

**TECHNICAL REPORT**

**On the**

**Phyllis Cobalt Property**

**Kenora Mining District  
Northwestern Ontario, Canada**

**Prepared for:**

**FIRST ENERGY METALS LTD.  
1206 - 588 Broughton Street  
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## 1.0 SUMMARY

Kristian Whitehead, P. Geo. (“the author”) was retained by First Energy Metals Ltd. (“First Energy” or “the Company”) to prepare an independent Technical Report on the Phyllis Cobalt Property (“the Property”). The purpose of the report is to meet the Toronto Stock Exchange requirements and to support future financings.

Located in the Kenora Mining District of Ontario, the property consists of 117 mineral claim units totalling 2113 hectares in Grummet and Cathcart townships. The property boasts year-round access 192km northwest of Thunder Bay, ON via Hwy 17 and 9km south on a gravel forestry road. First Energy Metals Ltd. has the option to own 100 % of the Mineral Claims by making cash payments, issuing shares and carrying out exploration work.

The Phyllis claim block occupies the central portion of an ENE-WSW trending greenstone belt, consisting of Mesoarchean to Neoproterozoic age mafic to ultramafic rocks. These are bound by granite of varying composition - ranging from tonalite to biotite-granodiorite. Recent mapping undertaken by the Ontario Geological Survey includes a small portion of the Phyllis claims, suggests that there is a greater abundance of ultramafic metavolcanics than previously indicated. The regional foliation follows the general trend of the greenstone belt.

Historically, the initial cobalt discovery on the Property was made in 2010 by Don Dobransky, named the “Phyllis Central” occurrence. This discovery is characterized by a 80m x 60m outcrop and appears as a fairly structureless gabbro, with the exception of an array of narrow quartz veins and veinlets, which have sharp contacts with the country rock and trend roughly NE-SW and appear to have been intruded relatively recently. The gabbro itself is fine-to medium grained and appears highly altered. The exposed outcrop follows the northern flank of a gentle hill. Earlier excavations focussed in the uppermost parts of the topographic profile. This work confirmed the presence of cobalt mineralization.

Geologically, the Phyllis Cobalt Property and its surrounding area is situated in the Wabigoon Subprovince, which is part of the western region of the Superior Province of the Canadian Shield – 3 to 2.6 billion year old rocks that form the core of the North American continent. An irregularly shaped, granitic intrusion Adele Lake Pluton intrudes the Phyllis Lake Greenstone Belt. Also, there are other batholiths in the Ignace area. The Phyllis belt is composed of mafic metavolcanic rocks that show pillows in less deformed areas and widespread amphibolite-facies metamorphism. The metamorphism has transformed the metavolcanic rocks to amphibole gneisses at many localities in the belt. Mafic metavolcanic rocks of the Phyllis belt unconformably overlie biotite tonalite along the northwest side of the belt. The unconformity is marked by a garnetiferous quartzo-feldspathic sandstone unit that attains a thickness of up to a few tens of metres.

Cobalt- copper-nickel mineralization on the property is hosted by fine to medium grained highly altered gabbro rocks. Mineralization is generally in the form of massive interstitial or

disseminated sulphides. The main minerals are pyrrhotite, pentlandite and chalcopyrite, all of which can contain cobalt in substitution for other metals.

There are four major types of deposit models for cobalt, which are: Sediment hosted deposits; Hydrothermal and volcanogenic deposits; Magmatic sulphides deposits; and Laterite type deposits. Phyllis cobalt Property falls under magmatic sulphides category.

First Energy Metals Ltd. has carried out exploration work on the Property in two stages where the first stage was to evaluate and confirm historical data on the property by carrying out prospecting, trenching and sampling on historically reported mineralization zones and trends. The second stage comprised of trenching and channel sampling as a follow up of February 2018 work. To date, total exploration expenditures on the property are \$89,029.

The Stage one program was carried out in February 2018. A total of 31 grab rock samples were collected and were submitted to Activation Laboratories (ACTLABS) in Thunder Bay, Ontario. Following are highlights of the results.

- Overall results of 31 samples indicate cobalt (Co) values in the range of 0.001% (10 parts per million “ppm”) to 0.435% (4,350 ppm), copper (Cu) 0.03% to 0.602%, and nickel (Ni) 0.004% to 0.48%.
- Two samples from historical Central Blast Pit show average 0.33% cobalt, 0.254% copper and 0.0195% nickel.
- Seven samples from south historical blast pit show average 0.021% cobalt, 0.299% copper, and 0.176% nickel.
- Cobalt- copper-nickel mineralization is hosted by fine to medium grained highly altered gabbro rocks.
- The samples tested for gold, platinum and palladium returned with low values for these precious metals.

In June 2018, the Company started Stage 2 of exploration as a follow up of the prospecting and sampling work of February 2018. The work comprised prospecting and sampling along cobalt mineralization trend; striping, trenching and channel sampling around the original cobalt showing and other new mineralization discovered during trenching; and geological mapping of the contact zone between greenstone belt and granitic intrusions. The samples for this work were submitted to Agat laboratories in Thunder Bay, and the results were pending till the filing of this report.

The author visited the property on June 24, 2018 to verify the recently completed 2018 exploration work and historical exploration areas, mineralized outcrops and collect necessary geological data. The existing data consisted of rock chip sampling, visiting reported approachable old trenching areas and onsite discussions. The author was able to verify location of February 2018 and June 2018 sampling and trenching areas during his June 24, 2018 property visit. The samples from property visit were delivered by the author to ALS Laboratories in Thunder Bay Ontario, an accredited laboratory in Canada. The samples were assayed using ALS package ME-ICP61 - Four Acid Digestion with ICP-AES Finish; plus, ore

grade package OG62 for over limit cobalt or any other element. A total of eight samples were collected by the author from various rock outcrops and channel sampling areas (Table 6). Assay results indicated cobalt values in the range of 75 parts per million (ppm) to 3560 ppm (0.356%), copper 629 ppm to 8750 ppm (0.875%), and nickel 113 ppm to 2170 ppm.

The data presented in this report is based on published assessment reports available from First Energy Metals Limited, Ontario MNDMF, the Geological Survey of Canada, and the Ontario Geological Survey. All the consulted data sources are deemed reliable. The data collected during the course of present study is considered sufficient to provide an opinion about the merit of the Property as a viable exploration target.

Based on its favourable geological setting indicating cobalt- copper-nickel mineralization hosted by fine to medium grained highly altered gabbro rocks, results of exploration work by First Energy Metals Limited and findings of present study, it is concluded that the Property is a property of merit and possess a good potential for discovery of economic concentration of cobalt-copper-nickel mineralization through further exploration. Good road access, availability of exploration and mining services in the vicinity makes it a worthy mineral exploration target. The historical and current exploration data collected on the Property provides the basis for a follow-up work program.

### **Recommendations**

In the author's opinion, the character of the Phyllis Cobalt Property is sufficient to merit the following phased work program, where the second phase is contingent upon the results of the first phase.

#### ***Phase 1 – Geophysical Surveying and Diamond Drilling Work***

The Phase 1 exploration work will comprise of two main tasks which include a 15 line-kilometre ground induced polarization (IP) survey and a 300-meter diamond core drill program targeting the immediate main area of the Phyllis Cobalt Zone.

##### ***Task 1 – Ground Induced Polarization Geophysical Survey***

A 15 line-kilometre IP survey is proposed around the main Phyllis Cobalt Zone at 100-meter line spacing to cover 1500-meter area along strike. This survey will not only help to check the presence of subsurface mineralization but also provide information regarding azimuth and dip of the contact zone between greenstone and the granitic intrusion.

##### ***Task 2 – Diamond Core Drilling***

A 300-meter diamond drill program is also recommended to check the subsurface extension of the main Phyllis Cobalt Zone. This drilling will comprise of two drill holes down to a depth of 150 metre each.

Total estimated budget for Phase 1 program is \$135,250 and it will take about eight to weeks time to complete this work.

***Phase 2 – Detailed Drilling and Resource Estimation***

If results from the first phase are positive, then a detailed drilling program would be warranted to check the targets identified in the ground geophysical survey and to further trace any mineralization intercepted in Phase 1 drilling. The scope of work for drilling and location of drill holes would be determined based on the findings of Phase 1 investigations.

## **2.0 INTRODUCTION**

### **2.1 Purpose of Report**

The author was retained by First Energy Metals Ltd. to prepare an independent Technical Report on the Phyllis Cobalt Property. The purpose of the report is to meet the Toronto Stock Exchange requirements and to support future financings.

### **2.2 Sources of Information**

The present report is based on published assessment reports available from the Ministry of Northern Development, Mines and Forestry (MNDMF) Ontario, and published reports by the Ontario Geological Survey (OGS), the Geological Survey of Canada (“GSC”), various researchers, websites, and personal observations. All consulted sources are listed in the References section. The sources of the maps are noted on the figures.

The author carried out a visit of the Property on June 24, 2018. The scope of Property inspection was to verify current and historical exploration work on the Property. The geological work performed to verify the existing data consisted of rock chip sampling and visiting reported approachable historical exploration work areas.

The author has also reviewed the land tenure on the MNDMF Database. The author reserves the right but will not be obliged; to revise the report and conclusions if additional information becomes known after the date of this report.

## **3.0 RELIANCE ON OTHER EXPERTS**

For the purpose of the report the author has reviewed and relied on ownership information provided by First Energy Metals Limited, which to the author’s knowledge is correct. A limited search of tenure data on the MNDM Ontario website on June 23, 2018, conforms to the data supplied by First Energy Metals Limited. However, the limited research by the author does not express a legal opinion as to the ownership status of the Phyllis Cobalt Property. This disclaimer applies to ownership information relating to the Property, and the information is available in Section 1 (Summary) and Section 4 (Property Description and Location) of this report.

## **4.0 PROPERTY DESCRIPTION AND LOCATION**

The Phyllis Cobalt Property consists of 123 mineral claims in 117 units totalling 2113 hectares in Grummet and Cathcart townships in Kenora Mining District of Northwestern Ontario, Canada (Figure 1 and 2). Originally the property was comprised of seven mining claims covering 112 units and 1792 hectares land package. As of April 10, 2018, the Ontario



Ministry of Energy, Northern Development and Mines changed its claim management system to incorporate online staking by dividing mining lands into cell and boundary claim units. The old claims are now called Legacy claims (see Figure 3).

It is located about 192 kilometers to the southwest of Thunder Bay, approximately 30 kilometers to the southeast of the town of Ignace on Highway 11/17.

The Property claims were acquired under an agreement dated January 29, 2018 with Alex Pleson and Afzaal Pirzada (“the Optionor”), where First Energy has the option to acquire a 100% interest in the Claims, by making the following cash payments, common shares issuances and exploration expenditures:

**Table 1: Property agreement**

	<u>Cash</u>	<u>Securities</u>	<u>Exploration Expenditure Requirements</u>
<u>On Signing</u>	\$20,000	100,000 Common Shares	Nil
<u>Year 1</u>	\$35,000	150,000 Common Shares	Exploration expenditures of not less than \$75,000 to be incurred on or before January 31, 2019.
<u>Year 2</u>	\$35,000	150,000 Common Shares	Cumulative exploration expenditures of not less than \$100,000 to be incurred on or before January 31, 2020.
<u>Year 3</u>	\$50,000	200,000 Common Shares	Cumulative exploration expenditures of not less than \$125,000 to be incurred on or before May 31, 2021.

The Claims Agreement also provides for a royalty equal to 3% Net Smelter Return (“NSR”) from the Claims payable to the Optionor. The royalty will be payable to the Optionor for as long as First Energy and/or its successors and assigns hold any interest in the Claims. First Energy will have a right to purchase a 1% NSR for \$1,000,000 at any time up to when a production decision is made.

The claims were staked on ground by erecting physical posts as required by claim staking regulations in Ontario. In Ontario all mineral claims staked are subject to \$400 per unit worth of eligible assessment work to be undertaken before year 2 anniversary, followed by \$400 per unit per year thereafter.

There are a number of Aboriginal communities and organizations in the Ignace area including Lac Seul First Nation, Seine River First Nation and Wabigoon Lake First Nation. Métis Councils in the area include Atikokan and Area Métis Council, Kenora Métis Council, Northwest Métis Council and Sunset Country Métis Council as represented by the Lake of Woods/Lac Seul, Rainy Lake/Rainy River and Treaty 3 Traditional Territory Consultation Committee and Greenstone Métis Council, Superior North Shore Métis Council and Thunder Bay Métis Council as represented by Lakehead/Michipicoten/Nipigon Traditional Territory Consultation Committee and the Métis Nation of Ontario. Any exploration and mining work in on the property will need to be carried out in consultation with these communities.

Claim data is summarized in the Table 1, while a map showing the claims is presented in Figures 2 and 3.

**Table 2: Claim Data**

Claim ID	Township	Option	Due Date	Legacy Claim
238466	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
334577	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
221391	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
142634	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
324676	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
257367	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
238467	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
334580	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
311952	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
201343	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
238465	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
113401	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
334578	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
334579	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
209356	Grummett	First Energy Metals Ltd.	Jan 18, 2020	K4280713
209357	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
257368	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
171376	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
201341	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280713
152389	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
196872	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
156702	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4280713
291793	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
102513	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
305141	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4280713
124393	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
311950	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4280713
311951	Grummett	First Energy Metals Ltd.	Jan 18, 2020	K4280713
171375	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4280713
201342	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4280713
321002	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
169004	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
235720	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784

Claim ID	Township	Option	Due Date	Legacy Claim
181808	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
321005	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
321001	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
284965	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
152390	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
321003	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
321004	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
110704	Grummett	First Energy Metals Ltd.	Apr 3 2019	K9279785
206305	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784, K4279785
343913	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
117843	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784 K4279785
206306	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
117844	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279784
143044	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
143045	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
182186	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
238262	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
136999	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
343817	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
209133	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
312335	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
257851	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
305024	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
238261	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
305025	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
305026	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785
161593	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785, K4279786
101821	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
101822	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
197530	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785, K4279786

Claim ID	Township	Option	Due Date	Legacy Claim
283596	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
283597	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279785, K4279786
116314	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
180433	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
234318	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
216295	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
167597	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
167598	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
161592	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
283595	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
122488	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
197531	Grummett	First Energy Metals Ltd.	Apr 3 2019	K4279786
244352	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280706
318387	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280706
270967	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4279786
270632	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280706
122487	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4279786
263510	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4279786
270633	Grummett	First Energy Metals Ltd.	Jan 19 2020	K4280706
244351	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280706
132431	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280706
111105	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280706
152048	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280706
167206	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280706
318386	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280706
204649	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280706
251886	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280706
270618	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280706, K4280707
152030	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280706, K4280707
185134	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280706, K4280707
132447	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280706, K4280707
168636	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
333346	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
319806	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
245803	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
272589	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
245801	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707

Claim ID	Township	Option	Due Date	Legacy Claim
245802	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
272590	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
198592	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
272588	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
333345	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
185730	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
112680	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
206591	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
272014	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
153390	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707, K4280708
265277	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707, K4280708
333108	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707, K4280708
133821	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707, K4280708
265852	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280707
272013	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
198532	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
333106	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
168555	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
153393	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
133819	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
245717	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
111428	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
205991	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
133820	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
301866	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
301867	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
153391	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
333107	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
153392	Cathcart	First Energy Metals Ltd.	Jan 19 2020	K4280708
Total Claims		<b>123</b>		
Units		<b>117</b>		
Area in Square Meter		<b>21133125</b>		
Area Hectares		<b>2113.31</b>		
Area Acres		<b>5222.00</b>		
Work Required		<b>\$46,800.00</b>		

There is no past producing mine on the Property and there were no historical mineral resource or mineral reserve estimates documented.

There are no known environmental liabilities and no permits have been applied for or acquired for the Property. An exploration work permit for trenching, channel sampling and drilling is in place for the Property.

Figure 1: Property Location Map

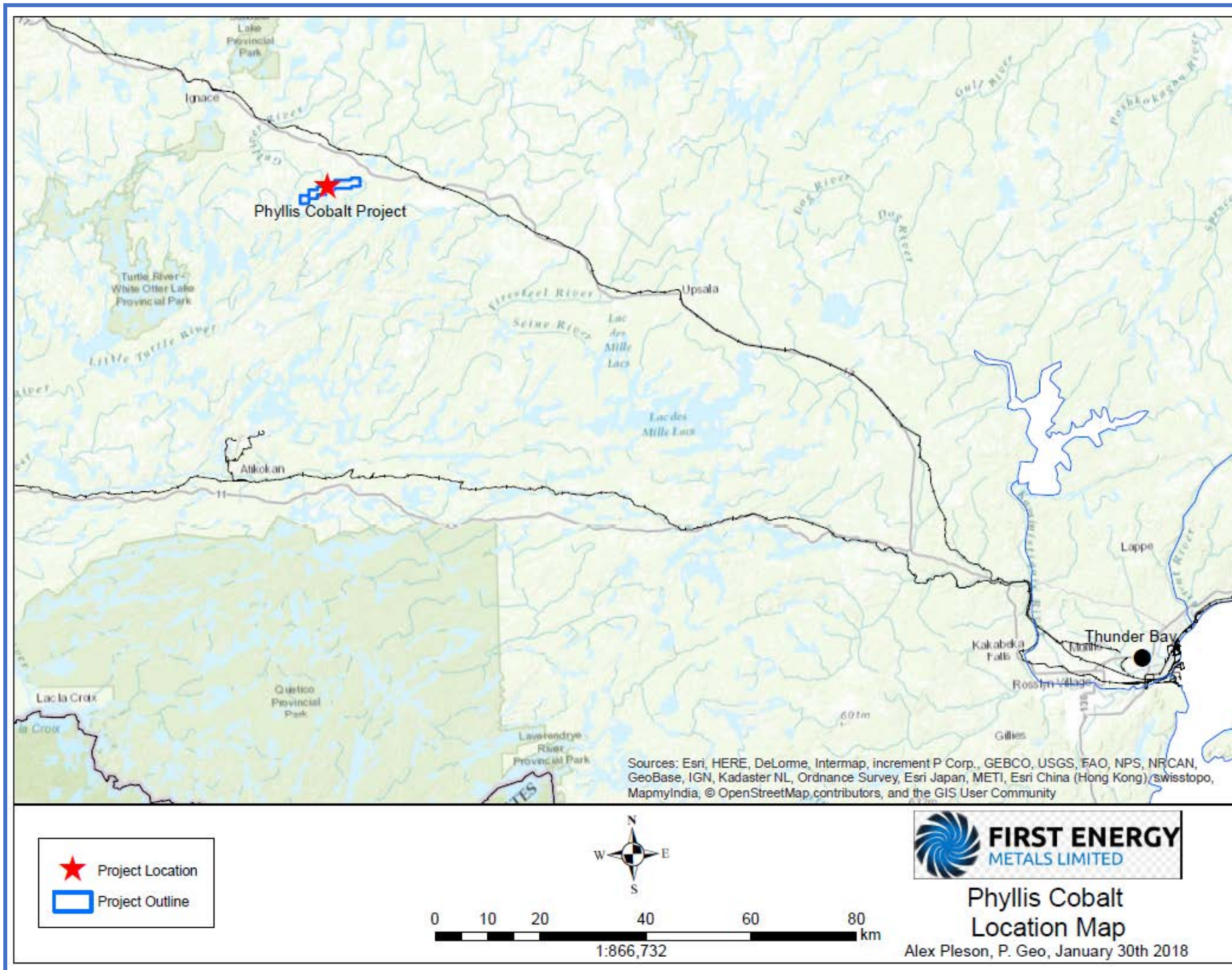
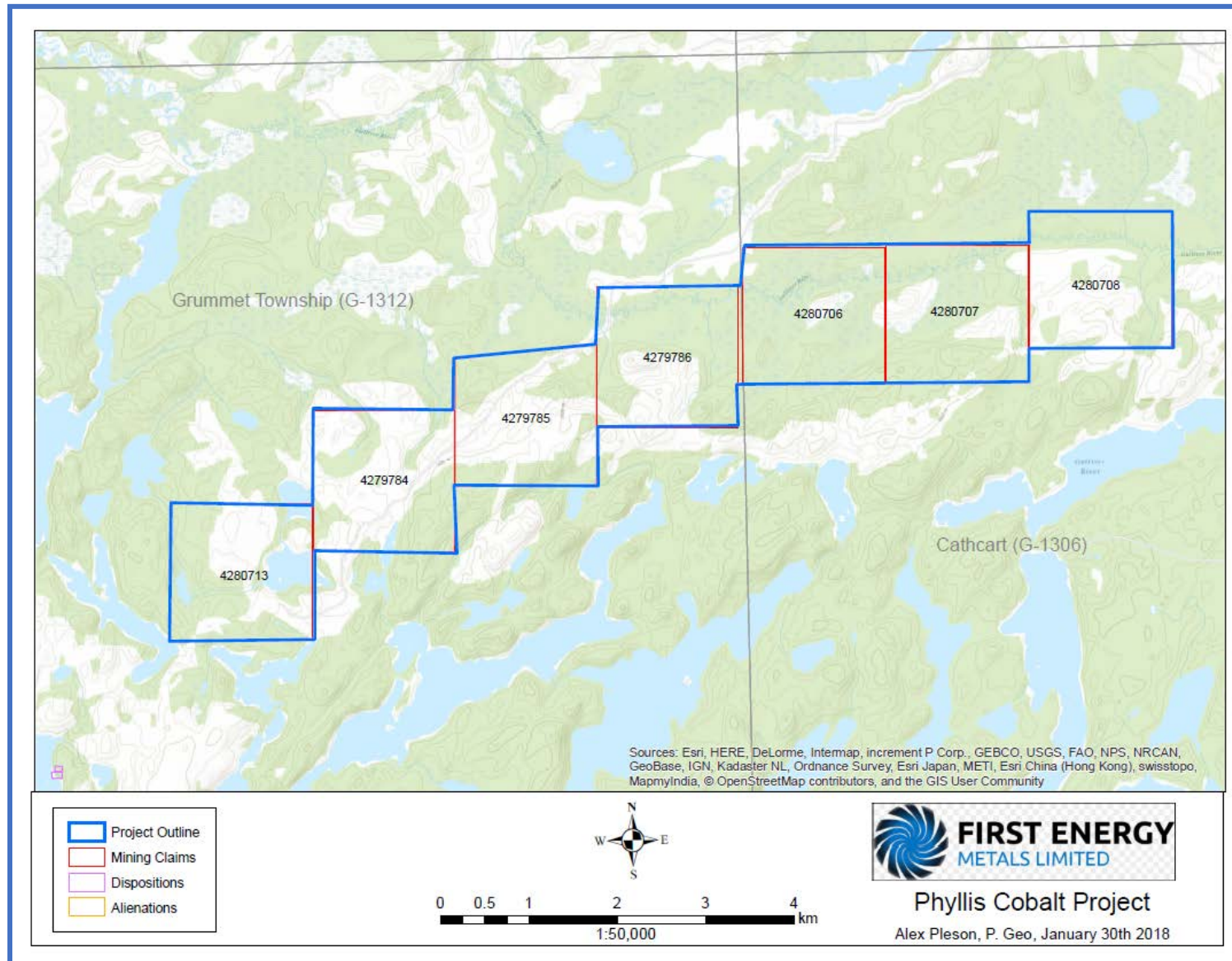


Figure 2: Phyllis Cobalt Property Mineral Claim Map





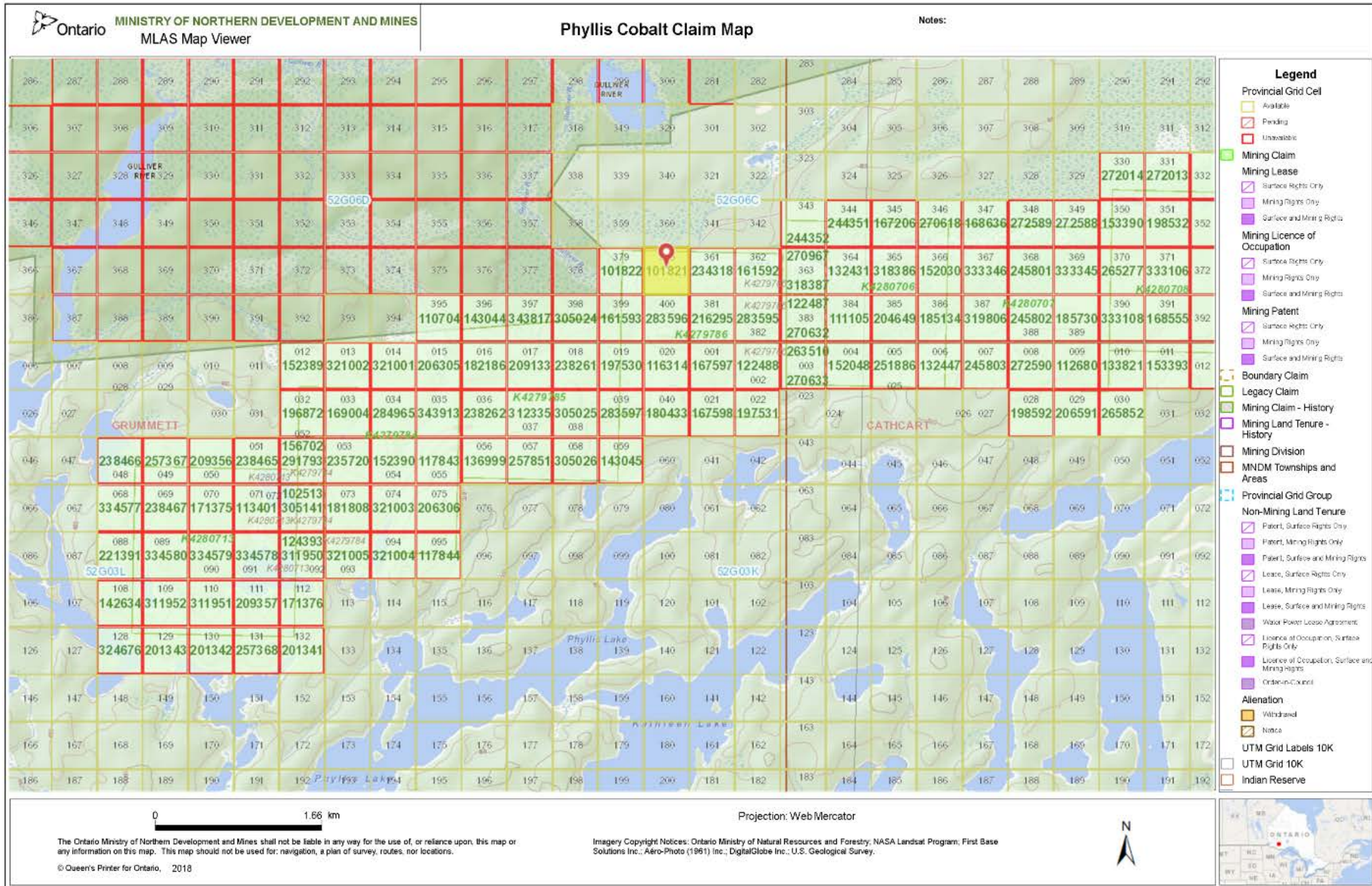


Figure 3: New claim map showing Cell Claims and Legacy Claims

## **5.0 ACCESS, CLIMATE, PHYSIOGRAPHY, LOCAL RESOURCES, AND INFRASTRUCTURE**

### **5.1 Access**

The Phyllis Cobalt Property has good year-round road access from the town of Thunder Bay, Ontario (Figure 1) via Hwy 17 and 9 km south on a gravel forestry road. Travel time by road from Thunder Bay to the Property is approximately 2 hours.

### **5.2 Climate**

The climate of Thunder Bay region including the Phyllis Cobalt Property area is influenced by Lake Superior, resulting in cooler winter temperatures and warmer summer temperatures for an area extending inland as far as 16 km. The average daily temperatures range from a high of 17.6 °C in July and a low of -14.8 °C in January. The summer period is approximately 97 days in length extending from the beginning of June to the beginning of September; fall lasts about 60 days and extends to November. The winter season lasts approximately 6 months extending from November through to May. Although the area normally has about six months of snow-free conditions, exploration and mining work can be carried out throughout the year.

### **5.3 Physiography**

The Canadian Shield region generally has a low-relief, gently undulating land surface with an elevation of about 150 masl (metres above sea level) in the north and about 450 masl in the south. The property lies in the Severn Uplands, which comprises broadly rolling surfaces of Canadian Shield bedrock that occupies most of northwestern Ontario and which is either exposed at surface or shallowly covered with Quaternary glacial deposits. Terrains in the Severn Uplands contain numerous lakes. The land surface within the area varies somewhat from the region in that there is considerable relief between the lakes in most areas and the ground surface elevation ranges from 368 masl to 554 masl.

Regionally, there are two major moraine ridges that represent dominant topographic features: the Hartman and Lac Seul moraines and associated glacial deposits (e.g., eskers, tills, kames and outwash). (Golder report 2013).

The Ignace area is contained within the Nelson River Drainage Area, which drains into Hudson Bay through the Nelson River. In the Ignace area there are three tertiary watersheds, the Upper English sub-basin, the Wabigoon sub-basin and the Central Rainy sub-basin. The Ignace area is abundant in lakes, which are interconnected by an intricate network of small and medium sized rivers, and by large rivers such as the Wabigoon River, Bending River and Gulliver River. The Township of Ignace and the northeastern part of the Ignace area is located within the Upper English sub-basin which generally drains to the northeast. The Wabigoon sub-basin is in the western part of the Ignace area and is

drained by the Wabigoon River to the northwest. The Central Rainy sub-basin, located south and southwest of the Ignace area, is drained largely by the Turtle River which eventually flows into the Rainy River. Given the modestly rugged terrain, modest precipitation and relatively small size of catchment areas, no large areas of floodplain are expected to be present.



## **5.4 Local Resources and Infrastructure**

The town of Thunder Bay, located about 192 kilometres from the Property, is the largest city in Northwestern Ontario, serving as a regional commercial centre. The town is a major source of workforce, contracting services, and transportation for the forestry, pulp and paper and mining industry. Thunder Bay is a transportation hub for Canada, as the TransCanada highways 11 and 17 link eastern and western Canada. It is close to the Canada-U.S. border and highway 61 links Thunder Bay with Minnesota, United States. Thunder Bay has an international airport with daily flights to Toronto, Ontario and Winnipeg, Manitoba and the United States. There is a large port facility on the St. Lawrence Seaway System which is a principal north-south route from the Upper Midwest to the Gulf of Mexico.

The city of Thunder Bay has most of the required supplies for exploration work including grocery stores, hardware stores, exploration equipment supply stores, restaurants, hotels, and a hospital. The population of the city of Thunder Bay was 110,984 people in 2014 (Statistics Canada, [www.statcan.gc.ca](http://www.statcan.gc.ca)). Many junior exploration and mining companies are based in Thunder Bay, and thus the city is a source of skilled mining labour.

The town of Ignace located about 30 kilometres to the northwest of the Property is the nearest place to provide lodging for exploration program. The town is located on Highway 17 and has a population of around 1,200 people. There are a few motels and lodges to stay and restaurants for dining. Forestry is a major industry in the area and the largest single land-use. The region has more than 66% productive forest and a number of private timber companies are currently managing forestry operations. There are a number of small sand and gravels pits in the Ignace area, as well as the Butler Quarry (located approximately 8 km west of the Township of Ignace and north of the Trans-Canada Highway), which extracts ornamental stone. There have been four other past producing ornamental stone quarries in the area (Golder report 2013).

A Canadian Pacific (CP) rail corridor runs approximately parallel to Highway 17 through the area also, as does a natural gas pipeline. There are two primary transmission corridors through the area. A 230-kV line which parallels the Trans-Canada Highway in the western half of the area, moving south between Elsie and Sandford Lakes south of Ignace towards Atikokan (Golder report 2013).

There are several lakes, rivers and creeks in and around the Phyllis Cobalt Property area which can be a source of water for exploration work.

## **6.0 HISTORY**

The area surrounding the property has seen, in the past, production of metallic resources and exploration potential for different minerals. The area is part of the Kenora Mining

District, where mining history is closely related to the exploration of gold, which was produced in the past at a number of mines.

The initial cobalt discovery on the Property was made in 2010 by Don Dobransky, named the “Phyllis Central” occurrence. This discovery is characterized by an 80m x 60m outcrop and appears as a fairly structureless gabbro, except for an array of narrow quartz veins and veinlets, which have sharp contacts with the country rock and trend roughly NE-SW and appear to have been intruded relatively recently. The gabbro itself is fine-to medium grained and appears highly altered. The exposed outcrop follows the northern flank of a gentle hill. Earlier excavations focussed in the uppermost parts of the topographic profile. This worked confirmed the presence of economic grades of cobalt mineralization up to 0.33% Co (including 1.2% Cu and 0.39% Ni).

## **7.0 GEOLOGICAL SETTING AND MINERALIZATION**

### **7.1 Regional Geology**

Geologically the Property and its surrounding area is situated in the Wabigoon Subprovince, which is part of the western region of the Superior Province of the Canadian Shield – 3 to 2.6-billion-year-old rocks that form the core of the North American continent. An irregularly shaped, granitic intrusion Adele Lake Pluton intrudes the Phyllis Lake Greenstone Belt. There are other batholiths in the Ignace area. These are Neoproterozoic intrusions that were emplaced into the older Raleigh Lake and Bending Lake greenstone belts.

Regional structural trends defined by lithologic contacts, foliations, gneissosity and faults are aligned mainly easterly to northeasterly in the central Wabigoon Subprovince area and indeed in most of the western Superior Province. The easterly trending boundary between the Quetico and Wabigoon subprovinces represents the most regionally extensive structural element in the area. Most structures dip subvertically although local areas of low-dip fabric are observed.

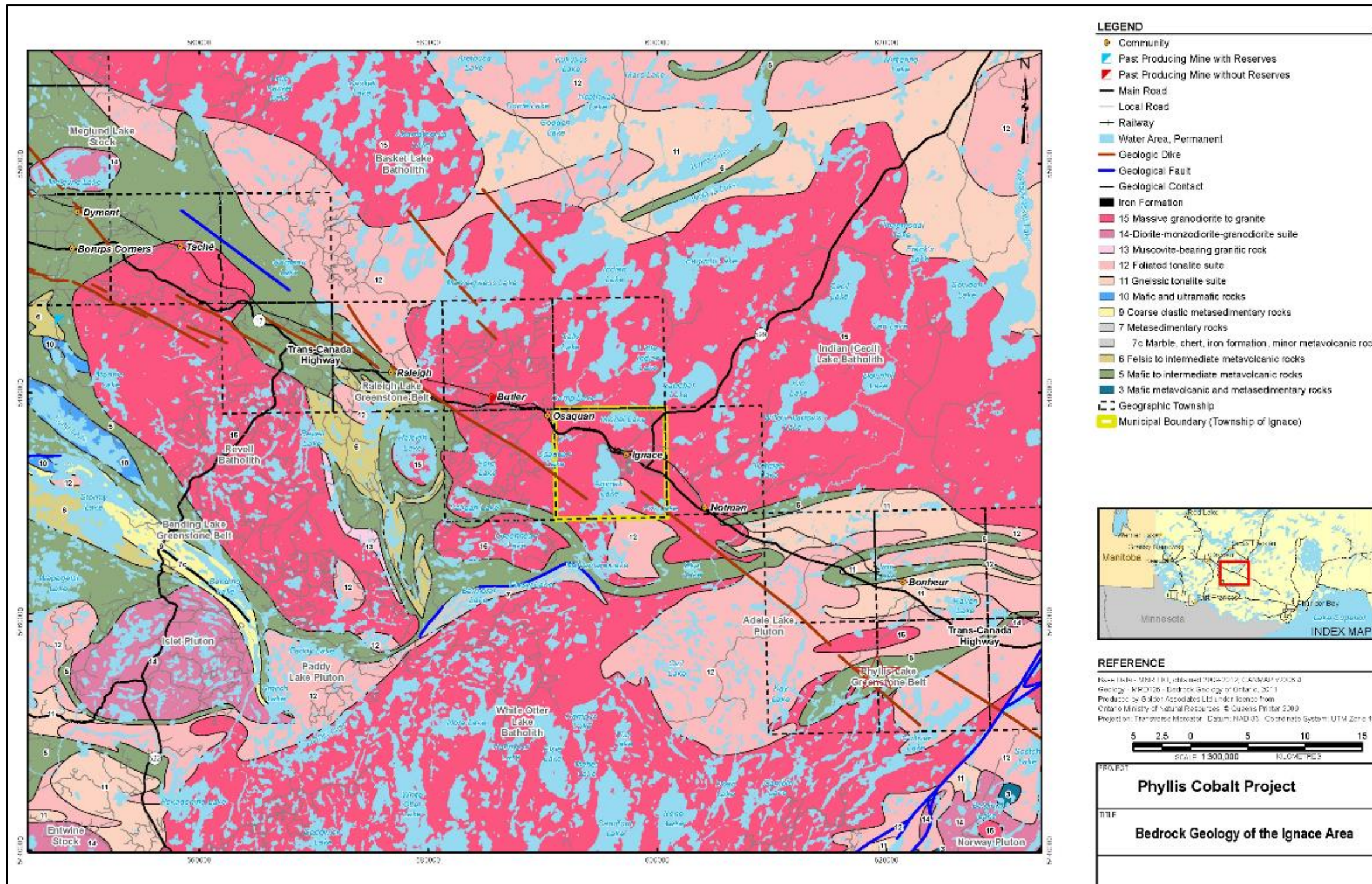


Figure 5: Regional Geology map

## 7.2 Local Geology

Locally, the Phyllis Cobalt Property area is a part of Central Wabigoon Geological sub-province. The main geological units are Phyllis Lake Greenstone Belt and Adele Lake Pluton. The Phyllis Lake greenstone belt (“Phyllis belt”) attains a width of a few kilometres and extends northeasterly over a distance of about 30 km in the northern central Wabigoon Subprovince area (see Figure 4). The Phyllis belt is composed of mafic metavolcanic rocks that show pillows in less deformed areas and widespread amphibolite-facies metamorphism. The metamorphism has transformed the metavolcanic rocks to amphibole gneisses at many localities in the belt. Mafic metavolcanic rocks of the Phyllis belt unconformably overlie biotite tonalite along the northwest side of the belt. The unconformity is marked by a garnetiferous quartzo-feldspathic sandstone unit that attains a thickness of up to a few tens of metres (OGS Report 5422).

A thin felsic tuff within mafic metavolcanic flows in the centre of the Phyllis belt has an age of 2955 Ma. Tonalite gneisses of the Raven gneiss complex on the northwest side of the Phyllis belt is dated at 2989 Ma and probably represent a basement complex on which lavas of the Phyllis belt were deposited. In contrast, biotite tonalite on the southeast side of the Phyllis belt has a U/Pb zircon age of 2817 Ma and represents part of the Pinecone– Savoy domain. The Phyllis belt is included with the Whitton domain (OGS Report 5422).



Figure 6: Local Geological Map

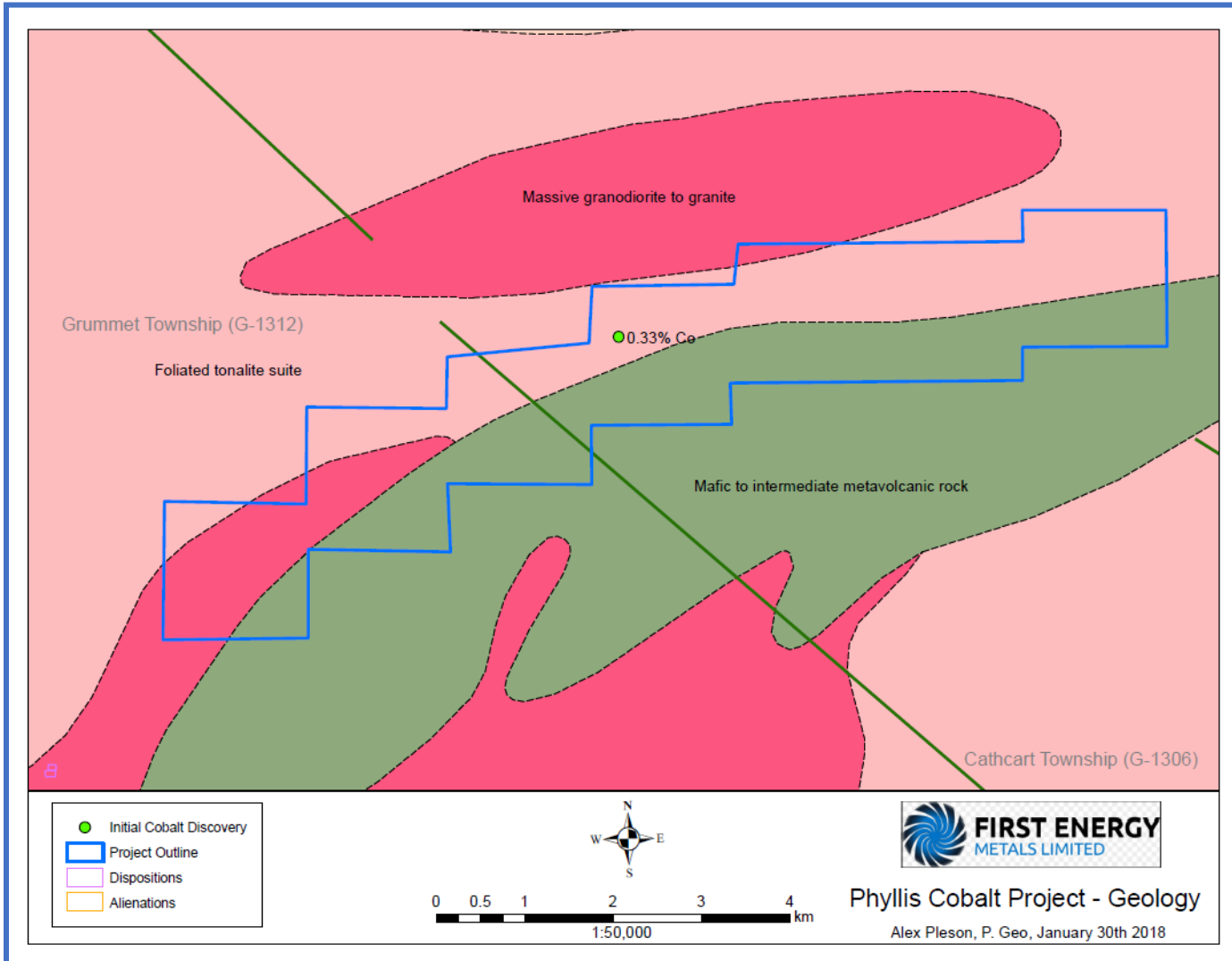




Photo of gabbro outcrop on the Property

### **7.3 Mineralization**

Cobalt- copper-nickel mineralization is hosted by fine to medium grained highly altered gabbro rocks. Sulphides are disseminated to semi-massive and massive in the form of chalcopyrite, pyrite, and pentlandite.



## 8.0 DEPOSIT TYPES

### 8.1 Deposit Types

Although cobalt (Co) is well known for the blue dyes that bear its name, metallic cobalt is a lustrous silver-grey. Metallic cobalt is ferromagnetic (can be magnetized) and has a very high melting point of 1500 degrees Celsius. It is a critical ingredient in high temperature and wear-resistant strategic metals as well as high temperature magnets and rechargeable batteries. In particular, cobalt is a key ingredient in the production of lithium batteries (Source: <https://www.geologyforinvestors.com/cobalt-commodity-overview/>).

There are no pure cobalt mines, only copper and nickel mines relatively enriched in cobalt to make it viable to recover it as a by-product. The large nickel copper complexes such as Sudbury, Norilsk and the copper–cobalt deposits in Central Africa really are dependent on buoyant prices for copper and nickel to determine how much cobalt will be produced in the end. The cobalt produced is also the net result of a complex smelting and refining process to produce sellable copper and nickel. These huge complexes require a large and long-life copper/nickel deposit to support its large capex and long amortization period (<https://investingnews.com/daily/resource-investing/critical-metals-investing/cobalt-investing/cobalt-canada-europe/>).

There are very minor deposits where cobalt is the primary commodity, but these only make up 3% of world-wide production. Hence the cobalt market is a function of the nickel and copper markets as supply is determined by how much demand there is for these markets. Artisanal mining of cobalt is a significant source of production in the Democratic Republic of Congo but does not occur elsewhere.

## 8.2 Deposit Models

There are four major types of deposit models for cobalt, which are: Sediment hosted deposits; Hydrothermal and volcanogenic deposits; Magmatic Sulphides deposits; and Laterite type deposits (British Geological Survey).

Sediment hosted deposits are mainly copper deposits with cobalt as a by-product. These deposits account for over 50% of world’s cobalt production and are a large, diverse class of deposits that include some of the richest and largest copper deposits with associated silver and cobalt. They are also important sources of silver and from the central Africa Copperbelt of Zambia and Zaire are the world's most important source of cobalt ([http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/GeoFiles/Pages/1996-1\\_sediment.aspx](http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/GeoFiles/Pages/1996-1_sediment.aspx)).

Hydrothermal and volcanogenic deposits groups together a wide range of deposit styles and mineral assemblages. The key process is precipitation from hydrothermal fluids passing through the host rock often sourced from, or powered by, volcanic activity. Ores can be found where minerals have been remobilized along fault planes, in veins, fissures and cracks, or as metasomatic replacement of host rocks. Some major examples of hydrothermal and volcanogenic deposits, most of which have been historically worked for cobalt, are listed in the following table.

**Table 3: Hydrothermal and volcanogenic deposit locations**

<b>Hydrothermal Deposit Type</b>	<b>Location</b>
Ophiolite-hosted massive sulphide (Outokumpu type)	Keretti, Finland; Deemi, China; Outokumpu district, Finland
Ophiolite-related cobalt arsenide	Bou Azzer, Morocco
Epigenetic Au-co-U bearing sulphides	Kuusamo, Finland; Great Bear Magmatic zone, Canada
Epigenetic Cu-Au-Co	Idaho Cobalt Belt, USA; Greenmount, Australia

Iron oxide-hosted polymetallic (Olympic Dam Type)	NICO and Sue-Dianne, Canada; Olympic Dam, South Australia
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(Source: <https://www.cobaltinstitute.org/hydrothermal-and-volcanogenic.html>)

Magmatic Sulphides deposits for cobalt are formed when a mafic to ultramafic melt becomes saturated in sulphur (generally because of contamination from crustal-derived sulphur), an immiscible liquid sulphide phase will form, into which nickel, cobalt and platinum-group elements (PGE) preferentially partition. These elements are thus scavenged from the residual magma and are deposited in discrete sulphide-rich layers.

Magmatic sulphide deposits cover a wide range of morphologies, ages and mineralization styles. The most common types are:

- **Basal deposits** (sulphur saturation of mafic magma causes dense cobalt and nickel sulphides to be concentrated in basal sections of magma chambers);
- **Stratabound deposits** (fractional crystallization in large gabbroic magma chambers causes deposition of discrete sulphide layers containing cobalt, nickel, copper and platinum-group minerals); and,
- **Deposits in extrusive ultramafic rocks** (Komatiite flows become sulphur saturated by differentiation and host rock assimilation. Dense cobalt, nickel and platinum-group minerals are deposited in depressions in footwall rocks).

Generally, the metal-rich layers will be found as lenses at or near the base of intrusions where the dense sulphide minerals have settled out from the lighter silicate-rich host rocks. Many of these deposits are very old and occur in rocks of Proterozoic and Archean age (4000 to 2500 million years ago). Subsequent alteration by tectonic and metamorphic forces commonly remobilizes the ore minerals into elongate masses or veins of sulphide-matrix breccias (Smith, et al. 2001).

Mineralization is generally in the form of massive interstitial or disseminated sulphides. The main minerals are pyrrhotite, pentlandite and chalcopyrite, all of which can contain cobalt in substitution for other metals. Specific cobalt sulphides, such as linnaeite or carrollite, are generally restricted to remobilized vein deposits (Cobalt Institute and BGS).

The largest and most economically important magmatic sulphide deposits include:

- Norilsk, Russia (basal deposit)
- Merensky Reef, South Africa (stratabound deposits)
- Kambalda, Western Australia (extrusive ultramafic deposits)
- Sudbury, Canada

Phyllis cobalt Property also fall under magmatic sulphides category.

Laterite type deposits in tropical and subtropical climates intense weathering of ultramafic rocks may cause significant cobalt and nickel enrichment in surficial residual deposits

known as laterites. Cobalt dispersed in silicates and sulphides within the host rock is remobilized and deposited in weathered layers as hydroxides and oxides near the surface and as silicate at deeper levels. These deposits are generally about 20 metres thick and mid-Tertiary to recent in age. They are principally worked for nickel with cobalt as a by-product. The cobalt is contained within limonite and goethite as well as erythrite and asbolite. At deeper levels, weathering of ultramafic rocks is less intense and the nickeliferous mineral garnierite is formed.

Serpentine-rich zones in saprolite at the base of laterites restrict the circulation of groundwater and thus the amount of cobalt enrichment. It also interferes with the processing of the ore as individual grains need to be crushed in order to liberate ore minerals from gangue intergrowths. Grades of cobalt in laterite deposits vary widely in the range 0.1 to 1.5% Co.

Topography plays an important role in the formation of laterite deposits. The most extensive deposits are found on gently dipping slopes where groundwater can freely circulate to encourage weathering. Therefore, deposits are often associated with areas of gentle tectonic deformation causing slow uplift. Important examples are found in New Caledonia and Cuba due to large areas of serpentinized peridotites and ideal weathering conditions (Source Cobalt Institute and BGS).

## 9.0 EXPLORATION

First Energy Metals Ltd. has carried out exploration work on the Property in two stages where the first stage was to evaluate and confirm historical data on the property by carrying out prospecting and sampling on historically reported mineralization zones and trends. The second stage comprised on trenching and channel sampling as a follow up of February 2018 work. To date, total exploration expenditures on the property are \$89,029.

### 9.1 Prospecting and Sampling

The Stage one program was carried out in February 2018 comprised of prospecting to locate historical cobalt (Co) showing; trenching and sampling to confirm reported cobalt, copper and nickel mineralization; and geological mapping to further explore the cobalt mineralization along its trend. Another purpose of the current work was to locate ground geophysical survey areas and drill hole targets for the next phase of exploration.

A total of 31 grab rock samples collected and submitted to Activation Laboratories (ACTLABS) in Thunder Bay, Ontario, were tested either at its Thunder Bay or Ancaster labs in Ontario. Actlabs is an independent group of laboratories accredited to both [ISO 17025 with CAN-P-1579](#) for specific registered tests.

#### Exploration Results:

Following are highlights of the results, for details refer to Table 4 and Figure 6.

- Overall results of 31 samples indicate cobalt (Co) values in the range of 0.001% (10 parts per million “ppm”) to 0.435% (4,350 ppm), copper (Cu) 0.03% to 0.602%, and nickel (Ni) 0.004% to 0.48%.
- Two samples from historical Central Blast Pit show average 0.33% cobalt, 0.254% copper and 0.0195% nickel.
- Seven samples from south historical blast pit show average 0.021% cobalt, 0.299% copper, and 0.176% nickel.
- Cobalt- copper-nickel mineralization is hosted by fine to medium grained highly altered gabbro rocks.
- The samples tested for gold, platinum and palladium returned with low values these precious metals.

**Table 4: February 2018 Samples description and assay results**

Sample ID	Co (%)	Cu (%)	Ni (%)	UTM	Easting	Northing	Location	Lithology	Sulphide Type	Sulphide (%)	Texture
152851	0.013	0.133	0.032	15	617855	5456732	North Pit	Cg. Gabbro	Cpy + Py +Po	15	semi-massive f.g to m.g.
152852	0.004	0.032	0.004	15	617855	5456732	North Pit	Fg. Gabbro	tr cpy, py	2	disseminated f.g
152853	0.003	0.106	0.011	15	617855	5456732	North Pit	Mg. Gabbro	cpy, py	20	semi-massive f.g to m.g.
152854	0.006	0.073	0.017	15	617855	5456731	North Pit	Fg. Gabbro	Cpy + Py + Tr Pent	2	disseminated, f.g.
152855	0.008	0.553	0.047	15	617855	5456731	North Pit	Mg. Gabbro	Cpy + Py + Tr Pn	25	massive sulphide m.g.
152856	0.005	0.338	0.018	15	617855	5456731	North Pit	Mg. Gabbro	Cpy + Py + Tr Pn	4	disseminated f.g, tr m.g blebs cpy
152857	0.435	0.210	0.015	15	617855	5456730	Central Pit	Mg. Gabbro	Py + Cpy + Po	40	massive sulphide lense (25cm wide) in Gabbro
152858	0.006	0.065	0.010	15	617855	5456730	Central Pit	Fg. Gabbro	tr cpy, py	2	disseminated f.g
152859	0.003	0.030	0.014	15	617855	5456730	Central Pit	Aplite	tr cpy, py on margin	2	disseminated f.g on margins of dyke
152860	0.218	0.298	0.024	15	617855	5456730	Central Pit	Mg. Gabbro	Py + Cpy + Po	25	semi massive sulph with m.g blebs of cpy
152861	0.008	0.049	0.006	15	617856	5456730	Central Pit	Fg. Gabbro	cpy, py	4	disseminated f.g, minor cpy blebs
152862	0.004	0.054	0.014	15	617856	5456730	Central Pit	Fg. Gabbro	cpy, py	4	disseminated f.g, minor cpy blebs



Sample ID	Co (%)	Cu (%)	Ni (%)	UTM	Easting	Northing	Location	Lithology	Sulphide Type	Sulphide (%)	Texture
152863	0.004	0.063	0.016	15	617857	5456730	Central Pit	Fg. Gabbro	cpy, py	4	disseminated f.g, minor cpy blebs
152864	0.003	0.029	0.007	15	617857	5456730	Central Pit	Fg. Gabbro	cpy, py	1	disseminated f. g
152865	0.009	0.099	0.051	15	617857	5456730	Central Pit	Fg. Gabbro	cpy, py	1	disseminated f. g
152866	0.007	0.075	0.017	15	617862	5456729	East Zone	Fg. Gabbro	cpy, py	2	disseminated f.g, minor cpy blebs
152867	0.003	0.026	0.011	15	617862	5456729	East Zone	Fg. Gabbro	cpy, py	2	disseminated f.g, minor cpy blebs
152868	0.015	0.134	0.054	15	617862	5456729	East Zone	Mg. Gabbro	cpy, py	10	semi-massive f.g to m.g.
152869	0.011	0.107	0.034	15	617862	5456729	East Zone	Fg. Gabbro	cpy, py	2	disseminated f.g, minor cpy blebs
152870	0.011	0.111	0.021	15	617862	5456729	East Zone	Mg. Gabbro	cpy, py	12	semi-massive f.g to m.g.
152871	0.007	0.077	0.025	15	617862	5456724	South Pit	Fg. Gabbro	cpy, py	1	disseminated f. g
152872	0.011	0.459	0.114	15	617862	5456724	South Pit	Mg. Gabbro	cpy, py	12	semi-massive f.g to m.g.
152873	0.037	0.119	0.341	15	617862	5456724	South Pit	Fg. Gabbro	cpy, py	8	disseminated f.g, minor cpy blebs
152874	0.027	0.129	0.257	15	617862	5456722	South Pit	Fg. Gabbro	cpy, py	8	disseminated f.g, minor cpy blebs
152875	0.006	0.034	0.037	15	617862	5456722	South Pit	Fg. Gabbro	cpy, py	1	disseminated f. g
152876	0.004	0.027	0.018	15	617862	5456722	South Pit	Fg. Gabbro	cpy, py	1	disseminated f. g

Sample ID	Co (%)	Cu (%)	Ni (%)	UTM	Easting	Northing	Location	Lithology	Sulphide Type	Sulphide (%)	Texture
152877	0.048	0.100	0.480	15	617862	5456721	South Pit	Mg. Gabbro	cpy, py, po	15	semi-massive f.g to m.g., lense of sulphides
152878	0.024	0.324	0.032	15	617862	5456721	South Pit	Fg. Gabbro	cpy, py	4	disseminated f.g, minor cpy blebs
152879	0.006	0.062	0.019	15	617862	5456721	South Pit	Fg. Gabbro	cpy, py	2	disseminated f.g, minor cpy blebs
152880	0.001	0.361	0.005	15	617862	5456721	South Pit	Fg. Gabbro	cpy, py	4	disseminated f.g, minor cpy blebs
152881	0.002	0.602	0.006	15	617862	5456723	South Pit	Fg. Gabbro	cpy, py	4	disseminated f.g, c.g cpy bleb

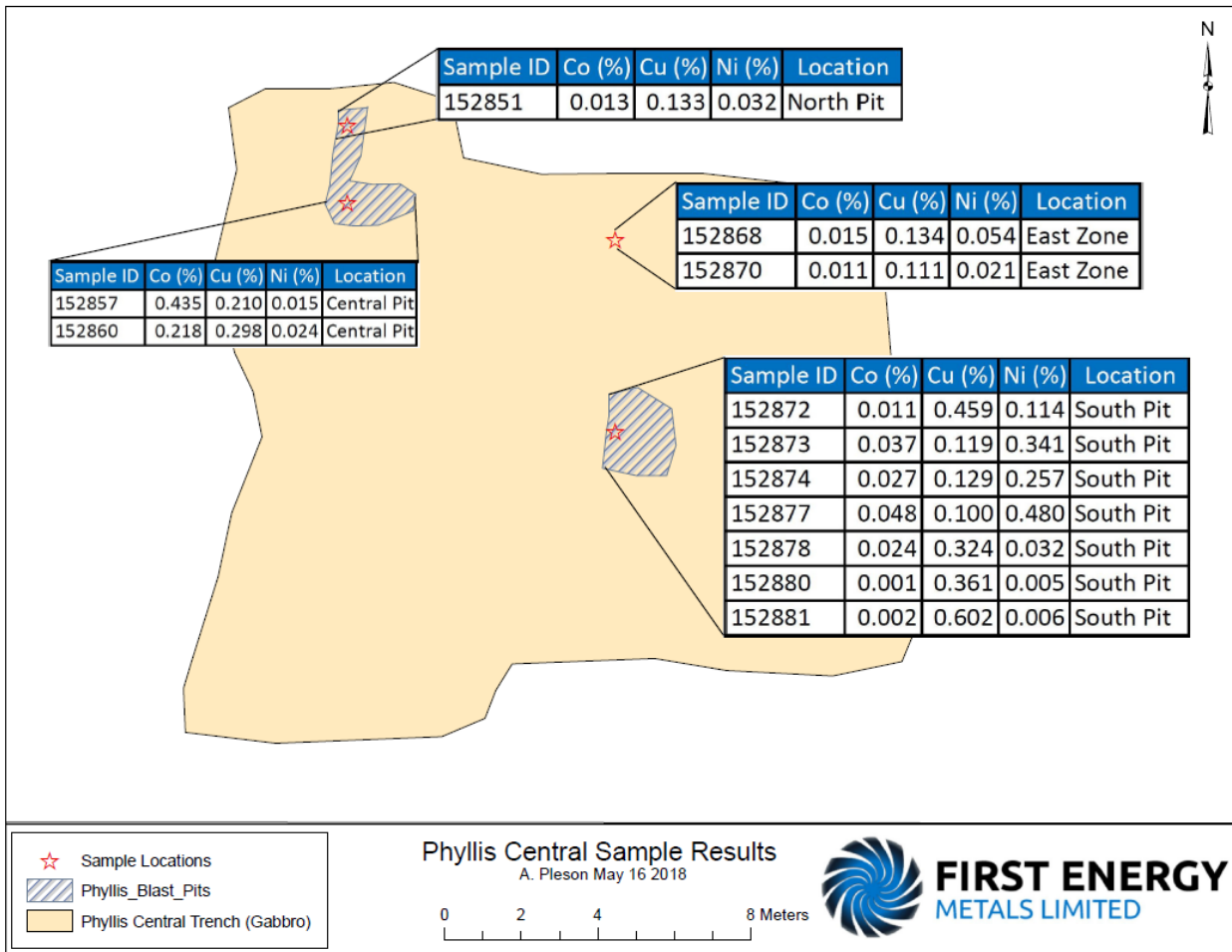


Figure 7: February 2018 sample locations and assay results.

## 9.2 Trenching and Channel Sampling

In June 2018, the second phase of exploration started which included one week of trenching work to follow the mineralized structures, where 20 channel samples were selected from the newly exposed area and 9 grab samples were taken along the trend by experienced prospectors. The sulphide mineralization was successfully traced for 500m within the intrusion associated to the original showing. All 29 samples were submitted to Agat laboratories in Thunder Bay, ON for analysis of Ni, Cu, and Co. The analysis used for Co assay is 4-acid near total digestion with ICP-MS finish. A few pictures of the trenching work are presented below. The assay results were still pending till the filing of this report.



Photos of June 2018 Trenching and Channel sampling work

**Table 5: Channel sampling details**

Sample ID	Type	Easting	Northing	UTM Zone	Name	From (m)	To (m)	Length (m)	Azimuth	Sulphide Min. (%)	Description
88101	Channel	617855	5456732	15	CH18-1	0	1	1	51	4	c.g gabbro, massive, strong disseminated py, po and minor cpy. Minor blebs of m.g cpy
88102	Channel					1	2	1		6	c.g gabbro, massive, strong disseminated py, po and minor cpy. Minor blebs of m.g cpy
88103	Channel					2	3	1		5	fractured gabbro, m.g, with qtz/carb veinlet (4cm), rusty, weak diss py/po/cpy and minor blebs of cpy, stringers of v.f.g. py/cpy mix.
88104	Channel	617855	5456727	15	CH18-2	0	1	1	54	6	c.g massive gabbro, diss po/py/cpy, minor blebs of cpy, 20cm portion has shallow fractures, rusty with euhedral py, minor cpy associated fractures, minor fracture fills with mostly cpy
88105	Channel					1	2	1		6	m.g gabbro, shallow fractures with massive cpy (locally 15%), disseminated sulphides throughout (po,py,cpy, pent), moderately dipping qtz/carb veinlet with cpy/py subhedral
88106	Channel					2	3	1		4	c.g gabbro with minor diss sulphides and fracture fills/stringers of cpy/py f.g
88107	Channel	617861	5456729	15	CH18-3	0	1	1	60	1	m.g. gabbro, wk sulphides, diss, trace blebs of py.

Sample ID	Type	Easting	Northing	UTM Zone	Name	From (m)	To (m)	Length (m)	Azimuth	Sulphide Min. (%)	Description
88108	Channel					1	2	1		6	rusty m.g gabbro, fractured, with relic quartz vein or lense surrounded by fractures filled with cpy/py,
88109	Channel					0	1	1		4	c.g gabbro, massive, strong disseminated py, po and minor cpy. Minor blebs of m.g cpy
88110	Channel					1	2	1		7	semi-massive patches of sulphides in c.g gabbro, related to highly fractured/rusty zone through gabbro
88111	Channel					2	3	1		5	m.g. gabbro, wk sulphides, diss, trace blebs of py, highly fractured, vuggy
88112	Channel					3	4	1		3	massive 50cm aplite/iron stained dyke or vein in m.g gabbro, minor sulphides in vein, diss sulphides in gabbro, patchy blebs of cpy/py throughout gabbro.
88113	Channel	617858	5456728	15	CH18-4	4	4.5	0.5	52	6	vertical dipping stringers, carb veinlet with massive sulphides (cpy/py) in f.g to m.g gabbro. Highly altered and fractured
88114	Select Cut	617861	5456719					0.5		10	semi-massive sulphides in vertical veinlet through m.g gabbro, cpy+po+py
88115	Select Cut	617859	5456717					0.5		12	semi-massive blebby sulphides in c.g gabbro, minor quartz influence (relic vein?), stringer-controlled f.g cpy with minor f.g euhedral py
88116	Select Cut	617853	5456723					0.7		9	highly rusty and fractured f.g gabbro, carb alt., with massive patches of cpy blebs,

Sample ID	Type	Easting	Northing	UTM Zone	Name	From (m)	To (m)	Length (m)	Azimuth	Sulphide Min. (%)	Description
88117	Grab	617855	5456731							20	massive rusty zone, highly altered gabbro, mostly weathered out sulphides, vuggy, orange rust, easy to break apart.
88118	Grab	617855	5456688							15	semi-massive c.g cpy in m.g gabbro
88119	Channel					0	1	1		5	minor blebs of cpy in c.g gabbro, diss (2-3% sulphides) throughout
88120	Channel					1	2	1		8	strong diss py and cpy, with increase in blebs of c.g cpy hosted in m.g gabbro
88121	Channel					2	3	1		35	massive pent, po, py, cpy, coarse grained sulphides in c.g gabbro
88122	Channel	617862	5456728		CH18-5	3	4	1	54	20	massive po or pent v.c.g. in gabbro
294351	Grab	617616	5456787	15							M.g gabbro, 5% diss sulphides, including cpy, py
294352	Grab	617642	5456745	15							m.g gabbro, 10% semi-massive to blebby sulphides, 2% cpy
294353	Grab	617214	5456513	15							f.g to m.g gabbro, minor f.g diss sulphides, 5% blebs of cpy, tr po or pent
294401	Grab	617608	5456768	15							very rusty, gossaned outcrop, pods/lenses of massive to semi-massive sulphides, (2:1 cpy:py) ~ 25%, most likely gabbro host rock although very rusty
294402	Grab	617507	5456663	15							gabbro, 6% diss f.g cpy and py, minor pods of cpy throughout, blebby.
294403	Grab	617638	5456739	15							gabbro, rusty, vuggy, euhedral py, blebs of cpy (3%), diss po +pent (2%)

Sample ID	Type	Easting	Northing	UTM Zone	Name	From (m)	To (m)	Length (m)	Azimuth	Sulphide Min. (%)	Description
294404	Grab	617635	5456740	15							dark, f.g. intrusive, stringer cpy (3%), diss po/py/pent (2%), blebs of c.g cpy and py throughout, slightly green tinge to rock



## 10.0 DRILLING

No drilling was done on the Phyllis Cobalt Property by First Energy Metals Limited.

## 11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

The samples for Stage 1 program completed in February 2018 were shipped to Activation Laboratories (ACTLABS) in Thunder Bay, Ontario and were tested either at its Thunder Bay or Ancaster labs in Ontario. Actlabs is an independent group of laboratories accredited to both [ISO 17025 with CAN-P-1579](#) for specific registered tests.

The samples were assayed using the following ACTLABS packages:

- Code 8 AR ICP-MS: A 0.5 g sample is digested in aqua regia and diluted volumetrically to 250 ml with 18 megaohm water. CANMET reference materials for the appropriate elements are digested the same way and are used as a verification standard(s). Samples are analyzed on a Varian Vista 735 ICP-OES or ICP-MS.
- Precious Metals package, Code 1C- ICP OES Fire Assay (FA-ICP): A 30 g sample is mixed with fire assay fluxes (borax, soda ash, silica, litharge) and with Ag added as a collector and the mixture is placed in a fire clay crucible. The mixture is then preheated at 850°C, intermediate 950°C and finish 1060°C. After cooling the sample solution is analyzed for Au, Pt, Pd by ICP/OES using a Varian 735 ICP. The instrument is recalibrated every 45 samples. On each tray of 42 samples there are two method blanks, three sample duplicates, and 2 certified reference materials (Source: Actlabs website). ACTLABS has its quality assurance and quality control (QA/QC) program.

The samples collected for Stage 2 exploration work carried out in June 2018 were assayed at Agat Laboratories in Thunder Bay, Ontario. Samples were assayed with AGAT – Code 201378 – 4-Acid Digestion (Co, Ni, Cu selection) which is described on their website as follows:

*Multi-acid digestion uses a combination of HCl (hydrochloric acid), HNO<sub>3</sub> (nitric acid), HF (hydrofluoric acid) and HClO<sub>4</sub> (perchloric acid). Because hydrofluoric acid dissolves silicate minerals, these digestions are often referred to as 'near-total digestions'. A 0.25 g sample is digested with four acids beginning with hydrofluoric, followed by a mixture of nitric and perchloric acids. The samples are then analyzed using an Agilent 735 ICP. QC for the digestion is 14% for each batch, 5 method reagent blanks, 10 in-house controls, 10 samples duplicates, and 8 certified reference materials. An additional 13% QC is performed as part of the instrumental analysis to ensure quality in the areas of instrumental drift.*

The samples collected by the Author were shipped to ALS Laboratories Thunder Bay Ontario, using ALS package ME-ICP61 - Four Acid Digestion with ICP-AES Finish; plus, ore grade package OG62 for over limit cobalt or any other element. All these laboratories are independent Canadian certified labs.

## 12.0 DATA VERIFICATION

The author visited the property on June 24, 2018 to verify the recently completed 2018 exploration work and historical exploration areas, mineralized outcrops and collect necessary geological data. The existing data consisted of rock chip sampling, visiting reported approachable old trenching areas and onsite discussions. A total of eight samples were collected by the author from various rock outcrops and channel sampling areas (Table 6). Assay results indicated cobalt values in the range of 75 parts per million (ppm) to 3560 ppm (0.356%), copper 629 ppm to 8750 ppm (0.875%), and nickel 113 ppm to 2170 ppm (Table 7).

All the 2018 exploration work was carried out under the supervision of Alex Pleson who is also one of the Property vendors. Mr. Pleson is a registered professional geoscientist in Ontario. For the present study, the sample preparation, security and analytical procedures used by the laboratories are considered adequate. No officer, director, employee or associate of First Energy Metals Ltd. was involved in sample preparation. The author was able to verify location of February 2018 and June 2018 sampling and trenching areas during his June 24, 2018 property visit. A limited search of tenure data on the MNDM Ontario website on June 23, 2018, conforms to the data supplied by First Energy Metals Limited. However, the limited research by the author does not express a legal opinion as to the ownership status of the Phyllis Cobalt Property.

Historical grades and assay data are taken from MNDMF assessment reports and OGS geological reports which are deemed reliable. Historical geological descriptions taken from the above-mentioned sources were prepared and approved by the professional geologists or engineers and are deemed reliable.



Photo: Channel samples location of June 2018 work

Field description of the samples collected during the June 24, 2018 property visit is provided in the following table.

**Table 6: Description of samples collected by the author**

Sample ID	Duplicate Sample ID	Northing_ NAD83	Easting_ NAD83	Elev_ m	Description
S195351	881803	5456723	617853	454	gossanous py, chalco & siderite veining and blebs within gabrro unit. South Pit
S195352	881804	5456724	617857	455	disseminated py, chalco & siderite veining and blebs within gabbro unit. South Pit
S195353	881806	5456721	617856	455	disseminated py, chalco & siderite veining, stringers and blebs within gabrro unit. South Pit
S195354	881813	5456718	617862	456	gossanous ~ 5% py, chalco & siderite veining and blebs within gabbro unit
S195355	881819	5456719	617863	453	gossanous py, chalco & siderite veining and blebs within gabbro unit
S195356	881821	5456719	617863	455	semi massive, near euhedral, gossanous py, chalco & siderite vein within gabbro unit
S195357		5456710	617860	456	gossanous py, chalco & siderite bleb within gabbro unit, top of exposed unit.
S195358		5456699	617849	457	gossanous, disseminated py, chalco & siderite bleb within gabbro unit, ~ 30 cm2 area.

Table 7: Assay results of samples collected by the author

SAMPLE ID	Method: ME-ICP61										
	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu
	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
S195351	1.3	2.1	<5	390	1.4	<2	7.25	1.2	81	572	629
S195352	1.9	1.41	<5	100	<0.5	2	11.3	1.3	192	660	2670
S195353	1.4	2.06	<5	270	<0.5	<2	11.85	1.1	235	688	3670
S195354	<0.5	2.34	<5	400	2.7	<2	9.75	1.4	176	757	358
S195355	15.8	1.97	<5	70	0.7	6	8.82	4	301	625	7090
S195356	4.1	1.09	<5	120	0.9	10	1.56	0.6	3560	126	8750
S195357	1	2.09	<5	110	<0.5	4	9.71	0.7	183	728	836
S195358	<0.5	5.47	<5	780	0.9	4	8.5	0.6	75	432	1020
SAMPLE ID	Method: ME-ICP61										
	Fe	Ga	K	La	Mg	Mn	Mo	Na	Ni	P	Pb
	%	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm
S195351	14.35	10	0.64	10	7.65	1050	2	0.54	207	140	10
S195352	8.12	10	0.15	10	9.31	1080	1	0.39	859	80	20
S195353	10.1	10	0.28	10	8.65	1140	1	0.61	2170	200	8
S195354	9.43	10	0.62	10	8.67	1440	<1	0.73	113	180	2
S195355	12	10	0.25	10	8.37	1340	4	0.55	636	130	531
S195356	36.5	<10	0.58	<10	1.4	327	2	0.31	1310	20	10
S195357	10.6	10	0.24	10	9.01	1140	1	0.53	915	130	7
S195358	7.55	20	1.18	10	6.39	1120	1	1.2	688	340	10
SAMPLE ID	Method: ME-ICP61										
	S	Sb	Sc	Sr	Th	Ti	Tl	U	V	W	Zn
	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
S195351	1.32	<5	35	62	<20	0.3	<10	<10	168	<10	86

S195352	2.44	<5	53	74	<20	0.22	10	<10	152	<10	85
S195353	3.79	<5	58	86	<20	0.25	<10	<10	177	<10	47
S195354	0.82	<5	45	104	<20	0.27	<10	<10	160	<10	133
S195355	4.96	<5	41	66	<20	0.24	<10	<10	139	<10	927
S195356	>10.0	<5	7	29	<20	0.05	<10	<10	27	<10	49
S195357	3.13	<5	45	73	<20	0.28	<10	<10	154	<10	58
S195358	0.57	<5	34	784	<20	0.26	<10	<10	160	<10	65

The samples were delivered by the author to ALS Laboratories Thunder Bay Ontario, an accredited laboratory in Canada. The samples were assayed ALS package ME-ICP61 - Four Acid Digestion with ICP-AES Finish; plus, ore grade package OG62 for over limit cobalt or any other element. The results were pending till the filing of this report.

The data collected during the present study is considered reliable because it was collected by the author. The data quoted from other sources is also deemed reliable because it was taken from, from the Ministry of Northern Development, Mines and Forestry (MNDM) Ontario, and published reports by the Ontario Geological Survey (OGS), the Geological Survey of Canada ("GSC"), various researchers, and personal observations.

### **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

No metallurgical testing was done on the property by First Energy Metals Limited.

### **14.0 MINERAL RESOURCE ESTIMATES**

No mineral resource estimates were done by First Energy Metals Limited.

***Items 15 to 22 are not applicable at this time.***

### **23.0 ADJACENT PROPERTIES**

The Property is located in an active and historical mining and mineral exploration region where many operators carried out exploration and/ or development work on the Property and the surrounding area (Figure 7). The following information is taken from the publically available sources which are identified in the text and in Section 27. The writer has not been able to independently verify the information contained although he has no reason to doubt the accuracy of the descriptions. The information is not necessarily indicative of the mineralization on the Phyllis Cobalt Property, which is the subject of this technical report.

The following information is provided as background material for the reader.

#### **23.1 Steep Hill Iron Mine**

In 1932, Dr. McKenzie and Tom Rawn staked out the entire South East bay of Steep Rock. They then found a spot, sunk a shaft and found it was rich with high grade hematite. The mine shaft was quickly abandoned as they had trouble keeping water out of it. Development of this shaft was said to have been sunken to depth of 700 feet and included a massive ventilation shaft that was drilled down to the sixth mine level before extraction operations had ceased and open pit mining operations would soon commence.

(Source: <https://www.ontarioexplorations101.com/thunder-bay-ontario-mines/steep-hill-iron-mine>)



Photo of Steep Hill Mine (Source: <https://www.ontarioexplorations101.com/thunder-bay-ontario-mines/steep-hill-iron-mine>)

## **23.2 Bending Lake Iron Project**

Bending Lake Iron Group Ltd operates as a mining company in Canada. The company operations include: Administration, Government Relations and Permitting, Engineering and Strategic Directions and Financial Relations. Each of these divisions work directly on bringing the BLIG Josephine Cone Mine into production.

The company was founded in 2008 and is based in Thunder Bay, Ontario with a field office in Wabigoon, ON and field camp at the future mine site. The Bending Lake Iron mine and processing facilities are scheduled for a 2017 start-up. To get the start-up there are many tasks to be completed such as the Environmental Assessment; finalizing the engineering and arranging for the many goods and services required for building and operating the mine and related facilities (Source: [https://mininglifeonline.net/company\\_9126.html](https://mininglifeonline.net/company_9126.html)).

## **23.3 Raleigh Lithium Project**

International Lithium Corp., a Toronto Stock Exchange (TSX) listed company has acquired in total 464 hectares of mineral claims in the Kenora Mining District of Ontario through a sale and purchase Agreement and additional staking in 2016. The Raleigh Project (“Raleigh”) is located about 7km south of the Trans-Canada Highway, 20 km west of Ignace, Ontario and approximately 270km west of Thunder Bay, Ontario. Access to key



parts of the property from the Trans-Canada Highway is by secondary roads and forest access roads. The city of Dryden is approximately 80 km west by highway 17, making the Company's recently announced Mavis joint venture approximately 60 kilometres away.

The rare metal mineralization at Raleigh was first identified by prospecting in 1966 and further categorized between 1993 and 1999 by the Ontario Geological Survey through mapping with particular emphasis on defining the zoned rare metal pegmatite belt and associated rare metal mineralization. This led to two periods of exploration; the first occurring from 1999 to 2001 focusing on tantalum, while the second in 2010 was expanded to encompass lithium. These exploration campaigns included mapping, lithochemistry, trenching (1500m) and diamond core drilling (2817.5m in 17 holes) resulting in the identification of several substantial pegmatites and numerous smaller ones.

The project is under a joint venture agreement with Pioneer Resources Limited, an Australian Company.



## **24.0 OTHER RELEVANT DATA AND INFORMATION**

### **24.1 Environmental Concerns**

There is no historical production from the Phyllis Cobalt Property, and the author is not aware of any environmental liabilities which have accrued from historical exploration activity. An exploration work permit Number PR-18-11253 was issued for the property on March 23, 2018 and is valid until March 22, 2021.

## **25.0 INTERPRETATION AND CONCLUSIONS**

Geologically, the Phyllis Cobalt Property and its surrounding area is situated in the Wabigoon Subprovince, which is part of the western region of the Superior Province of the Canadian Shield – 3 to 2.6 billion year old rocks that form the core of the North American continent. An irregularly shaped, granitic intrusion Adele Lake Pluton intrudes the Phyllis Lake Greenstone Belt. Also, there are other batholiths in the Ignace area. The Phyllis belt is composed of mafic metavolcanic rocks that show pillows in less deformed areas and widespread amphibolite-facies metamorphism. The metamorphism has transformed the metavolcanic rocks to amphibole gneisses at many localities in the belt. Mafic metavolcanic rocks of the Phyllis belt unconformably overlie biotite tonalite along the northwest side of the belt. The unconformity is marked by a garnetiferous quartzo-feldspathic sandstone unit that attains a thickness of up to a few tens of metres.

Cobalt-copper-nickel mineralization on the property is hosted by fine to medium grained highly altered gabbro rocks. Mineralization is generally in the form of massive interstitial or disseminated sulphides. The main minerals are pyrrhotite, pentlandite and chalcopyrite, all of which can contain cobalt in substitution for other metals.

There are four major types of deposit models for cobalt, which are: Sediment hosted deposits; Hydrothermal and volcanogenic deposits; Magmatic sulphides deposits; and Laterite type deposits. Phyllis cobalt Property falls under magmatic sulphides category.

First Energy Metals Ltd. has carried out exploration work on the Property in two stages where the first stage was to evaluate and confirm historical data on the property by carrying out prospecting, trenching and sampling on historically reported mineralization zones and trends. The second stage comprised of trenching and channel sampling as a follow up of February 2018 work. To date, total exploration expenditures on the property are \$89,029.

The Stage one program was carried out in February 2018. A total of 31 grab rock samples were collected and were submitted to Activation Laboratories (ACTLABS) in Thunder Bay, Ontario. Following are highlights of the results.

- Overall results of 31 samples indicate cobalt (Co) values in the range of 0.001% (10 parts per million “ppm”) to 0.435% (4,350 ppm), copper (Cu) 0.03% to 0.602%, and nickel (Ni) 0.004% to 0.48%.
- Two samples from historical Central Blast Pit show average 0.33% cobalt, 0.254% copper and 0.0195% nickel.
- Seven samples from south historical blast pit show average 0.021% cobalt, 0.299% copper, and 0.176% nickel.
- Cobalt- copper-nickel mineralization is hosted by fine to medium grained highly altered gabbro rocks.
- The samples tested for gold, platinum and palladium returned with low values for these precious metals.

In June 2018, the Company started Stage 2 of exploration as a follow up of the prospecting and sampling work of February 2018. The work comprised prospecting and sampling along cobalt mineralization trend; striping, trenching and channel sampling around the original cobalt showing and other new mineralization discovered during trenching; and geological mapping of the contact zone between greenstone belt and granitic intrusions. The samples for this work were submitted to Agat laboratories in Thunder Bay, and the results were pending till the filing of this report.

The author visited the property on June 24, 2018 to verify the recently completed 2018 exploration work and historical exploration areas, mineralized outcrops and collect necessary geological data. The existing data consisted of rock chip sampling, visiting reported approachable old trenching areas and onsite discussions. The author was able to verify location of February 2018 and June 2018 sampling and trenching areas during his June 24, 2018 property visit. The samples from property visit were delivered by the author to ALS Laboratories in Thunder Bay Ontario, an accredited laboratory in Canada. The samples were assayed using ALS package ME-ICP61 - Four Acid Digestion with ICP-AES Finish; plus, ore grade package OG62 for over limit cobalt or any other element. A total of eight samples were collected by the author from various rock outcrops and channel sampling areas (Table 6). Assay results indicated cobalt values in the range of 75 parts per million (ppm) to 3560 ppm (0.356%), copper 629 ppm to 8750 ppm (0.875%), and nickel 113 ppm to 2170 ppm.

The data presented in this report is based on published assessment reports available from First Energy Metals Limited, Ontario MNDMF, the Geological Survey of Canada, and the Ontario Geological Survey. All the consulted data sources are deemed reliable. The data collected during the course of present study is considered sufficient to provide an opinion about the merit of the Property as a viable exploration target.

Based on its favourable geological setting indicating cobalt- copper-nickel mineralization hosted by fine to medium grained highly altered gabbro rocks, results of exploration work by First Energy Metals Limited and findings of present study, it is concluded that the

Property is a property of merit and possess a good potential for discovery of economic concentration of cobalt-copper-nickel mineralization through further exploration. Good road access, availability of exploration and mining services in the vicinity makes it a worthy mineral exploration target. The historical and current exploration data collected on the Property provides the basis for a follow-up work program.

The author believes the present study has met its original objectives.

## **26.0 RECOMMENDATIONS**

In the qualified person's opinion, the character of the Phyllis Cobalt Property is sufficient to merit the following phased work program, where the second phase is contingent upon the results of the first phase.

### ***Phase 1 – Geophysical Surveying and Diamond Drilling Work***

The Phase 1 exploration work will comprise of two main tasks which include a 15 line-kilometre ground induced polarization (IP) survey and a 300-meter diamond core drill program targeting the immediate main area of the Phyllis Cobalt Zone".

#### ***Task 1 – Ground Induced Polarization Geophysical Survey***

A 15 line-kilometre IP survey is proposed around the main Phyllis Cobalt Zone at 100-meter line spacing to cover 1500-meter area along strike. This survey will not only help to check the presence of subsurface mineralization but also provide information regarding azimuth and dip of the contact zone between greenstone and the granitic intrusion.

#### ***Task 2 – Diamond Core Drilling***

A 300-meter diamond drill program is also recommended to check the subsurface extension of the main Phyllis Cobalt Zone. This drilling will comprise of two drill holes down to a depth of 150 metre each.

Total estimated budget for Phase 1 program is \$135,250 and it will take about eight to weeks time to complete this work.

### ***Phase 2 – Detailed Drilling and Resource Estimation***

If results from the first phase are positive, then a detailed drilling program would be warranted to check the targets identified in the ground geophysical survey and to further trace any mineralization intercepted in Phase 1 drilling. The scope of work for drilling and location of drill holes would be determined based on the findings of Phase 1 investigations.

## 26.1 Budget

Table 8: Phase 1 budget

Item	Unit	Unit Rate (\$)	Number of Units	Total
<b>Task 1: Ground Geophysics (3D IP Survey)</b>				
Line cutting	km	\$1,000	15	\$15,000
IP Survey Cost	km	\$2,200	15	\$33,000
GPS Survey	km	\$150	15	\$2,250
Mobilization and demobilization	lump sum	\$2,000	1	\$2,000
Project Management	days	\$650	5	\$3,250
Sub Total				<b>\$55,500</b>
<b>Task 2: Exploratory Drilling</b>				
Exploratory Drilling	m	\$100	300	\$30,000
Core Logging	days	\$550	7	\$3,850
Drill supervision	days	\$500	10	\$5,000
Drill Pads	Pads	\$1,000	3	\$3,000
Core Cutting and Packing	m	\$25	300	\$7,500
Accommodations and Meals	day	\$250	30	\$7,500
Supplies	ls	\$2,000	1	\$2,000
Sample Assays	sample	\$50	150	\$7,500
Transportation Road	km	\$1	5,000	\$3,000
Data Compilation	days	\$650	5	\$3,250
Report Writing	days	\$650	5	\$3,250
Project Management	days	\$650	6	\$3,900
Sub Total				<b>\$79,750</b>
<b>Total Phase 1 Budget</b>				<b>\$135,250</b>

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## 28.0 SIGNATURE PAGE

The effective date of this Technical Report, titled “NI43-101 Technical Report on the Phyllis Cobalt Property, Kenora Mining District, Northwestern Ontario, Canada”, is July 19, 2018.

Dated this 9<sup>th</sup> day of August 2018

“Signed original on file”

Kristian Whitehead | B.Sc., P.Geol.

## 29.0 CERTIFICATE OF AUTHOR

I, Kristian Whitehead, B.Sc., P.Geol. as an author of this report entitled “Technical Report on the Phyllis Cobalt Property, Kenora Mining District, Northwestern Ontario, Canada”, dated August 9<sup>th</sup>, 2018, do hereby certify that:

1. I am a consulting geologist of:  
Infiniti Drilling Corporation. 2763 Panorama Drive, North Vancouver  
British Columbia, Canada, V7G 1V7.
2. This certificate applies to the report entitled “Technical Report on the Phyllis Cobalt Property, Kenora Mining District, Northwestern Ontario, Canada”, dated August 9<sup>th</sup>, 2018.
3. I have B.Sc. degree in Earth and Ocean Science from the University of Victoria in 2004.
4. I am registered as a Professional Geologist in British Columbia (License #: 34243), Canada.
5. I have been practicing my profession continuously since 2004 and have over twelve years of experience in mineral exploration for base metals, gold, silver, uranium, niobium, iron, lithium and rare earths.
6. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI43-101”) and certify that by reason of my education, affiliation with professional associations and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purpose of NI43-101.
7. I visited the property on June 24, 2018, and I am the author of the report.
8. I am responsible for all items of this report.
9. I have no interest, direct or indirect in the Phyllis Cobalt Property, nor do I have any interest in any other properties of First Energy Metals Limited.
10. I am independent of First Energy Metals Limited, as that term is defined in Section 1.5 of NI 43-101. I do not own any securities of First Energy Metals Limited.
11. I have no prior involvement with the Phyllis Cobalt Property other than as disclosed in item 7 of this certificate.

12. I have read National Instrument 43-101 (“NI43-101”), and the Technical Report has been prepared in compliance with NI43-101, and Form 43-101F1.
13. I am not aware of any material fact or material change with respect to First Energy Metals Limited’s Property the omission of which would make this report misleading.
14. As at the date of this certificate, to the best of my knowledge, information and belief the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated this 9<sup>th</sup> day of August 2018

“Signed original on file”

Kristian Whitehead | B.Sc., P.Geo.