# TECHNICAL REPORT ON THE RESOURCE ESTIMATE UPDATE FOR THE BRABANT-McKENZIE PROPERTY, BRABANT LAKE, SASKATCHEWAN, CANADA FOR MURCHISON MINERALS LTD.

OCTOBER 27, 2018

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Toronto, Ontario, Canada
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# Date and Signature Page

This reported titled
TECHNICAL REPORT ON THE RESOURCE ESTIMATE UPDATE FOR THE BRABANT MCKENZIE PROPERTY, BRABANT LAKE, SASKATCHEWAN, CANADA FOR MURCHISON MINERALS LTD., Toronto, Ontario, Canada; Effective Date: September 4, 2018 was prepared and signed by the following authors:

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# 1. Summary

Murchison Minerals Ltd.'s ("**Murchison**" or the "**Company**") Brabant-McKenzie Property (the "**Property**") is located approximately 175 km north of La Ronge, Saskatchewan. It is accessible year-round by a 1 km drill/winter road, which connects it to Provincial Highway 102 at a point approximately 2 km north of the settlement of Brabant Lake.

The Property consists of 100%, undivided interest in Mining Lease 5054, which includes 21 former contiguous claims (S- 61073 to S-61087 and S-72187 to S-72192) covering approximately 411 hectares and an additional sixteen minerals claims (S-111620 to S-111622, S-111327 to S-111329, 113998, MC0003779, MC0008410 to MC0008412, MC0008491, MC0008493, MC00011056, MC0001157, MC00012387) which cover a total of approximately 6,963 hectares.

Mining Lease 5054 was located within Crown Reserve 656, Block 4. The Peter Ballantyne Cree Nation made application in 1994 to purchase Crown Reserve 656, Block 4 from the Saskatchewan government under the terms of the Treaty Land Entitlement Program. The process of transferring the land to the Peter Ballantyne Cree Nation was not advanced when the application was made, nor during the period to November 2009. The Crown Reserve 656, Block 4 remained under active claim until November 2009 at which time it was removed from Disposition Claim restriction and the area became open for disposition staking.

Incentive liens totaling $37,338.93 incurred by previous leaseholders must be repaid to the government from the net profits of any mineral production located on Mining Lease 5054.

Mining Lease 5054 and all Mineral Dispositions remain in good standing to 2019 A number of Mineral Dispositions have assessment credits which extend beyond 2019. The Company currently plans to continue keeping all of its Mineral Dispositions in good standing beyond 2019. The Company renewed its Mining Lease 5054 for an additional ten (10) years prior to the December 12, 2017 expiry date as per the Mineral Tenure Act requirements for mining leases.

The Property is located within the Reindeer Zone of the Early Proterozoic Trans-Hudson Orogen. The Reindeer Zone is comprised of a lithologically and structurally complex collage of arc-related volcanic and plutonic rocks, coeval or derived volcanogenic clastics, subordinate later arkosic mollase assemblages and crustal melt fractions. The Reindeer Zone has been subdivided into a series of domains. The McLennan Lake Tectonic Zone separates the lower metamorphic grade volcanic and intrusive rocks of the La Ronge domain from the amphibolite to granulite facies gneisses of the MacLean Lake Belt to the east.

The Property is situated less than 5 km east of the McLennan Lake Tectonic Zone in the western part of the MacLean Lake Belt and straddles the boundary between the MacLean Lake Gneisses and the McLennan Group meta-arkoses. The McLean Lake Gneisses are interpreted as representing mainly proximal volcanogenic greywackes with subordinate amounts of volcanic and volcanoclastic rocks and conglomeratic fan deposits. The McLennan Group is interpreted as a molasse assemblage with repetitious upward fining cycles of immature, fluvial, lithic and feldspathic sandstones and conglomerates. Metamorphic grades in the MacLean Lake Belt locally attain granulite facies.

The Property is covered by a thick blanket of Pleistocene to Recent lacustrine sediments. Outcrop is limited but is present in a series of ridges trending northeast–southwest along the length of the Property. Biotite gneiss and semi-continuous bands of intercalated amphibolite (+/- biotite) and calc-silicate gneisses are assigned to the McLennan Group and comprise the predominant lithologies on the Property. Garnetiferous biotite gneiss/migmatite which underlies the easternmost part of the Property is included in the MacLean Lake Gneisses. Pegmatites and other evidence of melt fractions are common, locally exceeding 50% by volume of the MacLean Lake Belt.

Prospecting in 1956 led to the discovery of what had become known as the McKenzie (a.k.a. Peg) deposit, now the Brabant-McKenzie Deposit (or "**the Deposit**"). Since the Deposit's discovery, the Property has been subjected to a variety of airborne and ground geophysical surveys, limited soil sampling, trenching, geological mapping and diamond drilling.

To date 175 diamond drill holes (51,400 metres) have tested the Deposit and regional targets. Current (September 2018) NI 43-101 inferred and indicated resource estimate is based on a 3.5% zinc equivalent and an approximate NSR cut-off of $90 CDN are listed in Table 1.1.

**TABLE 1.1 INDICATED AND INFERRED RESOURCE TABLE**

| Indicated Resource 3.5%Zn Equivalent Cutoff | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lens/Zone | Tonnes | % Zn | % Cu | % Pb | g/t Au | g/t Ag | % Zn Equiv. |
| Lower Zone - Lens 104 | 1,200,000 | 8.13 | 0.75 | 0.67 | 0.28 | 48.00 | 11.53 |
| Upper Zone - Lens 105 | 900,000 | 5.70 | 0.60 | 0.24 | 0.17 | 28.52 | 7.93 |
| TOTAL | 2,100,000 | 7.08 | 0.69 | 0.49 | 0.23 | 39.60 | 9.98 |

| Inferred Resource 3.5%Zn Equivalent Cutoff | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lens/Zone | Tonnes | % Zn | % Cu | % Pb | g/t Au | g/t Ag | % Zn Equiv. |
| Lower Zone - Lens 104 | 2,700,000 | 4.88 | 0.55 | 0.42 | 0.14 | 29.02 | 7.14 |
| Upper Zone - Lens 105 | 4,900,000 | 4.22 | 0.57 | 0.06 | 0.08 | 12.46 | 5.81 |
| TOTAL | 7,600,000 | 4.46 | 0.57 | 0.19 | 0.10 | 18.42 | 6.29 |

*Tonnes may not add due to rounding*

*The resource for the Brabant-McKenzie zinc deposit was estimated based on metal prices of US $1.20/lb zinc, $2.50/lb copper, $1.00/lb lead, $16.00/oz silver and $1200/oz/gold, and a US$ exchange rate of $1.25. An NSR cut-off of $90/tonne and a 3.5% zinc equivalent based on above metal prices and an average recovery of 75% for all metals for underground mining and milling was utilized to report the resource.*

The Deposit consists of two parallel, generally north-north-easterly striking and moderately west-northwesterly dipping zones referred to as the Upper and Lower Zones.

The Brabant-McKenzie Deposit consists of variable amounts of pyrrhotite, sphalerite, pyrite, chalcopyrite and galena as tabular to lensoid bodies of disseminated to massive sulphide,

sulphide-rich breccias, concordant to discordant veins and veinlets. Historically, the Deposit's textures within the sulphide-rich breccias suggested that the Deposit had been injected or, more likely, remobilized. The Deposit shares many textural and metamorphic characteristics with other massive sulphide deposits found in higher metamorphic grade terranes such as those of the Manitouwadge camp in Ontario and of the Sherridon area of Manitoba.

Limited petrography, micro-probe analyses and preliminary metallurgical testing indicate that the sphalerite is marmatitic, that efficient copper-zinc recoveries are possible and marketable grade zinc and copper concentrates can be produced. These preliminary flotation tests were not optimized, and more bench scale testing is warranted.

Many of the historical diamond drill holes on the Deposit did not go deep enough to intersect the Lower Zone. Based on the latest drill results, the Deposit remains open down plunge and laterally.

The authors of this report consider that the potential to increase indicated resource tonnage from the conversion of inferred resources and possibly increase the overall grade in the indicated resource category at Brabant-McKenzie deposit is probable.

An initial Phase I exploration program conducted in late 2006 included line cutting, ground geophysical surveys, MAG and HLEM, and 20 diamond drill holes totaling 7,102.24 m. The Phase I exploration program was designed to confirm higher grade intersections from previous drilling and to expand upon the known resources.

From early June 2007 to mid-February 2008, Manicouagan Minerals Inc. completed a drilling Phase II program consisting of 29 holes totaling 8,257.78 m. These holes were drilled in a series of fences designed to build upon the known resource and identify higher grade and thicker mineralized trends, particularly within the Lower Zone.

All holes completed to their designed depths intersected at least one mineralized horizon. Up to four mineralized zones were intersected in individual holes based on the results of the previous diamond drill programs a phase III exploration program was proposed to further define the extent of the Deposit.

The phase III program proposal which consisted of additional diamond drilling, borehole EM surveying, computerization of all drill hole and assay data as well as bench scale metallurgical testing totaling $2,000,000 was contemplated to advance the Property. Given the downturn in the capital markets in mid-2008, Manicouagan was unable to raise funding for this program and it was therefore not carried out.

In 2010, Manicouagan expanded the Property to approximately 2,850 ha covering 15 kilometres of the favourable geological horizon which hosts the Deposit. In March 2011, Manicouagan completed a detailed 560-line kilometre airborne VTEM PLUS geophysical survey which covered the entire 2,850 ha land package including the Deposit. A number of VTEM conductor anomalies identified in the survey were modeled by GeophysicsOne Inc. as potential diamond drill targets.

In November 2011, Manicouagan optioned the Property to Votorantim Metals Canada (“**Votorantim**”).

In 2012, Votorantim completed a 12-hole diamond drill program totalling 2,429.5 metres designed to test 10 VTEM conductor anomalies. After reviewing the results of its exploration program, Votorantim advised the Company that it had elected not to continue its option and returned the Property to Manicouagan in May 2012.

In 2014, Manicouagan completed an amalgamation via a reverse take-over with Flemish Gold Corp. (“**Flemish Gold**”) in which Manicouagan acquired all the issued common shares of Flemish Gold in exchange for common shares of Manicouagan. The resulting company was renamed Murchison Minerals Ltd. (“**Murchison**” or the “**Company**”).

In June 2015, Murchison staked an additional 940 hectares, adjacent to its 2,850 hectares on the Property. The area was considered to be prospective for zinc-copper because it covers EM conductor trends identified from the 2011 VTEM survey, but located outside the original boundary of the Property.

In December 2015, Murchison Minerals Ltd. conducted a limited ground fixed loop time domain electromagnetic (“**TDEM**”) ground survey and one line of SQUID EM. The geophysics program was designed to test the Deposit’s southern extension.

In 2016, Murchison conducted a borehole EM geophysics survey on five previously drilled holes designed to continue testing the lateral and down dip extents of the Deposit. The survey was successful in identifying numerous conductive electromagnetic plates that are coincident with thicker zones of the Deposit and areas with little or no testing by previous drilling immediately adjacent to the mineralized zones.

The Company also conducted a Helicopter Airborne Sub Audio Magnetics geophysics survey (“**HeliSAM**”) which covered the main deposit, the mining lease and claims immediately adjacent the mining lease. Interpretation of the data suggests that the Deposit has a down dip extent of approximately 1,000 metres while historic drilling of the Deposit had identified VMS style mineralization to a current down dip depth extent of 520 metres.

Results from the HeliSAM survey also indicated that two new large discrete conductors were also identified approximately 1.5 kilometres southwest (Anomaly C) and 1.4 kilometres due south (Anomaly D) of the Deposit. Results are pending.

In February and March 2017, Murchison Minerals completed a 5,600 m, 10-hole drill program designed to test both the lateral and depth extents of the Deposit outside of the 2008, NI 43-101 resource estimate and away from the main central corridor of historic drilling.

Volcanogenic Massive Sulphide (VMS) style zinc-copper mineralization, was intersected by all ten holes of the 2017 diamond drill program. The results from the program were successful in adding tonnage to the Deposit's resource estimate while extending its down dip depth extent to approximately 610 metres from surface. Additionally, drilling confirmed VMS mineralization at a down dip extent of approximately 950 metres from surface.

Results from this drilling program and the historic drilling results were used to estimate the 2017 NI 43-101 resource estimate for the Deposit.

In February 2017, the Company completed a follow up ground SQUID EM geophysics program over the Anomaly C and Anomaly D HeliSAM conductor anomalies.

Results from the EM and Mag data suggested that Anomaly C represented a discrete conductive body and a confirmed drill target with modeled EM plate dimensions measuring 1.4 km by 1.3 km. The conductive body occurs at approximately 260 m depth from surface within the same geological horizon as the Deposit.

Anomaly D was identified as a significantly large, very intense conductive body located on the southeastern edge of the EM survey grid. Modeled plate dimensions measured 1 km strike length by 2- 3 km depth extents with the top edge of the plate at about 145 m from surface. The conductivity of this body was measured at approximately 1,300 Siemens.

A prospecting, mapping and sampling program identified chalcopyrite and pyrrhotite mineralization in outcrop hosting elevated copper values in proximity to Anomaly D surface projection. Results from rock geochemistry samples collected directly over outcrop exposures returned anomalous values in copper ranging from 100 ppm to greater than 400 ppm.

Additional ground EM and Mag geophysics in November 2017 continued to confirm Anomaly D as a significant target with strong conductivity values greater than 2,000 siemens with depth extent and strike lengths in the range of 800 m beginning at approximately 20 m from surface.

Between August 2017 and July 2018, the Company carried out additional regional prospecting, sampling, mapping and geophysical surveys to identify and outline a number of geophysical anomalies and mineralized showings over approximately ten kilometres of strike on the Brabant-McKenzie project.

Sulphide mineralization was identified in outcrops, including chalcopyrite and pyrrhotite proximal the TOM2 geophysical and Priority 3 geophysical anomalies. Both anomalies were fully defined from the reinterpretation of the 2011 VTEM survey data.

Prospecting also identified chalcopyrite and fine-grained massive sphalerite in outcrops at the Main Lake showing as wells as massive sulphide mineralization over a 600 metre strike length at the McIvor Channel showing.

Follow up ground EM and Mag geophysical surveys over the TOM2 anomaly further defined a highly conductive shallow body coincident with magnetic high amplitudes and measures approximately 400 metres by 235 metres with a shallow dip of about 23 degrees to the west.

A ground geophysical program covering 40 line kilometres over a four and a half kilometre strike of a series of VTEM airborne geophysical anomalies known as the TOM Trend identified the T2T geophysical anomaly. Modeled dimensions of this anomaly measured 400 metres by 310 metres at a depth of 184 metres with conductivities exceeding 4,400 siemens. The conductive body is coincident with anomalous magnetic responses similar to the TOM2 target.

Based on the success of the 2018 regional exploration program an additional 3,517 ha of claims were added to the Brabant-McKenzie project.

Between January and March of 2018, the Company completed a 9,004 metre diamond drill program. An additional 3,400 metres was drilled on Anomaly C and Anomaly D to test for mineralization. As of the effective date of the Report, Anomaly C and Anomaly D drill results were pending.

Deposit drilling continued testing the potential mineralization both laterally and down dip of the previously modeled September 27 2017 NI 43-101 resource estimate as well as upgrading inferred resources to the indicated resource category. Drilling was successful in both aspects and provided significant confidence in the continuity of the mineralized zone. Based on results for the 2018 drill program an updated NI 43-101 resource estimate was prepared.

It is recommended that the current QA/QC and Specific Gravity programs be continued. Pulps and rejects should continue to be stored in anticipation of preliminary metallurgical testing. A projected budget of approximately $ 1,200,000 is proposed to fund the next stage of this exploration program in order to advance the Property. This figure does not include monies for a regional program as well as metallurgical testing and is limited to the diamond drill portion of the program in the immediate vicinity of the deposit.

# 2. Introduction

In February 2017, Finley Bakker Consulting (or "**FBC**") was retained by Murchison Minerals Ltd. ("**Murchison**" or the "**Company**") to prepare an independent Technical Report (the "**Report**") on the Brabant-McKenzie Property, located approximately 175 km by road northeast of the town of La Ronge, Saskatchewan. The report was commissioned by Murchison to comply with regulatory disclosure and reporting requirements and may be used in support of future financing efforts. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Properties.

Murchison is a Canadian mineral exploration company with projects in Quebec and Saskatchewan and is a reporting issuer in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, and Newfoundland and Labrador. The common shares of Murchison trade on the Canadian Securities Exchange and the Corporation is under the jurisdiction of the Ontario Securities Commission.

This Technical Report is in compliance with Form 43-101 F1 and Companion Policy 43-101 CP of National Instrument 43-101 (Standards and Disclosure for Mineral Projects). Terms of engagement for FBC are contained in a letter dated February 2017.

For this Technical Report, Finley Bakker and Kent Pearson served as the Qualified Persons responsible for the preparation of the report.

A site visit to the Brabant-McKenzie Property was carried out by Finley Bakker and Kent Pearson, in the period January 4 to March 24, 2018. The purpose of the visit was to monitor the diamond drill program, confirm the massive sulphide nature of the sulphide mineralization, observe and assist in core logging and sampling protocols, visit the active drill sites and landmarks, and identify any other factors that may affect the program.

In preparing this report, the authors reviewed and relied on geological reports, maps, and miscellaneous technical reports in the public domain and confidential geological reports, maps and technical reports supplied to them by Murchison. There were no limitations put on the authors in preparation of the report with respect to exploration data held by Murchison. The documents reviewed are listed in section 27, “References”, of the Report.

The results and opinions expressed in the Report are conditional upon the aforementioned information being current, accurate and complete as of the date of this report and that no information has been withheld which would affect the conclusions made herein.

Cost data used to create the proposed budget to support the proposed work program is based on Murchison’s experience over the past 18 months. References to currency in the report refer to the Canadian dollar, unless otherwise stated. Units of measurement used in the Report conform to the SI (metric) system, unless otherwise indicated. The following is a list of abbreviations which may be used in this report and the meanings attached to them.

**TABLE 2.1 LIST OF ABBREVIATIONS**

| | |
|---|---|
| Ag | silver |
| Au | gold |
| Cu | copper |
| Cdn | Canadian |
| Pb | lead |
| Zn | zinc |
| °C | degree Celsius |
| cm | centimetre |
| dia | diameter |
| EM | electromagnetic |
| ft | foot |
| g | gram |

| | |
|---|---|
| g/t | gram per tonne |
| ha | hectare |
| HLEM | horizontal loop electromagnetic (survey) |
| HeliSAM | high resolution helicopter-borne magnetic sub-audio magnetics geophysics |
| in | inch |
| kg | kilogram |
| km | kilometre |
| L | liter |
| m | metre |
| M | mega (million) |
| MAG. | Magnetic (survey) |
| masl | metres above sea level |
| mm | millimetre |
| opt, oz/st | ounce per short ton |
| oz | troy ounce (31.1035g) |
| ppb | part per billion |
| ppm | part per million |
| SQUID | Superconducting Quantum Interference Device |
| st | short ton |
| t | metric tonne |
| US | United States |
| VLF-EM | very low frequency electromagnetic (survey) |
| VMS | volcanogenic massive sulphide |
| Yr | year |

# 3. Reliance on Other Experts

N/A

# 4. Property Location and Description

## 4.1 Location

The Brabant-McKenzie Property is located 480 km northeast of Saskatoon, Canada and approximately 175 km northeast of the town of La Ronge, Saskatchewan via highway 102, in the Brabant Lake area of northern Saskatchewan, Canada (Figure 4.1).


**FIGURE 4.1 LOCATION MAP**

Locally, the Property is located 2.5 km northeast of the settlement of Brabant Lake, Saskatchewan and is centered at approximately latitude [57° 08' N and longitude 103° 43'W] or Universal Transverse Mercator ("**UTM**") coordinates [6 220 601 m N and 580 833 m E] of Zone 13 with datum set to North American Datum 1983 (NAD83). The Property lies within the Canadian National Topographic System (NTS) sheet 64D/4 SE (Figure 4.2).

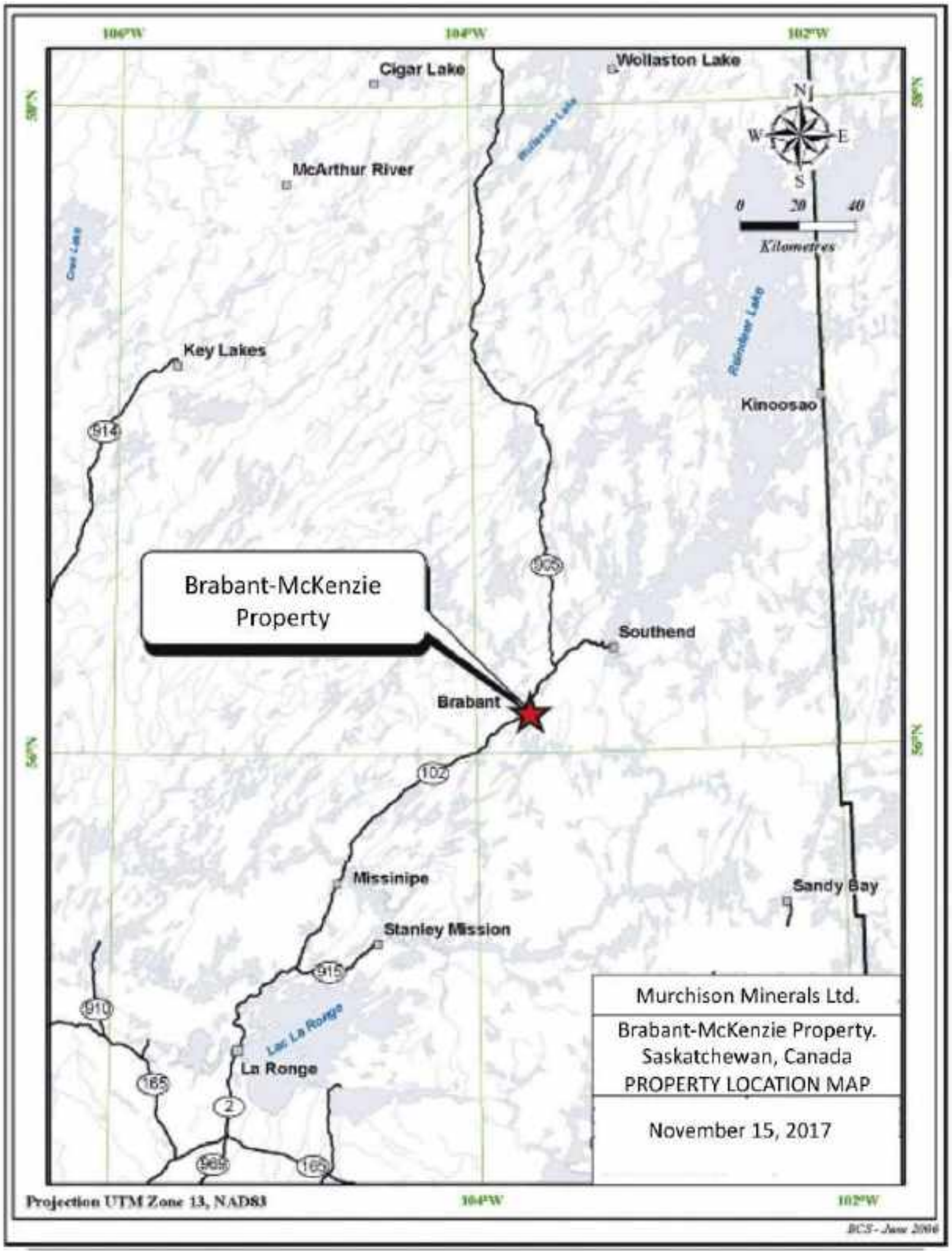



**FIGURE 4.2 PROPERTY LOCATION**

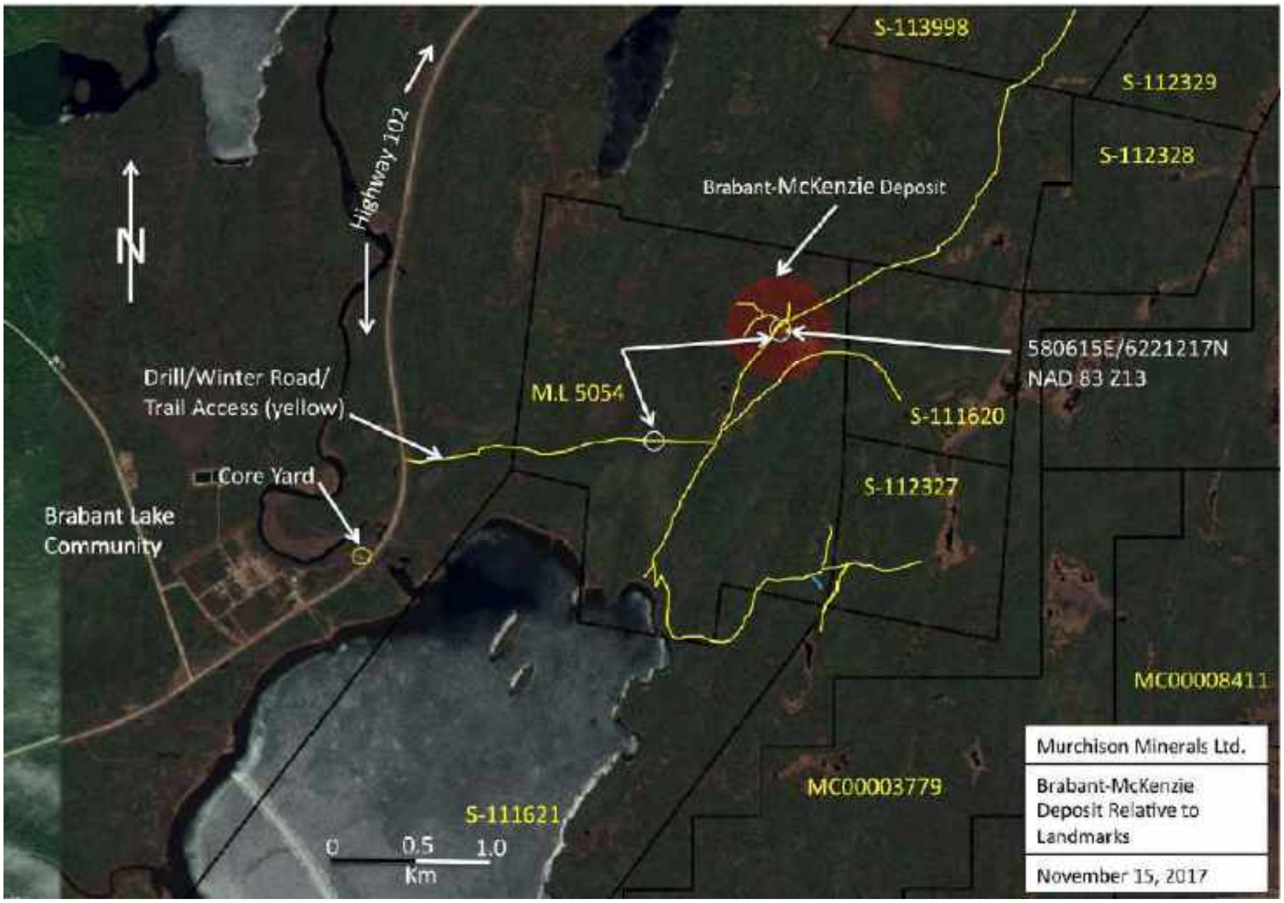



**FIGURE 4.3 LOCATION OF DEPOSIT RELATIVE TO LANDMARKS**

## 4.2 Property

The Brabant-McKenzie Property consists of Mining Lease 5054, ("**ML 5054**" or "**Mining Lease**") which includes 21 former contiguous claims (S- 61073 to S-61087 and S-72187 to S-72192) and covers approximately 411 hectares. Manicouagan Minerals Inc. announced on June 28, 2006 the purchase of a 100%, undivided interest in ML 5054.

Murchison also holds a 100% undivided interest in sixteen contiguous minerals claims ("**Mineral Claims**") (S-111620 to S-111622, S-111327 to S-111329, 113998, MC0003779, MC0008410 to MC0008412, MC0008491, MC0008493, MC0001156, MC0001157, MC00012387) adjacent to Mining Lease 5054 which cover an additional total of approximately 6,963 hectares. The Mining Lease and Mineral Claims are located within the Northern Mining District on Saskatchewan Mineral Claim map 64-D-4.

Mining leases in Saskatchewan are subject to renewal every ten years. M.L. 5054 was renewed on December 12, 2017. Minerals Claims are reviewed annually to ensure they have adequate assessment requirements to remain valid. Claims not meeting the assessment work requirements are subject to lapse and returned to the disposition pool.

Assessment credits must be filed annually for mining leases and mineral claims and excess credits may be banked. An assessment work commitment for mining leases of $75/hectare per annum is required in order to maintain tenure. Alternatively [for M.L. 5054] a deficiency deposit of $6,680.46 may be paid in lieu of work.

Assessment work commitments for minerals claims is as follows: NIL during the first annual assessment work period; $15.00 per hectare per assessment work period, from the second to tenth assessment work periods with a minimum of $240.00 per claim per assessment work period; $25.00 per hectare per assessment work period, for the eleventh assessment work period and all subsequent assessment work periods with a minimum of $400.00 per claim per assessment work period.

Alternatively, a deficiency deposit or non-refundable deficiency payment in lieu of in the amount equivalent to the assessment deficiency may be paid. If the Company pays a deficiency cash deposit and expends the amount required for the assessment work period that follows the assessment work period in which the deficiency was incurred in addition to an amount at least equal to the deficiency cash deposit, the deficiency cash deposit shall be refunded to the holder following registration of the expenditure.

At the effective date of this report, all mineral dispositions and the mining lease were current with required assessment work commitments and none had any assessment deficiency.

A number of minerals dispositions have assessment credits which extend beyond 2019. Company currently plans to continue keeping all its mineral dispositions in good standing beyond 2019. The Company renewed the Mining Lease 5054 for an additional ten (10) years prior to the December 12, 2017 expiry date as per the Mineral Tenure Act requirements for mining leases.

**TABLE 4.1 EFFECTIVE DATES AND REQUIRED ASSESSMENT AND ASSESSMENT CREDITS FOR M.L. 5054 AND THE MINERAL CLAIMS AS OF THE EFFECTIVE DATE OF THIS REPORT**

| Disposition # | Type | Status | Owners | Total Area | Issuance Date | Review Date | Work Requirements | Available Expenditures |
|---|---|---|---|---|---|---|---|---|
| ML 5054 | Mineral Lease | Active | Murchison Minerals Ltd. | 411 | 12/13/1966 | 12/12/2018 | $30,825.00 | $462,375.00 |
| S-111620 | Mineral Claim | Active | Murchison Minerals Ltd. | 100 | 2/26/2010 | 2/2/2019 | $1,500.00 | $32,617.64 |
| S-111621 | Mineral Claim | Active | Murchison Minerals Ltd. | 664 | 2/26/2010 | 2/2/2019 | $9,960.00 | $222,377.07 |
| S-111622 | Mineral Claim | Active | Murchison Minerals Ltd. | 886 | 2/26/2010 | 2/2/2019 | $13,290.00 | $86,692.61 |
| S-112327 | Mineral Claim | Active | Murchison Minerals Ltd. | 98 | 3/12/2012 | 2/1/2019 | $1,470.00 | $45,080.00 |
| S-112328 | Mineral Claim | Active | Murchison Minerals Ltd. | 109 | 3/12/2012 | 2/1/2019 | $1,635.00 | $3,825.00 |
| S-112329 | Mineral Claim | Active | Murchison Minerals Ltd. | 133 | 3/12/2012 | 2/1/2019 | $1,995.00 | $4,025.00 |
| S-113998 | Mineral Claim | Active | Murchison Minerals Ltd. | 517 | 2/3/2010 | 2/2/2019 | $7,755.00 | $69,224.48 |
| MC00003779 | Mineral Claim | Active | Murchison Minerals Ltd. | 939.801 | 7/2/2015 | 7/2/2019 | $14,097.02 | $23,186.98 |
| MC00008410 | Mineral Claim | Active | Murchison Minerals Ltd. | 523.334 | 8/29/2017 | 8/29/2019 | $7,850.01 | $2,296.36 |
| MC00008411 | Mineral Claim | Active | Murchison Minerals Ltd. | 198.527 | 8/29/2017 | 8/29/2019 | $2,977.91 | $0.00 |
| MC00008412 | Mineral Claim | Active | Murchison Minerals Ltd. | 493.334 | 8/29/2017 | 8/29/2019 | $7,400.01 | $0.00 |
| MC00008491 | Mineral Claim | Active | Murchison Minerals Ltd. | 494.194 | 9/20/2017 | 9/20/2019 | $7,412.91 | $0.00 |
| MC00008493 | Mineral Claim | Active | Murchison Minerals Ltd. | 163.571 | 9/20/2017 | 9/20/2019 | $2,453.57 | $0.00 |
| MC00011056 | Mineral Claim | Active | Murchison Minerals Ltd. | 1100.73 | 5/3/2018 | 5/3/2019 | $0.00 | $0.00 |
| MC00011057 | Mineral Claim | Active | Murchison Minerals Ltd. | 199.646 | 5/3/2018 | 5/3/2019 | $0.00 | $0.00 |
| MC00012387 | Mineral Claim | Active | Murchison Minerals Ltd. | 343.007 | 9/12/2018 | 9/12/2019 | $0.00 | $0.00 |

There are Incentive Liens totalling $37,388.92 outstanding against the Mining Lease which were incurred by previous leaseholders. In the eventuality that mineral production is achieved on

M.L. 5054, the incentive liens must be repaid to the government from 20% of net profits. Table 4.2 outlines liens payable.

**TABLE 4.2 INCENTIVE LIENS ON M.L. 5054**

| Company | Date | Amount |
|---|---|---|
| Bison Petroleum & Minerals | March 31, 1966 | $27,571.78 |
| Rio Tinto Canadian Exploration Limited | March 31, 1966 | $8,835.43 |
| Rio Tinto Canadian Exploration Limited | February 15, 1968 | $981.71 |
| **Total** | | **$37,388.92** |

There is no legal requirement to do a legal survey of the perimeter and there is no record of one having been done.

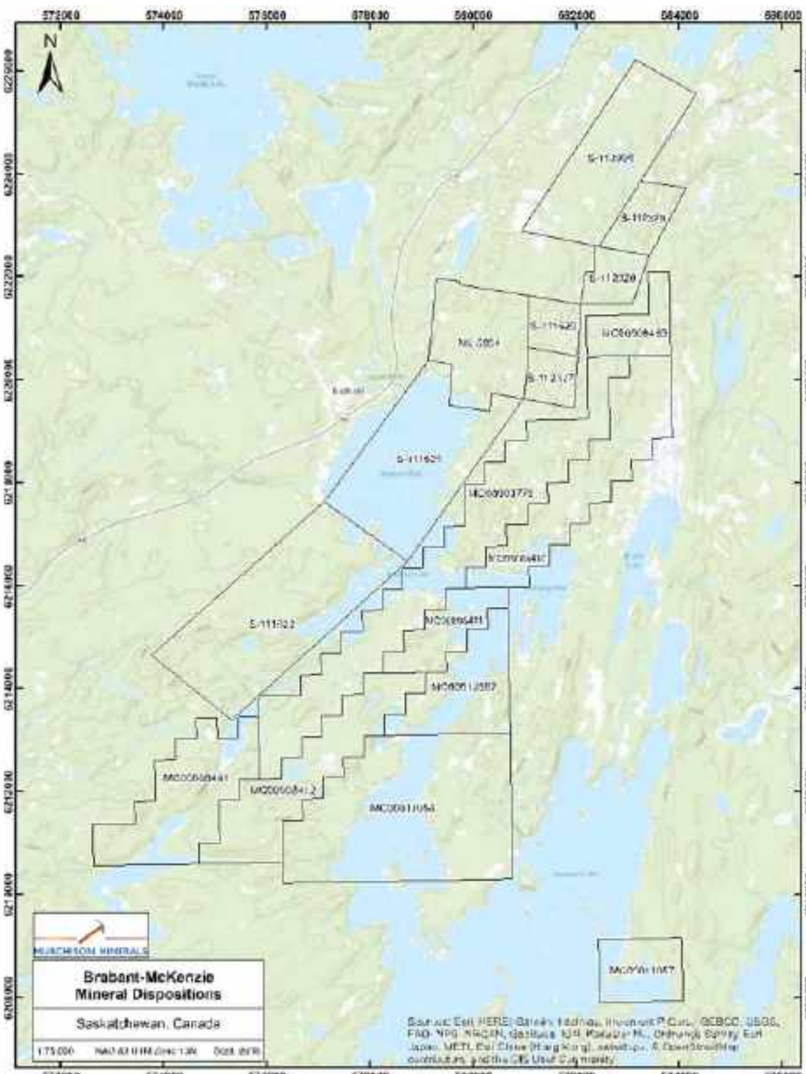



**FIGURE 4.4 BRABANT-MCKENZIE PROPERTY CLAIMS**

## 4.3 History of Claims

### 4.3.1 Previous Work by Other Parties

The Property's exploration history, prior to Murchison's involvement, is summarized below:

***1956*** ***Lawrence McKenzie***

- discovery by prospecting
- 15 contiguous claims staked
- Property optioned to Paramount Petroleum and Mineral Corporation Limited and Westore Mines Limited joint venture

***1956-58*** ***Paramount-Westore Joint Venture***

- ground geophysics (mag, EM)
- prospecting, trenching
- airborne magnetic and electromagnetic surveys
- diamond drilling
- 39 holes totaling 4,267 m

***1959*** ***Saskatchewan Department of Mineral Resources***

- 1" to ½ mile geological map of Brabant Lake area (Kirkland, 1959)

***1964*** ***Bison Petroleum and Minerals Ltd.***

- diamond drilling
- 2 holes totaling 962 m
- Property optioned to Rio Tinto Canadian Exploration Limited

***1965-66*** ***Rio Tinto Canadian Exploration Limited***

- diamond drilling
- 15 holes totaling 3,686 m

***1970*** ***Saskatchewan Department of Energy and Mines***

- soil and rock geochemical survey, Brabant Lake area (Johnston, 1972)

***1978*** ***Geological Survey of Canada***

- Pb-Pb isotope analysis of one galena sample (Sangster, 1978)

***1984*** ***Bison Petroleum and Minerals Limited***

- ground geophysics

- mag, VLF-EM (40 km)
- biogeochemical (alder twig) survey

***1988*** ***Gamsan Resources Ltd.***

- review of mineral inventory (Hawkins and Neale, 1988)
- soil and lithogeochem sampling
- trenching
- line cutting (100 km)
- ground geophysics
- HLEM (45 km)
- mag, VLF (96.4 km)

***1988-89*** ***Gamsan Resources Ltd.***

- diamond drilling
- 18 holes totaling 3,716 m
- updated mineral inventory calculation (Hawkins and Naas, 1989)

***1989*** ***Gamsan Resources Ltd.***

- detailed geological mapping
- soil sampling (b-horizon, humus)

***1992*** ***Phelps Dodge Corporation of Canada, Limited***

- line cutting (47 km) -ground geophysics
- HLEM (27 km)

***1992*** ***Phelps Dodge Corporation of Canada, Limited***

- line cutting (47 km)
- ground geophysics
- LEM (27 km)

***1993*** ***Phelps Dodge Corporation of Canada, Limited***

- diamond drilling of geophysical/geochemical anomalies outside of McKenzie Deposit area (Durocher, 1993a)
- 7 holes totaling 820.0 m

- no base metals intersected -detailed geological mapping in the vicinity of McKenzie Deposit (Barclay, 1993)

***1993*** ***Phelps Dodge Corporation of Canada, Limited*** *(cont'd)*

- diamond drilling to test depth potential of Upper Zone and existence of Lower Zone (Durocher, 1993b) -4 holes totaling 2,233.0 m
- bore hole transient domain EM survey
- preliminary metallurgical testing
- reflected light petrography, electron microprobe analysis and specific gravity determinations for seven samples (Davison and Davison, 1994)
- compilation and re-interpretation of drilling data including preliminary mineral resource inventory (Deptuck, 1994)

***2006*** ***Manicouagan Minerals Inc.***

- purchased a 100% undivided interest in the Property from Longyear for a one-time payment of $300,000 and as such no advanced or production royalties are owed to Longyear
- 35 line-kilometres of Line cutting, grid establishment
- ground geophysical surveys including magnetics, horizontal loop electromagnetic (HLEM) and VLF-EM over the entire grid
- HLEM survey successfully delineated one moderate to strong conductor trend oriented roughly parallel to localized ground magnetic anomalies with trend corresponding to the McKenzie Zone
- 20-hole drilling program totaling 7,102.24 m designed to twin certain higher-grade intersections from previous drilling and to expand upon the known resource
- diamond drill holes completed intersected both the Upper and Lower mineralized zones and the continuity of the mineralization was confirmed
- completed NI 43-101 TECHNICAL REPORT ON THE BRABANT LAKE PROPERTY, SASKATCHEWAN, CANADA FOR MANICOUAGAN MINERALS INC. September 15, 2006

***2007*** ***Crone Geophysics and Exploration Ltd.***

- bore hole electromagnetic surveying nine holes surveyed either partially or totally

***2007-2008*** ***Manicouagan Minerals Inc.***

- completed a drilling phase II program consisting of 29 holes totaling 8,257.78 m

- completed NI 43-101 2008 SECOND TECHNICAL REPORT ON THE BRABANT LAKE Property, SASKATCHEWAN, CANADA FOR MANICOUAGAN MINERALS INC. September 8, 2008

***2010*** ***Manicouagan Minerals Inc.***

- expanded the Property to 2,850 ha which covers approximately 15 kilometres of the favourable geological horizon which hosts the Deposit

***2011*** ***Manicouagan Minerals Inc.***

- completed a detailed 560-line kilometres airborne VTEM PLUS geophysical survey which covered the entire of 2,850 ha land package including the Deposit
- identified a number of VTEM conductor anomalies in the survey and plate modeled as potential diamond drill targets
- Property optioned to Votorantim Metals Canada ("**Votorantim**")

***2012*** ***Votorantim***

- completed a 12-hole diamond drill program totalling 2,430 metres designed to test 10 VTEM conductor anomalies

### 4.3.2 Previous Work by Murchison Minerals

In June 2015, Murchison staked an additional 940 hectares adjacent to its 2,850 hectares on the Property. The area was considered to be prospective for zinc-copper because it covers EM conductor trends identified in the 2011 VTEM survey, but are located outside the original boundary of the Property.

From October 6-10 and 14-21, 2015, Murchison conducted two field investigations and a data compilation on the Brabant-McKenzie Property. The premise of the field investigations was as follows:

- confirm known drill collars, grid locations, access routes and showings on M.L. 5054 and proximal ground for quality control purposes, geo-rectifying existing data and planning of future exploration programs;
- assess ground conditions, styles of mineralization and conductive properties from core and trenches for modelling and future work programs;
- determine structural setting of the known Brabant-McKenzie Deposit and areas proximal to Deposit;
- obtain an inventory of remaining and accessible core and assess its condition for geological control purposes;

- meet with government representatives in Regina and La Ronge to review their recent work and establish contacts as well as to informally introduce Murchison staff to members of the Brabant Lake community for consultation purposes and to assess the potential for local hires.

Murchison spent time in October field checking and compiling historical data for the area surrounding the Brabant-McKenzie Deposit itself and area of modeled VTEM geophysics conductors along strike of the Deposit. These target areas were presumed to be in the same geological formation as the Deposit and located on the western limb of a regional fold structure; likely located within a tight isoclinal Z fold structure that strikes NE dips 50 degrees NW and plunges to the north.

Field work consisted of checking as many old drill collars (with casing) and grid lines (stations) as possible in order to geo-reference old historical geology and geophysical data as well as obtaining a higher confidence level in the actual collar locations versus the locations on the drill hole model.

The locations of more than 20 collars, based on pre-determined GPS coordinates, gave a high confidence level in their location. All pertinent site visits were marked by GPS and flagged for future reference.

Old historical maps were digitized with conductor trends from both VTEM and HLEM surveys and these trends were prospected which led to the re-discovery of six older trenches, some likely dating back to the 1950s-1960s. These excavated areas are important as they appear to define the footwall contact zone to the Lower Mineralized Zone deposit as outlined in geological drill hole modelling by Murchison. The exposures revealed semi-massive to fracture filled and disseminated pyrrhotite, pyrite, galena, sphalerite and chalcopyrite with local graphite in both pegmatite dykes (late) and host rock gneisses. The detection of these sites was incorporated into the geological model as the mineralized footwall contact zone to the Deposit.

In December 2015, the Company conducted a limited ground fixed loop Time Domain Electromagnetic ("**TDEM**") and magnetic ground survey over 200 metres of the southern portion of the Deposit and a further 600 metres along strike to the south along 100-meter spaced lines. The geophysics program was designed to test the Deposit's southern extension. The program included one line of SQUID EM.

In 2016, Murchison conducted a borehole EM geophysics survey on five previously drilled holes designed to continue testing the lateral and down dip extents of the Deposit. The survey was successful in identifying numerous conductive electromagnetic targets that are coincident with thicker zones of the Deposit and areas with little or no testing by previous drilling immediately adjacent to the Mineralized Zones.

The Company also conducted a Helicopter Airborne Sub Audio Magnetics ("**HeliSAM**") geophysics survey which covered the main deposit, mining lease and claims immediately adjacent to the mining lease. Interpretation of the data suggests that the Deposit has a down dip extent of approximately 1,000 metres while historic drilling of the Deposit had identified VMS style mineralization to a current down dip depth extent of 520 metres. Results also indicated that in addition to the Deposit conductor, two new large discrete conductors were identified approximately 1.5 kilometres southwest (Anomaly C) and 1.4 kilometres due south (Anomaly D) of the Deposit. Neither target has been drill tested.

The Company completed a follow-up ground SQUID EM geophysics program in February 2017 over Anomaly C and Anomaly D HeliSAM conductor anomalies. Results from the EM and Mag data indicate that Anomaly C represents a discrete conductive body and a confirmed drill target with modeled EM plate dimensions measuring 1.4 km by 1.3 km. The conductive body occurs at approximately 260 m depth from surface within the same geological horizon as the Deposit.

Anomaly D is identified as a significantly large, very intense conductive body and is located on the southeastern edge of the EM survey grid. Modeled plate dimensions measure a 1 km strike length by 2- 3 km depth extents with the top edge of the plate at about 145 m from surface. The conductivity of this body is measured at approximately 1,300 Siemens. By comparison, the Deposit, which outcrops at surface, has a conductive range of 800 to 1,000 Siemens and current dimensions of 1 km of strike length and 520 m of depth extent.

A geological prospecting program in the area of the Anomaly D surface expression was successful in identifying outcrop exposures of approximately 150 m in strike length and containing sulphide mineralization of chalcopyrite and pyrrhotite. The evidence of surface mineralization and its proximity to the conductive body combined with the size and conductivity of the EM body is considered significant and presents the potential for a sizeable sulphide body.

In February and March 2017, Murchison Minerals completed a 5,600 m, 10-hole drill program designed to test both the lateral and depth extents of the Deposit outside of the 2008, NI 43-101 resource estimate and away from the main central corridor of historic drilling. Volcanogenic Massive Sulphide (VMS) style zinc-copper mineralization was intersected in all ten holes. The results from the program were successful in adding tonnage to the Deposit's resource estimate while extending the down dip continuity of the Deposit to approximately 610 metres from surface. Drilling also confirmed VMS mineralization at a down dip extent of 950 metres from surface.

Results from the 2017 drilling program and the historic drilling were used to estimate a new resource for the Deposit and are outlined the NI 43-101 TECHNICAL REPORT ON THE RESOURCE ESTIMATE UPDATE FOR THE BRABANT-MCKENZIE PROPERTY, BRABANT LAKE, SASKATCHEWAN, CANADA FOR MURCHISON MINERALS INC. September 27, 2017.

## 4.4 Environment and Socio-Economic Issues

### 4.4.1 Environmental Liabilities

The author is not aware of any existing environmental liabilities on the Property.

### 4.4.2 Treaty

M.L. 5054 was located within, and completely surrounded by Crown Reserve #656, Block #4 ("**C.R. 656**") (Figure 4.4). C.R. 656 was subject to the Treaty Land Entitlement Program whereby money is made available to certain treaty Indian Bands to buy private and/or Crown lands to be designated as reserves as redress for unfulfilled treaty obligations. The Peter Ballantyne Cree Nation (the "**First Nation**") made application in 1994 to purchase certain crown resource land, including C.R. 656. The sale of C.R. 656 to the First Nation was subject to certain conditions, one being that the owner of any mineral rights must consent to the sale.

At the time if Manicouagan did not consent to a sale, it would have continued to hold the mineral lease but M.L. 5054 would have been totally surrounded by a reserve. Agreements relating to surface access that are less than one year can be entered into with the Province of Saskatchewan. Agreements longer than one year must have the prior consent of the First Nation.

The Peter Ballantyne Cree Nation did not advance the acquisition and transfer process to acquire C.R. 656 at the time the application was made in 1994 nor was it advanced during that time through to November 2009. During this period, the First Nation could continue to re-select C.R. 656 every 18 months for acquisition. The Crown Reserve 656, Block 4 remained under active claim until November 2009 at which time it was removed from Disposition Claim restriction and the area became open for disposition staking.

## 4.5 Surface Rights

M.L. 5054 and the adjacent claims do not include surface rights, which are owned by the Crown.

## 4.6 Work Permits

Prior to the initiation of field work, a Work Authorization Permit (or "**WAP**") must be submitted to Saskatchewan Ministry of Environment outlining the timing, location, type and scope of work to be performed. A closure report may be required upon termination of the work, depending on the nature and extent of the proposed work. An application to Saskatchewan Heritage Branch is required with respect to areas of planned work. The Heritage Branch provides guidance on areas of cultural and archeologically sensitive sites. More information regarding the WAP best practices in Saskatchewan is available on the Saskatchewan Business and Industry web site (http://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/mineral-exploration-and-mining).

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

## 5.1 Accessibility

The Property is located 2.5 km northeast of the settlement of Brabant Lake, Saskatchewan, which in turn is located about 175 km by road north of the town of La Ronge along Provincial Highway 102. This all-weather gravel road passes to within 1 km west of the Property. Year-round access to the Property is via an approximately 2 km long bulldozed winter/drill road from Highway 102 at a point just north of the settlement of Brabant Lake, about 500 m north of the Waddy River. Alternatively, a winter/drill road leads north-easterly across the Property from a point at the northeast corner of Brabant Bay.

## 5.2 Climate

The Property is located within the Northern Forest ecological region as defined in Marshall and Schut (1999). The region is classified as having a sub-humid, high- to mid- boreal eco-climate marked by short, cool summers and long, very cold winters. From the period 2007 to 2017, the mean monthly temperatures range from -20° C in January to 17°C in July. Extreme maximum temperatures for the same period are 0.5°C to 3.0°C in January and up to 35°C in July. Extreme minimum temperatures for these months were -43.5°C and -0.4°C, respectively, during the period. The mean annual precipitation at Brabant Lake is 530 mm. In excess of 250 mm of snow remains for a period of 160 days and the median depth of maximum snow cover is about 500 mm.

Lakes are usually frozen until May and freeze-up generally begins in early November. Exploration and development can be carried out year-round.

## 5.3 Local Resources and Infrastructure

The community of Brabant Lake is located 175 northeast of La Ronge Saskatchewan. The Brabant-McKenzie Deposit is located approximately 2.5 km from the community via Highway 102 and an bulldozed access drill road. Provincial Highway 102 passes by Brabant Lake and within 1 km west of the Property. The highway is an all-weather road which services communities further north from Brabant Lake including Southend and Wollaston Lake as well as access into the Athabasca Basin.

According to StatsCan the population of Brabant Lake is about 62. Local accommodations, food and fuel are available at an outfitter’s camp in Brabant Lake.

Grid power provides electricity to Brabant Lake and communities along the highway from La Ronge north past Brabant Lake, as well as other mining operations in the area. Additionally, large transmission lines run though the area approximately 15 km south of Brabant Lake and provides power to mining operations in the Athabasca Basin.

La Ronge is the largest community and service area in northern Saskatchewan. It has a population of 3,500 in the town itself, about 2,000 people on the adjacent First Nations lands of the Lac La Ronge Indian Band and some 1,000 people residing in the bordering settlement of Air Ronge. It is serviced by daily scheduled flights and truck transport.

## 5.4 Physiography, Flora and Fauna

The Property has a base elevation of 486 masl. It is characterized by generally flat topography interrupted by northeast – southwest trending elongated outcrop ridges having a local relief of about 10 -25 m (Figure 5-1).

**FIGURE 5.1 VIEW OF PROPERTY IN VICINITY OF DRILL AREA**

Most of the Property is characterized by an extensive cover of grey, lacustrine clays, silts and littoral sands left stranded after the recession of glacial Lake Agassiz, 8500-9000 years B.P. Bedrock exposures are confined to elongate roches moutonnées ridges with a minor cover of autochthonous till and/or beach gravels which emerge from the lacustrine sediment infilled lowlands (Morton and Kleespies, 1990). Outcrop is limited but is present in a series of ridges trending northeast–southwest along the length of the Property.

Morton & Kleespies (1990) report that the Property was burned by forest fires in the late 1960's. Vegetation is essentially black spruce and pine with occasional aspen groves. A variety of willows, bog birches and occasional alders form narrow bands about the perimetres of muskegs. Species inhabiting this eco-region include moose, black bear, wolf, mink, muskrat, otter, beaver and snowshoe hare.

# 6. History

The earliest geological mapping of the Brabant Lake area was by Alcock (1939) of the Geological Survey of Canada.

The mineralized zone on the Brabant Lake Property was discovered by Lawrence McKenzie, a trapper and prospector from nearby Stanley Mission, Saskatchewan. The original PEG claims were staked for a syndicate by M. Murtack and optioned to a joint venture consisting of Paramount Petroleum Corporation Limited ("**Paramount**") and Westore Mines Limited ("**Westore**") in 1956. These companies later merged to become Prairie West Explorations Ltd., a corporation then controlled by Bison Petroleum and Minerals Ltd. ("**Bison**"), a subsidiary of Canadian Javelin Ltd. ("**Javelin**").

During 1957-1958, Paramount and Westore completed preliminary exploration consisting of an airborne magnetic and electromagnetic survey of the surrounding area, five trenches and ground magnetic and electromagnetic surveys. The trenching revealed a sulphide bearing mineralized zone varying from 2.2 m to 6.4 m in width (Morton and Kleespies, 1990). This was followed by 39 diamond drill holes for a total of 4,267 m. The drilling tested the McKenzie deposit over a strike length of about 1,000 m and to vertical depth of about 290 m.

Kirkland (1959) included the Property in his 1:31,360 scale geological map of the Brabant Lake Area. Byers (1959) examined the Deposit as part of his study of base metal mineralization associated with pegmatites in northern Saskatchewan. Byers (1962) estimated a historical resource of 5,052,000 tonnes averaging 4.84% Zn and 0.57% Cu using a 3% combined Cu + Zn cutoff.

Murchison is not treating the above historical resource estimate as a current mineral resource as a qualified person has not carried out sufficient work to classify the historical resource estimate as a current mineral resource and the historical resource should not be relied upon.

In 1964, Bison completed 2 diamond drill holes totalling 962 m. In 1965, Bison commissioned the Department of Mines and Technical Surveys to run a series of preliminary flotation tests on a 72.73 kg sample of low grade material. The sample was apparently oxidized and, although a concentrate running 26% Cu with 75% recovery was achieved, difficulty was experienced in rejecting the Zn from the concentrate (Berry, 1965). In 1964, Bison commissioned the Department of Mines and Technical Surveys in Ottawa to carry out preliminary flotation testing on a sample of material from the Property. A 72.73 kg sample of weathered material was supplied to the Department, the analysis of which yielded 2.28% Zn, 0.66% Cu, 0.55 oz/ton Ag, and 0.0025 oz/ton Au.

The sample contained disseminated pyrite, chalcopyrite, sphalerite, marcasite, galena and pyrrhotite along with quartz, feldspar, a fibrous amphibole, biotite and chlorite and minor goethite.

Despite the oxidized nature of the sample, a series of four flotation tests indicated that copper concentrates running as high as 26% Cu with recoveries of up to 75% were possible. It was difficult however to separate the Zn from these concentrates. It was concluded that work on an unoxidized sample might yield better grades and recoveries of Cu and Zn. It was recommended that further work be carried out on a higher-grade sample (Berry, 1965).

Later in 1965, the Property was optioned to Rio Tinto Canadian Exploration Limited ("**Rio Tinto**") which completed an additional 15 diamond drill holes totaling 3,686 m, the results of which did not prove sufficiently encouraging (Klemenchuk, 1966).

In 1968, D.M. Knowles estimated an unclassified, "geological and drill indicated" resource of 3,327,000 tonnes averaging 4.42% Zn, 0.64% Cu for Javelin. Knowles identified five apparently southwesterly plunging shoots within the tabular McKenzie deposit. Also in 1968, S.T.J. Kirkland estimated an unclassified, "geological and drill indicated" resource of 3,674,000 tonnes grading 4.42% Zn and 0.64% Cu (Morton and Kleespies, 1990).

Murchison is not treating these historical resource estimates as NI 43-101 defined resources (or reserves). The qualified person has not done sufficient work to classify the historical estimate as current mineral resources.

In 1970, W.G.Q. Johnston of the Saskatchewan Department of Mineral Resources covered the Property as part of a regional soil survey. A Zn-Cu soil anomaly coincided with the Deposit. A second anomaly measuring 350 m long by 120 m wide was identified to the southeast of the Deposit. The results of the survey, as well as a geology map of the Brabant-McKenzie deposit, were published in 1972.

Sangster (1978) included a sample of galena from the Deposit in a larger study of lead ores of the circum-Kisseynew volcanic belt.

In 1984, Mr. A.M. Frew was contracted by Bison to carry out ground magnetic and VLF-EM surveys over 40-line km. A strong VLF-EM conductor coincident with the 350 m x 120 m Zn-Cu soil anomaly outlined by Johnston (1972) was identified and interpreted to represent a possible extension to the Deposit. The VLF-EM conductors identified at that time were further investigated with a biogeochemical survey using the gold content in alder twigs (Morton and Kleespies, 1990).

In 1988, Gamsan Resources Ltd. ("**Gamsan**") purchased Prairie West Explorations Ltd. (Prairie West) from United Bison Resources Ltd. Prairie West's only asset was the Brabant-McKenzie Property. Gamsan commissioned MPH to prepare an independent assessment and summary of all existing databases. Hawkins and Neale (1988) concluded that the historical resource calculations of Knowles (1968) and Kirkland (1968) were acceptable with regard to methodology, and that potential existed for the delineation of additional mineralization.

Gamsan initiated their groundwork with a modest program of soil and lithogeochemical sampling followed by some trenching. Subsequently a new 100-line km grid was cut and ground geophysical surveys consisting of magnetics (96.4 km), VLF-EM (96.4 km) and HLEM (45 km) were completed. In December 1988, Gamsan undertook an 18-hole drill program recovering NQ size core totaling 3,716 m (Chamois, 1992). This program tested the mineralized zone to a vertical depth of 446 m and along strike for about 500 m (Morton and Kleespies, 1990).

**TABLE 6.1 1988-1989 GAMSAN DRILLING DATA**

| HOLE | LOCATION | AZIMUTH/DIP | LENGTH (m) |
|---|---|---|---|
| 88-1 | 13+95N/ 7+45E | 120°/-60° | 236.0 |
| 88-2 | 14+50N/ 9+15E | Vertical | 146.0 |
| 88-3 | 5+55N/ 9+25E | 120°/-70° | 182.0 |
| 88-4 | 17+75N/ 9+52E | Vertical | 186.0 |
| 88-5 | 15+30N/ 9+10E | 120°/-80° | 220.0 |
| 88-6 | 15+22N/ 8+83E | Vertical | 224.0 |
| 88-7 | 14+65N/ 8+60E | Vertical | 218.0 |
| 88-8 | 14+70N/ 8+86E | Vertical | 185.0 |
| 88-9 | 15+10N/ 8+30E | Vertical | 327.0 |
| 88-10 | | 120°/-80° | 410.0 |
| 88-11 | 16+80N/ 7+75E | Vertical | 446.0 |
| 88-12 | 16+80N/ 7+75E | 120°/-65° | 392.0 |
| 88-13 | 16+14N/ 10+60E | Vertical | 122.0 |
| 88-14 | 16+32N/ 11+12E | Vertical | 84.0 |
| 88-15 | 16+66N/ 10+62E | Vertical | 56.0 |
| 88-16 | 16+ / 11+ E | Vertical | 92.0 |
| 88-17 | 17+75N/ 11+35E | Vertical | 92.0 |
| 88-18 | | Vertical | 98.0 |
| **Total** | | | **3,716.0** |

**TABLE 6.2 1988-1989 GAMSAN SIGNIFICANT INTERSECTIONS**

| HOLE | FROM (m) | TO (m) | LENGTH (m) | Zn (%) | Cu (%) | Pb (%) | Ag (g/t) | Au (g/t) |
|---|---|---|---|---|---|---|---|---|
| 88-01 | 196.5 | 197.5 | 1.00 | 3.80 | 0.10 | tr | 0.10 | tr |
| 88-02 | 99.0 | 102.0 | 3.00 | 2.40 | 0.40 | 0.01 | 6.90 | 0.01 |
| | 127.5 | 129.5 | 2.00 | 3.50 | 0.20 | 0.09 | 10.30 | tr |
| 88-03 | 143.5 | 154.1 | 10.60 | 5.30 | 0.70 | 0.08 | 20.60 | 0.1 |
| 88-05 | 148.8 | 150.6 | 1.80 | 8.80 | 0.69 | 0.01 | 15.10 | tr |
| | 157.5 | 164.0 | 6.50 | 5.26 | 0.99 | 1.92 | 65.80 | 0.2 |
| | 166.0 | 168.7 | 2.70 | 5.46 | 1.43 | 0.1 | 38.90 | 0.2 |
| | 174.8 | 176.7 | 1.90 | 7.99 | 0.38 | 0.19 | 13.70 | 0.1 |
| 88-06 | 205.2 | 211.7 | 6.50 | 6.50 | 0.63 | 0.05 | 3.80 | tr |
| 88-07 | 164.3 | 165.5 | 1.20 | 5.00 | 0.64 | 0.01 | 19.10 | 0.2 |
| | 197.3 | 199.6 | 2.30 | 6.23 | 0.20 | 0.02 | 4.50 | tr |
| | 200.7 | 202.1 | 1.40 | 4.79 | 0.71 | 0.04 | 7.40 | tr |
| 88-08 | 111.7 | 114.6 | 2.90 | 1.01 | 1.12 | 0.03 | 23.30 | 0.2 |
| | 166.8 | 168.5 | 1.70 | 5.36 | 0.25 | 0.02 | 4.50 | tr |

**TABLE 6.3 1988-1989 GAMSAN SIGNIFICANT INTERSECTIONS CONTD.**

| HOLE | FROM (m) | TO (m) | LENGTH (m) | Zn (%) | Cu (%) | Pb (%) | Ag (g/t) | Au (g/t) |
|---|---|---|---|---|---|---|---|---|
| | 169.5 | 170.6 | 1.10 | 2.38 | 0.30 | 0.01 | 7.00 | tr |
| 88-09 | 209.5 | 211.0 | 1.50 | 0.27 | 0.01 | 1.16 | 17.00 | tr |
| | 272.1 | 276.6 | 4.50 | 1.56 | 0.48 | 0.50 | 20.40 | tr |
| 88-10 | 339.8 | 342.0 | 2.20 | 5.95 | 0.67 | 1.28 | 52.30 | 0.50 |
| | 369.9 | 373.0 | 3.10 | 7.71 | 2.16 | 0.79 | 116.10 | 0.20 |
| 88-11 | 369.7 | 373.0 | 3.30 | 4.89 | 0.23 | 2.06 | 91.90 | 0.50 |
| | 374.0 | 375.6 | 1.60 | 0.38 | 0.94 | 1.88 | 187.00 | 3.40 |
| | 381.7 | 384.4 | 2.70 | 0.60 | 0.50 | 3.27 | 198.30 | 2.90 |
| | 385.2 | 387.5 | 2.30 | 6.03 | 0.54 | 0.35 | 42.70 | 1.20 |
| | 390.0 | 394.2 | 4.20 | 5.99 | 0.76 | 0.42 | 55.30 | 0.20 |
| | 397.0 | 401.3 | 4.30 | 0.06 | 0.10 | 2.20 | 79.30 | 1.80 |
| 88-12 | 288.8 | 297.7 | 8.90 | 2.74 | 0.38 | 1.29 | 74.10 | 0.70 |
| | 330.0 | 341.5 | 11.50 | 5.09 | 0.75 | 1.35 | 76.90 | 1.30 |
| | 347.4 | 347.7 | 0.30 | 0.03 | 0.04 | 5.63 | 749.50 | 6.30 |
| 88-13 | 103.7 | 107.9 | 4.20 | 10.60 | 0.99 | 0.01 | 16.00 | 0.04 |
| 88-14 | 60.0 | 65.4 | 5.40 | 5.64 | 0.51 | tr | 8.00 | 0.04 |
| 88-15 | 36.9 | 39.2 | 2.30 | 2.96 | 0.31 | tr | 3.90 | 0.02 |
| 88-16 | 74.0 | 78.1 | 4.10 | 5.30 | 1.56 | tr | 18.67 | 0.09 |
| 88-17 | 84.2 | 87.8 | 3.60 | 5.23 | 1.16 | tr | 18.54 | 0.20 |
| 88-18 | 63.8 | 67.2 | 3.40 | 2.32 | 0.29 | tr | 3.00 | 0.15 |
| 88-18 | 77.3 | 80.6 | 3.30 | 6.17 | 2.22 | tr | 25.60 | 0.30 |

In 1989, MPH was contracted to generate a new “geological and drill indicated” mineral resource. This study estimated a geological and drill indicated resource of 3,489,212 tonnes grading 4.49% Zn, 0.54% Cu, 0.17% Pb,17.17 g/t Ag and 0.19 g/t Au at a 2% Zn cutoff.

Murchison is not treating the above historical resource estimate as a NI 43-101 defined resource (or reserve) verified by a qualified person and the historical resource should not be relied upon.

MPH also concluded that the Property had “good potential for an economic polymetallic deposit” (Hawkins and Naas, 1989). Subsequently, Gamsan completed detailed geological mapping of the Property as well as an 8-line orientation humus and B-horizon soil sampling program. Based on the results of the orientation program a larger B-horizon sampling program was completed. However, because of thick clay/silt cover deposited by glacial Lake Agassiz elsewhere, the survey was only successful in the south-easterly portion of the Property. The survey successfully identified the Brabant-McKenzie Deposit as well a lateral strike extension to the southwest as well as a new anomaly parallel to the Deposit to the southwest (Morton and Kleespies, 1990).

In 1992, Longyear Canada, Inc. ("**Longyear**") was awarded title to the Property, pursuant to a court order, in lieu of payment for work performed.

The Property lay dormant until 1992 when Phelps Dodge Corporation of Canada, Limited ("**PDC**") negotiated an option agreement with Longyear and initiated ground work by re-establishing the grid (47-line km) and completing a HLEM survey (27-line km). PDC completed a 7-hole drilling program (NQ size core) totaling 820 m in the spring of 1993 designed to test geophysical targets outside of the immediate Brabant-McKenzie Deposit area. Although sulphides were intersected, no base metal values were returned (Durocher, 1993a). That summer PDC completed a review of the previous drilling and detailed structural mapping (Barclay, 1993). Based on that work, a second drilling program consisting of 4 holes for a total of 2,233 m was completed to test the depth potential of the Upper Zone as well as to confirm the existence of the Lower Zone. (Durocher, 1993b). Details of the two phases of drilling are presented in Table 6.4.

**TABLE 6.4 1993 PDC DRILLING DATA**

| HOLE | LOCATION | AZIMUTH/DIP | LENGTH (m) |
|---|---|---|---|
| BR-196-1 | 11+30N/1+90E | 125°/-45° | 100.0 |
| BR-196-2 | 5+85N/1+30E | 125°/-45° | 101.0 |
| BR-196-3 | 5_85N/3+00E | 125°/-45° | 101.0 |
| BR-196-4 | 2+10N/2+38E | 125°/-45° | 134.0 |
| BR-196-5 | 3+20N/8+45E | 130°/-45° | 101.0 |
| BR-196-6 | 17+60N/4+25W | 135°/-45° | 152.0 |
| BR-196-7 | 20+50N/1+10E | 310°/-45° | 131.0 |
| BR-196-8 | 17+75N/8+00E | 120°/-75° | 479.0 |
| BR-196-9 | 18+00N/6+00E | 120°/-75° | 596.0 |
| BR-196-10 | 17+10N/5+20E | 120°/-75° | 590.0 |
| BR-196-11 | 18+50N/6+75E | 120°/-75° | 568.0 |
| **TOTAL** | | | **3,053.0** |

**TABLE 6.5 1933 PDC DRILLING SIGNIFICANT INTERSECTIONS**

| HOLE | FROM (m) | TO (m) | LENGTH (m) | Zn % | Cu % | Pb % | Ag g/t | Au g/t |
|---|---|---|---|---|---|---|---|---|
| BR-196-8 | 390.90 | 368.10 | 7.20 | 5.49 | 0.53 | 0.02 | 13.96 | 0.14 |
| | 398.00 | 404.30 | 6.30 | 13.92 | 0.83 | 0.04 | 43 | 0.16 |
| BR-196-9 | 470.70 | 472.65 | 1.95 | 0.70 | 0.1 | tr | 2.85 | 0.02 |
| | 479.35 | 479.65 | 0.30 | 9.93 | 0.05 | 0.04 | 24.2 | 0.23 |
| | 525.38 | 527.02 | 1.64 | 0.77 | 0.04 | 0.11 | 7.63 | 0.02 |
| BR-196-10 | 529.92 | 533.52 | 3.60 | 2.33 | 0.23 | 0.01 | 10.98 | 0.06 |
| | 535.75 | 539.33 | 3.58 | 2.30 | 0.13 | 0.02 | 6.14 | 0.04 |
| | 542.90 | 546.70 | 3.80 | 6.57 | 0.15 | 0.02 | 11.39 | 0.04 |

Four drill holes (BR-196-08 to BR-196-11 incl.) were surveyed using a Crone borehole transient domain EM system in 1993. The survey detected sulphide or graphite-bearing intervals in each hole as either "in-hole" or "off-hole" signatures.

**TABLE 6.6 BOREHOLE PULSE-EM TARGETS**

| HOLE | DEPTH (m) | TARGET DESCRIPTION |
|---|---|---|
| BR-196-08 | 370 | Off-hole condutor below and to the right |
| BR-196-09 | 480 | More conductive parts of the conductor may be located above and to the left |
| BR-196-10 | 525 to 530 | Increased conductivity may occur above and to the right |
| BR-196-10 | | Late channel in-hole response near end of hole may indicate a conductor beyond the end of the hole |
| BR-196-11 | 400 and 545 | More conductors may be located below and to the left |

In 1993, PDC commissioned Lakefield Research to complete specific gravity determinations and reflected light petrography of seven zinc-rich samples and electron microprobe analyses of selected sphalerite grains from four of the samples. The provenance of these seven samples is not recorded.

The microscopy indicated excellent potential for liberation of sphalerite from the dominant gangue sulphide, that being pyrrhotite. Sphalerite and pyrrhotite were coarse-grained and the latter occurred interstitially to sphalerite. Chalcopyrite occurred as fine-grained blebs, typically interstitial to, or along grain margins of, sphalerite. Minor coarse chalcopyrite was noted (Davison and Davison, 1993).

The electron microprobe analyses indicated very little variation between or within samples with the Zn content ranging from 56.7-58.9 wt%, averaging 58 wt%. Iron ranged from 7.82-9.67 wt%, averaging 8.5 wt%. The sphalerite composition reported as marmatitic (Zn0.85Fe0.15S). Copper values were <0.20 wt%. The analyses did not encounter any disseminated chalcopyrite blebs within the sphalerite (Davison and Davison, 1993).

It was concluded that the iron content of the sphalerite would limit the zinc concentrates to a theoretical maximum of approximately 57-58 wt% Zn and that concentrates of > 55 wt% Zn might be attainable with optimum metallurgy (Davison and Davison, 1993).

The specific gravities of the seven samples varied between 2.90 and 4.15.

In 1994, PDC completed preliminary metallurgical testing at its metallurgical laboratory in Tucson, Arizona based on three drill core composites from hole BR-196-8. Test work on a higher-grade composite yielded marketable Zn concentrates with good recoveries. Upgrading the Cu concentrate without unacceptable losses of recovery was not demonstrated however. A lower grade composite did not respond as well as the higher-grade composite sample, but a lead-silver rich concentrate was produced using a very simple reagent scheme. The test work was preliminary, and improvements were thought to be attainable with additional work (Hanks and Rood, 1993).

On June 28, 2006, Manicouagan announced that it had purchased a 100%, undivided interest in the Property from Longyear for a one-time payment of $300,000. No advanced or production royalties are owed to Longyear.

During the fall of 2006, Durama Enterprises of La Ronge, Saskatchewan was contracted to cut a grid with a base line oriented at 030° over the central and north-eastern portions of M.L. 5054. Grid lines were established at 50-metre intervals and stations were picketed at 25-metre intervals along the lines. About 35 line-kilometres were cut.

From October 18 to November 11, 2006, Patterson Geophysics Inc., also of La Ronge, Saskatchewan, completed ground geophysical surveys including magnetics, horizontal loop electromagnetic (HLEM) and VLF-EM over the entire grid. The HLEM survey successfully delineated one moderate to strong conductor trend oriented roughly parallel to localized ground magnetic anomalies (Ostapovich, 2006). This conductor trend corresponds to the McKenzie Zone.

From November 4, 2006 to April 18, 2007, Manicouagan completed a 20-hole drilling program totaling 7,102.24 m designed to twin certain higher-grade intersections from previous drilling and to expand upon the known resource, particularly in the Lower Zone. All but two holes completed to their designed depths intersected both the Upper and Lower mineralized zones, therefore, confirming the continuity of the mineralization. Two holes in the northwestern portion of the grid failed to intersect the Lower Zone. This suggests that faulting observed in the core may have displaced the zone in that area or that the trend of the mineralization may be more westerly than previously interpreted (Chamois, 2007).

From February 2 to February 12, 2007, Crone Geophysics and Exploration Ltd. attempted bore hole electromagnetic surveying of thirteen drill holes. Unfortunately, because of the highly faulted nature of the area, many holes were blocked and could not be surveyed in their entirety, if at all. In total only nine holes could be surveyed either partially or totally (Chamois, 2007).

Diamond drilling by Manicouagan in 2007 and 2008 was reported in the SECOND TECHNICAL REPORT ON THE BRABANT LAKE Property, SASKATCHEWAN, CANADA FOR MANICOUAGAN

MINERALS INC. and can be referenced there. This program resulted in a new NI 43-101 compliant resource calculation. At that time the resource was reported as:

**TABLE 6.7 2008 MINERAL RESOURCE ESTIMATE**

| 2008 Resource Estimate | Tonnes | Zn % | Cu % | Pb % | Au g/t | Ag g/t |
|---|---|---|---|---|---|---|
| Indicated Tonnes | 1,475,000 | 9.18 | 0.79 | 0.23 | 0.15 | 32.60 |
| Inferred Tonnes | 2,975,000 | 5.55 | 0.55 | 0.13 | 0.10 | 18.90 |

In March 2010 Manicouagan acquired by staking mining claims to the north and south of Mining Lease 5054 which hosts the Brabant-McKenzie Deposit. The land position covered approximately 15 kilometres of the favourable geological horizon which hosts the Brabant-McKenzie Deposit. Approximately 2,450 ha was staked, bringing the total land package now held by the Company to about 2,850 ha. Manicouagan held a 100 percent interest in the Brabant Lake mining lease and the newly staked claims.

The new ground that was acquired came open for staking when the crown reserve established in 1994, pursuant to Saskatchewan's Treaty Land Entitlement Program and surrounding M.L 5054, was withdrawn from the Treaty Land Entitlement Program.

In March 2011, Manicouagan completed a Versatile Time Domain Electro Magnetic ("**VTEM PLUS**") survey over the Property. The detailed 560-line kilometres airborne VTEM PLUS geophysical survey with 100 metre flight line spacing was completed by Geotech Ltd. of Aurora, Ontario covered the entire land package of 2,850 ha including the Brabant-McKenzie Deposit.

Scott Hogg and Associates carried out a preliminary interpretation of the airborne results. They identified 16 anomalies for follow-up investigation. Identified anomalies displayed characteristics similar to the response found over the Deposit which exhibits a significant time constant over a 1200 metre strike length.

In November 2011, Manicouagan signed a definitive Option/JV Agreement with Votorantim Metals Canada Inc. ("**Votorantim**") pursuant to which Votorantim could earn a 60% interest in the Brabant Lake Zinc Property. To earn its 60% interest, Votorantim was to pay Manicouagan $80,000 upon execution of the option/joint venture agreement followed by cash payments to Manicouagan totalling $460,000 and staged expenditures on the Property totalling $2,550,000 over the next three years.

The Agreement also provided for an expenditure commitment of at least $300,000 in the first year. Upon Votorantim earning its 60% interest, a joint venture was to be formed whereupon future expenditures would be shared in proportion to each party's interest. Should either party's interest dilute to 10%, this interest will convert to a 2% Net Smelter Return ("**NSR**"). The non-diluting party had the option to purchase 50% of the NSR for $1,000,000.

In May 2012, Votorantim announced it had completed a 12-hole diamond drill program for a total of 2,430 metres. Votorantim had identified 20 primary drill targets from the 563 line-km airborne VTEM PLUS survey which Manicouagan conducted over the Property in early 2011.

The drill program was designed to test high priority regional targets on strike from the Deposit. Previous drilling on the Brabant Lake Property by Manicouagan was concentrated on the Deposit. 10 of the 20 planned targets were drill tested.

After reviewing the results of the drill program, Votorantim elected not to continue its option and returned the Brabant-McKenzie Property to Manicouagan.

In June 2015, Murchison (Formerly Manicouagan Minerals Inc.) staked an additional 940 hectares, adjacent to its 3,212 hectares on the Property. The area was considered to be prospective for zinc-copper because it covered EM conductor trends identified from the 2011 VTEM survey, but was located outside the original boundary of the Property.

From October 6-10 and 14-21, 2015 Murchison conducted of 2 field investigations and data compilation on the Brabant-McKenzie Property.

The premise of the field investigations was as follows:

- confirm known drill collars, grid locations, access routes and showings on Mineral Lease 5054 and proximal ground for quality control purposes, geo-rectifying existing data and planning of future exploration programs;
- assess ground conditions, styles of mineralization and conductive properties from core and trenches for modelling and future work programs;
- determine structural setting of the known McKenzie deposit and areas proximal to deposit;
- obtain an inventory of remaining and accessible core and assess its' condition for geological control purposes; and
- meet with government representatives in Regina and La Ronge to review their recent work and establish contacts as well as to informally introduce Murchison staff to members of the Brabant Lake community for consultation purposes and to assess the potential for local hires.

Murchison spent time field checking and compiling historical data for the area surrounding the Brabant-McKenzie deposit itself and area of modeled VTEM geophysics conductors along strike of the Deposit. These target areas are presumed to be the same geological formation as the Deposit and located on the western limb of the regional fold structure and are likely located within a tight isoclinal Z fold structure that strikes NE dips 50 degrees NW and plunges to the north.

Field work consisted of checking as many old drill collars (with casing) and grid lines (stations) as possible in order to be able to geo-reference old historical geology and geophysical data as well as obtaining a confidence level as to actual collar locations as they pertain to the drill hole model.

Locations of more than 20 collar locations based on pre-determined GPS coordinates gave a high confidence in their location. All pertinent site visits were GPS marked and flagged for future reference.

Old historical maps were digitized with conductor trends from both VTEM and HLEM surveys and these trends were prospected which led to the re-discovery of 6 older trenches, some likely dating back to the 1950-1960's. These excavated areas are important as they appear to define the FW contact zone to the Lower Mineralized Zone of the Deposit as outlined in geological drill hole modelling by Murchison. The exposures revealed semi-massive to fracture filled and disseminated pyrrhotite, pyrite, galena, sphalerite and chalcopyrite with local graphite in both pegmatite dykes (late) and host rock gneisses. The detection of these sites was incorporated into the geological model as the mineralized footwall contact zone to the Deposit.

In December 2015, Murchison Minerals Ltd conducted a limited ground fixed loop Time Domain Electromagnetic ("**TDEM**") and magnetic ground survey which was conducted over 200 metres of the southern portion of the Deposit and a further 600 metres along strike to the south along 100-meter spaced lines. The geophysics program designed to test the Deposit's southern extension. The program included one line of SQUID EM.

In 2016, Murchison conducted a borehole EM geophysics survey on five previously drilled holes designed to continue testing the lateral and down dip extents of the Deposit. The survey was successful in identifying numerous conductive electromagnetic targets that are coincident with thicker zones of the Deposit and areas with little or no testing by previous drilling immediately adjacent to the Mineralized Zones.

The Company also conducted a Helicopter Airborne Sub Audio Magnetics geophysics survey ("**HeliSAM**") which covered the main Deposit, M.L. 5054 and claims immediately adjacent to the Mining Lease. Interpretation of the data suggests that the Deposit has a down dip extent of approximately 1,000 metres while historic drilling of the Deposit had identified VMS style mineralization to a current down dip depth extent of 520 metres. Results also indicated that in addition to the Deposit conductor, two new large discrete conductors were identified approximately 1.5 kilometres southwest (Anomaly C) and 1.4 kilometres due south (Anomaly D) of the Deposit. Targets were tested but results have not been released at the time of this report.

The Company completed a follow-up ground SQUID EM geophysics program in February 2017 that was conducted over Anomaly C and Anomaly D HeliSAM conductor anomalies.

Results from the EM and Mag data indicate that Anomaly C represents a discrete conductive body and a confirmed drill target with modeled EM plate dimensions measuring 1.4 km by 1.3 km. The conductive body occurs at approximately 260 m depth from surface within the same geological horizon as the Deposit.

Anomaly D was identified as a significantly large, very intense conductive body and is located on the southeastern edge of the EM survey grid. Modeled plate dimensions measure a 1 km strike length by 2-3 km depth extents with the top edge of the plate at about 145 m from surface. The conductivity of this body was measured at approximately 1,300 Siemens. By comparison, the Deposit that outcrops at surface, has a conductive range of 800 to 1,000 Siemens and current dimensions of 1 km of strike length and 520 m of depth extent.

In February and March 2017, Murchison Minerals completed a 5,600 m, 10-hole drill program designed to test both the lateral and depth extents of the Deposit outside of the 2008, NI 43-101 resource estimate and away from the main central corridor of historic drilling. Volcanogenic Massive Sulphide (VMS) style zinc-copper mineralization, was intersected by all ten holes of the recently completed drill program

The results from the program were successful in adding tonnage to the Deposit while extending its down-dip depth extent to approximately 610 metres from surface. Additionally, drilling confirmed VMS mineralization at a down-dip extent of 950 metres from surface.

Diamond drilling by Murchison Minerals from the 2017 program was reported in the TECHNICAL REPORT ON THE RESOURCE ESTIMATE UPDATE FOR THE BRABANT-McKENZIE PROPERTY, BRABANT LAKE, SASKATCHEWAN, CANADA FOR MURCHISON MINERALS LTD. September 27, 2017 25, 2017. The resource estimate was reported as the following:

**TABLE 6.8 2017 RESOURCE ESTIMATE**

| Indicted Resource | Tonnes | Zn% | Cu% | Pb% | Au g/t | Ag g/t | Zn Equiv. % |
|---|---|---|---|---|---|---|---|
| Lower Mineralized Zone | 670,000 | 8.83 | 0.78 | 0.57 | 0.3 | 46.1 | 12.20 |
| Upper Mineralized Zone | 800,000 | 6.37 | 0.64 | 0.25 | 0.1 | 19.2 | 8.40 |
| **Total Indicated Resour** | **1,500,000** | **7.46** | **0.70** | **0.39** | **0.2** | **31.2** | **10.09** |
| | | | | | | | |
| **Inferred Resource** | **Tonnes** | **Zn%** | **Cu%** | **Pb%** | **Au g/t** | **Ag g/t** | **Zn Equiv. %** |
| Lower Mineralized Zone | 1,820,000 | 7.44 | 0.76 | 0.36 | 0.1 | 31.1 | 10.00 |
| Upper Mineralized Zone | 2,640,000 | 4.99 | 0.52 | 0.22 | 0.1 | 11.3 | 6.60 |
| **Total Inferred Resourc** | **4,460,000** | **5.99** | **0.62** | **0.28** | **0.1** | **19.4** | **7.99** |

In August 2017, a geological prospecting program in the area of the Anomaly D modeled EM plate surface projection was successful in identifying outcrop exposures of approximately 150 m in strike length and containing sulphide mineralization of chalcopyrite and pyrrhotite. The evidence of surface mineralization and its proximity to the conductive body combined with the size and conductivity of the EM body was considered significant and presented the potential for a sizeable sulphide body.

Based on the identification of mineralization in relation to Anomaly D the Company has staked an additional 1,873 ha of land adjacent to its claims package.

In November 2017 a ground EM and Mag survey over Anomaly D to follow up the February 2017 survey was completed. The survey consisted of 8.8 line km and was designed to cover the initial conductor and mineralized outcrop exposures. Evidence from these results continued to confirm Anomaly D as a significant target with strong conductivity values greater than 2,000 siemens with depth extent and strike lengths in the range of 800 m beginning at approximately 20 m from surface.

Between January and March of 2018, the Company completed a diamond drill program to continue testing the potential mineralization both laterally and down dip of the previously modeled NI 43-101 resource estimate as well as upgrading inferred resources to the indicated resource category. Drilling was successful in both aspects and provided significant confidence in the continuity of the mineralized zone.

At this the Company also drilled Anomaly C and Anomaly D to test for mineralization. As of the effective date of the Report, drill results were pending.

Based on results for the 2018 drill program on the Deposit an updated NI 43-101 resource estimate for the Deposit was prepared and is discussed in section 14.

# 7. Geological Setting and Mineralization

## 7.1 Regional Geology

The Property is located within the Reindeer Zone of the Early Proterozoic Trans-Hudson Orogen. The Reindeer Zone in Saskatchewan is a collage of juvenile, arc-related crustal domains (Rottenstone, La Ronge, Flin Flon, Glennie Lake, Kisseynew and Hanson Lake Block) bounded by the Rae-Hearn and Archean Superior structural provinces (Figure 7.1). The La Ronge, Flin Flon and Hanson Lake Block domains represent the vestiges of arc-related volcanism and plutonism in the Reindeer Zone. These domains broadly envelope the clastic meta-sedimentary dominated inter-arc Kisseynew Domain. The Glennie Lake domain consists primarily of orthogneisses with lesser supracrustal gneisses, including minor metavolcanic rocks.

The McLennan Lake Tectonic Zone ("**MLTZ**") separates the lower metamorphic grade volcanic and intrusive rocks of the La Ronge Domain (a.k.a. Central Volcanic Belt) ("**CVB**") from amphibolite to granulite facies gneisses of the MacLean Lake Belt ("**MLB**") to the east (Figure 7.2). The MLB consists mainly of paragneisses similar to those of the Kisseynew domain. The MLB is divided into psammitic (arkosic) gneisses of the McLennan Group which are inferred to overlie the pelitic to psammitic (greywacke-derived) MacLean Lake Gneisses (Lewry, 1983). Migmatitic gneiss and other melt-derived units are significant components (up to 50%) and amphibolites and calc-silicate rocks are minor components of the MLB. The Property is located less than 5 km east of the MLTZ and straddles the boundary between the McLennan Group and the MacLean Lake Gneisses (Figure 7.1).

The MLB has undergone a polyphase ductile deformation history. The earliest events (D1 and D2) are likely related to thrust tectonics, including thrusting in the La Ronge domain over the MLB along the MLTZ (Lewry, 1983). Primary layering (So) and the earliest tectonic fabric? (S1) are strongly transposed into the NE-striking, NW-dipping S2 foliation which is axial planar to recumbent overturned F2 structures. Open, north-trending D3 fold axes east of Brabant Lake exhibit an axial planar S3 foliation locally. Poulsen et al. (1987) suggest that, although the downdip lineation found throughout in the MLTZ may attest to earlier recumbent nappe folding and thrust tectonics as proposed by Lewry (1983), the strain fabrics presently viewed in the MLTZ record predominantly dextral strike-slip movement.

Although peak metamorphic conditions likely occurred syn-D2 thrusting (Abbas-Hasanie et al., 1992) and gneissic fabrics are common, many rocks in the MLB exhibit granoblastic textures, (Durocher, 1992, Barclay 1993). Sillimanite in McLennan Group gneiss is typically to completely retrogressed adjacent to the MLTZ (Poulsen et al. 1987, Abbas-Hasanie et al. 1992) suggesting that the transpressive movement on this structure accompanied a retrogressive event which occurred post-D2.

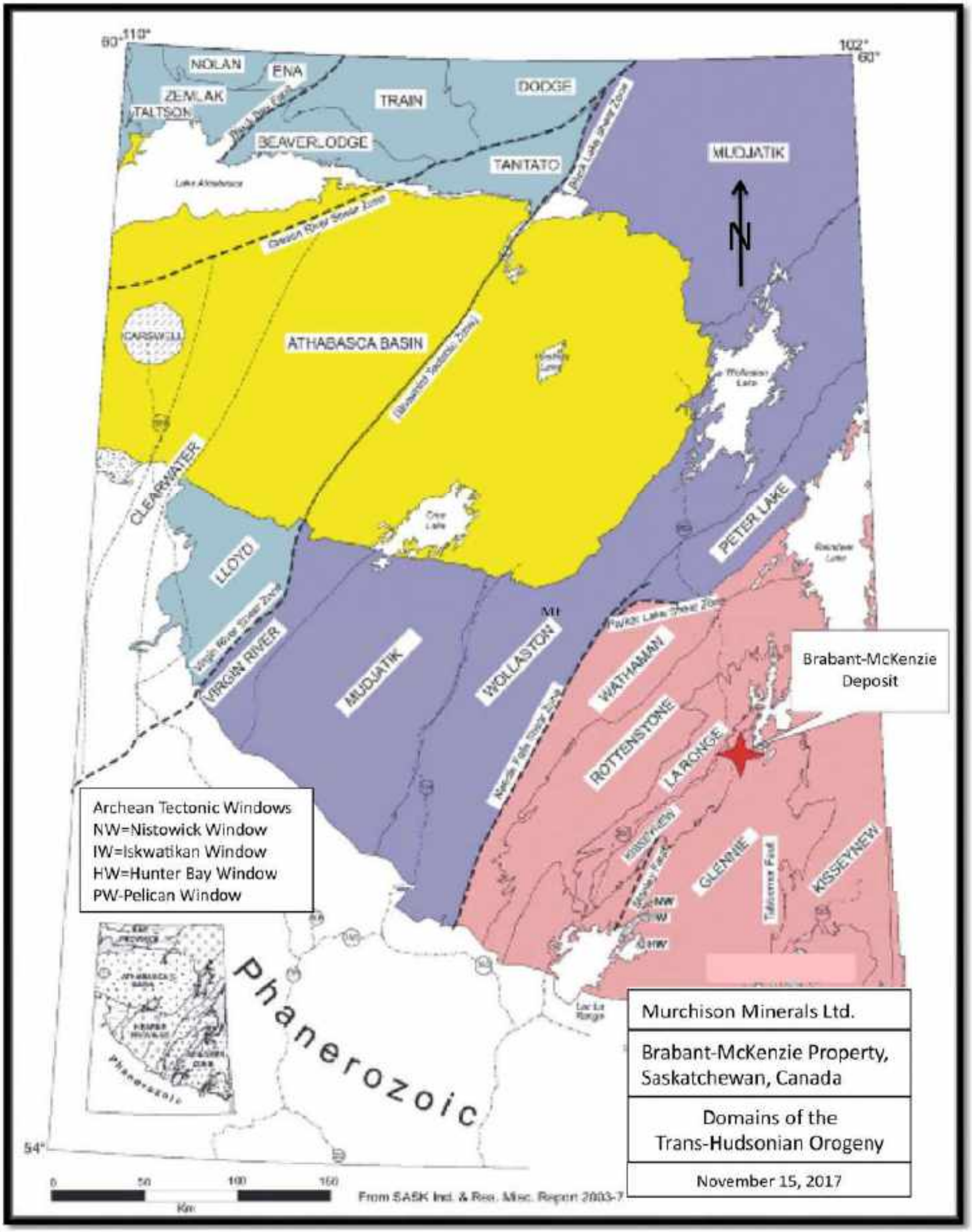



**FIGURE 7.1 SUBDIVISIONS OF THE TRANS HUDSONIAN OROGENY**

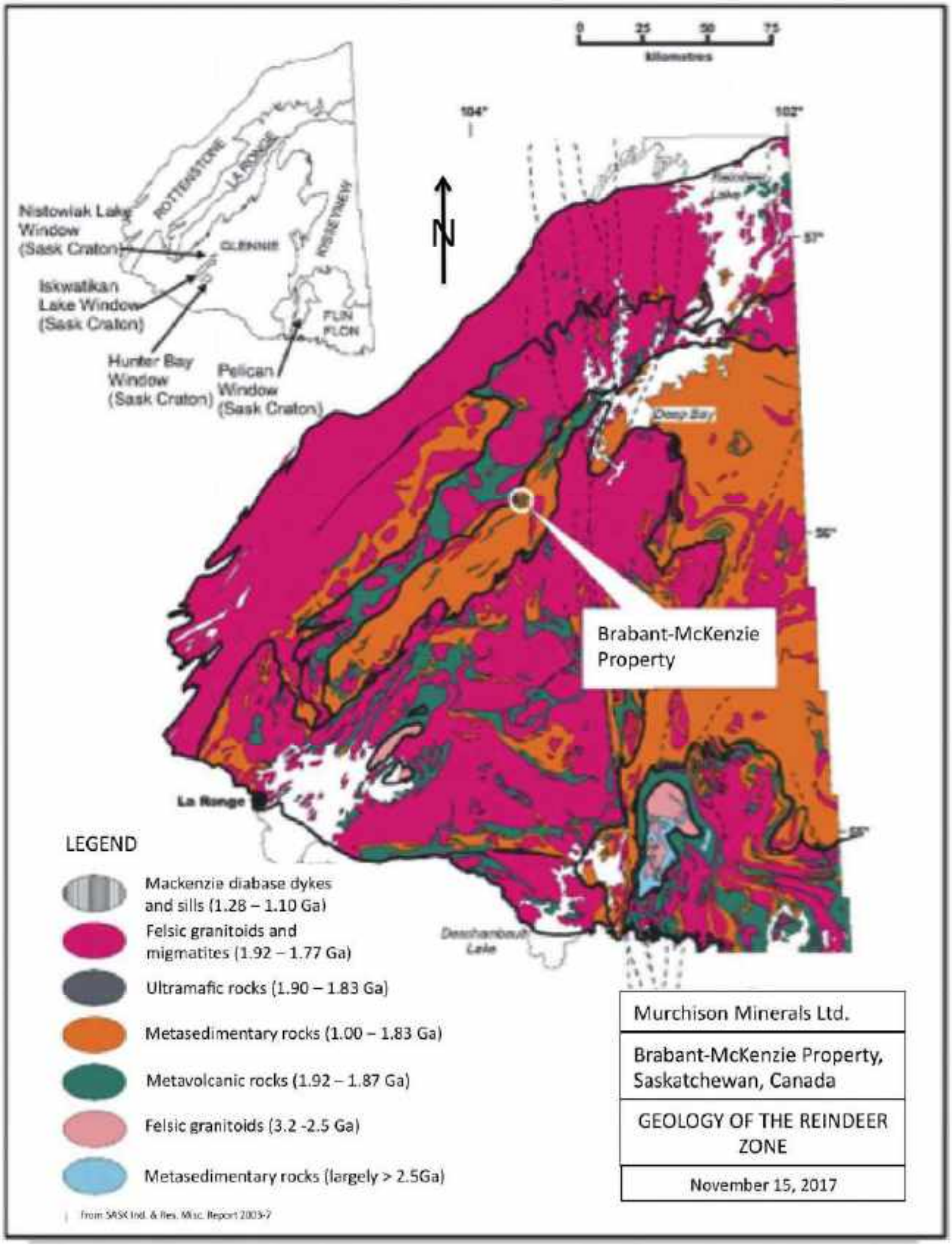



**FIGURE 7.2 GEOLOGY OF THE REINDEER ZONE IN NORTHERN SASKATCHEWAN**

## 7.2 Property Geology

The following is modified from Stewart and Chamois (1994).

The Property is located within the western part of the MLB and straddles the boundary between the McLean Lake Gneisses and the McLennan Group meta-arkoses. The central portion of the Property is covered by a thick blanket of Pleistocene to Recent lacustrine sediments with northeast trending outcrop ridges confined to the northwestern and southeastern quadrants.

The geology of the Property and its immediate surroundings can be found in Kirkland (1959), Byers (1959), Johnston (1972), Kleespies (1989), Morton and Kleespies (1990) and McCombe et al. (1991). Barclay (1993) mapped the northern portion of the southeastern outcrop ridge in detail. Harper (1996, 1997) mapped an area generally to the northeast of, but including parts, of the Property in an attempt to better define the contact between the CVB and the MLB. Figure 7.4 outlines the Brabant-McKenzie property relative to the regional geology as referenced from the Saskatchewan GeoAltas Mapping website (November 13, 2017).

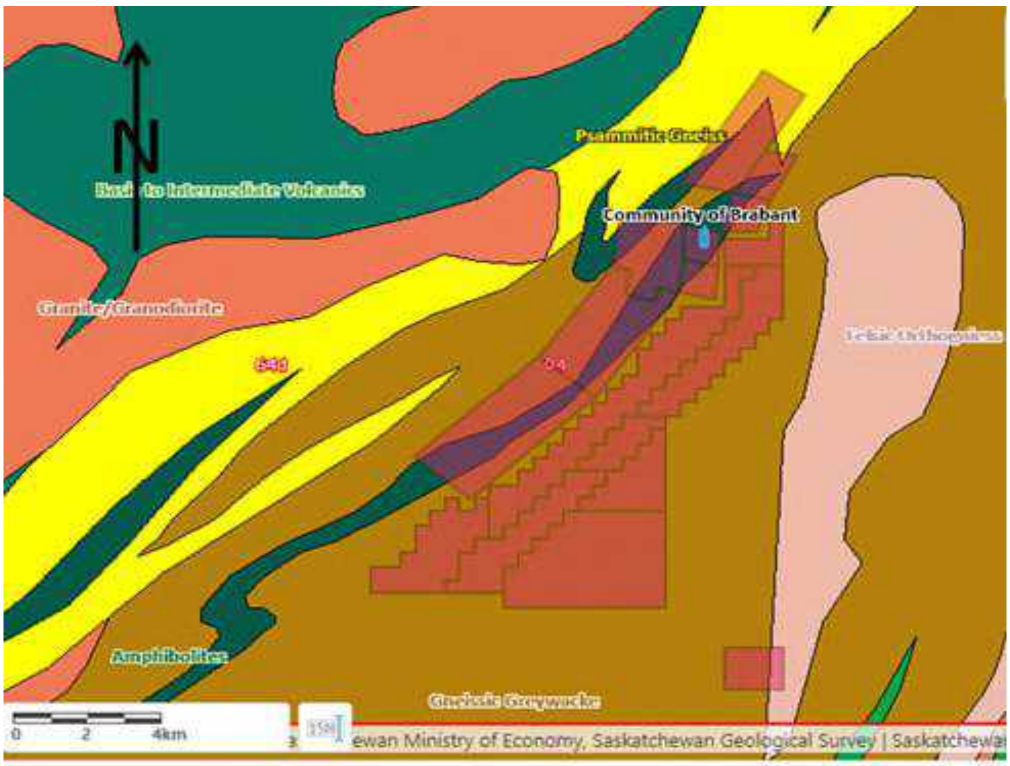



**FIGURE 7.4 BRABANT-MCKENZIE PROPERTY GEOLOGY**

Biotite gneisses with semi-contiguous bands and intercalated amphibolite (+/- biotite) and calcsilicate gneisses are the dominant lithologies on the Property and are assigned to the McLennan Group. Thicker and more continuous bands of amphibolite are also intercalated with biotite gneiss units in the southwestern portion of the Property and can be inferred from ground magnetic surveys to underlie the covered, central portion of the Property. Coombe (1991) reports "unequivocal pillow-like structures" in amphibolitic rocks on the Property, indicating their derivation, at least in part, from mafic lavas. Garnetiferous biotite gneiss/migmatite which underlies the easternmost part of the Property is included in the

MacLean Lake gneisses. Pegmatitic sill-like bodies and dykes are common, locally exceeding 50% by volume of the MLB. In the northwestern portion of the Property there are several small isolated ridges of biotite gneiss, amphibolite and biotite granodiorite/migmatite (Durocher, 1993, Stewart and Chamois, 1994).

Foliations and lithological banding generally strike north-easterly and dip moderately (45°-70°) to the northwest. The McKenzie deposit occurs within a northeast trending, northwest dipping homocline which may represent the eastern limb of a northeast striking overturned synform (Stewart and Chamois, 1990).

## 7.3 Lithologies

The following descriptions of the major lithologies found on the property are taken from Durocher (1992).

### 7.3.1 Biotite and Garnet-Biotite Gneiss

These rocks are grey-brown in colour, fine to coarse grained and usually exhibit a well developed gneissosity. The gneissosity is often accentuated by thin (3-10 cm) stringers and lenses of white pegmatitic material. Quartz-feldspar porphyroblasts measuring several centimetres in diameter are also quite common. Mineralogically these rocks are comprised of quartz, plagioclase, biotite +/- garnet, +/- sillimanite, +/- microcline, +/- hornblende. Graphite, zircon, sphene, muscovite, prehnite, opaques and apatite are present as accessory phases. Garnetiferous varieties commonly contain 10-15% pink almandine.

Rocks containing high proportions of quartz and plagioclase usually exhibit granoblastic textures. Biotite-rich sections display more lepidoblastic textures. In garnetiferous rocks, the garnets are porphyroblastic and augen textures are common. The garnets are poikiloblastic, enclosing grains of plagioclase, quartz and biotite (Kleespies, 1989).

### 7.3.2 Amphibolites

Amphibolite-rich gneisses occur in a spectrum that ranges from minor thin layers in biotitic gneisses to thick massive layers comprised almost entirely of hornblende. Layers containing subequal amounts of hornblende and plagioclase are generally foliated, whereas those comprised mainly of hornblende tend to be poorly foliated to massive. Amphibole-rich gneisses also appear to contain more pyrrhotite than other rock units. Mineralogically these rocks are made up of amphibole, plagioclase, +/- clinopyroxene, +/- quartz, +/- biotite, +/- garnet. Sphene, calcite, apatite, graphite and opaques occur as accessory minerals. Texturally, these rocks exhibit granoblastic textures. The amphibole in these rocks is usually, Mg-rich hornblende. In several thin sections, green hornblende crystals were surrounded by colourless cummingtonite rims. Diopside is the clinopyroxene that is present in these rocks (Kleespies, 1989).

### 7.3.3 Calc-silicate Gneisses

The calc-silicate rocks are intimately associated with the amphibolites. They tend to be coarse to medium grained, granoblastic and weakly foliated to massive. They are comprised of variable amounts of diopside, hornblende and cummingtonite, plagioclase and quartz. Accessory minerals include sphene, apatite, opaques and calcite. In some cases, sphene and apatite constitute 10% of the rock volume (Kleespies, 1989).

### 7.3.4 Felsic Gneisses

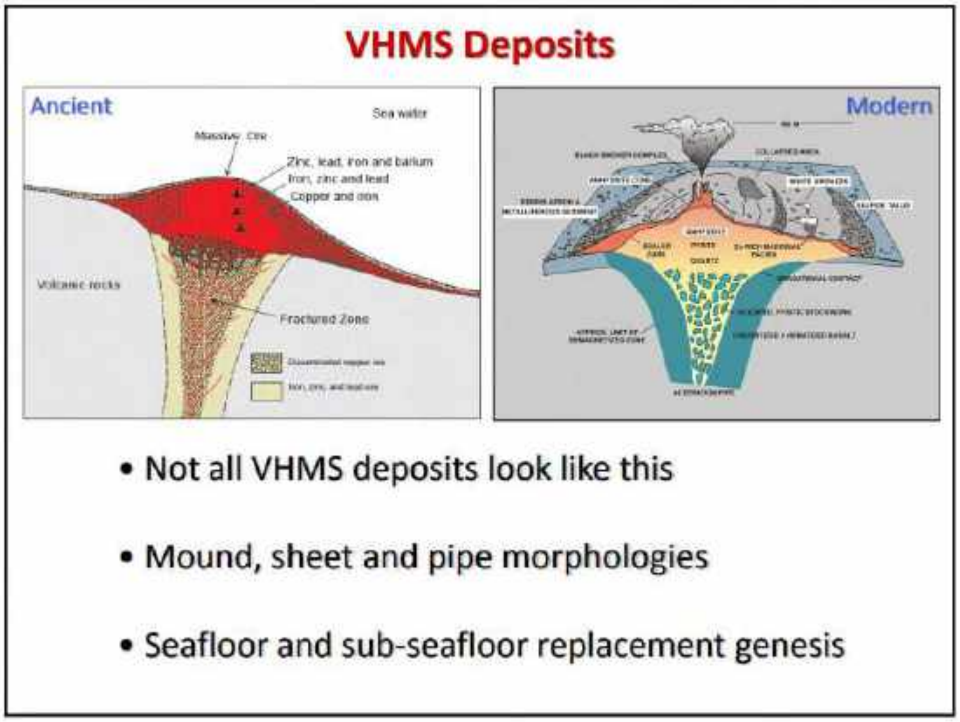
Although these rocks are volumetrically less abundant than other rock types, they are frequently present as thin layers or bands intercalated with other rock types. They are generally fine grained, foliated and are grey to pink in colour. Quartz commonly makes up 50-60% of these rocks, the remainder consists of microcline and perthite. Kleespies (1989) has observed that these rocks are more abundant in the hangingwall (within 50 m) of mineralized zones.

### 7.3.5 Pegmatites

Sill-like bodies of pegmatite ranging in thickness from a few centimetres to 50 metres are quite common. Complete gradations from biotite gneiss containing a few stringers of pegmatite to pegmatite containing a few relict bands of biotite gneiss have been observed. Mineralogically the pegmatite bodies are comprised mainly of varying proportions of plagioclase, microcline and quartz. Biotite and muscovite are locally present in minor amounts. In most places the pegmatites have a porphyroblastic appearance with large plagioclase porphyroblasts (2-3 cm) set in a finer grained (5 mm) quartzo-feldspathic matrix. Pegmatite bodies range in colour from green, pink to red, and greyish white. Greenish colored pegmatites are usually highly fractured and altered and are closely associated with mineralized zones. Pink to red coloured pegmatites are generally not fractured and not associated with mineralized zones. Greyish white pegmatites may or may not be mineralized (Kirkland, 1959, Kleespies, 1989).

# 8. Deposit Types

The McKenzie Deposit is interpreted to be a metamorphosed and deformed volcanogenic massive sulphide ("**VMS**") deposit, similar in many ways to deposits of the Manicouagan, Ontario and Sherridon, Manitoba mining camps. Figure 8.1 is taken from Gemmell, 2015.



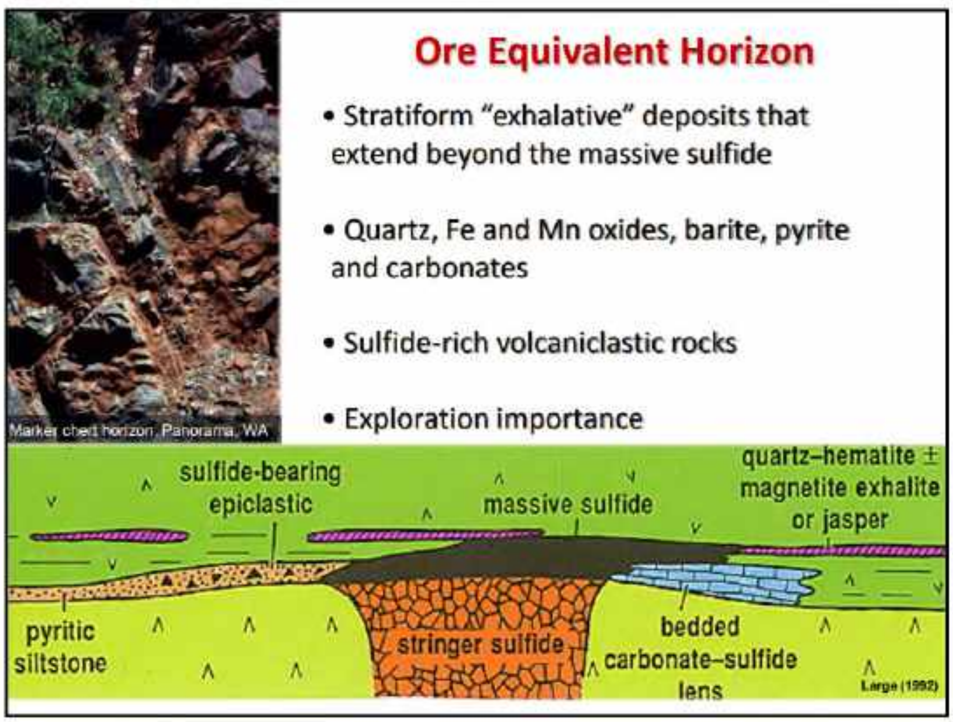




**FIGURE 8.1 DEPOSIT STYLES**

VMS deposits typically form at or near the seafloor in submarine volcanic environments. They form from metal-enriched fluids associated with seafloor hydrothermal convection. Their immediate host rocks can be either volcanic or sedimentary. The most common feature among all types of VMS deposits is that they occur in extensional tectonic settings, including both oceanic seafloor spreading and arc environments. Most, but not all, significant VMS mining districts are defined by deposit clusters formed within rifts or calderas.

The majority of VMS deposits in Canada form in either bimodal-mafic or bimodal-felsic volcanic terranes dominated by basalt to basaltic andesite and rhyolite-rhyodacite. Prospective VMS-hosting arc terranes are characterized by bimodal volcanic successions that have a tholeiitic to transitional tholeiitic-calc alkaline composition. The felsic volcanics are characterized by low Zr/Y (<7) and low (La/Yb)N (<6), with elevated high field strength element contents (Zr >200 ppm, Y >30 ppm, and elevated LREE and HREE,) typical of high-temperature, reduced magmas derived from partially hydrated crust.

VMS deposits are typically mound-shaped to tabular, stratabound bodies composed principally of massive (>40%) sulphide, quartz and subordinate phyllosilicates and iron oxide minerals and altered silicate wallrock. Idealized, undeformed and unmetamorphosed stratabound bodies are commonly underlain by discordant to semi-concordant stockwork veins and disseminated sulphides. The stockwork vein systems, or "pipes", are enveloped in distinctive alteration halos, which may extend into the hanging-wall strata above the VMS deposit. The stockwork zones are the conduits through which the hydrothermal fluids rose and occur at the centers of more extensive, discordant alteration zones. They form by interaction between rising hydrothermal fluids, circulating seawater and sub-seafloor rocks. The alteration zones and attendant stockwork vein systems may extend vertically below a deposit for several hundred metres.

Proximal hanging-wall alteration can manifest itself as a semi-conformable halo up to tens of metres thick.

When both proximal and regional semi-conformable alteration zones are affected by amphibolite grade regional or contact metamorphism, the originally strongly hydrated alteration mineral assemblages change into coarse-grained quartz-phyllosilicate-aluminosilicate assemblages that may be very distinct from the surrounding unaltered strata. At Sherridon, Manitoba, cordierite garnet anthophyllite gneiss is thought to represent metamorphic equivalents of hydrothermally altered rocks. This is also the case at the Geco Deposit at Manitouwadge Ontario.

In some cases, VMS deposits do not form on the seafloor but develop as a result of shallow subseafloor replacement. This occurs when hydrothermal fluids infill primary pore space in either extrusive, autoclastic, volcaniclastic or epiclastic successions below an impermeable cap. VMS deposits have been classified by various authors according to their tectonic settings, metal ratios and host rocks.

Exploration methods for this type of mineralization on a Property scale include geological mapping and magnetics to differentiate rock types and identify structures. Electrical methods (electromagnetics and induced polarization) are used for direct detection of mineralized bodies. Lithological sampling of available outcrops and whole rock analysis can identify and quantify alteration types.  Geochemically anomalous concentrations of base and precious metals in the secondary environment, mainly soils and tills, may be present if favourable conditions exist.

## 8.1 Deposit Classification

The McKenzie deposit occurs within a highly deformed and transposed terrane which makes its classification more difficult.

Because of the spatial association of the Upper Zone mineralization with greenish pegmatites, early workers suggested an epigenetic origin for the sulphides related to metamorphic mobilization and deposition along a metamorphic front (Byers 1959, Johnston 1972, Kirkland 1959).

Sangster (1986) suggested that the Deposit is a part of, and coeval with the volcanic, or volcanic derived, rocks in which they occur.

Coombe (1991) reported, “unequivocal pillow-like structures” in the amphibolitic rocks on the Property, indicating their derivation, at least in part, from mafic lavas.  Deptuck (1994) noted the spatial relationship of the Lower Zone with amphibolitic rocks.

Coombe (1991) suggested a pre-metamorphic origin for the mineralization based on the presence of gahnite which would have formed as a result of a zinc sulphide-silicate reaction during metamorphism.

Kleespies (1993) also presented  evidence for a metamorphosed rather than a metamorphogenic origin.  He suggested that a pre-metamorphic, likely syngenetic, model is appropriate.  It was felt that the stratabound nature of the mineralization, the fact that it is hosted dominantly by clastic sediments in a fore-arc tectonic setting.  In addition metal ratios supported a  Deposit having been formed mid way between Besshi and Kuroko type deposits on the VMS continuum.

Based on textural evidence, Barclay (1993) suggested that the Deposit had either been injected, or at least, remobilized.  Durocher (1993) felt  that the mineralization formed initially as a stratabound deposit in a distal volcanic or sedimentary environment and was subsequently recrystallized and possibly remobilized during regional metamorphism and deformation. Durchbewegung sulphide breccias and associated stockworks would have developed along reverse or thrust faults during the waning stages of metamorphism and deformation (Durocher, 1993).

Barclay (1993) made analogies with the Geco massive sulphide deposit in Manitouwadge, ON and Coombe (1991) compared the McKenzie deposit to the Bob Lake deposit in the Sherridon area of Manitoba.

FBC suggests that Brabant more closely resembles the “satellite” deposits in the Manitouwadge (Geco) camp.  The lack of a clearly defined footwall and the higher zinc to copper ratios more closely resemble the much smaller Willroy, WillEcho and Nama Creek (7-10 million tons) deposits found proximal to the 54 million ton Geco Deposit.

Based on photo in Figure 8.2 Gemmell suggested that the Deposit is, “more clearly subseafloor replacement.  The class all have wispy edges and the appearance of jigsaw fit”.

**FIGURE 8.2 SHOWING MINERAL TEXTURE**

Given the spatial relationship of the Upper Zone with greenish pegmatites (however it should be noted that green pegmatites also occur at Geco) and the predominantly sedimentary environment in which the Property occurs, the possibility exists that the mineralization might be similar in origin to Broken Hill (Stanton, 1972).

## 8.2 Mineralization

The following description of the mineralization is presented as it relates to both historical and a current inferred resource for the McKenzie deposit located on the Brabant Property.

The mineralization has been traced by drilling over a strike length of about 1,000 m.  The width of the zones is variable and ranges up to 18 m.  The mineralization generally strikes north-north-easterly and dips moderately west-northwesterly.

Discrete zones of mineralization above the Upper Mineralized Zone meet the minimum grade and width criteria but due to the inability to show lateral extension these zones were not included in the inferred resource estimate.  Locally narrow intervals of sulphide mineralization occur below the Lower Mineralized Zone as well and these also were not included in the inferred resource estimate.

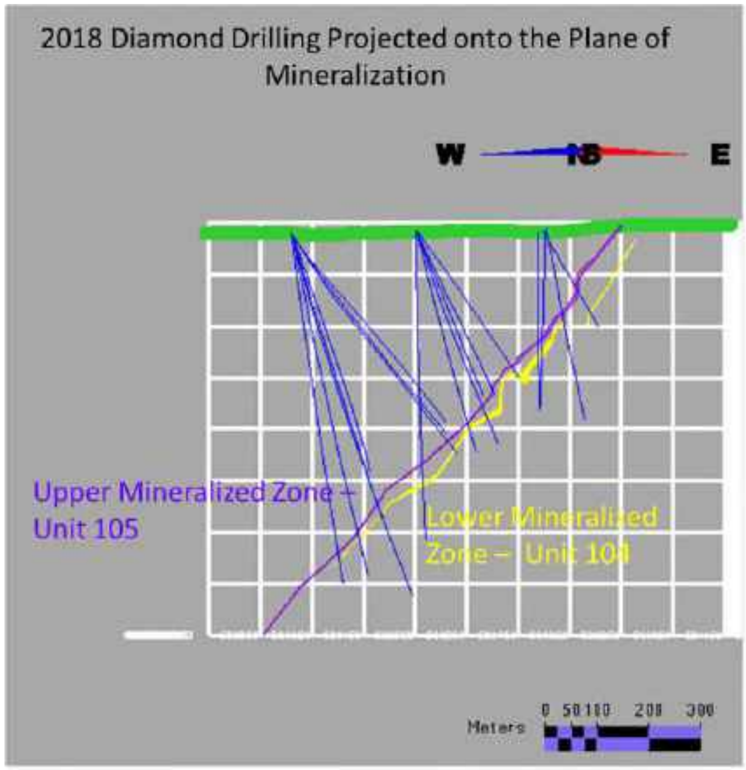



**FIGURE 8.5 SHOWING STACKED NATURE OF LENSES**

The McKenzie deposit consists of variable amounts of pyrrhotite, sphalerite, pyrite, chalcopyrite and galena as tabular to lensoid bodies of disseminated to massive sulphide, sulphide-rich breccias, concordant and discordant veins and veinlets. Secondary minerals such as covellite, malachite, native copper and colloform pyrite are present locally within 50 m of surface (Byers 1959, Coombe 1991). Accessory gahnite has also been reported (Byers, 1959) and was observed in hornfelsic units during 2017 drill program.

The sulphide-rich "breccias" consist of a matrix composed dominantly of fine to coarse-grained pyrrhotite and sphalerite with lesser pyrite, chalcopyrite and galena. Angular to subangular rock fragments which vary in composition, typically reflect the immediate host lithology (Deptuck, 1994). Durocher (1992, 1993a,b) refers to this style of mineralization as durchbewegung. Deptuck (1994) indicates that the highest-grade mineralization occurs as sulphide-rich breccias with lower grades reflecting vein and disseminated sulphides. The author of this report and feel that the sulphide mineralization is related to subseafloor replacement.

At or near the surface, the Upper and Lower Zones are found within a sequence comprised mainly of biotite and/or felsic gneisses. In the hangingwall there are several fairly large and continuous lenses of amphibolitic rocks which are localized along definite stratigraphic levels.

There are also several smaller and more discontinuous lenses of garnetiferous biotite gneiss and biotite-amphibole gneiss (Durocher, 1993b).

Garnetiferous biotite gneisses/migmatites appear to be more abundant in the footwall than in the hangingwall. Sill-like pegmatitic bodies are present at several stratigraphic levels in the footwall and the hangingwall. Durocher (1993b) indicates that the sulphide mineralization is hosted mainly within highly fractured and sheared pegmatite sill-like bodies. Deptuck (1994) suggests, however, that the Lower Zone is generally spatially related to amphibole-bearing rocks. It is the author's opinion that the mineralization may have been remobilized into pegmatites but are not related. Instead both lenses are typical, syngenetic stratabound deposits.

Over most of the length of the Upper Zone, both the immediate hangingwall and footwall rocks consist of biotite +/- felsic gneisses but in several areas amphibolitic rocks and garnetiferous biotite +/- felsic gneisses are also present in the immediate structural hangingwall. In places where the pegmatite lenses thin or pinch out, sheared biotite +/- felsic gneisses or amphibolitic gneisses host the Upper Zone sulphide mineralization (Durocher, 1993b).

### 8.2.1 Upper Mineralized Zone (UMZ)

The continuity of the Upper Zone mineralization has been tentatively correlated over a strike length of 1,100 m. The Upper Zone has continuity from the surface down dip for approximately 1000 m. The Upper Zone model used 137 diamond drill holes for the geological model; no minimums were applied at this stage – geological boundaries were used - with an average length weighted grade of 5.57% Zn Equivalent over 5.15 m and a maximum downhole length of 28.3 m with an approximate true thickness of 23 m.

### 8.2.2 Lower Mineralized Zone (LMZ)

The continuity of the Lower Zone mineralization has been tentatively correlated over a strike length of about 800 m with continuity from the surface down dip for approximately 800 m. The LMZ which is located 25-30 m below the Upper Mineralized Zone used 90 diamond drill holes for the resource calculation. Less LMZ intersections meet the criteria for inclusion in the resource estimate than for the UMZ because most of the holes from the early drill campaigns did not go deep enough to intersect this zone. Of the holes used, the average thickness/length measured was 5.85 metres and an average length weighted grade was 8.47 % Zn Equivalent. No minimums were applied at this stage and geological boundaries were used. The LMZ had a maximum down hole length of 30 m and approximate true thickness of 24 m.

## 8.3 Structure

The dominant structural features recorded in the drill logs are foliation, banding and gneissosity, plus local instances of small isoclinal folds in the core and variations in dip. Most drill logs record evidence of increased deformation such as where foliations are variable, irregular and/or stronger as well as the existence of chloritic slips or partings (Stewart and

Chamois, 1994). Durocher (1993b) interpreted low angled reverse or thrust faults based on graphitic and/or chloritic mylonite intervals, slips, partings, shears or fault gouge that dip generally subparallel to the foliation and banding. Some faults have been interpreted based on evidence seen in sections, but the correlation of these structures is difficult because of the lack of detail in the older logs (Deptuck, 1994).

There is debate whether the durchbewegung textures are in fact subseafloor replacement as the clasts all have wispy edges and the appearance of jigsaw fit. This has an important impact on the possible genesis of the Deposit.

## 8.4 Alteration

Durocher (1992) suggested that the presence of sillimanite and/or cordierite may be indicative of pre-metamorphic hydrothermal alteration Abbas-Hasanie et al. (1992), however, documented that sillimanite and cordierite are common throughout the MLB and Kisseynew domain.

It should be noted that hornfels type alteration – typically cordierite, chlorite, sillimanite and garnet in typical felted masses increased in proximity and adjacent to mineralization strongly suggesting ore related hydrothermal alteration. Grain size also typically increased again suggesting pre-metamorphic alteration.

Chlorite with carbonate +/- pyrite commonly coats late fractures oriented at a high angle to the foliation. However, chlorite-rich zones are generally quite removed from the mineralized zones and are unlikely to express hydrothermal alteration related to the mineralization. More significant possibly is the common occurrence of pervasive green colourations in pegmatites and other lithologies proximal to the mineralized zones. This greenish colour is caused by epidote +/- sericite alteration of plagioclase. This colouration is different from the chlorite occurrences noted above and these pervasive green zones are more silicified and more massive than adjacent rocks (Stewart and Chamois, 1994).

Coombe (1991) notes an increase in garnet in the footwall rocks and suggests that this might be related to footwall alteration.

# 9. Exploration Undertaken by Murchison

In October of 2015, two field investigations were carried out on the property to confirm known drill collars, grid locations, access routes and showings for quality control purposes. Existing data was Geo-rectified and used to plan for future exploration programs and to determine the ability to review remaining and accessible core.

Over the periods of September – December 2016, February 2017 and August 2017 the programs included prospecting, investigation of mineralized showings and identification of geophysical targets. An airborne Heli Sub Audio Magnetics geophysical survey ("**HeliSAM**") and follow up ground SQUID electromagnetic ("**EM**") and magnetics ("**Mag**") geophysical surveys covering prospective geological horizons were also undertaken at this time.

In October 2016 the Company conducted a prospecting program on three minfile showings; the Teneke (Ryan Gossan),the Min Showing and the Shore showing. In addition one geophysics target (TOM3) identified from the 2011 Manicouagan VTEM airborne geophysical survey was also investigated. Rock samples were taken during the prospecting program from the Teneke (Ryan Gossan) and TOM3 showings. Results from the Teneke yielded an elevated zinc showing of 1,555 ppm; however, values in copper, silver, lead and gold were generally low and results from the TOM3 sample did not yield any significant values.

A HeliSAM Geophysics Survey was carried out between November 23 and December 9, 2016 by Discovery Geophysics International (Discovery) in conjunction with Gap Geophysics Australia Pty Limited (GAP) to conduct the geophysical survey using GAP's proprietary techniques.

The survey grid covered 122-line kilometres using 50-meter line spacing over the main Deposit and adjacent mineral claims.

In February 2017, SQUID (a Time Domain Electromagnetic and Magnetometer geophysical survey) using a Jessy-Deep HT SQUID sensor was carried out on five lines totaling 12.45 km. The survey was designed to follow up newly identified HeliSam geophysical anomalies located on mineral claims.

In August 2017, a four-person crew conducted field investigations on identified outcrop showings and previously defined SQUID and VTEM geophysical targets in order to identify potential mineralization.

Five target areas on the property were prospected and sampled.

Prospecting and sampling in the vicinity of an interpreted 1.3 km long surface projection of the Anomaly D geophysical target area was also carried out and rock samples and soil samples were collected to the west of the prospective outcrops.

Prospecting and rock and soil sampling was also carried out on the TOM2 and Priority 3 geophysical targets and the Ryan Gossan.

Based on the identification of mineralization in relation to Anomaly D, TOM2 and Priority 3 the Company staked an additional 1,873 ha of land adjacent to its claims package.

In December 2017, the Company completed a follow up ground EM and Mag survey over the TOM2 anomaly. Results of the survey defined the presence of a highly conductive shallow body coincident with magnetic high amplitudes and measures approximately 400 metres by 235 metres with a shallow dip of about 23 degrees to the west.

TOM2 appears to be part of a series of identified geophysical anomalies, including TOM6, TOM7 and the Ryan Gossan (together, the "**TOM Trend**") that currently trends north over a strike of approximately 3 kilometres.

In March and April of 2018, Murchison completed an extensive ground geophysical program over the TOM Trend. The program consisted of a ground EM and Mag survey covering five survey grids. The combined grids extended from the TOM2 target to the northeast for approximately 4.5 kilometres and covered approximately 40 line kilometres.

The survey discovered a significant conductor ("**T2T**") located approximately 1.5 kilometres northeast of the TOM2 conductor and 7.0 kilometres south of the Brabant-McKenzie deposit. Modelling indicates a body measuring 400 metres by 310 metres at a depth of 184 metres with conductivities exceeding 4,400 siemens and is coincident with anomalous magnetic responses similar to the TOM2 target.

In June 2018, the Company announced it recently staked an additional 1,301 hectares of ground adjacent to and southeast of the current property in order to cover prospective geology and reported mineralized showings hosting anomalous copper and zinc values.

In July 2018, the Company completed a mapping, prospecting and sampling program on the recently staked claims hosting mineralized showings known as the Main Lake and McIvor Channel showings. At the Main Lake showing mineralization identified included chalcopyrite in micro fractures and as blebs as well as fine-grained massive sphalerite. At the McIvor Channel showing, six of eight historical trenches were identified as hosting massive sulphide mineralization of primarily pyrhhotite with chalcopyrite over a strike length of approximately 600 metres.

Based on the identification the McIvor Channel showing the Company staked an additional 343 hectares of land adjacent to its current claims package in order to cover any strike extension and proximal mineralization related to this mineralizing system.

# 10. Drilling

Drilling carried out on the property prior to Murchison's 2018 drill program is summarized in Table 10.1. The data from some of these drill holes are used in estimating inferred and indicated mineral resources.

**TABLE 10.1 SUMMARY OF DRILLING ON BRABANT-MCKENZIE PROPERTY PRIOR TO 2018 DRILLING BY MURCHISON MINERALS LTD.**

| Company | Date | Holes | Meterage |
|---|---|---|---|
| Paramount-Westore Joint Venture | 1956 | 39 | 4,267 |
| Bison Pettroleum and Minerals Ltd. | 1964 | 2 | 962 |
| Rio Tinto Canada Exploration Limited | 1965-1966 | 15 | 3,686 |
| Gamsan Resources Ltd. | 1988-1989 | 18 | 3,716 |
| Phelps Dodge Corporation of Canada, Limited | 1993 | 11 | 3,053 |
| Manicouagan Minerals Inc. | 2006-2008 | 49 | 15,360 |
| Votorantim Metals Canada Inc. | 2012 | 12 | 2,429 |
| Murchison Minerals Ltd | 2017 | 10 | 5,602 |
| **Total** | | **156** | **39,075** |

**TABLE 10.2 SUMMARY OF 2018 DRILL DATA ON BRABANT-MCKENZIE PROPERTY**

| Hole Number | Easting | Northing | Elevation (metres) | Dip | Az Start | TD (metres) |
|---|---|---|---|---|---|---|
| BM18-001A | 580,393.00 | 6,221,095.00 | 376.00 | 62.14 | -77.50 | 61.00 |
| BM18-001 | 580,393.00 | 6,221,095.00 | 376.00 | 62.14 | -77.50 | 675.00 |
| BM18-002 | 580,390.00 | 6,221,081.00 | 376.00 | 124.15 | -80.26 | 693.00 |
| BM18-003 | 580,393.00 | 6,221,095.00 | 376.00 | 148.15 | -59.03 | 549.00 |
| BM18-004 | 580,393.00 | 6,221,095.00 | 376.00 | 125.80 | -53.15 | 537.00 |
| BM18-005 | 580,393.00 | 6,221,095.00 | 376.00 | 138.35 | -46.60 | 549.00 |
| BM18-007 | 580,390.00 | 6,221,093.00 | 381.00 | 58.92 | -71.55 | 747.00 |
| BM18-008 | 580,393.00 | 6,221,095.00 | 376.00 | 110.00 | -57.00 | 546.00 |
| BM18-009 | 580,393.00 | 6,221,095.00 | 376.00 | 136.98 | -70.27 | 600.00 |
| BM18-010 | 580,889.00 | 6,221,339.00 | 386.00 | 148.80 | -43.83 | 276.00 |
| BM18-011 | 580,879.00 | 6,221,337.00 | 383.00 | 10.75 | -83.27 | 348.00 |
| BM18-012 | 580,632.00 | 6,221,084.00 | 386.00 | 130.00 | -48.00 | 387.00 |
| BM18-013 | 580,632.00 | 6,221,084.00 | 386.00 | 145.00 | -54.00 | 399.00 |
| BM18-014 | 580,632.00 | 6,221,084.00 | 386.00 | 155.00 | -53.00 | 399.00 |
| BM18-015 | 580,896.00 | 6,221,334.00 | 390.00 | 42.00 | -73.00 | 390.00 |
| BM18-016 | 580,895.00 | 6,221,331.00 | 390.00 | 222.00 | -88.00 | 348.00 |
| BM18-017 | 580,632.00 | 6,221,084.00 | 386.00 | 62.00 | -67.00 | 450.00 |
| BM18-018 | 580,632.00 | 6,221,084.00 | 386.00 | 96.00 | -76.00 | 447.00 |
| BM18-019 | 580,632.00 | 6,221,084.00 | 386.00 | 0.00 | -90.00 | 603.00 |
| **Total** | | | | | | **9,004.00** |

**TABLE 10.3 LIST OF SIGNIFICANT INTERSECTIONS IN 2018 BRABANT-MCKENZIE DRILLING**

| Hole ID | From (metres) | To (metres) | Interval (metres) | Zn% | Cu% | Pb% | Ag g/t | Zn Eq |
|---|---|---|---|---|---|---|---|---|
| BM18-001A | hole abandoned | | | | | | | |
| BM18-001 | 611.04 | 614.17 | 3.13 | 1.92 | 0.19 | 0.00 | 5.50 | 2.43 |
| BM18-002 | 574.65 | 581.61 | 6.96 | 0.80 | 0.50 | 0.06 | 19.63 | 2.28 |
| *including* | *578.38* | *578.87* | *0.49* | *4.56* | *0.08* | *0.01* | *7.30* | *4.88* |
| BM18-003 | 590.01 | 591.15 | 2.90 | 2.93 | 0.22 | 0.02 | 6.79 | 3.54 |
| BM18-004 | 431.87 | 434.43 | 2.56 | 2.32 | 0.38 | 0.15 | 34.98 | 3.91 |
| *including* | *432.10* | *432.43* | *0.33* | *12.20* | *0.19* | *0.00* | *7.50* | *12.74* |
| BM18-005 | 445.50 | 450.40 | 4.90 | 2.66 | 0.36 | 0.02 | 7.78 | 3.57 |
| BM18-006 | not drilled | | | | | | | |
| BM18-007 | 621.00 | 621.36 | 0.36 | 10.90 | 0.63 | 0.01 | 14.30 | 12.50 |
| BM18-007 | 622.85 | 623.25 | 0.40 | 7.24 | 0.06 | 0.02 | 9.28 | 7.57 |
| BM18-008 | 460.24 | 462.85 | 2.61 | 10.95 | 0.52 | 0.01 | 11.86 | 12.26 |
| BM18-009 | 473.35 | 484.13 | 10.78 | 1.58 | 0.48 | 0.01 | 12.75 | 2.83 |
| *including* | *473.35* | *474.24* | *0.89* | *5.28* | *0.39* | *0.02* | *10.28* | *6.30* |
| *including* | *476.84* | *478.40* | *1.56* | *1.85* | *1.41* | *0.02* | *37.11* | *5.52* |
| *including* | *481.16* | *482.84* | *1.68* | *3.14* | *0.85* | *0.01* | *22.71* | *5.38* |
| BM18-010 | 221.16 | 232.82 | 11.66 | 2.37 | 0.72 | 0.07 | 28.68 | 4.48 |
| *including* | *225.08* | *228.22* | *3.14* | *5.12* | *0.83* | *0.01* | *19.05* | *7.24* |
| BM18-011 | 269.72 | 275.06 | 5.34 | 2.10 | 1.69 | 0.01 | 32.18 | 6.26 |
| *including* | *273.72* | *275.06* | *1.34* | *4.20* | *3.22* | *0.01* | *58.28* | *12.05* |
| BM18-012 | 303.98 | 304.65 | 0.67 | 12.10 | 0.64 | 0.01 | 16.00 | 13.75 |
| BM18-012 | 308.79 | 311.95 | 3.16 | 1.00 | 1.24 | 0.01 | 34.16 | 4.27 |
| BM18-012 | 318.67 | 319.66 | 0.99 | 7.37 | 0.43 | 0.06 | 19.17 | 8.69 |
| BM18-013 | 308.40 | 308.70 | 0.30 | 12.80 | 0.17 | 0.01 | 6.30 | 13.29 |
| BM18-013 | 315.70 | 316.70 | 1.00 | 3.34 | 1.14 | 0.02 | 24.70 | 6.21 |
| BM18-013 | 351.00 | 354.00 | 3.00 | 4.50 | 0.36 | 0.10 | 16.14 | 5.65 |
| BM18-014 | 322.60 | 324.50 | 1.90 | 0.71 | 0.45 | 0.01 | 7.52 | 1.80 |
| BM18-015 | 214.66 | 215.13 | 0.47 | 19.70 | 1.24 | 0.00 | 17.40 | 22.62 |
| BM18-015 | 218.82 | 219.13 | 0.31 | 12.30 | 0.23 | 0.00 | 6.30 | 12.90 |
| BM18-015 | 219.95 | 220.36 | 0.41 | 4.44 | 0.36 | 0.00 | 5.30 | 5.29 |
| BM18-016 | 249.90 | 250.32 | 0.42 | 11.00 | 0.06 | 0.00 | 4.80 | 11.22 |
| BM18-017 | 357.60 | 363.00 | 5.40 | 6.35 | 0.68 | 0.47 | 63.09 | 9.39 |
| BM18-017 | 379.60 | 383.60 | 4.00 | 8.11 | 0.47 | 0.67 | 72.62 | 11.06 |
| BM18-017 | 416.10 | 417.90 | 1.80 | 11.89 | 1.09 | 0.41 | 67.18 | 15.82 |
| BM18-018 | 400.20 | 401.45 | 1.25 | 5.68 | 0.45 | 0.53 | 59.46 | 8.22 |
| BM18-019 | 497.40 | 503.77 | 6.37 | 12.53 | 0.70 | 0.18 | 42.03 | 14.97 |

# 11. Sample Preparation, Analyses and Security

Murchison employs industry best practice in its core handling protocols. Core was delivered on a daily basis by the drilling contactor to a core logging facility established on private property at Brabant Lake. The length of core recovered was compared to the position of depth markers in the core boxes by the Murchison personnel in order to check for misplaced markers and to calculate the amount of core loss, if any. The core was logged and sampled by Murchison geologists. Sampling of the core was based on visual observations of sulphide mineralization and samples were collected within lithologically homogeneous intervals with due regard for varying mineralogy and textures. Sample intervals did not cross geological boundaries.

In general, the sample length within the mineralized zones was in the order of one metre or less. The core was manually split and bagged with the first part of a three-part assay tag bearing a unique identifier number. The other half of the core was stored on site with the second part of the three-part assay tag bearing an identical unique identifier number placed in the core box at the beginning of the sample interval. Records of the sampled intervals and sample numbers were recorded in the logs, on a sampling sheet, and on the third part of the three-part assay tag bearing an identical identifier number as the other two parts of the assay tag. The third part of the assay tag was kept with the geologist's records.

The author is not aware of any drilling, sampling or recovery factors that would impact the reliability of the core samples. The author was present during much of the winter 2018 drill program and can confirm for the winter 2018 drill program that there were no significant sections of lost core or reduced core recovery in fresh rock.

Sample preparation conducted by Murchison personnel prior to dispatch consisted of placing half split core samples in plastic bags, recording sample numbers, sealing the shipping bags and noting shipment particulars. Samples were shipped by commercial carriers to Saskatchewan Research Council ("**SRC**") Laboratories, located in Saskatoon, Saskatchewan. Saskatchewan Research Council is a laboratory accredited under IS0 17025:2017 Standards and is independent of the Company"

Security of the samples was maintained by using a secure core handling facility located on private land. Samples awaiting dispatch to the assay laboratory were stored in this secured building and accessible only to authorized persons. Individual samples were placed in shipping bags, which in turn were sealed with plastic tie straps and the shipping bags remained sealed until they were opened by assay laboratory personnel.

The core was logged and split in a secured core logging facility. Individual samples were labelled, placed in plastic sample bags, and sealed. Groups of samples were then placed in security sealed bags and shipped directly to the Saskatchewan Research Council Laboratories ("**SRC**") in Saskatoon, Saskatchewan for assay analysis.

SRC used the ICP3 Base Metal Exploration Package for analysis. Partial digestions are performed on an aliquot of sample for the analysis of the requested elements by ICP-OES. An aliquot of pulp is digested in a test tube in a mixture of HNO3 HCl in a hot water bath and then diluted to 15 ml using de-ionized water. Check assays, utilizing four acid digestion with ICP or AAS finish, were undertaken by ALS Labs located in Vancouver, British Columbia. ALS Labs, of 2103 Dollarton Hwy, North Vancouver, BC, V7H 0A7, is independent of the Company. Assay results for both methods were comparable.

It is FBC's opinion that the sample preparation, security and analytical procedures are satisfactory. FBC is also confident that the integrity of the samples is uncompromised, given the security measures employed and the sample handling protocols in use at SRC Laboratories.

All samples were sent to: SRC Geoanalytical Laboratories, 125 - 15 Innovation Boulevard, Saskatoon, Saskatchewan, S7N 2X8; Tel: (306) 933-8118, Fax: (306) 933-8118, Email: geolab@src.sk.ca.

# 12. Data Verification

## 12.1 Verification and Results

Standards were obtained from Canadian Research Laboratories. These were inserted as part of the sampling protocol. Both high and low grade standards were used. In addition, pulps were submitted to a second laboratory.

The author systematically selected 92 check assays which were sent to: ALS Labs, of 2103 Dollarton Hwy, North Vancouver, BC, V7H 0A7, is independent of the Company; Tel: (604) 984-0221, Fax (604) 984-0218, Web: www.alsglobal.com/geochemistry. Results are given below.

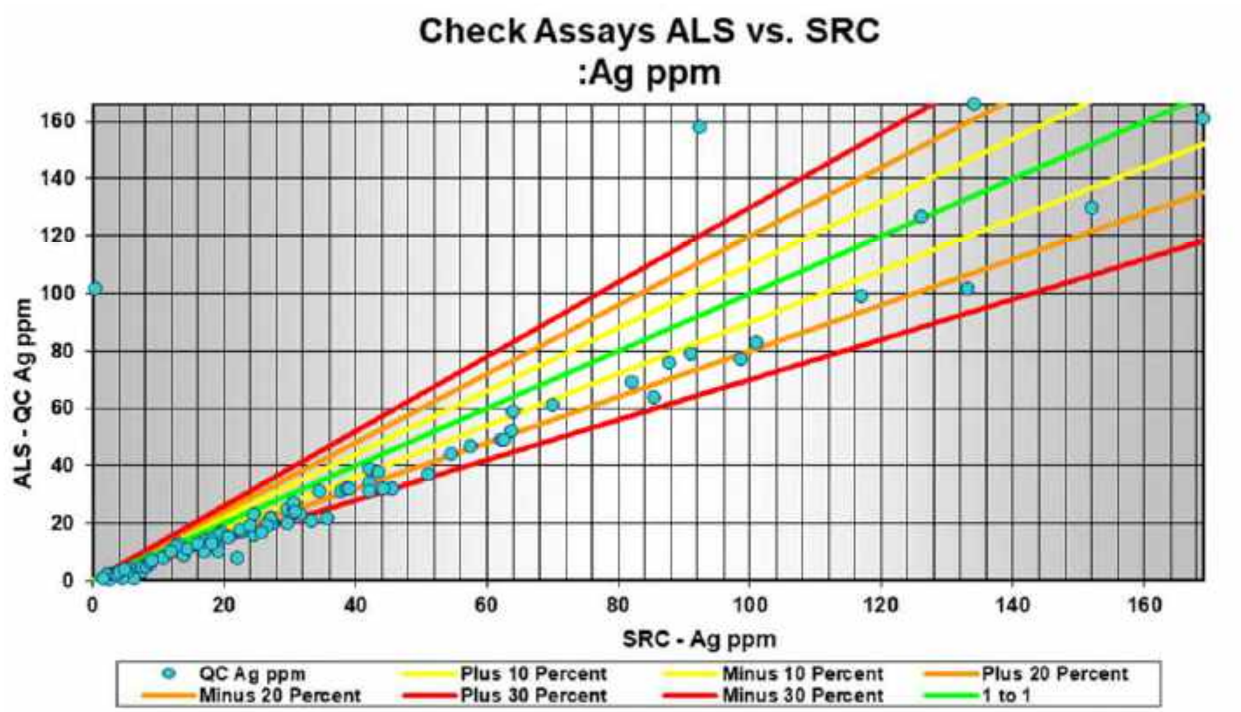



**FIGURE 12.1 LAB COMPARISONS OF SILVER ASSAYS**

SRC Labs tends to report higher silver values than ALS. This also appears to be the case when SRC is compared to submitted standards.

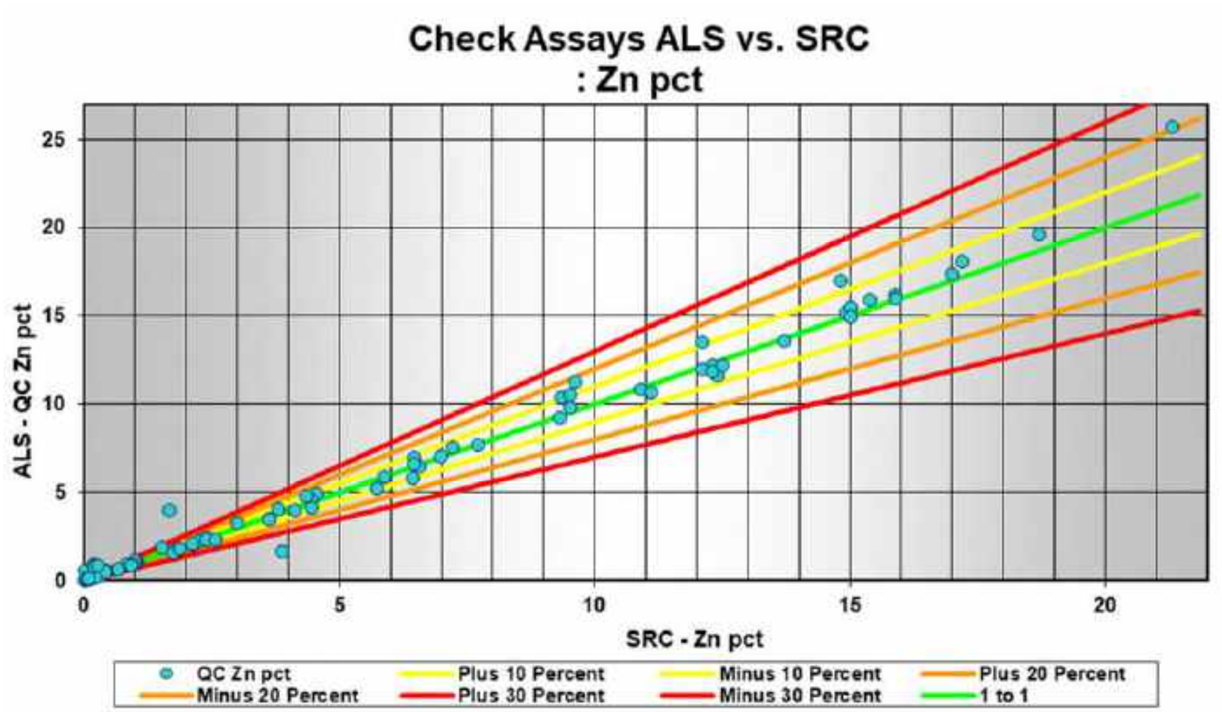



**FIGURE 12.2 LAB COMPARISONS OF ZINC ASSAYS**

Zinc check assays were comparable.

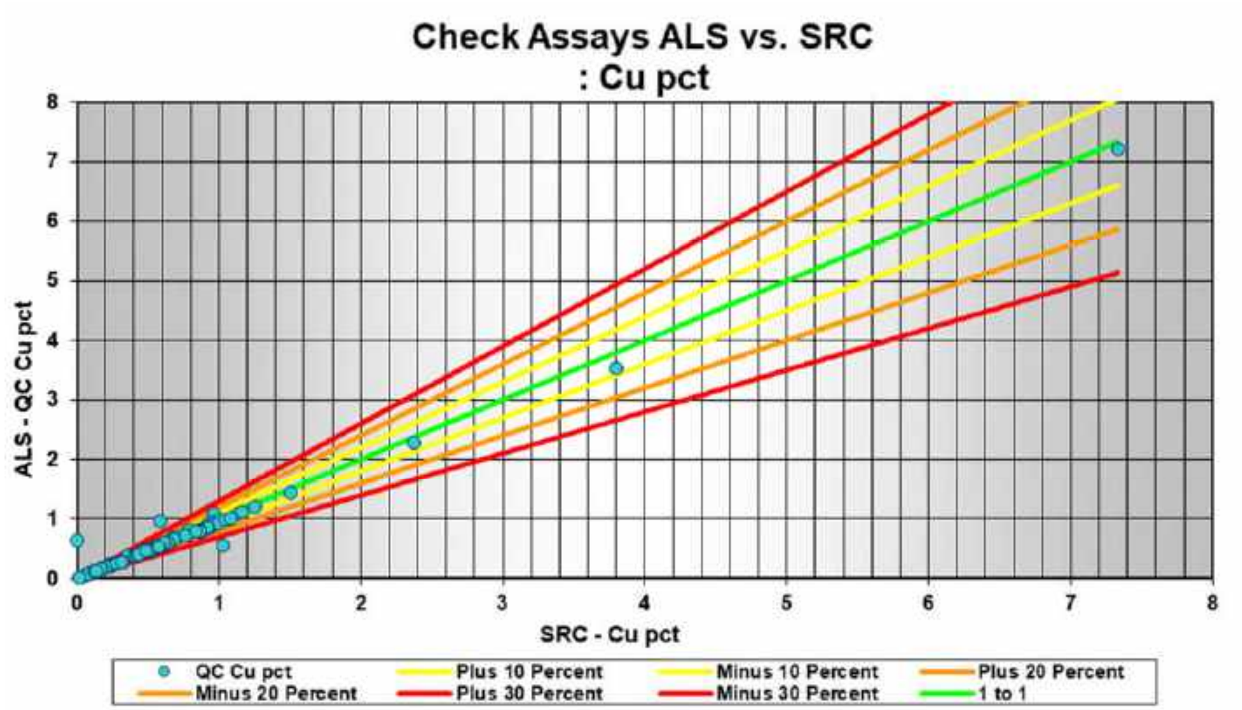



**FIGURE 12.3 LAB COMPARISONS OF COPPER ASSAYS**

All check assays were comparable.

# CDN Resource Laboratories Ltd.

#2, 20148-102nd Ave, Langley, B.C., Canada, V1M 4B4, 604-882-842, Fax 604-882-8466 (www.cdnlabs.com)

**REFERENCE MATERIAL: CDN-ME-1414**

Recommended values and the "Between Lab" Two Standard Deviations

| | | | | |
|---|---|---|---|---|
| Gold | 0.284 g/t | ± | 0.026 g/t | Certified value |
| Silver | 18.2g/t | ± | 1.2 g/t | Certified value |
| Copper | 0.219% | ± | 0.010% | Certified value |
| Lead | 0.105% | ± | 0.006% | Certified value |
| Zinc | 0.732% | ± | 0.024% | Certified value |

**FIGURE 12.4 LOW GRADE REFERENCE MATERIAL USED**

## CDN Resource Laboratories Ltd.

#2, 20148-102nd Ave, Langley, B.C., Canada, V1M 4B4, 604-882-842, Fax 604-882-8466 (www.cdnlabs.com)

**REFERENCE MATERIAL: CDN-ME-17**

Recommended values and the "Between Lab" Two Standard Deviations

| | | | | |
|---|---|---|---|---|
| Gold | 0.452g/t | ± | 0.058 g/t | provisonal value (RSD + 6.38%) |
| Silver | 38.2g/t | ± | 3.3 g/t | Certified value |
| Copper | 1.360% | ± | 0.10% | Certified value |
| Lead | 0.676% | ± | 0.054% | Certified value |
| Zinc | 7.340% | ± | 0.37% | Certified value |

**FIGURE 12.5 HIGH GRADE REFERENCE MATERIAL USED**

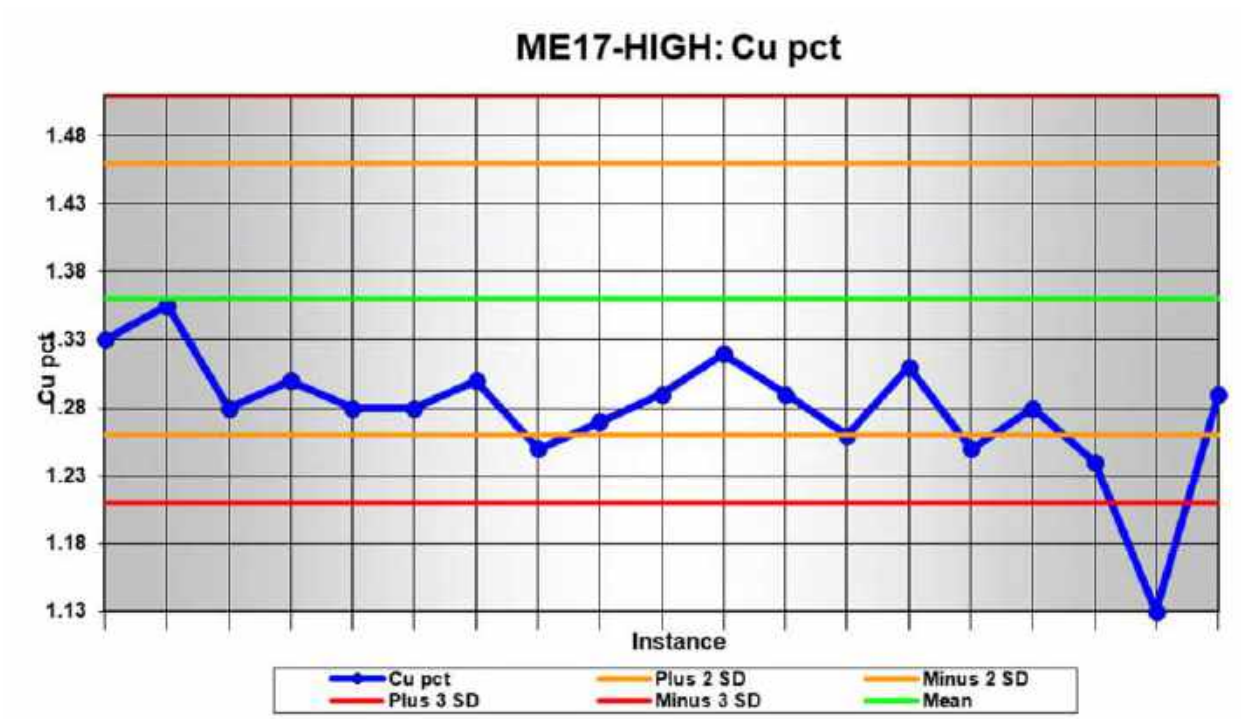



**FIGURE 12.6 QAQC HIGH GRADE COPPER**

SRC appears to consistently under report "high grade" copper. However, this is not borne out when compared to ALS assay results.

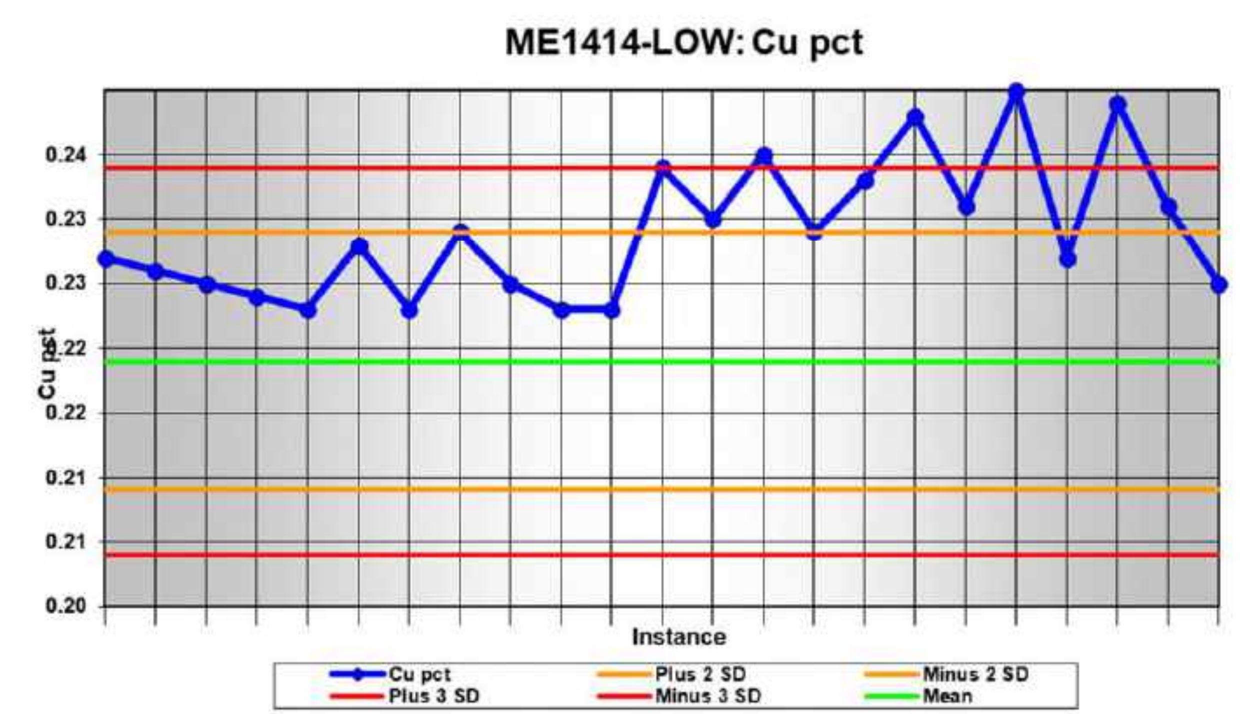



**FIGURE 12.7 QAQC LOW GRADE COPPER**

SRC appears to consistently over report low grade copper. However because the actual grade is quite low this in itself is not a significant difference.

High grade copper appears to be under reported by SRC Labs while low grade copper is over reported. The net result is that the differences will generally cancel each other out. It is felt that any impact on resource numbers for copper will be negligible.

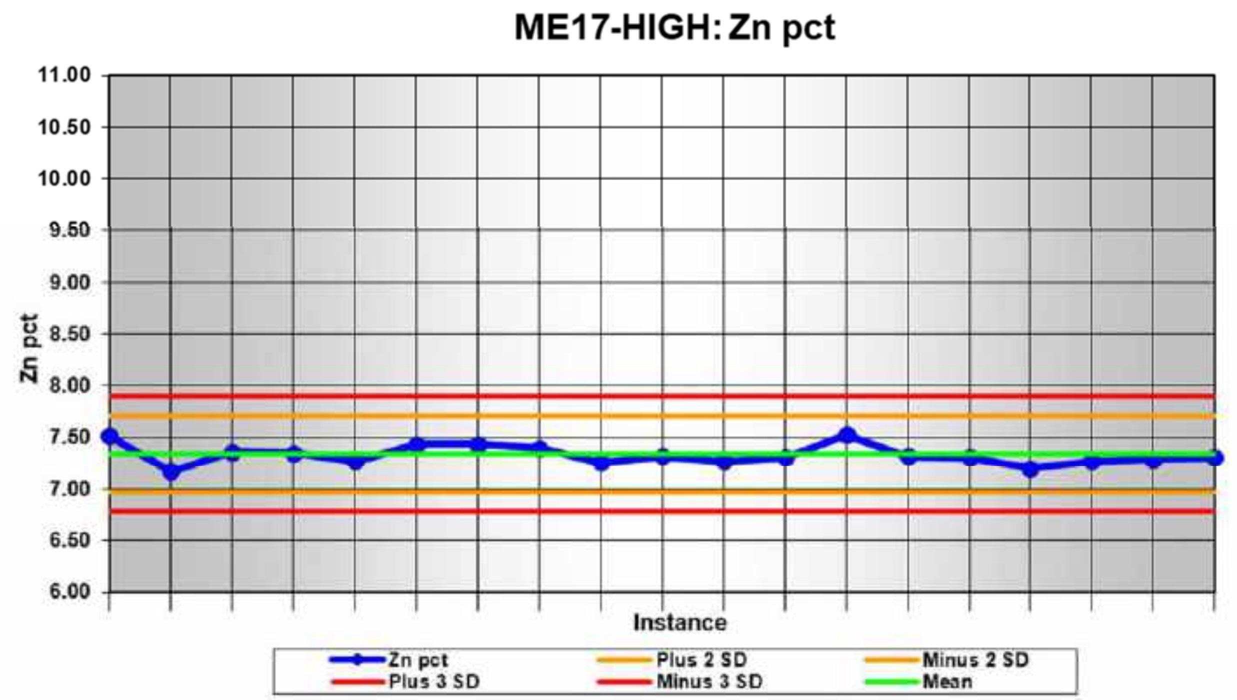



**FIGURE 12.8 QAQC HIGH GRADE ZINC**

High Grade Zinc shows strong correlation and accuracy to standards.

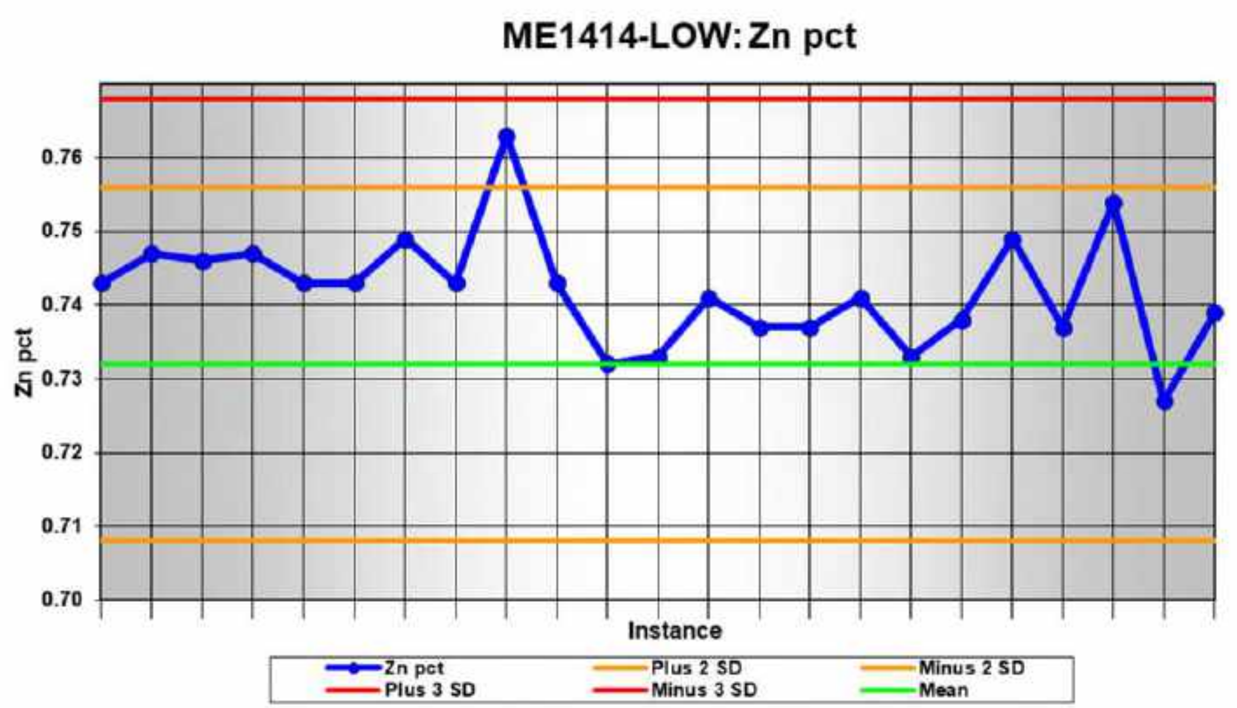



**FIGURE 12.9 QAQC LOW GRADE ZINC**

Low grade zinc assays show acceptable accuracy when compared to standards. There appears to be tendency to over report but still within acceptable margins of error.

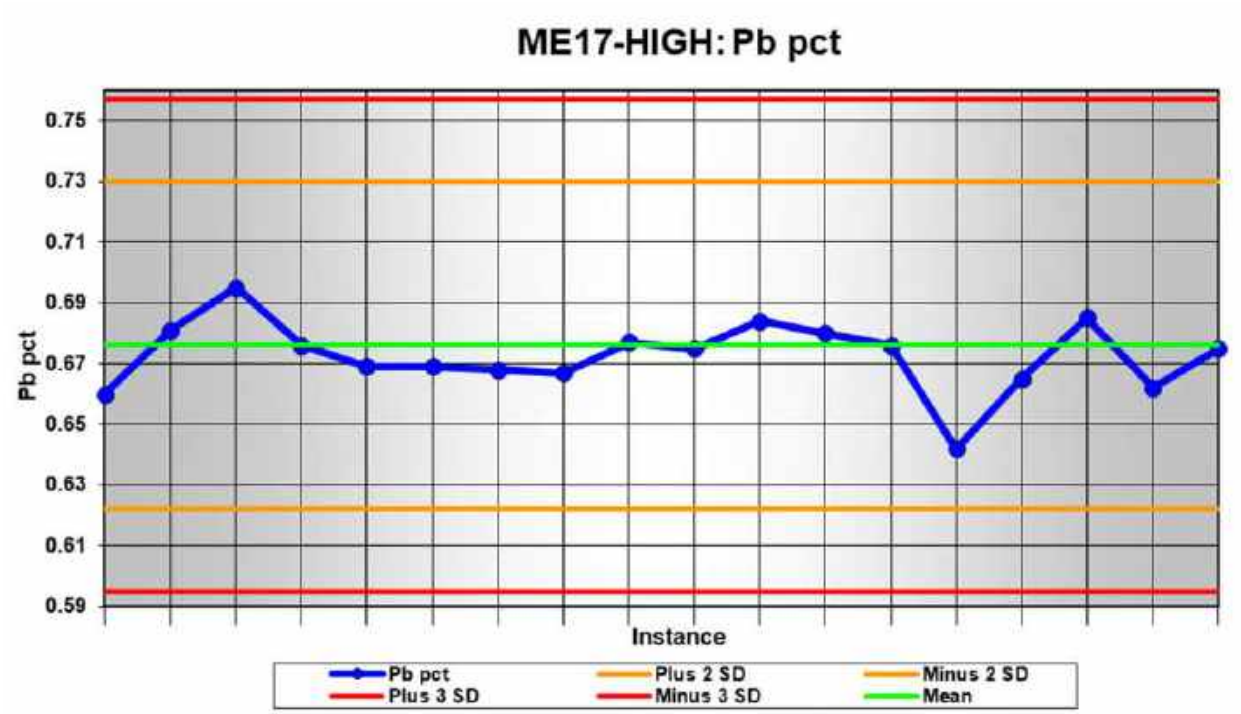



**FIGURE 12.10 QAQC HIGH GRADE LEAD**

High Grade Lead assays show a strong correlation to standards.

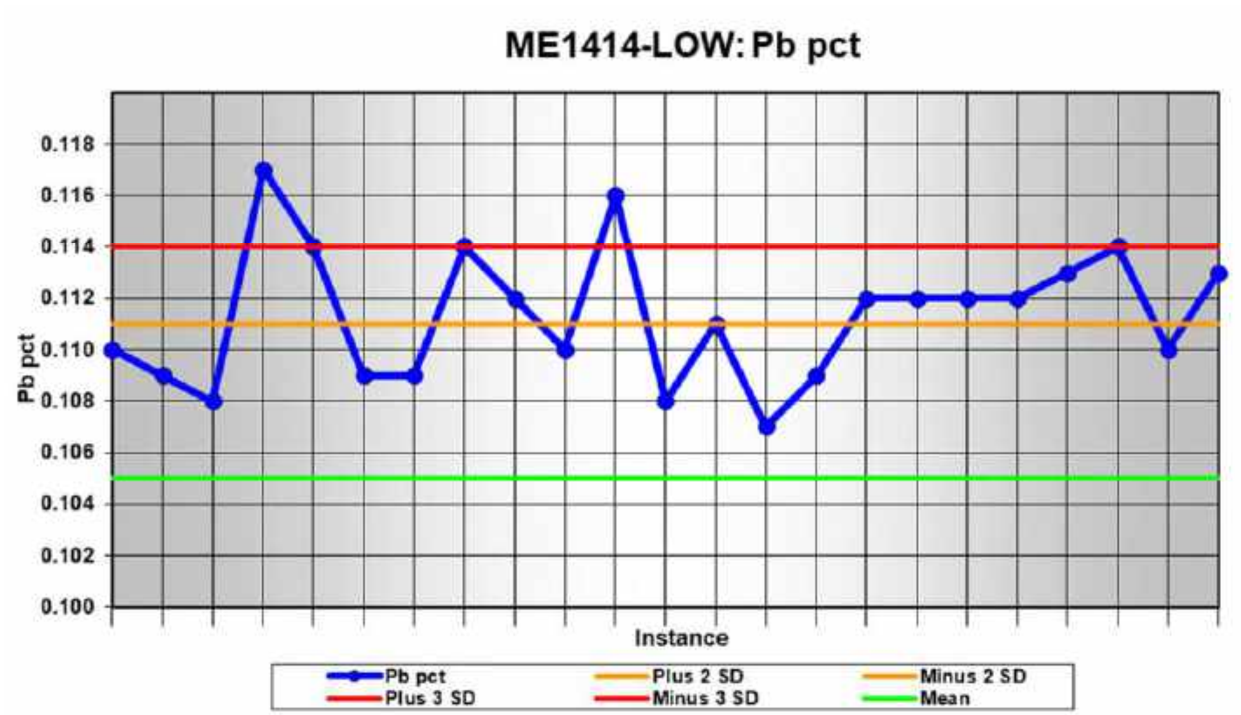



**FIGURE 12.11 QAQC LOW GRADE LEAD**

Low-grade lead appear to be consistently over reported. It is felt that the standard used was not really applicable to lead and the lead assay methods used. The difference between the .105 standard and an assay of .112 is essentially the same when rounded to two decimal places.

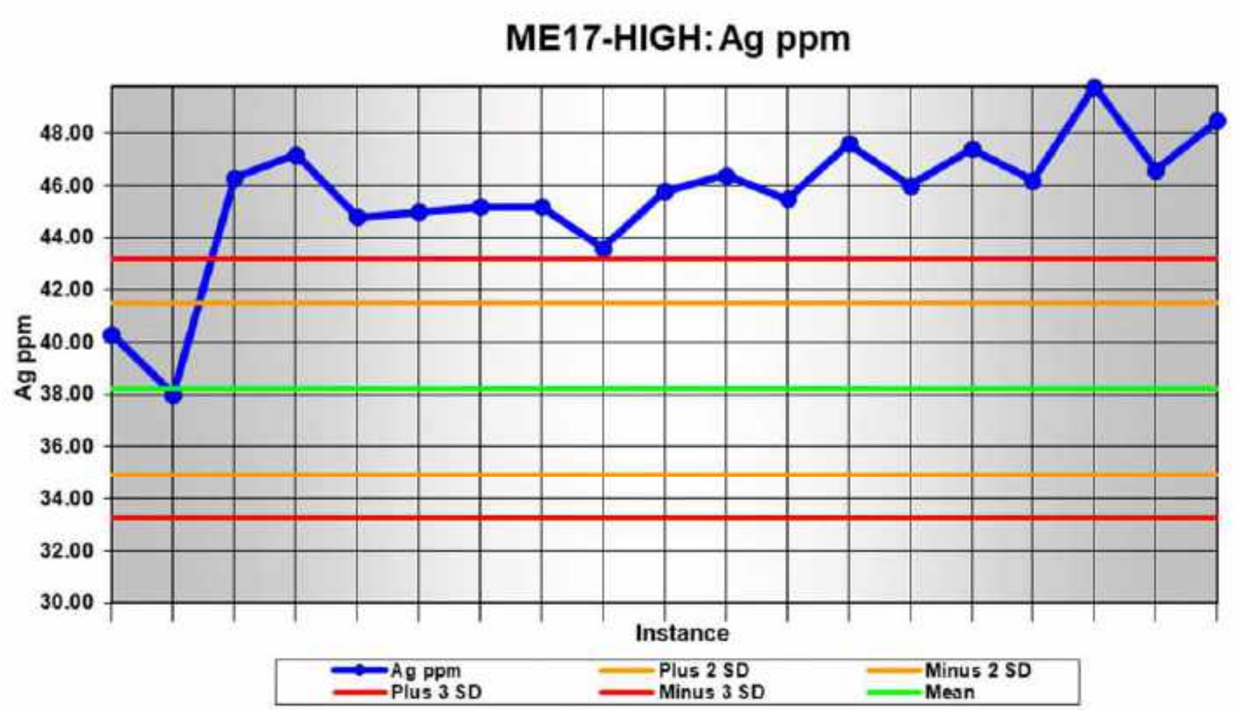



**FIGURE 12.12 QAQC HIGH GRADE SILVER**

SRC appears to have over reported high-grade silver standard. This is similar to results noted in the 2017 diamond drill program.

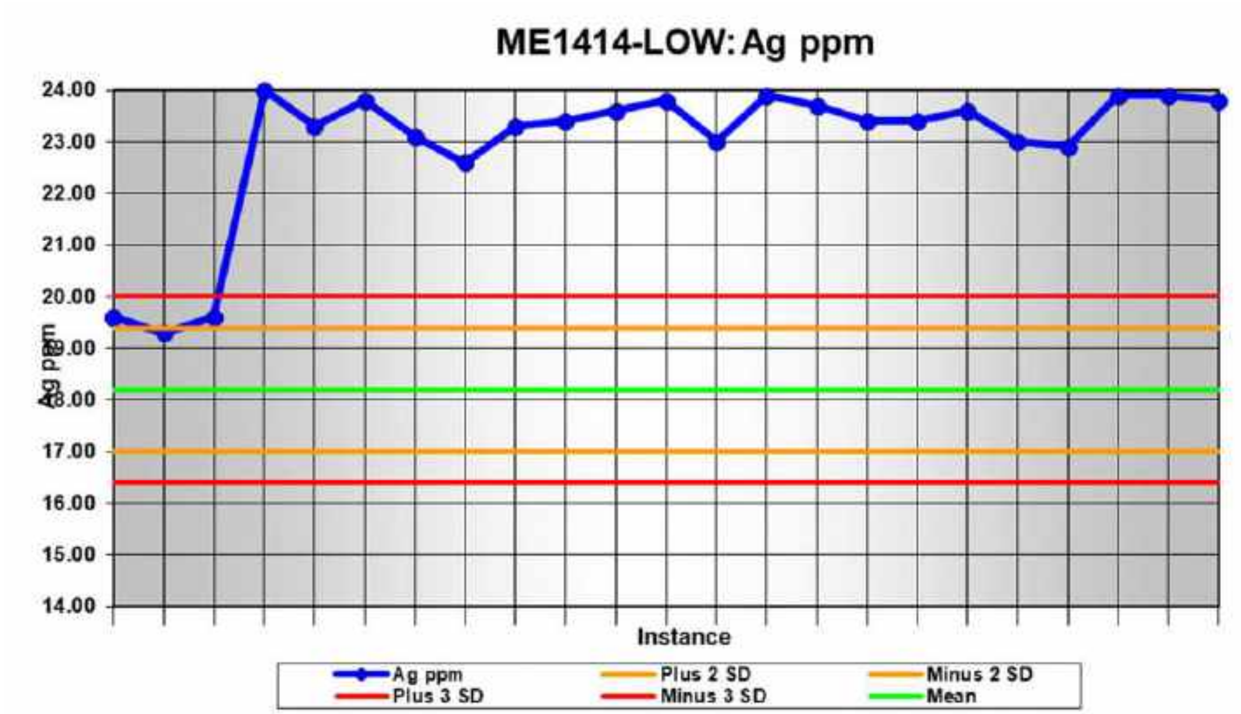



**FIGURE 12.13 QAQC LOW GRADE SILVER**

SRC over reported silver assays for both low and high grade standards. This is borne out when compared to ALS results which also consistently report lower that SRC. For the purposes of the resource calculation, the differences were still felt to be acceptable since the net impact on the value of the resource was not significant since while silver contributed to the value of the mineralization it was not a dominant one.

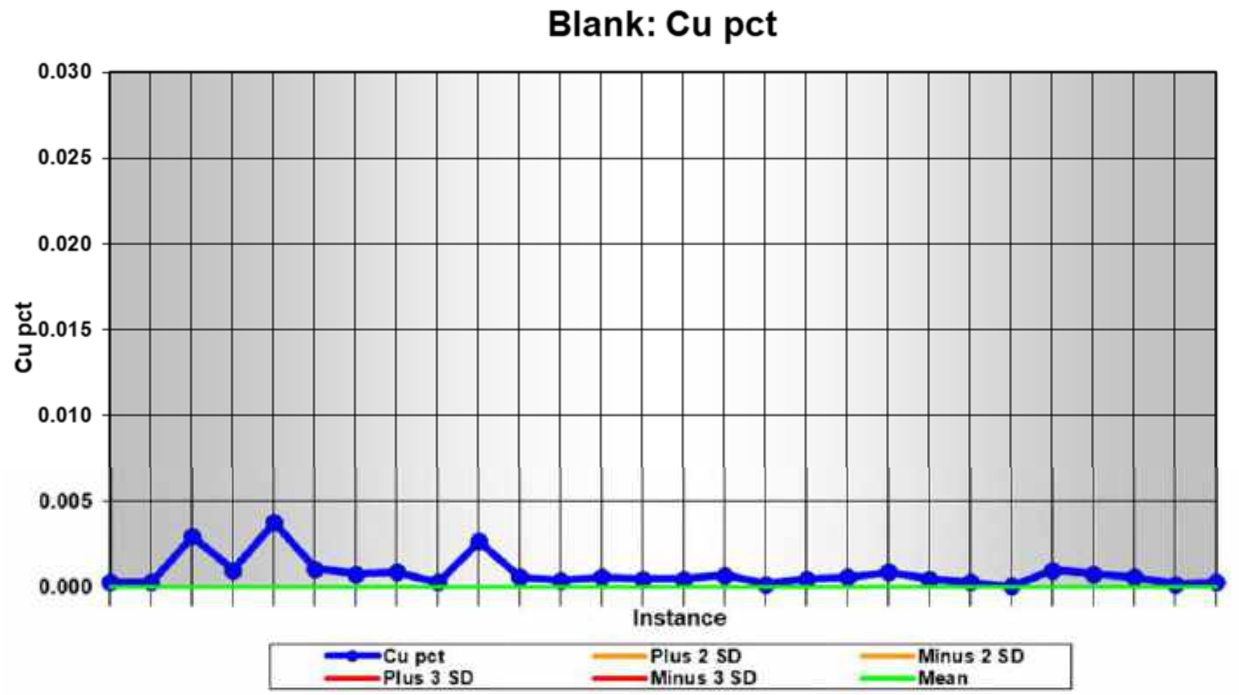



**FIGURE 12.14 QAQC BLANK COPPER CONTROL CHART**

Acceptable results were reported by SRC for copper blank sample analysis.

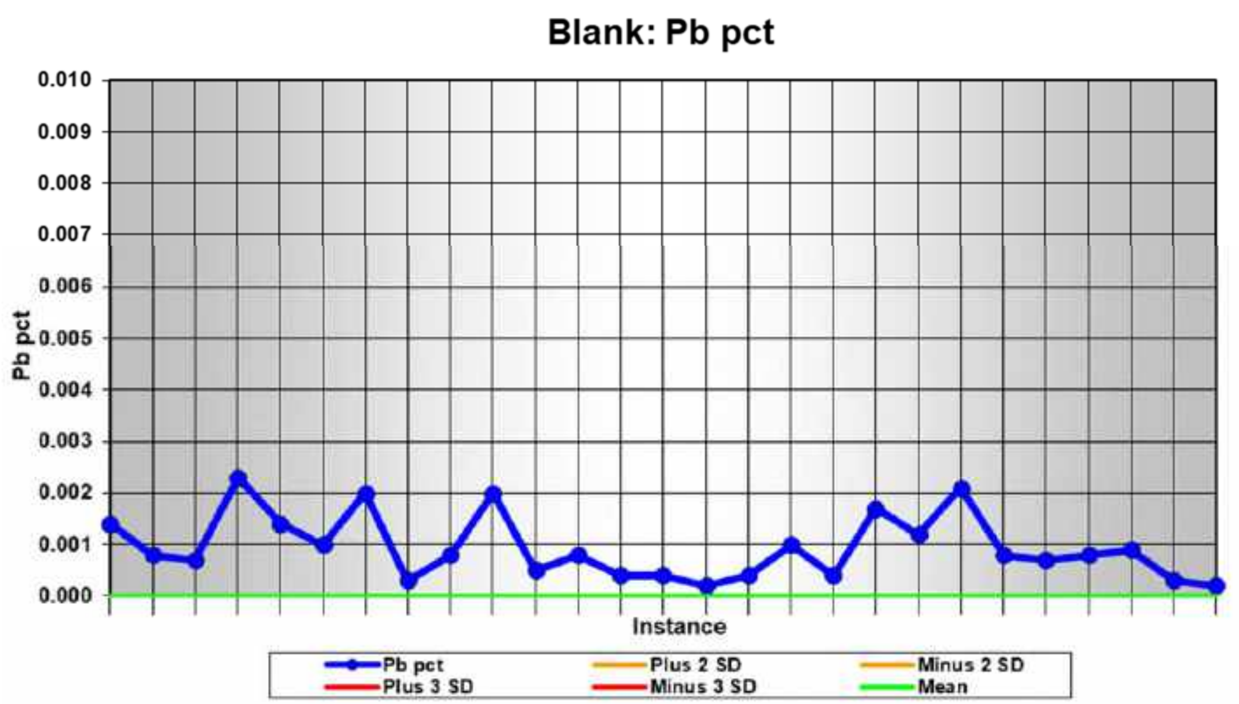



**FIGURE 12.15 QAQC BLANK LEAD CONTROL CHART**

Acceptable results were reported by SRC for lead blank sample analysis

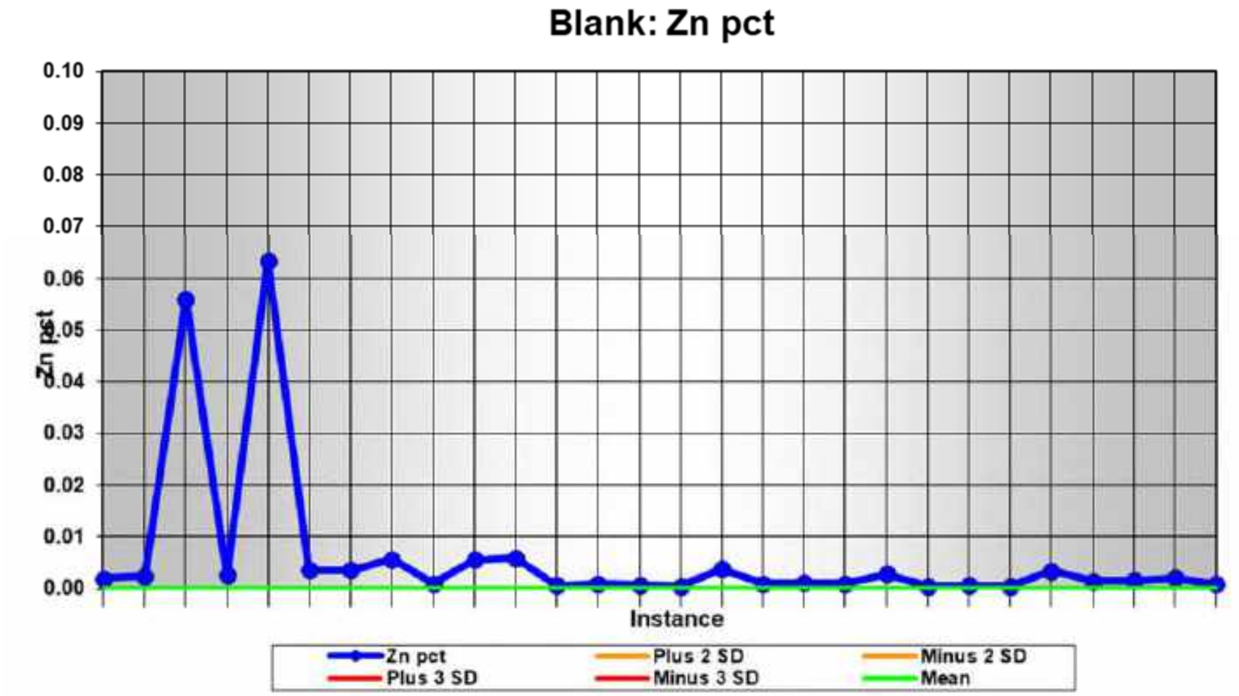



**FIGURE 12.16 QAQC BLANK ZINC CONTROL CHART**

With the exception of two failures, the control chart shows acceptable blank zinc values were reported by SRC.

## 12.2 Discussion of Results

ALS Labs generally matched SRC results and results were deemed acceptable. SRC Labs appears to have over reported silver and low grade copper. The discrepancy appears to be in the order of as much as 6 g/t. Given that approximately 75% of the metal value in the Deposit comes from zinc and only 6% from silver, this possible over stating of the silver value is considered minor (if silver was overstated by as much as 15%, the net impact on the value of the mineralization would be in the order of 1%). This is particularly true when it is considered that only relatively small number of recent silver assays make up the entire database.

# 13. Mineral Processing and Metallurgical Testing

As of the effective date of this report, Murchison Minerals has not commissioned any metallurgical testing or mineral processing of samples from the Property.

Metallurgical studies commissioned by previous owners of the Property are discussed in section 6 of this report.

# 14. Mineral Resource Estimates

## 14.1 Introduction

The author was retained by Murchison Minerals to update the Brabant-McKenzie Deposit Resources following NI 43-101 and CIM standards. This resource estimate was undertaken by Finley Bakker, P. Geo. of Campbell River, B.C. The effective date of this resource estimate is September 04, 2018. The update is a follow up to the winter diamond drill program undertaken by Murchison Minerals in February and March of 2018.

## 14.2 Database

Before the 2018 drilling program commenced Murchison Minerals purchased GeoSpark which is an access database software designed specifically for drillhole data collection. All historic and previous drilling data, which was in spreadsheet format, was compiled into the database software by Amanda Grant from MinData contracting. New data from the 2018 drilling program was added to the GeoSpark database platform as it became available. In addition, some historical diamond drill assays were discovered in old reports and these were also added to the GeoSpark base. The database was then exported and sent to the author in access format. The author has no reason not to rely on the information that he may have referenced.

The database now contains 3703 excluding QAQC samples. 1121. Of these 914 primary samples) were taken in 2018.

All diamond drilling data was taken from the GeoSpark database export and then entered into the MineSight/Hexagon model.

## 14.3 Data Verification

As due diligence had been undertaken by P&E in previous NI 43-101 Technical Report, titled "SECOND TECHNICAL REPORT ON THE BRABANT LAKE PROPERTY, SASKATCHEWAN, CANADA FOR MANICOUAGAN MINERALS INC., its data was assumed correct. The author has no reason not to rely on the information that he may have referenced. However, spot checks of historical data were still undertaken. No serious errors or omissions were found.

Before the 2018 drilling program, the author commissioned Amanda Grant at MinData contracting to compile the previous and historic excel data into a relational database program specific to diamond drilling. While preforming due diligence to verify the database compilation, the author noticed that some of the holes drilled by Paramount-Westore in 1957-1958 had errors in collar location likely due to historic coordinate transformation miscalculations. As a result of examining maps the author was able to identify a more accurate collar location for these holes within 20 m of the actual collar location. The changes in collar coordinates were updated and tracked in the relational database system. All the historic Bison Petroleum drillholes were used for the inferred resource category estimate only unless they had been verified by twinned holes.

The author compiled the previous NI 43-101 report titled, "Technical REPORT ON THE RESOURCE ESTIMATE UPDATE FOR THE BRABANT-MCKENZIE PROPERTY, BRABANT LAKE, SASKATCHEWAN, CANADA FOR MURCHISON MINERALS LTD." and can verify that the 2017 drilling data is reliable.

The location all the 2017 and 2018 diamond drill holes were verified by the author as he was on site during all of the 2017 drill program and much of the 2018 drill program. All data was collected in NAD-83 format.

Sample analyses were completed at the Saskatchewan Research Council laboratory ("**SRC**") located in Saskatoon, Saskatchewan utilizing 32 element ICP. Check assays utilizing Four Acid Digestion and ICP or AAS finish were undertaken by ALS, located in Vancouver. Results for both methods were acceptable. As due diligence had been undertaken by P&E in previous NI 43-101 Technical Report, titled "SECOND TECHNICAL REPORT ON THE BRABANT LAKE PROPERTY, SASKATCHEWAN, CANADA FOR MANICOUAGAN MINERALS INC., its data was assumed correct. The author has no reason not to rely on the information that he may have referenced. However, spot checks of historical data were still undertaken. No serious errors or omissions were found.

Sample analyses were completed at the Saskatchewan Research Council laboratory ("**SRC**") located in Saskatoon, Saskatchewan utilizing 32 element ICP. Check assays utilizing Atomic Absorption as well as specific gravity analysis were undertaken by TSL, also located in Saskatoon. Results for both methods were acceptable.

The location of the diamond drill holes was verified by the author as he was on site during the entirety of the actual drill program. All data was collected in NAD-83 format.

## 14.4 Domain Interpolation

The various domains were interpreted based on mineralogy, lithology and grade. However, unlike previous report, grade was only considered as "part three" of the model. More time was available to model continuity of lenses based on lithology and mineralogy. As a result, many of the minor lenses disappeared or became too disjointed to use in the calculation. However, the two main lenses showed much greater continuity than previously thought if grade by itself was not the dominant factor. It was felt by the author that the 3D Block Model would resolve grade continuity issues as part of the interpolation.

Any intersections of the lenses were trimmed using MineSight software to negate any double reporting of tonnes.

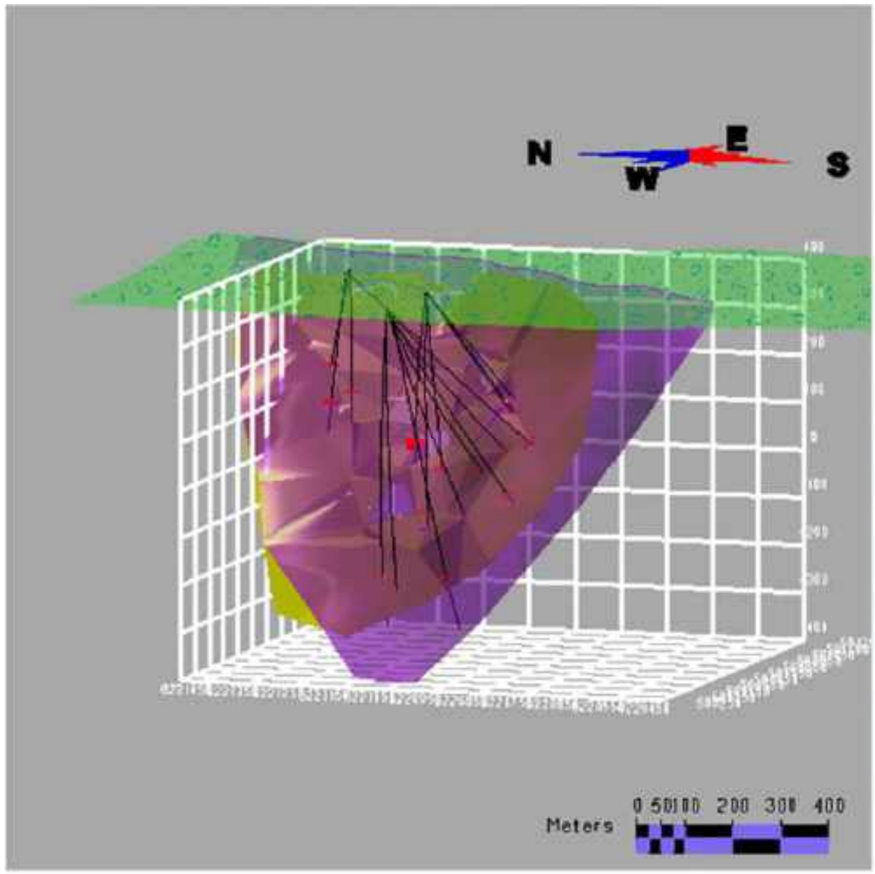



**FIGURE 14.1 UMZ AND LMZ AS MODELED IN MINESIGHT SHOWING 2018 DIAMOND DRILLING**

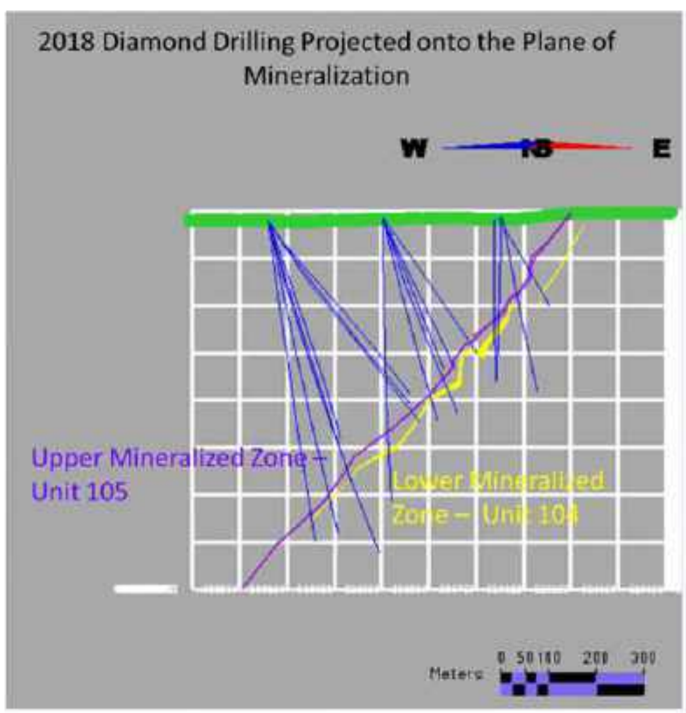



**FIGURE 14.2 2018 CROSS-SECTION OF UMZ AND LMZ AS MODELED IN MINESIGHT WITH 2018 DIAMOND DRILLING PROJECTED ONTO PLANE**

## 14.5 Lens/Rock Code

Only two lens codes were used in the actual resource calculation, although minor lenses were also assigned codes in an attempt to create a lens solid. At this stage, it was not possible to create coherent lenses on the smaller/minor lenses. All lens codes were manually entered into the assay portion of the model to ensure that correct intervals were interpolated. While it is easier to let the 3D solid intersect the lens and assign codes based on actual intercept, and is technically more correct, since only the precise interval that intersects the solid is used, minor deviations in the lens solid over 200+ metres could mean only a portion of the assay interval would be flagged. Instead mineralized codes were manually entered as LENS2 and the model then “speared” the lens and assigned LENS (not LENS2). The two were compared to ensure that the correct interval was being used.

Lens code 104 was assigned to the Lower Lens/Zone (“**Lower Mineralized Zone**” or “**LMZ**”).

Lens code 105 was assigned to the Upper Lens/Zone (“**Upper Mineralized Zone**” or “**UMZ**”).

The UMZ used 137 diamond drill holes for the geological model; no minimums were applied at this stage – geological boundaries were used - with an average length weighted grade of 5.57% Zn Equivalent over 5.15 m and a maximum downhole length of 28.3 m with an approximate true thickness of 23 m.

The LMZ that is located 25-30 m below the Upper Mineralized Zone used 90 diamond drill holes for the resource calculation. Less LMZ intersections meet the criteria for inclusion in the resource estimate than for the UMZ because most of the holes from the early drill campaigns did not go deep enough to intersect this zone. Of the holes used , they have an average thickness/length of 5.85 m and an average length weighted grade of 8.47 % Zn Equivalent – no minimums were applied at this stage– geological boundaries were used. The LMZ had a maximum down hole length of 30 m and approximate true thickness of 24 m.

## 14.6 Composites

Three sets of composites were created for calculating purposes.

**Composite 1** – composited SG/density to be used in a separate calculation for populating the 3D block model. Calculations were limited by lens code (LENS2).

**Composite 2** – composited metal grades over the entire lens code. This was done to ensure that entire interval used in calculation could be put into an Excel spreadsheet and compared to the block model. Calculations were limited by lens code (LENS2).

**Composite 3** – composited metal grades were limited to lens code but assigned a maximum of one metre. Calculations were limited by lens code (LENS2). These composites were used in the grade interpolation.

## 14.7 Grade Capping

Grade-capping was not done because it was noted that the general uniformity of grade was fairly consistent with no significant outliers in the assay results.

## 14.8 Variography

A series of variograms were created using Hexagon program – MSDA –this allowed a series of 3D variograms to be created based on lens code.

These 3D variograms were imported into MineSight. It is apparent that zinc shows a better correlation to the trend of the lenses than the other metals. A gold variogram was not undertaken due to the relatively low grade of the Deposit.

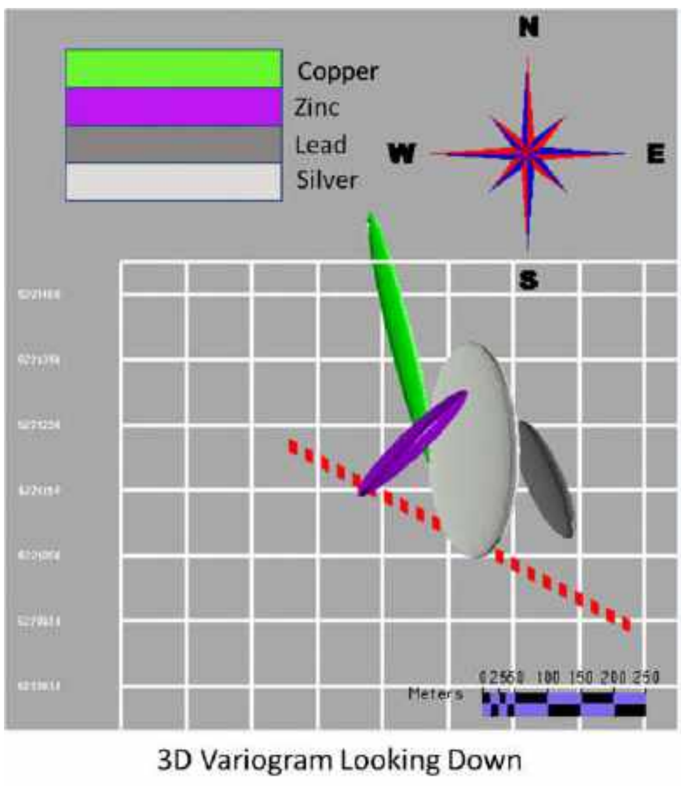



**FIGURE 14.3 3D VARIOGRAM OF METALS**

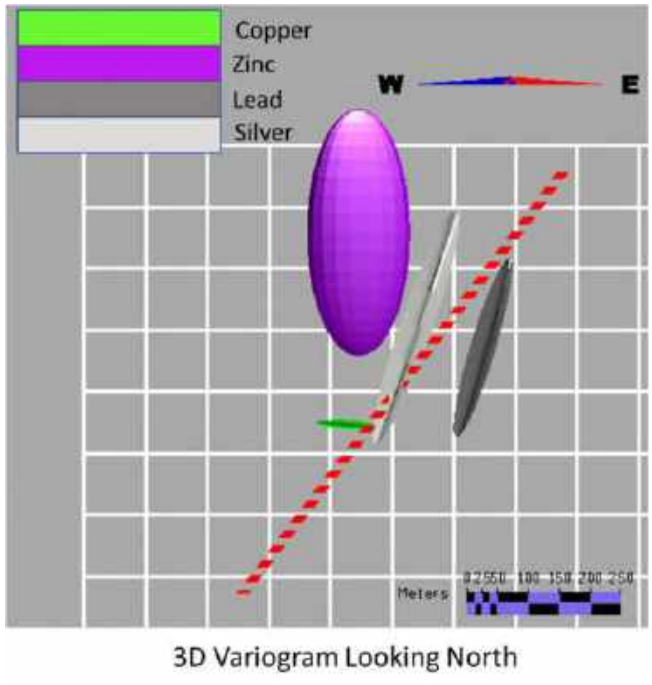



**FIGURE 14.4 3D VARIOGRAM OF METALS**

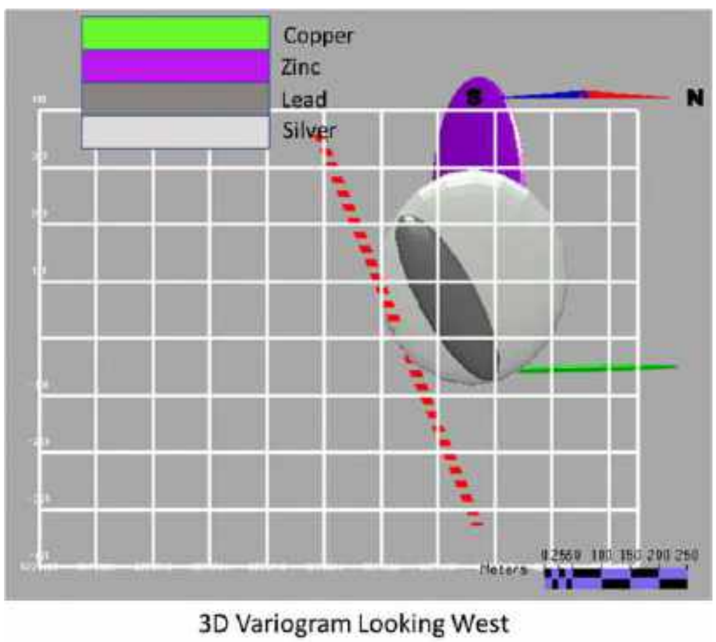



**FIGURE 14.5 3D VARIOGRAM OF METALS**

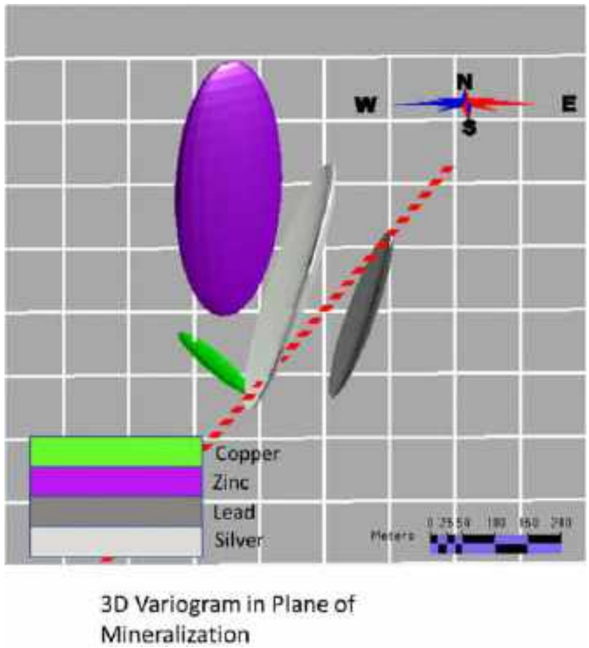



**FIGURE 14.6 3D VARIOGRAM OF METALS**

### 14.8.1 Discussion of Variograms

Several discrete mineral populations are identified in the variogram analysis. All metals appear to cross cut stratigraphy. This relationship was also evidenced when galena rich veins were observed in the core cross cutting stratigraphy. The silver and lead variograms to a large part mimic each other indicating a strong correlation between the two metals. This is not surprising since silver is often associated with galena. The copper variogram dramatically cross cuts lithology. This is backed up by observations in the field that show chalcopyrite veins cross cutting the lenses (Figure 14.7).Because copper is more easily remobilized than sphalerite, this may be indicative of regional strain creating room for tension gash infills.

**FIGURE 14.7 CROSS CUTTING NATURE OF CHALCOPYRITE**

The zinc variogram very much fits the model of mineralization, albeit with a smaller degree of confidence over distance.

The maximum continuity of zinc is approximately 200 metres in the plane of the mineralization. As such this was maximum distance used in the reporting of inferred resources.

## 14.9 Bulk Density

The specific gravities used in the model were updated based on a total of 825 measured specific gravities. A total of 573 measurements were taken during the 2018 diamond drill program. Of these measurements approximately 430 were assigned directly to either of the two major lenses. The specific gravity was averaged as 2.82 SG for waste, 3.18 SG for Upper Mineralized Zone (Lens 105), and 3.38 SG for the Lower Mineralized Zone (lens 104). The actual measured SG was loaded into MineSight model and used for indicated resource. The average SG by lens were used for the remainder.

## 14.10 Block Model

A 3D block model was built with the following parameters.

```
(476)     = TYPE OF  PROJECT   = METL

(21) XMIN = EASTING AT WEST MATRIX LIMIT    580250.00
(22) XMAX = EASTING AT EAST MATRIX LIMIT    581250.00
(23)  DX  = MATRIX BLOCK WIDTH ON EASTING       5.00
(24)  NX  = NO. OF MINE MODEL COLUMNS E-W     200.00


(25) YMIN = NORTHING AT SOUTH MATRIX LIMIT 6220450.00
(26) YMAX = NORTHING AT NORTH MATRIX LIMIT 6221500.00
(27)  DY  = MATRIX BLOCK WIDTH ON NORTHING      5.00
(28)  NY  = NO. OF MINE MODEL  ROWS  N-S      210.00


(29) ZMIN = TOE ELEVATION OF  LOWEST LEVEL   -400.00
(30) ZMAX = CREST  ELEV.  OF HIGHEST LEVEL    400.00
(31)  DZ  = MATRIX ELEVATION BLOCK HEIGHT       5.00
(32)  NZ  = NO. OF MINE MODEL BENCHES         160.00
```

## 14.11 Resource Classification

The resources were based on distance to diamond drill hole and by a zinc equivalent cut-off. Initially a two-hole minimum and a maximum distance of 60 metres was used for indicated. This was then revised and a significant portion of the "indicated" was downgraded to inferred. There was concern that insufficient recent drilling (twinning of historical holes) had occurred in portions of the Deposit. As such the 60 meter distance was overwritten to a much smaller area as shown in Figure 14.10

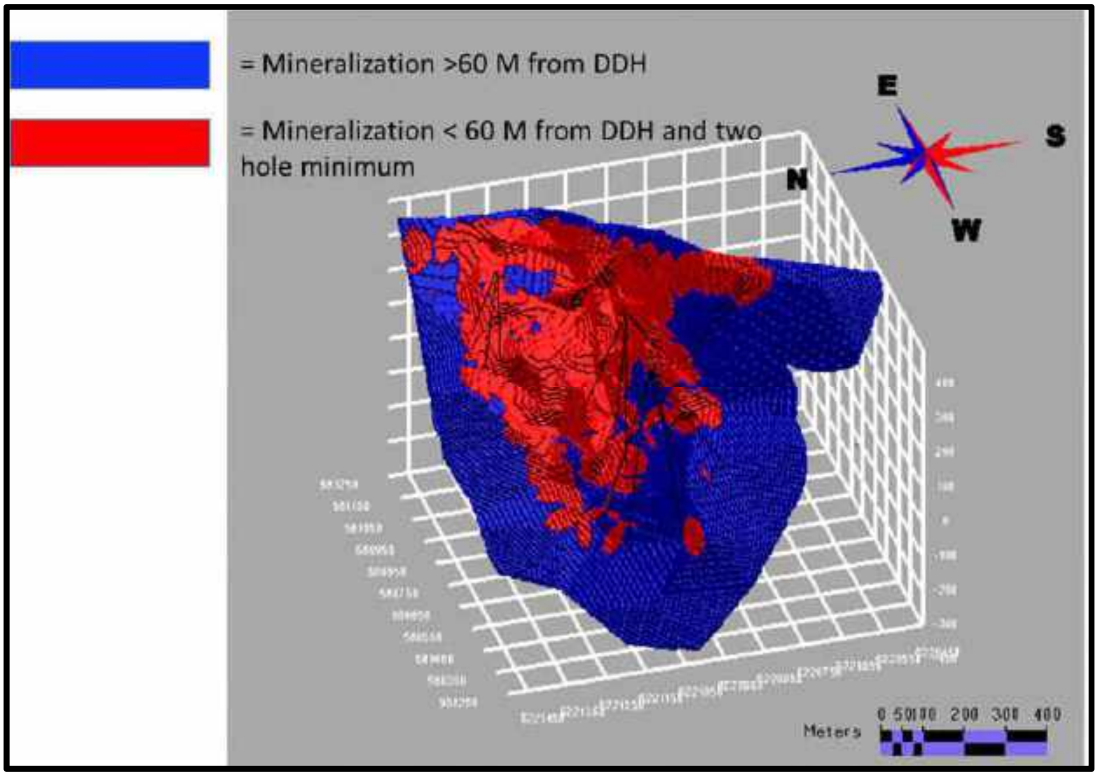



**FIGURE 14.9 MINERALIZATION AS DEFINED FROM DISTANCE TO DIAMOND DRILL HOLE**

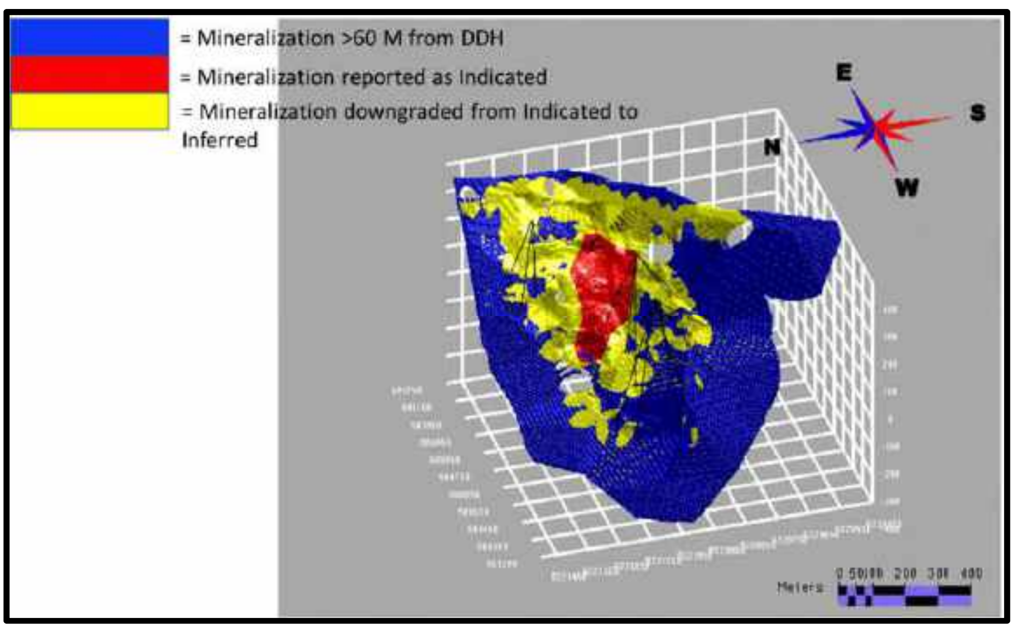



**FIGURE 14.10 AREA IN BLUE SHOWS INFERRED BASED ON DISTANCE TO DDH. YELLOW IS AREA DOWN GRADED FROM INDICATED TO INFERRED, RED IN IS AREA CONSIDERED INDICATED**

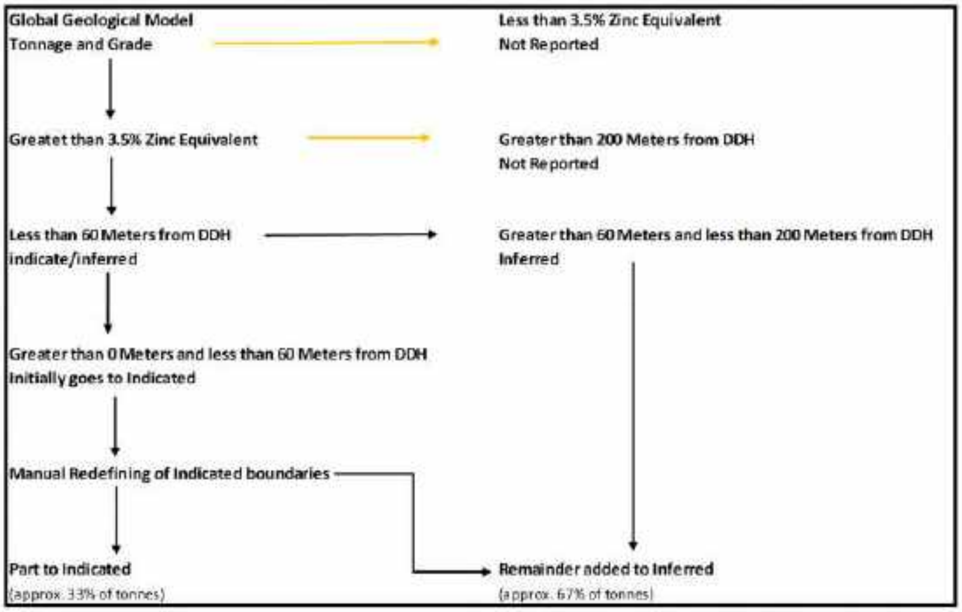



**FIGURE 14.11 FLOW CHART OF RESOURCE CLASSIFICATION**

Indicated was calculated as being a maximum of 60 meters from a diamond drill hole and meeting a two hole minimum. In addition it had to meet a minimum grade of 3.5% Zinc Equivalent. Subsequently a significant portion of indicated tonnage was downgraded to inferred based on the author's opinion that there was insufficient recent drilling to merit inclusion into indicated.

A no-hole minimum and a minimum of 60 metres and a maximum distance of 200 metres was used for inferred. In addition, any material less than 30 metres from a diamond drill hole but not meeting the two-hole minimum was included in inferred. In addition further material was moved to inferred based on the author's opinion that there was insufficient recent drilling and/or twinning of diamond drill holes to merit inclusion in Indicated.

## 14.12 Resource Estimate

**TABLE 14.1 RANGE OF INDICATED RESOURCE BASED ON < 60 METER **FROM DIAMOND DRILL HOLE SHOWING VARIOUS CUT-OFFS**

| Indicated Resource | | | | | | | |
|---|---|---|---|---|---|---|---|
| cutoff grade | Tonnes | % Zn | % Cu | % Pb | g/t Au | g/t Ag | % Zn Equiv. |
| 2.5% Zinc Equivalent cutoff | 2,100,000 | 6.88 | 0.68 | 0.48 | 0.23 | 38.99 | 9.74 |
| 3.5% Zinc Equivalent cutoff | 2,100,000 | 7.08 | 0.69 | 0.49 | 0.23 | 39.60 | 9.98 |
| 4.5% Zinc Equivalent cutoff | 1,900,000 | 7.34 | 0.70 | 0.50 | 0.24 | 40.40 | 10.30 |

** Indicated was also manually reduced and portions moved to Inferred Resource.

Note: 2.5% and 3.5% Zinc Equivalent cutoff show same tonnage due to rounding

**TABLE 14.2 RANGE OF INDICATED RESOURCE BASED ON > 60 AND < 200 METER FROM DIAMOND DRILL HOLE SHOWING VARIOUS CUT-OFFS**

| Inferred Resource | | | | | | | |
|---|---|---|---|---|---|---|---|
| cutoff grade | Tonnes | % Zn | % Cu | % Pb | g/t Au | g/t Ag | % Zn Equiv. |
| 2.5% Zinc Equivalent cutoff | 7,700,000 | 4.41 | 0.56 | 0.19 | 0.09 | 18.27 | 6.23 |
| 3.5% Zinc Equivalent cutoff | 7,600,000 | 4.46 | 0.57 | 0.19 | 0.10 | 18.42 | 6.29 |
| 4.5% Zinc Equivalent cutoff | 5,000,000 | 5.41 | 0.62 | 0.24 | 0.13 | 21.25 | 7.50 |

** Inferred also contain s portions of Indicated manually downgraded

Based on histograms, geological continuity and rough NSR calculations (given below), a 3.5% Zinc Equivalent was used in the final mineral resource report.

## 14.13 Calculation of Cut-off

Both a Gross Zinc Equivalent cut-off and a NSR were calculated. A generic NSR was calculated using the following parameters:

**TABLE 14.3 METAL PRICES AND EXCHANGE RATE**

| GROSS VALUE | | |
|---|---|---|
| **Assumptions** | **$US** | |
| Zn $US/lb | $ | 1.20 |
| Cu $US/lb | $ | 2.50 |
| Pb $US/lb | $ | 1.00 |
| Ag $US/oz | $ | 16.00 |
| Au $US/oz | $ | 1,200.00 |
| Exchange Rate (C$:US$) | $ | 1.25 |

Exchange rate based on 30 yr = 1.26, 20 year = 1.24, 10 year= ,1.15 and 5 year = 1.25

A 3.5% zinc equivalent was calculated based on values in above table and assumed similar recovery of all metals.

**TABLE 14.4 CALCULATION OF NSR /ZINC EQUIVALENT CUT OFF**

| | | |
|---|---|---|
| Zn $US/lb | $ | 1.20 |
| 3.5% zinc = lbs zinc/tonne | | 77 |
| average 75% recovery | | 58 |
| value in $US | $ | 69 |
| value in $Can | $ | 87 |

Assuming an overall recovery (milling and smelting) of 75%, a 3.5% zinc equivalent equates to a $87 NSR cutoff.

The 3.5% zinc equivalent was based on both economics as well as a tonnage grade curve and indicated that a significant portion of the tonnes and grade would be captured at this cutoff.

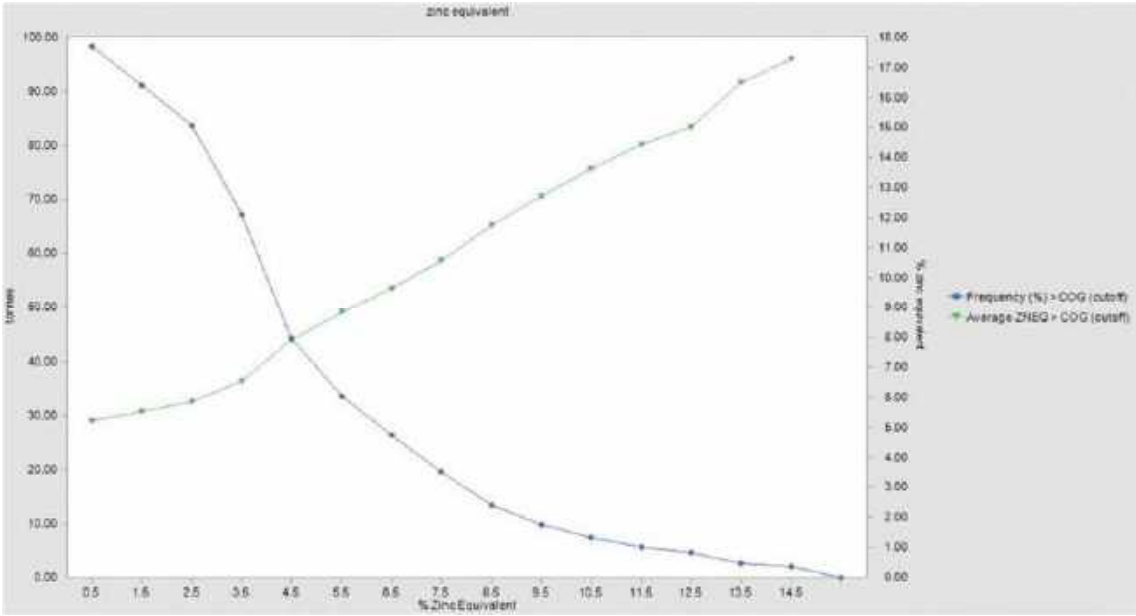



**FIGURE 14.12 ZINC EQUIVALENT TONNAGE CURVE LIMITED TO UMZ AND LMZ**

The histogram below also indicates that a cut off between 2.5 to 4.5% zinc equivalent would ensure that a bell curve would capture the bulk of the tonnes.

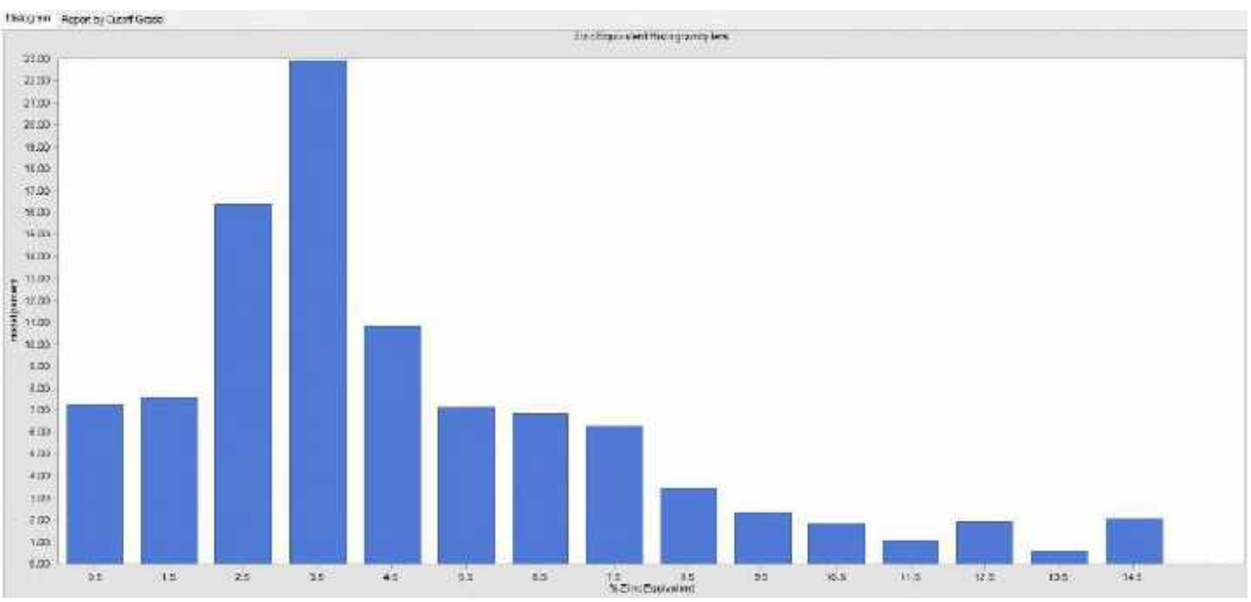


**FIGURE 14.13 HISTOGRAM OF ZINC EQUIVALENT CUT-OFF LIMITED TO LMZ AND UMZ**

Finally, a grade shell of >3.5% zinc equivalent was generated to ensure that the model held together.

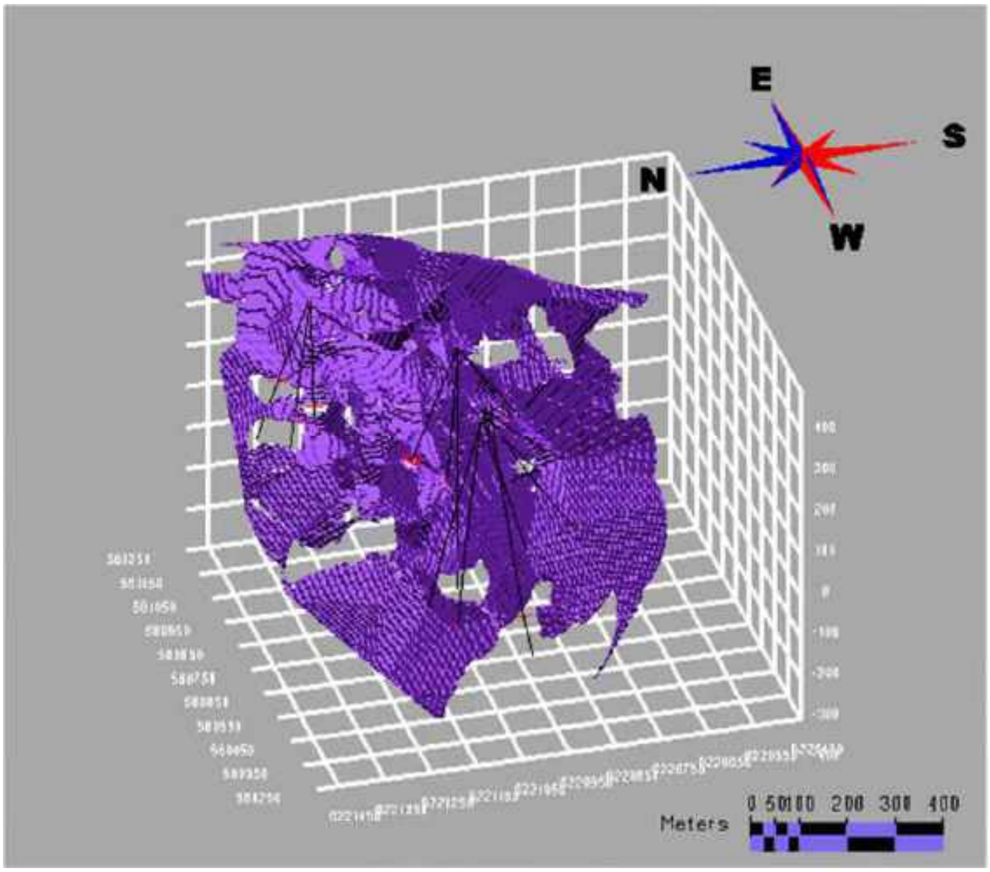



**FIGURE 14.14 SHOWING CONTINUITY OF 3.5% ZINC EQUIVALENT GRADE SHELL (PURPLE)**

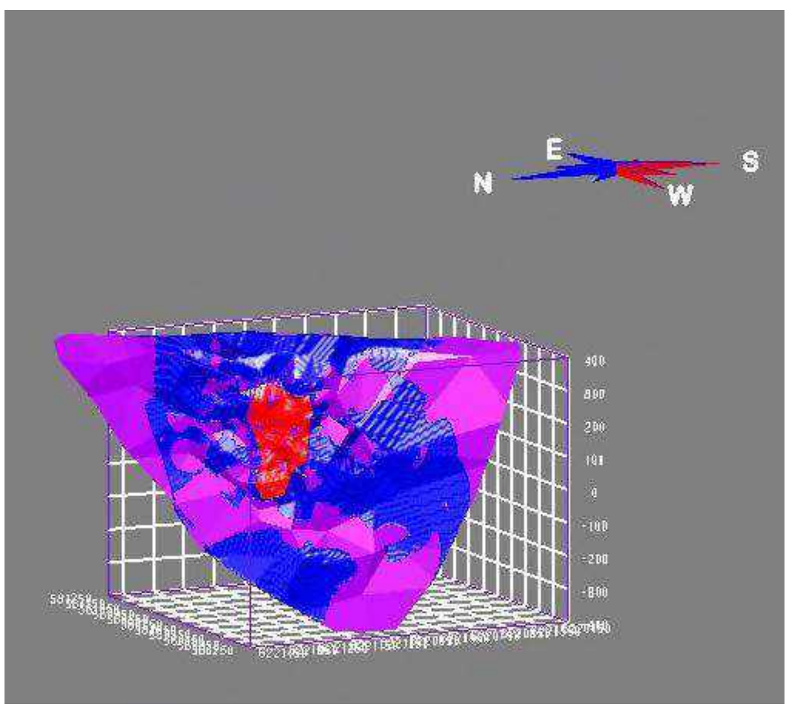



**FIGURE 14.15 INDICATED (RED) AND INFERRED (BLUE) DOMAINS SUPERIMPOSED ON ENTIRE GEOLOGICAL MODEL**

## TABLE 14.5 INDICATED AND INFERRED RESOURCE

*Tonnage may not add due to rounding*

| Indicated Resource 3.5%Zn Equivalent Cutoff | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lens/Zone | Tonnes | % Zn | % Cu | % Pb | g/t Au | g/t Ag | % Zn Equiv. |
| Lower Zone - Lens 104 | 1,200,000 | 8.13 | 0.75 | 0.67 | 0.28 | 48.00 | 11.53 |
| Upper Zone - Lens 105 | 900,000 | 5.70 | 0.60 | 0.24 | 0.17 | 28.52 | 7.93 |
| TOTAL | 2,100,000 | 7.08 | 0.69 | 0.49 | 0.23 | 39.60 | 9.98 |

| Inferred Resource 3.5%Zn Equivalent Cutoff | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lens/Zone | Tonnes | % Zn | % Cu | % Pb | g/t Au | g/t Ag | % Zn Equiv. |
| Lower Zone - Lens 104 | 2,700,000 | 4.88 | 0.55 | 0.42 | 0.14 | 29.02 | 7.14 |
| Upper Zone - Lens 105 | 4,900,000 | 4.22 | 0.57 | 0.06 | 0.08 | 12.46 | 5.81 |
| TOTAL | 7,600,000 | 4.46 | 0.57 | 0.19 | 0.10 | 18.42 | 6.29 |

*Tonnes may not add due to rounding*

*The resource for the Brabant-McKenzie zinc deposit was estimated based on metal prices of US $1.20/lb zinc, $2.50/lb copper, $1.00/lb lead, $16.00/oz silver and $1200/oz/gold, and a US$ exchange rate of $1.25. An NSR cut-off of $90/tonne and a 3.5% zinc equivalent based on above metal prices and an average recovery of 75% for all metals for underground mining and milling was utilized to report the resource.*

## TABLE 14.6 SHOWING REPRESENTATIVE VALUE OF INDICATED RESOURCE

| Average Value of Indicated Resource | | Average Value of Indicated Resource | | | | | |
|---|---|---|---|---|---|---|---|
| **assumptions** | **US$/Pound** | **US$/gm** | **US$/%** | **input file** | **US$ /tonne** | **zinc equiv** | percent payable by metal |
| Zn $US/lb | $ 1.20 | | $ 26.45 | **7.08** | $ 187.25 | **9.98** | 64% |
| Cu $US/lb | $ 2.50 | | $ 55.12 | **0.690** | $ 38.03 | | 13% |
| Pb $US/lb | $ 1.00 | | $ 22.05 | **0.49** | $ 10.80 | | 4% |
| Ag $US/oz | $ 16.00 | $ 0.51 | | **39.60** | $ 20.37 | | 7% |
| Au $US/oz | $ 1,200.00 | $ 38.58 | | **0.23** | $ 8.87 | | 3% |
| Gross Value $US | | | | | $ 265.33 | | 90% |
| Value if 75% recoverable/payable | | | | | $ 199.00 | | |
| Exchange Rate (C$:US$) | $ 1.25 | | | | **$ 248.75** | | |

## TABLE 14.7 SHOWING REPRESENTATIVE VALUE OF INFERRED RESOURCE

| | | Average Value of Inferred Resource | | | | | |
|---|---|---|---|---|---|---|---|
| **assumptions** | **US$/Pound** | **US$/gm** | **US$/%** | **input file** | **US$ /tonne** | **zinc equiv** | percent payable by metal |
| Zn $US/lb | $ 1.20 | | $ 26.45 | **4.46** | $ 117.96 | **6.29** | 40% |
| Cu $US/lb | $ 2.50 | | $ 55.12 | **0.570** | $ 31.42 | | 11% |
| Pb $US/lb | $ 1.00 | | $ 22.05 | **0.19** | $ 4.19 | | 1% |
| Ag $US/oz | $ 16.00 | $ 0.51 | | **18.42** | $ 9.48 | | 3% |
| Au $US/oz | $ 1,200.00 | $ 38.58 | | **0.10** | $ 3.86 | | 1% |
| Gross Value $US | | | | | $ 166.90 | | 57% |
| Value if 75% recoverable/payable | | | | | $ 125.17 | | |
| Exchange Rate (C$:US$) | $ 1.25 | | | | **$ 156.47** | | |

## 14.14 Confirmation of Estimate

The accuracy of the model reporting was verified in three ways:

1) Pitres (MineSight) was used to calculate the resource tonnage and grade.

2) UG1res (MineSight) was then used to compare resource estimate to the Pitres resource tonnage and grade.

3) The 3d block model data was exported into excel and the resource tonnage and grade results independently verified the data as reported by MineSight was correct.

## 14.15 Discussion of Results

As shown in the accompanying figure, the majority of the diamond drilling occurred outside of the modeled area used in the 2017 resource domains. As such the additional tonnage was a result of

1) drilling on edges of the Deposit

2) change in cutoff grades to better reflect continuity of deposit

3) remodelling of the lens

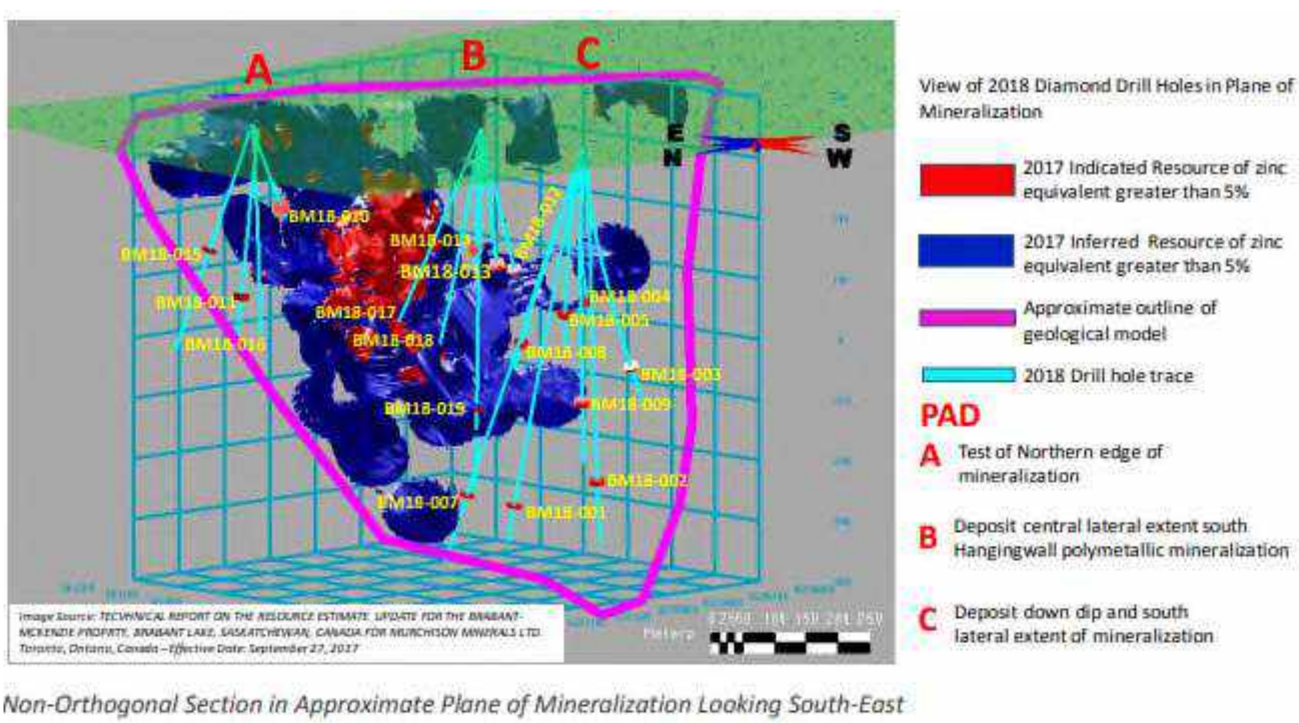



**FIGURE 14.16 2018 DIAMOND DRILL HOLE LOCATIONS**

**TABLE 14.8 LIST OF SIGNIFICANT INTERSECTIONS IN 2018 DIAMOND DRILLING**

| Hole ID | From (metres) | To (metres) | Interval (metres) | Zn% | Cu% | Pb% | Ag g/t | Zn Eq |
|---|---|---|---|---|---|---|---|---|
| BM18-001A | hole abandoned | | | | | | | |
| BM18-001 | 611.04 | 614.17 | 3.13 | 1.92 | 0.19 | 0.00 | 5.50 | 2.43 |
| BM18-002 | 574.65 | 581.61 | 6.96 | 0.80 | 0.50 | 0.06 | 19.63 | 2.28 |
| *including* | *578.38* | *578.87* | *0.49* | *4.56* | *0.08* | *0.01* | *7.30* | *4.88* |
| BM18-003 | 590.01 | 591.15 | 2.90 | 2.93 | 0.22 | 0.02 | 6.79 | 3.54 |
| BM18-004 | 431.87 | 434.43 | 2.56 | 2.32 | 0.38 | 0.15 | 34.98 | 3.91 |
| *including* | *432.10* | *432.43* | *0.33* | *12.20* | *0.19* | *0.00* | *7.50* | *12.74* |
| BM18-005 | 445.50 | 450.40 | 4.90 | 2.66 | 0.36 | 0.02 | 7.78 | 3.57 |
| BM18-006 | not drilled | | | | | | | |
| BM18-007 | 621.00 | 621.36 | 0.36 | 10.90 | 0.63 | 0.01 | 14.30 | 12.50 |
| BM18-007 | 622.85 | 623.25 | 0.40 | 7.24 | 0.06 | 0.02 | 9.28 | 7.57 |
| BM18-008 | 460.24 | 462.85 | 2.61 | 10.95 | 0.52 | 0.01 | 11.86 | 12.26 |
| BM18-009 | 473.35 | 484.13 | 10.78 | 1.58 | 0.48 | 0.01 | 12.75 | 2.83 |
| *including* | *473.35* | *474.24* | *0.89* | *5.28* | *0.39* | *0.02* | *10.28* | *6.30* |
| *including* | *476.84* | *478.40* | *1.56* | *1.85* | *1.41* | *0.02* | *37.11* | *5.52* |
| *including* | *481.16* | *482.84* | *1.68* | *3.14* | *0.85* | *0.01* | *22.71* | *5.38* |
| BM18-010 | 221.16 | 232.82 | 11.66 | 2.37 | 0.72 | 0.07 | 28.68 | 4.48 |
| *including* | *225.08* | *228.22* | *3.14* | *5.12* | *0.83* | *0.01* | *19.05* | *7.24* |
| BM18-011 | 269.72 | 275.06 | 5.34 | 2.10 | 1.69 | 0.01 | 32.18 | 6.26 |
| *including* | *273.72* | *275.06* | *1.34* | *4.20* | *3.22* | *0.01* | *58.28* | *12.05* |
| BM18-012 | 303.98 | 304.65 | 0.67 | 12.10 | 0.64 | 0.01 | 16.00 | 13.75 |
| BM18-012 | 308.79 | 311.95 | 3.16 | 1.00 | 1.24 | 0.01 | 34.16 | 4.27 |
| BM18-012 | 318.67 | 319.66 | 0.99 | 7.37 | 0.43 | 0.06 | 19.17 | 8.69 |
| BM18-013 | 308.40 | 308.70 | 0.30 | 12.80 | 0.17 | 0.01 | 6.30 | 13.29 |
| BM18-013 | 315.70 | 316.70 | 1.00 | 3.34 | 1.14 | 0.02 | 24.70 | 6.21 |
| BM18-013 | 351.00 | 354.00 | 3.00 | 4.50 | 0.36 | 0.10 | 16.14 | 5.65 |
| BM18-014 | 322.60 | 324.50 | 1.90 | 0.71 | 0.45 | 0.01 | 7.52 | 1.80 |
| BM18-015 | 214.66 | 215.13 | 0.47 | 19.70 | 1.24 | 0.00 | 17.40 | 22.62 |
| BM18-015 | 218.82 | 219.13 | 0.31 | 12.30 | 0.23 | 0.00 | 6.30 | 12.90 |
| BM18-015 | 219.95 | 220.36 | 0.41 | 4.44 | 0.36 | 0.00 | 5.30 | 5.29 |
| BM18-016 | 249.90 | 250.32 | 0.42 | 11.00 | 0.06 | 0.00 | 4.80 | 11.22 |
| BM18-017 | 357.60 | 363.00 | 5.40 | 6.35 | 0.68 | 0.47 | 63.09 | 9.39 |
| BM18-017 | 379.60 | 383.60 | 4.00 | 8.11 | 0.47 | 0.67 | 72.62 | 11.06 |
| BM18-017 | 416.10 | 417.90 | 1.80 | 11.89 | 1.09 | 0.41 | 67.18 | 15.82 |
| BM18-018 | 400.20 | 401.45 | 1.25 | 5.68 | 0.45 | 0.53 | 59.46 | 8.22 |
| BM18-019 | 497.40 | 503.77 | 6.37 | 12.53 | 0.70 | 0.18 | 42.03 | 14.97 |

**TABLE 14.9 LIST OF DIAMOND DRILL COLLARS FROM 2018 DIAMOND DRILLING**

| Hole Number | Easting | Northing | Elevation (metres) | Dip | Az Start | TD (metres) |
|---|---|---|---|---|---|---|
| BM18-001A | 580,393.00 | 6,221,095.00 | 376.00 | 62.14 | -77.50 | 61.00 |
| BM18-001 | 580,393.00 | 6,221,095.00 | 376.00 | 62.14 | -77.50 | 675.00 |
| BM18-002 | 580,390.00 | 6,221,081.00 | 376.00 | 124.15 | -80.26 | 693.00 |
| BM18-003 | 580,393.00 | 6,221,095.00 | 376.00 | 148.15 | -59.03 | 549.00 |
| BM18-004 | 580,393.00 | 6,221,095.00 | 376.00 | 125.80 | -53.15 | 537.00 |
| BM18-005 | 580,393.00 | 6,221,095.00 | 376.00 | 138.35 | -46.60 | 549.00 |
| BM18-007 | 580,390.00 | 6,221,093.00 | 381.00 | 58.92 | -71.55 | 747.00 |
| BM18-008 | 580,393.00 | 6,221,095.00 | 376.00 | 110.00 | -57.00 | 546.00 |
| BM18-009 | 580,393.00 | 6,221,095.00 | 376.00 | 136.98 | -70.27 | 600.00 |
| BM18-010 | 580,889.00 | 6,221,339.00 | 386.00 | 148.80 | -43.83 | 276.00 |
| BM18-011 | 580,879.00 | 6,221,337.00 | 383.00 | 10.75 | -83.27 | 348.00 |
| BM18-012 | 580,632.00 | 6,221,084.00 | 386.00 | 130.00 | -48.00 | 387.00 |
| BM18-013 | 580,632.00 | 6,221,084.00 | 386.00 | 145.00 | -54.00 | 399.00 |
| BM18-014 | 580,632.00 | 6,221,084.00 | 386.00 | 155.00 | -53.00 | 399.00 |
| BM18-015 | 580,896.00 | 6,221,334.00 | 390.00 | 42.00 | -73.00 | 390.00 |
| BM18-016 | 580,895.00 | 6,221,331.00 | 390.00 | 222.00 | -88.00 | 348.00 |
| BM18-017 | 580,632.00 | 6,221,084.00 | 386.00 | 62.00 | -67.00 | 450.00 |
| BM18-018 | 580,632.00 | 6,221,084.00 | 386.00 | 96.00 | -76.00 | 447.00 |
| BM18-019 | 580,632.00 | 6,221,084.00 | 386.00 | 0.00 | -90.00 | 603.00 |
| **Total** | | | | | | **9,004.00** |

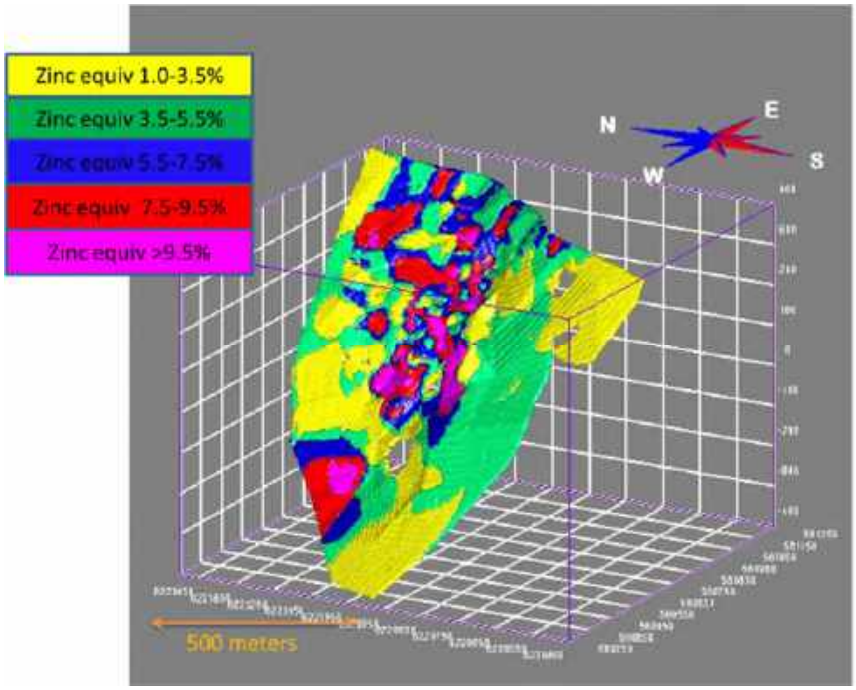



**FIGURE 14.17 GRADE SHELLS OF UMZ (105) – HANGING WALL VIEW**

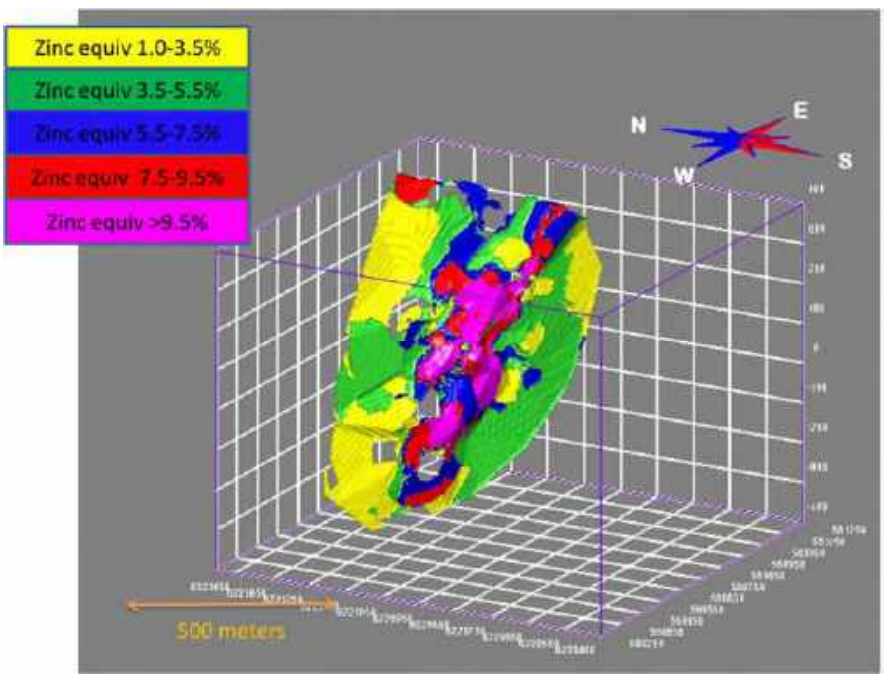



**FIGURE 14.18 GRADE SHELLS OF LMZ (104) - HANGING WALL VIEW**

A series of grade shells were created for both mineralized zones. This was undertaken to confirm the continuity of the mineralized zones as well as for future diamond drill and exploration targets.

# 15. Mineral Reserve Estimates

N/A

# 16. Mining Methods

N/A

# 17. Recovery Methods

N/A

# 18. Property Infrastructure

N/A

# 19. Market Studies and Contracts

N/A

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

N/A

# 21. Capital and Operating Costs

N/A

# 22. Economic Analysis

N/A

# 23. Adjacent Properties

There are no adjacent properties for comparison with the Brabant-McKenzie Deposit. However there are other analogous deposits in other parts of the Canadian Shield. A number of gold mining operations are present in the area but are currently on care and maintenance.

The reader is cautioned that the qualified person preparing this technical report has been unable to verify the information and that the information in this section is not necessarily indicative of the mineralization on the property that is the subject of this technical report.

The Property hosts a massive sulphide deposit similar in many respects to those of the Manitouwadge, Ontario and Sherridon, Manitoba mining camps. Numerous known mineralized showings and geophysical conductors are present along the strike length of the Property. Massive sulphide deposits tend to cluster and as such the adjacent ground may have the potential to host similar mineralization but insufficient work has been completed to properly evaluate its potential.

The Brabant-McKenzie deposit appears to still be open laterally both to the northeast and southwest as well as to depth. It is not clear at this time, however, whether the Deposit trends off M.L. 5054 onto the adjacent claims.

# 24. Other Relevant Data and Information

N/A

# 25. Interpretation and Conclusions

The Brabant-McKenzie Property shows significant potential as a VMS deposit. The mineralogy and texture of the mineralized zone and the surrounding host rock strongly indicates an apparent subsea floor replacement and/or distal deposit. It is the author's opinion that the theory that the mineralization is due to pegmatitic intrusions and/or fault shear structures is incorrect and is a holdover from similar theories (which were later disproved) on the depositional environment in which the Geco deposit was formed and to which this Deposit is often compared.

Based on regional mapping and Votorantim diamond drill program and the more recent geophysics that outlined Anomalies C and Anomaly D, it is apparent that there are potential additional mineralized/sulphide enriched zones on the Property. It is unknown at this time if these zones will contain significant economic mineralization.

It is the opinion of the author that the Brabant-McKenzie Property as it is currently known has significant infill opportunities on the Deposit which is now defined from approximately 610 m down dip to 950 m. The target is derived from the interpretation of the drilling, geological structure, geology, trenching and surface sampling carried out on the Property. The author believes the defined Deposit to be similar in nature to the stylized cartoon of a felsic deposit in Figure 25.1 taken from Galley et al, 2007. The potential quantity and grade is conceptual in nature, there has been insufficient exploration to define a mineral resource and it is uncertain if further exploration will result in the target being delineated as a mineral resource.

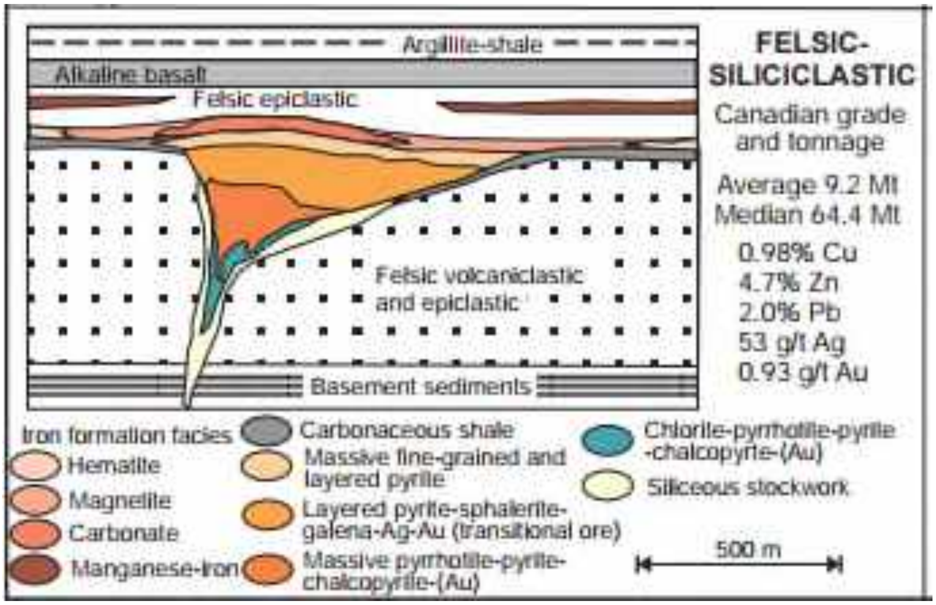



**FIGURE 25.1 FELSIC VOLCANIC DEPOSIT AFTER GALLEY ET AL 2007**

At this time, it is still not known if the Deposit is overturned; although, there is some evidence that suggests that it may be. It will be important to determine the stratigraphic sequence.

In addition, there remains the potential of additional similar VMS deposits in relatively close proximity to the known deposit and within the claim block.

In conclusion, the author believes the Brabant-McKenzie Property to be underexplored with a significant upside potential based on evidence of property-wide known mineralized showings, geophysical conductors and comparisons to similar deposits. The Property will require additional geophysics, diamond drilling and geological modeling to fully exploit its potential.

# 26. Recommendations

Based on the positive results of the 2018 winter Diamond Drill program, resource estimate update and new geological and geophysical targets identified regionally, additional work is recommended.

- Continue upgrading inferred resources to the indicated resource categories in both the UMZ and LMZ through a limited diamond drill program .
- Drill untested areas immediately adjacent the modeled inferred resource domains of the UMZ and LMZ in order to define Deposit continuity and for potential tonnage additions as well increasing grade potential.
- Diamond drill closer to “trenches” to allow their inclusion in resource estimates.

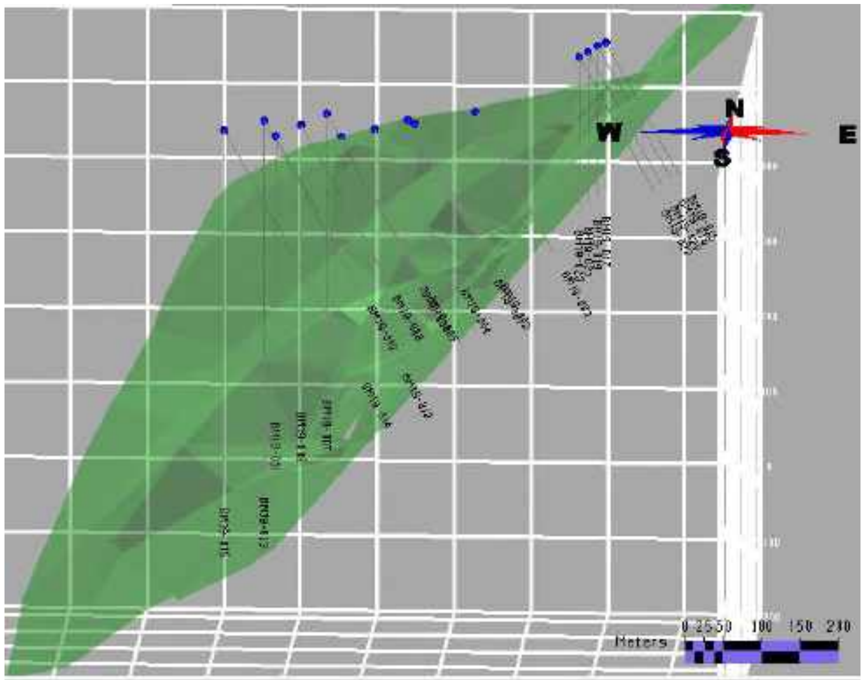



**FIGURE 26.5 SECTION LOOKING WEST OF BRABANT MCKENZIE PROPOSED DIAMOND DRILL SITES**

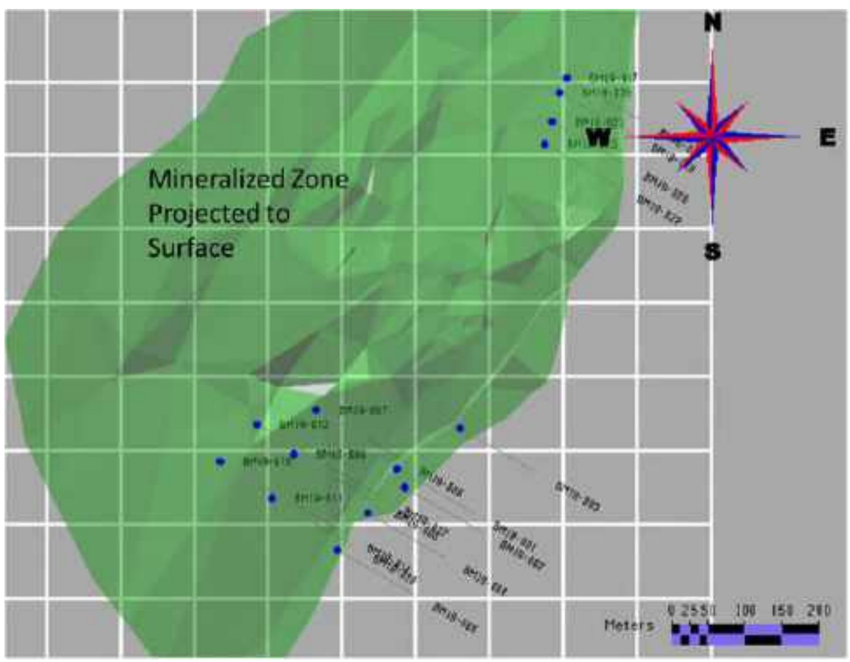



**FIGURE 26.6 PLAN VIEW OF BRABANT MCKENZIE - PROPOSED DIAMOND DRILL SITES**

**TABLE 26.1 LOCATION OF BRABANT-MCKENZIE DEPOSIT PROPOSED DIAMOND DRILL HOLES (NQ CORE)**

| HOLE# | EAST | NORTH | ELEV | AZ | DIP | DEPTH |
|---|---|---|---|---|---|---|
| BM19-001 | 580825 | 6220825 | 397 | 120 | -55 | 210 |
| BM19-002 | 580835 | 6220800 | 397 | 120 | -55 | 210 |
| BM19-003 | 580910 | 6220880 | 397 | 120 | -55 | 210 |
| BM19-004 | 580785 | 6220765 | 397 | 120 | -55 | 210 |
| BM19-005 | 580744 | 6220715 | 397 | 120 | -55 | 210 |
| BM19-006 | 580715 | 6220905 | 387 | 120 | -55 | 230 |
| BM19-007 | 580715 | 6220905 | 387 | 120 | -90 | 350 |
| BM19-008 | 580685 | 6220845 | 384 | 120 | -55 | 225 |
| BM19-009 | 580685 | 6220845 | 384 | 120 | -90 | 350 |
| BM19-010 | 580655 | 6220785 | 382 | 120 | -55 | 225 |
| BM19-011 | 580655 | 6220785 | 382 | 120 | -90 | 350 |
| BM19-012 | 580635 | 6220885 | 381 | 120 | -55 | 350 |
| BM19-013 | 580635 | 6220885 | 381 | 120 | -90 | 470 |
| BM19-014 | 580585 | 6220835 | 378 | 120 | -55 | 350 |
| BM19-015 | 580585 | 6220835 | 378 | 120 | -90 | 470 |
| BM19-016 | 581055 | 6221355 | 390 | 120 | -55 | 100 |
| BM19-017 | 581055 | 6221355 | 390 | 120 | -90 | 150 |
| BM19-018 | 581045 | 6221335 | 390 | 120 | -55 | 100 |
| BM19-019 | 581045 | 6221335 | 390 | 120 | -90 | 150 |
| BM19-020 | 581035 | 6221295 | 390 | 120 | -55 | 100 |
| BM19-021 | 581035 | 6221295 | 390 | 120 | -90 | 150 |
| BM19-022 | 581025 | 6221265 | 390 | 120 | -55 | 100 |
| BM19-023 | 581025 | 6221265 | 390 | 120 | -90 | 150 |
| | | | | | | 5420 |

Pulps and rejects should continue to be stored in anticipation of preliminary metallurgical testing.

A proposed budget of approximately $ 1,200,000 is proposed to fund the next stage of the diamond drill exploration program in order to advance the Property.

**TABLE 26.2 PROPOSED BUDGET PROPOSED BUDGET (FOR DIAMOND DRILLING IN IMMEDIATE VICINITY OF DEPOSIT ONLY)**

| | | |
|---|---|---|
| Drilling (5,400 m including Mob and Demob) | $ | 700,000 |
| Geophysics | $ | 31,000 |
| Geology(supervison, logging, sampling, reporting) | $ | 106,000 |
| Assays(including shipping) | $ | 20,000 |
| Field Supplies | $ | 16,000 |
| Food, Lodging and Travel | $ | 100,000 |
| Truck Rental, Fuel and Insurance | $ | 10,000 |
| **SubTotal** | **$** | **983,000** |
| Contingency 22% | | 217000 |
| **Estimated Total Program** | **$** | **1,200,000** |

Additional Recommendations

- Put together a bulk sample for metallurgical testing. This should be composed of reject from diamond drill core and ideally from extending surface trenches into unaltered/fresh rock. This may involve drilling and blasting surface trenches. The scope of this work has not been included in budgeting.
- Diamond drill of regional anomalies currently being tested through a ground geophysics program may be required. Since the geophysics program is ongoing, no specific recommendations or budget can be proposed at this time.
- However it would be reasonable to expect the above two recommendations could cost similar to the proposed diamond drill program in the immediate vicinity of the Brabant McKenzie Deposit.

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## Statement of Qualifications – Finley J. Bakker

I, Finley J. Bakker, P. Geo, as an author of this technical report entitled, "TECHNICAL REPORT ON THE BRABANT-MCKENZIE PROPERTY, SASKATCHEWAN, CANADA FOR MURCHISON MINERALS LTD.", prepared for MURCHISON MINERALS LTD., with mailing address Suite 2500, 120 Adelaide Street West, Toronto, Ontario M5H 1T1, Canada, Tel: 416.350.3776, and dated October 27, 2018 do hereby certify that:

1. I am a Professional Geoscientist and Consultant, residing in Campbell River, British Columbia, V9H 1C6.
2. I graduated with a degree in BSc. Honours in Geology from the McMaster University in 1979.
3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia APEGBC (1991) (registration No. 18639).
4. I have worked as a geologist for a total of 39 years since my graduation from university.
5. I have read the definition of "qualified person" as set out in National Instrument 43-101 ("**NI 43-101**") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101), and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. My relevant experience for the purpose of the Technical Report is:
    a. Chief Geologist at four mines,
    b. have also held the positions of Senior Resource Geologist, Exploration Manager and Superintendent of Technical Services,
    c. have undertaken Resource calculations for 37 years,
    d. have worked I have worked on a number of deposit types including VMS, skarn, epigenetic and porphyry deposits and have specifically worked at and on Massive Sulphide deposits for 26 years,
    e. I have been involved with commodities including copper, lead, zinc, gold, silver, REE, tungsten and iron and molybdenum,
    f. I have used MineSight/Compass/Hexagon software used in calculating the Mineral Resource for 30 years.
7. I am responsible for the preparation of the technical report titled "entitled "TECHNICAL REPORT ON RESOURCE ESTIMATE UPDATE FOR THE BRABANT MCKENZIE PROPERTY, BRABANT LAKE, SASKATCHEWAN, CANADA FOR MURCHISON MINERALS LTD."

8. I have had prior involvement with the property that is the subject of the Technical Report. The nature of my prior involvement is: I have worked at the site from February 2017 to March 2017, January 2018 to March 2018 , a site visit in June 2018 , as well as ongoing consulting to Murchison Minerals.

9. That, at the effective date of the technical report, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

10. I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101.

11. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public Company files on their websites accessible by the public, of the Technical Report.

Dated this 27th day of October 2018

//signed Finley Bakker

Finley J. Bakker, P.Geo.

# Statement of Qualifications – Kent Pearson

I, Kent Pearson, P. Geo., as an author of this technical report entitled, "TECHNICAL REPORT ON THE RESOURCE ESTIMATE FOR THE BRABANT-MCKENZIE PROPERTY, BRABANT LAKE, SASKATCHEWAN, CANADA FOR MURCHISON MINERALS LTD.", prepared for MURCHISON MINERALS LTD., with mailing address Suite 2500, 120 Adelaide Street West, Toronto, Ontario M5H 1T1, Canada, Tel: 416.350.3776, and dated September 4, 2018 do hereby certify that:

1. I am a Professional Geoscientist and President and CEO of Murchison Minerals Ltd., residing at 39 Norway Avenue, Toronto Ontario, M4L 1P7.
2. I graduated with a degree in BSc. Specialization in Geology from the University of Alberta in 1987.
3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (1991) with APEGBC (1993) (registration No. 20624) and Association of Professional Engineers, Geologists and Geophysicists of Alberta (1991) (registration no. 46752).
4. I have worked principally as a geologist for a total of 31 years since my graduation from university.
5. I have read the definition of "qualified person" as set out in National Instrument 43-101 ("**NI 43-101**") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101), and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. My relevant experience for the purpose of the Technical Report is:
    a. Geologist engaged in mineral exploration, exploration project generation, project management, project evaluation and project due diligence,

    b. have also held the position of Mine Geologist specifically the Goldstream copper zinc VMS mine,

    d. have worked I have worked on a number of deposit types including VMS, skarn, epigenetic gold and porphyry deposits,

    e. I have been involved with commodities including: copper, lead, zinc, gold, silver, coal,

    f. I have worked on, evaluated or provided due diligence on mining and exploration projects in Canada, the United States, Mexico, Central and South America, Australia, Asia and Africa.

7. I am responsible for the preparation of the technical report titled entitled, "TECHNICAL REPORT ON RESOURCE ESTIMATE UPDATE FOR THE BRABANT-MCKENZIE PROPERTY, BRABANT LAKE, SASKATCHEWAN, CANADA FOR MURCHISON MINERALS LTD." in conjunction with Finley Bakker with the exceptions of sections 11, 12, 13 and 14.

8. I have had prior involvement with the property that is the subject of the Technical Report. The nature of my prior involvement includes an evaluation of the property from April 2015 to November 2015 as a consultant, and on site work in September/October 2016, onsite from February 2017 to March 2017, August 2017, January 2018 to April 2018 and July 2018 in the capacity of President and CEO.

9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

10. I am not independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101.

11. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public Company files on their websites accessible by the public, of the Technical Report.

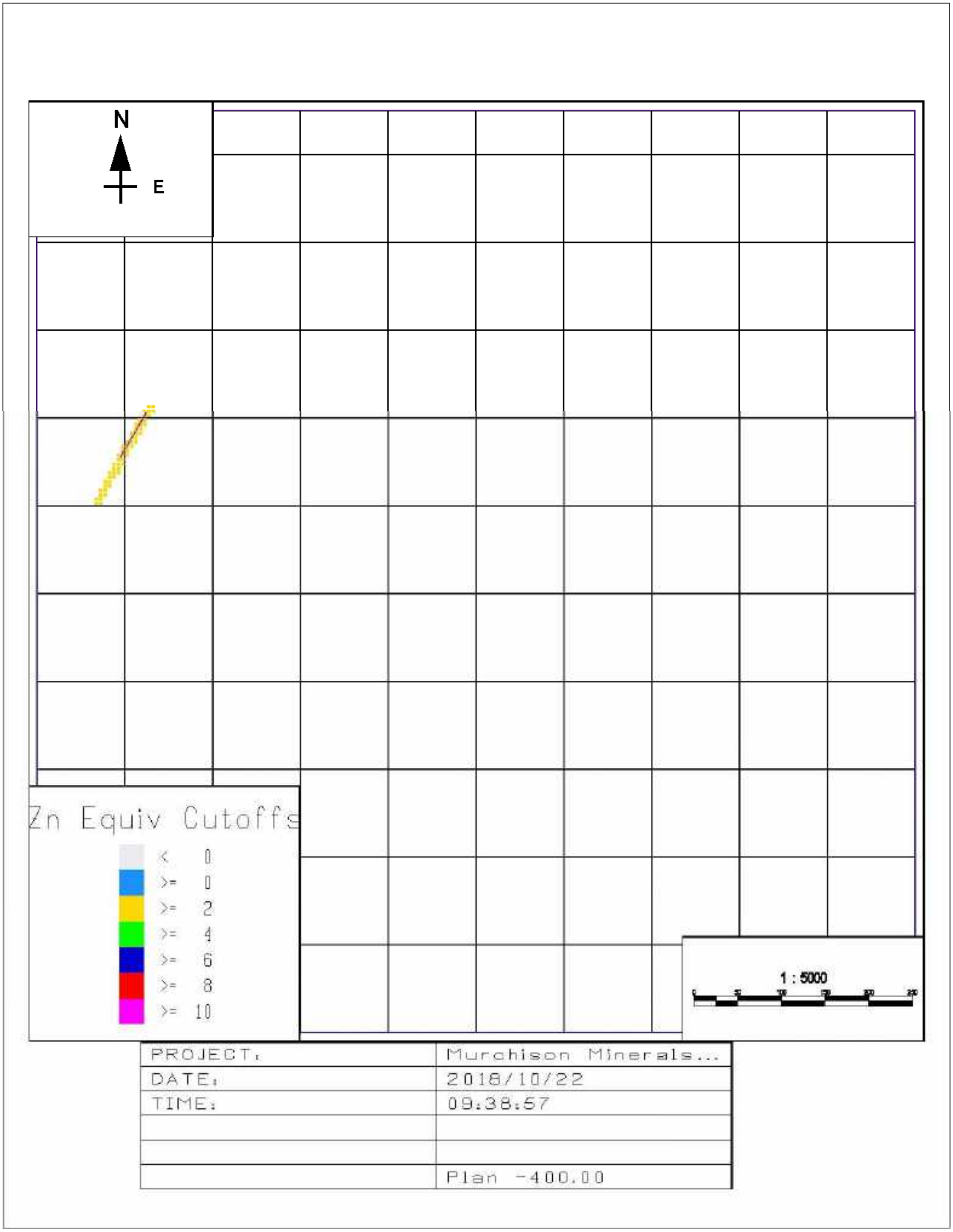
Dated this 27th day of October, 2018

__//signed Kent Pearson________

Kent Pearson, P.Geo.

# Appendices

## Appendix I Plan View of Deposit by Elevation and % Zinc Equivalent Grade Shell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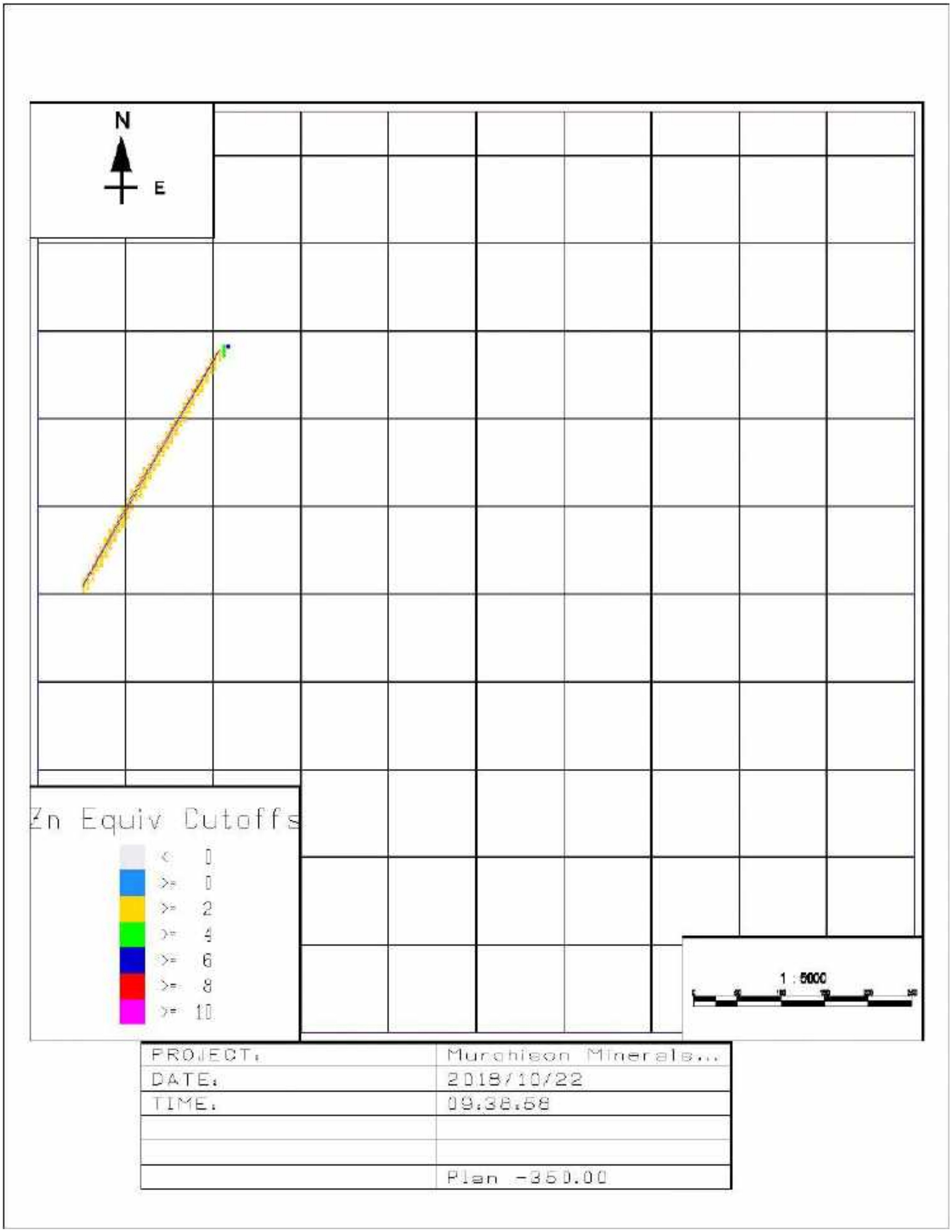
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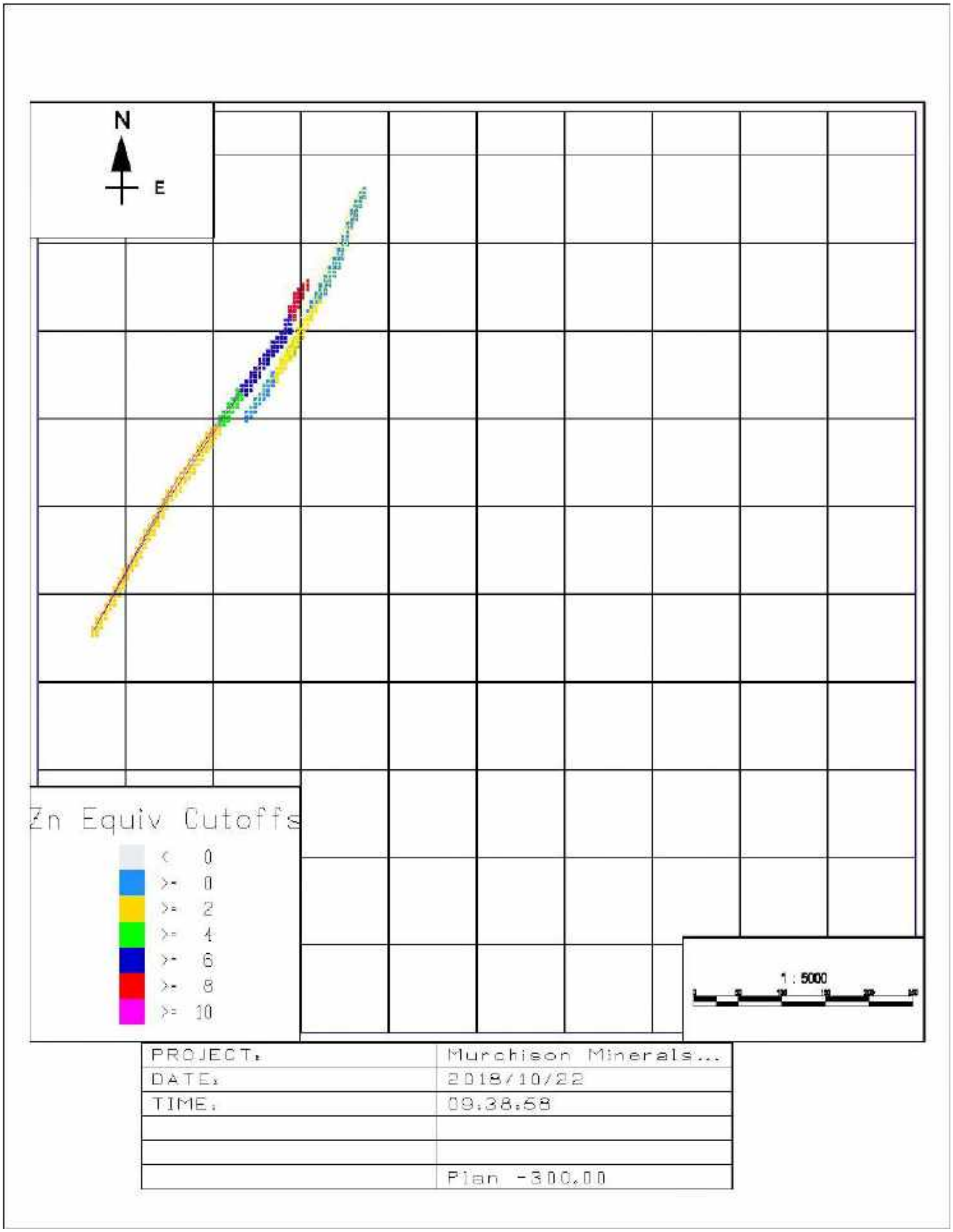
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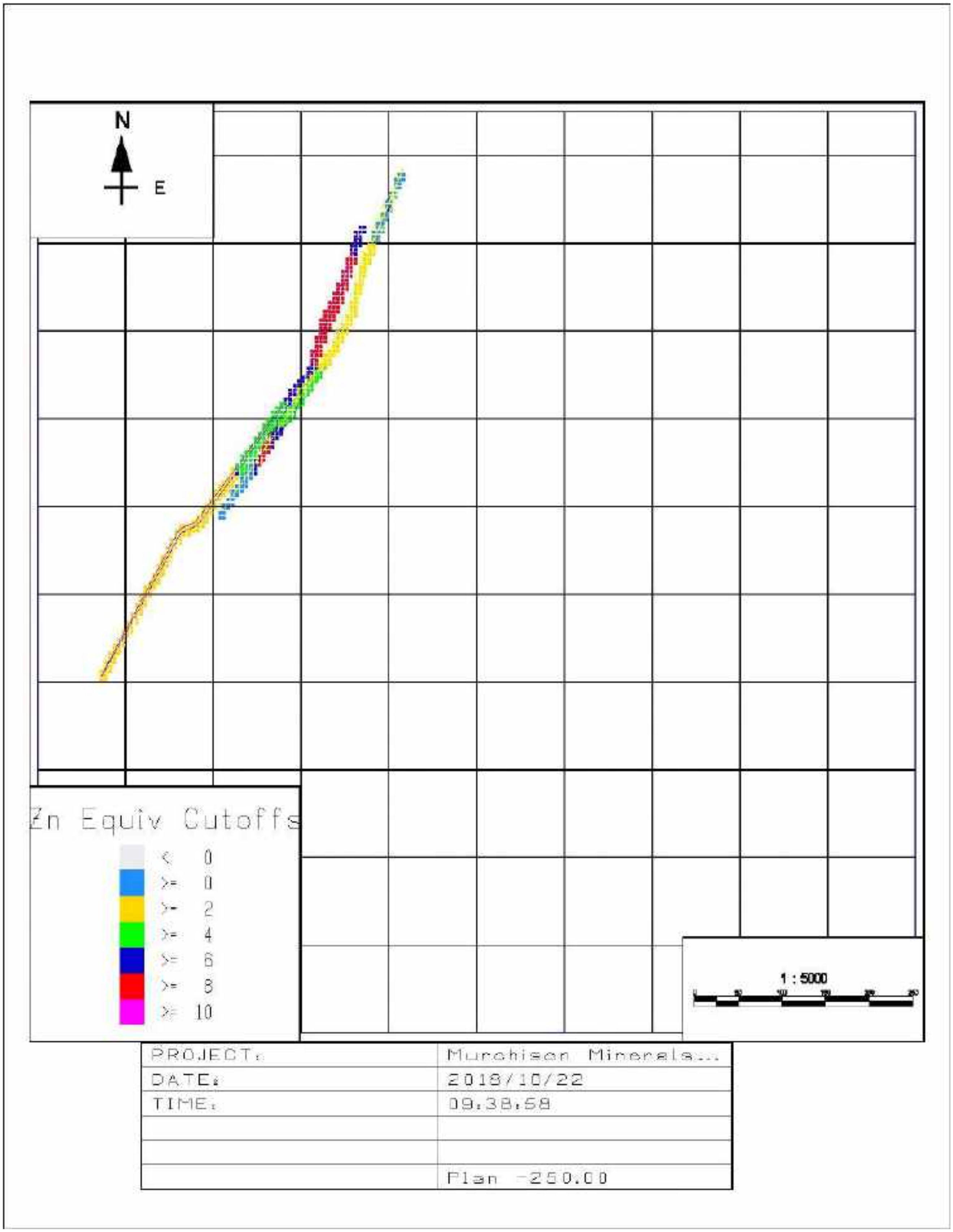

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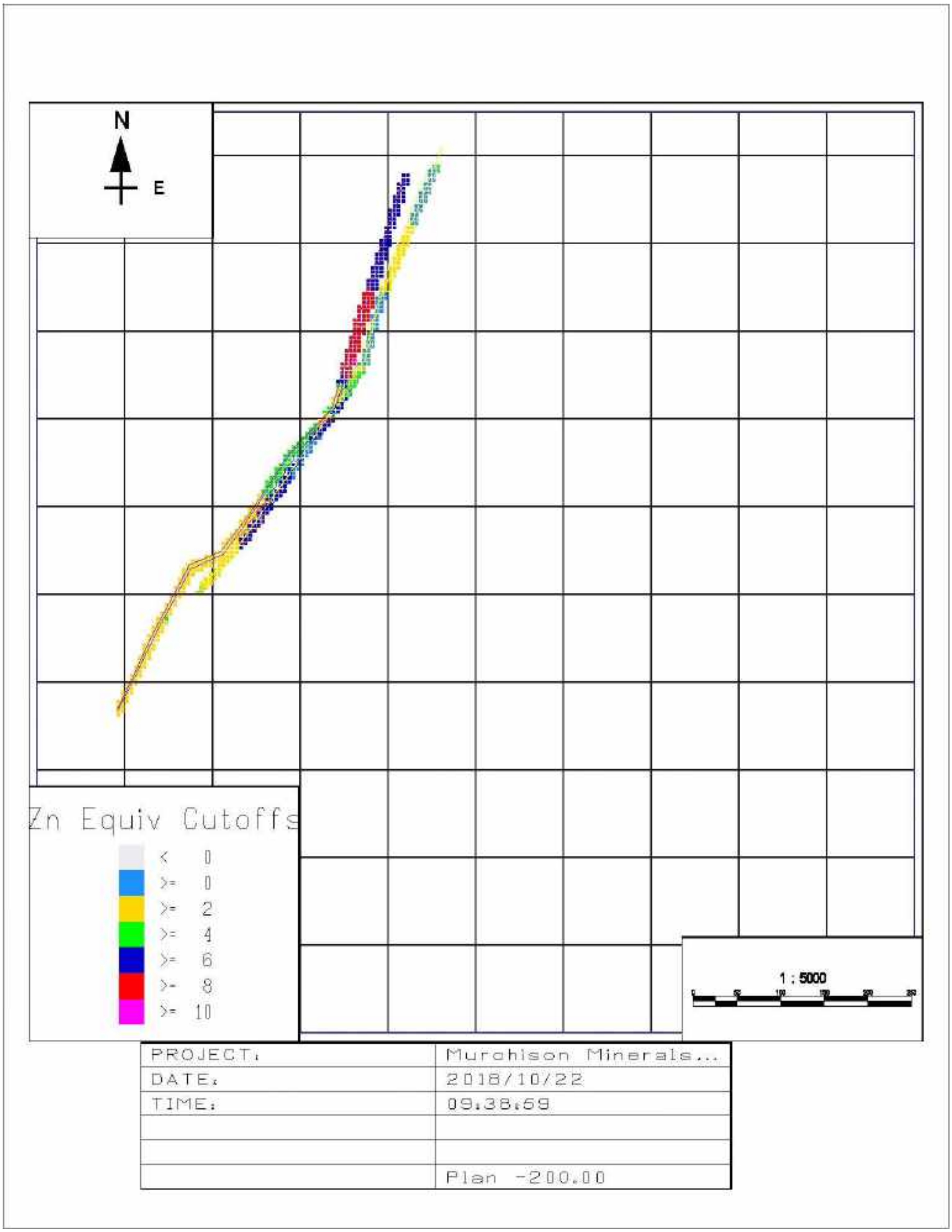
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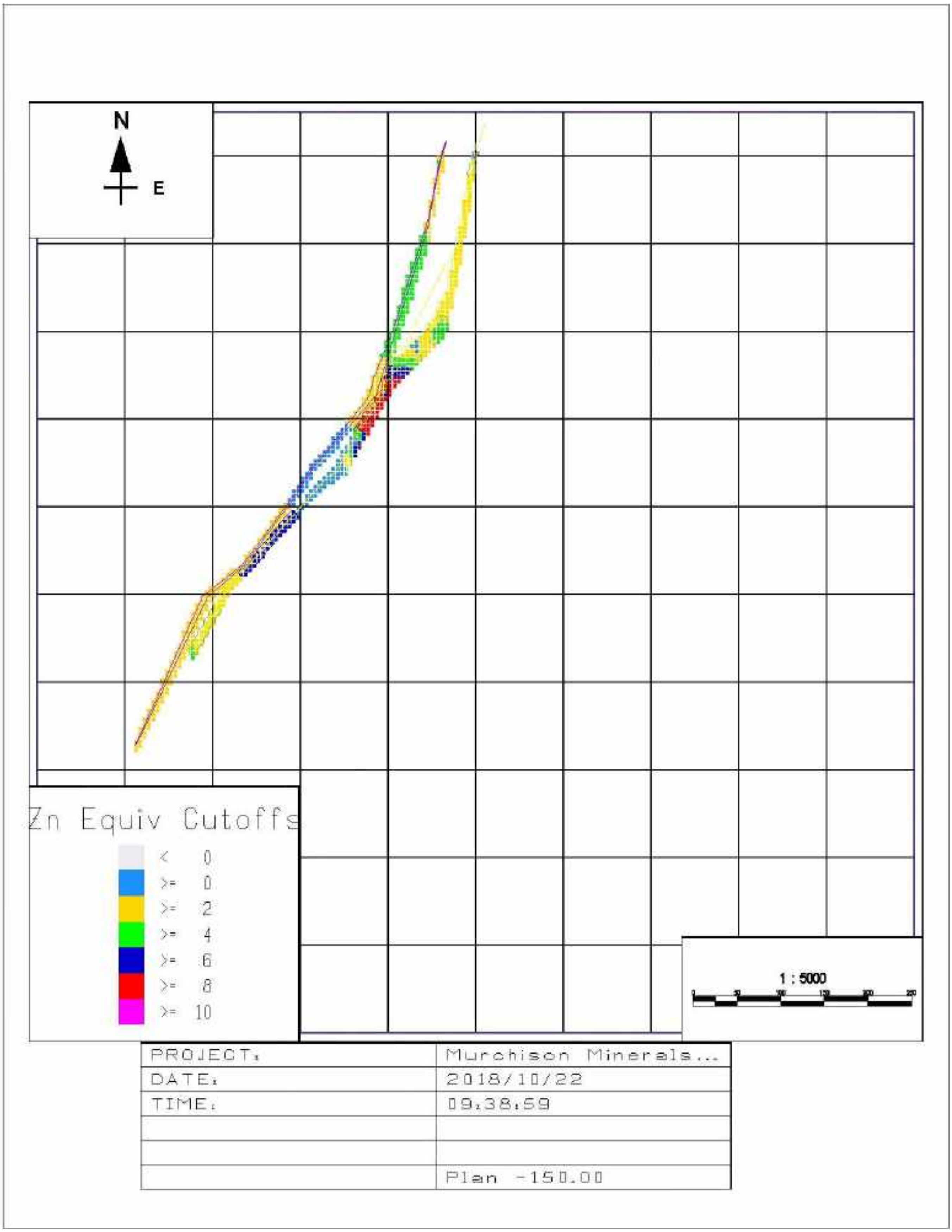
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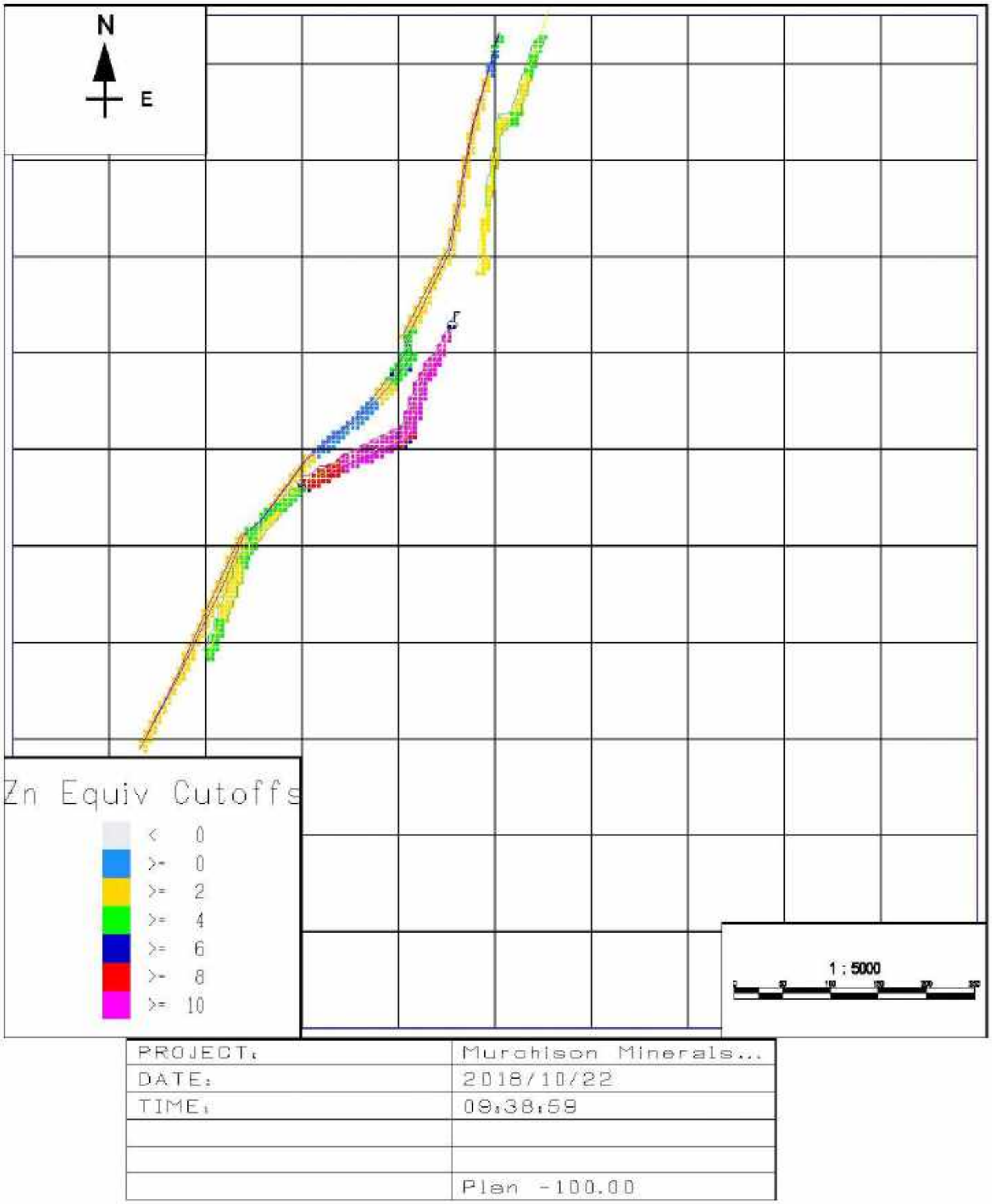
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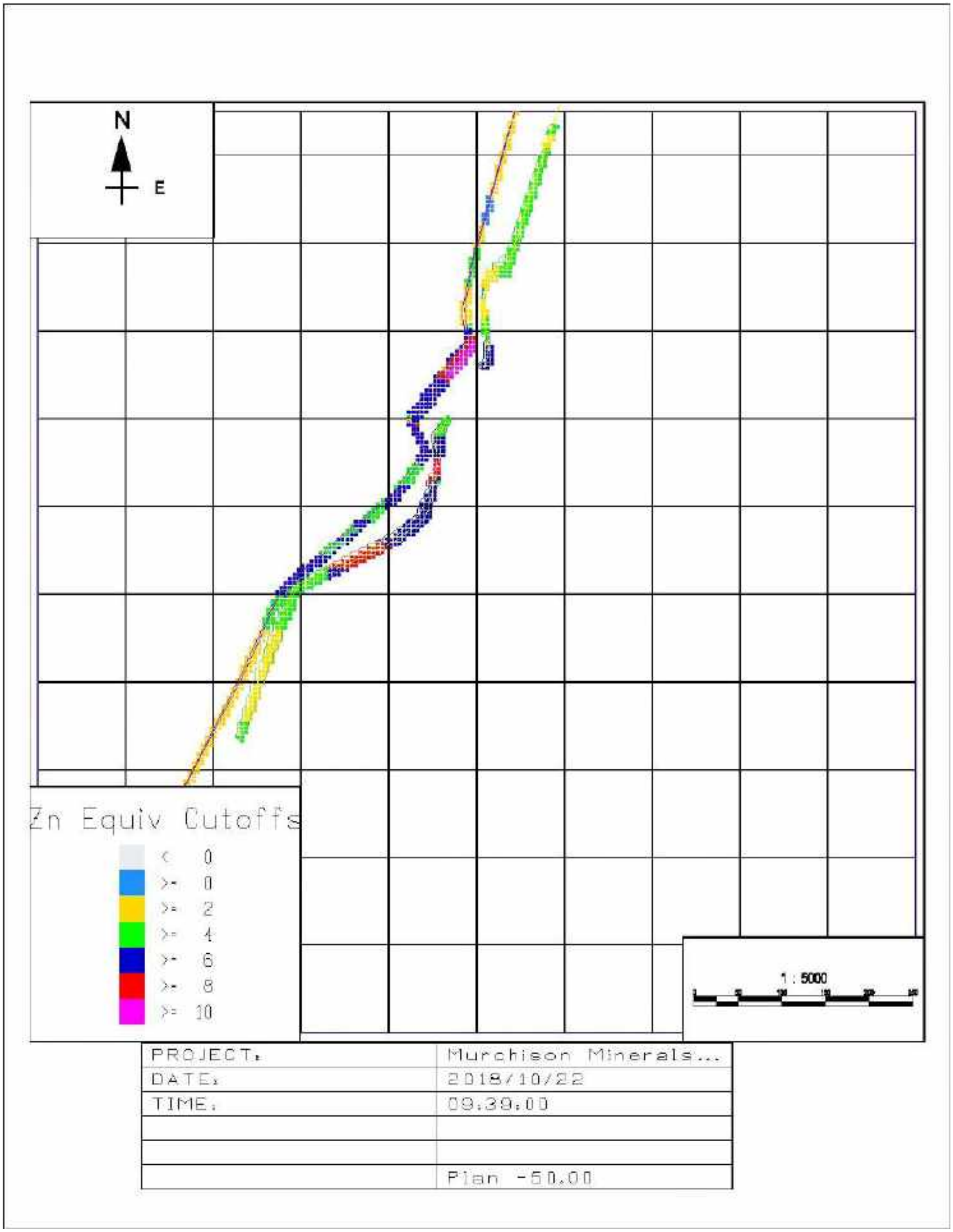
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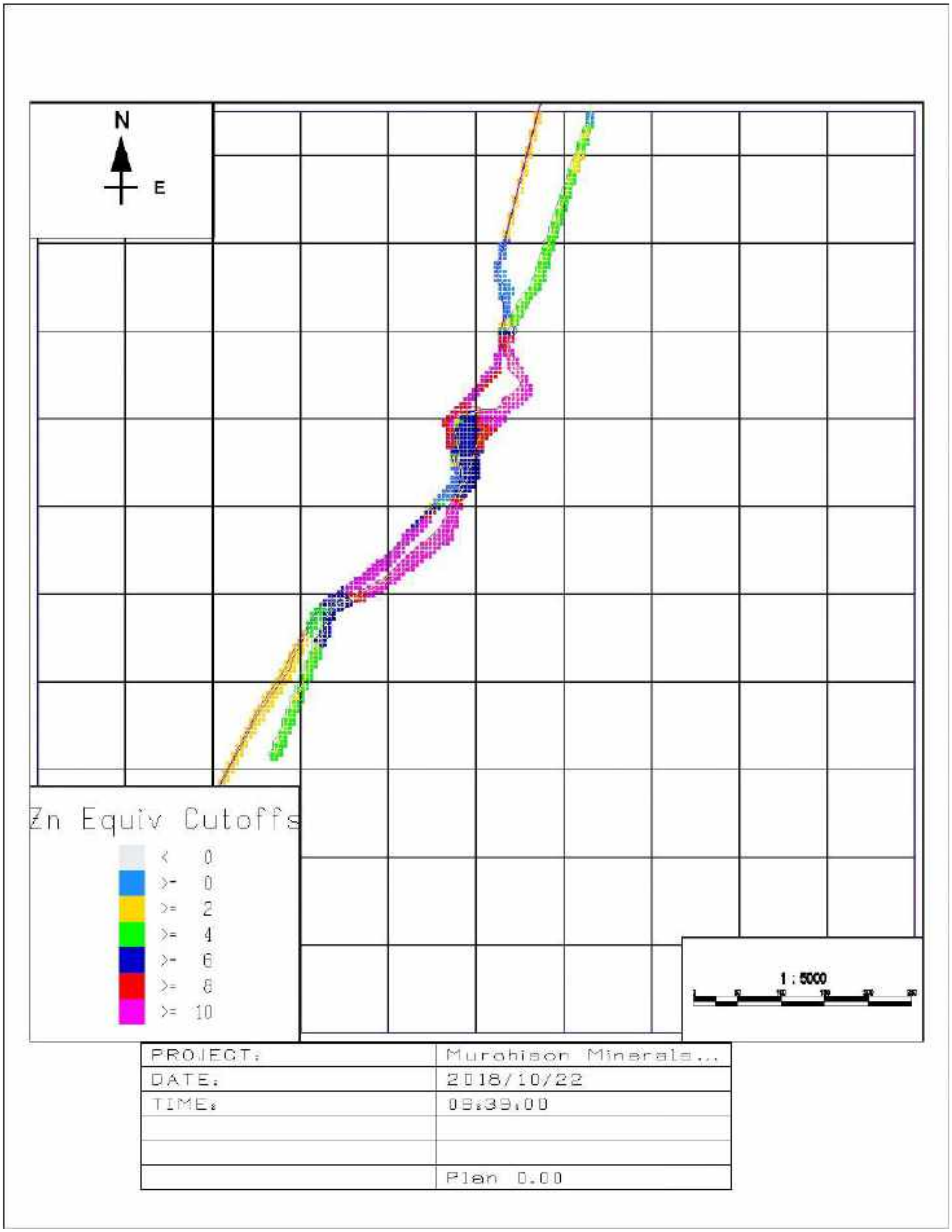
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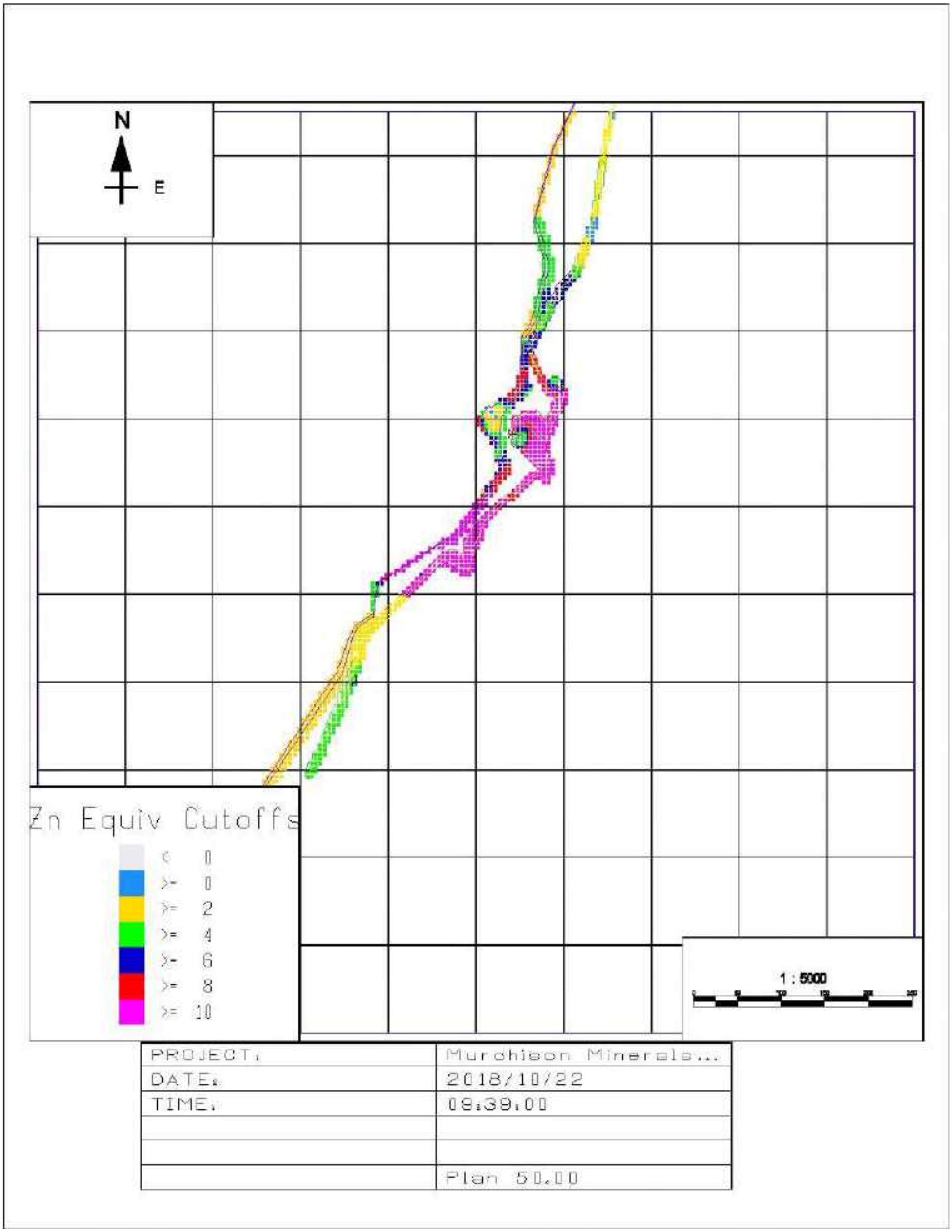
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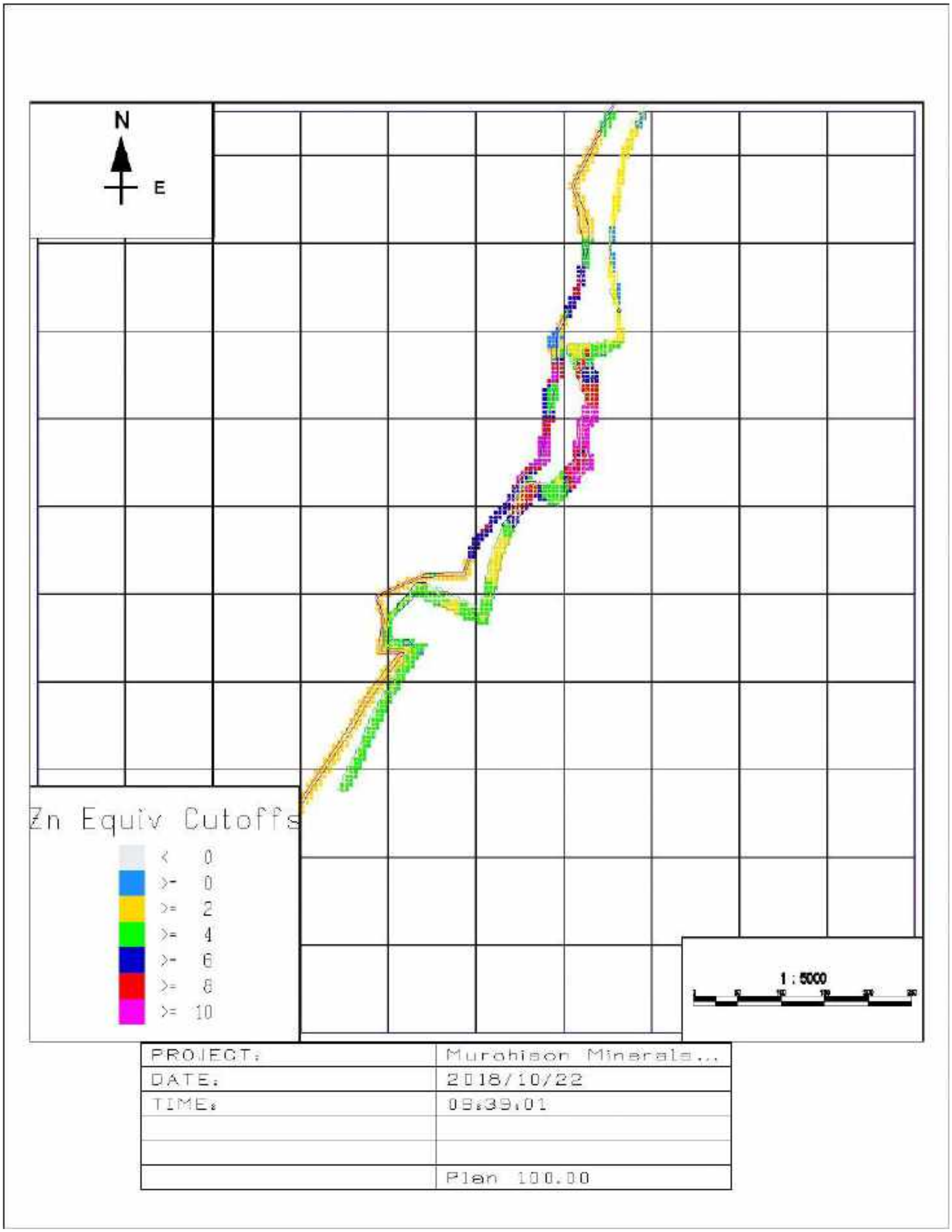
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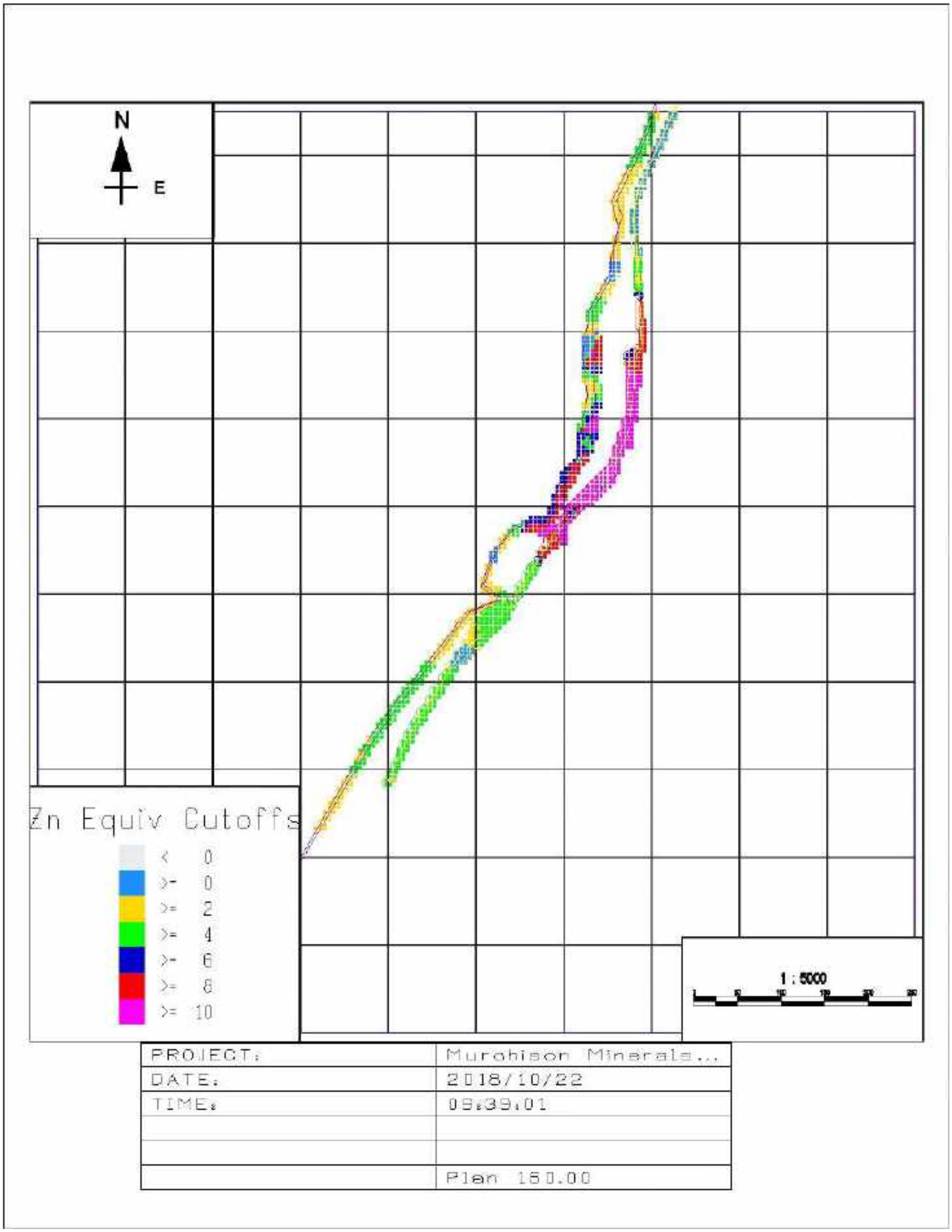
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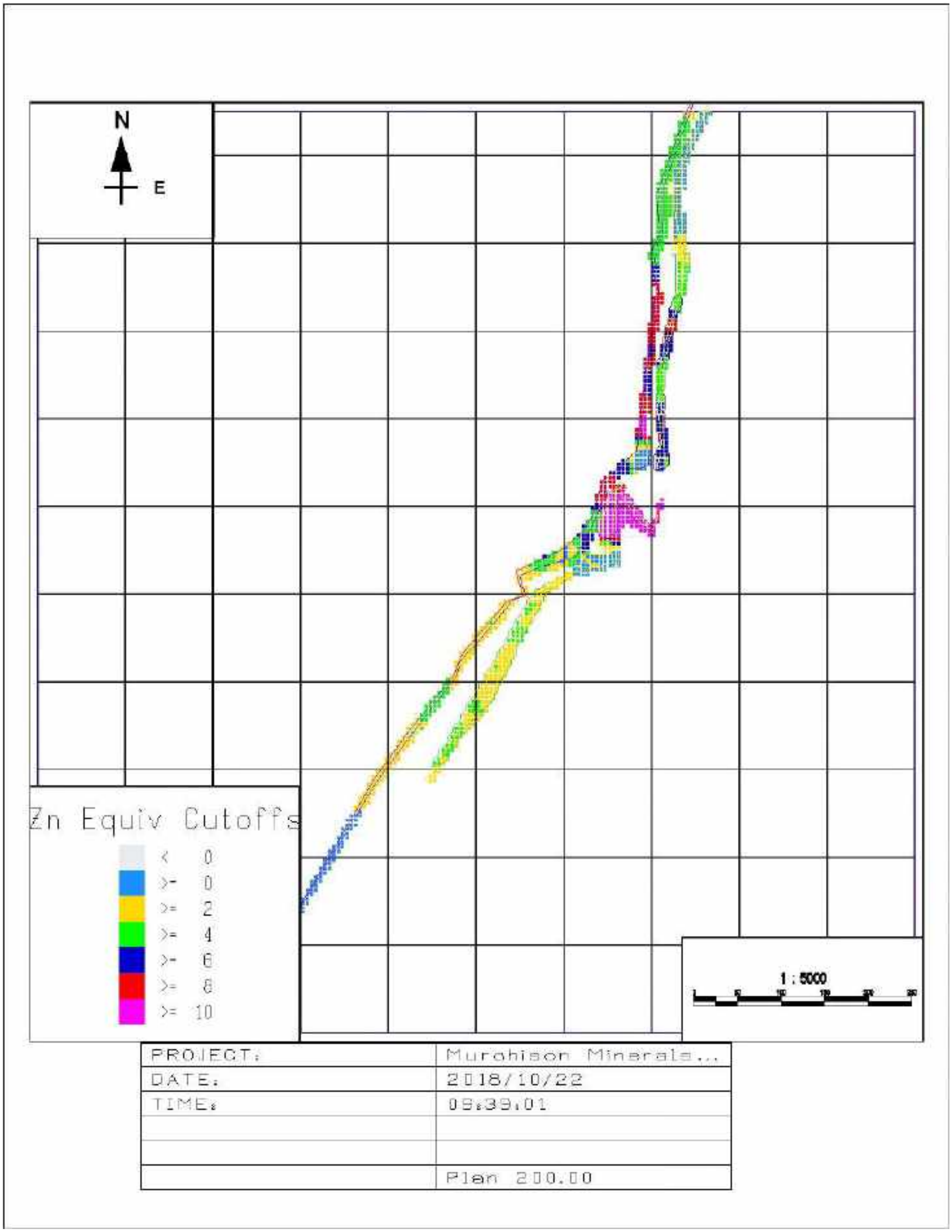
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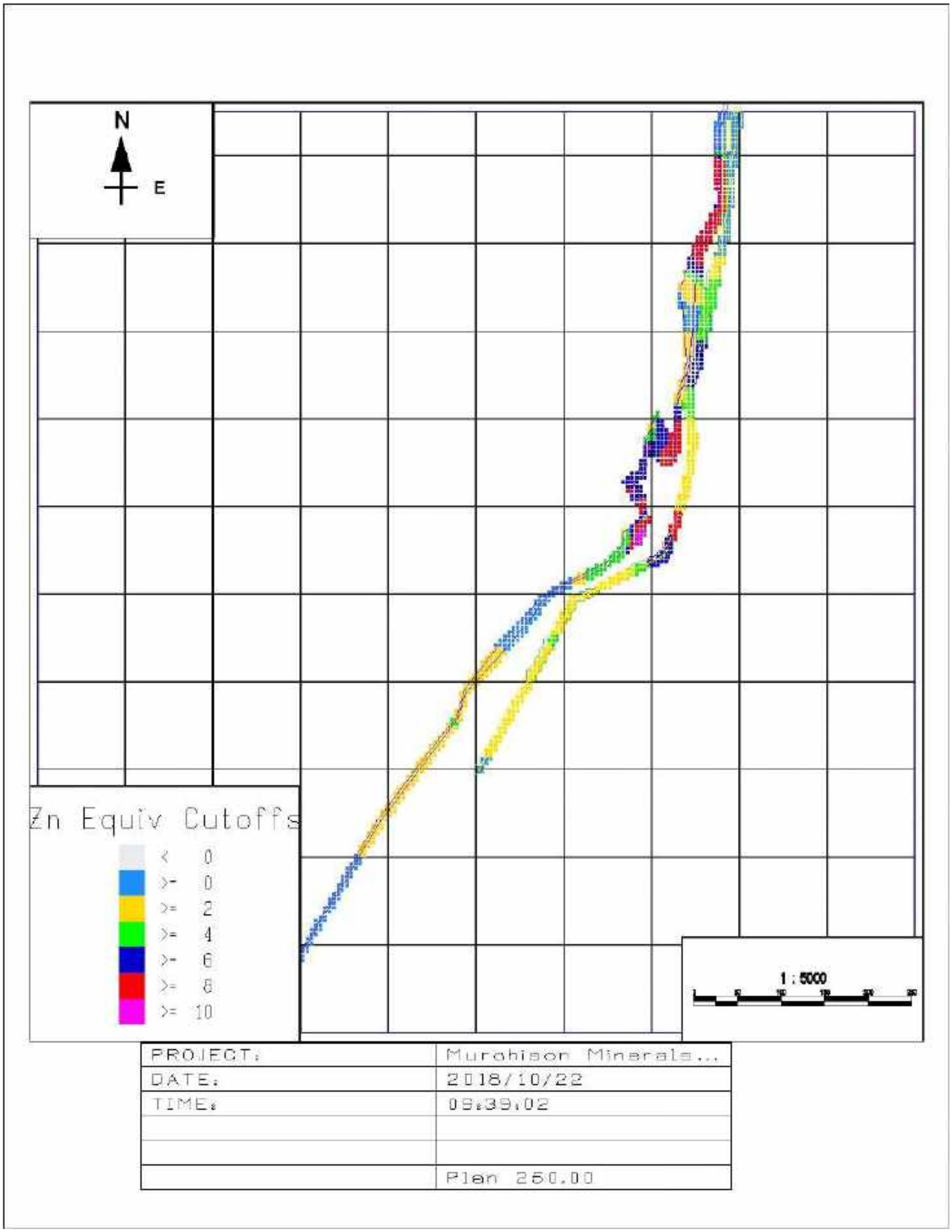
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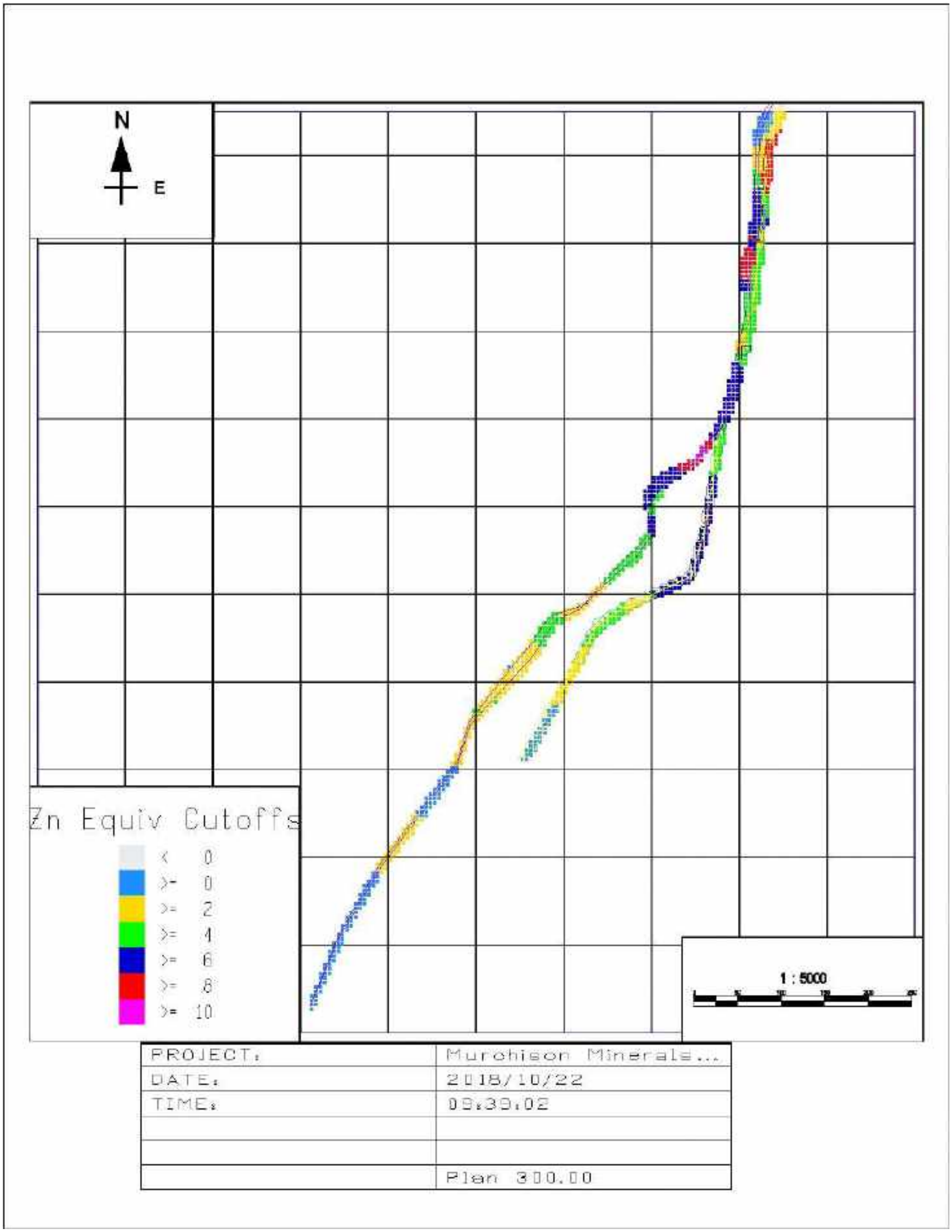
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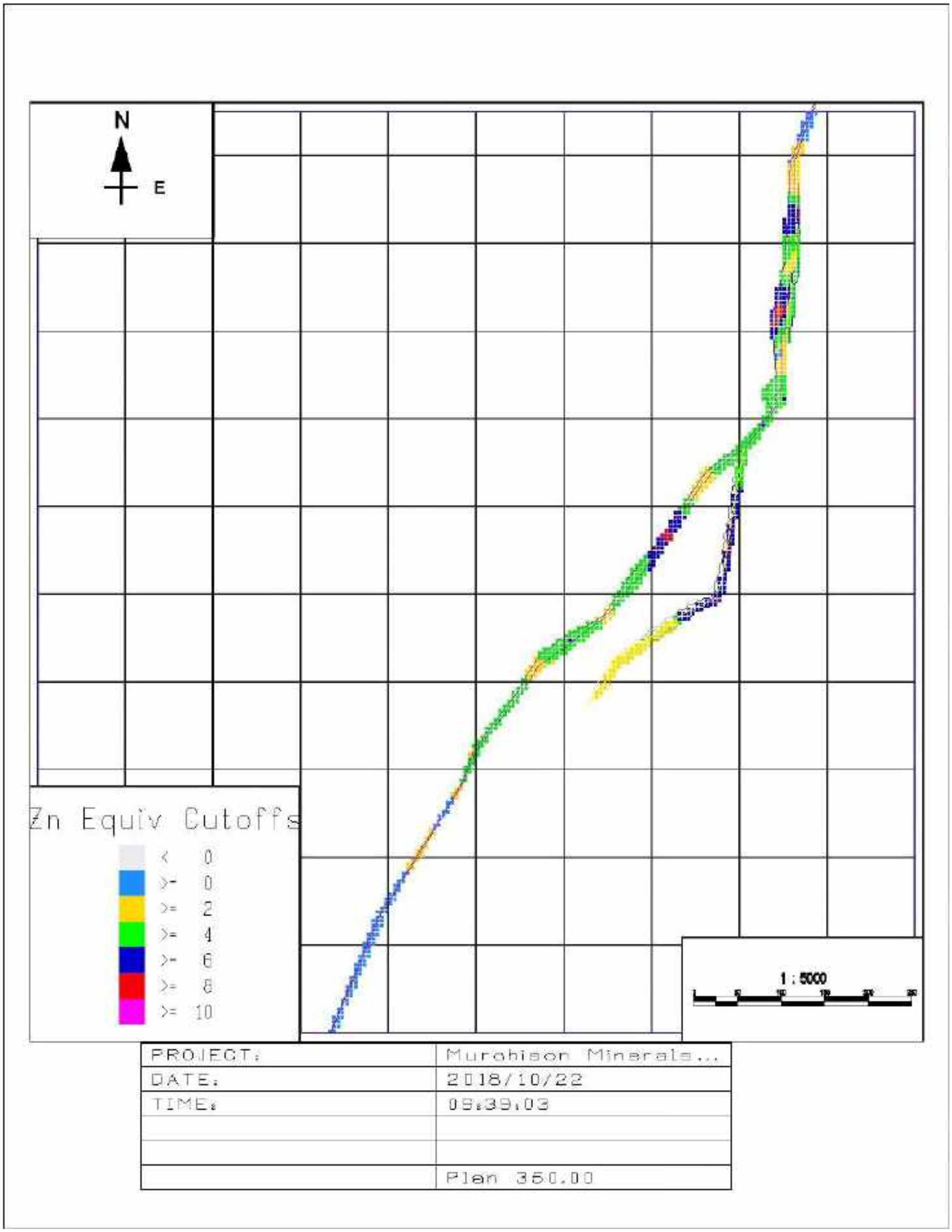
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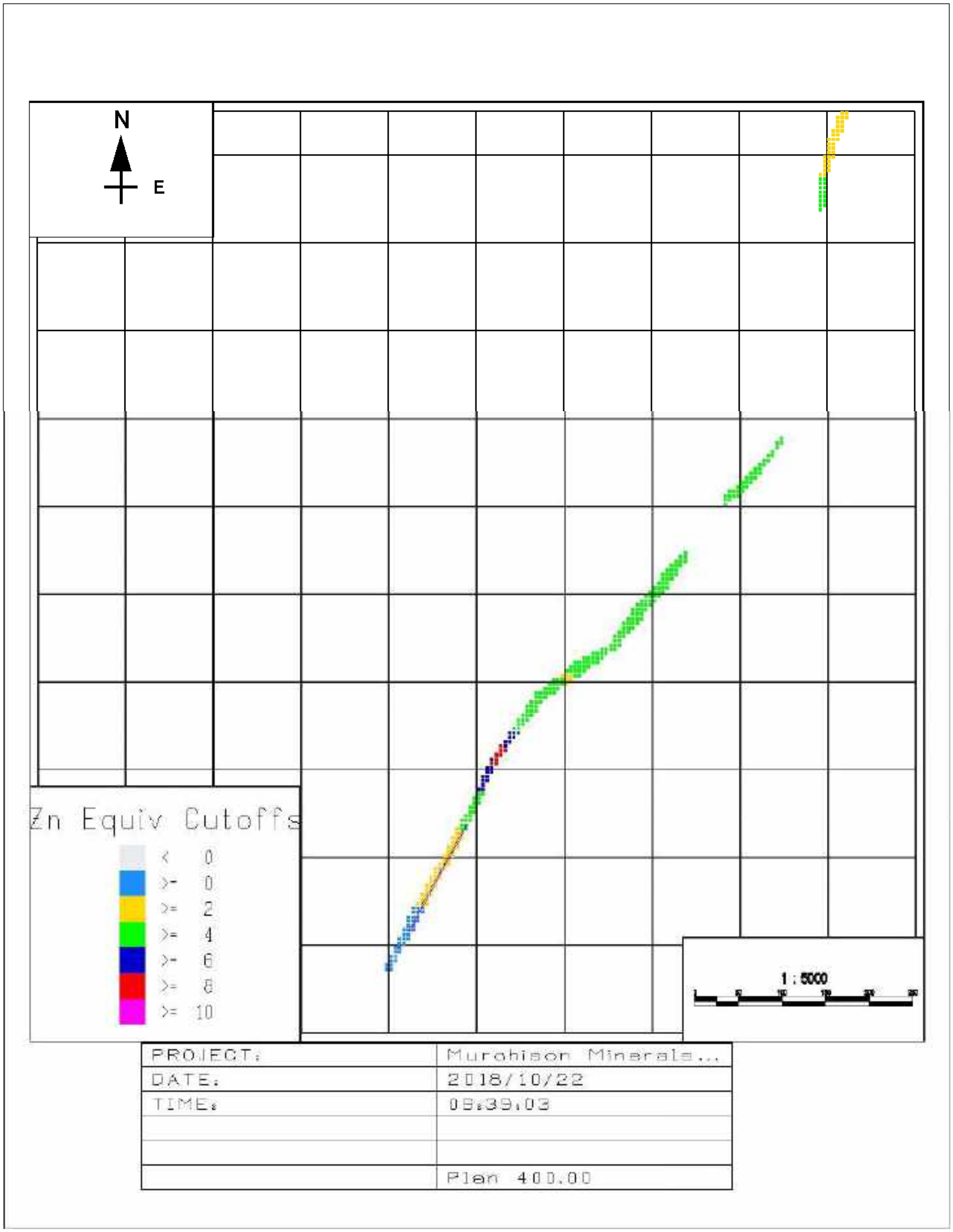
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