NI 43-101 TECHNICAL REPORT

on the

Magusi West Property Hébécourt Township, Abitibi-Ouest Québec, Canada

Prepared for:

EagleOne Metals Corp.

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April 22, 2024

DATE AND SIGNATURE PAGE

This report titled "NI 43-101 Technical Report on the Magusi West Property, Hébécourt Township, Abitibi-Ouest, Québec, Canada and dated April 22, 2024 was prepared and signed by the following author (the "Author"):

Dated at Thunder Bay, Ontario April 22, 2024

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1.0 SUMMARY

The Author was retained by EagleOne Metals Corp. ("EagleOne" or the "Company") to prepare an independent Technical Report on the Magusi West Property (the "Property"), located in Hébécourt Township, Abitibi-Ouest Region, Québec. This report will provide a summary of the technical information available on the Property in order to fulfill the Standards of Disclosure for Mineral Projects according to Canadian National Instrument 43-101 ("NI 43-101") and to support an Initial Public Offering (IPO) and listing of the Company's shares on the Canadian Securities Exchange (CSE).

The Property consists of a contiguous group of eleven (11) mineral claims, totalling 563.35 hectares, comprising the Loney Group within southern Hébécourt Township, Québec. The Property can be accessed in several ways using public highways, access roads, and logging roads depending upon whether the start point is in the Province of Ontario or within the Province of Québec. The most direct access is travelling east on Highway 101 from Timmins, ON to the Québec provincial border where the highway designation changes to Highway 388 and then further east to Chemin de la Mine (Mine Road) which heads south and eventually passes near the northeastern corner of the Property. The least direct route consists of travelling north from Rouyn-Noranda, QC along Quebec Highway 101 to Chemin Jason and turning northwest to follow a series of logging and other access roads that eventually become Chemin de la Mine, which leads northwest toward the Property. The bulk of the Property is accessed from Chemin de la Mine via several logging roads of various vintages located north and south of the Magusi River, which transects the Property from southeast to northwest.

The Property was acquired by EagleOne through a Mineral Property Option from Kyle Loney of Toronto, ON. The Company can earn 100% interest in the eleven (11) Loney claims by making three (3) cash payments totalling C\$170,000 over 3 years (C\$25,000 upon execution of the agreement); incurring at least C\$350,000 in exploration expenditures over 3 years (C\$50,000 by the end of September 2023); and issuing 550,000 common shares over 3 years (100,000 upon execution of the agreement).

The Property is underlain by the neo-Archaean-age felsic to intermediate and mafic metavolcanic rocks of the Blake River Group ("BRG"), and associated metasedimentary rocks, all within the Abitibi Greenstone Belt ("AGB") of the Wawa Abitibi Terrane of the Superior Province of the Canadian Precambrian Shield (the world's largest Archean craton). These rocks are locally intruded by younger granitoid and gabbroic rocks, some of which are subvolcanic. The Abitibi Greenstone Belt is the largest greenstone belt in the world and is host to many world-class, often giant, volcanic-hosted massive sulphide ("VHMS"), Au-rich VHMS, orogenic Au, magmatic-hydrothermal, intrusion related gold ("Au"), Au and Au-Cu (copper) porphyry, and orthomagmatic nickel-copper-platinum-group element ("Ni-Cu-PGE") sulphide mineral deposits.

The Blake River Group is the youngest and richest volcanic sequence within the AGB and directly underlies the Property. The BRG consists of a 4 to 7 km thick succession of submarine, basaltic to rhyolitic, tholeiitic to calc-alkaline volcanic and volcaniclastic rocks with several felsic volcanic centres intruded by a variety of plutons and mafic to intermediate dykes and sills. The BRG in Ontario is subdivided into a lower unit (2704-2699 Ma) and an upper unit (2699-2695 Ma)

which are known in Québec as the Misena and Noranda units, respectively. The BRG is further subdivided within Québec into the Reneault-Dufresnoy, Rouyn-Pelletier, Duprat-Montbray, Hébécourt (Lower Blake River), Horne, Camac, Dupuis, Bousquet and Noranda Formations. The BRG is bound to the north by the Porcupine-Destor Fault system ("PDF") and to the south by the Larder Lake-Cadillac fault system ("LLCF"). These two fault systems, and their associated subsidiary fault systems and splays, act as foci for a large amount of late Au mineralization. Metamorphic grade within most of the BRG is lower greenschist to sub-greenschist facies.

The BRG hosts many VHMS occurrences, prospects, and as many as 33 deposits. Some of these deposits are world-class, such as the giant Quemont and the Au-rich Horne deposits within the Noranda district and the Au-rich Laronde Penna Deposit within the Doyon-Bousquet-LaRonde district. Five deposits are recognised as some of the largest Au-rich VHMS deposits in the world. The Lower BRG (Hébécourt Formation) hosts the Horne and Quemont deposits and the upper BRG hosts the bulk of the deposits in the Noranda and Doyon-Bousquet-LaRonde districts. The implies that there were several stages of VHMS deposit formation within the BRG.

The BRG, and its margins, is host at least 39 producing and past producing Au mines and hundreds of unmined deposits, prospects, and occurrences. Of the mines at least 19 are Aurich or Au-bearing VHMS deposits including the Horne, Quemont, and Bousquet 1 and 2 mines.

The Magusi West Property is underlain by rocks of the Lower Unit of the BRG's Misena sub-group and roughly straddles the Baie Fabie Fault/Shear Zone ("BFSZ") which forms the boundary between altered volcanic rocks to the north and less altered to unaltered volcanic rocks to the south. North of the BFSZ the rocks are part of the Reneault-Dufresnoy Formation ("RDF") which is a south-younging homoclinal sequence centred on Lac Monsabrais (3.2 km northeast of the Property). The RDF consists of mafic to intermediate, massive to pillowed submarine flows and volcaniclastic rocks, crosscut by probably hypabyssal diorite, gabbro, and the multiphase, synvolcanic, tonalitic to quartz dioritic Monsabrais Pluton. There are no known rhyolitic rocks within the RDF.

South of the BFSZ the rocks comprise the less altered, mafic to intermediate, sometimes felsic, massive to pillowed volcanic rocks of the Duprat-Montbray Formation ("DMF"). The DMF contains some locally occurring, relatively restricted rhyolitic units (unknown whether they are flows or pyroclastic units). Some of the rhyolites occur as inclusions within, or adjacent to, the large, possibly subvolcanic, dioritic body underlying the southeastern portion of the Property.

The Baie Fabie Fault Zone passes through the approximate centre of the Property. The closely associated Alembert Fault ("AFZ") is located about 500 m (1640 ft) southeast of the Property. The arcuate trace of the AFZ and associated BFSZ suggests that they may form segments of the Misema Inner Ring Fault of the Blake River megacaldera proposed by Pearson and Daigneault (2009) to comprise much of the BRG. This subvolcanic ring fault could have acted as a pathway for the VHMS fluids that formed the Fabie Bay and Magusi River deposits located 4 and 7 km east of the Property, respectively. Late reactivation of both fault zones during the late Au mineralization event could have provided good pathways for Au-rich fluids and the numerous subsidiary faults and splays could have provided good deposition sites for Au mineralization.

There are two drill-defined VHMS deposits near to, and along-strike from, the Property. The *Magusi River Cu-Zn-Ag-Au Deposit* is located ~5.5 km east of the Property and consists of a complex, 15 to 35 m thick, 520 m long, roughly east-west-striking, south-dipping, massive sulphide body. The past-producing *Fabie Bay Cu-Au Mine* is located about 7 km east of the Property and was partially-mined by Noranda Mining between 1975 and 1976 and by First Metals in 2007 and 2008. The deposit consists of a conformable massive sulphide lens striking east-northeast for ~90 m and extending down-dip to the south for 180 m.

There are 4 mineral occurrences with VHMS affinity within 4 km of the Property.

- The *TA-89-01 Occurrence* is located about 550m east of the Property and consists of Ag-Pb-Zn veins within altered, fragmental to massive to locally sheared andesite (possibly mafic) flows and pyroclastic rocks. This is not an orogenic Au-related occurrence (it contains no Au), but may actually be VHMS stringer zone-related. Drill hole TA-89-01, drilled in 1989, intersected 6.50 g/t Ag/1.8 m (5.9 ft). The BFSZ is associated with, and may have crosscut or deformed this mineralization.
- The *Lac Monsabrais-SO Occurrence*, located 2.25km north-northeast of the Property, consists of two, probably VHMS-related, mineralization types. The first, with only low-grade Cu values, consists of narrow, chalcopyrite-bearing quartz veins within narrow shears crosscutting the Monsabrais Granite. The second consists of chalcopyrite-pyrite-pyrrhotite within strongly chloritized breccia zones within intermediate metavolcanic flows near the nose of a fold that contained up to 7.3 % Cu and 78.9 g/t Ag.
- **The Lac Monsabrais-OSO Occurrence** is located 1.90 km north-northeast of the Property and 820m west of the Lac Monsabrais SO Occurrence. Mineralization occurs as two, 610 m-separated zones consisting of narrow, 040°-striking chalcopyrite-pyrite-pyrrhotite-bearing quartz veins within shears crosscutting the Monsabrais Granite. This mineralization is similar to that observed at the Lac Monsabrais SO Occurrence.
- **The Magusi River-SO Occurrence**, located 4 km east of the Property, consists of two closely-spaced, mineralized alteration zones within weakly altered intermediate metavolcanic tuffs. Drill core sampling obtained up 0.93% Cu, 0.83% Zn, and 11.5 g/t Ag/0.49 over a variety of widths.

The only Au deposit known to be located near the Property occurs just outside of, and is possibly marginal to, the Blake River Group. This is the past-producing *Beattie Au Mine*, located near the town of Duparquet 16.8 km to the northeast of the Property. The mine was active between 1933 and 1956, occurs near the north margin of the PDF within a syenite body intruding the Duparquet Formation, northern Timiskaming Group.

There are 3 mineral occurrences with Orogenic Au affinity within 4 km of the Property:

• The Hébécourt-SO Occurrence was discovered in 1935 about 375 m west of the Property. It is associated with a distinct, up to 6.1m wide, silicified and carbonatized mineralized shear zone containing trace to 5% finely disseminated pyrite, pyrrhotite, and trace chalcopyrite that crosscuts diorite. It hosts an east-west-striking, 35° south-dipping, 30 to 90 cm wide, 120m long quartz vein containing coarse visible Au grains. This zone is located 450 m north of the BFSZ, and may be a splay from the BFSZ.

- The Lac Fabie Nord Occurrence, located 3.5 km southeast of the Property, was discovered in 1986 and consists of fine quartz stringers and finely disseminated pyrite within a felsic feldspar porphyry. Prospecting samples graded 1.03 to 2.09 g/t Au; channel sampling contained 1.2 g/t Au/0.9m and 1.4 g/t/1.0 m; and diamond drilling intersected up to 3.00 g/t Au.
- **The Lac Fabie Nord West Occurrence** is located about 200 m west of the Fabie Nord Occurrence and was discovered in 2017. This new occurrence consists of a felsic porphyry crosscut by some altered, 080°-striking fracture zones containing hematized quartz veinlets, disseminated pyrite, and between 0.13 and 2.40 g/t Au.

There are only 13 occurrences of orthomagmatic sulphide mineralization within the BRG, one of which occurs as an unmined, semi-massive to disseminated orthomagmatic sulphide lens within a synvolcanic mafic intrusion located adjacent to the primary massive sulphide deposit of the past-producing Newbec VHMS Mine.

The only orthomagmatic sulphide occurrence located near the Property is the *Lac Despré Zone A*, located 3.8 km to the southwest. This occurrence was discovered in 1957 and consists of a ~040°-striking gabbroic body crosscutting felsic (dacitic?) metavolcanic flows. Mineralization consists of a contact-related, up to 1 m thick zone of variably disseminated pyrite, pyrrhotite, and trace chalcopyrite directly adjacent to the northwestern contact with the enclosing volcanic rocks. Surface sampling and diamond drilling encountered low-grade values of up to 0.66% Cu and 0.50% Ni.

Mineral exploration probably began in the vicinity of the Magusi West Property after the First World War, but the first documented work was gold (Au) exploration in 1935. Since that time there has been considerable exploration completed in the search for orogenic-style Au, VHMS-style base metals, and some orthomagmatic Ni-Cu sulphides. Work completed consists of: prospecting; geological mapping: trenching and pitting; a variety of airborne and ground geophysics, generally consisting of magnetometer and VLF-EM surveys, but sometimes including horizontal or vertical loop EM; soil and humus geochemical surveys; and diamond drilling.

Gold was first discovered and mined near the PDF and the LLCF fault zones in the early 1900's. The first VHMS deposits were discovered in the Noranda Mining Camp in the early to mid-1920's (the Horne Deposit was discovered in 1920), but exploration began earlier. Exploration spread outward from those first discoveries until the beginning of World War II when there was a hiatus. Exploration recommenced in the late 1940's and increased during the 1950' and 1960's to the point that between 1970 and 1992 the pace was frenetic. During the latter period, trying to sort out the connections between the various properties and companies was often difficult. The pace of exploration has slowed considerably since the early 1990's, however, activity still continues at a slow pace.

During the summer and fall of 2023, RJ Reukl Geological Services supervised and completed a limited exploration program on the Magusi West Property. This program consisted limited geological examinations, the cutting of a reconnaissance grid, reconnaissance B-horizon soil sampling, and a UAV-borne (drone) aeromagnetic survey.

The reconnaissance grid cut on the property consisted of 4 north-south oriented lines spaced at 700 m intervals with one tie-line located north and another tie line located south of the river.

The geological examinations consisted of walking all of the gridlines cut earlier in the summer and examining the exposed outcrops. No outcrops were observed north of the Magusi River; however, several large composite outcrop areas, tending to form hills and ridges, were present south of the river. Most of the outcrop areas were composed of diorite, locally crosscut by diabase dykes. The exceptions are 3 small outcrops exposed at the bottom of a large gravel pit. These small, flat, low-relief outcrops were composed of variably altered, foliated (sheared?), locally pyritic, felsic pyroclastic or volcaniclastic rocks. These 3 outcrops are considered interesting due to their deformed, altered and locally pyritic nature and deserve follow-up.

A 301 sample B-horizon soil survey, including 7 blanks and 8 sample duplicates inserted every 20 samples, was completed south of the Magusi River during July and August 2023 by RJ Reukl Geological Services. Samples were nominally taken at 25 m intervals, where soil depth and other ground conditions allowed, along cut gridlines and GPS flagged lines. The UTM (NAD 83, Z17U) locations of all samples were taken by handheld GPS. No samples were taken from bogs, swamps, marshes, roads, trails, or shallow overburden overlying outcrop. The samples were analyzed for Au, Cu, Zn (zinc), and Ag (silver) by ALS Canada Limited at their North Vancouver, BC laboratory after sample preparation was completed at the ALS Prep Lab in Thunder Bay, On.

To better interpret the soil survey results response ratios (RR) were determined for the survey dataset. This simple technique can be easily and quickly used for surveys where colour-contoured plots of kriged data are not readily available. A close examination of the response ratios, shows several anomalous Au clusters and one slightly anomalous Cu cluster with all but 2 of those anomalous samples within the southern and southeastern 30% of the Property. The 19 anomalous Au samples have response ratios between 6 and 62 and the 2 slightly anomalous Cu samples have response ratios of 5. Most of the anomalous samples were taken in proximity to intermediate, possibly subvolcanic intrusions, adjacent to the regional Baie Fabie Fault Zone. Many of the samples occur downslope and/or down-ice from exposed outcrop. Four samples (3 with anomalous Au and 2 with anomalous Cu) were taken along strike from several outcrops of deformed, altered, and rusty felsic to intermediate metavolcanic rocks exposed within a gravel pit located a short distance to the west.

Abitibi Geophysics flew a high-resolution, AeroVision[®] UAV (drone) airborne magnetic survey over the Property on September 9, 2023. The survey consisted of 24 north-south-oriented lines (L0+00E to L 23+00E), at a nominal ground clearance of 34 m, and a flight line spacing of 100 m for a total of 68 line-km flown.

Total magnetic intensity ("TMI") and reduction-to-pole ("RTP") maps were generated from the survey data to further enhance and characterize the magnetic features detected during the survey. Calculations were then made using the RTP data to prepare residual anomaly and first vertical derivative (1VD) maps. These enhancements were used to understand the distribution of magnetic amplitudes, emphasize subtle near-surface geological features, and to help track the tectonic features affecting the underlying rocks. Eight complex magnetic anomalies (HT-01 to HT-08) were defined highlighting the dominant magnetic features within the Property. Any magnetic differentiation between the RDF and the DMF of the Blake River Group was not

obvious; however, the BFSZ, which is the contact between the two geological formations, is readily visible in the magnetic data.

Abitibi then took the RTP-total magnetic field data and completed an automatic predictive method known as CET grid analysis. This technique is specifically designed for Archean orogenic gold mineralization and was applied here to rapidly locate regions of significant structural complexity as a proxy for both fluid pathways and structural traps, which are likely to be genetically related to mineralization. This method does not require knowledge of the location of existing deposits, which is the case for other techniques such as machine learning (neural network). The CET Grid Analysis was plotted on a contact occurrence density (COD) heat map that outlined several zones of high structural complexity. These zones appear intensely disrupted by northwest-trending faults or shears. Two main targets were identified north of the BFSZ and 4 closely-spaced targets were identified south of the BFSZ.

Abitibi then completed an unconstrained 3D magnetic inversion on the residual magnetic data using Seequent's VOXI MAG3D software. The core volume of the inversion (2.35 km east, 2.85 km north, 1.06 km depth) defined the volume of interest for the Survey. The horizontal cell size within the core and data volumes was set to 25 x 25 m x 12.5 m downward (depth). This initial block model allowed investigation to a depth of approximately 1.0 km. After set-up two numerical inversions were calculated to optimize the magnetic susceptibility contrast of the model elements such that the predicted response fit the residual data. At first, the VOXI MAG3D inversion generates a smooth solution. Subsequently, an Iterative Reweighting Inversion Focusing ("IRIF") takes the obtained smooth model and uses it as a reweighting constraint. It is then used to model sharper contacts in the inversion result, providing more refined targets.

The final inversion was presented as a 3D voxel and as iso-surfaces of the magnetic susceptibility. The highest magnetic susceptibility was calculated on magnetic anomaly HT-04. This distinct magnetic feature, along with anomaly HT-05, probably carry remanent magnetization. To better understand the subsurface magnetic susceptibility, vertical sections were extracted using historic drillholes as constraining factors. The sections show that drillholes TA-90-02, TA-90-03 and 933-81-1 intercepted moderately magnetic zones, while hole DH 933-81-2 narrowly missed the magnetic susceptibility shell. DH 76-1 appears to have been drilled in a non-magnetic zone composed of felsic metavolcanic rocks, while DH TA-90-04, drilled to the west of the survey, appears to pass through a weakly magnetic unit composed of intercalated porphyritic andesite and intermediate tuffs crosscut by a mafic dyke.

A simplified structural map was then generated from the 3D magnetic inversion using a horizontal slice of magnetic susceptibility extracted from the inversion at an elevation of 200 m.

Abitibi summarized that the magnetic data described above provided: a 3D magnetic susceptibility model providing information on the subsurface architecture of the magnetic sources within the Property; a mineral prospectivity heat map where at least 4 target zones perceived as potential targets for hosting gold- and VHMS-style mineralization were identified; and a detailed structural map showing the distribution of the magnetic susceptibility, including the outlines of some known and unknown faults and shears.

1.1 Recommendations

In this qualified person's opinion, the Magusi West Property has potential for the discovery of gold, zinc, copper, and silver. The Property character, highlighted by historic research and the limited 2023 preliminary exploration program, is sufficient to merit a Phase 1 work program. Subsequent exploration phases will be contingent upon the results of the program recommended below:

- Surface stripping/power washing of the exposed outcrops within the gravel pit located at UTM 614178E, 5365783N (NAD83, Z17U). This work should commence once snow has melted in the spring to take advantage of high water from snow melt in the nearby streams. After the stripping is completed then following work should include:
 - a. Detailed geological mapping of the stripped area(s) at a scale of either 1:200 or if a complex package of rocks is exposed and detail is required then mapping at a scale of 1:100; and
 - b. Channel sampling of exposed rocks once mapping is complete, not before.
- 2. The cutting of 15 km of infill lines on the existing 2023 grid.
- 3. Soil sampling, at 25 m intervals, along the new gridlines, particularly as infill in those areas of the 2023 survey where anomalous analyses were obtained.
- 4. Geological Mapping at a scale of 1:5000 that should include;
 - a. Whole rock sampling of exposed outcrops to detect lithogeochemical indicators indicative of the fluids responsible for VHMS mineralization, such a Na₂O-depletion, or MgO or FeO enrichment; and
 - b. Detailed prospecting of known outcrop areas.
- 5. Summary Report.

Prospecting, 1:5000 scale geological mapping, and soil sampling cannot commence until the linecutting program is complete. Linecutting should not commence until the spring runoff is complete to allow better access in areas of low relief or alongside streams and rivers.

The total estimated cost of the work recommended above is \$102,000 and the field program is estimated to take at least 4 weeks.

2.0 INTRODUCTION

2.1 Purpose of the Report

Allan MacTavish, M.Sc., P.Geo. (the "Author") was retained by EagleOne Metals Corp. ("EagleOne" or the "Company") to prepare an independent Technical Report on the Magusi West Property (the "Property"), located in Hébécourt Township, Abitibi-Ouest Region, Québec. This report will provide a summary of the technical information available on the Property in order to fulfill the Standards of Disclosure for Mineral Projects according to Canadian National Instrument 43-101 ("NI 43-101") and to support an Initial Public Offering and listing of the Company's shares on the Canadian Securities Exchange (CSE).

2.2 Sources of Information

The author was retained to write this report in compliance with National Instrument 43-101 of the Canadian Securities Administrators ("NI 43-101") and the guidelines in Form 43-101 F1. In accordance with NI 43-101 guidelines, the author visited the Property on October 6, 2023.

Much of the information within this report is based on publicly available Québec government assessment work reports, geological, geophysical, and geochemical reports, maps and other data available on the Québec Ministère des Ressources naturerelles et des Forêts ("MNRF") SIGÉOM (System d'information géominière) website at <u>https://sigeom.mines.gouv.qc.ca</u>. This includes information from the Geological Survey of Canada, Natural Resources Canada, the Institut national de la recherche scientifique and several predecessors to the present Québec government agencies: Ministère des Mines; Ministère des Richesses naturelles; Ministère des Ressources naturelles; and ministère Ressources naturelles et Faune.

The author has reviewed the land tenure on the Québec Ministère des Ressources naturerelles et des Forêts SIGÉOM website and reserves the right, but will not be obliged to revise the report and conclusions, if additional information becomes known after the date of this report.

The Author completed a personal inspection of the Property on October 6, 2023, accompanied by Robert Reukl of RJ Reukl of Geological Services. During this inspection the Author examined access, physiography, exposed geology and structure, the cut reconnaissance grid, several soil sample sites, drainage, and local infrastructure.

3.0 RELIANCE ON OTHER EXPERTS

For the purposes of this report the Author relied only on ownership information and the Mineral Property Agreement between the Company and Kyle Loney provided by EagleOne Metals Corp. through their Primary Exploration Consultant Rob Reukl of RJ Reukl Exploration Services. The Author has not researched property title or mineral rights for the Property and expresses no opinion, nor is he qualified to provide a legal opinion, as to the ownership status of the property other than what was provided by the Company.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Description and Location

The Magusi West Property is located approximately 39 km northwest of the City of Rouyn-Noranda, QC, 18 km southwest of the Town of Duparquet, QC, 134 km east of the City of Timmins, ON, and 75 km east-southeast of the Town of Matheson, ON (*see* Figure 2). It is located near the western border of the Province of Québec (*see* Figures 1 and 2), within southwestern Hébécourt Township, Abitibi-Ouest County. It consists of 11 contiguous unpatented Mineral Claims (the Loney Group) covering approximately 563.35 hectares (*see* Figure 3 and Table-1). Also, the claims are located partly within the southwestern portion of Abitibi-Ouest County and partially within the northwestern portion of Rouyn-Noranda County. The approximate centre of the Property is located at UTM Zone 17U, 613980E, 5366226N, in the northwestern quadrant of NTS map sheet 032D/06.

The Property was acquired by EagleOne Metals Corp. via a Mineral Property Option Agreement (the "Agreement") dated February 24, 2023 ("Effective Date") where the Company can earn 100% interest in the Property by making total cash payments of C\$170,000, incurring C\$350,000 in exploration expenditures, and issuing 550,000 common shares, all in accordance with the following schedule:

(a) Cash Payments

Make aggregate cash payments of C\$170,000 as follows:

- 1) C\$20,000 to Kyle Loney upon execution of the Agreement;
- 2) An additional C\$50,000 by December 31, 2024; and
- 3) An additional C\$100,000 by December 31, 2025.

(b) Share Issuances

Issue an aggregate of 550,000 common shares in its capital to the Optionor as follows:

- 1) 100,000 common shares upon execution of the Agreement;
- 2) An additional 200,000 common shares by December 31, 2024; and
- 3) An additional 250,000 common shares by December 31, 2025.

(c) <u>Exploration Expenditures</u>

Fund exploration and development work on the Property totalling at least C\$350,000 as follows:

- 1) At least C\$50,000 by September 30, 2023;
- 2) At least an additional C\$100,000 by September 30, 2024; and
- 3) At least an additional C\$200,000 by December 31, 2025.

(d) Net Smelter Return (NSR) Royalty

Upon Commercial Production the Agreement is subject to payment to the Optionor a 2% NSR, 1% of which can be repurchased by EagleOne for a one-time payment of C\$1,000,000.

CDC Title	Owner	Title Type	Registration	Expiry/Due	Status	Area	Work Due
Number			Date	Date		(hectares)	
2613786	Kyle Loney (100%)	Mineral Claim	28Jun21	27Jun24	Active	57.11	\$1200
2613787	Kyle Loney (100%)	Mineral Claim	28Jun21	27Jun24	Active	57.11	\$500
2613788	Kyle Loney (100%)	Mineral Claim	28Jun21	27Jun24	Active	57.10	\$1200
2613789	Kyle Loney (100%)	Mineral Claim	28Jun21	27Jun24	Active	57.10	\$1200
2613790	Kyle Loney (100%)	Mineral Claim	28Jun21	27Jun24	Active	57.10	\$1200
2613791	Kyle Loney (100%)	Mineral Claim	28Jun21	27Jun24	Active	45.45	\$1200
2615580	Kyle Loney (100%)	Mineral Claim	27Jul21	26Jul24	Active	57.12	\$500
2615581	Kyle Loney (100%)	Mineral Claim	27Jul21	26Jul24	Active	57.12	\$500
2615582	Kyle Loney (100%)	Mineral Claim	27Jul21	26Jul24	Active	15.54	\$500
2615583	Kyle Loney (100%)	Mineral Claim	27Jul21	26Jul24	Active	57.11	\$1200
2615584	Kyle Loney (100%)	Mineral Claim	27Jul21	26Jul24	Active	45.49	\$1200
11	Claim Total				Totals	56,335	\$10,400

The value of the assessment work completed by EagleOne during 2023 will extend the Expiry/Due Dates in Table 1 (above) at least five years to June 27, 2029 and July 26, 2029.

4.1.1 Québec Mineral Claims Requirements:

The information regarding Québec mineral claims presented below was summarized and modified from an online publication available at www.mondaq.com/canada/mining/88982/a-guide-to-mining-titles-in-quebec-mining-of-metallic-industrial-and-construction-minerals:

- The mineral claims comprising the property were staked as 'map designated claims' using the Québec internet-based 'Public Register of Real and Immovable Mining Rights'. This register has been in use since 2000 and its present incarnation is referred to as GESTIM Plus. The register contains information regarding mining titles and title holders and numerous online maps and tools allowing for the efficient search and management of mining titles.
- The claim is the only title that may currently be issued for exploring for extractable minerals. A claim gives its holder the exclusive right to search for minerals (other than petroleum, natural gas and brine, sand, gravel and other surface substances) on the parcel subject to the claim. A claim may be obtained by two (2) methods:
 - Map designation, in which case it is called a "map designated claim" or a "CDC" (from the French "claim désignée sur carte"), which was the method used to acquire the claims comprising the Property, or

- Staking on lands designated for such purposes (a physical method), in which case it is called a "staked claim".
- The relatively fast and simple map designation method consists of choosing preestablished, exploration available parcels of land from maps prepared by the Québec Ministry of Natural Resources and Wildlife (in French Ministère Ressources naturelles et Faune). In order to acquire a "CDC", an applicant must complete a notice of designation of claim in a prescribed form, in which it will identify itself and make a selection of claims, and send such notice to the office of the mining registrar or the regional office, together with the payment of prescribed fees.
- If the notice of map designation is accepted, the applicant will be issued a certificate of registration in respect of the selected claims.
- A claim has a term of two years and it may be renewed for additional two (2) year periods upon compliance with the application of the minimum exploration work requirements and payment of renewal fees. A claim may also be abandoned in a prescribed manner.
- The holder of a claim may conduct exploratory work for mineral substances on its parcel (other than for petroleum, natural gas and brine, sand, gravel, and other surfaces substances, as previously stated above). The holder may also extract or dispatch mineral substances, but only for geological or geochemical sampling and in a quantity not in excess of 50 metric tons (tonnes). Similarly, limited and specific deforestation of the parcel of land is permitted without a special permit, but only for line cutting, trenches and excavations upon receiving prior authorization.
- While the holder of the claim is given freedom to manage the exploration work on the claim, it must nonetheless conduct a minimum amount of exploration work in order to keep the claim active. The nature and the minimum cost of such work, as well as various rules in respect of the allocation and timing of such work are prescribed by regulation. Failure to comply with the regulation requirements may result in the loss of the claim.

The Property claims (as identified by EagoleOne), and the information defining them, were located online by the Author using both the GESTIM Plus and SIGEOM internet-based systems.

4.1.2 Québec Mineral Claims Assessment Work Requirements:

Enough work, or payment in lieu of work, on each claim must be registered on or before the expiry/due date of the claim in order to bring that claim into good standing. Any claim that has not been brought into good standing by the expiry/due date, will be forfeit.

The assessment work requirements per claim per year in the Province of Québec varies according to claim area (in hectares), the number of claim terms (years since the claim was first registered), and whether the claim is located north or south of 52° North Latitude. The claims comprising the Magusi West Property are located south of 52° North Latitude and the assessment due can be calculated from the dollar amounts presented in Table 2 (below). The assessment amount due before the expiry/due dates for the Property is C\$10,500. This amount was obtained from the Claim Abstracts available on the SIGÉOM website.

Number of Claim Terms (years)	Area <25 ha	Area 25-45 ha	Area >45 ha	
1	\$500	\$1200	\$1800	
2	\$500	\$1200	\$1800	
3	\$500	\$1200	\$1800	
4	\$750	\$1800	\$2700	
5	\$750	\$1800	\$2700	
6	\$750	\$1800	\$2700	
7	\$1000	\$2500	\$3600	

Table 2: Magusi West Property Claims Data

4.2 Environmental Concerns

There is no historical production from mineralized zones on the Property, and the author is not aware of any environmental liabilities which have accrued from historic exploration activity.

4.3 First Nations

The mineral claims comprising the Property are situated on Crown Land and fall under the jurisdiction of the Québec Government, as does the duty to consult with any indigenous groups associated with the land underlying the Property. This is defined within the Québec Government online publication "Aboriginal Community Consultation Policy Specific to the Mining Sector" downloaded from the Québec MNRF website at <u>https://mrnf.gouv.qc.ca/wp-</u>

<u>content/uploads/PO-consultation-mines_MERN-ANG.pdf</u>. The publication states (taken almost, but not completely, verbatim):

Constitutional duty incumbent upon Québec:

 Although mining proponents are not subject to the obligation to consult and accommodate Aboriginal communities, they may be required to cooperate at certain stages of the process, where their presence is useful for the proper conduct of the consultation, including explaining certain more technical aspects of a mining project. However, the responsibility for consultation and accommodation is incumbent upon Québec.

Beyond the consultations held by Québec

- This Policy emphasizes the proponent's role and the importance of exchanging information through good faith and mutual respect, and of developing and maintaining harmonious relations between the various parties, so that each party can benefit from the maximum positive spinoffs and minimum negative impacts associated with mining activities.
 - This approach is based mainly on non-coercive measures, which aim to strengthen relations between Aboriginal communities and mining developers operating in Québec.
 - The effectiveness of this approach lies in the willingness of all parties to respect the spirit behind it and work together.

This Policy sets out the guidelines for consulting Aboriginal communities about exploration and mining activities. The Role and Responsibility of the Mining Proponent is as follows:

- In order to develop and maintain harmonious relationships with Aboriginal communities, mining proponents are encouraged to interact with them about their project throughout the mining project's development process:
 - Mining proponents are strongly encouraged to approach Aboriginal communities as early as possible in the mining development process, so that they can identify the concerns and

expectations of the affected Aboriginal communities early on and take them into account, where appropriate, in their project development.

- They should commit to establishing and maintaining harmonious relationships with Aboriginal communities, and even strengthening these ties throughout the different phases of their mining projects.
- Mining proponents should base their communication on the transparent exchange of information to foster mutual cooperation.
- Discussions could focus on the various aspects of the mining project, including exploration and development planning, timelines, activity logistics, locations, project progress monitoring, business opportunities for the community concerned, activity impacts and possible mitigation measures.
- Mining proponents are invited to familiarize themselves with the general Aboriginal context in Québec and the realities and particularities of the Aboriginal communities concerned. If necessary, they can contact Québec to obtain information on the communities concerned and their roles and responsibilities with respect to them.



Figure 1: Provincial Location Map.



Figure 2: Regional Property Location Map.



Figure 3: Claim Map.



Figure 4: Property and Physiography Map.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE PHYSIOGRAPHY

5.1 Access

The Property can be accessed in several ways using public highways, secondary roads, and logging roads, depending upon whether the start point is within the Province of Ontario or within the Province of Québec. The most direct access route is by travelling east on Highway 101 from Timmins, ON to the Québec provincial border, where the highway designation changes to Route 388, and then further east to the Chemin de la Faune which heads south and eventually passes near the northeastern corner of the Property. The least direct route consists of travelling north from Rouyn-Noranda, QC, along Québec Route 101 to Chemin Jason and turning northwest to follow a sequence of secondary access roads that eventually become Chemin de la Faune, which then leads northwest to near the Property (as above). The southern part of the Property is accessed from Chemin de la Faune via logging roads of various vintages that are located south of the Magusi River, which transects the Property from southeast to northwest. These roads cross through the southeastern and southern portions of the property. Access north of the Magusi River is minimal and confined to a single series of non-driveable, almost overgrown logging roads, now trails that extend west for approximately 1.5 km. Access to the western part of the Property is presently only on foot or via canoe/boat on the Magusi River.

5.2 Climate

The climate in the area of the Property is continental and typical for west-central Québec and northeastern Ontario, with warm to occasionally hot, relatively dry summers, and cold winters with moderate amounts of accumulated rain and snow (*see* Figures 5, 6, and 7). The City of Rouyn-Noranda is located 36 km southeast of the Property and Weatherspark.com states that summers in the Rouyn-Noranda region, including the Property, are long, reasonably comfortable, and partly cloudy. The website also states that winters are frigid, snowy, and tend to be overcast. Over the course of a normal year, the temperature typically varies from -21°C to 24°C and rarely below -32°C or above 29°C (Figure 5). The annual rainfall (Figure 6) is approximately 870 mm (34.14 in) which includes an annual snowfall (Figure 7) of approximately 282.2cm (113.4 in).



Figure 5: Rouyn-Noranda and Region Yearly Temperature Variations. Data Source <u>https://weatherspark.com/y/19894/Average-Weather-in-Rouyn-Noranda-Canada-Year-Round</u>.



Figure 6: Rouyn-Noranda and Region Yearly Rainfall Variations. Data Source <u>https://weatherspark.com/y/19894/Average-Weather-in-Rouyn-Noranda-Canada-Year-Round</u>.



Figure 7: Rouyn-Noranda and Region Yearly Snowfall Variations. Data Source <u>https://weatherspark.com/y/19894/Average-Weather-in-Rouyn-Noranda-Canada-Year-Round</u>.

5.3 Local Resources and Infrastructure

Other than a nearby secondary access road and several recent vintage logging roads there is no infrastructure around or near the Property. The closest infrastructure would be of the Town of Duparquet, QC, located 18 km northeast. The largest nearby population centres hosting civic, supply, experienced mining personnel, and mining infrastructure would be the City of Rouyn-Noranda, located approximately 40 km to the southeast, and the City of Timmins, located 134 km to the west (Figure 2). The nearest source of power would be an existing line that supplied power to the Fabie Bay Mine. The closest approach of that line to the Magusi West Property is 6 km and is located at the junction between the Fabie Bay Mine access road and the Chemin de la Faune. Other sources of power would be those lines supplying power to the cottages and home located on the norther shoreline of Lac Hébécourt west of the town of Duparquet. A high-power transmission line is located ~30 km east-southeast of the Property near the past-producing Norbec Mine.

The Property is small, but is still of sufficient size to support an underground mine and associated infrastructure. If required there is available land adjacent to the Property that could be acquired to support any necessary infrastructure. There are no parks, recreation areas, townsites, or indigenous communities anywhere near the Property that would limit the construction of roads or infrastructure.

5.4 Physiography

The terrain within the Property (*see* Figure 4, above) is relatively flat in the centre of the flanking the Magusi River (which bisects the Property from east to west) and with moderate to rugged relief in the southeastern and northern portions of the Property. The land surface is covered by boreal forest consisting of large stands of poplar, maple, white birch, white and black spruce, and jack pine. The forest is locally clearcut, particularly south of the river. Low-lying areas, particularly near the streams and rivers, host swamps, marshes and bogs whose edges are forested by black spruce, tamarack, alder, and locally cedar.

The elevation of the Property ranges between 265m (the Magusi River) up to 328 m (outcrop ridges south of the river). The area is drained to the east by the Magusi River and its tributaries into Lac Acotawegami. Overall regional drainage is to the south. Slopes are usually gentle to moderate, but can locally be quite steep along the edges of outcrop ridges. Outcrop percentage is highly variable throughout the Property with a conservative estimate of between 1 and 5%.

6.0 HISTORY

6.1 General History

Mineral exploration probably began in the vicinity of the Property after the First World War, but the first documented work was gold (Au) exploration in 1935. Since that time there has been considerable exploration completed in the search for orogenic-style Au, VHMS-style base metals (mainly Cu and Zn), and some orthomagmatic sulphides (Ni-Cu).

Gold was first discovered and mined near the Porcupine Destor (PDF) and the Larder Lake-Cadillac (LLCF) fault zones in the early 1900's. The first VHMS deposits were discovered in the Noranda Mining Camp in the early to mid-1920's (the Horne Deposit was discovered in 1920), but exploration began earlier. Exploration spread outward from those first discoveries until the beginning of World War II when there was a hiatus. Exploration recommenced in the late 1940's and increased during the 1950' and 1960's to the point that between 1970 and 1992 the pace was frenetic. During the latter period trying to sort out the connections between the various properties and companies was often difficult. The pace of exploration has slowed considerably since the early the early 1990's, however, some activity still continues.

6.2 Property History

Most of the information described within this sub-section was summarized from the Québec government assessment data website at <u>https://sigeom.mines.gouv.qc.ca</u> ("SIGÉOM") which, at this time, is the only available source of assessment information. SIGÉOM is the depository of all mineral exploration assessment work that has been filed within the province since the Québec Mining Act was first set into law. Even though the data available is considerable it does not contain all of the information for all of the work completed on all properties. Many companies and individuals filed all work completed; however, others only filed that work required to hold active mineral claims in good standing. This has resulted in an incomplete exploration picture in most areas.

The information summarized here primarily consists of work completed within 1 km of the boundaries of the Magusi West Property, as best can be determined, and includes several airborne surveys and some diamond drilling contracted by the Québec government (Ministère de l'Énergie des Ressources du Québec).

- **1935 and 1936:** Gold was discovered by prospecting in 1935 about 375 m (1230 ft) west of the Property by Mel Robb of **Robb-Montbray Mines Ltd.** The Au occurred within a shear zone-hosted quartz vein contained within silicified, carbonatized, and sericitized diorite containing up to 5% disseminated pyrite (py), pyrrhotite (po), and some chalcopyrite (cp). This is now known as the <u>Hébécourt-SO Occurrence</u> and a detailed description is presented within the Mineralization Section (below). Work completed in 1935 and 1936 included prospecting, bedrock trenching, grab sampling, and 3 short diamond drill holes (DH). The DH are not contained within the SIGÉOM database and their lengths, locations, and what geology and mineralization encountered are unknown.
- **1945:** A description of the *Hébécourt-SO Occurrence*, and its discovery, was completed by Mining Engineer C.T. Bischoff for Cross Canada Exploration Ltd. This report does mention

that considerable Ni-Cu exploration (most unreported) was underway within Hébécourt and Montbray townships at the time he visited the Au occurrence.

- **1950 and 1956:** The **Mining Corp. of Canada Ltd.** completed geological mapping on the Ouzounian Property which overlapped the northern 10% of the present Property. The mapping extended north to the southern shoreline of Lac Hébécourt, 5.5 km (3.4 mi) north.
- 1959, 1960, and 1965: Ground magnetometer and ABEM Electromagnetic Gun (EMG), geophysical surveys were completed in 1959 by Nealon Mines Ltd. on the Thompson Option located ~1640 ft (500 m) north and northeast of the Property. No conductors were detected by the EMG survey and the magnetic profile was relatively flat. The large Thompson Option property included the Lac Monsabrais SO and Lac Monsabrais OSO Cu-Ag occurrences (described below) that are located several km north of the Property.
- **1963:** The Québec Department of Natural Resources (DNR) complete a geological mapping program covering all of Hébécourt Township, including the Property. The mapping appears to be of good quality and the maps (released in 1966) were at a scale of 1000 ft=1 inch.
- **1971:** The DNR contracted Questor Surveys Ltd. to complete a 6 channel Input Mark V airborne electromagnetic and magnetic survey over a large area, including most of the western Blake River Group within Québec. No anomalies were detected within the Property.
- **1972 and 1973:** *Protea Developments Inc.* completed VLF-EM and magnetometer surveys in 1972 on claims owned by F. Tagliamonte. The claim group almost completely overlapped the present claims and extended to the west to include the Hébécourt SO Au Occurrence and its western strike extension. Early in 1973 a follow-up Crone Horizontal-Loop EM (CEM) survey was completed. Two drill holes (totaling 809 ft or 245 m) were completed in early 1973 to test two of the CEM conductors. Neither hole intersected Au mineralization.
- 1972 to 1977: Work from at least 40 exploration programs were filed for assessment credit during this time period for work within, and surrounding, the present Property by several individuals, numerous companies, and their option and Joint Venture (JV) partners. Claim Groups, and portions of those groups, seemed to change hands on a regular basis resulting in overlapping property interests. The two dominant names during this period are New Insco Mines Ltd. and F. Taglamonte; however, Arcadia Explorations Ltd., Mustang Mines Ltd., and Protea Developments Ltd. were often present as partners as were Panacan Minerals and Oils Limited, ACAP Diversified Inc., Noranda Exploration Co. Ltd., and Lewis Red Lake Mines Ltd on a lesser basis.

Work completed included magnetometer, VLF-EM, HLEM, Turam EM, MaxMin II HLEM, CEM, IP-EM and Resistivity, Time-domain EM (TDEM), and ABEM Electromagnetic Gun ground geophysical surveys; geological mapping at a variety of scales; Pionjar basal till sampling, and at least two diamond drilling programs. Numerous VLF-EM conductors, some coincident with HLEM anomalies, were detected with some recommended for follow-up. The recommended follow-up included more geophysics (often IP-EM), basal till sampling, and diamond drilling. Some geophysical surveys had issues with conductive overburden. A fence of four diamond drill holes (one abandoned) were completed by *Lewis Red Lake Mines Ltd.* about 2625 ft (800 m) east of the Property, one in 1975 (700 ft or 213 m) and three in 1976 (1790 ft or 545 m). A single 750 ft (230 m) hole was completed in 1976 by *Noranda Exploration Co. Ltd.* on a property optioned from F. Tagliamonte that now includes the present Property. All holes drilled targeted ground HLEM anomalies and no anomalous assays were obtained.

- **1979:** The Ministère de l'Énergie des Ressources du Québec (once the DNR) completed a 9-hole, 2482 m (8145 ft), stratigraphic diamond drilling program along a north-northwest-trending section line. The northernmost hole was drilled 580 m east of the northern corner of the present Property and the southernmost hole was drilled 1420m east of the southeastern corner of the Property. These holes were drilled to test the stratigraphy and structure of the rock package located east of the Magusi River VHMS Deposit and the Fabie Bay VHMS Mine (*see* descriptions in the Mineralization Section, below).
- 1980 to 1986, 1989, and 1990: Over an 11-year period ground magnetometer, VLF-EM, HEM, IP-EM, and resistivity surveys; bedrock trenching and sampling; 5 diamond drilling programs; and several project summaries and compilations were completed on a property owned by *F. Tagliamonte*. Over time the exploration partners on this group included *Corbeau Resources Ltd., SOQUEM, Churchill Energy Inc., Midnapore Resources Inc., Noranda Exploration Co. Ltd., Nova-Cogesco Resources Inc., and Orcana Resources Ltd.* Throughout most of the 1980's the Tagliamonte Group enclosed and extended to the west and north of the present Property. The claim group was extended to the east during the late 1980's to encompass the area of what became the *TA-89-1 (Project Tagliamonte) Occurrence* (described in the mineralization section, below).

The trenching and sampling work concentrated on the structures and mineralization associated with the <u>Hébécourt SO Occurrence</u> and did not add any new information or significant analyses. The various ground EM surveys detected a variety of anomalies of varying strengths, some coincident with known structures or other geophysical anomalies, that were tested by the 5 drilling programs.

In 1982 **SOQUEM** (a Québec Provincial Government-owned exploration company) drilled 2 holes (305 m or 1000 ft) within eastern and southeastern portions of the present Property that tested IP chargeability/resistivity anomalies coincident with VLF-EM anomalies; however, no anomalous analyses were obtained from samples taken.

A 5-hole drill program (2070 ft or 630 m) completed by *Midnapore Resources Inc.* in late 1985 and early 1986 tested a reportedly Au-bearing, generally east-west-striking shear zone flanking the hangingwall diorite to the north. The westernmost 4 holes tested a 250 ft (75 m) interval of the variably brecciated, pervasively chloritized and sericitized, weakly mineralized, locally quartz-carbonate-brecciated shear zone. Drill samples from the shear contained anomalous to low-grade Au values (up to *0.065 opt* from DH MNPH85-1). DH MPSH86-4 was drilled 1600 ft (490 m) to the east of the other 4 holes at a point located 245 ft (75 m) west and 665 ft (200 m) south of the northwest corner of the present Property. This hole was planned to test the extension of the shear zone where it was coincident with a Turam anomaly detected during a 1975 survey. The hole intersected *1.32% Cu and 0.11%*

Zn/1 ft (30 cm) and localized anomalous Au from a narrow, massive chalcopyrite vein within sheared, altered diorite. This intersection defines a Cu-(Zn±Au) occurrence (albeit a narrow one), that is not designated in the SIGÉOM database, within a variably mineralized structure. The Author has designated this as the **MPSH86-4 Occurrence**. After an IP-EM survey was completed Midnapore drilled another 8 holes (5171 ft or 1575 m) that were designed to test new IP anomalies, 1975-vintage Turam anomalies, as well as to extend several of the holes drilled earlier in the year. The 3 holes testing IP and Turam anomalies did not yield any significant results; however, one hole (MNPH86-6) intersected **1.74% Zn/1.5 ft (0.45 m)** within sheared and altered hangingwall diorite containing 2 to 5% disseminated pyrite, pyrrhotite and sphalerite. This intersection also classifies as an unrecorded occurrence along an altered and mineralized structure and the Author has designated it the **MNPH86-9 Occurrence**.

Noranda Exploration Co. Ltd. and Nova-Cogesco Resources Inc. drilled a 456.6m (1500 ft) deep hole 550 m (1800 ft) east of the Property in 1989 that discovered the <u>TA-89-01 Aq</u> <u>Occurrence</u> (see description within the Mineralization Section, below). Analyses of drill core from DH TA-89-01 contained between **0.160 opt Ag/0.70 m and 0.270 opt Ag/1.40 m** within chlorite-sericite schist containing quartz-ankerite veinlets. This not an orogenic Au occurrence, but may represent the remnants of a VHMS stringer system since it is along-strike from the Magusi River VHMS Deposit located 4.5 km to the east.

The final drill program completed during the 11-year period comprised 4 holes drilled by *Noranda Exploration Co. Ltd. and Orcana Resources Ltd*. Two holes were drilled within the present Property on unspecified targets, but the location of the holes suggests targeting geophysical anomalies along strike from the *Hébécourt SO Occurrence* (TA-90-02, western hole) and the Baie Fabie Fault (TA-90-03, eastern hole). No significant Au or base metals values were intersected.

- **1984 to 1987:** Aunore Resources Inc. completed a large amount work over a 4-year period on a large claim group overlapping the northern edge of the present Property. Aunore's property extended to the Porcupine Destor Fault Zone in the north, Lac Duparquet in the East, and the Ontario border on the west. Most of the work, but not all, was done well away from the present Property. Exploration within or near the Property included a REXHEM-3 airborne electromagnetic survey, reconnaissance geological mapping, soil (humus) geochemistry surveys, and several data compilations and summary reports. Several REXHEM-3 anomalies and some weak humus soil geochemical anomalies were located directly adjacent to the Property to the north and west. There is no evidence in the SIGÉOM database for any diamond drilling completed near or within the Property.
- **1986:** The Ministère de l'Énergie des Ressources du Québec completed a 6 channel Input Mark VI airborne electromagnetic survey over a large area stretching from Rouyn-Noranda in the southeast and almost to the Ontario border east of Lac Hébécourt in the northwest, including the area surrounding present Property. Several 2, 3 and 4 channel anomalies occurred marginal to the Property. The Questor Mark VI Input survey had better depth penetration than the earlier Mark V survey; however, neither system tended to penetrate to greater than 50 m depth.

- **1996:** The Ministère de l'Énergie des Ressources du Québec reprocessed the historical airborne geophysical data for a large area including the present property.
- **2002** and **2003**: Joint Venture (JV) partners **Noranda Inc., Novicourt Inc., and Virgina Gold Mines Inc.** completed several airborne MegaTEM surveys, flown by Fugro Airborne Surveys, over their Abitibi JV which included the Duparquet-Rouyn-Noranda area (and the present Property) in 2002. There was follow-up drilling and ground geophysics of anomalies detected by the airborne survey, but no holes were drilled near the Property.

The JV partners contracted Quantec Geoscience Inc. in 2003 to complete borehole TEM surveys on holes drilled as follow-up to the MegaTEM survey and ground TEM (Timedomain or pulse EM) surveys to better define some anomaly clusters. No follow-up holes were drilled anywhere near the Magusi West Property; however, five small grids were cut over MegaTEM anomaly clusters located within 3 km of the present Property. Grid HEB-105 was cut to cover the only nearby cluster and was located between 100 and 300 m north of the northwestern corner of the Property. No interpretation of the survey completed is available; however, examination of the line profiles within the Quantec report by the author strongly suggests no conductor of any significance was detected.

- **2007:** *First Metals Inc.* contracted Aeroquest International to complete an airborne electromagnetic (AeroTEM), radiometric, and magnetic survey over a large area located to the east of, and slightly overlapping, the present Property. The SIGÉOM website does not contain any reports providing interpretation; however, available anomaly maps show 4 very weak, possibly overburden anomalies present within the eastern part of the Property and coincident with the trace of the Magusi River.
- **2011 to 2013:** Northern Skye Resources Ltd. completed prospecting, a beep mat survey, and some channel sampling during 2011 within the Property south of the Magusi River. The 12 channel samples and 1 grab sample were taken from four outcrops that the samplers had stripped of moss. No significant or anomalous base or precious metals values were obtained from the samples taken.

In 2012 Northern Skye contracted Geophysics GPR International Inc. to complete helicopter-borne GPR Time-domain EM and magnetic surveys over a large area located west, northwest, and northeast of the present property, including the northern half. The maps show at least 15 weak, low-channel. off-time anomalies and eight possible anomalies.

During 2013 Northern Skye drilled 4 holes, totalling 445.36 m (1460 ft), only one of which was located near the present Property. DH H12-001 (101.26 m or 332 m), drilled 515 m west of the western Property boundary, tested the deformation zone associated with the <u>Hébécourt SO Occurrence</u>. The hole intersected a variably carbonatized. anastomosing shear zone crosscutting a variably fractured, hematized, and carbonatized quartz-feldspar porphyry (historically referred to as a diorite?). No analytical results from the hole are available

2012 and **2015**: During 2012 Mag Copper Ltd. completed in-loop Time-domain EM surveys over three cut grids located within a large group of claims adjacent to the east and southeast of the present Property. There was a slight overlap with the southeast corner of

the Property. The surveys detected 10 weak anomalies and recommended prospecting and IP-EM surveys; however, there is no record of this work being done. During late winter 2015 the company completed beep mat surveys over three widely-spaced areas, one of which overlapped the southeastern corner of the Property. Several conductive anomalies were detected on the Property and ground follow-up was recommended. Again, there is no record of any further work being completed.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Property is hosted within the felsic, intermediate, and mafic metavolcanic rocks of the Blake River Group which is located within the southern portion of the Neoarchean-age Abitibi Greenstone Belt ("AGB"). The AGB is, in turn, contained within the Wawa-Abitibi Terrane (formerly referred to as the Wawa-Abitibi Subprovince) of the southeastern portion of the Superior Province of the Canadian Precambrian Shield (the largest Archean craton in the world).

Monecke et al. (2017) describe the AGB (*see* Figure 8) as the largest and most continuous tectonic and supracrustal unit within the Canadian shield and the largest greenstone belt in the world. The AGB straddles the Ontario-Québec provincial border and extends ~720 km east-west and 310 km north-south (Mercier-Languevin et al., 2011). The belt is a prolific host of many world-class VHMS and Au-rich VHMS (i.e., Horne); orogenic gold; significant orthomagmatic sulphide; magmatic hydrothermal (intrusion related); and several Au and Cu-Au porphyry deposits. The belt is bound to the north by the dominantly meta-plutonic domain of the Opatica Terrane (Subprovince); southeast, by the dominantly metasedimentary schists and paragneiss of the Pontiac Terrane (Subprovince); east by the largely high-grade metamorphic Grenville Province; and west by the 500 km-long, north-northeast-trending Kapuskasing structural zone that juxtaposes granulite facies metamorphic rocks with lower metamorphic-grade AGB rocks.

The Abitibi greenstone belt-was subdivided by Thurston et al. (2008) into seven volcanic episodes based on groupings of U-Pb zircon ages. The Thurston et al. (2008) ages were augmented by ages determined by Ayer et al. (2005). The volcanic episodes are the: pre-2750 Ma (un-named unit); 2750 to 2735 Ma (Pacaud); 2734 to 2724 Ma (Deloro); 2723 to 2720 Ma (Stoughton-Roquemaure); 2719 to 2711 Ma (Upper and Lower Kidd-Munro); 2710 to 2704 Ma (Upper and Lower Tisdale); and 2704 to 2695 Ma (Upper and Lower Blake River).

Ayer et al. (2008) state that

"Many of these volcanic episodes are intercalated with and capped by relatively thin sedimentary interface zones dominated by chemical sedimentary rocks. Stratigraphic and geochronological analysis indicates discontinuous volcanic deposition with these sedimentary zones representing localized gaps of 2 to 27 m.y. between volcanic episodes. The gaps thus represent condensed sections consisting of up to 200 m of iron formation, chert breccia, heterolithic debris flows, sandstone, argillite, and conglomerate. The data support an autochthonous origin for the belt and suggest that the belt consists of a series of stratigraphic and/or lithotectonic units bounded by localized unconformities. This has fundamental implications for regional correlation and development of greenstone belts in general. The stratigraphic gaps are important as they are commonly correlative with the time of formation of Abitibi VMS deposits and thus the sedimentary interface zones represent important stratigraphic markers which can be used to help focus exploration."

7.1.1 Blake River Group:

The 3200 km² Blake River Group (BRG) underlies the Property (*see* Figure 9), which, as stated above, is the youngest and richest volcanic sequence within the Abitibi Greenstone Belt at 2704 to 2695 Ma (Thurston et al., 2008). The BRG primarily consists of a 4 to 7 km thick succession of submarine, basaltic to rhyolitic, tholeiitic to calc-alkaline volcanic and volcaniclastic rocks with several felsic volcanic centres intruded by a variety of plutons and mafic to intermediate dykes and sills (Paradis et al. 1988; Galley and van Breemen 2002; Galley 2003; Piercey et al. 2008; Ross et al., 2011, and references therein). U-Pb ages determined by Goutier et al. (2009) allowed the subdivision of the BRG in Ontario into a lower unit (2704-2699 Ma) and an upper unit (2699-2695 Ma) known in Québec as the Misena and Noranda units, respectively (*see* Figure 10). The BRG is further subdivided within Québec into the Reneault-Dufresnoy, Rouyn-Pelletier, Duprat-Montbray, Hébécourt (Lower Blake River), Horne, Camac, Dupuis, Bousquet and Noranda Formations by Goutier et al. (2009) and McNicoll et al. (2014).

The BRG, for most of its areal extent within both Ontario and Québec, is bound on the north and south by the crustal-scale Porcupine-Destor (PDF) and Larder Lake-Cadilac (CCLF) faults, respectively, and along its northeast margin by the La Pause fault zone (LPF). Both the PDF and CCLF systems act as foci of a large amount of late Au mineralization that usually occurs adjacent to, or associated with, faults that splay from or are subsidiary to the main structures (*see* below). The intersection of the LPF with the CCLF coincides with a large cluster of small to large Au deposits near the town of Cadillac. Rocks of the BRG were subjected to major north-south shortening events (regional D2); however, the deformation is heterogeneously distributed within the BRG. The BRG is characterized by tilting of the strata and by the presence of laterally extensive shears and tight folds. Metamorphic grade within the bulk of the BRG is lower greenschist to sub-greenschist facies; however, in the south there are some lower amphibolite facies rocks (Mercier-Languevin et al., 2011).

Pearson and Daigneault (2009) postulated that the Blake River Group comprised a megacaldera complex composed of the large Misema Megacaldera including two nested, overlapping collapse structures referred to as the New Senator caldera and the previously identified Noranda caldera. They identified and defined the three structures by the distribution and geometry of synvolcanic faults and dyke complexes and the organization of intrusive and volcanic facies. Pearson and Daigneault (2009) defined the Blake River Megacaldera Complex on the basis of the mafic-intermediate dyke swarm pattern; the overall domal geometry; the fault pattern; the distribution of volcaniclastic rock; and the distribution pattern of carbonate-rich hydrothermal alteration.

If this theory is correct then some of the major fault zones present within the BRG, particularly those with arcuate form, may be the remnants of synvolcanic ring faults associated with the collapse of the megacaldera complex (*see* Figure 11). If they are synvolcanic ring faults then they could, and possibly did, provide pathways for metal-rich hydrothermal fluids to reach and vent onto, or just below, the seafloor. The proposed location of the inner ring fault of the megacaldera complex coincides with the Alembert (AFZ) and Baie Fabie fault (BFSZ) zones passing through or near the property and the nearby Magusi River and Fabie Bay (New Insco) VHMS deposits (*see* Mineralization section below). Reactivation of these faults could easily have provided pathways for Au-bearing fluids associated with the late orogenic Au mineralization event.



Figure 8: Geological map of the Abitibi Greenstone Belt showing the location the various important fault zones. Thurston et al. (2008).



Figure 9: The Blake River Group (green) within the southern Abitibi greenstone belt showing volcanic and sedimentary rock distribution and major regional structures. LLCfz = Larder Lake-Cadillac fault zone, LPfz = La Pause fault zone, MNfz = Manneville North fault zone, PDfz = Porcupine-Destor fault zone, Pfz = Pipestone fault zone. From Monecke et al. (2017). The red star shows the approximate location of the Magusi West Property.



Figure 10: Relevant features of the Blake River Group and distribution of the upper and lower subgroups (Noranda and Misema, respectively) and the distribution of felsic volcanism. The red star shows the approximate location of the Magusi West Property. Figure from Pearson and Daigneault (2009).



Figure 11: The Blake River Megacaldera Complex. The synvolcanic faults and distribution of volcanic and intrusive facies delineate the host Misema caldera and the nested New Senator (shaded) and Noranda calderas (lower right of shaded section). The important feature of this figure with respect to this report is the Inner Ring Fault (Misema Inner Ring Fault) which defines the location of the Alembert and Baie Fabie faults which are the components of the Inner Ring Fault which are associated with the Magusi River Property. The 2 prospect symbols left of the "Crescent shaped structures" label define the location of the Fabie Bay and Magusi River VHMS deposits. The red star marks the approximate location of the Magusi West Property. Map after Pearson and Daigneault (2009) and Moore et al. (2014) and was taken from Moore et al. (2016).


Figure 12: Regional Geology Map. Ross et al. 2011 (CJES, v48, Figure 7). The red star marks the approximate centre of the Magusi West Property

7.2 Local and Property Geology

The Magusi West Property, is underlain by rocks of the Misema sub-group (Lower Unit) of the Archean Blake River Group (Moneke et al., 2017) located within the southern Abitibi Greenstone Belt (*see* Figure 12). The geological description of the Property (*see* Figure 13) was summarized by the Author from SIGÉOM, QDM geology maps, and Ross et al. (2011).

The Property roughly straddles the Baie Fabie Fault/Shear Zone (BFSZ) which forms the boundary between the altered volcanic rocks to the north and the less altered to unaltered volcanic rocks to the south.

North of the BFSZ the rocks are part of the Reneault-Dufresnoy Formation (RDF) (Goutier et al., 2007) which is a homoclinal sequence that youngs to the south and is centred on Lac Monsabrais (located 3.2 km northeast of the Property). The rock package consists of mafic to intermediate, transitional to calc-alkaline, massive to pillowed submarine flows and volcaniclastic rocks, crosscut by diorite (often quartz- and/or feldspar-phyric, and probably hypabyssal), gabbro, and the synvolcanic Monsabrais Pluton (Ross et al., 2008a; Ross et al., 2011). The pluton is a multiphase intrusion that ranges from tonalite to quartz diorite in composition whose southern margins are located 1.9 km north of the Property (Figure 12). The pattern of the dioritic units associated with and marginal to the pluton suggests that they are closely related to the pluton and may be apophyses of it.

The vesicularity of the lava flows and the proportion of fragmental units present within the rock package increase southward (Ross et al., 2011, and references therein). There are no rhyolitic rocks observed north of the BFSZ. The observed volcaniclastic rocks comprise relatively abundant intermediate to mafic fragmental units within the property. They primarily consist of monomictic, non-bedded and non-graded, lapilli tuffs and tuff-breccias that are intimately intermixed with coherent subaqueous lava flows. Jigsaw-fit textures are present locally and most of the package is interpreted as dominantly hyaloclastitic (Ross et al., 2011).

The rocks south of the BFSZ comprise mafic to intermediate, sometimes felsic, massive to pillowed volcanic rocks of the Duprat-Montbray Formation (DMF). The available literature does not provide much information on these rocks and also does not note the presence of any volcaniclastic units within the northern part of the formation. What are present are some localized, relatively restricted rhyolitic units (unknown whether these are flows or pyroclastic units). Some of the rhyolite units occur as inclusions within or adjacent to the dioritic body underlying the southeastern portion of the Property. If this intrusion is subvolcanic then it is possible that it may have stoped upward into its own extrusive volcanic products.

Geology maps by Thibault (1960, 1961) and on SIGÉOM show that the BFSZ passes through the approximate centre of the Property and the associated Alembert Fault (AFZ) is located about 500 m (1640 ft) southeast of the Property (Figure 13). The BFSZ passes through the <u>TA-89-01</u> <u>Ag-Zn Occurrence</u>, located a short distance east of the Property (*see* Figure 13), and about 425 m (1395 ft) south of the <u>Hébécourt SO Au Occurrence</u> located a short distance west of the Property (*see* descriptions below, Figure 13). An interpreted west-northwest-trending splay from the BFSZ apparently passes through the occurrence. East of the Property the fault strikes east and passes a short distance north of the <u>Magusi River VHMS deposit</u> and the past-

producing <u>Fabie Bay VHMS Mine</u> (Figure 13). The AFZ passes south of the Magusi River Deposit and north of the Fabie Bay Mine. The BFSZ merges with the AFZ about 250 m north-northeast of the Fabie Bay mine. The proximity of both faults to the deposits strongly suggests that they have had a tectonic effect on both deposits. The arcuate trace of the AFZ and its associated BFSZ suggests they may form segments of the Misema Inner Ring Fault of the megacaldera (Figure 11) proposed by Pearson and Daigneault (2009). This subvolcanic ring fault could have acted as a deposition site for the VHMS fluids that formed the Fabie Bay and Magusi River deposits (described below).

Regional metamorphism within both volcanic packages only reaches sub-greenschist grade, the level of tectonic strain is very low, and volcanic textures are well preserved. (Ross et al., 2011).



Figure 13: Magusi West Property Geology Map. All geology and data taken from the SIGÉOM website.

7.3 Mineralization

The Abitibi Greenstone Belt is very well endowed with base metal and gold mineralization (*see* Figure 14) consisting of several distinct styles comprising Volcanic-hosted Massive Sulphide (VHMS); Au-enriched VHMS; orogenic Au mineralization; orthomagmatic sulphide mineralization (Ni-Cu-PGE); several pre- to syn-deformation Au and Cu-Au porphyry systems; and syenite-associated magmatic-hydrothermal deposits (Mathieu, 2021).

The Property is contained within the Blake River Group of the AGB which is the bestmineralized of the 7 groups comprising the AGB. It is particularly well-endowed with VHMS, Au-enriched VHMS; and intrusive rock-associated Orogenic Au mineralization. The BRG contains >30% of the known mineral deposits within the AGB and almost half of the mined VHMS tonnage.

The BRG hosts numerous mineral occurrence and prospects of VHMS and orogenic Au deposit types as well as some of the orthomagmatic sulphide type. Only two SIGÉOM-named occurrences are present within a 1 km radius of the Property with another five within a 4 km radius (*see* Figure 14). There are also two occurrences not identified within SIGÉOM, but identified from a detailed review of the assessment data by the Author, that occur short distances west of the northwestern boundary of the Property (Figure 14). No mineral occurrences have presently been identified within the boundaries of the Property, Descriptions of nearby VHMS and Au mineral deposits and the nearby mineral occurrences are presented below by deposit type.

7.3.1 Volcanic-hosted Massive Sulphides:

The BRG hosts many VHMS occurrences, prospects, and possibly as many as 33 deposits (Pearson and Daigneault, 2009; Mercier-Languevin et al., 2017). Some of these deposits are world-class, such as the giant Quemont and the Au-rich Horne deposits within the Noranda district (Gibson and Watkinson 1990; Kerr and Gibson 1993, Gibson and Galley 2007) and the Au-rich Laronde Penna Deposit within the Doyon-Bousquet-LaRonde district (Dubé et al. 2007; Mercier-Langevin et al. 2007a, 2007b). Five deposits are recognised as some of the largest Au-rich VHMS deposits in the world (McNicoll et al., 2014). Goutier et al. (2009) determined that the Lower BRG (Hébécourt Formation) hosts the Horne and Quemont deposits and the upper BRG hosts the bulk of the deposits in the Noranda and Doyon-Bousquet-LaRonde districts. The implication is that there were several stages of VHMS deposit formation within the BRG.

There are two known, drill-defined, VHMS deposits within a 7 km radius of the Property. These are the Magusi River Deposit and the past-producing Fabie Bay Mine. Both deposits are considered part of the West Camp, which also includes the past-producing Aldermac 3, 4, and 5 and the unmined Aldermac 7 and 8 deposits (Mercier-Languevin, 2011).

 The Magusi River (Fabie Creek, Iso-Magusi) Cu-Zn-Ag-Au Deposit is located approximately 5.5 km to the east of the Property and according to Esson and Lecuyer (1989) consists of a complex 520 m (1700 ft) long massive sulphide body with a downdip extent of at least 400 m (1300 ft). The deposit strikes roughly east-west and dips south at about 50°. The western 300 m of the deposit contains all known resources and averages of about 15 m in thickness, but can reach 35 m thickness locally. To the east this thicker portion of the deposit tapers abruptly to a narrow tail averaging less than 3 m thick that continues along strike for at least another 200 m.

The Magusi River Deposit is thought to be a distal phase of the Fabie Bay Deposit located about 1220 m (4000 ft) to the east. The deposit footwall consists primarily of mafic volcanic flows, whereas the deposit hangingwall consists of felsic volcanic rocks intruded by quartz-feldspar porphyry sills and some dykes. Roughly conformable, diorite bodies, possibly sills, intrude the host-rocks of the deposit. The deposit is contained within rocks that are sheared and altered to sericite and chlorite schists with some talc and quartz.

All of the massive sulphide comprising the deposit contains Cu, Zn, Au, and Ag with the better values near the western end and along the footwall of the deposit. There are some scattered disseminated sulphides within the schists adjacent to the massive sulphide body, but metal values within the schist are low (website: <u>https://www.globexmining.com/property)</u>.

The past-producing *Fabie Bay (Fabie Bay, Hébécourt, New Insco) Cu-Au Mine* is located about 7 km east of the Property and was partially-mined as a combined open pit/underground operation by Noranda Mining between 1975 and 1976 and again in 2007 and 2008 by First Metals. The deposit comprises a conformable massive sulphide lens striking east northeast for ~90 m (300 ft) and extending about 180 m (600 ft) at 70° down-dip to the south. The massive, stratiform, sulphide deposit, is composed of about 30% massive, fine grained pyrrhotite (po), 5% disseminated, finely banded chalcopyrite (cp), and 25% pyrite (py) with about 30% of the massive po oxidized to py. Sphalerite (sp) and galena (gn) make up less than 1% of the sulphides. The deposit is enveloped by broad zone of 1 to 10% disseminated py anomalous in Cu and Zn.

The deposit occurs within overturned, relatively undeformed, pillowed mafic flows, breccias, and tuffs. It stratigraphically overlies, and is partially interbedded with, a heterogeneous, felsic volcaniclastic sequence hosting most of the associated alteration zone. The contact between the massive sulphide body and the enclosing volcanic rocks is sharp but irregular.

A disseminated py-po-cp-rich siliceous zone, primarily composed of granular quartz, with lesser amounts of sulphide and carbonate, is intercalated and broadly conformable along the stratigraphic hanging wall of the deposit. This zone contains about the same amount of Cu as contained within the massive sulphide body.

There are 6 mineral occurrences with possible VHMS affinity located within 4 km of the Property (Figure 14). The descriptions of the occurrences were obtained from summaries and assessment documents available from the Québec Government website at <u>https://sigeom.mines.gouv.qc.ca</u>. The descriptions obtained from this documentation are not

always detailed enough to make useful, or accurate interpretations of their true mineralization style. The occurrences are:

- The TA-89-01 (Tagliamonte Project) Occurrence is located about 550m east of the Property and is considered by the Québec government to be an Ag occurrence. It is unusual because it consists of Ag-Pb-Zn veins within chloritized and sericitized, fragmental to massive to locally sheared, amygdaloidal andesite (possibly mafic) flows and pyroclastic rocks. This is not an orogenic Au-related occurrence (it contains no Au), but may be VHMS stringer zone-related. DH TA-89-01, drilled in 1989, intersected schistose, chloritized, weakly sericitized andesite containing 50% irregular quartzcarbonate veins that graded 6.50 g/t Ag/1.8 m (5.9 ft). The west-southwest to eastwest-striking, regional BFSZ (Thibault, 1960, 1961), is associated with, and possibly may have crosscut or deformed this mineralization. The BFSZ passes near the Magusi River and Fabie Bay Mine VHMS deposits (and may have had an effect on them) as well as the Hébécourt SO Au Occurrence, described below.
- The Lac Monsabrais-SO Occurrence is located 2.25km north-northeast of the Property and consists two, probably related types of mineralization discovered in 1959 by Nealon Mines Limited. The first type consists of narrow, <5 to 60 cm (a few inches to 2 ft) wide, cp-bearing quartz veins within narrow shears crosscutting the Monsabrais Pluton. These veins contained only low-grade Cu values. The second type consists of cp, py, and po occurring within strongly chloritized breccia zones within intermediate metavolcanic flows within a fault (?) near the nose of a later fold. Both types of mineralization may be VHMS-related and occur along subparallel, apparently related, fault zones that cut both the volcanic and granitoid rocks. Analyses obtained from the breccia-related mineralization graded up to 7.3 % Cu and 78.9 g/t Ag.
- The Lac Monsabrais-OSO Occurrence is located 1.90 km north-northeast of the Property and about 820m west of the Lac Monsabrais SO Occurrence. As above this occurrence was discovered by Nealon Mines in 1959. The mineralization at this location occurs as two 610 m-separated zones comprising narrow cp-py-po-bearing quartz veins within narrow shears crosscutting the Monsabrais Pluton and striking 040°. The mineralization here is similar to the vein type of mineralization observed at the Lac Monsabrais SO Occurrence, but with the addition of py and po within the veins.
- The Magusi River-SO Occurrence, located 4km east of the Property, consists of mineralization intersected in two holes drilled by Noranda Exploration Co. Ltd. in 1990. The two closely-spaced mineralized intervals consisted of strongly chloritized to variably sericitized alteration zones within usually weakly altered intermediate metavolcanic tuffs containing disseminated cp, py, and sp. Analyses of drill core obtained grades of 0.93% Cu, 0.58% Zn, and 11.5 g/t Ag/0.49 m and 0.83% Zn/1.50m.
- The MPSH86-4 and MNPH86-9 Occurrences were discovered in 1986 during diamond drilling completed west of the Property by Midnapore Resources Inc.
 - **The MPSH86-4 Occurrence** was discovered at the end of a 5-hole program that tested a reportedly Au-bearing, generally east-west-striking shear zone flanking the hangingwall diorite to the north. The westernmost 4 holes tested a variably brecciated, pervasively chloritized and sericitized, weakly mineralized, locally

quartz-carbonate-brecciated shear zone that intersected only low-grade Au values. The fifth hole, DH MPSH86-4, was drilled 1600 ft (490 m) to the east of the other holes about 245 ft (75 m) west and 665 ft (200 m) south of the northwest corner of the present Property. This hole tested the extension of the same shear zone where it was coincident with a Turam anomaly detected during a 1975 survey. The hole intersected **1.32% Cu and 0.11% Zn/1 ft (30 cm)** and localized anomalous Au from a narrow, massive chalcopyrite vein within sheared, altered diorite. This intersection defines a Cu-(Zn±Au) occurrence (albeit a narrow one), that is not designated in the SIGÉOM database, and is contained within a variably mineralized structure.

The MNPH86-9 Occurrence was discovered after Midnapore completed an IP-EM survey that was followed up by another 8 drill holes (5171 ft or 1575 m). One hole (MNPH86-6), located ~1220 m west of the Property (Figure 14), intersected 1.74% Zn/1.5 ft (0.45 m) within sheared and altered hangingwall diorite containing 2 to 5% disseminated py, po, and sp. This intersection also classifies as an unrecorded occurrence along an altered and mineralized structure.

7.3.2 Orogenic Gold

As stated in Section 7.1.1, above, the BRG is bound on the north and south by the transcurrent, crustal-scale Porcupine-Destor (PDF) and Larder Lake-Cadilac (LLCF) faults, respectively, and by the La Pause fault zone (LPF) along its northeast margin. The PDF and LLCF are complex structural systems that act to focus Au mineralization associated with flexures and bends within the main fault systems that are further associated with a complex series of subsidiary and splay faults which usually act as deposition sites for Au mineralization. Bedeaux et al. (2018) state that Au deposits are not uniformly distributed along major faults due to complex (and long-debated) interactions between seismicity, hydrothermalism, and structural heterogeneities.

Dozens of large and small Au deposits and hundreds, if not thousands of Au occurrences are present along the length of the PDF and LLCF (website: <u>https://sigeom.mines.gouv.qc.ca</u>). This mineralization is not evenly distributed along the 2 fault systems, but tends to concentrate in clusters where the host rock is properly prepared and the local structures are consistent with an extensional regime. The majority of the deposits associated with the ~200 km long PDF are located in Ontario, whereas most of the deposits associated with the ~250 km long LLCF occur in Québec.

There is a close association between Au mineralization, the PDF, the LLCF, and the sedimentary and volcanic rocks of the Neoarchean Temiskaming Group. The Temiskaming Group rocks acted as sedimentary and volcanic infill of grabens formed by down-drop along the ancient PDF and LLCF and consists of conglomerates, sandstones, siltstones, argillite, chert, iron formations, and trachytic and phonolitc lavas, agglomerates, and tuffs.

The BRG is thought to host at least 39 producing and past producing Au mines (website: https://sigeom.mines.gouv.qc.ca), and hundreds of unmined deposits, prospects and occurrences. Of these 39 mines at least 19 are Au-rich or Au-bearing VHMS deposits including the Horne, Quemont, and Bousquet 1 and 2 mines.

The only Au deposit known to be located near the Property occurs just outside, but not within the Blake River Group. This is the past-producing Beattie Gold Mine, near the town of Duparquet. It is located approximately 16.8 km to the northeast of the Property.

• The *Beattie Au Mine*, which was actively mined between 1933 and 1956, occurs near the north margin of the PDF within a syenite body intruding the Duparquet Formation of the rocks of the northern Timiskaming Group.

Bigot and Jébrak (2015) describe the Beattie Au deposit as consisting of two styles of gold mineralization, one lithologically-controlled and the other structurally-controlled. The lithologically-controlled mineralization is contained within a syenite intrusion and is associated with iron carbonate and sericite alteration. This style of mineralization is low grade (1–2 g/t Au) and associated with disseminated arsenic-rich pyrite and arsenopyrite (asp). The structurally-controlled mineralization is contained within fault zones within and marginally adjacent to the syenite. This style of mineralization is relatively high-grade (5 g/t Au) and is contained within a silicified breccia exhibiting hydraulic and tectonic features, and cherty and polymetallic veins.

The initial stage of deposit formation consisted of hematite alteration via deuteric oxidation followed by a second formational stage consisting of a shift towards reducing conditions triggered by the introduction of CO₂-rich hydrothermal fluids. This led to sulfide precipitation and Au deposition in As-rich py and asp. A later-stage silica-rich alteration event produced sulfide brecciation and Au remobilization into microfractures within brecciated pyrite. This event also enriched the deposit in tellurium (Te), mercury (Hg), molybdenum (Mo), As, Au, selenium (Se), Ag, and antimony (Sb).

There are 3 mineral occurrences with Orogenic Au affinity within 4 km of the Property. Information describing the occurrences below was obtained from summaries and assessment documents available from the Québec Government SIGÉOM website. As mentioned previously the descriptions obtained from this documentation are not always detailed enough to make useful, or accurate interpretations of their true mineralization style. The occurrences are:

- The Hébécourt-SO Occurrence consists of Au mineralization discovered in 1935 about 375 m (1230 ft) west of the Property. The occurrence is associated with a distinct, up to 6.1m (20 ft) wide, silicified and carbonatized shear zone that crosscuts intermediate intrusive rocks (diorite). The altered shear zone is mineralized with trace to 5% finely disseminated py, po, and trace cp and is host to an east-west-striking, 35° south-dipping, 30 to 90 cm (1 to 3 ft) wide, approximately 120m (400 ft) long quartz vein containing coarse visible Au grains and also containing finely disseminate py, po, and cp. This occurrence is located about 450 m north of the steeply south-dipping, regional BFSZ (Thibault 1960, 1961) and the shear zone associated with the occurrence may be a splay from the BFSZ.
- The Lac Fabie Nord Occurrence, located 3.5 km southeast of the Property, consists of mineralization discovered by Explorations Rambo Inc. during prospecting, channel sampling, and diamond drilling between 1986 and 1988. Prospecting samples taken in 1986 graded 1.03 to 2.09 g/t Au; 1987 channel sampling intersected 1.2 g/t Au/0.9m

and 1.4 g/t/1.0 m; and three 1988 diamond drill holes (461 m) intersected up to 3.00 g/t Au in DH LF88-2. The mineralization occurs within a felsic feldspar porphyry containing fine quartz stringers and trace disseminated py. Sampling by Trudeau Gold Inc. in 2017 confirmed the 1987 Au values by obtaining 0.13 to 2.82 g/t Au.

• The Lac Fabie Nord Occurrence West is located approximately 200 m west of the Fabie Nord Occurrence and was discovered by prospecting and channel sampling completed by Trudeau Gold Inc. in 2017 while following up the mineralization discovered by Explorations Rambo in 1988. This new occurrence consists of fine- to medium-grained felsic porphyry, with some fractured and altered zones striking at 080°, containing 2 to 5 cm thick, pinkish (hematized) quartz veinlets and 2 to 5% disseminated py. Samples taken from the zone contained between 0.13 and 2.40 g/t Au.

7.3.3 Orthomagmatic Sulphides

Ni-Cu-PGE-rich orthomagmatic sulphide mineralization is present, but is not common within the Abitibi Greenstone Belt. There are 3 varieties observed.: the most common is Ni-rich, generally massive sulphide mineralization associated with komatiitic flows (the past-producing Marbridge Mine; SIGÉOM); the next most common is massive to disseminated Ni-Cu-dominant mineralization associated with mafic and ultramafic intrusions of a variety of sizes, usually chonoliths/magma conduits (possibly the various Dumont deposits; SIGÉOM); and the least common is PGE-dominant, disseminated sulphide mineralization usually associated with large, often layered, mafic and ultramafic intrusions. Small to minor amounts of Ni, Cu, and platinum-group elements (PGE's) also occur within, or associated with, several VHMS deposits (the past-producing Lac Mattagami and Newbec mines; SIGÉOM). In the Lac Mattagami case the Ni-sulphides are associated with a komatiite flow unit associated with the main VHMS lens of the deposit.

Orthomagmatic sulphide mineralization within the BRG, according to the Québec government SIGÉOM website, consists of only 13 occurrences and one past-producing VHMS mine (Newbec Mine). The Newbec VHMS Mine is located about 38 km east-southeast of the Property and is associated with an unmined, semi-massive to disseminated orthomagmatic sulphide lens located 450 m southeast of the primary VHMS deposit. The lens consists of Cu-rich sulphides with lesser amounts of Ni and PGE that is associated with a synvolcanic mafic intrusion.

There is only one orthomagmatic sulphide occurrence located near the Property:

The Lac Despré Zone A is located 3.8 km southwest of the Property and consists of a medium- to coarse-grained gabbroic body, probably a dyke, striking ~040° and crosscutting felsic volcanic flows (possibly dacite). The mineralization, discovered in 1957, consists of variably disseminated po, py, and cp within an up to 40 ft (12 m) wide zone directly adjacent to the northwestern contact of the gabbro with the dacitic volcanic rocks. Surface sampling (grab and channel samples), trenching, and diamond drilling in 1957 and 1973 documented relatively low-grade values of up to 0.66% Cu and 0.50% Ni.



Figure 14: Mineral Occurrence Map for the Magusi West Property area. Triangles and diamonds are SIGÉOMnamed occurrences; hexagons are Author-designated occurrences, squares are unmined mineral deposits, and circles overlain by an X are past-producing mines. The geological legend is the same as in Figure 13. Map is a screenshot taken from the SIGÉOM website at https://sigeom.mines.gouv.qc.ca/.

8.0 DEPOSIT MODELS

As mentioned within Section 7.3, above, there are three distinct mineral deposit types present within the Blake River Group of the Abitibi Subprovince that are, or may be applicable to the Magusi West Property. These are: Volcanic-hosted Massive Sulphide (both Cu-Zn-rich and Cu-Au-rich styles); Orogenic Gold (often intrusion-related); and Orthomagmatic Sulphide deposit types. Even though there is an orthomagmatic sulphide type occurrence located about 4 km southwest of the Property, the lack of mafic-ultramafic intrusive rocks or komatiite flows in the immediate vicinity of the Property may preclude the existence of Ni-Cu-PGE mineralization within or near the Property; however, this does not mean that the deposit type should be ignored, particularly with regard to any later drilling which may intersect mineralized mafic-ultramafic rocks not exposed at surface.

The Noranda Mining Camp, located 38 km southeast of the Property, is one of the largest VHMSproducing districts in Canada and the world, and is host to the typical Cu-Zn-Pb-Ag-rich VHMS deposits (bulk of the deposits of the district) as well as the somewhat atypical Au-Cu-rich VHMS deposits (the Horne and others).

The margins of the Blake River Group within Québec are defined by the very complex Porcupine Destor Fault Zone (PDF) along the north margin, the just as complex Larder Lake Cadillac Fault Zone (LLCF) along the southern margin, and the La Pause Fault Zone (LPF) along the northeast margin. A very large number of orogenic-type Au occurrences, prospects, and deposits (hundreds if not more) are concentrated along and to either side of these complex fault systems, some within the BRG and some outside the BRG. However, not all of the known Au occurrences, prospects, and deposits are directly associated with the 3 bounding fault systems or are of the orogenic type. There are many occurring well within the BRG that are not associated with fault and shear zones related to the PDF, LLCF, or LPF. Also, the BRG is well known for hosting many VHMS deposits that are enriched in non-orogenic gold, some to the point that Au dominates over the usually dominant Zn and Cu with lesser Pb, or Ag.

As described above in the Mineralization Section there are 6 VHMS, 1 orogenic Au-, and one orthomagmatic sulphide-style occurrences within a 4 km radius of the property. There are no defined mineral deposits, producing, or past-producing mines within the Property or inside a 2 km radius of the Property; however, there are 2 defined Cu-Zn-rich VHMS deposits within a 7 km radius and 1 past-producing Orogenic Au deposit within a 20 km radius (all are described above).

The models for the 3 deposit types present near the Property are presented below.

8.1 Volcanic-hosted Massive Sulphides

Galley et al. (2007) write that volcanogenic massive sulphide (VMS) deposits are also known as volcanic-associated, volcanic-hosted, and volcano-sedimentary-hosted massive sulphide deposits. In recent years the term Volcanic-hosted Massive Sulphide (VHMS) has begun to replace VMS as the most common label and because of this VHMS has been used exclusively within this report, except within this paragraph.

Galley et al. (2007), Gibson et al. (2007) and Franklin et al. (2005) write that VHMS deposits typically occur as massive sulphide lenses that form at or near the seafloor in submarine volcanic environments from metal-enriched fluids associated with sub-seafloor hydrothermal convection. The immediate host rocks to mineralization can be either volcanic or sedimentary.

VHMS deposits form at, or near, the seafloor through the focused discharge of evolved, high temperature, metal-rich, sea water-dominated hydrothermal fluids along deep-seated synvolcanic faults (Franklin et al., 1981; Lydon, 1984, 1988; Large et al., 2001a; Franklin et al., 2005; *see* Figure 15). These deposits typically consist of two parts (*see* Figure 16) comprising syngenetic, mound-shaped to tabular, stratabound, in part stratiform semi-massive to massive sulphide bodies (>60% sulphide) usually underlain by discordant to semiconcordant vein-type sulphide mineralization, collectively and commonly referred to as the stinger or stockwork zone. The discordant stockwork systems are usually referred to as "pipes" and are enveloped by alteration halos/zones that can extend into hanging-wall rocks above the mineral deposit.

The most common base metal classification system was first defined by Franklin et al. (1981) and then refined by Large (1992) and Franklin et al. (2005) and subdivides deposits into Cu-Zn, Zn-Cu, and Zn-Pb-Cu groups according to their contained ratios of the three metals. Morton and Franklin (1987) further defined the Canadian Cu-Zn and Zn-Cu categories for Canadian deposits into Noranda and Mattabi types, respectively, by taking into account the nature of their host rocks (mafic vs. felsic, effusive vs. volcaniclastic) and their characteristic alteration mineral assemblages (chlorite-sericite dominated vs. sericite-quartz ± carbonate-rich). Large (1992) added the Zn-Pb-Cu category to more fully represent deposits occurring in Australia. Barrie and Hannington (1999) suggested a five-fold grouping, later modified by Franklin et al. (2005), that classifies VHMS deposits by host lithology including all strata within the host succession defining a distinctive time-stratigraphic event. The five groups comprise bimodalmafic, mafic-backarc, pelitic-mafic, bimodal-felsic, and felsic-siliciclastic. A sixth group comprising hybrid bimodal felsic was added to represent a cross between VHMS and shallow water epithermal mineralization (taking into account Au-rich systems). These lithologic groupings generally correlate with different submarine tectonic settings. Their order reflects a change from the most primitive VHMS environments, represented by ophiolite settings, through oceanic rifted arc, evolved rifted arcs, continental back-arc to sedimented back-arc.

The model illustrates the main elements considered essential to the formation of VHMS hydrothermal systems, described below (taken almost verbatim from Gibson et al., 2007):

- 1. A subvolcanic heat source sometimes manifested by large, sill-like, synvolcanic hypabyssal intrusions to initiate, drive and sustain the necessary long-lived, high temperature hydrothermal system (Cathles 1981; Cathles et al., 1997).
- 2. A high-temperature reaction zone that forms through the interaction of evolved seawater with volcanic and sedimentary strata where metals are "leached" from the rocks.
- 3. Deep penetrating, synvolcanic faults that focus recharge and discharge of metal-bearing hydrothermal fluid.

- 4. Footwall and hanging wall alteration zones that are products of the interaction of near surface strata with mixtures of high-temperature ascending hydrothermal fluid and ambient seawater.
- 5. The massive sulphide deposit that formed at or near the seafloor and whose metal content was refined by successive hydrothermal events.
- 6. Distal products, primarily exhalites, that represent a hydrothermal contribution to background sedimentation.

VHMS deposits are polymetallic and are major sources of not just Zn, Cu, Pb, Ag, and Au, but are also significant sources of cobalt (Co), tin (Sn), Se, manganes (Mn), cadmium (Cd), indium (In), bismuth (Bi), Te, gallium (Ga), and germanium (Ge), and in some cases contain significant As, Sb, and Hg.



Figure 15: Generalized VHMS System Cross-section. A schematic illustrating the relationship between subvolcanic intrusions, sub-seafloor alteration, synvolcanic faulting, and the generation of VMS deposits; taken from Gibson et al. (2007).



Figure 16: Idealized VHMS Deposit showing a stratiform lens of massive sulphide overlying a discordant stringer sulphide zone within an envelope of altered rock (alteration pipe). Base metal zonation indicated by numbers in circles with the highest numbers Cu-rich and the lower numbers more Zn-rich (Py = pyrite, Cp = chalcopyrite, Po = pyrrhotite, Sp = sphalerite, and Gn = galena; taken from Gibson et al. (2007).

8.2 Orogenic Gold

It is difficult to properly define an exploration model for Orogenic Gold Systems (OGS) due to the many, often conflicting, theories for OGS development. The Author decided to let Mathieu (2021) summarize the 3 main styles of Au mineralization within the AGB and then use the Mineral Systems approach (Groves et al., 2020) to describe an Orogenic Gold Deposit Model. The mineral systems approach is beginning to be more widely used, particularly in Australia.

Mathieu (2021) states that Au mineralization occurs in a variety of contexts in the AGB, including orogenic gold systems (OGS), magmatic-hydrothermal systems (i.e., porphyry), and Au-enriched VHMS (i.e., the Horne). Most greenstone belt gold is OGS-related and consists of structurally controlled deposits formed by the circulation of fluids produced by metamorphic devolatilization of associated supercrustal and other rocks (Phillips and Powell, 2010). The association between Au mineralization and small-volume felsic intrusions has long been recognized in the AGB and the spatial association with alkaline magmatism is well documented. Mathieu (2021) further states that the very Au-endowed AGB contains several Au and Cu-Au porphyry deposits formed during the ~100 million year magmatic phase that ended at about 2.70 Ga prior to the main deformation phase. In addition, the AGB contains pre- to syndeformation (ca. 2.70–2.65 Ga) magmatic-hydrothermal deposits, generally referred to as syenite-associated, or intrusion-related systems, which are not to be mistaken for reduced intrusion-related gold systems which are post-collisional polymetallic deposits associated with reduced magmas (i.e., Fort Knox Deposit, Alaska). The AGB intrusion-related gold systems (IRGS) are usually associated with small-volume intrusions emplaced along crustal-scale faults into the upper crust. These faults also channelize metamorphic fluids and result in a common spatial association of IRGS and OGS deposits. There is also a temporal association, as both

systems formed during the syntectonic period, with IRGS being generally older than OGS. Some OGS deposits may form within competent units, such as felsic intrusions, to form intrusion-hosted deposits. In addition, OGS and IRGS may overprint each other. Multiple gold enrichment events are common and may be a requirement for the genesis of large deposits. Part of the gold mineralization of the Abitibi greenstone belt may thus correspond to the multistage mineral systems approach.

The mineral systems approach to an orogenic gold model (Groves et al., 2020) states that "concept-based orogenic gold exploration requires a scale-integrated approach using a robust mineral system model". In their view other orogenic gold hypotheses involving near-surface or magmatic-hydrothermal fluids are no longer valid when compared to coherent global mineral systems which require only two realistic sources of fluid and gold:

- 1. Devolatilization of a subducted oceanic slab with its overlying gold-bearing sulphide-rich sedimentary package; or
- 2. Release from mantle lithosphere that was metasomatized and fertilized during a subduction event, particularly adjacent to craton margins.

Groves et al. (2020) further state (verbatim) that:

"In this model, CO2 is generated during decarbonation and S and ore-related elements released from transformation of pyrite to pyrrhotite at about 500°C. This orogenic gold mineral system can be applied to conceptual exploration by first identifying the required settings at geodynamic to deposit scales. Within these settings, it is then possible to define the critical gold mineralization processes in the system: fertility, architecture, and preservation. The geological parameters that define these processes, and the geological, geophysical and geochemical proxies and responses for these critical parameters can then be identified. At the geodynamic to province scales, critical processes include a tectonic thermal engine and a deep, effective, fluid plumbing system driven by seismic swarms up lithosphere-scale faults in an oblique-slip regime during uplift late in the orogenic cycle of a convergent margin. At the district to deposit scale, the important processes are fluid focussing into regions of complex structural geometry adjacent to crustal-scale plumbing systems, with gold deposition in trap sites involving complex conjugations of competent and/or reactive rock sequences and structural or lithological fluid caps. Critical indirect responses to defined parameters change from those generated by geophysics to those generated by geochemistry with reduction in scale of the mineral system-driven conceptual exploration."

They then describe the model (with some necessary repetition):

"Any mineral system has to be anchored by the fundamental Earth processes incorporated in geodynamics, fertility, architecture and preservation. For orogenic gold systems, fertility is inexorably linked to subduction, so that geodynamics and fertility parameters are both related to convergent margin tectonics. Fertile gold fluids are either directly related to devolatilization of the subducted slab and overlying sediment wedge, or indirectly related to reactivated mantle lithosphere previously metasomatized by such fertile subduction-related fluids. The first-order components of the orogenic gold system architecture are lithosphere-to-crust-scale faults or shear zones capable of delivering a focussed flux of auriferous fluid to the crust during seismic activity, preferably to crustal levels equivalent to the ductile-brittle transition. Within the crust, fluid is further focussed into spaced damage zones, normally jogs or flexures in the first-order fluid channels via injection-driven swarm seismology. Here, the fluid migrates along pressure gradients to lower-order, interconnected

structures with repetitive architectures, related to critical controls such as fault arrays, locked-up anticlinal hinges, or anomalous configurations of igneous intrusions. Conjunctions of these parameters produce the world-class to giant deposits. At these structural sites, depositional traps and caps connected to favourable fluid pathways are controlled by rheology and geochemical contrasts between rock units in the host rock sequences. The deposits normally survive exhumation and erosion because of their deep crustal formation and extensive vertical extent, and, in the case of Precambrian deposits, the formation of thick buoyant lithosphere soon after gold mineralization. It is only the period from the Mesoproterozoic to early Neoproterozoic that is largely devoid of orogenic gold deposits. From an exploration viewpoint, the orogenic gold system model provides a hierarchical framework for target generation. Ancient convergent margins can first be recognized from a number of geological and geophysical proxies. Strike-extensive faults that extend to the Moho can be best identified as aeromagnetic lineaments in poorly-explored terranes, or as magnetotelluric anomalous zones in more mature terranes. They may also have deeply-sourced intrusions, such as lamprophyre dykes along them. The wide range of structural and stratigraphic traps related to interconnected lower-order structures can be recognized by repetitive structural geometries derived from both geological and geophysical data. Gravity "worms" and gradients may be particularly diagnostic. Locations within these geometries that comprise rock sequences with the required rheological and geochemical characteristics to represent traps and caps can then be identified as specific exploration targets. These are likely to have a multi-element geochemical footprint if a significant deposit exists at the target site."

8.3 Orthomagmatic Sulphides

Naldrett (1999) states that:

"Magmatic sulphide deposits form as the result of segregation and concentration of droplets of liquid sulphide from mafic or ultramafic magma, and the partitioning of chalcophile elements into these from the silicate melt. Sulphide saturation of a magma is not enough in itself to produce an ore deposit. The appropriate physical environment is required so that the liquid sulphide mixes with enough magma to become adequately enriched in chalcophile metals, and then is concentrated in a restricted locality so that the resulting concentration is of ore grade."

Naldrett et al. (1990) subdivided magmatic sulphide deposits into Ni-Cu dominant (sulphiderich) and the PGE-dominant (sulphide-poor) groups that occur within several tectonic settings:

- Synvolcanic (largely Archean): Mafic-ultramafic bodies within this class consist of distinct komatiitic and tholeiitic classes. The komatiitic class is almost always volcanic. The tholeiitic class consists of the *picritic* and *anorthositic subclasses* which include the Pechenga (Russia) deposits and the Montcalm (Ontario) deposit, respectively;
- **2.** *Rifted Plate Margins:* Which include the Thompson and Raglan Ni camps of the Circum-Ungava Belt and the Penikat Intrusion of the Kemi-Koilismaa Belt;
- **3.** *Cratonic Areas:* Cratons can host *flood-basalt*-related intrusions which include Noril'sk-Talnakh (Siberia), the Duluth Complex (Minnesota), and the Crystal Lake Gabbro (Ontario) or *large stratiform complexes* such as the Sudbury Igneous Complex (Ontario), the Bushveld Complex (South Africa), the Stillwater Complex (Montana), the Lac des Iles Complex (Ontario), and the Great Dyke (Zimbabwe); and
- 4. Orogenic: which includes the Moxie and Katahdin Intrusions (Maine).

Ni-Cu-dominant magmatic sulphide deposits comprise large, rich concentrations of coarsely disseminated, net-textured, semi-massive to massive Ni-Cu sulphides that generally occur at, near, or below the base of the host intrusion. Good examples of this are the Noril'sk-Talnakh, Voiseys Bay, Sudbury, and Thompson deposits. The Noril'sk-Talnakh, Voiseys Bay, and Thunder Bay North Complex deposits are also examples of conduit-related deposits, which tend to be richer in metals than many other examples of this group.

PGE-dominant magmatic sulphide deposits comprise low concentrations of disseminated, PGE-rich, Cu-Ni sulphides (generally <3% total sulphides) and primarily occur as stratabound and non-stratabound types. The stratabound-, or 'reef'-type is always associated with layered intrusions and is usually, but not always, associated with a mineralized rock layer exhibiting distinctive mineralogy or texture. The Merensky Reef of the Bushveld Complex and the J-M Reef of the Stillwater Complex are prime examples of reefs associated with distinctive rock units. The Main and Lower Sulphide zones of the Great Dyke, Zimbabwe, are reefs not associated with a specific mineralized rock layer and occur as discreet zones within a much more extensive bronzitite unit. Some deposits, such as the Lac des Iles and Marathon deposits, are discordant in nature and do not appear to be associated with any specific horizon, rock-type, or layering, although Marathon may have associated conduits.

Deposits of both groups are mafic magma associated and require (Naldrett and Scott, 1992; Naldrett et al., 1999):

- 1. Saturation and segregation of an immiscible sulphide liquid from the silicate melt;
- **2.** Reaction of the sulphide liquid with a large volume of magma in order to concentrate the Cu, Ni, and PGE's; and
- **3.** Settling and concentration of the Cu-Ni-PGE-enriched, immiscible sulphide liquid into a large enough restricted volume to form an economic deposit. Ni-Cu-dominant deposits generally form nearly massive deposits that concentrate within or near the basal regions of an intrusion (Sudbury, Duluth Complex) or magma conduit (Noril'sk-Talnakh, Voiseys Bay). PGE dominant deposits generally form relatively low-sulphide, disseminated deposits that often concentrate near or within a particular stratigraphic horizon of an intrusion (Merensky Reef, Bushveld Complex; J-M Reef, Stillwater Complex).

The formation of a PGE-dominant deposit does not generally require the addition of external sulphur to the magma; however, the addition of considerable amounts of crustal sulphur is essential to the formation of Ni-Cu-dominant deposits.

The above sequence is not part of the normal fractionation history of mafic magmas and the formation of a deposit requires a trigger to initiate sulphide saturation after a magma ascends through the crust. This trigger could constitute: assimilation of crustal sulphur or silicates within the feeder system or the magma chamber; depressurization of the magma chamber lowering the sulphur solubility within the magma; addition of primitive magma into a fractionating, more siliceous magma chamber leading to turbulent convection, magma mixing, and sulphur saturation; or any combination of the three.

9.0 EXPLORATION

EagleOne Metals Corp. completed field exploration work on the Property between mid-May and mid-October 2023. This work included: linecutting, soil geochemical sampling, and a detailed airborne (drone) magnetometer survey. A total of 301 B-horizon soil samples were taken along cut and flagged gridlines within the portion of the Property located south of the Magusi River. The field team consisted of Rob Reukl of RJ Reukl Geological Services. Details of the exploration completed on the Property are presented below. The 2023 exploration work completed by EagleOne was in the process of being filed for assessment credit with the Québec Provincial Government at the time of the writing of this report. The value of this exploration will extend the Expiry/Due Dates listed in Table 1 for at least five years to June 27, 2029 and July 26, 2029.

9.1 Linecutting

During the late spring and early summer of 2023 EagleOne, through RJ Reukl Geological Services, contracted the cutting of a reconnaissance grid. The grid consisted of four north-south-oriented gridlines, spaced 700m apart, and two east-west-oriented tie-lines, spaced 1000m apart, for a total of 14,750 m.

9.2 Prospecting and Geological Examinations Summary

Between August 26 and 29, 2023, Rob Reukl of RJ Reukl Geological Services walked all of the cut gridlines looking for outcrop to examine. No outcrop was observed north of the Magusi River. The only outcrops observed were located in the southern and eastern portion of the property south of tie-line 5365700N.

Outcrops exposed in this area are almost exclusively composed of grey-white, fine to medium grained diorite, as described on the Québec government geological maps of the area, and confirmed during the October 6, 2023 property examination completed by the Author on October 6, 2023. Due to its resistance to weathering this diorite is commonly exposed as the large, topographically dominant hills located south and southeast of the Magusi River. A small outcrop of diabase was also observed. Soil samples could not be taken from these outcrop areas and some of the gaps in soil coverage are due to this (*see* below).

The exception to the predominance of diorite are exposures of altered felsic pyroclastic or volcaniclastic rocks exposed within an old gravel pit located west of gridline L614400E at UTM (NAD83, Z17) co-ordinates 614178E, 5365783N (also observed and confirmed by the Author on October 6, 2023). One small outcrop was initially observed on the north side of the pit and two additional small outcrops were exposed using a mattock to remove the thin overburden cover. All three outcrops are slightly different in appearance; however, all appeared to be variations of felsic pyroclastic or volcaniclastic rock. Rhyolite is identified on the Québec government geology map of the area.

The three outcrops vary from a light, buff-grey, felsic volcanic rock, with numerous small (sub 1cm) rusted pyrite knots to a grey-green. banded felsic rock devoid of any mineralization. This area would be a good candidate for a program of outcrop stripping and power washing as the

cover in the immediate area appears to be thin (< 30-50cm). The stripping should be followed by channel sampling (*see* Proposed Exploration Program, below).

No rock samples were taken due to the flat nature of the outcrops.

9.3 Soil (B-horizon) Geochemical Sampling Program

A reconnaissance soil geochemical survey comprising 301 B-horizon samples (including blanks and duplicates) was completed south of the Magusi River during July and August ,2023. Samples were nominally taken at 25 m intervals, where soil depth allowed, along previously cut grid lines and compass and GPS flagged lines between cut grid lines (*see* Figures 17 to 19, inclusive). No samples were taken from bog, marsh or swamp or the thin soil mantling areas of outcrop. The samples included 7 blanks and 8 duplicates, taken for quality control purposes, which were inserted alternately every 20 samples. Samples K045518 and K045521 were determined by the laboratory to not have sufficient material for analysis. All samples were analyzed for Au, Ag, Cu, and Zn; however, all Ag analyses were below the detection limit of the analytical technique used and will not be discussed further.

To better interpret the soil survey results response ratios (RR) were determined for the survey dataset. This technique can be easily and quickly used for surveys where colour-contoured plots of kriged data are not readily available. The method for determining response ratios is quite simple and, as described in SGS Minerals Technical Bulletin 23 (2005) (https://www.sgs.com/en-ca/services), is as follows:

- **1.** The background levels for the elements Au, Cu, and Zn, were determined using the lowest 25% (quartile) of data.
- 2. Values containing less than the detection limit for a specific element need to be included in the RR determination and were assigned a value corresponding to 50% of the detection limit.
- **3.** After determining the lowest quartile 25% of the data in Item 1, the average of the analytical values was then calculated to determine the background value for Au, Cu, and Zn; all Ag values were less than the detection limit so an RR calculation was not completed for the element.
- **4.** The analysis for each sample was then calculated by dividing each sample value by the predetermined background value for that element (Item 3). The resulting numbers are then rounded down or up to give whole numbers greater than or equal to 1. These whole numbers then become the response ratios.
- **5.** Samples with RR of 2, or less, are low and are considered background samples. Those samples with RR of greater than 5 can be considered anomalous.

9.3.1 B-horizon Soil Sampling Program Results:

Examination of the soil survey analytical results (both raw data and response ratios) quickly shows that the values obtained were almost uniformly low. This is most likely due to the sampled surface layer being primarily derived from silt- and clay-rich soil formed from the extensive, unconsolidated glaciolacustrine sediments (often varved clays) deposited by the immense post-glacial Lake Ojibway. This glacial lake covered most of north-central Ontario and west-central Quebec between ~10,500 and ~8450 years before present (BP) at the end of the

last ice age (Breckinridge et al., 2012). This lake is thought to have catastrophically drained into the Atlantic Ocean, along with the associated, and probably interconnected, glacial Lake Agassiz (located to the west in northwestern Ontario and Manitoba), at some point after ~8450 BP and before ~8200 BP'. This event caused the largest known Holocene climate deterioration, the "8200 ka cooling event", and resulted in a relatively abrupt global sea level rise of about 3-4 m (Hijima and Cohen, 2010).

A closer examination of the analyses obtained from the Magusi West survey, particularly the response ratios, shows that there are several anomalous clusters of Au data and one cluster with slightly anomalous Cu scattered throughout the Property. All samples with anomalous response ratios (see Figures 20 and 21) occur south of the Magusi River and all but 2 anomalous samples occur within the southern and southeastern 30% of the Property. The 19 anomalous Au samples have a RR range between 6 and 62 and both slightly anomalous Cu samples have response ratios of 5. Most of the anomalous samples were taken in proximity to underlying intermediate (dioritic), possibly subvolcanic intrusions adjacent to the regional BFSZ and associated subsidiary structures. Many of the samples occur downslope and/or down-ice from exposed outcrop. Two samples, K045559 and K045563, with Au response ratios of 62 and 6, respectively, were taken along strike from several outcrops of deformed, altered, and rusty felsic to intermediate metavolcanic rocks recently exposed within a gravel pit located 100 to 120 m to the west (see Figure 22). A third sample (K045684), with a Au response ratio of 24 and a Cu response ratio of 5, is located ~625 m along strike to the east-northeast of the pit. The other slightly anomalous Cu sample (K045683) with a response ratio of 5 is located 50 m to the south of K045684.

The small, flat outcrops exposed within the gravel pit were observed by the Author during the October 6, 2023 field visit and look like they were recently exposed (within the last 5-19 years). Google Earth Pro satellite photos show that the gravel pit did not exist in 2004, but was present in 2019, thus allowing the time range estimate. The observed rocks consist of deformed, altered, and rusty felsic to intermediate metavolcanic (possibly pyroclastic) rocks that do not appear to have ever been sampled. It is possible that they have never been examined by exploration geologists before being observed by Rob Reukl, the EagleOne consulting geologist (RJ Reukl Geological Services) during the summer of 2023. The outcrops were too flat to allow sampling by the author. This exposure definitely needs follow-up work.

Location and analysis maps showing the locations of soil survey samples for Au and Cu are shown in Figures 17 and 18. The only anomalous response ratios obtained were for Au and Cu (Figures 19 and 2)) the determinations for Ag and Zn are not shown in map form.



Figure 17: Soil Sample Locations and Au Analyses, A: Northern Map; B: Southern Map.



Figure 18: Soil Sample Locations and Cu Analyses, A: Northern Map; B: Southern Map.



Figure 19: Anomalous Response Ratios Maps. A: Au; B: Cu.



Figure 20: Anomalous Au and Cu Response Ratios Locations, Gravel Pit Cluster, Google Earth Image.

9.4 Airborne (UAV) Magnetic Survey

Abitibi Geophysics ("Abitibi") flew a high-resolution, AeroVision[®] UAV (drone) airborne magnetic survey over the Magusi West Property on September 9, 2023 using a Devbrio UAV Multirotor drone with the CS-VL magnetometer (*see* Figure 23). The survey is documented by an Abitibi Geophysics 'Logistics and Interpretation Report' (Chemam, 2023) and much of the data and interpretations presented below were taken, modified, or summarized from this report. The survey consisted of 24 north-south-oriented lines (L0+00E to L 23+00E), a nominal ground clearance of 34 m, and a flight line spacing of 100 m (68 line-km; *see* Figures 24 and 25).

The geophysical objectives of the survey were:

- To provide a high-quality map of the total magnetic intensity, its reduction-to-pole (RTP), and the RTP residual anomaly.
- To generate a high-resolution first vertical derivative ("1VD") map that is effective in locating faults.
- Outline the major tectonic features of the Property.
- Highlight regions of high structural complexity and then generate a mineral prospectivity heat map of the Property.

The Author has worked with many airborne geophysical survey datasets over the last 45 years and the data from this survey and the subsequent processing and modeling is of consistently high quality.



Figure 21: Devbrio UAV Multirotor drone with the CS-VL magnetometer used at Magusi West. Photo from the Abitibi Geophysics Logistic and Interpretation Report (Chemam, 2023).



Figure 22: AeroVision[®] north-south-oriented flight-lines within the Magusi West Property, Hébécourt Project. Map from the Abitibi Geophysics Logistic and Interpretation Report (Chemam, 2023).



Figure 23: Geology and drill hole compilation map of the Magusi West Property showing the AeroVision[®] UAV flight-lines and the location of the Baie Fabie Fault Zone. Map from the Abitibi Geophysics Logistic and Interpretation Report (Chemam, 2023).

9.4.1 Geophysical Survey Processing and Results:

Abitibi generated total magnetic intensity (TMI) and reduction-to-pole (RTP) maps from the survey data (*see* Figures 26 and 27) and to further enhance and characterize the magnetic features detected during the survey calculations were made using the RTP data to prepare residual anomaly and 1VD maps (*see* Figures 28 and 29). These calculated enhancements were used to better understand the distribution of magnetic amplitudes, emphasize subtle near-surface geological features, and to help track the tectonic features (faults and shears) affecting the rocks underlying the Magusi West Property.

Shown on the four maps are eight dominant, Abitibi-defined, magnetic anomalies (HT-01 to HT-08). The total field magnetic values detected over the Magusi West Property range from 54 938 nanoTeslas ("nT") to 55 036 nT, with an average of ~54 974 nT, and, overall, these values appear low. The strongest TMI value (55,036 nT) is part of a northeast-trending elliptical anomaly that occurs north of the Magusi River and shows up well on all four maps. The interpreted magnetic features (HT-01 to HT-08), inclusive) are described below:

- Two northeast-trending magnetic lineaments, **HT-01** and **HT-02**, were identified in the southern part of the survey within the Duprat-Montbray formation (DMF). These lineaments are difficult to confirm beyond the BFSZ.
- A north-northeast-trending magnetic lineament (**HT-03**) was identified in the western part of the survey grid between Lines 2+00E and 7+00E. HT-03 is observed within both the Reneault-Dufresnoy Formation (RDF) and the DMF, apparently crossing the BFSZ. The extent of this feature is not easy to determine in the northern part of the Property due to faulting that has deformed its shape. This deformation coincides with part of a rhyolite unit at the ends of lines L2+00E to 6+00E.
- The northeast-trending **HT-04** elliptical anomaly is located within the RDF between Lines 13+00E and 15+00E. The residual amplitude is estimated to be 60 nT above a magnetic background of approximately 54 975 nT.
- East-west-trending anomaly **HT-05** is located within the RDF between Lines 15+00E and 20+00E and 200 m north of the BFSZ. The eastern part of the anomaly appears to be changing direction to the northeast. Geologically, the HT-05 anomaly coincides with intermediate ash, lapilli tuff, and andesite.
- The semicircular **HT-06** anomaly is located within the RDF just north of anomaly HT-04 between Lines 12+00E and 18+00E. The anomaly shape may be the result of the intersection of two magnetic anomalies, one oriented northwest and the other northeast. The magnetic amplitude of HT-06 is weak and estimated at 15 nT; however, its residual amplitude is estimated at 30 nT above a local magnetic background of approximately 54 960 nT.
- Other magnetic anomalies were also highlighted, particularly in the northern and northwestern part of the survey grid. The most distinct is **HT-07**, identified at the end of Lines 0+00E to 4+00E. This anomaly is not fully defined and appears to be affected by two northwest-trending faults.

• To the south of HT-07, discontinuous, northeast-trending **HT-08** was delineated. This trend is located within the RDF and geologically coincides with the intermediate ash, lapilli tuff and andesite rocks.

Magnetic differentiation between the RDF and the DMF is not obvious; however, the Baie Fabie fault/shear zone (BFSZ), which is the contact between the two geological formations, is visible on the magnetic maps in almost the same position as drawn on available geological maps.



Figure 24: High resolution total magnetic intensity (TMI) map with interpreted magnetic anomalies, Magusi West Property. Map from the Abitibi Geophysics Logistic and Interpretation Report (Chemam, 2023).



Figure 25: Reduction-to-pole (RTP) map with interpreted magnetic anomalies, Magusi West Property. Map taken from the Abitibi Geophysics Logistic and Interpretation Report (Chemam, 2023).



Figure 26: Residual magnetic anomaly map with interpreted magnetic anomalies, Magusi West Property. Map from the Abitibi Geophysics Logistic and Interpretation Report (Chemam, 2023).



Figure 27: First vertical derivative reduced-to-pole (RTP) map with interpreted magnetic anomalies, Magusi West Property. Map from the Abitibi Geophysics Logistic and Interpretation Report (Chemam, 2023).

9.4.2 Predictive Targeting Analysis

Abitibi took the RTP-total magnetic field data and completed an automatic predictive method known as CET (Centre for Exploration Targeting) grid analysis. This analysis can help determine possible candidates for Au and VHMS mineralization targeting from the airborne magnetic data.

The CET grid image analysis technique is specifically designed for Archean orogenic gold mineralization and was applied here to rapidly locate regions of significant structural complexity as a proxy for both fluid pathways and structural traps which may be genetically related to prospective and targetable mineralization (Holden et al., 2008). This method does not require knowledge of the location of existing deposits, which is the case for other techniques such as machine learning (neural network).

9.4.2.1 Principle of the CET Grid Analysis Method

The method used by Chemam (2023) to complete Predictive Targeting Analysis is as follows:

- Identify regions of magnetic discontinuity that correspond to lithological boundaries and shear zones by using a texture analysis and symmetry feature detection techniques.
- Examine the data using fractal analysis to identify nearby areas of complex magnetic expression which correspond to zones of structural complexity. The most prospective areas are those where inferred structural complexity occurs adjacent to regions of magnetic discontinuity. By using skeletal structures of the identified regions of discontinuity, this method then analyses structural associations to locate their intersections, as well as to find variations in the orientation of neighbouring structures.
- Applying an accumulative Gaussian weighting to generate an orientation entropy (OE) heat map that highlights the areas that are perceived to be prospective.

9.4.2.2 CET Grid Analysis Results

The results of the CET Grid Analysis (Chemam, 2023) are shown in map form in Figure 30. As can be readily observed, several zones of high structural complexity that appear intensely disrupted by northwest-trending faults or shears were identified within the Property:

- In the RDF, north of the BFSZ, two main target areas were identified. One zone appears to be northwest-trending along the trace of the Magusi River from the BFSZ to near, and possibly including, magnetic zone HT-08. The second zone nicely coincides with the HT-04 and HT-06 magnetic anomalies. A possible third zone is located a short distance north of the BFSZ near the western Property boundary.
- In the DMF, south of the BFSZ, the contact occurrence density (COD) heat map shows 4 closely-spaced target areas. Three of the targets appear to be located close to the BFSZ (100 to 400 m apart), whereas, the fourth target is located to the south between lines 12+00E and 18+00E, partially underlain by diorite and partially coincident with the east-west-trending magnetic anomaly that lies closely adjacent to TL 0+00N between Lines 13+00E and 16+00E.

Five of the 6 historic holes drilled within the Property (Figure 24) were completed in areas of high structural complexity according to the COD heat map.

- SOQUEM targeted a coincident VLF-EM and magnetic anomaly located a short distance south of the BFSZ with **DH 933-81-1** and intersected a 45 m wide shear zone containing trace disseminated py and no significant analyses.
- SOQUEM's **DH 933-81-2** was drilled 200 m southeast of the CET target zone coincident with HT-01 and intersected a pyritized graphitic tuff that explains a coincident VLF-EM anomaly. No significant analyses were obtained.
- Noranda Exploration Ltd. drilled **DH 76-1** in 1976. The hole intersected essentially barren rhyolite and dacite containing trace disseminated py and no significant analyses.
- Noranda drilled holes **TA-90-02**, **TA-90-03**, and **TA-90-04** in 1990 into several of the COD target zones. **DH TA-90-02** was collared on the north edge of the BFSZ (possibly within it) and intersected an 11 m wide shear zone, numerous quartz veinlets, and 5 to 10% finely disseminated pyrite at 64.4 m depth. No significant analyses were obtained from any of the 3 holes.

All of the historic holes drilled on the Property have failed to intercept VHMS or Au mineralization, even though most of the holes were drilled into or near zones now known to exhibit high structural complexity. It is not known whether these holes are well oriented, drilled in the best location, or drilled sufficiently deep; therefore, Abitibi recommends that EagleOne examine the generated heat map closely using known geology, structure, and geochemistry to determine whether the delineated target zones are of sufficient interest to be explored more effectively and in greater detail (Chemam, 2023).

9.4.3 Unconstrained 3D Magnetic Inversion Method

To extract more information about the magnetic anomalies defined above, Abitibi (Chemam, 2023) completed an unconstrained 3D magnetic inversion on the residual magnetic data using Seequent's VOXI MAG3D software. The core volume of the magnetic inversion (2.35 km east, 2.85 km north, and 1.06 km depth) defines the volume of interest for the Magusi West Survey. The horizontal cell size within the core and data volumes was set to 25 x 25 m x 12.5 m downward (depth). This initial block model allowed Abitibi to investigate to a depth of approximately 1.0 km.

After setting up the residual data and the earth model, two numerical inversions were used to optimize the magnetic susceptibility contrast of the model elements in such a way that the predicted response fit the residual data. At first, the VOXI MAG3D inversion generated a smooth solution. Subsequently, an Iterative Reweighting Inversion Focusing (IRIF) took the obtained smooth model and used it as a reweighting constraint to then model sharper contacts in the inversion result, providing more refined targets.

9.4.3.1 Unconstrained 3D Magnetic Inversion Results

The resultant final inversion is presented as a 3D voxel (*see* Figure 31) and as iso-surfaces (Figure 7B) of the magnetic susceptibility. The magnetic susceptibility values calculated by the 3D magnetic inversion range from -0.0046 to 0.0091 SI. The highest magnetic susceptibility, in excess 0.004 SI, was calculated on magnetic anomaly HT-04. This distinct magnetic feature, along with anomaly HT-05, probably carry remanent magnetization, as demonstrated by the Magnetization Vector Inversion (MTV) presented in Figure 32.

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To better understand the subsurface magnetic susceptibility, vertical sections were extracted through the old drillholes, as shown in Figure 33 A and B. These vertical sections (Figure 33B) show that drillholes TA-90-02, TA-90-03 and 933-81-1 intercepted moderately magnetic zones, while hole DH 933-81-2 narrowly missed the magnetic susceptibility shell. DH 76-1 appears to have been drilled in a non-magnetic zone composed of felsic metavolcanic rocks, while DH TA-90-04, drilled to the west of the survey, appears to pass through a weakly magnetic unit composed of intercalated porphyritic andesite and intermediate tuffs crosscut by a mafic dyke.

Finally, with the help of the 3D magnetic inversion, a simplified structural map (*see* Figure 34) was generated using the horizontal slice of magnetic susceptibility extracted from the inversion model at an elevation of 200 m.

The Author would like to comment at this point that in his experience <u>unconstrained</u> inversions of any kind, not just magnetic, are inherently unreliable and tend to be inaccurate. That said, the author will state that useful information can be obtained from unconstrained inversions if they are examined carefully in the light of known geology, structure and geophysics (particularly physical properties data, if available) which does constrain the inversion. During Abitibi's analysis of the inversion and its products (Chemam, 2023) definitely takes into account known geology (surface and drill hole) and structure, such that the final product of the inversion exercise, a simplified structural map of the Property (Figure 34) superimposed on the subsurface magnetic susceptibility and including major inferred faults and shear zones, CET target areas (blue stars), and the known historic drill holes, can be considered a useful exploration tool.

9.4.4 Abitibi Geophysics Summary and Recommendations

Abitibi summarizes that the AeroVision[®] magnetic data have provided (other than high-resolution magnetic maps) of the Property:

- A 3D magnetic susceptibility model providing information on the subsurface architecture of the magnetic sources within the Property.
- A mineral prospectivity heat map where at least 4 target zones perceived as potential targets for hosting mineralization were identified.
- A detailed structural map showing the distribution of the magnetic susceptibility, including the outlines of some known and unknown faults and shears.

Abitibi also recommends that future follow-up work consist of:

- A deep Induced Polarization survey, such as OreVision[®], with a=25 m and n=1 to 25 and
- A time-domain electromagnetic survey (TDEM), such as InfiniTEM[®], to investigate the property at depth. Historic drilling tested only near-surface VLF-EM surveys with short, shallow depth holes.


Figure 28: Mineral Prospectivity (COD) heat map, generated from the CET Grid Analysis, showing target zones of high structural complexity, including the location of the BFSZ and historic diamond drilling. Map from the Abitibi Geophysics Logistic and Interpretation Report (Chemam, 2023).



Figure 29: Perspective view of the magnetic susceptibility model plotted as 3D voxel (A) and iso-surfaces rendered at 0.001 SI. Figures from the Abitibi Geophysics Logistic and Interpretation Report (Chemam, 2023).



Figure 30: Plan view of the effective (mvi) magnetic susceptibility at an elevation of 170 m, showing the magnetization vectors of the old drill holes. Figure from the Abitibi Geophysics Logistic and Interpretation Report (Chemam, 2023).



Figure 31: Perspective view of the magnetic susceptibility model (A) and vertical sections (black lines in A) of the magnetic susceptibility distribution extracted through existing historic drill holes. Figure from the Abitibi Geophysics Logistic and Interpretation Report (Chemam, 2023).



Figure 32: Simplified structural map of the Magusi West Property superimposed on the subsurface magnetic susceptibility, including the major inferred faults and shear zones, blue CET target stars, and the existing historic drill holes. Map from the Abitibi Geophysics Logistic and Interpretation Report (Chemam, 2023).

10.0 DRILLING

No diamond drilling has been completed to date on the Property by EagleOne Minerals Corp.

11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

The Magusi West Property soil samples were collected by placing at least a handful of B-horizon soil into kraft paper soil sample bags with the sample number written on the bag in permanent marker and a corresponding bar-coded label attached to the bag. The GPS location of each sample (UTM NAD83, Z17) was recorded at the time the sample was taken and notes describing each sample station were taken at the same time. Alternating quartz sand blanks and sample duplicates were inserted into the sample batch every 20th sample. The insertion of this number of blanks and duplicates into the sample-batch, and therefore into the sample stream at the laboratory, is considered adequate as Quality Control and Quality Assurance for this type of reconnaissance-level soil sample survey. The collected soil samples were transported at the end of each sampling day back to the sampler's base camp and stored in 5-gallon plastic pails in a secure location. Sample locations were determined using a handheld Garmin GPSXL12 set to record locations in UTM (Universal Trans-Mercator) co-ordinates using the 1983 North American Datum (NAD83) in Zone 17. The samples were bagged and tagged using best practices and then transported by the sampler to the ALS Canada Ltd. (ALS) preparation laboratory, located at 645 Norah Crescent, Thunder Bay, Ontario P7C 5H9, Canada. The samples were given directly to ALS personnel by the sampler. After ALS sample preparation the samples were securely transported by ALS to their geochemical laboratory located at 2103 Dollarton Hwy, North Vancouver, BC.

The information presented below regarding sample preparation, analysis, and security were obtained from the ALS website at <u>https://www.alsglobal.com/en/geochemistry/</u>. ALS Canada Ltd. is a wholly-owned subsidiary of ALS Global whose global quality and assurance program includes internal and external inter-laboratory test programs and regularly scheduled internal audits that meet all requirements of ISO/IEC 17025:2017 and ISO 9001:2015. ALS Canada Ltd. is a commercial, ISO-Certified Laboratory independent of EagleOne Metals Ltd., RJ Reukl Geological Services, and Allan MacTavish. Consulting Geologist.

To ensure chain of custody once the samples arrived at the ALS Thunder Bay, ON, preparation laboratory they are immediately logged into the ALS global laboratory information management system (LOG-21) and then weighed (WEI-21). The samples were then subjected to PREP-41 where they are dried at <60°C/140°F and then sieved. It is critical to dry the samples at a temperature low enough to prevent the loss of volatile elements. The samples are sieved to -180 microns to remove a large portion of any quartz sand present in the sample. The -180-micron screen is equivalent to 80 mesh, which corresponds to the Tyler and US mesh number. Both fractions of the sample are retained. Analysis is completed on the minus fraction ensuring that a larger number of grains form part of the sample aliquot and therefore making it more representative. After sieving the samples were securely sent to the ALS North Vancouver geochemistry lab in sealed containers. At the North Vancouver lab 30-gram (g) samples were taken, preconcentrated by fire assay, subjected to 4-acid digestion, and then analyzed using AAS (atomic absorption spectrometry) to determine the Au concentration in the sample to a lower detection limit of 0.01 ppm. At the same time a 0.25 g sample was taken, subjected to four acid digestion, and then analyzed for Ag, Cu and Zn using the ME-ICP61 method. The four-acid digestion utilised in both analysis techniques is a combination of nitric, perchloric, and hydrofluoric acids with a final dissolution stage using hydrochloric acid. This digestion technique breaks down most silicate and oxide minerals allowing for the "near-total" recovery of most minerals and analytes.

The analysis of blank and duplicate samples inserted into the sample stream by EagleOne did not identify any analytical issues and the duplicates reported, within statistical error, almost the same analytical results as the original samples and are considered adequate and valid. For the present work, the sample preparation, security, and analytical procedures used by the laboratory are considered adequate and the data is valid, and of sufficient quality, to be used for further investigations.

12.0 DATA VERIFICATION

The author visited the Property on October 6, 2023 to verify historic and current exploration work, to take geological, infrastructure, and other technical observations on the Property and to assess the potential of the Property for the discovery of gold, silver, zinc, copper and other sulphide-associated mineralization.

Exploration during 2023 was completed by, or under the supervision of, Consulting Geologist Robert Reukl, B.Sc., P.Geo. (Ontario) of RJ Reukl Geological Services. After a close examination of all of the data generated by the exploration programs supervised, or completed by, by RJ Reukl Geological Services and after lengthy discussions concerning the collection of that data the Author believes that the data collected during the field programs was collected using proper procedures and is considered reliable. Data quoted from other sources is also deemed reliable because it was taken from Québec government Assessment Reports, published reports by the Québec government, the Geological Survey of Canada ("GSC"), various researchers, and the Author's personal observations. Historic geological descriptions were taken from professional reports and papers taken from well-respected, refereed, technical scientific journals. The author also verified, in the field, the presence and location of the cut grid, the validity of geological descriptions, geological structure, and rock formations described by the earlier Québec government and GSC workers, and some of the 2023 soil sample survey sites.

The area investigated by the Author consisted of the driveable access roads within the Property south of the Magusi River and the outcrops observed were located adjacent to or nearby to those access roads. No road access and few outcrops exist throughout the portion of the Property located north of the Magusi River. A few older logging trails are visible in this area on satellite images of the property; however, an examination of these trails by the Author showed that they were overgrown to the point of being impassable and not useful for exploration access unless rehabilitated. The 2023 cut reconnaissance grid provides good foot access to the portion of the Property located north of the Magusi River.

The airborne geophysical survey data, described below, is considered reliable because it was collected by a well-respected geophysical survey company (Abitibi Geophysics) and after close

examination of that data and a long-time familiarity with airborne magnetic surveys the Author is confident of its reliability.

The procedures and sampling techniques used by RJ Reukl Geological Services to collect soil geochemical samples along cut grid lines were closely examined by the Author and are considered reliable. The analytical data, including analysis of sample blanks and duplicates inserted by EagleOne and lab-inserted blanks and duplicates; obtained from ALS Canada was closely examined by the Author an is considered to be reliable, valid, and of sufficient quality. Sample preparation, security, and the analytical procedures used by the laboratory are considered adequate. No officer, director, employee or associate of EagleOne Minerals Corp. was involved in sample preparation and analysis.

No search of tenure data or Mineral Title was completed; however, all of the property information was obtained directly from the Company . The author does not express a legal opinion as to the ownership status of the Property.

The author is unaware of any environmental liabilities associated with the Property. Overall, the author is of the opinion that the data verification process demonstrated the validity of the data and considers the Property database to be valid and of sufficient quality.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing or metallurgical testing was done on the Property by EagleOne Minerals Corp.

14.0 MINERAL RESOURCE ESTIMATES

No mineral resource estimates have been completed on the Magusi West Property by EagleOne Minerals Corp.

Items 15 to 22 are not currently applicable.

23.0 ADJACENT PROPERTIES

The author is unaware of any present or recently active adjacent properties. The most recent assessment work filed within the present Property boundaries was in 2015 (Beep-map survey). The last diamond drilling filed near or within the Property was in 2013.

24.0 OTHER RELEVANT DATA AND INFORMATION

24.1 Environmental Concerns

There is no historical production from any known mineralized zones on or directly adjacent to the Property and the author is not aware of any environmental liabilities which have accrued from historical exploration and mining activity.

25.0 INTERPRETATION AND CONCLUSION

The Magusi West Property straddles the synvolcanic Misema Inner Ring Fault (now the Alembert and Baie-Fabie Fault zones) of the northern portion of the Blake River Megacaldera Complex postulated by Pearson and Daigneault (2009). This megacaldera complex hosts most of the VHMS and Au-rich VHMS occurrences and deposits within the Québec portion of the exceptionally Au- and base metals-rich Blake River Group of the Abitibi Greenstone Belt.

The Magusi West claims north of the (BFSZ) are underlain by the altered, mafic to intermediate, transitional to calc-alkaline metavolcanic rocks of the Reneault-Dufresnoy Formation (RDF). The RDF is a homoclinal sequence that youngs to the south and is centred on Lac Monsabrais (3.2 km northeast of the Property). The rock package consists of massive to pillowed submarine flows and volcaniclastic rocks, crosscut by diorite, gabbro, and the synvolcanic, multiphase, tonalitic to quartz dioritic Monsabrais Pluton. South of the BFSZ the rocks comprise mafic to intermediate, sometimes felsic, massive to pillowed metavolcanic rocks of the Duprat-Montbray Formation (DMF). The available literature does not provide much information on the rocks of the DMF and also does not note the presence of any volcaniclastic units, at least within the northern part of the formation. There are some locally occurring, relatively restricted rhyolitic units of unknown deposition type(s) (flow, pyroclastic or volcaniclastic units). Some of the rhyolite units occur as inclusions within or adjacent to the dioritic body underlying the southeastern portion of the Property. If this intrusion is subvolcanic then it is possible that it may have stoped upward into its own extrusive volcanic products.

The Property is: located 5.5 km west of the Magusi River VHMS deposit and 7 km west of the past-producing Fabie Bay VHMS Mine. It is potentially underlain by several possibly subvolcanic intermediate intrusions; and is bisected by the regional BFSZ which splays from the arcuate, regional Alembert Fault Zone located a short distance to the east and southeast. These two initially synvolcanic fault systems are potential fluid sources or focus points for VHMS

mineralization and later reactivation may have provided fluid pathways and lithological and structural traps for orogenic Au mineralization.

There are 6 mineral occurrences with possible VHMS-affinity within 4 km of the Property: the TA-89-01 Occurrence, located about 550m to the west of the Property; The Lac Monsabrais-SO Cu-Ag Occurrence, located 2.25km north-northeast of the Property; The Lac Monsabrais-OSO Occurrence located 1.90 km north-northeast of the Property and ~820m west of the Lac Monsabrais SO Occurrence; The Magusi River-SO Occurrence, located 4 km east of the Property; and The MPSH86-4 and MNPH86-9 Occurrences located about 245 ft (75 m) west and 665 ft (200 m) south of the northwest corner of the present Property and ~1220 m west of the Property (Figure 14), respectively.

There are 3 mineral occurrences with Orogenic Au affinity within 4 km of the Property: The Hébécourt-SO Occurrence, located ~375 m west of the Property; The Lac Fabie Nord Occurrence, located 3.5 km southeast of the Property; and The Lac Fabie Nord Occurrence West, located ~200 m west of the Fabie Nord Occurrence.

During the spring of 2023 EagleOne Metals Inc. contracted RJ Reukl Geological Services to complete linecutting, geological examinations of exposed rock, a reconnaissance soil geochemistry survey (301 samples), and to arrange the Abitibi Geophysics airborne UAV magnetic survey.

The limited exploration completed to date by EagleOne has begun to highlight the potential of the Property to possibly host orogenic Au and VHMS mineralization. The discovery of deformed, altered, and locally pyritized felsic metavolcanic rocks within a recently excavated gravel pit on the Property; the presence of several Au-anomalous soil samples along strike from those exposed pit outcrops; and the coincidence of the pit outcrops with magnetic anomaly HT-01 coincident with an Abitibi Mineral Prospectivity Map target zone generated data provided by the AeroVision[®] UAV airborne magnetic survey. This area, in particular, provides a good focal point for further exploration; however, the other magnetic anomalies and potential Mineral Prospectivity Map targets should be considered targets also in need of exploration follow-up.

The Author visited the Property on October 6, 2023 and drove many of the access roads, observed the cut gridlines and soil sample sites, viewed many of the rocks exposed within the southern part of the property, and examined the small, deformed, altered, and locally pyritic felsic metavolcanic outcrops exposed at the base of the gravel pit excavated somewhere between 2005 and 2019. The geology of that location, of the property in general, and the mineral potential of the property was discussed in detail with Rob Reukl of RJ Reukl Geological Services during the field visit.

26.0 **RECOMMENDATIONS**

In this qualified person's opinion, the Magusi West Propertyand merits a work program to follow-up the preliminary program completed during 2023. This can initially be accomplished by a single-phase exploration program, with any subsequent exploration phases contingent upon the results of the Phase 1 program outlined below:

- Surface stripping/power washing of the exposed outcrops within the gravel pit located at UTM 614178E, 5365783N. The stripping/power washing should commence once snow has melted in the spring to take advantage of high water from snow melt in the nearby streams. After the stripping is completed then following work should include:
 - Detailed geological mapping of the stripped area(s) at a scale of either 1:200 or if a complex package of rocks is exposed and detail is required then mapping at a scale of 1:100; and
 - b. Channel sampling of exposed rocks once mapping is complete, and not before.
- 2. The cutting of 15 line-km of infill lines on the existing 2023 grid.
- 3. Soil sampling at 25 m intervals along the new gridlines, particularly as infill in those areas of the 2023 survey where anomalous analyses were obtained.
- 4. Geological Mapping of the Property at a scale of 1:5000;
 - Whole rock sampling of exposed outcrops to detect lithogeochemical indicators indicative of the fluids responsible for VHMS mineralization such a Na₂Odepletion, and MgO or FeO enrichment; and
 - b. Prospecting of known outcrop areas.
- 5. The writing of a Summary Phase 1 Exploration Report.

Prospecting, 1:5000 scale geological mapping, and soil sampling cannot commence until the linecutting program is complete. Linecutting should not commence until the spring runoff is finished to allow better access in areas of low relief or alongside streams and rivers.

The total estimated cost of the work recommended above is \$102,000 and the field program is estimated to take at least 4 weeks. The program budget is presented in Table 3 (below).

Exploration Activity	Number	Unit	Number	Total (\$)
Ducient Diagnice and Legistics	of People	Cost (Ș)	of Units	
Project Planning and Logistics				44.000
Geologist	1	800	2	\$1600
			Sub-total	\$1600
Power Washing, Channel Sampling				
Mobilization		\$2500	1	\$2500
Field Technicians	2	\$650	8	\$10,400
Geologist (Consulting)	1	\$800	8	\$6400
Equipment Rental		\$2500	1	\$2500
Vehicle Rental		\$100	13	\$1300
Channel Sample Analysis		\$45	80	\$3600
			Sub-total	\$26,700
Linecutting				
Mobilization		\$2500	1	\$2500
Cost/line-km	4	\$1250	15	\$18,750
			Sub-total	\$21,250
Soil Sampling		\$0	1	\$0
Soil Sample Collection	2	\$650	8	\$10,400
Soil Sample Analysis		\$40	400	\$16,000
			Sub-total	\$26,400
Geological Mapping & Prospecting				
Geologist (Consulting)	1	\$800	5	\$4000
Prospecting	2	\$650	5	6500
Whole Rock Lithogeochemical Analysis		\$85	20	\$1700
			Sub-total	\$12,200
Summary Report				
Report Writing		\$1000	5	\$5000
Maps & Figures		\$2000	1	\$2000
			Sub-total	\$7000
Total Phase 1 Budget				\$95,150
Contingency 7%				\$6661
Total Budget				\$101,811
Total Budget (Rounded Up)				\$102,000

Table 3:	Proposed	Work	Program	Budget

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28.0 CERTIFICATE OF AUTHOR

I, Allan MacTavish, M.Sc., P.Geo., as the author of this report entitled "NI 43-101 Technical Report on the Magusi West Property, Hébécourt Township, Abitibi-Ouest, Québec, Canada", hereby certify that:

- 1. I am an independent consulting geologist.
- 2. This certificate applies to the current report entitled "NI 43-101 Technical Report on the Magusi West Property, Hébécourt Township, Region Abitibi-Ouest, Québec, Canada" with an effective date of April 22, 2024.
- 3. I hold an H.B.Sc. from Laurentian University, Sudbury, Ontario (1977) and an M.Sc. from Lakehead University, Thunder Bay, Ontario (1992).
- 4. I am a member (Professional Geoscientist, Membership No. 0816) of the Professional Geoscientists of Ontario (PGO).
- 5. I have worked as a geologist for over 46 years since graduation with an undergraduate geology degree from Laurentian University in 1977. I have considerable mineral exploration and evaluation experience for volcanic-hosted massive sulphide (VHMS), orthomagmatic sulphide, and orogenic gold deposits as well as geological mapping and mineral deposit studies experience with the Ontario Geological Survey.
- 6. I certify that by reason of my education, affiliation with a professional association, and past work experience, having written numerous published and private geological reports and technical papers, that I am qualified as a Qualified Person as defined by Canadian *National Instrument 43-101*.
- 7. I visited the Property on October 6, 2023, and I am the author of this report.
- 8. I am responsible for all items of this report.
- I am independent of EagleOne Metals Corp., as that term is defined in Section 1.5 of NI 43-101. I do not own, nor do I expect to own, any shares or options of EagleOne Metals Corp.
- 10. I have no prior involvement with the Magusi West Property other than as disclosed in item 7 of this certificate.
- 11. I have read National Instrument 43-101 ("NI 43-101"), and the Technical Report has been prepared in compliance with NI 43-101, and Form 43-101F1.
- 12. As at the date of this certificate, to the best of my knowledge, information, and belief the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

"AD MacTavish"

Signature of Qualified Person

Allan MacTavish, M.Sc., P. Geo. 777 Red River Road, Lower Level, Thunder Bay, ON P7B 1J9 Dated: April 22, 2024 [professional geoscientist Ontario stamp affixed]