



NI 43-101 TECHNICAL REPORT

ON THE

**LAC VIROT IRON ORE PROJECT  
MINERAL RESOURCE ESTIMATE  
NEWFOUNDLAND AND LABRADOR, CANADA**

N 5875000, E 627500, NAD 83, UTM Zone 19N

**Prepared for:**

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## 1 SUMMARY

### 1.1 Introduction

This Report was prepared and compiled by the QP under employment with SGS at the request of Red Paramount Iron Ltd. (“Red Paramount” or the “Company”). The purpose of this Report is to provide a Mineral Resource Estimate (“MRE”) for the Lac Virot Iron Ore Project (“Lac Virot” or the “Project”) in the Labrador West region, Newfoundland and Labrador, Canada.

### 1.2 Property and Agreements

During 2020, Mine Capital acquired all of the issued and outstanding common shares of Ridgemont Iron Ore Corp. a private Canadian company with interests in the Lac Virot Property located in Labrador. Upon completion of the acquisition Ridgemont’s name changed to Red Paramount Iron Ltd. which has the benefit of all the rights and obligations previously held by Ridgemont with respect to the Lac Virot Property. The combined mineral rights total 521 claims covering an un-surveyed area of 13,025 ha or 130.25 km<sup>2</sup>.

All mineral licenses are currently in good standing with respect to exploration expenditures (assessment work expenditures). All licenses presently have exploration surpluses; however additional expenditures will be required. An extensive drill program is planned for the summer of 2023.

### 1.3 Accessibility, Local Resources, Infrastructures

The Lac Virot Property covers an area of some 130.25 km<sup>2</sup> located in the Labrador West region of Labrador, some 12 km west of the Town of Labrador City. Labrador City is located 590 km by road north northeast of Baie-Comeau, Quebec, and 533 km by road west of Goose Bay, NL.

The district of Labrador West includes the Town of Labrador City (population ~7,200) and neighboring Wabush (population ~1,800). Labrador West is the regional center for the iron ore mining industry in Labrador. Labrador City and Wabush can provide modern housing as well as educational, medical, recreational and shopping facilities. Historically, mining has been a dominant part of the local and regional economy. Labor, industrial supplies and services for mining and exploration activities are readily available in the region. Wabush Airport is the only airport in western Labrador and is served by two commercial airlines. The Quebec North Shore & Labrador Railway (“QNS&L”) connects Labrador West with the port of Sept-Îles, Québec on the north shore of the St. Lawrence River.

In terms of the actual Lac Virot Property there is no on-property all-weather road access or mining related infrastructure. In Mr. Dupéré opinion there are sufficient Crown land surface rights available for all aspects of any potential mining operations, along with abundant water. Labrador West can provide nearby electrical power supplies, and mining personnel.

### 1.4 History

Iron ore mining has a long history of continuous production, from 1895 to the present, in Newfoundland and Labrador. Serious interest in the iron ore deposits of Labrador West began in the mid 1940’s which saw a monumental increase in the iron market as Europe and Asia rebuilt its cities and industries after World War II, and nations re-armed for the Cold War. However, the strong post-war demand revealed a world iron ore shortage which stimulated the worldwide search for new sources of ore. These exploration efforts eventually uncovered vast quantities of highly competitive ores in Labrador, Brazil and Australia.

Development of these and other deposits from the 1950's onward signaled the gradual demise of lower quality or otherwise compromised Fe ores.

The Labrador Mining and Exploration Company Limited ("LM&E") was formed in 1936 to explore and develop a large,  $>50,000 \text{ m}^2$  mineral rights concession that covered most of western Labrador section of the Labrador Trough. By 1949, LM&E had developed sufficient reserves of high-grade direct-shipping iron ore at Knob Lake sufficient to justify development. The partners joined forces with a group of US steelmakers and the Iron Ore Company of Canada ("IOC") was formed. After a major construction project including the mine, town-site (Schefferville, QC) and railway, the first shipment of iron ore moved south to the St. Lawrence River in 1954.

In 1951, Joseph R. Smallwood, Premier of the Province of Newfoundland, created the Newfoundland and Labrador Corporation ("Nalco") to stimulate development of the province's natural resources. In 1953, Nalco became a subsidiary of Canadian Javelin Limited. The Nalco/Javelin connection would lead to the Wabush Mines operations and also to the Julianne Lake iron deposit.

Wabush Mines began mining ore from the Scully Mine in Labrador in 1965 and currently operates a mine and concentrating plant at Wabush with a concentrate production capacity of 5.5 million tonnes/year, together with a pellet plant and shipping facilities in Point Noire, Québec. Wabush Mines is currently owned by Tacora Resources.

By the late 1950's, IOC had a renewed interest in its Wabush Lake area concentrating-type iron deposits. Its Labrador City area mine known as the Carol Project began operation in 1962 and has produced more than one billion tonnes of crude ore with an average iron content of 39 percent. Annual capacity at the Carol Concentrator is 17 million tonnes of iron ore concentrate, of which 13 million tonnes can be pelletized and the balance processed into various grades of concentrate products. Production capacity is currently being expanded to 23 million tonnes/year. Operations at IOC's Schefferville, QC site continued until 1982, when the mine was closed. The current ownership of IOC is Rio Tinto (58.7%), Mitsubishi Corporation (26.2%), and the Labrador Iron Ore Royalty Income Fund (15.1%). IOC operates within the Rio Tinto Iron Ore group and maintains its head office in Montreal, Quebec.

Historically, very little exploration has been done in this area and on the Lac Virot project area in particular. Exploration work completed by MPH Consulting Limited in the summer of 2011 included:

- An initial geological reconnaissance/prospecting site visit to the Property to confirm the existence of good quality iron formation units and to determine specifications for an airborne geophysical survey.
- Completion of a helicopter-borne high resolution magnetic, radiometric and very low frequency electromagnetic ("VLF-EM") survey.
- Focused follow-up of the airborne geophysical survey by additional reconnaissance geological mapping and prospecting.

In 2012, further exploration work continues with airborne magnetic and gravity surveys and a round of 12,000 m of drilling:

- Fugro (May 2012) – Gravity Gradiometric (AGG) survey
- Terraquest (Oct 2012) – Horizontal Aero-Magnetic Gradient & XDS VLF-EM Survey
- Drilling program – June to Oct 2012.

## 1.5 Regional Geology Setting

The Lac Virot property Lake Superior-type iron formation ("LSTIF") mineral showings occur in the Labrador-Quebec Fold Belt or Labrador Trough, within the Sokoman Formation of the Lower Proterozoic (Aphebian)

Knob Lake Group. The Sokoman Formation, one of the most extensive iron formation units in the world, extends along the eastern margin of the Archean Superior-Ungava craton for over 1,000 km.

The oldest rocks in the region are Archean migmatites and gneisses known as the Ashuanapi Metamorphic Complex. Although re-deformed and re-metamorphosed during the subsequent Grenville Orogenic episode and located within the borders of the Grenville Province of the Canadian Shield, the Complex is part of the stratigraphic assemblage that comprises the extensive Superior/Ungava Craton. These units constitute the basement of the predominantly sedimentary lithologies of the Labrador Trough.

The Lower Proterozoic (Aphebian) platformal sedimentary and related rocks of the Labrador Trough are named the Knob Lake Group. Previously known as the Gagnon Group in the Grenville Province portion of the Labrador Trough, the Knob Lake Group was redefined to include the stratigraphic sections on both sides of the Grenville Front.

The northern margin of the Grenville Province in southwestern Labrador is interpreted as a 20-30-km-wide ductile fold and thrust belt. The area represents the boundary zone of a collisional orogen wherein older rocks of the Superior and Churchill Provinces and Lower Proterozoic sediments of the Labrador Trough comprise a Parautochthonous Belt of various thrust sheets, the Gagnon terrane.

Deposition of the Knob Lake Group, which records the Aphebian (2.5 to 1.75 Ga) stratigraphy of the Labrador Trough, probably began with deposition of fluvial red sands and gravels (Seward Formation) in a narrow elongate valley that was probably a continental rift valley. This was followed by shallow marine transgression, subsidence and deposition of shales (Attikamagen Formation), carbonates (Denault Formation), sands (Wishart Formation), and iron formation (Sokoman Formation) in a shallow marine environment. Following deposition of the Sokoman Formation the basin subsided resulting in the build-up of deep water turbidites of the Menehek Formation. The final stage of Labrador Trough development saw the extrusion of a great thickness of mafic pillow lavas (Doublet Group) on its eastern margin. In the Wabush area all stratigraphic units have been deformed and metamorphosed during the development of the Trough or Labrador-Quebec Fold Belt, then further deformed, and metamorphosed during the Grenville Orogenic episode.

The basal section of the Knob Lake Group in the Wabush Lake area comprises widespread quartz-feldspathic schist and gneiss of the Attikamagen Formation which underlies most of the map area. An extensive tract of Denault Formation dolomitic and calcitic marble underlies the eastern shore of Wabush Lake and the southern shore of Julienne Lake, marking the upper limit of the Attikamagen Formation in that area. Quartzite of the Wishart Formation overlies the Attikamagen and Denault Formations along the western side of Wabush Lake, on the Julienne Peninsula, and the north side of Julienne Lake. Where present the top of the Wishart Formation defines the footwall contact of the Sokoman Formation ironstones.

The Sokoman Formation conformably overlies the Wishart Formation on the west side of Wabush Lake and Julienne Peninsula, but elsewhere it sits on the Attikamagen Formation. The dominant lithological units are silicate-carbonate iron formation and oxide iron formation. Outcrops of iron formation around Goethite Bay, Julienne Lake and to a lesser extent on the Julienne Peninsula are excessively leached.

The Menehek Formation, the youngest sequence of the Knob Lake Group in the Wabush Lake region, is composed of dark grey quartz-feldspar-biotite-graphic schist with a well-developed schistosity and distinctive graphite porphyroblasts.

Finally, the assemblage is intruded by Middle Proterozoic (Helikian, 1.75 to 1.0 Ga) mafic intrusions of the Shabogamo Intrusive Suite. These occur as folded and contorted sill-like bodies in the Attikamagen Formation in the south-eastern part of the region.

## 1.6 Property Geology and Mineralization

Most of the northern and western sector of the Lac Virot Property is underlain by basement rocks of the Ashuanipi METAMORPHIC Complex. Lithologies include quartzo-feldspathic migmatites, gneisses and granitoid rocks representing reworked Archean Superior Province units.

The Wishart Formation of the Knob Lake Group is the mapped to the east of the Lac Virot Property. During the past geological investigation and geophysical survey work a few exposures of clean quartzite were noted in the structurally complex Emma and O'Brien Lakes area.

The unit of primary importance with respect to iron ore exploration is the Sokoman Formation of the Knob Lake Group. Exposures of this formation are widespread throughout the Lac Virot Property as previously mapped by exploration groups, government, and academic geologists.

Mineralogically the outcropping sedimentary units of the Sokoman Formation on the Lac Virot Property are relatively simple, consisting primarily of quartz and iron-bearing minerals including mostly magnetite ( $Fe_3O_4$ ) with lesser hematite ( $Fe_2O_3$ ) or specularite in its coarse-grained form, and goethite ( $Fe_2O_3 \cdot H_2O$ ). Variable amounts of iron are also present in silicates such as amphiboles (grunerite) and in carbonates such as ankerite ( $Ca[Fe,Mg,Mn][CO_3]_2$ ).

Typically, the most economically significant iron formation units on the Property may be described as massive or banded quartz-magnetite-specular hematite schists that contain approximately 50% silica and 50% iron minerals by volume. The metamorphosed silica is predominantly medium to coarse grained granular in crystalline habit. The main iron oxide minerals are coarse to medium grained magnetite, medium grained dull granular hematite and fine-grained earthy hematite-goethite-limonite. The banded units comprise alternating centimeter-scale bands of whitish lean ferruginous quartzite/chert and dark grey to black to blueish black quartz-magnetite-specular hematite schists.

A variant of the above unit that typically contains more than 65% quartz and usually less than 20% total Fe is referred to as lean iron formation.

Parts of the Sokoman Formation on the Property (notably the Emma Lake sector) contain what has been described by early workers as quartz-grunerite schist or gneiss. Jackson (1954) describes the unit; "The rock varies from massive nearly pure grunerite to quartz, to thin banded with bands alternatively of quartz or grunerite. The grunerite varies from white to light straw color to waxy brown on the fresh surface to darker brown on the weathered surface." "Occasionally an outcrop is composed almost entirely of rosettas to  $\frac{1}{4}$  inch in diameter of rosettas." Disseminated crystals of magnetite are generally present, while an occasional carbonate band or magnetite rich band is also present.

The Sokoman Formation is stratigraphically overlain by garnet-biotite-graphite schists of the Menihik Formation.

The extensive thrusting noted in the Regional Geology section above is particularly evident in the Emma Lake area. This is atypically quite well exposed compared to other parts of the Sokoman-Menihik-Ashuanipi assemblage on the Lac Virot Property.

## 1.7 Exploration

Red Paramount has yet to complete surface exploration on the Property.

## 1.8 Drilling

Red Paramount has yet to complete diamond drilling on the Property.

## 1.9 Mineral Processing and Metallurgical Testing

During fall of 2022, Iron ore samples from the Lac Virot deposit were processed at the SGS Quebec laboratories. For this test program, two samples; a surface grab sample and a drill core sample were received for characterization and evaluation of their metallurgical performance.

Chemical analysis of the two samples found them to be very similar, with iron content ranging from 30.4% Fe in the Core sample to 31.3% Fe in the Surface sample and the silica content ranging from 44.2% SiO<sub>2</sub> in the Core sample to 47.4% SiO<sub>2</sub> in the Surface sample. Both samples have low sulphur content at less than 0.02% S. The amount of magnetically recoverable iron as determined by Satmagan was slightly higher in the Core sample at 80.2% than the 72.2% observed for the Surface sample.

A Bond ball mill grindability test (BWI) completed on a 10-kg composite of the two samples obtained a work index value at 7.7 kWh/t, which is qualified as “very soft” ore corresponding to the 3<sup>rd</sup> percentile of the SGS database.

Metallurgical tests were then carried out to evaluate the recovery of iron via magnetic or gravity separation processes.

For the magnetic separation, Davis tube tests at P<sub>80</sub> of 38 and 53 µm on both samples showed a highgrade iron concentrate at expected recoveries. The grades and recoveries obtained are 71.3% Fe at 73.5% and 68.5% Fe at 79.7%, respectively for Surface and Core samples. The impurities are below 4.0 % SiO<sub>2</sub> + Al<sub>2</sub>O<sub>3</sub> and below 0.05% S, removing any need for flotation. Also, dry medium intensity magnetic separation at 1.7 mm rejected 26.0% and 30.5% of the mass with low magnetic iron loses of 0.9% and 1.3%, for the Surface and Core samples, respectively. These results show that there is opportunity to reduce CAPEX with the addition of a coarse cobbing pre-concentration stage ahead of the ball mill.

A heavy liquid separation test was performed to evaluate the amenability of the ore to gravity separation. The results showed that the sample was not amenable to gravity recovery, achieving only 45.7% Fe and 51.8 % Fe in the 3.1 g/cm<sup>3</sup> sink fraction and further grinding would be required. This testwork program showed that the ore has a good proportion of magnetite which can be recovered with a series of size reduction and magnetic separation stages as presented in Figure 13-1. The proposed flowsheet should be evaluated at larger scale to confirm the feed sizes to the cobber, rougher, and cleaned magnetic separation stages and the number of magnetic separators to include in the wet LIMS stages.

## 1.10 Mineral Resource Estimate

SGS completed a Mineral Resource Estimate for the Lac Virot deposit at the Lac Virot Iron project.

The Mineral Resources presented herein, with an effective date of February 16<sup>th</sup>, 2023, incorporates drilling data from holes completed by previous owner of the 2012 drilling campaign, which in the QP's opinion were collected in accordance with The Canadian Institute of Mining, Metallurgy and Petroleum (CIM) “Exploration Best Practices Guidelines”, 2018.

The Mineral Resource was estimated using the 2019 CIM “Best Practice Guidelines for Estimation of Mineral Resources and Mineral Reserves” and classified in accordance with the “2014 CIM Definition

Standards". It should be noted that Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

The Mineral Resource estimate was conducted using SGS 3D modelling and block modelling proprietary software called Genesis, together with Microsoft Excel. The mineral resource estimation was carried out by Mr. Maxime Dupéré (the Qualified Person) of SGS Geological Services an independent mining and geological consulting branch of SGS Canada Inc.

The drillhole data was provided in Microsoft Excel files that were extracted from a Microsoft Access database managed by Red Paramount. The principal sources of information used for the estimate are exploration drilling programs conducted by previous owner (Ridgemont Iron Ore Corp.) during the 2012 drilling campaign.

A total of 43 drillholes were drilled. The cut-off date for inclusion of drill hole data into this estimate is December 3<sup>rd</sup>, 2012 at which time there was no outstanding information for Lac Virot as the drilling was completed in 2012.

A total of 2,307.50 metres of drillhole samples were assayed for all zones. The North (1,070.40 m) and the South (584.60 m) are the ones most sampled. Sample lengths vary from 0.05 m to 10.00 m in North zone and 0.80 m to 3.90 m in South zone with the dominant sample length being 2.6 metre for both areas.

Datamine was first used to generate three-dimensional volumes and surfaces representing the mineralised zones. SGS used Genesis Software for the update the South and North zones.

A topographic survey was provided by Red Paramount. This survey consists of a topographic surface (3DFace) in dxf.

The surveyed drillhole collars correspond well with the resultant topographic surface.

The modelling procedure examined the continuity of Fe (%) grades along strike and down-dip to generate mineralised wireframes. A modeling cut-off of 15% was used as a base for modelling. There are areas where low grade Fe is present. These areas were taken out mostly as external waste zones and do not part of the mineralized solids. However, waste intervals of less than 6 metres were considered in the model as internal waste. The Assay results within internal waste intervals were kept and taken into account during estimation. The use of the threshold resulted in generally continuous zones that form a suitable framework for block model grade estimation. The modelled zones (areas/solids/envelopes) were individually coded into the drillhole data and volumes were generated using Datamine and Genesis software. Where necessary, manual edits were incorporated to provide for geologically realistic shapes.

The modelling resulted in fourteen individual mineralised zones.

Mineralised intervals consisting of the top and bottom intersects of mineralised assay data following the modelling parameters were created for all mineralised zones. The mineralised intervals are within the shapes of the solids and reflect the economic potential of profitable mining of each selected drill hole.

Samples were composited to three (3) metre lengths based the dominant sample interval, size of the deposit and block model parameters. Each set of composited data were restrained to each 3D solid. Compositing was carried out inside the mineralised 3D solids and within mineralised intervals. Statistics were analysed for  $Al_2O_3$ (%),  $CaO$ (%),  $Cr_2O_3$ (%),  $Fe_2O_3$ (%) (Fe %, derived),  $Fe_3O_4$ (Sat) (%),  $FeO$ (titration) (%),  $K_2O$  (%), LOI(%), MagnFe(%),  $MgO$ (%),  $MnO$ (%), (Mn % derived),  $Na_2O$ (%),  $P_2O_5$ (%),  $SiO_2$ (%),  $TiO_2$ (%),  $V_2O_5$ (%).

Block models were generated for each project using 25 m by 25 m blocks in the X (easting) and Y (northing) direction and 10 m blocks in the Z (elevation) direction. The block model was not rotated. The blocks were assigned a volume percentage corresponding to the proportion of blocks within each 3D solid. In fact, a block fraction (between 0 (0%) and 1 (100%)) was applied to each block.

The selected grades for each mineralized zones within the deposit was interpolated into blocks by the Inverse Distance Squared (ID<sup>2</sup>) estimation method. Search ellipses for the mineral domains were interpreted based on drill hole (Data) spacing, orientation and size of the resource wireframe models (Table 14-5). The search ellipse axes were interpolated and applied to each block of the block model. These variable ellipse axes (azimuth, dip, spin) were applied based on the relative orientation of the different mineralised solids and the observed trend of the mineralization down dip/down plunge (Figure 14-8).

Grades were interpolated into blocks using a minimum and maximum number of composites based on available data in each mineral domain, to generate block grades during Pass 1, 2 and 3. During pass 1, a minimum of 5 and a maximum of 15 composite samples per drill hole, and a maximum of 3 composites per drill hole, were used to generate block grades totalling 16,998 blocks estimated (32.1%). For pass 2, The same parameters were used except the search ellipse was set as twice the size of the first pass totalling 27,910 blocks estimated (52.6%). For pass 3, a minimum of 3 and a maximum of 15 composite samples per drill hole (no minimum drill holes to use) were needed to generate block grades for totalling 8,115 estimated blocks (15.3%). Note that for the 3<sup>rd</sup> pass for zones 3 and 10, a minimum of 2 samples was set as estimation parameters. Note also that for the 3<sup>rd</sup> pass for zone 4, a minimum of 1 sample was set as estimation parameters. A fixed density of 3.5 was set for all Lac Virot deposit as per findings done in section 14.2.1.

All the Mineral Resources were classified as Inferred. The drillholes are sparse and local estimates cannot be reliably made.

The Mineral Resource was reported as Inferred as shown in Table 1-1. The Mineral Resource was estimated using The Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (2019) and is reported in accordance with the 2014 CIM Definition Standards, which have been incorporated by reference into National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101).

In the QP's opinion, the Mineral Resources reported herein at the selected cut-off grade have "reasonable prospects for eventual economic extraction", taking into consideration mining and processing assumptions (refer to 14.12). The Mineral Resource was reported from within a Whittle optimised pit shell at a cut-off grade of 15% Fe.

**Table 1-1 Lac Virot Inferred Mineral Resource Estimates above 15% Fe cut-off grade – February 16, 2023**

Name	Classification	Fe (%)	FeO (%)	SiO <sub>2</sub> (%)	P <sub>2</sub> O <sub>5</sub> (%)	MnO (%)	MagFeSat (%)	Volume (Mm <sup>3</sup> )	Tonnes (M)
ALL: South, Middle & North Pits	Inferred	23.23	19.58	42.67	0.04	1.21	10.72	150.6	527.1
North Pit		23.09	21.35	41.31	0.04	1.15	9.49	94.6	331.2
Middle Pits		20.73	16.62	45.68	0.04	1.10	10.14	19.4	67.9
South Pit		24.91	16.58	44.58	0.03	1.43	14.19	36.6	128

1. A fixed density of 3.5 t/m<sup>3</sup> was used to estimate the tonnage from block model volumes.
2. Resources are constrained by the pit shell and the topography of the overburden layer.
3. The results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.
4. Mineral resources which are not mineral reserves do not have demonstrated economic viability. An Inferred Mineral Resources has a lower level of confidence than that applying to a Measured and Indicated Resources and must and must not be converted to a Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
5. All figures are rounded to reflect the relative accuracy of the estimate and numbers may not add due to rounding.
6. Effective date February 16<sup>th</sup>, 2023.
7. The estimate of mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing or other relevant issues.
8. Based on a cut-off grade of Fe of 15%.
9. Resources are constrained within Red Paramount mineral rights.
10. The pit optimization and base case cut-off grade of 15% iron (Fe) considers a pricing of US\$120/t of concentrate at 67% Fe (160.80 CAD\$/t of concentrate at 67%), rock processing, treatment and refining, transportation and G&A cost of 13.13 CAD\$/t of mineralized material, open pit mining cost of 3.00 CAD\$/t of mineralized material, an average pit slope of 45°, and an average mining recovery of 95%, processing recovery of 90% and dilution of 5%, and a waste density of 2.9.

## **1.11 Mineral Reserve Estimate**

There are no current Mineral Reserve estimates stated on this Property. This section does not apply to the Technical Report.

## **1.12 Adjacent Properties**

The property is bordered to the north-east by claims of Rio Tinto Exploration Canada Inc., to the east by a mining lease of Labrador Iron Ore Royalty Corporation ("LIORC"), to the south-east by Iron Ore Company of Canada ("IOC"), and to the south and west by Capital Mine (Figure 23-1).

The author has been unable to verify the information and the information is not necessarily indicative of the mineralization on the Lac Virot property that is the subject of the technical report.

## **1.13 Conclusions**

The Lac Virot Mineral Resource Estimate is the first estimate based on the validated 2012 Drilling information. The mineral resource model was constructed using a geostatistical block modeling approach constrained by a wireframe interpretation of the boundaries of the iron mineralization, which was verified by SGS. The iron mineralization, as delineated by core drilling at the Lac Virot iron deposit, is considered amenable to open pit extraction.

## **1.14 Recommendations**

The detailed recommendations list is provided in Section 26.

## 2 INTRODUCTION

This Report was prepared and compiled by the QP under employment with SGS at the request of Red Paramount Iron Ltd. ("Red Paramount" or the "Company"). The purpose of this Report is to provide a Mineral Resource Estimate ("MRE") for the Lac Virot Iron Ore Project ("Lac Virot" or the "Project") in Newfoundland and Labrador, Canada.

This Technical Report has been prepared to comply with Canadian National Instrument 43-101, Companion Policy 43-101CP, Form 43-101F1, the 'Standards of Disclosure for Mineral Projects' of January 2011 (the Instrument) and the Mineral Resource and Reserve classifications as defined in the CIM Definition Standards 2014 document.

Red Paramount is a privately owned, emerging Canadian steel producer in Vancouver, British Columbia, Canada. Red Paramount is developing its 100%-owned Lac Virot iron ore property in the Eastern Canada Province of Newfoundland and Labrador. The subject of this technical report is the Lac Virot Iron Ore Project. The Company's registered corporate office is 20<sup>th</sup> Floor 250 Howe Street, Vancouver, British-Columbia, V6C 3R8, Canada.

At the request of Red Paramount Iron Ltd. ("Red Paramount" or "the Company") of Vancouver, British Columbia, Canada, SGS Canada Inc. ("SGS") has prepared an independent technical report (the "Report") conforming to the standards dictated by National Instrument 43-101, in respect to the Lac Virot Property located in the Labrador West region, Newfoundland and Labrador (Figure 4-2).

### 2.1 Terms of Reference

Red Paramount engaged the services of SGS on January 11, 2023, to write an independent NI 43-101 Technical Report on the Lac Virot Iron Ore Property in Newfoundland and Labrador, Canada. This Report was prepared in accordance with NI 43-101 and Form NI 43-101F1 and Companion Policy 43 101CP.

### 2.2 Report Responsibility and Qualified Person

The author, by virtue of their education, experience, and professional association, is considered Qualified Person (QP) as defined in the NI 43-101 standard, for this report, and are members in good standing of appropriate professional institutions:

- SGS Canada under the supervision of Maxime Dupéré (B.Sc., géo.):

The report titled "NI 43-101 Lac Virot Iron Ore Project Mineral Resource Estimate, Canada" March 23, 2023 (the "Technical Report") for Red Paramount Iron Ltd.

The QP has contributed to the writing of this Report and has provided a QP certificate, included at the end of this Report. The information contained in the certificate outlines the sections in this Report for which he is responsible. The QP has also contributed to figures, tables, and Sections of this report.

### 2.3 Site Visit

Maxime Dupéré did not personally inspected the Property as the site visit done in February 13<sup>th</sup>, 2023 and the area was covered in snow however visit was made to the location of Lac Virot core shack in Wabush. Mr. Dupéré examined several drill cores and accompanying drill logs and assay certificates. Assays were examined against drill core mineralized zones. Mr. Dupéré inspected the core storage facilities.



The intention is that Mr. Dupéré will visit the Lac Virot Property site as soon as the snow cover has melted, within the next three months, by June 2023.

Mr. Dupéré verified the drill hole database and QAQC results. Based upon the evaluation of the QA/QC program undertaken on the Property, the availability of SGS assay certificates and internal QAQC, it is the Author's opinion that its independent verification confirms the presence of iron mineralization on the Property and that the results are acceptable for use in the current Mineral Resource Estimate.

## 2.4 Currency, Units, Abbreviations and Definitions

All units of measurement used in this technical report are International System of Units (SI) or metric, except for Imperial units that are commonly used in industry (e.g., ounces (oz.) and pounds (lb.) for the mass of precious and base metals). Every effort has been made to clearly display the appropriate units being used throughout the Report. All currency is in Canadian dollars (CAD\$), unless otherwise noted. The locations of all maps are referenced to UTM Zone 19, NAD83, unless otherwise stated. Frequently used abbreviations and acronyms can be found in Table 2-1.

This Report includes technical information that required subsequent calculations to derive subtotals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, the QPs consider them immaterial.

In terms of reporting weight percent (%) for unbeneficiated iron ore samples, Fe<sub>2</sub>O<sub>3</sub> is standard for whole rock major oxide analysis. To convert to total Fe multiply by 0.6994. Total Fe does not necessarily mean valuable or saleable iron content because iron silicates etc. contain Fe which cannot be recovered. The internationally accepted unit of measure for iron ore pricing is the dry metric tonne unit (dmtu) which is 1% of iron (Fe) contained in a tonne of ore, concentrate or pellets, excluding moisture. The price per tonne of a consignment of iron ore is calculated by multiplying the dollars/dmtu price by the percent Fe content of the ore in that shipment. For example, a 66.2% Fe content iron ore will be priced at the contracted dmtu price multiplied by 66.2, a 55% Fe content ore at the dmtu price multiplied by 55, etc. Iron ore contract prices are quoted in US\$ dollars and are correctly referenced in this report.

**Table 2-1 List of Abbreviations**

%	Percent sign
°	Degree
°C	Degree Celsius
CAD\$	Canadian dollar
cm	Centimetre
g	Grams
g/t	Grams per metric tonne
Ga	Billion years
GPS	Global Positioning System
ha	Hectare
ICP-MS	Inductively coupled plasma mass spectrometry
ICP-OES	Inductively coupled plasma optical emission spectrometry
kg	Kilograms
km	Kilometers
L.m	Linear meter

L.S.	Lump sum
m	Meters
$m^3$	Cubic metres
Ma	Million years
mm	Millimeter
MRE	Mineral Resource Estimate
Mt	Million tonnes
N, S, E, W	North, South, East, West
ppm	Parts per million
QA	Quality Assurance
QC	Quality Control
QP	Qualified Person
SG	Specific Gravity
SGS	SGS Canada Inc. Geological Services
SGS Lakefield	SGS Minerals Services Lakefield Facility
SGS Quebec	SGS Minerals Services Quebec Facility
SGS	SGS Geological Services
tonnes or t	Metric tonnes
$\mu\text{m}$	Micrometers
US\$	US Dollar
UTM	Universal Transverse Mercator

## 2.5 Effective Date

The effective date of this technical report is February 16<sup>th</sup>, 2023.

As of the effective date of this Report, the author is not aware of any material fact or material change with respect to the subject matter of this Technical Report that is not presented herein, or which the omission to disclose could make this Report misleading.

## 2.6 Previous Technical Reports

A 2012 Technical Report on the Project was completed by A.C.A. Howe International Limited (A.C.A. Howe, 2012) for Ridgemont Iron Ore Corp. on March 25, 2012, titled “Technical Report on the Lac Virot Iron Ore Property, Labrador West, Newfoundland & Labrador”. A 2021 Technical Report on the Project was completed by Johannes Francois Erasmus, (Erasmus, 2021) for Red paramount Iron Ltd. on August 26, 2021, titled “2021 Technical Report on the Lac Virot Iron Ore Property, Labrador West, Newfoundland and Labrador”. Information considered by the QP to be both current and relevant was sourced from these documents.

The sources of information as referenced throughout this report are as follows:

- Data supplied by Red Paramount;
- Technical reports by A.C.A. Howe and Erasmus and associated geological background information.

### **3 RELIANCE ON OTHER EXPERTS**

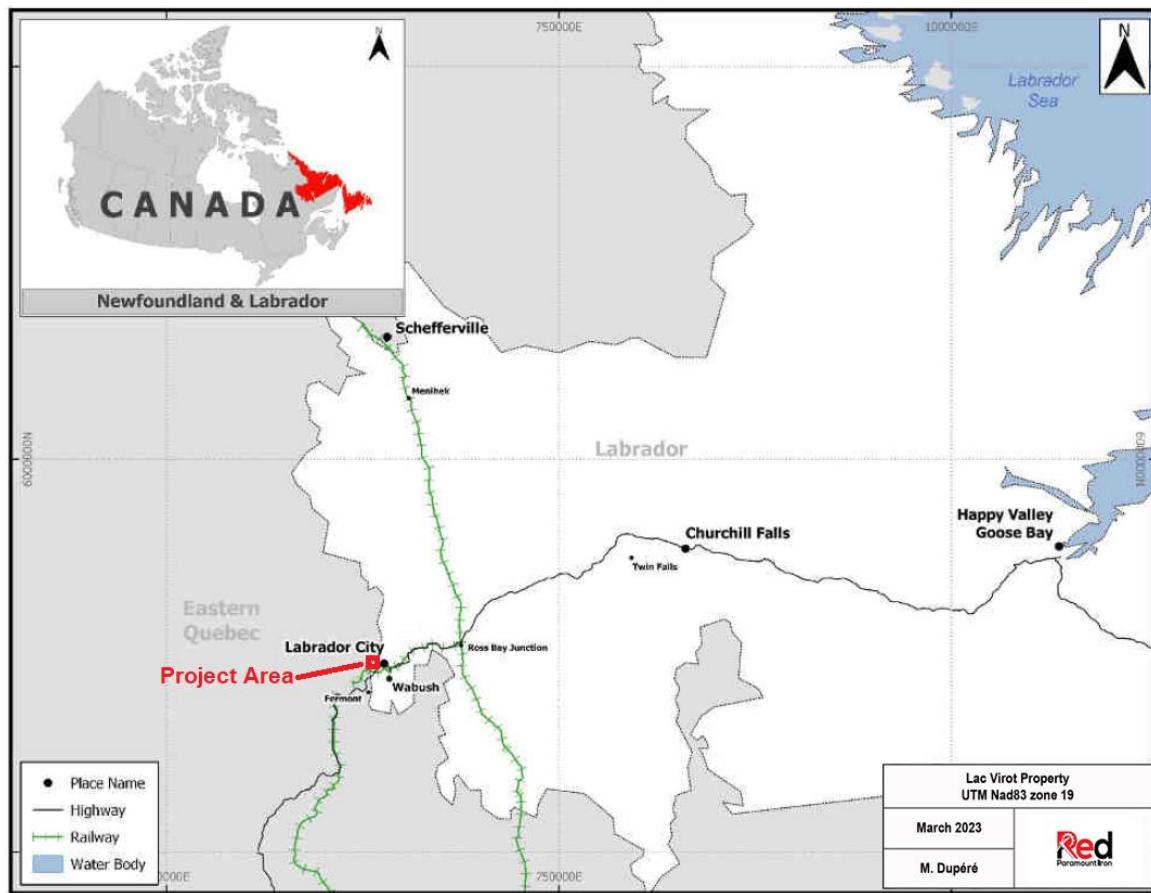
Verification of information concerning Property status and ownership, which are presented in Section 4 below, has been provided to the Author by McInnes Cooper, by way of an E-mail on February 8<sup>th</sup>, 2023, 2023. The Author only reviewed the land tenure in a preliminary fashion and has not independently verified the legal status or ownership of the Property or any underlying agreements or obligations attached to ownership of the Property. However, the Author has no reason to doubt that the title situation is other than what is presented in this technical report (Section 4). The Author is not qualified to express any legal opinion with respect to Property titles or current ownership.

## 4 PROPERTY DESCRIPTION AND LOCATION

*The following section has been extracted from previous technical reports.*

The Property is located approximately 12 km west of the Town of Labrador City, in the Labrador West region, Newfoundland and Labrador, Canada (Figure 4-1). The Property is centered at approximately at N 5875000, E 627500, NAD 83, UTM Zone 19N.

**Figure 4-1 Property Location Map**



### 4.1 Mineral Rights

During 2020, Mine Capital acquired all of the issued and outstanding common shares of Ridgemont Iron Ore Corp. a private Canadian company with interests in the Lac Virot Property located in Labrador. Upon completion of the acquisition, Ridgemont Iron name changed to Red Paramount Iron Ltd with the benefit of all the rights and obligations previously held by Ridgemont with respect to the Lac Virot Property which consists of four Map Staked Licenses (Figure 4-2) with a combined 521 claims covering a total area of 130.25 km<sup>2</sup>. The mineral rights are in National Topographic System (“NTS”) of Canada 1:50,000 scale map sheets 23G/03 and 23B/14. The Property is in the Province of Newfoundland and Labrador, Canada, some 12 km west of Labrador City. A summary of mineral rights is provided in Table 4-1 and shown further in Figure 4-2.

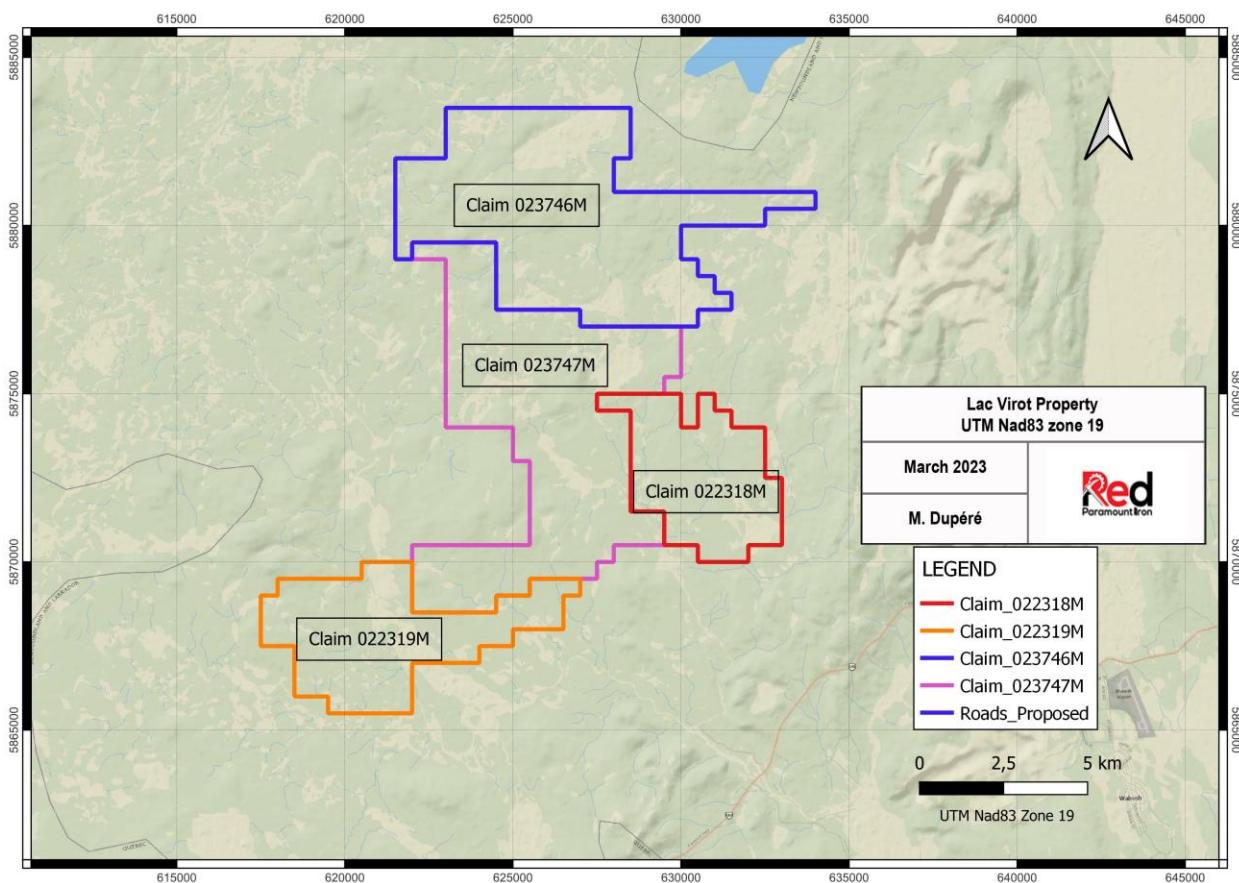
**Table 4-1      Lac Virot Property, List of Mineral Rights**

License #	Status	Owner	Location	Map sheets	# Claims	Area (Ha)	Issue Date	Renew Date	Report Due Date
022319M	Issued	Red Paramount Iron Ltd.	Lake Virot	23B/14	90	2,250	10-Jan-2011	12-Jan-2026	11-Mar-2024
022318M	Issued	Red Paramount Iron Ltd.	Lac Montenon	23B/14 23G/03	70	1,750	7-Jun-2010	9-Jun-2025	7-Aug-2023
023746M	Issued	Red Paramount Iron Ltd.	Lac Montenon	23G/03	181	4,525	7-Feb-2011	9-Feb-2026	10-Apr-2023
023747M	Issued	Red Paramount Iron Ltd.	Lac Montenon	23B/14 23G/03	180	4,500	7-Feb-2011	9-Feb-2026	10-Apr-2023
					521	13,025			

All mineral licenses are currently in good standing with respect to exploration expenditures (assessment work expenditures). For all licenses, additional expenditures will be required as early as 2022 and 2023, to keep some of the claims in continued good standing. Table 4-1 lists the amount of exploration dollar expenditures required for each mineral license as well as the expenditure year and date in which the expenditures should be incurred.

Red Paramount has no current title to surface rights. All the current mineral land holdings are on Crown land including a portion within the municipal boundary of Labrador City. These areas may be accessed upon application for and receipt of various land use permits. The Government of Newfoundland and Labrador historically issued such permits in an expeditious manner.

To the knowledge of Mr. Dupéré there are no existing environmental liabilities with respect to the Lac Virot Property. Red Paramount believes that it is prudent to consider environmental and water resources aspects of a potential mining property at an early stage of its exploration. The initial step in the overall mitigation plan is to define baseline parameters so that the environmental situation can be documented in its semi-natural state prior to potential major mining/processing activities.

**Figure 4-2 Lac Virot Property Map**

**Source:** Red Paramount Iron, 2021, Updated & validated by SGS, March 2023

## 4.2 Newfoundland and Labrador Basic Information

Since its first settlement, Newfoundland and Labrador has been highly dependent on its resource sector. The province was initially settled because of its rich fishing grounds on the Grand Banks. The mainstay of the province's fishing industry has been groundfish (primarily cod); however, other important catches are flounder, redfish, capelin, shrimp, and crab. In 1977, the Canadian government extended its fishery jurisdiction to 200 miles around the coast of the province to gain better control of fishing activity, but in 1989 it was recognized that many of the Atlantic's key groundfish stocks were in severe decline. Since that period, there have been successive reductions in quotas and fishing moratoria.

The second most prominent industry in the provincial economy is the mining industry. The forecast of the Gross Vale of Mineral Shipments (GVMS) for 2020 is \$4.2 billion, representing an increase of 12 percent from the previous year of \$3.7 billion. The increase is mainly attributed to a rise in the value of iron ore shipments. Other minerals mined in the province are gold, asbestos, limestone and gypsum. In 1994, a major discovery of nickel, copper and cobalt was made at Voisey Bay. The development of the Voisey's Bay mine expansion (the underground mine) is approximately 41 per cent complete with expected capital expenditures of US\$471 million as of April 2020. The expansion will produce about 45,000 tonnes of nickel per year.

The third significant traditional goods-producing industry is the newsprint industry. This industry consists primarily of three pulp and paper mills located in Corner Brook, Grand Falls and Stephenville.

The discovery of offshore oil and gas reserves has added a new dimension to the marine resources of the province. The Hibernia discovery in 1979 was Newfoundland's first significant oil find; reserves are estimated at 615 million barrels.

The province's largest utility industry is electric power. The largest hydroelectric facility is in Churchill Falls Labrador with a total installed capacity of 5,403 megawatts.

Newfoundland's agriculture industry is small. The output of the agriculture industry is mainly for domestic consumption, although some agricultural products such as blueberries and furs are sold to markets outside the province.

### 4.3 Mining Law

In Newfoundland and Labrador, the ownership of surface rights and mining rights can vary from one property to another, particularly in regions where settlement and industry have a long history. In practice the great majority of current mineral rights in the province are acquired by staking, with a few Fees Simple Grants that date back to at least the mid-1900's still remaining, along with a few areas of Exempt Mineral Lands set aside by the provincial government.

The acquisition of Mineral Rights in the province is by online map staking using the Province's Mineral Rights Administration System – Geoscience Atlas. Every natural person, nineteen years of age or more, and every corporation has the right to obtain mineral exploration licenses.

The basic unit in map staking is the claim. In map staking, a claim is a 500-m<sup>2</sup> being one quarter of a UTM grid square - bounded by one corner of a UTM grid square. The UTM grid square referred to is the one-thousand-meter grid used on the 1:50,000 National Topographic Map Series NAD 27. There is no restriction on the shape of an area being applied for; an application for a Map Staked License can be for a maximum of 256 claims and all the claims in the electronic application must be coterminous.

A mineral exploration license is issued for a term of five years. However, a mineral exploration license may be held for a maximum of twenty years provided the required annual assessment work is completed and reported upon and the mineral exploration license is renewed every five years.

Expenditures on the following, within the area of the license, shall be credited as assessment work when carried out for the purpose of exploration:

- prospecting,
- trenching, pitting, and stripping,
- line cutting and flagging,
- surface and underground geological surveys,
- airborne, surface and underground geochemical surveys,
- airborne, surface, underground geophysical surveys, and borehole geophysical surveys,
- photogeological and remote imagery interpretations,
- drilling, and core transportation to storage facilities of the Department of Natural Resources,
- land surveys,
- topographic surveys,
- shaft sinking and other underground exploration work,
- engineering evaluation reports,

- beneficiation studies, analysis, assays and microscopic studies, and others as may be approved by the Minister.

#### **4.4 Environmental Permitting**

Any person who intends to conduct an exploration program on a staked or licensed area must submit prior notice with a detailed description of the activity to the Department of Natural Resources. An exploration program that may result in ground disturbance or disruption to wildlife or wildlife habitat must have an Exploration Approval from the department before the activity can commence.

## 5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Lac Virot Property covers an area of some 13,025 Ha (130.25 km<sup>2</sup>) located in the Labrador West region of Labrador, some 12 km west of the Town of Labrador City (Figure 5-1). Labrador City is located 590 road km north northeast of Baie-Comeau, Quebec and 533 road km west of Goose Bay, NL (Figure 5-2).

The district of Labrador West includes the Town of Labrador City (population ~7,200) and neighboring Wabush (population ~1,906). Labrador West is the regional center for the iron ore mining industry in Labrador. Labrador City and Wabush can provide modern housing as well as educational, medical, recreational and shopping facilities. Historically, mining has been a dominant part of the local and regional economy. Labor, industrial supplies and services for mining and exploration activities are readily available in the region. Wabush Airport is the only airport in western Labrador and is served by two commercial airlines. The Quebec North Shore & Labrador Railway (“QNS&L”) connects Labrador West with the port of Sept-Îles, Québec on the north shore of the St. Lawrence River.

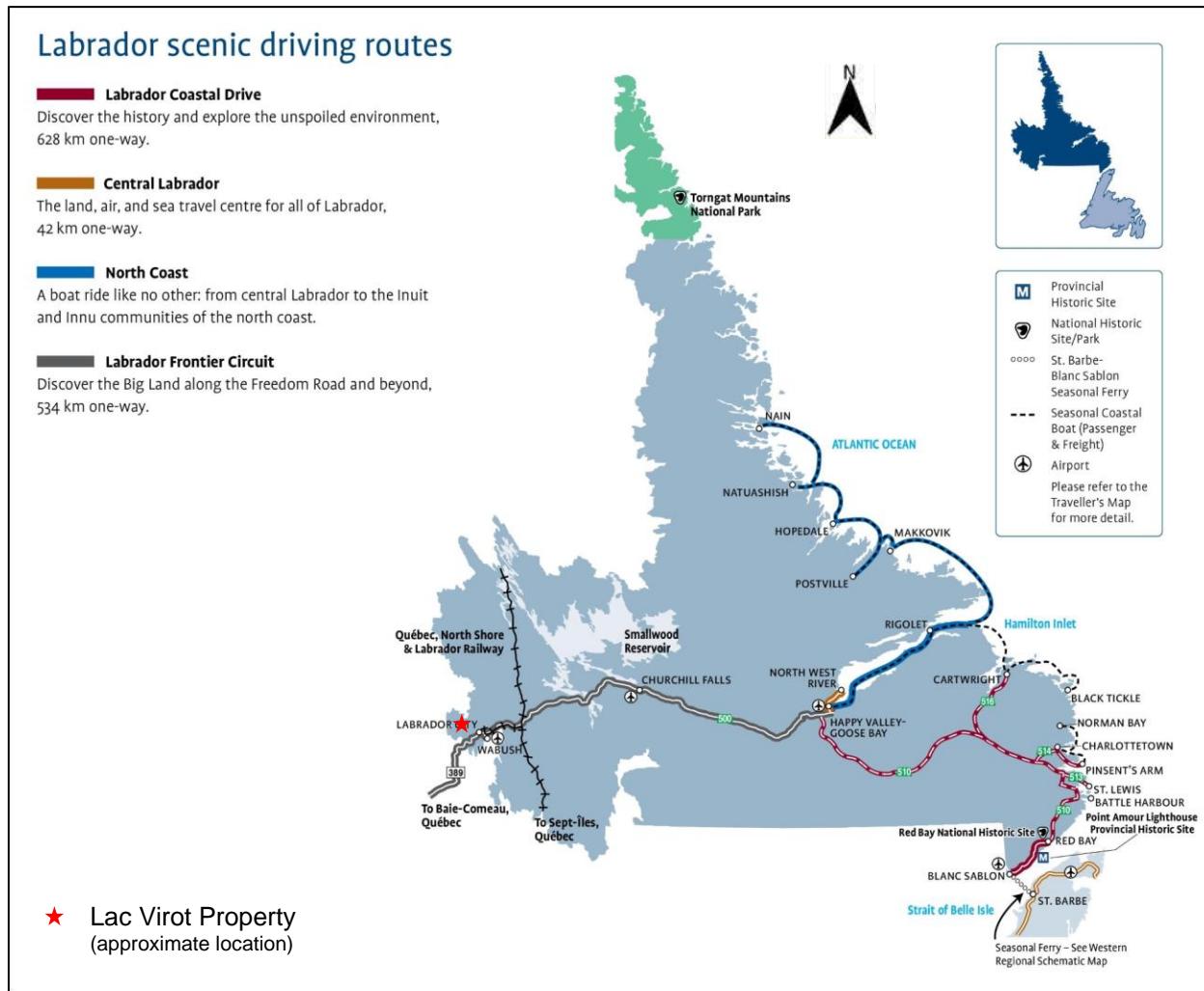
**Figure 5-1 Aerial View of Labrador City/Wabush**



Local climatic conditions are typical of western Labrador. Mean total precipitation for Wabush is 851.6 mm including 482.6 mm of rainfall and 445.7 cm of snowfall. Higher levels of rainfall typically occur in July (average 111.5 mm) while the highest level of snowfall accumulation (average 75.3 cm) usually occurs in

the month of November. Mean July daily temperature is 13.7 °C while mean January daily temperature is –22.7 °C. Recorded temperatures have ranged from a low of –47.8 °C on February 17, 1973, to a maximum temperature of 33.3 °C on June 16, 1983. (Source: Meteorological Service of Canada). Mining and exploration operations may be conducted on a year-round basis, although seasonal restrictions and inefficiencies do apply to certain activities.

**Figure 5-2 Regional Main Access Routes**



**Source:** On the World Map, 2023.

Built in the early 1950's by IOC, the Quebec North Shore & Labrador Railway ("QNS&L"), originally connected the port of Sept-Îles, Québec on the north shore of the St. Lawrence River with a northern terminus at IOC's mining community of Schefferville, Québec, a distance of 573 km. In the late 1950's major iron ore deposits were opened up near Labrador City by IOC and Wabush Mines, and the QNS&L built a 58-km line to serve these mines, running west from the main line at Emeril Junction to Carol Lake, (near Wabush). Service on this branch began in 1960. IOC's Schefferville, Québec operations closed in the 1980's. However, the company's QNS&L railway maintained subsidized passenger and freight service for communities along the northern portion of its system until 2005, when it transferred ownership of the Emeril Junction to Schefferville section to First Nations interests, Tshiuetin Rail Transportation Inc ("TRT"). IOC maintains proprietorship over the southern section of its QNS&L rail line which runs 414 km between Sept-

Îles and Labrador City, hauling up to 21 million tonnes of iron ore yearly for its own operations and those of Wabush Mines. Passenger service on the QNS&L is now operated by TRT as two return trips per week between Sept-Îles and Emeril Junction; situated on the Trans Labrador Highway, 63 km from Labrador West. Also available twice a week is an eight-hour trip from Emeril Junction to Schefferville, Quebec. A recently constructed railway line connecting the Bloom Lake Mine to the QNS&L railway via the Wabush Mine railway runs to the immediate south of Lac Virot.

**Figure 5-3 Railway Line within 4 km of the project**



**Source:** A.C.A Howe International Ltd., 2012, verified SGS 2023

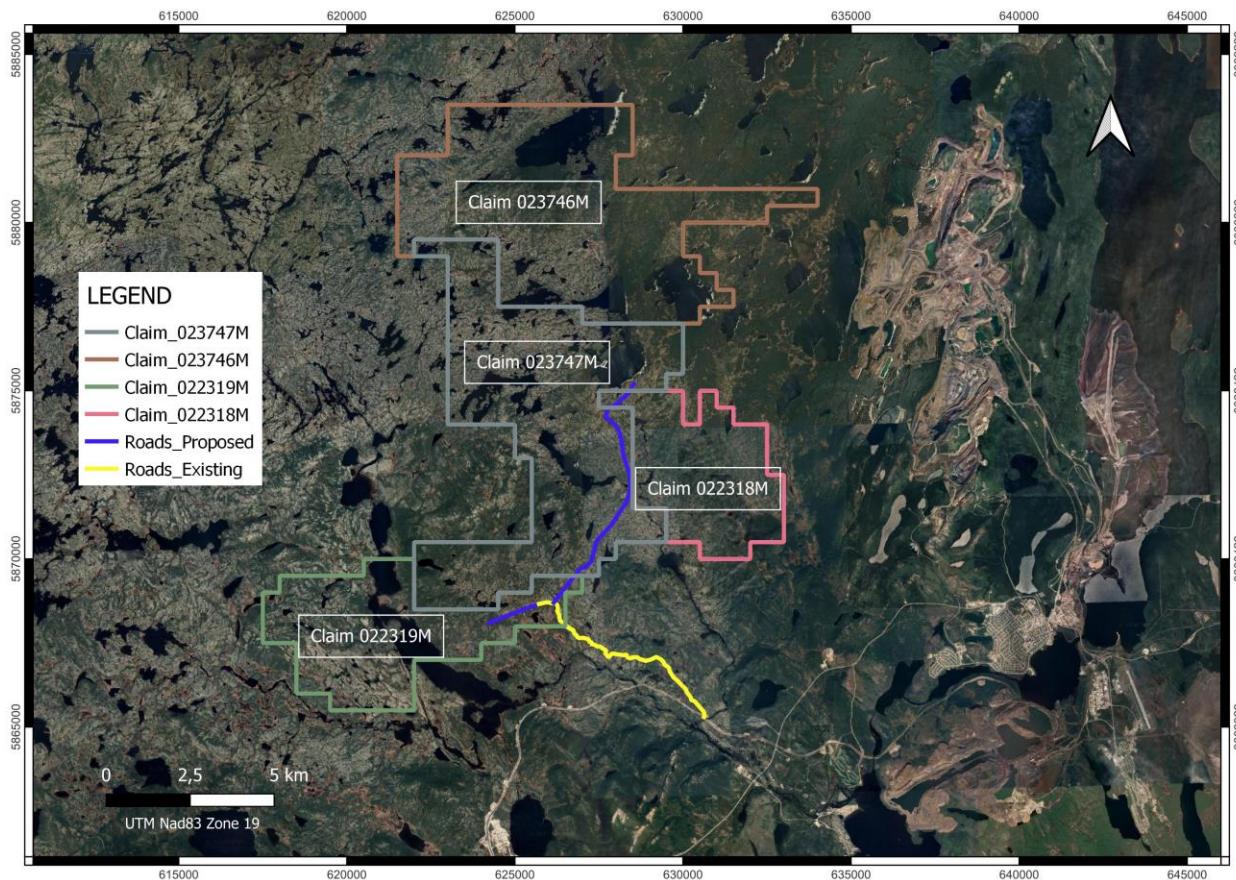
In terms of the actual Lac Virot Property there is no on-property all-weather road access or mining related infrastructure. In Mr. Dupéré opinion there are sufficient Crown land surface rights available for all aspects of any potential mining operations, along with abundant water. Labrador West can provide nearby electrical power supplies, and mining personnel.

The Lac Virot property is characterized by moderate relief and undulating terrain with elevations ranging from approximately 590 to 720 m above mean sea level. The region is predominantly covered by spruce/lichen forest, with minor muskeg bogs and marshes in low-lying areas. The area is characterized by an open to dense tree canopy underlain by an undergrowth of lichens and shrubs. The prominent tree species is black spruce (*Picea mariana*). Shrub species include lambkill (*Kalmia angustifolia*), Labrador tea (*Ledum groenlandicum*), blueberry (*Vaccinium angustifolium*) and alder (*Alnus spp.*). The dominant lichen species are Reindeer Lichens (*Cladonia alpestris*, *C. arbuscula*, *C. mitis*).

## 5.1 Accessibility

The Lac Virot project area is located approximately 12 km west of Labrador City. The Labrador City/Wabush is serviced daily by commercial airline from Sept-Îles, Montréal and Québec City and also by flights from Goose Bay, Deer Lake and St. John's. The Lac Virot property can be reached by helicopter during summer or by snowmobile during winter. There is a limited access road at the beginning of claim 022319M. Red Paramount has submitted a permit application to crown land to continue the access road on the property (Figure 5-4).

**Figure 5-4 Location and Proposed Road Access to the Lac Virot Project Area**



## 5.2 Climate

The climate in the region is typical of north-central Québec/Western Labrador (sub-Arctic climate). Winters are harsh, lasting about six to seven months with heavy snow from December through April. Summers are generally cool and wet; however, extended daylight enhances the summer workday period. Early and late winter conditions are acceptable for ground geophysical surveys and drilling operations. The prevailing winds are from the west and have an average of 14 km per hour, based on 30 years of records at the Wabush Airport.

### 5.3 Local Resources and Infrastructure

The Lac Virot Property is adjacent to the two towns of Labrador City, 2021 population 7,412 and Wabush, population 1,964. Together these two towns are known as Labrador West. Labrador City and Wabush were founded in the 1960s to accommodate the employees of the Iron Ore Company of Canada and Wabush Mines. A qualified work force is located within the general area due to the operating mines and long history of exploration in this region.

Although relatively low cost power from a major hydroelectric development at Churchill Falls to the east is currently transmitted into the region for the existing mines operations, the current availability of additional electric power on the existing infrastructure in the region is limited.

The Property is also located in proximity to other key services and infrastructure. The Property is also fairly close to the existing railroad going to the current Fermont area iron ore mines operated by Tatas Steel Canada and Minerais de Fer Quebec (MFQ). Fresh water sources on the site are easily accessible.

### 5.4 Physiography

The Property is characterized by gentle rolling hills and valleys generally trending northeast-southwest reflecting the structure of the underlying geology. Elevations range from 580 m to 764 m. There are several lakes within the area. The Lac Virot is within the most southern part of the Property. The larger Lac Emma is located to the northern part of the Property. The cover predominantly consists of various coniferous and deciduous trees with alder growth over burnt areas. Marshes are also present in the area.

## 6 HISTORY

### 6.1 History of Mining in Newfoundland and Labrador

The first major mining development in Newfoundland was begun in 1864 at Tilt Cove which signaled the beginning of a sustained period of mining activity on the northeast coast. During the second half of the 19th century several additional copper mines (Terra Nova, Betts Cove, Little Bay and Pilley's Island) were successfully developed in the Notre Dame Bay-Green Bay region.

Development of the Wabana iron ores at Bell Island, Conception Bay began in 1893 and the first cargo of ore was shipped to Nova Scotia in 1895. When the steel industry was established in Sydney, Nova Scotia, in 1900 Wabana became the principal source of iron ore for this enterprise. Production was continuous from Wabana for over 70 years and operations ceased due to sustained operational losses in 1966.

The mining of copper ores declined and eventually ceased early in the 20<sup>th</sup> century, and for a time Wabana accounted for the only mineral production of significance. The exploitation of the large high grade polymetallic base metal deposits at Buchans, central Newfoundland, in 1928, was the first major advancement in Newfoundland mining in the 20th century.

The 1950's and 60's saw a major resurgence of mining activity in Newfoundland and Labrador, beginning with the development of giant iron ore deposits by the Iron Ore Company of Canada at Labrador City in western Labrador in 1954. Four copper mines, the Little Bay, Rambler, Whalesback and Gullbridge Mines, began production in 1961, 1964, 1965 and 1967 respectively. Finally, two concentrating-grade iron ore deposits were developed at Wabush Lake, Labrador in 1962 and 1965.

The 1970's saw a steady decline in mining activities on the island of Newfoundland. One by one the cupriferous base metal mines of Notre Dame/Green Bay closed due to exhaustion of reserves or declining metal prices. The St. Lawrence fluorite mine shut down in 1978 due to economic factors. The health problems found to be associated with asbestos products in general caused a gradual decline at Baie Verte, with the Advocate Mine closing in 1981. Buchans was the only long-standing base metal operation to survive into the 1980's and only barely. The only good news in the island's mining industry was the start-up of the Daniel's Harbour Zinc Mine on the Great Northern Peninsula in 1975. The Daniel's Harbour mine was closed in 1987 when its reserves were exhausted.

There were also at various historic times small gold mines in places such as Moreton's Harbour, Sop's Arm, and Ming's Bight, precursors to the more recent modern gold-mining operations in such places as Hope Brook. The Hope Brook Gold Mine in south central Newfoundland operated from 1987 to 1997.

### 6.2 History of Mining in Western Labrador

The Labrador Mining and Exploration Company Limited ("LM&E") was formed in 1936 to explore and develop a large, >50,000 km<sup>2</sup> mineral rights concession that covered most of western Labrador section of the Labrador Trough. By 1949, LM&E had developed sufficient reserves of high-grade direct-shipping iron ore at Knob Lake sufficient to justify development. The partners joined forces with a group of US steelmakers and the Iron Ore Company of Canada ("IOC") was formed. After a major construction project including the mine, town-site (Schefferville, QC) and railway, the first shipment of iron ore moved south to the St. Lawrence River in 1954.

By the late 1950's concentrating-type iron ore deposits were in demand and the Québec Cartier Mining Company ("Quebec Cartier") a subsidiary of United States Steel Corporation ("US Steel") was founded to develop low-grade deposits in an area extending from Lac Jeannine to Mont Wright, Saguenay County, Quebec. Mining operations commenced at Lac Jeannine near Gagnon, QC in 1961, and in 1973 the

company started operating at Mont Wright near Fermont, QC. Québec Cartier (now called ArcelorMittal Mining Canada) is one of the leading producers of iron ore products in North America. The Mont-Wright mining complex and Fire Lake mine run day and night, 365 days a year, to produce more than 26 million metric tons of iron ore concentrate every year. The company also operates a pellet plant with an annual production capacity of some nine million metric tonnes of iron ore pellets at Port Cartier, QC. In 2006, ArcelorMittal (the world's largest steel maker) purchased Quebec Cartier Mines.

In 1951, the Province of Newfoundland created the Newfoundland and Labrador Corporation ("Nalco") to stimulate development of the province's natural resources. In 1960, a pilot plant opened, and in 1965 Wabush Mines's Scully Mine officially opened. The ore was shipped south on the Quebec, North Shore and Labrador Railway. Wabush Mines was one of Labrador's largest mining companies, with a capacity of more than 6 million tonnes of iron concentrate per year.

The Scully Mine was shut down in 2014 by its then-owner, Cliffs Natural Resources, however in 2019, it reopened under new owners, Minnesota-based Tacora Resources.

### 6.3 Previous Exploration of the Lac Virot Property

Red Paramount has checked the NL government open file assessment reports for the Lac Virot area and determined that little historical work was reported on the current claims area prior to the 2011 and 2012/2013 programs by Ridgemont Iron Ore Corp. The only known early exploration was conducted by Labrador Mining and Exploration Company/Iron Ore Company of Canada ("IOCC") in the 1950's. By the mid-1950's IOCC was focused exclusively on the development of the nearby Carol Lake Property.

A modest helicopter supported reconnaissance program was conducted by IOCC in the vicinity of Emma Lake in 1979. A total of 53 rock samples were reportedly taken but only one was analyzed. This sample (Block 84-18) reportedly contained 55.2% total Fe, 53% magnetic Fe by Satmagan test, 21.1% SiO<sub>2</sub> and 0.85% Mn (Grant, 1979).

Federal and Provincial Government geological and geophysical maps show that iron formation units are present on the Lac Virot claims.

A 1950's IOCC report describing mineralization on the current property in the Emma Lake – O'Brien Lake area notes magnetic-specularite gneiss and quartz-magnetite-specularite rock exposures.

The Emma Lake area was mapped in some detail in connection with a B.Sc. thesis by D. L. Brown of Memorial University of Newfoundland ("MUN") in 1988 (Brown et al. 1990).

No recent property scale exploration work is reported in the open file assessment reports. However, the Lac Virot property area was included in two regional studies conducted for IOCC in 2000 and 2001.

In 2001, IOCC retained consultants Watts, Griffis and McOuat Limited to complete a structural interpretation based on Landsat TM imagery (Watts, Griffis and McOuat, 2001). This survey also covered a very large area that included the current property.

Historically, very little exploration has been done in this area and on the Lac Virot project area in particular. Exploration work completed by MPH Consulting Limited in the summer of 2011 included:

- An initial geological reconnaissance/prospecting site visit to the Property to confirm the existence of good quality iron formation units and to determine specifications for an airborne geophysical survey.
- Completion of a helicopter-borne high resolution magnetic, radiometric and very low frequency electromagnetic ("VLF-EM") survey.
- Focused follow-up of the airborne geophysical survey by additional reconnaissance geological mapping and prospecting.

In 2012, further exploration work continues with airborne magnetic and gravity surveys and a round of 12,000 m of drilling:

- Fugro (May 2012) – Gravity Gradiometric (AGG) survey
- Terraquest (Oct 2012) – Horizontal Aero-Magnetic Gradient & XDS VLF-EM Survey
- Drilling program – June to Oct 2012.

The key findings of the integrated geological and geophysical programs as they pertain to the property and regional geology are presented in Section 7 above, but the detail is discussed in the following sections.

## 6.4 2011 and 2012 Exploration Works

### 6.4.1 2011 Initial Geological Mapping & Prospecting Site Visit by MPH Consulting

MPH Consulting Limited conducted a helicopter supported site visit to the Lac Virot area from June 9 to 12, 2011, utilizing a Bell 206LR helicopter chartered from Universal Helicopters Newfoundland Limited ("UHNL") of Goose Bay, Labrador, NL. (Coates, et.al., 2012).

The geological objectives were to complete reconnaissance investigations over several reported iron ore occurrences and aeromagnetic anomalies scattered about the Lac Virot Property. A preliminary mostly aerial investigation was conducted to identify signs of previous exploration activities and also to find potential summer or winter access routes for more advanced exploration activities such as diamond drilling programs.

Prior to implementing the program MPH compiled existing information such as open file assessment reports, and public domain regional geological, mineral occurrence and geophysical data.

The Sokoman Formation iron ore showings were relocated for the most part, although one or two could easily be large glacial boulders rather than outcrop. The areas of bedrock exposure are more lithologically and structurally complex than indicated by the 1:250,000 and 1:50,000 scale GSC and Provincial Government geological maps (Figure 6-1). Additional property scale geological mapping is required to sort this out.

This area is not accessible by road, although the Trans Labrador Road is within 3 km of the property. One of the visit objectives was to determine if the property might be accessible by winter road for potential drilling operations. Aerial reconnaissance showed that a wide, well-marked skidoo trail connects the Trans Labrador Highway to the southern part of the property near Lac Virot. This could minimize or possibly eliminate the need for helicopter support for drilling, at least for the Neal Lake anomaly sector. Old baselines were noted in other places and have been partially located by GPS readings.

At the time of the MPH site visit, there was clear requirement for more detailed and accurate geophysical information to assist with ongoing geological studies and the eventual selection of high potential target

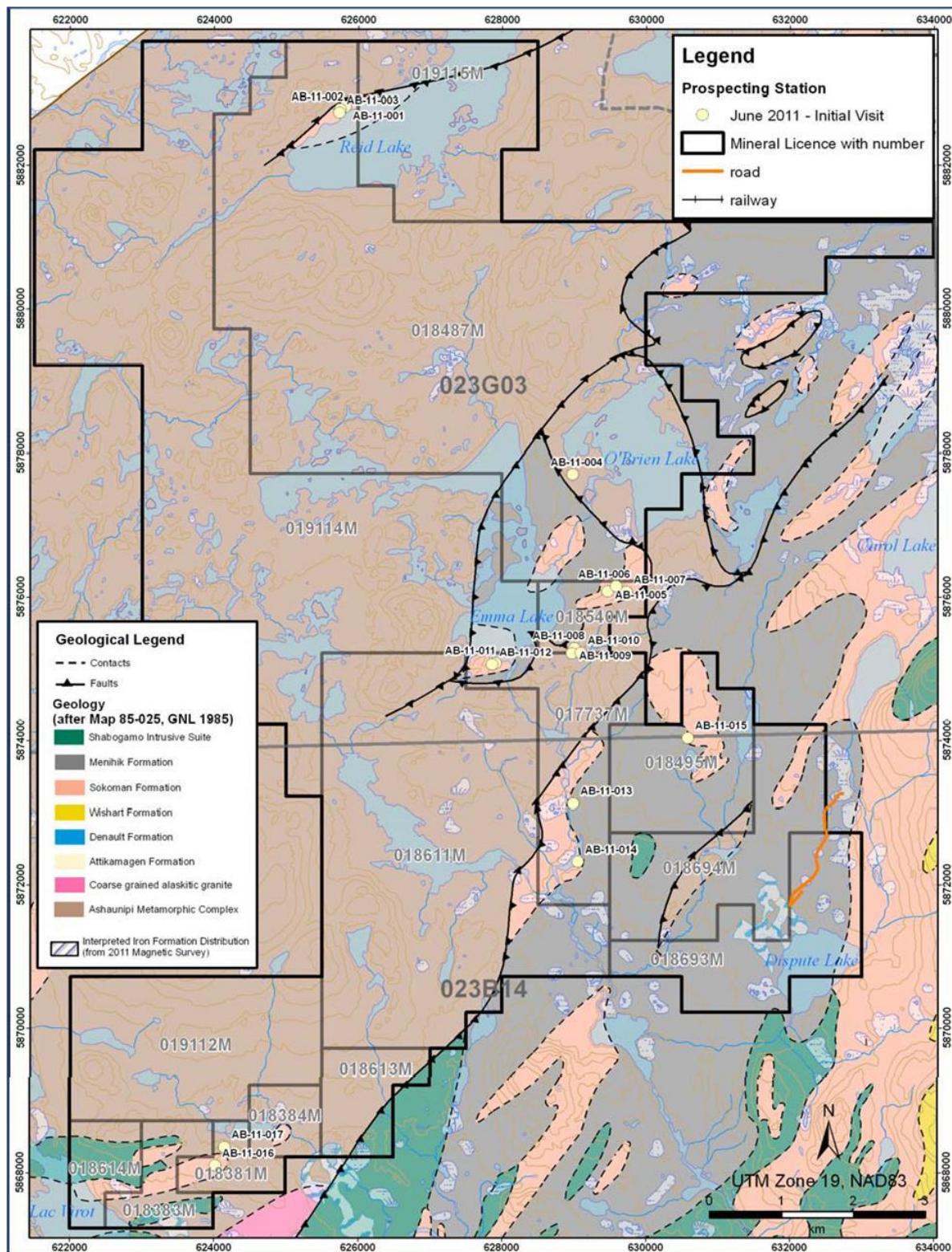
areas for drilling. Helicopter surveying was recommended as the best option given the close proximity to IOC's Carol Project mining operation with its inherent low level flight restrictions.

The southernmost magnetic high feature, the Neal Lake anomaly, was found to have little or no bedrock exposure. This would have precluded effective prospecting and geological evaluation work in the early historical years of exploration and development.

The sites visited during the initial program are located on the attached maps and described in the accompanying spreadsheet. Selected analytical results for the Sokoman Formation iron formation samples collected during the property visit are shown in Table 6-1. Sample locations are shown in Figure 6-1. It is noted that these are grab samples of better material taken to identify the general nature of the iron formation and deleterious elements. Due to the spot locations and incomplete cross-sectional exposures, such samples are typically not representative of a given location. However, the initial results were very promising.

**Table 6-1      Initial Site Visit Iron Formation Selected Analyses**

Sample Number	Location (UTM NAD 83)			SiO <sub>2</sub>	Fe	Mn	P	TiO <sub>2</sub>
	Easting (m)	Northing (m)	El.(m)	%	%	%	%	%
413551	625750	5882780	644	47.22	34.04	0.031	0.026	0.02
413552	628975	5877703	652	59.47	21.92	1.047	0.009	0.02
413553	629004	5875281	636	32.56	46.55	0.359	0.013	0.03
413554	627857	5875052	632	28.22	48.87	0.542	0.013	0.02
413555	630578	5874030	657	49.88	35.10	0.249	< 0.005	0.01

**Figure 6-1 Lac Virot Initial Prospecting Sites**

**Source:** (A.C.A Howe International Ltd., 2012)

#### 6.4.2 Airborne Geophysical Survey

Terraquest Limited was retained to conduct a High Resolution Magnetic, Radiometric & XDS VLF-EM Helicopter Survey over the Lac Virot Property in June 2011. An Application for Exploration Work and Notification of Planned Mineral Exploration Work was approved by the Government of Newfoundland and Labrador, Department of Natural Resources, Mines Branch, Mineral Lands Division on July 5, 2011. The aircraft and crew arrived in Labrador City on July 18, 2011 and set up the base station and general logistics including safety reports. Initial problems with equipment setup and weather delayed the survey somewhat. The survey was flown successfully in 10 survey flights over a period of 10 days from July 25 to Aug 3, 2011. The survey included 1,063 km of grid lines and 145 km of tie lines for a total of 1,208 km.

The contractor supplied the following properly qualified and experienced personnel to carry out the survey and to reduce, compile and report on the data:

- Pilot Patrick Cote (Panorama Helicopters Ltd.)
- Field Operator Amit Prahraj
- Office Chief Geophysicist Allen Duffy (radiometrics)
- Office Processing Geophysicist Carolyn Boone (magnetic, EM and compilation)
- Manager Charles Barrie

The survey was performed over the Lac Virot Block located approximately 20 km northwest of Wabush airport with 50 m mean terrain clearance, 100 and 200 m line intervals (depending on the area), 1000 m tie line interval, and with data sample points at approximately 2-3 m along the flight lines. The base of operations was at the airport at Wabush, Labrador. A high sensitivity magnetic and a GPS base station located at the airport recorded the diurnal magnetic activity and reference GPS time during the survey for adherence to survey tolerances.

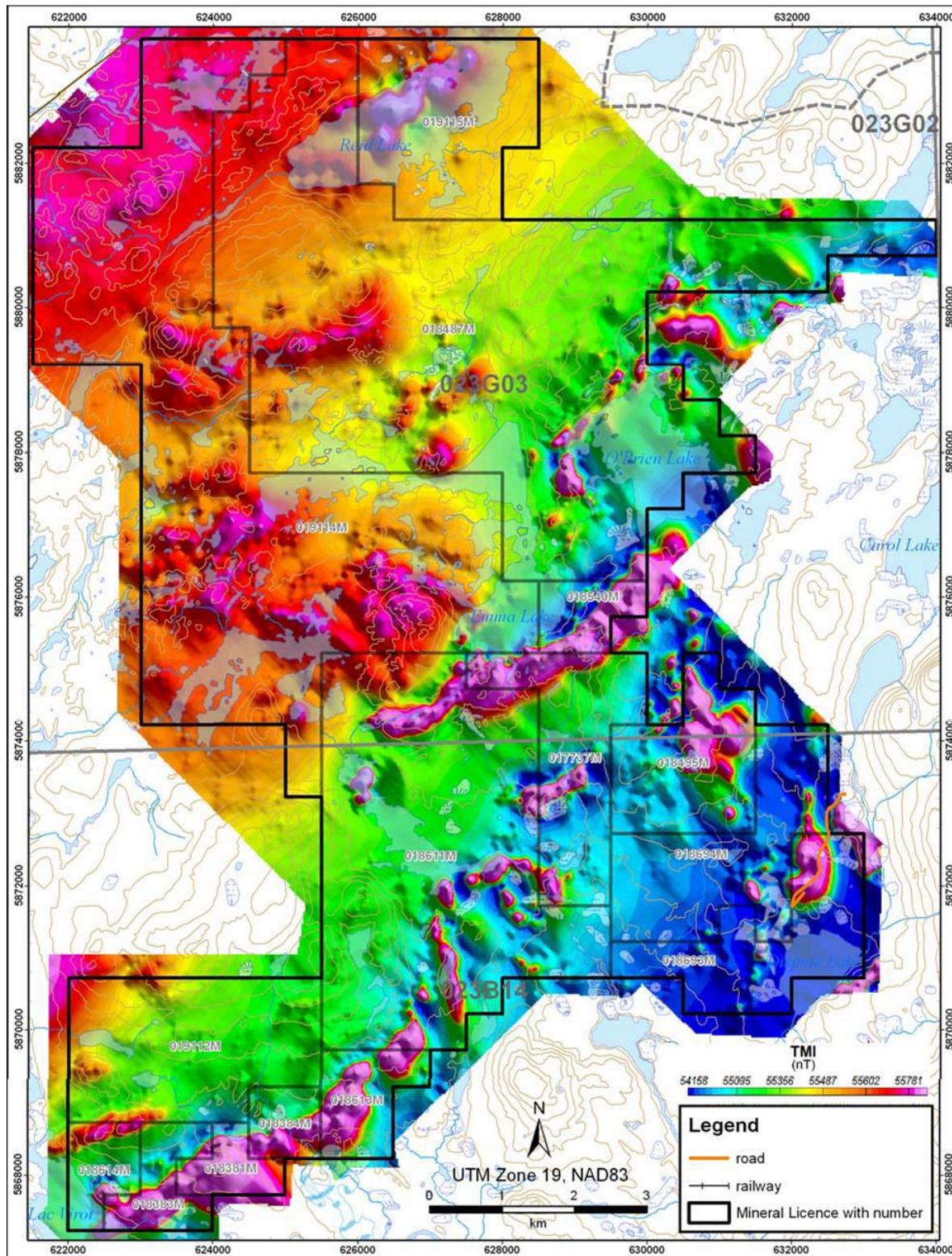
The primary airborne geophysical equipment includes one high sensitivity cesium vapour magnetometer, a gamma ray spectrometer system and an optional XDS VLF-EM system. Ancillary support equipment includes a tri-axial fluxgate magnetometer, recorder, radar altimeter, barometric altimeter, GPS receiver with a real-time correction service, and a navigation system. The navigation system comprises a left/right indicator for the pilot and a screen showing the survey area, planned flight lines, and the real time flight path. All data were collected and stored by the data acquisition system. Equipment specifications are summarized in Table 6-2.

**Table 6-2 Airborne Geophysical Equipment Summary**

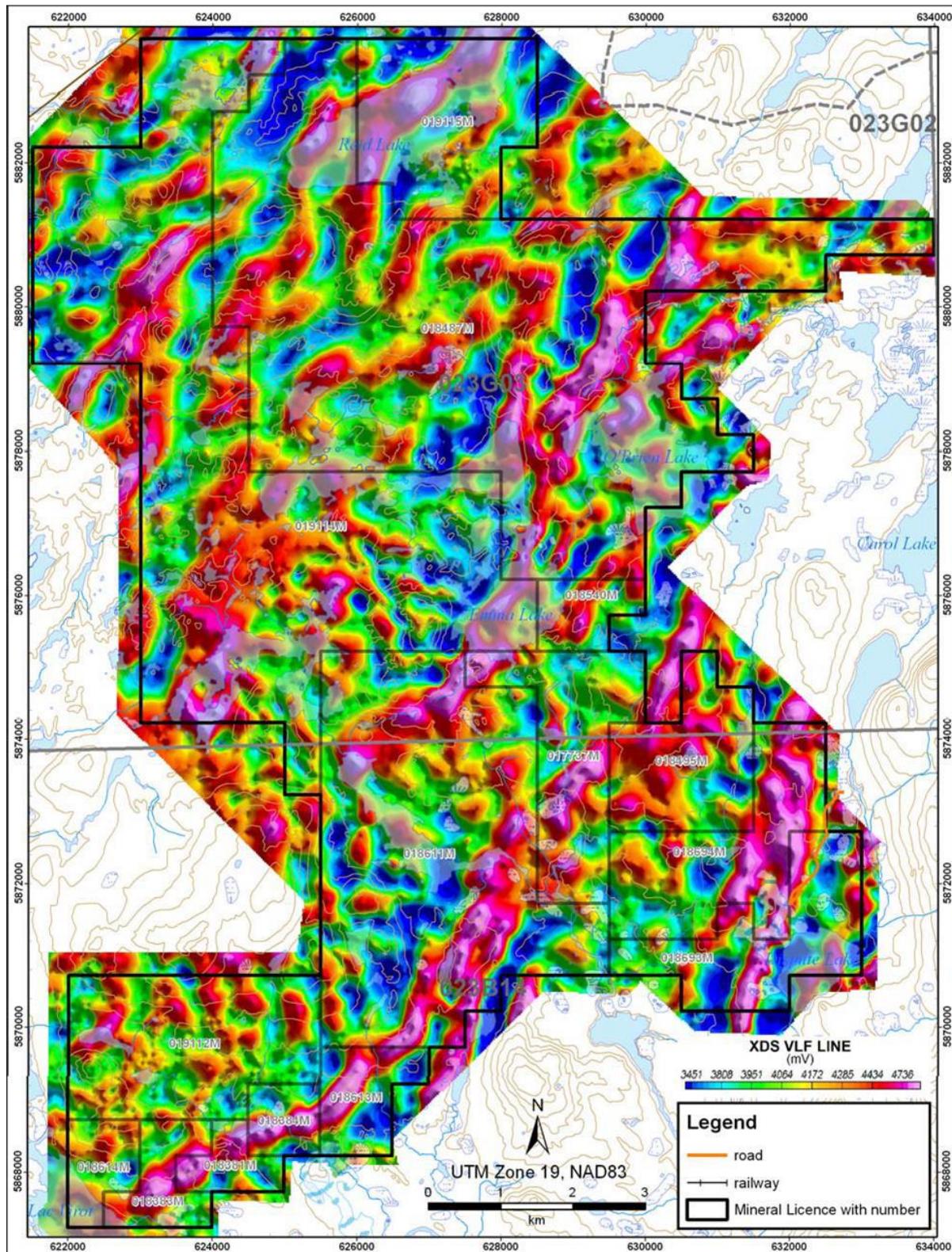
<b>Helicopter</b>	Bell 206, Jet Ranger III
<b>Equipment:</b>	
Magnetometer	Geometrics CS-3 Cesium Vapour
3-axis Magnetometer	Billingsley TFM100-LN
Gamma Ray Spectrometer	AGIS / IRIS 256 channel
Gamma Ray Detector Pack	1024 in3 (16.8 litres) Downward 256 in3(4.2 litres) Upward
VLF-EM	Terraquest Ltd: XDS system
GPS Receiver	Hemisphere R120
Radar Altimeter	Free Flight Systems TRA3500
Barometric Altimeter	Sensym
Navigation & Data Acquisition	AGIS by PicoEnvirotec Inc.
<b>Magnetic Specifications:</b>	
Nose Boom	7.3 m
Output Sample Rate	10 Hz
4th difference noise envelope	0.10 nT
FOM index	<1.5 nT
Sensor Sensitivity	0.001 nT

The basic magnetic and VLF-EM survey results are presented as contour maps in Figure 6-2 and Figure 6-3, respectively.

**Figure 6-2 Lac Virot Airborne Geophysical Survey, Total Magnetic Intensity**



**Source:** (A.C.A Howe International Ltd., 2012)

**Figure 6-3 Lac Virot Geophysical Survey, XDS VLF-EM**

Source: (A.C.A Howe International Ltd., 2012)

### 6.4.3 Focused Geological Mapping and Prospecting

During the latter stages of the airborne geophysical survey MPH Consulting Limited conducted a helicopter supported reconnaissance geological/prospecting program over selected parts of the overall Lac Virot area. The field program took place from July 29 to August 5, 2011, utilizing a Bell 206 helicopter chartered from Canadian Helicopters of Sept-Îles, Québec.

The principal focus of the second reconnaissance mapping/prospecting program was to further assess the quality and distribution of the iron formation units utilizing the newly acquired detailed airborne geophysical data as a guide. The geological party was divided into two teams, so with good weather and expeditious helicopter use it was possible to map and sample many iron formation units on the Property.

As previously noted, geological observations from this work are incorporated into the geological section (Section 7) above.

Selected analytical results for the iron formation samples and samples from other geological units collected during the property visit are shown in Table 6-3, Table 6-4 and Table 6-5. Due to the spot locations and incomplete cross-sectional exposures, such samples are typically not representative of a given location. Sample locations are shown in Figure 6-4. Full analyses are appended to this report.

**Table 6-3 Second Site Visit Iron Formation Selected Analyses**

Sample Number	Location (UTM NAD 83)			SiO <sub>2</sub>	Fe	Mn	P	TiO <sub>2</sub>
	Easting (m)	Northing (m)	El.(m)	%	%	%	%	%
328101	624143	5868233	630	60.68	26.25	0.549	0.009	0.03
328102	624121	5868105	629	34.33	42.65	0.890	0.013	0.03
328103	625841	5869123	609	54.12	23.74	0.642	0.013	0.02
328106	628845	5875403	641	37.58	42.89	0.314	0.009	0.03
328107	628678	5875212	n/a	40.37	39.13	2.001	0.009	0.02
328108	628695	5875306	633	43.29	26.92	0.834	-0.005	0.02
328109	627569	5872114	601	47.07	33.95	0.937	0.009	0.02
328110	628901	5873364	608	62.01	22.41	0.111	-0.005	0.02
328111	628973	5873447	610	59.95	26.40	0.296	-0.005	0.01
328112	628657	5873348	609	58.50	24.21	0.535	0.026	0.04
328113	628503	5873283	610	59.41	25.78	0.186	-0.005	0.02
328114	630975	5874450	653	60.58	26.32	0.188	-0.005	0.02
328078	623146	5867479	593	8.77	44.15	3.456	0.017	0.04
328079	626677	5869845	619	54.38	18.33	0.682	0.009	0.02
328080	627964	5875081	636	56.79	19.15	0.720	0.009	0.02
328086	627356	5874603	629	54.04	28.49	0.659	-0.005	0.02
328087	629141	5875585	645	45.97	37.20	0.130	0.013	0.02
328088	629260	5875808	657	48.23	35.28	0.401	0.009	0.02
328089	629432	5876086	654	58.81	26.34	0.157	-0.005	0.01
328101	624143	5868233	630	60.68	26.25	0.549	0.009	0.03
328102	624121	5868105	629	34.33	42.65	0.890	0.013	0.03
328115	628958	5875519	642	48.22	25.37	1.010	0.009	0.03
328116	628958	5875519	642	56.49	22.81	0.961	0.009	0.02
328117	628974	5875437	647	59.21	20.06	0.965	-0.005	0.02
328118	628974	5875437	647	48.14	35.19	0.121	0.009	0.03
328119	628993	5875263	638	55.95	29.09	0.323	0.013	0.03
328120	628993	5875263	638	65.49	22.87	0.498	0.009	0.03
328121	628964	5875270	635	55.77	20.97	0.961	0.009	0.02

**Source:** (A.C.A Howe International Ltd., 2012)

**Table 6-4 Second Site Visit Iron Formation Selected Analyses**

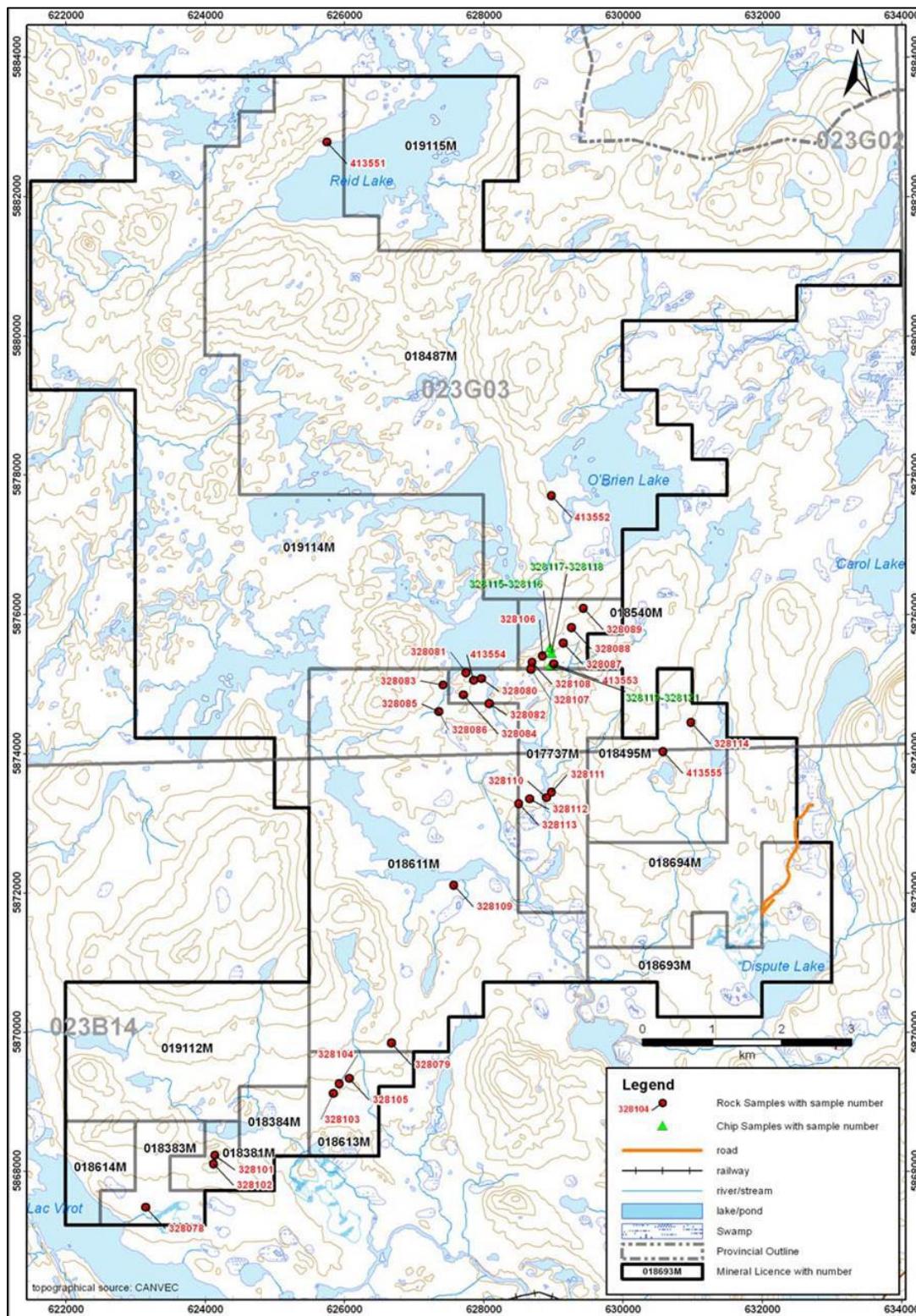
Sample Number	Location (UTM NAD 83)			SiO <sub>2</sub>	Fe	Mn	P	TiO <sub>2</sub>
	Easting (m)	Northing (m)	El.(m)	%	%	%	%	%
328104	625929	5869262	613	79.94	10.32	0.826	-0.005	0.02
328105	626072	5869339	614	78.56	10.63	0.395	-0.005	0.02
328081	627742	5875168	642	83.49	7.69	0.297	0.009	0.02
328082	628077	5874720	n/a	54.93	5.08	0.088	0.175	0.65
328084	627708	5874842	635	83.37	5.29	0.284	0.013	0.02

**Source:** (A.C.A Howe International Ltd., 2012)

**Table 6-5 Second Site Visit Iron Formation Selected Analyses**

Sample Number	Length (m)	Location (UTM NAD 83)		SiO <sub>2</sub>	Fe	Mn	P	TiO <sub>2</sub>
		Easting (m)	%	%	%	%	%	%
328115	1.4	628958	5875519	48.22	25.37	1.010	0.009	0.03
328116	1.25	628958	5875519	56.49	22.81	0.961	0.009	0.02
328117	0.75	628974	5875437	59.21	20.06	0.965	-0.005	0.02
328118	0.85	628974	5875437	48.14	35.19	0.121	0.009	0.03
328119	0.95	628993	5875263	55.95	29.09	0.323	0.013	0.03
328120	1.05	628993	5875263	65.49	22.87	0.498	0.009	0.03
328121	2.3	628964	5875270	55.77	20.97	0.961	0.009	0.02

**Source:** (A.C.A Howe International Ltd., 2012)

**Figure 6-4 2011 Rock and Chip Sample Location Map**

**Source:** (A.C.A Howe International Ltd., 2012)

#### 6.4.4 Structural Geology Study

IOCC initiated the Resource Assessment Program (RAP) in October 2000 to evaluate its holdings, including the Red Paramount area, to ensure a long-term and sustainable resource base. The RAP mandate was to define an additional 1.5 billion tonnes of iron ore reserves in the vicinity of its Labrador City mining operations, west of Wabush Lake.

The key results from the 2001 phase 1 RAP program are as follows:

- F1/ F2 interference folds played an important role in terms of the distribution and economic viability of iron ore bodies. The dominant structural trends between Polly Lake and Julienne Lake are controlled by northeast trending F2 folds and thrust faults, which cut, overturn, and repeat the MIF ore-bearing horizon. These structures are superimposed on earlier F 1 structures, causing structural thickening of iron ore beds.
- Gravity surveys provide a quantitative evaluation of a prospect and allows a better selection of drill hole targets for prospect evaluation.
- Areas with positive magnetic and gravity signature, F1/F2 fold interference patterns, and favorable geology are prime exploration targets.
- The Polly Lake prospect area has the potential to host a sizeable (> 100Mt) iron ore deposit.

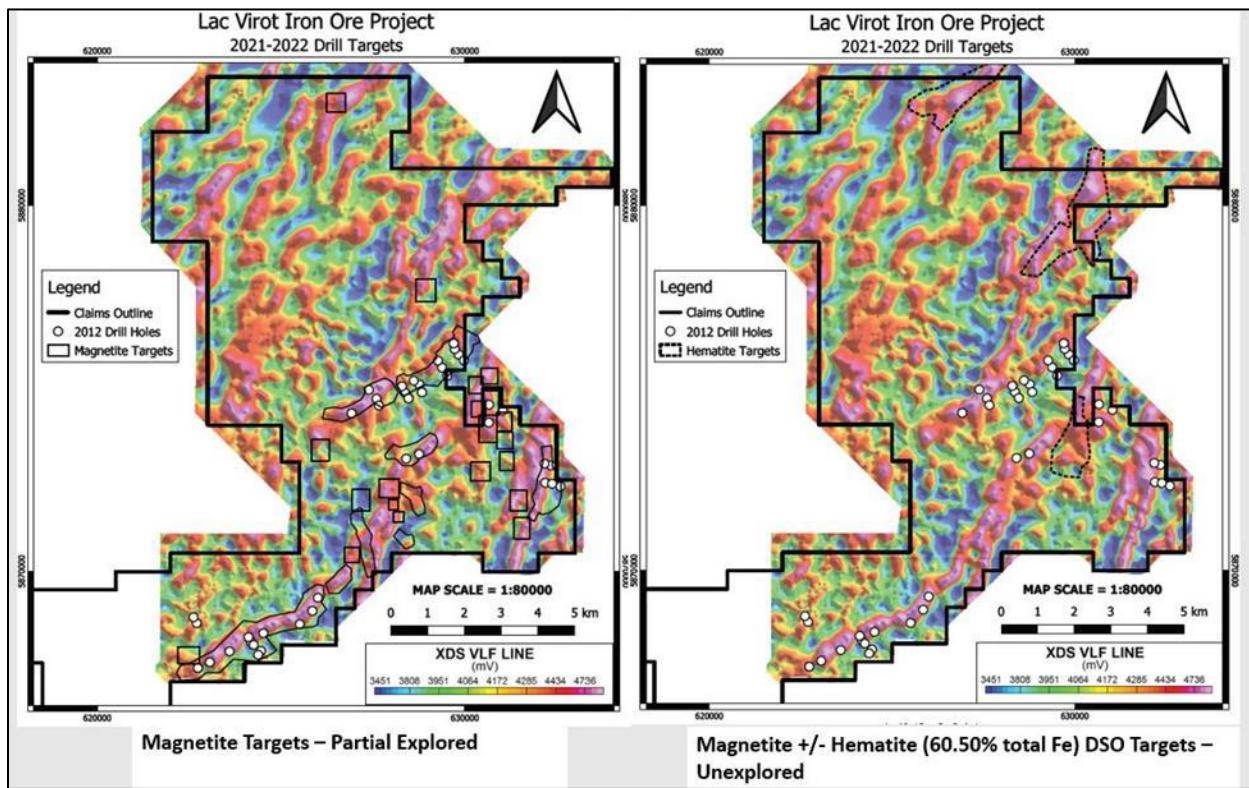
The results from the 2001 Phase 1 RAP program were considered to be very encouraging and further work was recommended to fully evaluate the iron resources potential of the Polly Lake area.

#### 6.4.5 2012 Gravity Survey

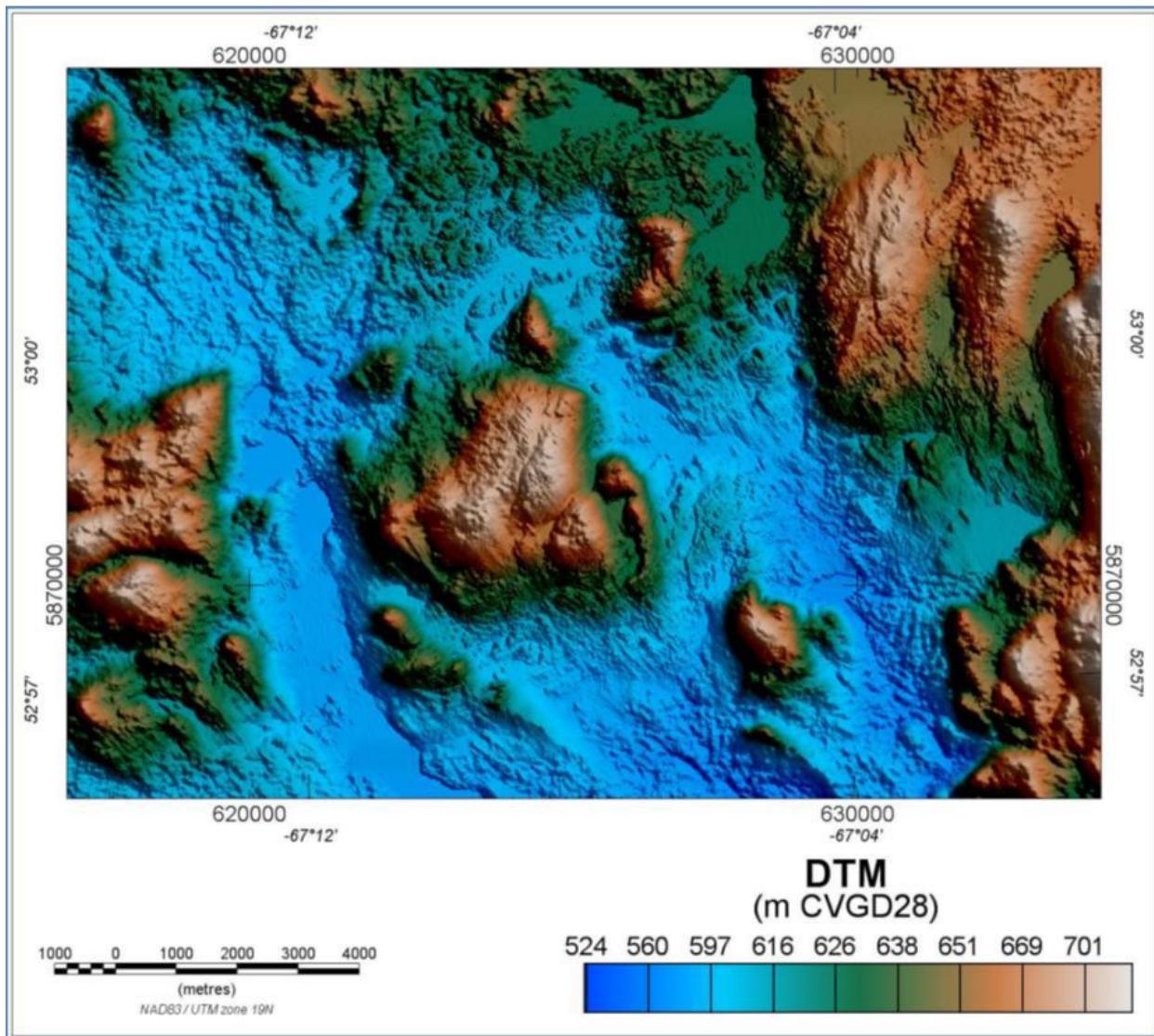
On May 19<sup>th</sup> and 20<sup>th</sup>, 2012 Fugro Airborne Surveys conducted an 884.7 km high sensitivity HeliFALCON Airborne Gravity Gradiometer (AGG) survey over the Lac Virot Property (Figure 6-6).

Several anomalous areas were outlined in the survey, which coincided with magnetic anomalies. Anomalies 1, 3, 4 and 5 all coincided with magnetic anomalies outlined in the 2011 survey. The area containing anomaly 2 was not fully covered by the 2011 magnetic survey, so it is unknown whether there is a coincident magnetic anomaly.

The gravity survey conducted at the Lac Virot Property in May 2012, was successful in giving a better understanding of the area and outlining several anomalies. The data outlines 8 separate gravity anomalies which most of the gravity anomalies coincide with magnetic anomalies which together indicate a dense material beneath the surface. The hematite and magnetite unexplored anomalies will be followed up with drill testing in 2021-2022. Figure 6-5 shows a high-level Lac Virot project hematite and magnetite areas identified as high potential zones.

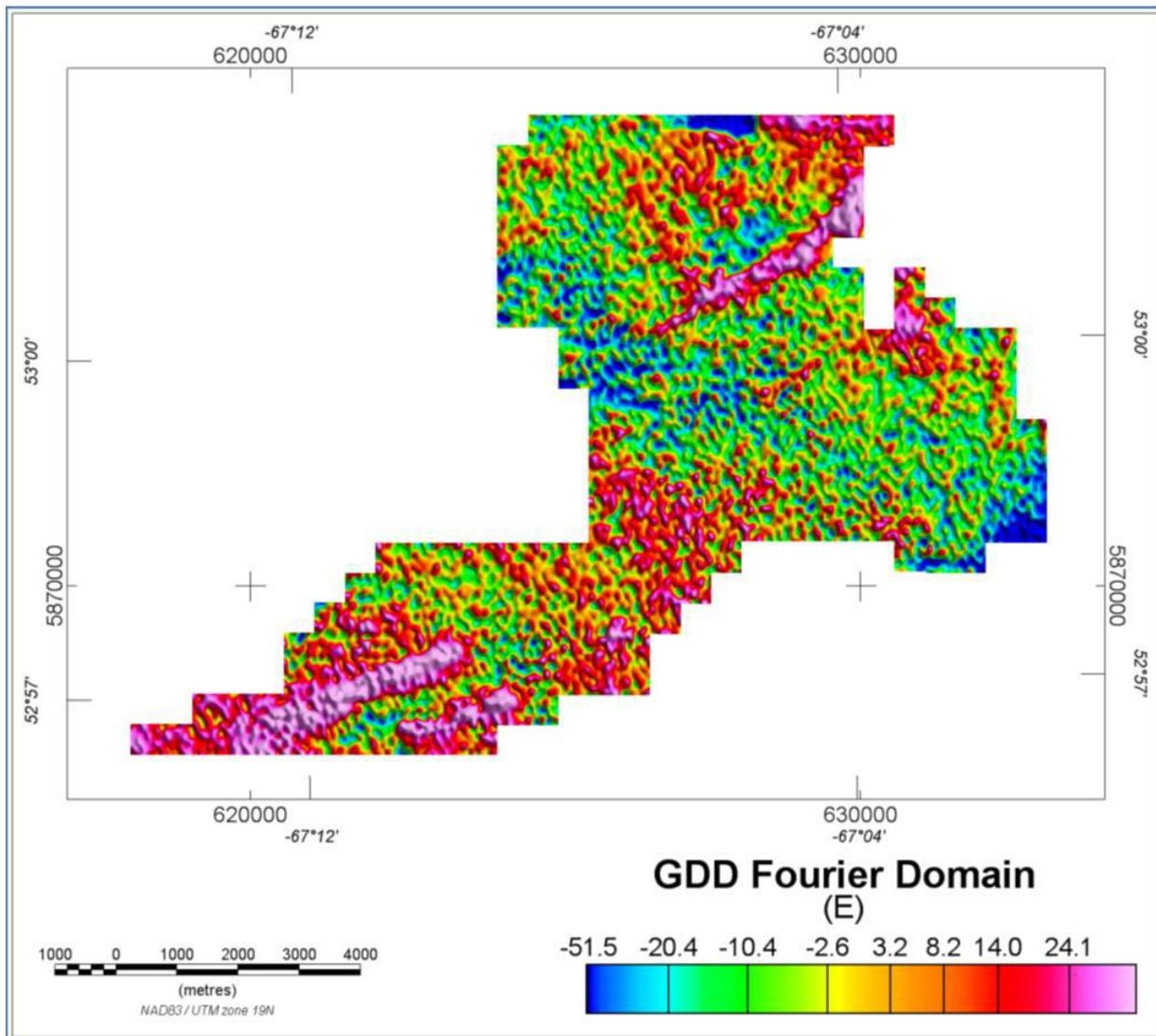
**Figure 6-5 Lac Virot Identified Target Areas 2011**

**Source:** (Red Paramount Iron, 2021)

**Figure 6-6 Lac Virot DTM (meters, referenced to the EGM96 Geoid)**

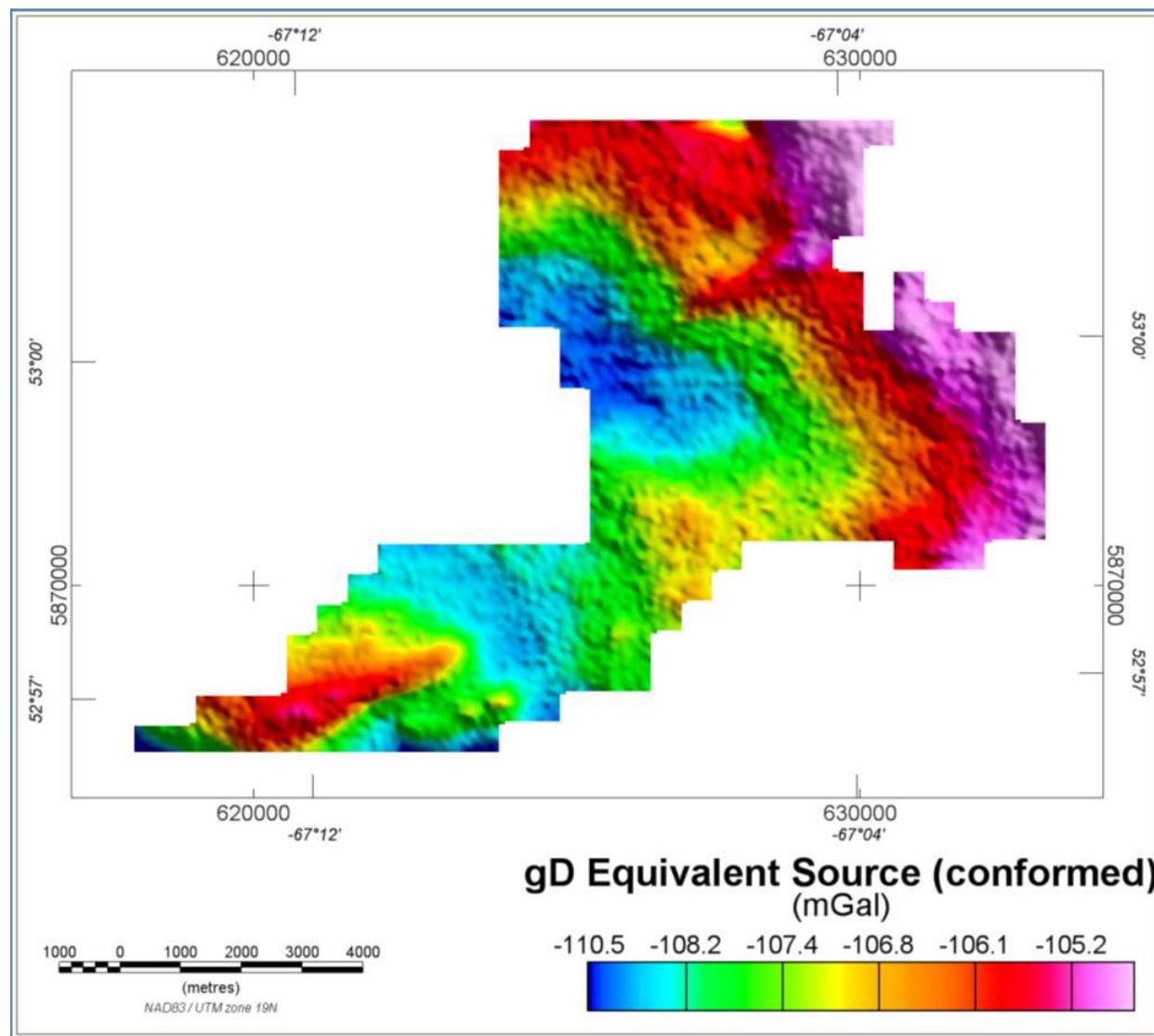
**Source:** (Fugro Airborne Surveys, 2012)

As can be seen in Figure 6-6, the long wavelength information in gD (both the Fourier and equivalent source versions) can be improved by incorporating ancillary information. Such information is available in the form of the Canadian Gravity Anomaly Data Base. The Fourier and equivalent source gD grids were conformed to a grid derived from a subset of the Canadian Gravity Anomaly Data Base as follows. The (density 2.67 g/cm<sup>3</sup>) results are presented in Figure 6-8.

**Figure 6-7 Lac Virot Vertical Gravity from Equivalent Source Processing**

**Source:** (Fugro Airborne Surveys, 2012)

**Figure 6-8 Lac Virot Vertical Gravity from Equivalent Source Processing Conformed to Regional Gravity Data**

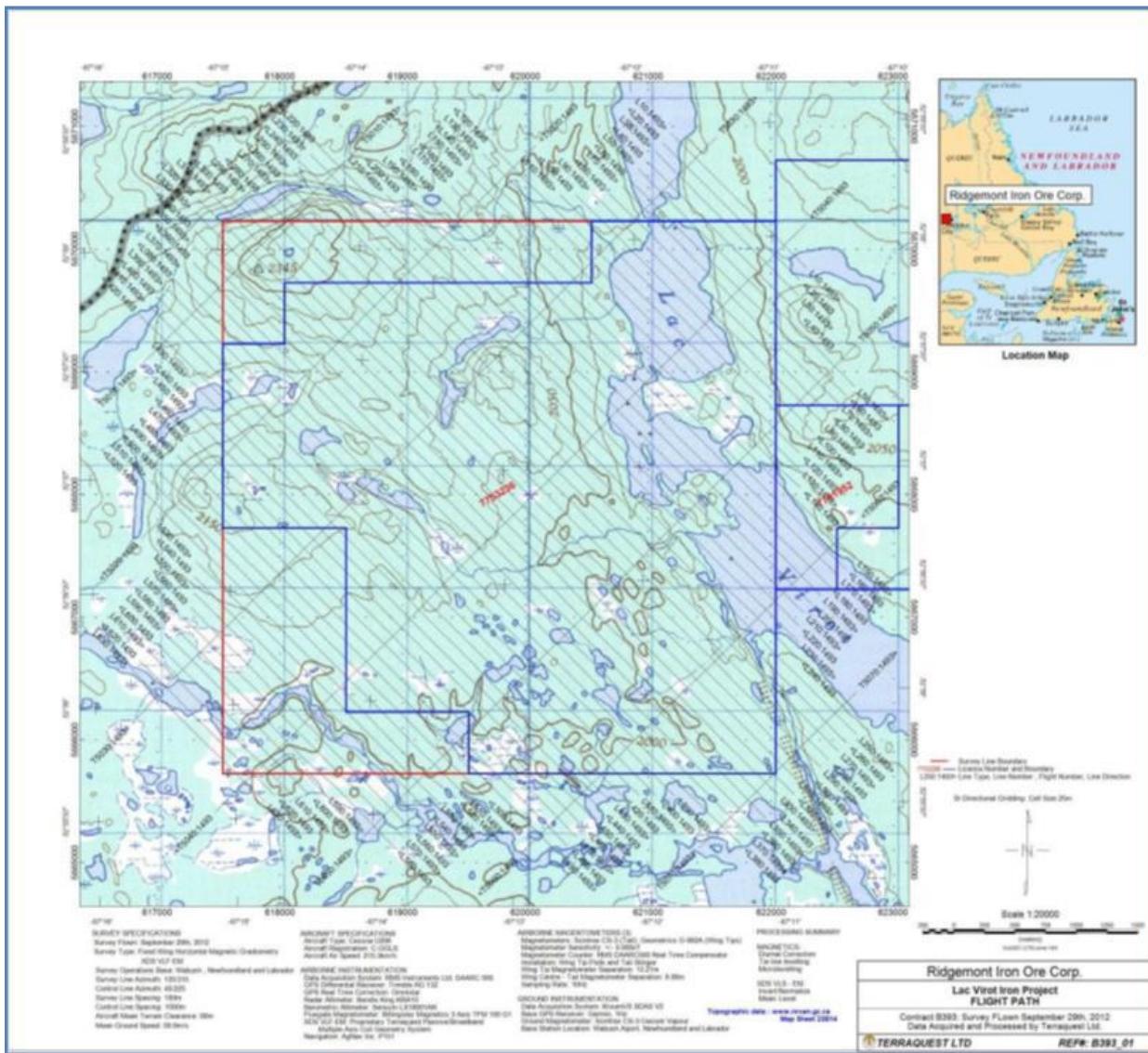


Source: (Fugro Airborne Surveys, 2012)

#### 6.4.6 Horizontal Aero-Magnetic Gradient & XDS VLF – EM Survey (2012)

An airborne high sensitivity, horizontal gradient magnetic and XDS VLF-EM survey was performed over the southwestern portion of Claim 022319M of the Lac Virot Iron Project in 2012. This survey was designed to match a larger survey B357 flown in 2011, as an extension to the southwest. Survey parameters were 68 m mean train clearance, 100 m line intervals, 1000 m tie line intervals, aircraft speed of 59.8 m per second, and with data sample points at 10 Hz to provide equivalent ground samples at approximately 6 m along the flight lines. A high sensitivity magnetic and a GPS base station located at the Wabash airport recorded the diurnal magnetic activity and reference GPS time during the survey.

**Figure 6-9 Horizontal Aero-Magnetic Gradient Survey on Claim 022319M**



**Source:** (Fugro Airborne Surveys, 2012)

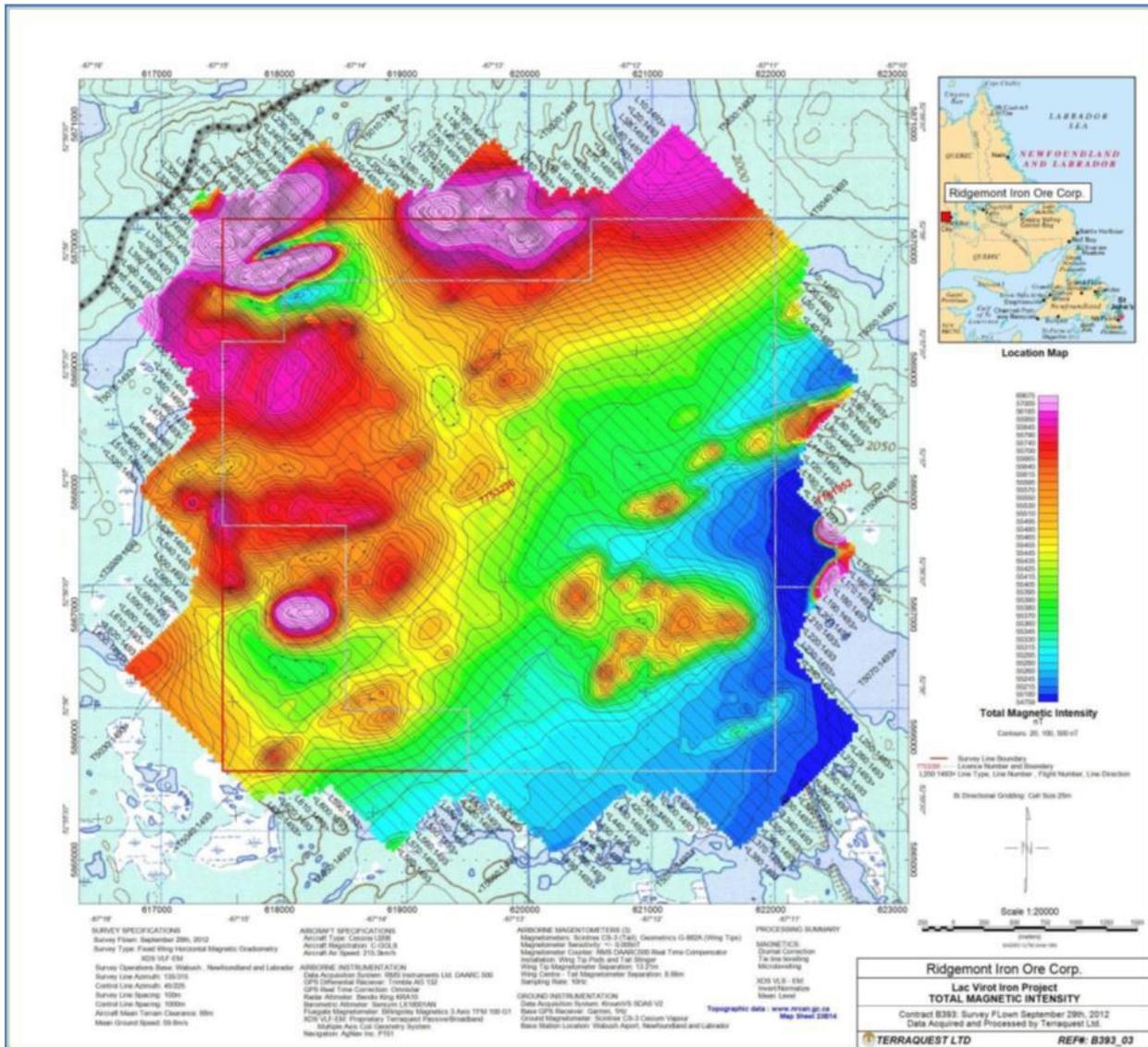
The data were subjected to final processing to produce grids with a cell size of 25 m and color digital images at 1:20,000 scale as follows:

- Magnetics: Total Magnetic intensity of tail sensor, calculated first vertical derivative, along track magnetic gradient, lateral magnetic gradient
- XDS VLF-EM: Line, Ortho and Vertical Fields
- Experimental Self Potential Channels: electric field of x, y and z components and DC of longitudinal and vertical components; Cutler and North Dakota VLF-EM on ORTHO coil
- Flight Path and Digital Terrain Model

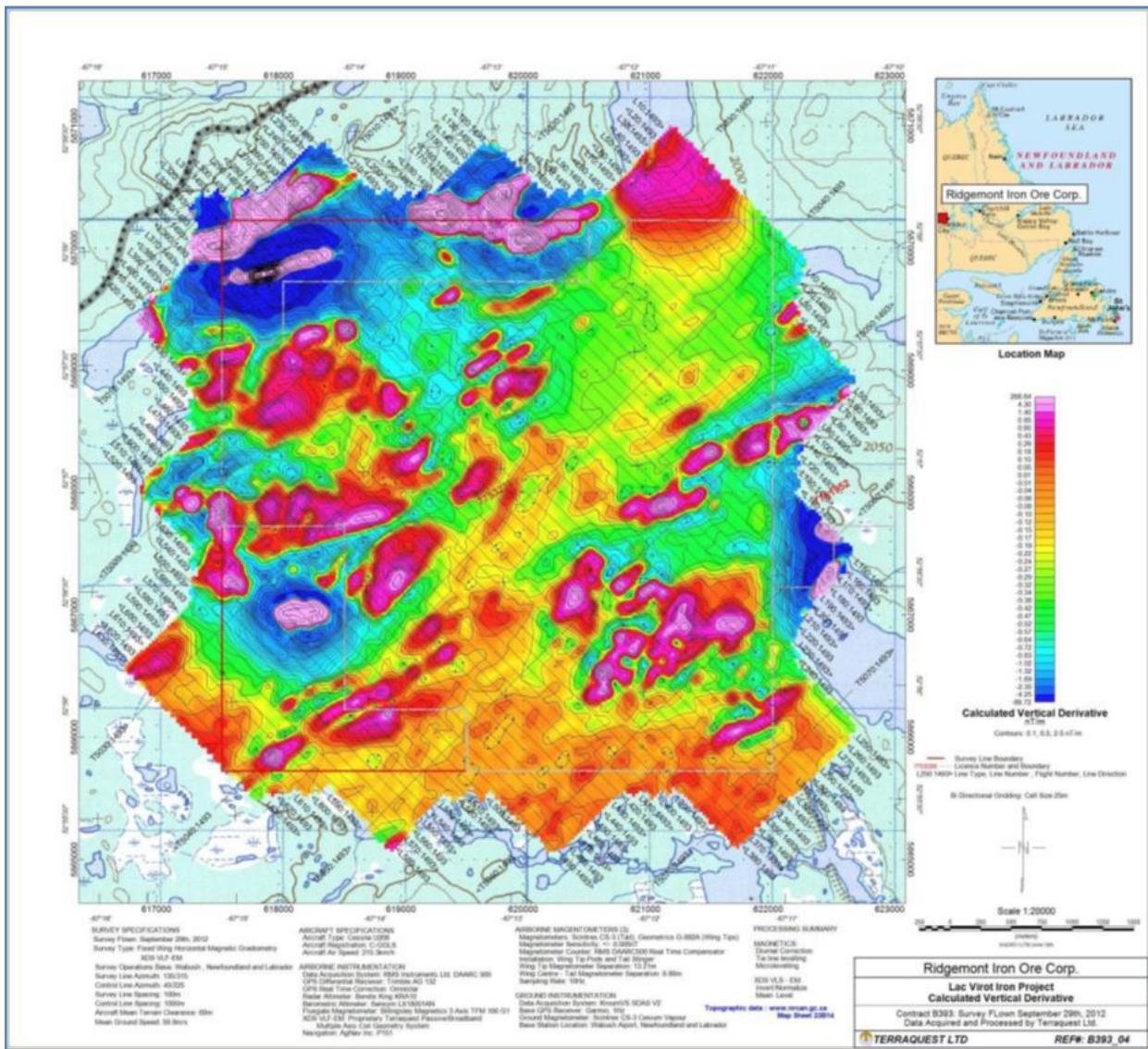
All data was archived as Geosoft database (GDB and GBN) and XYZ formats; all Geosoft MAP and GRID files used to make the maps; JPEG and PDF formats, and this report in PDF format are included in the archive.

The database merged with the database from B357 and reprocessed to create merged grids of total magnetic field, calculated first vertical magnetic derivative and broadband XDS VLF-EM grids of the LINE, ORTHO and VERTICAL components.

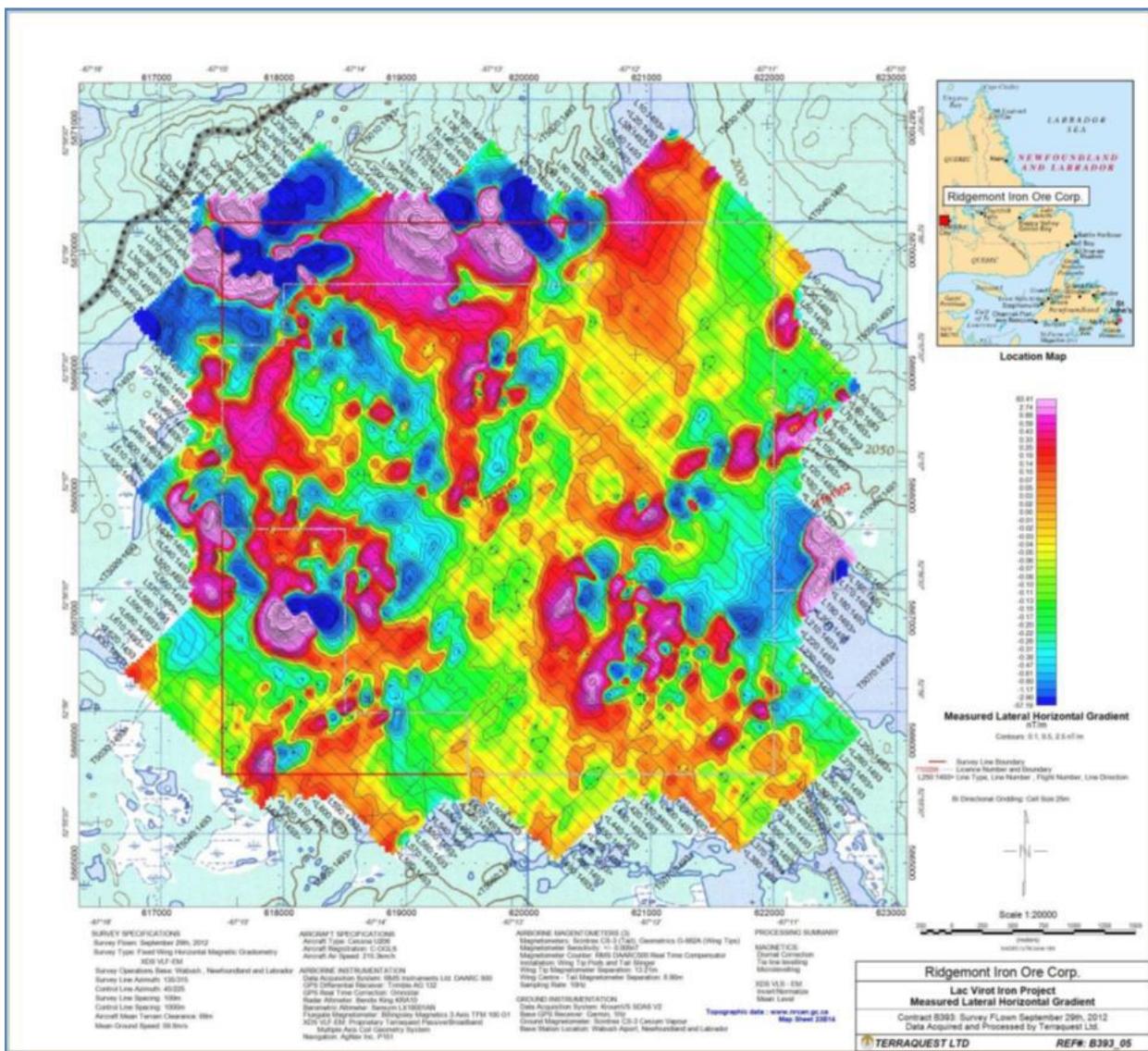
**Figure 6-10 Total Magnetic Field 2012**



**Source:** (Fugro Airborne Surveys, 2012)

**Figure 6-11 Calculated 1<sup>st</sup> Vertical Magnetic Derivative 2012**

**Source:** (Fugro Airborne Surveys, 2012)

**Figure 6-12 Measured Lateral Horizontal Magnetic Gradient**

**Source:** (Fugro Airborne Surveys, 2012)

## 6.5 Historical Drilling

The only indication of early drilling on the current Property is a fence of three pre-1985 drill holes shown on 1:100,000 scale Geological Map 85-25, Geology of the Lac Virot Area, Labrador/Quebec jointly published by the Department of Mines and Energy, Newfoundland and Labrador and the Departments of Energy, Mines and Resources and Regional Economic Expansion, Government of Canada. The holes are located in the south-central part of the current Property along the southern boundary of current claim 018613M. According to the geological map all three holes encountered units belonging to Archean basement or the Asuanapi Metamorphic Complex. No logs, analyses, or certificates pertaining to these drill holes are currently in the public domain. It is unlikely that the drill core was retained and stored but this should be checked with the Department of Mines and Energy in Newfoundland.

The 2012 Lac Virot exploration program was completed by Major Drilling Group International for Ridgemont Iron Corp. during the summer and fall of 2012 and consisted of 11,713 m in 42 holes. The program was designed to follow up on positive, coincident airborne magnetic anomalies and surface sampling anomalies discovered in 2011. The drilling was focused in the southern and eastern portions of the property.

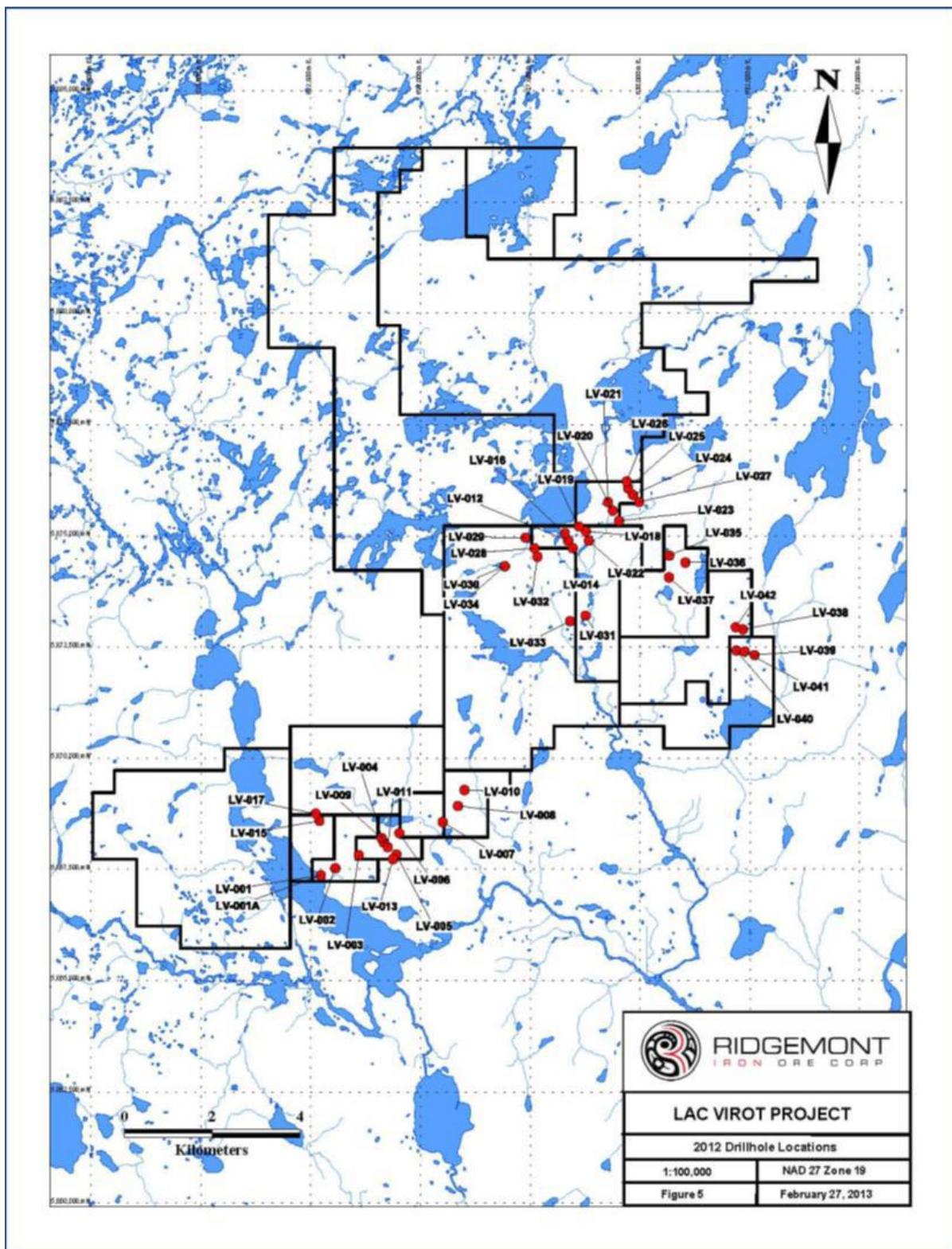
The program started in June and continued through October 2012 using two helicopter-portable drill rigs. The project was operated out of Labrador City, which is located approximately 12 km east of the property. Heli-Boreal provided air support for the program and Major Drilling was contracted to complete the drilling. All samples were collected from sawn HQ-sized half-core cut on-site in its Labrador City facility. Split drill core samples have been sent to independent contractor SGS Minerals Services in Lakefield, ON for analysis. Total iron analysis is performed using X-ray fluorescence (XRF) and the magnetic component is determined by Satmagan magnetic analysis. FeO titration analysis permits an estimation of hematite. Standards, blanks, and duplicate assays are included at regular intervals in each sample batch submitted from the field as part of an on-going Quality Assurance/Quality Control program. Drillholes coordinates and locations are presented in Table 6-6 and shown on Figure 6-13. Table 6-7 presents significant mineralized intervals from 2012 historical drilling data.

**Table 6-6 2012 Drillhole Coordinates**

Hole ID	Easting	Northing	Elevation	Azimuth	Depth	Dip
LV-001	622736	5867369	585.7	330	251.0	-60
LV-001A	622736	5867369	585.7	330	147.8	-60
LV-002	623061	5867529	600.2	330	291.0	-60
LV-003	623598	5867823	607.0	330	314.3	-60
LV-004	624167	5868104	626.0	330	330.0	-60
LV-005	624452	5867838	614.1	330	206.0	-52
LV-006	624520	5868319	605.7	330	204.0	-52
LV-007	625507	5868565	595.8	330	249.0	-50
LV-008	625853	5868928	604.1	330	201.0	-50
LV-009	624114	5868211	625.3	330	180.0	-50
LV-010	626002	5869286	611.0	330	146.0	-50
LV-011	624255	5868002	621.1	330	319.0	-50
LV-012	628362	5874893	628.2	330	488.0	-60
LV-013	624377	5867732	610.7	330	386.0	-50
LV-014	628467	5874726	622.0	330	368.0	-75
LV-015	622703	5868594	640.0	330	297.0	-50
LV-016	628290	5875060	632.4	330	457.6	-60
LV-017	622617	5868756	640.0	330	222.0	-50
LV-018	628766	5875103	631.7	330	392.0	-60
LV-019	628610	5875210	638.0	330	396.0	-60
LV-020	629378	5875570	654.7	330	390.0	-60
LV-021	629271	5875758	658.0	330	360.0	-60
LV-022	628834	5874891	624.9	330	409.0	-60
LV-023	629520	5875341	665.6	330	353.0	-60
LV-024	629837	5875922	679.9	330	414.0	-60
LV-025	629726	5876074	672.2	330	371.0	-60
LV-026	629698	5876226	667.9	330	209.0	-60
LV-027	629977	5875763	686.0	330	319.0	-60
LV-028	627597	5874722	634.2	330	317.0	-60
LV-029	627390	5874960	630.8	330	222.0	-60
LV-030	626921	5874318	630.0	330	15.1	-60
LV-031	628758	5873206	609.2	330	108.0	-60
LV-032	627663	5874532	631.7	330	276.0	-60
LV-033	628405	5873083	610.0	330	204.0	-60
LV-034	626920	5874319	630.0	330	222.0	-52
LV-035	630663	5874556	674.3	300	125.0	-55
LV-036	631030	5874402	655.0	315	234.0	-55
LV-037	630656	5874068	659.0	300	211.0	-55
LV-038	632340	5872898	649.8	280	201.0	-55
LV-039	632602	5872324	638.8	280	303.0	-55
LV-040	632189	5872425	636.3	280	212.0	-55
LV-041	632380	5872399	637.0	280	197.0	-55
LV-042	632174	5872947	646.2	280	195.0	-55

**Source:** (Ridgemont Iron Ore, 2012)

Figure 6-13 Lac Virot Drilling Map 2012



Source: (A.C.A Howe International Ltd., 2012)

**Table 6-7 Significant Mineralized Intervals from 2012 Historical Drilling Data**

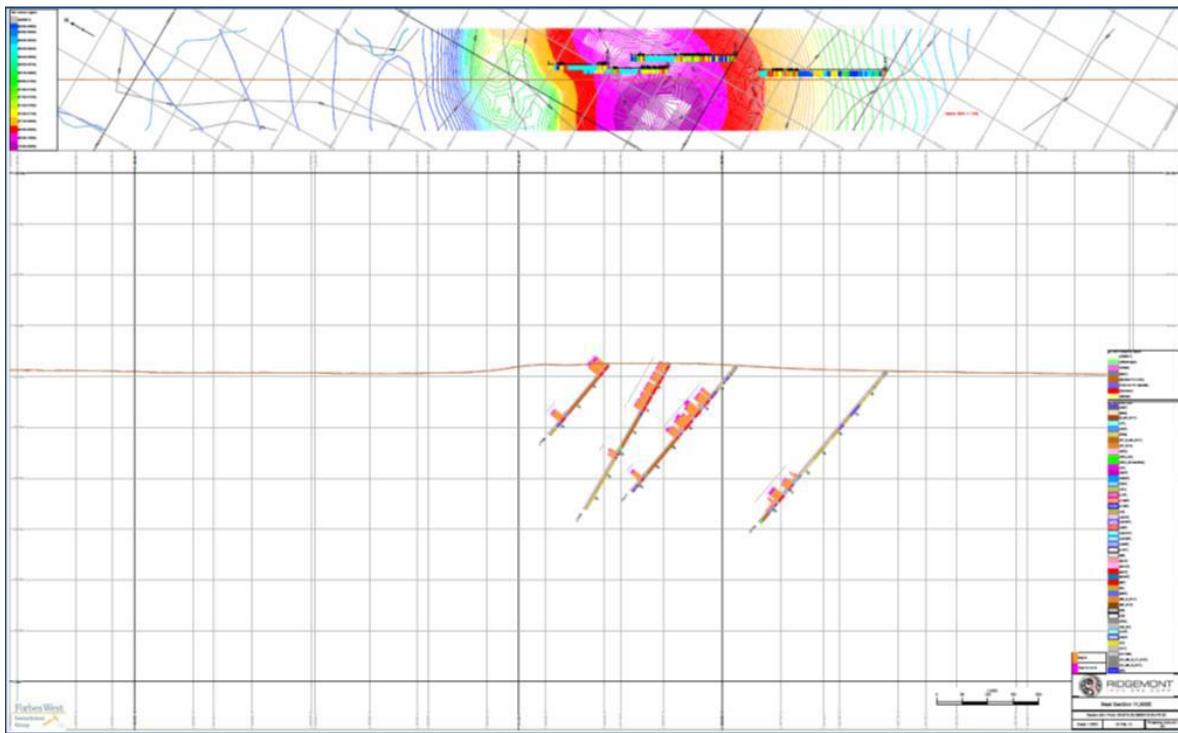
Hole Name	From (m)	To (m)	Length (m)	Tag	Fe (%)
LV-001	79.0	116.0	37.0	16	31.12
LV-001	238.0	251.0	13.0	17	23.90
LV-002	49.0	61.0	12.0	16	25.11
LV-002	127.0	140.0	13.0	16	21.91
LV-002	215.0	223.0	8.0	17	20.34
LV-003	19.9	81.0	61.1	16	21.98
LV-003	174.5	188.0	13.5	16	19.58
LV-003	207.0	218.4	11.4	17	22.69
LV-004	4.5	106.3	101.8	16	24.72
LV-004	199.3	214.4	15.1	16	23.96
LV-006	36.4	37.9	1.5	16	28.54
LV-007	91.1	99.7	8.6	14	19.89
LV-007	105.0	110.5	5.5	14	15.11
LV-008	45.0	51.0	6.0	15	21.12
LV-008	65.8	72.6	6.8	14	15.72
LV-008	82.5	93.7	11.2	14	17.92
LV-008	137.5	142.6	5.1	14	19.38
LV-009	3.9	30.6	26.7	16	24.36
LV-009	132.0	147.2	15.2	16	25.64
LV-010	11.0	15.6	4.6	15	21.39
LV-010	53.0	89.0	36.0	14	22.35
LV-011	74.8	185.6	110.8	16	25.60
LV-011	277.1	295.8	18.7	16	25.66
LV-012	143.0	158.0	15.0	12	13.16
LV-012	205.4	330.9	125.5	8	25.59
LV-012	450.0	466.9	16.9	11	23.33
LV-013	265.0	276.0	11.0	16	14.09
LV-013	282.0	305.0	23.0	16	22.97
LV-013	312.7	344.0	31.3	16	25.61
LV-016	296.3	337.5	41.2	11	20.37
LV-016	350.6	359.0	8.4	11	19.46
LV-016	436.0	444.0	8.0	13	23.69
LV-018	188.8	218.0	29.2	8	22.53
LV-018	276.7	296.0	19.3	8	22.20
LV-018	324.9	331.4	6.5	10	21.42
LV-019	36.7	93.2	56.5	8	21.75
LV-019	383.2	396.0	12.8	11	19.07
LV-020	92.0	142.2	50.2	8	17.69
LV-020	161.0	217.4	56.4	8	17.19
LV-021	6.6	37.2	30.6	8	25.88
LV-021	50.4	68.0	17.6	8	16.10
LV-022	215.5	229.9	14.4	9	10.13
LV-022	313.9	321.8	7.9	8	9.66
LV-022	389.2	399.2	10.0	8	24.08
LV-023	107.0	116.0	9.0	8	21.92
LV-024	17.4	87.0	69.6	8	24.22
LV-024	283.0	361.2	78.2	8	25.78
LV-025	15.5	39.0	23.5	8	23.53
LV-025	91.6	187.5	95.9	8	24.21
LV-026	86.0	98.9	12.9	8	20.53
LV-027	57.8	66.9	9.1	8	24.42
LV-027	100.7	123.0	22.3	8	23.02
LV-028	99.5	216.1	116.6	8	25.54
LV-031	75.0	83.4	8.4	1	25.40
LV-032	162.0	168.0	6.0	8	22.23
LV-032	186.0	198.0	12.0	8	28.90
LV-032	214.7	221.7	7.0	8	16.96
LV-033	11.0	81.9	70.9	1	23.39
LV-034	33.7	52.3	18.6	8	17.14
LV-034	62.4	69.0	6.6	8	22.36

Hole Name	From (m)	To (m)	Length (m)	Tag	Fe (%)
LV-034	108.4	115.0	6.6	8	17.75
LV-034	145.4	152.7	7.3	8	16.03
LV-035	1.0	44.5	43.5	5	20.56
LV-035	121.9	123.6	1.7	4	20.01
LV-036	6.8	14.0	7.3	7	16.37
LV-036	29.4	63.0	33.6	6	12.93
LV-036	146.6	163.8	17.2	5	12.49
LV-036	179.0	191.6	12.6	5	16.99
LV-037	4.5	11.7	7.2	7	17.62
LV-037	23.4	65.7	42.3	6	14.82
LV-037	82.6	108.7	26.1	5	18.10
LV-038	38.4	83.8	45.4	2	11.92
LV-039	168.3	195.1	26.8	2	11.76
LV-039	214.5	266.3	51.8	2	19.70
LV-040	13.9	39.0	25.1	2	14.41
LV-041	81.3	105.9	24.7	2	15.04
LV-041	133.2	138.6	5.4	3	31.26
LV-042	3.3	15.9	12.6	2	12.91

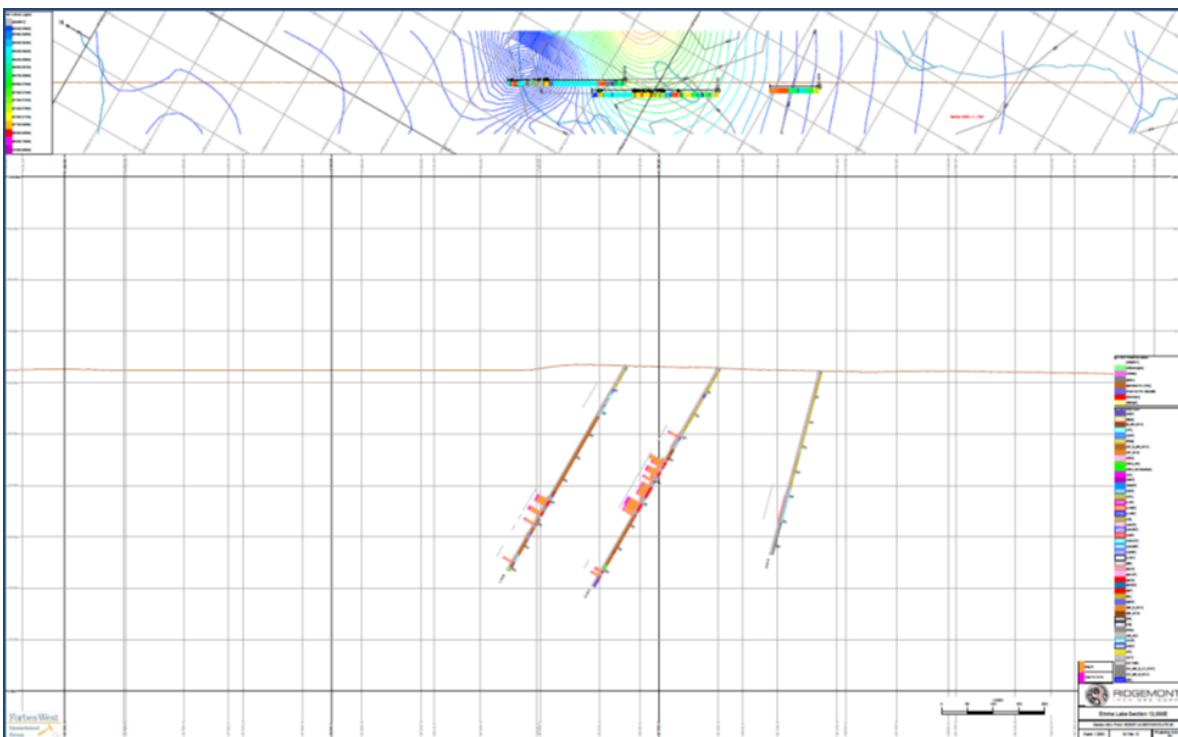
The exploration to date indicates that the Sokoman Formation maintains the typical 100-140 m true thickness throughout the district. The proportion of iron oxides is generally less and in more isolated bands. Quartz – Fe-Silicate – Fe-carbonate facies are dominant.

The airborne geophysical data interpretations have been very useful in delimiting the faulted D1 folds and the late NW-trending fault offsets. These were confirmed by drilling. The Sokoman folds are more extensive than marked in the surface maps, which is not surprising, considering the amount of thin glacial cover on the property.

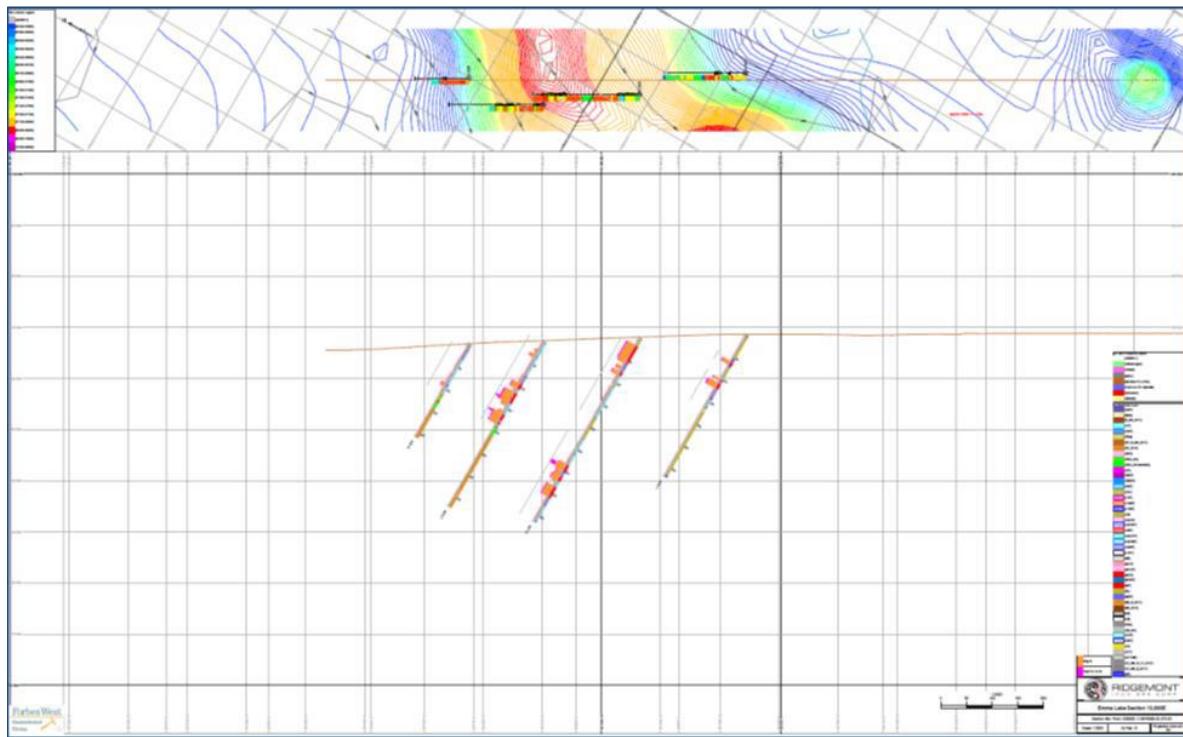
The several parallel anomalies plus drill results indicate the geometry of two parallel fold sequences. These likely represent one horizon that has been repeated by overturned nappe folding with some components eroded by glaciers. There may be repetition by thrust fault(s) parallel to the anomaly trend. Future exploration should focus on the interpreted fold noses as areas with potentially thicker iron oxide mineralization.

**Figure 6-14 Neal Section, 12,000E**

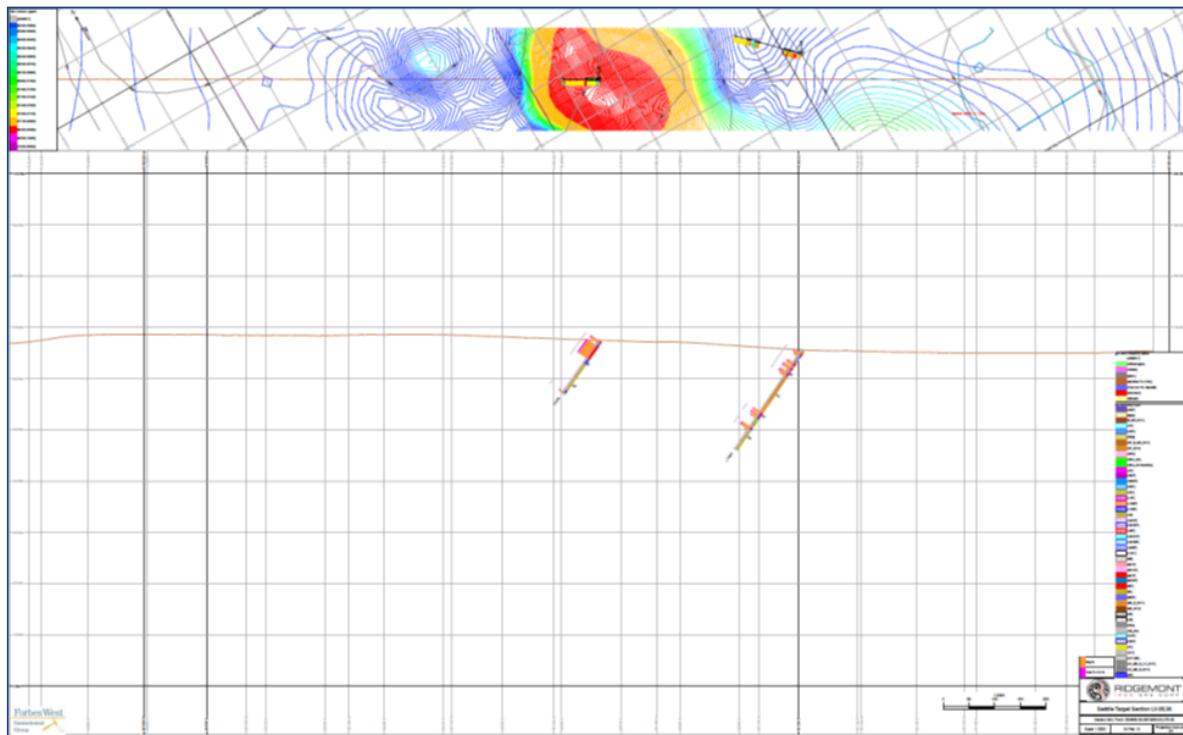
Source: (Edward Lyons, 2013)

**Figure 6-15 Emma Lake Section, 12,000E**

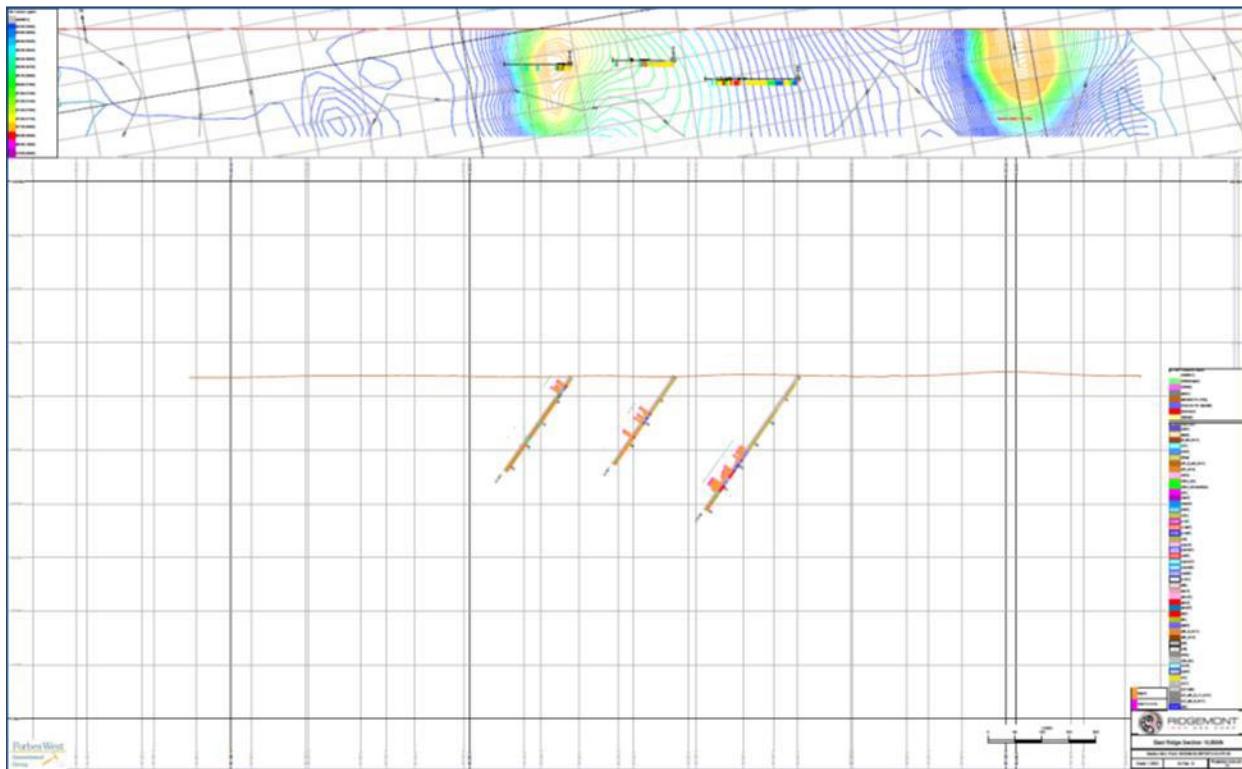
Source: (Edward Lyons, 2013)

**Figure 6-16 Emma Lake Section, 13,800E**

Source: (Edward Lyons, 2013)

**Figure 6-17 Saddle Target Section LV-35, LV-36**

Source: (Edward Lyons, 2013)

**Figure 6-18 East Ridge Section, 10,500N**

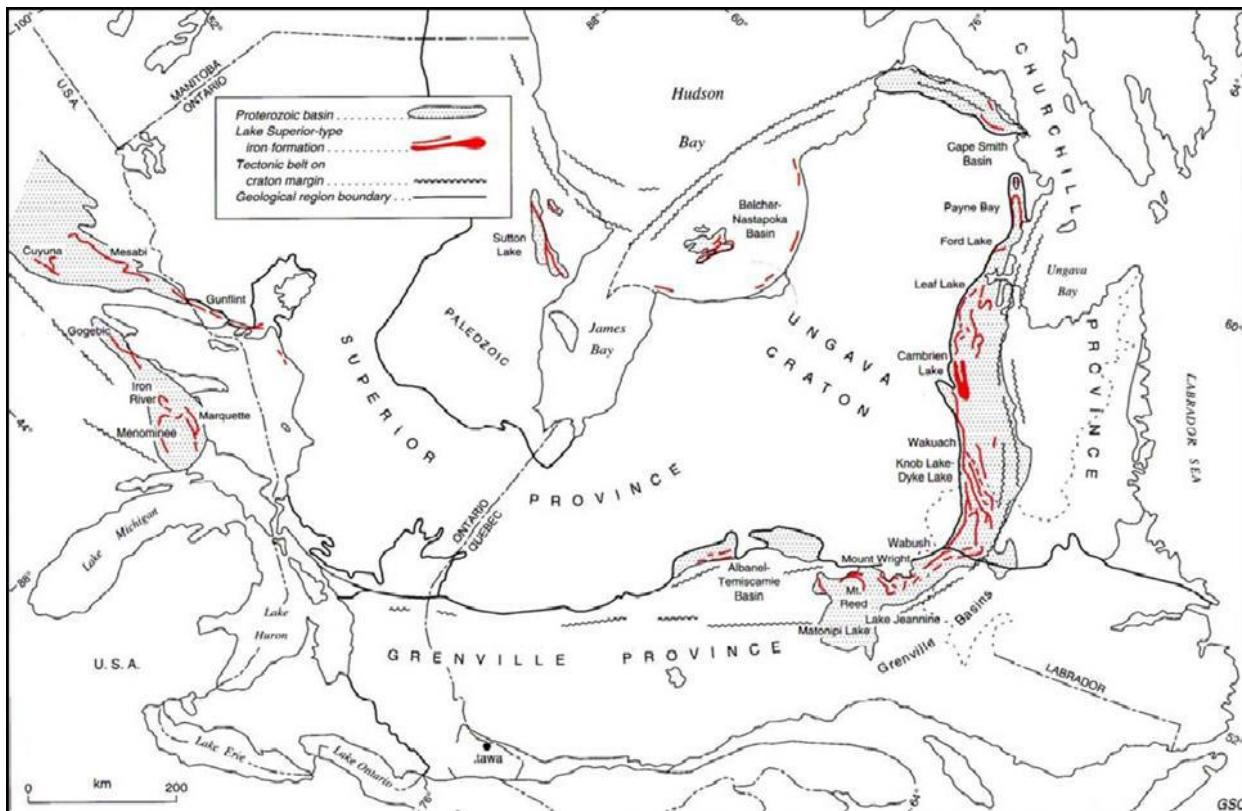
**Source:** (Edward Lyons, 2013)

## 7 GEOLOGICAL SETTING AND MINERALIZATION

### 7.1 Paleotectonic Setting

The Lake Superior-type iron formation (“LSTIF”) occurrences of the Lac Virot area lie in the Labrador-Quebec Fold Belt or Labrador Trough, within the Sokoman Formation of the Lower Proterozoic (Aphebian) Knob Lake Group. The Sokoman Formation, one of the most extensive iron formation units in the world, extends along the eastern margin of the Archean Superior- Ungava craton for over 1,000 km (Figure 7-1) (Gross, 2009).

**Figure 7-1 LSTIF Distribution Eastern North America (Gross, 1996)**



**Source:** A.C.A Howe International Ltd., 2012

The following paragraphs are quoted or summarized from Geological Survey of Canada (“GSC”) Open File 5987, “Iron Formation in Canada, Geology and Geochemistry”, by G.A. Gross, 2009.

“The Sokoman [Formation] iron formation along the western boundary of the Northern fold belt extends south from the isolated basin structures north of latitude 600N and west of Ungava Bay, through a series of interconnected paleobasins extending from the area west of Ungava Bay, to Lac Cambrien, Knob Lake - Schefferville and southwest across the boundary of the Grenville orogenic belt. The iron formation and associated metamorphosed sedimentary rocks extend southwest into the Grenville orogenic belt where they are exposed in a series of isolated complex highly metamorphosed and deformed fold structures in the Wabush Lake, Mont Wright, Fire Lake, (Gagnon), Mount Reed, and Lac Jeannine areas, and beyond the Mouchalagane River through the Matonipi Lake area.”

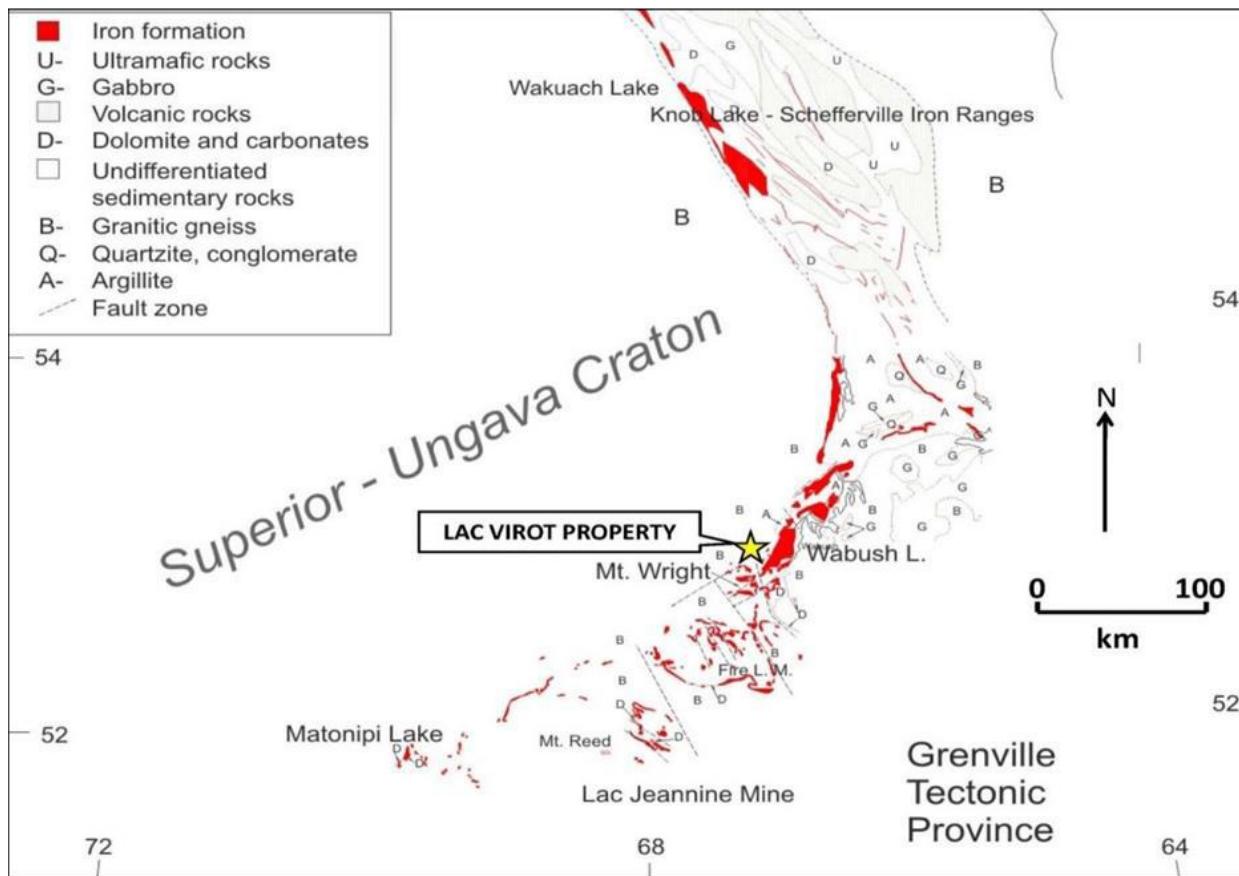
“Principal stratigraphic features of the fold belt are well developed and have been mapped in detail in the Knob Lake basin centered around Schefferville in the north central part of the fold belt. These Lower Proterozoic rocks overlying the granitoid gneisses of the platform or craton include a thick succession of thin-banded grey-green to maroon colored fine grained clastic sediments, argillite and slate [Attikamagen Formation] which is transitional upward to dolomite and chert breccia in local basins [Denault Formation] that are intercalated in places with argillite and the overlying quartz arenite beds. The Wishart [Formation] quartz-arenaceous sediments are the most consistent stratigraphic units throughout the fold belt and in many areas along its western margin lie unconformably on the basal gneissic rocks. In parts of the Knob Lake basin the quartz arenaceous sediments are overlain by thin irregular sinuous beds of white chert intercalated with black carbonaceous and ferruginous shale that mark the beginning of major deposition of iron and silica in the overlying Sokoman [Formation] iron formation.”

“The iron formation throughout the belt is predominantly magnetite-hematite-chert-quartz oxide lithofacies with well-defined and discrete thin-bedded cherty Fe-carbonate and Fe-silicate lithofacies units at its base and locally in upper parts of stratigraphic sections. The iron formation lithofacies are interbedded with the overlying black carbon-, carbonate-, and sulphide- bearing slate and shale units [Menihik Formation] which extend intermittently throughout the fold belt. The quartz-arenite, iron formation, and upper black slate are the most persistent stratigraphic units throughout the marginal basins and fold belt.”

“This succession of metasedimentary rocks is most extensively developed in the western parts of the marginal basins and fold belts. Eastward in the fold belt the metasedimentary rocks are associated with an increasing amount of intercalated tuff, lava flows, various extrusive volcanic rocks, and mafic and ultramafic dykes and sills.”

“Transitions from predominant shelf and platform environments for Lake Superior type iron formation to volcanic-arc tectonic environments hosting iron formation lithofacies of Algoma type are recognized in the northeastern and central parts of the fold belt.”

“Folded structural segments of Early Proterozoic iron formation and platform sediments extend southwest into the Grenville Province tectonic belt from Wabush Lake to the Matonipi Lake area. The sequence of rocks bearing iron formation in the Grenville Province north of Wabush Lake is offset to the northeast for a distance of about 15 km along a fault zone that marks the northeast margin of the Grenville Province tectonic belt and the Superior - Ungava Craton (Figure 7-2). Stratigraphic continuity of the Early Proterozoic Sokoman Iron formation and associated sediments has been traced southward across this marginal belt and through the Wabush Lake area. The rank of metamorphism in this succession of rocks increases to the southwest to amphibolite facies and to granulite facies in some areas close to the marginal belt. A second order of folding and deformation apparently related to the Grenville orogeny (1 - 0.8 Ga) has been imposed over the isoclinal fold and imbricate structures of the successions of Early Proterozoic iron formation and associated rocks that are traced southward into the Grenville tectonic belt.”

**Figure 7-2 Southern Labrador-Quebec Fold Belt (Modified after Gross, 1986)**

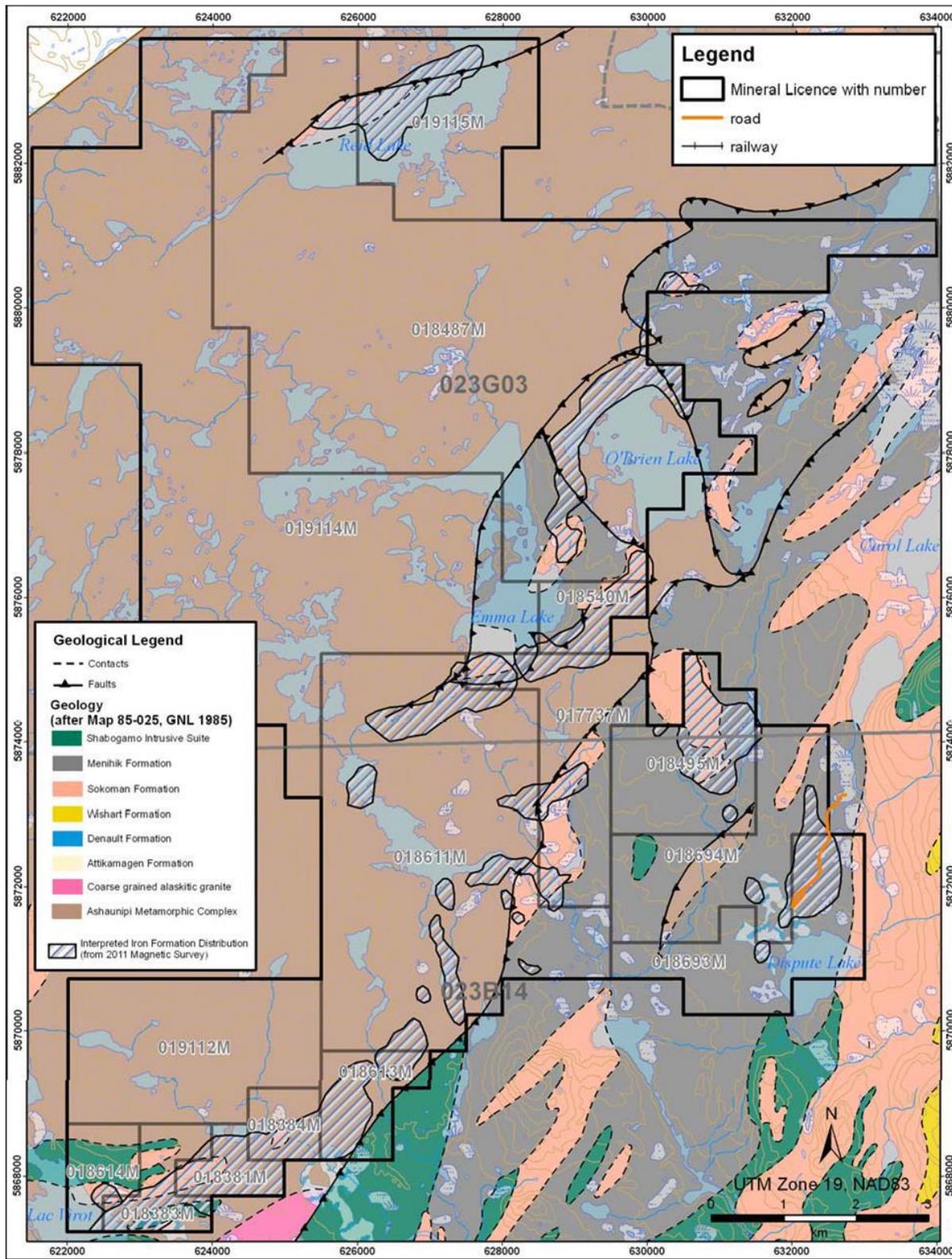
Source: (A.C.A Howe International Ltd., 2012)

"The isolated structural segments of iron formation and metasediments mapped in the Grenville Province mark the southwestern continuity of iron formation deposition in the major shelf or platform basins along the southern margin of the early Superior-Ungava Craton or landmass. These structural segments occur in major tectonic domains delineated by prominent fault zones that were probably related to subduction along the Grenville boundary."

## 7.2 Regional Bedrock Geology

Several geological investigations have been conducted in the western Labrador region during the latter half of the 20th century. In the early 1950's predecessor companies to the current mine operators IOC and Wabush Mines completed widespread reconnaissance geological mapping in the region (Neale, 1951, Boyko, 1953). In addition, the GSC completed 1 inch = 4 miles scale regional mapping in the mid-1960's (Farhig, 1967). In the 1980's, the Newfoundland and Labrador, Department of Mines and Energy, Geological Survey Branch ("GSNL") published a preliminary 1:50,000 scale geological map of the area (Rivers, 1980) followed by colored 1:100,000 scale map jointly produced by the Government of Newfoundland, Department of Mines and Energy and the Government of Canada in 1985 (Maps 85-25 & 85-28) (Figure 7-3).

**Figure 7-3 Lac Virot Area Geology (NL/Canada Maps 85-25 &85-28)**



Source: (A.C.A Howe International Ltd., 2012), validated 2023, SGS

The oldest rocks in the region are Archean migmatites and gneisses known as the Ashuanapi Metamorphic Complex (Unit 1). Although re-deformed and re-metamorphosed during the subsequent Grenville Orogenic episode and located within the borders of the Grenville Province of the Canadian Shield, the Complex is part of the stratigraphic assemblage that comprises the extensive Superior/Ungava Craton. These units constitute the basement of the predominantly sedimentary lithologies of the Labrador Trough.

The Lower Proterozoic (Aphebian) platformal sedimentary and related rocks of the Labrador Trough are named the Knob Lake Group. Previously known as the Gagnon Group in the Grenville Province portion of the Labrador Trough, the Knob Lake Group was redefined to include the stratigraphic sections on both sides of the Grenville Front.

Deposition of the Knob Lake Group, which records the Aphebian (2.5 to 1.75 Ga) stratigraphy of the Labrador Trough, probably began with deposition of fluvial red sands and gravels (Seward Formation) in a narrow elongate valley that was probably a continental rift valley. This was followed by shallow marine transgression, subsidence and deposition of shales (Attikamagen Formation), carbonates (Denault Formation), sands (Wishart Formation), and iron formation (Sokoman Formation) in a shallow marine environment. Following deposition of the Sokoman Formation the basin subsided resulting in the build-up of deep water turbidites of the Menihik Formation. The final stage of Labrador Trough development saw the extrusion of a great thickness of mafic pillow lavas (Doublet Group) on its eastern margin (Rivers and Wardle, 1978). In the Wabush area all stratigraphic units have been deformed and metamorphosed during the development of the Trough or Labrador-Quebec Fold Belt, then further deformed and metamorphosed during the Grenville Orogenic episode.

The basal section of the Knob Lake Group in the western Labrador region comprises widespread quartzofeldspathic schist and gneiss of the Attikamagen Formation which occurs to the south and east but is not known to be exposed on the Lac Virot Property. An extensive tract of Denault Formation dolomitic and calcitic marble underlies the eastern shore of Wabush Lake and the southern shore of Julianne Lake, marking the upper limit of the Attikamagen Formation in that area. Quartzite of the Wishart Formation overlies the Attikamagen and Denault Formations along the western side of Wabush Lake, on the Julianne Peninsula, and the north side of Julianne Lake. Where present the top of the Wishart Formation defines the footwall contact of the Sokoman Formation ironstones.

The Sokoman Formation conformably overlies the Wishart Formation on the west side of Wabush Lake and Julianne Peninsula, but elsewhere it sits on the Attikamagen Formation. The dominant lithological units are silicate-carbonate iron formation and oxide iron formation. Outcrops of iron formation around Goethite Bay, Julianne Lake and to a lesser extent on the Julianne Peninsula are excessively leached (Rivers, 1981).

The Menihik Formation, the youngest sequence of the Knob Lake Group in the western Labrador region, is composed of dark grey quartz-feldspar-biotite-graphitic schist with a well-developed schistosity and distinctive graphite porphyroblasts.

Finally, the assemblage is intruded by Middle Proterozoic (Helikian, 1.75 to 1.0 Ga) mafic intrusions of the Shabogamo Intrusive Suite. These occur as folded and contorted sill-like bodies in the Attikamagen Formation in the south-eastern part of the region.

### 7.3 Lac Virot Regional Tectonic Study

During the latter part of the 1970's through the 1980's the Government of Canada, Departments of Regional Economic Expansion and Energy, Mines & Resources and the Province of Newfoundland and Labrador, Department of Mines & Energy conducted extensive regional geological mapping investigations throughout Newfoundland and Labrador. Aided by academic institutions including Memorial University of Newfoundland, the federal and provincial government programs resulted in significant advances in understanding the tectonics of the Grenville Province of southwestern Labrador and neighboring Quebec.

The northern margin of the Grenville Province in southwestern Labrador is interpreted as a 20-30-km-wide ductile fold and thrust belt (Rivers, 1983). The area represents the boundary zone of a collisional orogen wherein older rocks of the Superior and Churchill Provinces and Lower Proterozoic sediments of the Labrador Trough comprise a Parautochthonous Belt of various thrust sheets, the Gagnon terrane (van Gool, et al., 1988).

**Figure 7-4    Extensive Evidence of Folding and Thrusting**



**Source:** (A.C.A Howe International Ltd., 2012)

## 7.4 Lac Virot Property Geology

Most of the northern and western sector of the Lac Virot Property is underlain by basement rocks of the Ashuanipi Metamorphic Complex. Lithologies include quartzo-feldspathic migmatites, gneisses and granitoid rocks representing reworked Archean Superior Province units.

The Wishart Formation of the Knob Lake Group is mapped to the east of the Lac Virot Property. During the current MPH work a few exposures of clean quartzite were noted in the structurally complex Emma and O'Brien Lakes area. These possibly represent thrusted blocks of Wishart Formation that are juxtaposed with the Sokoman Formation.

The unit of primary importance with respect to iron ore exploration is the Sokoman Formation of the Knob Lake Group. Exposures of this formation are widespread throughout the Lac Virot Property as previously mapped by exploration groups, government and academic geologists.

Mineralogically the outcropping sedimentary units of the Sokoman Formation on the Lac Virot Property are relatively simple, consisting primarily of quartz and iron-bearing minerals including magnetite ( $Fe_3O_4$ ) with lesser hematite ( $Fe_2O_3$ ) or specularite in its coarse-grained form, and goethite ( $Fe_2O_3 \cdot H_2O$ ). Variable amounts of iron are also present in silicates such as amphiboles (grunerite) and in carbonates such as ankerite ( $Ca[Fe,Mg,Mn][CO_3]_2$ ).

Typically, the most economically significant iron formation units on the Property may be described as massive or banded quartz-magnetite-specular hematite schists that contain approximately 50% silica and 50% iron minerals by volume. The metamorphosed silica is predominantly medium to coarse grained granular in crystalline habit. The main iron oxide minerals are coarse to medium grained magnetite, medium grained dull granular hematite and fine-grained earthy hematite-goethite-limonite. The banded units comprise alternating centimeter-scale bands of whitish lean ferruginous quartzite/cher and dark grey to black to blueish black quartz-magnetite-specular hematite schists.

A variant of the above unit that typically contains in excess of 65% quartz and usually less than 20% total Fe is referred to as lean iron formation.

Parts of the Sokoman Formation on the Property (notably the Emma Lake sector) contain what has been described by early workers as quartz-grunerite schist or gneiss. Jackson (1954) describes the unit; “The rock varies from massive nearly pure grunerite to quartz, to thin banded with bands alternatively of quartz or grunerite. The grunerite varies from white to light straw color to waxy brown on the fresh surface to darker brown on the weathered surface.” “Occasionally an outcrop is composed almost entirely of rosettas to  $\frac{3}{4}$  inch in diameter of rosettas.” Disseminated crystals of magnetite are generally present, while an occasional carbonate band or magnetite rich band is also present.

The Sokoman Formation is stratigraphically overlain by garnet-biotite-graphite schists of the Menihik Formation.

**Figure 7-5    Massive Quartz-Magnetite-Speculite Hematite Schists**

**Source:** (A.C.A Howe International Ltd., 2012)

**Figure 7-6    Banded Iron Formation**

**Source:** (A.C.A Howe International Ltd., 2012)

**Figure 7-7 Quartz-Grunerite(?)-Carbonite(?) Schist**

**Source:** (A.C.A Howe International Ltd., 2012)

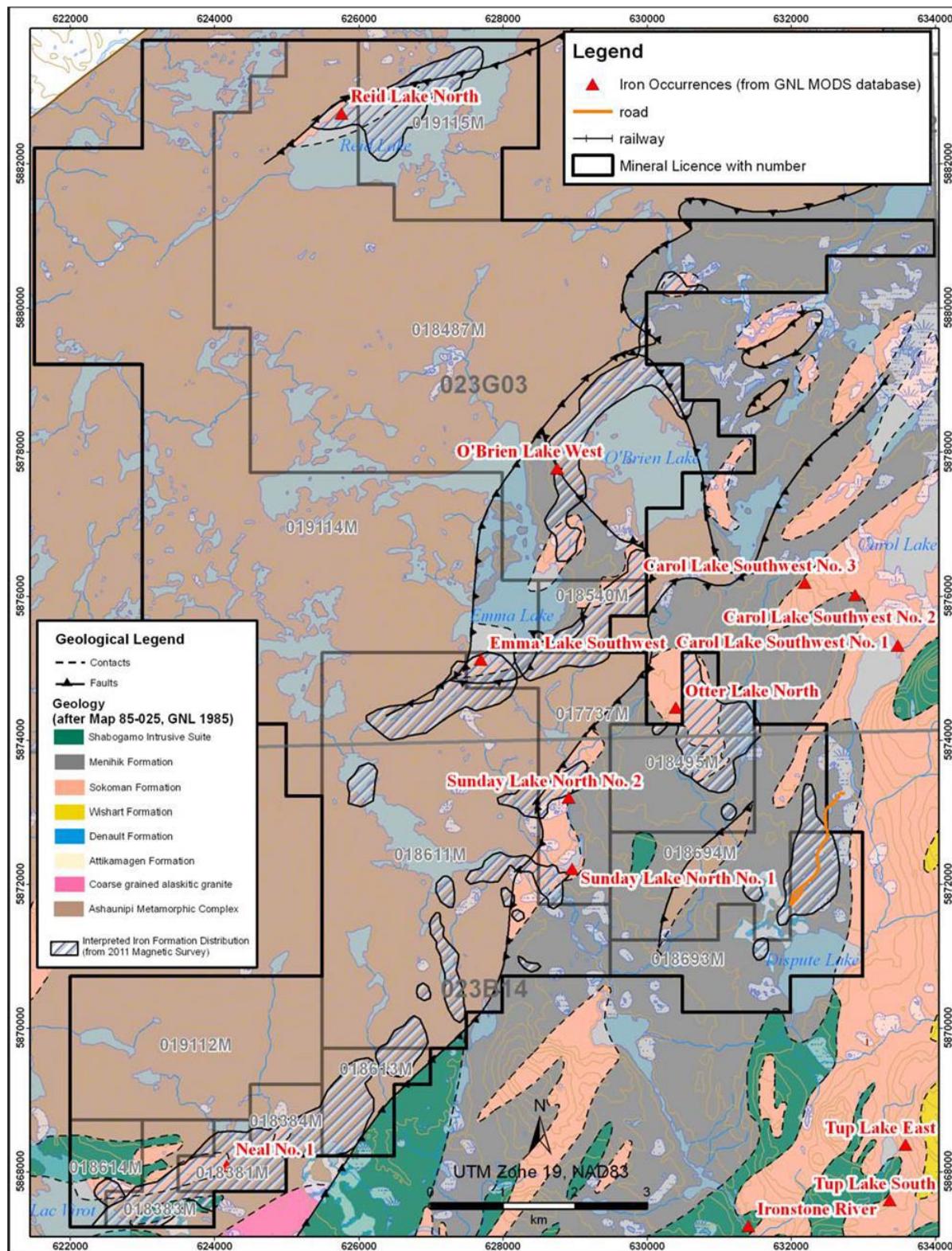
The extensive thrusting noted in Section 6-3 is particularly evident in the Emma Lake area. This is atypically quite well exposed compared to other parts of the Sokoman-Menihik-Ashuanipi assemblage on the Lac Virot Property. The area was mapped in some detail by the Centre for Earth Resources Research at MUN in 1989-90 (Brown, et al., 1991). A total of 13 thrust sheets were mapped across a section a little more than 1 km wide. Although MPH did not map in such detail it is attested that the structural juxtaposition of units is not overstated by the MUN workers.

**Figure 7-8    Thrust Related Shearing Near Emma Lake**



**Source:** (A.C.A Howe International Ltd., 2012)

Figure 7-9 Lac Virot Iron Ore Occurrences



Source: (A.C.A Howe International Ltd., 2012)

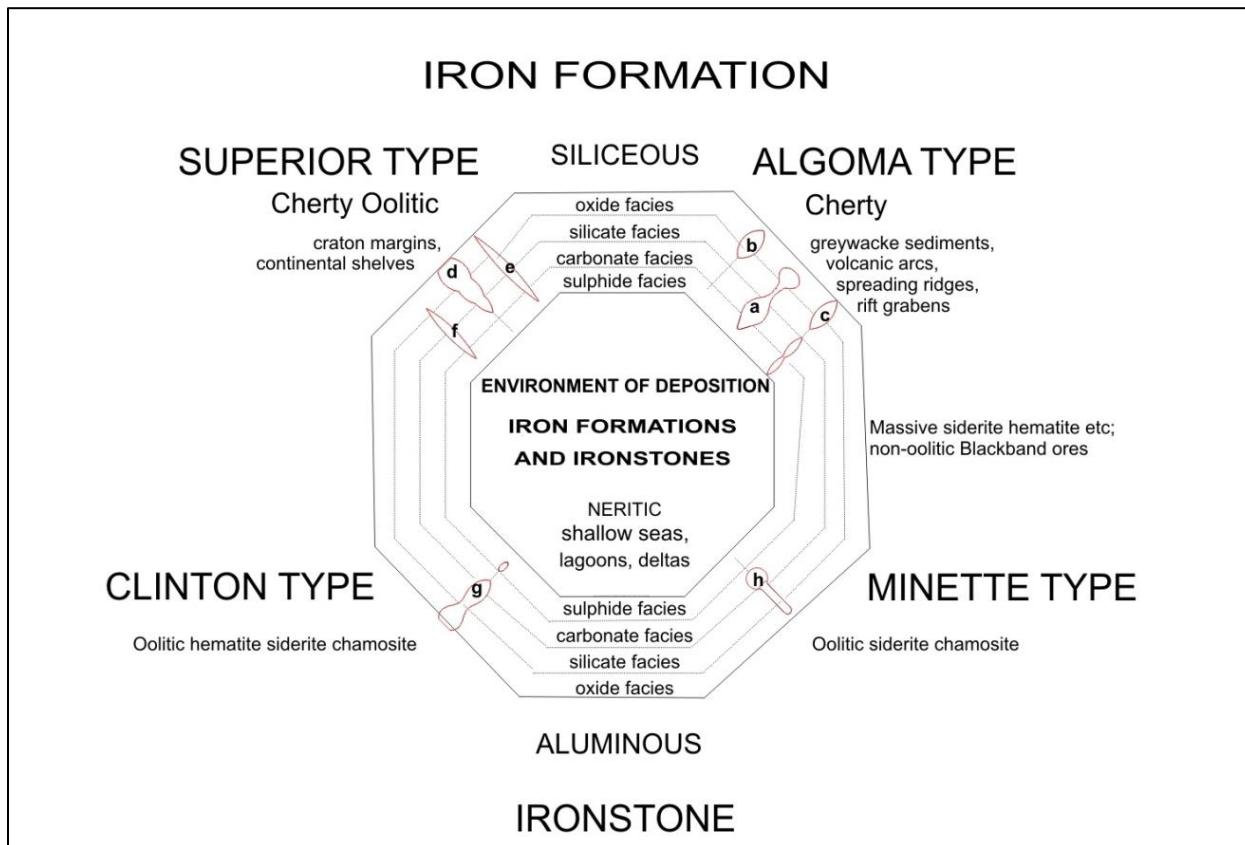
## 8 DEPOSIT TYPES

A basic understanding of iron ore deposits worldwide and in particular those of North America is set out in the landmark work that spanned over 50 years of G. A. Gross (2009) entitled “Iron Formation in Canada, Genesis and Geochemistry”, GSC Open File 5987. This section is for the most part based on Open File 5987 and earlier publications of G. A. Gross.

Iron is the fourth most abundant element in the Earth’s crust and is first overall in the planet as a whole. Iron is most widely distributed in the common rock-forming silicate minerals. Iron oxide minerals, hematite ( $Fe_2O_3$ ), goethite ( $Fe_2O_3 \cdot H_2O$ ), limonite ( $\sim 2 (Fe_2O_3 \cdot 3H_2O)$ ), magnetite ( $Fe_3O_4$ ) and ferrous iron carbonate, siderite ( $FeCO_3$ ) are the principal components of the commercially recoverable iron ores. Over 90% of the world’s iron resources are hosted by siliceous ferruginous sediments known as “iron formation” which occur within host strata known as “stratafer sediments”. Stratafer sediments formed in a broad spectrum of sedimentary environments and are widely distributed throughout the geological record from Early Archean to Recent time.

Sedimentary iron deposits are classified under four main headings: Superior or Lake Superior Type Iron Formation (“LSTIF”), Algoma Type, Clinton Type and Minette Type (Figure 8-1). All of Canada’s current primary iron ore production belongs to the Superior or LSTIF category and comes from four mines located in the Labrador West-Fermont region of Newfoundland and Labrador, and Quebec. Historically, the Algoma and Clinton Types also accounted for significant production share.

**Figure 8-1 Iron Ore Deposit Terminology (Gross, 1965)**

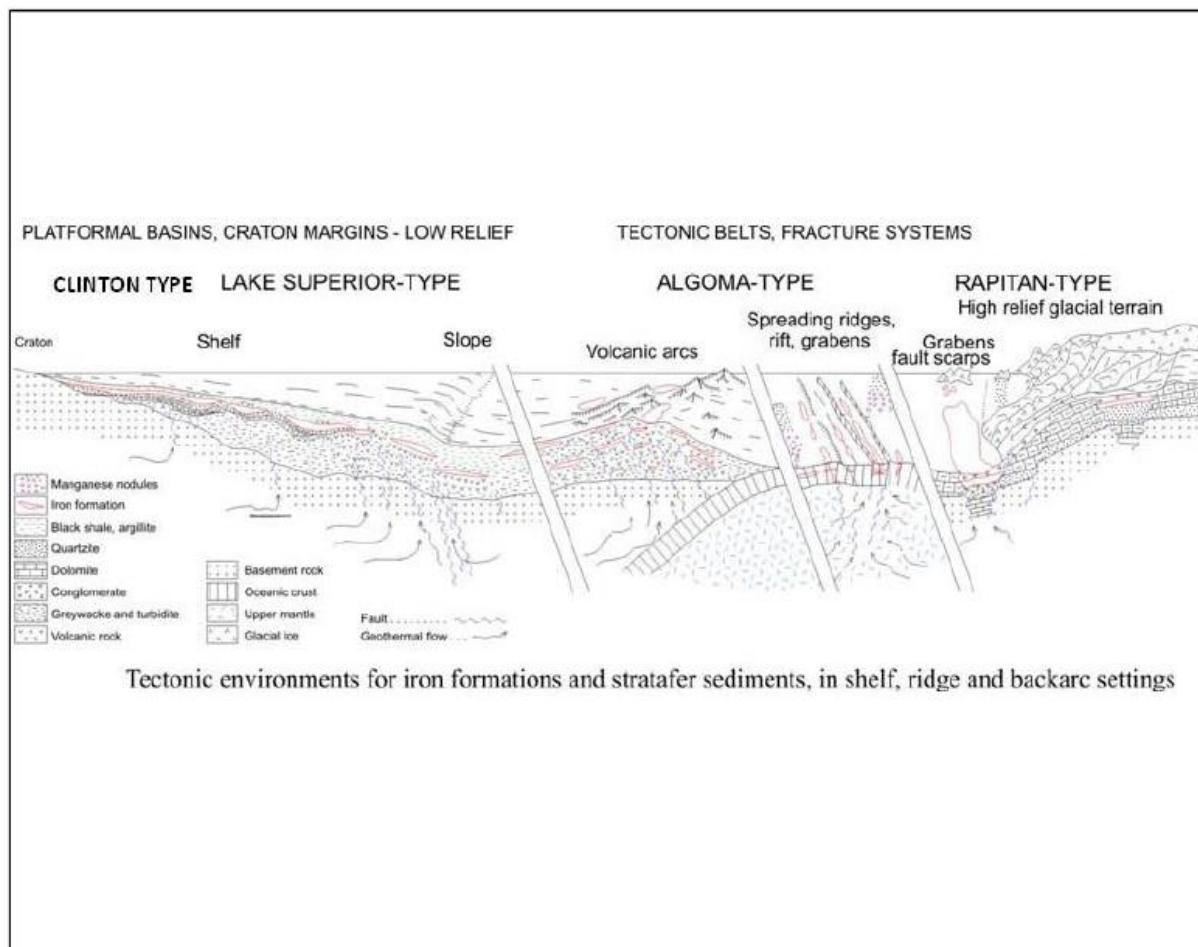


**Source:** (A.C.A Howe International Ltd., 2012)

In terms of temporal range iron formation spans the full spectrum from Archean to Recent. However, in terms of economic significance the Superior Type is linked to the Paleoproterozoic Era, the Algoma Type

to the Archean Era, and in North America the Clinton Type to the Lower Paleozoic. Paleotectonic settings (Figure 8-2) vary from platform basins and craton margins for Superior and Clinton Type deposits to tectonic (greenstone) belts for the Algoma Type (Gross, 2009).

**Figure 8-2 Tectonic Environments for Iron Formations (Gross, 2009)**



**Source:** (A.C.A Howe International Ltd., 2012)

The mineral deposits of the Labrador City/Wabush area belong to the broad class of iron deposits known as Superior-type iron formation although in this area, post consolidation tectono-metamorphic events would make the term meta-Superior-type more appropriate. The Lac Virot Property was acquired as a Superior Type iron ore prospect.

In terms of geology the Sokoman Formation and specifically the metamorphosed areas within the Grenville Province, that typify the Lac Virot Property, host four major iron ore mining operations that currently account for over 99% of Canada's iron ore production. Within this geological setting the best initial exploration target definition tools in poorly exposed areas are geophysical techniques, notably magnetic and gravity surveys, followed by extensive drilling. Due to widespread glacial drift cover, muskegs and water bodies, target testing is primarily by diamond drilling, with lesser although important inputs from outcrop mapping/channel sampling and possibly mechanical trenching/mapping/channel sampling.

## **9 EXPLORATION**

Red Paramount has yet to complete surface exploration on the Property.

## **10 DRILLING**

Red Paramount has yet to complete diamond drilling on the Property.

## 11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

All of the 2011 program surface rock samples were submitted to the Activation Laboratories Limited (“Actlabs”) preparation facility in Goose Bay, NL for sample preparation and then to the Actlabs laboratory in Ancaster, ON for analysis. The Ridgemont samples from the 2012 drilling program were submitted to SGS in Lakefield, Ontario. Actlabs is an independent commercial laboratory accredited to both ISO 17025 and CAN-P- 1579 for specific registered tests. Actlabs is accredited since 1998 in North America and has a large scope of accreditation in the minerals industry.

All of the 2012 drilling program samples were submitted to the SGS Lakefield Laboratories (“SGS Lakefield”) preparation and analysis facility in Lakefield, Ontario for sample preparation and analysis. The Ridgemont samples from the 2012 drilling program were submitted to SGS in Lakefield, Ontario. SGS Lakefield is an independent commercial laboratory accredited to ISO 17025 for specific registered tests. SGS Lakefield is accredited in North America and has a large scope of accreditation in the minerals industry.

### 11.1 2011 Rock Sample Preparation

All rock 2011 samples were prepared for analysis at the Activation Laboratories Limited preparation laboratory located in Goose Bay, NL. RX1-GB sample preparation protocols are as follows:

- Upon delivery to the Goose Bay laboratory, samples are unpacked, sorted and entered into a Laboratory Information Management System (LIMS). Clients can track samples from sample reception and logging through to preparation, analysis and reporting.
- As a routine practice with rock and core, the entire sample is crushed to a nominal minus 10 mesh (1.7 mm), mechanically split (riffle) to obtain a representative sample and then pulverized to at least 95% minus 150 mesh (105 microns).
- As a routine practice, Actlabs will automatically use cleaner sand between each sample at no cost to the customer.
- Quality of crushing and pulverization is routinely checked as part of Actlabs quality assurance program. Randomization of samples in larger orders (>100) provides an excellent means to monitor data for systematic errors. The data is resorted after analysis according to sample number.

### 11.2 2011 Analyses

All 2011 rock samples were analyzed at the Actlabs laboratory located in Ancaster, ON.

#### 11.2.1 Actlabs Analysis 4C-XRF Fusion-MPH Package

To minimize the matrix effects of the samples, the heavy absorber fusion technique of Norrish and Hutton (1969, *Geochim. Cosmochim. Acta*, volume 33, pp. 431-453) are used for major element (oxide) analysis. Prior to fusion, the loss on ignition (LOI), which includes  $H_2O+$ ,  $CO_2$ , S and other volatiles, can be determined from the weight loss after roasting the sample at 1050°C for 2 hours. The fusion disk is made by mixing a 0.5 g equivalent of the roasted sample with 6.5 g of a combination of lithium metaborate and lithium tetraborate with lithium bromide as a releasing agent. Samples are fused in Pt crucibles using an automated crucible fluxer and automatically poured into Pt molds for casting. Samples are analyzed on a Panalytical Axios Advanced wavelength dispersive XRF.

The intensities are then measured, and the concentrations are calculated against the standard G-16 provided by Dr. K. Norrish of CSIRO, Australia. Matrix corrections were done by using the oxide alpha - influence coefficients provided also by K. Norrish. In general, the limit of detection is about 0.01 wt% for most of the elements.

**Table 11-1 Actlabs Code 4C Fusion-XRF, Detection Limits**

Oxide	Detection Limit
SiO <sub>2</sub>	0.01
TiO <sub>2</sub>	0.01
Al <sub>2</sub> O <sub>3</sub>	0.01
Fe <sub>2</sub> O <sub>3</sub>	0.01
MnO	0.001
MgO	0.01
CaO	0.01
Na <sub>2</sub> O	0.01
K <sub>2</sub> O	0.01
P <sub>2</sub> O <sub>5</sub>	0.01
Cr <sub>2</sub> O <sub>3</sub>	0.01
LOI	0.01

**Source:** (Ridgemont Iron Ore, 2012)

MPH requested that the iron, manganese and phosphorous analytical results be reported as total Fe, Mn and P instead of the oxides Fe<sub>2</sub>O<sub>3</sub>, MnO, and P<sub>2</sub>O<sub>5</sub>.

**Table 11-2 Actlabs Code 4C FUision-XRF, MPH Package Detection Limits**

Oxide	Detection Limit
SiO <sub>2</sub>	0.01
TiO <sub>2</sub>	0.01
Al <sub>2</sub> O <sub>3</sub>	0.01
Fe	0.007
Mn	0.0008
MgO	0.01
CaO	0.01
Na <sub>2</sub> O	0.01
K <sub>2</sub> O	0.01
P	0.0005
Cr <sub>2</sub> O <sub>3</sub>	0.01
V <sub>2</sub> O <sub>5</sub>	0.003
LOI	0.01

**Source:** (Ridgemont Iron Ore, 2012)

### 11.3 Security 2011

The author is not aware of any QAQC done on the 2011 rock samples.

During the two field programs of 2011, all the rock samples were collected by MPH. These were taken by collecting representative grab or composite chip samples for the specific sample locations. The samples were collected by MPH personnel and were continuously in their possession until hand delivered to the Activation Laboratories Limited preparation facility in Goose Bay, NL. for preparation.

It is the author's opinion the analytical procedures were adequate for current purposes.

### 11.4 2012 Drill Core samples

SGS does not know how the samples were collected and shipped to the SGS Lakefield laboratories, but it is believed, based upon good storage, and assay results review that the sample preparation done at the core shack in Wabush was adequate and within industry's best practices. From observations at the core shack, the 2012 core samples are made of half core (NQ), sampled, and labelled with visible proof in the core boxes. The author and present owner of the Property do not know the exact sample preparation (sample size reduction) at the laboratory, but the presence of drums of sample rejects and pulps labelled to the Lac Virot Property and coming from SGS indicate that the sample preparation was probably done in Lakefield. Lakefield sample preparation protocols are as follows:

(SGS Code WGH79) and sample preparation (SGS Code PRP89) which includes:

- Weighing of samples and reporting of weights
- Dry <3kg, crush to 75% passing 2 mm, using an agate bowl
- Split to 250 g
- Pulverize to 85% passing 75µm

As the core is generally homogenously mineralized, it was sampled in the mineralised intervals between 1 and 3 m (sometimes more) to an average of 2.5 m length, taking only ½ the core. New samples were started at lithological changes and in this case, the minimum sample interval was taken at 0.5 m, mostly in unmineralized material. Samples were sent to the SGS Lakefield Laboratories in Lakefield, Ontario for analysis.

#### 11.4.1 X-Ray Fluorescence Spectrometry, titration

All samples were analysed for Fe group, meaning whole rock analysis by using X-rays Fluorescence spectrometry after a borate fusion (GO/GC/GT\_XR F76V) for all major elements, including SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, Fe<sub>2</sub>O<sub>3</sub>, CaO, MgO, Na<sub>2</sub>O, K<sub>2</sub>O, Cr<sub>2</sub>O<sub>3</sub>, TiO<sub>2</sub>, MnO, P<sub>2</sub>O<sub>5</sub>, V<sub>2</sub>O<sub>5</sub>, LOI, Sum, and Magnetic Fe (Satmagan).

All samples were analysed for Fe<sup>2+</sup> as FeO by titration (GC\_CLA01V). The sample is quickly cooled and the ferrous iron is titrated with a standardized solution of potassium dichromate resulting in the oxidation of the ferrous (Fe<sup>2+</sup>) ion to the ferric (Fe<sup>3+</sup>) ion. Endpoint is detected visually using barium diphenylamine sulfonate as the external indicator. Fe<sup>2+</sup> as FeO is reported where the raw data as Fe<sup>2+</sup> is multiplied by 1.286. Manual data entry of the titration volume into the worksheet, data fed to Laboratory Information Management System with secure audit trail.

#### 11.4.2 Satmagan

All 2012 core samples were analysed for Satmagan. Accurate analysis of ferromagnetic compounds such as magnetite is difficult and time consuming by conventional wet chemical methods. The Satmagan (SATuration MAGnetic ANalysis) method was designed specifically to measure the magnetite content of iron ores and has been in general use for over 40 years.

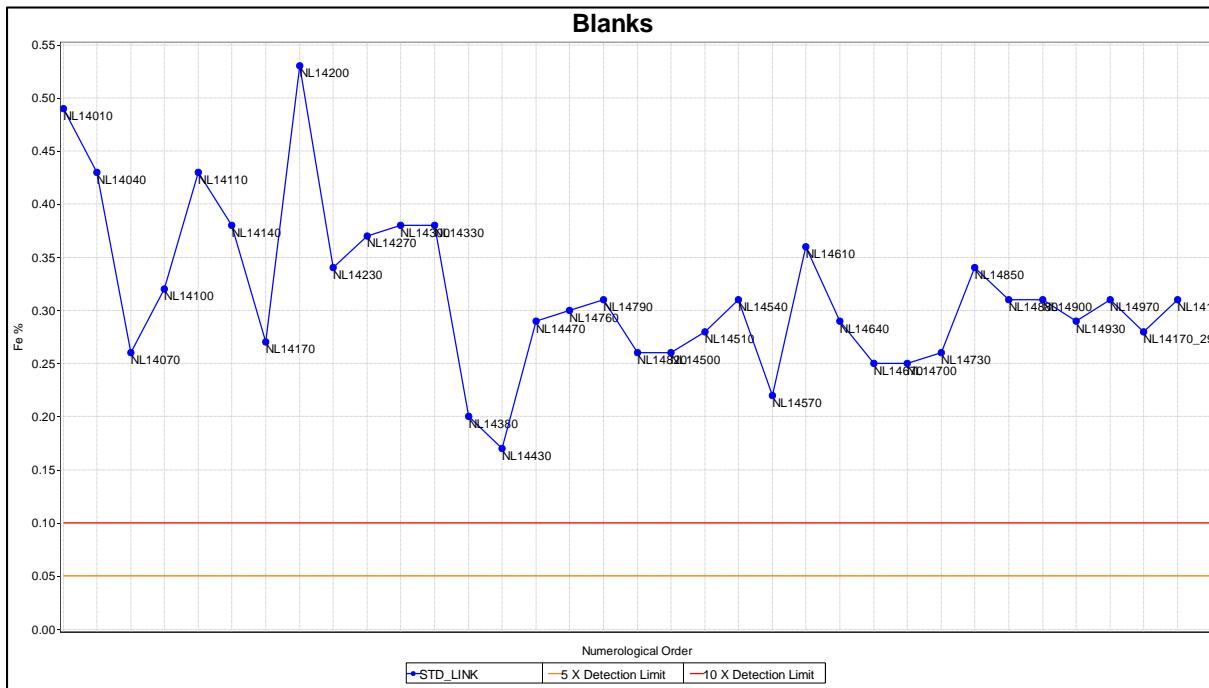
The instrument measures the force (total magnetic moment) acting on a small ~1.2 cm<sup>3</sup> pulverized sample by applying a strong enough magnetic field to saturate the magnetic component of the sample while measured within a known vertical magnetic spatial gradient. The instrument is calibrated to standards of known magnetite content and is more accurate and reliable than measurements based on magnetic susceptibility. An average grain size greater than 150 µm (100 mesh) provides accurate measurements. For finer materials, the Satmagan gives slightly lower readings, so a different calibration curve is required. The range of measurement is 0 to 100% by magnetite weight with reproducibility of 0.2% and precision of less than 0.4%. Operating temperature range of the instrument is +10°C to +40°C (+50°F to +100°F).

### 11.5 Security 2012 (QAQC)

#### 11.5.1 Blanks 2012 (QAQC)

As part of a QAQC procedure, blanks, standards and duplicates were inserted on a regular basis during the 2012 drilling campaign (43 diamond drill holes) by previous owner. This procedure includes the systematic addition of certified standards, blanks and duplicates in the assayed core.

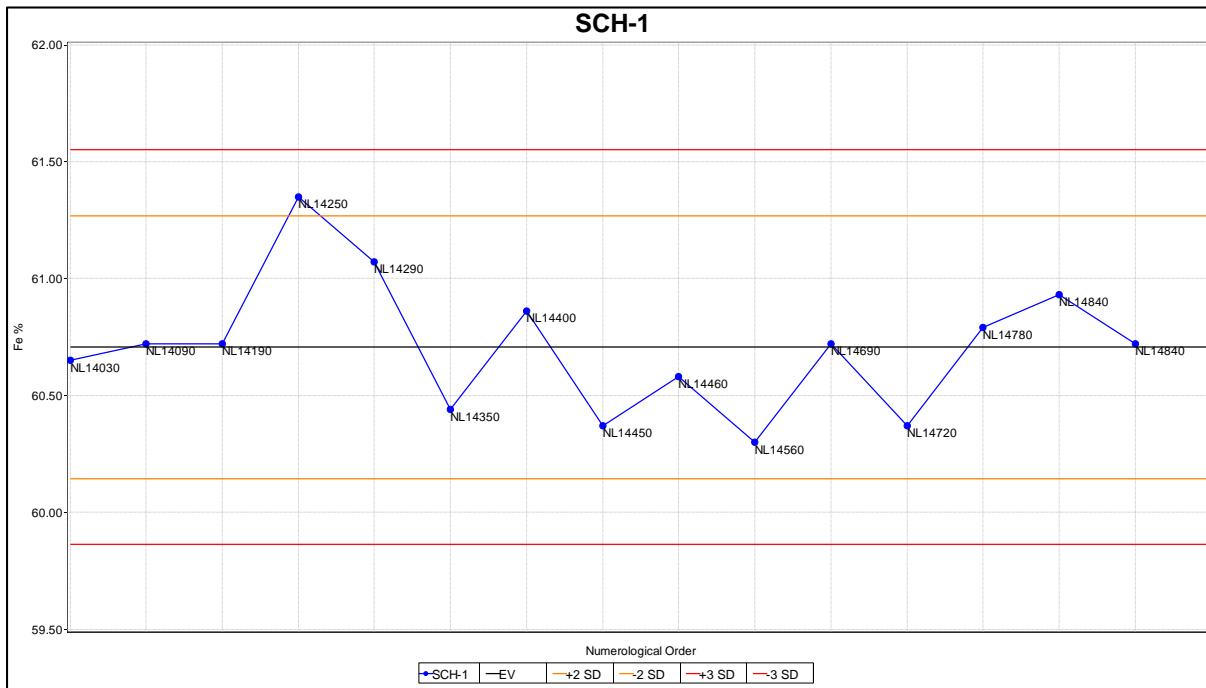
A total of 35 blanks were inserted during drilling logging and sampling. It is believed to be consisting of coarse pure white quartz sand. the results of assay blank samples showed that there are no anomalous values of Fe %. Although based on a 0.1% detection limit ("D.L."), one can see that Fe results are all above the D.L. and that one result of around 0.5% is clearly sticking out of the blanks sample batch. SGS opinion is that all results (Figure 11-1) including the 0.53% Fe fall well below any Fe % anomalous values and can be discarded as a warning or a failure blank value.

**Figure 11-1 Distribution of Blank Samples used for the 2012 Drilling Campaign (Fe%)**

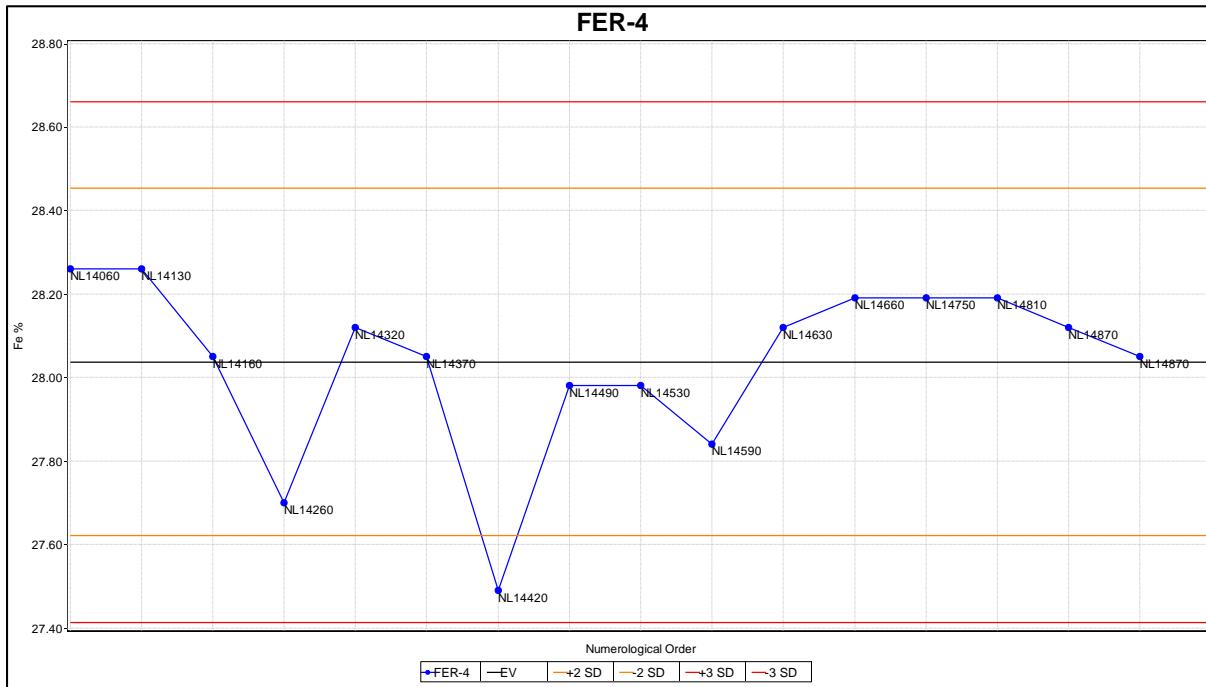
### 11.5.2 Standards 2012 (QAQC)

Two types of standards were used (SCH-1 and FER-4). A total of 31 standards (15 SCH-1, 16 FER-4) were sent to SGS Lakefield laboratory. The SCH-1 and FER-4 standards certificates highlighting the expected values and range of deviations (averages and standard deviations) were taken from the Natural Resources Canada website.

SCH-1 shows a minimum value of 60.30 % Fe, a maximum of 61.35% Fe and an average of 60.71% Fe. All SCH-1 standards fall within a narrow range (Figure 11-2). As seen in Figure 11-2, one sample falls out of the warning range ( $+2\sigma$ ). Further investigation is warranted however it is not considered as a major flaw.

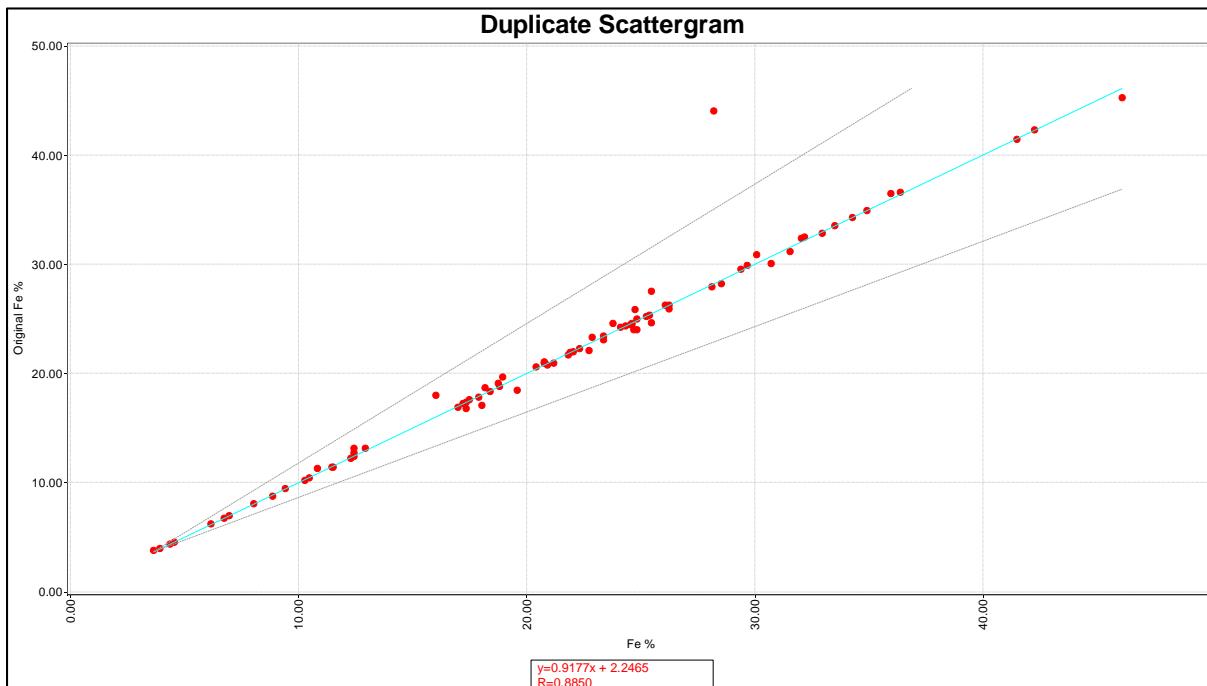
**Figure 11-2 Distribution of Standard SCH-1 used in the 2012 Drilling Campaign**

FER-4 shows a minimum value of 27.49 % Fe, a maximum of 28.26% Fe and an average of 28.04% Fe. All standards fall within a narrow range (Figure 11-2). As seen in Figure 11-2, one sample falls out of the warning range (-2 $\sigma$ ). Further investigation is warranted however it is not considered as a major flaw.

**Figure 11-3 Distribution of Standard FER-4 used in the 2012 Drilling Campaign**

A total of 83 duplicates were analyzed (Figure 11-4). The slope of the regression line and the correlation coefficient are fairly close to unity (Figure 11-4), indicating a good reproducibility of the results.

**Figure 11-4 Sample Duplicate Vs Original Assays Fe%**



It is the author's opinion that the QAQC done on the 2012 drilling program is adequate and within accepted limits; and that it is suitable for Mineral resource estimates.

## 12 DATA VERIFICATION

The data verification aspects of a property evaluation exercise normally include the confirmation of existence of work sites such as survey grids, property boundaries, drill holes and underground workings as well as procedures to test the reliability of the historic database, in particular the analytical results. With respect to analytical data, the in-laboratory and intra-laboratory QA/QC procedures, or lack thereof, of any previous property operators are reviewed along with the results of duplicate sampling if available. Finally, a check sampling program conducted by the author(s) of an evaluation or technical report is normally suggested as part of the overall exercise.

### 12.1 2011 Exploration Program

The 2011 exploration program included data verification including the confirmation of existence of historical sites along with a basic regimen for ensuring that the various data collected during the current program meets industry standards for precision and accuracy. In-laboratory blanks, standards and duplicate analyses were part of the laboratory procedure. Due to the early reconnaissance stage of exploration and considering that most samples were grab samples, it wasn't considered necessary to include field duplicates, external standards or blanks for the initial work program. The author did not review the 2011 exploration and QAQC data.

The in-laboratory QA/QC included 6 standards, 1 blank and 1 duplicate. Values for selected elements for the Fe standards and the duplicate sample are presented in Table 12-1.

**Table 12-1 Selected In-laboratory QA/QC Data**

Sample #	Analysis	SiO <sub>2</sub> %	Fe (Total) %	Mn %
328089	Original	59.19	26.615	0.1565
	Duplicate	58.43	26.07	0.1572
Std. MICA FE	Certificate	34.4	17.937	0.271
	Measured 1	34.45	17.727	0.2696
	Measured 2	34.29	18.000	0.2730
Std. IF G	Certificate	41.2	39.06	0.033
	Measured 1	41.56	39.007	0.0256
	Measured 2	41.15	38.980	0.0300

**Source:** (Ridgemont Iron Ore, 2012)

### 12.2 Previous Site Visit

The previous site visits outlined the presence or iron mineralisation on site. One sample was collected by Howe (2012) in connection with the 2012 site visit and only one mineralized exposure was examined in a cursory manner only during the site visit due to deep snow cover. The Howe sample was taken from station MC-11-24 (Emma Lake) in the vicinity of where sample 328083 was previously collected by MPH. The Howe sample number is 76792. Location coordinates are: 627435, 5874985 (NAD83, UTM Zone 19N). This sample cannot be considered as a field duplicate sample. The author did not review the 2011 exploration and QAQC data.

A comparison of the MPH and Howe samples is as follows (Table 12-2). The sites are from the same outcrop area but are separated by approximately 20 m. Both have significant total iron values.

**Table 12-2 Comparable of MPH and Howe Samples, Site MC-11-24**

Sample Number	Location (UTM NAD83)			SiO <sub>2</sub>	Fe	Mn	P	TiO <sub>2</sub>
	Easting (m)	Northing (m)	El. (m)	%	%	%	%	%
328083	627417	5874987	636	13.29	60.50	0.294	0.009	0.03
76792	627435	5874985	-	46.70	34.00	0.751*	0.039**	0.03

\*MnO (Mn content 77.4457%)

\*\*P2O5 (P content 77.425%)

**Source:** (Ridgemont Iron Ore, 2012)**Figure 12-1 Lac Virot View from South, 2021****Source:** provided by Red Paramount

### 12.3 2012 Drill Hole Data Verification

All analysis data was reviewed and checked for possible errors. Any potential errors were flagged, and acceptable explanations were given by Red Paramount personnel. SGS verified in 2012 the assay results in the database against data from assay lab certificates. More than 95% of all assay certificates were verified and corroborated from the database.

## 12.4 2023 Site Visit

Maxime Dupéré did not personally inspected the Property as the site visit done in February 13<sup>th</sup>, 2023 and the area was covered in snow however visit was made to the location of Lac Virot core shack in Wabush. Mr. Dupéré examined several drill cores and accompanying drill logs and assay certificates. Assays were examined against drill core mineralized zones. Mr. Dupéré inspected the core storage facilities.

The intention is that Mr. Dupéré will visit the Lac Virot Property site as soon as the snow cover has melted, within the next three months, by June 2023.

Mr. Dupéré verified the drill hole database and QAQC results. Based upon the evaluation of the QA/QC program undertaken on the Property, the availability of SGS assay certificates and internal QAQC, it is the Author's opinion that its independent verification confirms the presence of iron mineralization on the Property and that the results are acceptable for use in the current Mineral Resource Estimate.

## 13 MINERAL PROCESSING AND METALLURGICAL TESTING

### 13.1 2022 SGS Quebec Metallurgical Testwork

During fall 2022 Iron ore samples from the Lac Virot deposit were processed at the SGS Quebec laboratories. For this test program, two samples; a surface grab sample and a drill core sample were received for characterization and evaluation of their metallurgical performance.

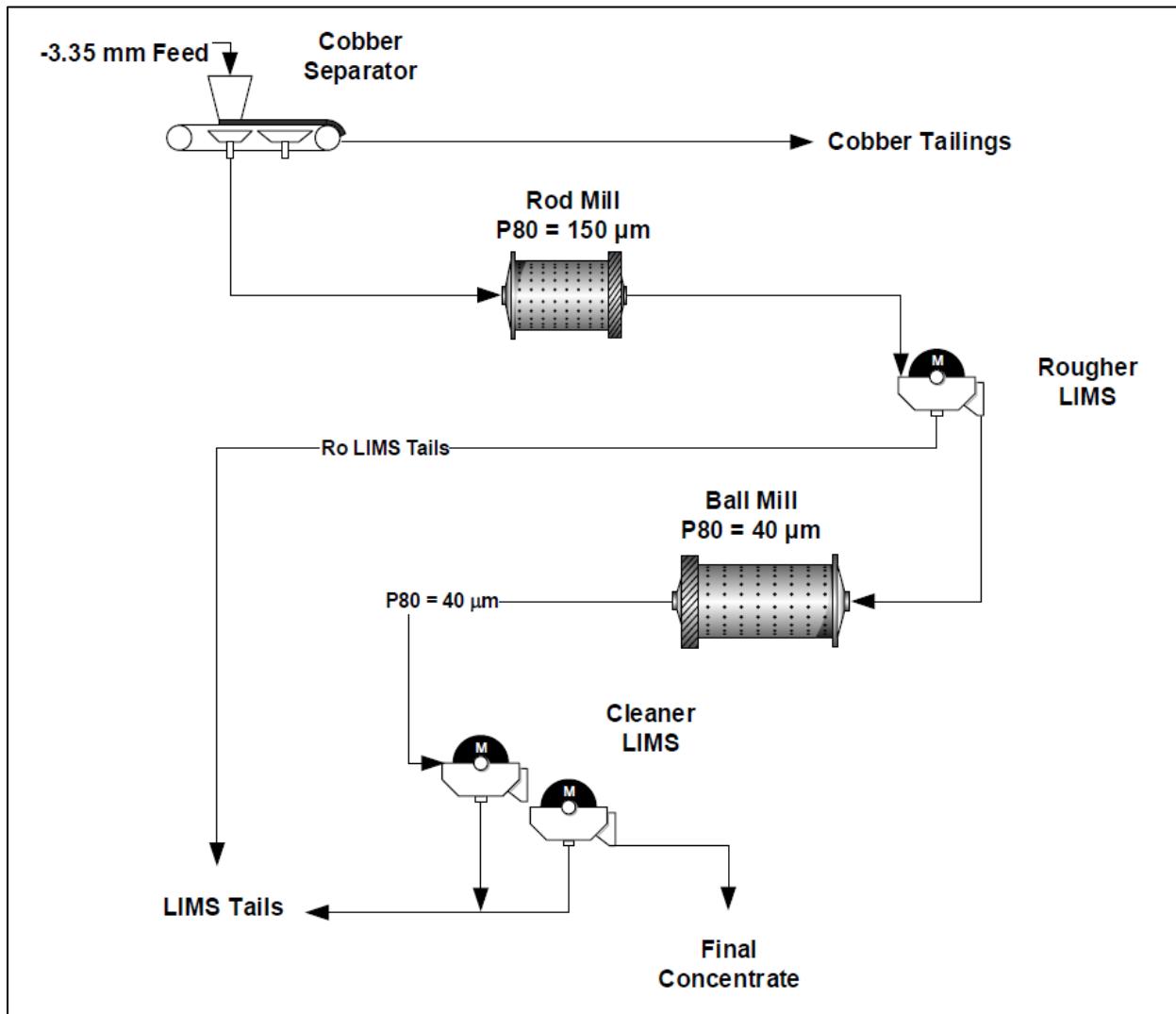
Chemical analysis of the two samples found them to be very similar, with iron content ranging from 30.4% Fe in the Core sample to 31.3% Fe in the Surface sample and the silica content ranging from 44.2% SiO<sub>2</sub> in the Core sample to 47.4% SiO<sub>2</sub> in the Surface sample. Both samples have low sulphur content at less than 0.02% S. The amount of magnetically recoverable iron as determined by Satmagan was slightly higher in the Core sample at 80.2% than the 72.2% observed for the Surface sample.

A Bond ball mill grindability test (BWI) completed on a 10-kg composite of the two samples obtained a work index value at 7.7 kWh/t, which is qualified as “very soft” ore corresponding to the 3<sup>rd</sup> percentile of the SGS database.

Metallurgical tests were then carried out to evaluate the recovery of iron via magnetic or gravity separation processes.

For the magnetic separation, Davis tube tests at P<sub>80</sub> of 38 and 53 µm on both samples showed a highgrade iron concentrate at expected recoveries. The grades and recoveries obtained are 71.3% Fe at 73.5% and 68.5% Fe at 79.7%, respectively for Surface and Core samples. The impurities are below 4.0 % SiO<sub>2</sub> + Al<sub>2</sub>O<sub>3</sub> and below 0.05% S, removing any need for flotation. Also, dry medium intensity magnetic separation at 1.7 mm rejected 26.0% and 30.5% of the mass with low magnetic iron loses of 0.9% and 1.3%, for the Surface and Core samples, respectively. These results show that there is opportunity to reduce CAPEX with the addition of a coarse cobbing pre-concentration stage ahead of the ball mill.

A heavy liquid separation test was performed to evaluate the amenability of the ore to gravity separation. The results showed that the sample was not amenable to gravity recovery, achieving only 45.7% Fe and 51.8 % Fe in the 3.1 g/cm<sup>3</sup> sink fraction and further grinding would be required. This testwork program showed that the ore has a good proportion of magnetite which can be recovered with a series of size reduction and magnetic separation stages as presented in Figure 13-1. The proposed flowsheet should be evaluated at larger scale to confirm the feed sizes to the cobber, rougher, and cleaned magnetic separation stages and the number of magnetic separators to include in the wet LIMS stages.

**Figure 13-1 Proposed Lac Virot Beneficiation Flowsheet**

## 13.2 Introduction

This testwork program aiming a preliminary metallurgical test work for the treatment of the Lac Virot deposit ore from Red Paramount Iron Ltd. The program included the processing of 20 kg of ore and the assessment of the metallurgical performance of two variability samples.

The objective of the testwork was to obtain preliminary data on comminution, and recovery of iron via magnetic and gravity separation.

The samples were characterized (comminution, chemical analysis) and submitted to metallurgical tests (Davis tube test, Heavy liquid separation and Magnetic separation). The performance of each test was evaluated.

### 13.2.1 Sample Receipt and Preparation

The samples were delivered to SGS in Burnaby, Vancouver and then shipped to SGS Québec. Two samples identified as drill core (16.6 kg) and surface grab (3.95 kg) were received. Table 13-1 shows the quantity of material received and Figure 13-2 shows the sample preparation and testwork flowsheet. Enough material from each of the two zones (2.0 kg of Surface and 8.0 kg of Core) were split and blended for the BWI test and approximately 1.5 kg of each zone was used for metallurgical testing.

**Table 13-1      Sample Inventory**

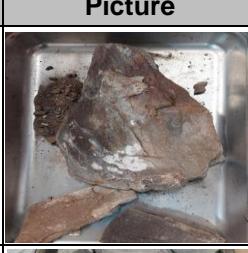
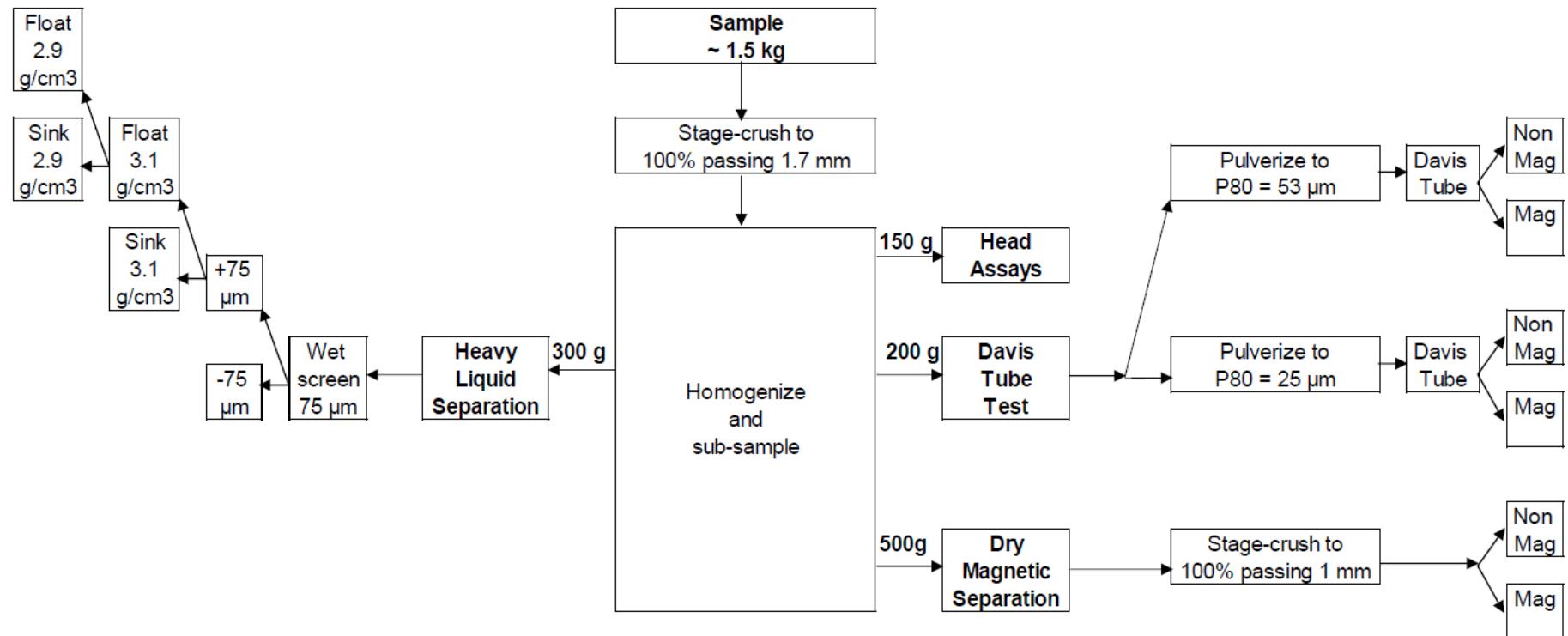
Sample ID	Weight (kg)	Picture
Surface	3.95	
Core	16.6	

Figure 13-2 Sample Preparation and Testwork Flowsheet



### 13.3 Testwork Summary

#### 13.3.1 Head Characterization

A subsample from each of the prepared composites was submitted for chemical analysis, the results of which are summarized in Table 13-2. Both samples contained mostly iron and silica, with iron content ranging from 30.4% Fe in the Core sample to 31.3% Fe in the Surface sample and the silica content ranging from 44.2% SiO<sub>2</sub> in the Core sample to 47.4% SiO<sub>2</sub> in the Surface sample. Both samples have low sulphur content at less than 0.02% S. The amount of magnetically recoverable iron as determined by Satmagan was slightly higher in the Core sample at 80.2% than the 72.2% observed for the Surface sample.

**Table 13-2 Samples Head Assays**

Sample ID	SiO <sub>2</sub> (%)	Al <sub>2</sub> O <sub>3</sub> (%)	F <sub>2</sub> O <sub>3</sub> (%)	MgO (%)	CaO (%)	Na <sub>2</sub> O (%)	K <sub>2</sub> O (%)	TiO <sub>2</sub> (%)	P <sub>2</sub> O <sub>5</sub> (%)	MnO (%)	Cr <sub>2</sub> O <sub>3</sub> (%)	V <sub>2</sub> O <sub>5</sub> (%)	LOI (%)	Sum (%)	Fe (%)	S (%)	Fe mag (%)	Fe <sub>3</sub> O <sub>4</sub> (%)	Mag. Rec. Fe (%)	S.G. (g/cm <sup>3</sup> )
Surface	47.4	0.12	44.7	1.60	0.45	< 0.01	< 0.01	0.02	0.03	0.67	0.01	< 0.01	3.11	98.1	31.3	< 0.01	22.6	31.2	72.2	3.36
Core	44.2	0.45	43.4	1.75	2.76	0.02	0.01	0.03	0.03	1.74	0.01	< 0.01	5.53	99.9	30.4	0.02	24.4	33.6	80.2	3.42

### 13.3.2 Comminution Tests

#### 13.3.2.1 Bond Ball Mill Grindability Test

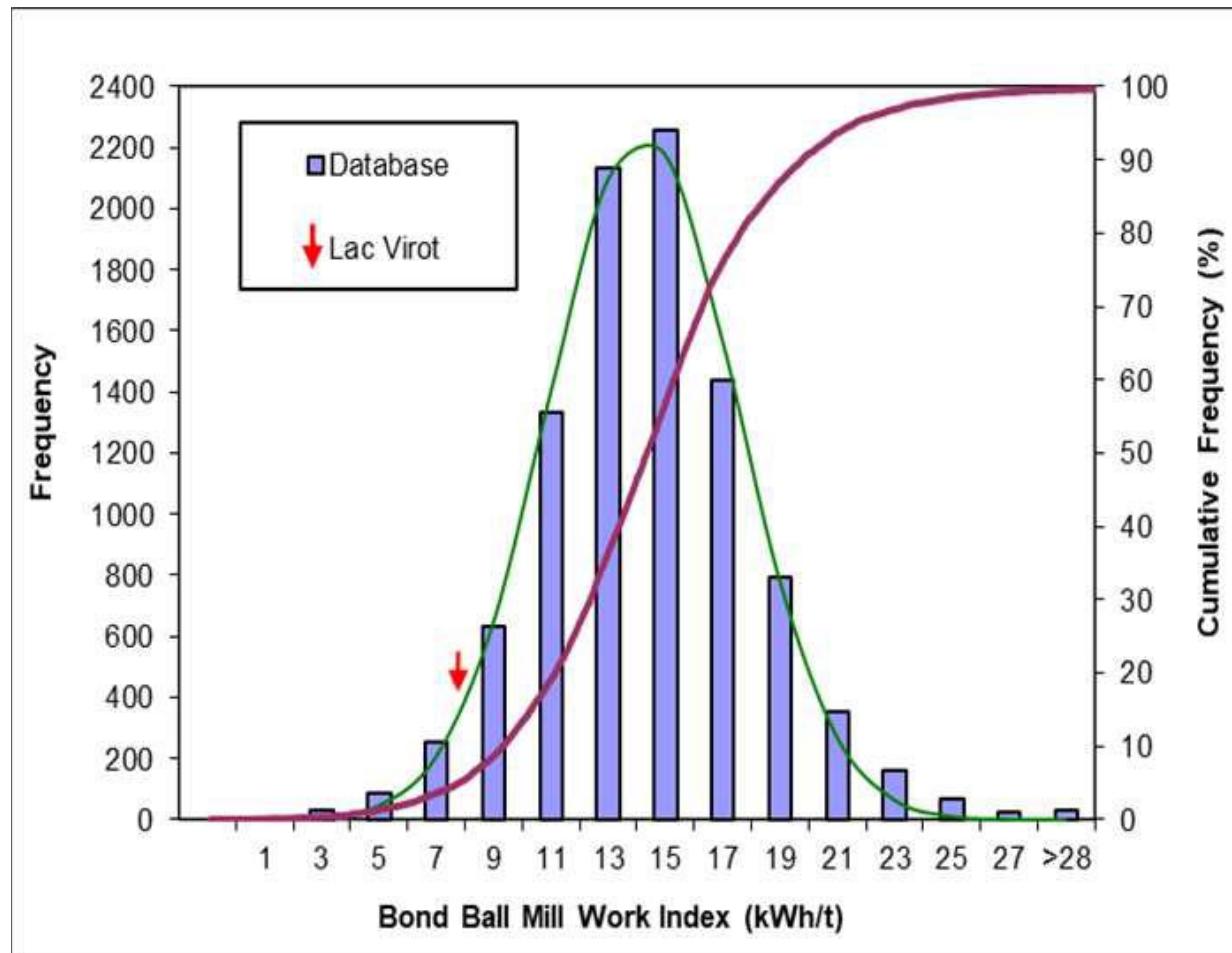
The Bond ball mill grindability test was performed according to the original Bond procedure at a closing size of 150  $\mu\text{m}$ . The test results are summarized in Table 13-3 and Figure 13-2.

With a Work index value of 7.7 kWh/t, the composite has a ball mill hardness corresponding to the 3<sup>rd</sup> percentile of the SGS database. This can be categorized as “very soft” ore, with “soft” and “moderately soft” starting at the 25<sup>th</sup> and 40<sup>th</sup> percentile.

**Table 13-3 BWI Results Compared to SGS Database**

Sample Name	Mesh of Grind	$F_{80}$ ( $\mu\text{m}$ )	$P_{80}$ ( $\mu\text{m}$ )	Gram per Revolution	Work Index (kWh/t)	Hardness Percentile	Category
Composite	100	1978	130	3.94	7.7	3.30	Very Soft

**Figure 13-3 BWI Results Compared to SGS Database**



### 13.3.3 Metallurgical Beneficiation

#### 13.3.3.1 Magnetic Separation

##### 13.3.3.1.1 Davis Tube Test

Davis tube tests at 38 µm and 53 µm size on the two samples (Core and Surface) were carried out. The results are summarized in Table 13-4. Both samples produced good quality magnetite concentrates at both grind sizes with the best results achieved at the finest primary grind size:

- Surface sample
  - 71.3% Fe at 73.4% iron recovery
  - 0.01% S
  - 0.90% SiO<sub>2</sub>
- Core sample
  - 68.9% Fe at 79.8% iron recovery
  - 0.05% S
  - 2.12% SiO<sub>2</sub>

**Table 13-4 Davis Tube Test**

Test	Feed	Feed Wt. (g)	P <sub>80</sub> (µm)	MAGS		MAGS Grade (%)				NON-MAGS Grade (%)			Distribution (%)	
				Weight (%)	Fe	Sat	SiO <sub>2</sub>	S	Fe	Fe	Sat	S	Fe to MAGS	Mag Fe to NON-MAGS
DTT 38 µm	Surface	23.7	38	32.6	71.3	94.6	0.90	0.01	12.5	1.0	0.02	73.4	2.1	
	Core	23.1	38	35.3	69.8	95.7	2.12	0.05	9.65	1.0	0.03	79.8	1.8	
DTT 53 µm	Surface	23.4	53	33.0	71.3	93.2	1.59	0.01	12.5	0.8	0.02	73.7	1.7	
	Core	24.4	53	35.7	68.0	95.0	4.51	0.05	9.79	0.8	0.02	79.4	1.5	

##### 13.3.3.1.2 Dry Magnetic Separation

Dry medium intensity magnetic separation at a coarse size was carried out on the two samples (Core and Surface). The results are summarized in Table 13-5. The dry magnetic separation did not significantly increase the iron grade, but did result in a 26-30% mass rejection with minimal magnetic iron losses:

- Surface sample
  - 26.2% mass rejection
  - 0.9% magnetic iron loss
- Core sample
  - 30% mass rejection
  - 1.3% magnetic iron loss

**Table 13-5 Hight Intensity Magnetic Separation**

Test	Feed	Feed Wt. (g)	P <sub>80</sub> (µm)	MAGS		MAGS Grade (%)				NON-MAGS Grade (%)			Distribution (%)	
				Weight (%)	Fe	Sat	SiO <sub>2</sub>	S	Fe	Fe	Sat	S	Fe to MAGS	Mag Fe to NON-MAGS
HIMS	Surface	789	1700	73.8	36.9	44.7	43.2	0.03	18.4	1.1	0.03	85.0	0.9	
	Core	859	1700	69.5	37.2	47.1	37.7	0.03	12.6	1.5	0.04	87.1	1.3	

### 13.3.3.2 Heavy Liquid Separation

Heavy liquid separation was carried out on the -1700/+75 µm fraction at two specific gravities of 3.1 g/cm<sup>3</sup> and at 2.9 g/cm<sup>3</sup> to evaluate the amenability of the samples to gravity separation. The results are given in Table 13-6 and in Table 13-7 for Surface and Core samples, respectively. The results showed that the sample was not amenable to gravity recovery, achieving only 45.7% Fe and 51.8 % Fe in the 3.1 g/cm<sup>3</sup> sink fraction and further grinding would be required.

- Surface sample
  - 51.8% Fe at 71.3% iron recovery
  - 12.7% SiO<sub>2</sub>
- Core sample
  - 45.7% Fe at 78.6% iron recovery
  - 20.3% SiO<sub>2</sub>

**Table 13-6 Heavy Liquid Separation for Surface Sample**

Product	Weight (%)	Grade (%)				Distribution (%)			
		Fe	Sat	SiO <sub>2</sub>	S	Fe	Sat	SiO <sub>2</sub>	S
3.1 Sink	43.3	51.8	52.8	12.7	0.02	71.3	73.1	11.6	38.8
3.1 Sink + 75 µm	54.6	50.1	50.3	16.0	0.02	86.9	88.0	18.6	59.2
2.9 Sink + 3.1 Sink	52.1	47.2	47.7	20.2	0.02	78.2	79.6	22.3	46.8
2.9 Sink + 3.1 Sink + 75 µm	63.4	46.5	46.5	21.7	0.02	93.8	94.5	29.2	67.2
Head		44.7	32.5	47.4	< 0.01				

**Table 13-7 Heavy Liquid Separation for Core Sample**

Product	Weight (%)	Grade (%)				Distribution (%)			
		Fe	Sat	SiO <sub>2</sub>	S	Fe	Sat	SiO <sub>2</sub>	S
3.1 Sink	51.3	45.7	52.8	20.3	0.04	78.6	77.3	23.7	64.5
3.1 Sink + 75 µm	62.4	43.2	50.3	22.6	0.04	90.3	90.4	32.0	85.4
2.9 Sink + 3.1 Sink	60.1	41.2	47.7	26.3	0.04	83.1	83.1	35.9	70.0
2.9 Sink + 3.1 Sink + 75 µm	71.2	39.7	46.5	27.4	0.04	94.9	96.2	44.3	91.0
Head		43.4	24.3	44.2	0.02				

### 13.4 Conclusions and Recommendations

The following conclusions are coming from and SGS report titled “An Investigation into Metallurgical Testwork on iron Ore Samples from Lac Virot”, prepared for red Paramount Iron Ltd (Manga, M.M. and Lascelles, D., 2022).

The conclusions can be made from the testwork completed on two samples from the Lac Virot project.

- The head assays show that 72% of the Surface sample iron and 80% of the Core sample iron is recoverable by magnetic separation.
- Davis tube tests at 38 and 53  $\mu\text{m}$  on both samples showed that a high-grade iron concentrate ( $>68\%$  Fe) could be achieved at expected recoveries.
  - The Surface sample obtained a magnetic concentrate grade of 71.3% Fe at an average 73.5% recovery.
  - The Core sample obtained a magnetic concentrate grade of 68.5% Fe at an average recovery of 79.7%.
- At a  $P_{80}$  of 38  $\mu\text{m}$ , the magnetite concentrates were below 4.00 %  $\text{SiO}_2 + \text{Al}_2\text{O}_3$  and below 0.05% S, indicating that the addition of a flotation circuit would not be necessary.
- Dry medium intensity magnetic separation at coarse size (1.7 mm) was able to reject 26% to 30% of the mass at very low magnetic iron losses of ~1%, for both samples. We would recommend a coarse cobbing stage ahead of the ball mill to reduce CAPEX.
- The HLS tests showed reasonable iron recovery, but the maximum grades achieved were low at 51.8% Fe for the Surface sample and 45.7% Fe for the Core sample. This concentrate could be upgraded much further by regrinding.
- Seeing as the ore has a good proportion of magnetite, 75-80%, we would recommend focusing solely on a magnetic separation circuit which would include a medium intensity coarse cobbing stage (2-4 mm) ahead of ball milling to a  $P_{80}$  of ~150  $\mu\text{m}$ , 1 or 2 stages of rougher low intensity magnetic separation, regrinding of the rougher magnetic concentrate to a  $P_{80}$  of 40  $\mu\text{m}$ , and 2-3 stages of cleaner low intensity magnetic separation.
- Further testwork is recommended to confirm the crushing, grinding, and magnetic separation stages to be considered for the final flowsheet.

The author considers the conclusions of the SGS report titled “An Investigation into Metallurgical Testwork on iron Ore Samples from Lac Virot” to be adequate.

## 14 MINERAL RESOURCE ESTIMATE

SGS completed a Mineral Resource Estimate for the Lac Virot deposit at the Lac Virot Iron project.

To the best of the QP's knowledge there are currently no title, legal, taxation, marketing, permitting, socio-economic or other relevant issues that may materially affect the Mineral Resource described in this Technical Report.

The Mineral Resources presented herein, with an effective date of February 16<sup>th</sup>, 2023, incorporates drilling data from holes completed by previous owner of the 2012 drilling campaign.

The reporting of the MRE comply with all disclosure requirements for Mineral Resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects. The classification of the MRE is consistent with the 2014 Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards (2014 CIM Definitions) and adhere as best as possible to the 2019 CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines (2019 CIM Guidelines).

The Mineral Resource estimate was conducted using SGS 3D modelling and block modelling proprietary software called Genesis, together with Microsoft Excel. The mineral resource estimation was carried out by Mr. Maxime Dupéré (the Qualified Person) of SGS Geological Services an independent mining and geological consulting branch of SGS Canada Inc.

### 14.1 Mineral Resource Estimation Database

The database provided by Red Paramount to inform the Mineral Resource Estimate consists of:

- Information from diamond drillholes in the form of:
  - Collar surveys.
  - Downhole surveys.
  - Sampling and assay data.
  - Geology logs.
  - Limited Specific gravity (SG) measurements.
  - Rock Quality Designation (RQD) measurements.
- Topographic surveys were provided as 3D face dxf format.

The drillhole data was provided in Microsoft Excel files that were extracted from a Microsoft Access database managed by Red Paramount. The principal sources of information used for the estimate are exploration drilling programs conducted by previous owner (Ridgemont Iron Ore Corp.) during the 2012 drilling campaign.

A total of 43 drillholes were drilled. The cut-off date for inclusion of drill hole data into this estimate is December 3<sup>rd</sup>, 2012 at which time there was no outstanding information for Lac Virot as the drilling was completed in 2012.

### 14.2 Exploratory Analysis of the Raw Data

The dataset examined consisted of sampling and logging data from diamond drillholes. The following attributes are of direct relevance to the estimate:

- Specific Gravity (SG) measurements.
- Rock Quality Designation (RQD) measurements.

- Silica ( $\text{SiO}_2$ ), Aluminum ( $\text{Al}_2\text{O}_3$ ), Ferric Iron Oxide ( $\text{Fe}_2\text{O}_3$ ), Magnesium Oxide ( $\text{MgO}$ ), Calcium Oxide ( $\text{CaO}$ ), Sodium Oxide ( $\text{Na}_2\text{O}$ ), Potassium Oxide ( $\text{K}_2\text{O}$ ), Titanium Dioxide ( $\text{TiO}_2$ ), Phosphorus pentoxide ( $\text{P}_2\text{O}_5$ ), Manganese Oxide ( $\text{MnO}$ ), chromium (III)
- Oxide ( $\text{Cr}_2\text{O}_3$ ), Vanadium Pentoxide ( $\text{V}_2\text{O}_5$ ), Loss on ignition (LOI), SumMagnetic Fe (from Satmagan), Magnetite ( $\text{Fe}_3\text{O}_4$ ) (from Satmagan),  $\text{Fe}^{2+}$  as  $\text{FeO}$  (from titration), Weight (g).

#### 14.2.1 Validation of the data

SGS undertook a validation process which included the following checks:

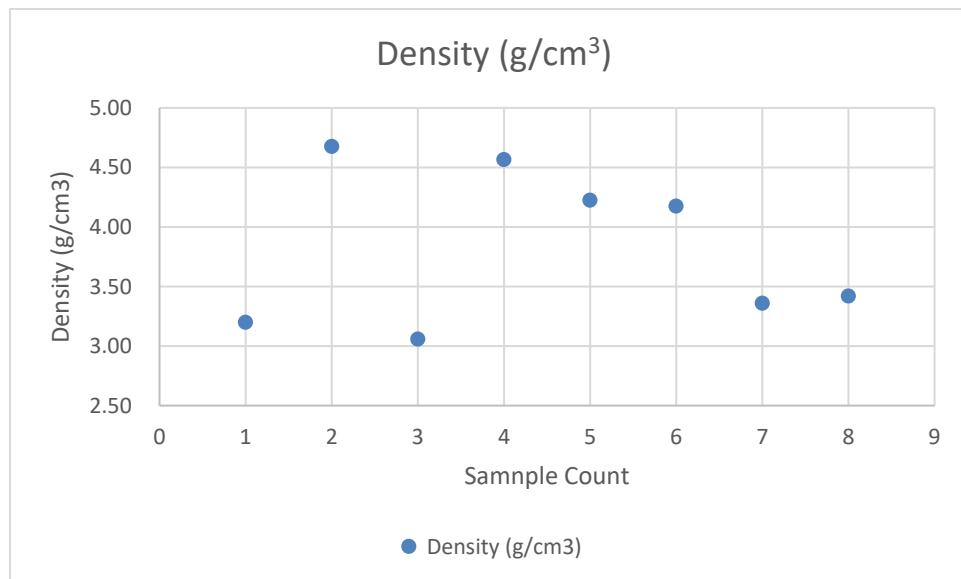
- Examining the sample assay, collar survey, down-hole survey and geology data to ensure that the data were complete for all the drillholes,
- Examining the de-surveyed data in three dimensions to check for spatial errors,
- Examination of the assay and density data to ascertain whether they were within expected ranges,
- Checks for “FROM-TO” errors, to ensure that the sample data do not overlap one another or that there are no unexplained gaps in the sampling.

The data validation exercise revealed the following:

- There are no unresolved errors relating to missing intervals and any overlaps in the drillhole logging data. Absent assays correspond to intervals where no samples were taken.
- Drill Holes LV-001, LV-002 and LV-034 had erroneous dips in the database. Changes were made according to drill logs information.
- Examination of the drillhole data in three dimensions of both in the database and on the drill logs show good correlations and that the collar locations are within expected relative position to the topographic surface.
- Extreme assays were checked, and no errors were found.
- Limited density measurements (2) from the 2023 metallurgical tests work (Archimedes principle) and limited density measurements (6) provided by the client on mineralised material from Lac Virot.
- Density measurement values (Table 14-1) indicate that densities reported by the client tend to be higher than the ones reported in the met test work report (see Table 13-2). Additionally, these different density values are directly related to iron content within the samples. The limited number of values does not permit SGS to establish an adequate density formula based on Fe therefore a 3.5 value was set as the reference density value used for the mineralized material.
- Generally, the sampled intervals core recoveries are adequate and show good recovery. Some recoveries were reported above 100% and were noted. Abnormal core recoveries over 100% were retained as 100%.

**Table 14-1 Red Paramount Density Measurements**

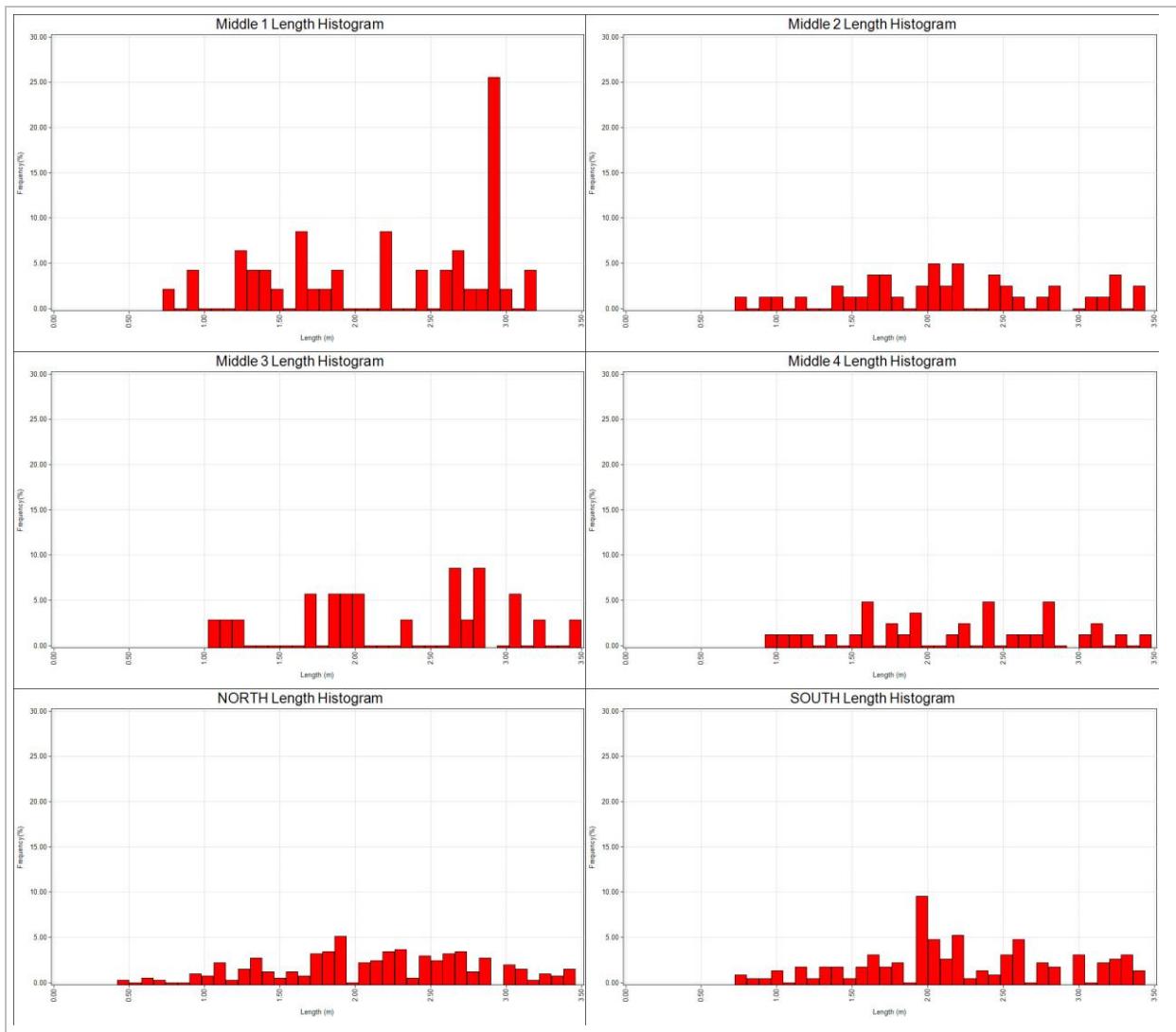
Intercept	Sample #	Mass (g)	Volume (cm <sup>3</sup> )	Density (g/cm <sup>3</sup> )
LV-025 (39-42 m)	1	448	140	3.20
LV-012 (303-306 m)	2	318	68	4.68
	3	520	170	3.06
	4	662	145	4.57
LV-011 (114-117 m)	5	338	80	4.23
	6	835	200	4.18
			Average	3.98

**Figure 14-1 Scatter Plot of Limited Available Density Measurements (Drill Hole and Rock Material)**

## 14.2.2 Statistics of the Raw Sample Data

### 14.2.2.1 Sample Lengths

A total of 2,307.50 metres of drillhole samples were assayed for all zones. The North (1,070.40 m) and the South (584.60 m) are the ones most sampled. Sample lengths vary from 0.05 m to 10.00 m in North zone and 0.80 m to 3.90 m in South zone with the dominant sample length being 2.6 metre for both areas as illustrated in the histograms in Figure 14-2.

**Figure 14-2 Sample Length Histogram for North, South and Middle Zones**

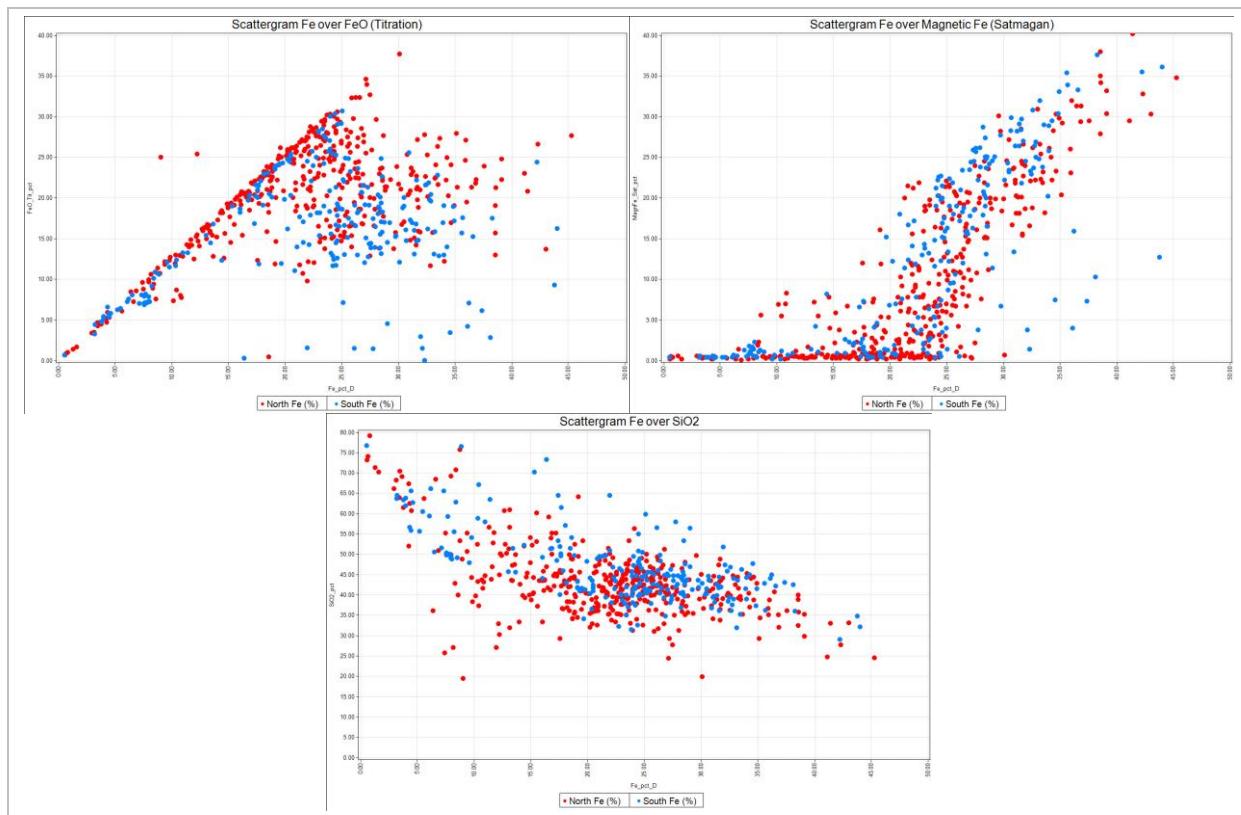
**Table 14-2 Length (m) Statistics**

Length(m) Statistics	All	Middle1	Middle2	Middle3	Middle4	NORTH	SOUTH
Min Value	0.50	0.80	0.80	1.10	1.00	0.50	0.80
Max Value	10.70	3.20	4.50	4.00	4.00	10.70	3.90
Average	2.61	2.29	2.76	2.61	2.77	2.62	2.54
Length Weighted Average	2.84	2.52	3.00	2.77	2.93	2.90	2.71
Sum of Length	2,307.50	107.80	223.30	91.20	230.20	1,070.40	584.60
Variance	0.61	0.51	0.68	0.44	0.44	0.74	0.44
Standard Deviation	0.78	0.71	0.82	0.66	0.67	0.86	0.66
% Variation	0.30	0.31	0.30	0.25	0.24	0.33	0.26
Median	2.90	2.50	3.00	2.90	3.00	2.90	2.70
First Quartile	2.00	1.70	2.10	2.00	2.50	2.10	2.00
Third Quartile	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Count	885	47	81	35	83	409	230

### 14.3 Bivariate Analysis

The relationship between iron and silica is well established. Scatterplots were created to understand the existence of any correlation between variables which should be preserved in the mineral resource estimate. A strong linear relationship between the Fe and SiO<sub>2</sub> grades exists, with some elements displaying this relationship with multiple elements. As an example, Figure 14-3 shows the relationships of Fe and SiO<sub>2</sub>, Fe and FeO (titration), ands Fe ands Magnetic Fe (Satmagan) for the South and North zones.

**Figure 14-3 Sample ScatterPlots Fe, FeO, SiO<sub>2</sub> and Magnetic Fe (Satmagan) for North and South Zones**



#### 14.3.1 Core Recovery

The average core recovery is 97.13% for the entire deposit (South, Middle & North).

### 14.4 Geological Modelling

Datamine was first used to generate three-dimensional volumes and surfaces representing the mineralised zones. SGS used Genesis Software for the update the South and North zones.

#### 14.4.1 Topography

A topographic survey was provided by Red Paramount. This survey consists of a topographic surface (3DFace) in Autocad dxf.

The surveyed drillhole collars correspond well with the resultant topographic surface.

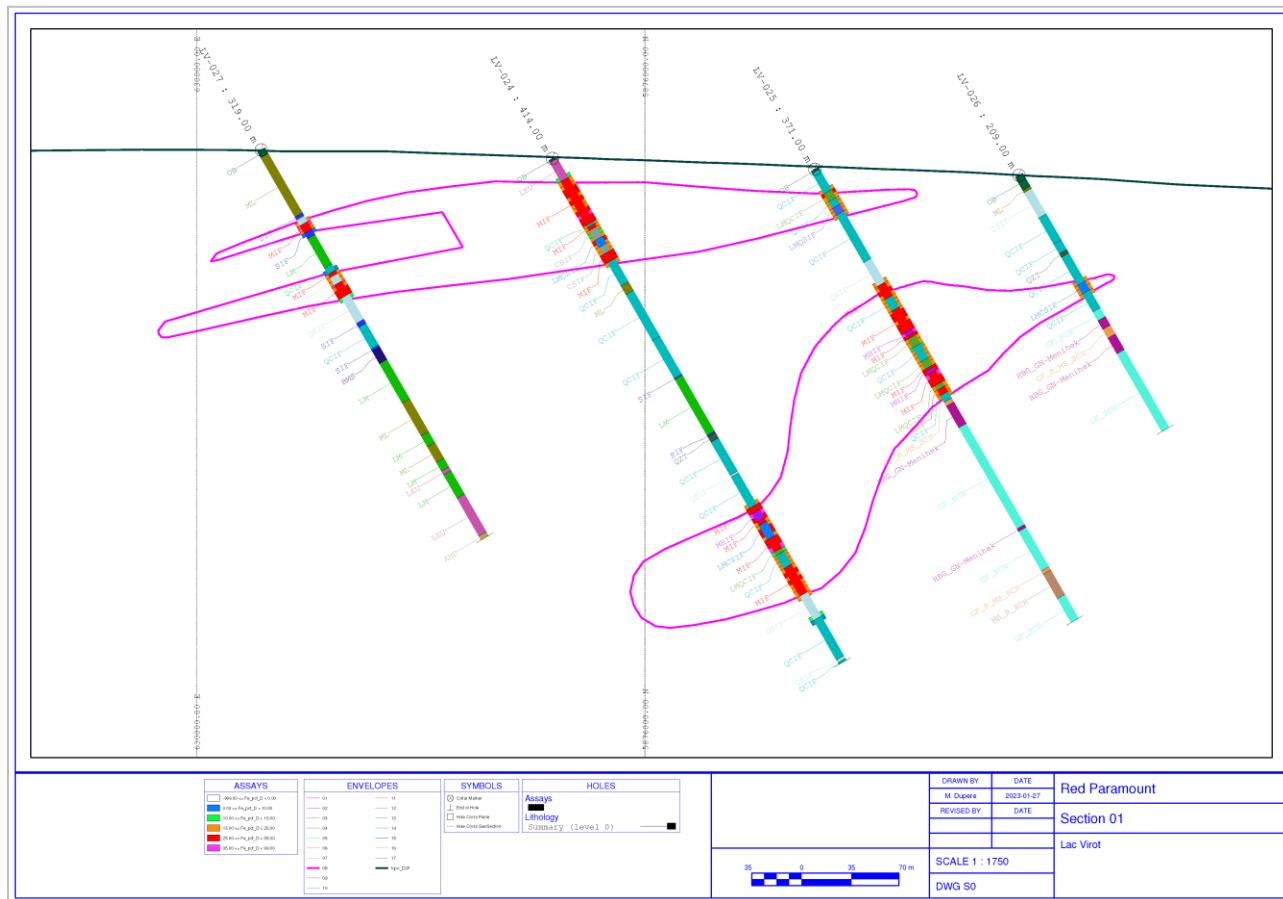
#### 14.4.2 Mineralised Zones

The modelling procedure examined the continuity of Fe (%) grades along strike and down-dip to generate mineralised wireframes. A modeling cut-off of 15% was used as a base for modelling. There are areas where low grade Fe is present. These areas were taken out mostly as external waste zones and do not

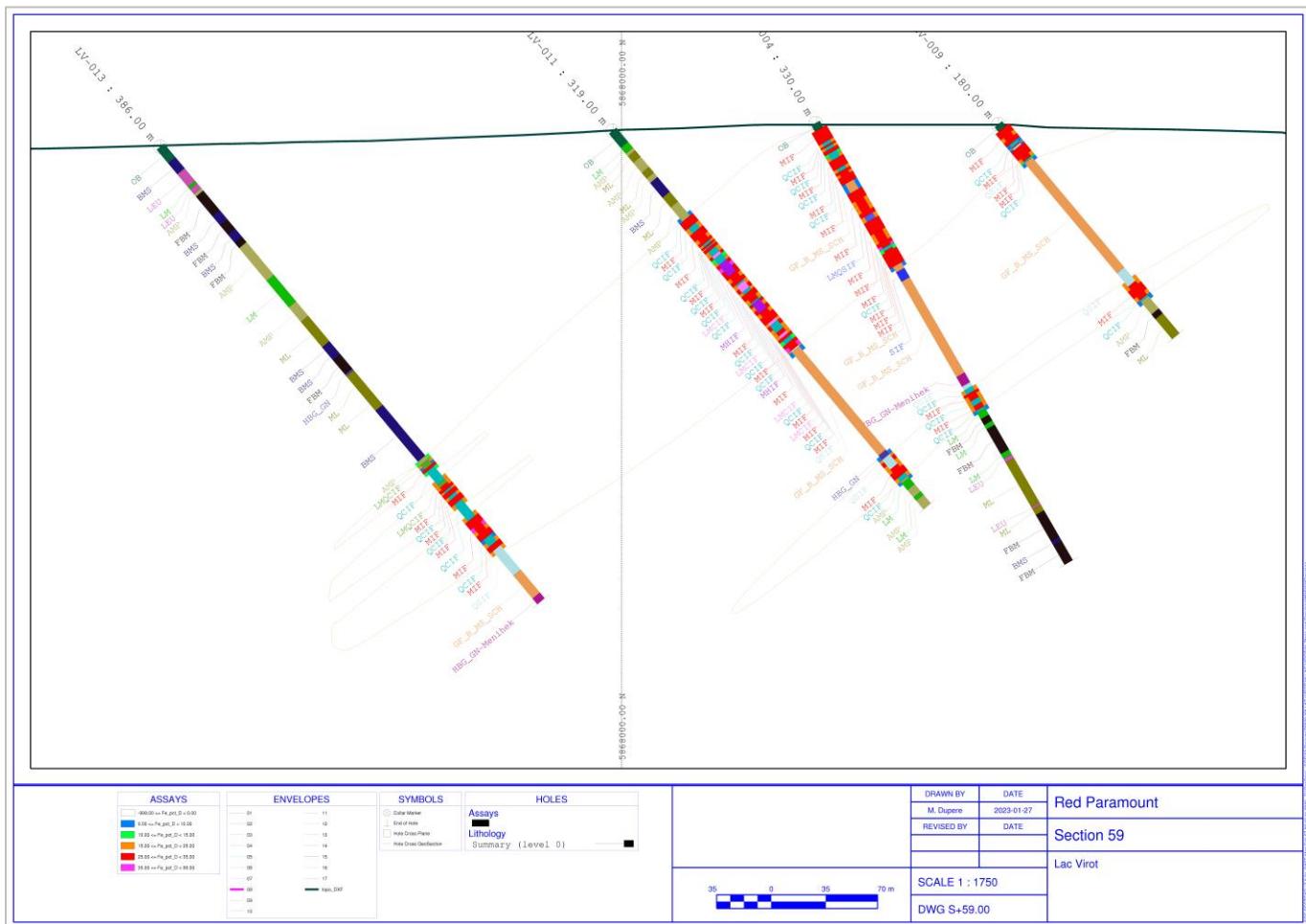
form part of the mineralized solids. However, waste intervals of less than 6 metres were considered in the model as internal waste. The Assay results within internal waste intervals were kept and taken into account during estimation. The use of the threshold resulted in generally continuous zones that form a suitable framework for block model grade estimation. The modelled zones (areas/solids/envelopes) were individually coded into the drillhole data and volumes were generated using Datamine and Genesis software. Where necessary, manual edits were incorporated to provide for geologically realistic shapes.

The modelling resulted in fourteen individual mineralised zones. The next figures represent the main 2 zones such as the zone North, number tagged as 8 (Figure 14-4) and the South zone, number tagged as 16 (Figure 14-5).

**Figure 14-4 Cross-Section Illustrating Modelled Mineralised North Zone (8)**



**Figure 14-5 Cross-Section Illustrating Modelled Mineralised South Zone (16)**



### 14.4.3 Overburden Surface

SGS created an overburden surface from drill hole logs. The overburden surface was modified so it would not cross over the topographic surface given by the client. This topographic surface is limited in terms of quantity of data but serves its purpose adequately. Further drill hole information and /or further targeted soil thickness probing will help better define the shape of this contact surface.

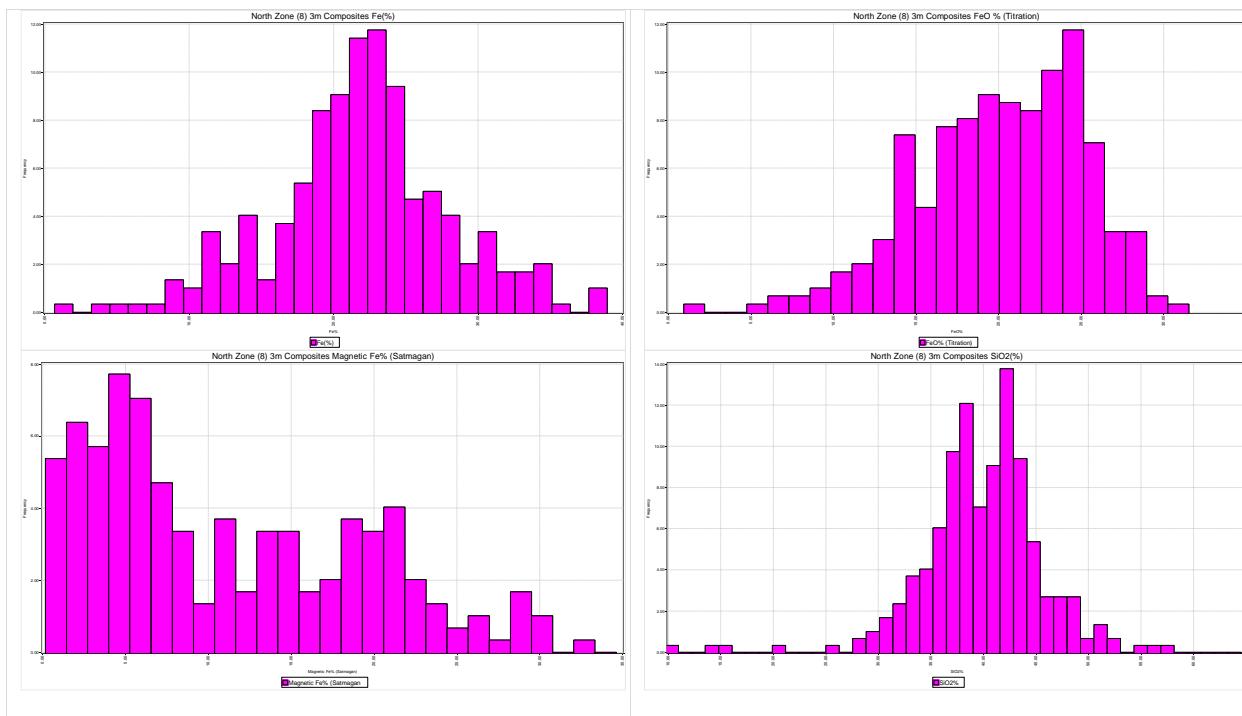
## 14.5 Creation of Mineralised Intervals

Mineralised intervals consisting of the top and bottom intersects of mineralised assay data following the modelling parameters were created for all mineralised zones. The mineralised intervals are within the shapes of the solids and reflect the economic potential of profitable mining of each selected drill hole.

## 14.6 Statistical Analysis of the Composite Data

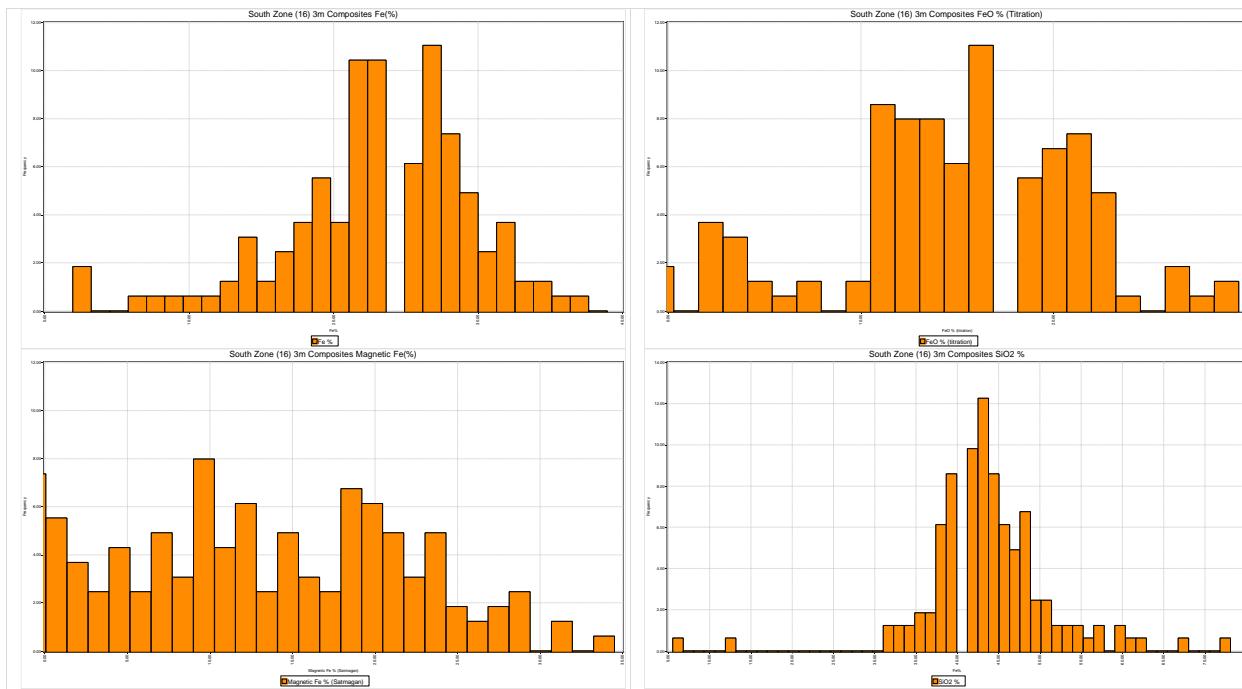
Samples were composited to three (3) metre lengths based the dominant sample interval, size of the deposit and block model parameters. Each set of composited data were restrained to each 3D solid. Compositing was carried out inside the mineralised 3D solids and within mineralised intervals. Statistics were analysed for  $\text{Al}_2\text{O}_3(\%)$ ,  $\text{CaO}(\%)$ ,  $\text{Cr}_2\text{O}_3(\%)$ ,  $\text{Fe}_2\text{O}_3(\%)$  (Fe %, derived),  $\text{Fe}_3\text{O}_4(\text{Sat}) (\%)$ ,  $\text{FeO}(\text{titration}) (\%)$ ,  $\text{K}_2\text{O} (\%)$ ,  $\text{LOI}(\%)$ ,  $\text{MagnFe}(\%)$ ,  $\text{MgO}(\%)$ ,  $\text{MnO}(\%)$ , (Mn % derived),  $\text{Na}_2\text{O}(\%)$ ,  $\text{P}_2\text{O}_5(\%)$ ,  $\text{SiO}_2(\%)$ ,  $\text{TiO}_2(\%)$ ,  $\text{V}_2\text{O}_5(\%)$ . The Fe%, Magnetic Fe% (Satmagan), FeO% (titration) and SiO<sub>2</sub>% Histograms of the North zone are shown in Figure 14-6. The Fe%, Magnetic Fe% (Satmagan), FeO% (titration) and SiO<sub>2</sub>% Histograms of the South zone are shown in Figure 14-7.

**Figure 14-6 Histograms of Fe%, FeO%, Magnetic Fe% and SiO<sub>2</sub>% of North Zone**



**Table 14-3 Statistics of the North 3 m Composite Set**

Statistics	Length (m)	Al <sub>2</sub> O <sub>3</sub> (%)	CaO (%)	Cr <sub>2</sub> O <sub>3</sub> (%)	Fe (%)	FeO (Tit) (%)	Fe <sub>2</sub> O <sub>3</sub> (%)	MagnFeSat (%)	Fe <sub>3</sub> O <sub>4</sub> Sat (%)	K <sub>2</sub> O (%)	LOI (%)	MgO (%)	MnO (%)	Na <sub>2</sub> O (%)	P <sub>2</sub> O <sub>5</sub> (%)	SiO <sub>2</sub> (%)	TiO <sub>2</sub> (%)	V <sub>2</sub> O <sub>5</sub> (%)
Min Value	6.20	0.02	0.01	0.00	3.22	0.30	4.60	0.07	0.10	0.00	1.54	0.02	0.14	0.00	0.01	6.83	0.00	0.00
Max Value	6.20	13.22	11.41	0.05	43.18	29.74	61.73	35.49	48.97	4.24	22.16	5.55	2.86	0.86	0.43	73.30	0.74	0.09
Average	6.20	0.72	3.49	0.02	24.73	16.62	35.36	14.27	19.71	0.17	10.32	2.69	1.46	0.05	0.03	44.83	0.05	0.01
W.Average	2.30	0.73	3.49	0.02	24.79	16.58	35.43	14.34	19.80	0.17	10.27	2.68	1.46	0.05	0.03	44.79	0.05	0.01
Variance	0.00	3.58	3.95	0.00	38.82	34.92	79.32	75.61	144.32	0.35	21.00	1.53	0.38	0.01	0.00	52.87	0.01	0.00
Std.Dev.	0.00	1.89	1.99	0.01	6.23	5.91	8.91	8.70	12.01	0.59	4.58	1.24	0.61	0.12	0.05	7.27	0.11	0.01
%Var.	0.00	2.61	0.57	0.38	0.25	0.36	0.25	0.61	0.61	3.47	0.44	0.46	0.42	2.21	1.47	0.16	2.16	1.30
Median	6.20	0.15	3.46	0.02	25.17	17.34	35.98	13.86	19.13	0.01	10.16	2.67	1.38	0.02	0.02	44.25	0.01	0.01
1 <sup>st</sup> Quartile	6.20	0.08	2.16	0.02	22.20	13.27	31.74	7.37	10.23	0.01	7.61	2.04	1.00	0.01	0.02	41.50	0.01	0.01
3 <sup>rd</sup> Quartile	6.20	0.30	4.85	0.02	28.38	20.25	40.58	21.05	29.10	0.02	13.26	3.42	1.92	0.04	0.03	47.68	0.03	0.01
Count	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	

**Figure 14-7 Histograms of Fe%, FeO%, Magnetic Fe% and SiO<sub>2</sub>% of South Zone**

**Table 14-4 Statistics of the South 3 m Composite Set**

Statistics	Length (m)	Al <sub>2</sub> O <sub>3</sub> (%)	CaO (%)	Cr <sub>2</sub> O <sub>3</sub> (%)	Fe (%)	FeO (Tit) (%)	Fe <sub>2</sub> O <sub>3</sub> (%)	MagnFeSat (%)	Fe <sub>3</sub> O <sub>4</sub> Sat (%)	K <sub>2</sub> O (%)	LOI (%)	MgO (%)	MnO (%)	Na <sub>2</sub> O (%)	P <sub>2</sub> O <sub>5</sub> (%)	SiO <sub>2</sub> (%)	TiO <sub>2</sub> (%)	V <sub>2</sub> O <sub>5</sub> (%)
Min Value	6.20	0.01	0.28	0.00	1.96	2.20	2.80	0.20	0.30	0.00	2.11	0.38	0.07	0.00	0.00	10.97	0.00	0.00
Max Value	6.20	14.00	23.11	0.06	40.22	32.53	57.50	37.06	51.26	1.69	29.95	9.45	3.39	2.71	0.83	66.60	2.98	0.06
Average	6.20	0.49	5.65	0.01	23.23	21.36	33.21	9.75	13.46	0.06	14.25	3.07	1.17	0.06	0.04	41.33	0.08	0.01
W.Average	6.20	0.48	5.64	0.01	23.25	21.36	33.24	9.78	13.51	0.06	14.24	3.06	1.17	0.06	0.04	41.34	0.08	0.01
Variance	0.00	2.41	9.66	0.00	39.03	24.96	79.76	77.78	148.42	0.05	28.22	1.87	0.35	0.05	0.01	37.49	0.10	0.00
Std.Dev.	0.00	1.55	3.11	0.01	6.25	5.00	8.93	8.82	12.18	0.22	5.31	1.37	0.59	0.23	0.09	6.12	0.32	0.01
%Var.	0.00	3.15	0.55	0.72	0.27	0.23	0.27	0.90	0.90	3.41	0.37	0.44	0.51	3.87	2.26	0.15	3.94	0.96
Median	6.20	0.09	5.14	0.01	23.38	21.73	33.43	6.96	9.60	0.01	14.13	2.99	1.22	0.02	0.02	41.61	0.01	0.01
1 <sup>st</sup> Quartile	6.20	0.05	3.65	0.01	20.01	18.21	28.60	1.96	2.73	0.01	10.34	2.13	0.73	0.01	0.01	38.33	0.01	0.01
3 <sup>rd</sup> Quartile	6.20	0.21	6.90	0.01	26.51	25.25	37.89	16.00	22.14	0.02	18.20	3.96	1.54	0.04	0.03	44.40	0.02	0.01
Count	298	298	298	298	298	298	298	298	298	298	298	298	298	298	298	298	298	298

### 14.6.1 Cutting and Capping

An outlier analysis was completed on the composite data for the entire deposit and for individual mineralised zones. No capping was applied.

## 14.7 Geostatistical Analysis

Insufficient drill hole data did not permit the modelling of a semi variogram.

## 14.8 Block Modelling

Block models were generated for each project using 25 m by 25 m blocks in the X (easting) and Y (northing) direction and 10 m blocks in the Z (elevation) direction. The block model was not rotated. A block fraction was applied to each block.

The common origins for the block model are shown Table 14-5.

**Table 14-5 Block Model Origin**

Grid	x	y	z
Origin	622,487.50	5,867,163	155
Corner Origin	622,475.00	5,867,150	150
Size	25	25	10
Discretization	4	4	4
Starting Coordinate	622,487.50	5,867,163	155
Starting Block Index	1	1	1
Ending Coordinate	632,612.50	5,876,338	685
Ending Block Index	406	368	54

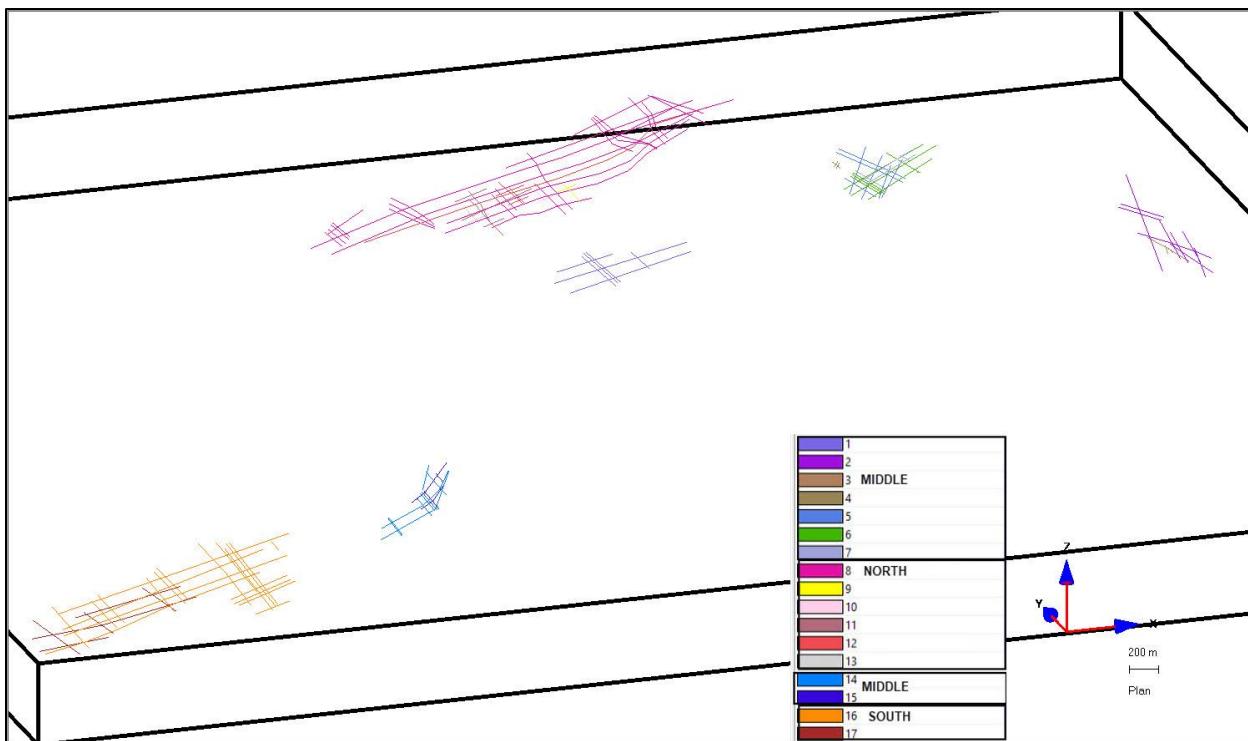
### 14.8.1 Estimation Parameters

The search distance and rotation angles were based on the spatial availability of data.

The selected grades for each mineralized zones within the deposit was interpolated into blocks by the Inverse Distance Squared (ID<sup>2</sup>) estimation method. Search ellipses for the mineral domains were interpreted based on drill hole (Data) spacing, orientation and size of the resource wireframe models (Table 14-5). The search ellipse axes were interpolated and applied to each block of the block model. These variable ellipse axes (azimuth, dip, spin) were applied based on the relative orientation of the different mineralised solids and the observed trend of the mineralization down dip/down plunge (Figure 14-8).

Dynamic anisotropy (in Genesis: Variable Ellipsoid) was used to align the search ellipsoids to account for local changes in the orientation of the mineralised zones along strike and dip. The dynamic search for each zone was orientated using trend surfaces from gridded 3D lines created in Genesis.

**Figure 14-8 Isometric View Looking NorthEast Showing Lac Virot Deposit Variable Ellipsoid Grid Lines used to Populate Azimuth, Dip and Spin Variables of Block Model based on each selected 3D solids**



Three estimation passes were used to interpolate grade into all of the blocks in the mineral domains (Table 14-6).

Grades were interpolated into blocks using a minimum and maximum number of composites based on available data in each mineral domain, to generate block grades during Pass 1, 2 and 3. During pass 1, a minimum of 5 and a maximum of 15 composite samples per drill hole, and a maximum of 3 composites per drill hole, were used to generate block grades totalling 16,998 blocks estimated (32.1%). For pass 2, The same parameters were used except the search ellipse was set as twice the size of the first pass totalling 27,910 blocks estimated (52.6%). For pass 3, a minimum of 3 and a maximum of 15 composite samples per drill hole (no minimum drill holes to use) were needed to generate block grades for totalling 8,115 estimated blocks (15.3%). Note that for the 3<sup>rd</sup> pass for zones 3 and 10, a minimum of 2 samples was set as estimation parameters. Note also that for the 3<sup>rd</sup> pass for zone 4, a minimum of 1 sample was set as estimation parameters. A fixed density of 3.5 was set for all Lac Virot deposit as per findings done in section 14.2.1.

The search parameters are shown in Table 14-6 for Lac Virot Zone 01 to 17.

**Table 14-6 Search Parameters for Lac Virot**

Parameter	<u>Lac Virot Zones 01 to 17 (*except 3, 4 and 10)</u>		
	Pass 1	Pass 2	Pass 3
Calculation Method	ID2		
Search Type	Ellipsoid		
Ellipse orientation	Variable		
Anisotropy X	250	500	1000
Anisotropy Y	250	500	1000
Anisotropy Z	50	100	200
Min. composite Samples	5	5	3*
Max. Composite Samples	15	15	15
Composite Samples/drill hole	3	3	-

\*Zones 3 and 10 were set as a minimum of 2, Zone 4 was set as a minimum of 1.

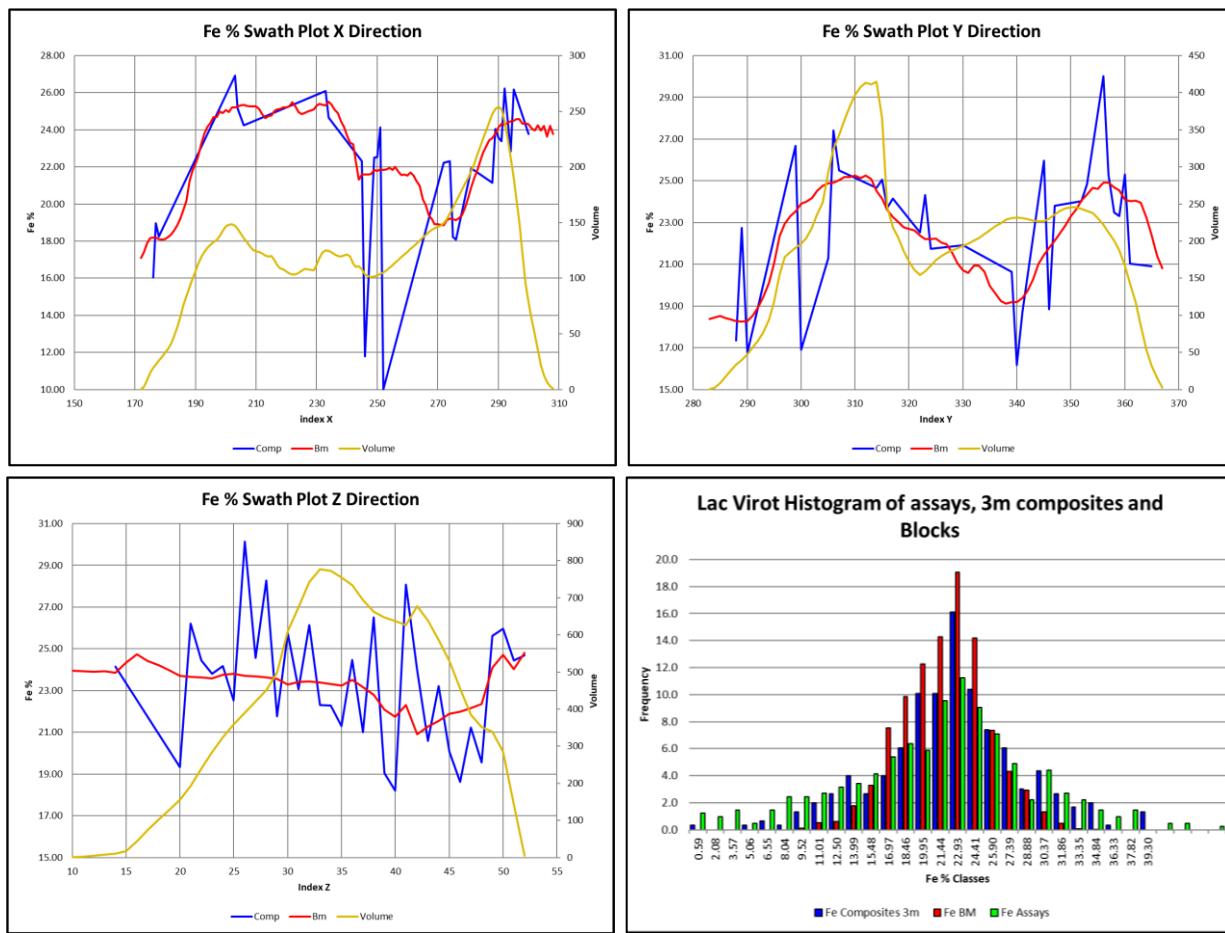
## 14.9 Validation of Estimates

The models were validated by:

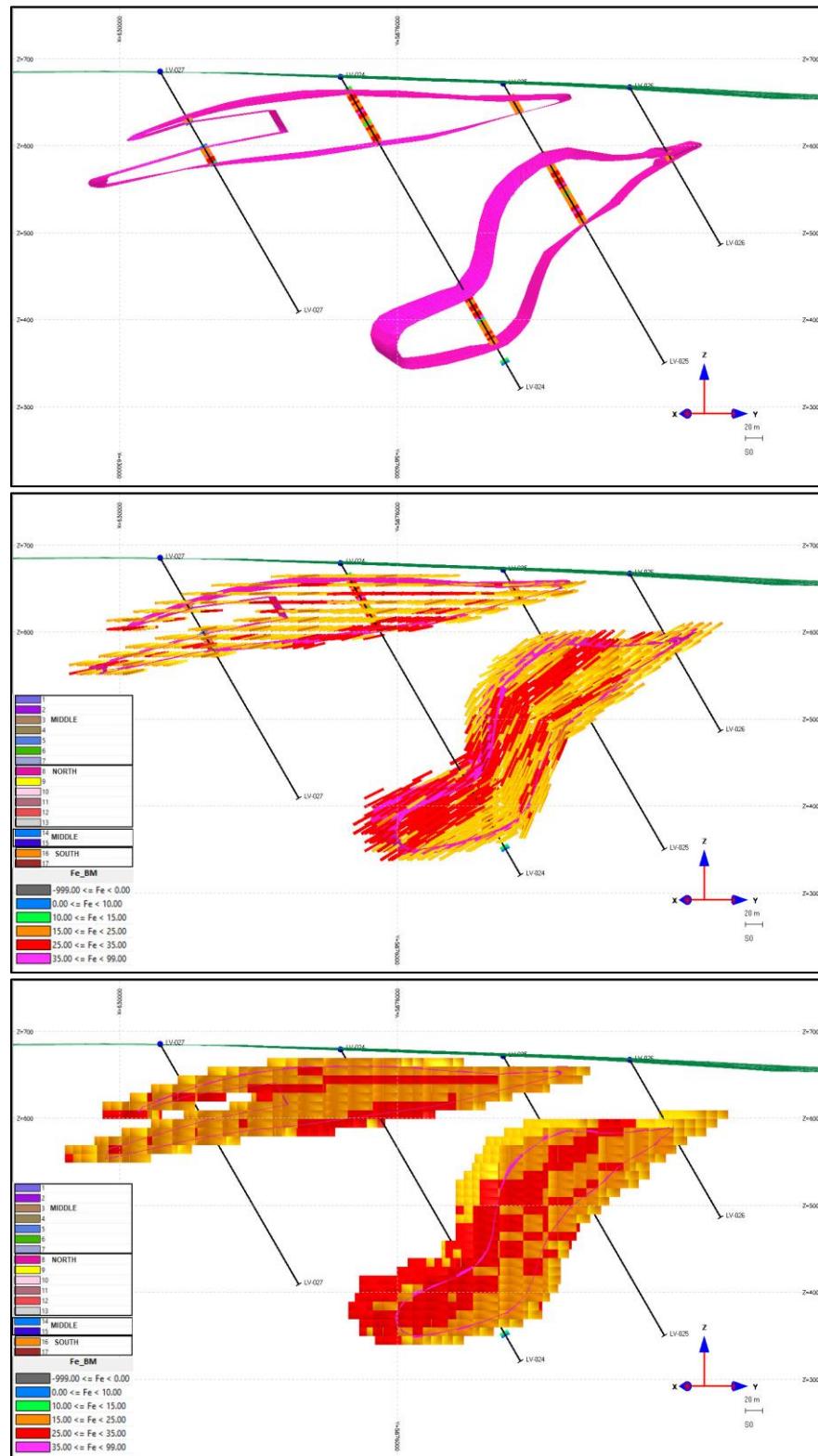
- Comparison of the global estimates against the average composite sample grades.
- Swath plot validation.
- Visual examination of the input data against the block model estimates.

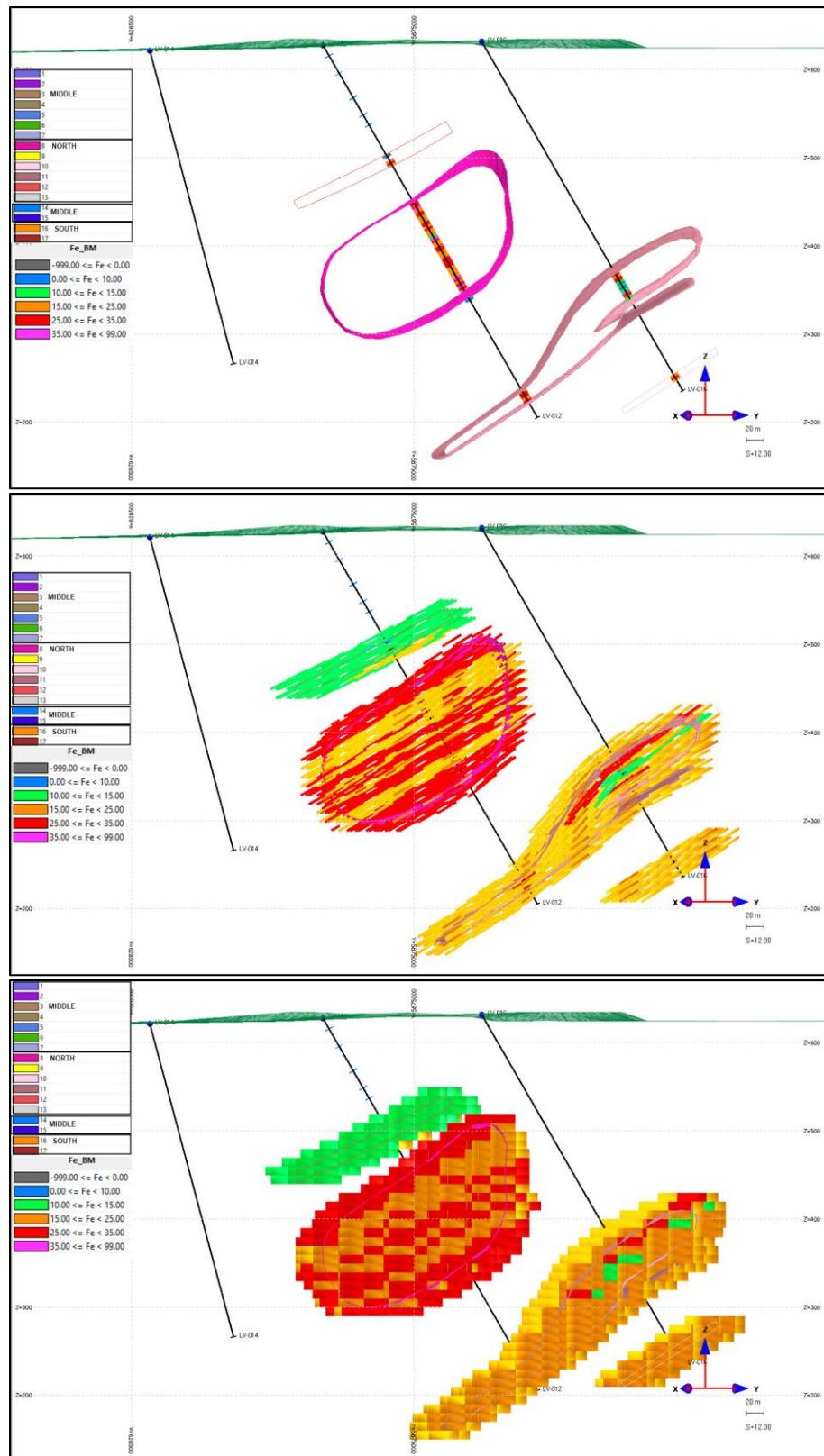
The average grade of the block model for each individual zone were validated against the de-clustered composite grades (de-clustered to 100 m X by 100 m Y by 50 m Z). Globally, the estimated block grades compare favourably to the input data, with relative differences less than ten percent for the main mineralised zones. Larger percentage differences are noted for the smaller zones, which can be attributed to factors such as the spatial arrangement and paucity of the data.

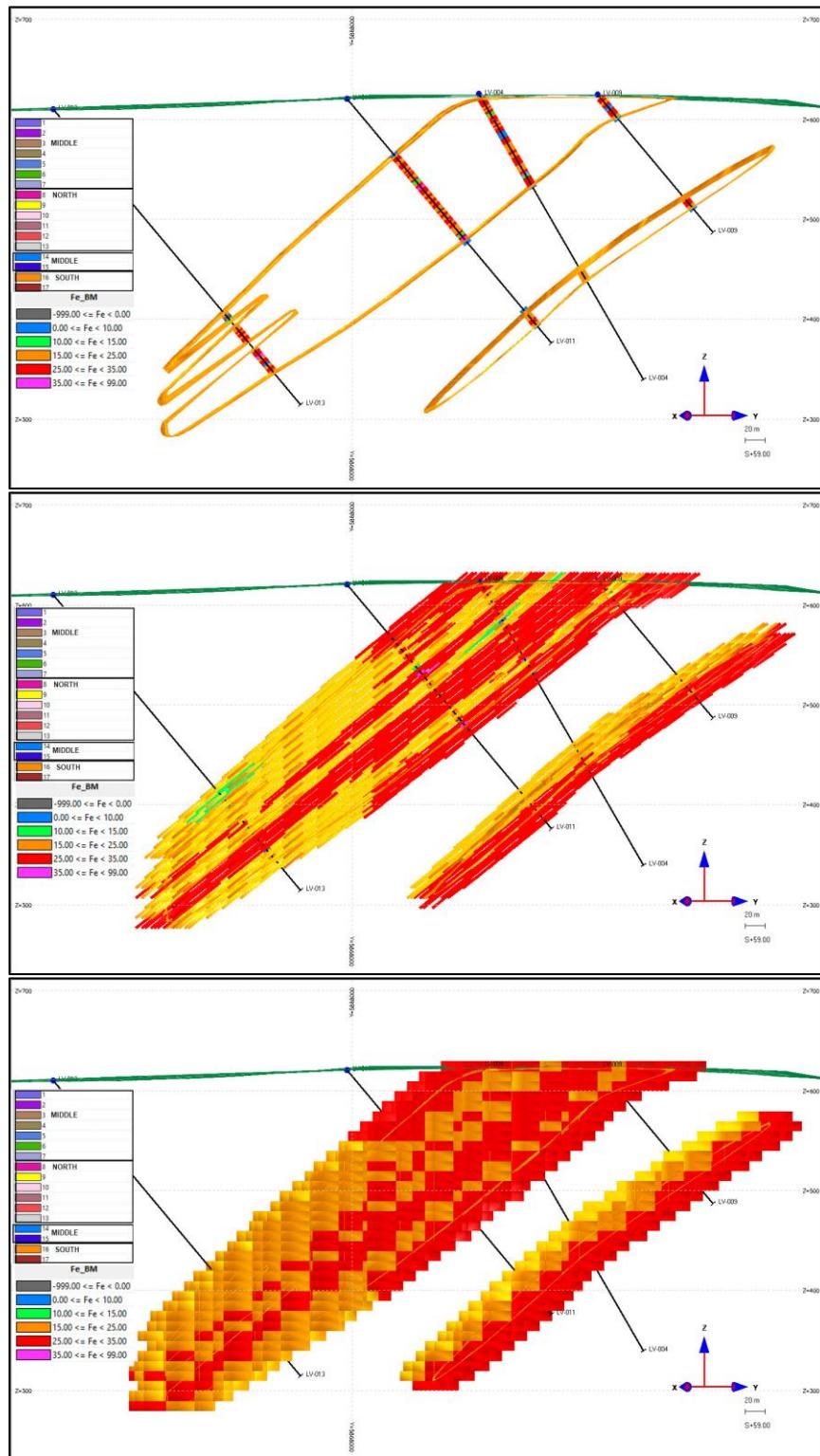
Swath plot validations in the X, Y and Z directions were used to locally validate the block estimates against the de-clustered sample composites. No material biases in the estimates of the individual elements were identified. Examples of a swath plot validation are shown for Fe % in Figure 14-9.

**Figure 14-9 Swath Plot Validation for Fe (%)**

The block model was examined visually to ensure that the drillhole grades were locally well represented by the model and it was found that the model validated reasonably well against the data. The model is less well locally representative of the data when extrapolating down dip, and where there is a large space between drill hole information (2<sup>nd</sup> and 3<sup>rd</sup> pass). It was considered in the classification. Examples of this validation for Fe (%) are illustrated for North (Figure 14-10) and South (Figure 14-11).

**Figure 14-10 North Zone Block Model Cross-Section view to Southwest: Fe %**



**Figure 14-11 South Zone Block Model Cross-Section view to Southeast: Fe %**

## 14.10 Mineral Resource Classification

Classification of the Lac Virot deposit (North, South, Middle; All 17 3D solids) Mineral Resources was based on the degree of geological uncertainty, grade and spatial continuity, and variability and availability of the drilling data. The main considerations in the classification are as follows:

- All the data that inform the Mineral Resource have been collected using acceptable principles and the assays passed the relevant QAQC tests.
- The geological model is adequate and the grade shells exhibit good continuity with relatively low variability within and between drilling sections.
- Insufficient drill hole data did not permit the modelling of a semi variogram.
- Average drill spacing is over 150m by 150m, closer to 200m by 200m.

Given the aforementioned factors, the Mineral Resources have been classified using the following criteria:

- All the Mineral Resources were classified as Inferred. The drillholes are sparse and local estimates cannot be reliably made.

The Mineral Resources could be affected by further infill drilling, which may result in increases or decreases in subsequent Mineral Resource estimates. Inferred Mineral Resources are high-risk estimates that may change significantly with additional data. It cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated Mineral Resource due to continued exploration. The Mineral Resources may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic and other factors.

## 14.11 Mineral Resource Statement

The Lac Virot Mineral Resource estimate as of February 16, 2023 is presented in Table 14-7. The Mineral Resource is stated at a cut-off of 15% Fe.

In the QP's opinion, the Mineral Resources reported herein at the selected cut-off grade have "reasonable prospects for eventual economic extraction", taking into consideration mining and processing assumptions (refer to 14.12).

**Table 14-7 Lac Virot Inferred Mineral Resource Estimates above 15% Fe cut-off grade – February 16, 2023**

Name	Classification	Fe (%)	FeO (%)	SiO <sub>2</sub> (%)	P <sub>2</sub> O <sub>5</sub> (%)	MnO (%)	MagFeSat (%)	Volume (Mm <sup>3</sup> )	Tonnes (M)
All: South, Middle & North Pits	Inferred	23.23	19.58	42.67	0.04	1.21	10.72	150.6	527.1
North Pit		23.09	21.35	41.31	0.04	1.15	9.49	94.6	331.2
Middle Pits		20.73	16.62	45.68	0.04	1.10	10.14	19.4	67.9
South Pit		24.91	16.58	44.58	0.03	1.43	14.19	36.6	128

1. A fixed density of 3.5 t/m<sup>3</sup> was used to estimate the tonnage from block model volumes.
2. Resources are constrained by the pit shell and the topography of the overburden layer.
3. The results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.
4. Mineral resources which are not mineral reserves do not have demonstrated economic viability. An Inferred Mineral Resources has a lower level of confidence than that applying to a Measured and Indicated Resources and must and must not be converted to a Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
5. All figures are rounded to reflect the relative accuracy of the estimate and numbers may not add due to rounding.
6. Effective date February 16<sup>th</sup>, 2023.
7. The estimate of mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing or other relevant issues.
8. Based on a cut-off grade of Fe of 15%.
9. Resources are constrained within Red Paramount mineral rights.
10. The pit optimization and base case cut-off grade of 15% iron (Fe) considers a pricing of US\$120/t of concentrate at 67% Fe (160.80 CAD\$/t of concentrate at 67%), rock processing, treatment and refining, transportation and G&A cost of 13.13 CAD\$/t of mineralized material, open pit mining cost of 3.00 CAD\$/t of mineralized material, an average pit slope of 45°, and an average mining recovery of 95%, processing recovery of 90% and dilution of 5%, and a waste density of 2.9.

The Lac Virot Inferred Mineral Resource is presented at a variety of cut-off grades as shown in Table 14-8.

**Table 14-8 Lac Virot Inferred Mineral Resource Estimates Resources Grade-Tonnage Table at Various Fe % Cut-Off Grades – February 16, 2023**

Cut-Offs Fe (%)	Classification	Fe (%)	FeO (%)	SiO <sub>2</sub> (%)	P <sub>2</sub> O <sub>5</sub> (%)	MnO (%)	MagFeSat (%)	Volume (Mm <sup>3</sup> )	Tonnes (M)
0	Inferred	22.33	18.97	43.21	0.05	1.16	10.18	164.9	577.3
10		22.37	19.00	43.18	0.05	1.17	10.21	164.4	575.4
<b>15</b>		<b>23.23</b>	<b>19.58</b>	<b>42.67</b>	<b>0.04</b>	<b>1.21</b>	<b>10.72</b>	<b>150.6</b>	<b>527.1</b>
20		24.50	20.03	42.36	0.03	1.28	11.82	121.6	425.6
25		27.18	18.97	42.44	0.03	1.43	15.61	47.7	167.1
30		31.55	15.70	42.89	0.03	1.23	17.52	5.0	17.4

1. A fixed density of 3.5 t/m<sup>3</sup> was used to estimate the tonnage from block model volumes.
2. Resources are constrained by the pit shell and the topography of the overburden layer.
3. The results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.
4. Mineral resources which are not mineral reserves do not have demonstrated economic viability. An Inferred Mineral Resources has a lower level of confidence than that applying to a Measured and Indicated Resources and must and must not be converted to a Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
5. All figures are rounded to reflect the relative accuracy of the estimate and numbers may not add due to rounding.
6. Effective date February 16<sup>th</sup>, 2023.
7. The estimate of mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing or other relevant issues.
8. Based on a cut-off grade of Fe of 15%.
9. Resources are constrained within Red Paramount mineral rights.
10. The pit optimization and base case cut-off grade of 15% iron (Fe) considers a pricing of US\$120/t of concentrate at 67% Fe (160.80 CAD\$/t of concentrate at 67%), rock processing, treatment and refining, transportation and G&A cost of 13.13 CAD\$/t of mineralized material, open pit mining cost of 3.00 CAD\$/t of mineralized material, an average pit slope of 45°, and an average mining recovery of 95%, processing recovery of 90% and dilution of 5%, and a waste density of 2.9.

## 14.12 Assessment of Reasonable Prospects for Eventual Economic Extraction (RPEEE)

In assessing “reasonable prospects for eventual economic extraction” (RPEEE) the Mineral Resource was reported from within a Whittle optimised pit shell using the following assumed parameters and a cut-off grade of 15% Fe.

Mining will be by open-pit methods:

- 45° slope angle in the partially weathered rock and 55° slope angle in the fresh rock
- 5% mining dilution
- 5% mining loss
- 10 m bench height
- 75% Concentrate recovery

Costs were assumed as follows:

- Open pit mining cost for drill and blast: CAD\$ 3 / tonne mined.
- Processing costs: CAD\$ 5.5 / tonne milled
- G&A cost: CAD\$ 3.04 / tonne milled
- Transport & Logistics: CAD\$ 4.58 / tonne milled (CAD\$15.5 / tonne of conc.)
- Iron concentrate price USD\$ 120/ tonne of concentrate at 66.2% Fe. At the CAD/USD Exchange Rate of 1.25: CAD\$ 160.8/ tonne of concentrate at 66.2% Fe. Transferred into CAD\$ 242.9 / tonne at 100% Fe.

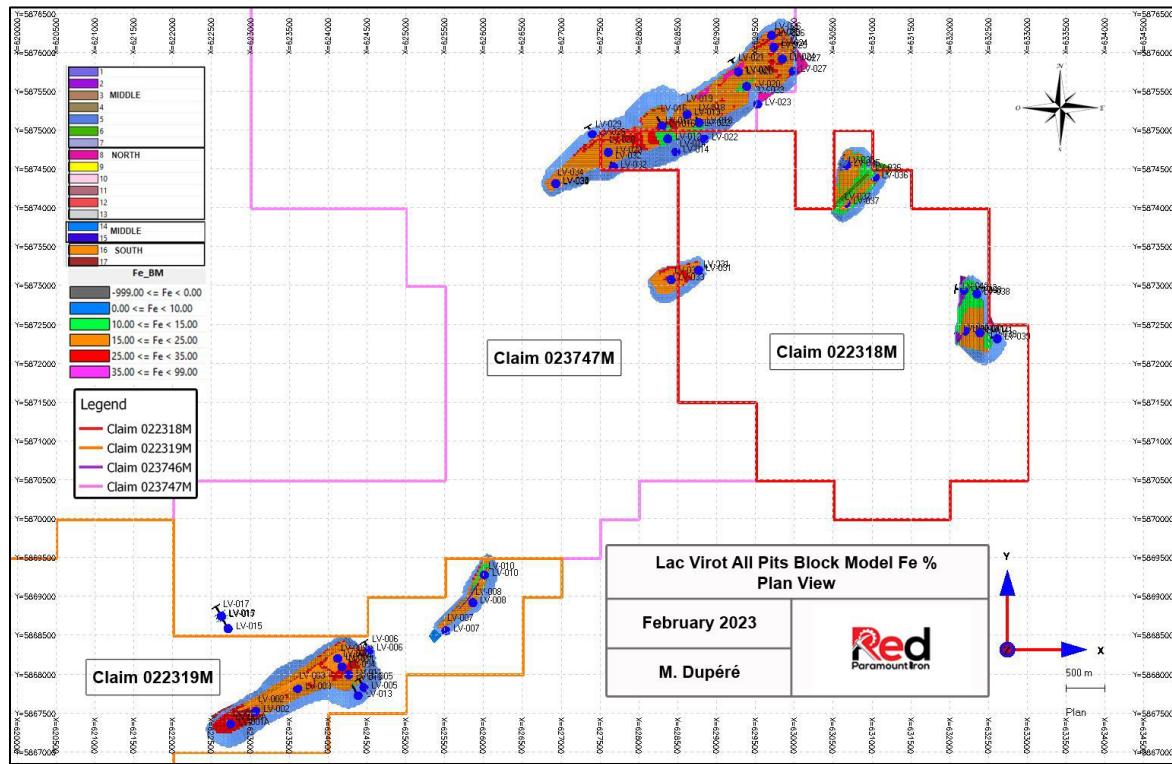
A plan showing the extents of the block model and surveyed topography in relation to the conceptual pit shell boundaries is shown in Figure 14-12 for the entire deposit, A plan showing the extents of the block model and surveyed topography in relation to the conceptual pit shell boundaries is shown in Figure 14-13 for the North zone, in Figure 14-15 for the Middle Zone and in Figure 14-17 for the South zone. A section through the deepest part of the modelled pit shell is shown in Figure 14-14 for the North zone, in Figure 14-16 for the Middle zone and in Figure 14-18 for the South zone.

The pit shells cover the majority of the North and South grade block model both aerially and at depth, however the North and Middle Pit Shell extents are marginally affected by Red Paramount mineral rights boundaries and thus the pits were updated considering Red Paramount's boundaries.

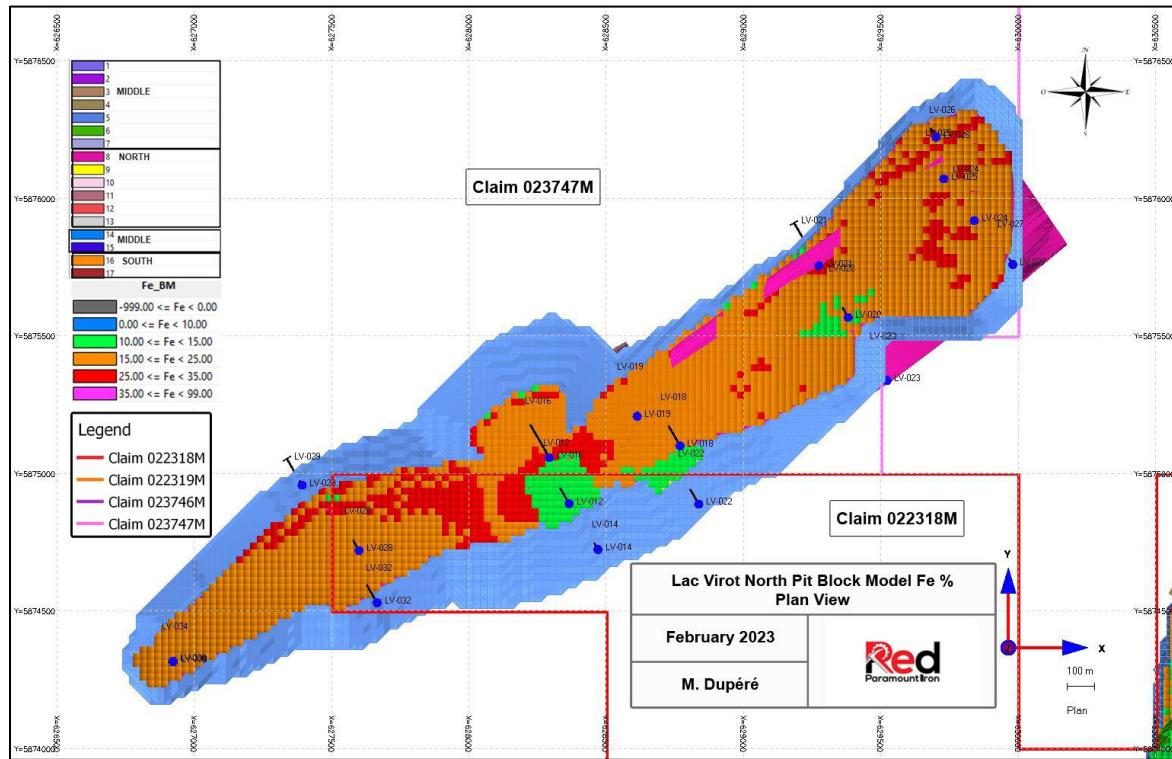
As we can see in the aforementioned figures, all the pit shells are constrained to the Red Paramount's mineral rights boundary. The pits are far enough away from each other to be operated as separate pits, although close enough so that mineralised material will be transported to a central facility for processing. There is no infrastructure, such as major roads, power lines, water courses or settlements, within or within the immediate vicinity of the pit shell outline.

The reader is advised that the assessment of economic potential that is incorporated in the Mineral Resource is solely for the purpose of reporting Mineral Resources and does not represent an attempt to estimate Mineral Reserves.

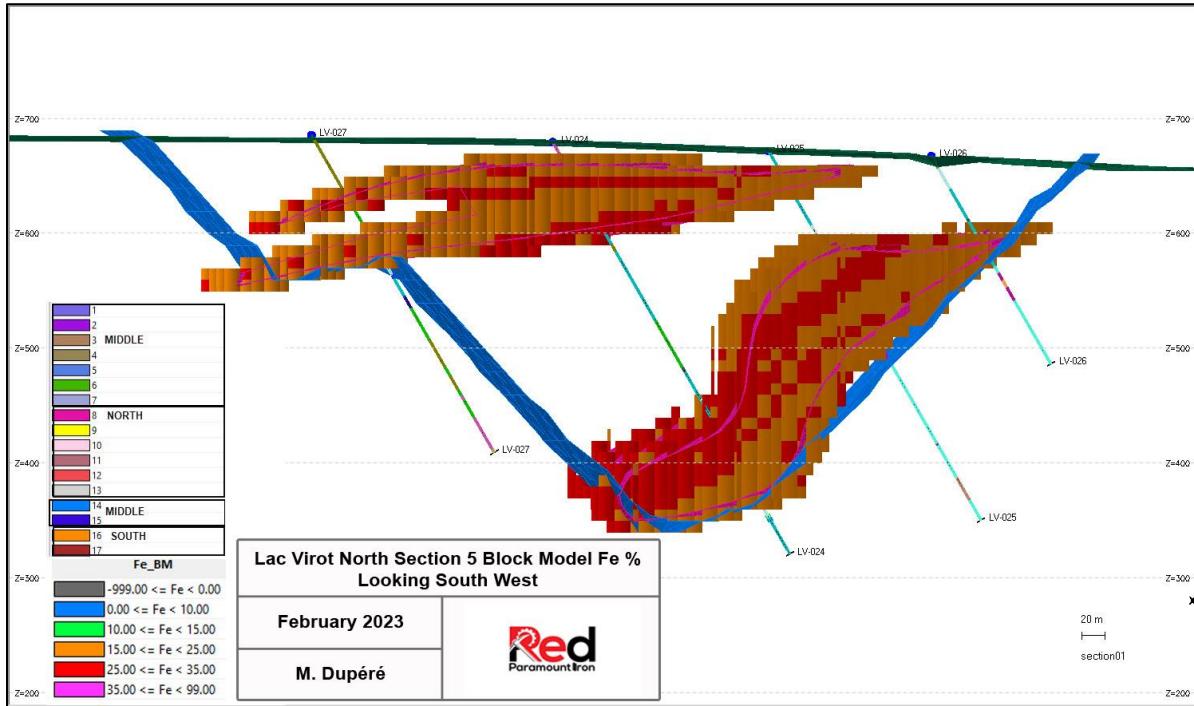
**Figure 14-12 Lac Virot Deposit – Plan showing Block Model Relative to Pit Shell Extents**



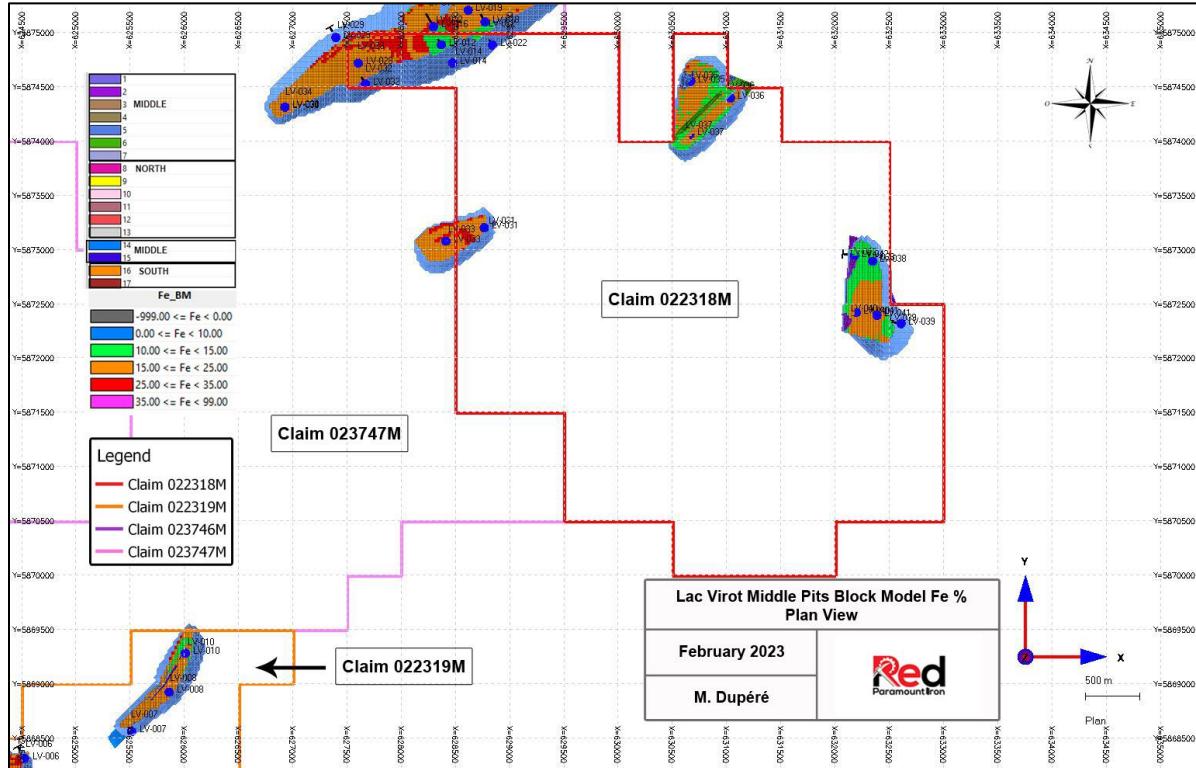
**Figure 14-13 North Zone – Plan showing Block Model Relative to Pit Shell Extents**



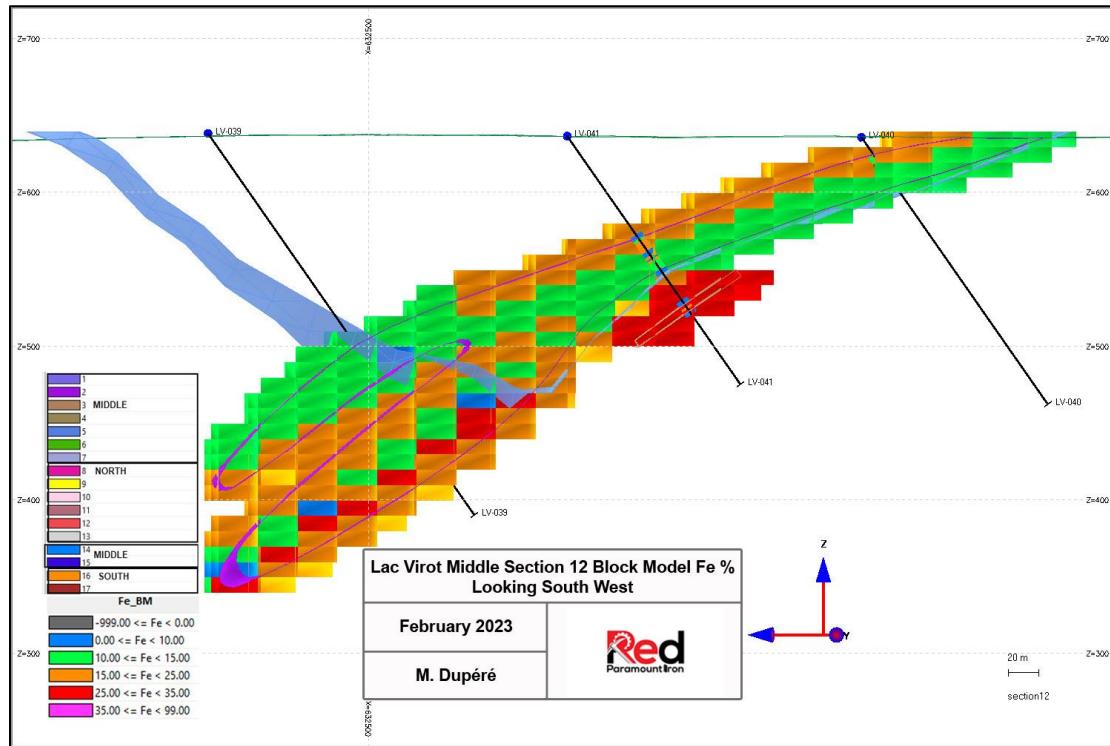
**Figure 14-14 North Zone Section looking Northeast showing Block Model Relative to Pit Shell Extents and Topography**



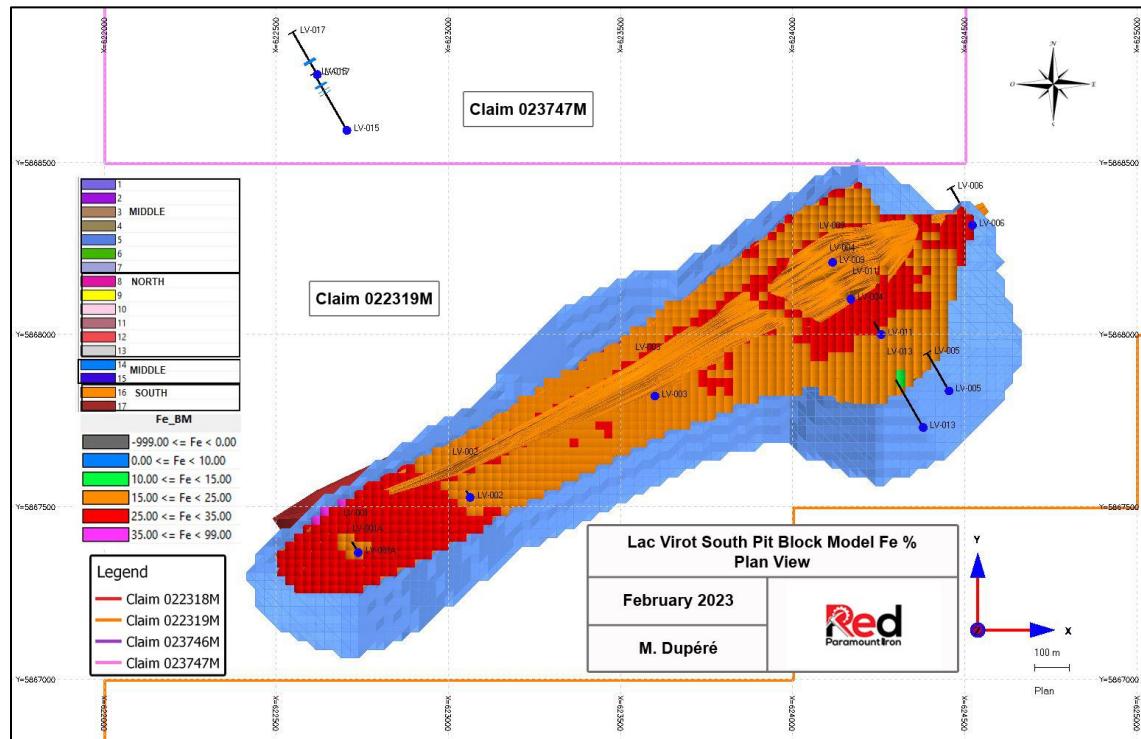
**Figure 14-15 Middle Zone – Plan showing Block Model Relative to Pit Shell Extents**



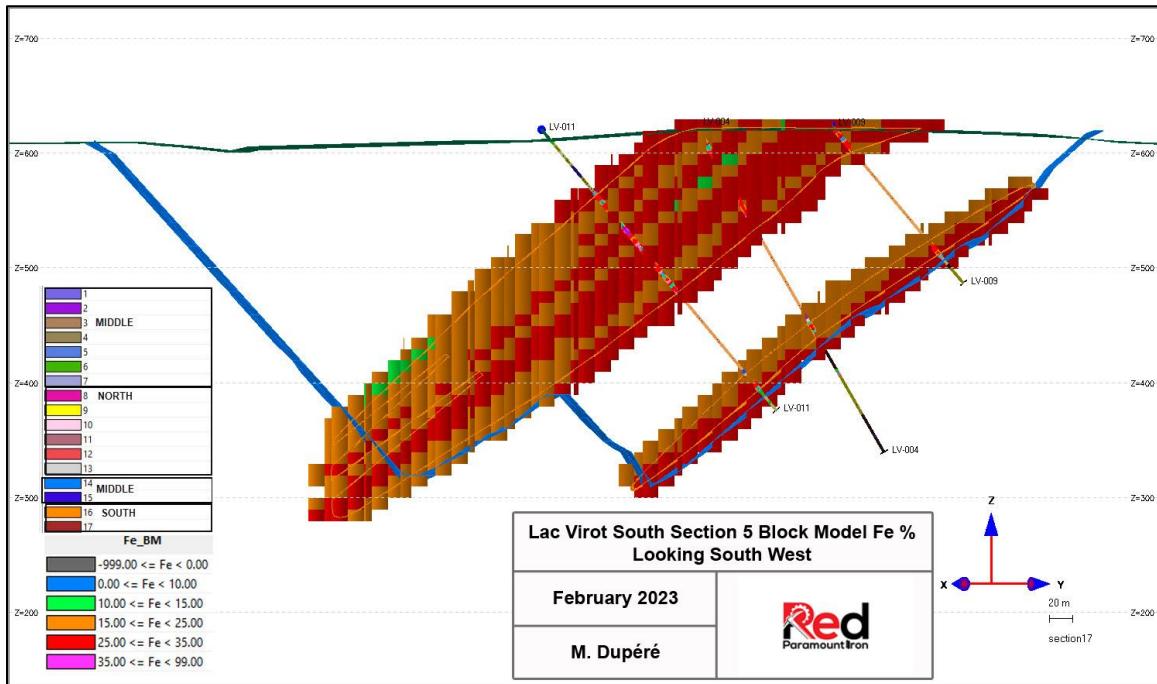
**Figure 14-16 Middle Zone Section looking Northeast showing Block Model Relative to Pit Shell Extents and Topography**



**Figure 14-17 South Zone – Plan showing Block Model Relative to Pit Shell Extents**



**Figure 14-18 South Zone Section looking Northeast showing Block Model Relative to Pit Shell Extents and Topography**



## **15 MINERAL RESERVE ESTIMATES**

There are no current Mineral Reserve estimates stated on this Property. This section does not apply to the Technical Report.

## **16 MINING METHODS**

This section does not apply to the Technical Report.

## 17 RECOVERY METHODS

This section does not apply to the Technical Report.

## **18 PROJECT INFRASTRUCTURE**

This section does not apply to the Technical Report.

## **19 MARKET STUDIES AND CONTRACTS**

This section does not apply to the Technical Report.

## **20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT**

### **20.1 Environmental Baseline Study**

There is no environmental baseline study in this project.

### **20.2 Labrador City Municipality and Stewardship Zone**

A small section of the Lac Virot Property lies inside the Labrador City Municipal Boundary and environmental Stewardship Zone. Management Units pertaining to specific wildlife species are defined inside the Stewardship Zone, although none of these are located inside the Lac Virot mineral claims. It will be necessary to notify and maintain liaison with municipal officials and other stakeholders (e.g., Snowmobile Club) with respect to exploration activities. However, as long as best practices are maintained on Red Paramount's part, no problems are expected with the town or the provincial Environment Department with respect to the Stewardship Zone.

### **20.3 First Nations**

Currently five separate first nations groups claim aboriginal land rights to the Labrador West- northeastern Quebec region:

1. Innu Takuakan mak Mani-Utenam (“ITUM”) of Uashat, Quebec,
2. Conseil de la Nation Innu de Matimekush-Lac John (“CNIML”) of Schefferville, Quebec,
3. Naskapi Nation of Kawawachikamach (“Naskapi Nation”) of Nuchimiyuschiyi, Quebec, and
4. Labrador Innu First Nation (“Labrador Innu”) of Happy Valley-Goose Bay, NL.,
5. NunatuKavut Community Council Inc. (“NCC” – the Labrador-Metis Nation) of Happy Valley – Gosse Bay, NL.

## **21 CAPITAL AND OPERATING COSTS**

This section does not apply to the Technical Report.

## **22 ECONOMIC ANALYSIS**

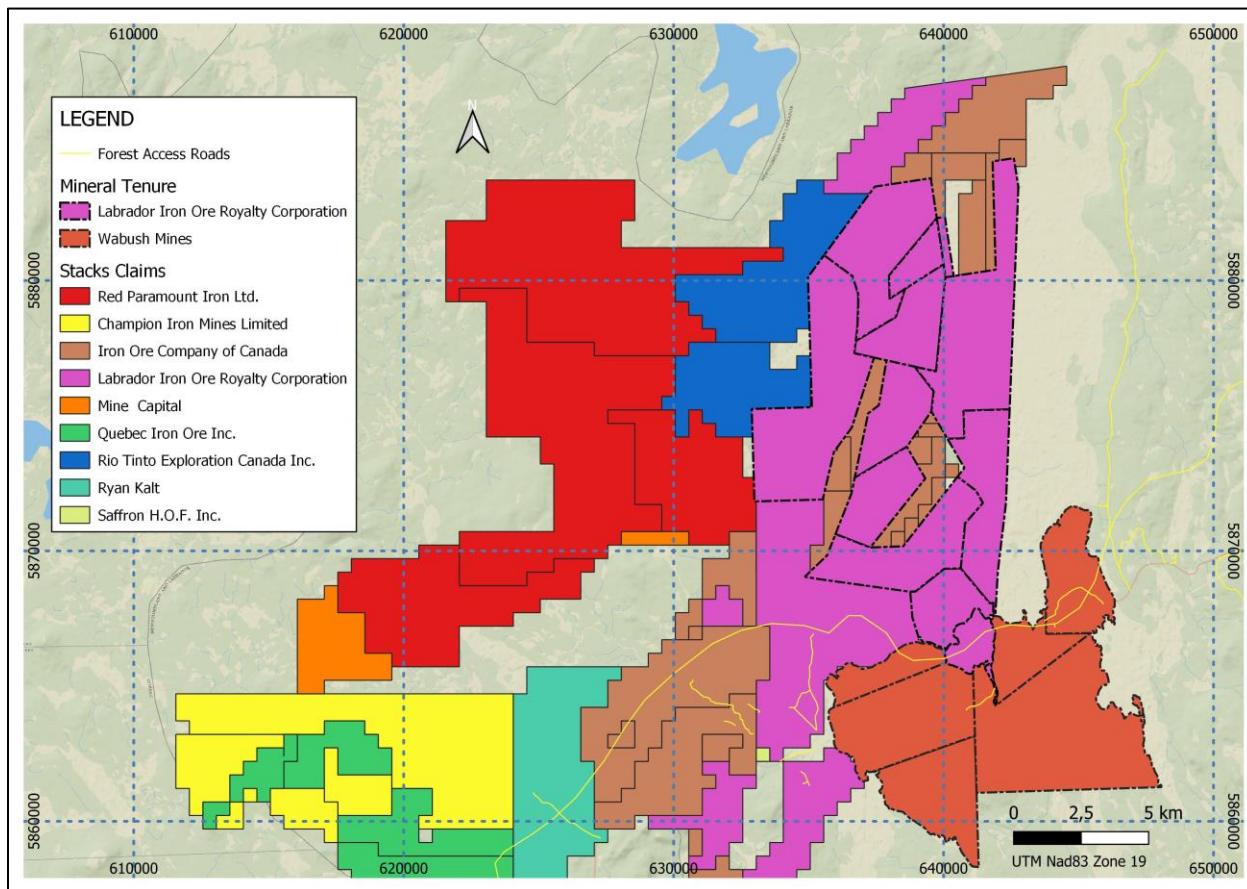
This section does not apply to the Technical Report.

## 23 ADJACENT PROPERTIES

The property is bordered to the north-east by claims of Rio Tinto Exploration Canada Inc., to the east by a mining lease of Labrador Iron Ore Royalty Corporation ("LIORC"), to the south-east by Iron Ore Company of Canada ("IOC"), and to the south and west by Capital Mine (Figure 23-1).

The author has been unable to verify the information and the information is not necessarily indicative of the mineralization on the Lac Virot property that is the subject of the technical report.

**Figure 23-1 Adjacent Properties**



### 23.1 Iron Ore Company of Canada, Carol Project

IOC has been at the forefront of the Newfoundland and Labrador mining industry for over 60 years. IOC is the second largest iron ore producer in the country, and one of the largest private employers in Newfoundland and Labrador. IOC first began mining iron ore in the Schefferville / Menihek area of Québec and Labrador in 1954 and expanded into Labrador West in 1962 where it has been producing at the Carol Lake project ever since. The Labrador Iron Ore Royalty Corporation (LIOC) holds 15.1 per cent equity ownership, while Mitsubishi Corp. holds 26.2 per cent and Rio Tinto holds the remaining 58.7 per cent. IOC operates a mine, concentrator and pellet plant near Labrador City with a 418 km rail line, the Québec North Shore and Labrador Railway, linking the mine to its own port facility in Sept-Îles. IOC's products are shipped to markets throughout North America, Europe, the Middle East, and the Asia- Pacific region. IOC has remote operational logistics optimization centres in Labrador City and Sept-Îles. These centres help ensure

the efficiency of the operation to achieve maximum productivity. IOC has mineral reserves and resources of 1.1 billion tonnes and 1.7 billion tonnes, respectively, with an average grade of approximately 38 per cent iron. Annual production capacity is 23.3 million tonnes of high-grade concentrate of which 14 million tonnes can be processed to produce 12.5 million tonnes of pellets. Rio Tinto's saleable production guidance for IOC in 2022 is 17.0 to 18.7 million tonnes of iron ore concentrate and pellets.

(Source: <https://www.gov.nl.ca/iet/files/22445-Mining-in-NL-Final-for-Web-Oct-24.pdf>)

## 23.2 Tacora Resources, Wabush Mines, Scully Mine

Tacora is a Canadian iron ore mining and processing company focused on the development of highgrade iron ore reserves and assets. Incorporated in British Columbia, Tacora's long-term strategic investors include Proterra Investment Partners, Aequor, Cargill, and MagGlobal. The Scully Mine consists of open pit mines, a concentrator and processing facilities, waste rock and tailings management facilities and a spur railway that connects to the Quebec North Shore & Labrador railway where ore is railed to the port operator Société Ferroviaire et Portuaire de Pointe-Noire at Sept-Îles, Quebec. Annual production capacity has historically been 5.6 to 6.0 million tonnes of iron concentrate. Tacora's short term strategy is to achieve name plate production capacity of 6.0 million tonnes per year of high-grade, low-impurity iron ore concentrate by the first half of 2022. Production has been ramping up since the second quarter of 2019 and will continue to 2023. In July 2022, Tacora commissioned a fines bypass project to divert material within the current process (i.e., material that is already small enough does not need to be crushed again). The project will effectively increase milling capacity.

In June 2022, Atlantic Canada Opportunities Agency announced a \$3.3 million repayable investment to assist Tacora with its manganese reduction circuits (MRCs) project, which will result in higher grade iron ore while reducing emissions. Tacora will invest a further \$6.2 million towards the initiative. In all, Tacora spent US\$44 million on its three major capital projects – the fines bypass, MRCs, and scavenger spirals projects. In April 2022, Tacora's expansion to its existing tailing impoundment was released from environmental assessment. The existing tailings impoundment area will reach full capacity by 2025 but iron ore reserves will last up to 2047. The expansion is scheduled to commence in October 2025.

(Source: <https://www.gov.nl.ca/iet/files/22445-Mining-in-NL-Final-for-Web-Oct-24.pdf>)

## 24 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data or information available that is necessary to make the current technical report understandable and not misleading.

## 25 INTERPRETATION AND CONCLUSIONS

SGS Geological Services Inc. was contracted by Red Paramount to complete a Mineral Resource Estimate for the Lac Virot Iron Project in the Labrador West region, Newfoundland and Labrador, Canada, and to prepare a National Instrument 43-101 Technical Report written in support of the MRE.

This Technical Report has been prepared to comply with Canadian National Instrument 43-101, Companion Policy 43-101CP, Form 43-101F1, the 'Standards of Disclosure for Mineral Projects' of January 2011 (the Instrument) and the Mineral Resource and Reserve classifications as defined in the CIM Definition Standards 2014 document.

Red Paramount is a privately owned, emerging Canadian steel producer in Vancouver, British Columbia, Canada. Red Paramount is developing its 100%-owned Lac Virot iron ore property in the Eastern Canada Province of Newfoundland and Labrador. The subject of this technical report is the Lac Virot Iron Ore Project. The Company's registered corporate office is 20<sup>th</sup> Floor 250 Howe Street, Vancouver, British-Columbia, V6C 3R8, Canada.

During 2020, Mine Capital acquired all of the issued and outstanding common shares of Ridgemont Iron Ore Corp. a private Canadian company with interests in the Lac Virot Property located in Labrador. Upon completion of the acquisition Ridgemont's name changed to Red Paramount Iron Ltd. which has the benefit of all the rights and obligations previously held by Ridgemont with respect to the Lac Virot Property. The combined mineral rights total 521 claims covering an un-surveyed area of 13,025 ha or 130.25 km<sup>2</sup>.

All mineral licenses are currently in good standing with respect to exploration expenditures (assessment work expenditures). All licenses presently have exploration surpluses; however additional expenditures will be required. An extensive drill program is planned for the summer of 2023.

The current report is authored by Maxime Dupéré, B.Sc., géo. of SGS. The MRE presented in this report was estimated by the author. Maxime Dupéré is an independent Qualified Person as defined by NI 43-101 and is responsible for all sections of this report.

The reporting of the MRE complies with all disclosure requirements for Mineral Resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects. The classification of the MRE is consistent with the 2014 Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards (2014 CIM Definitions) and adhere as best as possible to the 2019 CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines (2019 CIM Guidelines).

### 25.1 Accessibility and Infrastructures

The district of Labrador West includes the Town of Labrador City (population ~7,200) and neighboring Wabush (population ~1,800). Labrador West is the regional center for the iron ore mining industry in Labrador. Labrador City and Wabush can provide modern housing as well as educational, medical, recreational and shopping facilities. Historically, mining has been a dominant part of the local and regional economy. Labor, industrial supplies and services for mining and exploration activities are readily available in the region. Wabush Airport is the only airport in western Labrador and is served by two commercial airlines. The Quebec North Shore & Labrador Railway ("QNS&L") connects Labrador West with the port of Sept-Îles, Québec on the north shore of the St. Lawrence River.

In terms of the actual Lac Virot Property there is no on-property all-weather road access or mining related infrastructure. In Mr. Dupéré opinion there are sufficient Crown land surface rights available for all aspects of any potential mining operations, along with abundant water. Labrador West can provide nearby electrical power supplies, and mining personnel.

## 25.2 History

Historically, very little exploration has been done in this area and on the Lac Virot project area in particular. Exploration work completed by MPH Consulting Limited in the summer of 2011 included:

- An initial geological reconnaissance/prospecting site visit to the Property to confirm the existence of good quality iron formation units and to determine specifications for an airborne geophysical survey.
- Completion of a helicopter-borne high resolution magnetic, radiometric and very low frequency electromagnetic ("VLF-EM") survey.
- Focused follow-up of the airborne geophysical survey by additional reconnaissance geological mapping and prospecting.

In 2012, further exploration work continues with airborne magnetic and gravity surveys and a round of 12,000 m of drilling:

- Fugro (May 2012) – Gravity Gradiometric (AGG) survey
- Terraquest (Oct 2012) – Horizontal Aero-Magnetic Gradient & XDS VLF-EM Survey
- Drilling program – June to Oct 2012.

## 25.3 Exploration

Red Paramount has yet to complete surface exploration on the Property.

## 25.4 Drilling

Red Paramount has yet to complete diamond drilling on the Property.

## 25.5 Security 2012 (QAQC)

As part of a QAQC procedure, blanks, standards and duplicates were inserted on a regular basis during the 2012 drilling campaign (43 diamond drill holes) by previous owner. This procedure includes the systematic addition of certified standards, blanks and duplicates in the assayed core.

A total of 35 blanks were inserted during drilling logging and sampling. It is believed to be consisting of coarse pure white quartz sand. the results of assay blank samples showed that there are no anomalous values of Fe %. Although based on a 0.1% detection limit ("D.L."), one can see that Fe results are all above the D.L. and that one result of around 0.5% is clearly sticking out of the blanks sample batch. SGS opinion is that all results (Figure 11-1) including the 0.53% Fe fall well below any Fe % anomalous values and can be discarded as a warning or a failure blank value.

Two types of standards were used (SCH-1 and FER-4). A total of 31 standards (15 SCH-1, 16 FER-4) were sent to SGS Lakefield laboratory. The SCH-1 and FER-4 standards certificates highlighting the expected values and range of deviations (averages and standard deviations) were taken from the Natural Resources Canada website.

SCH-1 shows a minimum value of 60.30 % Fe, a maximum of 61.35% Fe and an average of 60.71% Fe. All SCH-1 standards fall within a narrow range (Figure 11-2). As seen in Figure 11-2, one sample falls out of the warning range ( $+2\sigma$ ). Further investigation is warranted however it is not considered as a major flaw.

It is the author's opinion that the QAQC done on the 2012 drilling program is adequate and within accepted limits; and that it is suitable for Mineral resource estimates.

## 25.6 2023 Site Visit

Maxime Dupéré did not personally inspected the Property as the site visit done in February 13<sup>th</sup>, 2023 and the area was covered in snow however visit was made to the location of Lac Virot core shack in Wabush. Mr. Dupéré examined several drill cores and accompanying drill logs and assay certificates. Assays were examined against drill core mineralized zones. Mr. Dupéré inspected the core storage facilities.

The intention is that Mr. Dupéré will visit the Lac Virot Property site as soon as the snow cover has melted, within the next three months, by June 2023.

Mr. Dupéré verified the drill hole database and QAQC results. Based upon the evaluation of the QA/QC program undertaken on the Property, the availability of SGS assay certificates and internal QAQC, it is the Author's opinion that its independent verification confirms the presence of iron mineralization on the Property and that the results are acceptable for use in the current Mineral Resource Estimate.

## 25.7 Mineral Resource Estimate

The Lac Virot Mineral Resource Estimate is the first estimate based on the validated 2012 Drilling information.

The Mineral Resource was reported as Inferred as shown in Table 25-1. The Mineral Resource was estimated using The Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (2019) and is reported in accordance with the 2014 CIM Definition Standards, which have been incorporated by reference into National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101).

In the QP's opinion, the Mineral Resources reported herein at the selected cut-off grade have "reasonable prospects for eventual economic extraction", taking into consideration mining and processing assumptions (refer to 14.12). The Mineral Resource was reported from within a Whittle optimised pit shell at a cut-off grade of 15% Fe.

**Table 25-1 Lac Virot Inferred Mineral Resource Estimates above 15% Fe cut-off grade – February 16, 2023**

Name	Classification	Fe (%)	FeO (%)	SiO <sub>2</sub> (%)	P <sub>2</sub> O <sub>5</sub> (%)	MnO (%)	MagFeSat (%)	Volume (Mm <sup>3</sup> )	Tonnes (M)
<b>ALL: South, Middle &amp; North Pits</b>	<b>Inferred</b>	<b>23.23</b>	<b>19.58</b>	<b>42.67</b>	<b>0.04</b>	<b>1.21</b>	<b>10.72</b>	<b>150.6</b>	<b>527.1</b>
North Pit		23.09	21.35	41.31	0.04	1.15	9.49	94.6	331.2
Middle Pits		20.73	16.62	45.68	0.04	1.10	10.14	19.4	67.9
South Pit		24.91	16.58	44.58	0.03	1.43	14.19	36.6	128

1. A fixed density of 3.5 t/m<sup>3</sup> was used to estimate the tonnage from block model volumes.
2. Resources are constrained by the pit shell and the topography of the overburden layer.
3. The results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.
4. Mineral resources which are not mineral reserves do not have demonstrated economic viability. An Inferred Mineral Resources has a lower level of confidence than that applying to a Measured and Indicated Resources and must and must not be converted to a Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
5. All figures are rounded to reflect the relative accuracy of the estimate and numbers may not add due to rounding.
6. Effective date February 16<sup>th</sup>, 2023.
7. The estimate of mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing or other relevant issues.
8. Based on a cut-off grade of Fe of 15%.
9. Resources are constrained within Red Paramount mineral rights.
10. The pit optimization and base case cut-off grade of 15% iron (Fe) considers a pricing of US\$120/t of concentrate at 67% Fe (160.80 CAD\$/t of concentrate at 67%), rock processing, treatment and refining, transportation and G&A cost of 13.13 CAD\$/t of mineralized material, open pit mining cost of 3.00 CAD\$/t of mineralized material, an average pit slope of 45°, and an average mining recovery of 95%, processing recovery of 90% and dilution of 5%, and a waste density of 2.9.

## 25.8 2022 SGS Quebec Metallurgical Testwork

The following conclusions are coming from and SGS report titled “An Investigation into Metallurgical Testwork on iron Ore Samples from Lac Virot”, prepared for red Paramount Iron Ltd (Manga, M.M. and Lascelles, D., 2022).

The conclusions can be made from the testwork completed on two samples from the Lac Virot project.

- The head assays show that 72% of the Surface sample iron and 80% of the Core sample iron is recoverable by magnetic separation.
- Davis tube tests at 38 and 53  $\mu\text{m}$  on both samples showed that a high-grade iron concentrate ( $>68\%$  Fe) could be achieved at expected recoveries.
  - The Surface sample obtained a magnetic concentrate grade of 71.3% Fe at an average 73.5% recovery.
  - The Core sample obtained a magnetic concentrate grade of 68.5% Fe at an average recovery of 79.7%.
- At a  $P_{80}$  of 38  $\mu\text{m}$ , the magnetite concentrates were below 4.00 %  $\text{SiO}_2 + \text{Al}_2\text{O}_3$  and below 0.05% S, indicating that the addition of a flotation circuit would not be necessary.
- Dry medium intensity magnetic separation at coarse size (1.7 mm) was able to reject 26% to 30% of the mass at very low magnetic iron losses of ~1%, for both samples. We would recommend a coarse cobbing stage ahead of the ball mill to reduce CAPEX.
- The HLS tests showed reasonable iron recovery, but the maximum grades achieved were low at 51.8% Fe for the Surface sample and 45.7% Fe for the Core sample. This concentrate could be upgraded much further by regrinding.
- Seeing as the ore has a good proportion of magnetite, 75-80%, we would recommend focusing solely on a magnetic separation circuit which would include a medium intensity coarse cobbing stage (2-4 mm) ahead of ball milling to a  $P_{80}$  of ~150  $\mu\text{m}$ , 1 or 2 stages of rougher low intensity magnetic separation, regrinding of the rougher magnetic concentrate to a  $P_{80}$  of 40  $\mu\text{m}$ , and 2-3 stages of cleaner low intensity magnetic separation.
- Further testwork is recommended to confirm the crushing, grinding, and magnetic separation stages to be considered for the final flowsheet.

The author considers the conclusions of the SGS report titled “An Investigation into Metallurgical Testwork on iron Ore Samples from Lac Virot” to be adequate.

## 25.9 Opportunities

These initial resources statement demonstrates that the Lac Virot Project has the potential to have profitable mining extraction based on the optimized pit shell done on the MRE. The Project is near surface and access to site is foreseen as relatively simple upon completion of an access road. Several opportunities for the project are available to further enhance the project:

- Expansion at each pit with additional resources.
- Sufficient space for resource improvement involving additional exploration and infill drilling.
- Potential resource expansion at other undrilled targets

## 25.10 Risks

There are risks that have been identified within the recommendations. Main risks to project success would be:

- Changes in environmental regulations;
- Additional metallurgical testing on representative material should be performed to establish flowsheet;
- The potential for additional area to the northeast since North Zone appears to continue to the northeast outside of Red Paramount mineral rights boundaries.
- Availability of skilled labour during the construction phase.

## 26 RECOMMENDATIONS

It is recommended that Red Paramount complete the following:

### Mineral Resources

- Undertake an 26,000 m infill drilling programme on the North and South zones principally of the deposit within the Mineral Resource pit-shells to ensure that all Mineral Resources that have the potential to be converted to Mineral Reserves are in the Indicated category.
- The project area has potential to increase the Mineral Resources. Should additional Mineral Resources be required to support the project, further exploration would be warranted.
- The project needs additional and representative sample quantity of density measurements on the entire deposit.
- Undertake further prospecting, outcrop stripping, channel sampling on the north and south zones based on available geological and geophysical data.

### Mineral Processing and Metallurgical Testing

There are several metallurgical tests that can be performed on an iron mining project to allow for the addition of indicated resources to the project. These tests can help evaluate the quality and recovery of the ore, as well as determine the most appropriate processing options.

Here are some important metallurgical tests for an iron mining project:

- Mineralogy of representative samples throughout the entire deposit,
- Complete Satmagan, Davis tube tests and Heavy Liquid Separation tests on the head samples for all samples or on mining interval composites to determine recovery and grade achievable from both ore types,
- Flowsheet development to recover both hematite and magnetite,
- Comminution tests for grinding circuit design.

These tests can help provide a better understanding of the quality and recovery of the ore, as well as the most appropriate processing options for an iron mining project and can help for future pilot testing.

### PEA Level study

To complete a preliminary economic study, the necessary additional steps would generally include:

- Metallurgical testing: see recommendations above.
- Engineering studies involving preliminary engineering studies for mining and processing methods, and capital and operating costs.
- Environmental and social impact assessment studies, and to develop plans to mitigate any negative impacts.
- No geotechnical study has yet been undertaken. This should be done if the project advances to PEA as this will have a material impact on the stripping ratio.
- A preliminary hydrological study should be commissioned to validate the assumption that there is no water related issues at depth.
- Market analysis involving market studies.

- Economic analysis considering all aspects and data above to estimate the economic viability of the project, including the net present value (NPV), internal rate of return (IRR), payback period, and other financial indicators.
- Reporting: A NI 43-101 compliant technical report would need to be prepared summarizing the results of the study, including all the data, assumptions, and conclusions. This report would need to be reviewed and approved by an independent qualified person (QP) in accordance with NI 43-101 regulations.

**Table 26-1 Budget for Future Work**

	Tasks	Quantity	Unit	Unit Rate	Estimated Cost (CAD\$)
<b>Phase 1</b>	Data purchase and setup, licenses	1	L.S.	\$350,000	\$350,000
	PEA- Engineering and Support	7,500	Hour	\$160	\$1,200,000
	Access Road +3 River Crossings	12	km	\$90,000	\$1,080,000
	Infill Drilling Program, Exploratory, Geotechnical Drilling – All Inclusive	12,000	L.m	\$500	\$6,000,000
	Environmental Baseline Data Collection	1	L.S.	\$750,000	\$750,000
	Pre-feasibility Study and Support	16,500	Hour	\$160	\$2,640,000
	Sub-Total				\$12,020,000
	G&A and OH -25%				\$3,005,000
	<b>Total Phase 1</b>				<b>\$15,025,000</b>
<b>Phase 2</b>	Infill Drilling Program, Condemnation, Geotechnical Drilling – All Inclusive	14,000	L.m	\$500	\$7,000,000
	Environmental Baseline Data Collection and Permitting	1	L.S.	\$1,200,000	\$1,200,000
	Community Engagement and Support	1	L.S.	\$500,000	\$500,000
	Feasibility Study and Support	16,500	Hour	\$160	\$2,640,000
	Sub-Total				\$11,340,000
	G&A and OH -25%				\$2,835,000
	<b>Total Phase 2</b>				<b>\$14,175,000</b>

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<https://natural-resources.ca/our-natural-resources/minerals-mining/mining-resources/fer-1-fer-4-certificate-analysis/8013>

SCH-1 Standard :

<https://natural-resources.ca/our-natural-resources/minerals-mining/mining-resources/sch-1-certificate-analysis/8123>

Regional Main Access Routes :

<https://ontheworldmap.com/canada/province/newfoundland-and-labrador/labrador-scenic-driving-routes-map.jpg>

Mining in Newfoundland and Labrador:

<https://www.gov.nl.ca/iet/files/22445-Mining-in-NL-Final-for-Web-Oct-24.pdf>

## 28 DATE AND SIGNATURE PAGE

This report titled “NI 43-101 LAC VIROT IRON ORE PROJECT MINERAL RESOURCE ESTIMATE, CANADA” March 23, 2023 (the “Technical Report”) for Red Paramount Iron Ltd. was prepared and signed by the following author:

The effective date of the report is February 16<sup>th</sup>, 2023.

The date of the report is March 23<sup>rd</sup>, 2023.

Signed by:

*"Original Signed and Sealed"*

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Qualified Person  
Maxime Dupéré, B.Sc., géo.  
March 23<sup>rd</sup>, 2023

Company  
SGS Canada Inc.

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## 29 CERTIFICATE OF QUALIFIED PERSON

**QP CERTIFICATE – MAXIME DUPÉRÉ, géo.**

To accompany the report entitled: NI 43-101 Technical Report on the Lac Virot Iron Ore Project Mineral Resource Estimate, Newfoundland and Labrador, Canada." (the "Technical Report") for Red Paramount Iron Ltd., dated March 23<sup>rd</sup>, 2023 and with an effective date of February 16<sup>th</sup>, 2023.

I, Maxime Dupéré, géo., of Blainville, do hereby certify that:

- a) I am a geologist with SGS Canada Inc, SGS Geological Services, with an office at 10 Boul. de la Seigneurie Est, Suite 203, Blainville Quebec Canada, J7C 3V5.
- b) I am a graduate from the Université de Montréal, Québec in 1999 with a B.Sc. in geology. I am a member in good standing of the Ordre des Géologues du Québec (#501, 2006. I have practiced my profession continuously since 2001. I have 22 years of experience in mining exploration in diamonds, gold, silver, base metals, lithium and iron ore. I have prepared and made several mineral resource estimations for different exploration projects including iron at different stages of exploration. I am aware of the different methods of estimation and the geostatistics applied to metallic, non-metallic and industrial mineral projects.
- c) I have not visited the property site but conducted verifications and validations at the core shack on drill core and data on February 13<sup>th</sup>, 2023 in Wabush, Newfoundland Labrador. It is my intention that I will visit the Lac Virot Property site as soon as the snow cover has melted, within the next three months, by June 2023.
- d) I am an author of this report and responsible for all Items of the Technical Report.
- e) I am independent of Red Paramount Ltd. as defined in Section 1.5 of National Instrument 43-101.
- f) I have had no prior involvement with the subject property.
- g) I have read the definition of "qualified person" set out in the National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements to be an independent qualified person for the purposes of NI 43-101.
- h) As at the effective date of the technical report, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- i) I have read National Instrument 43-101, Form 43-101F1 and confirm that this technical report has been prepared in accordance therewith.

Signed and dated this 23<sup>rd</sup> day of March 2023 at Blainville, Québec.

*"Original Signed and Sealed"*

*Maxime Dupéré, géo., SGS Canada Inc.*

