Technical Report on the Cobequid Highlands Property, Colchester County, Nova Scotia, Canada (in accordance with National Instrument 43-101)

NTS sheets 11E05 & 11E12
UTM 453,125E/5,037,921N
NAD83 Zone 20
(centre)

Presented to

Spark Minerals Inc.
206 Brownlow Avenue, Unit 3
Dartmouth, NS
B3B 1V9
Canada

by
Alex MacKay, P.Geo. APGNS #242

November 10th, 2020

Certificate of Qualified Person – Alex MacKay

I, Stuart Alexander Mackay, P.Geo (APGNS #242), do hereby certify that:

I reside at 77 Stark Road in Newport Station, Nova Scotia, B0N 2T0, Canada, and I am currently the President of AMK Geoscience Ltd., located at 77 Stark Road in Newport Station, Nova Scotia, B0N 2T0.

This certificate accompanies the report entitled "Technical Report on the Cobequid Highlands Property, Colchester County, Nova Scotia, Canada (in accordance with National Instrument 43-101)", dated November 10th 2020 The effective date of this report is November 10th , 2020. The issue date is November 10th , 2020.

I received a double B.Sc. in Earth Science & Physics from Dalhousie University in Halifax, NS in 2008. Prior to that, in 2003 I completed a Diploma in Civil Engineering also at Dalhousie University. As part of my studies, I completed all the core economic geology courses in addition to management and financial courses. I have been working in the mineral exploration industry since 2008, first as an employee for a TSX listed Gold company. Since then I have consulted to various public and private companies, primarily on early stage projects in Atlantic Canada. I have direct experience exploring for gold, silver, copper, lead, zinc, graphite, barite, lithium and REE's. In addition to consulting, I have also staked my own projects and founded companies around them. I have been a member of the Association of Professional Geoscientists of Nova Scotia since 2016 as member #242.

I have explored for IOCG's along the Cobequid Chedabucto Fault Zone ("CCFZ') on various projects since 2010. I have been a previous claim holder in the area of this project but have no interest now. I have read National Instrument 43-101 and Form 43-101F1 (April 8, 2011 version). Based on my experience and the exploration stage of the Cobequid Highlands Property, I can act as the Independent Qualified Person within the meaning of NI 43-101.

I conducted a personal current inspection of the Cobequid Highlands Property on September 11th, 2020. The Cobequid Highlands Property is at an early exploration stage.

As of the date of this technical report, 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.

Alex MacKay, P.Geo (APGNS #242)
November 10th, 2020

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Item 1. Summary

AMK Geoscience Ltd. was retained by Spark Minerals Inc. ("**Spark**") in September 2020 to complete a Technical Report on the Cobequid Highlands Property (''the **Property''**) to support a potential listing on a Canadian exchange.

The Property was acquired by Spark Minerals Inc., which is co-owned by 21Alpha Resources Inc. (35%) and Maximos Metals Corp. (65%). A 2 % Net Smelter Return is attached to the Property, and has no buy-back clause.

The Property is located near Londonderry and Debert, Nova Scotia on NTS sheets 11E/05 and 11E/12. It consists of one irregular block composed of 7 claims, covering approximately 3,264 hectares or 32.64 km^2. Since the initial staking of mineral claims that constitute the Property, Spark has acquired an additional 19 claims in the Cobequid Highlands.

In 2018, Prospectair Geosurveys/Dynamic Discovery ("**Prospectair**") conducted a Heliborne Magnetic and Time Domain Electromagnetic (TDEM) survey, valued at $62,256. In 2019, Spark Minerals Inc. commissioned Nanospectra Geophysics to acquire and analyze hyperspectral data on the Property, valued at $71,808. SL Exploration Inc. was contracted in February 2019 to produce a technical report valued at $9,169. In agreement with SL Exploration, the current report is an updated version of that report. Modern exploration activity in and around the Property dates back to 1963. Expenditures related to various exploration activities including geological mapping, geophysical surveys, geochemical analyses and drilling within this area are estimated to be in excess of 10 million dollars (with the bulk of the expenditures incurred since 2000). More recently, $143,233 was spent on the Property between 2018 and now.

There are two regional faults that cross the Property: the Londonderry and Cobequid faults. North of the Londonderry fault are Neoproterozoic metamorphosed gneissic rocks which form part of the Bass River Block. Between the two faults are greywacke, siltstone and shale of the Early Carboniferous Londonderry Formation (part of the Mabou Group). These units abut to the south against Late Carboniferous sandstones and conglomerates of the Parrsboro Formation.
The Property is located in an iron ore district that produced from 1847 to 1906. The deposits comprise iron-oxides in fault-controlled veins filled with ankerite-siderite and sit within the regional Cobequid-Chedabucto fault system.

Mineralization found in the Mabou Group within the Property is an excellent candidate for iron oxide-copper-gold (IOCG) type mineralization based on historical geophysical, soil and rock sample analyses. Five targets were developed based on historical work and the new Prospectair survey. Three additional targets were generated from the hyperspectral work (targets 6, 7 and 8 in this report). Two of the three new targets coincide with recognized copper occurrences.

The Property's historical work will be augmented in two phases of exploration. Phase I will include detailed geological mapping and prospecting focused on the eight targets (discussed under Item 25.1) and alteration mineralization that is critical to discovering the ore zone in an IOGC setting. The mapping program will be complemented by a Property-scale soil sampling program to fill-in data gaps due to lack of bedrock exposure. Furthermore, geophysical coverage will be extended (airborne TDEM) or concentrated (ground gravity), and merged with historical data. The field programs will be guided by a comprehensive compilation and review of past exploration programs within the property and in adjacent areas. This effort will include re-processing and re-interpreting of geophysical data (gravity, EM, IP). Also, assaying of rock samples and historical drill cores for base and precious metals will be of great value to evaluating the mineral potential of the Property. The Phase I budget is estimated at $315, 957, which will include funds for a 43-101 compliant submission to address the 19 claims not incorporated in this report.

Phase II will depend on the results of Phase I. Assuming positive results, Phase II should include a 2,000 m drill program, drill core assaying and preliminary environmental assessments.

Item 2. Introduction

AMK Geoscience Ltd. was retained by the Spark Minerals in November 2020 to complete a NI43-101 Technical Report on the Property. The mineral claims are registered to Spark Minerals, as discussed under Item 4.3.

This Technical Report has been prepared by Alex MacKay of AMK Geoscience Ltd. The Project is at an early stage of exploration for the search of base and precious metals. This Technical Report provides the reader with a thorough review of past exploration activities and geology on the Property. Spark requested the Technical Report as part of the supporting documentation for a potential qualifying transaction to list on a Canadian Exchange.

This Technical Report is based, in part, on published government reports and public information as listed in the "References" section of this report as well as information and documents provided by Spark. The author visited the site on September 11th, 2020.

The author believes the information used to prepare this Technical Report is valid and appropriate considering the status of the Property and the purpose of the Technical Report. To the best of the author's knowledge the work program and recommendations presented herein are in accordance with NI 43-101 requirements and follow CIM Standards on Mineral Resources and Reserves– Definitions and Guidelines ("**CIM Definition Standards**").

The effective date of this report is November 10th, 2020.

2.1 Sources of Information

The author relied on:

- Exploration history of the Property in Item 6 is based on information from the NovaScan database of the Department of Energy and Mines of Nova Scotia a database of reports and assessment work files at https://gesner.novascotia.ca/novascan.
- There is sparse historical information available regarding exploration and mining activities in the late 1800s and early 1900s. Such information consists mainly of general statements and cannot be readily verified and, as such, are considered historical in nature.
- The status, area and ownership of the claims contained within Item 4 were verified on the NovaROC database at https://novaroc.novascotia.ca. The claims are in good standing as of the date of this report.
- Geophysical reports and results are discussed under Item 6 were produced by previous explorers
- The 2018 Prospectair report discussed in Item 9 was provided direct from Prospectair
- Hyperspectral maps provided in Appendix 9 were provided, as is from Spark
- The authors previous experience in the area over the last 10 years

The author has sourced additional information for this Technical Report from the collection of reports listed in the References section.

The Qualified Person involved in this Technical Report has not, and does not, have any material interest in Spark ("**the Company**")**.** The relationship with the Companies is solely a professional association between the companies and the Qualified Person. This Technical Report was prepared in return for fees based upon agreed commercial rates, and the payment of these fees is in no way contingent on the results of the Technical Report.

The base of this report was provided by SL Exploration. It has been reviewed and updated section by section. Where possible, new information based on the new hyperspectral survey, the current author's local knowledge, a new current personal inspection and current claim status has been revised.

2.2 Qualified Person

Alex MacKay, P.Geo. APGNS #242, is an Independent Qualified Person as defined in NI 43-101 hired under contract with Spark. He has worked in the mineral exploration industry since 2008 and has consulted on various public and private companies, primarily on early stage projects. He has direct experience exploring for gold, silver, copper, lead, zinc, graphite, barite, lithium and REE's across many different deposit types. With respect to IOCG's, he has worked on several different IOCG targets, including this project, along the CCFZ over the last 10 years.

Current Personal Inspection

A current personal inspection was conducted on the Property on September 11th, 2020, by Alex MacKay. The following elements were verified and additional details are found under Item 12:

- Inspection of the Property access roads.
- Observation of geological features.

Item 3. Reliance on Other Experts

Alex MacKay, an independent Qualified Person as defined by Regulation 43-101, was contracted to study technical documentation relevant to the Technical Report, and to make recommendations for additional work to be done. The author has reviewed the mining titles and their status, and technical data supplied by the Spark (or its agents) and available public sources of relevant technical information.

Although the author has reviewed the available data, they have only validated a portion of the entire data set. Therefore, the author has made judgments about the general reliability of the underlying data and, where deemed either inadequate or unreliable, the data were either not used or disclaimers were added to account for this lack of confidence.

The author has performed basic verification of land titles and tenures, but did not verify the legality of any underlying agreements that may exist concerning the permits or other agreements between third parties. The author relied on information provided by Spark for mining titles, option agreements, royalty agreements, environmental liabilities and permits. The Qualified Person is not qualified to express any legal opinion with respect to property titles or current ownership and possible litigation.

With respect to the hyperspectral work completed by Nanospectral Geophysical, the author does take any responsibility whatsoever for the product. The NSG maps attached to this report were received as is from Spark. The author was told that this is a new proprietary technology that identifies gold and copper prospective targets for further geological inspection. As this is a proprietary technology, the author was not granted access to how it works, as such the author takes no responsibly for it whatsoever.

The mineral title information was confirmed via Nova Scotia's online claim management system ("NovaROC"). The Option Agreement detailed in Item 4 was told to the author by Spark representatives, no agreements were reviewed.

Item 4. Property Location and Infrastructures

The Cobequid Highlands Property is located in the north-central part of the Province of Nova Scotia, within NTS sheets 11E05 & 11E12 (Figure 1). The centre of the property is located approximately at 453,125 m Easting and 5,037,921 m Northing (from NAD 1983, UTM system, Zone 20N).

The western portion of the Property is crossed by the Trans-Canada Highway (Route 104) while the eastern portion is crossed by Highway 4. The centre is located near the Londonderry community and approximately 35 km northwest of Truro, a major distribution hub of Nova Scotia. A series of logging roads and ATV trails are also present on the Property.

4.1 Area of the Property

The Property is made of one irregular block composed of 7 exploration licences (Figure 2) covering approximately 3,264 hectares or 32.64 km^2. The Property is mostly composed of private lands with a few limited crownland areas located in the western area of the Property.

There are no restrictions on the Property. A protected area, the Portapique River Wilderness Area, lies to the west of the Property. In addition, Department of National Defense (DND) land is located 6 km southeast of the Property. No claim staking is allowed in the aforementioned zones.

In addition to the 7 licences under assessment, Spark holds 19 licences adjacent or in close proximity to the Property. They are all situated in the prospective Cobequid Highlands (Figure 2).

Figure 1. Location of the Property.

4.2 Mineral Tenure

The Property consists of one irregular block totaling 7 claim tenures, over approximately 3,264 hectares or 32.64 km^2. The licences are in good standing and the expiry dates of the tenures are from May 9th 2021 to August 3rd 2021. A minimum of $45,240.00 in exploration expenditures will be required for claim renewal, along with renewal fees of $3,717.22. Work done in 2018-19 totaled $134,064 in exploration expenses. The tenures and claims are described in the appendices 1,2 and 3 of the Technical Report.

4.3 Agreements

Spark Minerals Inc. is co-owned by 21Alpha Resources Inc. (35%) and Maximos Metals Corp. (65%). A 2% Net Smelter Return is attached to the Property for the benefit of the vendors and has no buy-back clause.

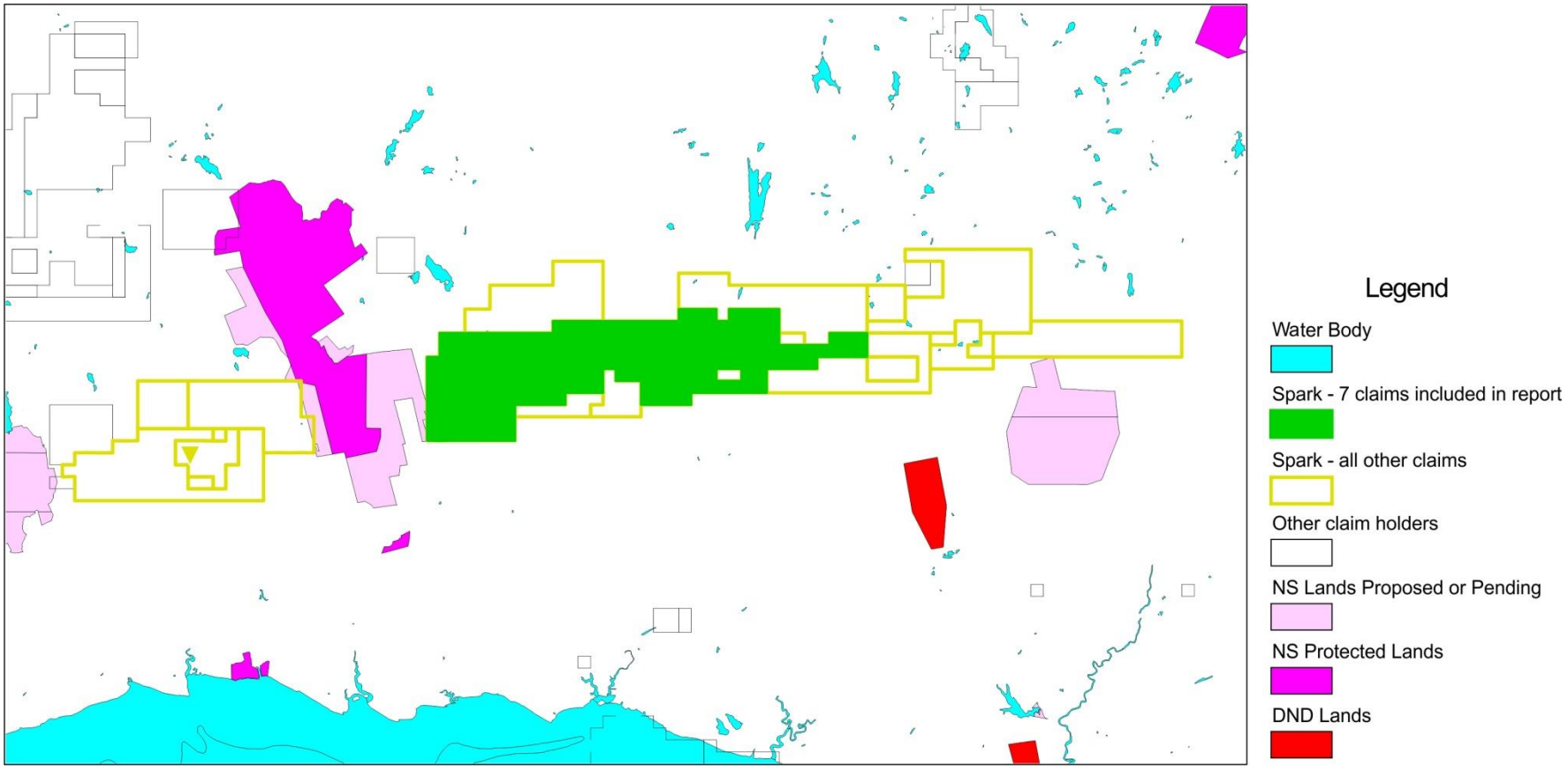

Figure 2. Property Licences and Restrictions.

4.4 Exploration Restrictions

Exploration work should be conducted in a manner that limits impact on the natural environment. Land owners must be contacted and provide permission before conducting work on private land. Permits are required before conducting work on crown land. There are no other known significant factors or risks in addition to those noted in the Technical Report that could affect access, title, or the right or ability to perform the recommended exploration program.

Item 5. Accessibility, Climate, Local Resources, Infrastructures and Physiography

5.1 Topography

The Property shows a relatively hilly topography with a downhill southern slope. There are some small valleys from downstream brooks (south flowing). Elevation ranges between 365 m to 85 m, with an estimated average of 225 m. A large majority of the Property consists of bedrock with sparse stony till deposits– south of the Cobequid fault, where it is mostly a silty till plain, is the exception (Geoscience Atlas, 2019).

5.2 Access and Local Resources

The Property encompasses Londonderry, a small community of 200 inhabitants. It can be easily accessed by driving 30 minutes (38 km) west from Truro. Truro has a population of 12,500 inhabitants and it offers all standard amenities. The western portion of the property is crossed by the Trans-Canada Highway 104, while the eastern part has the Provincial Highway 4 going through (Figure 3). Major power lines also cross the property.

5.3 Climate

Nova Scotia lies in the mid-temperate zone and, although the province is almost entirely surrounded by water, the climate is closer to continental rather than maritime. Seasonal temperature extremes are moderated by the ocean: temperatures during summer are from 14 °C to 28 °C, and from −9 °C to 0 °C during winter. The area has precipitation well-distributed throughout the year, with a slight summer maximum. Because the Nova Scotian landmass juts out into the Atlantic Ocean, it is prone to intense cold-season storms arriving from the northeastern United States, and occasional tropical storms and hurricanes in late summer and autumn (Environment Canada, 2019).

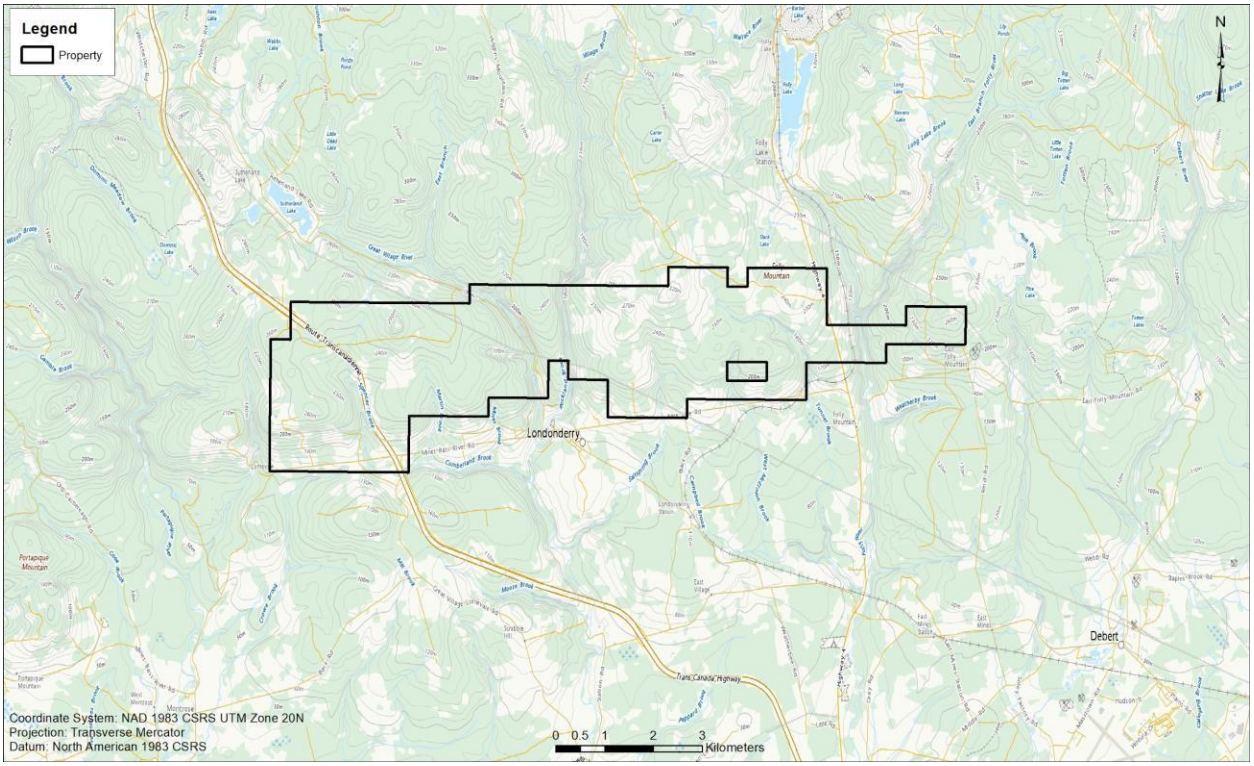

Figure 3. Road Access to the Property.

5.4 Infrastructures

Two major power lines run through the Property. One is located at the easternmost point, while a 345-kV transport line crosses the property at its centre, going over Londonderry community. All major infrastructures are located in the vicinity of Truro, which is 38 km from Londonderry. Airport, hospital and other commercial facilities can be found in Truro.

Item 6: History

The different elements described in this section are located on the Property unless otherwise specified. The anomalies generated during historical work were compiled in the interpretation section under Item 25 to generate 5 main targets for exploration. 3 additional targets were develop based on the remote sensing hyperspecral work.

6.1 Historical Work

Iron mining during the period of 1847-1906 focused on large deposits of iron carbonate that extended E-W over a total strike length of 16 km with individual veins and pods up to 40 m in thickness. It has been suggested that those past producers are the most developed ones of all the potential IOCG occurrences along the 250 km long Cobequid-Chedabucto Fault Zone (CCFZ) (Belperio et al., 2009).

In 1963, Noranda Exploration Company Ltd. conducted geological mapping, prospecting, geochemical sampling and geophysical surveys followed by trenching and diamond drilling. Strong Cu anomalies were obtained in soil samples (up to 6000 ppm Cu) and trenching results give **1.32% Cu content over 1.5 m** within licence# 53024 held by Spark, but outside of the 7 licences under assessment. One zone of weak conductivity and several large self-potential anomalies were observed (Logan, 1963).

In 1966, Lura Corporation/Ran-Lux Mines Ltd. conducted a geochemical survey followed by diamond drilling. Two short drill-holes are located just north of Acadian Mines Bridge. The source of the geochemical anomalies was not found (Hudgins, 1966).

In 1975, the Millmor syndicate conducted an exploration program for base metals. Extensive geochemical anomalies for Cu-Pb-Zn were found in soils over and adjacent to iron deposits at McElman Brook. Follow-up electromagnetic surveys outlined zones of conductivity associated with the geochemical anomalies (Hudgins, 1976).

Between 1975 and 1977, Westfield Minerals conducted prospecting, geochemical and induced polarization (IP) surveys. No significant correlation was detected between the IP and geochemical anomalies (Buckley, 1975; McKillen, 1975).

In 1977, Falconbridge Nickel Mines conducted geochemical and geological surveys. One soil sample showed values up to 38 ppm Cu, 333 ppm Pb, 1,060 ppm Zn and 0.6 ppm Ag (Taylor, 1977).

In 1979, Cuviers Mines Ltd. conducted two geochemical and magnetometer surveys. In the first area, three isolated lead anomalies were found in soil samples with highest values at 245 ppm. Two large barium anomalies were also discovered, with values between 406 ppm and 775 ppm (Black, 1979A). In the second area, values up to 5220 ppm Pb in soil samples and 495 ppm Cu in soil samples were found (Black, 1979B).

In 1979, Northgate Exploration Ltd. conducted an IP survey. The results indicate that the Probert area contains polarizing mineralization, likely sulphides (Lewis, 1979).

In 1989, Acadia Mineral Ventures Ltd. conducted a geophysical survey on the EL.13492 (52232 and 51736) and a geochemical survey on the EL.14440 and EL.14482 (52329, 52235 and 07391). Strong VLF anomalies and magnetic anomalies were outlined (Black, 1989A). 333 soil samples were collected, and resulted in the discovery of a semi-continuous Pb-Zn anomaly trending NE-SW (Black, 1989B).

In 1993, Ecum Secum Enterprises conducted a geochemical and a Very Low Frequency (VLF)-

EM survey on a large part of the property. No significant values were obtained (Black, 1993).

Between 2003 and 2007, Elk Exploration conducted several surveys. In 2004-2005, Cu-Pb-Zn anomalies were found in till samples on the EL.04933 (52329) (Allen, 2005). In 2005, they prospected on the EL.06189 (52344), and assayed a sample which showed 10 Wt.% iron, 247 ppm copper and 71 ppm cobalt (Allen, 2006A). In 2005-2006, they identified zinc mineralization (0.29% Zn), on the EL.06202 (52232), which appears to be associated with ankerite (Allen, 2006B). In 2007, they conducted a hand-held drill survey to take 3 meters of core from an outcrop that was showing malachite on the EL.06201 (51736). Values of 2257 ppm Cu, 4.2 ppm Ag, 244 ppm Pb and 26 ppm Zn were obtained (Allen, 2007).

Between 2008 and 2010, Minotaur Atlantic Exploration Ltd. conducted a regional gravity survey along the CCFZ for a total of 250 line-km. Two anomalies fall on the Property. Anomaly **NS-27** is broad and has a high amplitude (14 mGal) and covers an area of 12 km by 4 km. The western portion of this anomaly overlaps with the eastern part of the Property, on tenures 52329 and 52344. **NS-24** is a 2600 m × 600 m gravity anomaly and is located on the northwest corner of the property. It corresponds to an IOCG target following the gravity survey by Minotaur Atlantic Exploration Ltd. Additional mapping and prospecting work is also available (Belperio et al., 2008).

In 2011, Minotaur Atlantic Exploration Ltd. re-analyzed and re-interpreted the 2008-2010 gravity survey (including aforementioned anomalies NS-24 and NS-27 that lie within the Property). Moreover, a new target, NS-27d, was also defined and a small part of it is located on the Property limit. Soil surveys and prospecting were also completed over these targets. Appendices 6, 7 and 8 show anomalies NS-24, NS 27-D and NS-27.

- **NS-24**: The target is coincident with a strong magnetic high anomaly. A till sample grabbed south of the target show value of 240 ppm Cu and 295 ppm Zn. The combination of geochemistry and geophysics favours the presence of mineralization in the area of interest. Data was reprocessed in order to enhance the gravity survey and the modeling of data was used to simulate the gravity and magnetic response. Prospecting led to the discovery of a rock sample with **1.77% Cu** (Rock Sample NS-24-055) (Belperio et al., 2008)

- **NS-27d**: The Target is coincident with a magnetic high and is located on the Cobequid Fault. A soil anomaly in barium is present in the vicinity of the target. Diorite is also found north of the target and could be related to the Brooking Mine, located 2 km northwest, which reportedly contains iron mineralization and silica in contact with a diorite intrusive (Belperio et al., 2011).

The extensive anomaly NS-27 is discussed as being related to a mafic post-orogenic intrusion (Belperio et al., 2011). Prospecting led to a rock sample with **1.22% Cu** (Rock sample NS- 27-008) (Belperio et al., 2008).

In 2012, Witch's Glen Gold Inc. conducted a geological mapping and a VLF-EM survey. One drill-hole of 326 m was executed and grab samples were collected. Also, values up to 0.8% Cu, 0.2 ppm Au and 1,200 ppb Co were obtained in grab samples outside of the Property (Derek, 2012).

In 2012, Elk Exploration Ltd. conducted an exploration survey. The purpose of this survey was to test a theory that there could be a correlation between radiometric count per second and IOCG mineralization. Several correlated positives anomalies for Cu, Ba and Fe were found (Allen, 2012).

Between May 27th and June 17th 2013, Cogonov Inc. conducted geological mapping on the exploration licence #06201 (51736). The principal exploration objective of this mapping effort was identifying potential IOCG-type mineralization. At least three major structural orientations were identified on the property. The two oldest are related to the CCFZ. The youngest appears to be a relatively localized feature in the northeast corner of the licence and appears to cross-cut the other two structural trends. Iron-oxide mineralization in the CCFZ is commonly structurally controlled, and also appears to be further influenced by syn- to post- dating structures (Hantelmann, 2014).

Between May 25th and June 6th 2013, Cogonov Inc. conducted geological mapping and geochemical sampling. They found significant copper mineralization, which is spatially associated with iron-oxide mineralization. Copper-sulphide minerals are present within different structures than those hosting the iron-oxide minerals. The hydrothermal iron-oxide mineralization is coincident with a high gravity anomaly (Hantelmann, 2013).

In 2014, Cogonov Inc. conducted geological mapping and prospecting on exploration licences held by Elk Exploration Ltd. Chalcopyrite was found to be associated with quartz-ankerite-siderite veinlets and stringer zones. Significant chalcopyrite/malachite mineralization was found along the western boundary of EL.07393 (52232). Cu mineralization is associated with a 100 m-wide zone of quartz/iron-carbonate veining. Cu values up to 0.478% were encountered in the zone (Black, 2014A, Black, 2014B).

In January 2015, Cogonov Inc. contracted Geotech Ltd. of Aurora, Ontario, to conduct an airborne Versatile Time Domain Electromagnetic (VTEM) survey. On the exploration licence #06201 (51736), low level magnetics are noted on the southeast flank of a cluster of Fe, Mn mineral occurrences (Lohman, 2016).

Item 7. Geological Setting and Mineralization

In northern mainland Nova Scotia, multiple occurrences of iron-oxide coupled with Cu-Co-Ni and carbonates are found along the CCFZ, which is comprised of several east-west trending faults over 275 km, separating the Meguma Terrane (south) from the Avalon Terrane (north). Rock age ranges from late Proterozoic to Jurassic. The metallogenic assemblage in a regional fault system has been suggested as a potential host to IOCG mineralization (O'Reilly, 2002; Corriveau, 2007; Kontak, 2005).

7.1 Geology

The regional geology is best described by the abstract of Murphy et al. (2011):

"The Minas Fault Zone (MFZ) defines the boundary between the Avalon and Meguma terranes in the Canadian Appalachians and is exposed in mainland Nova Scotia and southern New Brunswick. These terranes originated along the Gondwanan margin, but had accreted to Laurentia by the middle Devonian. The surface trace of the MFZ is adjacent to the southern margin of the Late Devonian–Permian Maritimes Basin.

The Late Devonian–Late Carboniferous evolution of the MFZ involves several episodes of oblique dextral shear that resulted in basin formation and inversion and at various times the zone was the focus of magmatism, regional fluid flow and mineralization. In the Late Devonian–Early Carboniferous, asymmetric rifting accompanied by dextral shear produced two coeval sequences: the Horton Group, which is dominated by continental clastic strata, and the Fountain Lake Group, which consists predominantly of bimodal volcanic rocks that overlie high-level plutons emplaced along active shear zones. The overall tectonic environment may have been dominated by dextral transtension along the southern margin of Laurentia, which corresponded with the northern flank of the Rheic Ocean.

A major change in the evolution of the Minas Fault Zone occurred in the Late Mississippian–Early Pennsylvanian and produced the E-W Chedabucto Fault, clockwise rotation of pre-existing structures, local zones of transtension and transpression, as well as regional fluid flow and extensive mineralization. This major change may reflect the onset of Laurentia–Gondwana oblique collision, the effects of which continued into the latest Carboniferous with coeval development of flower structures and pull-apart basins in zones of local transpression and transtension."

7.2 Local Geology

The property is overlain, from north to south, by hornblende quartzo-feldspathic gneiss, amphibolite, granite gneiss of the Great Village River and the quartzite and garnet-mica schist of Gambel Brook Formation, both are part of the Neoproterozoic Bass River Block and are the oldest rocks in the region. Afterwards is the Londonderry Fault which is at the interface with sedimentary

rocks of the Carboniferous Mabou Group and is bordered to the south by the Cobequid Fault. Finally, the southernmost part of the Property is made of Carboniferous fluvial sandstone, calcrete limestone, conglomerate and mudstone rocks of the Parrsboro Formation (Pe-Piper and Piper, 2003).

7.3 Mineralization

There are eight provincially mapped occurrences of mineralization on the Property (listed in Table 1 and situated in Figure 4), of which three occurrences include multiple samples across an area (E05-001, E05-055 and E05-058). No production data could be located regarding the past producers, certainly due to them being century-old mines (Gesner, 2019).

Table 1. *List of mineralization occurrences on the Property*.

ID	***Showing Name***	***Status***	***Mineral***	***Commodities***
*E05-001**	*Folly River Cu, Fe Occurrences*	*Showing*	*ankerite*	*Cu, Fe*
E05-008	*Derry Fe Mine (Brooking Mine)*	*Past Producer*	*hematite*	*Fe, Ba*
E05-009	*Lornevale Fe Prospect (Matheson Brook)*	*Showing*	*ankerite*	*Fe*
E05-026	*Londonderry Pb, Zn Occurrence (Saltsprings Brook)*	*Showing*	*galena*	*Pb, Zn*
*E05-055**	*Londonderry Fe Mine (Old Mountain Mines)*	*Past Producer*	*ankerite*	*Fe, Mn*
E05-056	*Londonderry Fe District (Martins Brook Workings)*	*Past Producer*	*limonite*	*Fe, Mn*
E05-057	*Cook Brook Fe Mine (Londonderry)*	*Past Producer*	*ankerite*	*Fe, Mn*
*E05-058**	*Londonderry Fe Mines (West Mines)*	*Past Producer*	*limonite*	*Fe, Ba, Mn*

*The showing includes multiple mineralization sites

E05-001

The Folly River showings span across 700 m over seven different locations with work having been done over different years. It is mostly ankerite veins with associated siderite, chalcopyrite, pyrite and minor azurite and malachite, cutting the metasiltstone rocks in an E-W direction. In 1963 Noranda Exploration found up to 6000 ppm Cu in soil samples in this zone (Logan, 1963).

E05-008

The old Derry mine (E05-008) is less than 50 m from the Londonderry Fault, which runs north and parallel to the Londonderry Mine. The production was done on a hematite showing along a faulted

contact between the metasediments of the Londonderry Formation and shear-related amphibolite and gabbros to the north. Mineralization consisted of large lenses of black and dark grey hematite cutting the fault zone; however, the silica content was deemed too high for the Londonderry furnaces and was, thus, not much mined. Other minerals present were ankerite and possibly barite along with 3-5% pyrite. A 65 m hole was drilled in 1966 to analyze the mineralized fault. The hematite body was not found, but the ankerite, carbonate and barite alteration of the Londonderry Fault was confirmed along with the intersection of gabbro rocks and faulted rocks. In 1996, O'Reilly found mineralization and collected 9 grab samples either from mine dumps or hematite outcrops. The iron-oxide samples don't have anomalies apart from Fe, while two grab samples (E5-96-G008 and E5-96-G009), intruding the carbonated altered and brecciated host rock, have anomalous values in Ba. Sample G0008 is also mentioned as having "abundant crystals of disseminated pyrite" (O'Reilly, 1997).

E05-009

The Lornevale showing spans across four locations, of which only one is on the property. It is located 300 m north of a N-S fault that intersects both the Londonderry and Cobequid faults. Specularite veins appear to cut the greenish-grey altered siltstones with some ankerite. An old pit is found (Ervine, 1994) along with several shallow sunken pits on the hill (Wright, 1975).

E05-026

The Londonderry Pb-Zn occurrence is located close to the Cobequid Fault and is noted as having disseminated and fracture-filled mineralization associated with galena and sphalerite. The showing was not located during the 1987 field survey and no historical assay values could be found (Ervine, 1994)

E05-055, E05-056 and E05-058

The Londonderry Fe Mines (E05-058, E05-055, E05-056) were in production between 1874 and 1908 with three main shafts along the ore zone, and smaller ones all along the iron mineralization. The biggest producers were the West Mines and Martink Brook workings. Ore was around 50 to 58% Fe and 0.5 to 9.8 % Mn. The ankerite-siderite vein system, where production was conducted, strikes east and intrudes the Carboniferous rocks. Mineralization occurs in lenses with irregular shapes with some host-rock inclusions, no banding or internal structures, are medium to coarse-grained and range from narrow stringers to irregular masses up to 30 m wide. There was also barite mineralization, although not mined at the time, in white to pale pink coarse crystalline or irregular veins associated with iron-oxide carbonates and host rocks. It is also reported to have been disseminated as secondary mineral in hydrothermal-related wall rocks (Hughes, August 1995; G. A. O'Reilly, February 1997). On the Old Mountain side (E05-055) the mineralization does not continue to the Cook Brook prospect (E05-057), as mineralized veins finish on a slickenside wall. It is plausible that cross faults and veins on Old Mountain are wider and crushed (Wright, 1975).

E05-057

The Cook Brook Mine is similar to nearby iron mines: iron-oxide minerals (limonite, goethite, hematite and specularite) in carbonate lenses. The ore is over short distances and stops at the altered light green slaty quartzite at the interface with the carbonated rocks. The mine was worked with 2 adits of three levels on each side of the Cook Brook valley. According to historical information, there was not much ore produced relative to the amount of work as there was no production below the local drainage (Wright, 1975).

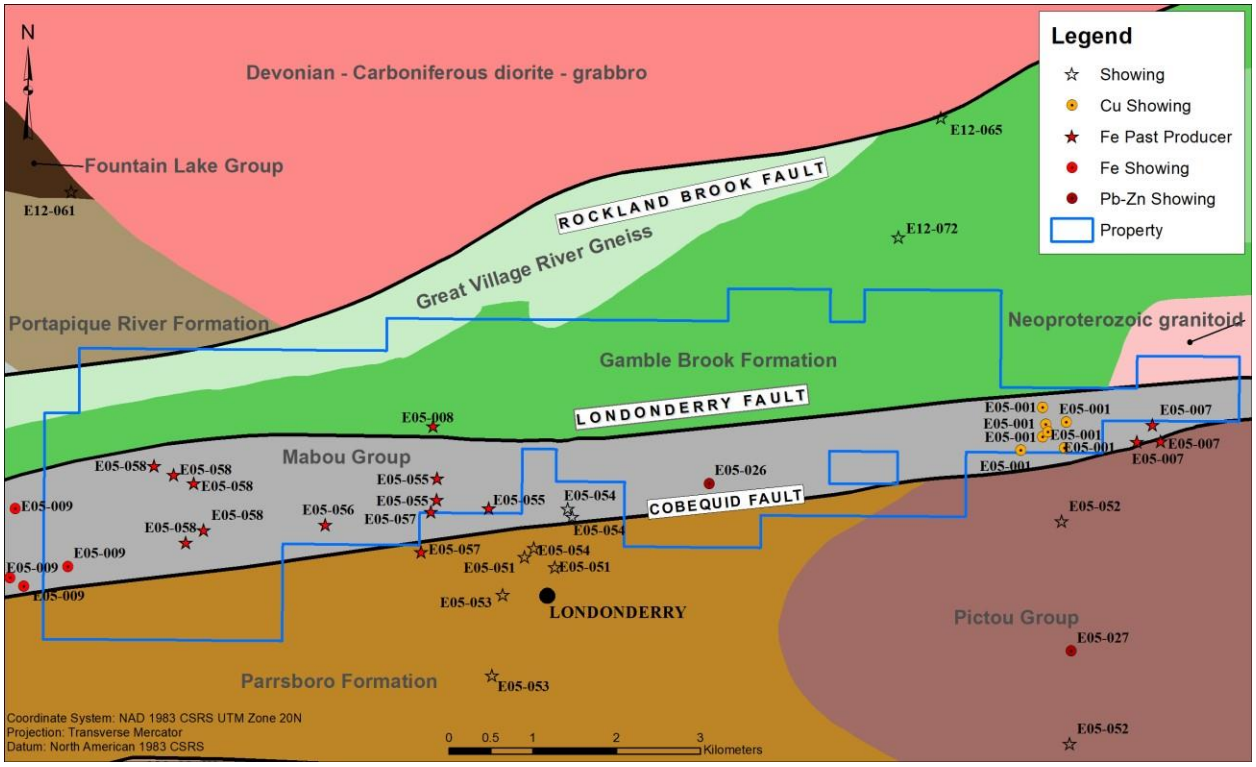

Figure 4. Occurrences on the Property over local geology (Geoscience Atlas, 2019).

Item 8. Deposit type

Iron Oxide-Copper-Gold (IOCG) deposits have only recently been described and characterized in the history of metallogenic deposits. IOCG deposits are economically significant, large scale, low-grade hydrothermal deposits with ore zones associated with regional scale alteration systems. The most prominent district in Canada for IOCG deposits is the Great Bear Magnetic Zone in the Yukon Territoies (Corriveau, 2011). It hosts 31MT Au-Co-Bi-Cu NICO deposit and the 8Mt Cu-Ag-Au Sue Dianne deposit.

Most of these deposits are mainly associated with felsic magmatism and occur along a major crustal fault setting. Other proxies such as strong and pervasive alteration of Ca-Na, and a more proximal content of Fe-K alteration are often found in these deposits. The alteration distribution is largely dependent on the host rock, within magmatic rocks it tends to be structurally controlled,

while it is more discontinuous and scattered in sedimentary rocks. IOCG deposits show a strong preference for structural control. They are found mainly as a breccia, diatreme or karst. Like the alteration halo, the morphology of the deposit is strongly host-related (Figure 5). The mineralogy shows an abundant quantity of iron-oxide such as hematite and magnetite with an anomalous high ratio of Fe/Ti. They provide major sources of Fe, Cu, Au and, and anomalous contents of U, F, P, Co, Ni, As, Mo, Ag, Ba and rare earth elements (REE) (Kontak, 2006). No specific time-period is related to for their occurrences, as they can be found on Archean terranes (e.g., Salobo, Brazil) to Pliocene (e.g., El Laco, Chili). The mineralizing fluids are high temperature (400-600 °C) and contain CO_2. The setup and alteration are syngenetic with the related intrusion (William et al. 2005; Jébrak and Marcoux, 2008).

8.1 Regional Evidence

The CCFZ is a major crustal fault structure, striking on nearly 300 km across Nova Scotia, dated 365-350 Ma. It has recently been recognized as a potential zone to host IOCG-type mineralization associated with regional metamorphism, deformation, hydrothermal alteration and magmatism that occurred along the CCFZ.

There were multiple events of voluminous bimodal mafic-felsic intrusions during that time (Dunning et al., 2004). Many geochemical anomalies occur along the CCFZ; mainly: Fe, Cu, Au, Ba, Co and Ni.

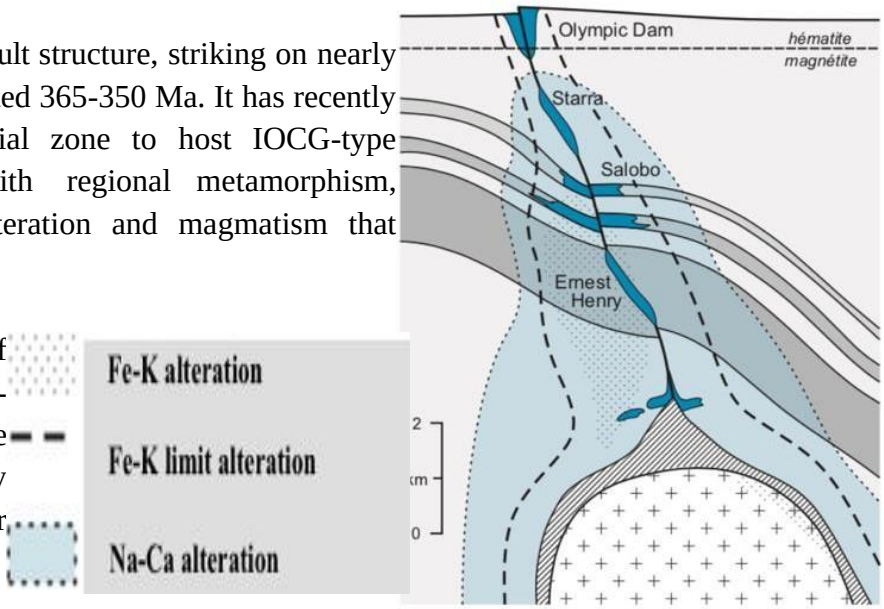

Figure 5. IOCG deposits (dark blue) and their emplacement with respect to depth. (Jebrak and Marcoux, 2008).

Hydrothermal alteration is well-documented along the CCFZ. Their emplacement occurs between ca. 344-312 Ma. Different breccias are found along this zone, such as in the Mabou Group. Large carbonate and iron oxide formation are also found along the CCFZ. They are found mainly in the form of a vein or breccia system containing siderite, ankerite, magnetite and hematite (MacHattie and O'Reilly, 2009).

8.2 Londonderry IOCG

Many different mineral occurrences have been found on the Property that may relate to IOCG mineralization (see item 7.3 Mineralization). Oxides can be found such as azurite, hematite, magnetite, malachite, goethite and limonite. Sulphides such as barite, galena, sphalerite, chalcopyrite, bornite and pyrite, and ferruginous carbonates also exist. The sulphides are found

mainly in irregular masses or lenses of goethite, limonite and hematite and within larger carbonate lenses containing inclusion of host rocks with varying width going from narrow stringers to 15 to 30 m. The nearby geology shows felsic plutonic intrusive rocks and minor mafic intrusions and dikes. The CCFZ is going through the property, where the timing is syn-intrusive (Wright, 1975). Appendices 4 and 5 show pictures of IOCG mineralization.

Item 9. Exploration

9.1 Heliborne Magnetic and TDEM Survey

In August 2018, Prospectair performed a heliborne magnetic and TDEM Survey for 21Alpha Resources Inc. for the total amount of $62,256. At the time of the survey, the Property limits were very similar to the current Property limits. The western part of the Property was covered by this survey and revealed 3 magnetic anomalies and multiple magnetic lineaments. Multiple conductor anomalies were found but seem to be associated with silty sediments in the southern part of the Property. However, one conductor axis is found on the Property and may be related to a bedrock source. The elements from this heliborne survey were used in the interpretation of targets on the Property due to their spatial relation to faults and geochemical anomalies, as discussed under Item 25.

9.2 Technical Report

In 2018, SL Exploration was hired to write a technical report or the property. That report provided the basis for this report.

9.3 Hyperspectral Survey

In May 2020, Spark Minerals Inc. commissioned Nanospectra Geophysics (NSG) to acquire and analyze hyperspectral data over the Property, using their proprietary method, to detect anomalously high concentrations of gold and copper (Au-Cu). The NSG survey provided an additional 3 targets which can be seen in Appendix 9.

Prospective zones identified by the survey are included in Appendix 9, where they are displayed as polygons outlining zones of high prospectivity. These results are preliminary and should be followed-up with observations on the ground. Targets 6, 7 and 8 are primarily defined based the hyperspectral data (refer to Item 25.1).

Item 10. Drilling

No drilling was performed on the Property by the Companies.

Item 11. Sampling, Assaying and Security

This section does not apply to this Technical Report.

Item 12. Data Verification

The data presented within this Technical Report were collected from a variety of cited sources including historical documents, scientific papers and government websites. Other than a review of claim status, the author did not attempt to verify other Property information as the accuracy of information provided by the cited sources was considered to be sufficient. A current personal inspection was done by the Qualified Person.

12.1 Current Personal Inspection

Alex MacKay conducted a current personal inspection on the Property and the following aspects were observed on September 11th, 2020:

12.1.1 Property Access

The Property is accessible during all seasons through the Trans-Canada highway and Route 14. Also, trails allow access on foot to the transmission line. The location of observation stations can be found in Table 2 and Figure 6.

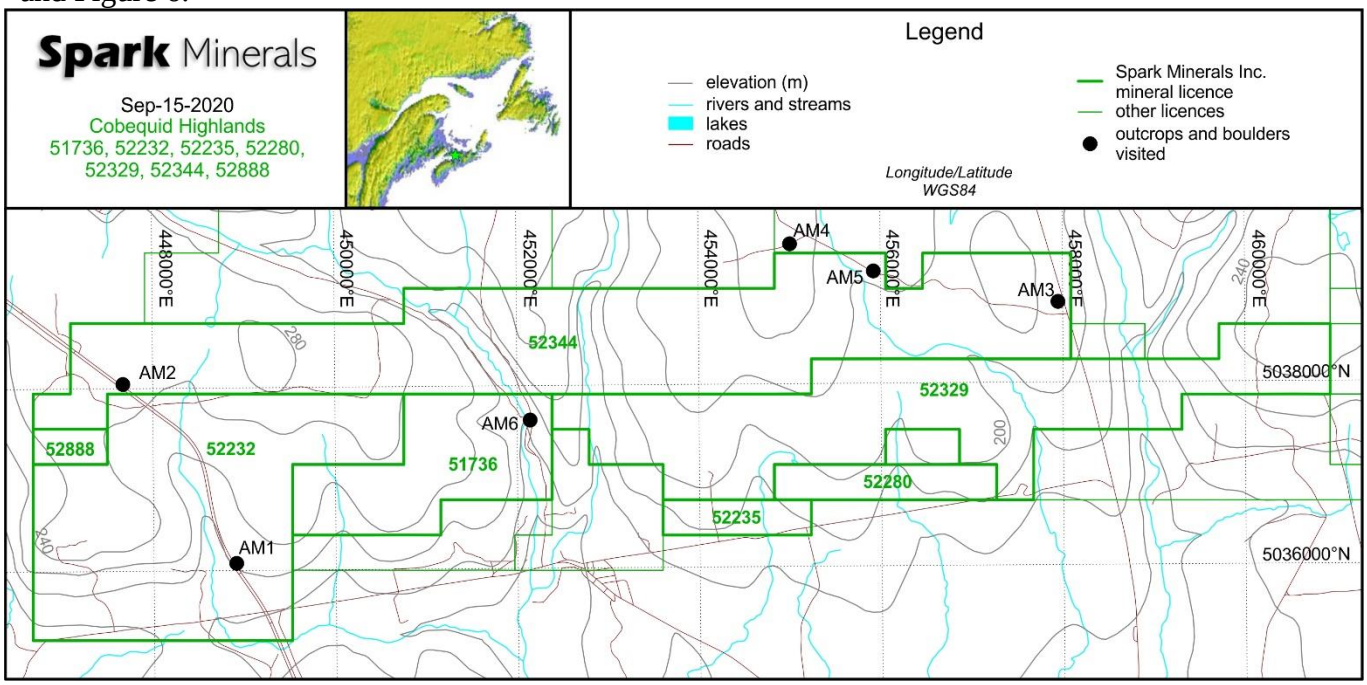

Figure 6. Sites visited during the current Personal Inspection.

Table 2. UTM coordinates of visited sites (NAD83 Zone20N)

Site #	X_NAD83	Y_NAD83
AM1	448898	5036083
AM2	447663	5038052
AM3	457944	5038886
AM4	454999	5039537
AM5	455917	5039233
AM6	452135	5037627

12.1.2 Outcrop Sites

AM1

This is a >100 m outcrop exposed along the side of Hwy 104. It features black fine-grained meta-sediments with several mafic volcanic units ranging from 1-3 m in width. The volcanics appear to follow the bedding of the meta-sediments. Small pockets of pyrite mineralization were observed in the volcanics. Ankerite mineralization is common within the volcanics and sometime displays as veinlets in the metasediments. A small spot of malachite (Cu-oxides) was observed in one ankerite vein at this site.

Figure 7-Rocks observed at site AM1

AM2

This sample was collected from a 10-metre long diorite exposure along the side of Hwy 104. Several highly sulphidized zones were observed within the diorite. Diorite had fine pyrite disseminated throughout the matrix.

AM3

This is an active quarry with lots of exposure. During the site visit, the face was actively being worked on with machinery, so only rubble piles were observed. Rocks observed were of dioritic composition with trace pyrite and quartz veining. Some possible sediments appear on the face, but that could not be confirmed by closer inspection. This site corresponds with one of the hyperspectral targets (Target 8) and was also the site of a 1.22% Cu rock sample collected by Minotaur Atlantic in 2008. (Belperio et al. 2008)

Figure 8-Typical Quartz Veins observed in the field

AM4

This outcrop runs along the north side of a forestry road. It is just off the claims in this report, but lies within another Spark claim. It is also in the vicinity of another hyperspectral target (Target 8). The outcrop is an altered mafic volcanic, the dominant alteration is propylitic with some clay veining. There is some minor brecciation and some quartz veining in rubble on the southern side of the road.

AM5

Two large, up to 1m, angular white quartz boulders were located along the road side. These boulders were likely dug up during construction of the road. In addition to the large boulders, several other small quartz boulders were observed in the vicinity. It is the author's opinion that these are very local.

Figure 9-Large Quartz Boulders observed at site AM5

AM6

A large silicified diorite face with pyrite on fractures is found at this site. Several faults are apparent along the face and have an attitude of 090/60 (RHR). This outcrop is on the road side along a large gorge. Across the gorge, the same rocks are in contact with meta-sediments.

Item 13. Mineral Processing and Metallurgical Testing

The author is unaware of any mineral processing and/or metallurgical testing that has been carried out on the Property.

Item 14. Mineral Resource Estimates

No Mineral Resource, as currently defined by Canadian Institute of Mining, Metallurgy and Petroleum (C.I.M.) terminology, has been outlined on the Property.

Item 15. Mineral Reserve Estimate

No Mineral Reserve, as currently defined by Canadian Institute of Mining, Metallurgy and Petroleum (C.I.M.) terminology, has been outlined on the Property.

Item 16. Mining Methods

Not applicable to this Technical Report.

Item 17. Recovery Methods

Not applicable to this Technical Report.

Item 18. Project Infrastructures

Not applicable to this Technical Report.

Item 19. Market Studies and Contracts

Not applicable to this Technical Report.

Item 20. Environmental Studies, Permitting and Social or Community Impact

The author is not aware of any particular environmental, political, or regulatory problems that would adversely affect mineral exploration and development on the Property. To the author's knowledge there are no environmental studies currently being undertaken on the Property.

It is important for the Issuer to better define its responsibility in regards to landowners and the rights of these landowners since most of the Property is located on private land, including specific targets defined during the writing of this Technical Report (as shown under Item 25). There are no special key assumptions, risks or limitations, no known environmental issues, land ownership contestation or special permitting required at this stage.

Item 21. Capital and Operation Costs

Not applicable to this Technical Report.

Item 22. Economic Analysis

Not applicable to this Technical Report.

Item 23. Adjacent Properties

Claims adjacent to the Property are held, for the most part, by Spark as of the writing of this report (see Figure 10 below). Claims not held by Spark are: a 2-claim block held by local prospector Patrick Bellefontaine (light blue), a 4-claim block held by public company Chilean Metals Inc. (CSE:CVE) and shown in dark blue (Figure 10), and a four-claim block held by private company Cogonov Inc. shown in red (Figure 10).

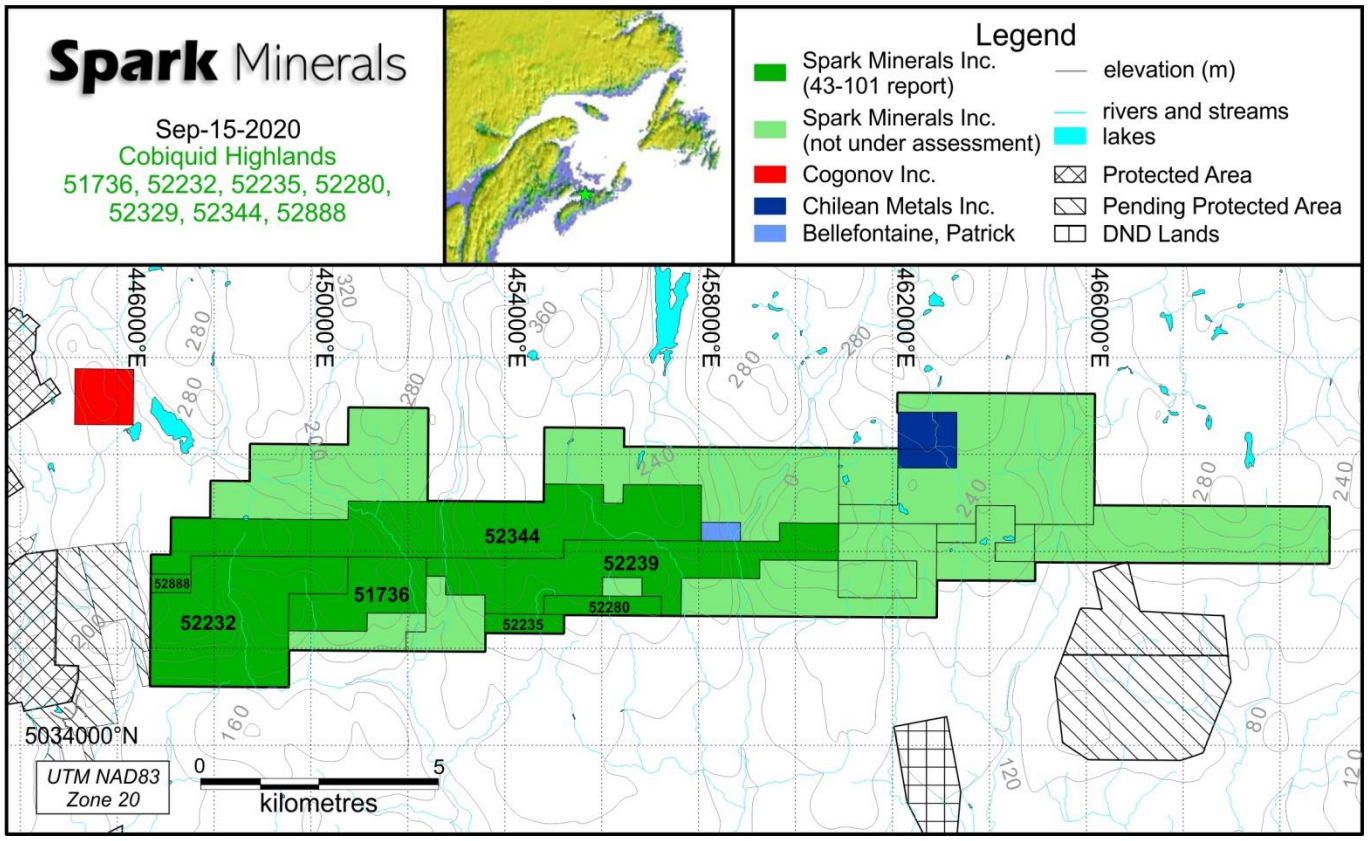

Figure 10. Adjacent properties.

Item 24. Other Relevant Data and Information

No other relevant data and information is available on the Property.

Item 25. Interpretations and Conclusions

25.1 Interpretations

The historical exploration work on the Property led to the discovery of multiples showings, including iron deposits that were mined from the late 19th to early 20th century. Multiple copper occurrences are also found in association with iron showings. Those showings are hosted in the Mabou Group, located in-between two major faults: the Londonderry and Cobequid faults. The Mabou Group is known to host IOCG-style mineralization and alteration and the presence of those showings indicate good potential for this type of deposit on the Property.

Multiple geophysical, soil and rock anomalies found during historical work could be explained by the presence of IOCG mineralization. Eight targets (Figure 8) were identified by the author of this Technical Report. 5 targets were selected based on magnetic, gravity and geochemical data and their spatial relation to faults defined by the 2018 airborne magnetic compilation. There are three targets based on the hyperspectral work. The targets are explained below.

Additionally, adjacent properties have showed some success by re-assaying older discoveries on their properties for base and precious metals, and industrial minerals. Such an effort should also be carried out on the Property as past exploration work did not assay for full suite of elements.

Target 1

This target is at the foothills of the Cobequid Highlands and contains a conductor of about 150 m related to a magnetic source and is at the junction of the major Cobequid Fault and a possible NW-SE fault (Dubé, 2018). High pXRF values of Ba and Fe were found in rock samples from that target zone in 2012. Just 100m to the NW is the Lornevale Fe showing where green-altered siltstone was observed along with ankerite in old pits. Less than 750 m away, semi-massive sulphide grab samples, from work executed by Cogonov Inc. in 2013, were discovered in pervasive silicified arenite, which returned high Cu values. This target is thus on a major structural trend and in the same geological unit where iron was mined and hydrothermal-related copper is confirmed.

Target 2

This target is related to EM anomalies associated to magnetic sources along a major structural fault (Londonderry). It also lies at the possible intersection of WSW-ENE and NNE-SSW faults. An old iron mine was located just to the east and a 1966 drill hole 350m to the east was noted as having an alteration halo which continued beyond the fault zone. This target is also at the eastern end of anomalous Ba-Fe-Cu rock values discovered in 2012 and is probably down-ice of a till survey with an anomalous Cu-Zn value.

Target 3

This target has two rock samples on its southern limit with anomalous values in Cu, Fe and Ba. It exhibits the strongest magnetic anomaly from the 2018 heliborne survey. This geophysical anomaly is locally bent, which suggests shearing, thereby making it a strong contender for different mineralization styles (including IOCG). The target is adjacent to an E-W magnetic lineament and to the positive high amplitude gravimetric anomaly NS-24.

Target 4

Similar to Target #3, a strong magnetic anomaly is defining the target and is in a possible shear zone (as interpreted based on the heliborne survey) at the interface with the Londonderry Fault. This target is highly prospective for fracture-filled and hydrothermal-related mineralization such as IOCG deposits. There are nearby Cu-Pb-Zn soil anomalies to the SE of the target (possibly down-ice).

Target 5

Target 5 is located on the Londonderry Fault and its neighbouring units. The target superposes part of a regional gravity anomaly (NS-27) with multiples copper showings in its surrounding. If the copper anomaly correlates with the gravimetric anomaly, hydrothermal fluid may well have been concentrated close to the Londonderry Fault.

Target 6

Target 6 was identified by the hyperspectral survey. The target is located in the southern part of Licence 51736 and aligns with the Cobequid Fault, a major crustal fault structure. A rock sample in close proximity to this target yielded **1.77% Cu** (NS-24-055).

Target 7

Similar to the previous target, Target 7 is based on the interpretation of hyperspectral data. During the site visit propylitic alteration and quartz veining were observed.

Target 8

Target 8 is the last one outlined by the hyperspectral work. It is located within the Minotaur gravity high NS27 and, had a previous rock grab with **1.22% Cu** (Minotaur Rock Sample NS-27-008).

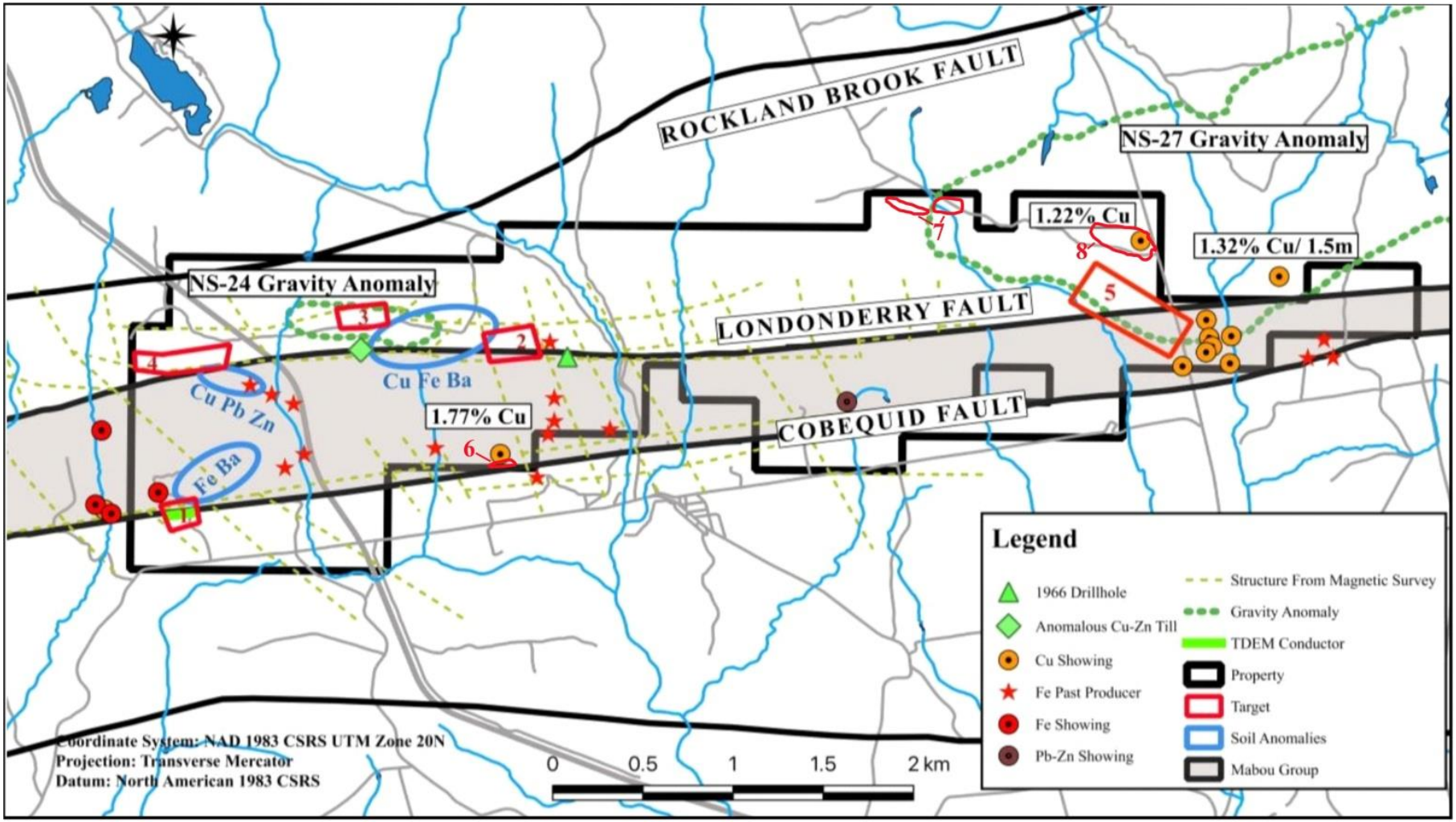

Figure 11. Targets on the Property.

25.2 Conclusions

This report was prepared for Spark Minerals for a Listing on the Canadian Stock Exchange (CSE). This Technical Report provides the reader with a thorough review of past exploration activities and the geology of the Property, which is at an early exploration stage.

The Property overlies lithological and structural environments could be attributed to IOCG mineralization within the Cobequid-Chedabucto Fault Zone (CCFZ). The Property is located in a prospective zone of the CCFZ for the discovery of IOCG mineralization in an area where iron was historically mined and several base metals showings occur. The Mabou sedimentary rocks are contained between two regional-scale faults where hydrothermal alteration associated with base metals mineralization is reported. Modern exploration activity in and around the Property dates back to 1963. Expenditures related to various exploration activities including geological mapping, geophysical surveys, geochemical analyses and drilling within the IOCG Spark claims are estimated to be in excess of 10 million dollars (expenditures are found in reports listed under section 6.1 and can be accessed via the Nova Scotia geological database NovaROC).

The identification of multiple coincident geophysical and geochemical anomalies from recent exploration, their association with regional faults and the observation of copper mineralization in rock samples are encouraging factors for the potential of the Property to host IOCG mineralization.

Item 26. Recommendations

The Cobequid Highland Property was historically covered with multiple geochemical and geophysical surveys. A review of the Property's geochemical anomalies should be done to better interpret the recent airborne EM survey to identify additional targets. A field survey should also be conducted around the magnetic or gravity anomalies used by the author to define the first five targets, and this work should be extended to the three hyperspectral targets. Since alteration halos and iron content are a strong component of IOCG-type deposits, the survey would consist of prospecting and mapping of the targets for alteration styles. This work should be augmented with mineralogical studies. The survey should also include re-assaying of known showings for base metals, industrial minerals and precious metals. The Phase I budget is presented in the Table 3 below and is estimated at approximately $315,957.

Table 3. Proposed budgets for Phase I.

	Description	Cost (CAD)
Phase I	Claim expenses	45,240
	Renewal fees	3,717
	Permitting	3,000
	Geological mapping and prospecting	45,000
	Geological consultants	15,000
	Re-interpretation of geophysical data	25,000
	Rock sample assaying	15,000
	Vehicle rental	5,000
	Mineralogical studies	10,000
	Field Camp Expenses	15,000
	Field supplies and equipment	2,500
	Miscellaneous expenses	7,000
	Food	5,000
	Other fees	500
	Travel expenses	4,000
	Reporting	15,000
	Focused high resolution gravity	30,000
	Soil sampling	40,000
	Report 43-101: 19 remaining claims	30,000
	Total :	315,957

Table 4. Proposed budgets for Phase II.

	Work	Cost (CAD)
Phase II	Land Holder cost	1,400
	Community Outreach	7,000
	Environmental studies	2,000
	Permitting	2,000
	Core loggers/geotechnicians	90,000
	Geological consultants	63,000
	Hyperspectral survey (NSG)	100,000
	Drill core assaying	150,000
	Drill programme	300,000
	Geophysical interpretation	25,000
	Vehicle rentals	4,500
	Camp and accommodations	27,000
	Field supplies and equipment	2,500
	Food	10,000
	Miscellaneous expenses	40,000
	Reporting	15,000
	Total :	839,400

Item 27. Acknowledgements

The Technical Report is based on an unpublished report by Steven Lauzier, P.Geo. (SL Exploration Inc.). Mr. Lauzier, acting as an independent expert, was retained by 21Alpha Resources to produce a compilation of historical work performed on and evaluate the prospectivity of the Property. Much thanks for his help with the completion of this updated report is extended to Mr. Lauzier from the current author.

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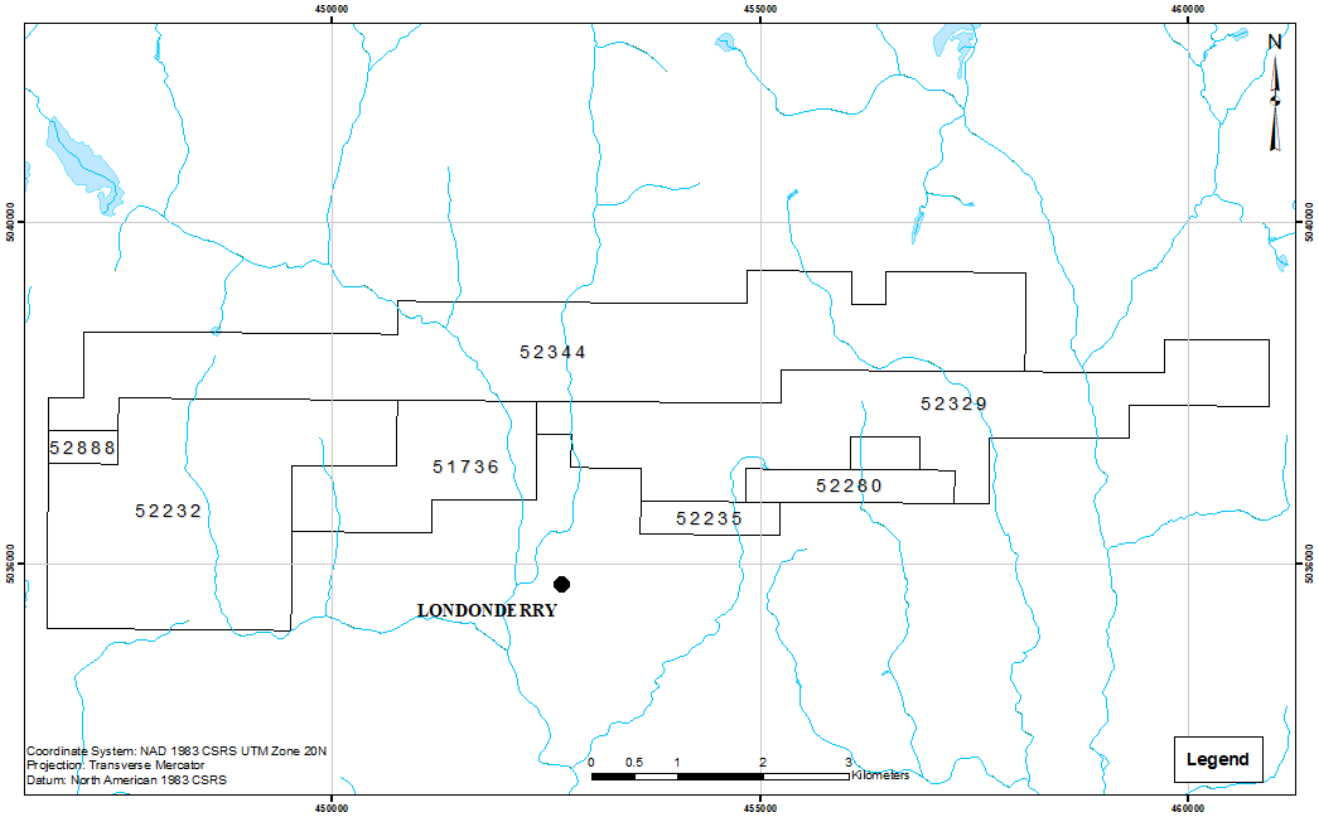
Appendix 1: Tenure Location Map



Appendix 2: Tenure List and Expenditures

Licence name	Number claim blocks	Area (km^2)	NSG expense*	SL Exploration report	Status	Holder	Issue date	Anniv. date	Expiry date
51736	19	3.04	$6,688.00	$1,309.86	Good Standing	Spark Minerals	8/3/2017	8/3/2021	8/3/2021
52232	51	8.16	$17,952.00	$1,309.86	Good Standing	Spark Minerals	5/9/2018	5/9/2021	5/9/2021
52235	4	0.64	$1,408.00	$1,309.86	Good Standing	Spark Minerals	5/9/2018	5/9/2021	5/9/2021
52280	6	0.96	$2,112.00	$1,309.86	Good Standing	Spark Minerals	6/1/2018	6/1/2021	6/1/2021
52329	48	7.68	$16,896.00	$1,309.86	Good Standing	Spark Minerals	6/18/2018	6/18/2021	6/18/2021
52344	74	11.84	$26,048.00	$1,309.86	Good Standing	Spark Minerals	6/26/2018	6/26/2021	6/26/2021
52888	2	0.32	$704.00	$1,309.86	Good Standing	Spark Minerals	8/3/2017	8/3/2021	8/3/2021
Total	204	32.64	$71,808.00	$9,169.00					

* The cost per km^2 was $2,200 for the hyperspectral survey conducted by Nanospectra Geophysics.

Appendix 3: Claim List

Tenure Number	*Tracks*	*Claims*	*NTS Sheet*
51736	*90*	*JKLM NOPQ*	*11E05*
51736	*91*	*NOP*	*11E05*
51736	*102*	*BCDE FG*	*11E05*
51736	*103*	*AH*	*11E05*
52232	*80*	*NOPQ*	*11E05*
52232	*81*	*OPQ*	*11E05*
52232	*88*	*ABCF GHJK LOPQ*	*11E05*
52232	*89*	*All Claims*	*11E05*
52232	*103*	*BCDE FG*	*11E05*
52232	*104*	*ABCD EFGH*	*11E05*
52232	*105*	*AH*	*11E05*
52235	*92*	*JK*	*11E05*
52235	*93*	*LM*	*11E05*
52329	*92*	*PQ*	*11E05*
52329	*93*	*N*	*11E05*
52329	*94*	*Q*	*11E05*
52329	*97*	*JKLM OPQ*	*11E05*
52329	*98*	*EFGH JKLM*	*11E05*
52329	*99*	*ABEF GHJK LM*	*11E05*
52329	*100*	*ABCD EFGH JK*	*11E05*
52329	*101*	*ABCD EFGH*	*11E05*

52329	*102*	*H*	*11E05*
52344	*2*	*DE*	*11E12*
52344	*3*	*ABCD FGH*	*11E12*
52344	*4*	*ABCD FGH*	*11E12*
52344	*5*	*ABCD*	*11E12*
52344	*6*	*ABCD*	*11E12*
52344	*7*	*A*	*11E12*
52344	*98*	*N*	*11E05*
52344	*99*	*NOPQ*	*11E05*
52344	*100*	*LMNO PQ*	*11E05*
52344	*101*	*JKLM NOPQ*	*11E05*
52344	*102*	*JKLM NOPQ*	*11E05*
52344	*103*	*JKLM NOPQ*	*11E05*
52344	*104*	*JKLM NOPQ*	*11E05*
52344	*105*	*FGJK PQ*	*11E05*
52280	*93*	*OPQ*	*11E05*
52280	*94*	*NOP*	*11E05*
52888	*105*	*BC*	*11E05*

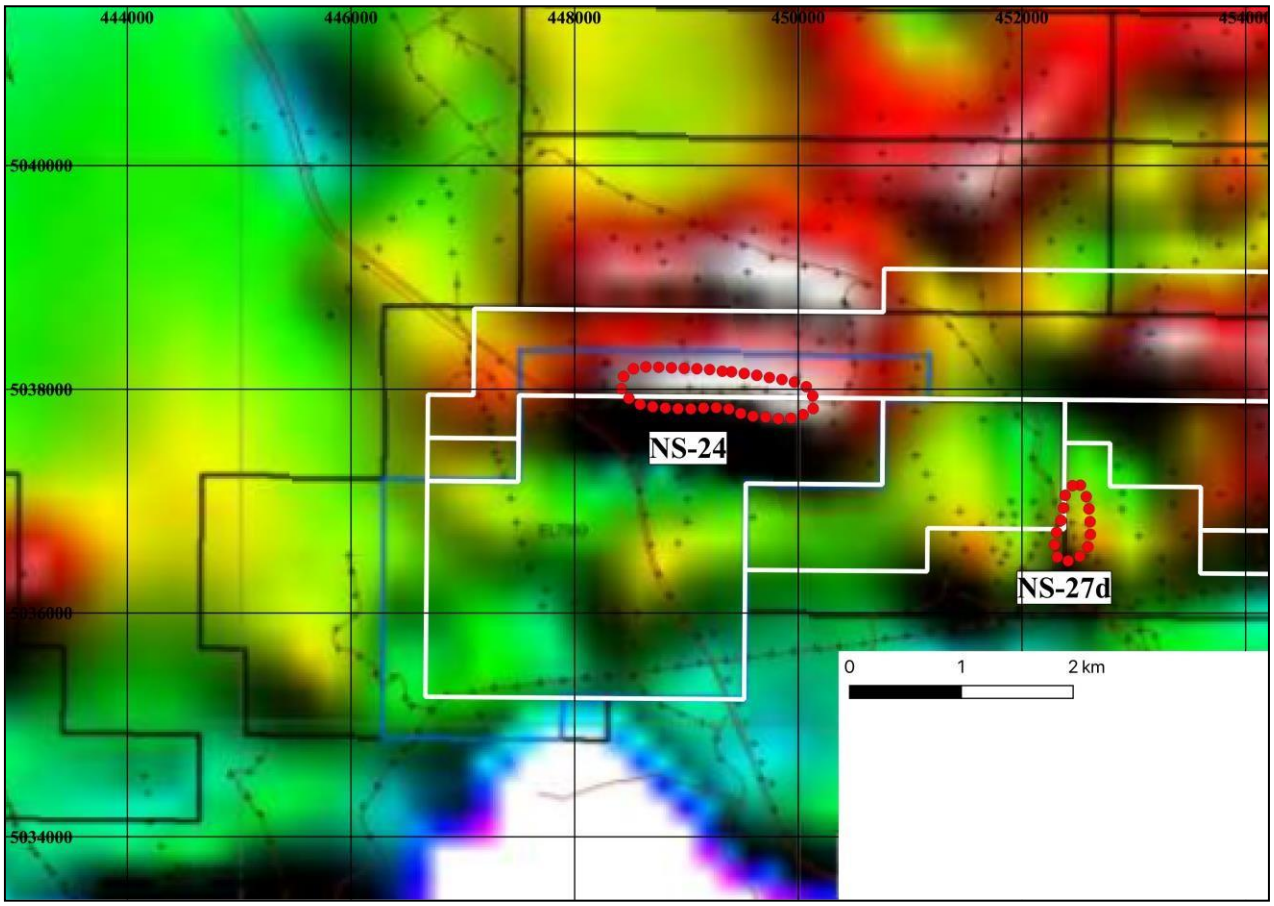
Appendix 4: Ankerite (light orange), siderite (reddish brown) and chalcopyrite

Image taken from Belperio et al, 2008

Appendix 5: Typical breccia with limonite and pyrite

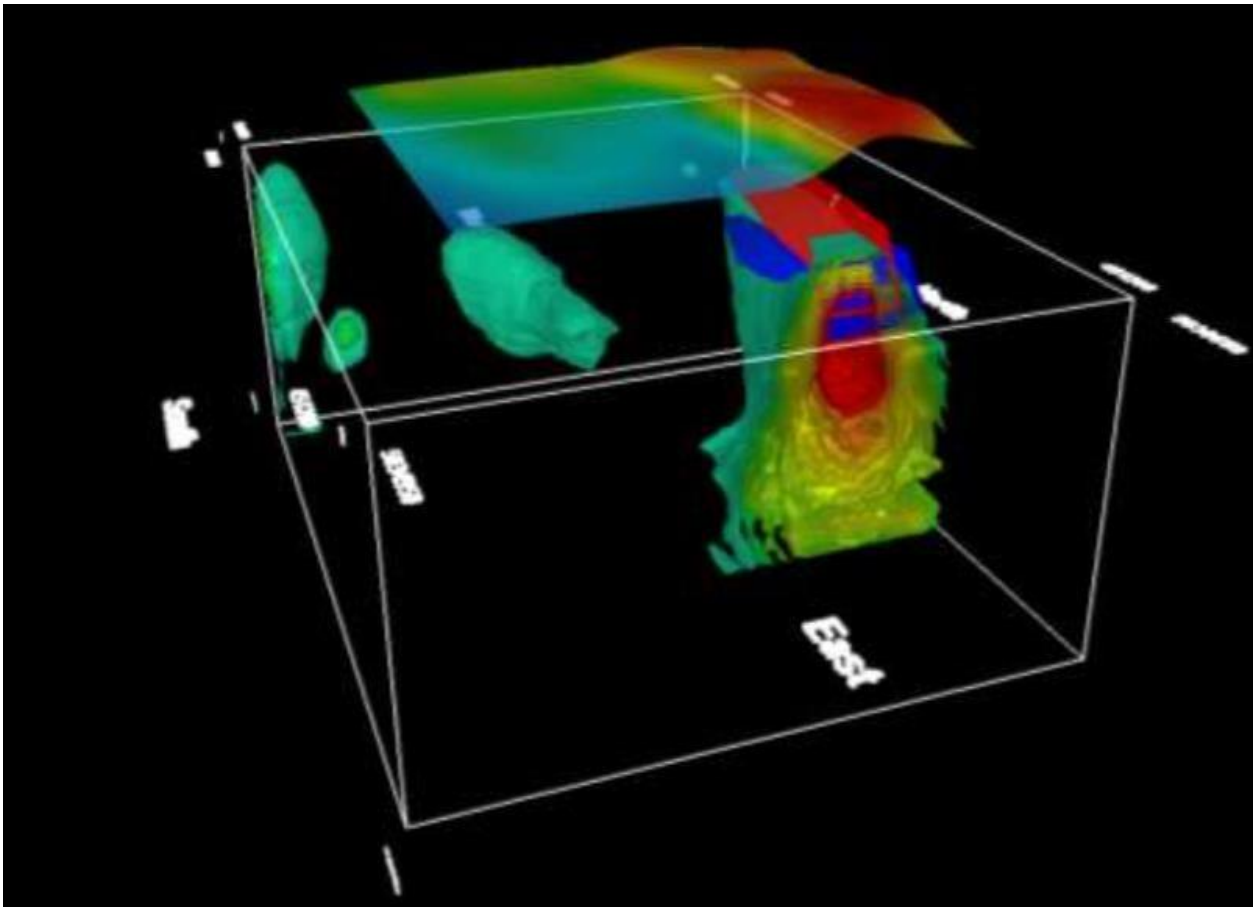
Image taken from Belpiero et al 2008

Appendix 6: Enhanced gravity anomaly NS-24.



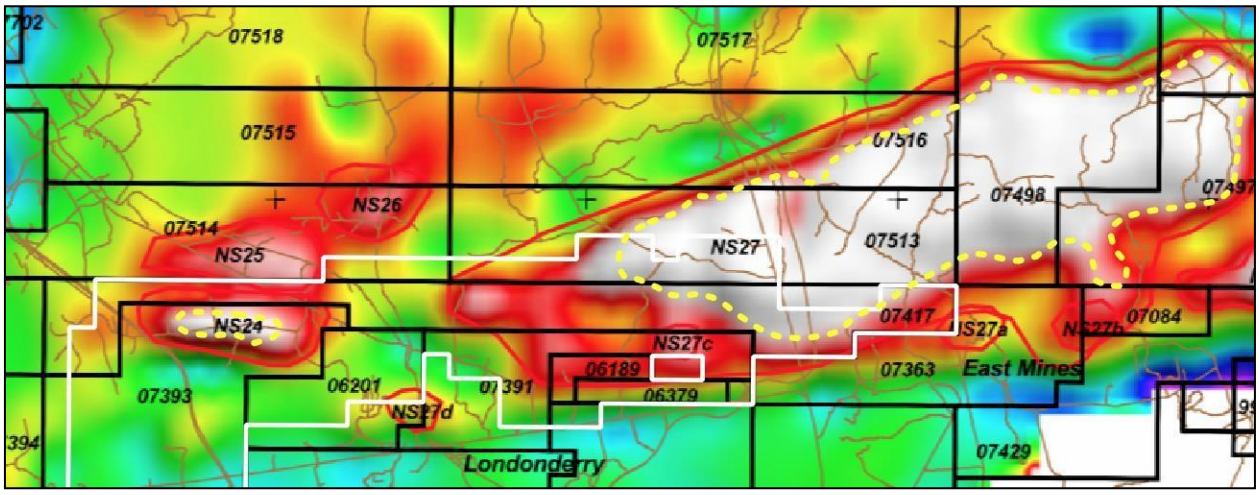
taken from Belperio et al, 2011

Appendix 7: 3D Gravity model with RTPTMI magnetic image of anomaly NS-24



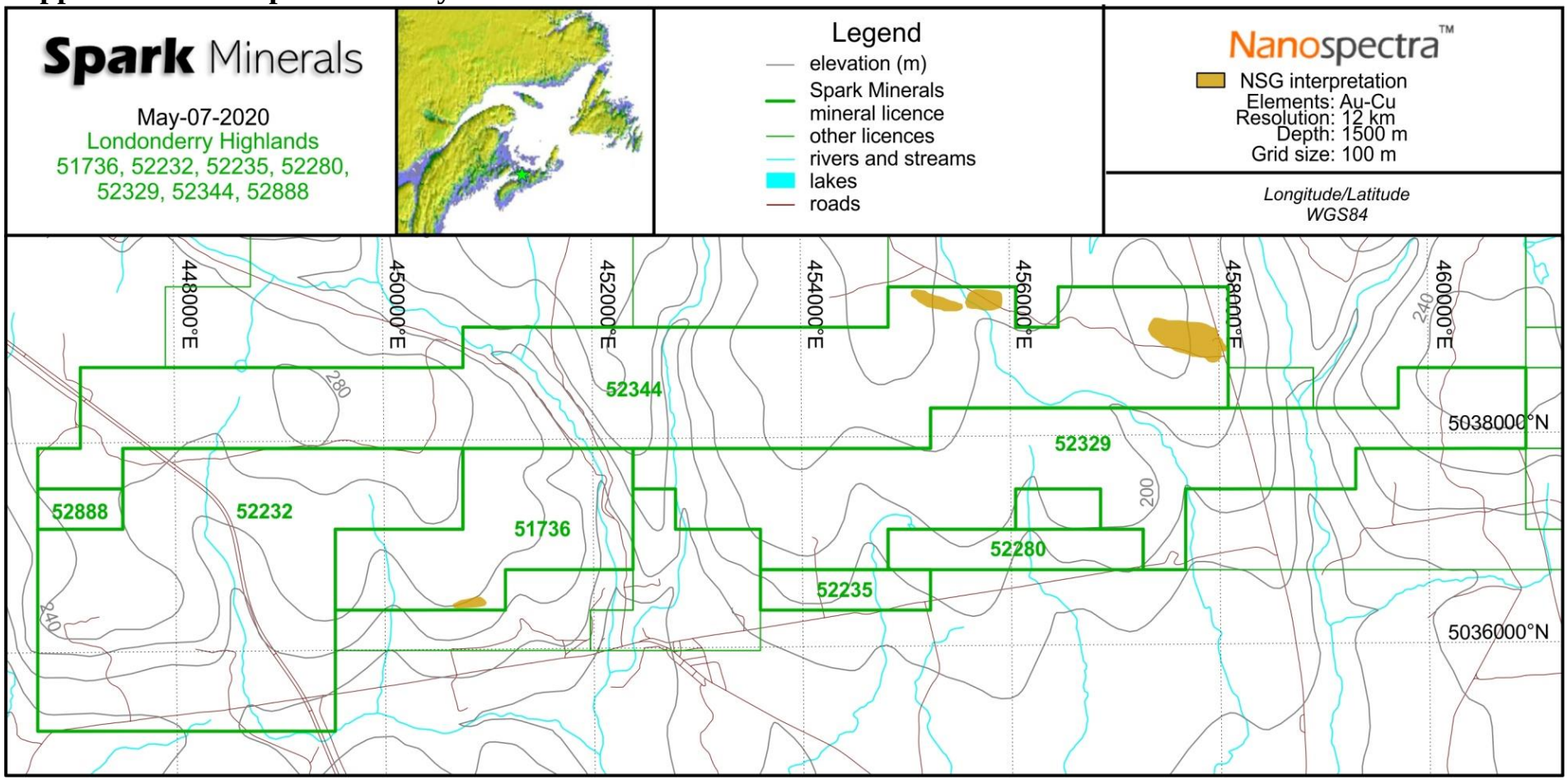
Red represents the gravity body while the blue represents the magnetic body (taken from Belperio et al., 2011).

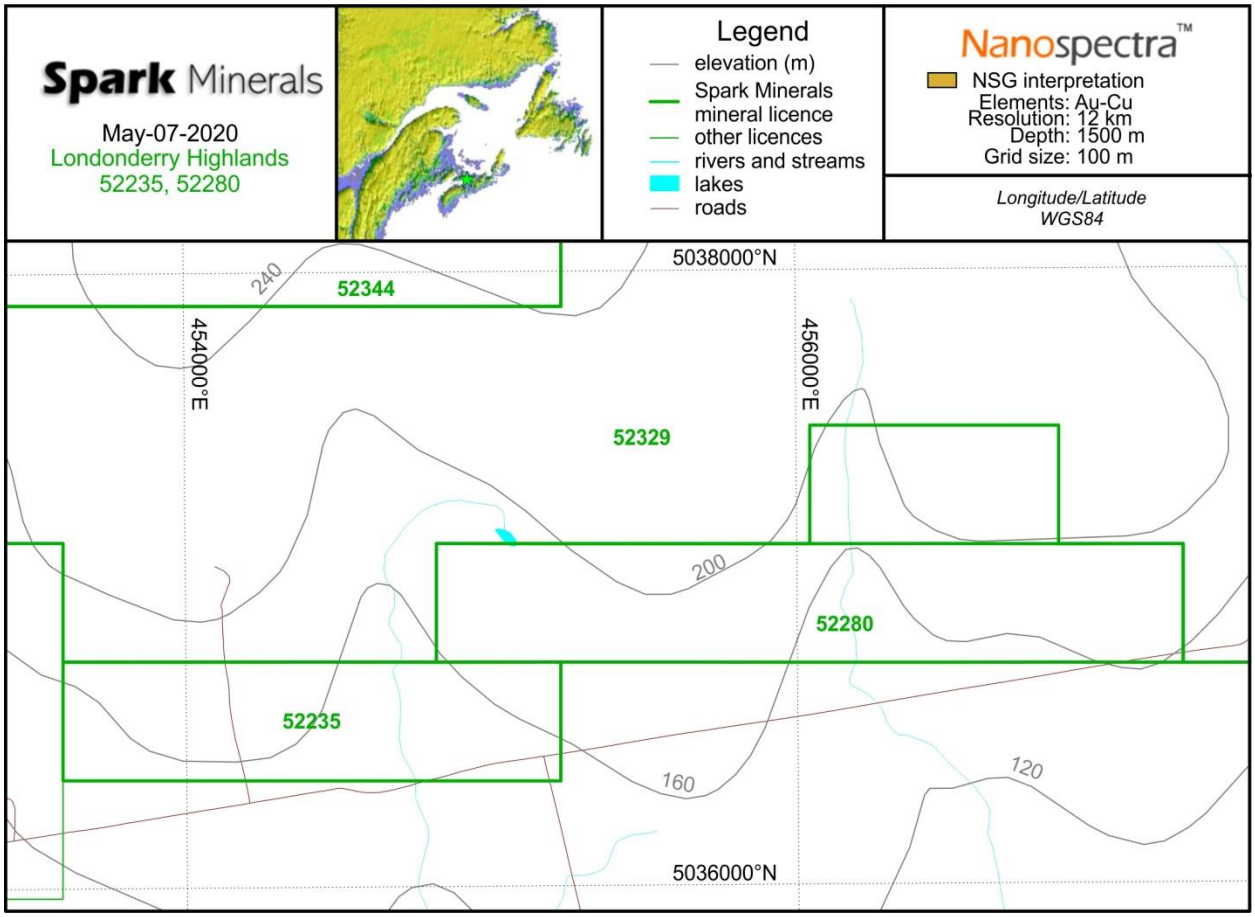
Appendix 8: Gravity anomaly NS-27

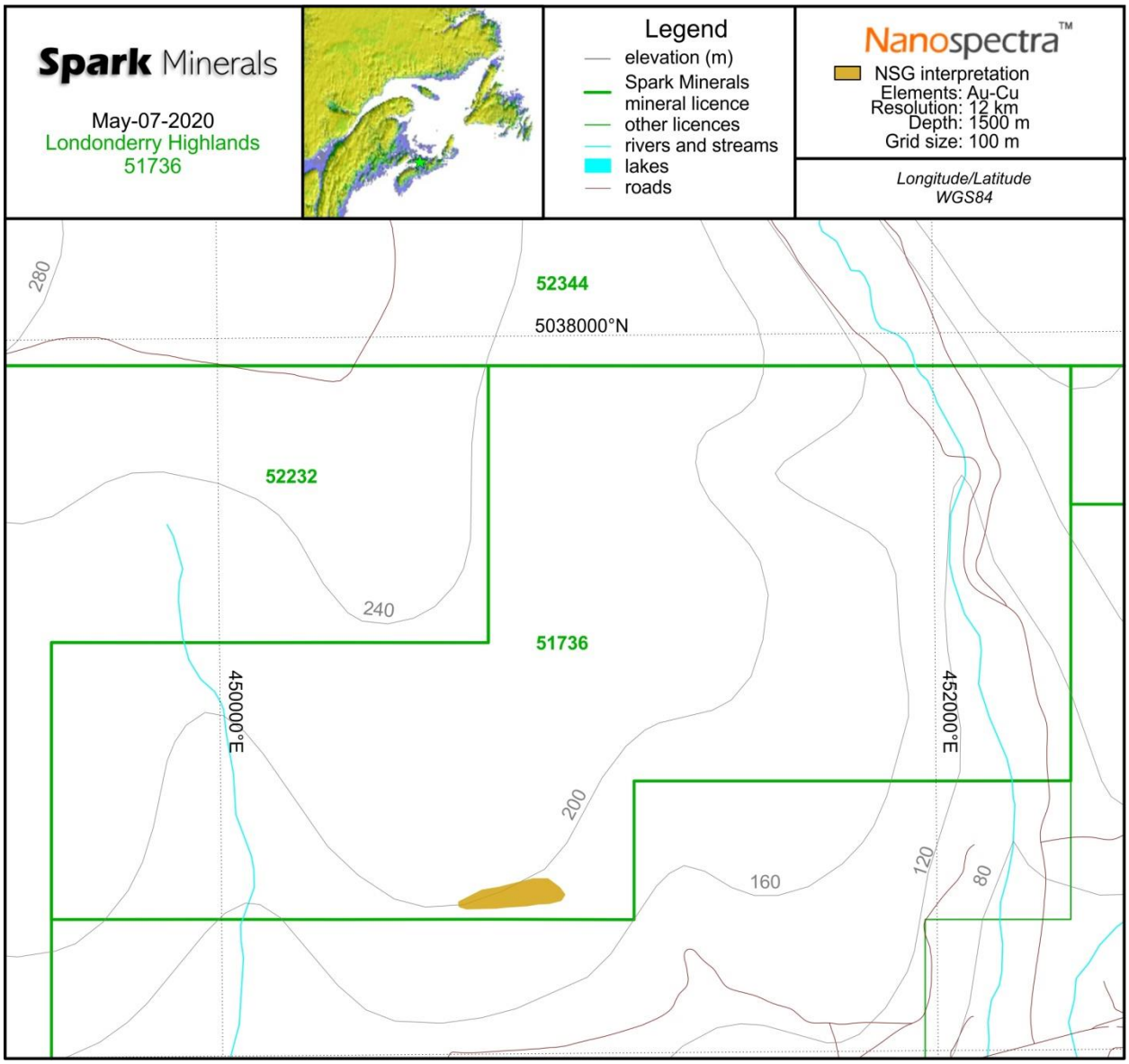


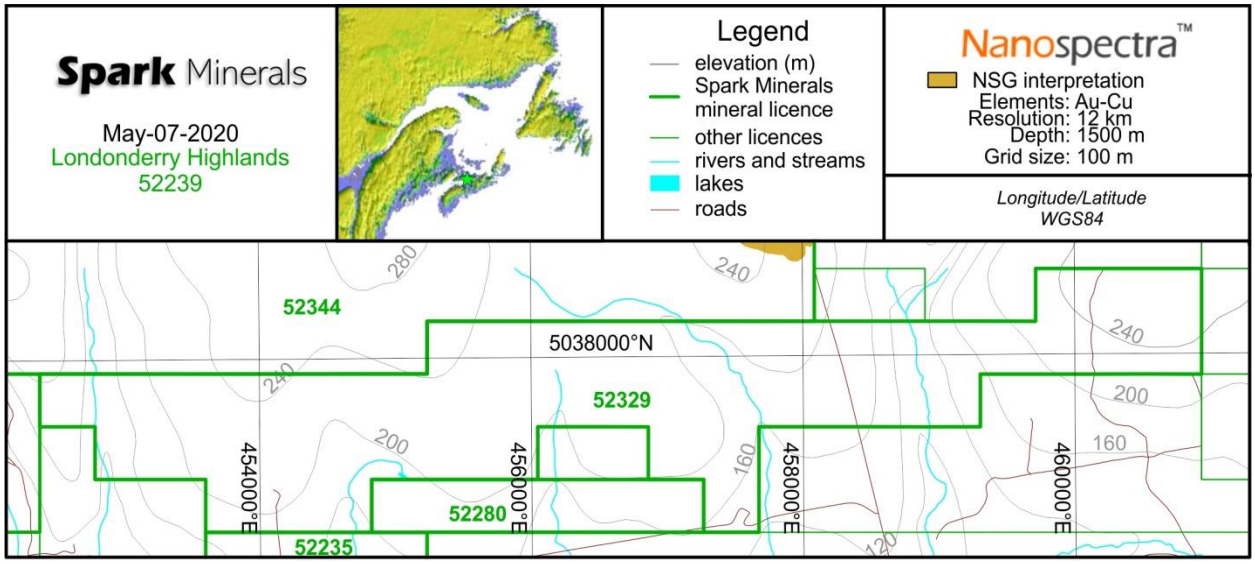
Property boundaries in white, Image taken from Belpiero et al.2011

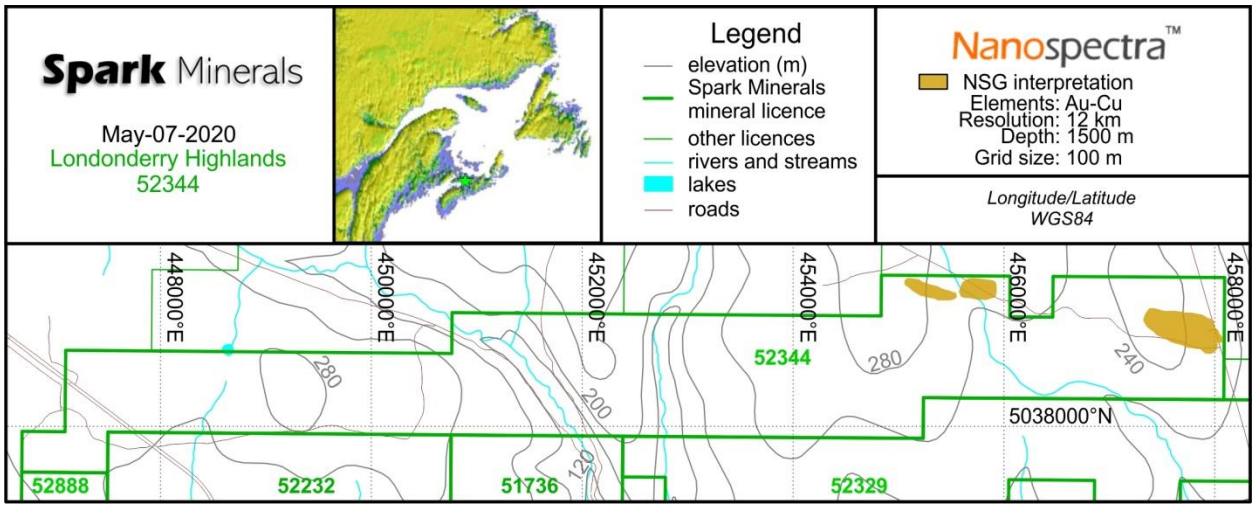
Appendix 9: Nanospectra Survey

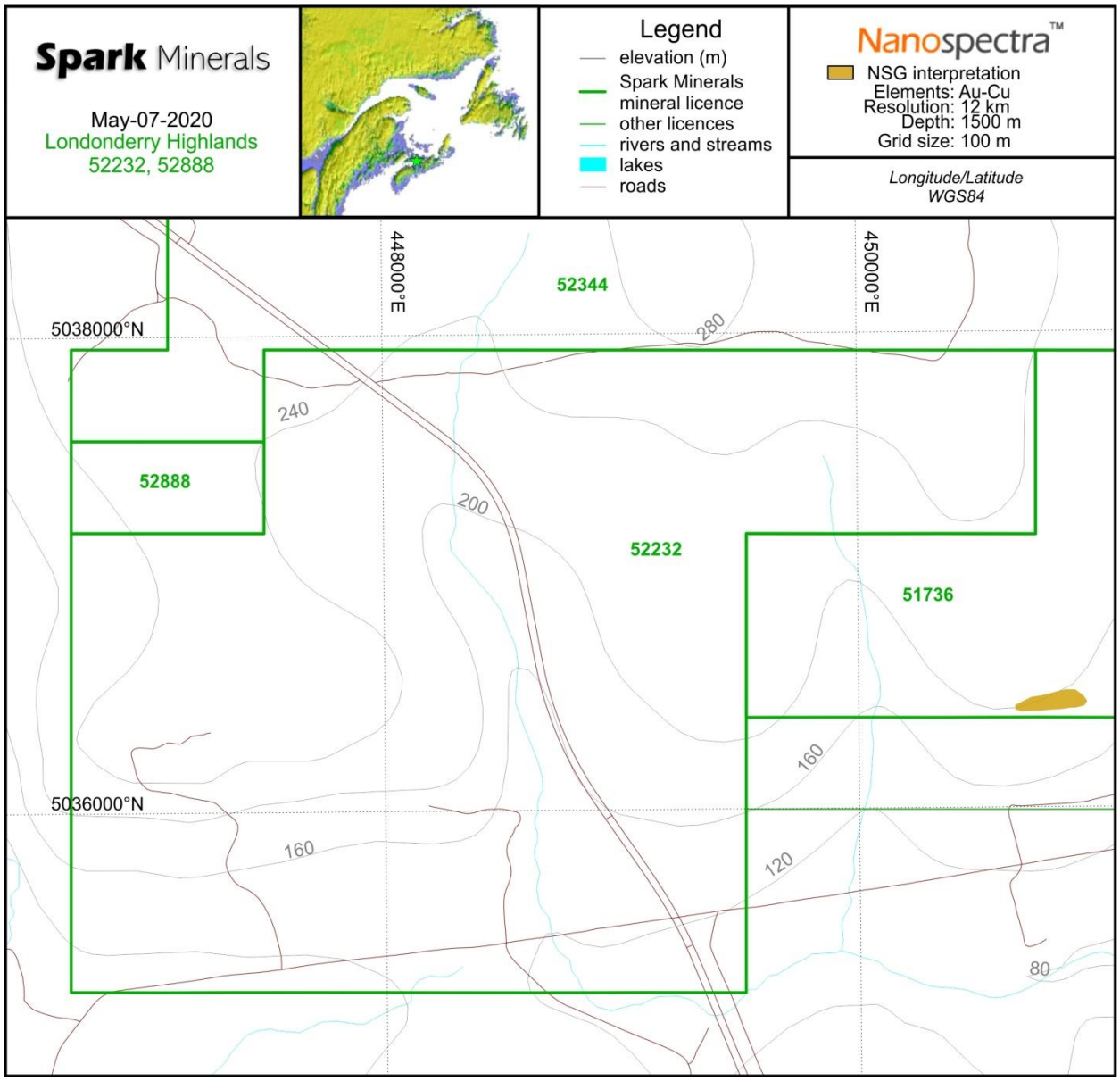



Spark Minerals
May-07-2020
Londonderry Highlands
52235, 52280
Legend
elevation (m)
Spark Minerals mineral licence
other licences
rivers and streams
lakes
roads
Nanospectra™
NSG interpretation
Elements: Au-Cu
Resolution: 12 km
Depth: 1500 m
Grid size: 100 m
Longitude/Latitude
WGS84
5038000°N
5036000°N
454000°E
456000°E
52344
52329
52280
52235
240
200
160
120


Spark Minerals
May-07-2020
Londonderry Highlands
51736
Legend
elevation (m)
Spark Minerals mineral licence
other licences
rivers and streams
lakes
roads
Nanospectra™
NSG interpretation
Elements: Au-Cu
Resolution: 12 km
Depth: 1500 m
Grid size: 100 m
Longitude/Latitude
WGS84
52344
5038000°N
52232
51736
450000°E
452000°E
280
240
200
160
120
80


Spark Minerals
May-07-2020
Londonderry Highlands
52239
Legend
elevation (m)
Spark Minerals mineral licence
other licences
rivers and streams
lakes
roads
Nanospectra™
NSG interpretation
Elements: Au-Cu
Resolution: 12 km
Depth: 1500 m
Grid size: 100 m
Longitude/Latitude
WGS84
52344
52329
52280
52235
5038000°N
454000°E
456000°E
458000°E
460000°E
280
240
200
160
120


Spark Minerals
May-07-2020
Londonderry Highlands
52344
Legend
elevation (m)
Spark Minerals mineral licence
other licences
rivers and streams
lakes
roads
Nanospectra™
NSG interpretation
Elements: Au-Cu
Resolution: 12 km
Depth: 1500 m
Grid size: 100 m
Longitude/Latitude
WGS84
448000°E
450000°E
452000°E
454000°E
456000°E
458000°E
52344
52888
52232
51736
52329
5038000°N
280
240
200
120



Maps outlining zones with high potential for Au-Cu mineralization.