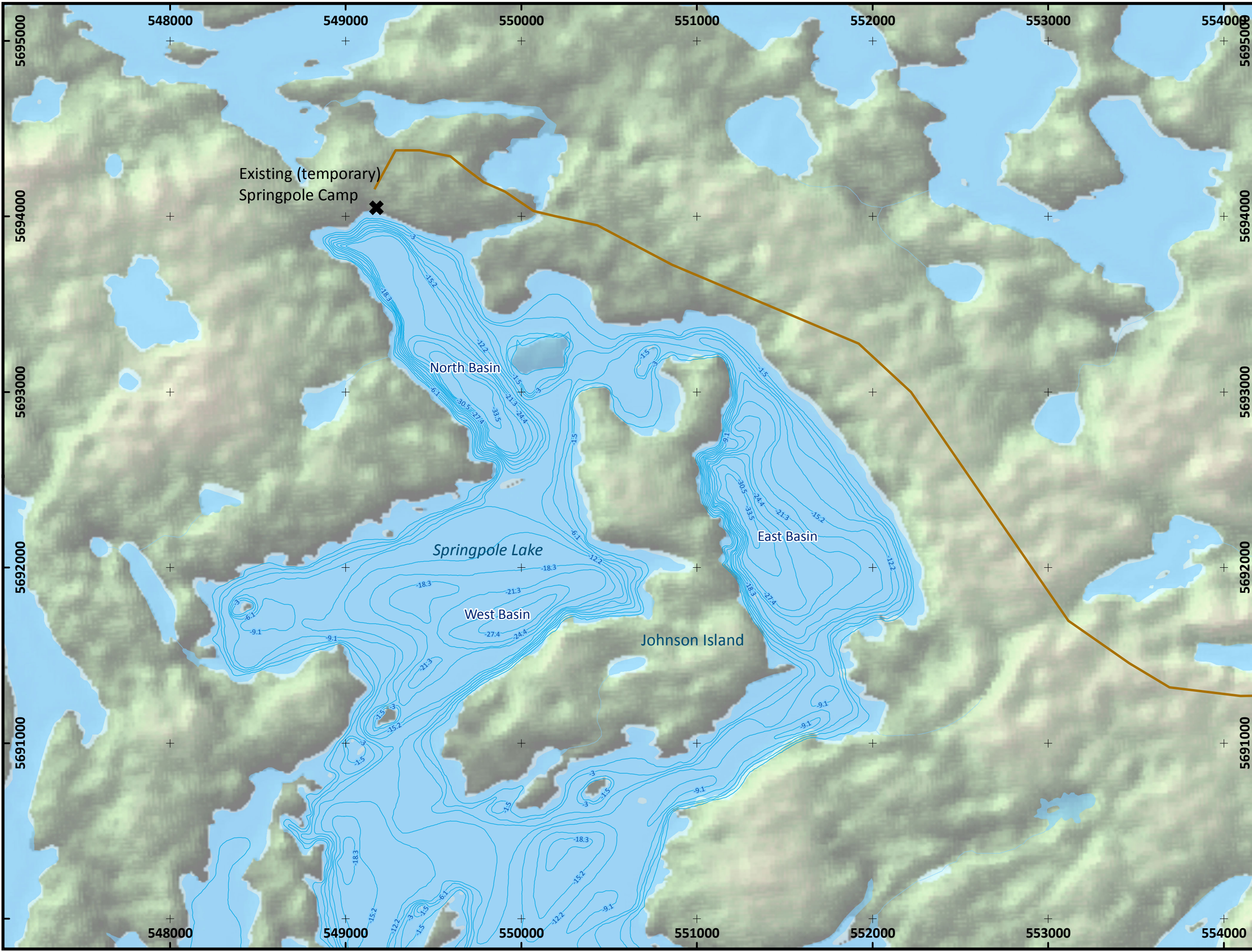
- Forestry Road* (Power Line Removed)
 - Potential New Spawning Shoal (created by coffer dam decommissioning - evaluation in progress)
 - Sloped & Vegetated
 - Potential New Fish Habitat (created by developing aggregate pit below water table)
- * Trout Lake Forest Management Plan



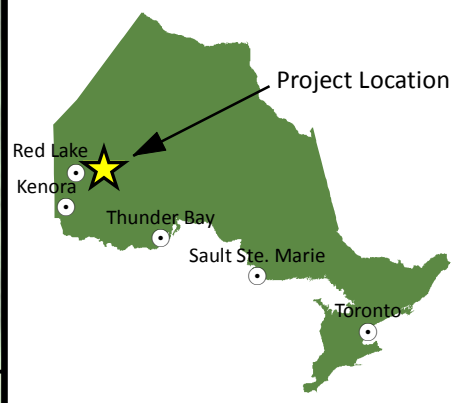
Springpole Gold Project
 Kenora District, Ontario
 Figure 3-3
 Conceptual General Arrangement
 Closed Out

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





Property Reference



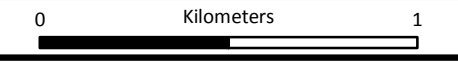
- Road & Powerline Corridor
- Bathymetry Contour Depth (m)



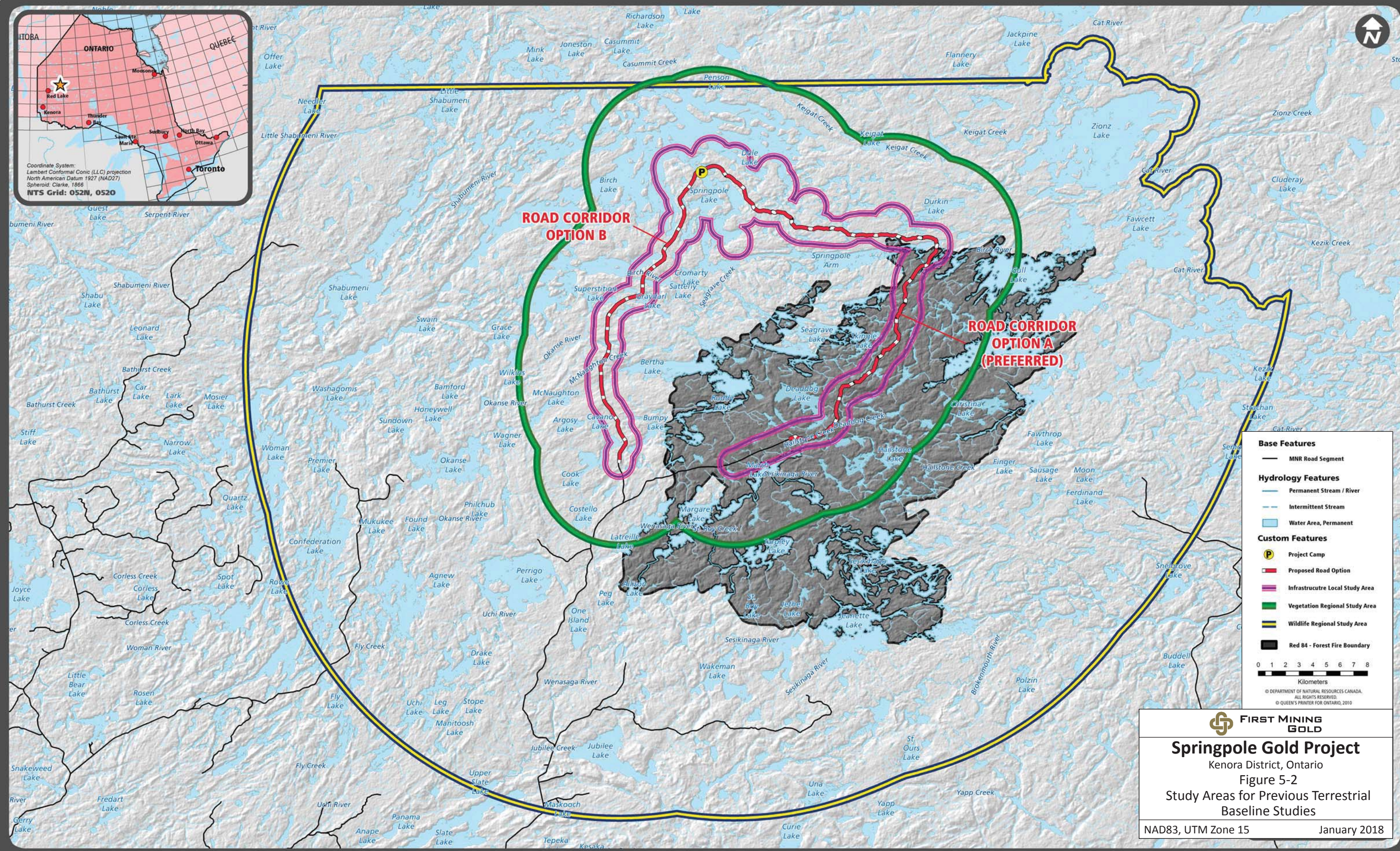
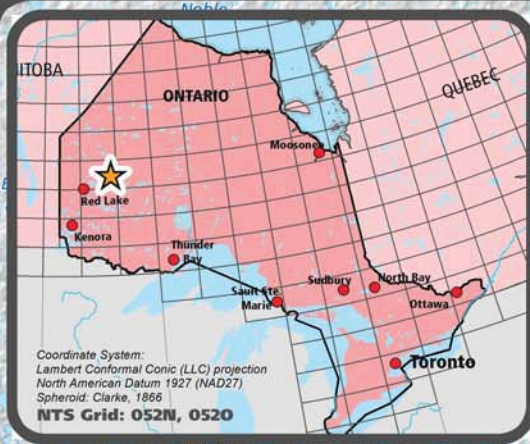
Springpole Project
Kenora District, Ontario

Figure 5-1
Springpole Lake Bathymetry

Scale 1 : 20,000 NAD83, UTM zone15 Nov.2017

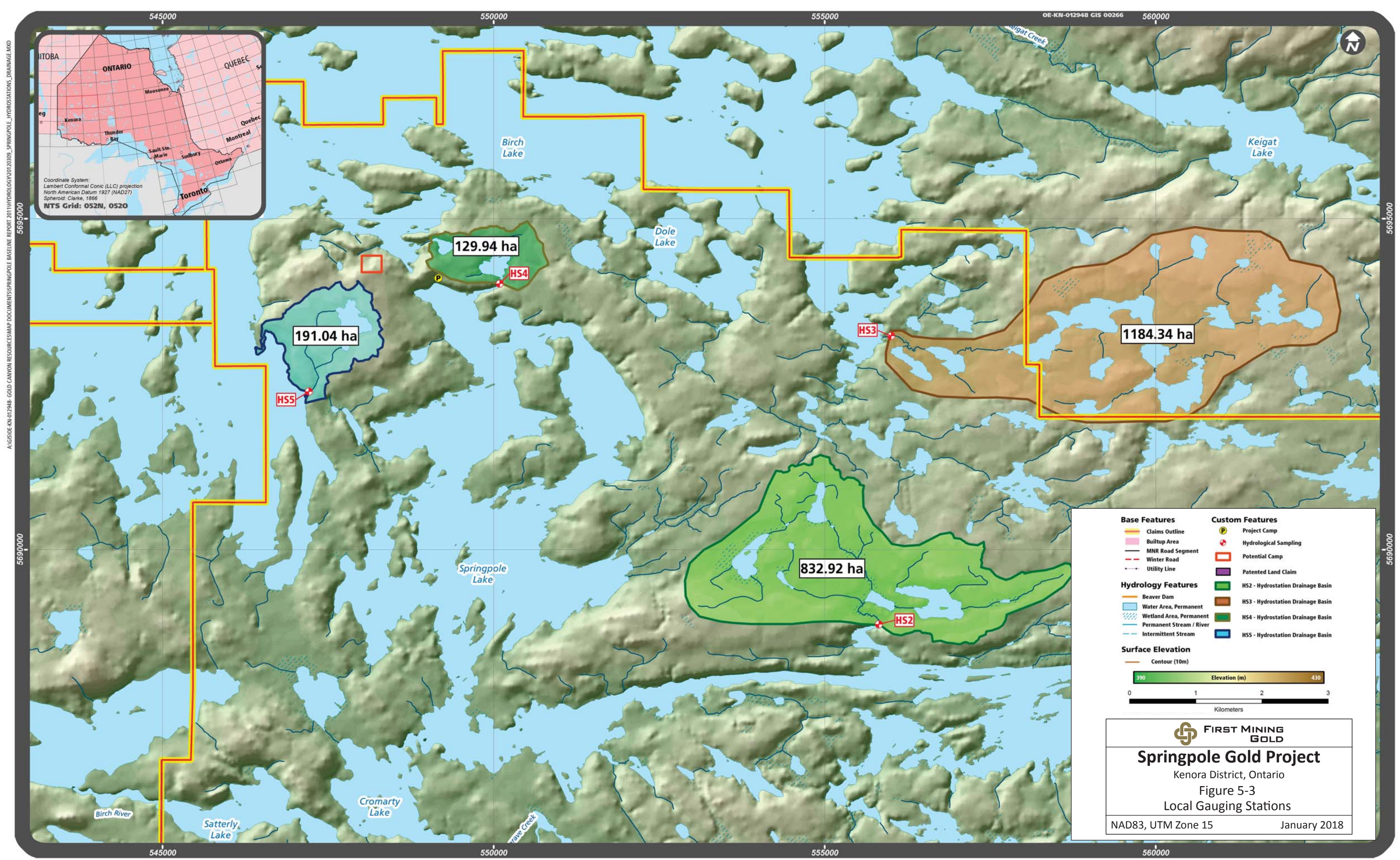


AGIS0E-KN-012948- GOLD CANYON RESOURCES MAP DOCUMENT SUB-BASELINE STUDY 2012/12/15 FIGURE 5-2 REGIONAL AND LOCAL STUDY AREAS.MXD



Springpole Gold Project
Kenora District, Ontario
Figure 5-2
Study Areas for Previous Terrestrial
Baseline Studies

NAD83, UTM Zone 15 January 2018



ONTARIO
 Moosonee
 Kenora
 Thunder Bay
 Sault Ste. Marie
 Sudbury
 Ottawa
 Montreal
 Quebec
 Toronto

Coordinate System:
 Lambert Conformal Conic (LLC) projection
 North American Datum 1927 (NAD27)
 Spheroid: Clarke, 1866
 NTS Grid: 052N, 052O

Base Features	Custom Features
Claims Outline	Project Camp
Builtup Area	Hydrological Sampling
MNR Road Segment	Potential Camp
Winter Road	Patented Land Claim
Utility Line	HS2 - Hydrostation Drainage Basin
Beaver Dam	HS3 - Hydrostation Drainage Basin
Water Area, Permanent	HS4 - Hydrostation Drainage Basin
Wetland Area, Permanent	HS5 - Hydrostation Drainage Basin
Permanent Stream / River	
Intermittent Stream	

Surface Elevation
 Contour (10m)
 390 Elevation (m) 430
 0 1 2 3
 Kilometers

FIRST MINING GOLD
Springpole Gold Project
 Kenora District, Ontario
 Figure 5-3
 Local Gauging Stations
 NAD83, UTM Zone 15 January 2018

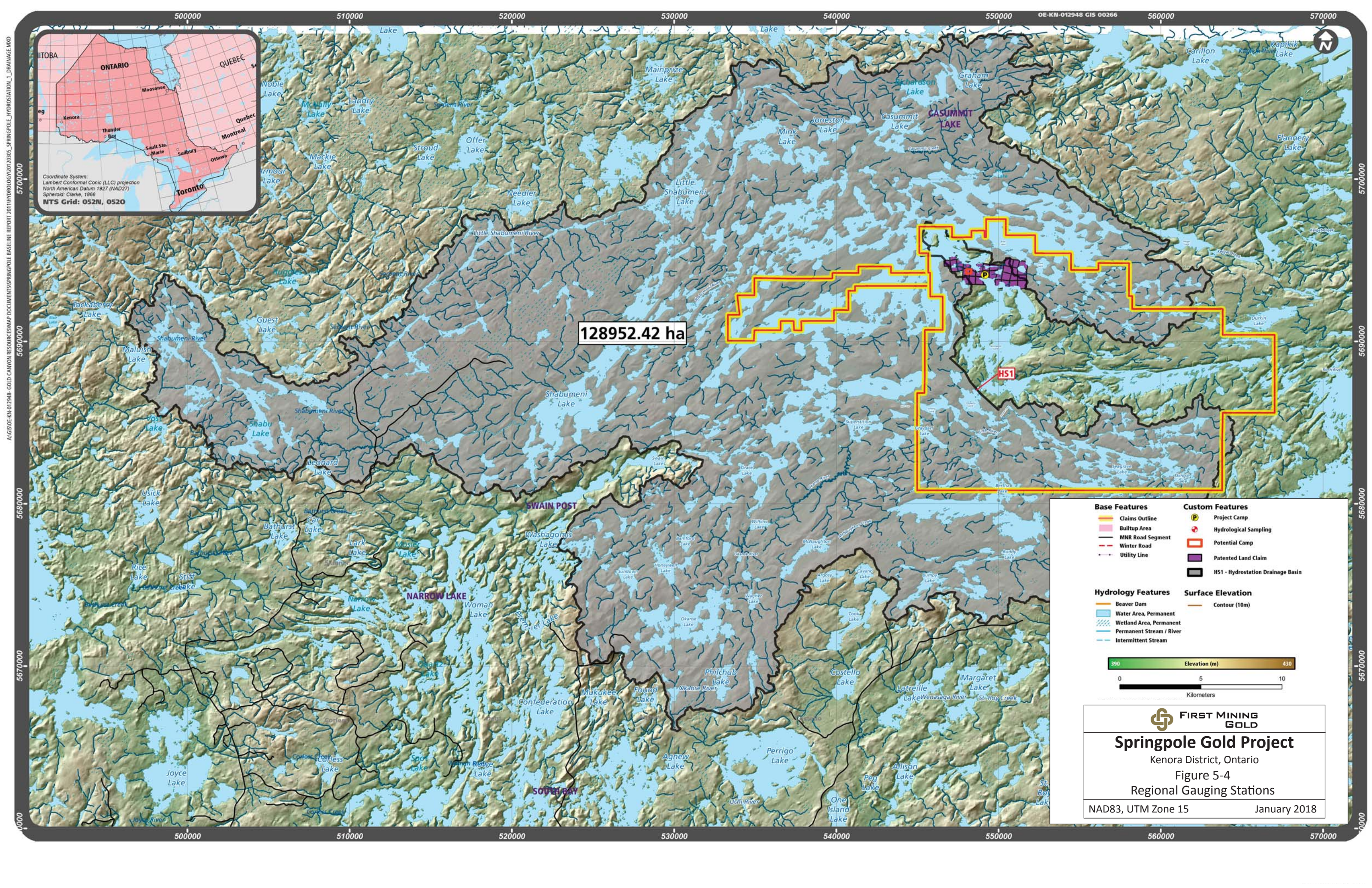
A:\GIS\OE-KN-012948-GOLD CANYON RESOURCES\MAP DOCUMENTS\SPRINGPOLE BASELINE REPORT 2011\HYDROLOGY\01202009_SPRINGPOLE_HYDROSTATIONS_DRAINAGE.MXD

5695000

5690000

5695000

5690000

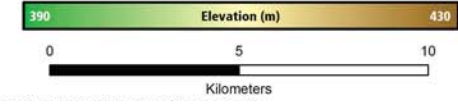


Coordinate System:
Lambert Conformal Conic (LLC) projection
North American Datum 1927 (NAD27)
Spheroid: Clarke, 1866
NTS Grid: 052N, 052O

128952.42 ha

- | | |
|----------------------|-----------------------------------|
| Base Features | Custom Features |
| Claims Outline | Project Camp |
| Builtup Area | Hydrological Sampling |
| MNR Road Segment | Potential Camp |
| Winter Road | Patented Land Claim |
| Utility Line | HS1 - Hydrostation Drainage Basin |


- | | |
|---------------------------|--------------------------|
| Hydrology Features | Surface Elevation |
| Beaver Dam | Contour (10m) |
| Water Area, Permanent | |
| Wetland Area, Permanent | |
| Permanent Stream / River | |
| Intermittent Stream | |



FIRST MINING GOLD

Springpole Gold Project
Kenora District, Ontario
Figure 5-4
Regional Gauging Stations


NAD83, UTM Zone 15 January 2018

 MW1 Groundwater Monitoring Locations



Springpole Gold Project
Kenora District, Ontario
Figure 5-5
Ground Water Monitoring Stations

NAD83, UTM Zone 15 January 2018

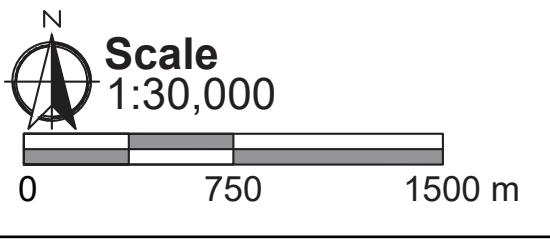
SP11-102 
Springpole Base Camp 
MW2 
BL08-385 
BL-235 
MW1 
MW3 

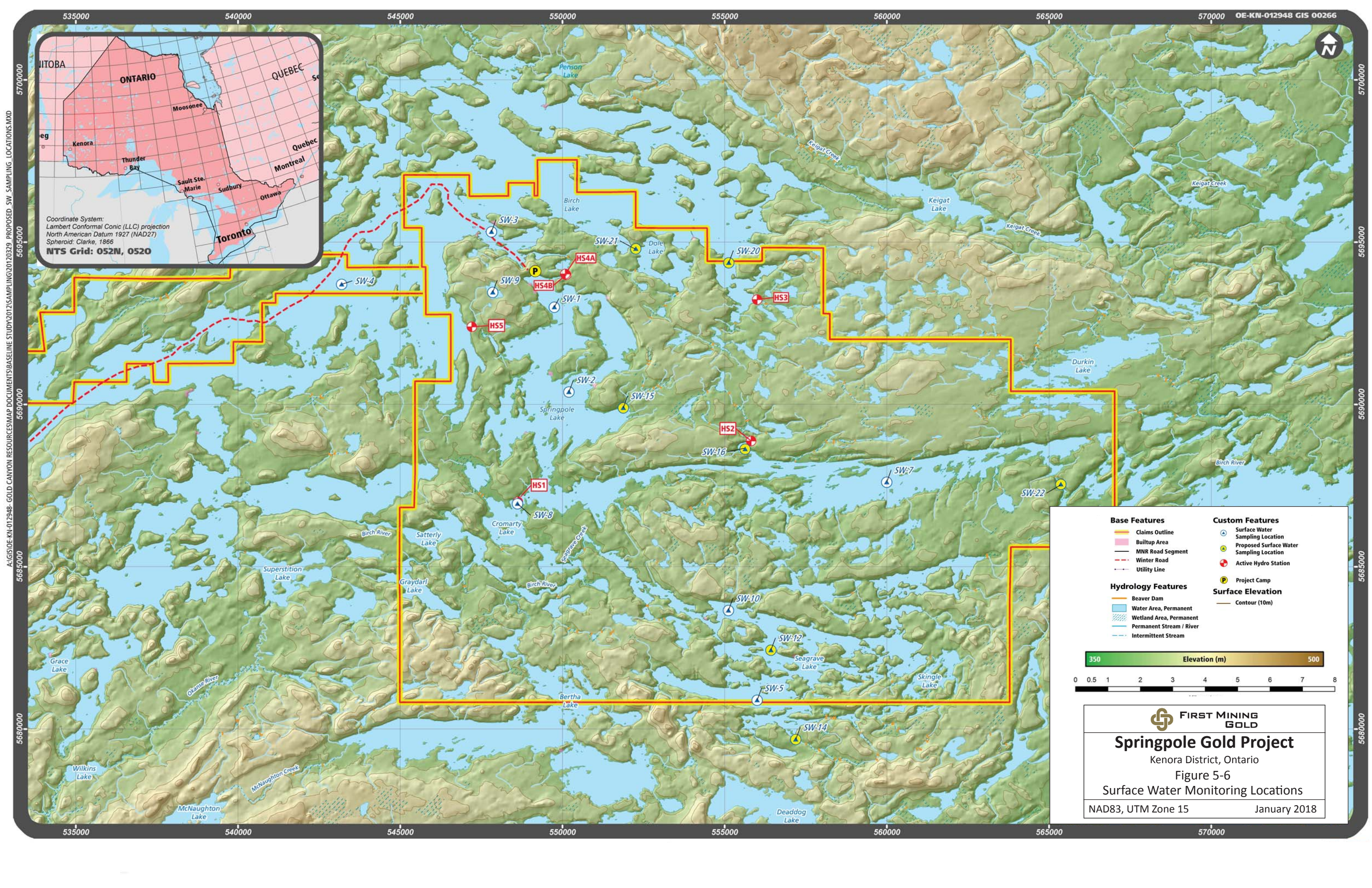
DDH1 
DDH2 
SP11-064 

MW5 

Springpole Lake

 MW4





ONTARIO QUEBEC
 Kenora Moosonee
 Thunder Bay Sault Ste. Marie
 Sudbury Ottawa
 Toronto
 Montreal

Coordinate System:
 Lambert Conformal Conic (LLC) projection
 North American Datum 1927 (NAD27)
 Spheroid: Clarke, 1866
NTS Grid: 052N, 052O

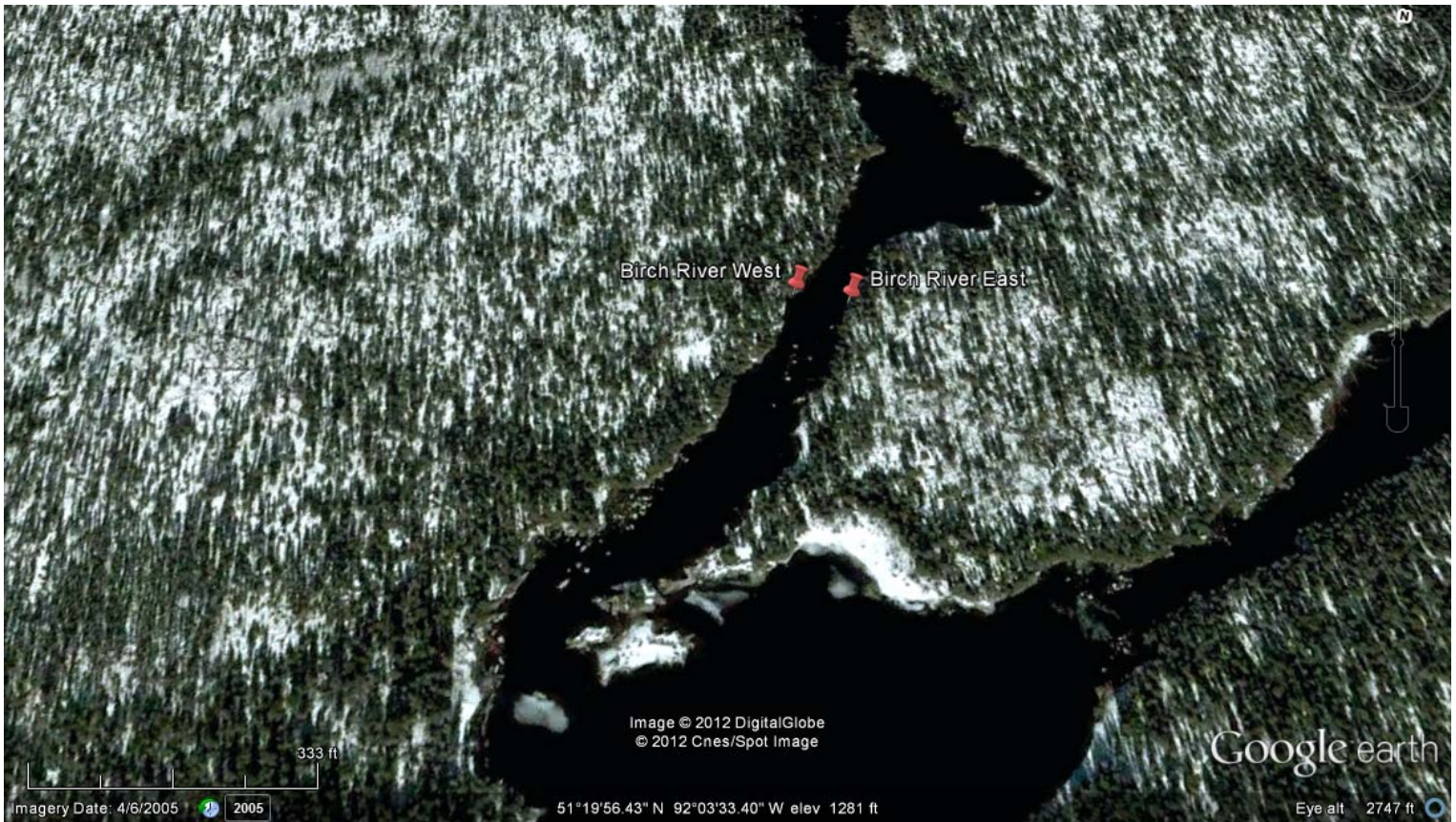
Base Features	Custom Features
Claims Outline	Surface Water Sampling Location
Builtup Area	Proposed Surface Water Sampling Location
MNR Road Segment	Active Hydro Station
Winter Road	Project Camp
Utility Line	Surface Elevation
	Contour (10m)

Hydrology Features
 Beaver Dam
 Water Area, Permanent
 Wetland Area, Permanent
 Permanent Stream / River
 Intermittent Stream

Elevation (m)
 350 500
 0 0.5 1 2 3 4 5 6 7 8

FIRST MINING GOLD
Springpole Gold Project
 Kenora District, Ontario
 Figure 5-6
 Surface Water Monitoring Locations
 NAD83, UTM Zone 15 January 2018

Appendix 2
Photographs



Birch River Crossing

15 U 0565468

5687242

Conducted on September 16, 2012

Weather: Overcast, no precipitation, moderate wind



Photo 1: Taken from flight facing in a northerly direction

Note: Narrowest location on the river, to the bottom left of the picture is where the proposed road crossing is.



Photo 2: Taken facing the West on top of hill

Note: Orange flagging tape on East side of stream (bottom of photo) and orange flagging on West side of river (slightly to the left of center).



Photo 3: Taken facing the West on top of hill not on the top of the hill

Note: Orange flagging tape on East side of stream (bottom of photo slightly to the left) and orange flagging on West side of river (slightly to the left of center).



Photo 4: Taken facing North of East side flagging tape



Photo 5: Taken facing South of East side flagging tape



Photo 6: Directly at flagging tape facing West

Note: Orange flagging tape on East side of stream (bottom left of photo) and orange flagging on West side of river (slightly to the higher than center).



Photo 7: Taken facing the North approximately 20 feet south of flagging

Note: Orange flagging tape on East side of stream (on right side of photo in line with center)



Photo 8: Taken south on the east side approximately 10 feet from East side flagging



2017 View of Springpole Camp on north shore of Springpole Lake



Dead Dog Crossing

15 U 0559043

5676749

Crown Land Water Crossing Application Part 4

Conducted on September 14, 2012

Weather: Sunny, No precipitation, Light Wind

Completed by

Ashley Polson (Environmental Coordinator, Gold Canyon Resources)



Photo 1: Facing North at original flagged water crossing location



Photo 2: Facing North at Biologist's recommended flagged location

Note: Blue flagging tap in middle location of photo.



Photo 3: Facing East at Biologist's recommended flagged location



Photo 4: Facing South at Biologist's recommended flagged location



Photo 5: Facing West at Biologist's recommended flagged location



Photo 6: Facing North at recommended flagged location.



Photograph 1: View of SPR-HS1 at Cromarty lake inlet to Springpole Lake on June 2, 2011, installment date; facing north.



Photograph 2: View of SPR-HS1 on August 16, 2011 with survey equipment.



Photograph 3: View of the Springpole Lake inlet hydrometric station SPR-HS2 on June 2, 2011, installment date.



Photograph 4: View of the Springpole Lake inlet hydrometric station SPR-HS2 on August 16, 2011.



Photograph 5: View of SPR-HS3 Birch Lake inlet hydrometric station on June 2, 2011; facing south. Installment date.



Photograph 6: View of SPR-HS3 Springpole inlet hydrometric station on August 18, 2011; facing northeast.



Photograph 7: View of SPR-HS4 Springpole inlet hydrometric station on June 3, 2011; facing northeast. Installed date.



Photograph 8: Manual flow measurements being taken at SPR-HS5 Birch Lake inlet hydrometric station on June 4, 2011; facing east. Installed date.



Photograph 9: View of the SPR-HS5 on August 18, 2011.

Appendix 3
Stakeholder Contact List

Table2-1: Springpole Gold Project Preliminary Stakeholder List

Stakeholder Category	Stakeholder	Address	Phone	Web Page
Aboriginal Communities	Cat Lake First Nation	Chief Ernie Wesley Cat Lake First Nation P.O. Box 81	807 347-2100	
	Slate Falls First Nation	Slate Falls First Nation 48 Lakeview Drive Slate Falls ON P0V 3C0 Chief Joanne Petiquan-Moore	807 737-5700	www.slatefalls.firstnation.ca
	Wabauskang First Nation	Wabauskang First Nation PO Box 418 Ear Fall, POV1T0	807 529-3007	www.windigoeducation.on.ca/communities/catlake
	Lac Seul First Nation	Chief Clifford Bull Lac Seul First Nation P.O. Box 100 Hudson ON P0V 1X0	807 582-3503	www.lacseulfirstnation.ca
	Metis Nation Ontario – Sunset District	Carla Koski Lands, Resources and Consultation Branch Metis Nation of Ontario 426 Victoria Avenue Fort Frances, Ontario P9A 2C3	613 798-1488	www.metisnation.org

Stakeholder Category	Stakeholder	Address	Phone	Web Page
Business and Community Interests	Kabeelo Lodge	Harald and Ann Lohn KaBeeLo Lodge PO Box 189 Prior Lake MN 55372 Lee Cuwarason	807 222-3246	www.kabeelo.com
	Pickerel Arm Camps	Pickerel Arm Camp 2722 Harvard Drive, Chuck and Cathy Mosbeck	807 482-2362	www.tno.on.ca
	True North Outposts	True North Outpost and Camps Jim Reinke	800 443-3362	www.hiddenbay.com
	Hidden Bay Lodge	Hidden Bay Lodge John Hall	807 737-2904	www.fishredpine.com
	Red Pine Lodge	Box 4048, 947 Hwy 105 Sioux Lookout, ON P8T 1J9	877 760-7356	www.whitewingresort.com
	Whitewing Floating Lodges	Dave and Bobbie MacDonald Whitewing Floating Lodges P.O. Box 220 Enigma, GA 31749	807 274-3666	www.northernwilderness.net
	Fort Frances Northern Wilderness Outfitters	VIC Davis Fort Francis Northern Wilderness Outfitters		
Millard Johnson – Private Land owner				

Stakeholder Category	Stakeholder	Address	Phone	Web Page
Business and Community Interests	Latrielle Lake Lodge	Jeff Thomas Latrielle Lake Lodge 5505 Massachusetts Avenue Indianapolis, IN 46218	866 528-7345	www.latriellelake.com
	Kay Air Service	KayAir Service P.O. Box 284 Ear Falls ON Canada P0V 1T0	807 222-2434	www.kayair.com
	Green Airways	Peter and Karen Kay KayAir Service P.O. Box 284 Ear Falls ON Canada P0V 1T0	807 727-2264	www.greensflyin.com
	Best Baits	Marty Buckler Best Baits	807 222-2326	
	D & E Minnows	David Wetendorf D & E Minnows	807 222-2496	
	Birch Lake Lodge	Barry and Edith Labine Birch Lake Lodge P.O. Box 408 Red Lake Ontario. P0V 2M0	807 727-2158	www.birchlakelodge.ca
	Red Lake District Chamber of Commerce			

Stakeholder Category	Stakeholder	Address	Phone	Web Page
Business and Community Interests	Ear Falls Community and Economic Development Committee	Willow Crescent, Ear Falls, ON P0V 1T0-	1 807 222-3624	www.ear-falls.com/invest/economic - development
	Ear Falls Contracting Ltd.	Richard Robinson Ear Falls Contracting Ltd. PO Box 417 Ear Falls On P0V 1T0	807 822-3354	
	Ontario Prospectors Association	Garry Clark 1000 Alloy Drive Thunder Bay, ON P7B 6A5	807 622-3284	
	Boreal Prospectors Association			
	Red Lake Trappers Association	Red Lake Trapper's Council PO Box 815 Red Lake ON P0V 2M0		
	Ear Falls Trappers Council	Ear Falls Trappers Council PO Box 864 Ear Falls ON P0V 1T0		
Ear Falls Hunters and Anglers	Ear Falls Hunters & Anglers PO Box 834 Ear Falls ON P0V 1T0			

Stakeholder Category	Stakeholder	Address	Phone	Web Page
Business and Community Interests	Sioux Lookout Area Fur Managers Council		807 738-0925	
	Ontario Federation of Anglers and Hunters	Ontario Federation of Anglers & Hunters 4601 Guthrie Drive, PO Box 2800 PO Box 2800 Peterborough ON K9J 8L5	705 748-6324	www.ofah.org
	Ontario Fur Managers Federation	531 Second Line, E Sault Ste Marie Native Trapper's Council PO Box 974	705 254-3338	www.furmanagers.com
	Native Trappers Council	Red Lake ON P0V 2M0		
	Nishnawbe Aski Nation	Nishnabe Aski Nation 100 Back St. Unit 200 Thunder Bay ON P7J 1L0	807 623-8228	www.nan.on.ca
	Grand Council Treaty #3	237 Airport Road, Kenora, ON P9N 0A1 Northwestern Ontario Prospectors Assoc.	807 548-4214	http://gct3.ca
	Northwest Ontario Prospectors Assoc.	PO Box 10124, Station P Thunder Bay ON P7B 6T6		www.nwopa.net
Windigo Tribal Council	160 Alcona Drive, Sioux Lookout, ON P8T 1B3	807 737-1583	www.windogo.on.ca	

Stakeholder Category	Stakeholder	Address	Phone	Web Page
Business and Community Interests	Ministry of Northern Development and Mines			
	Ministry of Tourism, Culture and Sport	Ministry of Tourism, Culture & Sport 810 Robertson St., Suite 101 Kenora ON P9N 1X8		www.mtc.gov.on.ca
	Ministry of Labour	Ministry of Labour 479 Government Street Dryden ON P8N 3B3		
	Ministry of the Environment & Climate Change	435 James St. Suite 331. Thunder Bay	807 475-1205	www.ontario.ca/ministry-environment-and-climate-change
	Ministry of Natural Resources and Forestry	435 James St. Suite 221A. Thunder Bay	807 475-1261	www.ontario.ca/ministry-natural-resources-and-forestry
	Ministry of Energy Ontario Power Generation			www.energy.gov.on.ca www.opg.com
	Hydro One	Hydro One 855 Pond Mills Road London ON N5Z 4R1	1 807 474- 2800	www.hydroone.com
Ministry of Environment and Climate Change	Ministry of the Environment and Climate Change, Technical Support Section, Northern Region, 435 James St S, Suite 331 Thunder Bay ON P7E6S7	1 905 521- 7650		

Stakeholder Category	Stakeholder	Address	Phone	Web Page
Federal Government	Canadian Environmental Assessment Agency Indigenous and Northern Affairs Canada (INAC) Fisheries and Oceans Canada Natural Resources Canada Health Canada	981 Balmoral St.	807 343-5310	www.ceaa.gc.com www.aandnc-aandc.gc.ca www.dfo-mpo.gc.ca www.nrcan.gc.ca www.canada.ca/en/health-canada/services
Municipal Government	Municipality of Red Lake Municipality of Sioux Lookout Township of Ear Falls Township of Pickle Lake	Phil Vinet, Mayor Municipality of Red Lake PO Box 1000 Balmertown ON P0V 1C0 Willow Crescent, Ear Falls, ON P0V 1T0- 2 Ste Anne St. Pickle Lake, ON P0V 3A0	807 735-2096 807 928-2034	www.redlake.ca www.ear-falls.com www.picklelake.ca

Appendix 4

Table 5-10 to Table 5-12: Environment Interaction Matrices

TABLE 5-10: POTENTIAL PROJECT INTERACTION MATRIX

Valued Component Category	ACTIVITY/COMPONENT VALUED COMPONENT	PROJECT COMPONENT / ACTIVITY																			
		Coffer Dams and Lake Dewatering	Open Pit Operation	Waste Rock Pile	Ore Pile	Crushing Plant	Ore Processing	Tailings Management Facility	Water Treatment Facility	Sewage Treatment	On-Site Haul Roads	Access Road	On-Site Electricity Distribution System	Transmission Line	Water and Tailings Pipelines	Plant Site, Buildings and Yards	Camp / Accommodations	Explosives Production / Supply	Waste Management Site	Fuel Storage and Distribution System	Communication System
Atmospheric	Climate		X				X									X			X		
	Air Quality		X	X	X	X	X	X		X	X	X			X	X	X	X	X		
	Noise		X			X	X				X	X			X	X	X				
Hydrology	Surface Water Flow	X	X	X				X			X	X			X						X
	Surface Water Quality	X	X	X				X	X	X	X	X								X	
Aquatic Environment	Fish and Fish Habitat	X	X	X				X	X			X									X
	Sediment Quality	X	X	X				X	X												
	Benthic Invertebrate Community	X	X					X	X												X
Hydrogeology	Ground Water Flow	X	X	X				X													X
	Grond Water Quality (overburden, bedrock)		X	X	X	X		X							X		X	X	X		
Terrestrial Environment	Vegetation Communities		X	X				X			X									X	
	Soils		X	X	X	X		X			X									X	
	Wildlife		X	X		X		X			X	X		X			X		X		
	Species at Risk and Critical Habitat		X					X				X		X	X						

LEGEND X indicates interaction

TABLE 5-10: POTENTIAL PROJECT INTERACTION MATRIX

Valued Component Category	ACTIVITY/COMPONENT VALUED COMPONENT	PROJECT COMPONENT / ACTIVITY																					
		Coffer Dams and Lake Dewatering	Open Pit Operation	Waste Rock Pile	Ore Pile	Crushing Plant	Ore Processing	Tailings Management Facility	Water Treatment Facility	Sewage Treatment	On-Site Haul Roads	Access Road	On-Site Electricity Distribution System	Transmission Line	Water and Tailings Pipelines	Plant Site, Buildings and Yards	Camp / Accommodations	Explosives Production / Supply	Waste Management Site	Fuel Storage and Distribution System	Communication System	Fresh Water Taking	
Socio-Economic and Cultural	Land Use	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Recreation Opportunities	X	X	X		X	X	X	X			X		X			X		X		X		
	Remote Tourism	X	X	X		X	X	X	X			X		X			X		X		X		
	Community Infrastructure and Services											X		X			X		X		X		
	Archaeology and Cultural Heritage Values											X											
	Environmental Health	X	X			X	X	X	X	X				X					X	X	X		
	Opportunities for Employment and Training		X				X										X	X	X				
	Goods and service contract opportunities		X				X	X					X		X			X	X				
Federal Legislation	Fish and Fish Habitat	X	X	X	X			X	X			X									X		X
	Aquatic Species at Risk																						
	Migratory Birds										X	X		X		X							
	Exeme Weather and/or Events	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	
	Traditional Use	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	
	Traditional Occupancy	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	

LEGEND X indicates interaction

TABLE 5-12: POTENTIAL INTERACTIONS BETWEEN PROJECT ACTIVITIES AND VALUED COMPONENTS DURING CLOSURE AND ACCIDENT/MALFUNCTION/UNPLANNED EVENTS

Valued Component Category	ACTIVITY VALUED COMPONENT	CLOSURE							ACCIDENTS / MALFUNCTIONS / UNPLANNED EVENTS										
		Identify and Procure Required Goods and Services	Demobilize and downsize workforce	Dismantle Facilities and Salvage Assets for Re-sale	Recycle and Manage Waste	Earthworks for Backfilling Open Pits, Soil Covers and Re-vegetation	Breach Cofferdam, Flood Dewatered Portion of Springpole Lake	Decommission Roads	Post Closure Monitoring and Maintenance	Fire / Forest Fire	Power Outage	Fuel or Hazardous Materials Spill	Change in influent quality	Rock and/or tailings generate acid and/or leaches metals during life of mine	Elevated Fugitive Dust from Project site	Intense spate (rainfall and/or snowmelt) event	Increased Ground Water Seepage into Open Pit	Drought Conditions Lead to Shortage of Process Water	Cofferdam Instability
Atmospheric	Climate			X		X	X			X	X						X		
	Air Quality			X	X	X		X		X	X				X				
	Noise			X	X	X	X	X		X	X	X							
Hydrology	Surface Water Flow					X	X	X		X					X	X	X	X	X
	Surface Water Quality			X	X	X	X	X		X		X	X	X	X	X	X	X	X
Aquatic Environment	Fish and Fish Habitat					X	X			X		X	X	X	X	X	X	X	X
	Sediment Quality			X	X	X	X			X		X	X	X	X			X	X
	Benthic Invertebrate Community						X					X	X	X	X	X	X	X	X
Hydrogeology	Ground Water Flow					X	X			X					X	X	X	X	X
	Ground Water Quality (overburden, bedrock)			X	X	X	X					X	X	X	X	X			X
Terrestrial Environment	Vegetation Communities					X	X			X		X	X	X	X	X	X		X
	Soils				X	X	X	X		X		X	X	X	X				X
	Wildlife		X	X		X		X		X		X	X	X			X		X
	Species at Risk and Critical Habitat			X		X		X		X		X		X					X

LEGEND X indicates interaction

TABLE 5-12: POTENTIAL INTERACTIONS BETWEEN PROJECT ACTIVITIES AND VALUED COMPONENTS DURING CLOSURE AND ACCIDENT/MALFUNCTION/UNPLANNED EVENTS

Valued Component Category	ACTIVITY VALUED COMPONENT	CLOSURE								ACCIDENTS / MALFUNCTIONS / UNPLANNED EVENTS										
		Identify and Procure Required Goods and Services	Demobilize and downsize workforce	Dismantle Facilities and Salvage Assets for Re-sale	Recycle and Manage Waste	Earthworks for Backfilling Open Pits, Soil Covers and Re-vegetation	Breach Coffor Dam, Flood Dewatered Portion of Springpole Lake	Decommission Roads	Post Closure Monitoring and Maintenance	Fire / Forest Fire	Power Outage	Fuel or Hazardous Materials Spill	Change in influent quality	Rock and/or tailings generate acid and/or leaches metals during life of mine	Elevated Fugitive Dust from Project site	Intense spate (rainfall and/or snowmelt) event	Increased Ground Water Seepage into Open Pit	Drought Conditions Lead to Shortage of Process Water	Coffor Dam Instability	Instability of tailings facility (unusual seepage, overtopping)
Socio-Economic and Cultural	Land Use	X	X	X	X	X	X	X	X			X		X						X
	Recreation Opportunities						X	X												
	Remote Tourism						X	X		X		X							X	X
	Community Infrastructure and Services			X				X												
	Archaeology and Cultural Heritage Values							X		X										
	Environmental Health					X	X			X		X	X	X	X	X			X	X
	Opportunities for Employment and Training	X							X											
	Goods and service contract opportunities	X							X			X								
Federal Legislation	Fish and Fish Habitat					X	X	X				X		X	X	X	X	X	X	X
	Aquatic Species at Risk																			
	Migratory Birds			X		X		X		X										X
	Exteme Weather and/or Events			X		X	X	X	X	X			X	X	X	X	X	X	X	X
	Traditional Use	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Traditional Occupancy	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

LEGEND X indicates interaction

Appendix 5

2013 Comments from Shared Territory Protocol Nations

Concern / Question	Mitigation / Response	Raised by
concern about decommissioning of the road if GCU does not go ahead. What if another party wants the road to remain?	Only the north portion of the road, beyond the FMP-approved section would be decommissioned by GCU, and even then, if someone requested that the road remain, they could complete their own EA to take over responsibility for any portions they wanted to remain.	SFFN community member
asked if GCU would connect to a road coming from Vermillion Lake (Polar Road) concern with the road options and alternatives, interest to provide access between Lac Seul, Slate Falls and Cat Lake, as this would assist with the Lac Seul Forestry company with their access road maintenance.	GCU could look at this in the future, but another EA would need to be completed. At this time, GCU is proposing a winter road only to connect to the Wenasaga Road and not an all-weather road.	a SFFN and 2 LSFN community members
asked if the Springpole Project is developed into a mine, will another EA be conducted.	GCU will have to conduct a separate EA for the mine development, and there will be a long involved consultation process related to that EA.	SFFN community member
asked if FN communities will be building the road	GCU responded that an Request for Expression of Interest had been sent to all Aboriginal partner companies that were identified by CLFN, SFFN, LSFN, WFN and MNO, as well as a contractor from Ear Falls. When GCU gets to a point where we are confident we can proceed with the project, we will get back to those companies and proceed with the contract to one or more of the companies. The contract(s) will be awarded based on a combination of the best plan for community involvement, price, experience on similar jobs and safety & environmental protection record.	Several community members from SFFN, CLFN and LSFN.
asked if there were any species at risk at the road corridor, specifically whip-poor-will	GCU indicated that there are no known (eastern) whip-poor-will in the project area based on DST's studies to date. DST Consulting (qualified independent biologist) has also considered wolverine and caribou and the proposed corridor has been designed and selected to mitigate effects to these species at risk that are known to be present in the region.	CLFN community member
asked about other species in the area, including wolverine, caribou and owls. CLFN community members have seen them in the road corridor area in the past.	GCU indicated that no wolverine have been found during the course of DST's field work and although wolverine are known to be present in the project area it would not be practical to collect meaningful baseline data for this species against which future potential impacts could be measured. GCU is sensitive to all species at risk. The eastern corridor was selected because it was deemed to have less impact to SAR's. Caribou reside in the area around the northern portion of the road, so GCU has been working with the MNR to plan a process that will ensure a net overall benefit to caribou in the area	CLFN community member
asked about endangered plant species in the area.	DST has not found any rare or endangered or at risk plant species in the project area.	CLFN community member
asked if GCU would conduct any spraying during road construction to clear the road corridor	GCU will not be conducting any spraying during road construction, or any other phase or the project. Timber harvesting will be conducted utilizing mechanical methods only	SFFN and CLFN community members
asked if FN communities will be contacted if there is ever a spill in the area.	GCU staff and contractors are trained in fuel handling and spill response according to GCU's Emergency Spill Response Plan, which includes notification to GCU, all relevant government agencies and First Nation Band Offices in the event of a spill.	CLFN community member
comment that the road planning should be a 4 party process: MNR, Domtar, GCU and First Nations	GCU has consulted with MNR throughout the process. The proposed access corridor will serve the needs of Domtar's future planned forestry roads and GCU understands it also has synergies with an all-weather road to CLFN.	CLFN community member
comment that there should be an exploration agreement in place before any work is conducted in the area.	GCU has been supporting the negotiation process and looks forward to an exploration agreement with the FN's; MNNDM added that the reason for the open house session was to solicit feedback on the proposed plans before the work is conducted.	CLFN community member

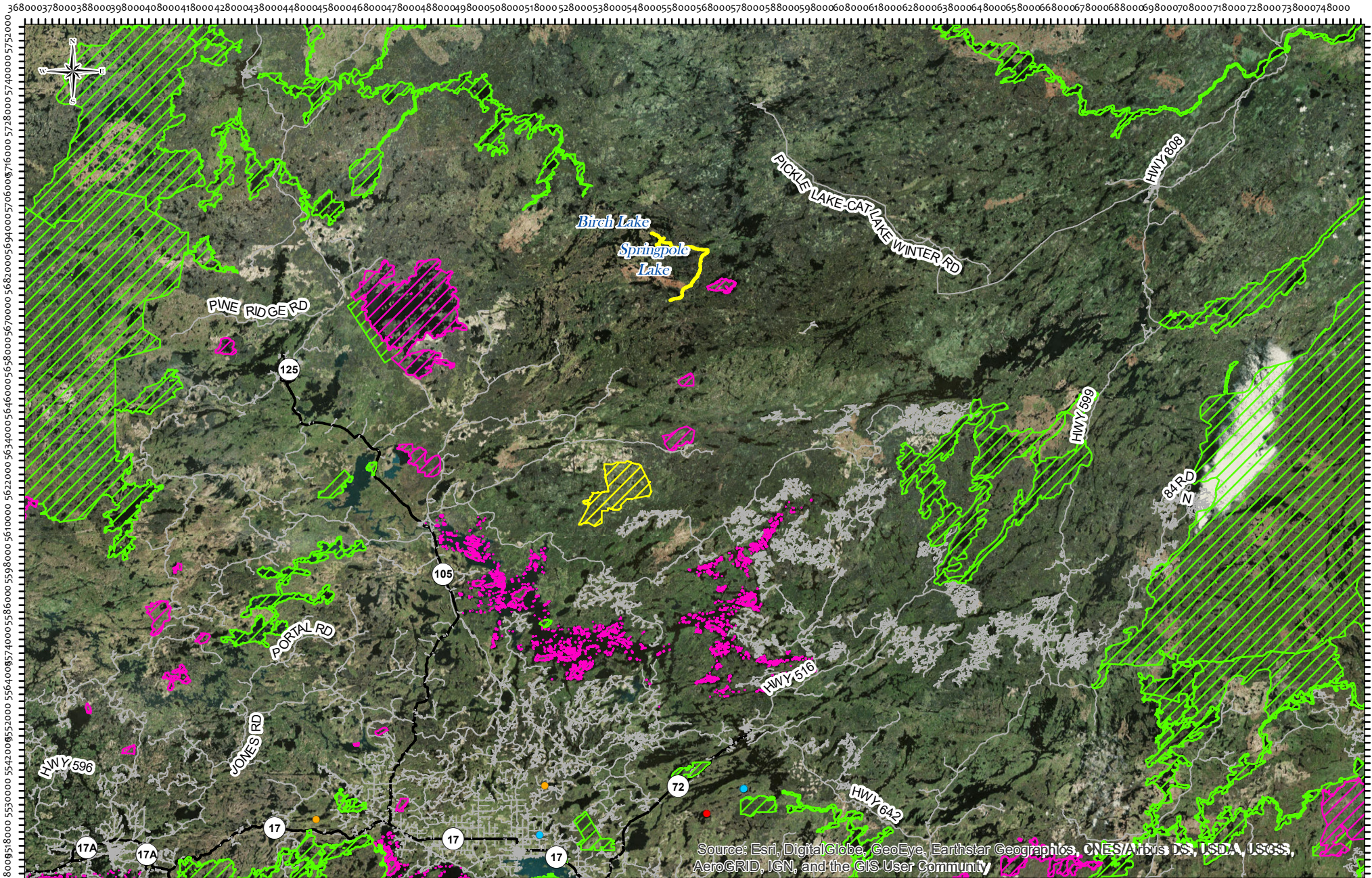
Concern / Question	Mitigation / Response	Raised by
concern about the placement of a gate on the road and closing access to First Nations is impacting their Treaty Rights, noting that the gate would not restrict their access to the area, just to the use of the road.	GCU is not permitted to allow selective access along the road corridor; although the gate will restrict use of the road corridor, First Nations use of the area will not be restricted, as they will still be able to access the area using the same means as they used prior to construction of the access corridor.	LSFN councillor
concern about the quality of the road and water crossings. In his experience with private companies, water crossings farther from the main road tend to decrease in quality and MNR needs to monitor them all	All water crossings will be constructed to primary forestry road standards, according to MNR and DFO guidance documents, Domtar's standard operating procedures for the Trout Lake Forest, and using best practices (such as having competent contractors and supervisors and RFP auditors) and as described in the Final Environmental Screening Report (ESR) published in February 2013. The road will be monitored according to forestry industry standards as described in the Final ESR.	LSFN councillor
comment that a road in proposed area would be good, he would like a road there.	GCU advised that the access to the road would be restricted to GCU workers only at the gate locations (first at Dead Dog Lake and then before the Birch River) at least until the forestry company takes over responsibility for the road. This did not change the opinion.	CLFN trapline holder
The access corridor is in a good location to be extended to the community of Cat Lake. They are very interested in having a First Nation based/partner company complete the access corridor construction. This will bring jobs and contracts to the community.	GCU responded that an Request for Expression of Interest had been sent to all Aboriginal partner companies that were identified by CLFN, SFFN, LSFN, WFN and MNO, as well as a contractor from Ear Falls. When GCU gets to a point where we are confident we can proceed with the project, we will get back to those companies and proceed with the contract to one or more of the companies. The contract(s) will be awarded based on a combination of the best plan for community involvement, price, experience on similar jobs and safety & environmental protection record.	CLFN community member
The Springpole Project has provided jobs and has been good for the community.		SFFN community member
No concerns with the proposed project. Interested in job opportunities with the Springpole Gold project.		Several community members from SFFN, CLFN and LSFN.
no concerns with the project; hopes it will provide employment for the community		CLFN community member
wants to see Cat Lake people employed and to see this road provide all-weather access for Cat Lake		CLFN community member
no concerns with the road proposal and has not heard any concerns from others		CLFN community member
many questions regarding training and employment opportunities for the road project and the exploration/future mining project	<p>GCU responded that an Request for Expression of Interest had been sent to all Aboriginal partner companies that were identified by CLFN, SFFN, LSFN, WFN and MNO, as well as a contractor from Ear Falls. When GCU gets to a point where we are confident we can proceed with the project, we will get back to those companies and proceed with the contract to one or more of the companies. The contract(s) will be awarded based on a combination of the best plan for community involvement, price, experience on similar jobs and safety & environmental protection record.</p> <p>GCU will be identifying work force requirements for the potential mine at Springpole and will communicate those requirements to the FN EDO's, along with the training requirements, in time to allow FN workers to receive appropriate training before the mine begins operation. GCU will also work with the EDO's to identify funding opportunities to cover training costs.</p>	Many participants from SFFN, CLFN, and LSFN

Concern / Question	Mitigation / Response	Raised by
Other comments, unrelated to the road project		
<p>concern for mining and draining the lake, worried about the quality of water which will drain through SFFN when mining starts;</p> <p>Comment that Springpole is an important lake. It is a source of clean drinking water, it is a naturally spring-fed lake, and is the deepest lake in the area.</p>	<p>Mining is not being proposed at this time, this EA is for a winter road only to facilitate continued exploration and resource definition work. Although out of scope for this EA: GCU is committed to meet or exceed all MNR, MOE and DFO regulations and operational guidelines with respect to water quality; follow best practices for all work conducted on the property, and continue to conduct regular water quality testing to avoid negative impacts to Springpole and other lakes in the watershed.</p> <p>For the mining operation GCU will obtain an Environmental Compliance Approval pursuant to Section 20.2 of Part II.1 of the Environmental Protection Act. This approval imposes stringent effluent criteria that are protective of the receiving waterbody in accordance with provincial policy. In plain language, the waterbody needs to remain "fishable, swimmable and drinkable" and this approval often requires very stringent effluent criteria on discharges.</p>	<p>Several SFFN community members, one CLFN community member</p>
<p>concern that when GCU leases the land for mining activities there will be no benefit to the trapline holder for the land that is lost from his trapline.</p>	<p>Although out of scope for this EA: GCU will work with the trapper to mitigate any impacts to his trapline activities to the best of their ability, however, GCU recognizes that the trapline holder will lose use of the part of his trapline area covered by the mining activities for the duration of the construction, operation and reclamation phases of the mine. At the end of the mine life, the lands used for mining will be reclaimed and restored to their natural state. GCU will work with the trapper to mitigate as many impacts to his trapping activities as possible, and provide accommodation for any impacts that cannot be mitigated.</p>	<p>CLFN trapline holder</p>
<p>2 traditional harvesting periods were identified:</p> <p>1 week in August for trout fishing in Springpole Lake and</p> <p>1 week in late September for moose hunting in the Birch/Springpole general area.</p>	<p>Although out of scope for this EA: GCU is open to discussion about modifying or suspending activities at the project site during these Traditional Harvesting periods and/or allowing workers to schedule time off to participate in these activities, thereby allowing Traditional Harvesting to be conducted on schedule.</p>	<p>CLFN trapline holder</p>
<p>commented that a worker from CLFN was advised that he could not bring a firearm to the work site to be used for hunting while working for Gold Canyon</p>	<p>Although out of scope for this EA: GCU recognizes FN rights to harvest in their Traditional Lands, but while in the employ of GCU, no workers will be allowed to conduct hunting activities in work areas as this is a safety issue.</p>	<p>CLFN trapline holder</p>
<p>comment that the portage between Springpole Lake and Birch Lake are very important to the people of CLFN to access Birch Lake for harvesting</p>	<p>Although out of scope for this EA: GCU respects the rights of FN people to travel within their traditional lands and will not impede access through the portage between the 2 lakes. GCU would ask that travellers proceed slowly through GCU work areas, leaving a wide berth between their boats and the drill rigs on the lake, and that they report to the GCU camp office when they access GCU's dock at the camp site.</p>	<p>CLFN trapline holder</p>
<p>commented that she would like to see a working group to comment on the Mine EA with other FN's to be part of the decision making</p>	<p>Although out of scope for this EA: GCU has suggested organizing a working group comprised of Aboriginal and stakeholder representatives to provide direct feedback on the mine EA, and potential future mine operations; similar organization to forestry Committees that are organized for Sustainable Forest Licenses (i.e. the Local Citizen's Committee for the Trout Lake Forest)</p>	<p>CLFN community member</p>
<p>concerns about increased traffic in the area, if there is a mine, which will have an impact on the wildlife in the area</p>	<p>Out of scope for this EA: Under the current proposal, GCU is proposing only a winter access corridor which would see 3-4 trips per week during the freeze-up period, and no more than one trip per week outside the freeze-up period. Road usage restrictions through the use of a monitored gate and low speed limits will minimize the effects to local wildlife. The road use strategy for an all-weather mine access road would be addressed if/when GCU proposes to upgrade the road to an all-weather road for mine site development.</p>	<p>CLFN community member</p>
<p>comment that sturgeon were previously present along Springpole Arm and in Gull Lake</p>	<p>Although out of scope for this EA: information was relayed to DST to be incorporated in their fisheries studies</p>	<p>SFFN community member</p>

Concern / Question	Mitigation / Response	Raised by
comment that CLFN people have trails that come down the northern section of the road (west of Durkin Lake)	Although out of scope for this EA: This information has been noted. GCU will attempt to avoid impeding access to CLFN residents using these trails to access their traditional lands.	SFFN community member
comment that there are more moose in the RED84 burn area than before the fire	Although out of scope for this EA: This information has been noted, as it may indicate increased hunting pressures in the Red84 fire area.	SFFN community member
request for a Springpole site visit for the youth of the community	Although out of scope for this EA: GCU will attempt to organize such site visit in late summer, early fall. Also GCU could facilitate delivery of PDAC's Mining Matters educational program in the community, if there is interest from the school	CLFN trapline holder
requested GCU provide core samples for the school to use in their educational program.	Although out of scope for this EA: GCU is in the process of collecting appropriate core samples and photos of drilling operations to put together an educational package to be delivered to CLFN school before September 2013	CLFN teacher

Appendix 6

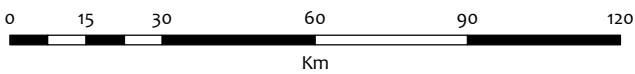
Value Maps and Figures from 2012-2014 Class EA Process
for Access Road Corridor



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

Legend

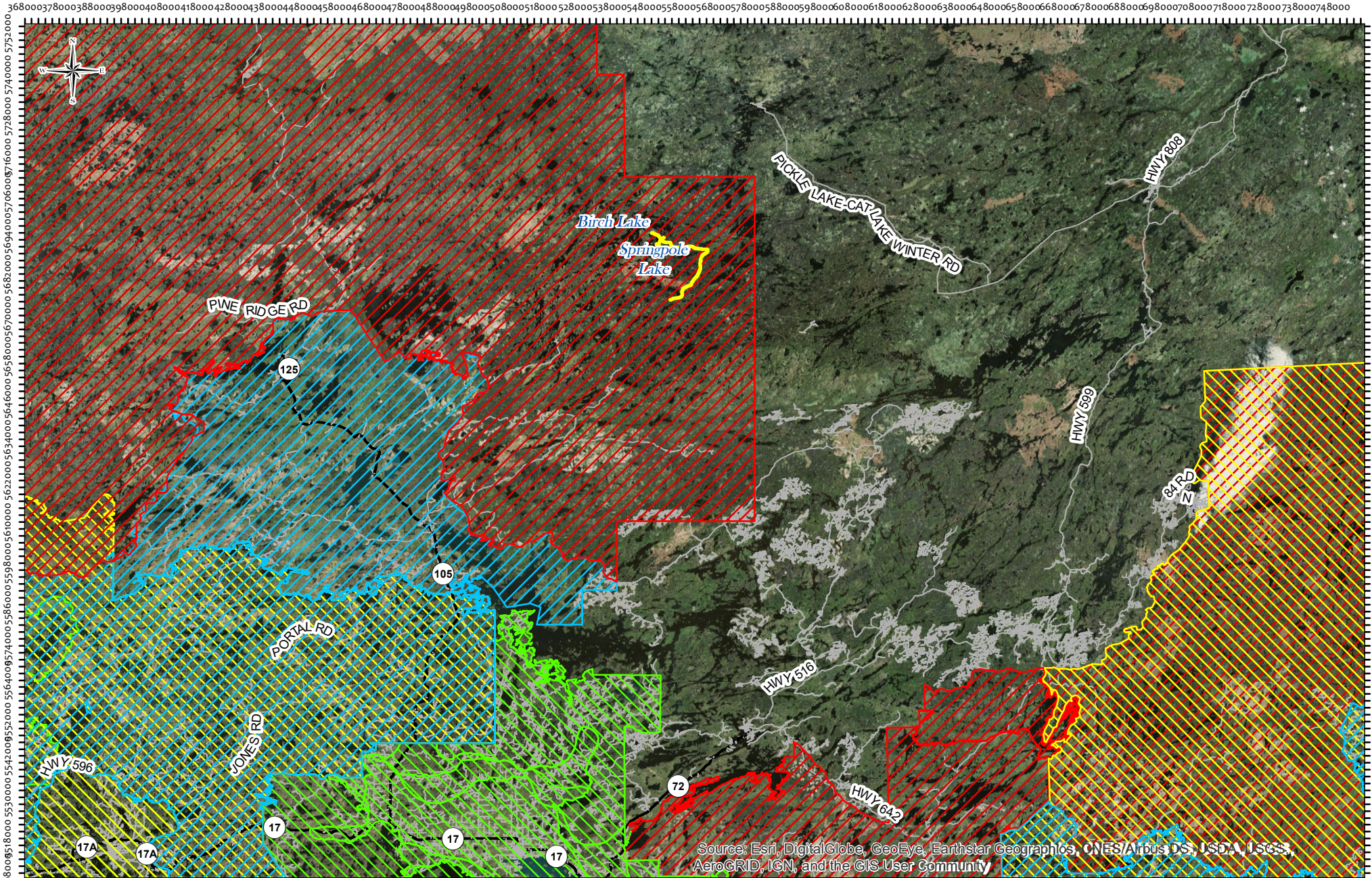
- Road
- Highway
- Access Corridor
- Designated Old Growth Forest
- Significant Valley
- Significant Woodland
- ▨ Provincial Parks - Regulated
- ▨ Conservation_Reserve
- ▨ Whitemud River ANSI



Springpole Gold Project

Kenora District, Ontario

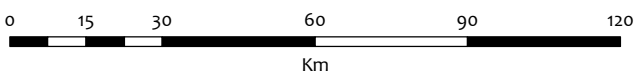
Figure 7-1
Protected Areas



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

Legend

- Road
- Highway
- Access Corridor
- ▨ Caribou Habitat Planning Range
- ▨ Deer Habitat Planning Range
- ▨ Marten Habitat Planning Range
- ▨ Moose Habitat Planning Range



Springpole Gold Project

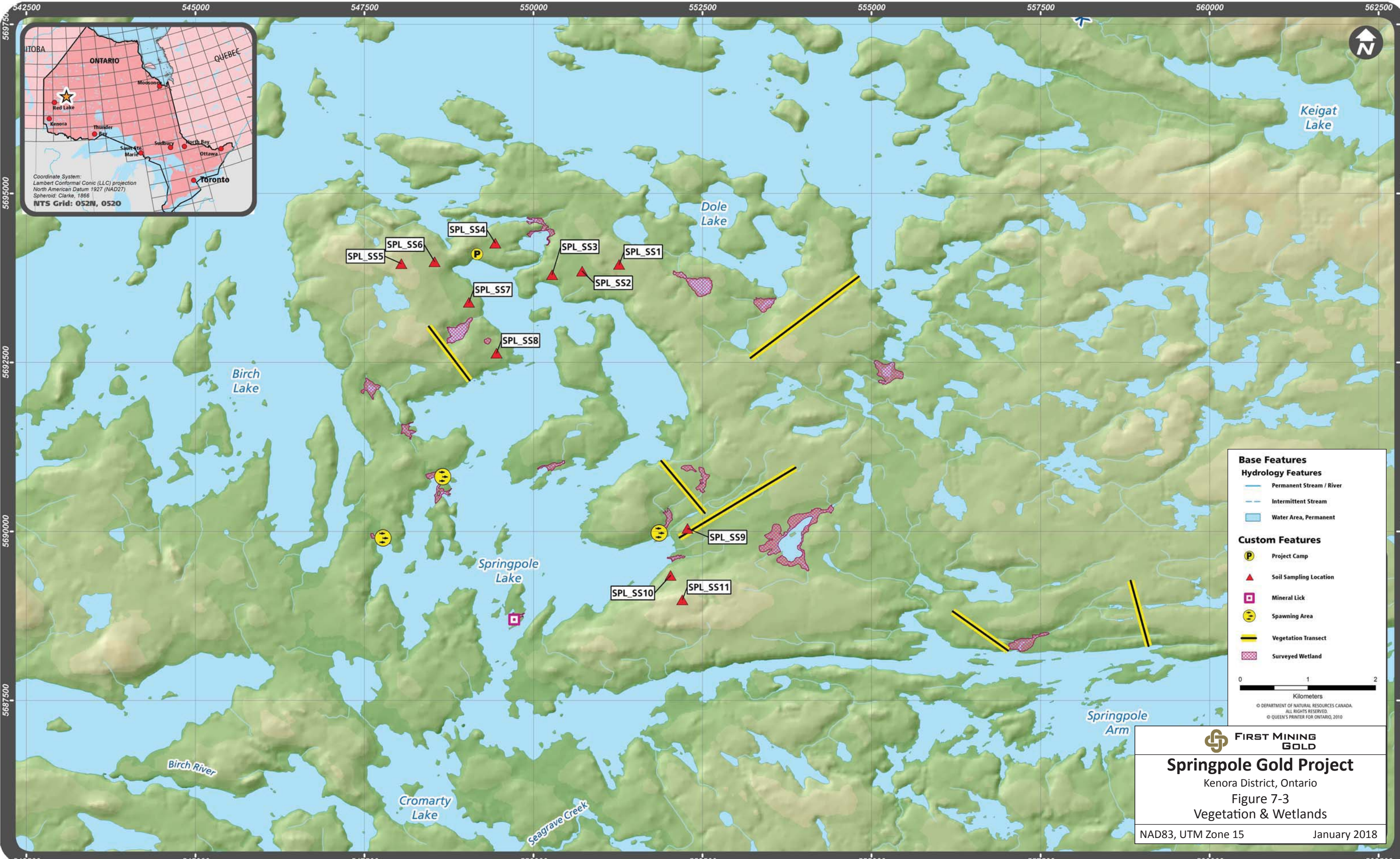
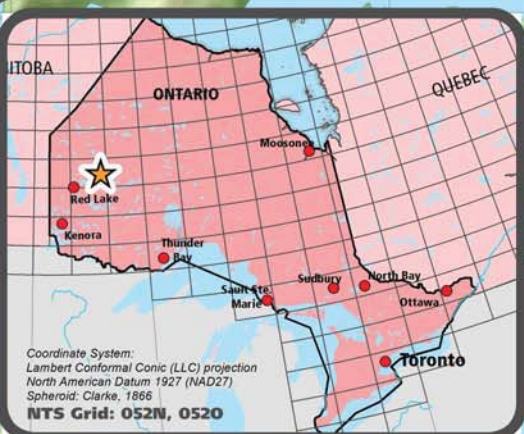
Kenora District, Ontario

Figure 7-2
Habitat Planning Ranges

NAD83, UTM Zone 15

January 2018

ALGSDOE-KN-012948 - GOLD CANYON RESOURCES/MAP DOCUMENTS/BASILINE STUDY/2012/VEGETATION/VEGETATION REPORT 2012/01/30/01 - FIGURE 7.1 - LOCATIONS OF VEGETATION AND SOIL SURVEYS.MXD



Base Features

Hydrology Features

- Permanent Stream / River
- Intermittent Stream
- Water Area, Permanent

Custom Features

- Project Camp
- Soil Sampling Location
- Mineral Lick
- Spawning Area
- Vegetation Transect
- Surveyed Wetland

0 1 2
Kilometers

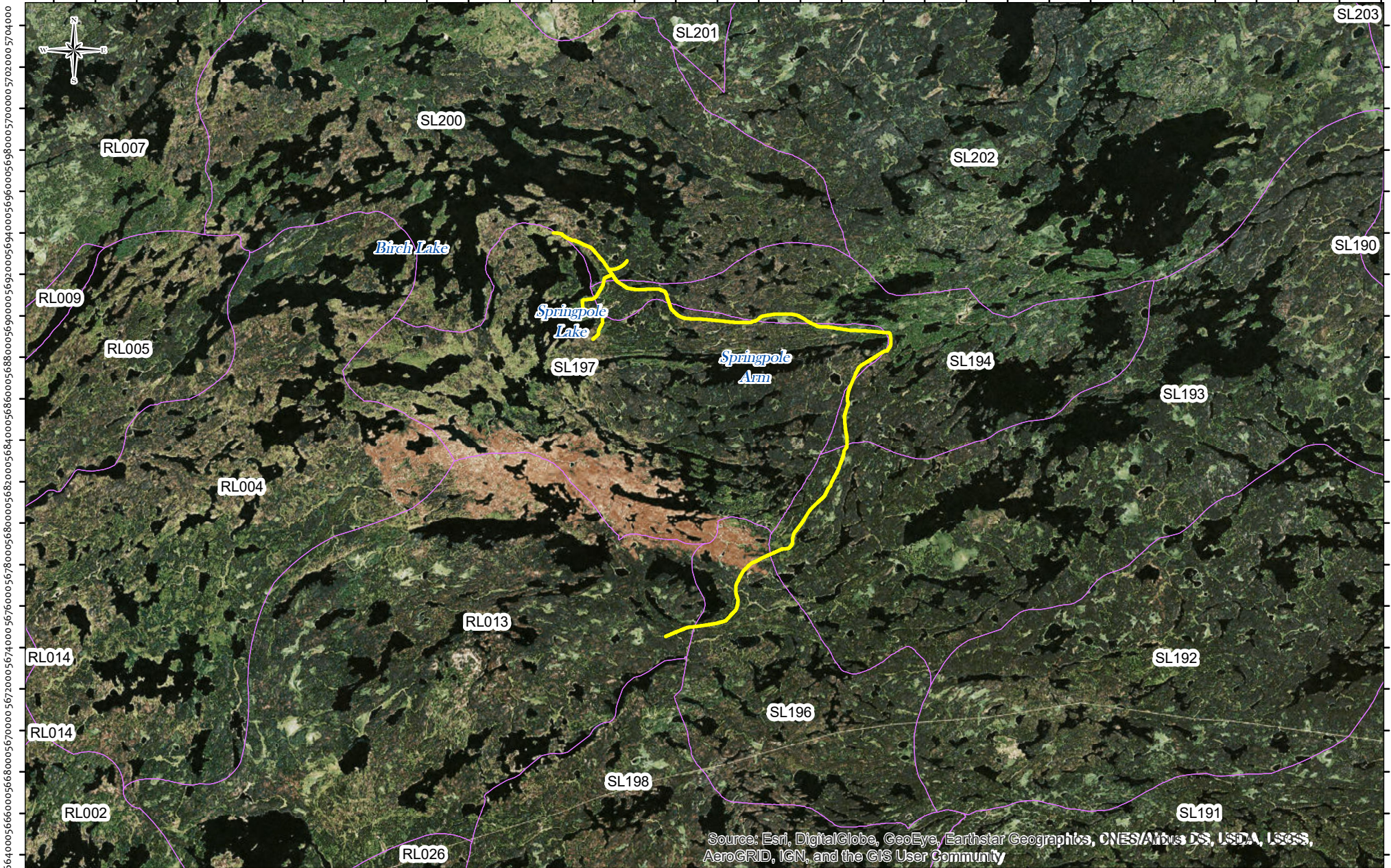
© DEPARTMENT OF NATURAL RESOURCES CANADA,
ALL RIGHTS RESERVED.
© QUEEN'S PRINTER FOR ONTARIO, 2010

FIRST MINING GOLD

Springpole Gold Project
Kenora District, Ontario
Figure 7-3
Vegetation & Wetlands

NAD83, UTM Zone 15 January 2018

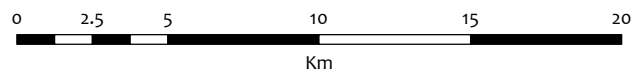
526000 528000 530000 532000 534000 536000 538000 540000 542000 544000 546000 548000 550000 552000 554000 556000 558000 560000 562000 564000 566000 568000 570000 572000 574000 576000 578000 580000 582000 584000 586000 588000 590000



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

Legend

- Access Corridor
- Trapline Area



Springpole Gold Project

Kenora District, Ontario

Figure 7-4

Trapline Areas

NAD83, UTM Zone 15

January 2018

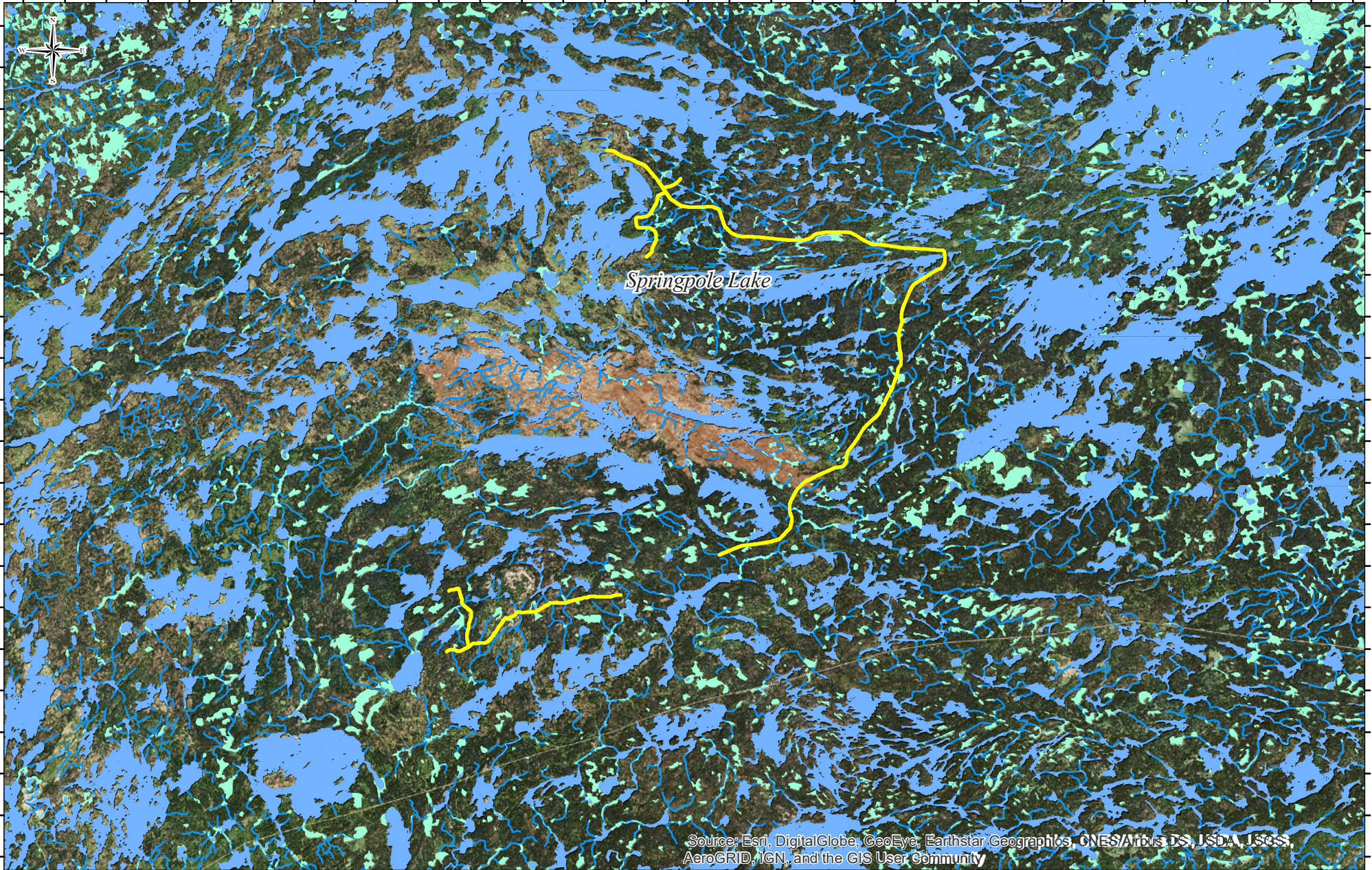
5640000 5660000 5680000 5700000 5720000 5740000 5760000 5780000 5800000 5820000 5840000 5860000 5880000 5900000

5640000 5660000 5680000 5700000 5720000 5740000 5760000 5780000 5800000 5820000 5840000 5860000 5880000 5900000

522000 524000 526000 528000 530000 532000 534000 536000 538000 540000 542000 544000 546000 548000 550000 552000 554000 556000 558000 560000 562000 564000 566000 568000 570000 572000 574000 576000 578000 580000 582000 584000 586000

5660000 5662000 5664000 5666000 5668000 5670000 5672000 5674000 5676000 5678000 5680000 5682000 5684000 5686000 5688000 5690000 5692000 5694000 5696000 5698000 5700000

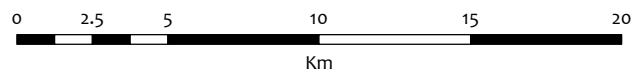
5660000 5662000 5664000 5666000 5668000 5670000 5672000 5674000 5676000 5678000 5680000 5682000 5684000 5686000 5688000 5690000 5692000 5694000 5696000 5698000 5700000



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

Legend

- Proposed Road
- Waterbody
- Wetland
- Watercourse



Springpole Gold Project

Kenora District, Ontario

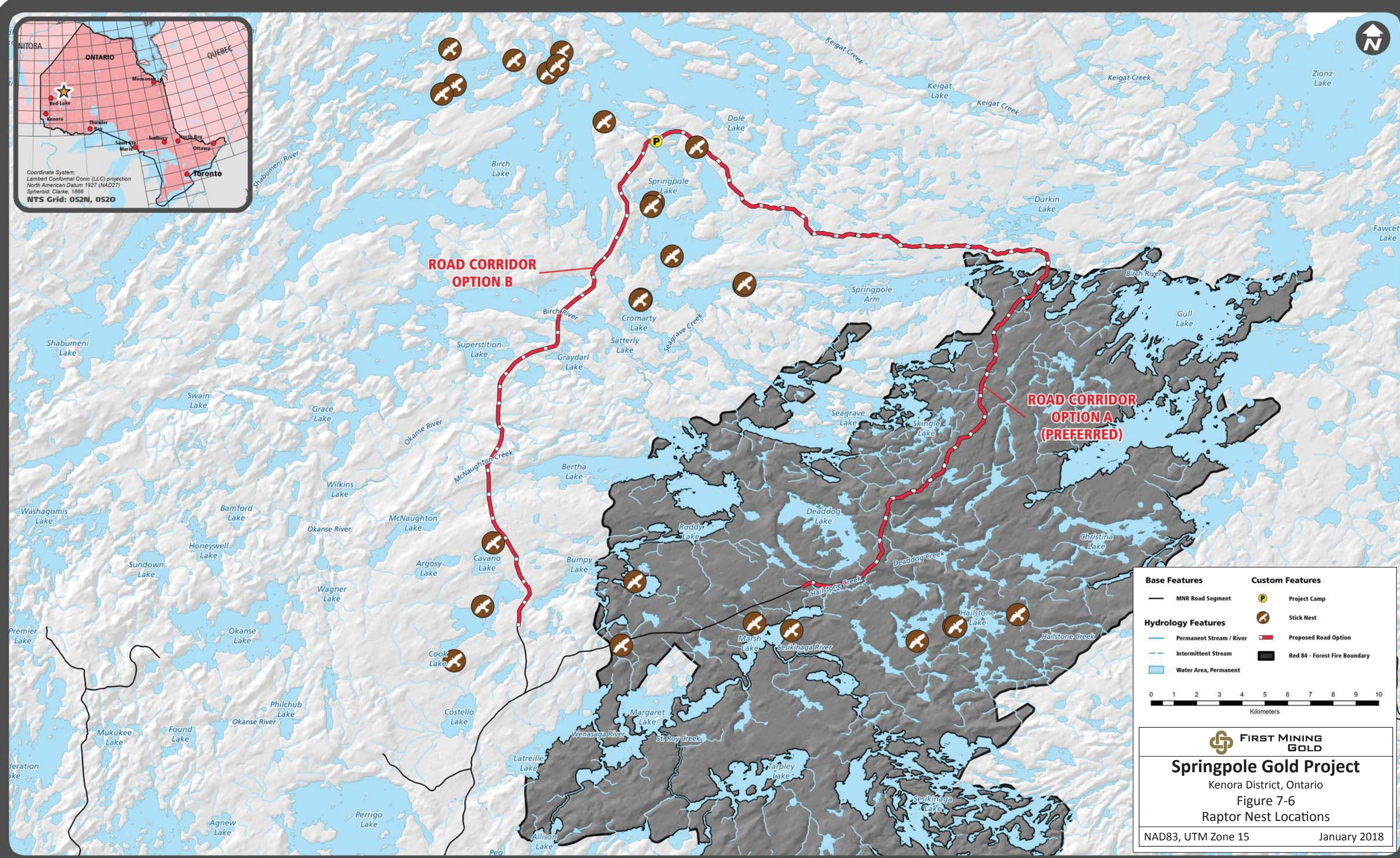
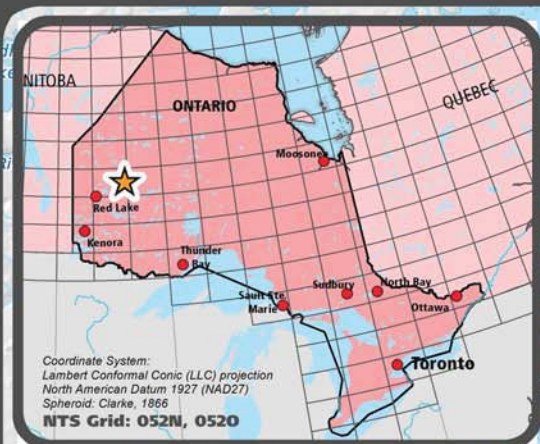
Figure 7-5

Regional Wetlands

NAD83, UTM Zone 15

January 2018

AGIS0E-KN-012948-GOLD-CANYON-RESOURCES-MAP-DOCUMENT-SUB-BASELINE-STUDY-2012-12-12-FIGURE-7-6-RAPTOR-NESTING-LOCATIONS.MXD



Base Features	Custom Features
MNR Road Segment	Project Camp
Permanent Stream / River	Stick Nest
Intermittent Stream	Proposed Road Option
Water Area, Permanent	Red 84 - Forest Fire Boundary

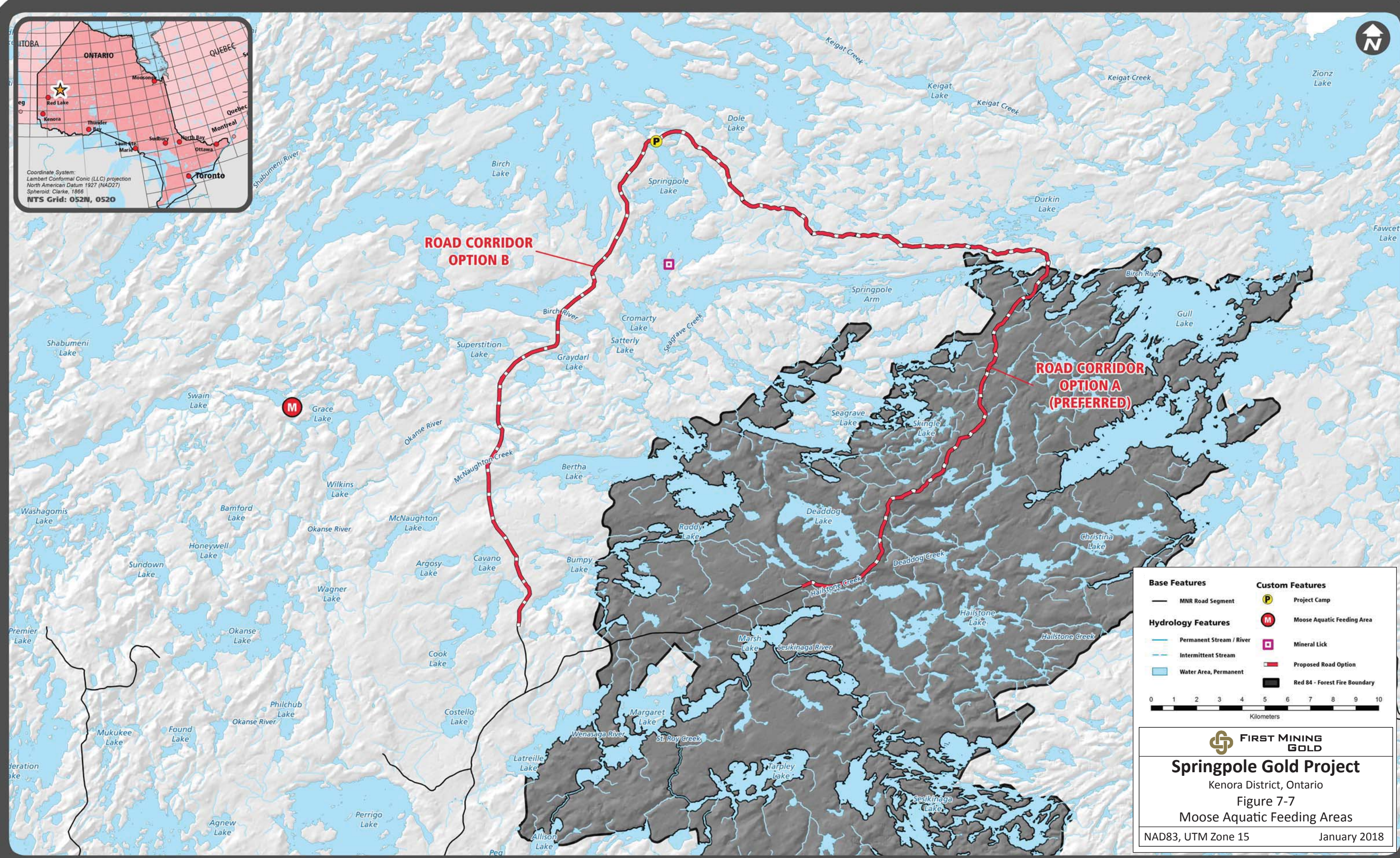
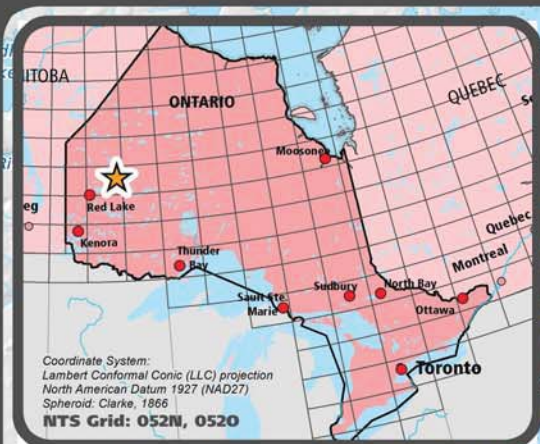
0 1 2 3 4 5 6 7 8 9 10
Kilometers

FIRST MINING GOLD

Springpole Gold Project
Kenora District, Ontario
Figure 7-6
Raptor Nest Locations

NAD83, UTM Zone 15
January 2018

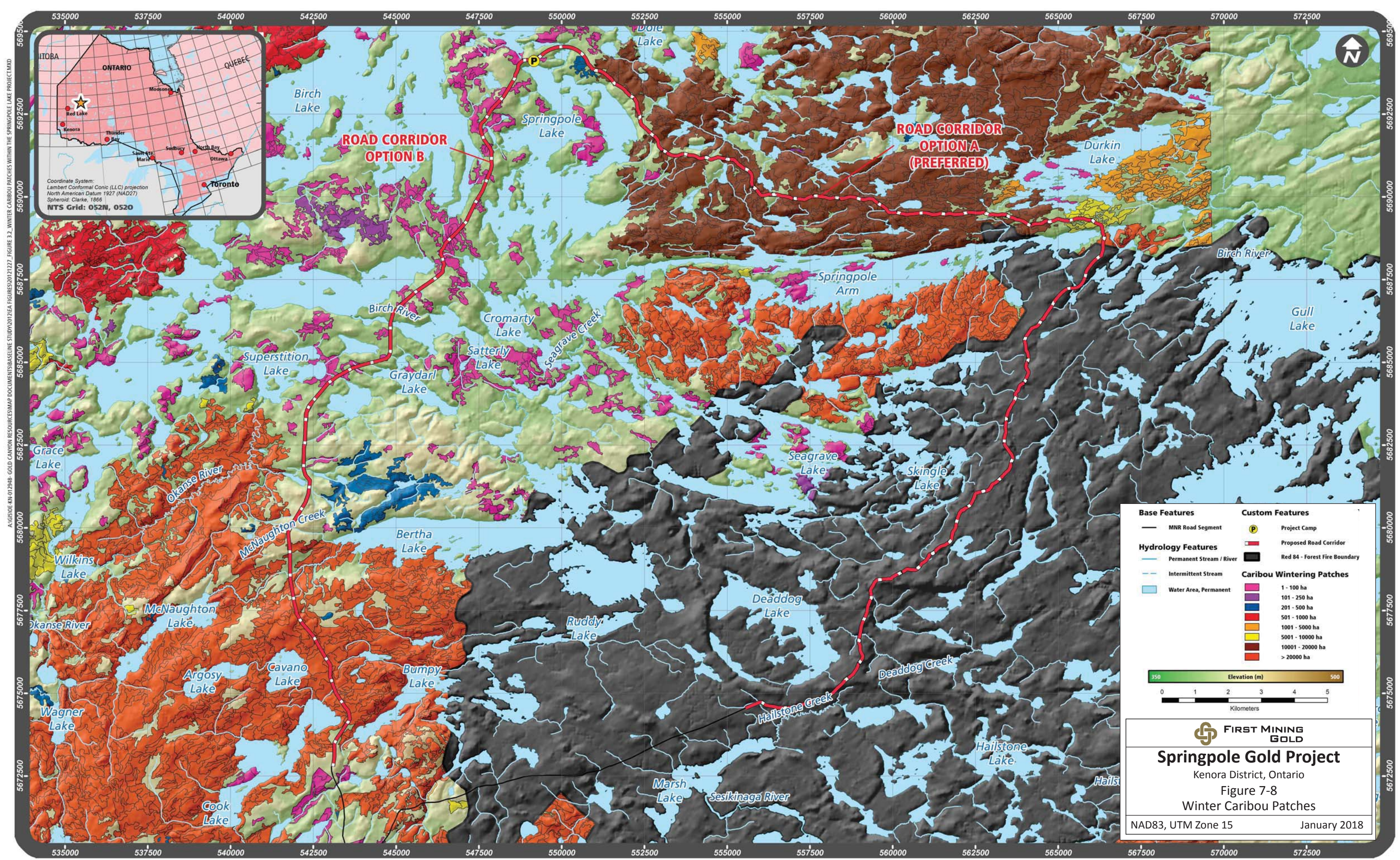
AGIS0E-KN-012948 - GOLD CANYON RESOURCES/MAP DOCUMENT/SUBBASELINE STUDY/2012/12/12/27 - FIGURE 2.19 - MOOSE AQUATIC FEEDING AREAS.MXD



FIRST MINING GOLD

Springpole Gold Project
Kenora District, Ontario
Figure 7-7
Moose Aquatic Feeding Areas

NAD83, UTM Zone 15
January 2018



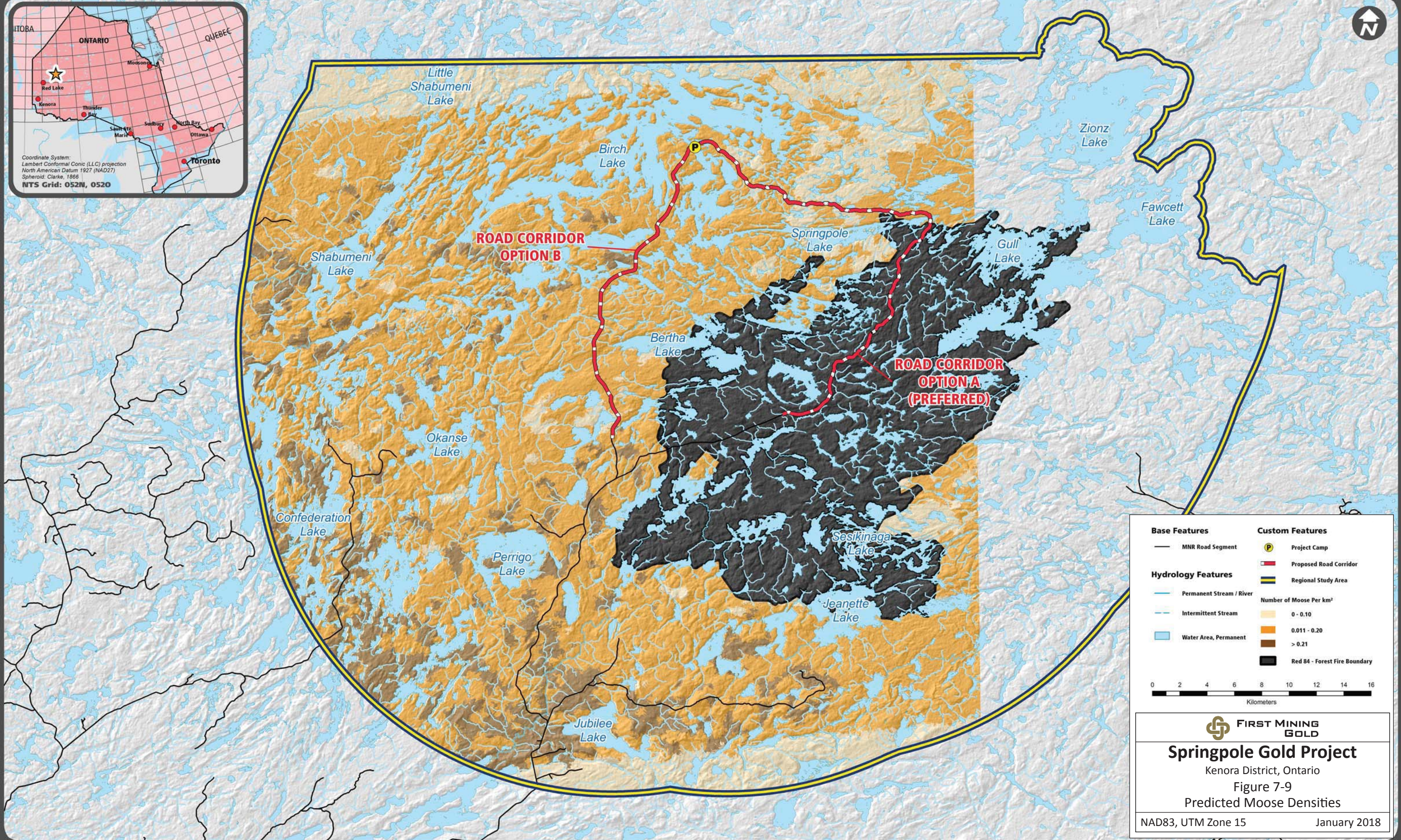
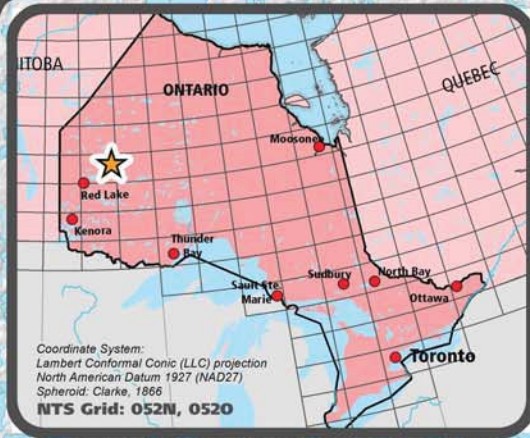
Coordinate System:
 Lambert Conformal Conic (LLC) projection
 North American Datum 1927 (NAD27)
 Spheroid: Clarke, 1866
 NTS Grid: 052N, 052O

Base Features	Custom Features
— MNR Road Segment	Project Camp
Proposed Road Corridor	Red 84 - Forest Fire Boundary
Permanent Stream / River	Caribou Wintering Patches
Intermittent Stream	1 - 100 ha
Water Area, Permanent	101 - 250 ha
	201 - 500 ha
	501 - 1000 ha
	1001 - 5000 ha
	5001 - 10000 ha
	10001 - 20000 ha
	> 20000 ha

Elevation (m)
 Kilometers

FIRST MINING GOLD
Springpole Gold Project
 Kenora District, Ontario
 Figure 7-8
 Winter Caribou Patches
 NAD83, UTM Zone 15
 January 2018

ALG150E-KN-012948 - GOLD CANYON RESOURCES MAP DOCUMENTS/BASELINE STUDY/2017/2EA FIGURES/2017/2EA FIGURE 3.1_Predicted Moose Densities.MXD



Base Features	Custom Features
MNR Road Segment	Project Camp
Permanent Stream / River	Proposed Road Corridor
Intermittent Stream	Regional Study Area
Water Area, Permanent	Number of Moose Per km²
Intermittent Stream	0 - 0.10
Water Area, Permanent	0.011 - 0.20
Red 84 - Forest Fire Boundary	> 0.21

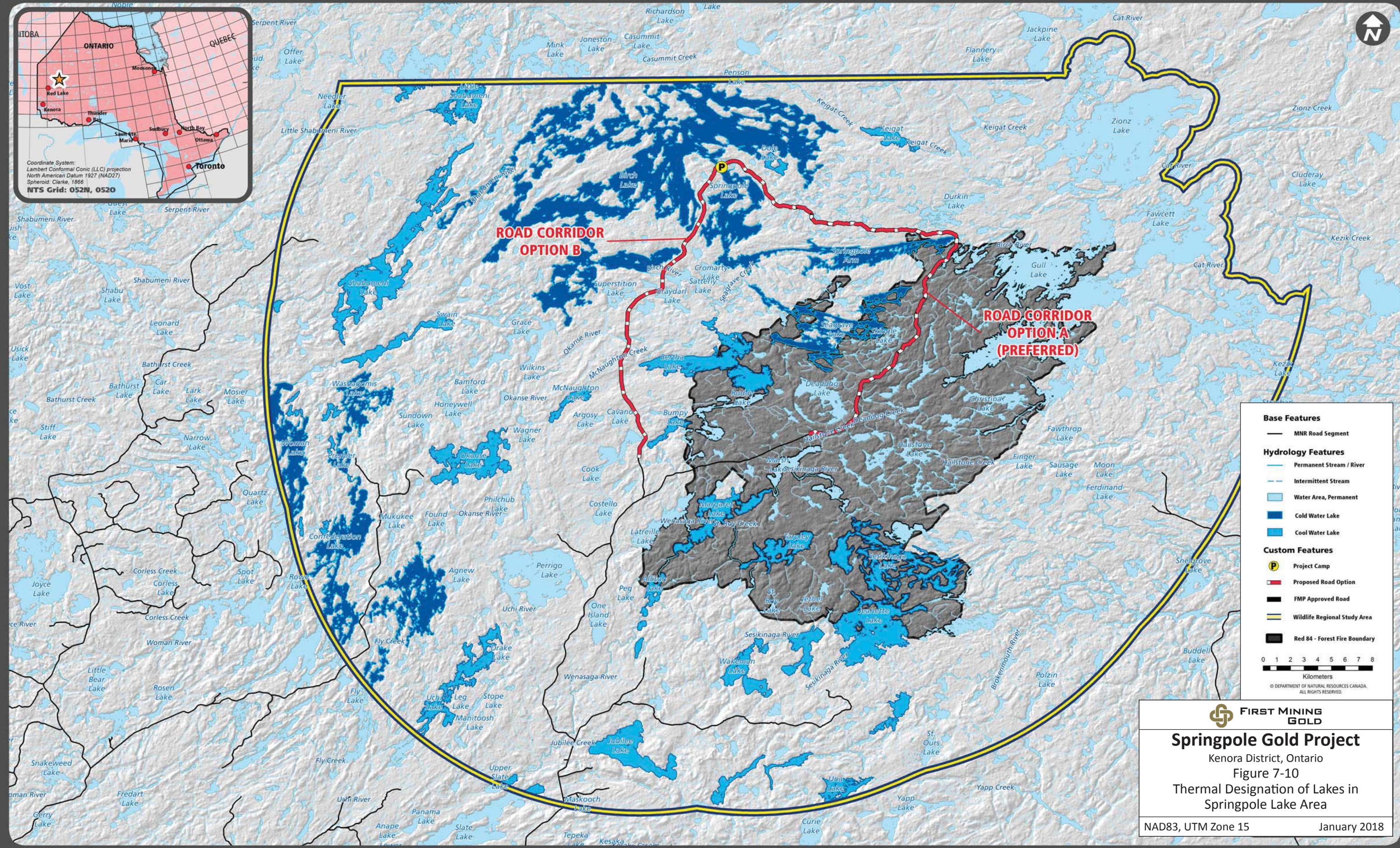
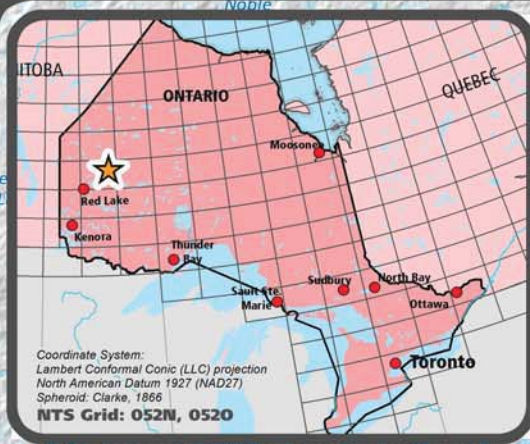
0 2 4 6 8 10 12 14 16
Kilometers

FIRST MINING GOLD

Springpole Gold Project
Kenora District, Ontario
Figure 7-9
Predicted Moose Densities

NAD83, UTM Zone 15
January 2018

AGIS02E-KN-012948-GOLD-CANYON-RESOURCES-MAP-DOCUMENT-BASELINE-STUDY-2012/12/12-FIGURE 7-10- THERMAL DESIGNATIONS OF LAKES.MXD



Base Features

- MNR Road Segment

Hydrology Features

- Permanent Stream / River
- Intermittent Stream
- Water Area, Permanent
- Cold Water Lake
- Cool Water Lake

Custom Features

- Project Camp
- Proposed Road Option
- FMP Approved Road
- Wildlife Regional Study Area
- Red 84 - Forest Fire Boundary

0 1 2 3 4 5 6 7 8
Kilometers
© DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.

FIRST MINING GOLD

Springpole Gold Project
Kenora District, Ontario
Figure 7-10
Thermal Designation of Lakes in Springpole Lake Area

NAD83, UTM Zone 15 January 2018



**ROAD CORRIDOR
OPTION B**

**ROAD CORRIDOR
OPTION A
(PREFERRED)**

Base Features	Custom Features
— Road Segment (MNR)	P Project Camp
Watercourse	— Road Corridor Option
— Intermittent	— Old Growth and Mature Forest Stand
— Permanent	— Red 84 - Forest Fire Boundary
— Interim Wetland	
Waterbody	
— Intermittent	
— Permanent	

345 Elevation (m) 500

0 1 2 3 4 5

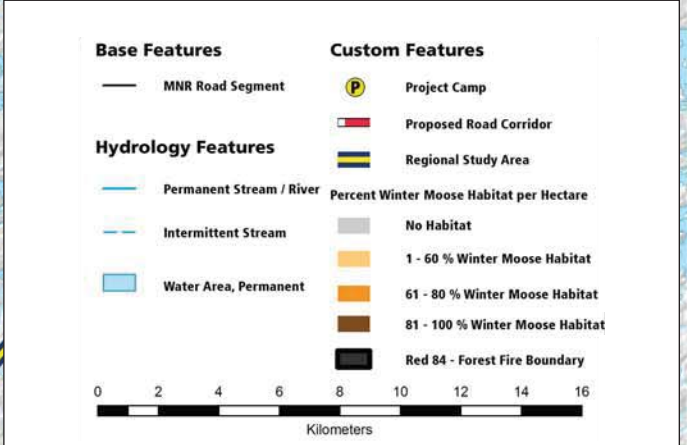
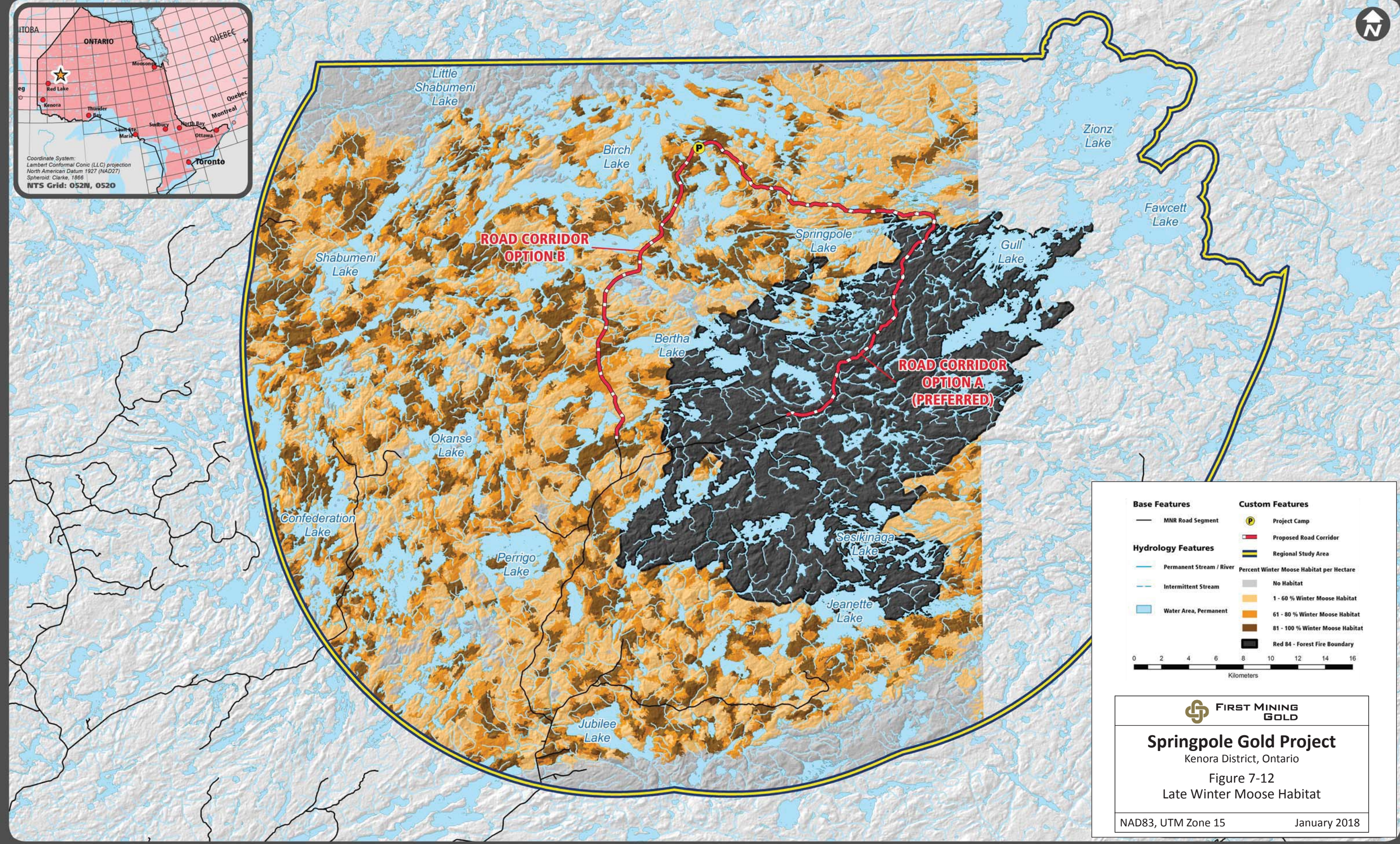
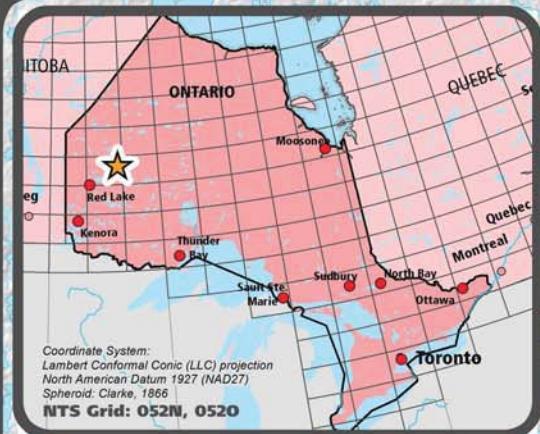
FIRST MINING GOLD

Springpole Gold Project
Kenora District, Ontario

Figure 7-11
Old Growth Stands

NAD83, UTM Zone 15 January 2018

A:\GIS\OE-KN-012948 - GOLD CANYON RESOURCES\MAP DOCUMENTS\BASELINE STUDY\2017\7EA FIGURES\20172727_ FIGURE 7-15_LATE WINTER MOOSE HABITAT.MXD



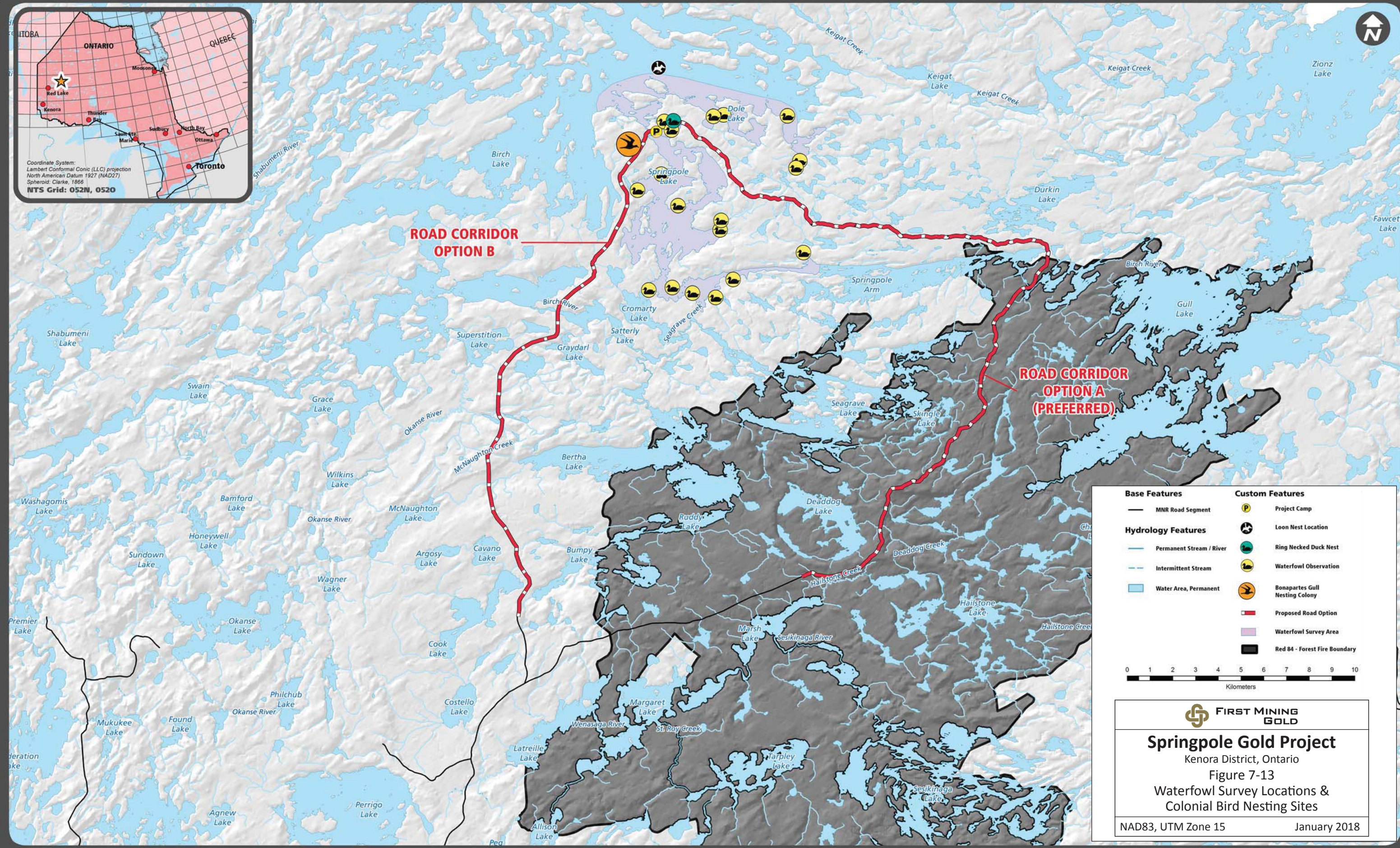
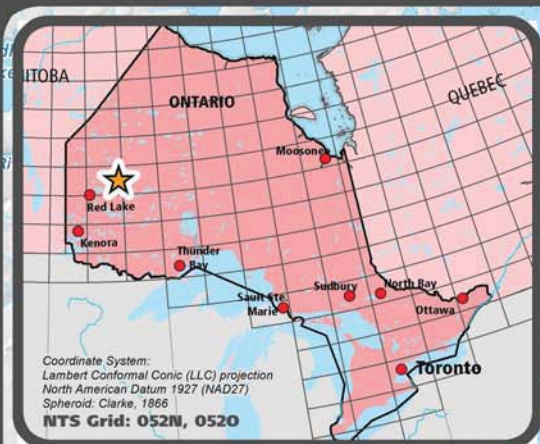
FIRST MINING GOLD

Springpole Gold Project
Kenora District, Ontario

Figure 7-12
Late Winter Moose Habitat

NAD83, UTM Zone 15 January 2018

AGIS0E-KN-012948 - GOLD CANYON RESOURCES MAP DOCUMENT SUB-BASIN STUDY 2012/12/15 - FIGURE 7-13 - WATERFOWL SURVEY LOCATIONS AND COLONIAL BIRD NESTING SITES.MXD



Base Features	Custom Features
MNR Road Segment	Project Camp
Hydrology Features	Loon Nest Location
Permanent Stream / River	Ring Necked Duck Nest
Intermittent Stream	Waterfowl Observation
Water Area, Permanent	Bonapartes Gull Nesting Colony
Proposed Road Option	Proposed Road Option
Waterfowl Survey Area	Waterfowl Survey Area
Red 84 - Forest Fire Boundary	Red 84 - Forest Fire Boundary

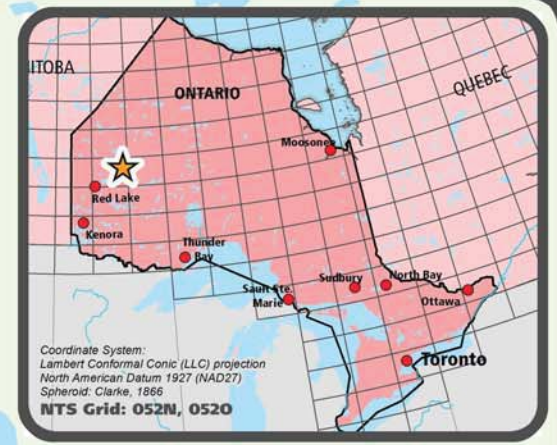
0 1 2 3 4 5 6 7 8 9 10
Kilometers

FIRST MINING GOLD

Springpole Gold Project
Kenora District, Ontario
Figure 7-13
Waterfowl Survey Locations & Colonial Bird Nesting Sites

NAD83, UTM Zone 15 January 2018

AGIS05E-KN-012948- GOLD CANYON RESOURCE MAP DOCUMENT SUB-BASELINE STUDY 2017/2018 FIGURES 20171227_ FIGURE 2.14 LOCATION OF ISA WITHIN CHURCHILL CARIBOU RANGE.MXD



Coordinate System:
Lambert Conformal Conic (LLC) projection
North American Datum 1927 (NAD27)
Spheroid: Clarke, 1866
NTS Grid: 052N, 052O

Base Features	Claim Features
Province of Ontario	Gold Canyon Mining Claim
Hydrology Features	Custom Features
Permanent Stream / River	Caribou Range
Water Area, Permanent	Regional Study Area

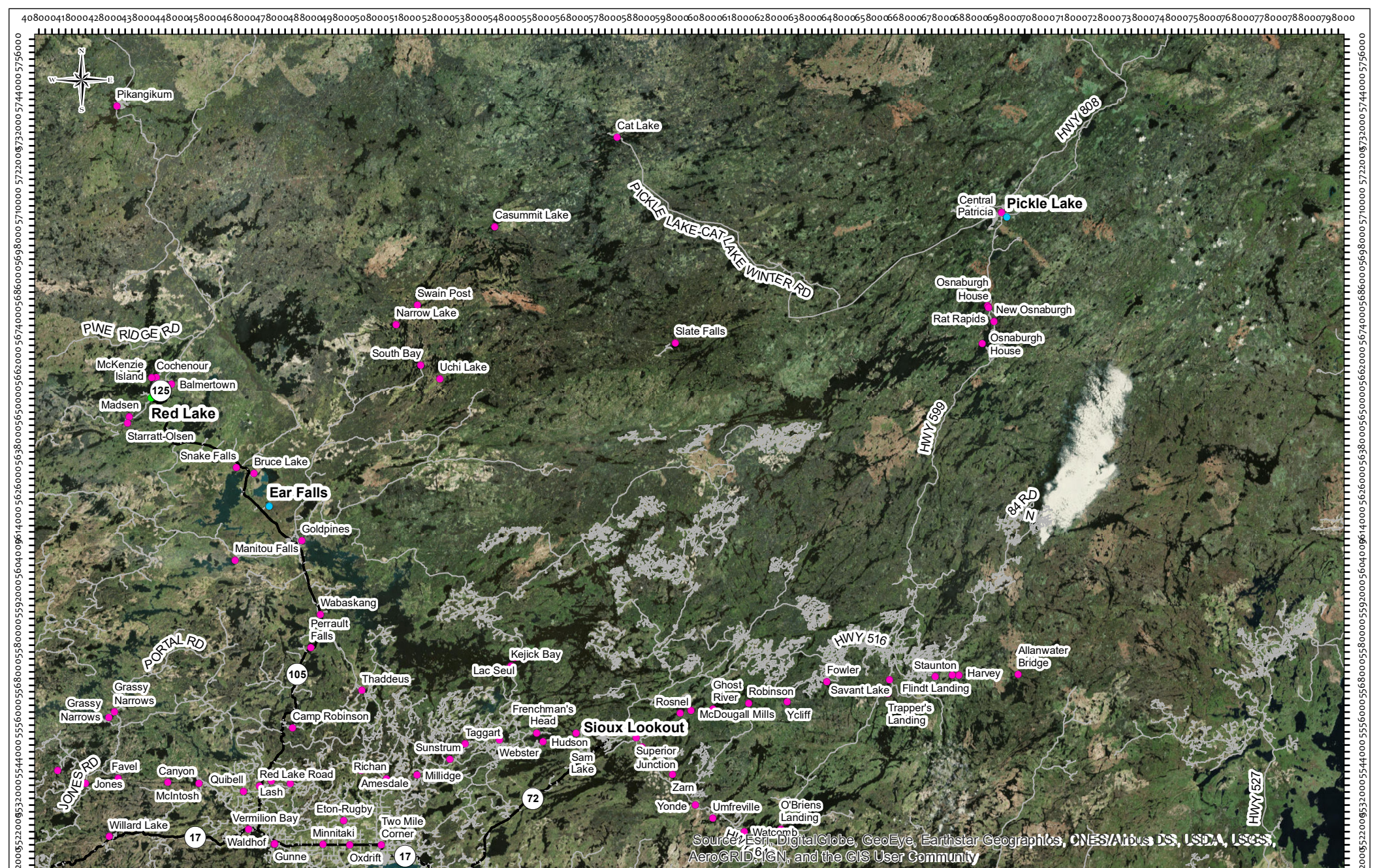
0 50 100 150 200
Kilometers

FIRST MINING GOLD

Springpole Gold Project
Kenora District, Ontario

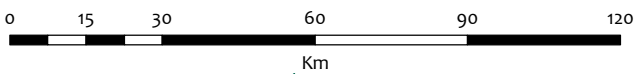
Figure 7-14
Location of Study Area within
Churchill Caribou Range

NAD83, UTM Zone 15 January 2018



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

- Legend**
- Road
 - Highway
 - Towns
 - Municipalities
 - Unincorporated Places



Springpole Gold Project
 Kenora District, Ontario
 Figure 7-15
 Settlements

NAD83, UTM Zone 15 January 2018