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*NI 43-101 Technical Report*  
*on the*  
**SMITH AND CANADIAN COBALT PROJECTS**  
**LARDER LAKE MINING DIVISION**  
**ONTARIO, CANADA**  
**by**  
**CSA Global Canada Geosciences Ltd**  
**for**  
**Cobalt Power Group Inc.**

Author and Qualified Person:

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Report Effective Date: 15 March 2018  
Report No: R139.2018





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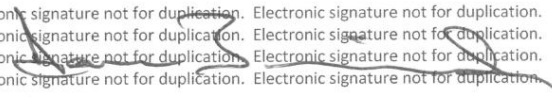
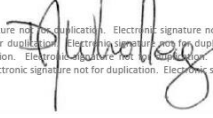
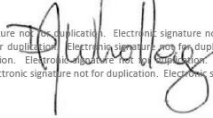
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## Date and Signature Page

This Report titled “NI 43-101 Technical Report on the Smith and Canadian Cobalt Projects, Larder Lake Mining Division, Ontario” for Cobalt Power Group Inc. and dated 15 March 2018 was prepared and signed by the following author:

["SIGNED AND SEALED"]

{*Ian Trinder*}

Dated at Toronto, ON  
15 March 2018

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Ian Trinder, M.Sc., P.Ge. (ON, MB)  
Principal Geologist  
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Report Effective Date:  
15 March 2018



# Certificate of Qualification

I, Ian D. Trinder, M.Sc., P.Ge. (ON, MAN), do hereby certify that:

1. I am employed as a Principal Geologist by CSA Global Canada Geosciences Ltd located at 365 Bay St., Suite 501, Toronto, Ontario, Canada. M5H 2V1.
2. I graduated with a degree in Bachelor of Science Honours, Geology, from the University of Manitoba in 1983 and a Master of Science, Geology, from the University of Western Ontario in 1989.
3. I am a Professional Geoscientist (P.Ge.) registered with the Association of Professional Engineers and Geoscientists of Manitoba (APEGM, No. 22924) and with the Association of Professional Geoscientists of Ontario (APGO, No. 452). I am a member of the Society of Economic Geologists and of the Prospectors and Developers Association of Canada.
4. I have approximately 30 years of direct experience with precious and base metals mineral exploration in Canada, USA and the Philippines including project evaluation and management. Additional experience includes the completion of various National Policy 2A and NI 43-101 technical reports for gold and base metal projects.
5. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
6. I have visited the Smith Cobalt Project on 13 February 2018.
7. I am the author of the technical report titled: “NI 43-101 Technical Report on the Smith and Canadian Cobalt Projects, Larder Lake Mining Division, Ontario” for Cobalt Power Group and dated 15 March 2018 (the “Report”). I am responsible for all sections of the Report.
8. I have no prior involvement with the Issuer or the Property.
9. As of the Effective Date of the technical report (15 March 2018), 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.
10. I am independent of the Issuer, and the Property applying all the tests in section 1.5 of NI 43-101.
11. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

DATED this 15<sup>th</sup> day of March 2018

*["SIGNED AND SEALED"]*

*{ Ian Trinder }*

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Ian D. Trinder, M.Sc., P. Geo.



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# 1 Summary

## 1.1 Introduction

This technical report (“Report”) was prepared by CSA Global Canada Geosciences Ltd (CSA Global) at the request of Mr Chris Healey, Vice President Exploration of Cobalt Power Group Inc. (CPG) and focuses on the exploration potential of the Issuer’s Smith Cobalt and Canadian Cobalt Projects, in the historic Cobalt and Silver Centre mining camps of northeastern Ontario and is intended to enable the Issuer and potential partners to reach informed decisions with respect to the Project.

The Report has been prepared in accordance with the standards dictated by National Instrument 43-101 (NI 43-101), companion policy NI 43-101CP and Form 43-101F1 (Standards of Disclosure for Mineral Projects). The Effective Date of this Report is 15 March 2018. The Report is based on information known to CSA Global at that date.

## 1.2 Property Description and Location

CPG’s cobalt exploration projects, approximately 400 km north of Toronto in eastern Ontario, comprise one group of near contiguous claims in the historic Cobalt mining camp, herein referred to as the Smith Cobalt Project, and one group of non-contiguous claim blocks in the historic Silver Centre mining camp area, herein referred to as the Canadian Cobalt Project. The Smith Cobalt Project claims lie between approximately 3 km northeast and 10 km southeast of the community of Cobalt. The Canadian Cobalt Project is approximately 25 km southeast of the community of Cobalt, west of Lake Temiskaming and flanking the Montreal River.

The Smith Cobalt Project comprises 13 staked mining claims (56 units totalling approximately 880 ha), 19 patent claims (approximately 234.3 ha) and two surface rights-only patents which overlie Smith Cobalt unpatented mining claims, situated in Bucke, Coleman and Lorrain Townships and grouped into 11 contiguous and non-contiguous claim blocks based on acquisition agreement/date and location.

CPG holds a 100% interest in the staked mining claims and patents of the Smith Cobalt Project. The Smith Cobalt claim block is subject to a 2% net smelter return (NSR) payable to the vendor with 1% of the NSR purchasable at \$1,000,000. The Coleman claim block is subject to a 2% NSR payable to the vendor with the option to purchase the first 1% for \$250,000 and the second 1% for \$500,000.

The Canadian Cobalt Project comprises 57 staked claims (674 units totalling approximately 10,784 ha) grouped into five claim blocks based on location and acquisition and one mining lease (approximately 15 ha) in Lorrain, South Lorrain and Gillies Limit townships.

CPG holds a 100% interest in the 43 staked mining claims of the East Lorrain, West Lorrain, Silver Centre South and Montreal River blocks and the one mining lease of the Silver Eagle block by way of its definitive agreement for the acquisition of Canadian Cobalt Projects Inc. The 43 claims and one mining lease are subject to a 1.5% NSR royalty payable to the shareholders of Canadian Cobalt at the time of its acquisition by CPG. 0.75% of the royalty may be purchased at any time in consideration for a cash payment of \$1,000,000.

On 13 February 2018, CPG announced the signing of a share purchase agreement to acquire Ontario Cobalt Property Developers Inc. (Ontario Cobalt) Montreal River West block in Gillies Limit Township, northwest of and contiguous with the Montreal River block. The share purchase agreement and the closing of the acquisition remains subject to approval of the TSX Venture Exchange. At closing, the 14 claims acquired from Ontario Cobalt are subject to a 2.5% NSR royalty, of which 1.5% may be purchased at any time, on or before the seventh anniversary of the effective date of acquisition, in consideration of a \$1,000,000 cash payment.



To the best of the Author's and CSA Global's knowledge, the Smith Cobalt and Canadian Cobalt Projects' mining claims, mining lease and patented mining claims are currently in good standing and CPG warrants that there are no current or pending challenges to ownership of the Projects' claims of which it is aware.

As of the Effective Date, CPG holds an exploration plan no. PL17-10780 effective from 1 September 2017 to 1 September 2019 for the Proteus, Kirk, Kirk SW, Smith Cobalt Extension and Fraelecks Pond Blocks. The plan covers the following activities: geophysical surveys, physical stripping, physical trenching, drilling and line cutting.

As of the Effective Date, CPG also holds an exploration permit no. PR17-11205 effective from 10 January 2018 to 20 January 2021 for Proteus claim 4248871 and Kirk claim 4280185. The permit covers physical stripping and drilling.

Environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other relevant issues could potentially materially affect access, title or the right or ability to perform the work recommended in this Report on the Projects. However, at the time of this Report, CSA Global is unaware of any such potential issues affecting the Projects.

### **1.3 Accessibility, Climate, Local Resources, Infrastructure and Physiography**

The Greater Cobalt Project is located in the historic Cobalt and Silver Centre mining camp areas. The various Properties are generally accessible via all weather roads and seasonal all-terrain vehicle (ATV) trails.

Most services and supplies required for a mineral exploration program are available in the City of Temiskaming Shores (2016 Census population of 9,920), an amalgamated municipality (formerly the Town of Haileybury, New Liskeard and the Township of Dymond) at the head of Lake Temiskaming approximately 15 km north of the centre of the Smith Cobalt Project area. The Town of Cobalt (2016 Census population of 1,128), approximately 3 km west of the Smith Cobalt Project area offers some basic services. Given the mining history of the Cobalt Camp and the proximity of mining communities such as Kirkland Lake and Sudbury, as well as service centres such as North Bay, exploration and mining personnel are readily available in the region.

Other than several powerlines, all-weather roads and ATV trails, no infrastructure is present within the Properties. The Project areas lie approximately 4–20 km east of Provincial Highway 11 and the Ontario Northland rail line which provides freight services for the transportation of mineral and forest products, chemicals, petroleum and other products to and from northeastern Ontario and northwestern Quebec. Hydro One 115 kV and 230 kV transmission lines cross or are near the Project property areas.

Abundant water resources are present in the lakes, rivers, creeks, and beaver ponds on the Properties.

As of the Report's Effective Date, it appears that CPG both holds and has the option acquire sufficient mining claims necessary for proposed exploration activities and potential future mining operations (including potential tailings storage areas, potential waste disposal areas, and potential processing plant sites) should a mineable mineral deposit be discovered.

The climate in the Project area is warm summer humid continental with warm and often hot summers and long, cold winters. Season-specific mineral exploration may be conducted year-round. Swampy areas and lakes/ponds may be best accessed for drilling and ground geophysical surveys during the winter months when the ground and water surfaces are frozen. Mine operations in the region can operate year-round with supporting infrastructure.

The Project area is characterized by rocky, rolling bedrock hills with locally steep ledges and cliffs, separated by valleys filled with clay, glacial material, swamps and streams. Total relief is approximately 130 m in the



Smith Cobalt Project area with topography varying from 250 m to 380 m above sea level. Total relief is approximately 260 m in the Canadian Cobalt Project area with topography varying from 180 m on the shore of Lake Temiskaming to 450 m above sea level in the Montreal River Block. Local relief is commonly up to 30 m to 50 m, although some ridges are up to 80 m or more above surrounding lowlands.

Vegetation is typical boreal forest with mixed second growth forest of mixed coniferous and deciduous trees, including poplars, birch, maple, pine, spruce, alders, and willows. Swampy low-lying areas contain abundant tag alders. Locally, the clay-belt extends intermittently south into the Lorrain Valley supporting limited farmland but outside of the Projects.

## 1.4 History

The initial discovery of silver in the region was made west of Lake Temiskaming in 1903 during the construction of the Temiskaming and Northern Ontario Railway. This began a rich mining history in the area. The location along the railway was named Cobalt after one of the elements found in the arsenide minerals within the veins. The first mines commenced production as early as 1904 and mining was, more or less, continuous until 1989 with production peaking in 1911 (Petruk *et al.*, 1971). In addition to silver, cobalt, nickel and copper were recovered from the ore. Mineralisation was not just limited to the area immediately around Cobalt but was recovered from areas with similar geology within the Cobalt embayment of the Southern Province, from Gowganda in the west to Silver Centre in the southeast.

Information on the Project's early exploration and ownership history (pre-1950) is limited and incomplete, particularly with respect to the Ministry of Northern Development and Mines (MNDM) online assessment files. Some additional hardcopy information on early exploration in the Project area is available in historic Resident Geologist's notes and donated files archived at the District Geologist's office in Kirkland Lake.

Minor production from the historic Smith Mine occurred on the Smith Cobalt Project area. Thomson (1961c) reported approximately 9,570 lbs of cobalt ore was extracted in 1935. Cobalt production in 1939 and 1940 was reported to be 126 lbs and 331 lbs respectively. On the Canadian Cobalt Project Silver Eagle lease Knight (1922; p225 and 229) reported total production of 248,486 g (7,989 oz) Ag in 1918 from a 20-ft strike length of the Wettlaufer Vein where it crossed the northwest corner of the Silver Eagle claim.

## 1.5 Geology

### 1.5.1 Regional Geology

The Cobalt/Silver Centre area is underlain by Precambrian rocks of the Superior and Southern provinces (Guindon *et al.*, 2016). Outliers of Paleozoic strata are exposed immediately to the north in the Haileybury area and further to the north between New Liskeard and Englehart.

Archean Keewatin rocks are the oldest rocks in the Cobalt/Silver Centre area and form the southernmost portion of the Western Abitibi sub-province of the Superior Province. These rocks include predominantly intermediate to mafic metavolcanic flows with intercalated metasedimentary rocks. The Archean rocks were folded and intruded by mafic to ultramafic dikes and granite stocks and batholiths. The eroded Archean surface is unconformably overlain by relatively flat lying Paleoproterozoic sedimentary rocks of the Huronian Supergroup which forms the mildly deformed Cobalt Embayment of the Southern Province. At the northeast edge of the Cobalt Embayment in the Cobalt area, the Huronian Supergroup rocks comprise only the Cobalt Group (Gowganda and Lorrain formations) and are commonly found filling interpreted paleo-valleys or troughs in the Archean basement. Early Proterozoic-age Nipissing Diabase intrudes both the Archean basement and the Huronian sediments. The Nipissing Diabase are the most abundant and widespread igneous



rocks intruding the Huronian Supergroup sediments and occur as dykes, and sills up to several hundred metres thick. In the Cobalt area, the Nipissing Diabase is interpreted as a thick undulating sheet intruding the Cobalt Group sediments at or immediately above the Archean unconformity.

The grade of regional metamorphism in the area ranges from subgreenschist facies in the Huronian sedimentary rocks to greenschist facies in the Archean metavolcanic rocks (Born and Hitch, 1990). Contact metamorphism of sedimentary rocks of the Gowganda and Lorrain formations occurred during the emplacement of Nipissing Diabase.

### 1.5.2 *Projects Geology*

The oldest rocks on the Smith and Canadian Cobalt Projects are folded, faulted, and steeply dipping metamorphosed Archean (Keewatin) felsic to mafic metavolcanics and volcanoclastics (pillowed flows, tuffs, and agglomerates) and argillaceous metasediments. Archean Temiskaming sediments do not appear to outcrop in the Project area however some workers have interpreted them to locally unconformably overly the older Archean Keewatin metavolcanics and metasediments in the subsurface at the Smith Cobalt Project in the Smith Mine area and the Proteus area. Late Archean Lorrain Granite intrudes the Archean metavolcanics in the southern part of the Smith Cobalt Project area. The granite is in part unconformably overlain by the younger Proterozoic Cobalt Group sediments or by Nipissing Diabase sill.

A major erosional unconformity resulted in the development of basins and highlands on the surface of Archean metavolcanics and intrusives upon which the Proterozoic Cobalt Group were deposited; represented by the Gowganda Formation's Coleman and Firstbrook members and the Lorrain Formation. In the Smith Cobalt Project area, the Lorrain Formation locally overlies the Coleman Member but for the most part the Lorrain sediments lie directly on the underlying Lorrain Granite in the Smith Cobalt Project area. In the Canadian Cobalt Project area, the Firstbrook Member of the Gowganda Formation overlies the Coleman Member along the west boundary of the Silver Centre South block and a more extensive area in the Montreal River West block. In the Canadian Cobalt Project area, the Lorrain Formation conformably overlies the Gowganda Formation and underlies a significant portion of the Lorrain Valley East and West blocks and the Montreal River and Montreal River West blocks.

The Late Proterozoic Nipissing Diabase, typically a fine- to medium-grained, fresh to slightly altered rock, intrudes the Archean volcanics and intrusives and the older Proterozoic Cobalt Group sediments (Thomson 1960a). The Nipissing Diabase in Cobalt Camp has historically been considered a single sheet, with numerous rolls, both major and minor resulting in basin and dome like shapes and is estimated to have been approximately 300 m (1,000 ft) thick pre-erosion in the Smith Cobalt Project area (Thomson, 1960a). These domes and basins are elongated in a northeast direction in Lorrain Township. The Canadian Cobalt Project area is underlain by a number of Nipissing Diabase sills and dykes. As at Cobalt, McIlwaine (1970) considers the Nipissing Diabase in South Lorrain Township to be a single sheet, with numerous rolls, both major and minor.

Major southeast-striking faults parallel and are interpreted to be related to the post-Silurian in age Lake Temiskaming Fault.

The Smith Cobalt Project area hosts a number of arsenide silver-cobalt vein occurrences the most significant of which is the historic Smith Mine which had minor cobalt production predominantly from the lower Nipissing Diabase/Cobalt sediment contact area and the underlying Archean metavolcanics and metasediments. The only significant silver-cobalt occurrence located to date in the Canadian Cobalt Project area is on the Silver Eagle lease where a minor amount of silver was produced from a 20 ft strike length of the Wettlaufer Vein where it crossed the northwest corner of the Silver Eagle claim. The relatively fewer



number of arsenide silver-cobalt vein occurrences in the Silver Centre camp and adjacent Canadian Cobalt Project areas compared to the main Cobalt Camp could be due to an unknown geological control but it may also in part reflect masking overburden cover hindering prospecting efforts and the poor accessibility of the areas during the time that the camp was most active in the first half of the 20th century.

## 1.6 Deposit Model

The Cobalt Camp (and the satellite Silver Centre Camp) is the type locality of arsenide silver-cobalt vein deposits which are the exploration target at the Greater Cobalt Project. At both camps the veins occur in the Nipissing Diabase and in the Huronian Cobalt Group sediments and Archean metavolcanic rocks within about 200 m of their contact with the diabase.

## 1.7 Exploration

Since 2016 CPG has completed exploration at the Smith Cobalt Project including:

- An airborne magnetic survey
- An induced polarisation (IP) geophysical survey
- Surface trenching/stripping and sampling
- A collaborative seismic survey
- Two phases of diamond drilling.

CPG has not yet completed work on the Canadian Cobalt Project.

## 1.8 Drilling

CPG's 2017 diamond drilling was completed in two phases. Phase 1 comprising nine holes (SC-17-01 to SC-17-09) totalling 1,896.4 m, was completed between 26 May and 6 July 2017. Phase 2 comprising 16 holes (SC-17-10 to SC-17-25) totalling 2,344.5 m, was completed between 13 September and 4 November 2017. The drill programs focused on the Smith Cobalt Mine area and the Smith Cobalt SE Extension occurrence.

## 1.9 Interpretations and Conclusions

The arsenide silver-cobalt vein deposits in the Cobalt and Silver Centre camps are associated with Proterozoic conglomerate, quartzite, and greywacke rocks of the Cobalt Group (Coleman Member of the Gowganda Formation), as well as with major sill-like bodies of Nipissing Diabase and with Archean mafic and intermediate lavas and intercalated pyroclastic and sedimentary rocks. Distribution of the silver-cobalt veins in the Cobalt Camp (Smith Cobalt Project area) is controlled by the contact between the Nipissing Diabase sills and the rocks of the Cobalt Group (Gowganda Formation) and to an extent the contact between Cobalt Group rocks and Archean metavolcanic and metasedimentary rocks. Distribution of the known silver-cobalt veins in the Silver Centre camp (Canadian Cobalt Project area), however, is generally controlled by the contact between the Nipissing Diabase sills and the Archean metavolcanic and metasedimentary rocks. In both camps, the veins occur in the diabase and in the Proterozoic and Archean rocks within about 200 m of their contact with the diabase.

The Smith and Canadian Cobalt Projects are underlain in variable proportions by rock types associated with the historic arsenide silver-cobalt vein deposits elsewhere in the Cobalt and Silver Centre camps, namely Archean metavolcanics (Keewatin) and metasediments, Proterozoic Cobalt Group sediments and Nipissing Diabase. The relatively fewer number of arsenide silver-cobalt vein occurrences in the Silver Centre Camp and adjacent Canadian Cobalt Project areas compared to the main Cobalt Camp could be due to an unknown



geological control but it may also in part reflect overburden cover masking bedrock, hindering prospecting efforts and the poor accessibility of the areas during the time that the camp was most active in the first half of the 20<sup>th</sup> century.

Previous historic surface-based exploration has relied largely on prospecting for mineralized fractures and veins supported by overburden stripping and pitting programs. In addition to prospecting methods, CPG should consider continued testing and use modern geophysical and geochemical techniques to identify features controlling arsenide silver-cobalt mineralization or the arsenide silver-cobalt veins themselves at the Cobalt Project.

CPG's airborne magnetic and VLF-EM survey of the Smith Cobalt Project has highlighted interpreted structural zones which require compilation and interpretation with geological and geochemical data and in-field follow-up mapping and prospecting to assess the prospectivity for cobalt-silver mineralization. The IP survey results from the Smith Mine area should be reviewed in context of the geological information gained from the Phase 1 and Phase 2 drill programs. Borehole geophysics and or drill core geophysical testing should be undertaken to characterize the various rock and assist in interpretation the 2017 IP survey results and selection of future ground geophysical methods.

Limited surface sampling of in-situ veining in outcrop and of muck piles surrounding historical shafts and pits has returned weak to high-grade cobalt values in the Smith Cobalt, Smith Cobalt East Extension, Temiskaming and Chrysler Niles areas of the Smith Cobalt Project.

CPG's Phase 1 and Phase 2 diamond drill programs near the historic Smith Mine did not intersect a significant zone of mineralization however they did confirm the local presence of minor narrow veins with silver and cobalt mineralization along a trend extending from the historic Smith Mine southeast 800 m to the Smith Cobalt Southeast Extension occurrence. The drilling results confirmed the need to gain a better understanding of potential structural and lithological controls to the distribution of the silver-cobalt veins utilizing geological, geophysical and geochemical methods.

The Author and CSA Global conclude that the Smith and Canadian Cobalt Projects have potential to host arsenide silver-cobalt vein deposits and exploration is warranted.

The Author and CSA Global consider identified project-specific risks to have low to moderate potential to reasonably affect the reliability or confidence in exploration information obtained to date or the completion of exploration programs proposed in this Report.

### **1.10 Recommendations**

CSA Global considers the Smith and Canadian Cobalt Projects to be at an early stage of exploration and recommends a multifaceted exploration program including historical and current data compilation, continued airborne geophysical surveys to cover both Project areas, prospecting, geological mapping, testing of ground geophysical and geochemical methods with follow-up surveys and finally diamond drill testing of targets developed from these programs.

CPG has proposed a 2018 multi-faceted exploration program and budget for the Smith and Canadian Cobalt Projects as presented in Table 1. The Author and CSA Global concur with CPG's program and budget.

Table 1: 2018 Smith and Canadian Cobalt Projects proposed exploration program and budget

Category	Item	Description	Budget	
Geophysics	1	Airborne geophysics	Airborne magnetometer and VLF of Canadian Cobalt Project and remainder of Smith Cobalt Project area. 50 m line spacing. Approximately 2,500-line km.	\$250,000
	2	Line cutting	Cut survey grids for ground geophysics.	\$20,000
	3	Ground geophysics	Ground geophysical coverage between Smith Cobalt and Proteus, to complete coverage initiated 2017. Approximately 15-line km. Determine technique to get best results (2017 2D IP inadequate resolution for targeting).	\$80,000
	4	Bore hole geophysics	Downhole surveys of electrical properties to aid in interpretation of the geology. 10 holes – acoustic televiewer, magnetic susceptibility, inductive conductivity and IP.	\$40,000
	5	Geophysics interpretation	Comprehensive interpretation of the airborne and ground surveys.	\$20,000
Geology	6	Interpretation of existing data	Comprehensive review of all current core and surface mapping/sampling data and geophysics, with data compilation and three-dimensional (3D) modelling to define targets for next drill program.	\$50,000
	7	Mapping and sampling	Follow up detailed mapping/sampling for Smith Cobalt East and Timiskaming Project. Also add several other target areas with known showings. Outcrop stripping and trenching as appropriate.	\$100,000
Geochemistry	8	Soil geochemistry	Conduct reconnaissance soil geochemistry surveys over under-explored areas. Appropriate technique to be determined.	\$100,000
Drilling	9	Phase 3 drill program	Follow up on Smith Cobalt Phase 1 and Phase 2 programs after geological compilation. Drill several holes at each of Proteus, Timiskaming and Chrysler-Niles. 30 holes, 6,000 m, \$200/m all inclusive.	\$1,200,000
Environmental	10	Baseline environmental studies	Investigate environmental studies required moving forward and a timeline.	\$5,000
First Nations	11	Ongoing consultations	Develop and maintain working relationship with the Temiskaming and Temagami First Nations.	\$5,000
Land	12	Claim conversion	Ensure an orderly transfer of all claims into the new system.	\$5,000
Logistics	13	Core shack	Set up and operate new core shack, and operate (includes improvements, monthly rental, taxes and utilities). Move all core to permanent storage area.	\$68,000
	14	Road work	Develop and maintain suitable access to all properties.	\$20,000
	15	Travel and lodging		\$150,000
	16	Supplies	Exploration and safety supplies, fuel, etc.	\$45,000
<b>Subtotal</b>			<b>\$2,158,000</b>	
<b>10% Contingency</b>			<b>\$215,800</b>	
<b>TOTAL</b>			<b>\$2,373,800</b>	





## 2 Introduction

### 2.1 Issuer

This technical report was prepared by CSA Global at the request of Mr Chris Healey, Vice President Exploration of CPG and focuses on the exploration potential of the Issuer's Smith and Canadian Cobalt Projects, in the historic Cobalt and Silver Centre mining camps of northeastern Ontario.

CPG's head office is at 520-65 Queen Street West, Toronto, Ontario, M5H 2M5; its legal registered address is currently 1100-736 Granville St. Vancouver BC V6Z 1G3. It is a publicly traded Canadian exploration company listed on the TSX-Venture Exchange and US Pink Sheets (TSXV: CPO, OTC Pink: CBBWF) currently focused on cobalt exploration in the Cobalt region of Ontario, Canada.

### 2.2 Terms of Reference

CSA Global was commissioned by the Issuer to prepare a technical report on its Smith and Canadian Cobalt Projects in Ontario, Canada. The Report is specific to the standards dictated by NI 43-101, companion policy NI 43-101CP and Form 43-101F1 (Standards of Disclosure for Mineral Projects). The Report focuses on the exploration potential of the Projects and is intended to enable the Issuer and potential partners to reach informed decisions with respect to the Projects.

The Effective Date of this Report is 15 March 2018. The Report is based on information known to CSA Global at that date.

The Issuer reviewed draft copies of this Report for factual errors. Any changes made because of these reviews did not include alterations to the interpretations and conclusions made. Therefore, the statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the date of this Report.

### 2.3 Sources of Information

This Report has been prepared by the Author and CSA Global based on review of publicly available geological reports, maps, assessment files, mining claim information and technical papers, and company letters and memoranda made available by the Issuer, as listed in Section 19 (References) of this Report. The Author has taken reasonable steps to verify the information provided where possible.

The Author also had discussions with the management and consultants of the Issuer: Mr Chris Healey, P.Geo., Vice President of Exploration and Director, and Jeff Poloni, Director and Consultant.

### 2.4 Qualified Person Property Inspection

Mr Ian Trinder, M.Sc., P.Geo., CSA Global Principal Geologist and Qualified Person, is responsible for the preparation of this Report. Mr Trinder has a Master of Science Degree in Geology and is a registered Professional Geoscientist (P.Geo.) in good standing registered in the Provinces of Ontario and Manitoba Canada (APGO no. 0452, APEGM no. 22924). Mr Trinder has over 30 years' experience in the mining industry with a background in international precious and base metals mineral exploration including resource estimates, project evaluation and management.

The Author completed a one-day field visit at the Smith Cobalt Project on 13 February 2018. CPG's Mr Chris Healey and Mr Jeff Poloni accompanied and guided the Author during the field visit, providing valuable insight into the history and current status of the Smith and Canadian Cobalt Projects.

The Author considers that the site visit is current under Section 6.2 of NI 43-101.

## 2.5 Units and Currency

The Metric System or SI System is the primary system of measure and length used in this Report and is generally expressed in kilometres, metres and centimetres; volume is expressed as cubic metres, mass expressed as metric tonnes, area as hectares, and zinc, copper and lead grades as percent or parts per million. The precious metal grades are generally expressed as grams/tonne but may also be in parts per billion or parts per million. Conversions from the SI or Metric System to the Imperial System are provided below and quoted where practical.

Many of the geologic publications and more recent work assessment files now use the SI system but older work assessment files almost exclusively refer to the Imperial System. Metals and minerals acronyms in this report conform to mineral industry accepted usage and the reader is directed to online resources at [https://en.wikipedia.org/wiki/List\\_of\\_chemical\\_elements](https://en.wikipedia.org/wiki/List_of_chemical_elements) and [http://cms.unige.ch/sciences/terre/research/Groups/mineral\\_resources/opaque/ore\\_abbreviations.php](http://cms.unige.ch/sciences/terre/research/Groups/mineral_resources/opaque/ore_abbreviations.php)

Other abbreviations include UTM = Universal Transverse Mercator; NAD = North American Datum; WGS = World Geodetic System.

Conversion factors utilized in this report include:

- 1 troy ounce/ton = 34.2857 grams/tonne
- 1 gram/tonne = 0.0292 troy ounces/ton
- 1 troy ounce = 31.1035 grams
- 1 gram = 0.0322 troy ounces
- 1 pound = 0.4536 kilograms
- 1 foot = 0.3048 metres
- 1 mile = 1.609 kilometres
- 1 acre = 0.4047 hectares
- 1 square mile = 2.590 square kilometres.

The term gram/tonne or g/t is expressed as “gram per tonne” where 1 gram/tonne = 1 ppm (part per million) = 1,000 ppb (part per billion). Other abbreviations include ppb = parts per billion; ppm = parts per million; oz/t = ounce per short ton; Moz = million ounces; Mt = million tonne; t = tonne (1,000 kilograms); SG = specific gravity; lb/t = pound/ton; and, st = short ton (2,000 pounds).

Unless otherwise mentioned, all UTM coordinates in this Report are provided in the datum of Canada, NAD83 Zone 17 T.

All currency in this Report is in Canadian dollars (C\$) unless otherwise noted. As of the Effective Date of this Report, the Bank of Canada exchange rate between the US and Canadian Dollars was approximately US\$1.00 = C\$1.30.



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## 3 Reliance on Other Experts

The Author and CSA Global has relied upon the Ontario MNDM for online information on mining claim location and status and patented claim location (Section 4). The MNDM disclaims any guarantee or warranty that their information is accurate, complete or reliable. The Author has relied upon the Issuer, its management and legal counsel for information related to underlying contracts and agreements pertaining to the acquisition of the mining claims, mining leases and patented claims and their status (Section 4). The Author has not independently verified ownership or mineral title beyond information that is publicly available or been provided by the Issuer. The Property description presented in this Report is not intended to represent a legal, or any other opinion as to title.

# 4 Property Description and Location

## 4.1 Project Location

CPG’s cobalt exploration projects, approximately 400 km north of Toronto in eastern Ontario, comprise one group of near contiguous claims in the historic Cobalt mining camp, herein referred to as the Smith Cobalt Project, and one group of non-contiguous claim blocks in the historic Silver Centre mining camp, herein referred to as the Canadian Cobalt Project. The Smith Cobalt Project claims lie between approximately 3 km northeast and 10 km southeast of the community of Cobalt. The Canadian Cobalt Project is approximately 25 km southeast of the community of Cobalt, west of Lake Temiskaming (also spelled Temiskaming) and flanking the Montreal River (Figure 1 and Figure 2).

The Projects are approximately centred at the coordinates listed in Table 2.

Table 2: Approximate centre points of the CPG’s Projects (Zone 17T, NAD83)

Project	UTM east	UTM north	Latitude	Longitude
Smith Cobalt Project area	603,300	5,249,100	47°23’13” north	79°37’55” west
Canadian Cobalt Project area	608,400	5,229,700	47°12’42” north	79°34’08” west



Figure 1: Location of Projects in Ontario

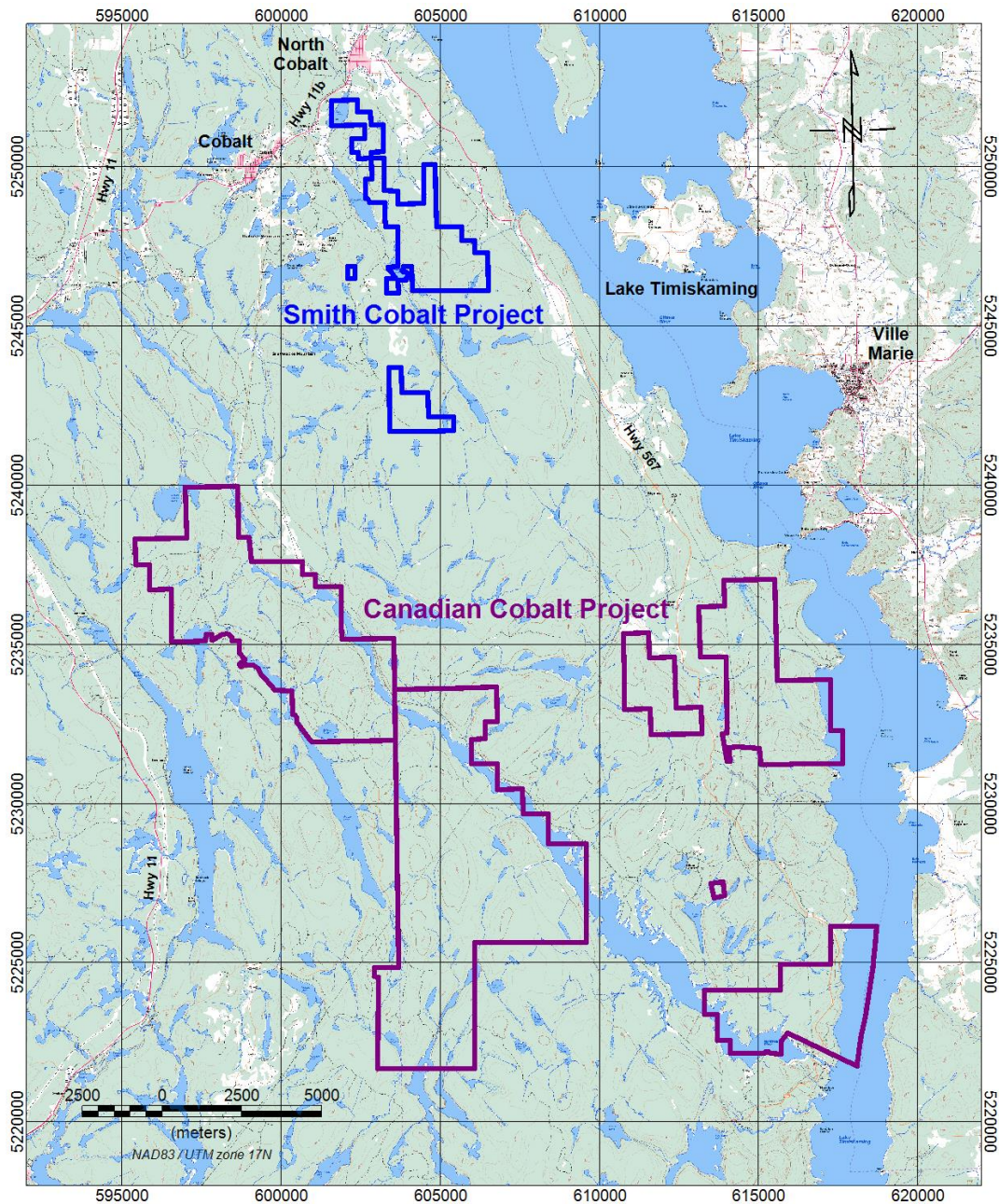


Figure 2: Location of the Smith Cobalt and Canadian Cobalt Projects

## 4.2 Project Description and Ownership

As of the Effective Date of this Report, the Smith Cobalt Project comprises 13 unpatented claims (56 units totalling approximately 880 ha) and 19 patent claims (approximately 234.3 ha) and two surface rights-only patents which overlie Smith Cobalt unpatented mining claims. The Canadian Cobalt Project comprises 57 unpatented claims (674 units totalling approximately 10,784 ha) and one mining lease (approximately 15 ha). Claim descriptions are summarised in Table 3, Table 4, Table 5 and Table 6 with respect to project, acquisition claim group and type of claim.



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The Author notes that prior to 8 January 2018, mining claims were staked in Northern Ontario by ground staking. As of the Effective Date of the Report (15 March 2018), Ontario is in the process of converting to an online system of claim registration using a cell-based provincial grid which will replace ground and map staking. At conversion on 10 April 2018, all active, unpatented claims will be converted from their legally defined location by claim posts on the ground or by township survey to the cell-based provincial grid. Following conversion, the claims will be legally defined by their cell on the grid and coordinate location in Ontario's new Mining Lands Administration System (MLAS).

The reader is referred to [Appendix 1](#) for a description of Ontario current mineral tenure.



Table 3: Description of Crown Grant patented claims of the Smith Cobalt Project

Project	Claim block	CPG designated ID	PIN no.	Parcel no.	Township	Lot/Concession	Area (ha)	Mining land tax (\$)	Municipal tax (\$)*	Rights**	Registered owner	CPG interest
Smith Cobalt	Smith Cobalt	Smith Cobalt 1	61388-0014	138 SST	Coleman	SE PT Lot 1 Con 6	8.094	\$32.38	\$59.62	M+SR	CPG	100%
		Smith Cobalt 2	61388-0200	4774 NND	Coleman	NE PT Broken Lot 1 Con 5	8.094	\$32.38	\$30.35	M+SR	CPG	100%
		Smith Cobalt 3	61388-0201	2102 SST	Coleman	PT Broken Lot 1 Con 5	8.094	\$32.38	\$30.35	M+SR	CPG	100%
		Smith Cobalt 4	61388-0202	604 SST	Coleman	PT Broken Lot 1 Con 5	6.07	\$24.28	\$30.35	M+SR	CPG	100%
		Smith Cobalt 5	61388-0203	2085 SST	Coleman	PT Broken Lot 1 Con 5	2.02	\$8.09	\$30.35	M+SR	CPG	100%
		Smith Cobalt 6	61388-0204	3584 SST	Coleman	PT North part Broken Lot 1 Con 5	8.094	\$28.65	\$30.35	M+SR	CPG	100%
		Smith Cobalt 7	61388-0220	217 SST	Coleman	PT Broken Lot 1 Con 5	8.094	\$32.38	\$30.35	M+SR	CPG	100%
		Smith Cobalt 8 T19592	61390-0044	3585 SST	Lorrain	SW 1/4 of N 1/2 Lot 1 Con 11	16.19	\$64.75	\$30.35	M+SR	CPG	100%
		Smith Cobalt 9	61388-0219	2450	Coleman	W 1/2 SE 1/4 of N 1/2 Lot 1 Con 5	6.88	\$32.38	\$224.93	M+SR	CPG	100%
	Bende	Bende 1355	61389-0046	8089 SST	Coleman	South part Lot 2 Con 4	8.094	\$32.38	NA *	M+SR	CPG	100%
	Kingston	Kingston 1	61359-0299	22154 SST	Bucke	SE 1/4 of S 1/2 Lot 11 Con 1 & SW 1/4 of S1/2 Lot 12 Con 1	32.37	\$64.75	\$200.00	M+SR	CPG	100%
		Kingston 2	61359-0298	22153 SST	Bucke	W 1/2 of part Lot 11 Con 1	32.37	\$64.75	\$200.00	M+SR	CPG	100%
		Kingston 3	61359-0297	22152 SST	Bucke	NE 1/4 of S 1/2 Lot 11 Con 1	16.19	\$64.75	\$100.00	M+SR	CPG	100%
	Wuest	Wuest 2T26282	61390-0075	10147 SST	Lorrain	SW 1/4 of S 1/2 Lot 1 Con 11	16.99	\$69.19	NA *	M+SR	CPG	100%
	Coleman	Coleman 1	61388-0003	10837 SST	Coleman	W1/2 NE 1/4 N 1/2 Lot 1 Con 6	24.282	\$97.14	NA	M+SR	CPG	100%
		Coleman 2	61388-0005	10726 SST	Coleman	N 1/2 SE 1/4 N 1/2 Lot 1 Con 6	12.95	\$51.80	NA	M+SR	CPG	100%
		Coleman 4	61388-0006	9023 SEC SST	Coleman	PT LT 1 Con 6	11.33	\$45.33	NA	M+SR	CPG	100%
		Coleman 5	61388-0008	9336 SEC SST	Coleman	PT Lot 1 Con 6 NP5547			NA	M+SR	CPG	100%
		Coleman 6	61388-0010	9023 SEC NND	Coleman	PT Lot 1 Con 6 NP4459	8.094	\$32.38	NA	M+SR	CPG	100%
		<b>19</b>				<b>234.3</b>	<b>\$740.95</b>	<b>\$997.00*</b>				

\*NA: Annual municipal tax amounts are not available to the Author as of the Effective Date. Partial total.

\*\*M+SR: Mining and Surface Rights.

Table 4: Description of Crown Grant Surface Rights Only patented claims of the Smith Cobalt Project

Project	Claim block	CPG designated ID	PIN no.	Parcel no.	Township	Lot/Concession	Area (ha)	Mining land tax (\$)	Municipal tax (\$)*	Rights*	Registered owner	CPG interest
Smith Cobalt		Coleman 3	61388-0007	14246 SST	Coleman	N PT Lot 1 Con 6 (surface only) Overlies CPG mining claim L4277172 (SCX1)	8.094	\$32.38	NA	SRO	CPG	100%
		Coleman 7	61388-0019	17428	Coleman	PT Lot 2 Con 6 (surface only) Overlies CPG mining claim L4280111 (Fraelecks Pond)	8.094	\$32.38	NA	SRO	CPG	100%
		<b>2</b>					<b>16.188</b>	<b>\$64.76</b>	<b>NA *</b>			

\*NA: Annual municipal tax amounts are not available to the author as of the Effective Date.

\*\*SRO: Surface rights only.

Table 5: Description of 21-year mineral leases of the Canadian Cobalt Project

Project	Group	Lease	Parcel	PIN	Lease name	Township	Ha	Start date	Expiry date	Annual rent*	Rights**	Owner	CPG interest	Description
Canadian Cobalt	Silver Eagle	108069	4586LT	61391-0102 (LT)	T46579	South Lorrain	15.050	4/1/2007	3/31/2028	\$45.15	M+SR*	Canadian Cobalt Projects	100% through its acquisition of Canadian Cobalt Projects	Mining Claim T46579

\* Approximate annual rent amount based on rate of \$3/ha.

\*\* M+SR: Mining and Surface Rights.



Table 6: Description of unpatented claims of the Smith and Canadian Cobalt Projects

Project	Claim block	Claim no.	Township	Lot/Concession / Rights	Units	Ha	Recording date	Claim due date	Vendor	% CPG on title	Work required
Smith Cobalt	Smith Cobalt Ext	4275038	Coleman	Part of Lot 1, Con 6 / MRO	1	16	2016-Sep-09	2019-Sep-09	Chitaroni	100%	\$400
		4277172	Coleman	Part of Lot 1, Con 6 / MRO	1	8	2016-Sep-09	2019-Sep-09	Chitaroni	100%	\$400
	Fraelecks Pond	4280111	Coleman	E1/2 SE1/4 N1/2 Lot 2, Con 6 / MRO	1	8	2016-Nov-16	2018-Nov-16	Chitaroni	100%	\$400
	Proteus	4242314	Lorrain	SE1/4 of S1/2 Lot 2, Con 11	1	16	2009-Jun-19	2020-Jun-19	Timber Wolf Gold Corp.	100%	\$59
		4248745	Lorrain	SW1/4 of S1/2 of Lot 2, Con 2	1	16	2010-Jul-08	2020-Jul-08	Timber Wolf	100%	\$59
		4248871	Lorrain	N1/2 of S1/2 Lot 1 Con 11, N1/2 of S1/2 Lot 2 Con 11, E1/2 of N1/2 ET AL	7	112	2010-May-18	2020-May-18	Timber Wolf	100%	\$1,907
	Kirk Lake	4280185	Lorrain	Lot 1 & 2 Con 9 & 10, ET AL	13	208	2016-Oct-04	2019-Oct-04	Chitaroni	100%	\$5,200
		4280186	Lorrain	Lot 3 & 4 Con 9 & 10, ET AL	12	192	2016-Oct-04	2019-Oct-04	Chitaroni	100%	\$4,800
		4280187	Lorrain	Lot 3 & 4 Con 10, ET AL	5	80	2016-Oct-04	2019-Oct-04	Chitaroni	100%	\$2,000
	Kirk Lake SW	4284361	Lorrain	NW1/4 of N1/2 Lot 1, Con 9	1	16	2017-Mar-20	2019-Mar-20	Fudge/Gaudreau	100%	\$400
	Suddie Lake	4284443	Lorrain	SE1/4 of S1/2 Lot 2 Con 7, SW1/4 of S1/2 Lot 3 Con 7	2	32	2017-Jun-26	2019-Jun-26	CPG staked	100%	\$800
		4284449	Lorrain	SW1/4 of S1/2 Lot 1 Con 8, NW1/4 of N1/2 Lot 1 Con 7	2	32	2017-Jun-26	2019-Jun-26	CPG staked	100%	\$800
		4284450	Lorrain	S1/2 Lot 1 Con 7, S1/2 of N1/2 Lot 1 Con 7 ET AL	9	144	2017-Jun-26	2019-Jun-26	CPG staked	100%	\$3,600
<b>Smith Cobalt</b>	<b>Subtotal</b>	<b>13</b>			<b>56</b>	<b>880</b>					<b>\$20,825</b>



Project	Claim block	Claim no.	Township	Lot/Concession / Rights	Units	Ha	Recording date	Claim due date	Vendor	% CPG on title	Work required
Canadian Cobalt	Lorrain Valley East	4286490	Lorrain	Lot 14 and 15, Con 3	16	256	2017-Jun-01	2019-Jun-01	Canadian Cobalt Projects Inc. (CCP)	100%	\$6,400
		4286492	South Lorrain		4	64	2017-Feb-21	2019-Feb-21	CCP	100%	\$1,600
		4286494	South Lorrain		8	128	2017-Mar-07	2019-Mar-07	CCP	100%	\$3,200
		4286495	Lorrain	Lot 16 and 17 Con 1	16	256	2017-Jun-01	2019-Jun-01	CCP	100%	\$6,400
		4286496	South Lorrain		9	144	2017-Mar-23	2019-Mar-23	CCP	100%	\$3,600
		4286497	Lorrain	Lot 14 and 15 Con 1	16	256	2017-Jun-01	2019-Jun-01	CCP	100%	\$6,400
		4286498	Lorrain	Lot 14 and 15 Con 2 / Part MRO – excludes internal surface rights patent REF123007	16	256	2017-Jun-01	2019-Jun-01	CCP	100%	\$6,400
		4286499	Lorrain	N1/2 Lot 13 Con 2, S1/2 Lot 13 Con 3	8	128	2017-Jun-01	2019-Jun-01	CCP	100%	\$3,200
	Lorrain Valley West	4286458	Lorrain	N1/2 Lot 10 & N1/2 Lot 11, Con 1 / Part MRO subject to WP2008-333	8	128	2017-Mar-23	2019-Mar-23	CCP	100%	\$3,200
		4286488	Lorrain	S1/2 Lot 11 Con 2, Lot 10 Con 2	12	192	2017-Jun-01	2019-Jun-01	CCP	100%	\$4,800
		4286491	South Lorrain	MRO subject to WP2008-333	2	32	2017-Feb-21	2019-Feb-21	CCP	100%	\$800
		4286493	South Lorrain	Part MRO subject to WP2008-333	8	128	2017-Feb-21	2019-Feb-21	CCP	100%	\$3,200
	Montreal River	4280070	South Lorrain	Part MRO subject to WP2005-15, WP2008-328	16	256	2016-Dec-23	2018-Dec-23	CCP	100%	\$6,400
		4280071	South Lorrain	Part MRO subject to WP2008-328	16	256	2016-Dec-23	2018-Dec-23	CCP	100%	\$6,400
		4280072	South Lorrain	Part MRO subject to WP2008-327	16	256	2016-Dec-23	2018-Dec-23	CCP	100%	\$6,400
		4280073	South Lorrain	Part MRO subject to WP2005-15, WP2008-328	13	208	2016-Dec-23	2018-Dec-23	CCP	100%	\$5,200
		4280074	South Lorrain	Part MRO subject to WP2005-15, WP2008-328, WP2008-327, WP2008-196	10	160	2016-Dec-23	2018-Dec-23	CCP	100%	\$4,000
		4280075	South Lorrain	Part MRO subject to WP2008-328, WP2008-327	8	128	2016-Dec-23	2018-Dec-23	CCP	100%	\$3,200



Project	Claim block	Claim no.	Township	Lot/Concession / Rights	Units	Ha	Recording date	Claim due date	Vendor	% CPG on title	Work required
		4280076	South Lorrain	Part MRO – excludes withdrawn area WPLA32; subject to WP2008-327, WP2008-333, WP2008-196	16	256	2016-Dec-23	2018-Dec-23	CCP	100%	\$6,400
		4280077	South Lorrain	MRO subject to WP2008-196, WP2008-333; excludes internal third-party surface patent.	8	128	2016-Dec-23	2018-Dec-23	CCP	100%	\$3,200
		4286451	South Lorrain	MRO subject to WP2008-196	10	160	2017-Feb-21	2019-Feb-21	CCP	100%	\$4,000
		4286452	South Lorrain	Part MRO subject to WP2008-196, WP2008-333, WP2005-15	16	256	2017-Feb-21	2019-Feb-21	CCP	100%	\$6,400
		4286453	South Lorrain	MRO subject to WP2008-196, WP2005-15	10	160	2017-Feb-21	2019-Feb-21	CCP	100%	\$4,000
		4286454	South Lorrain	MRO subject to WP2005-15	16	256	2017-Feb-21	2019-Feb-21	CCP	100%	\$6,400
		4286455	South Lorrain	MRO subject to WP2005-15	12	192	2017-Feb-21	2019-Feb-21	CCP	100%	\$4,800
		4286456	South Lorrain	MRO subject to WP2005-15	12	192	2017-Mar-07	2019-Mar-07	CCP	100%	\$4,800
		4286457	South Lorrain	Part MRO subject to WP2008-328, WP2005-15	9	144	2017-Mar-07	2019-Mar-07	CCP	100%	\$3,600
		4286459	South Lorrain	Part MRO subject to WP2008-328, WP2005-15	11	176	2017-Mar-15	2019-Mar-15	CCP	100%	\$4,400
		4286460	South Lorrain	Part MRO subject to WP2008-328, WP2005-15	4	64	2017-Mar-15	2019-Mar-15	CCP	100%	\$1,600
		4286461	South Lorrain	Part MRO subject to WP2008-328, WP2005-15	12	192	2017-Mar-15	2019-Mar-15	CCP	100%	\$4,800
		4286462	South Lorrain	Part MRO subject to WP2008-328	16	256	2017-Mar-15	2019-Mar-15	CCP	100%	\$6,400
		4286463	South Lorrain	Part MRO subject to WP2008-328	16	256	2017-Mar-15	2019-Mar-15	CCP	100%	\$6,400
		4286464	South Lorrain	Part MRO subject to WP2008-327	16	256	2017-Mar-15	2019-Mar-15	CCP	100%	\$6,400
		4286469	Lorrain	Lot 1 and Lot 2, Con 1 / MRO subject to WP2008-196, WP2008-333	16	256	2017-Jun-13	2019-Jun-13	CCP	100%	\$6,400
		4286489	Lorrain	Lot 3 and 4 Con 1, Excluding SE1/4 Lot 4 Con 1 patent / MRO subject to WP2008-333	15	240	2017-Jun-13	2019-Jun-13	CCP	100%	\$6,000



Project	Claim block	Claim no.	Township	Lot/Concession / Rights	Units	Ha	Recording date	Claim due date	Vendor	% CPG on title	Work required
	Silver Centre South	4286472	South Lorrain	Part MRO – excludes internal third-party patent	11	176	2017-Jun-13	2019-Jun-13	CCP	100%	\$4,400
		4286473	South Lorrain		11	176	2017-Jun-13	2019-Jun-13	CCP	100%	\$4,400
		4286474	South Lorrain		11	176	2017-Jun-13	2019-Jun-13	CCP	100%	\$4,400
		4286475	South Lorrain		7	112	2017-Jun-13	2019-Jun-13	CCP	100%	\$2,800
		4286476	South Lorrain		7	112	2017-Jun-13	2019-Jun-13	CCP	100%	\$2,800
		4286477	South Lorrain		16	256	2017-Jun-23	2019-Jun-23	CCP	100%	\$6,400
		4286478	South Lorrain		6	96	2017-Jun-23	2019-Jun-23	CCP	100%	\$2,400
		4286480	South Lorrain		4	64	2017-Jun-23	2019-Jun-23	CCP	100%	\$1,600
	Montreal River West	4286481	Gillies Limit	Block 72 / Part MRO; WP2008-196	14	224	2017-Jul-31	2019-Jul-31	Gold Rush Cariboo Inc. (GRC)	0% Transfer pending	\$5,600
		4286482	Gillies Limit	Block 63 / Part MRO; WP2008-196	16	256	2017-Jul-31	2019-Jul-31	GRC	0% Transfer pending	\$6,400
		4286483	Gillies Limit	Block 62 / Part MRO; WP2008-196; WP2008-333	16	256	2017-Jul-31	2019-Jul-31	GRC	0% Transfer pending	\$6,400
		4286484	Gillies Limit	Block 71 / MRO; WP2008-196; WP2008-333	16	256	2017-Jul-31	2019-Jul-31	GRC	0% Transfer pending	\$6,400
		4286520	Gillies Limit	Block 64 / Part MRO; WP2008-196	12	192	2017-Sep-08	2019-Sep-08	GRC	0% Transfer pending	\$4,800
		4286521	Gillies Limit	Block 55 / Part MRO; WP2008-196	16	256	2017-Sep-08	2019-Sep-08	GRC	0% Transfer pending	\$6,400
		4286522	Gillies Limit	Block 54 / Part MRO; WP2008-196	16	256	2017-Sep-13	2019-Sep-13	GRC	0% Transfer pending	\$6,400
		4286523	Gillies Limit	Block 56 / Part MRO; WP2008-196; WP2008-330	15	240	2017-Sep-08	2019-Sep-08	GRC	0% Transfer pending	\$6,000
		4286524	Gillies Limit	Block 46 / Part MRO; WP2008-196; WP2008-329; W-L-58/96	16	256	2017-Sep-13	2019-Sep-13	GRC	0%	\$6,400



Project	Claim block	Claim no.	Township	Lot/Concession / Rights	Units	Ha	Recording date	Claim due date	Vendor	% CPG on title	Work required
				NER SEPT 17/96 SRO ONT HYDRO						Transfer pending	
		4286525	Gillies Limit	Block 45, Excl. NE1/4 & E1/2 of NW1/4 / Part MRO; WP2008-196; WP2008-329; W-L-58/96 NER SEPT 17/96 SRO ONT HYDRO	10	160	2017-Oct-26	2019-Oct-26	GRC	0% Transfer pending	\$4,000
		4286526	Gillies Limit	Block 44 SW1/4, Excl. NE1/4 of NE1/4 of SW1/4 / Part MRO; W-L-58/96 NER SEPT 17/96 SRO ONT HYDRO	3	48	2017-Oct-26	2019-Oct-26	GRC	0% Transfer pending	\$1,200
		4286527	Gillies Limit	East 1/4 of Block 57 / Part MRO; WP2008-196; WP2008-330	4	64	2017-Oct-26	2019-Oct-26	GRC	0% Transfer pending	\$1,600
		4286529	Gillies Limit	Block 35 / Part MRO; W-L-58/96 NER SEPT 17/96 SRO ONT HYDRO	16	256	2017-Oct-26	2019-Oct-26	GRC	0% Transfer pending	\$6,400
		4286540	Gillies Limit	N1/2, SE1/4 & E1/2 of SW1/4, Block 47 / MRO; WP2008-196; WP2008-329	14	224	2017-Sep-13	2019-Sep-13	GRC	0% Transfer pending	\$5,600
<b>Canadian Cobalt</b>	<b>Subtotal</b>	<b>57</b>			<b>674</b>	<b>10,784</b>					<b>\$269,600</b>
<b>Smith Cobalt and Canadian Cobalt</b>	<b>TOTAL</b>	<b>70</b>			<b>730</b>	<b>11,664</b>					<b>\$290,425</b>

Note: MRO = Mining rights only; SRO = Surface rights only.

### 4.2.1 Smith Cobalt Project

The Smith Cobalt Project, situated in Bucke, Coleman and Lorrain townships, comprises 11 contiguous and non-contiguous claim blocks identified on the basis of acquisition agreement/date and location (Figure 3 and Figure 4).

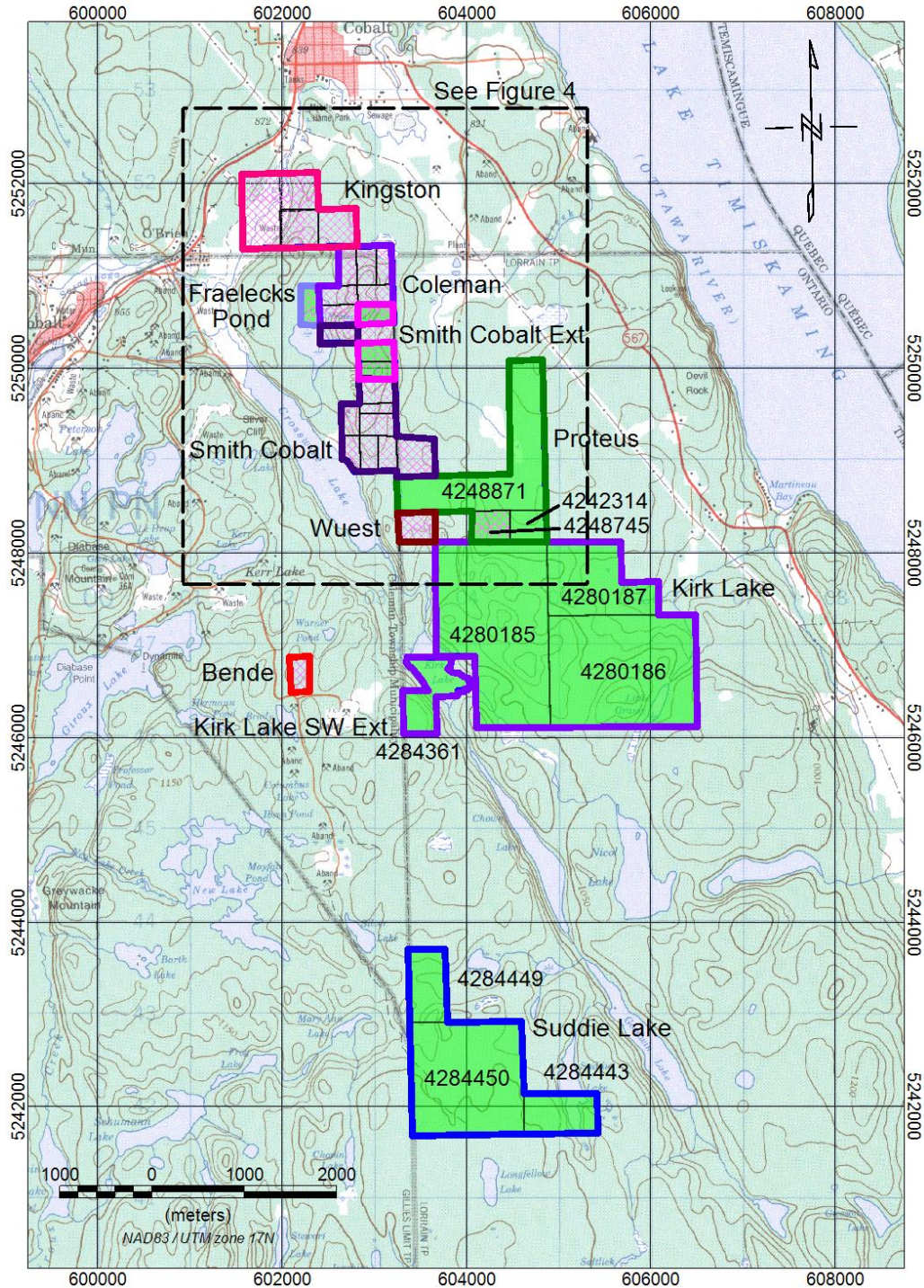


Figure 3: Smith Cobalt Project – claim and patent location map

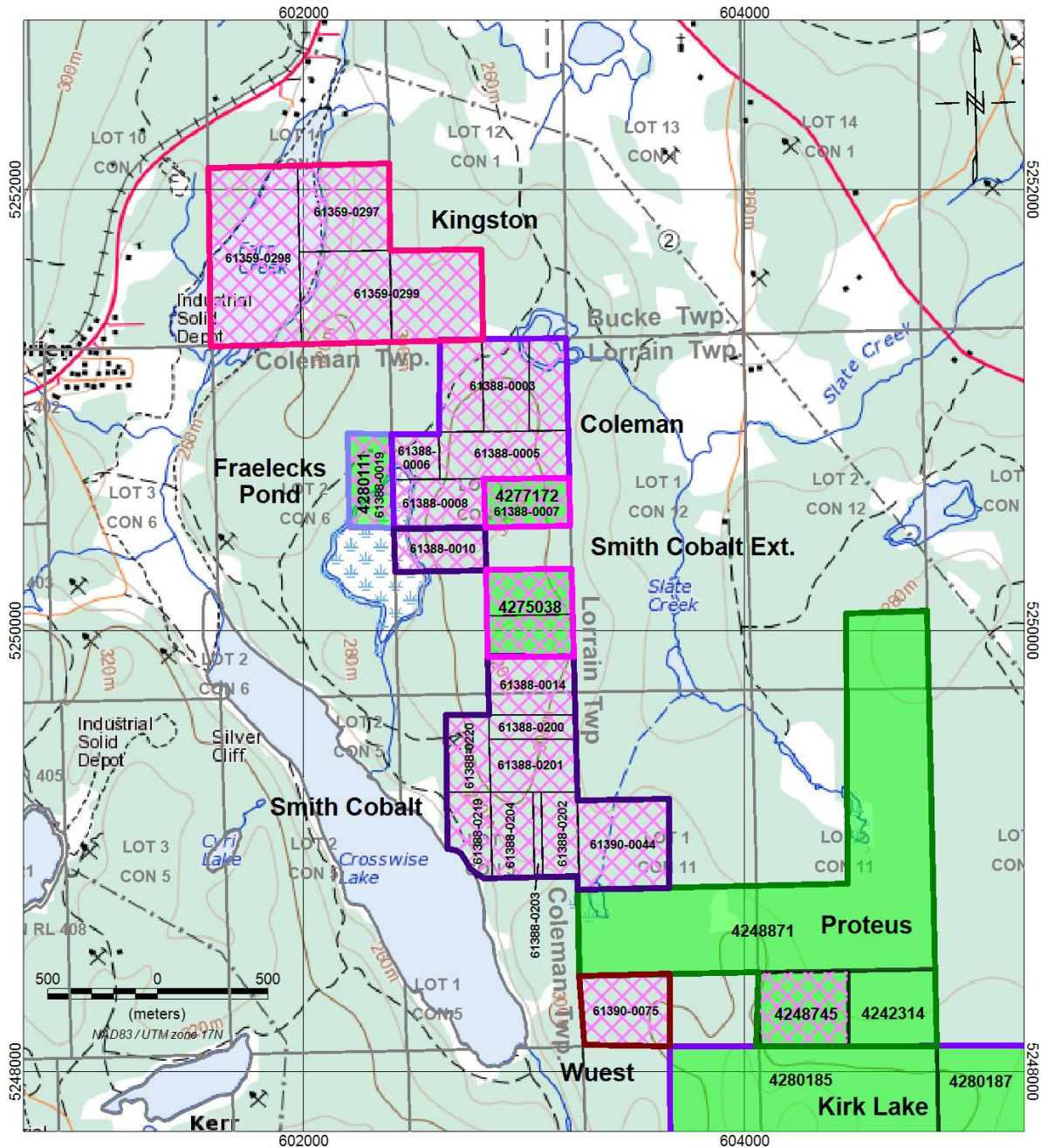


Figure 4: Smith Cobalt Project – claim and patent location map (north part)

The **Smith Cobalt claim block** is comprised of nine contiguous patented (fee simple) mining claims with surface and mining rights totalling 71.63 ha (Table 3, Figure 3 and Figure 4).

On 6 September 2016, CPG, then Global Copper Group Inc. (“Global Copper”), announced its option to purchase the nine patents. The option required payment of \$5,000 non-refundable upon signing, followed by a \$20,000 payment and an aggregate 750,000 common shares upon TSXV approval. CPG also agreed to continue payment on the remaining mortgage owed on the property, up to the amount of \$16,000 and, on the first anniversary of signing, allot an additional 750,000 common shares to the vendor. The claim block is



also subject to a 2% NSR payable to the vendor with 1% of the NSR purchasable at \$1,000,000. TSXV approval and all required payments of cash and shares were completed on 15 September 2017.

The **Proteus claim block** comprised of three contiguous, staked mining claims totalling nine claim units and covering approximately 145 ha (Table 6, Figure 3 and Figure 4).

On 13 September 2016, CPG (then Global Copper) announced acquisition of the three mineral claims located contiguous to the nine Smith Cobalt patented mining claims. The claims were acquired from Timber Wolf Gold Corp. (Timber Wolf), of Cobalt, Ontario for the sum of \$25,000 and 500,000 fully paid and non-assessable shares to be issued and allotted five days following the date of the TSXV's acceptance of the terms of acquisition. Of the cash payment, \$10,000 was payable on signing of the formal agreement and the balance of \$15,000 was payable 30 days after exchange acceptance of the transaction. TSXV approval was received on 15 September 2016 and all required payments of cash and shares were completed. Timber Wolf is a private corporation 100% beneficially owned and controlled by Michael Johnson, Randy Lawson and Pat Laferriere of Cobalt, Ontario. Transfer of ownership of the staked mining claim from the vendor to CPG was registered by the Mining Recorder on 1 December 2016.

The **Kirk Lake block** comprised of three contiguous, staked mining claims totalling 30 claim units and covering approximately 480 ha (Table 6 and Figure 3) and the Smith Cobalt Extension block comprised of two staked mining claims totalling two claim units and covering approximately 24 ha (Table 6, Figure 3 and Figure 4). Both claims in the latter block are mining rights only (MRO) because of third party surface rights; however, CPG holds the surface rights only (SRO) patent over the smaller 8 ha mining claim.

On 11 October 2016, CPG (then Global Copper), announced the acquisition of the Smith Cobalt Extension and Kirk Lake claim blocks contiguous to, and surrounding, the Smith Cobalt patented mining claims. Cost of the transaction was \$14,000 (cost of staking) and 150,000 common shares. TSXV approval was received on 11 October 2016 and all required payments of cash and shares were completed. Transfer of ownership of the staked mining claim from the vendor to CPG was registered by the Mining Recorder on 1 December 2016.

The **Fraelecks Pond block** comprised of one staked mining claim totalling one claim unit and covering approximately 8 ha (Table 6, Figure 3 and Figure 4).

On 11 November 2016 CPG announced the acquisition this claim located immediately west of the Smith Cobalt Property extensions. Cost of the transaction was \$14,000.00 (cost of staking) and 150,000 common shares. TSXV approval was received on 11 October 2016 and all required payments of cash and shares were completed. Transfer of ownership of the staked mining claim from the vendor to CPG was registered by the Mining Recorder on 1 December 2016.

The **Wuest claim block** comprised of one patented (fee simple) mining claim with surface and mining rights totalling 16.99 ha (Table 3, Figure 3 and Figure 4).

On 23 March 2017, CPG announced signing of an offer to purchase the patented mining claim contiguous to the its Smith Cobalt Project. The offer required payment of 300,000 common shares for a 100% interest in the patented land claim upon TSXV approval of the transaction. Approval was received, and the transaction was completed on 23 May 2017.

The **Bende claim block** comprised of one patented (fee simple) mining claim with surface and mining rights totalling 8.09 ha (Table 3 and Figure 3) and the **Kingston claim block** comprised of three patented (fee simple) mining claims with surface and mining rights totalling 80.93 ha (Table 3 and Figure 3).

On 29 March 2017, CPG announced signing of an option to purchase a 100% interest in the Bende and Kingston patented mining claims in Coleman and Bucke townships. The option required a payment of \$20,000 and an





allotment of 400,000 of CPG's common shares on TSXV approval of the transaction followed by the payment of \$20,000 and allotment of 400,000 of CPG's common shares six months thereafter, upon TSX approval. TSXV approval was received on 23 May 2017 and all required payments of cash and shares were completed on 13 November 2017.

The **Kirk SW block** comprised of 1 staked mining claim totalling one claim unit and covering approximately 16 ha (Table 6 and Figure 3).

On 3 May 2017, CPG announced signing of an option to purchase the Kirk SW mining claim (#L4284361) contiguous with the southwest section of the main portion of the Smith Cobalt Project. The option required a payment of \$1,000 and an allotment of 200,000 fully paid, non-assessable common shares of CPG, to be issued at a deemed price of \$0.12 per common share, upon TSXV approval. TSXV approval was received and all required payments of cash and shares were completed on 23 May 2017. The transfer of ownership from the vendors to CPG was recorded by the Mining Recorder on 5 June 2017.

The **Coleman claim block** comprised of six patented (fee simple) mining claims with surface and mining rights totalling 48.58 ha (Table 3, Figure 3 and Figure 4).

On 5 September 2017, CPG announced the purchase of a 100% interest in the six patents in the northeast corner of Coleman township, contiguous with the Kingston, Fraelecks Pond and Smith Cobalt Extension blocks. The transaction is structured as follows: \$54,920 payable in two instalments: \$35,000 upon signing followed by \$19,920 within 12 months. A 2% NSR is attached to the properties with the option to purchase the first 1% for \$250,000 and the second 1% for \$500,000. The first cash payment was made on 5 September 2017. The second payment is due on 5 September 2018, at which time ownership will be transferred from the vendor to CPG.

On 13 September 2017, CPG announced that it had staked the **Suddie Lake claim block** comprised of three mining claims totalling 13 claim units and covering approximately 208 ha in the southwestern corner of the Lorrain Township (Table 6 and Figure 3).

Some staked and patent mining claims have MRO or part MRO because of third party overlapping SRO only patents (Table 6).

#### 4.2.2 Canadian Cobalt Project

The Canadian Cobalt Project comprises one mining lease (Table 5) and five claim blocks totalling 57 staked mining claims (Table 6) in Lorrain, South Lorrain and Gillies Limit townships (Figure 5):

- The Silver Eagle block comprising mining lease 108069 (T46579) totalling approximately 15 ha
- The East Lorrain Valley block comprising eight claims totalling 93 claim units and approximately 1,232 ha
- The West Lorrain Valley block comprising four claims totalling 30 claim units and approximately 480 ha
- The Silver Centre South Valley block comprising eight claims totalling 73 claim units and approximately 992 ha
- The Montreal River block comprising 23 claims totalling 294 claim units and approximately 4,704 ha
- The Montreal River West block comprising 14 claims totalling 184 claim units and approximately 2,944 ha.

CPG holds a 100% interest in 43 staked mining claims of the East Lorrain, West Lorrain, Silver Centre South and Montreal River blocks and the one mining lease of the Silver Eagle block by way of its definitive agreement for the acquisition of Canadian Cobalt Projects Inc. (CCP) dated 23 October 2017 and announced on 6 November 2017. Pursuant to the terms of the agreement, CPG acquired the claims by acquiring all the issued



and outstanding shares of CCP in exchange for the issuance of 29,500,000 common shares of CPG to the existing shareholders of CCP. At closing, the shareholders of CCP received a 1.5% NSR royalty, of which 75% may be purchased at any time in consideration for a cash payment of \$1,000,000. On 4 December 2017, the TSXV accepted the share purchase agreement for filing. CCP is now a wholly owned subsidiary of CPG. Transfer of ownership of the staked mining claims from CCP to CPG was registered by the Mining Recorder on 3 January 2018. Online records as of 15 March 2018 indicate that mining lease 108069 (T46579) remains in the name of CCP. CPG anticipates the transfer will be completed after the start-up of Ontario's new MLAS claim system in April 2018.

On 13 February 2018, CPG announced the signing of a share purchase agreement to acquire Ontario Cobalt Property Developers Inc. (Ontario Cobalt) – a privately held mineral exploration company that holds the Montreal River West block comprising 14 mineral claims (184 units; 2,944 ha) in the Gillies Limit Township, northwest of and contiguous with the Montreal River block. Pursuant to the terms of the agreement, CPG will acquire all of the issued and outstanding shares of Ontario Cobalt in exchange for the issuance, pro-rata, of 15,000,000 common shares of CPG to the existing shareholders of Ontario Cobalt. At closing, the shareholders of Ontario Cobalt will receive the benefit of a 2.5% NSR royalty, of which 1.5% may be purchased by the Company at any time, on or before the seventh anniversary of the Effective Date, in consideration of a \$1,000,000 cash payment. The share purchase agreement and the closing of the acquisition remains subject to approval of the TSX Venture Exchange.

Some claims have MRO or part MRO because of overlapping third party surface rights-only patents or Ministry of Natural Resources surface withdrawals as discussed in Section 4.3.3 (Table 6).

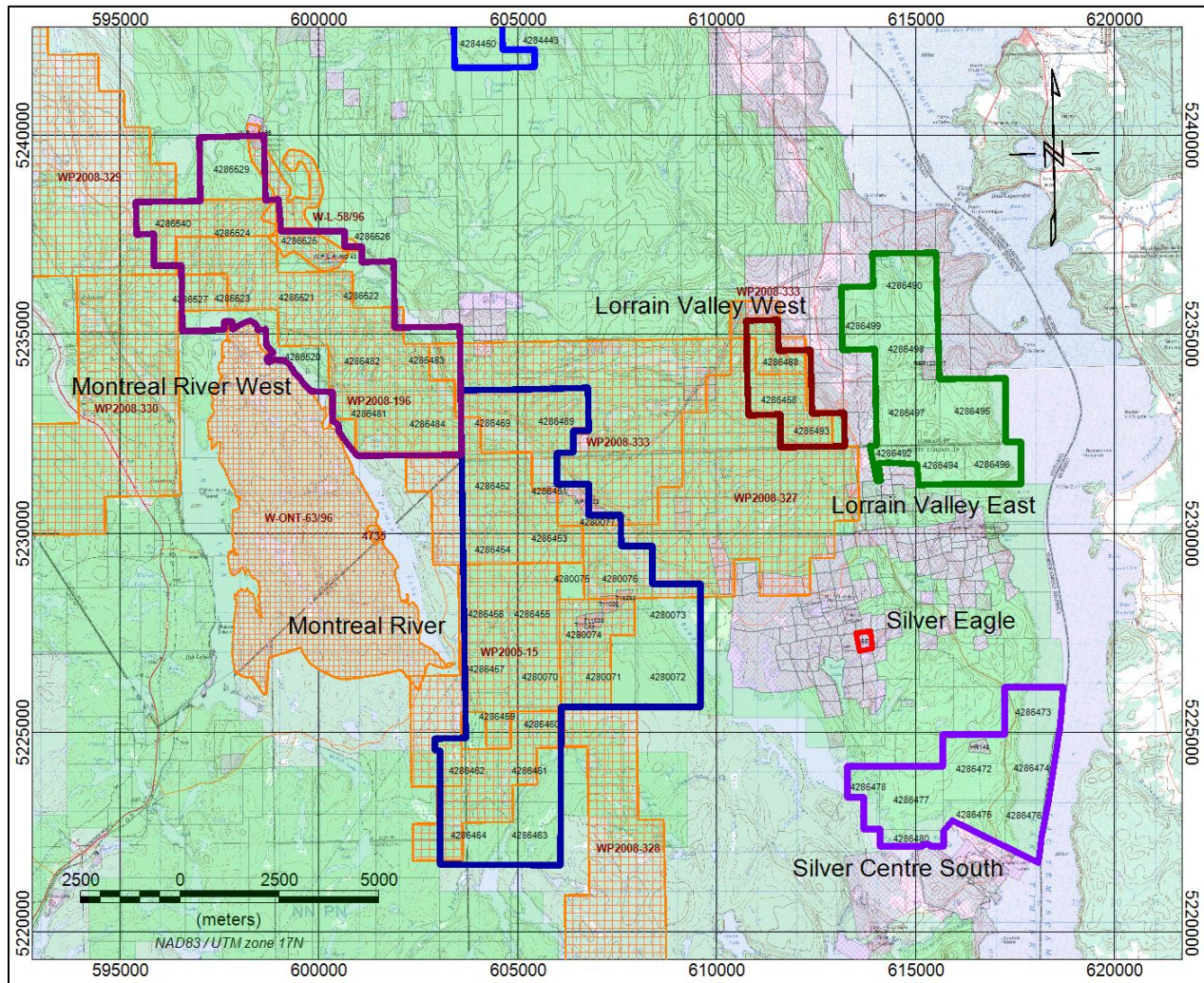


Figure 5: Canadian Cobalt Project –claim location map

### 4.3 Property Claim Status

To the best of the Author’s and CSA Global’s knowledge, the Smith Cobalt and Canadian Cobalt Projects’ mining claims, mining lease and patented mining claims are currently in good standing and CPG warrants that there are no current or pending challenges to ownership of the Projects’ claims of which it is aware.

#### 4.3.1 Patented Mining Claims

The patented claims include both surface and mining rights and would have been legally surveyed at the time of patent application.

The patented lands transferred under the Crown Grant to the patentee are typically subject to exclusions/qualifications such as:

- 5–10% of the lands are reserved for the Crown for the purpose of constructing roads
- All pine trees on the lands are reserved for the Crown and may be cut and removed by any person to whom the Crown grants a timber licence; however, the patentee of the lands may, without a licence, cut and use pine trees for building, fencing and fuel on the land or any other purpose essential to the working



of the mines thereon as long as it compensates the Crown or the licence-holder, as applicable, for the value of such trees

- Free use, passage and enjoyment of navigable waters flowing through any part of the lands are reserved for the Crown
- Access and use of shorelines of all rivers, streams and lakes on the lands are reserved for vessels, boats and persons which use such waters for fishery purposes.

In addition, deemed exclusions/qualifications set out in the Ontario Public Lands Act (PLA) include:

- Wood, gravel and other materials required for the construction or improvement of roads may be taken by the Ministry of Natural Resources and Forestry, or a person authorised by it, from the land without compensation to the patentee (PLA, s.65(2))
- Any portage which exists, or has existed, over the lands may be used by any person travelling on waters connected by said portage without the permission of, or payment to, the owner of the lands (PLA, s.65(4)).

The Author and CSA Global are unaware of any other encumbrances on the patented mining claims other than a royalty described in Section 4.3.4 below and property tax payments. The patented claims are subject annual mining land taxes and municipal taxes which totalled approximately \$740.95 and \$997.00 respectively in 2017 (Section 4.2, Table 3). Total annual municipal tax amounts are partial because taxes for the Coleman and Wuest patents have not yet been determined.

#### 4.3.2 *Mining Leases*

Unless a mining lease states otherwise, a mining lease vests in the leaseholder all title of the Crown in the lands described and all mines and minerals within those lands. Mining leases require a plan of survey approved by the Surveyor General of Ontario. The Silver Centre Property, Frontier-Keeley group's five mining leases are for mining rights only, surface rights are retained by the Crown. A right to lease the surface rights for development purposes exists through the Ontario Mining Act.

Ontario mining leases have an initial term of 21 years and are renewable for further 21-year terms. The holder of a mining lease cannot transfer, mortgage, charge or sublet the lease or make the lease subject to a debenture without the written consent of the Minister.

To maintain a lease in good standing, the holder of a mining lease in Ontario must comply with various requirements under Ontario's Mining Act. The lands, surface rights or mining rights issued under a lease must be used solely for the purposes of the mining industry. Any breach of this requirement could invalidate a lease.

All mining leases issued in Ontario are subject to a number of reservations. These reservations relate to such public interest matters as powerlines, pipelines, roads, railways and waterways. In addition, pursuant to modernisation amendments in effect as of 2009, every lease issued under the act, including leases issued or renewed before the enactment of the amendment, includes or is deemed to include the provision that the lessee's rights under the lease are subject to the protection provided for existing Aboriginal or treaty rights in section 35 of the *Constitution Act 1982* and the lessee shall conduct itself on the demised premises in a manner consistent with the protection provided to any such rights.

CSA Global is unaware of any other encumbrances on the Canadian Cobalt Project mining lease other than a royalty described in Section 4.3.4 below and the annual lease rental payment of approximately \$45.15. The first term lease expiry date is 31 March 2028.



### 4.3.3 *Unpatented Mining Claims*

The Project's staked mining claims have not been legally surveyed. The staked claims include no surface rights; however, a right to acquire the surface rights for development purposes exists through the Ontario Mining Act. The Mining Act also provides legal access to the land for the purpose of exploration.

Staked claims are generally subject to the following reservations:

- 400 ft surface rights reservation around all lakes and rivers
- Sand and gravel reserved
- Peat reserved.

Certain staked claims also:

- Include land under water
- Are MRO or part MRO where all or part of the surface rights within the claim are held by a third party
- Exclude roads
- Exclude hydro right of ways
- Exclude withdrawn areas.

Certain Canadian Cobalt Project mining claims are subject to wind power area applications (WP2005-15, WP2008-196, WP2008-327, WP2008-328, WP2008-329, WP2008-330, and WP2008-333) for SRO under the PLA (Table 6). Under the Mining Act s.28(2)(3), the wind power PLA SRO applications have priority over the mining claims. Any surface mineral exploration activities conducted on claims will therefore require notification and approval of the company holding the applications; this would be completed as part of the exploration permit/plan application process (see Section 4.5). If the PLA SRO applications lapse, are withdrawn or are not accepted or approved, a mining claim staked during the time that the overlapping application was pending shall be deemed to be amended to include the minerals and rights that were the subject of the application (in this case, SRO) as if the application had never existed.

CSA Global is unaware of any other encumbrances on the staked claims other than a royalty described in Section 4.3.4 below and annual mining claim assessment work requirements and. CPG must perform \$400 worth of approved assessment work per mining claim unit, per year filed on or before the claim due date (anniversary date). Table 6 details the assessment costs and current due dates for the staked mining claims of the Smith Cobalt and Canadian Cobalt Projects. Total annual assessment requirement for the Projects' staked mining claims is \$292,000; however, because of previously filed excess assessment work, as of the Effective Date, the total required assessment for the next due dates is only \$290,425. The next claim due dates vary from 16 November 2018 to 8 July 2020 (Table 6).

### 4.3.4 *Royalties*

Smith Cobalt Project:

- The Smith Cobalt claim block is subject to a 2% NSR payable to the vendor with 1% of the NSR purchasable at \$1,000,000
- The Coleman claim block is subject to a 2% NSR payable to the vendor with the option to purchase the first 1% for \$250,000 and the second 1% for \$500,000.



#### Canadian Cobalt Project:

- The 43 claims and one mining lease acquired from CCP are subject to a 1.5% NSR royalty payable to the shareholders of CCP at the time of its acquisition by CPG. 0.75% of the royalty may be purchased at any time in consideration for a cash payment of \$1,000,000.
- At closing, the 14 claims acquired from Ontario Cobalt are subject to a 2.5% NSR royalty, of which 1.5% may be purchased at any time, on or before the seventh anniversary of the effective date of acquisition, in consideration of a \$1,000,000 cash payment.

## 4.4 Environmental Liabilities

### 4.4.1 Patented Mining Claims

CPG is responsible for all historic environmental liabilities on its Smith Cobalt Project patented claims and any necessary rehabilitation. This work would be covered in a mine closure plan for any new proposed mine.

CPG warrants that it has not received from the patent vendors or any government authority, notice of, or communication relating to, any actual or alleged breach of any environmental laws, regulations, policies or permits with respect to the various patented claims.

Ontario's Abandoned Mines Information System (AMIS) documents nine AMIS sites totalling 37 features on CPG's patented claims and mining lease (Table 7). In providing the AMIS database information, MNDM and the Government of Ontario accept no liability and make no warranty or any representation regarding the use, accuracy, applicability, completeness, performance, availability, security or reliability of the information, through field measurements or otherwise. All information is provided "as is" without warranties or conditions of any kind either expressed or implied. These AMIS site and feature locations relative to CPG patent boundaries have not been verified by CPG or CSA Global. The historic features include equipment such as hoists, waste dumps, surface trenches and pits, raises and stopes to surface, exploration shafts, adits, and underground lateral workings. Of the features, one is rehabilitated, seven are considered not a hazard, 21 are considered a hazard, and the status of eight are unavailable. Since CPG is responsible for the ongoing maintenance of any remediation efforts on the patents (fencing, signage, etc.), CSA Global recommends that CPG locate and document the hazards and environmental liabilities and inspect them on a semi-annual basis.

### 4.4.2 Unpatented Mining Claims

CPG is not liable for environmental issues existing on its unpatented mining claims prior to their staking date. CPG would however become liable for a pre-existing hazard if it were to disturb it (e.g. excavating a stockpile). If in the future, CPG was to obtain mining rights by taking a mining claim to lease or patent, it will then be responsible for the pre-existing liabilities on the claim (stockpiles, tailings etc.) and any necessary rehabilitation. This work would be covered in a mine closure plan for any new proposed mine.

Of note, under the Mining Act an individual or company not responsible for creating a pre-existing mine hazard may apply to voluntarily undertake mine hazard rehabilitation work without becoming liable for the pre-existing environmental issues on the site. Applications are to be sent to the Director of Mine Rehabilitation for review and if approved, the Director may set conditions that must be met by the applicant. Once approved, applicants shall carry out voluntary rehabilitation according to their approved rehabilitation plan, in accordance with the standards in the Mine Rehabilitation Code of Ontario as specified by the Director.

AMIS documents 13 sites totalling 38 known abandoned mine features within the Smith and Canadian Cobalt Projects' (staked) mining claims (Table 7). These site and feature locations relative to CPG claim boundaries have not been confirmed by CPG or CSA Global. The historic features include surface trenches and pits, waste



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dumps, raises to surface, exploration shafts and underground lateral workings. Of the features, 21 are considered not a hazard, 16 are considered a hazard and the status of one is unavailable. As noted above, CPG is not liable for these pre-existing hazards. CPG warrants that it has not received from its property vendors or any government authority any notice of, or communication relating to, any actual or alleged breach of any environmental laws, regulations, policies or permits with respect to the Projects' staked claims.



Table 7: AMIS documented abandoned mine feature locations within the Smith and Canadian Cobalt Projects

Claim	Patent/Lease	AMIS site ID	Feature ID	Mine feature type description	Mine hazard status	Mine feature condition description	UTM northing	UTM easting
4280185		02227	73038	Shaft - 2 compartment - vertical shaft	Active hazard	Two-compartment shaft with vertical sides in bedrock with a timbered collar. Surrounded by a barbed wire fence (3–4 strand) with posts set in concrete in poor to moderate condition.	5248038	604353
			80805	Lateral workings	Active hazard		5248038	604353
		02228	73039	Shaft - 2 compartment - vertical shaft	Active hazard	Two-compartment shaft with vertical sides in bedrock with a timbered collar. Surrounded by barbed wire fence (3–4 strand) with posts set in concrete in poor condition.	5247348	604733
			73040	Trench	Not a hazard	Pit in bedrock with vertical walls.	5247432	604778
4248871		02229	73042	Exploration shaft - vertical shaft	Active hazard	Prospect shaft (12 m deep) with vertical sides in bedrock with a timbered collar. No protection is present. Feature is clearly visible.	5248672	604553
			73043	Exploration shaft - vertical shaft	Active hazard	Prospect shaft (10 m deep) with vertical sides in bedrock with a timbered collar. No protection is present. Feature is partially hidden.	5248657	604433
			73044	Trench	Not a hazard	Pit (2 m deep) in bedrock with vertical walls.	5248772	604553
		02244	73063	Exploration shaft - vertical shaft	Active hazard	Prospect shaft in overburden with vertical sides and timber cribbed collar. Surrounded by 3–4 strand barbed wire fence with posts set in concrete in poor condition.	5248828	603428
			89602	Open pit	Active hazard	Pit in bedrock with vertical walls. Surrounded by 3–4 strand barbed wire fence with posts set in concrete in poor condition.	5248772	603443
		02250	73070	Trench	Active hazard	Pit (3.5 m deep) in bedrock with vertical walls. Feature is surrounded by barbed wire fence in poor condition.	5248498	604353
4248745		02250	73142	Trench	Active hazard	Pit (3 m deep) in bedrock with vertical walls.	5248352	604338
			73143	Trench	Not a hazard	Pit in bedrock with vertical walls.	5248352	604338
			89606	Trench	Not a hazard	Pit in bedrock with vertical walls.	5248387	604308
			89607	Trench	Active hazard	Pit in bedrock with sloped sides. Surrounded by barbed wire fence in poor condition.	5248207	604333
			89608	Trench	Not a hazard	Pit in bedrock with vertical walls.	5248202	604333
			89609	Trench	Not a hazard	Pit in bedrock with vertical walls.	5248307	604448
4242314		02251	73071	Open pit	Active hazard	Pit in bedrock with vertical walls. Surrounded by barbed wire fence in poor condition.	5248353	604548
			89610	Open pit	Not a hazard	Pit in bedrock with vertical walls.	5248327	604553
		02254	73144	Trench	Not available		5248228	604658





Claim	Patent/ Lease	AMIS site ID	Feature ID	Mine feature type description	Mine hazard status	Mine feature condition description	UTM northing	UTM easting
4284450		02257	73077	Trench	Active hazard	Pit (3 m deep) which is completely flooded at the time of inspection. No protection is present. Feature is clearly visible.	5242803	603388
			73078	Trench	Not a hazard	Pit (1 m deep) in overburden with steep sides.	5242775	603383
			73147	Trench	Not a hazard	Pit in overburden with steep sides.	5242777	603408
			89613	Trench	Not a hazard	Pit in overburden with steep sides.	5242782	603433
4248871		02265	73089	Trench	Not a hazard	Pit in bedrock with vertical walls.	5248913	604133
			73150	Trench	Not a hazard	Pit in bedrock with vertical walls.	5248952	604118
			73151	Trench	Not a hazard	Pit in bedrock with vertical walls.	5248937	604148
			73152	Trench	Not a hazard	Pit in bedrock with vertical walls.	5248913	604148
			82577	Trench	Not a hazard	Pit in bedrock with vertical walls. Surrounded by a barbed wire fence in moderate condition.	5248687	604116
			89617	Trench	Not a hazard	Pit in bedrock with vertical walls.	5248577	604408
			89618	Trench	Active hazard	Pit in bedrock with vertical walls. No protection present. Feature is clearly visible.	5248597	604453
4280185		02271	73098	Exploration shaft - vertical shaft	Active hazard	One compartment shaft (8 m deep) with vertical sides in bedrock with a timbered collar. No protection is present. Feature is clearly visible.	5246388	605088
			89621	Trench	Not a hazard	Pit in bedrock with vertical walls.	5246367	605088
4284361		03719	74670	Open pit	Active hazard	Pit in bedrock with sloped sides. Water level 0.5 m below grade. Some sloughing/coning. Pit has three steep sides and one at a low angle. No protection present. Feature is partially hidden.	5246437	603538
			89907	Trench	Not a hazard	Pit in bedrock with sloped sides. Water level 0.5 m below grade. Some sloughing/coning. Pit has three steep sides and one at a low angle. No protection present. Feature is partially hidden.	5246437	603523
			89908	Shaft - 1 compartment - vertical shaft	Active hazard	(Lorrain shaft) one-compartment shaft with vertical sides in bedrock with a timbered collar. Waste rock pile suggests the feature is less than 30 m deep. Depth sounding not possible. Water level 1 m below grade. No protection present.	5246532	603533
4280074		03669	74525	Trench	Not a hazard	Shallow trench.	5227650	606680
4286462		03793	74769	Trench	Not a hazard	Pit: square sides – vertical walls – in rock – water filled to 1 m below grade surface.	5223676	603196
			82217	Waste rock dump	Not a hazard	Rock pile – next to pit – indicates pit is not very deep. No coordinates taken in 2000 report. Pit coordinates approximate taken from site map.	5223676	603186



Claim	Patent/ Lease	AMIS site ID	Feature ID	Mine feature type description	Mine hazard status	Mine feature condition description	UTM northing	UTM easting
	T19592	02243	73061	Trench	Not a hazard	Pit in bedrock with sloped sides.	5249108	603448
			73062	Trench	Active hazard	Pit in bedrock with sloped sides. Surrounded by a barbed wire fence (3–4 strands) with posts set in concrete in poor condition.	5249077	603433
			89599	Trench	Not a hazard	Pit in bedrock with vertical walls. Surrounded by a barbed wire fence (3–4 strands) with posts set in concrete in poor condition.	5249052	603288
			89600	Trench	Not a hazard	Pit in bedrock with vertical walls.	5248972	603303
			89601	Trench	Not a hazard	Pit in bedrock with vertical walls. Surrounded by a barbed wire fence (3–4 strands) with posts set in concrete in poor condition.	5248942	603293
		02244	73064	Exploration shaft - vertical shaft	Active hazard	Prospect shaft in bedrock with vertical sides and timber collar. Surrounded by 3–4 strand barbed wire fence with posts set in concrete in poor condition.	5248907	603388
			89603	Trench	Active hazard	Pit in bedrock with vertical walls. Surrounded by 3–4 strand barbed wire fence with posts set in concrete in poor condition.	5248852	603368
			89604	Open pit	Active hazard	Pit in bedrock with vertical walls. Surrounded by 3–4 strand barbed wire fence with posts set in concrete in poor condition.	5248902	603333
			2017	03448	74014	Shaft - 1 compartment - vertical shaft	Active hazard	Prospect shaft in bedrock with vertical sides. Without a constructed collar. A lundy type fence topped with three barbed wire strands in good condition surrounds the feature.
89512	Adit				Active hazard	Adit collared in bedrock and not screened. No protection present.	5251337	602503
	Kingston	03516	74197	Shaft - 1 compartment - vertical shaft	Active hazard	(Shaft no. 1) one-compartment shaft with vertical sides of unknown dimension and form. Filled with run of mine (dump) waste in good condition. Minor sulphide staining on muck pile.	5246058	602763
			74198	Exploration shaft - vertical shaft	Not available		5246058	602763
			74199	Shaft - 2 compartment - vertical shaft	Active hazard	(Shaft no. 2) two-compartment shaft with vertical sides in overburden with a timber cribbed collar. Surrounded by a lundy type fence topped with three barbed wire strands in good condition.	5245722	602748
			74201	Waste rock dump	Not available		5246058	602763



Claim	Patent/Lease	AMIS site ID	Feature ID	Mine feature type description	Mine hazard status	Mine feature condition description	UTM northing	UTM easting
	Smith	03693	74553	Shaft - 2 compartment - vertical shaft	Active hazard	Two-compartment shaft with vertical sides in bedrock with a timbered collar. A permanent recessed concrete slab (vented) in poor condition. Shaft collapsing in on itself. Concrete slab no longer covers entire shaft opening.	5249448	602743
			74554	Lateral workings	Not available	Plans indicate workings on 122 m, 137 m and 152 m levels.	5249448	602743
			74555	Hoist room	Not a hazard	Hoist room. No protection present. Feature is clearly visible. Air hoist may have heritage potential.	5249427	602743
			74558	Winze	Not available		5249448	602743
			74559	Winze	Not available		5249448	602743
	Bende	03716	74655	Shaft - 2 compartment - vertical shaft	Active hazard	(Shaft no. 3) two-compartment shaft with vertical sides in bedrock with a timbered collar. Surrounded by a barbed wire fence in poor condition. Water level 3 m below grade. East rock pile suggests depth >30 m.	5246778	602318
			74656	Shaft - 2 compartment - vertical shaft	Active hazard	(Shaft no. 4) two-compartment shaft with vertical sides in bedrock with a timbered collar. Surrounded by a barbed wire fence in poor condition. Timbered overhang is obscured by vegetation. Waste rock pile suggest depth >30 m.	5246702	602258
			74657	Shaft - 1 compartment - inclined shaft	Active hazard	(Shaft no. 5) two-compartment shaft with vertical sides in bedrock with concrete collar. Covered with a permanent recessed concrete slab (vented) in good condition.	5246547	602143
			74658	Lateral workings	Not available		5246778	602318
		10099	84206	Shaft - 1 compartment - vertical shaft	Active hazard	This shaft was located and inspected in Patrick Chance and Associates' 1993 site assessment report; although, it is unclear whether this shaft exists within the boundaries of closure plan c10.	5246463	602184
			84220	Shaft - 1 compartment - unknown	Not available	Historic maps show a winze or possibly a shaft located on the southeast corner of the Lumsden claim on the 285' level; in 1920 this winze was 20' deep. Documents also suggest that this may have later become a shaft called Brady Lake #2 or Brady L.	5246555	602185
			84221	Shaft - 1 compartment - unknown	Rehabilitated	Historical documents indicate a shaft, which may have been a prospect shaft, or an air raise located at the end of the drift in the southeast corner of the Lumsden property. Depending on the source, this may be entitled Brady Lake #3 or Brady Lake #6.	5246552	602183



Claim	Patent/Lease	AMIS site ID	Feature ID	Mine feature type description	Mine hazard status	Mine feature condition description	UTM northing	UTM easting
	Cobalt1	03724	74681	Lateral workings	Not available		5251123	602728
			89920	Shaft - 2 compartment - vertical shaft	Active hazard	(Shaft no. 2) two-compartment shaft with vertical sides in bedrock with a timbered collar. No protection present. Partially hidden. Shaft located 75 m from trail. Literature indicates shaft has a depth of >30 m with lateral workings.	5251122	602728
			89921	Shaft - 2 compartment - vertical shaft	Active hazard	Two-compartment shaft with vertical sides in overburden with a timber cribbed collar. No protection present. Feature is partially hidden.	5251152	602728
	Cobalt2	03724	74679	Shaft - 2 compartment - vertical shaft	Active hazard	Two-compartment shaft with vertical sides in bedrock with a timbered collar. No protection present and feature is partially hidden. Located 10 m from recreational trail. Waste rock pile suggests depth of <20 m.	5251167	603008
			74680	Shaft - 2 compartment - vertical shaft	Active hazard	Two-compartment shaft with vertical sides in overburden with a timber cribbed collar. No protection present. Feature is partially hidden. Located 2 m from recreational trail.	5251257	602923
			90809	Shaft - 2 compartment - vertical shaft	Active hazard	(Shaft no. 3) two-compartment shaft with vertical sides in overburden with a timber-cribbed collar. A lundy type fence topped with three barbed wire strands. The current protection is inadequate. Shaft is located 5 m from recreational trail.	5251252	602868
	Cobalt3	03724	82642	Shaft - 2 compartment - vertical shaft	Active hazard	(Shaft no. 1) two-compartment shaft with vertical sides in bedrock with a timbered collar. No protection present. Feature is partially hidden. Literature indicates shaft has a depth >30 m with lateral workings.	5251107	603083
			90810	Head frame	Active hazard	Headframe has collapsed at shaft no. 1. Debris of headframe is still located on site.	5251107	603083
	T46579	03681	74540	Open pit	Not a hazard	Pit no. 1: regrowth, partially filled-in.	5227328	613612
			82120	Trench	Not a hazard	Pit no. 2: water filled to 1 m below surface grade.	5227392	613540
			82505	Trench	Not a hazard	Long narrow trench.	5227370	613589



## 4.5 Required Exploration Permits

### 4.5.1 General

Ontario Mining Act regulations require exploration plans and permits, with graduated requirements for early exploration activities of low to moderate impact undertaken on mining claims, mining leases and licences of occupation. Exploration plans and permits are not required on patented mining claims.

There are a number of exploration activities that do not require a plan or permit and may be conducted while waiting for a plan or permit is effective. These may include the following:

- Prospecting activities such as grab/hand sampling, geochemical/soil sampling, geological mapping
- Stripping/pitting/trenching below thresholds for permits
- Transient geophysical surveys such as radiometric, magnetic
- Other baseline data acquisition such as taking photos, measuring water quality, etc.

### 4.5.2 Exploration Plan

Those proposing to undertake minimal to low impact exploration plan activities (early exploration proponents) must submit an exploration plan. Early exploration activities requiring an exploration plan include:

- Geophysical activity requiring a power generator
- Line cutting, where the width of the line is 1.5 m or less
- Mechanised drilling for the purposes of obtaining rock or mineral samples, where the weight of the drill is 150 kg or less
- Mechanised surface stripping (overburden removal), where the total combined surface area stripped is less than 100 m<sup>2</sup> within a 200-m radius
- Pitting and trenching (of rock), where the total volume of rock is between 1 m<sup>3</sup> and 3 m<sup>3</sup> within a 200-m radius.

In order to undertake the above early exploration activities, an exploration plan must be submitted, and any surface rights owners must be notified. Aboriginal communities potentially affected by the exploration plan activities will be notified by the MNM and have an opportunity to provide feedback before the proposed activities can be carried out.

### 4.5.3 Exploration Permit

Those proposing to undertake moderate impact exploration permit activities (early exploration proponents) must apply for an exploration permit. Early exploration activities that require an exploration permit include:

- Line cutting, where the width of the line is more than 1.5 m
- Mechanised drilling, for the purpose of obtaining rock or mineral samples, where the weight of the drill is greater than 150 kg
- Mechanised surface stripping (overburden removal), where the total combined surface area stripped is greater than 100 m<sup>2</sup> and up to advanced exploration thresholds, within a 200-m radius
- Pitting and trenching (rock), where the total volume of rock is greater than 3 m<sup>3</sup> and up to advanced exploration thresholds, within a 200-m radius.



The above activities will only be allowed to take place once the permit has been approved by the MNDM. Surface rights owners must be notified when applying for a permit. Aboriginal communities potentially affected by the exploration permit activities will be consulted and have an opportunity to provide comments and feedback before a decision is made on the permit.

#### 4.5.4 *First Nation Consultations*

CPG warrants that it will consult with the appropriate First Nation and Metis communities as required per the Ontario Mining Act.

#### 4.5.5 *Exploration on Mining Rights Only Mining Claims*

Under Ontario's Mining Act, surface rights owners must be notified prior to conducting exploration activities. Where there is a surface rights holder of land, a person who:

- Prospects, stakes or causes to be staked a mining claim;
- Formerly held a mining claim that has been cancelled, abandoned or forfeited;
- Is the holder of a mining claim and who performs assessment work; or
- Is the lessee or owner of mining lands and who carries on mining operations,

on such land, shall compensate the surface rights holder for damages sustained to the surface rights by such prospecting, staking, assessment work or operations.

#### 4.5.6 *Permit Status for the Smith and Canadian Cobalt Projects*

As of the Effective Date, CPG holds an exploration plan no. PL17-10780 effective from 1 September 2017 to 1 September 2019 for the Proteus, Kirk, Kirk SW, Smith Cobalt Extension and Fraelecks Pond blocks. The plan covers the following activities: geophysical surveys, physical stripping, physical trenching, drilling and line cutting.

As of the Effective Date, CPG also holds an exploration permit no. PR17-11205 effective from 10 January 2018 to 10 January 2021 for Proteus claim 4248871 and Kirk claim 4280185. The permit covers physical stripping and drilling.

The various patented claims do not require an exploration plan or permit. CPG warrants that they will acquire any and all additional government permits required to execute proposed early exploration activities where required on the Project properties.

## 4.6 **Other Significant Factors and Risks**

Environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other relevant issues could potentially materially affect access, title or the right or ability to perform the work recommended in this Report on the Projects. However, at the time of this Report, the Author and CSA Global are unaware of any such potential issues affecting the Projects.



## 5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

### 5.1 Accessibility

The Smith and Canadian Cobalt Projects are located in the historic Cobalt and Silver Centre mining camps respectively. The Projects are accessible as follows.

#### 5.1.1 *Smith Cobalt Project*

The various contiguous and non-contiguous property blocks of the Smith Cobalt Project are accessible via all-weather gravel roads, trails and hydro transmission line right-of-way located off Highways 11B and 567 in and around the towns of Cobalt and North Cobalt.

#### 5.1.2 *Canadian Cobalt Project*

The Canadian Cobalt Project's Lorrain and Silver Centre South claim blocks are accessible via all-weather paved highway as follows:

1. From Highway 11B in the town of North Cobalt, take Lakeview Avenue 1.2 km east.
2. Lakeview Avenue changes to Silver Centre Road, continue 2.8 km south.
3. Silver Centre Road changes to Provincial Highway 567, continue south 17 km, from this point to 22.8 km at the Maidens Head Camp Road intersection, the highway passes between the East and West Lorrain claim blocks. Several side roads and trails provide access to the claim blocks.
4. From the Maidens Head Camp turnoff continue south on Highway 567 7.5 km to the northeastern boundary of the Silver Centre South claim block. The highway continues 4.5 km through the eastern part of the claim block to the hydro power dam at the mouth of the Montreal River on Lake Temiskaming.

The northern two claims of the Montreal River Property are accessed via all-weather gravel roads as follows:

1. From Highway 11B in the town of Cobalt, take Coleman Road east 1.7 km.
2. Turn right onto Silverfields Road and travel south 13.5 km to the end of Silverfields Road approximately 6 km past Hound Chute on the Montreal River. At this point, forestry access roads and ATV accessible trails provide access to the claim block lying on the northeast side of the Montreal River.

The portion of the Montreal River Block lying southwest of the river is accessible by boat across the river. This part of the block may also be accessed by four-wheel drive vehicle from the Rosevelt Forest Road which runs along its western boundary:

1. From the south end of the Latchford Bridge, take Highway 11 south 20 km to the Rosevelt Road intersection at Granite Lake.
2. Take Rosevelt Road east 7 km. From this point northward approximately 9 km, the west boundary of the Montreal River claim block lies approximately 0.25 km to 1 km to the east of the road.
3. At this point, the Rosevelt Road continues north and westward through the Montreal River West Block (see below) back to Highway 11.



The portion of the Montreal River West Block lying southwest of the may also be accessed by four-wheel drive vehicle from the Rosevelt Forest Road which runs through the block. Additional trails in provide further access off of Rosevelt Road within the block:

1. From the south end of the Latchford Bridge, take Highway 11 south 3 km to the Rosevelt Road intersection at Straight Lake.
2. Take Rosevelt Road east 5.1 km to Raede Lake and the west boundary of the Montreal River West claim block. From this point east and southward, Rosevelt Road passes for approximately 10.7 km through the claim block.
3. Additional trails in provide further access off of Rosevelt Road within the block.
4. Rosevelt Road continues south approximately 9 km, outside the west boundary of the Montreal River claim block and then west back to Highway 11 as described above.

## 5.2 Climate

The climate in the Project areas is warm summer humid continental. The region has warm and often hot summers with long, cold winters. It is situated northeast of the Great Lakes, making it prone to arctic air masses.

Ville Marie, Québec, on the east side of Lake Temiskaming, is the closest centre representative of the Properties for which Environment Canada (2017) climatic records are available (1981 to 2010). Mean summer temperature is approximately 17 degrees Celsius (°C); however, extreme daily summer maximum temperatures can reach 40°C. Mean winter temperature is -12.5°C; however, extreme daily winter minimum temperatures can reach -50°C. Average annual precipitation (combined rain and snow) is approximately 836.5 mm per year. Monthly precipitation is relatively equal year-round but typically the greatest amount of precipitation falls from late spring to early fall and the least precipitation occurs in the winter months. Some snow cover is expected six months of the year. Mean total rainfall is 655.9 mm. Mean total annual snowfall is 180.6 cm. Smaller lakes in the immediate area are typically frozen between December and March.

Season-specific mineral exploration may be conducted year-round. Swampy areas and lakes/ponds may be best accessed for drilling and ground geophysical surveys during the winter months when the ground and water surfaces are frozen. Mine operations in the region can operate year-round with supporting infrastructure.

## 5.3 Local Resources and Infrastructure

Most services and supplies required for a mineral exploration program are available in the City of Temiskaming Shores (2016 Census population of 9,920), an amalgamated municipality (formerly the Town of Haileybury, New Liskeard and the Township of Dymond) at the head of Lake Temiskaming approximately 15 km north of the centre of the Smith Cobalt Project area. The Town of Cobalt (2016 Census population of 1,128), approximately 3 km west of the Smith Cobalt Project area offers some basic services.

The City of Greater Sudbury (2016 Census population of 161,531) is located approximately 200 km by road southwest of the Projects at the intersection of the Trans-Canada Highway, Highway 69S and Highway 144N. Sudbury is located 390 km north of Toronto. A world leader in nickel mining, milling, smelting and refining, Greater Sudbury has diversified and is now a regional service centre for northeastern Ontario, having established itself as a major centre of finance, business, tourism, health care, education, government, and science and technology research. Over 300 mining supply and service companies are in Greater Sudbury. A





full range of equipment, supplies and services required for any mining development is available in Greater Sudbury.

Given the mining history of the Cobalt Camp and the proximity of mining communities such as Kirkland Lake and Sudbury, as well as service centres such as North Bay, exploration and mining personnel are readily available in the region.

Other than several powerlines, all-weather roads and ATV trails, no infrastructure is present within the Properties. The Project areas lie approximately 4–20 km east of Provincial Highway 11 and the Ontario Northland rail line which provides freight services for the transportation of mineral and forest products, chemicals, petroleum and other products to and from northeastern Ontario and northwestern Quebec. Hydro One 115 kV and 230 kV transmission lines cross or are near the Project property areas.

Abundant water resources are present in the lakes, rivers, creeks, and beaver ponds on the Properties.

As of the Report's Effective Date (15 March 2018), it appears that CPG both holds and has the option to acquire sufficient mining claims necessary for proposed exploration activities and potential future mining operations (including potential tailings storage areas, potential waste disposal areas, and potential processing plant sites) should a mineable mineral deposit be discovered.

#### **5.4 Physiography**

The major topographic feature of the area is Lake Temiskaming located immediately east of the Projects (Figure 1: Location of Projects in Ontario)

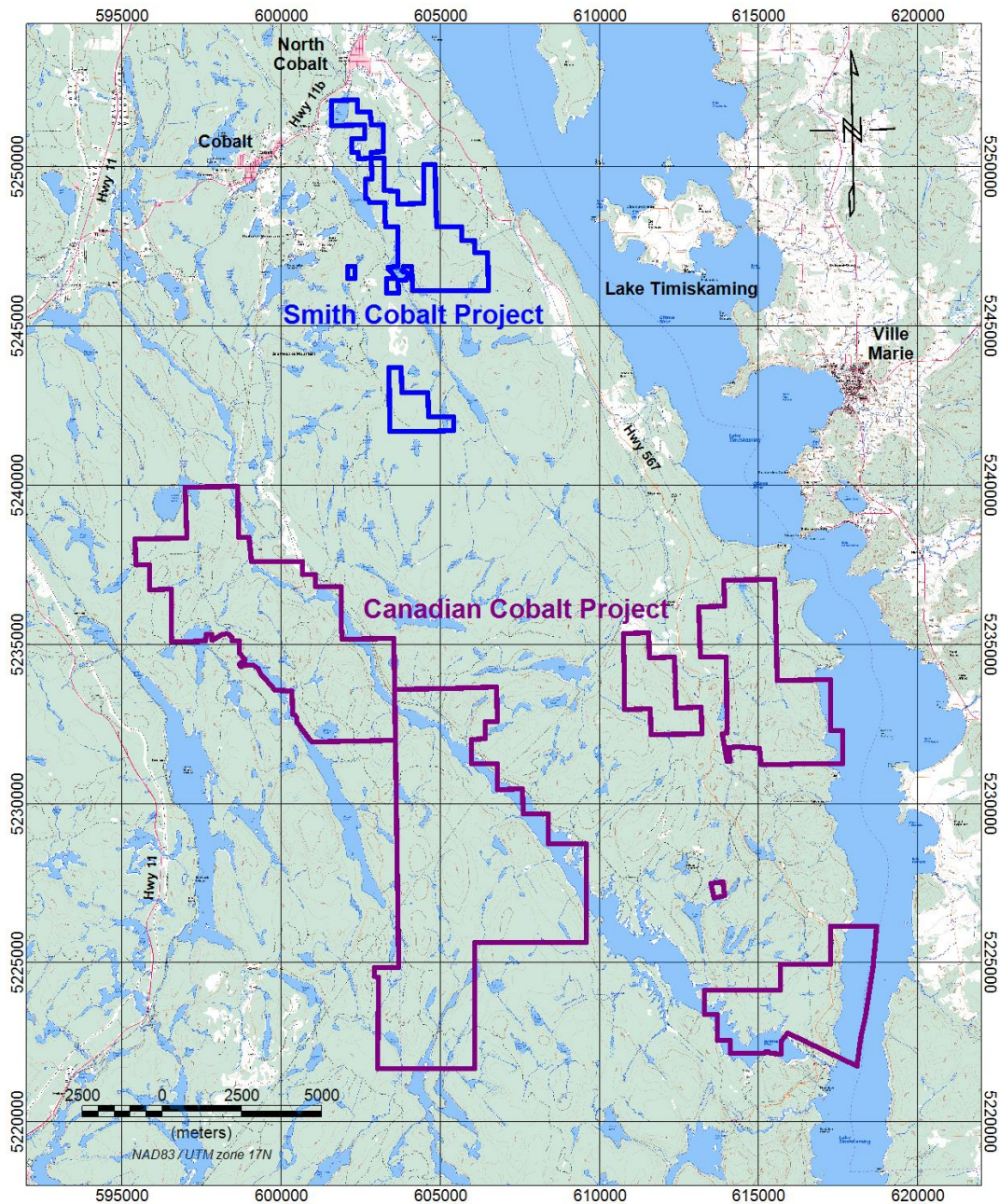


Figure 2). The Montreal River and Lake Temiskaming itself (part of the Ottawa River system) are the major drainage channels in the area.

The Projects lie adjacent to one of the Canadian Shield’s rare “clay belts”. These late/post-glacial lacustrine deposits preserve well developed accumulations of sediment that are well suited to agriculture. As a result, the area to the north of the Projects area retains a robust agricultural community, particularly north of Lake Temiskaming.

The Project area is characterized by rocky, rolling bedrock hills with locally steep ledges and cliffs, separated by valleys filled with clay, glacial material, swamps and streams. Total relief is approximately 130 m in the Smith Cobalt Project area with topography varying from 250 m to 380 m above sea level. Total relief is approximately 260 m in the Canadian Cobalt Project area with topography varying from 180 m on the shore



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of Lake Temiskaming to 450 m above sea level in the Montreal River Block. Local relief is commonly up to 30 m to 50 m, although some ridges are up to 80 m or more above surrounding lowlands.

Vegetation is typical boreal forest with mixed second growth forest of mixed coniferous and deciduous trees, including poplars, birch, maple, pine, spruce, alders, and willows. Swampy low-lying areas contain abundant tag alders. Locally, the clay-belt extends intermittently south into the Lorrain Valley supporting limited farmland but outside of the Projects.

## 6 History

### 6.1 Regional Exploration and Development History

The initial discovery of silver in the region made west of Lake Temiskaming in 1903 during the construction of the Temiskaming and Northern Ontario Railway began a rich mining history in the area. The location along the railway was named Cobalt after one of the elements found in the arsenide minerals within the veins. The first mines commenced production as early as 1904 and mining was more or less, continuous until 1989 with production peaking in 1911 (Petruk *et al.*, 1971). In addition to silver, cobalt, nickel and copper were recovered from the ore. Mineralization was not just limited to the area immediately around Cobalt but was recovered from areas with similar geology within the Cobalt embayment of the Southern Province, from Gowganda in the west to Silver Centre in the southeast.

CPG's Smith and Canadian Cobalt Projects lies within the Cobalt and Silver Centre mining camp areas respectively. Guindon *et al.* (2016) tabulated the historic production (1904 to 1989) from approximately 140 silver-cobalt properties in the Cobalt embayment. Historic production from approximately 107 mines in the Cobalt and Silver Centre camps totalled approximately 492,538,553 oz Ag, 23,279,622 lbs Co, 3,624,786 lbs Ni and 2,087,211 lbs Cu during this period. The information is suspected to be under-reported, in part, due to lease mining during the 1930s (Guindon *et al.*, 2016). The Author has been unable to verify the information and the information is not necessarily indicative of the mineralization on the Properties. Two minor historic mines are located within CPG's Project areas.

### 6.2 Exploration History of the Smith Cobalt Project

The known exploration history of CPG's Smith Cobalt Project area is summarised in Table 8, based on available online Ontario government reports, assessment files and Mineral Deposit Index (MDI) files. The approximate locations of the historical work areas are noted in Figure 6 with the Map ID and or MDI number referenced in Table 8.

Table 8: General exploration history of Smith Cobalt Project area

Year	Map ID	Assessment file/ reference	Operator	Target	Work history
1906–1926	1	Thomson (1961b) MDC010	Century Silver Mine renamed Cobalt Twentieth Century Mining Co. in 1915	Ag	<p><b>Century Silver</b></p> <p>1908–1915: Two shafts were sunk: Shaft no. 1 (claim 417) 175' deep with 300' of drifting and crosscutting. Shaft no. 2 (claim 59) 365' deep with 200' of drifting east of the shaft.</p> <p>1926: Shaft no. 3 (claim 1770), 41' deep, was sunk.</p> <p>Thomson (1961b) reported all the solid rock exposed at surface is Nipissing Diabase. The lower contact of this intrusive was intersected by the crosscut east of Shaft no. 1. Coleman conglomerate may be seen on the shaft dump indicating a thickness of 175 ft for the diabase at this shaft area. Shaft no. 2, which attained a depth of 365 ft apparently did not reach the lower contact of the diabase. Vein material was seen on the dumps of shafts no's 1 and 3 but no information is available on results from the underground workings. The position of the trenches indicates a northerly strike for the veins.</p>



Year	Map ID	Assessment file/ reference	Operator	Target	Work history
1908–1910	2	MDC010 31M05SE0006 Thomson (1960a)	1908 Chrysler-Niles Mining Company Limited 1910 Hecla Silver Mines Limited	Ag	<p><b>Chrysler-Niles</b></p> <p>1908: A shaft was put down to a depth of over 200 ft. About 8,000 ft of trenching was also done.</p> <p>Davis (Davis, H. P., ca.1910, “The Davis Handbook”, Directory Part, p.22) reports: “The principal vein in this shaft at the surface is about 5 inches wide and gradually increased to 97 ft in depth, where it left the shaft, pitching about 15° from the vertical; assays taken at different depths on this vein all carried silver values, running from 3 to 200 oz per ton.” “About 8,000 ft of trenching has been done on the surface of the property, exposing 8 or 10 other silver-bearing veins.”</p> <p>Apparently very little additional work was done by Hecla Silver Mines Limited who took over the property in 1910.</p> <p>31M05SE0006 follow-up work in 1963 unable to verify.</p> <p>Thomson (1960a) reported that Nipissing Diabase was the only rock seen on the shaft dump; quartz-calcite vein material up to widths of 2 inches was rather abundant; the only metallic mineral seen was chalcopryite, which was in larger amount than usual in this type of vein. A very small vein in a pit at about 250 ft northeast of the shaft also contained chalcopryite.</p>
1908–1911	3	PR1961-06 MDC010 MDI31M05SE00145	Badger Mines Ltd acquired by C. Bende 1968	Co-Fe-Ni	<p><b>Bende</b></p> <p>Surface trenching and pitting including a 1,100 ft long trench along no. 5 vein.</p> <p>Done. Shaft no. 4 was sunk 70’ on a 79° incline on vein no. 5 in 1908 with further undocumented work done. Shaft no. 5 was sunk 344’ on vein no. 5 with 33’ of drifting on the 75’ level, north and south drifts on the 140’ level, and a 300’ southwest drift on the 344’ level with 140’ of southeast crosscutting at its end.</p> <p>Also, from the 75’ level of Shaft no. 5 (or no. 4? – some uncertainty), 120 ft southwest of the shaft a winze was sunk 100’ and 320’ of drifting done at this level.</p>



Year	Map ID	Assessment file/ reference	Operator	Target	Work history
1926–1940	4	PR 1961-4 (Thomson, 1961c) MDC010 (Sergiades, 1968) ARV45 Pt 1, P.186 District Geologist notes	1926–1928: under option to Mining Corporation of Canada Ltd 1928–1960: Smith Cobalt Mines Ltd	Ag-Co	<p><b>Smith Mine</b></p> <p>1926–1928: Two diamond drillholes and a shaft 125.6 m (412 ft) deep with 274.3 m (900 ft) of crosscutting in four directions on the 122 m (400 ft) level were completed.</p> <p>1934: No. 1 winze was sunk (apparently on South Vein?) to a depth of 22.9 m (75 ft) from the 122 m (400 ft) level and the 137.8 m (452 ft) level was established. At 9.1 m (30 ft) below the 122 m (400 ft) level, it entered Keewatin rocks and shortly afterwards calcite became heavily mineralized with cobalt comprising two veins each 2.5–7.6 cm and 45.7 cm (1–3 inches and 18 inches) apart. 238.8 m (931 ft) of crosscutting was completed on the 137.8 m (452 ft) level. Work carried out on the North Vein and South Vein.</p> <p>1935: No. 2 winze was put down a depth of 15.2 m (50 ft) from the 137.8 m (452 ft) level. 111.3 m (365 ft) of drifting and crosscutting was done on the 152.4 m (500 ft) level.</p> <p>Northern Miner (Oct 10/1935) reported 7.6 cm (3 inches) of massive smaltite in North Vein on 137.8 m (452 ft) level.</p> <p>Northern Miner (Oct 18/1935) reported drifting 36.6 m (120 ft) along a 2.5–22.9 cm (1–9 inches) calcite-cobalt vein on 137.8 m (452 ft) level (presumably the North Vein).</p> <p>ARV45 Pt 1, P.186 and Thomson (1961c) reported approximately 4,350 kg (9,570 lbs) of cobalt ore was extracted mainly from the 137.8 m (452 ft) level in 1935. Cobalt production in 1939 and 1940 was reported to be 57.27 kg and 150.45 kg (126 lbs and 331 lbs) respectively (Thomson, 1961c).</p>
1949	5	31M05NE0138	Lafrange		One diamond drillhole (100 ft) No assays reported.
1951–1952	6	31M05NE0137	Brown		Six diamond drillholes totalling 1,386 ft. No assays reported
1959	4	Campbell, E. (1959) Thomson (1960a, 1961c) MDC010 (Sergiades, 1968)	1959–1960: Under option to Dolmac Mines Limited	Ag-Co	<p><b>Smith Mine area</b></p> <p>10 diamond drillholes (SC-4 to SC-9, SC-9A, SC-10 to SC-12) totalling 6,010 ft. Thin calcite quartz veining intersected in Keewatin volcanics and sediments, Temiskaming sediments(?), Huronian sediments and Nipissing Diabase. No significant silver or cobalt assays reported.</p>
1960	7	31M05NE0108	Temiskaming Project Syndicate	Ag-Co	<p>Several pits and trenches from early exploration noted on the Proteus ground. More recent geophysical surveys were noted but not described.</p> <p>In 1960, the Temiskaming Project Syndicate financed a diamond drilling program. Details are unavailable, but results of the program indicated the presence of silver although economic values were not encountered.</p>



Year	Map ID	Assessment file/ reference	Operator	Target	Work history
1963	4	MDC010 (Sergiades, 1968)	1961–1968: Rockzone Mines Ltd	Ag-Co	<b>Smith Mine</b> The shaft was dewatered, and 4,768 ft of underground diamond drilling was completed. No information.
1963	2	31M05SE0006 31M05SE0009	Nama Creek Mines	Ag-Co	<b>Crysler Niles occurrence</b> Mapping and sampling of four veins within shaft. Samples reported only nil to 0.16 oz/t Ag. Unable to repeat historically reported (1908) assays. One horizontal drillhole (101 ft) drilled from shaft. No significant Ag assays.
1967	8	31M05SE9735	McAllister	Ag-Co	One diamond drillhole (287 ft) No assays reported.
1967– 1973	1	31M05NE0414	Silver Monarch Mines	Ag	<b>Century Silver</b> The company carried out exploration and development work including road building and the installation of compressed air service. Shaft no. 1 was rehabilitated and dewatered and a hoisting plant installed. Exploration and geological mapping of the surface and underground workings was carried out and a total of 4,051 ft of diamond drilling completed from the surface and underground workings.
1979	9	31M05NE0407	Malouf Holdings		Two partial lines VLF-2 EM surveying on current claim 4280111. Two frequencies were used, Cutler Maine and Seattle, Washington. No significant anomalies within current property area.
1984	10	31M05NE0025	Highland-Crow Resources/Teck Corporation – Northgate Minerals Ltd	Ag	Four DDH (NC-1 to NC-4 totalling 3,396 ft) targeting postulated northeast extension of the productive Cobalt sedimentary basin at depth. No significant Ag assay results from sludge or core.
1985	7	31M05NE0108	Proteus Resources Inc.	Au-Ag- Co	<b>Proteus block</b> 15 diamond drillholes (P-85-01 to P-85-15) were completed between 27 August and 1 December 1985 totalling 9,261 ft. Morissette Diamond Drilling of Haileybury Ontario was the drill contractor. Core diameter was BQ. size. Sludge was sampled over 10 ft intervals (where possible). The objective was to test structurally interesting areas for silver and secondarily for gold. Gold had been encountered in anomalous amounts during the 1984 surface sampling program. Sludge samples returned trace to 5.45 oz/ton Ag. Core assays returned trace to a high gold value assay of 0.142 oz/ton over 0.8 ft. Four other assays returned 0.036 to 0.054 oz/ton Au over 1 ft. Core assays did not return any significant silver values.



Year	Map ID	Assessment file/reference	Operator	Target	Work history
1985	4	31M05NE0409 31M05NE0105	Phaeton Exploration Ltd		<b>Smith Mine</b> Three holes (84-1, 85-2, 85-3) totalling 2,261 ft. Coleman conglomerate intersected beneath Nipissing Diabase. No silver values were located but intense alteration, highly fractured rock, mineralization in the form of chalcopryite, pyrite, pyrrhotite, pentlandite and galena, and an area with calcite-quartz veins was located.
1985	2	31M05SE0004	GQR Resources Ltd (O.L. Giroux)	Ag-Co	<b>Crysler Niles</b> Two diamond drillholes (GQR85-1 and 2) totalling 410 ft. Tested diabase adjacent Chrysler-Niles shaft. No assays reported.
1986	7	31M05NE0102	Proteus Resources Inc.	Au-Ag-Co	<b>Proteus block</b> 24 diamond drillholes (P-86-01 to P-86-24) were completed between 10 January and 28 February 1986 totalling 12,534 ft. The objective was to further explore the areas in which anomalous silver and gold values were obtained from the 1985 drill program. The drilling concentrated on two zones, referred to as the North Zone and the South Zone. The latter proved to be more successful as a drill hole intersected a 1/4-inch pink calcite cobalt arsenide vein which assayed 13.55 oz/ton silver over 0.3 ft. Anomalous gold values were also returned, the best being 0.374 oz/ton over 0.9 ft. Several other anomalous intervals of silver and gold were encountered in both zones.
2011	11	20000006566	Intervia Inc.	Au	7.4 km line cutting and VLF-EM surveying for a total of 294 readings taken at 25 m stations. A Geonics VLF-EM receiver was used for the survey. The VLF transmitter station was Cutler, Maine NAA transmitting at 24.0 kHz. The measured quantities were the in-phase and quadrature components of the vertical magnetic field measured as a percentage of horizontal primary field (read to a resolution of +/-1%). All readings were taken facing north. The survey yielded one conductor that may represent a fault or structure.





Year	Map ID	Assessment file/ reference	Operator	Target	Work history
2011	11	20000007717	Intervia Inc.	Au	<p>Quantec Geoscience conducted a gradient array IP/resistivity survey comprising 8 lines totalling 14.8-line km at 100 m spacing and station intervals of 25 m. The objective of the survey was to delineate IP/resistivity signatures related to:</p> <ul style="list-style-type: none"> <li>• Known occurrence of gold-bearing disseminated pyrite mineralization hosted in a fault area paralleled by a VLF-EM conductor axis</li> <li>• Potential metallic sulphide-arsenide mineralized zones hosting silver-cobalt.</li> </ul> <p>The survey delineated low to very high Apparent Resistivity (50 Ω-m to 11,600 Ω-m) and very low to low Apparent Chargeability (0 mV/V to 10.5 mV/V). Two weak to moderate chargeable zones were detected and delineated, which may be consistent with the target models.</p>
2012	12	2.52330_20010641 20000007352	Canagco Mining Corporation		<p>Four days of traverses prospecting/ground truthing airborne magnetic anomalies. Four diabase samples with calcite/quartz veins returned below detection silver and gold values.</p>
2012	13	20000007324	Canagco Mining Corporation		<p>Three days of traverses prospecting/ground truthing airborne magnetic anomalies. No samples reported.</p>

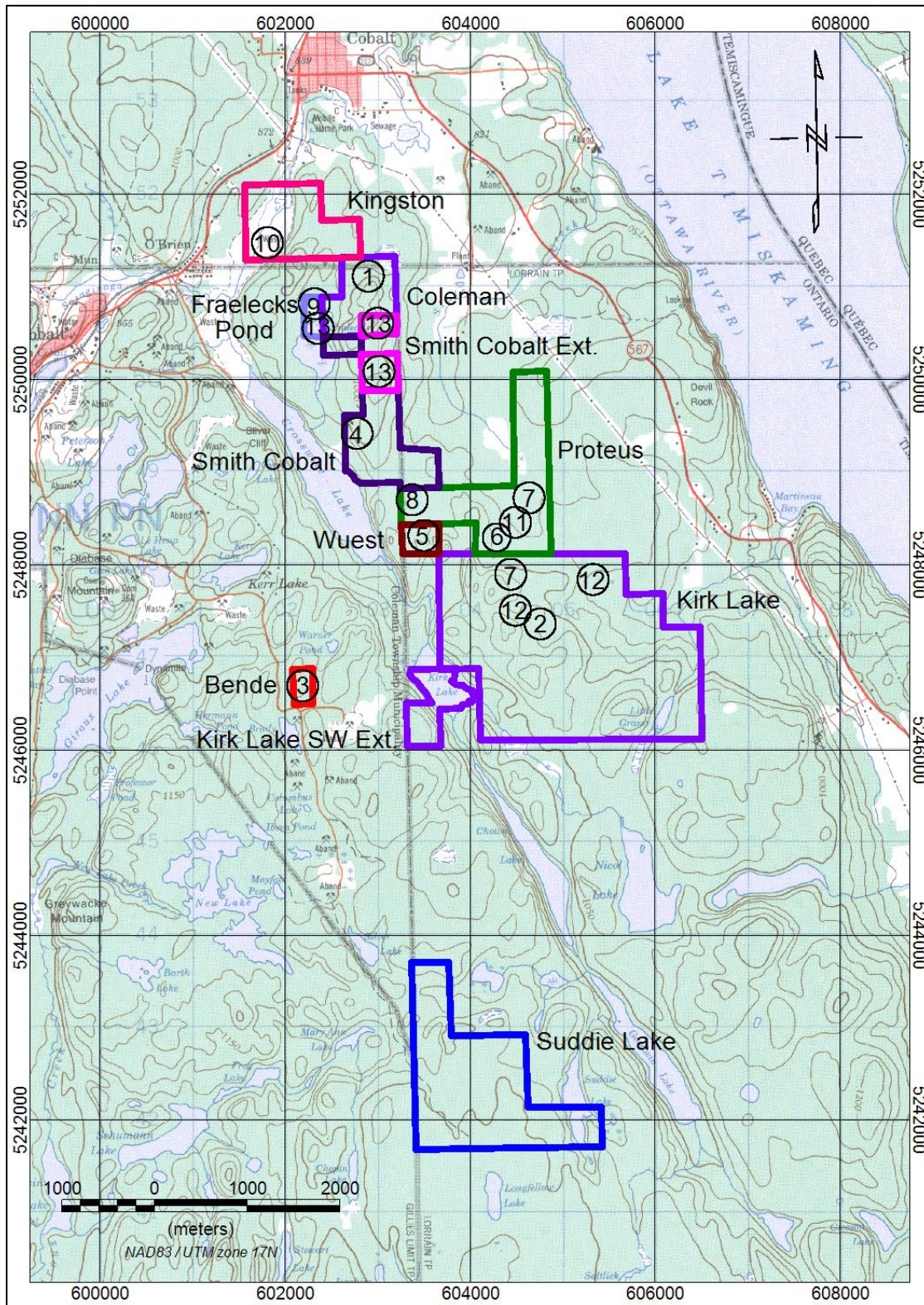


Figure 6: Smith Cobalt Project – location of historic assessment work areas

Note: Numbers correspond to assessment work index numbers in Table 8.

### 6.3 Exploration History of the Canadian Cobalt Project

The known exploration history of CPG's Canadian Cobalt Project area is summarised in Table 9, based on available online Ontario government reports, assessment files and MDI files. The approximate locations of the historical work areas are noted in Figure 7 with the Map ID and or MDI number referenced in Table 9.

Table 9: General exploration history of the Canadian Cobalt Project area

Year	Map ID	Assessment file/reference	Operator	Target	Work history
1918	1	MDC010	-	Ag	<b>Mining Lease T 46579 (HR 97) – Silver Eagle</b> The Wettlaufer Vein crossed the northwest corner of the Silver Eagle claim for a length of 6.09 m (20 ft) on the 70.1 m (230 ft) level of the Wettlaufer mine which lies on third-party land outside the current lease. Access to the deposit was via the Wettlaufer shaft, approximately 129.5 m (425 ft) northeast of the northwest corner property, on the 54.9 m (180 ft) and 70.1 m (230 ft) levels. Knight (1922; p225 and 229) reported total production of 248,486 g (7,989 oz) Ag in 1918.
1956	2	31M03NW0014	Roche Longlac Gold Mines	Ag-Co	Three holes (#2, #3 and #5) totalled 41.15 m (135 ft). Two additional drillholes unreported. Unquantified and undocumented "mineralization" associated with diabase and conglomerate.
1972	3	31M04NE0028	Weaver		Ground magnetic and VLF-EM geophysical surveys on lines 400 ft apart over eight patented claims.
1997	4	31M04NE2005	Isometric Mineral Corporation		Quantec Geoscience conducted Gradient/Realsection Time Domain Induced Polarization (TDIP) and Total Field Ground Magnetics (TFM) surveys comprising 25 lines at 50 m spacing and station intervals of 20 m totalling 33.5-line km. The objective of the survey was to locate and resolve potential zones of sulfide mineralization and map the host geology, investigating to depths of up to 450 m with sampling resolution +/- 20 m.  TDIP was conducted using IRIS IP-6 (time domain 16 channels) Receiver and Phoenix IPT-2B (15 kW 1200-2200V out) Transmitter. Magnetometer survey conducted using mobile and base station GEM Instruments Ltd, GSM-19 model (Overhauser – type proton precision antennae).  Quantec identified three first-priority targets with significant chargeability, width, strike-length and geoelectric characteristics to warrant immediate drill-testing. At least 14 other second-priority targets were also identified along these horizons and their strike extensions, which either feature similar but weaker signatures, or are not sufficiently characterized using Real Section IP.
2004	5	20000000430	Tres-OR Resources Ltd	Diamonds	Heliborne magnetic and EM survey over Tres OR's South Cobalt Project, which covered the southeast half of the current Montreal River West block and claims 4286469, 4286451, 4286452 and 4286454 of the Montreal River block.  In its diamond exploration program, Tres-OR elected to detail noisy magnetic areas with high K.I.M. counts using



Year	Map ID	Assessment file/reference	Operator	Target	Work history
					<p>helicopter Mag/EM with 50 m line spacing and 30 m bird elevation. The EM portion of the system was utilized to attempt to detect conductive clays which can develop on the weathered top of a buried kimberlite pipe, and generally help with identification of other features (e.g. faults and dykes).</p> <p>Principal geophysical sensors were AeroQuest's IMPULSE© six frequency, electromagnetic system and a high sensitivity, cesium vapour magnetometer.</p> <p>No significant anomalies within the current Montreal River block claims.</p>
2005	5	20000000430	Tres-OR Resources Ltd	Diamonds	<p>Orthorectification and data fusion of QuickBird panchromatic and multispectral data, a portion of which covered current Montreal River 4286469, 4286451, 4286452 and 4286454.</p>
2005	6	20000000503	Tres-OR/Adroit	Diamonds	<p>Helicopter-borne geophysical survey carried out on Tres-Or's Cobalt South Project, Gillies Limit/South Lorrain Township. The principal geophysical sensor was Aeroquest's AeroTEM II time domain electromagnetic system employed in conjunction with a high-sensitivity cesium vapour magnet.</p> <p>This area was re-flown with the AeroTEM coincident loop system because it has the ability to detect IP effects, which are known, in some cases, to occur in kimberlite sources.</p> <p>The nominal EM bird terrain clearance was 30 m, but higher in more rugged terrain due to safety considerations and the aircraft capabilities. The magnetometer sensor was mounted in a smaller bird connected to the tow rope 17 m above the EM bird and 21 m below the helicopter. Nominal survey speed over relatively flat terrain was 75 km/hr and generally lower in rougher terrain.</p> <p>Assessment report states that the EM data is generally devoid of any response from any conductive sources or any significant accumulation of conductive overburden. Very subtle early (channel 0, off time) channel Z component responses do reflect thicker accumulations of sediment over some of the lakes and rivers.</p>
2005	7	20000000839	John Carroll	Diamonds	<p>Helicopter-borne geophysical survey carried out on Carroll-Hestor JV Block 2 covered the westernmost two claims of the current Montreal River West block (4286527 and 4286540) and ground further to the west. The principal geophysical sensor was Aeroquest's AeroTEM time domain electromagnetic system employed in conjunction with a high-sensitivity cesium vapour magnet.</p> <p>The nominal EM bird terrain clearance was 30 m, but higher in more rugged terrain due to safety considerations and the aircraft capabilities. The magnetometer sensor was mounted in a smaller bird connected to the tow rope 17 m above the EM bird and 21 m below the helicopter. Nominal survey speed over</p>



Year	Map ID	Assessment file/reference	Operator	Target	Work history
					<p>relatively flat terrain was 75 km/hr and generally lower in rougher terrain.</p> <p>Assessment report states that the conventional off-time EM channel profiles were examined, and no identifiable bedrock conductors were noted.</p>
2006	8	20000002444	Adroit Resources Inc.	Base and precious metals	<p>Helicopter-borne geophysical survey carried out on the Adroit's Argentia Ridge Project, South Lorraine Township. The principal geophysical sensor was Aeroquest's AeroTEM II time domain electromagnetic system employed in conjunction with a high-sensitivity cesium vapour magnetometer. The survey, flown with north-south lines spaced at 100 m, totalled 240.9-line km of which only a small part fell within the CPG's current Canadian Cobalt Project claims 4286472, 4286473 and 4286474.</p> <p>The nominal EM bird terrain clearance was 30 m, but higher in more rugged terrain due to safety considerations and the aircraft capabilities. The magnetometer sensor was mounted in a smaller bird connected to the tow rope 17 m above the EM bird and 21 m below the helicopter. Nominal survey speed over relatively flat terrain was 75 km/hr and generally lower in rougher terrain.</p> <p>One very weak Z1 single line off-time EM anomaly east of Highway 567 on claim 4286474.</p>
2006	6	20000001695	Adroit Resources Inc.	Diamonds/ base metals/ precious metals	<p>The 2006 exploration program at Adroit's Cobalt South Project consisted of 11 days of geological mapping and prospecting. The goal of the program was to determine the source of the airborne magnetic anomalies, Keating Coefficients, and Impulse EM picks. Limited outcrop was available in the target areas. The Impulse EM picks tended to be associated with the presence of magnetite-bearing olivine diabase dykes, and Nipissing Gabbro. No significant sulphide mineralization was identified in the field.</p> <p>Three magnetic anomalies identified in the 2004 airborne geophysical survey were visited. All three anomalies are contained within topographic lows (cedar swamps), and have corresponding Keating Coefficients, two of which were recommended for immediate follow up work.</p>
2006	9	20000003649 2306	Adroit Resources Inc.	Diamonds/ base metals/ precious metals	<p>A Soil Gas Hydrocarbon survey (SGH) was performed on the Adroit's Cobalt South property to test for potential indications of kimberlite targets. The sampling process was completed between 31 October and 1 November 2006. 33 soil samples taken from a straight line transect – Target 3. Target 3 consisted of sample spacing of 15 m and one sample of 30 m spacing. 31 soil samples were taken from another straight line transect – Target 4. Target 4 consisted of 15 m spacing for most of the samples and 30 m spacing for several samples.</p> <p>The SGH survey over Targets 3 and 4 was designed to identify signatures that typically represent buried kimberlites. The interpretation of the results by</p>



Year	Map ID	Assessment file/reference	Operator	Target	Work history
					Activation Laboratories of Ancaster, Ontario indicated that the two targets sampled have low probability of being buried kimberlites. The report recommended a limited till sampling program to further evaluate the potential of Target 3.
2007	10	20000002465	Adroit Resources Inc.	Base and precious metals	<p>Spectral IP/resistivity and magnetic surveys included three lines totalling 4,175 m. Work conducted by JVX Ltd. The IP/resistivity survey was done in time domain using the Scintrex IPR12 receiver (2 second current pulse, 0.125 Hz base frequency) and Scintrex IPC7 2.5 kW transmitter. The magnetic survey was done with GEM Systems GSM-19 receivers. Station spacing for the magnetic survey was 12.5 m. For the IP/resistivity survey, the pole-dipole array was used with a current potential electrode layout that combines two 'a' spacings in up to seven potential electrode pairs. The distance from the current electrode to the first potential electrode is always 25 m. When fully extended, the potential electrode separation ('a' spacing) for the first four electrode pairs is 25 m. The 'a' spacing for the last three electrode pairs is 50 m. This might also be described as a=25 m, n=1,4 + a=50 m, n=2,5,4,5. It is equivalent to a=25 m, n=1,10 with some loss of resolution in the later dipoles. On every second move, the current electrode is advanced 25 m to a position formerly occupied by the first potential electrode. The receiver moves to what was P2. The array is now defined by a=25 m, n=1,3 + a=50 m, n=2,4 and would be equivalent to a=25 m, n=1,9.</p> <p>The three-line grid covered the very weak single line off-time airborne EM anomaly east of Highway 567 on claim 4286474. The IP/resistivity survey shows that the overburden is moderately conductive over 30% of the grid and very conductive over 40%. The magnetic results show few marked trends or patterns. Most readings are in the range of <math>\pm 75</math> nT from the mean. Peak IP amplitudes are barely above background levels and many very weak chargeability highs are probably due to local bedrock highs. There is no IP anomaly associated with the AeroTEM anomaly in the vicinity of a creek. Low surficial resistivities over this small creek (100 to 400 ohm.m) are consistent with a thick layer of conductive overburden.</p>
2007	10	20000002725	Adroit Resources Inc.	Base and precious metals	<p>One 125 m DDH (AR-3; UTM 5224368 N, 617366 E -45 dip 180 Az) tested airborne EM anomaly on current Canadian Cobalt Project claim 4286474. Drilled by Cartwright Drilling of Goose Bay Labrador. The core diameter was BTW in size (42 mm).</p> <p>Intersected Huronian conglomerate and arkosic sandstone. Locally up to 1% disseminated py-po. Not sampled. The EM anomaly is probably due to conductive overburden.</p>

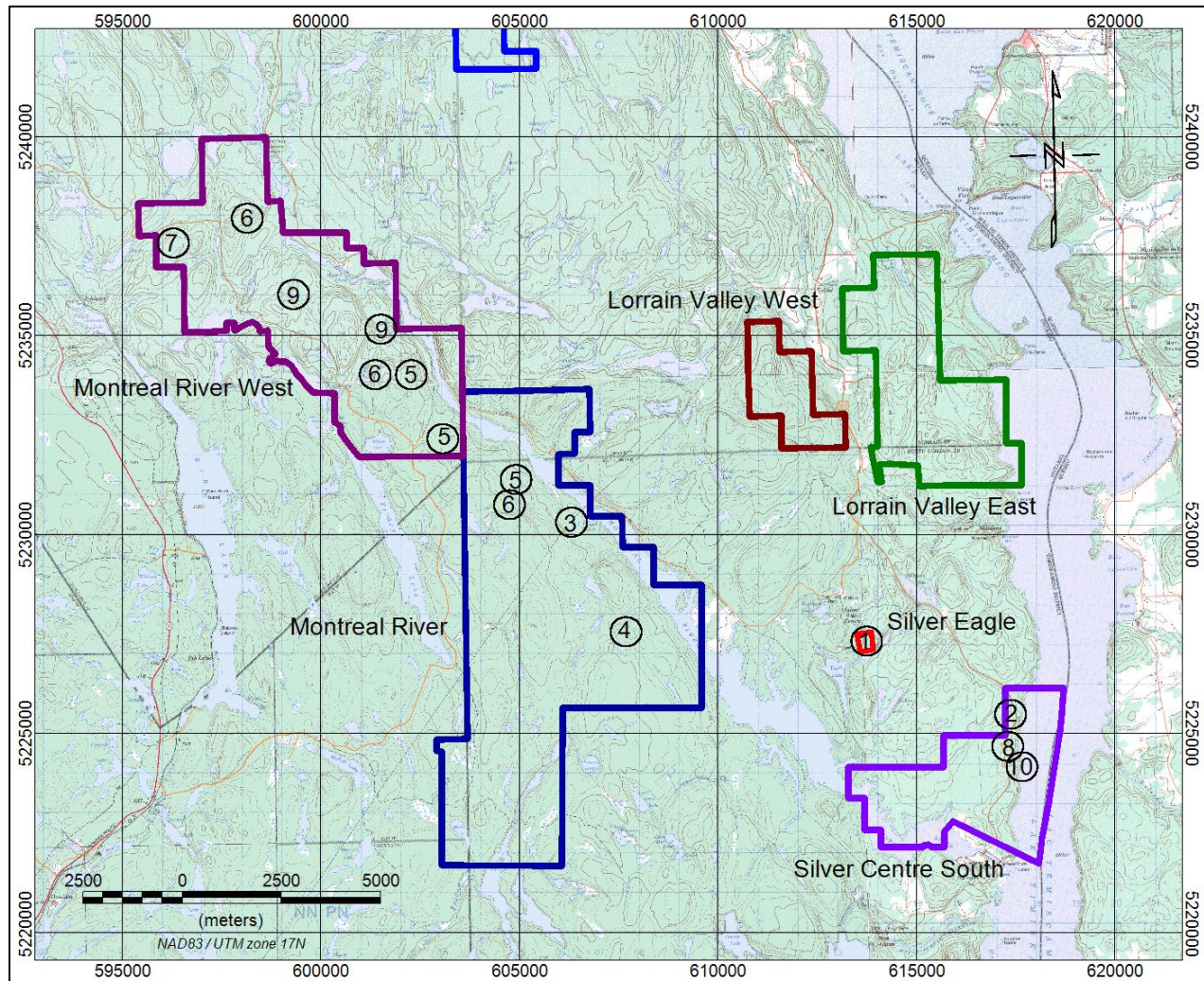


Figure 7: Canadian Project – location of historic assessment work areas

Note: Numbers correspond to assessment work index numbers in Table 9

## 6.4 Significant Historical Mineral Resource and Mineral Reserve Estimates

There are no significant historical Mineral Resource and Mineral Reserve estimates applicable to the Smith Cobalt and Canadian Cobalt Projects and mineral occurrences.

## 6.5 Historical Mineral Production

### 6.5.1 Smith Cobalt Project – Smith Mine Historical Production

Development at the Smith Mine began in 1927 when a shaft was sunk 125.6 m (412 ft) with crosscutting from the 122 m (400 ft) level in four directions. On the South Vein, a winze was put down from the 122 m (400 ft) level to a depth of 22.9 m (75 ft) and a winze level established at the 137.8 m (452 ft) level below the shaft collar (Ontario Department of Mines, Vol. XLV, (1936), Pt. I, p. 186.) Workings on the 137.8 m (452 ft) level, reported to be some 283.8 m (931 ft) in all, include a crosscut driven northerly to the North Vein on which another winze was put down some 15.2 m (50 ft); from it another level, the 152.4 m (500 ft) level was



established. Lateral work on the 500-ft level is reported to consist of 111.3 m (365 ft) of drifting and crosscutting.

Thomson (1961c) reported approximately 4,350 kg (9,570 lbs) of cobalt ore was extracted in 1935, mainly from the 137.8 m (452 ft) level on which 42.7 cubic m (1,508 ft<sup>3</sup>) of stoping was completed (Ontario Department of Mines, Vol. XLV, (1936), pt. I, p. 186). Cobalt production in 1939 and 1940 was reported to be 57.27 kg and 150.45 kg (126 lbs and 331 lbs) respectively.

#### 6.5.2 *Canadian Cobalt Project – Silver Eagle Lease – Historical Production*

The Wettlaufer Vein crossed the northwest corner of the Silver Eagle claim for a length of 6.09 m (20 ft) on the 70.1 m (230 ft) level of the Wettlaufer mine which lies on third-party land outside the current lease. Access to the deposit was via the Wettlaufer shaft, approximately 129.5 m (425 ft) northeast of the northwest corner property, on the 54.9 m (180 ft) and 70.1 m (230 ft) levels. Knight (1922; p225 and 229) reported total production of 248,486 g (7,989 oz) Ag in 1918.



# 7 Geological Setting and Mineralization

## 7.1 Regional Geology

The following summary is largely taken from Andrews *et al.* (1986), Smyk and Watkinson (1990), Born and Hitch (1990), Guindon *et al.* (2016), and others.

The Cobalt/Silver Centre area is underlain by Precambrian rocks of the Superior and Southern provinces. Outliers of Paleozoic strata are exposed immediately to the north in the Haileybury area and further to the north between New Liskeard and Englehart.

Archean Keewatin rocks are the oldest rocks in the Cobalt/Silver Centre area and form the southernmost portion of the Western Abitibi sub-province of the Superior Province. These rocks include predominantly massive and pillowed intermediate to mafic metavolcanic flows with intercalated pyroclastics and metasedimentary rocks, including cherty and sulphidic interflow sediments; felsic metavolcanic rocks are relatively rare. The Archean rocks were folded and intruded by mafic to ultramafic dikes and granite stocks and batholiths (Table 10).

The eroded Archean surface is unconformably overlain by relatively flat lying Paleoproterozoic sedimentary rocks of the Huronian Supergroup which forms the mildly deformed Cobalt Embayment of the Southern Province. The Supergroup comprises four individual shelf type sedimentary cycles. Each cycle consists of a lower sequence of conglomerate of probable glacial origin succeeded by mudstone, siltstone and coarse arenite; some chemical sediments are associated with the uppermost cycle (Cobalt Group). Southwest of Sudbury, the Huronian Supergroup attains a thickness of 12 km and thins northward across the Cobalt Embayment due to wedging out of lower cycles, a thinning of clastic units and erosion within the sequence (Harron, 2011). At the northeast edge of the Cobalt Embayment in the Cobalt area (Figure 8), the Huronian Supergroup rocks comprise only the Cobalt Group (Gowganda and Lorrain formations) and are commonly found filling interpreted paleo-valleys or troughs in the Archean basement (Table 10).

Paleoproterozoic-age Nipissing Diabase, a suite of tholeiitic gabbroic intrusive rocks and differentiates, intrude both the Archean basement and the Huronian Supergroup sediments. The Nipissing Diabase are the most abundant and widespread igneous rocks intruding the Huronian sediments and occur as dykes, and sills up to several hundred metres thick uniformly distributed across the Cobalt Embayment. In the Cobalt area, the Nipissing Diabase is interpreted as a thick undulating sheet intruding the Cobalt Group sediments at or immediately above the Archean unconformity. Minor Middle Proterozoic diabase dikes intrude all the rocks (Table 10).

The grade of regional metamorphism in the area ranges from sub-greenschist facies in the Huronian sedimentary rocks to greenschist facies in the Archean metavolcanic rocks (Born and Hitch, 1990). Contact metamorphism of sedimentary rocks of the Gowganda and Lorrain formations occurred during the emplacement of Nipissing Diabase at around 2219 Ma, including chlorite-spotted alteration and feldspar clotting. Mineral assemblages in Nipissing Diabase rocks generally reflect greenschist metamorphism which probably occurred during the Penokean Orogeny at around 1900 Ma.

The Lake Temiskaming Structural Zone (graben) trends north-northwest from the Grenville Front and extends across the Cobalt Embayment well beyond the Cobalt/Kirkland Lake area. The axial portion of the graben is filled with flat lying Ordovician and Silurian sedimentary rocks that rest unconformably upon both Archean and Proterozoic terranes. Faulting affects these Paleozoic rocks.

Cretaceous to Jurassic age kimberlite intrusions occur within and proximal to the Lake Temiskaming Graben. Recent exploration indicates that some of the (20 or more) kimberlite intrusions are diamondiferous (Harron, 2011). Sage (1996) notes that kimberlites of the Cobalt-New Liskeard area are often spatially associated with northwest-trending Lake Temiskaming structures and oblique cross-structures.

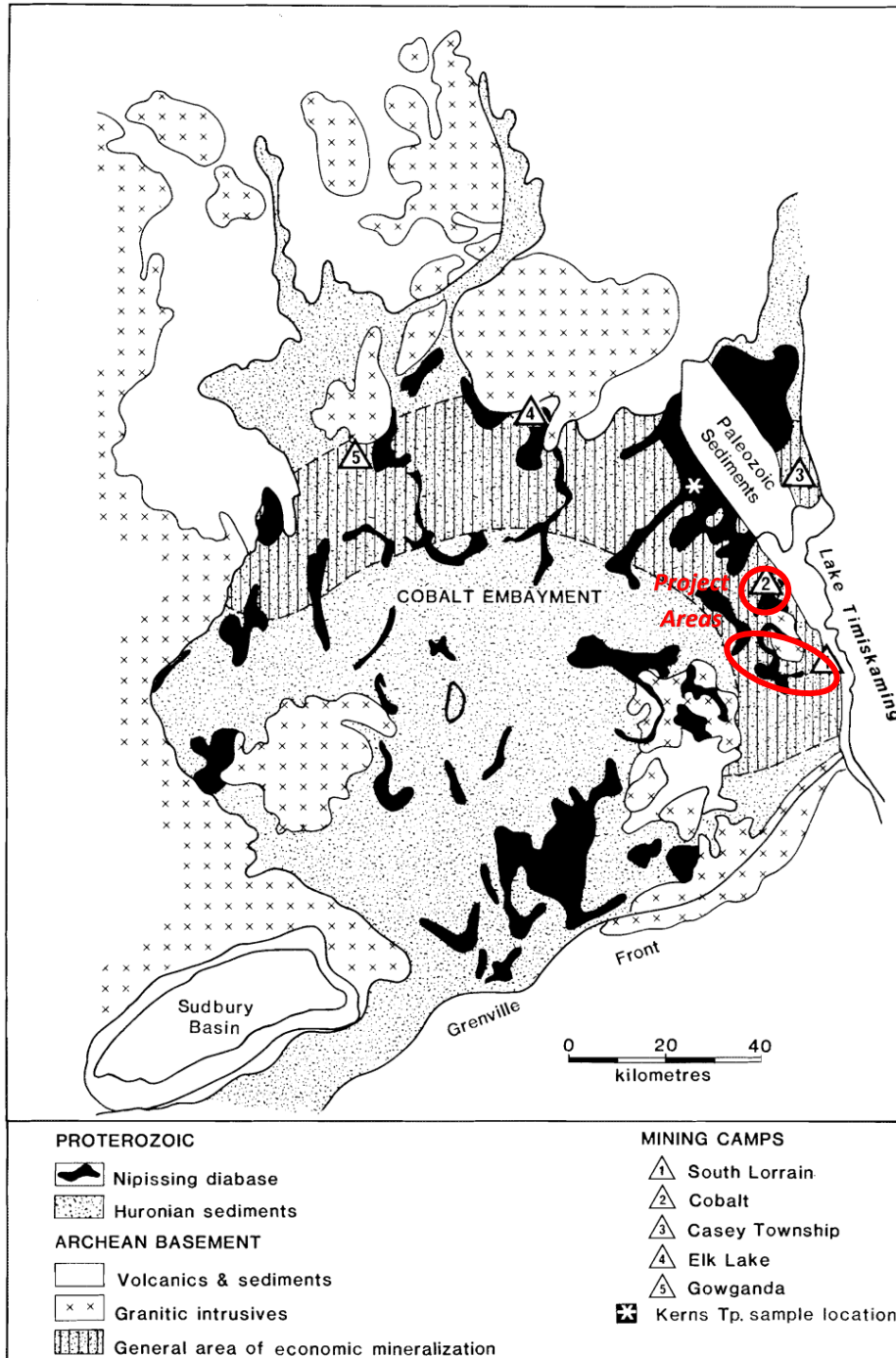


Figure 8: Simplified geology of the Cobalt Embayment

Source: Andrews et al., 1986



Table 10: Lithologic units in the Cobalt region

## PHANEROZOIC

### CENOZOIC

#### QUATERNARY

##### PLEISTOCENE AND RECENT

*Sand, gravel, clay and swamp deposits*

#### UNCONFORMITY

## PRECAMBRIAN

### MIDDLE PROTEROZOIC

#### Lamprophyre Dikes and Diatreme Breccia

*Lamprophyre dikes, Lake Temagami-type diatreme breccia*

#### Olivine Diabase Dikes (Sudbury Swarm)

*Fine-grained (chilled), coarse-grained and plagioclase porphyritic olivine diabase*

#### INTRUSIVE CONTACT

### EARLY PROTEROZOIC

#### Mafic Intrusive Rocks

##### Nipissing Diabase

*Gabbro, hypersthene gabbro, quartz gabbro, leucogabbro, varied textured gabbro, granophyre, sheared and/or hydrothermally altered gabbro*

#### INTRUSIVE CONTACT

### HURONIAN SUPERGROUP

#### Cobalt Group

##### Lorrain Formation

*Arkose, shaly mudstone quartzite, contact metamorphic rocks*

#### CONFORMABLE CONTACT

##### Gowganda Formation

##### Firstbrook Member

*Siltstone, mudstone, arenite; contact metamorphic rocks; tectonically brecciated sediments*

#### CONFORMABLE CONTACT

##### Coleman Member

*Basal (regolithic) conglomerate; clast-supported, massive conglomerate; matrix-supported conglomerate; pebbly wacke and lesser arenite; shaly mudstone; sheared and tectonically brecciated sediments*

#### UNCONFORMITY

### ARCHEAN

#### Felsic to Intermediate Plutonic Rocks

*Mafic diorite and minor quartz diorite; tonalite; granodiorite; granite*

#### INTRUSIVE CONTACT

#### Metasedimentary Rocks (Timiskaming)

##### Conglomerate, Greywacke

#### UNCONFORMITY?

#### Metavolcanic Rocks (Keewatin)

##### Intermediate to Felsic Metavolcanic Rocks

*Dacite; rhyolite; lapilli-stone tuffs and pyroclastic flows*

##### Mafic to Intermediate Metavolcanic Rocks

*Amphibolite; basalt; pillowed basalt; plagioclase-phyric basalt; variolitic basalt; andesite; minor sedimentary and/or pyroclastic debris flows*

*Modified from: Born and Hitch, 1990*



## 7.2 Property Geology

### 7.2.1 Smith Cobalt Project Geology

The oldest rocks on the Smith Cobalt Project area are folded, faulted, and steeply dipping metamorphosed Archean (Keewatin) felsic to mafic metavolcanics and volcanoclastics (pillowed flows, tuffs, and agglomerates) and argillaceous metasediments. An approximately 1 km<sup>2</sup> area of Archean rocks are mapped in the Lorrain Township within and north of the Proteus claim block.

Archean Temiskaming sediments do not appear to outcrop in the Project area however some workers have interpreted them to locally unconformably overly the older Archean Keewatin metavolcanics and metasediments in the subsurface of the Smith Cobalt mine area and the Proteus historic drilling area. The interpretation of Temiskaming sediments is based on the presence of jasper fragments within conglomerate which is generally accepted to occur in Temiskaming conglomerates but not the younger Proterozoic Cobalt Group sediments. Jasper fragments have locally been reported in some conglomerates intersected by historic Dolmac drillholes and CPG's 2017 diamond drillholes SC 17-06 and SC 17-22).

Drillhole SC-10 by Dolmac Mines Limited, put down from surface in the SW1/4, N1/2, lot I, concession XI Lorrain Twp., intersected at a few feet west of the Lorrain-Coleman township line and below the Nipissing Diabase sill (whose bottom contact is here some 490 ft below surface) a conglomerate which may possibly be of Timiskaming age (Campbell, 1959). Campbell describes this conglomerate occurring between footages 536 and 798 as follows *"Timiskaming conglomerate, a fine-grained (1/16 to 1/32 inch) grit with massive greywacke sections; sparse but very definite 2-inch granite pebbles, slightly reddish and siliceous for 3 feet from contact: red granite pebble at footage 553 with attendant faint bedding"* (Thomson PR1960-1).

Late Archean Lorrain Granite intrudes the Archean metavolcanics over a large portion of Lorrain Township and locally southeastern Coleman Township and eastern Gillies Limit. The granite is in part unconformably overlain by the younger Proterozoic Cobalt Group sediments or by Nipissing Diabase sill. The granite is massive, coarse-grained and has a distinctive pinkish red colour. The southwest portion and locally eastern portions of the Kirk Lake block and the southern portion of the Suttie Lake block are underlain by the Lorrain Granite.

A major erosional unconformity resulted in the development of basins and highlands on the surface of Archean metavolcanics and intrusives upon which the Proterozoic Cobalt Group were deposited; represented by the Gowganda Formation's Coleman Member and Lorrain Formation in the Project area. In places the Lorrain Formation overlies the Coleman Member but for the most part the Lorrain sediments lie directly on the underlying Lorrain Granite. Thomson (1960a) suggests that the Lorrain Granite was the source of a significant amount of the material making up both the Coleman Member and Lorrain Formation.

In the Project area, Coleman Member sediments were deposited in the basins and remain relatively undeformed. The greatest thickness of the Coleman Member, probably of the order of 700 ft, lies in the interior of the North Lorrain Basin (Thomson 1960a) which underlies a portion of the Proteus claim block. The beds are generally east-striking and shallow dipping to the south except at the southwest end of the basin in the Proteus claim block where strikes are variable and dips steeper which is interpreted by Thomson (1960a) to reflect deposition of the Coleman sediments on underlying Archean bedrock topographic slopes.

Approximately 70 m of Coleman Member sediments lie between underlying Archean metavolcanics and metasediments and overlying Nipissing Diabase at the Smith Cobalt mine.

The rocks of the Coleman Member are a heterogeneous mixture of greywacke and quartzose siltstone, arkose, argillite, and conglomerate. The Coleman Member often has a lower conglomerate unit and upper conglomerate unit with a sequence of finer grained metasediments "sandwiched" between. Conglomerate



pebbles, cobbles, and rare boulders are generally pink granitic rocks with minor white granite, “greenstone”, and diabase. Clast composition of the conglomerates often reflects the underlying Archean rocks; clasts are more granite dominant over the Lorrain Granite and more metavolcanic/metasedimentary dominant over the Keewatin rocks. Clasts are generally sub-angular to sub-rounded and range up to 15–20 cm in diameter although boulders greater than 1 m diameter have been noted.

Small areas of Lorrain Formation have been mapped overlying Coleman Member sediments in the North Lorrain Diabase Basin in the Proteus claim block area. Thicknesses may be of the order of 40 ft or less. The Lorrain Formation is much more extensive to east of the Project where overlies the Lorrain Granite and forms the steep hills fronting Lake Timiskaming. Thomson (1960a) reports that the Lorrain may be of the order of 550 ft in this area.

The Lorrain Formation exposed in the north part of the Lorrain Township, is almost exclusively arkosic despite the common reference to it as Lorrain quartzite. It is for the most part, light yellowish green or sea green in colour. Bedding is commonly present but is poorly developed.

The Late Proterozoic Nipissing Diabase, typically a fine- to medium-grained, fresh to slightly altered rock, intrudes the Archean volcanics and intrusives and the older Proterozoic Cobalt Group sediments (Thomson 1960a). The Nipissing Diabase in Cobalt Camp has historically been considered to be a single sheet, with numerous rolls, both major and minor resulting in basin and dome like shapes and is estimated to have been approximately 300 m (1,000 ft) thick pre-erosion in the Smith Cobalt Project area (Thomson, 1960a). These domes and basins are elongated in a northeast direction in Lorrain Township. Thomson (1960a) applied the names “North Lorrain Basin” and “Nicol Lake Basin” to two basin-shaped occurrences in the north part of Lorrain Township.

Information is limited for the elevations and dips of the top contact of the diabase within the basins; in general, where the diabase band at surface is narrow and rectilinear the dips are steep. Possibly the greatest vertical depth to the Nipissing Diabase top contact in the North Lorrain Basin is of the order of 700 ft (Thomson, 1960a).

Thomson (1960a) reports that the top contact of the Nipissing Diabase is neither parallel to nor in close proximity to the Cobalt series-Keewatin contact. In the western part of the North Lorrain Basin, the top contact is overlain directly by Keewatin rocks; elsewhere however the diabase overlies Coleman member conglomerate. Thomson (1960a) interprets local steep dipping diabase contacts as representing a post-dyabase fault or a “roll” in the contact.

The Nipissing Diabase has a thickness of 75 m from surface at Smith Cobalt mine shaft. Drilling by CPG in the vicinity of the Smith Cobalt mine shaft confirms a diabase thickness in excess of 50 m in this area (all the holes were collared in diabase). Eight-hundred metres to the southeast in the Southeast Extension occurrence area, CPG’s diamond drillhole SC 17-20 was drilled to determine the thickness of diabase at that location and encountered diabase for its entire length (321 m) for a vertical thickness exceeding 300 m. CPG interprets that this location may be a feeder zone for the sill. In the same area, drillhole SC-10 put down near the Coleman-Lorrain Township line by Dolmac Mines Limited in 1959, intersected the bottom contact of the Nipissing Diabase some 150 m vertically below surface.

The northwest diabase rim of the Nicol Lake Basin underlies the Bende Patent block and the southeast portion of the Kirk Lake claim block.

The northern portion of the Smith Cobalt Project lies on the diabase dome or arch lying between the North Lorrain Diabase basin to the southeast and the Cobalt basin. Here, Thomson (1961b) reported that at the historic Cobalt Twentieth Century Mining area the lower contact of the Nipissing Diabase was intersected in



contact with Coleman Member conglomerate by the crosscut east of Shaft no. 1 indicating a thickness of 53.3 m (175 ft) for the diabase at this location. Cobalt Twentieth Century Shaft no. 2 however attained a depth of 111.3 m (365 ft) and apparently did not reach the lower contact of the diabase.

The S30°E-trending Cross Lake fault which lies to the west of much the Smith Cobalt Project area but cuts through the Kirk Lake Extension block is marked by a pronounced topographic depression in part occupied by Cross, Kirk, Chown and Goodwin Lakes. No information is available in on the dip or displacement in Lorrain township. Northeast of the Project in Bucke Township, the McKenzie Fault strikes S35°E and has a vertical displacement east side down) of over 200 ft. These southeast-striking faults parallel and are interpreted to be related to the post-Silurian in age Lake Temiskaming Fault.





Table 11: Precambrian geology legend for Figure 9 Project Geology

<p>PRECAMBRIAN</p> <p>PROTEROZOIC</p> <p>NIPISSING</p> <p><b>Mafic Intrusive Rocks</b> 17 Diabase, granophyre</p> <p>HURONIAN SUPERGROUP</p> <p><b>Sedimentary Rocks</b> 16 Unsubdivided 16a Bar River Formation 16b Gordon Lake Formation 16c Lorrain Formation 16d Gowganda Formation 16e Serpent Formation 16f Mississagi Formation</p> <p><b>Diabase Dikes</b> 15 Unsubdivided 15a Matachewan (2452 Ma) (NW-trending) 15b Biscotasing (2167 Ma) (ENE-trending) 15c Sudbury (1238 Ma) (WNW-trending) 15d Abitibi (1140 Ma) (ENE-trending)</p> <p style="text-align: center;"><i>INTRUSIVE CONTACT</i></p> <p>ARCHEAN</p> <p>NEOARCHEAN</p> <p><b>Alkalic Intrusive Suite</b> 13 Unsubdivided 13a Syenite, monzonite, granite 13b Diorite, syenodiorite, monzogabbro, hornblendite 13c Schistose-textured</p> <p><b>Felsic to Intermediate Intrusive Suite</b> 12 Unsubdivided 12a Tonalite, granodiorite, trondhjemite 12b Granite, quartz monzodiorite, quartz diorite 12c Schistose-textured</p> <p><b>Porphyry Suite</b> 11 Unsubdivided 11a Porphyry 11b Quartz and/or feldspar porphyry 11d Tonalite, granodiorite</p> <p><b>Mafic Intrusive Rocks</b> 10 Unsubdivided 10a Diorite, gabbro, metagabbro 10b Porphyritic 10c Anorthositic gabbro, leucogabbro 10d Granophyre</p> <p><b>Ultramafic Intrusive Rocks</b> 9 Unsubdivided 9a Peridotite, pyroxenite 9c Schistose-textured</p>	<p style="text-align: center;">CONTINUED</p> <p style="text-align: center;"><i>INTRUSIVE CONTACT</i></p> <p><b>Timiskaming-Type Clastic Metasedimentary Rocks</b> 8 Unsubdivided 8a Arenite 8b Wacke 8c Conglomerate 8d Mudstone, siltstone 8e Schistose-textured</p> <p style="text-align: center;"><i>UNCONFORMITY</i></p> <p><b>Clastic Metasedimentary Rocks</b> 6 Unsubdivided 6a Arenite 6b Wacke 6c Conglomerate 6d Mudstone, siltstone 6f Schistose-textured</p> <p><b>Intermediate (to Felsic) Metavolcanic Rocks/Intrusions</b> 3 Unsubdivided 3a Massive flows 3b Pillowed flows 3c Variolitic flows 3d Hyaloclastite, flow breccia 3e Amygdaloidal flows 3f Tuff, lapilli tuff 3g Tuff breccia, pyroclastic breccia 3h Schistose-textured 3C Calc-alkalic 3T Tholeiite</p> <p><b>Mafic (to Intermediate) Metavolcanic Rocks/Intrusions</b> 2 Unsubdivided 2a Massive flows 2b Pillowed flows 2c Variolitic flows 2d Hyaloclastite, flow breccia 2e Amygdaloidal flows 2f Tuff, lapilli tuff 2g Tuff breccia, pyroclastic breccia 2h Schistose-textured 2C Calc-alkalic 2F High-iron tholeiite 2M High-magnesium tholeiite 2T Tholeiite</p>
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### 7.2.2 Canadian Cobalt Project Geology

The oldest rocks on the Project are folded, faulted, and steeply dipping metamorphosed Archean (Keewatin) intermediate to mafic pillowed flows, tuffs, and agglomerates which lie along the southern boundary of the Lorrain Valley East block.

A small granodiorite body intrudes the Archean age volcanic rocks in the south part of the Lorrain Valley East block.

A major erosional unconformity resulted in the development of basins and highlands on the surface of Archean metavolcanics and intrusives. In the Project area, Proterozoic Cobalt Group Gowganda Formation, Coleman Member sediments were deposited in the basins and remain relatively undeformed. Coleman Member sediments are generally restricted to the South Silver Centre block and the northern margins of the Montreal River West block in the vicinity of the Montreal River and Hound Chute Lake. The beds are generally close to flat-lying, except in the areas of faults where they dip steeply (McIlwaine, 1970). The vertical thickness of the Coleman Member is interpreted to be between 55 m and 240 m in the vicinity of the Silver Centre South block based on historic drill logs (McIlwaine, 1970). McIlwaine (1970) suggests that the variation in thicknesses represents irregular basement topography on which the Coleman Member was deposited, with the suggestion of a local trough trending east-northeast subparallel to the flanks of the diabase domes. South of the dome, McIlwaine (1970) estimated that the Coleman Member might reach a maximum thickness of approximately 300 m based on bedding attitudes and topography. The rocks of the Coleman Member are a heterogeneous mixture of greywacke and quartzose siltstone, arkose, argillite, and conglomerate. Conglomerate pebbles, cobbles, and rare boulders are generally pink granitic rocks with minor white granite, “greenstone”, and diabase. They are generally sub-angular to sub-rounded and range up to 15–20 cm in diameter.

The Firstbrook Member of the Gowganda Formation is reported to overlie the Coleman Member along the west boundary of the Silver Centre South block and a more extensive area in the Montreal River West block between Rosevelt Lake and the Montreal River. Bedding is generally flat to shallow dipping (<10°). In South Lorrain Township the Firstbrook Member rocks are laminated or varved, very fine-grained argillite, with alternating greyish red or greyish brown and greyish green layers, and quartzite with a total estimated thickness of 150 m to 200 m (McIlwaine, 1970). In Bay Lake area including the Montreal River West block, Born and Hitch (1990) describe the Firstbrook Member rocks as a coarsening upward sequence of mudstone, siltstone and sandstone with a total estimated thickness of up to 260 m.

The Cobalt Group Lorrain Formation conformably overlies the Gowganda Formation and underlies a significant portion of the Lorrain Valley East and West blocks and the Montreal River and Montreal River West blocks. Bedding is generally flat to shallow dipping (<25°). McIlwaine (1970) describes the rocks of the Lorrain Formation in South Lorrain Township as grey feldspathic quartzite, pale green quartzite, and pink arkose. The thickness of the Lorrain Formation in South Lorrain Township is estimated to be 0–365 m but there is not drill confirmation (McIlwaine, 1970). In Bay Lake area, including the Montreal River West block, Born and Hitch (1990) describe the Lorrain Formation as a basal arkose overlain by thin local units of laminated shaly mudstones, siltstones and very fine-grained sandstones in turn overlain by a moderate- to poorly sorted, medium- to very coarse-grained arkose, with a total estimated thickness of up to 250 m.

The Nipissing Diabase intrudes the Archean volcanics and the Proterozoic Cobalt Group sediments. It is typical a fine- to medium-grained, fresh to slightly altered rock. The Silver Eagle Lease block is mostly underlain by the Nipissing Diabase which is approximately 277 m (910 ft) thick in the Keeley-Frontier Mine area (McIlwaine, 1970). McIlwaine (1970) considers the Nipissing Diabase in South Lorrain Township to be a single sheet, with



numerous rolls, both major and minor. The Silver Eagle Lease lies on the west side of a diabase dome, with the central part removed by erosion. The axis of the dome strikes north-northeast. This axis is subparallel to the margin of the interpreted basin of deposition of the Cobalt Group sedimentary rocks. A narrow Nipissing Diabase dyke (200–500 m thick) trends north-northeast cutting Lorrain Formation sediments in the Montreal River block. A more extensive Nipissing Diabase sill extends from the northern part of the Montreal River block northwest through the southern part the Montreal River West block where it cuts Gowganda Formation Coleman and Firstbrook Member sediments and Lorrain Formation sediments. Another northwest trending sill cuts the Gowganda and Lorrain Formation sediments at the northwest end of the Montreal River West block.

Born and Hitch (1990) report that the sedimentary rocks of the Gowganda and Lorrain formations are undeformed in most places in the Bay Lake area which includes the Montreal River West claim block. They have locally undergone some gentle flexure folding during the Penokean Orogeny. Government geological maps show some generally limited strike-length north, northeast and northwest trending faults and lineaments cutting the Proterozoic sediments and Nipissing Diabase. Prominent northwest trending faults such as the Montreal River Fault and several subparallel subsidiary structures are interpreted to be post-Silurian and related to the Timiskaming Rift Valley. Born and Hitch (1990) report that in the Montreal River West block area, displacements along these faults appear to be minor, and the local Huronian stratigraphic sequence is essentially intact with no apparent major horizontal or vertical displacements. McIlwaine (1970) however notes variable lateral displacements of 150 m or more in South Lorrain Township; with up to a 1.5 km left lateral displacement of the Firstbrook Member by the Montreal River Fault on the west boundary of the Silver Centre South block.

### **7.3 Significant Mineralized Zones on the Smith Cobalt Project**

Mineralization at the Smith Mine, Bends Patent and Silver Eagle Lease are discussed below. Other historical silver-cobalt occurrences are known on the Project areas; however, there is little to no information available regarding them as of the Effective Date of this Report.

#### *7.3.1 Smith Mine (extracted from Thomson, 1960a and 1961c)*

The Smith Cobalt shaft is located on an outcropping arch of Nipissing Diabase with a thickness of 75 m (Thomson, 1961c).

The Coleman Member sediments underlying the diabase in the shaft area have a thickness of about 70 m made up of conglomerate except for the top 10.7 m which is bedded greywacke (“slate”) with some quartzite. An east-west cross section through the shaft shows the lower contact of the Coleman Member to have a gentle trough shape.

Information on the Archean rocks below the Coleman Member is limited. Campbell (1959) reports the presence of both metavolcanics and metasediments in Dolmac Mines drill logs. Campbell (1959) assigned the volcanic rocks comprising rhyolite, rhyolitic tuffs (in part bedded) and breccias to the Keewatin series and the sedimentary rocks comprising fine-grained conglomerate to the Timiskaming series. Thomson (1961c) noted the difficulty in distinguishing between Cobalt Group sediments and Timiskaming Series sediments in diamond drill core and suggested the assignment these fine-grained conglomerates to either Cobalt Group or Timiskaming should wait until the stratigraphy was better understood.

Referring to plans of the 400-ft level, Thomson (1961c) noted several faults that lacked information as to displacement. At 70 m west of the shaft, the most pronounced fault strikes N18°E. The North and South veins are also said to be along strong faults. At about 80 m northward of the shaft a fault striking slightly north of



west appears to be the extension of the No. 10 vein fault from the adjoining Cross Lake O'Brien (Deer Horn) property currently held by Agnico Eagle.

Thomson (1961c) reported four veins, striking easterly or slightly south of east on the 400-ft level of the historic Smith Cobalt mine; two, designated as the North and the South veins contained cobalt and nickel but apparently negligible amounts of silver. No historic assay grades are reported. The vein structures are said to be well marked faults (Thomson, 1961c).

The South Vein is complex; on the 400-ft level crosscut after striking 6 m at N65°W through Coleman Member conglomerate it splits into two branches, as less significant one continuing at N65°W and the more significant one striking S75°W. The latter was drifted on for some 24.4 m at which point another irregularity and vein junction was encountered. At this vein junction, a winze was put down to the 452-ft level. The total footage of drifting on the South Vein on both levels was less than 91.5 m which was completed in the vicinity of the Proterozoic Cobalt Group over Archean Keewatin series contact, both above and below it. The Cobalt-Keewatin contact on the 400-ft level at the vein lies about 15 m east of the Smith Cobalt Project–Cross Lake O'Brien property line.

The North Vein carried only minor amounts of cobalt where hosted by Coleman Member conglomerate. On the 452-ft level, in Keewatin metavolcanics, widths of up to 7.5 cm of massive smaltite were reported in the North Vein. It was drifted on for some 36.6 m at this level and widths of 2.5–22.5 cm of calcite and cobalt ore are said to occur. Most of the cobalt ore obtained from the mine came 452-ft level North Vein.

Both the North and South veins were more productive in the Keewatin metavolcanics than in the overlying Coleman Member conglomerate. Thomson (1961c) reported that no silver- or cobalt-bearing veins had been found in the Nipissing Diabase but, no exploration for such was made except on surface.

At the Smith Cobalt block, the Cobalt Series sediments occur under a Nipissing Diabase arch, similar to that at Kerr Lake outside the Smith Cobalt Project boundary (lot 3, concession IV, Coleman township) and being possibly its continuation. Historically, significant production was obtained from veins in the Cobalt Series sediments under the arch at Kerr Lake but to date exploration on the Smith Cobalt property has not located significant mineralization. The shaft crosscut on the 400-ft level traversed the sediments under the arch in an east-west direction – approximately at right angles to the axis of the arch – without discovering anything of economic importance. The veins carrying cobalt on the Smith Cobalt property are approximately normal to the axis of the arch.

It seems probable that the North and South veins on the Smith Cobalt property are extensions of productive veins on the adjoining Cross Lake O'Brien property, immediately west of and outside the Smith Cobalt Project boundary.

A very small historical production of cobalt ore was obtained as described in Section 6.5.1.

### 7.3.2 *Bende Patent*

Thomson (1961d) reports that Badger Mines Limited prospected the Bende patent (then claim no.1355) and the adjacent claim no. 1494 from 1908 to 1911. Three northeast-striking veins (no's 4, 5 and 6) and one north-striking vein (no. 7). were discovered. Significant surface trenching and pitting was done on the veins including a 335 m (1,100 ft) long trench along the No. 5 vein. Shafts no's 4 and 5 were put down on the No. 5 vein within the current Bende property. Shaft no. 3 was put down on the No. 5 vein in historic claim 1494 outside the east boundary of the Bende property.



The No. 5 vein dips steeply to the northwest possibly at about 80°; it is said to have had a width of 38–51 cm (15–20 inches) in many places. Underground exploration on the No. 5 vein was extensive. Shaft no. 4, inclined at 79°, is reported to have reached a depth of 21.3 m (70 ft) by 1908 and further undocumented work was done. Shaft no. 5 is reported to be 104.9 m (344 ft) deep with levels at 22.9 m, 42.7 m and 104.9 m (75 ft, 140 ft and 344 ft). There is reference to additional work being conducted from the 22.9 m (75 ft) level; however, it is uncertain whether this refers to Shaft no. 4 or Shaft no. 5: *“From the drift on the 75-foot level, 120 feet southwest of the shaft, a winze was sunk a depth of 100 feet, and 320 feet of drifting done at this level”*. Thomson (1961d) reports that it appears that little if any production of silver or cobalt was obtained from the two claims.

The veins on the Bende Patent block are hosted in the upper part of the Nipissing Diabase sill; its upper contact is along the south boundary of the patent where it dips beneath Archean metavolcanics. The Author is unaware of any information describing the style of veins and silver-cobalt mineralization on the Bende patent.

### 7.3.3 Canadian Cobalt Project – Silver Centre Lease – Silver Eagle Historical Production

The Wettlaufer Vein crossed the northwest corner of the Silver Eagle lease for a length of 6.09 m (20 ft) on the 70.1 m (230 ft) level of the Wettlaufer mine which lies on third-party land outside the current lease. Access to the deposit was via the Wettlaufer shaft, approximately 129.5 m (425 ft) northeast of the northwest corner property, on the 54.9 m (180 ft) and 70.1 m (230 ft) levels.

In the adjacent Wettlaufer mine property, Knight (1922) described the Wettlaufer vein as being hosted entirely in the Nipissing Diabase and at a depth of from 30 m to 75 m below the Keewatin contact. The main vein width varies from a fracture up to 6 inches and is usually accompanied by two or more parallel fractures from a several centimetres to 60 cm away on either or both sides. The strike is northeast, and the dip is practically vertical. The diabase hosting the vein showed little jointing or fracturing, consequently, leaf silver penetrated only a few inches into the wall rock, and the quantity of mill-rock from the walls was negligible.

Knight (1922) states: *“In the plane of the vein the ore-shoots rake to the southwest at from 15° to 30°, more or less, conforming with the dip of the contact between the diabase and the overlying Keewatin. At the shaft the contact was, before erosion, about 100 feet above the collar; and high-grade was found in the outcropping of the vein at the shaft. At the southwest corner of the property, 500 feet distant along the strike of the vein, the contact is about 100 feet above the top of the ore zone. This is an interesting feature and shows a relation between ore zone and contact similar to many cases in Cobalt where the ore zones in the conglomerate of the Cobalt series conform to the Keewatin contact at a more or less regular distance from it.”*

A very small historical production of silver ore was obtained as described in Section 6.5.2.

## 8 Deposit Types

The exploration target at the Greater Cobalt Project is arsenide Ag-Co vein deposits of which the historical Cobalt Camp and satellite Silver Centre Camp are the type locality. The arsenide Ag-Co vein deposit type is also referred to as the Five-Element (Ni-Co-As-Ag-Bi) Vein (FEV) deposit type (Kissin, 1993). The following descriptions of the arsenide Ag-Co vein deposit model (Sections 8.1 and 8.2) are extracted and modified from Ruzicka and Thorpe (1996).

### 8.1 Physical Model – Arsenide Silver-Cobalt Vein Deposits

Arsenide Ag-Co vein deposits are localised in areas affected by basinal subsidence and rifting and are spatially related to regional fault systems and closely associated with intrusions of mafic rocks. The arsenide Ag-Co vein deposits in the Cobalt Camp are associated with Paleoproterozoic conglomerate, quartzite, and greywacke rocks of the Cobalt Group (Coleman Member of the Gowganda Formation), as well as with major sill-like bodies of Nipissing Diabase and with Archean mafic and intermediate lavas and intercalated pyroclastic and sedimentary rocks (Figure 10).

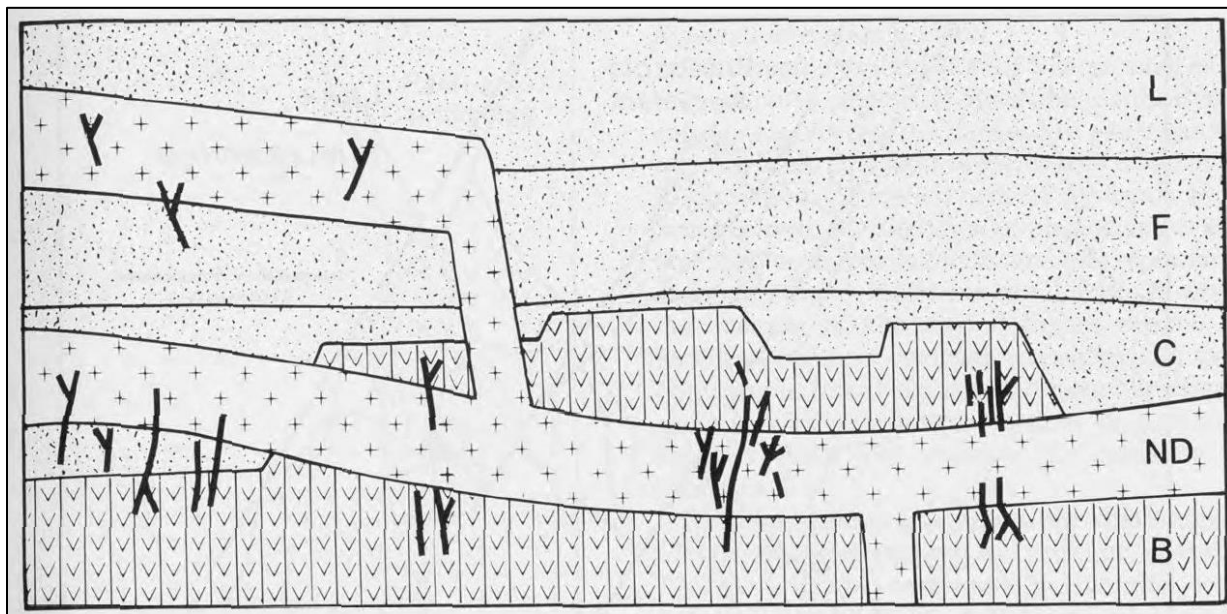


Figure 10: Simplified geological schematic section showing relationship between major lithological units and distribution of arsenide silver-cobalt vein systems (black lines)

Note: Huronian sediments include the Lorrain Formation (L), and the Gowganda Formation's Firstbrook Member (F) and Coleman Member (C). Archean basement rock (B) are steeply dipping metavolcanic sequences. All units are intruded by Nipissing Diabase (ND).

Source: Andrews et al., 1986a

The deposits in the Cobalt Camp contain three principal mineral assemblages: (i) a relatively minor base metal sulphide assemblage, which is confined to Archean metasedimentary and metavolcanic rocks; (ii) the arsenide Ag-Co assemblage, which occurs prevalingly at and near the contacts between the Nipissing Diabase and the sedimentary rocks of the Cobalt Group, and to a lesser extent along contacts between the diabase and the Archean rocks; and (iii) a late stage sulphide assemblage, which is in part distributed along the margins of arsenide-rich veins, where these have apparently been reopened.



The age of the arsenide Ag-Co veins has been established from geological evidence and from dating of the associated diabase sheets. In the Cobalt area, the arsenide silver-cobalt veins cut the Nipissing Diabase, but are displaced by post-mineralization reverse faults, which are contemporaneous with the intrusion of the quartz diabase dykes. Therefore, the deposition of the mineralization must have taken place after intrusion of the Nipissing Diabase sills, but before intrusion of the quartz diabase dykes (i.e. between 2.22 Ga and 1.45 Ga). The bulk of the mineralization apparently formed shortly after intrusion of the Nipissing Diabase sheets, which took place about 2.22 Ga (Jambor, 1971a; Corfu and Andrews *et al.*, 1986a).

Distribution of the Ag-Co veins in the Cobalt Camp is controlled by the contact between the Nipissing Diabase sheets and the rocks of the Cobalt Group (Gowganda Formation) and to a lesser extent the Archean metavolcanic and metasedimentary rocks. The veins occur in the diabase and in the Proterozoic and Archean rocks within about 200 m of their contact with the diabase. They dip steeply, extend horizontally as much as 1,000 m and vertically as much as 120 m, and are as wide as 1.2 m. A typical deposit consists of a few short anastomosing veins of variable thickness from a few centimetres to two or three decimetres.

The metallic minerals occur in irregular high-grade lenses surrounded by aureoles of low-grade material. Arsenides, sulpharsenides, and antimonides of Ni, Co, and Fe as well as native Ag, are the principal metallic constituents of the veins. The mineralized veins in the Cobalt area contain native Ag, dyscrasite, acanthite, rammelsbergite, skutterudite, arsenopyrite, gersdorffite, cobaltite, glaucodot, nickeline, breithauptite, chalcopyrite, tetrahedrite, and native Bi. Native Ag and the Co-Ni arsenides are the most abundant metallic minerals. Quartz, chlorite, calcite, and dolomite are the most common gangue minerals (Lang *et al.*, 1970; Petruk *et al.*, 1971a, b, c, d; Jambor, 1971c).

The metallic minerals occur in masses, lenses, veinlets, and disseminations with or without associated gangue minerals and in various textural forms, such as intergrowths, disseminations, dendrites, rosettes, and monocrystals. They are present in distinct mineral assemblages, such as Ni-arsenide, Ni-Co-arsenide, Co-arsenide, Co-Fe-arsenide, Fe-arsenide, sulphide, and oxide (Petruk, 1971), with the following features:

- The Ni-arsenide assemblage is localised in many cases at the periphery of major veins, but also occurs in various places in small veins.
- The Ni-Co-arsenide assemblage occupies a transitional position between the Ni-arsenide and Co-arsenide assemblages. Much of the best Ag mineralization is associated with this assemblage.
- The Co-arsenide assemblage occurs generally in the main parts of the veins.
- The Co-Fe-arsenide assemblage is less common than the preceding ones.
- Minerals of the Fe-arsenide assemblage tend to be concentrated at the ends of the veins. They are commonly accompanied by native bismuth, galena, and marcasite.
- The sulphide assemblages typically contain chalcopyrite and tetrahedrite, although more than 30 sulphide minerals have been reported (Petruk, 1971). They occur in some of the main carbonate veins, usually in the peripheral portions of highly mineralized sections.
- Oxide minerals, hematite, magnetite, rutile, anatase, ilmenite, and wolframite, occur in the veins only in small amounts. They are typically associated with the carbonate gangue.

The host rocks of the deposits in the Cobalt Camp were affected by several phases of alteration. Intrusion of the diabase sheets was accompanied by contact metasomatic alteration of the country rocks and by deuteric alteration of the diabase itself. A specific kind of contact alteration is the spotted chloritic alteration, which developed in the vicinity of the Nipissing Diabase prior to mineralization. It is characterised by the occurrence

of chlorite-rich spots, which are surrounded by chlorite-deficient aureoles, and affected many of the rocks intruded by the diabase.

The most prominent alteration was associated with formation of the mineralized veins. Its effects depended upon the composition of the rocks involved. For instance, the alteration of diabase resulted in: (i) replacement of pyroxene by actinolite and some chlorite; (ii) retrogression of plagioclase to muscovite, epidote, and albite; and (iii) replacement of ilmenite and magnetite by leucosene and titanate (Andrews *et al.*, 1986). The hydrothermal wall rock alteration along the mineralized veins is developed in narrow zones, typically a few centimetres wide. The most distinct alteration zones are developed in the diabase and consist of two or three layers. The first (inner) layer, immediately adjacent to the veins, contains albite, chlorite, and anatase; the second layer has calcite, epidote, and small amounts of muscovite; and the third (outer) layer comprises increased amounts of muscovite (Jambor, 1971b; Andrews *et al.*, 1986).

## 8.2 Genetic Model – Arsenide Silver-Cobalt Vein Deposits

The solutions that deposited Ag-arsenide ores were initially as hot as 400°C in some cases, although wide ranges of fluid inclusion temperatures (mostly 100–250°C) and salinities have been recorded (Franklin *et al.*, 1986; Kerrich *et al.*, 1986; Jennings, 1987; Kissin, 1988). The fluids may have been variable mixtures of basinal brines and meteoric waters. Kissin (1988) has suggested that the deposits were formed in an environment characterised by incipient rifting of continental crust.

In the case of the arsenide Ag-Co veins in the Cobalt area, genetic models have been postulated that involve derivation of the Ag, Ni, Co, As, Sb, Bi, Cu, and Hg either from the Archean sedimentary beds, with minor contributions from certain volcanic flows (Boyle and Dass, 1971), or, more recently, from the formational brines of the Archean carbonaceous, pyritic tuffs or their clastic derivatives in the Proterozoic sedimentary sequence (Watkinson, 1986). The latter hypothesis is supported by fluid inclusion and oxygen isotopic data. Watkinson (1986) inferred from the relatively homogeneous Pb isotopic ratios (Thorpe *et al.*, 1986) that the metalliferous brines had a long residence time in the sulphide-bearing rocks but were released into tensional fractures upon intrusion of the Nipissing Diabase sills. The sudden release of pressure caused rapid precipitation of the mineralization in fractures at the diabase contacts (Watkinson, 1986). According to sulphur isotope studies, the mineralization took place under temperatures between 130°C and 254°C (Goodz *et al.*, 1986). The mineralization components, principally native Ag, As, and Co, were introduced into the fractures along with carbonate gangue by hydrothermal solutions of high pH and low Eh.

The reader is referred to Kissin (1992, 1993) for a discussion of alternative genetic models for arsenide Ag-Co deposits.

Potter and Taylor (2010) have more recently proposed a genetic model for the Ag-Co veins of the Cobalt mining camp and other regionally-distributed, polymetallic (Fe, Cu, Ni, Co, As, Au, Ag, Bi ± U) calcite-quartz vein systems in the Cobalt Embayment. The genetic model, which encompasses all of the observed isotopic, mineralogical, and textural features of the polymetallic vein systems involves: (i) Regional flow of oxidized, hydrothermal fluids focused along the Huronian-Archean unconformity, driven by sedimentary loading and the heat released by the Nipissing Diabase intrusive event ca. 2.2 Ga; (ii) Genesis of regionally-distributed, discordant, polymetallic vein mineralization through the interaction of the oxidized basin fluids with both fluid- and solid-reducing components of the basement, facilitated by localized displacement of the Huronian-Archean unconformity along reactivated faults; and (iii) Hydrothermal remobilization of at least some of the vein components, notably Pb, in association with regional Na- and K-metasomatic events ca. 1.7 Ga. Potter and Taylor also suggest that this model introduces the possibility that other styles of polymetallic



mineralization, notably “unconformity-associated”, could have formed as a result of the two regional hydrothermal fluid circulation events.

### 8.3 Exploration Guides – Arsenide Silver-Cobalt Vein Deposits

Selection of exploration targets areas for arsenide-silver-cobalt vein deposits should consider:

1. The contact between the Nipissing Diabase sheets and the rocks of the Cobalt Group (Gowganda Formation) and to a lesser extent the Archean metavolcanic and metasedimentary rocks. Known veins occur in the diabase and in the Proterozoic and Archean rocks within about 200 m of their contact with the diabase.
2. In addition to recognition of the prospective envelope relative to the Nipissing Diabase contact, previous workers have noted that many of the significant deposits hosted by the Coleman Member sediments are at or near the contact with the basement Archean rock (Nichols, 1988). The Coleman Member sedimentary rocks are often in “basins or troughs” developed on the Archean paleotopography proximal Nipissing Diabase intrusions.
3. Based on work in the main Cobalt Camp, the occurrence of sulphide-bearing carbonaceous tuffaceous horizons (reductants) in the Archean and/or Proterozoic complexes located beneath diabase sills (Ruzicka and Thorpe, 1996). Nichols (1988) noted sulphide enrichment of the Archean interflow sediments adjacent to high grade mineralized veins. Although a relationship between the quantity of sulphides and the quantity of Ag was not established, the relative amount of Cu, Pb and Zn sulphides increased with proximity to Ag mineralization in each interflow. Thus, as an exploration guideline, the relative amount of base metal sulphides, particularly chalcopyrite, in an interflow chert can be interpreted as an indication of proximity to a high-grade shoot. Based on historic and current work this does not seem to be an important guide in the Silver Centre area; interflow sediments in volcanic units are not reported.
4. Permeable rocks in the overlying sequence capable of yielding formational metalliferous brines (Ruzicka and Thorpe, 1996).
5. Presence of favourable structural features, which include broad dome-like arches of the base of a diabase sill and possible associated structural traps in the form of fracture systems favourable for deposition of metallic minerals from hydrothermal solutions (Ruzicka and Thorpe, 1996).
6. When targeting Co mineralization, bear in mind observed metal zonation in the arsenide-Ag-Co vein deposits. Historic mining generally targeted the Ag-rich portions of the veins, Co-rich zones if present may therefore have locally been left underexplored and undeveloped if the Ag grade did not meet cut-off grade.
7. Nichols (1988) also noted the strike of Archean volcanics appears to have a definite influence on Ag mineralization. Thus, the strike of volcanics should be determined very early in an exploration program. The remainder of the program should then test the ideal host rock environment for veins parallel or sub-parallel to the strike of the Archean basement rocks.

In the Cobalt area, past surface-based exploration has relied largely on prospecting for mineralized fractures supported by overburden stripping and pitting programs.

In addition to prospecting methods, exploration of the Cobalt Project should consider the use of the following techniques and guides to identify the features controlling arsenide Ag-Co mineralization or the arsenide Ag-Co veins alone:





- 
- Airborne and ground based geophysical surveys including magnetic, electromagnetic (EM) and IP methods to map lithology and structure.
  - Detailed geological mapping to map prospective lithology, alteration and structure.
  - Quaternary geology mapping to aid in planning and interpretation of soil and overburden geochemical surveys. Sampling of the basal till for mineral exploration and tracing of mineralized float is most easily and efficiently accomplished in areas of ground moraine and follow-up exploration should be easier than in other glacial landforms, such as hummocky moraine.
  - Selective multi-element (Ni-Co-As-Ag) geochemical surveys including soils and basal till. Soil gas surveys may be useful. Contamination of the surface soils by previous mining activities may locally limit the utility of soil geochemical surveys.
  - Diamond drilling testing of any geological geophysical and geochemical targets should consider the 200 m vertical prospective envelope above and below the Nipissing Diabase contacts with the Cobalt sediments and the Archean metavolcanics and metasediments. Targeting should also consider the evidence that many of the significant deposits hosted by the Coleman Member sediments are at or near the contact with the basement Archean rock.



## 9 Exploration

Historical exploration conducted on the Smith Cobalt Project and Canadian Cobalt Project areas prior to acquisition by CPG is described in Section 6.

CPG has not yet completed work on the Canadian Cobalt Project. Since 2016, CPG has completed exploration over at the Smith Cobalt Project, including:

- An airborne magnetic survey
- An IP geophysical survey
- Surface trenching/stripping and sampling;
- A collaborative seismic survey
- Two phases of diamond drilling (see Section 10).

### 9.1 2016 Airborne Magnetometer and VLF-EM Survey

CPG commissioned Eagle Geophysics Ltd to fly a helicopter-borne gradient magnetic survey over the Smith Cobalt Project (GeoPulse Inc., 2016). The survey was flown 9–12 October 2016 and part of a larger survey, included 149.1-line km within Project claim boundaries at that time.

Heli Explore, based in LaSarre Quebec, was commissioned by Eagle Geophysics to tow the geophysical equipment at the project with a Eurocopter AS350B3 helicopter. All ancillary equipment was mounted directly to the magnetometer structure (bird) for higher accuracy measurements. Navigation of the aircraft was achieved using differential positional (DGPS) and aided by both radar and laser high precision altimeters for high precision topographic draping. The survey was flown using the WGS-84 Datum and then re-projected into UTM (Zone 17) projection, NAD83 datum during post-processing.

#### 9.1.1 *Magnetic Gradiometer*

The bird used was a four-sensor (Quadrimag) potassium magnetic gradiometer designed by Eagle Geophysics and attached to the helicopter by a 30 m-long tow cable. The gradiometer contains four GEM System GSMP-35A sensors mounted within the Y-Z plane at the front of the system frame: one located at the top of the frame, one at the base of the frame and two on the outer edges of the frame. The central bottom sensor is used for the total magnetic intensity measurement and combined with the top sensor approximately 3 m away for the measured vertical gradient. The two outside sensors are separated by 10 m and used for the cross-line gradient measurement. The inline gradient is calculated by applying the same difference formula to two consecutive records that occur approximately 3 m from each other.

The gradiometer data are collected at a rate of 10 samples per second (10 Hz) and merged with all ancillary data. The combined data stream (including Mag, GPS, VLF-EM and radar information) is then sent up the tow cable to the data acquisition system in the helicopter.

#### 9.1.2 *VLF-EM System*

Two VLF (very low frequency) EM receivers mounted on the bird were tuned to orthogonal stations: La Moure, North Dakota (25.2 kHz) and Cutler, Maine (24.0 kHz). At times, one of the VLF stations was operating at reduced power resulting in only one station offered in the deliverables.

Measurements of the in-phase, quadrature-phase and total field are taken at a 10 Hz sample rate. The in-phase measurement is easily affected by variations in the sensor orientation and may not be useful in areas of rugged topography or where bird movement is significant. The quadrature-phase measurements are dependent on bird direction; therefore, directional rectification is required. The resulting signal measured by the sensors can reveal weak conductors that are energized by the strong VLF signals.

### 9.1.3 Quality Control

All collected survey data was subject to a comprehensive data quality control verification. Data quality objectives for the survey were analyzed in accordance with the metrics specified in Table 12.

Table 12: Data quality objectives

Parameter	Objective	Results
Line spacing	Not to exceed 1.4 times the planned line spacing for an average of more than 1 km along a flight line.	No re-flights were required due to exceed the line path specification.
Magnetic storms	Departure from a 1-minute chord should not exceed 30 nT.	No magnetic storms presented an issue during survey activities.
Bird height	Not to exceed 70 m over 1 km.	No lines exceeded this specification. The only areas affected by > 70 m terrain clearance were in areas with high topographic gradient and over a major transmission line crossing the survey area.
Magnetic noise	Not to exceed $\pm 1.0$ nT over 1 km. <5 seconds in duration and outside of high gradient areas	No excessive noise was detected during survey activities.
Magnetic drop-outs	<5 seconds in duration.	No drop-out longer than 5 seconds were detected during survey activities.

### 9.1.4 Results

All geophysical data including ancillary data were provided in a Geosoft GDB database. Digital grid and map products included:

- Total Magnetic Intensity (TMI):
  - Measured vertical magnetic gradient (VGRAD)
  - Measured cross-line magnetic gradient (CGRAD)
  - Calculated in-line magnetic gradient (IGRAD)
  - Magnetic Tilt Derivative (TDR)
  - Horizontal Magnetic Gradient (HGRAD)
- Magnetic Analytic Signal (ASIG):
  - VLF Total Field (VLF-TF)
  - VLF Quadrature (VLF-QD)
  - VLF In-Phase (VLF-IP)
  - Digital Terrain Model (DTM)

The gridding cell size used for all grids was 15 m.

GeoPulse Inc. (2016) noted that magnetic data collected over the survey area was complex and defines features that appear related to contact zones and structures such as faults, folds, and fractures. The magnetic field response varies considerably in both amplitude and character. Broad, low gradient features likely represent deeper seated bodies, whereas the sharp and high gradient responses are more likely to be related



to near surface features. The area is dominated by a Cross Lake fault, that is well defined in both the magnetic and VLF-EM data products, striking northwest-southeast just off the west side of the Project area.

GeoPulse Inc. (2016) recommended that the magnetic data be compared with the VLF-EM data in order to correlate geologic structures with the presence of near-surface conductivity. Such areas could represent the presence of sulphides associated with silver-cobalt mineralization and should be followed-up.

**9.2 2017 IP Survey**

CPG retained Abitibi Geophysics Inc. to conduct an OreVision® Time Domain Resistivity/IP survey (“a” = 25 m/ “n” = 1 to 30) over the Smith Cobalt Mine area in January 2017. A total of 6.4-line km was surveyed over eight 800 m long north-south lines at spacings of 50–100 m. Equipment used is summarised in Table 13.

Table 13: 2017 IP survey equipment

IP TRANSMITTER (TX)	
Make and model:	IRIS Instruments TIPIX
Power supply:	Honda 2000 W
Maximum output:	Up to 2.0 kW or 15 A or 2400 V
Electrodes:	Stainless steel
Resolution:	1 mA on output current display
Waveform:	Bipolar square wave with 50% duty cycle
Pulse duration:	1 second
IP RECEIVER (RX)	
Make and model:	IRIS Elrec-Pro, (10 input channels)
Electrodes:	Stainless steel
VP primary voltage measurement:	
Input impedance:	100 MΩ
Resolution:	1 μV
Typical accuracy:	0.2%
Ma apparent chargeability measurement:	
Resolution:	0.01 mV/V
Typical accuracy:	0.4%
Sampling mode:	Linear sampling mode, 20 time slices (M1 to M20)

**9.2.1 Quality Control**

Before the survey:

- Transmitter and motor generator were checked for maximum output using calibrated loads
- Receiver was checked using the Abitibi Geophysics SIMP™ certified and calibrated VP and Ma signal simulator.

During data acquisition:

- Rx and Tx cable insulation were verified every morning
- Daily monitoring of data quality and survey efficiency
- Sufficient pulses were stacked: a minimum of 8 pulses for every reading.

At the operations base:

- Field QCs were inspected and validated.
- Each IP decay curve was analyzed with proprietary software. The gates that were rejected were not included in the calculation of the plotted Ma.

Table 14: Quality statistics – OreVision® survey – Smith Cobalt Project

<b>Average contact resistance across RX dipole (P1-P2):</b>	<b>19.26 kΩ</b>
Average current applied to TX dipole (C1-C2):	1486 mA
Average Vp measured across Rx dipole (P1-P2):	487 mV
Observed windows found to fit a pure electrode polarization relaxation curve:	97.3 %
Average deviation of the validated, normalized windows with respect to the mean chargeabilities:	0.18 mV/V

### 9.2.2 Processing

Following an automated quality control procedure, the apparent resistivity and apparent chargeability pseudo-sections were reviewed and further, manual quality control was conducted if required.

Apparent resistivity and chargeability values were inverted using software that calculates three dimensional patterns of resistivity and chargeability of the subsurface that best explain the values recorded at surface. The software generates a model consisting of rectangular prisms and applies a nonlinear algorithm to minimise the difference between the calculated model and field measurements. In the absence of hard constraining data about the subsurface geometry of lithology/mineralization and considering the non-uniqueness of the geophysical inversion methods, any recovered electrical distribution is only one of an infinite number of possible distributions that could explain the observed data.

### 9.2.3 Resistivity Results

Abitibi Geophysics (2017) reported:

- The inverted resistivity values are low to moderate, with most of the values on the west part of the grid around 1000 Ohm-m and below. Values on the east side of the grid are in the range of 2000 to 4000 Ohm-m. Surface conductive material seems to be limited to the southwest part of the grid.
- There is a broad resistive zone, extending from the west, across the middle of the survey to about line 3000, with two narrower features bending southward. There are two chargeable trends, SC-01 and SC-02, which correlate with the main resistive zone, and are the two highest priority chargeability targets on the grid.
- There are a few “conductive” zones defined in the survey, which have lower resistivity than the background values on the survey but are not strongly conductive. Chargeable trend SC-03 falls within one of these zones.
- A shallow zone of low resistivity is present in the southwest part of the survey area and is likely attributable to conductive cover. This zone correlates with a shallow area of low chargeability.

### 9.2.4 Chargeability Results

Abitibi Geophysics (2017) reported:

- The observed chargeability values are generally low with background values measuring below 6 mV/V and anomalous features sitting mostly in the 15–30 mV/V range. The inverted results show the anomalous features widening at depth producing broadly high chargeability in the lower parts of the inversion model.



However, the reliability of the model is reduced as depth increases, and the broad nature of the high chargeability should not be interpreted literally as a representation of chargeable geology. Widening of inverted features with depth is a common artefact in inversion results, and the results are most reliable near the top of the inverted bodies.

- Eight chargeability trends were resolved by the survey. Of these eight anomalies, three targets (SC-01, SC-02 and SC-03) warrant follow-up and are categorized as priority 1 and priority 2:
  - SC-01 (priority 1) is the highest priority target in the survey area. It is one of the highest chargeability anomalies, which can be an indication of mineralization, and correlates well with a resistive zone, which may represent a silicified body. This target has a generally well-defined trend striking over 150 m and open to the west; it is best resolved on lines 27+50E and 28+00E. It is a deep source, ranging from 280 m down to 200 m elevation (depth to apparent centre of mass), becoming deeper to the west and trending east-northeast.
  - SC-02 (priority 2) is a good target for follow-up. It is characterized by a discrete chargeable response which correlates well with a discrete resistive response. With a 150 m strike length open to the west, both chargeable and resistive features are well resolved on line 26+50E. It is a deep source, ranging from 200 m down to 180 m elevation (depth to apparent centre of mass), becoming deeper to the east and trending east-northeast.
  - SC-03 (priority 2) is the only target on the east side of the grid that has been recommended for follow-up. Its chargeable response is somewhat better resolved than other trends in the eastern part of the grid and it correlates with an area of lower resistivity. The trend has a 100 m strike length and is open to the east. It is a deep source, ranging from 230 m down to 200 m elevation (depth to apparent centre of mass), becoming deeper to the west.

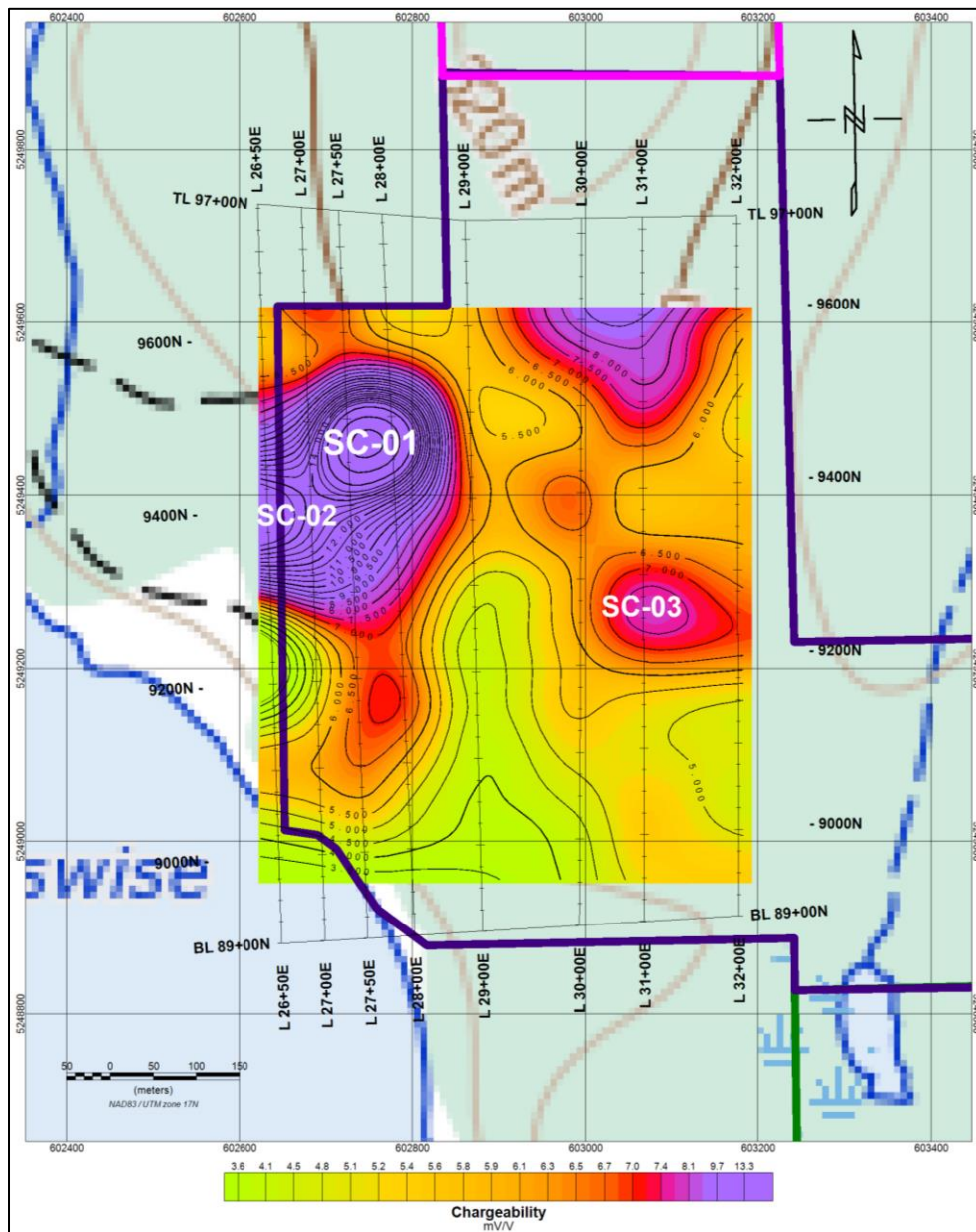


Figure 11: Inverted chargeability (mV/V) at elevation 200 m (approximately 100 m below surface)

### 9.3 Surface Stripping and Sampling – Smith Cobalt East Extension (Patent 61390-0044)

Prospecting in 2017 led to the rediscovery of a single calcite vein, approximately 10 cm wide, with abundant cobalt bloom in a historical pit wall approximately 800 m southeast of the Smith Cobalt mine shaft. The pit is located on Smith Cobalt Patent 61390-0044 at approximately UTM 603,295E 5,248,965N.

Thomson (1960a) previously reported on this cobalt occurrence as being exposed in a 13-ft pit at 150 ft north and 200 ft east of the southwest claim corner on Concession XI, Lot I, Lorrain Township. The pit was put down on nearly vertical fault striking N58°E in Archean Keewatin metavolcanic rock approximately 1.5 m south of and nearly parallel to a Nipissing-Keewatin contact. In the pit, three or four fractures strike northerly nearly at right angles to the fault; along one of these is a little calcite and abundant cobalt bloom (Thomson, 1960a).

CPG reports that the vein is hosted in Nipissing Diabase on the north wall of the historical pit, trending at an azimuth of approximately 340° and dipping at 85° to the southwest. A 15 cm chip sample taken across the vein assayed 12.5% Co, 82.2 g/t Ag, 4.94 g/t Au, 0.53% Ni, as well as >1% Bi and >1.0% As (Sample 324701; Table 15).

CPG cleared approximately 2,000 m<sup>2</sup> surrounding around the historic pit in 2017. The mechanical stripping was completed under contract by Demora Construction of New Liskeard, Ontario utilizing a Doosan 180 excavator. Washing of the bedrock exposed by the excavator was then undertaken using a “Wajax-type” high pressure water pump supported by manual and mechanical shoveling and brushing. Total bedrock exposed and washed was of the order of 800 m<sup>2</sup>.

After the exposed outcrop was washed, preliminary structural mapping of the stripped area was completed. The stripping program exposed a major shear zone trending at an azimuth of 050° separating Nipissing Diabase in the north and Archean metavolcanics in the south. The shear cuts across the vein in the historic pit and at least five additional calcite vein structures hosted in both the diabase and the metavolcanic. The majority trend northwest-southeast, a few display north-south and east-west strikes. All veins display a steep dip (subvertical). The brittle-ductile shear zone displays indicators for relatively pure dip-slip fault movement; no major horizontal displacement along the fault was observed.

CPG has conducted limited grab sampling of the calcite veins exposed in the stripped area. The program was managed by Chris M. Healey, P.Geo. of Nanaimo, BC with field work performed by J. Poloni of N. Vancouver, BC.

Chip samples were manually collected from selected outcrop features of interest using a geological hammer. Samples were placed in plastic sample bags and each bag assigned a unique sample number. Sample bags were then sealed, removed from the field sites and securely stored at CPG’s core logging facility in Cobalt, Ontario, under the supervision of J. Poloni prior to delivery to the laboratory. Because of the limited nature of the surface sampling program, no independent sample standards and blanks were inserted into the sample shipments, instead the lab’s internal quality assurance/quality control (QAQC) programs were relied upon.

CPG collected six selective chip samples from the stripped area in addition to the initial pre-stripping sample. The six chip samples were collected over intervals of 0.5–1.0 m along six separate carbonate veins. Analytical results are presented in Table 15.

Table 15: Surface grab sample analytical results – Smith Cobalt Southeast Extension occurrence stripped area

Sample no.	Location	UTM north	UTM east	Co ppm	Ag ppm	Au ppb	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Comments
324701	SC-East	5248969	603299	12.50%	82.2	4940	137	80.3	20	5280	Vein in old pit. Chip across 15 cm. Co bloom.
66701	SC-East	5248969	603299	6,770	1.17	9	51.9	1.1	11	1910	Main vein 1 m along strike. Co bloom.
66702	SC-East	5248957	603290	10.4	0.21	11	60.2	5	596	13.2	Vein off shear.
66703	SC-East	5249044	603274	1,610	90	21	840	2.7	32	484	Vein in shear.
66704	SC-East	5249028	603289	129	32.1	9	196	234	472	558	North Vein upper pit.
66705	SC-East	5248958	603290	38.1	1.36	12	113	3.6	2010	101	North Vein lower pit.
66706	SC-East	5248946	603285	15.8	0.63	6	43.7	6.3	341	19.4	Veins in west pit.





## 9.4 Sampling at Known Prospects and Occurrences

In 2017, CPG conducted limited and intermittent grab sampling of outcrop and surface muck piles located adjacent historical pits and shafts. The program was managed by Chris M. Healey, P.Geo. of Nanaimo, BC with field work performed by J. Poloni of N. Vancouver, BC.

Grab samples were manually collected from selected outcrop features of interest using a geological hammer. Other grab samples were manually collected from broken rock in historic muck piles. Samples were placed in plastic sample bags and each bag assigned a unique sample number. Sample bags were then sealed, removed from the field sites and securely stored at CPG's core logging facility in Cobalt, Ontario, under the supervision of J. Poloni prior to delivery to the laboratory by a commercial trucking company. Because of the limited nature of the surface sampling program, no independent sample standards and blanks were inserted into the sample shipments, instead the lab's internal QAQC programs were relied upon.

CPG collected 10 grab samples from the historic Smith Cobalt mine muck pile comprising broken rock brought to surface from underground during development and mining of mineralized veins (Table 16). The muck pile covers an area approximately 50 m x 20 m, with a thickness of approximately 3–4 m. CPG estimates the muck pile contains 5,000–10,000 tonnes of broken rock. The samples were collected by digging into the pile to a depth of approximately 30 cm over a semi-regular grid pattern and are considered by CPG to be representative of the bulk of the material within the pile.

Two grab muck samples of quartz-calcite vein material (A00289958 and A00289959, Table 16) uncovered and collected from the Smith Mine dump while clearing vegetation around the historical shaft returned significant Co and Ni values. Two Smith Mine dump muck samples of Cobalt Member sediment containing disseminated **arsenides** and abundant Co bloom on fractures also returned significant Co values and anomalous Ni values (Table 16).

Five samples were collected from the Proteus block's Temiskaming shaft area (UTM 5,248,036N, 603,356E; one from each side of the shaft, one from the surface and two from surface muck immediately adjacent to the shaft) were collected and submitted for analysis. The shaft area sampled is located in northwest-trending Archean volcanics. Three of the samples returned significant Cu values but low values of Co, Ag, Au and other base metals (Table 16). Four historical 1985 and 1986 drillholes appear to undercut this shaft area. These holes were reported to intersect significant Au and Ag values (no Co assays were taken). Hole 86-23 intersected 0.58 m at 6.21 g/t Au (0.181 oz/t Au); hole 86-28 intersected 0.24 m at 694 g/t Ag (20.24 oz/t Ag); hole 85-16 intersected 0.25 m at 679 g/t Ag (19.79 oz/t Ag) and 0.15 m at 428 g/t Ag (12.48 oz/t Ag); hole 86-13 intersected 465 g/t Au over 0.1 m (13.55 oz/t Au). In addition, the geological description of 86-13 mentions 70% Co arsenide in a narrow vein. These intersections all occur in the Archean volcanics (rhyolite and intermediate breccias), near the upper contact of the underlying Nipissing Diabase sill. These drillhole intersections and assay results are taken from assessment reports generated by the project operator at the time (Proteus Resources Inc.), and have not been verified by the Author.

One muck sample of quartz-calcite vein material with sulphides collected adjacent the Chrysler Niles shaft area on the Kirk Lake block approximately 700 m south of the Temiskaming occurrence returned significant Cu values (Table 15).

One muck sample collected adjacent the #5 Vein shaft no. 5 on the Bende patent returned anomalous Co and Cu values (Table 16).



Table 16: Surface grab sample analytical results

Sample no.	Location	UTM north	UTM east	Co ppm	Ag ppm	Au ppb	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Comments			
341678	Smith-Cobalt	5249430	602757	6,200	9.41	120	1,980	2,100	820	3,070	Muck sample			
341679				3,260	3.83	70	1,840	904	584	1,240	Muck sample			
341680				3,050	5.52	144	1,120	922	608	908	Muck sample			
341681				9,930	4.7	221	91.8	63.3	132	3,390	Muck sample			
A00289951				2,290	4.91	61	1,120	3,070	684	1,060	Muck sample			
A00289952				6,800	6.98	394	2,400	1,330	857	2,750	Muck sample			
A00289953				5,600	8.29	108	1,650	1,050	873	2,430	Muck sample			
A00289954				858	1.69	22	1,160	237	249	441	Muck sample			
A00289955				6,840	5.77	236	2,160	1,280	858	2,930	Muck sample			
A00289956				4,950	4.39	96	1,850	706	261	1,710	Muck sample			
A00289962							3.81%	1.25	49	21.3	260	48	5,160	Coleman sediment? Disseminated arsenides, Co bloom in fractures
A00289964							4.09%	6.3	99	125	1,000	561	4,510	Coleman sediment? Disseminated arsenides, Co bloom in fractures
A00289958	Smith-Cobalt	5249446	602723	7.85%	118	573	639	519	905	5.46%	Muck sample. Qtz/Calcite Co Vein material			
A00289959				3.77%	60.2	126	1,150	154	67	2.18%	Muck sample. Qtz/Calcite Co Vein material			
A00289963	Chrysler Niles	5247386	604754	282	6.69	31	3.80%	33.2	105	52.7	Chrysler Niles shaft. Qtz/Ca vein, visible sulphide, Cu			
66707	Temiskaming	5248036	604356	94.7	0.28	54	3.06%	3.2	16.5	30.6	Vein material from shaft NE, Cpy, Cu ox			
66708				2.94	0.09	5	1,930	0.6	<0.5	2.2	Muck sample. Vein material from shaft, Cpy			
66709				16.5	0.16	3	3,120	1.3	18.9	44.7	Vein material from shaft SW, Cpy			
66710				17	0.22	12	3.78%	3.1	16.8	25.1	Vein material from shaft SW surface, Cpy			
66711				118	0.17	13	1.73%	2.7	7.1	45.4	Muck sample. Vein material, Cpy, Hem			
A00289957				Bende	5246554	602183	759	2.8	<5	7,020	1,080	35	178	Muck sample. Vein #5 material



## 9.5 Seismic Survey

A two-dimensional (2D) seismic survey was conducted on 10–11 October 2017 as part of the Metal Earth research initiative led by Laurentian University’s Mineral Exploration Research Centre (MERC). Part of this research is to utilize seismic geophysical surveys to survey between 10 km and 30 km below the surface and image crustal scale features.

SAExploration, a leading seismic surveying company, performed field operations. The surveys are conducted using four large vibro-seismic trucks which send vibrations into the Earth that are then measured to map rocks and structures beneath the surface. The trucks were AHV-IV 364 Commanders which have a peak force of 61,800 lbs and can attain frequency from 2 Hz to 250 Hz (peak force from 6.2 Hz). Surveying using the OYO GSX Wireless nodal recording system covered 7.7 km in a general north-northwest to south-southeast direction with approximately 1 km within the northern part of the Smith Cobalt Project area. The results are expected to assist in regional and local structural and stratigraphic interpretations which may assist in understanding the controls on distribution of cobalt-silver mineralization in this part of the Cobalt Embayment.

No data interpretation has yet been completed.

# 10 Drilling

## 10.1 Historical Drilling

Historical drilling by previous operators on the Smith Cobalt and Canadian Cobalt Projects is discussed in Section 6. Historical drilling was not reported in the manner currently required by NI 43-101. Descriptions of the protocols and procedures were rarely recorded in technical reports of that time if written and early assessment files only required submission of abbreviated drill logs.

The Author is therefore unable to confirm whether the drilling, logging and sampling procedures and protocols employed by the historic operators were appropriate for the mineralization type and conform to current industry standards. For this reason, it is the Author's opinion that historic drill records and sample results should be viewed for reference only and should not be relied upon. The Author is of the opinion however that drilling conducted post 1980 should have followed drill core logging and sampling procedures that would generally meet current industry and NI 43-101 standards with exception of the insertion of QAQC standards and blanks and present-day standards for documentation of procedures and protocols.

## 10.2 CPG 2017 Drill Programs

CPG's 2017 diamond drilling was completed in two phases. Phase 1 comprising nine holes (SC-17-01 to SC-17-09) totalling 1,896.4 m, was completed between 26 May and 6 July 2017. Phase 2 comprising 16 holes (SC-17-10 to SC-17-25) totalling 2,344.5 m, was completed between 13 September and 4 November 2017. Core was logged and cut at a rented facility in North Cobalt. Logging of the core was completed by CPG contract geologist Dale Schultz, P.Geo. of Temagami, Ontario. Assistance was provided by Martin Ethier of Haileybury, Ontario. The program was managed by Chris M. Healey, P.Geo. of Nanaimo, BC.

G4 Drilling of Val-d'Or, Québec was the diamond drill contractor on both Phase 1 and Phase 2 programs. G4 used a Usinage Marcotte HTM 1500 skid-mounted rig for Phase 1 and a Usinage Marcotte HTM 2500 skid-mounted rig for Phase 2. NQ core (47.6 mm diameter) was drilled in both phases. The drills were operated on a single 12-hour shift per day, seven days per week. The drill contractor constructed drill access trails and drill pads as required. Drill water was supplied by pump and hose from a local surface water sources.

### 10.2.1 Phase 1: May–July 2017

Summary collar information for the Phase 1 diamond drillholes is presented in Table 17 and a drillhole plan is presented in Figure 12. All holes were completed to their planned depths.

Table 17: Phase 1 – 2017 diamond drill collar information

Hole ID	UTM easting (m)	UTM northing (m)	Elevation (m)	Azimuth	Dip	Length (m)	Start date	End date
SC-17-01	602683	5249597	281.7	180	-47	249.0	2017-05-25	2017-06-02
SC-17-02	602764	5249414	293.4	35	-53	216.4	2017-06-02	2017-06-07
SC-17-03	602694	5249412	274.0	220	-42	204.0	2017-06-07	2017-06-12
SC-17-04	602695	5249412	274.0	218	-60	216.0	2017-06-12	2017-06-16
SC-17-05	602695	5249413	273.8	56	-56	198.0	2017-06-16	2017-06-20
SC-17-06	602695	5249411	267.2	170	-52	210.0	2017-06-20	2017-06-24
SC-17-07	602721	5249256	267.2	35	-52	201.0	2017-06-24	2017-06-27
SC-17-08	602706	5249287	268.2	185	-54	201.0	2017-06-28	2017-07-03
SC-17-09	602673	5249260	263.0	175	-52	201.0	2017-07-03	2017-07-07
<b>9</b>	<b>Total</b>				<b>Total</b>	<b>1,896.4</b>		

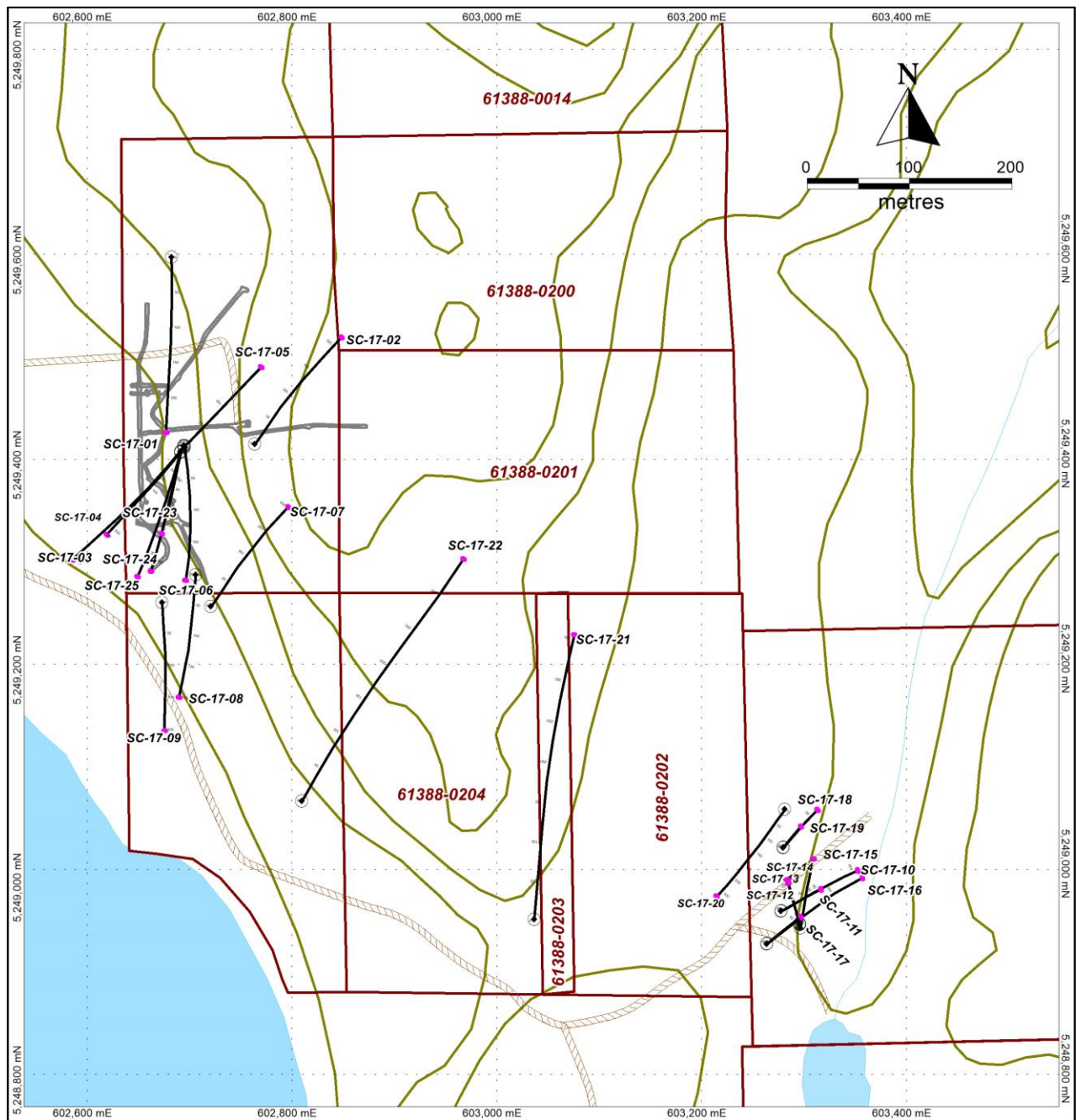


Figure 12: 2017 Phase 1 and Phase 2 diamond drillhole plan

Approximately 1,443 Phase 1 core samples excluding standards, blanks and duplicates were collected and sent to SGS Minerals Services for analyses. Basic statistics for rock sample analytical results (select elements) including range of values (maximum and minimum) is presented in Table 18.

Table 18: Basic statistics of 2017 Phase 1 DDH sample analytical results

	Ag ppm	As ppm	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Au ppm
<b>No. of samples</b>	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443
<b>Minimum*</b>	0.01	0.50	1.00	0.25	8.20	0.70	3.00	0.0025
<b>Maximum</b>	42.50	8,580.00	17,100.00	7,840.00	2,700.00	7,730.00	7,810.00	1.0100
<b>Average</b>	0.51	47.41	59.10	123.59	132.43	128.17	227.89	0.0059
<b>Mode</b>	0.06	0.50	19.60	0.25	130.00	3.00	9.00	0.0025
<b>Median</b>	0.10	4.00	24.10	49.40	68.00	6.05	56.00	0.0025
<b>Standard deviation</b>	2.07	311.28	507.05	403.13	239.55	543.83	628.30	0.0289

Note: For statistics, analytical results below detection limit have been assigned a value of half the detection limit.

The objective of CGP's 2017 Phase 1 program was to verify the distribution of the veins and associated cobalt-silver-base metal mineralization documented in the historical Smith Cobalt mine workings. Historical mine data indicated that cobalt and silver grades within the veins are highly variable.

Phase 1 drilling intersected several narrow zones with high-grade cobalt and silver associated with carbonate veins and veinlets as well as wider zones of anomalous copper-nickel-zinc base metal mineralization generally within Archean dacitic tuffs (Table 19). Phase 1 drilling confirmed and characterized veins documented in historical mine workings. Drill results also indicate that the Smith Cobalt property lies in the same stratigraphic and structural setting as the historical Deer Horn mine, approximately 500 m slightly north of west of the Smith Cobalt mine, currently owned and formerly operated by Agnico Eagle.

Anomalous analytical results are presented in Table 19.

Table 19: CPG 2017 Phase 1 diamond drillhole program – anomalous analytical results

Hole no.	From (m)	To (m)	Length (m)	Ag g/t	Au g/t	Co %	Cu %	Pb %	Zn %
SC-17-01 incl	244.00	249.00	5.00	NS	0.128	NS	NS	NS	NS
	245.00	247.00	2.00	2.09	NS	NS	NS	NS	NS
	240.00	245.00	5.00	NS	NS	0.10	NS	NS	NS
SC-17-03	113.00	115.15	2.15	NS	NS	0.07	NS	NS	NS
	182.00	182.10	0.10	42.50	NS	1.71	NS	NS	NS
	184.39	184.49	0.10	15.60	NS	NS	NS	NS	NS
	185.25	185.36	0.11	3.29	NS	0.23	NS	NS	NS
	186.25	186.35	0.10	38.20	NS	NS	0.46	NS	0.25
	190.43	190.53	0.10	16.00	NS	NS	0.13	NS	0.51
SC-17-04 incl incl incl incl incl and	134.00	152.00	18.00	2.70	NS	NS	NS	NS	NS
	138.25	147.66	9.41	3.58	NS	NS	NS	NS	NS
	138.25	139.00	0.75		NS	0.13	NS	NS	NS
	192.00	199.44	7.44	2.52	NS	NS	NS	NS	NS
	193.76	195.70	1.94		NS	0.10	NS	NS	NS
	193.76	194.34	0.58	13.00	NS	NS	NS	NS	NS
	194.34	194.63	0.29		NS	0.57	NS	NS	NS
SC-17-06	197.10	200.00	2.90	3.16	NS	NS	NS	NS	NS
SC-17-08	163.00	164.00	1.00	6.10	NS	NS	NS	NS	NS
	174.00	175.85	1.85	2.98	NS	NS	NS	NS	NS
SC-17-09	145.00	145.30	0.30	13.70	NS	0.05	>1.00	0.77	NS
	166.00	167.00	1.00	7.35	NS	NS	NS	NS	NS

Note: Lengths are downhole core length – true widths are unknown. NS = no significant analytical results

### 10.2.2 Phase 2: September–November 2017

Summary collar information for the Phase 2 diamond drillholes is presented in Table 20 and a drillhole plan is presented in Figure 12. Holes SC-17-23 and SC-17-24 ended short of the planned target depth, having intersected possible old mine workings or intense fracturing around those workings.

Table 20: Phase 2 – 2017 diamond drill collar information

Hole ID	UTM easting (m)	UTM northing (m)	Elevation (m)	Azimuth	Dip	Length (m)	Start date	End date
SC-17-10	603278	5248959	274.3	60	-36	105.0	2017-09-14	2017-09-17
SC-17-11	603277	5248959	274.1	60.5	-44	63.0	2017-09-18	2017-09-18
SC-17-12	603296	5248947	272.3	344	-36	51.0	2017-09-19	2017-09-19
SC-17-13	603296	5248946	272.2	344	-45	64.5	2017-09-20	2017-09-20
SC-17-14	603296	5248946	272.2	344	-55	81.0	2017-09-21	2017-09-22
SC-17-15	603296	5248942	272.6	10	-46	99.0	2017-09-22	2017-09-24
SC-17-16	603264	5248927	274.5	52	-35	138.0	2017-09-24	2017-09-27
SC-17-17	603263	5248927	274.5	50	-45	60.0	2017-09-27	2017-09-28
SC-17-18	603280	5249021	274.4	41	-34	60.0	2017-09-28	2017-09-29
SC-17-19	603279	5249021	274.3	39.2	-45	39.0	2017-09-29	2017-09-30
SC-17-20	603281	5249058	274.1	215	-70	321.0	2017-09-30	2017-10-07
SC-17-21	603037	5248951	276.7	5	-40	354.0	2017-10-08	2017-10-17
SC-17-22	602810	5249066	268.1	30	-40	348.0	2017-10-18	2017-10-24
SC-17-23	602692	5249407	274.7	192	-56	147.0	2017-10-25	2017-10-27
SC-17-24	602692	5249406	274.7	193	-44	165.0	2017-10-28	2017-10-30
SC-17-25	602692	5249407	274.8	197	-60	249.0	2017-10-31	2017-11-05
<b>16</b>	<b>Total</b>				<b>Total</b>	<b>2,344.5</b>		

Approximately 1,937 Phase 2 core samples excluding standards, blanks and duplicates were collected and sent to AGAT Laboratories for analyses. Basic statistics for rock sample analytical results (select elements) including range of values (maximum and minimum) is presented in Table 21.

Table 21: Basic statistics of 2017 phase 2 diamond drillhole sample analytical results

	Ag ppm	As ppm	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Au ppm
<b>No. of samples</b>	1,937	1,937	1,937	1,937	1,937	1,937	1,937	1,937
<b>Minimum*</b>	0.005	0.10	0.025	0.25	0.25	0.05	0.25	0.0005
<b>Maximum</b>	371	7,720	2,720	9,250	786	17,900	103,000	1.04
<b>Average</b>	0.78	36.91	44.14	140.22	82.65	92.55	220.44	0.0068
<b>Mode</b>	0.12	2.50	40.20	118.00	101.00	2.80	0.25	0.0030
<b>Median</b>	0.19	4.40	37.80	90.10	84.30	6.10	61.10	0.0030
<b>Standard deviation</b>	9.96	311.95	117.08	379.93	45.52	604.71	2441.11	0.0289

Note: For statistics, analytical results below detection limit have been assigned a value of half the detection limit.

Drillholes SC-17-10 to SC-17-17 tested the distribution and continuity of mineralized silver-cobalt veins delineated on surface at the 2017 stripped area at the South Cobalt East Extension occurrence. Drilling intersected multiple quartz-calcite veins however only five holes intersected occasional narrow zones with higher-grade silver associated with carbonate veins and veinlets (Table 22).

Drillholes SC-17-18 to SC-17-20 tested for the subsurface continuity mineralization in a historical pit approximately 65–100 m north of the Smith Cobalt East Extension stripped area. SC-17-18 and SC-17-19 samples



returned no significant analytical values. SC-17-20 was drilled at a steep angle ( $-70^\circ$ ) to test the thickness of the diabase. The hole ended still in diabase at a downhole depth of 321 m (approximately 300 m vertical thickness). The diabase at this location may be a feeder dyke, with an anomalous Ni zone grading 0.03% over 71.0 m. SC-17-20 also intersected a 2 m interval of weak Ag mineralization grading 4.95 g/t (Table 22).

Drillholes SC-17-21 and SC-17-22 tested for the extension of potential controlling northwest-southeast structures and associated mineralization between the Smith Cobalt mine area and the Smith Cobalt East Extension occurrence area. SC-17-21 and SC-17-22 returned several narrow intervals of weak to moderate silver mineralization including one 2 m interval grading 0.1% Co (Table 22).

Drillholes SC-17-23, SC-17-24 and SC-17-25 were drilled at various dips on a section between Phase 1 drillholes SC-17-03 and SC-17-04 to the west and SC17-06 to the east to test for potential extension of the mineralized trends between the Smith Cobalt Mine area to the west and the Smith Cobalt East Extension stripped area to the east. As with Phase 1 drilling SC-17-23 to SC-17-25 intersected several narrow zones with higher-grade Co and Ag associated with carbonate veins and veinlets as well as wider zones of anomalous Ag-Cu-Zn base metal mineralization within the Archean metavolcanics and metasediments.

Table 22: CPG 2017 phase 2 diamond drillhole program – anomalous analytical results

Hole no.	From (m)	To (m)	Length (m)	Ag g/t	Au g/t	Co %	Cu %	Pb %	Zn %
SC-17-10	25.88	26.36	0.48	3.07	NS	NS	0.06	NS	0.64
SC-17-13	35.49	36.12	0.63	3.22	NS	NS	NS	NS	NS
SC-17-14	37.60	39.15	1.55	2.13	NS	NS	NS	NS	NS
SC-17-16	37.00	37.40	0.40	7.40	NS	NS	NS	NS	0.85
SC-17-17	58.00	59.00	1.00	3.41	NS	NS	NS	NS	NS
SC-17-20	44.00	46.00	2.00	4.95	NS	NS	NS	NS	NS
SC-17-21	59.00	60.00	1.00	16.70	NS	NS	NS	NS	NS
	71.40	78.00	6.60	2.31	NS	NS	NS	NS	NS
	144.00	145.00	1.00	4.65	NS	NS	NS	NS	NS
	348.00	350.00	2.00	3.69	NS	NS	0.10	0.07	0.14
SC-17-22 including	276.00	283.33	7.33	3.27	0.13	NS	NS	NS	NS
	281.00	282.00	1.00	9.27	NS	NS	NS	NS	NS
SC-17-23 including including including	118.00	147.00	29.00	14.09	NS	NS	NS	NS	NS
	121.00	126.00	5.00	76.19	NS	NS	NS	NS	NS
	121.00	122.00	1.00	371.00	NS	0.11	NS	1.79	NS
	133.00	142.00	9.00	2.19	NS	0.10	0.23	NS	NS
SC-17-24	9.00	9.25	0.25	NS	0.26	NS	NS	NS	NS
	159.00	165.00	6.00	5.73	NS	NS	0.17	0.29	0.43
SC-17-25 including including and and including	130.80	180.00	49.20	3.08	NS	NS	NS	NS	NS
	130.80	151.00	20.20	4.37	NS	NS	NS	NS	NS
	130.80	131.00	0.20	211.00	0.193	NS	NS	NS	NS
	163.43	163.64	0.21	90.50	NS	NS	NS	NS	NS
	174.60	178.00	3.40	7.63	NS	NS	0.18	NS	NS
	177.00	178.00	1.00	22.70	0.44	0.27	0.52	NS	NS
	211.50	213.00	1.50	7.97	NS	NS	NS	1.00	NS
	224.00	232.00	8.00	2.66	NS	NS	NS	NS	0.40
244.30	244.50	0.20	10.90	NS	NS	NS	0.73	1.27	

Note: Lengths are downhole core length – true widths are unknown. NS = no significant analytical results





### **10.3 CPG General Drillhole, Core Handling, Logging and Sampling Methods and Approach**

#### *10.3.1 Drillhole Survey Methods*

Prior to drill setup, the drill collar was located by the Martin Ethier, contract geologist, using a Genex SX Blue II with Effigis EZSurv GNSS Post-Processing software. Upon completion of the drillholes, drillhole collar coordinates and elevations were surveyed by Mr Ethier in UTM coordinates (NAD83) with a horizontal accuracy of 0.1 m.

The drill contractor completed downhole directional surveys on all diamond drillholes at intervals of approximately 50 m using a Devico DeviShot single shot digital survey tool in the Phase 1 drill program and at intervals of approximately 30 m using a Reflex EZ Shot single shot digital survey tool in the Phase 2 drill program.

The drill casing is left in each hole and capped after the drill rig is removed to permit potential future downhole geophysical testing and/or deepening of the holes.

The Author's opinion is that the drillhole survey methods meet industry and NI 43-101 standards.

#### *10.3.2 Drillhole, Core Handling, Logging and Sampling Methods*

Core is retrieved from the drill string using conventional wireline techniques. Sample security and chain of custody starts with the removal of core from the core tube and boxing of drill core at each drill. Core is removed from the core tube by the drill contractor's personnel, carefully placed in labelled wooden core boxes and localized by inserted depth blocks. The boxed core remains under the custody of the drillers until it is transported from the drill to CPG's secure core processing and sampling facility by either the drill contractor or one of CPG's designated personnel.

The 2017 diamond drill core was handled at a rented core processing facility located in North Cobalt, Ontario. The facility had an office and an adjacent, secure core facility used for logging and packing samples for shipment to the assay laboratory. The core facility had space for storage of core prior to logging. The core was sawed onsite in secure shipping container owned by CPG and fitted as a core sawing facility. Subsequent to the 2017 drill programs, CPG acquired a warehouse facility in Haileybury, Ontario. At the time of the Author's site visit the facility was being renovated to include a core logging area and several offices in addition to equipment storage space. The shipping container core sawing facility will be moved and placed outside the Haileybury facility.

At the core facility, core boxes were opened and inspected to ensure correct boxing and labelling of the core by the drill contractors then re-closed. Remedial actions were undertaken, if necessary, to correct deficiencies in the spatial information prior to entry into a database. The core was stored securely at the CPG's core processing facility until it was moved into the core shack for processing.

Processing of the core started with the core being laid out on workbenches and cleaned prior to logging and sample interval marking. Spatial information related to each box of core was checked for accuracy and consistency at this point. Remedial actions were undertaken, if necessary, to correct deficiencies in the spatial information prior to entry into a database. A geotechnical log of core recovery, rock quality designation (RQD) and magnetic susceptibility measurements was completed by a contract geological technician under the supervision of CPG's contract geologist. The magnetic susceptibility measurements were completed with one reading every 3 m at the end of each coring run. CPG's contract geologist then completed a descriptive log.

Drill core and sample information were logged manually onto paper logs, then later input into a digital spreadsheet with a detailed description of rock type (maintaining consistency between holes), structure,



alteration, and mineralization (including presence of carbonate and quartz veining and its angle with the axis of the core).

The core was next photographed with a digital SLR camera, capturing a JPEG image. Three boxes of core are photographed at the same time, first photographing the core dry and then wet.

Following logging and photography, the geologist selected the sample intervals and input the intervals into the drillhole database. The selected portions of core were marked and measured for sampling and were identified with one part of a three-part assay tag, placed at the up-hole end of the sample interval.

The core was sawed with a 230-volt 5hp Husqvarna water-cooled core saw with 14-inch diamond blade and a mounted jig to assure the core was split equally. The core saw was located in a ventilated shipping container separate from the core logging facility. Fresh water was used as a cooling/lubricating fluid; recycled water is not used.

The core was cut in half longitudinally, perpendicular to the foliation (50% split) with one half placed into plastic sample bags along with part two of the three-part assay tag and sealed. The other half core was returned to the core box for archive and future verification and testing (if required). Each sample bag had the sample number written on the outside of the bag with black permanent marker corresponding to the sample tag placed inside. Information on the third part of the assay tag was entered into the database and the drill log, at which time accuracy and consistency were again reviewed and remedied, if necessary.

Core logging, sawing, sample bagging and sample shipment preparation was completed either by or under the onsite supervision of a CPG's contract geologist. Certified reference materials (CRMs) (standards), sample blanks and duplicate samples were inserted by CPG personnel/contractors into each sample batch submitted to the lab for the purpose of quality control.

After sampling was completed, the archived core boxes were labelled and placed on core racks which are now located at CPG's Haileybury facility.

Core recovery was generally very good except locally in SC 17-23 and SC 17-24, which may have terminated in underground workings. The Author's opinion is that there are no significant sampling or recovery factors that would negatively impact the sampling procedures.

Approximately 99% of the drill core was submitted to a certified analysis laboratory for assaying. Sample intervals vary from 0.1 m to a maximum of 3 m in length. Sample lengths were chosen as follows:

- Veins – minimum sample 0.10 m; maximum sample 0.30 m; if greater than 0.30 m divide into equal length samples, no shorter than 0.10 m
- Wall rock adjacent to veins – one 1 m sample each side of each vein
- Barren wall rock – generally 2 m.

Sealed sample bags were placed in rice sacks and sealed. CPG personnel maintained possession of the samples in the secure core shack until delivery to the laboratory. Sample batches were transported to the analytical laboratory by commercial freight carrier, Manitoulin Transport and transferred to the laboratory's chain of custody procedures and protocols. All shipping sacks were closed with zipper tie straps. Laboratory pulps and rejects were backhauled to and stored within CPG's secure Haileybury facility.

Following analysis, digital assay files provided by the laboratory were merged with a "from" and "to" interval file created by CPG, with the sample number linking the two files. This methodology limits data entry errors to sample numbering, as well as the "from" and "to" intervals.



Overall, sampling methods were to industry standards for mineralization of this type. The Author's opinion is that the sampling methods meet NI 43-101 standards. The Author notes that CPG's chain of custody protocols can be improved by requiring the signing and maintenance of tracking logs and receipts when samples are shipped from the core facility, and when they are picked up from analysis laboratories and delivered to another laboratory or returned to CPG's storage facility. Use of unique, pre-numbered seals on shipping sacks would also provide additional security while in transport.

In addition, the Author notes that while the use of 0.1 m samples for individual veins may provide useful information with respect to distribution of mineralization grade within the vein and its host rock, the use of such small intervals is not practical for resource estimation purposes. CPG should consider using a minimum sample width on the order 0.3 m should a mineralized deposit be found, and a resource definition program be undertaken.



# 11 Sample Preparation, Analyses and Security

## 11.1 Historical Exploration – Prior to 2017

Detailed descriptions sample preparation, analytical techniques, QAQC and security protocols and procedures utilized by previous operators for assay results disclosed in the History section (Section 6) were not available to the Author. Furthermore, the Author was unable to confirm certification of the assay labs nor their relationship to the previous operators for assay results disclosed in the History section.

The Author is therefore unable to confirm whether the sample preparation, analytical techniques and QAQC/security protocols employed by those companies were appropriate for the sample media and mineralization type and conform to current industry standards. For this reason, it is the Author's opinion that historical analytical results should be viewed for reference only and should not be relied upon. The Author notes however that historical production records of the Smith Cobalt mine indicate that significant mineralization was mined and processed from structures in the Smith Cobalt Mine within the current Smith Cobalt Project area utilizing methods available at the time (Section 6.5.1).

## 11.2 CPG 2016 and 2017 Sample Security Preparation and Analysis

### 11.2.1 *Sample Security*

Field surface samples were collected and placed into plastic bags and sealed in the field. Samples were transported from the field at the end of each field day and were in the possession of CPG personnel and/or contractors until a sufficient number were collected for delivery to the analytical laboratory. Half split drill core samples were bagged and secured at the core logging facility until a sufficient number of samples were ready to be sent out as a batch to the analytical laboratory. Security of samples prior to dispatch to the analytical laboratory was maintained by limiting access to authorised persons. The individual labelled sample bags were batched, packed in polypropylene rice bags and sealed prior to delivery to the laboratory. The samples were transported to the laboratory by commercial trucking companies. The preparation laboratory completed sample preparation operations and employed bar coding and scanning technologies that provide complete chain of custody records for every sample.

Following analysis, the remaining laboratory pulps and coarse crush duplicates from the 2017 Phase 1 and Phase 2 diamond drill programs were returned to CPG and are currently stored at its secure field office/warehouse/core shack facility in Haileybury, Ontario.

CSA Global believes the security and integrity of the samples submitted for analyses is un-compromised, given the adequate storage locations, sample transport methods, and the analytical laboratories' chain of custody procedures. Chain of custody records from drill to lab should be thoroughly documented during future programs.

### 11.2.2 *Sample Preparation and Analysis*

The limited number of surface rock samples were delivered directly to SGS Minerals Services in Burnaby, BC for analysis by J. Poloni.

The 2017 Phase 1 drill core samples were delivered via Manitoulin Transport to SGS Minerals Services' Cochrane, Ontario laboratory for initial sample preparation. The samples were prepared and analyzed using



SGS preparation code G-PRP89 in which the sample is weighed, dried, crushed to 75% passing 2 mm screen, a 250 g split is then taken and pulverized to 85% passing 75 microns. A split of the pulverized material was then analyzed at the Cochrane laboratory using SGS analytical codes GE FAA313 Au, a 30 g fire assay for gold with AAS finish and detection limits of 5–10,000 ppb. The Cochrane lab sent a split of the pulp to its laboratory in Burnaby, BC for multi-element analyses (SGS analytical codes ICM40B) which utilizes four-acid digestion and multi-element ICP-AES and ICP-MS analysis for 49 elements (including Ag, Co, Ni, Bi, Sb). Over-limit Ag was re-analyzed using SGS analytical code GO FAG313, a 30 g fire assay for Ag with gravimetric finish and detection limits of 10–5,000 ppm. Other over-limit elements (Co, Cu, Ni) were re-analyzed using sodium peroxide ( $\text{Na}_2\text{O}_2$ ) fusion with an ICP-OES finish (SGS analytical code GO ICP90A). Lower detection limits are 0.01% for those elements analyzed.

The SGS Cochrane laboratory has accreditation from the Standards Council of Canada (No. 841) conforming to requirements of CAN-P-1579 (Mineral Analysis) and CAN-P-4E (ISO/IEC 17025:2005); however, not for the gold fire assay/AAS finish completed for CPG. The SGS Burnaby laboratory has accreditation from the Standards Council of Canada (No. 744) conforming to requirements of CAN-P-1579 (Mineral Analysis) and CAN-P-4E (ISO/IEC 17025:2005) for methods including those requested by CPG in the previous paragraph.

SGS' sample preparations follow industry best practices and procedures. The analytical methods used are routine. SGS and their employees are independent from CPG. CPG personnel, consultants and contractors were not involved in sample preparation and analysis.

The 2017 Phase 2 drill core samples were delivered via Manitoulin Transport to AGAT Laboratory's facility in Mississauga, Ontario. The samples were prepared and analyzed using AGAT preparation code 200-001 in which the sample is weighed, dried, crushed to 75% passing 2 mm screen, a 250 g split is then taken and pulverized to 85% passing 75 microns. Splits of the pulps were then taken for multi-element analysis using four-acid digestion with ICP-OES/ICP-MS finish (48 element AGAT analytical code 201-071) and for Au fire assay with ICP-OES finish (AGAT analytical code 202-052 – 0.001 ppm lower limit of detection). Over-limit elements (Ag, Co, Cu, Ni, Pb, Zn) were re-analyzed using sodium peroxide ( $\text{Na}_2\text{O}_2$ ) fusion with an ICP-OES/ICP-MS finish (AGAT analytical code 201-378). Lower detection limits are 1 ppm for Ag and 5 ppm for the other over-limit elements analyzed.

AGAT is a fully accredited laboratory and conforms with the requirements of CANP4E (ISO/IEC 17025:2005) and CANP1579 by the Standards Council of Canada for methods including those requested by CPG in the previous paragraph.

AGAT's sample preparations follow industry best practices and procedures. The analytical methods used are routine. AGAT and their employees are independent from CPG. CPG personnel, consultants and contractors were not involved in sample preparation and analysis.

It is the Author's and CSA Global's opinion that security, sample collection, preparation and analytical procedures undertaken on the Smith Cobalt Project during the 2016–2017 surface sampling and diamond drill programs are appropriate for the sample media and mineralization type and conform to industry standards.

### **11.3 CPG 2016–2017 Quality Assurance and Quality Control**

CPG elected not to insert certified reference standards and blank samples into the analytical stream of the surface rock samples collected in 2016 and 2017 because of the very limited nature of the sampling program. The analytical laboratory's internal QAQC programs were relied upon.

CPG's 2017 diamond drill sample QAQC program included the insertion of certified reference standards and blank samples into the sample sequence at the core shack prior to delivery to the laboratory. Coarse crush

reject duplicate analyses were also requested at the lab. The insertion of standards, blanks and duplicates is based on a batch size of 40 samples: For each bath the following were inserted:

- One cobalt standard (OREAS-14p)
- One of two silver standards (alternate CDN-ME-1505 and CDN-GS-1Q)
- One blank (OREAS-21e in Phase 1; OREAS-21e or OREAS-24b in Phase 2)
- One reject duplicate.

In addition, the laboratories conducted their own internal QAQC programs. Internal laboratory quality control samples including CRMs, blanks, and duplicates are inserted within each analytical run. The minimum number of quality control samples required to be inserted are based on the rack size specific to the method.

### 11.3.1 Certified Reference Standards

To monitor accuracy, CRMs were inserted sequentially into the sample stream before shipment from the field at a rate of one Ag CRM (alternating low and high grade) and one Co CRM in every 40 samples submitted (Table 23).

Table 23: Summary of the CRMs used in the QAQC for 2017 Phase 1 and Phase 2 drill programs

	Au	Ag	Cu	Pb	Zn	Co	Ni
Standard CDN-ME-1505	1.29 g/t	360.0 ppm	0.05%	1.87%	0.01		
Standard CDN-GS-1Q	1.24 g/t	40.7 ppm					
Standard OREAS-14p	51 ppb		1.00%	<20 ppm	81 ppm	754 ppm	2.09%

### Acceptance Criteria for Routine Analyses – 2017 Phase 1 and Phase 2 Drill Programs

To check the accuracy of the laboratory, CSA Global control limits (CL) are established at accepted mean  $\pm 3\sigma$  (standard deviation) and warning limits (WL) at accepted mean  $\pm 2\sigma$ . Any single standard analysis beyond the upper control limits (UCL) and lower control limits (LCL) is considered a “failure”. In addition, three successive standard analyses outside of the upper warning limits (UWL) and lower warning limits (LWL) limits on the same side of the mean could also constitute a failure. Successive warning results may indicate laboratory bias and possibly incorrect calibration of the laboratory equipment.

The results from the QAQC standards were plotted versus time for each standard (Figure 13 to Figure 16). The minimum and maximum warning and control values (yellow and red lines respectively) and mean value (green line) for the quality control sample are shown on each chart.

### Results of Routine Analyses – 2017 Phase 1

All Ag CRMs except two low-grade (GS-1Q) samples returned values within  $\pm 3\sigma$  and one GS-1Q fell outside  $\pm 3\sigma$  and is considered a failure (Figure 13). CPG staff elected to not re-analyze pulps from the batch because no significant mineralization was encountered in that interval.

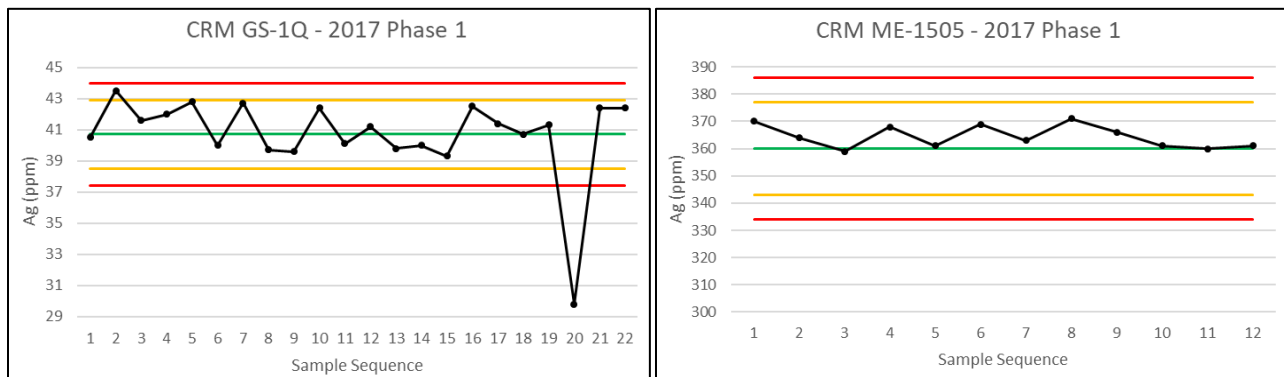


Figure 13: 2017 Phase 1 drill program low- and high-grade Ag CRM results

The results from the Phase 1 low-grade Co CRM are problematic. All results fell significantly below the  $-3\sigma$  failure limit (Figure 14). In CPG’s discussions with the lab, it was suggested that because the CRM was a massive sulphide sample, the sample had undergone oxidation prior to analysis resulting in an under-reporting of grade. However, other elements within the sample were within tolerances which suggests oxidation is not the cause of the failure. In addition, the same CRM returned more favourable results in the Phase 2 program when run at a different lab. Significant time was spent with the lab to resolve the problem but suitable explanation for the failure was not reached. In the opinion of the Author and CSA Global, it would seem that the consistent failure is likely due to either a miscalibration of the lab’s spectrometer and/or an unrecognized interference with another element within the massive sulphide CRM.

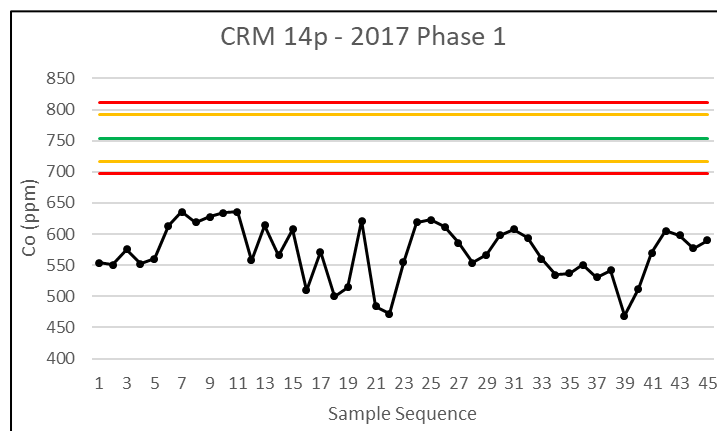


Figure 14: 2017 Phase 1 drill program low-grade Co CRM results

**Results of Routine Analyses – 2017 Phase 2**

The low-grade Ag CRM (GS-1Q) shows a general drift to higher grades over the length of the Phase 2 analytical program and an erratic distribution of results at start of the program with eight samples failing outside  $\pm 3\sigma$  (Figure 15). In addition, two high-grade samples fell slightly below the  $-3\sigma$  limit at the start of the program and the last three samples were significant failures falling below the  $-3\sigma$  limit. CPG staff elected to not re-analyze pulps from the batch because no significant mineralization was encountered in that interval.

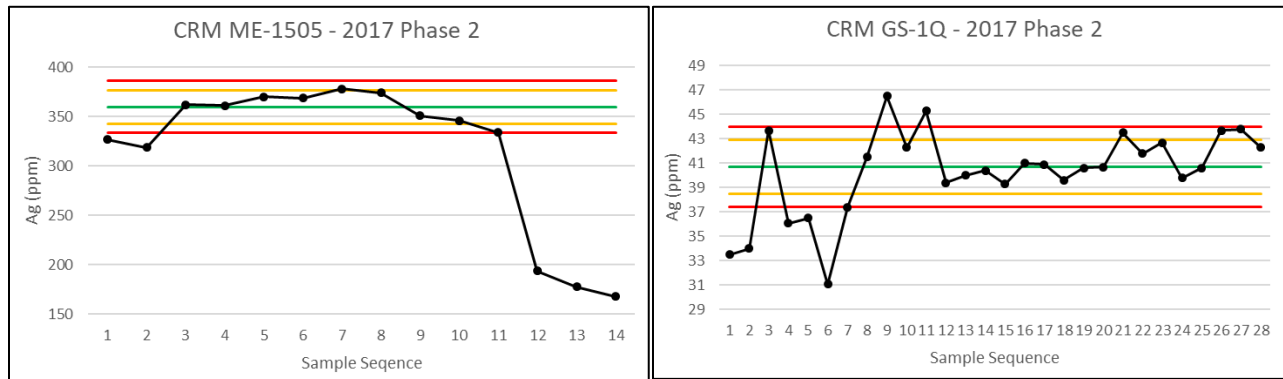


Figure 15: 2017 Phase 2 drill program low- and high-grade Ag CRM results

Phase 2 sample analyses were conducted at a different lab than Phase 1. The results from the Phase 2 low-grade Co CRM are better than the Phase 1 lab results; however, there is a bias to lower reported grades than the suggested mean and there are a significant number of samples that fall just below the  $-3\sigma$  failure limit (Figure 16). Oxidation of the massive sulphide prior to analysis resulting could result in this lower grade bias; however, other elements were generally within tolerances which suggests oxidation is not a significant issue (the CRM package is filled with nitrogen prior to sealing to minimize oxidation of the CRM while in storage and transport). In the opinion of the Author and CSA Global, it would seem that the consistent lower grade bias may be due to either a calibration issue with the lab’s spectrometer and/or an unrecognized interference with another element within the massive sulphide CRM.

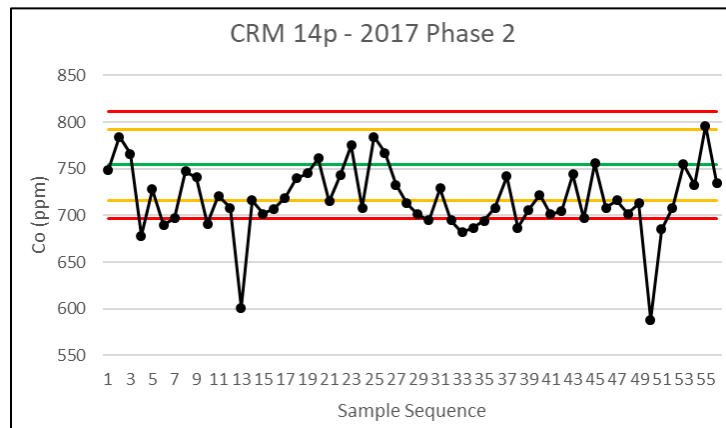


Figure 16: 2017 Phase 2 drill program low-grade Co CRM results

### 11.3.2 Blank Samples

Sample contamination may arise through cross-contamination during sample preparation, laboratory analysis. Contamination is normally monitored through the routine insertion of coarse field blank material into the sample stream. During Phase 1 and the start of Phase 2 drilling, CPG used a prepared blank obtained from OREAS (OREAS 21e) that was pulverized to  $-200$  mesh, blended and packaged in 60 g packets instead of a coarse field blank. The blank had a concentration of less than 0.05 ppm Ag and a mean value of 0.42 ppm Co. During the latter part of Phase 2 drilling, CPG used a prepared blank obtained from OREAS (OREAS 24b) that was pulverized to  $-200$  mesh, blended and packaged in 60 g packets instead of a coarse field blank. The blank had a concentration of less than 0.05 ppm Ag and a mean value of 16.9 ppm Co. CPG inserted a blank approximately every 40th sample into the drill core sample batches before shipment.





Table 24: Summary of blanks used in the QAQC for 2017 Phase 1 and Phase 2 drill programs

	Au	Ag	Cu	Pb	Zn	Co	Ni
Blank OREAS-21e	<1 ppb	<0.05 ppm	5.68 ppm	<1 ppm	2.91 ppm	0.42 ppm	-
Blank OREAS-24b	<3 ppb	-	38.00 ppm	23.1 ppm	105 ppm	16.9 ppm	60 ppm

Because OREAS 21e and 24b blanks are pulverized samples, they do not test the two laboratory sample preparation processes that have significant potential for cross-contamination between samples: the jaw crushing and ring pulverizing stages. A pulverized blank will only check for contamination or sample mislabelling in the analytical side of the laboratory.

*Acceptance Criteria for Routine Analyses*

As a rough guide, CSA Global suggests that blank samples should have analyses of less than 5x the detection limit. In the case of Co which had a detection limit of 0.1 ppm the mean suggested grades of the blanks were significantly above the detection limit at 0.42 ppm and 16.9 ppm Co respectively. The Author therefore chose to use the mean (0.42) plus 0.5 ppm rounded to 20.0 ppm Co as the arbitrary maximum acceptable value for the blank OREAS-21e material and mean (16.9) plus 3σ rounded to 1.0 ppm Co as the arbitrary maximum acceptable value for the blank OREAS-24b material. A blank sample that assays greater than the maximum acceptable value should be considered a failure.

*Results of Routine Analyses*

Only two Oreas-21e samples from Phase 1 and one Oreas-24b sample from Phase 2 returned Co concentrations greater than the maximum acceptable values. Only one Oreas-21e sample and one Oreas-24b sample from Phase 2 returned Ag concentrations greater than the maximum acceptable values (Figure 17, Figure 18 and Figure 19).

CGS reviewed the results and deemed a repeat the oven load or parts thereof were not required nor feasible, given the analytical results of the core samples in the accompanying batches.

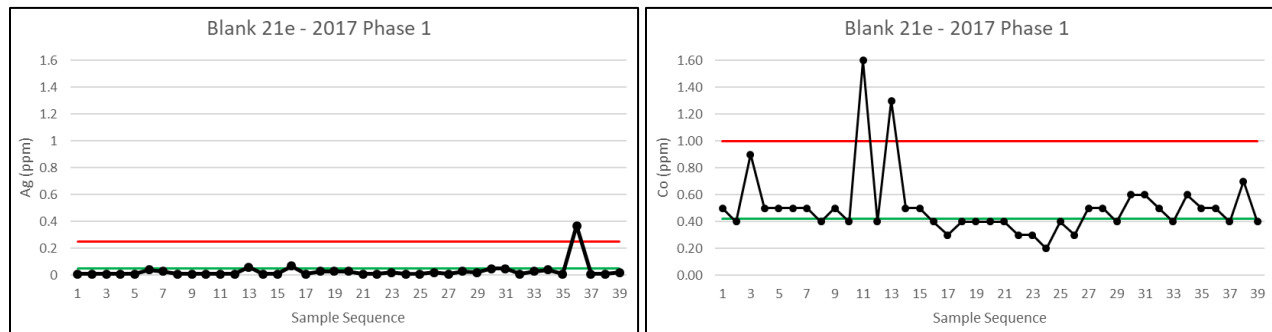


Figure 17: Oreas-21e blank results – Phase 1 drill program

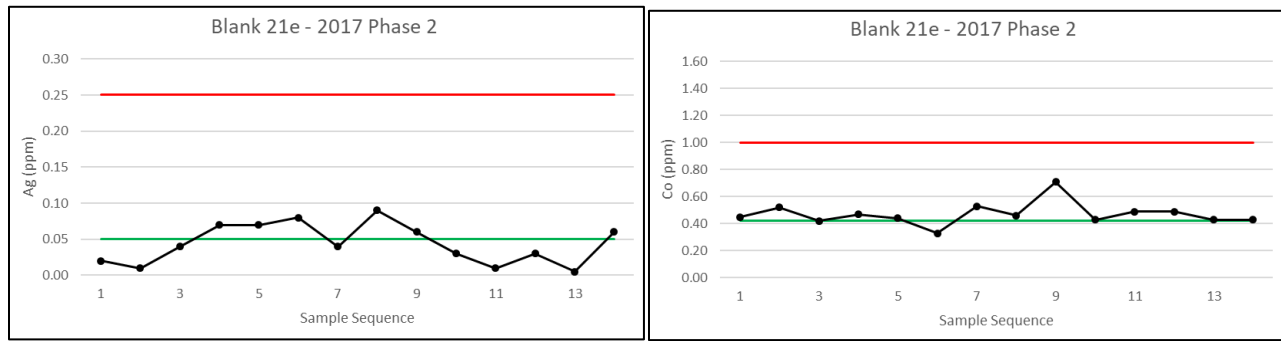


Figure 18: Oreas-21e blank results – Phase 2 drill program

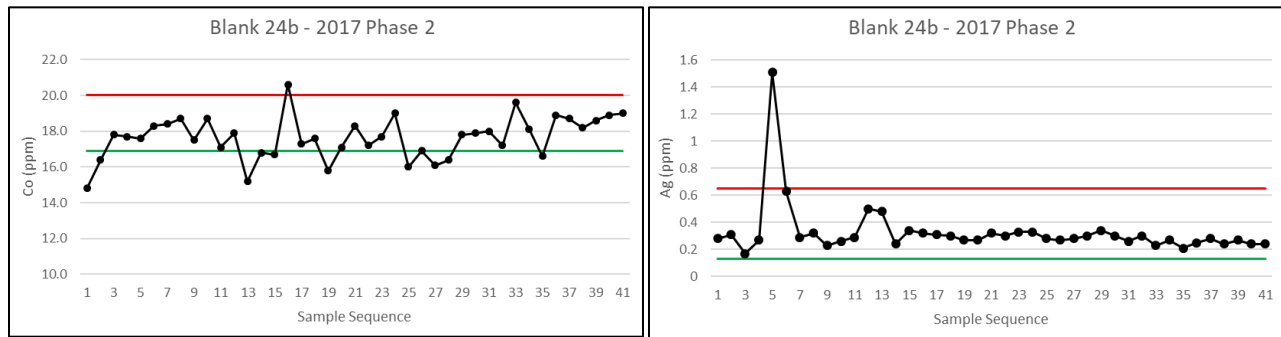


Figure 19: Oreas-24b blank results – Phase 2 drill program

### 11.3.3 Duplicates

Analytical precision is monitored by the insertion of duplicate samples. The duplicates may be:

1. Quarter core duplicates;
2. Preparation (coarse crush) duplicates, split after the initial jaw-crushing phase to make two pulps; and/or
3. Pulp duplicates.

CPG requested the lab insert preparation duplicates (coarse rejects) into the sample stream each at a rate of 1 in 40 samples. In addition, the laboratories routinely analyzed pulp duplicates, split after the pulverizing phase, as part of their internal quality control programs.

#### Acceptance Criteria for Routine Analyses

Half the Relative Difference (HRD) is half the difference between the original and the duplicate assay, expressed as percentage of the pair mean. It is a measure of precision and relative difference, a positive HRD value shows that the duplicate assay value is lower than the original assay value. A negative HRD value shows the duplicate is higher than the original. A HRD value of 0% is an optimum result where both the first and duplicate analyses have identical results and therefore perfect precision. The larger the +/- HRD value, the greater the difference between the two analytical results and the poorer the precision.

#### Results of Routine Analyses

Preparation duplicates are split after crushing; so much of the initial geological variability should be eliminated, resulting in better precision overall.

Good repeatability of both Phase 1 and Phase 2 original assay values is indicated by the majority of repeat coarse duplicate assay pairs having a HRD value within +/-20%. The mean HRD value is 1%. The mean HARD (absolute HRD) value is 7%.

Scatter plots and HRD plots versus sample pair mean are presented in Figure 20 and Figure 21.

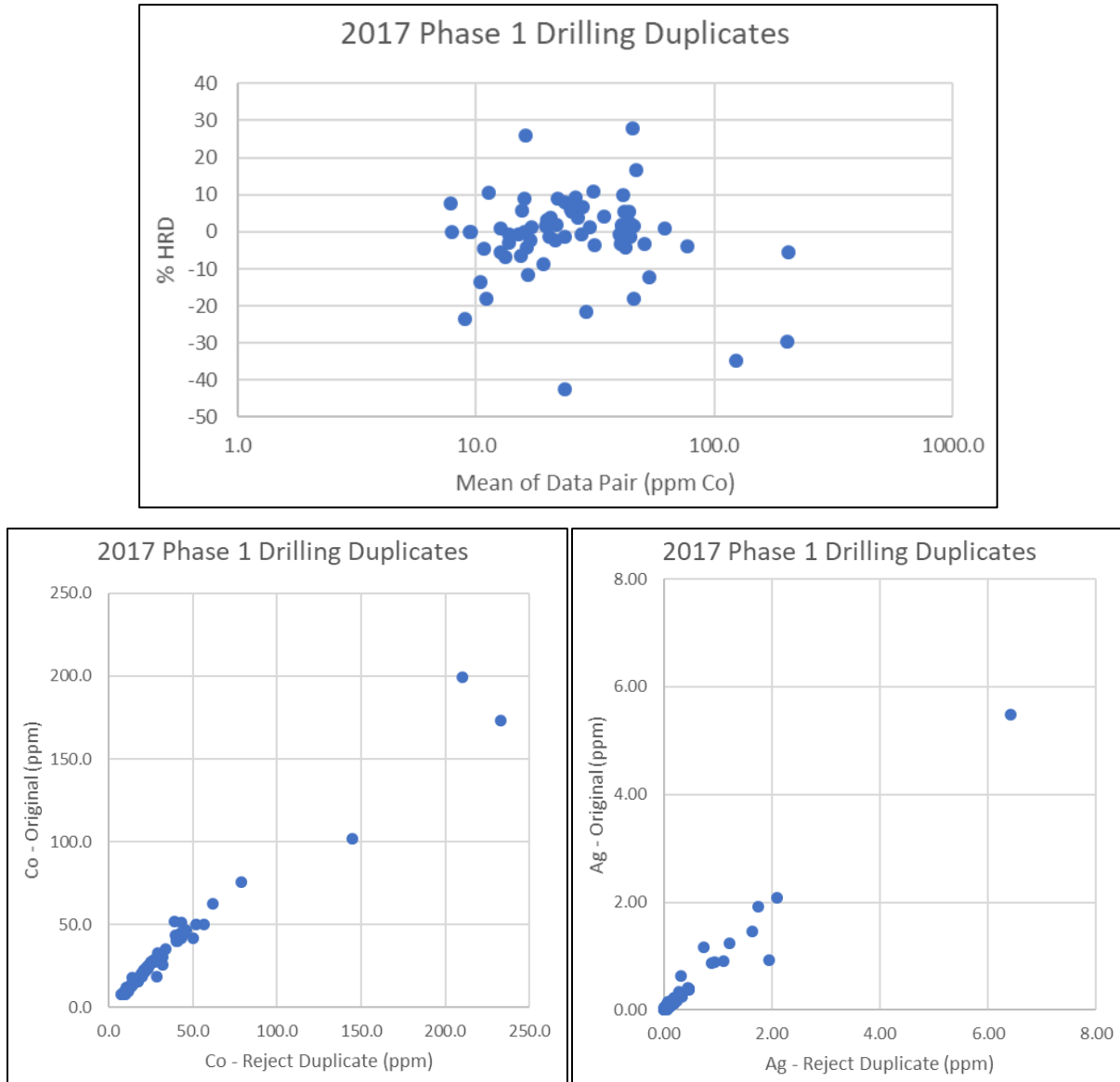


Figure 20: Phase 1 coarse crush duplicate scatter plots and HRD versus data pair mean

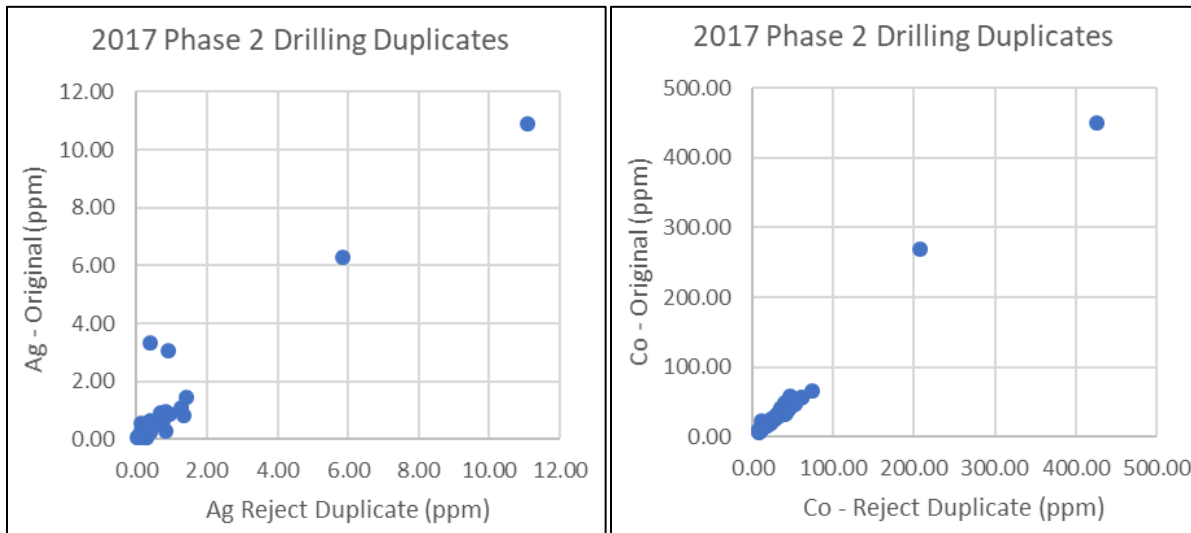
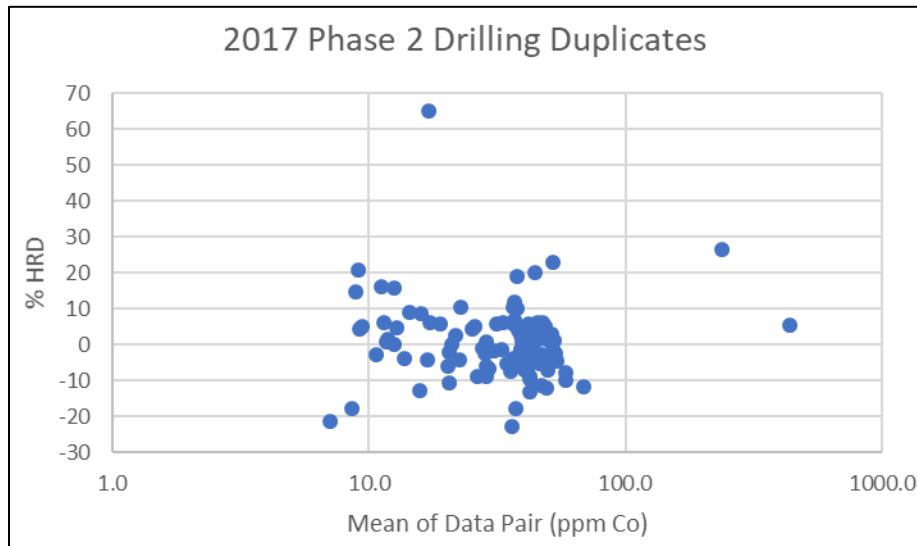


Figure 21: Phase 2 coarse crush duplicate scatter plots and HRD vs data pair mean

### 11.3.4 QAQC Interpretation

It is the Author’s and CSA Global’s opinion that CPG’s independent QAQC program undertaken during the Smith Cobalt 2017 Phase 1 and 2 drill programs is appropriate and conforms to industry standards.

During any future systematic surface sampling or drill program, the Author and CSA Global recommends that CPG expand its QAQC program by:

- Inserting coarse field/core blanks in place of or in conjunction with pulverized blanks in order to test all potential sources of laboratory contamination.
- In addition to routine insertion of coarse blanks, coarse blanks should also be inserted immediately after samples with significant mineralization.
- Inserting quarter-core duplicate samples into each sample batch submitted to the analytical laboratory. The results of these analyses will help to quantify Ag and Co heterogeneity within drill core.



- 
- Pulp sample splits should be regularly run at the primary lab and submitted for check analysis at a second independent laboratory.
  - If a resource drilling program is initiated, duplicates (quarter-core, coarse crush and pulp) should be taken from mineralized envelopes identified after the primary analyses have been completed such that routine duplicate sampling of non-mineralized intervals is minimized.
  - CPG should investigate acquiring or having prepared a low, medium and high-grade Co CRM with a similar matrix to the five-element mineralization of the Cobalt area. The massive sulphide Co CRM utilized in the Phase 1 and 2 drill programs is not ideal.



## 12 Data Verification

### 12.1 CSA Global 2017 Site Visit

CSA Global's representative and Author, Mr Ian Trinder, completed a one-day field visit at the Smith Cobalt Project on 13 February 2018 as part of CSA Global's diligence in the preparation of this Report. Confirmation of the location of the capped Smith Cobalt mine shaft and muck pile, the 2017 SC East stripped area and several 2017 drillhole collars was completed by the Author despite deep snow cover. Several selected drill core intervals were reviewed at CGP's recently acquired and under renovation field office/warehouse/core shack in Haileybury, Ontario.

CGP's Vice President Exploration, Chris Healey, and Jeff Poloni, a director of CPG at the time of the visit, accompanied the Author during the field visit, providing valuable insight into CPG's work on the Smith Cobalt and Canadian Cobalt Projects. Mr Martin Ethier of Haileybury and CPG contract geologist guided the Author and provided snowmobile transport to the Smith Cobalt shaft, stripped areas and drill collars.

CPG's exploration to date, methodologies, QAQC procedures, security and proposed future activities were discussed. The Projects and technical observations were generally as reported in historical documents and CPG's current public documents. Several drill core verification samples were collected.

### 12.2 CSA Global 2017 Verification Sampling

CSA Global conducted limited verification sampling of three archived intervals from CPG diamond drillhole SC-17-03. The Author selected and marked three archived half-core intervals for quarter-core sampling, then supervised the cutting of the core samples with a core saw. One quarter of the sample was placed into a plastic sample bag and the remaining quarter-core was returned to the core box for archive. The Author sealed the sample bags with ladder lock ties and retained possession of the samples until personally delivered to AGAT Laboratory's facility in Mississauga, Ontario.

The samples were prepared and analyzed using AGAT preparation code 200-001 in which the sample is weighed, dried, crushed to 75% passing 2 mm screen, a 250 g split is then taken and pulverised to 85% passing 75 microns. Splits of the pulps were then taken for multi-element analysis using four-acid digestion with ICP-OES/ICP-MS finish (48 element AGAT analytical code 201-071).

AGAT is a fully accredited laboratory and conforms with the requirements of CANP4E (ISO/IEC 17025:2005) and CANP1579 by the Standards Council of Canada for methods including those requested by the Author in the previous paragraph.

AGAT's sample preparations follow industry best practices and procedures. The analytical methods used are routine. AGAT and their employees are independent from CSA Global and CPG. CSA Global personnel and CPG personnel, consultants and contractors were not involved in sample preparation and analysis.

CSA Global's verification samples are too few to permit a statistical comparison with the historic samples, however, they do provide an independent confirmation of the presence of weak silver, cobalt and nickel and base metal mineralization reported in the primary half-core duplicates submitted by CPG (Table 25). The variation in grades is attributable to nugget effect, orientation of structures and mineralization within the core, and the primary half-core sample size versus quarter-core duplicate sample size.

It is the Author's and CSA Global's opinion that security, sample collection, preparation and analytical procedures undertaken on the Smith Cobalt Project during the 2016–2017 surface sampling and diamond drill programs are appropriate for the sample media and mineralization type and conform to industry standards.

Table 25: CSA Global verification sample results and comparison to 2017 CPG DDH analytical results

CSA Global sample no.	Sample length (m)	Ag ppm	Co ppm	Ni ppm	Cu ppm	Pb ppm	Zn ppm	CPG sample no.	Ag ppm	Co ppm	Ni ppm	Cu ppm	Pb ppm	Zn ppm
16906	0.39	1.06	27.9	85.8	48.6	305	854	E000-20501	1.67	31.3	116	93.4	314	1050
16907	0.10	3.67	38.4	102	186	1130	500	E000-20502	15.6	30.9	106	211.0	7000	2090
16908	0.76	3.5	208	112	70.7	3070	561	E000-20503	4.57	96.4	126	82.3	3530	855
REP-16906		1.08	27.4	85.8	51.0	310	853							

CSA Global sample no.	DDH	DDH from (m)	DDH to (m)	CPG Sample weight (g)	CSA Sample weight (g)	Sample description from CPG log
16906	SC-17-03	184.00	184.39	839.4	361	BEDDED TUFF/DACITE/CHERT: Siliceous bedded tuff... very siliceous/chert, breccias textures locally, interval contains 2–3% sphalerite, 1–2% pyrite, and trace to 1% chalcopyrite.
16907	SC-17-03	184.39	184.49	216.3	97	QUARTZ-CALCITE VEIN: Pink with wall rock inclusions, pyrite-sphalerite-chalcopyrite within vein.
16908	SC-17-03	184.49	185.25	1764	803	184.49–185.13 m BEDDED TUFF/DACITE/CHERT: Siliceous bedded tuff... very siliceous/chert, breccias textures locally, interval contains 2–3% sphalerite, 1–2% pyrite, and trace to 1% chalcopyrite. 185.13–185.25 m QUARTZ-CALCITE VEIN: pink, 55° to core axis, 2–3% pyrite throughout.

Note: Lengths are downhole core length – true widths are unknown.

### 12.3 General

The Author has reviewed available historic third party technical reports provided by CPG, online MNDM historical third-party exploration assessment reports, online MNDM mineral deposit inventory (MDI) files and various Ontario Geological Survey (OGS) geological publications pertinent to the current Project areas.

CPG provided CSA Global with 2017 diamond drill logs and assay data in digital spreadsheet format. The Author has completed a spot check comparison of approximately 10% of historical assay data against available digital scans/PDF files of laboratory certificates to verify accuracy and completeness. No errors were detected.

The Author and CSA Global have not independently conducted any title or other searches but has relied upon Ontario government online mining claims databases and CPG management and its lawyers for information on the status of the claims, property title, agreements, and other pertinent permitting and environmental conditions (see Section 4).

It is CSA Global's and the Author's opinion that the historical information and data available to CSA Global are a reasonable and accurate representation of the Smith Cobalt and Canadian Cobalt Projects, particularly the Smith Cobalt Property, and are of sufficient quality to provide the basis for the conclusions and recommendations reached in this Report.



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## 13 Mineral Processing and Metallurgical Testing

This section is not relevant to the Projects. As of the Effective Date of this Report, no mineral processing or metallurgical testwork have been completed by CPG on the Projects.





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## 14 Mineral Resource Estimates

This section is not relevant to the Projects. As of the date of this Report, the Projects are at an early stage of exploration and CPG has conducted limited surface sampling and diamond drilling; no Mineral Resources have been estimated.



## 15 Adjacent Properties

The Cobalt and Silver Centre areas have recently experienced an increase of staking activity and interest in the area's cobalt exploration potential both by the Issuer and third parties; however, to date there have been no significant exploration discoveries or development of historical properties announced in the immediate areas of the Smith and Canadian Cobalt Projects.

The Deerhorn (aka Cross Lake O'Brien) Mine, a major past producer currently held by Agnico Eagle, lies immediately west of the Smith Cobalt block on the east shore of Cross Lake. Historical production from 1928 to 1945 was included with production of the O'Brien Mine RL 403 property and may have been of the order of 6,000,000 oz Ag and 600,000 lbs Co (Sergiades, 1968). Thomson (1961c) reported production from 1950 to 1953 to be 3,021 lbs Co, 145,742 oz Ag, 653 lbs Ni and 598 lbs Cu. Production from 1960 to 1966 was reported to be 97,124 lbs Co, 2,846,053 oz Ag, 38,838 lbs Ni and 172,611 lbs Cu (Sergiades, 1968).

Within the Deerhorn property, Nipissing Diabase, about 500 ft thick forms an arch that trends north-northeast and separates the Peterson from the Lorrain basin. In the eastern part, Cobalt sediments 225 ft thick underlie the diabase about the crest of the arch the same geology hosting the adjacent Smith Mine on the Smith Cobalt Project; in the west part, Keewatin rocks cut by Haileyburian lamprophyre dikes occur in underground workings from the main shaft. The west portion of the property is also crossed by northwest-striking Cross Lake Fault and Cross Lake olivine diabase dike. The most important producing veins found up to 1959 were the Veins No. 1, Vein No. 2 and Vein No. 5. Vein No. 1 is arcuate in nature and strikes generally southwest; it was productive mostly in the diabase. Vein No. 2 and Vein No. 6 striking west-northwest with steep dips were most productive in the Keewatin rocks. Vein No. 10 is closely associated with west-northwest striking Vein No. 10 Fault. After 1960, nine silver zones were discovered; Vein No. 7, Vein No. 16 and Vein No. 27 accounted for most of the production.

Thomson (1961c) reported that the Deerhorn veins contained metallic minerals loellingite, skutterudite, cobaltite, rammelsbergite, silver, chalcopyrite, safflorite, tetrahedrite, arsenopyrite, chloanthite, niccolite, smaltite, breithauptite, gersdorffite, argentite, pyrite, galena, sphalerite and marcasite whose abundance, associations and zoning relationships varied between veins and within veins relative to host rock type and distance from the Nipissing-Keewatin contact.

The Author has not verified the Deerhorn Property information and the information is not necessarily indicative of the mineralization on the Smith and Canadian Cobalt Projects.



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## 16 Other Relevant Data and Information

No additional information or explanation is necessary to make the technical Report understandable and not misleading.

## 17 Interpretation and Conclusions

The Smith Cobalt Project lies within the historic Cobalt mining camp and the Canadian Cobalt Project lies within and adjacent the satellite Silver Centre mining camp, both in the Lake Temiskaming area of Ontario. The Cobalt Camp and satellite Silver Centre Camp are the type locality of arsenide silver-cobalt vein deposits which are the exploration target at the Smith and Canadian Cobalt Projects.

Arsenide silver-cobalt vein deposits are localized in areas affected by basinal subsidence and rifting and are spatially related to regional fault systems and closely associated with intrusions of mafic rocks. The arsenide silver-cobalt vein deposits in the Cobalt and Silver Centre camps are associated with Proterozoic conglomerate, quartzite, and greywacke rocks of the Cobalt Group (Coleman Member of the Gowganda Formation), as well as with major sill-like bodies of Nipissing Diabase and with Archean mafic and intermediate lavas and intercalated pyroclastic and sedimentary rocks. Distribution of the silver-cobalt veins in the Cobalt Camp (Smith Cobalt Project area) is controlled by the contact between the Nipissing Diabase sills and the rocks of the Cobalt Group (Gowganda Formation) and to an extent the contact between Cobalt Group rocks and Archean metavolcanic and metasedimentary rocks. Distribution of the known silver-cobalt veins in the Silver Centre Camp (Canadian Cobalt Project area), however, is generally controlled by the contact between the Nipissing Diabase sills and the Archean metavolcanic and metasedimentary rocks. In both camps, the veins occur in the diabase and in the Proterozoic and Archean rocks within about 200 m of their contact with the diabase.

In the Smith Cobalt Project area, Thomson (1961c) reported approximately 4,350 kg (9,570 lbs) of cobalt ore was extracted from the Smith Mine in 1935. Cobalt production in 1939 and 1940 was reported to be 57.27 kg and 150.45 kg (126 lbs and 331 lbs) respectively. At the Silver Eagle Lease of the Canadian Cobalt Project, Knight (1922; p225 and 229) reported total production of 248,486 g (7,989 oz) silver in 1918 from a 6.1 m (20 ft) length of the Wettlaufer Vein where it crossed the northwest corner of the Silver Eagle claim on the 230-ft level of the Wettlaufer mine.

The Smith and Canadian Cobalt Projects are underlain in variable proportions by rock types associated with the historic arsenide silver-cobalt vein deposits elsewhere in the Cobalt and Silver Centre camps, namely Archean metavolcanics (Keewatin) and metasediments, Proterozoic Cobalt Group sediments and Nipissing Diabase. The relatively fewer number of arsenide silver-cobalt vein occurrences in the Silver Centre Camp and adjacent Canadian Cobalt Project areas compared to the main Cobalt Camp could be due to an unknown geological control but it may also in part reflect overburden cover masking bedrock, hindering prospecting efforts and the poor accessibility of the areas during the time that the camp was most active in the first half of the 20<sup>th</sup> century.

Previous historical surface-based exploration has relied largely on prospecting for mineralized fractures and veins supported by overburden stripping and pitting programs. In addition to prospecting methods, CPG should consider continued testing and use modern geophysical and geochemical techniques to identify features controlling arsenide silver-cobalt mineralization or the arsenide silver-cobalt veins themselves at the Cobalt Project.

CPG's airborne magnetic and VLF-EM survey of the Smith Cobalt Project has highlighted interpreted structural zones which require compilation and interpretation with geological and geochemical data and in-field follow-up mapping and prospecting to assess the prospectivity for silver-cobalt mineralization. The IP survey results from the Smith Mine area should be reviewed in context of the geological information gained from the Phase 1 and Phase 2 drill programs. Borehole geophysics and or drill core geophysical testing should be undertaken



to characterize the various rock and assist in interpretation the 2017 IP survey results and selection of future ground geophysical methods.

Limited surface sampling of in-situ veining in outcrop and of muck piles surrounding historical shafts and pits has returned weak to high-grade Co values in the Smith Cobalt, Smith Cobalt East Extension, Temiskaming and Chrysler Niles areas of the Smith Cobalt Project.

CPG's Phase 1 and Phase 2 diamond drill programs near the historic Smith Mine did not intersect a significant zone of mineralization; however, they did confirm the local presence of minor narrow veins with Ag and Co mineralization along a trend extending from the historic Smith Mine southeast 800 m to the Smith Cobalt East Extension occurrence. The drilling results confirmed the need to gain a better understanding of potential structural and lithological controls to the distribution of the silver-cobalt veins utilizing geological, geophysical and geochemical methods.

The Author and CSA Global conclude that the Smith and Canadian Cobalt Projects have potential to host arsenide silver-cobalt vein deposits and exploration is warranted.

## **17.1 Risks**

### *17.1.1 General Risks*

As noted in Section 4.6, environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other relevant issues could potentially materially affect access, title or the right or ability to perform the work recommended in this Report on the Projects. However, at the time of this Report, the Author and CSA Global are unaware of any such potential issues affecting the Projects.

The Author considers the Project-specific risks identified in the following subsections to a low to moderate potential to reasonably affect the reliability or confidence in exploration information obtained to date or exploration programs proposed in this Report.

### *17.1.2 Exploration Risk*

A key risk, common to all exploration companies, is that the targeted mineralization type may not be discovered or that it may be too small to warrant commercial exploitation.

Given the mining history of the Cobalt Camp, undocumented historical mining of veins may result in insufficient tonnage remaining for mining extraction at documented vein occurrences. CPG should compile and identify all documented historical mine workings. When drill testing known veins, attention should be paid to missing core or poor core recovery which may indicate the presence of historical mine workings.

### *17.1.3 Mineralization-Type Risk*

The target mineralization at the Smith Cobalt and Canadian Cobalt Projects is the arsenide silver-cobalt vein deposit type, also referred to as the Five-Element (Ni-Co-As-Ag-Bi) Vein deposit type. As suggested by the name these deposits can contain significant contents of As, Sb and other potentially deleterious elements. Should a significant deposit be delineated, metallurgical testwork and planning would be required to address the safe processing and disposal of tailings of these deleterious elements in accordance with provincial and federal environmental regulations.



#### 17.1.4 *Environmental Liabilities*

As noted in Section 4, CPG is responsible for all historical environmental liabilities on its Smith Cobalt Project patented claims and any necessary rehabilitation. This work would be covered in a mine closure plan for any new proposed mine. CPG is not liable for environmental issues and historical mine hazards existing on its unpatented mining claims prior to their staking date. A claim holder would however become liable for a pre-existing hazard if it were to disturb it (e.g. excavating a stockpile). If in the future a party obtains mining rights by taking a mining claim to lease or patent, they will then be responsible for the pre-existing liabilities on the claim (stockpiles, tailings etc.) and any necessary rehabilitation. This work would be covered in a mine closure plan for any new proposed mine.

CPG warrants that it has not received from the mining claim and patent vendors or any government authority, notice of, or communication relating to, any actual or alleged breach of any environmental laws, regulations, policies or permits with respect to the Projects' various claims.

CPG should locate, document and confirm any AMIS locations or other potentially undocumented historical mine hazards within the Projects. CPG should, in consultation the Ontario Director of Mine Rehabilitation, consider making safe any significant historical physical hazard that might exist within the Projects.

#### 17.1.5 *QAQC*

As noted in Section 11.3, the low-grade Co CRM 14p consistently failed in 2017 Phase 1 drilling and had a low reporting bias in 2017 Phase 2 drilling. While not a critical failure due to the early exploration nature of the drilling, CPG should investigate acquiring or having prepared a low, medium and high-grade Co CRM with a similar matrix to the five-element mineralization of the Cobalt area.

### 17.2 **Opportunities**

The Projects have potential for additional silver-cobalt discoveries near historical mines and mineral occurrences and for new mineralized zones in areas with little past exploration (particularly the Canadian Cobalt Project area).

## 18 Recommendations

CSA Global considers the Smith and Canadian Cobalt Projects to be at an early stage of exploration and recommends a multi-faceted exploration program including historical and current data compilation, continued airborne geophysical surveys to cover both Project areas, prospecting, geological mapping, testing of ground geophysical and geochemical methods with follow-up surveys and finally diamond drill testing of targets developed from these programs.

CPG has proposed a 2018 multi-faceted exploration program and budget for the Smith and Canadian Cobalt Projects as presented in Table 26. The Author and CSA Global concur with CPG's program and budget.

Table 26: 2018 Smith and Canadian Cobalt Projects proposed exploration program and budget

Category	Item	Description	Budget	
<b>Geophysics</b>	1	Airborne geophysics	Airborne magnetometer and VLF of Canadian Cobalt Project and remainder of Smith Cobalt Project area. 50 m line spacing. Approximately 2,500-line km.	\$250,000
	2	Line cutting	Cut survey grids for ground geophysics.	\$20,000
	3	Ground geophysics	Ground geophysical coverage between Smith Cobalt and Proteus, to complete coverage initiated 2017. Approximately 15-line km. Determine technique to get best results (2017 2D IP inadequate?).	\$80,000
	4	Bore hole geophysics	Downhole surveys of electrical properties to aid in interpretation of the geology. 10 holes – acoustic televiewer, magnetic susceptibility, inductive conductivity and IP.	\$40,000
	5	Geophysics interpretation	Comprehensive interpretation of the airborne and ground surveys.	\$20,000
<b>Geology</b>	6	Interpretation of existing data	Comprehensive review of all current core and surface mapping/sampling data and geophysics, with data compilation and 3D modelling to define targets for next drill program.	\$50,000
	7	Mapping and sampling	Follow up detailed mapping/sampling for Smith Cobalt East and Timiskaming Project. Also add several other target areas with known showings. Outcrop stripping and trenching as appropriate.	\$100,000
<b>Geochemistry</b>	8	Soil geochemistry	Conduct reconnaissance soil geochemistry surveys over under-explored areas. Appropriate technique to be determined.	\$100,000
<b>Drilling</b>	9	Phase 3 drill program	Follow up on Smith Cobalt Phase 1 and 2 programs after geological compilation. Drill several holes at each of Proteus, Timiskaming and Chrysler-Niles. 30 holes, 6,000 m, \$200/m all inclusive.	\$1,200,000
<b>Environmental</b>	10	Baseline environmental studies	Investigate environmental studies required moving forward and a timeline.	\$5,000
<b>First Nations</b>	11	Ongoing consultations	Develop and maintain working relationship with the Temiskaming and Temagami First Nations.	\$5,000
<b>Land</b>	12	Claim conversion	Ensure an orderly transfer of all claims into the new system.	\$5,000



Category	Item	Description	Budget	
Logistics	13	Core shack	Set up and operate new core shack, and operate (includes improvements, monthly rental, taxes and utilities). Move all core to permanent storage area.	\$68,000
	14	Road work	Develop and maintain suitable access to all properties.	\$20,000
	15	Travel and lodging		\$150,000
	16	Supplies	Exploration and safety supplies, fuel, etc.	\$45,000
<b>Subtotal</b>			<b>\$2,158,000</b>	
10% Contingency			\$215,800	
<b>TOTAL</b>			<b>\$2,373,800</b>	





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# Appendix 1: Establishing Mineral Rights in Ontario

## Mining Claims

In Ontario, Crown lands are available, for the purposes of mineral exploration, to a person or entity that holds a prospector's licence from the Ministry of Northern Development and Mines (MNDM). The prospector must complete the Mining Act Awareness Program (MAAP) within 60 days before applying for a licence or a licence renewal. MAAP is an online program that provides basic information on the mining sequence. It includes information on staking claims, early exploration and Aboriginal consultation requirements.

Prior to 8 January 2018, a licensed prospector must first stake a mining claim to gain the exclusive right to prospect on Crown land. The owner of a mining claim is not granted title or ownership to the land and cannot extract or sell any resources removed from the land. Claim staking is governed by O. Reg. 43/11: Claim Staking and Recording under Mining Act, R.S.O. 1990, c. M.14 and is administered through the Provincial Mining Recorder and Mining Lands offices of the MNDM.

Prior to 8 January 2018, claims were staked in Ontario by ground staking or in the case of southern Ontario only, map staking. As of the Effective Date of the Report (15 March 2018), Ontario is in the process of converting to an online system of claim registration using a cell-based provincial grid which will replace ground and map staking. At conversion on 10 April 2018, all active, unpatented claims will be converted from their legally defined location by claim posts on the ground or by township survey to the cell-based provincial grid. Following conversion, the claims would be legally defined by their cell on the grid and coordinate location in MLAS.

### *Ground Staking*

An unpatented mining claim is a square or rectangular area of open Crown land or Crown mineral rights that a licensed prospector marks out with a series of claim posts and blazed lines. Mining claims can be staked either in a single unit or in a block consisting of several single units. In un-surveyed territory, a single unit claim is laid out to form a 16 ha (40 acre) square with boundary lines running 400 m (1,320 ft) astronomic north, south, east and west. Multiples of single units, up to a maximum of 16 units (256 ha), may be staked with only a perimeter boundary as one block claim but must be staked in a square or rectangular configuration.

Each corner of the mining claim must be marked with a post. These posts are known as corner posts. Corner posts can be constructed from a standing tree, commercial timber or a loose post. They must stand 1.2 m above ground when erected. A metal tag, known as a claim corner post tag, must be affixed to each corner post. Claim corner post tags are engraved with a unique number, known as a claim number, which identifies the mining claim. They also have a second number, which indicates which corner post the tag is to be placed on. Tags may be purchased from the Provincial Recording Office or other offices, such as the Mining Land Consultant Office, or Service Ontario. A clearly marked line, known as a claim boundary, must be made between the four corner posts. Claim boundaries are usually marked by blazing trees and cutting underbrush with an axe. Piles of loose rock, known as cairns, or stakes cut from other smaller trees, known as pickets, are acceptable if trees are not available or undesirable to cut. A line post is used in conjunction with a claim line to mark the perimeter of a mining claim. For un-surveyed areas, line posts must be erected at every 400 m along a claim line and at locations where the boundary changes direction. A metal tag, known as a claim line post tag, must be affixed to each line post. Claim line post tags are blank when purchased and must be



engraved with the claim number found on the claim corner post tags along with the distance and direction from the last corner post.

Global Positioning System (GPS) georeferencing data must be included on the application to record a mining claim staked on or after 1 November 2012. This requirement only applies to ground staked mining claims on lands that are un-surveyed. It does not apply to land surveyed into lots and concession.

Upon completion of staking, and not later than 30 days after the day on which the staking was completed, a recording application form is filed with payment to the Provincial Recording Office. Staking completion time takes priority, meaning that if two licensees file applications to record the staking of all or part of the same lands, then the applicant with the earliest completion time will have priority. Where the time limited for any proceeding or for the completion of said proceeding in an office of a mining recorder or an office of the Commissioner or an office of the Minister or Deputy Minister expires or falls upon a day on which the relevant office is closed, the time so limited extends to and the recording may be done on the day next following the day on which the relevant office was closed. All claims are liable for inspection at any time by the Ministry and may be cancelled for irregularities or fraud in the staking process. Disputes of mining claims by third parties will not be accepted after one year of the recording date or after the first unit of assessment work has been filed and approved.

The staker must notify all persons who own surface rights to any part of the land located within the claim area that their land has been staked for the purpose of mineral exploration. A surface rights holder is a person who own rights to a piece of land which do not include the mineral rights. The staker must send proof of an attempt to notify surface rights holders to the Provincial Mining Recorder within 60 days after making the application to record the claim, in order for the mining claim to remain valid

A mining claim remains valid as long as the claim holder properly completes and files the assessment work as required by the Mining Act and the Minister approves the assessment work. A claim holder is not required to complete any assessment work within the first year of recording a mining claim. In order to keep an unpatented mining claim current, the mining claim holder must perform \$400 worth of approved assessment work per mining claim unit, per year; immediately following the initial staking date, the claim holder has two years to file one year's worth of assessment work. No payments in lieu of work can be made. Claims are forfeited if the assessment work is not done.

A mining claim can be transferred, charged or mortgaged by the prospector without obtaining any consents. Notice of the change of owner of the mining claim or charge thereof should be filed with the MNDM at the district mining recorder's office.

### *Map Staking*

Map staking was introduced in November 2012 in surveyed areas in Southern Ontario where there are no registered surface rights owners. Map staking for Northern Ontario will become effective on 10 April 2018.

Map staking is the action of staking a mining claim via the internet using a cell-based provincial grid reference system, without having to physically be on the land. A title search at the Land Registry Office may be required prior to map staking.

### **Mining Leases**

A claimholder may prospect or carry out mineral exploration on the land under a mining claim. However, the land covered by these claims must be converted to leases before any development work or mining can be performed. Mining leases are issued for 21-year terms and may be renewed for further 21-year periods upon



submission of an application to the MNM within 90 days before the expiry date of the lease. Pursuant to the provisions of the Mining Act, the holder of a mining claim is entitled to a lease if it has complied with the provisions of the Act in respect of those lands. An application for a mining lease may be submitted to the MNM at any time after the first prescribed unit of work in respect of the mining claim is performed and approved. Leases can be issued for surface and mining rights, mining rights only or surface rights only. Once issued, the lessee pays an annual rent to the province. Furthermore, prior to bringing a mine into production, the lessee must comply with all applicable federal and provincial legislation.

A mining lease cannot be transferred or mortgaged by the lessee without the prior written consent of the MNM. The consent process generally takes between two and six weeks and requires the lessee to submit various documentation and pay a fee.

### **Freehold Mining Lands**

A prospector interested in removing minerals from the ground may, instead of obtaining a mining lease, make an application to the Ministry of Natural Resources and Forestry (MNRF) to acquire the freehold interest in the subject lands. If the application is approved, the freehold interest is conveyed to the applicant by way of the issuance of a mining patent. A mining patent can include surface and mining rights or mining rights only.

The issuance of mining patents is much less common today than in the past, and most prospectors will obtain a mining lease in order to extract minerals. If a prospector is issued a mining patent, the mining patent vests in the patentee all of the provincial Crown's title to the subject lands and to all mines and minerals relating to such lands, unless something to the contrary is stated in the patent.

The holder of a mining patent enjoys the freehold interest in the lands that are the subject of such patent, therefore no consents are required for the patentee to transfer or mortgage those lands.