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QUEBEC PRECIOUS METALS CORPORATION AND INTERNATIONAL EXPLORERS AND PROSPECTORS INC.

TECHNICAL REPORT ON THE MATHESON JOINT VENTURE PROJECT, COCHRANE DISTRICT, NORTHEASTERN ONTARIO, CANADA

NI 43-101 Report

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September 5, 2019

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1 SUMMARY

EXECUTIVE SUMMARY

Roscoe Postle Associates Inc. (RPA) was retained by Quebec Precious Metals Corporation (QPM) and International Explorers and Prospectors Inc. (IEP) (collectively the Partners) to prepare an independent Technical Report on the Matheson Joint Venture property (the Project or the Property), located in Cochrane District, northeastern Ontario, Canada. QPM and IEP hold a 50% interest each in the Matheson Joint Venture, with QPM being the manager.

The purpose of this report is to document the technical aspects of the Project to support a possible transaction. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). RPA visited the Property from August 7 to 8, 2019.

QPM is a Montreal-based junior mining exploration company formed in April 2018 by way of a business combination among Matamec Explorations Inc. (Matamec) and Canada Strategic Metals Inc. and is a reporting issuer in British Columbia, Alberta, and Quebec. The common shares of QPM trade on the TSX Venture Exchange and the company is under the jurisdiction of the *Autorité des marchés financiers du Québec*. In addition to the Project, QPM has several other exploration properties, primarily in the James Bay area of Quebec, including its flagship Sakami gold property. QPM also owns a 72% interest in the advanced-stage Kipawa heavy rare earth property in the Temiscaming area of southwestern Quebec.

IEP is a privately-owned, Timmins-based exploration company incorporated in the Province of Ontario in January 2008 and also registered in the Province of Quebec. It controls a broad portfolio of primarily gold and base metal exploration properties mainly in the Abitibi Belt of Ontario and Quebec, including the Montclerg property which hosts an historical resource estimate. IEP acquired its interest in the Project by way of a debt conversion with Explorers Alliance Corporation (Explorers Alliance) in 2008.

On June 11, 2007, Matamec and Explorers Alliance Corporation (Explorers Alliance) entered into a three-year option agreement whereby Matamec could earn a 50% interest in certain claims totalling 1,200 ha in Matheson Township by issuing shares and share purchase



warrants, transferring an interest in the Matheson-Colbert property to Explorers Alliance and incurring work expenditures. Matamec also granted a 1.5% net smelter return (NSR) royalty to Explorers Alliance, subject to a buy-back provision of 0.75% for \$1,500,000. In May 2010, Matamec vested its 50% interest.

On June 27, 2018, QPM announced that it had acquired all of the issued and outstanding common shares of Matamec by way of a business combination. IEP acquired its interest in the Project by way of a debt conversion with Explorers Alliance in 2008.

Some of the claims comprising the Project are subject to NSR royalties by virtue of underlying agreements.

The major asset associated with the Project is a strategic land position covering prospective lithologies and structures analogous to the geological setting of the nearby Hoyle Pond mine. Exploration targets warranting additional work, including diamond drilling, have been identified.

RPA is not aware of any environmental, permitting, legal, title, taxation, socio-economic or other relevant factors that could materially affect the continued exploration of the Project.

CONCLUSIONS

The Project consists of four non-contiguous blocks of patented, leased, and single cell mining claims totalling 1,276.84 ha located in western Matheson Township, Porcupine Mining District, northeast Ontario. It is held 50% by QPM and 50% by IEP under the terms of a joint venture agreement entered into in June 2007. QPM is the manager of the Matheson Joint Venture.

The Project is underlain primarily by lithologies belonging to the Tisdale and Porcupine assemblages of the Southern Abitibi Greenstone Belt but is mantled by an extensive, and locally quite thick, layer of Quaternary glaciofluvial and glaciolacustrine deposits and tills. This surficial cover has hampered historical exploration efforts which have relied heavily on reverse circulation (RC) drilling, diamond drilling, and ground and airborne geophysical surveys.

The various blocks comprising the Property cover lithological and structural extensions of the Hoyle Pond mine. The Hoyle Pond mine has produced 3,983,281 ounces of gold at an average grade of 0.36 oz/st Au from 1985 to the end of 2018, making it one of the highest-grade deposits in the Timmins camp based on production to date.



In RPA's opinion, maximizing the exploration potential of the Project depends on understanding the geological and structural setting of the Hoyle Pond mine and recognizing analogous environments on the Project.

The Hoyle Pond gold deposit is located in complexly deformed mafic-ultramafic volcanic rocks of the Hersey Lake and Central formations of the Tisdale assemblage. The most recent study suggests that the deposit is hosted within a homoclinal sequence of south facing, stacked volcanic flows of high magnesium (Mg) tholeiitic basalt, basaltic komatiite and komatiite flows, and interbedded high Mg tholeiitic basalt and iron-rich tholeiitic basalts. The metavolcanic rocks in the mine area have been divided into three volcanic packages, the north volcanic package (NVP), the central volcanic package (CVP), and the south volcanic package (SVP).

Geochronological dating of quartz and quartz-feldspar porphyries that locally intrude the prospective mafic to ultramafic volcanics and sediments indicates that they are co-eval with the porphyries related to other gold deposits in the Timmins camp.

Prior to 1994, most of the ore was mined from the 13-14 and 16 veins of the Hoyle Pond zone hosted by mafic rocks of the NVP. With the discovery in 1994 of the 1060, A Vein, and the 7 Vein zones, much of the production has shifted to the SVP. The A-vein and 1060 zones extend to vertical depths of greater than 1,000 m.

The bulk of the gold mineralization was emplaced at lithologic contacts along the shear zones associated with isoclinal folding and thrusting. Mineralization consists of micron to centimetre sized flakes of free gold or veinlets associated with quartz-carbonate (dolomite and ferroan dolomite) shear and extension vein arrays along second-order shear zones and faults spatially related to the PDFZ (Dinel et al., 2008). Mineralization at Hoyle Pond occurred during D_3 and D_4

The alteration mineral formation appears to have been synchronous with vein development and gold mineralization as indicated by alteration halos which envelope but do not crosscut the veins. The alteration zones have been identified: an inner sericite zone surrounding the veins, an outer albite zone, and a graphitic alteration zone (grey zone). Carbonate alteration is pervasive and occurs throughout the mine. The intensity of carbonate, sericite, and "fuchsite" alteration increases locally and is best developed in the vicinity of the veins. Grey zones form anastomosing three dimensional networks surrounding lenses of less altered rock.





It is not necessarily mineralized, however, when the zone is cut by veining, it can contain significant amounts of gold (Dinel et al., 2008).

Three higher potential corridors have been identified on the Property based on favourable volcanic lithologies, structurally controlled contacts with metasediments of the Porcupine Group, and quartz and quartz-feldspar porphyritic intrusions locally. The North and Central Corridors, which transect portions of the Main Block, are interpreted to be cut by the northeasterly extensions of the Hoyle Pond and 1060 faults. Both of these faults host high grade gold mineralization currently being mined at Hoyle Pond. The potential for other, as yet unrecognized northeasterly striking faults, which may also host gold mineralization, exists.

A recent study of the historical RC drilling results in the area of the Project by the Timmins Regional Resident Geologist Ed van Hees highlighted a number of significant gold in till anomalies, some of which occur in close proximity to the North and Central corridors where they appear to be intersected by the inferred extensions of the Hoyle Pond and 1060 veins. The sources of the gold in till anomalies have yet to be identified. The distribution and flow directions of various till sheets of different ages in the area is complex and may not be fully understood. Van Hees suggests that some of the till anomalies identified in Matheson Township may be related to fluvial processes resulting in paleo-placer deposits and that the source of the gold may be more than a kilometre from the till anomalies.

The South Corridor hosts the eastward strike extension of the mineralized mafic volcanic stratigraphy that hosts the Main, 7 Vein, and 1060 zones at Hoyle Pond. Several significant mineralized intervals have been drilled over an approximately four-kilometre interval referred to as the Mill Creek Colbert trend (MCC). The MCC is thought to trend east-northeasterly, dip at 55° to the north, and young to the south. Mineralization has been intersected along a favourable mafic volcanic/sedimentary contact along the faulted extension of the MCC on the Tkachuk property located immediately south of the South Block which dips to the north. Given that many of the more recently discovered zones at Hoyle Pond were found at depth along favourable structures, the potential of Tkachuk mineralization to the north warrants additional drilling.

Some of the historical drilling on the Project appears to have identified lithologically and structurally favourable environments with no evidence of sampling or evidence of very limited



sampling. In some instances, drill holes were terminated short of prospective geological contacts and structures.

Given the high grades currently being mined at Hoyle Pond, high grade mineralization may be expected to exist elsewhere along its structural and lithological extensions or along yet unrecognized structures, particularly at depth where the more recent veins have been discovered at Hoyle Pond.

Targets recommended for follow-up in previous reports have yet to be tested.

RPA is of the opinion that the Project has the potential to host significant quartz-carbonate gold mineralization and warrants additional exploration.

RECOMMENDATIONS

RPA considers the Matheson Joint Venture a very attractive early stage exploration project meriting a significant exploration program. In RPA's opinion, the Hoyle Pond geological and structural model is well understood. Work to date suggests that the Project may host analogous targets which require additional work.

RPA has reviewed and concurs with the Partners' proposed exploration programs and budgets which consist of two phases. Recommended Phase I work, to be initiated as soon as operationally possible and envisioned to take six to eight months to complete, consists of the following:

- Completion of a GIS-based compilation of all available historical work on, and in the vicinity of, the Project,
- Re-logging and detailed sampling of all available historical core, and
- Diamond drilling to evaluate prospective lithologies, structures and contacts at depth (at least 500 m) in the following areas:
 - South Corridor (1,000 m): Deepen holes 95-3, MMP-10-05 and MMP-10-07 to test the mafic volcanic/sediment contact.
 - Central Corridor (2,500 m): establish fences of holes to test: higher priority areas at depth based on the results of the proposed GIS-based compilation and re-logging/sampling.

Details of the recommended Phase I exploration program, can be found in Table 1-1.



TABLE 1-1	PROPOSED BUDGET - PHASE I
QPM and IE	P – Matheson Joint Venture Project

Item	C\$
Head Office Expenses	25,000
Project Management/Staff Costs	50,000
Property Holding Costs	4,000
GIS Compilation	25,000
Core re-logging and sampling	50,000
Diamond Drilling (3,500 m @ \$150/m)	525,000
Assays	10,000
Social/Consultation	10,000
Sub-total	699,000
Contingency	50,000
Total	749,000

RPA also recommends that the Partners institute robust quality assurance/quality control (QA/QC) protocols as part of their historical core sampling and diamond drilling program, including the insertion of duplicates, standards, and blanks into the sample stream.

Contingent on the Phase I program results, a recommended Phase II program, envisioned to be initiated in the summer of 2020, will consist primarily of diamond drilling to follow up on high potential target areas developed during Phase I. The expected Phase II program budget is \$2,500,000.



TECHNICAL SUMMARY

PROPERTY DESCRIPTION AND LOCATION

The Project is located in Matheson Township, northeastern Ontario, approximately 24 km from the Timmins city centre. Access to all the claim blocks comprising the Project is by paved and secondary roads, concession roads, bush roads, and trails. The Project is centred at approximately Latitude 48° 34' N and Longitude 81° 03' W within 1:50,000 scale NTS map sheet 42A/11 (Pamour).

LAND TENURE

The Project consists of four non-contiguous blocks totalling 41 single cell mining claims, four patented (surface and mining rights) claims and three leased (surface and mining rights) claims covering approximately 1,276.84 ha located in the western portion of Matheson Township. As of the effective date of this report, all claims comprising the Project were in good standing. The Project is subject to a joint venture agreement between QPM (50%) and IEP (50%).

Some of the claims comprising the Project are subject to NSR royalties by virtue of underlying agreements.

EXISTING INFRASTRUCTURE

All Project claim blocks are accessible by paved, secondary, or bush roads and would benefit from access to the provincial hydro-electric grid. A natural gas pipeline crosses the South Block and an active railway line cross portions of the Main Block. The Project is located four kilometres northeast of the Xstrata Metallurgical Complex.

HISTORY

The Property has been explored sporadically since the mid-twentieth century. The Property has been covered by a variety of airborne surveys, notably during the 1960s following the discovery of the Kidd Creek mine north of Timmins, when companies explored the area for volcanogenic massive sulphide (VMS) deposits. Major companies including Texas Gulf Sulphur Co. in the late 1970s to early 1980s, Kidd Creek Mines Ltd. from the late 1970s to the mid-1980s, and Falconbridge Inc. from the late 1980s to early 1990s were active Matheson Township. More recently, the Porcupine Joint Venture (PJV) between Newmont Goldcorp Inc. (51%) and Kinross Gold Corporation (49%) has been very active in the area. Gold became the focus of exploration after the discovery of the Bell Creek, Owl Creek, and Hoyle Pond mines in southern Hoyle Township, to the west of Matheson Township.



The paucity of bedrock exposures in Matheson Township has resulted in a reliance on indirect exploration methods including airborne geophysical surveys, RC overburden drilling, and ground geophysical surveys (magnetics, very low frequency electromagnetic (VLF-EM), horizontal loop electromagnetic (HLEM) and induced polarization (IP) followed by limited diamond drilling.

GEOLOGY AND MINERALIZATION

The Central Timmins Project lies within the Southern Abitibi Greenstone Belt (SAGB) of the Superior Province in northeastern Ontario. In very general terms, the Abitibi Sub-province consists of Late Archean metavolcanic rocks, related synvolcanic intrusions, and clastic metasedimentary rocks, intruded by Archean alkaline intrusions and Paleoproterozoic diabase dikes. The traditional Abitibi Greenstone Belt stratigraphic model envisages lithostratigraphic units deposited in autochthonous successions, with their current complex map pattern distribution developed through the interplay of multi-phase folding and faulting.

At a regional scale, the distribution of supracrustal units in the SAGB is dominated by eastwest striking volcanic and sedimentary assemblages. The structural grain is also dominated by east-west trending Archean deformation zones and folds. The regional deformation zones commonly occur at assemblage boundaries and are spatially closely associated with long linear belts representing the sedimentary assemblages. The dominant regional fault in this area is the Destor-Porcupine, referred to as the Destor-Porcupine Fault Zone (DPFZ). The current locations of these regional deformation zones are interpreted to be proximal to the locus of early synvolcanic extensional faults. Belt scale folding and faulting was protracted and occurred in a number of distinct intervals associated at least in the early stages with compressive stresses related to the onset of continental collision between the Abitibi and older sub-provinces to the north. Throughout the history of the Abitibi Sub-province, there was repeated plutonism defined by three broad suites: 1) synvolcanic plutons, 2) syntectonic intrusions that range in age from 2695 Ma to 2680 Ma and include tonalite, granodiorite, syenite, and granite, and 3) post-tectonic granites that range in age from approximately 2665 Ma to 2640 Ma.

The volcanic and sedimentary rocks of the Timmins-Porcupine gold camp belong to the Deloro, Tisdale, Porcupine, and Timiskaming assemblages.



The Deloro assemblage only occurs to the south of the DPFZ. It is mainly composed of pillowed calc-alkaline mafic volcanic rocks, and constitutes the oldest volcanic rock assemblage in the camp. Intermediate to felsic volcanic and/or volcaniclastic rocks and iron formations are also present in the Deloro assemblage.

A disconformity and/or a reverse fault marks the contact between the volcanic rocks of the Deloro assemblage and those of the overlying Tisdale assemblage. In contrast to the Deloro assemblage, the Tisdale assemblage, in particular the Hersey Lake Formation, is present both to the south and to the north of the DPFZ.

The contact between the volcanic rocks of the Tisdale assemblage and the overlying sedimentary rocks of the Porcupine assemblage has been described as a disconformity. A distinct, discontinuous horizon of carbonaceous argillite (approximately 100 m) separates the Tisdale and Porcupine assemblages in much of the camp. The Porcupine assemblage comprises the following, from base to top: (1) calc-alkaline pyroclastic and volcaniclastic rocks (debris flow, talus breccia) of the Krist Formation, (2) greywackes, siltstone, and mudstone of the Beatty Formation, and (3) greywacke, siltstone, and mudstone of the Hoyle Formation. Locally, minor conglomerate and iron formation are also present.

The sedimentary rocks of the Timiskaming assemblage (approximately 900 m thick) are only distributed along the north side of the DPFZ and unconformably overlie the Porcupine and Tisdale assemblages. The Timiskaming angular unconformity cuts both limbs of the Porcupine syncline.

The structural setting of the Timmins-Porcupine gold camp is complex and comprises several stages of deformation and/or strain increments.

The main structural feature of the camp is the east-northeast to east-west trending ductilebrittle DPFZ. It is a poorly exposed, regionally extensive (approximately 550 km), long-lived major fault zone that can be more than 100 m wide. The DPFZ is characterized by steeply dipping penetrative composite foliations (S_3 and S_4). The fault zone is marked by highly strained mafic and ultramafic rocks of the Tisdale and Deloro assemblages, transformed into talc-chlorite schists as well as sedimentary rocks of the Porcupine and Timiskaming assemblages. Quartz ± carbonate veins and breccias, pervasive iron-carbonate hydrothermal



alteration, and local development of fault gouge are also common within or in the vicinity of the fault zone.

Stratigraphic relationships indicate that, overall, the fault is characterized by a south-side-up component of motion, however, the fault zone has a complex geometry and kinematic history. The dip of the fault zone is steep and varies from north to south along its length with evidence for both vertical and strike-slip displacements. The presence of Porcupine assemblage sedimentary rocks and local volcanic rocks and/or intrusive rocks of the Hersey Lake Formation on both sides of the DPFZ indicates that it is not a terrane-bounding structure.

The Property is covered by an extensive and locally thick layer of Quaternary glaciofluvial and glaciolacustrine deposits and till. The Property geology is based on a compilation of diamond drilling, RC drilling, and geophysical interpretation data.

Sedimentary rocks of the Hoyle assemblage are dominant on the Property. The northeast and central parts of North Claim Block are crossed by ultramafic and mafic rocks of the Tisdale assemblage, as well as in the South claim block, which correlates with the volcanic stratigraphy extending westward, and which hosts Bell Creek, Owl Creek, and Hoyle Pond mines, approximately six kilometres to 12 km west of the South Block. The intercalated volcanic and sedimentary rocks appear to form a predominantly southward facing succession. Faulting evidence is marked, principally by the offset of various volcanic units having strong magnetic signatures. These faults are mainly oriented north-south although some northwest trending faults have also been interpreted.

EXPLORATION STATUS

The Project is at an early stage of exploration, albeit in close proximity to an existing mining camp which has been explored for over a century.

MINERAL RESOURCES

There are no current Mineral Resource or Mineral Reserve estimates for the Project.



2 INTRODUCTION

Roscoe Postle Associates Inc. (RPA) was retained by Quebec Precious Metals Corporation (QPM) and International Explorers and Prospectors Inc. (IEP) (collectively the Partners) to prepare an independent Technical Report on the Matheson Joint Venture property (the Project or the Property), located in Cochrane District, northeastern Ontario, Canada. QPM and IEP hold a 50% interest each in the Matheson Joint Venture, with QPM being the manager.

The purpose of this report is to document the technical aspects of the Project to support a possible transaction. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101).

QPM is a Montreal-based junior mining exploration company formed in April 2018 by way of a business combination among Matamec Explorations Inc. (Matamec) and Canada Strategic Metals Inc. and is a reporting issuer in British Columbia, Alberta, and Quebec. The common shares of QPM trade on the TSX Venture Exchange and the company is under the jurisdiction of the *Autorité des marchés financiers du Québec*. In addition to the Project, QPM has several other exploration properties, primarily in the James Bay area of Quebec, including its flagship Sakami gold property. QPM also owns a 72% interest in the advanced-stage Kipawa heavy rare earth property in the Temiscaming area of southwestern Quebec.

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On June 11, 2007, Matamec and Explorers Alliance Corporation (Explorers Alliance) entered into a three-year option agreement whereby Matamec could earn a 50% interest in certain claims totalling 1,200 ha in Matheson Township by issuing shares and share purchase warrants, transferring an interest in the Matheson-Colbert property to Explorers Alliance and incurring work expenditures. Matamec also granted a 1.5% net smelter return (NSR) royalty



to Explorers Alliance, subject to a buy-back provision of 0.75% for \$1,500,000. In May 2010, Matamec vested its 50% interest.

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Some of the claims comprising the Project are subject to NSR royalties by virtue of underlying agreements.

The major asset associated with the Project is a strategic land position covering prospective lithologies and structures analogous to the geological setting of the nearby Hoyle Pond mine. Exploration targets warranting additional work, including diamond drilling, have been identified.

RPA is not aware of any environmental, permitting, legal, title, taxation, socio-economic or other relevant factors that could materially affect the continued exploration of the Project.

SOURCES OF INFORMATION

This report has been prepared by RPA for the Partners, and is based on information supplied by the Partners, information in the public domain, and a site visit.

The site visit was carried out by Paul Chamois, M.Sc. (A), P.Geo., Principal Geologist with RPA, from August 7 to 8, 2019. The purpose of the site visit was to confirm the local geological setting, independently sample historical diamond drill core from the Property, and identify factors which might affect the Project.

Prior to, and during the visit, discussions were held with:

- Mr. Normand Champigny CEO, QPM
- Mr. Lionel Bonhomme President, IEP
- Mr. Peter Colbert CFO, IEP
- Dr. Ed van Hees
 Regional Resident Geologist, Timmins District
 Ontario Geological Survey

This report was prepared by Paul Chamois, P.Geo., an Independent Qualified Person, who is responsible for all sections of the report.



The documentation reviewed, and other sources of information, are listed at the end of this report in Section 27 References.

LIST OF ABBREVIATIONS

Units of measurement used in this report conform to the metric system. All currency in this report is Canadian dollars (C\$) unless otherwise noted.

°C C\$ cm	degree Celsius Canadian dollars centimetre
g	gram
g/t	gram per tonne
ft	foot
ha	hectare
in.	inch
k	kilo (thousand)
km	kilometre
m	metre
Ма	million years
MASL	metres above sea level
mm	millimetre
ΟZ	Troy ounce (31.1035 g)
oz/st	ounce per short ton
t	metric tonne
vol. %	volume percent



3 RELIANCE ON OTHER EXPERTS

This report has been prepared by RPA for QPM and IEP. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to RPA at the time of preparation of this report, and
- Assumptions, conditions, and qualifications as set forth in this report.

For the purpose of this report, RPA has relied on ownership information provided by Mr. Peter Colbert, Chief Financial Officer of IEP, on August 8, 2019. RPA has not researched property title or mineral rights for the Project and expresses no opinion as to the ownership status of the Property. RPA did, however, review the status of some the Project claims on the Ontario Ministry of Northern Development and Mines web site (<u>https://www.mci.mndm.gov.on.ca</u>), in addition to the claims information for those claims reviewed in Section 4 of this report as of August 12, 2019, the date of RPA's review.

Except for the purposes legislated under provincial securities laws and under exchange policy, any use of this report by any third party is at that party's sole risk.



4 PROPERTY DESCRIPTION AND LOCATION

The Project is located in western Matheson Township, Cochrane District, northeastern Ontario. The centre of the Project is approximately 24 km northeast of the Timmins city centre and approximately 575 km north-northwest of the provincial capital of Toronto within 1:50,000 scale NTS sheet 42A/11 [Pamour] (Figure 4-1).

The Project consists of four non-contiguous claim blocks that would fit within a rectangular area extending five kilometres in an east-west direction and eight kilometres in a north-south direction. The Project is centred approximately at Latitude 48°34' N and Longitude 81°03' W.

LAND TENURE

The Project consists of four non-contiguous claim blocks, referred to for the purposes of this report as the Main, East, South, and River blocks. The Main Block consists of patented (mining and surface rights), leased (mining and surface rights), and single cell mining claims forming an irregularly shaped group located from Concessions II to V and Lots 7 to 12 totalling approximately 1,117.9 ha. The East Block consists of one patented (mining and surface rights) claim located in Concession III, Lot 7 (S1/2) totalling approximately 31.7 ha. The South Block consists of leased (mining and surface rights) claims located in Concession II, Lots 8 and 9 totalling approximately 95.4 ha. The River Block consists of patented (mining and surface rights) claims located in Concession I, Lot 11 (S1/2) totalling approximately 31.8 ha.

The Project comprises four patented claims, three leases, and 41 single cell mining claims totalling approximately 1,276.84 ha in the Porcupine Mining Division (Figure 4-2). The claims are currently registered variously in the name of QPM, IEP, or Matamec and, as of the effective date of this report, were all in good standing. Table 4-1 lists the relevant tenure information related to the Property.

In order to renew the entirety of the Project claims upon their respective anniversary dates, a total of \$5,800 in assessment work must be completed annually. Taxes due annually on the leased and patented claims total an estimated \$4,000. Sufficient assessment credits are available to renew all of the claims comprising the Project on their respective anniversary dates for several years.



On June 11, 2007, Matamec and Explorers Alliance entered into a three-year option agreement (the Option Agreement) whereby Matamec could earn a 50% interest in certain claims totalling 1,200 ha by issuing shares, transferring an interest in the Matheson-Colbert property to Explorers Alliance, and incurring work expenditures according to the following:

- Issuance of 2,166,667 common shares of Matamec valued at \$0.30 per share and 2,166,666 flow-through share warrants of Matamec exercisable at \$0.45 per share for an eighteen-month period beginning ninety days after regulatory approval,
- Transferring a 50% interest in the Matheson-Colbert Property to Explorers Alliance, and
- Incurring \$1,500,000 in work expenditures over a three-year period.

The Option Agreement is subject to a 1.5% NSR royalty in favour of Explorers Alliance on all products extracted from the Property, of which half (0.75%) can be re-purchased for \$1,500,000.

In late 2007, the Matamec and Explorers Alliance entered into an agreement with the Porcupine Joint Venture (the PJV) comprising Newmont Goldcorp Canada Inc. and Kinross Gold Corporation (Kinross) to combine exploration properties in Matheson Township. Under the terms of that agreement, the PJV would earn a 50% interest and the Partners would earn a 50% interest in a property package totalling approximately 3,700 ha. This agreement was terminated before the respective interests could be vested.

IEP acquired its interest in the Project by way of a debt conversion with Explorers Alliance in 2008.

On June 27, 2018, QPM announced that it had acquired all of the issued and outstanding common shares of Matamec by way of a business combination.

MINERAL RIGHTS

In Canada, natural resources fall under provincial jurisdiction. In the Province of Ontario, the management of mineral resources and the granting of mining rights for mineral substances and their use are regulated by the Ontario Mining Act and administered by the Ministry of Northern Development and Mines (MNDM). Mineral rights are owned by the Crown and are distinct from surface rights.



ROYALTIES AND OTHER ENCUMBRANCES

In addition to the NSR royalty due to IEP, certain claims (as defined by their legacy claim identification) comprising the Property are subject to the following royalties by virtue of underlying agreements:

- 1.5% NSR royalty in favour of J.W. Spooner on Parcel 9708SEC,
- 1.0% NSR in favour of River Oaks Gold Corporation on Parcels 5762SEC and 5763SEC, one half (0.50%) of which can be purchased for \$500,000,
- 1.0% NSR royalty in favour of E.H. Ludwig on mining claims P1189144, P4209684, P4209685 and P4209690, one half (0.50%) of which can be purchased for \$500,000, and
- 1.0% NSR in favour of R. Meikle and S. Anderson (A.E. Chaumont) on mining claim P181459, one half (0.50%) of which can be purchased for \$500,000.
- 2.0% NSR in favour of 6070205 Canada Inc. on mining claim 4247270, one half (1.00% of which can be purchased for \$1,000,000.
- 1.5% NSR in favour of the Bonhomme estate et. al. on patented claims PAT-46406, PAT-46407, PAT-46408, PAT-46409 and leases LEA-107339, LEA-108037, LEA-108148, P1189144, P1181459, P1198788, P1198788, P4209684, P4209685 and P4209690, one half (0.75%) which can be purchased for \$750,000.

PERMITTING

The MNDM is the principal agency responsible for implementing the provincial Mining Act and regulating the mining industry in Ontario. It is involved in the permitting and approvals process throughout the lifecycle of a mine.

Given the Project's early stage of development, permits, approval applications, and reporting requirements for the MNDM may include:

- Aboriginal Consultation Reports
- Exploration Permits
- Exploration Plans

Permits, approval applications, and reporting requirements for work on patented (surface and mining rights) claims are not required.

RPA is not aware of any environmental liabilities on the Property. The Partners has all required permits to conduct the proposed work on the Property. RPA is not aware of any other



significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the Property.



TABLE 4-1 TENURE DATA QPM and IEP - Matheson Joint Venture Project

Legacy	Area	Township	Tenure	MLAS	Anniversary	Tenure	Tenure	Work
Claim No.	(ha)		ID	Tenure	Date	Status	Percentage	Required
				Туре			(%)	Annually (\$
1181459		MATHESON	104730	Single Cell Mining Claim	2020-12-01	Active	100	200
1181459		MATHESON	140510	Single Cell Mining Claim	2020-06-14	Active	100	200
1181459		MATHESON	165344	Single Cell Mining Claim	2020-06-14	Active	100	200
1181459		MATHESON	171833	Single Cell Mining Claim	2020-06-14	Active	100	200
1181459	68.15	MATHESON	172995	Single Cell Mining Claim	2020-06-14	Active	100	200
1181459		MATHESON	231376	Single Cell Mining Claim	2020-06-14	Active	100	200
1181459		MATHESON	276420	Single Cell Mining Claim	2020-06-14	Active	100	200
1181459		MATHESON	308497	Single Cell Mining Claim	2020-06-14	Active	100	200
1181459		MATHESON	308498	Single Cell Mining Claim	2020-06-14	Active	100	200
1189144		MATHESON	104730	Single Cell Mining Claim	2020-12-01	Active	100	200
1189144	40.40	MATHESON	171833	Single Cell Mining Claim	2020-06-14	Active	100	200
1189144	16.40	MATHESON	307381	Single Cell Mining Claim	2020-12-01	Active	100	200
1189144		MATHESON	324558	Single Cell Mining Claim	2020-04-26	Active	100	200
1198788		MATHESON	104730	Single Cell Mining Claim	2020-12-01	Active	100	200
1198788	04.00	MATHESON	168681	Single Cell Mining Claim	2020-12-01	Active	100	200
1198788	31.66	MATHESON	259265	Single Cell Mining Claim	2020-12-01	Active	100	200
1198788		MATHESON	307381	Single Cell Mining Claim	2020-12-01	Active	100	200
4209684		MATHESON	104730	Single Cell Mining Claim	2020-12-01	Active	100	200
4209684		MATHESON	144419	Single Cell Mining Claim	2020-04-26	Active	100	200
4209684		MATHESON	172995	Single Cell Mining Claim	2020-06-14	Active	100	200
4209684	51.57	MATHESON	259265	Single Cell Mining Claim	2020-12-01	Active	100	200
4209684		MATHESON	276420	Single Cell Mining Claim	2020-06-14	Active	100	200
4209684		MATHESON	306962	Single Cell Mining Claim	2020-04-26	Active	100	200
4209685		MATHESON	114611	Single Cell Mining Claim	2020-04-26	Active	100	200
4209685		MATHESON	158714	Single Cell Mining Claim	2020-04-26	Active	100	200
4209685		MATHESON	223431	Single Cell Mining Claim	2020-04-26	Active	100	200
4209685		MATHESON	239140	Single Cell Mining Claim	2020-04-26	Active	100	200
4209685		MATHESON	239141	Single Cell Mining Claim	2020-04-26	Active	100	200
4209685	68.46	MATHESON	247891	Single Cell Mining Claim	2020-04-26	Active	100	200
4209685		MATHESON	259265	Single Cell Mining Claim	2020-12-01	Active	100	200
4209685		MATHESON	259360	Single Cell Mining Claim	2020-04-26	Active	100	200
4209685		MATHESON	259361	Single Cell Mining Claim	2020-04-26	Active	100	200
4209685		MATHESON	306962	Single Cell Mining Claim	2020-04-26	Active	100	200
4209690		MATHESON	168681	Single Cell Mining Claim	2020-12-01	Active	100	200
4209690	45.86	MATHESON	307381	Single Cell Mining Claim	2020-12-01	Active	100	200
4209690		MATHESON	324558	Single Cell Mining Claim	2020-04-26	Active	100	200
4247270		MATHESON	148880	Single Cell Mining Claim	2019-12-15	Active	100	200
4247270		MATHESON	340216	Single Cell Mining Claim	2019-12-15	Active	100	200
4247270		MATHESON	301480	Single Cell Mining Claim	2019-12-15	Active	100	200
4247270	64.23	MATHESON	289331	Single Cell Mining Claim	2019-12-15	Active	100	200
4247270		MATHESON	178647	Single Cell Mining Claim	2019-12-15	Active	100	200
4247270		MATHESON	164605	Single Cell Mining Claim	2019-12-15	Active	100	200

Mining Right	Area	Mining	Old	Account	Tenure	PIN	
No.	(ha)	Right	Number	Status	Creation		
		Туре			Date		
LEA-108148	32.21	Lease	Lease 104776	Active	2019-01-31	65361-0171(LT)	
PAT-46406	61.90	Patent	9708SEC	Active	2019-01-31	65631-0303(LT)	
PAT-46407	31.70	Patent	119377SEC	Active	2019-01-31	65361-0304(LT)	
PAT-46408	15.90	Patent	5762SEC	Active	2019-01-31	65361-0294(LT)	
PAT-46409	15.90	Patent	5763SEC	Active		65361-0293(LT)	
LEA-108037	317.70	65361-0323(L ⁻	T) Lease 104377	Parcel 1481 SEC LC	30679) Glencore	Canada Corporatio	North Lease
LEA-107339	455.20	65361-0038(L ⁻ 65361-0197(L ⁻ 65361-0196(L ⁻	Г)	Parcel 1166 SEC LC	∣30679) Glencore	Canada Corporatio	South Lease

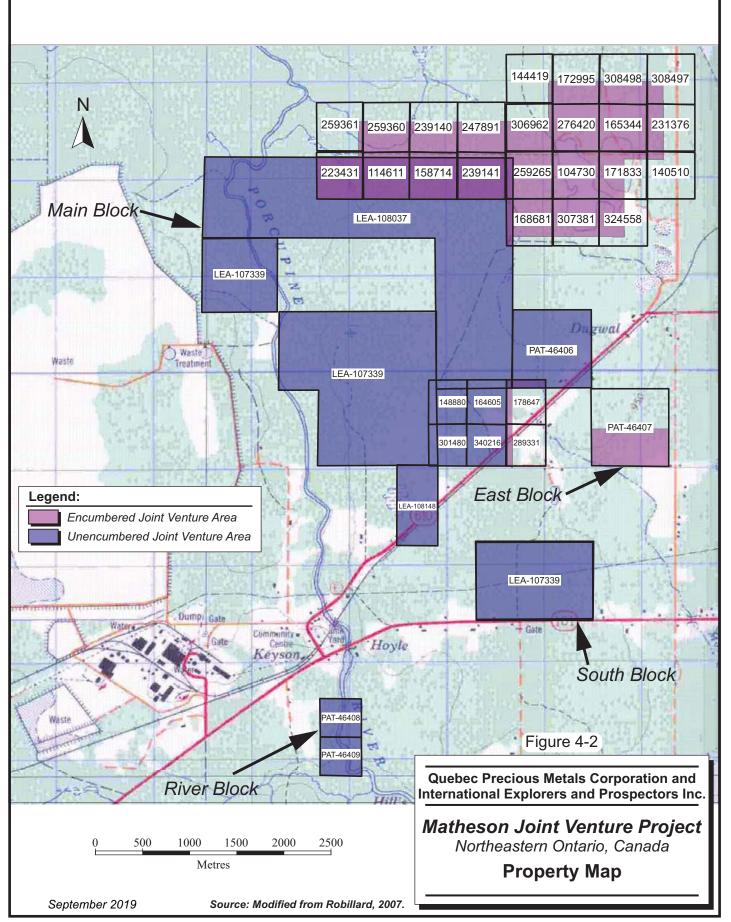
TOTAL AREA 1,276.84



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5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

ACCESSIBILITY

The Project is located northeast of Timmins, which has a population of approximately 41,800 according to the 2016 census. Timmins is accessible by the provincial road network and is serviced by daily flights from Toronto. Access to the Project is via Provincial Highway 101 east from Timmins, which crosses the southern part of the general Project area, and Provincial Highway 610 which parallels the CN railway. The Project is traversed by a network of paved secondary roads and gravel range roads as well as bush roads and trails.

CLIMATE

The Property lies within the Abitibi Plains ecoregion of the Boreal Shield ecozone and is marked by warm summers and cold, snowy winters. The mean annual temperature is approximately 1°C. The mean summer temperature is 14°C and the mean winter temperature is -12°C (Marshall and Schutt, 1999). Table 5-1 illustrates the major climatic data for the two closest weather stations – Timmins, Ontario, and Porcupine, Ontario.

TABLE 5-1	CLIMATIC DATA – KIRKLAND LAKE AND PORCUPINE
	QPM and IEP – Matheson Joint Venture Project

	Timmins	Porcupine
Mean January temperature	-16.8°C	-17.0°C
Mean July temperature	17.5°C	18.4°C
Extreme maximum temperature	39.4°C	38.5°C
Extreme minimum temperature	-45.6°C	-45.0°C
Average annual precipitation	834.6 mm	865.1 mm
Average annual rainfall	558.3 mm	558.2 mm
Average annual snowfall	311.3 cm	306.9 cm

Source: Environment Canada

Despite the harsh climatic conditions, geophysical surveying and diamond drilling can be performed on a year-round basis. Geological mapping and geochemical sampling are typically restricted to the months of May through to October.



LOCAL RESOURCES

Timmins is a major mining centre and a complete range of services are available including temporary and permanent accommodations, medical services, heavy equipment sales and repairs, machine shops, and specialized mining services including contractors, trained and unskilled labour.

INFRASTRUCTURE

The general area benefits from good road access and the presence of the CN railway line which crosses the Main Block in a northeasterly direction. A natural gas pipeline crosses the South Block.

All Project claim blocks would benefit from access to the provincial hydro-electric grid.

PHYSIOGRAPHY

Topographic relief is relatively flat lying, averaging approximately 290 MASL with maximum elevation variations rarely exceeding ten metres.

The landscape is dominated by fine-textured, level to undulating lacustrine deposits. Intermixed within these deposits are bedrock outcrops and organic deposits. Occurrences of organic soils increase towards the north as elevation decreases. Domed, flat, and basin bogs are the characteristic wetlands found in over 50% of the ecoregion with concentrations increasing towards the north.

Gray luvisols and gleysols found on the clayey lacustrine and loamy tills are the dominant soils in the ecoregion. Although level, poorly drained areas are characterized by mesisols and fibrisols, humo-ferric podzols occur on sandy deposits in the southern part of the ecoregion.

Vegetation consists of mixed, open to dense deciduous and coniferous forest including spruce, pine, balsam fir, cedar, poplar, birch, and tag alder typical of a boreal forest environment. The understory is typically moss, as well as lichen in cold and wet sites.

Characteristic wildlife includes moose, black bear, lynx, snowshoe hare, caribou, wolf, and coyote. Bird species include sharp-tailed grouse, American black duck, wood duck, hooded merganser, and pileated woodpecker.



The Project is currently at an early exploration stage and the requirements for water and surface rights are sufficient for the proposed work programs.



6 HISTORY

PRIOR OWNERSHIP

Most of the claims comprising the Property were staked by J.V. Bonhomme (Bonhomme) in 1971. During the 1980s, the claims were controlled by Bongold Exploration and Development Company (Bongold), a private company owned by Bonhomme. In 1994, the claims were optioned to Golden Trio Minerals Ltd. which then assigned the claims to International Larder Minerals Inc. (International Larder). International Larder terminated its option in early 1995. The claims were then optioned to BHP Minerals Canada Ltd. (BHP Minerals) until 1996. In early 1997, the claims were optioned to Kinross Gold Corporation (Kinross). In 1998, Bonhomme was involved in an amalgamation involving five companies which resulted in the formation of Explorers Alliance. In June 2007, Matamec entered into an option agreement with Explorers Alliance whereby it vested a 50% interest in the Property.

EXPLORATION AND DEVELOPMENT HISTORY

The Property has been explored sporadically since the mid-twentieth century. The Property has been covered by a variety of airborne surveys, notably during the 1960s following the discovery of the Kidd Creek mine north of Timmins, when companies explored the area for volcanogenic massive sulphide (VMS) deposits. Major companies including Texas Gulf Sulphur Co. (Texas Gulf) in the late 1970s to early 1980s, Kidd Creek Mines Ltd. from the late 1970s to the mid-1980s, and Falconbridge Inc. from the late 1980s to early 1990s were active in Matheson and surrounding townships. Gold became the focus of exploration after the discovery of the Bell Creek, Owl Creek, and Hoyle Pond mines in southern Hoyle Township, to the west of Matheson Township.

The following is compiled from Robillard (2007) and assessment reports available for viewing on-line (<u>www.geologyontario.mndm.gov.on.ca/index.html</u>), and corresponds to work completed on claims comprising the current Property for which reports of work are available.

In 1952, Dominion Gulf Company completed geological mapping and ground magnetic surveying over three non-contiguous blocks totalling 33 claims in the western portion of Concessions V and VI to define an airborne magnetic anomaly. Some of the surveyed claims



correspond to the northernmost claims comprising the Main Block of the Property. The survey was completed over north-south oriented lines cut at 400 ft (122 m) spacings. No outcrops were identified. The resulting magnetic pattern was interpreted to be either a cross-folded anticlinal structure in an intermediate to basic lava or multiple basic to ultrabasic intrusives (Ratcliffe, 1953).

In 1972, ground magnetic and vertical loop electromagnetic (VLEM) surveys were completed on north-south oriented, 400 ft spaced lines across the South Block on claims held by Bonhomme. The only significant responses were from a natural gas pipeline and a hydroelectric power line that cross the property (Bradshaw, 1972a).

Also, in 1972, ground magnetic VLEM surveys were completed on north-south oriented, 400 ft spaced lines across a 22 claim property that coincided with the western and southern portions of the Main Block on claims held by Bonhomme. Eight conductors were defined and four diamond drill holes were recommended (Bradshaw, 1972b).

In 1978, ground magnetic VLEM surveys were completed on north-south oriented, 400 ft spaced lines across a 20-claim property held by Bongold that coincided with the eastern and northern portions of the Main Block. The surveys revealed a generally featureless area without significant conductive zones. A 200 ft (61 m) wide, easterly striking shear zone was identified on the basis of the electromagnetic (EM) response (Bradshaw, 1978).

In 1982, Kidd Creek Mines Ltd. (Kidd Creek) contracted Aerodat Ltd. to fly a combined magnetic and EM helicopter-borne survey over four claim blocks in northern Matheson Township, one of which covered a portion of the Main Block. North-south flight lines were flown at 200 m spacings. A weak conductive response interpreted to be caused by a graphitic horizon at the contact between mafic volcanics and ultramafic volcanics was identified (Gasteiger, 1982).

In 1996, BHP Minerals completed a reverse circulation (RC) drilling program totalling 25 holes on two properties in Matheson Township. Twenty-three of the holes were drilled at 400 m intervals in three east-west oriented tiers in Concessions III and IV. Nineteen of these holes were drilled on what is now the Main Block. No evidence of major shearing was found in the bedrock chip samples and the alteration observed was due mainly to lower greenschist facies metamorphism. Gold and base metal values in bedrock chips were low. Two potentially



significant visible gold anomalies in basal till samples were identified, one of which occurs on the Main Block and the other, immediately east of it in Concession III.

In 2003, the PJV contracted Terraquest Ltd. to complete a detailed, fixed wing magnetic survey over several townships in the Timmins area, including Matheson Township. Flight lines were spaced at 50 m intervals and were flown at headings of 340° (Barrie, 2003). No interpretation of the survey results was provided.

In 2004, Placer Dome Inc. completed a detailed, high resolution airborne magnetic survey on behalf of the PJV over an area covering six townships, including Matheson Township, referred to as the Hoyle East and North (HEN) Project. A total of 21 targets were identified and prioritized. Two of the targets, "G" and "O", were located in the vicinity of the Main Block and the South Block, respectively. The "O" target, corresponding to the Tkachuk property, immediately south of the South Block, was drilled in 2005. No significant results were achieved and no further work on that target was recommended (Gliddon, 2005). Target "G", located in the vicinity of the eastern portion of the Main Block, may not yet have been tested.

HISTORICAL RESOURCE ESTIMATES

No historical Mineral Resource estimates have been prepared by previous owners.

PAST PRODUCTION

There has been no historical production from the Property.

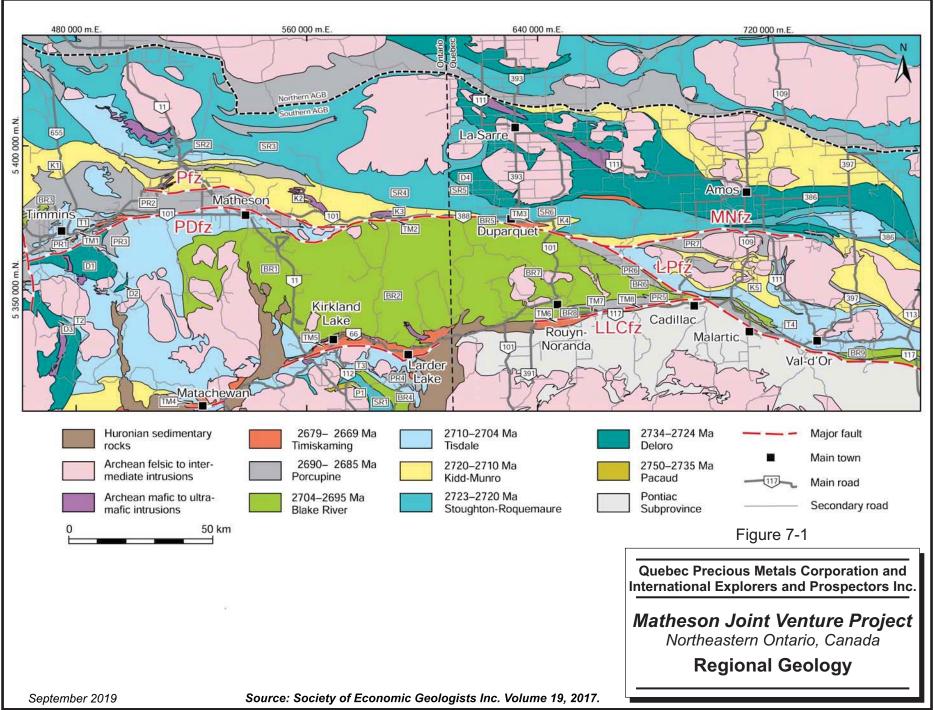


7 GEOLOGICAL SETTING AND MINERALIZATION

REGIONAL GEOLOGY

The Project lies within the Southern Abitibi Greenstone Belt (SAGB) of the Superior Province in northeastern Ontario (Figure 7-1). In very general terms, the Abitibi Sub-province consists of Late Archean metavolcanic rocks, related synvolcanic intrusions, and clastic metasedimentary rocks, intruded by Archean alkaline intrusions and Paleoproterozoic diabase dikes. The traditional Abitibi greenstone belt stratigraphic model envisages lithostratigraphic units deposited in autochthonous successions, with their current complex map pattern distribution developed through the interplay of multi-phase folding and faulting (Heather, 1998).

On a regional scale, the distribution of supracrustal units in the SAGB is dominated by eastwest striking volcanic and sedimentary assemblages. The structural grain is also dominated by east-west trending Archean deformation zones and folds. The regional deformation zones commonly occur at assemblage boundaries and are spatially closely associated with long linear belts representing the sedimentary assemblages. The dominant regional fault in this area is the Destor-Porcupine, referred to as the Destor-Porcupine Fault Zone (DPFZ). The current locations of these regional deformation zones are interpreted to be proximal to the locus of early synvolcanic extensional faults. Belt scale folding and faulting was protracted and occurred in a number of distinct intervals associated at least in the early stages with compressive stresses related to the onset of continental collision between the Abitibi and older sub-provinces to the north (Ayer et al., 2005). Throughout the history of the Abitibi Subprovince, there was repeated plutonism defined by three broad suites: 1) synvolcanic plutons, 2) syntectonic intrusions that range in age from 2695 Ma to 2680 Ma and include tonalite, granodiorite, syenite, and granite, and 3) post-tectonic granites that range in age from approximately 2665 Ma to 2640 Ma (Ayer et al., 1999).



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7-2



LOCAL GEOLOGY

The following description of the geology of the Timmins-Porcupine gold camp is abridged from Dubé et al. (2017). Figure 7-2 illustrates the geology of the Timmins-Porcupine gold camp and Figure 7-3 illustrates the schematic stratigraphic column for the area.

STRATIGRAPHY

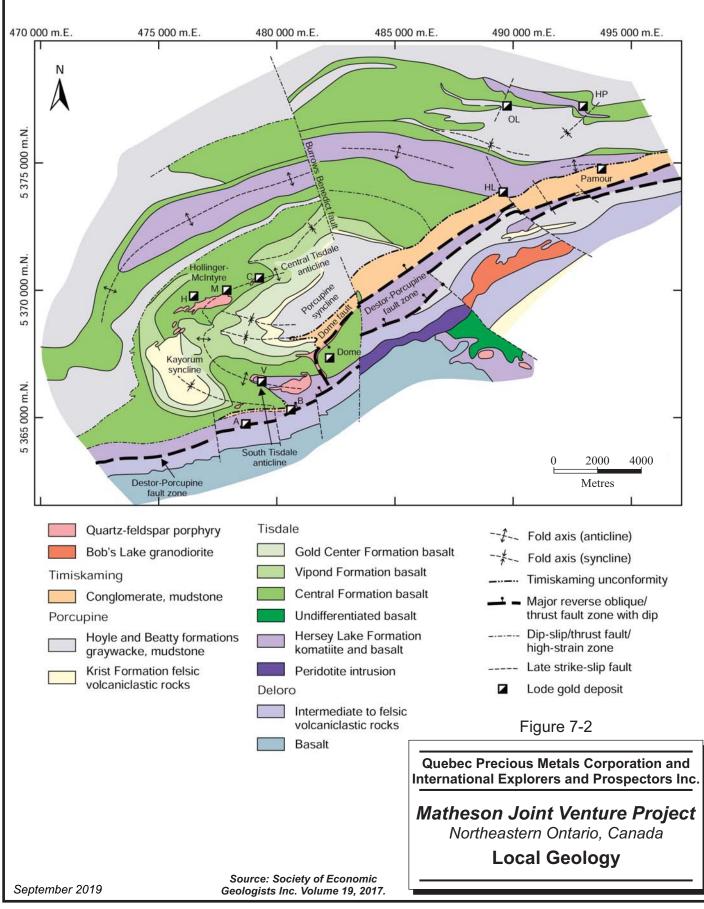
The volcanic and sedimentary rocks of the Timmins-Porcupine gold camp belong to the Deloro, Tisdale, Porcupine, and Timiskaming assemblages.

The Deloro assemblage only occurs to the south of the DPFZ. It is mainly composed of pillowed calc-alkaline mafic volcanic rocks, and constitutes the oldest volcanic rock assemblage in the camp. Intermediate to felsic volcanic and/or volcaniclastic rocks and iron formations are also present in the Deloro assemblage.

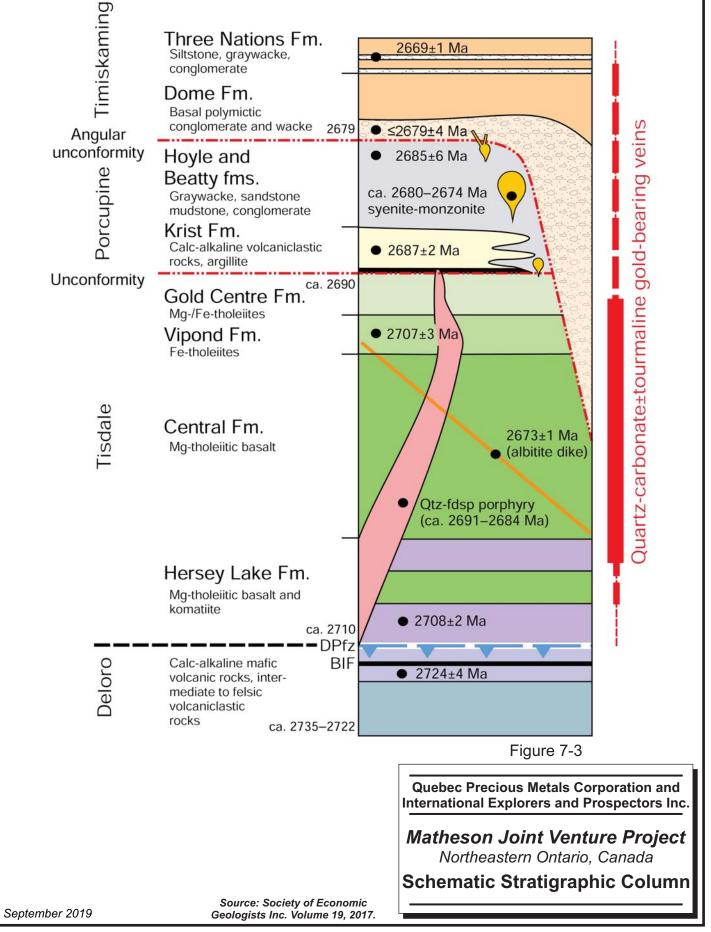
A disconformity and/or reverse fault marks the contact between the volcanic rocks of the Deloro assemblage and those of the overlying Tisdale assemblage (Ayer et al., 2004). In contrast to the Deloro assemblage, the Tisdale assemblage, in particular the Hersey Lake Formation, is present both to the south and to the north of the DPFZ.

From base to top, the Tisdale assemblage consists of the approximately 600 m thick Hersey Lake Formation, the approximately 450 m thick Central Formation, the 200 m to 300 m thick Vipond Formation, and the up to 800 m thick Gold Centre Formation (Mason et al., 1986; Bateman et al., 2008). The Tisdale assemblage is dominated by a wide diversity of regionally mappable basaltic tholeiite flows, including variolitic and amygdaloidal pillowed flows, massive flows and hyaloclastic and pillowed breccias, lesser komatiitic and basaltic komatiite flows, and minor carbonaceous interflow sedimentary rocks (Dunbar, 1948; Griffis, 1962; Holmes, 1964; Ferguson et al., 1968; Pyke, 1982; Brisbin, 1997). The tholeiitic rocks with the highest iron content are dark coloured and contain magnetite and modal quartz. Some of the flows are very distinctive, such as the variolitic pillowed mafic V10 flow and the 99 massive flow of the Vipond Formation (Graton et al., 1933; Hurst, 1939; Ferguson et al., 1968; Mason et al., 1986). The 99 massive flow has yielded a U-Pb zircon age of 2707 Ma \pm 3 Ma. This age overlaps with that of the 2708 Ma \pm 2 Ma Hersey Lake Formation, and thus suggests that the Tisdale assemblage was formed over a duration of a few million years (Ayer et al., 2002a).











The bulk of the gold in the Timmins-Porcupine gold camp is hosted in the Tisdale assemblage. The Central Formation mafic volcanic rocks and interflow carbonaceous argillites host the bulk of the gold at the giant Hollinger-McIntyre deposit, whereas the Vipond Formation is one of the main hosts to gold at the Dome deposit.

The contact between the volcanic rocks of the Tisdale assemblage and the overlying sedimentary rocks of the Porcupine assemblage has been described as a disconformity (Buffam, 1948a, b). A distinct, discontinuous horizon of carbonaceous argillite (approximately 100 m) separates the Tisdale and Porcupine assemblages in much of the camp. The Porcupine assemblage comprises the following, from base to top: (1) calc-alkaline pyroclastic and volcaniclastic rocks (debris flow, talus breccia) of the Krist Formation, (2) greywacke, siltstone, and mudstone of the Beatty Formation, and (3) greywacke, siltstone, and mudstone of the Hoyle Formation. Locally, minor conglomerate and iron formation are also present.

The Krist Formation consists of poorly sorted and bedded volcaniclastic deposits that are composed of one centimetre to 25 cm wide angular clasts of feldspar \pm quartz-phyric rhyodacite, chert, and minor, but ubiquitous ultramafic clasts containing fuchsitic green-mica, in a fine-grained feldspathic matrix (Bateman et al., 2008).

Rocks of the Beatty Formation overlie those of the Krist Formation within the Porcupine syncline. The Beattie Formation directly overlies the Tisdale assemblage elsewhere in the camp, the contact being unconformable or faulted (Ferguson et al., 1968; Bateman et al., 2008). The sedimentary rocks of the Hoyle Formation are exposed east, north, and west of the Timmins-Porcupine gold camp. The Hoyle and Beatty formations are correlative units (Bateman et al., 2005, 2008) that are considered to have formed in similar settings (J. Gibbons and T. Monecke, unpub. data). These rocks were probably primarily derived from the erosion of Tisdale and Deloro aged units (e.g., Ayer et al., 2002a, 2005; Bleeker, 2012).

The sedimentary rocks of the Timiskaming assemblage (approximately 900 m thick) are only distributed along the north side of the DPFZ and unconformably overlie the Porcupine and Tisdale assemblages (Hurst, 1939; Ferguson et al., 1968). The Timiskaming angular unconformity cuts both limbs of the Porcupine syncline (Burrows, 1911, 1915; Hurst, 1939; Ferguson et al., 1968). The Dome Formation (approximately 400 m thick) is located at the base of the Timiskaming assemblage and is characterized by a basal conglomerate (approximately 50 m thick) containing abundant angular mafic and ultramafic clasts sourced



from the underlying Tisdale assemblage (Lorsong, 1975). Overlying finer grained sedimentary rocks consist of alternating beds of shale (5 cm to 20 cm thick) and sandstone (10 cm to 50 cm thick), which formed as a sequence of turbiditic fan deposits (Born, 1995; Ayer et al., 1999; Bateman et al., 2008; Bleeker, 2012; Bleeker et al., 2014). Rocks of the Three Nations Formation overlie those of the Dome Formation and consist of interbedded quartz-lithic sandstone, pebbly sandstone, and conglomerate (Lorsong, 1975). Conglomerate beds contain rounded clasts (1 cm to 25 cm) of various compositions, including siltstone, felsic volcanic rocks, ultramafic rocks, and, locally, numerous sub-angular to sub-rounded fuchsitic clasts. Rare sulphide-rich clasts and quartz vein fragments are also locally present in those conglomerates. The Three Nations Formation is interpreted to represent deltaic-fluvial deposits (Pyke, 1982; Born, 1995; Ayer et al., 1999).

Volcanic rocks of the Tisdale assemblage are intruded by quartz-feldspar porphyry stocks (up to 1,200 m by 400 m) and dike swarms (Holmes, 1964; Ferguson et al., 1968). The crystallization age of these porphyries was determined by U-Pb zircon dating and varies between 2691 Ma and 2684 Ma (Corfu et al., 1989; Marmont and Corfu, 1989; Gray and Hutchinson, 2001; Bateman et al., 2004, 2008; Ayer et al., 2005). The porphyries contain plagioclase (30 vol. % to 60 vol. %, 1 mm to 5 mm) and quartz (5 vol. %; 1 mm to 5 mm) phenocrysts in a fine grained groundmass of feldspar, quartz, sericite, and chlorite, with lesser carbonate, leucoxene, apatite, and actinolite (Pyke, 1982). Small fuchsitic green mica clasts are locally present in these porphyries. Geochemically, the porphyries are dominantly composed of rocks with dacitic to rhyodacitic compositions and calc-alkaline affinity (McAuley, 1983; MacDonald et al., 2005). These porphyries are identical and comagmatic to the pyroclastic rocks of the Krist Formation (MacDonald et al., 2005; Bateman et al., 2008). Clasts of these intrusions are locally present within the overlying Timiskaming conglomerate.

STRUCTURAL SETTING

The structural setting of the Timmins-Porcupine gold camp is complex and comprises several stages of deformation and/or strain increments. Only a brief summary is presented here.

The first deformation episode (D₁) in the Timmins-Porcupine gold camp consists of thin-skin thrusting (Brisbin, 1997; Robert and Poulsen, 1997; Poulsen et al., 2000; Robert et al., 2005; Bateman et al., 2008; Bleeker, 2012) and megascopic F₁ folding. The Central Tisdale anticline represents one of those F₁ folds (Dunbar, 1948). Quartz-feldspar porphyries, such as the Miller Lake and 2689 Ma \pm 1 Ma Pearl Lake porphyries, are commonly located close to the core



and/or flanks of F₁ folds (Carter, 1948; Jones, 1968; Corfu et al., 1989). The F₁ folds are refolded by F₂ folds such as the Porcupine syncline associated with the second phase of deformation (D₂). The F₂ folds do not seem to be associated with a well-developed axial-planar foliation. The D₂ deformation occurred after the deposition of the Porcupine assemblage at ca. 2690 Ma to 2680 Ma, but predates the ca. 2679 Ma to 2669 Ma Timiskaming assemblage (Bleeker et al., 1999; Ayer et al., 2003, 2005, Bleeker, 2012) as evidenced by foliated clasts within the Dome Formation conglomerate, immediately above the Timiskaming unconformity. The clasts show evidence of a pre-depositional S₁ or S₂ foliation that is at high angle to the main flattening fabric (S₃) recorded by the conglomerate. In addition, the F₁ and F₂ folds are truncated by the Timiskaming unconformity, implying that both phases of folding predate the deposition of the south facing Dome Formation at ca. 2679 Ma to 2674 Ma (Ferguson et al., 1968; Davies, 1977; Roberts, 1981; Heather et al., 1995; Bateman et al., 2008; Bleeker, 2012).

The west-southwest trending Timiskaming unconformity dips steeply to the north, this tilting resulting from post-Timiskaming D₃ shortening. The D₃ deformation represents the main phase of deformation (approximately north-south to northwest-southeast shortening) recorded in the camp. It correlates with the thick-skinned thrusting phase described in Robert et al. (2005) and Bleeker (2012). The D₃ deformation is equivalent to the main phase of shortening recorded elsewhere in the southern Abitibi Belt, which is commonly interpreted as D₂ (e.g., Robert, 1990; Poulsen et al., 2000; Robert et al., 2005). The D₃ deformation in the Timmins-Porcupine gold camp is heterogeneous, with both oblate and prolate dominated strain. The prolate strain has been interpreted as D_5 in Bateman et al. (2008). The D_3 event is generally characterized by flattening and upright folding associated with a penetrative east-west to northwest or eastnortheast trending and steeply dipping S₃ foliation (main flattening plane), and a moderately to steeply east plunging stretching lineation (L₃). Ductile-brittle reverse-oblique D₃ shear zones or high strain zones host steeply dipping centimetre to metre wide fault-fill quartz-carbonate ± tourmaline veins associated with shallow to moderately dipping en-echelon extensional sigmoidal quartz-carbonate ± tourmaline veins. These D₃ high strain zones locally show composite foliations (S_{3a}-S_{3b} or S₃-S₄?). Several generations of structures, including a northnortheast to northwest trending cleavage (S₄), steep and shallow plunging intersection lineations, Z-shaped chevron folds, and kink-bands, postdate the main foliation (S₃). These were developed during D_4 and/or D_5 , particularly in rocks that were already (S₃) strongly foliated (e.g., Bleeker, 1999; Bateman et al., 2008; Bleeker, 2012).



The predominant structural feature of the camp is the east-northeast to east-west trending ductile-brittle DPFZ (Burrows, 1925; Hurst, 1936; Ferguson et al., 1968; Holmes, 1968; Pyke, 1982). It is a poorly exposed, regionally extensive (approximately 550 km), long-lived major fault zone that can be more than 100 m wide. The DPFZ is characterized by steeply dipping penetrative composite foliations (S_3 and S_4). The fault zone is marked by highly strained mafic and ultramafic rocks of the Tisdale and Deloro assemblages, transformed into talc-chlorite schists as well as sedimentary rocks of the Porcupine and Timiskaming assemblages. Quartz ± carbonate veins and breccias, pervasive iron-carbonate hydrothermal alteration, and local development of fault gouge are also common within or in the vicinity of the fault zone as illustrated at the Buffalo Ankerite, Aunor, and Delnite deposits (Pyke, 1982; Brisbin, 1997; Berger, 2001; Bateman et al., 2005, 2008; Bleeker, 2012). The intensity of the D₃ strain and iron-carbonatization commonly increases towards the DPFZ. In intensely S₃-foliated areas, D4-D5 chevron folds and kink-bands are common. In the Dome deposit area, the DPFZ steeply dips to the north (Lane, 1968; Rogers, 1982; Snyder et al., 2008). Stratigraphic relationships indicate that overall, the fault is characterized by a south-side-up component of motion (Brisbin, 1997; Benn et al., 2001; Bateman et al., 2008; Bleeker, 2012, 2015). The fault zone, however, has a complex geometry and kinematic history. The dip of the fault zone is steep and varies from north to south along its length with evidence for both vertical and strike-slip displacements (e.g., Hodgson and Hamilton, 1989; Heather et al., 1995; Bleeker et al., 1999; Benn et al., 2001; Berger, 2001; Bateman et al., 2005, 2008; Bleeker, 2012, 2015). The presence of Porcupine assemblage sedimentary rocks and local volcanic rocks and/or intrusive rocks of the Hersey Lake Formation on both sides of the DPFZ indicates that it is not a terrane-bounding structure.

QUATERNARY GEOLOGY

The following is taken from Giguère and Marcotte (2009).

Pleistocene Lake Barlow Ojibway once covered much of the region, depositing thick layers of varved clays (5 m to 15 m on average on the Matheson JV property) and drastically limiting outcrop exposure. Figures 7-4a and 7-4b are the generalized map of the surficial geology and the legend for the surficial geology map as taken from Ontario Geological Survey Preliminary Map P3564, respectively.

The Property itself is situated west and north of the Harricana moraine. It has therefore mainly been affected by a series of counter-clockwise glacial movements starting from an east-west



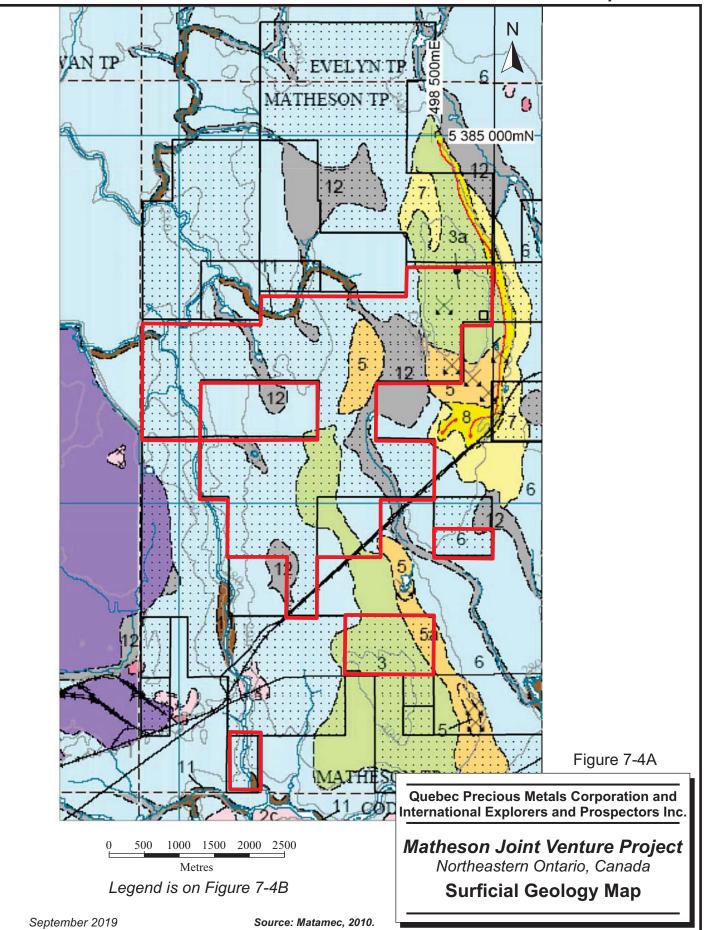
ice flow dominated by the New Quebec ice dome, around 2000 years before the end of the last glaciations, all the way to the prevalent regional north-south ice flow, this one dominated by the then isolated Hudson Bay ice dome at the very end of the ice age. Exposed eskers in the area generally trend southward, paralleling the final ice flow, which varies between 175° and 185°. Figure 7-5 indicates the various ice flow directions that have occurred over this area.

In addition, the Ontario Geological Survey has established that the proportion deposited by southward ice flows, referred to as the Matheson Till, increases northwesterly from the Harricana Moraine towards the Hudson Bay dome and is essentially entirely in the Timmins area (MacNeil and Averill, 1996).

Giguère and Marcotte (2009) believe that remnants of older tills within deeper valleys may still be preserved. For example, Filo (1986) reported very high gold values, ranging from 30 g/t Au to 616 g/t Au in the lowest till, near the till/bedrock contact in drill holes that encountered deeper valleys than the average overburden depths of adjacent drill holes. It is also worth noting that three drill holes of the 1986 campaign had to be abandoned in thick, hardened clay till at depths varying between 33 m and 38 m vertical. These tills could have been deposited during one of two earlier phases; either east-northeast to west-southwest trending ice flows (240°) as described by Steele et al. (1989) or east-southeast to west-northwest trending ice flows (290°). It should be noted that the sources of these auriferous anomalies have yet to be discovered. The drilling for these sources was positioned a short distance north of the till anomalies, assuming a southward ice flow direction, whereas the source of the anomalies could very well be located east-northeast or east-southeast of the overburden holes assuming a 240° or 290° ice flow direction.



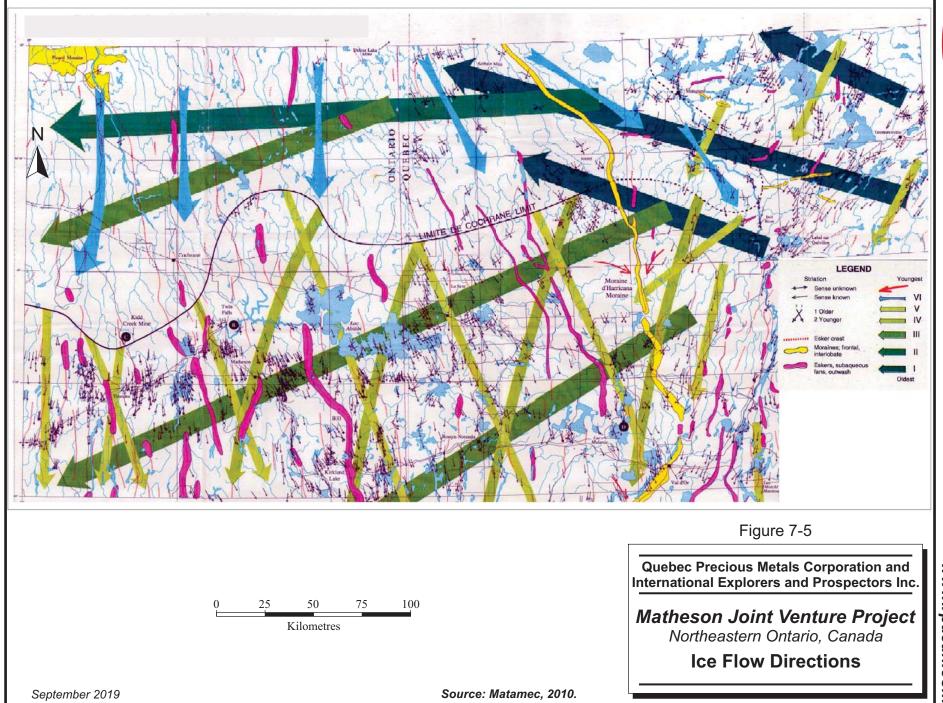
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PHAN	EROZOIC	
CEN	NOZOIC	
QU	JATERNARY	
	RECENT	
13	Man-Made Deposits: mine tailings and rock waste, landfill and wood waste	
12	Organic Deposits: peat and black muck	
PL	EISTOCENE	
11	Alluvial Deposits: clayey silt, silty sand, to sand and gravel	
10	Eolian Deposits: fine- to medium-grained sand	
9	Till (Cochrane Formation) 9a Underlain by glaciofluvial sand and gravel	
8	Glaciolacustrine Beach and Bar Deposits (Barlow– Ojibway Formation): pebbly sand, gravel	
7	 Glaciolacustrine coarse-grained deposits (Barlow– Ojibway Formation) 7a Glaciolacustrine coarse-grained deposits, modified by nearshore processes 7b Glaciolacustrine coarse-grained deposits, may be modified by wind 	
6	Glaciolacustrine Fine-Grained Deposits (Barlow– Ojibway Formation): massive to varved silt, clay	
5	Glaciofluvial Deposits 5a Overlain by thin veneer of glaciolacustrine silts and clays 5b Overlain by thin veneer of Cochrane Till	
4	Ice-Contact Stratified Deposits 4a Overlain by thin veneer of Cochrane Till	
3	Till (Matheson Formation) 3a Underlain by glaciofluvial sand and gravel	
PRECA	MBRIAN	
2	Bedrock-drift complex [*] 2a Mainly till veneer 2b Mainly stratified veneer 2c Glaciolacustrine fine-grained deposits over bedrock 2d Glaciolacustrine coarse-grained deposits over bedrock	Figure 7-4B
1	Precambrian bedrock	Quebec Precious Metals Corporation and International Explorers and Prospectors Inc.
Readers a	ses of clarity, not all subunits have been labelled on the map. are referred to the digital version of this map on MRD 148 for information not portrayed on the map.	Matheson Joint Venture Project Northeastern Ontario, Canada
		Legend of Surficial Geology
September	2019 Source: Matamec, 2010.	







PROPERTY GEOLOGY

Kovala (1997) indicates that no outcrop exists on the Main, South, or East blocks. Figure 7-6 (A and B) is a map of the Property geology based on a compilation of diamond drilling, RC drilling, and geophysical interpretation data.

The following is taken from Robillard (2007).

Sedimentary rocks of the Hoyle assemblage are dominant on the Property. Ultramafic and mafic rocks of the Tisdale assemblage cross the northeast and central parts of the Main Block, as well as the South Block, which correlates with the volcanic stratigraphy extending westward and which hosts the Bell Creek, Owl Creek and Hoyle Pond mines, approximately six kilometres to 12 km west of the South Block. The intercalated volcanic and sedimentary rocks appear to form largely a southward facing succession (Pyke, 1994). Faulting evidence is marked, principally by the offset of various volcanic units having strong magnetic signatures. These faults are mainly oriented north-south although some northwest trending faults have also been interpreted (van Hees, 1988).

QUATERNARY GEOLOGY

Based on the concentration of gold in heavy mineral concentrates and bedrock topography from historical RC data, van Hees (2016) highlighted fifteen gold-rich overburden anomalies at the eastern end of the Porcupine Mining Camp, eight of which occur in Matheson Township. The coarse size of native gold grains recovered by some overburden drilling programs indicates that they were derived from quartz veins containing native gold. Pyrite that generally accompanies the gold in the heavy mineral separates indicates that some of the veins will likely be hosted by mafic metavolcanic rock units, similar to those in the nearby Hoyle Pond, Owl Creek, and Bell Creek deposits. The veins might also be associated with the Buskegau River and Pipestone faults, as well as the projected Hoyle Pond fault and other, as yet unrecognized northeast trending faults. Gold grains accompanied by arsenopyrite in some anomalies are likely derived from veins hosted by metasedimentary rocks.

Three of the overburden anomalies, Location 3 (BHP West Anomaly), Location 4 (Asarco-Falconbridge Anomaly), and Location 9 (Falconbridge North Anomaly), are all closely associated with the northeast projection of the Hoyle Pond fault where it cuts mafic and



ultramafic bedrock units (Van Hees, 2016). These three anomalies are located on, or in close proximity to, the Central block.

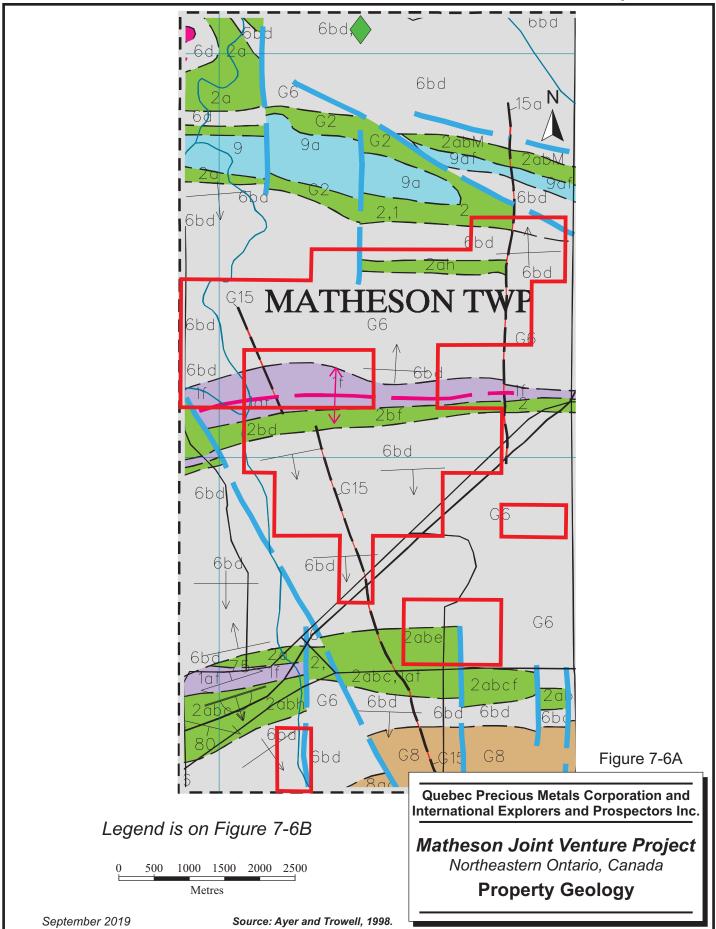
The pristine shape of gold grains at the eastern portion of the BHP West Anomaly indicates that they are derived from a nearby bedrock source located to the north. The abundant cobaltite accompanying this gold suggests an origin near the ultramafic rocks. The west end of the anomaly lies near the projected Hoyle Pond fault and is underlain by mafic and ultramafic rocks similar to those found in the Hoyle Pond and Owl Creek mines. Van Hees (2016) concludes that the area near the projected Hoyle Pond fault meets all the criteria as a possible source for the gold.

The Asarco-Falconbridge Anomaly extends from one kilometre to four kilometres to the south and west of hole MT04-22, drilled by the PJV which returned a 0.45 m wide vein assaying 2.16 g/t Au, as well as close to the projected Hoyle Pond fault. The close proximity of the Asarco-Falconbridge Anomaly to a known bedrock source suggests that the gold may be derived from the general area. The west end of the anomaly occurs close both to the projected Hoyle Pond fault and to mafic and ultramafic bedrock.

The Falconbridge North Anomaly is defined by a single analytical result and no detailed sample description exists. It is located close to the projected Hoyle Pond fault and to mafic and ultramafic bedrock (van Hees, 2016).

Figure 7-7 illustrates the gold in till anomalies and bedrock topography as well as the location of the northeast extension of the Hoyle Pond fault identified by van Hees (2016) in the vicinity of the Property as well as the location of the 1060 fault as identified by IEP (2017).



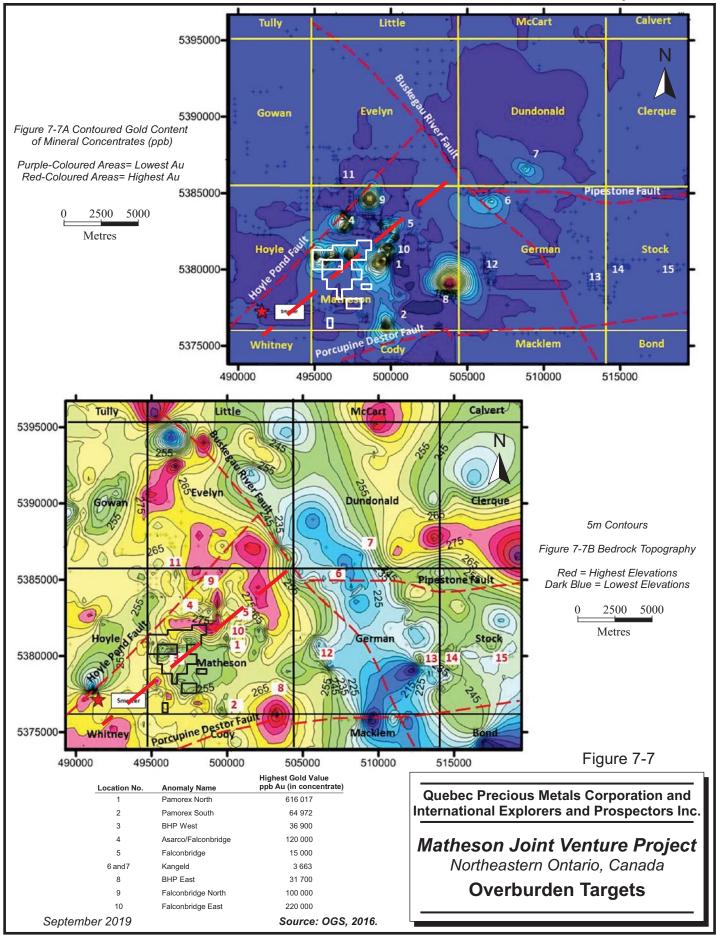




		SYMB	OLS
7 Chemical Metasedimentary Rocks 7 Unsubdivided 7 Iron formation 7. Oxide facies 7. Silicate facies, chert 7. Graphite facies 7. Graphite facies, chert 7. Graphite facies 6 Clastic Metasedimentary Rocks 6 Unsubdivided 6a Arenite 6b Wacke 6c Conjonnerate 6d Mudstone, siltstone 6f Schistose-textured 5 Alkalic Metavolcanic Rocks/Intrusions 4 Felsic (to Intermediate) Metavolcanic Rocks/Intrusions 4 Visubdivided 4a Massive flows 4b Tuff. Hajlill-tuff 4c Calc-alkalic 41 Toff. Hajlill-tuff 3 Unsubdivided 3a Massive flows 3b Pillowed flows 3c Variolitic flows 3c Variolitic flows 3d Hyaloclastite, flow breccia 3c Cale-alkalic <td><section-header><section-header> LEGENDate PADADEROZOIC CENDZOIC JUADENCAU JUATENARU JUATENARU LECOROLOL JUATENARU LECOROLOL JUATENARU LECOROLOL Carronal devices devices devices devices DOTOCOLOL 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 11 11 11 11 11 11 12 13 Nettentenel 14 15 16 17 18 19 19 10 10 11 12 13 14</section-header></section-header></td> <td>Image: Section of the section of th</td> <td>Compositional layering and parallel foliation, unknown generation, magnitude of dip uncertain Compositional layering and parallel foliation, uncertain Compositional layering and parallel foliation, uncertain Compositional layering and parallel foliation, unknown generation, vertical Boy Foliation, defined by minerals, first generation, inclined Du/ Foliation, defined by minerals, first generation, magnitude of dip uncertain Foliation, defined by minerals, first generation, vertical Foliation, defined by minerals, first generation, defined by minerals, second generation, inclined Foliation, defined by minerals, second generation, inclined Foliation, defined by minerals, grading, facing only Image: Second generation, inclined Shear (ductile), dextral displacement, unknown generation, trend only Shear (ductile), dextral displacement, unknown generation, trend only</td>	<section-header><section-header> LEGENDate PADADEROZOIC CENDZOIC JUADENCAU JUATENARU JUATENARU LECOROLOL JUATENARU LECOROLOL JUATENARU LECOROLOL Carronal devices devices devices devices DOTOCOLOL 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 11 11 11 11 11 11 12 13 Nettentenel 14 15 16 17 18 19 19 10 10 11 12 13 14</section-header></section-header>	Image: Section of the section of th	Compositional layering and parallel foliation, unknown generation, magnitude of dip uncertain Compositional layering and parallel foliation, uncertain Compositional layering and parallel foliation, uncertain Compositional layering and parallel foliation, unknown generation, vertical Boy Foliation, defined by minerals, first generation, inclined Du/ Foliation, defined by minerals, first generation, magnitude of dip uncertain Foliation, defined by minerals, first generation, vertical Foliation, defined by minerals, first generation, defined by minerals, second generation, inclined Foliation, defined by minerals, second generation, inclined Foliation, defined by minerals, grading, facing only Image: Second generation, inclined Shear (ductile), dextral displacement, unknown generation, trend only Shear (ductile), dextral displacement, unknown generation, trend only
3e Arnygdaloidal flows 3f Tuff, lapili-tuff 3g Tuff-breccia, pyroclastic-breccia 3h Schistose-textured 3C Calc-alkalic 3T Tholeiite 2 Mafic (to Intermediate) Metavolcanic Rocks/Intrusions 2 Unsubdivided 2a Massive flows 2b Pillowed flows 2b Pillowed flows 2b Pillowed flows 2c Variolitic flows 2d Hyaloclastite, flow breccia 2e Arnygdaloidal flows 2f Tuff, lapilli-tuff 2g Tuff-breccia, pyroclastic-breccia 2h Schistose-textured 2C Calc-alkalic 2F Hilgh iron tholeiite	12b Granite, quartz monzodiorite, quartz diorite 11 Porphyry Suite 11 Porphyry 11 Porphyry 11 Porphyry 11 Tonalite, granodiorite 10 Mafic Intrusive rocks 10 Unsubclivided 10 Mafic Intrusive rocks 10 Unsubclivided 10 Diorite, gabbro, melagabbro 10 Diorite, gabbro, nelagabbro 10 Oprphyritic 10 Official Intrusive Rocks 9 Ultramafic Intrusive Rocks 9 Ultramafic Intrusive Rocks 9 Ultramafic Intrusive Rocks 9 Unsubclivided 9 Ultramafic Intrusive Rocks 9 Unsubclivided 8 Unsubclivided 8 Unsubclivided 8 Unsubclivided 8 Conglomerate 8 Mudstone, siltstone	crossbedding, vertical, facing vertical, facing Bedding, pillows, facing direction known, dip direction unknown DU Bedding, unsubdivided, magnitude of dip uncertain, no facing Image: Section of the structures of the structures of the structures of the structures other than flow tops and	inty igneous layering, grading, facing only isplacement, unknown generation, trend only igneous comment, unknown generation, trend only



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MINERALIZATION

The following is modified from Robillard (2007) and Marcotte and Giguère (2010).

Three gold bearing corridors were identified as traversing the Property (Figure 7-8). These gold bearing corridors strike east-west or northeast-southwest and roughly correspond to the contacts between the sediments of the Hoyle assemblage and the ultramafic to volcanic Kidd-Munro and Tisdale assemblages.

NORTH CORRIDOR

The North Corridor consists of a core of intermediate/mafic/ultramafic volcanics flanked by younger Porcupine sediments trending west-northwest to east-southeast.

The North Corridor has been partly tested in the northeast portion of the Property by Cominco Ltd. (Cominco), where pillowed, variolitic flows of the Tisdale assemblage were observed in some of the drill holes. Anomalous gold values were found in quartz-carbonate veins with sulphides and fuchsite. Evidence of folding was reported in the drill logs. These veins are hosted in altered sediments near the contact with an argillite zone. Gold concentrations range from 0.23 g/t Au to 2.1 g/t Au. The highest gold values were 2.1 g/t Au and 1.9 g/t Au over 0.5 m (Grosl, 1986).

CENTRAL CORRIDOR

The geology of the Central Corridor consists of east-west trending intermediate/mafic/ultramafic volcanic rocks within younger Porcupine sediments. The sediments are described as variably altered greywacke, mudstone, and argillite, locally pyritized and frequently cut by narrow quartz-carbonate veins and veinlets. Repeated sequences of greywacke grading into argillite indicate that the tops are to the north. This is an important observation and further evidence of folding, as tops are usually south facing in this camp. The northern contact zone between the Porcupine sedimentary and the Tisdale volcanic rocks is described as grey to buff-grey, intensely carbonatized, ankeritized, and locally fuchsitic massive to variably pillowed and variolitic mafic to ultramafic volcanic rocks. The southern contact zone between the same lithologies is marked by the presence of graphite.

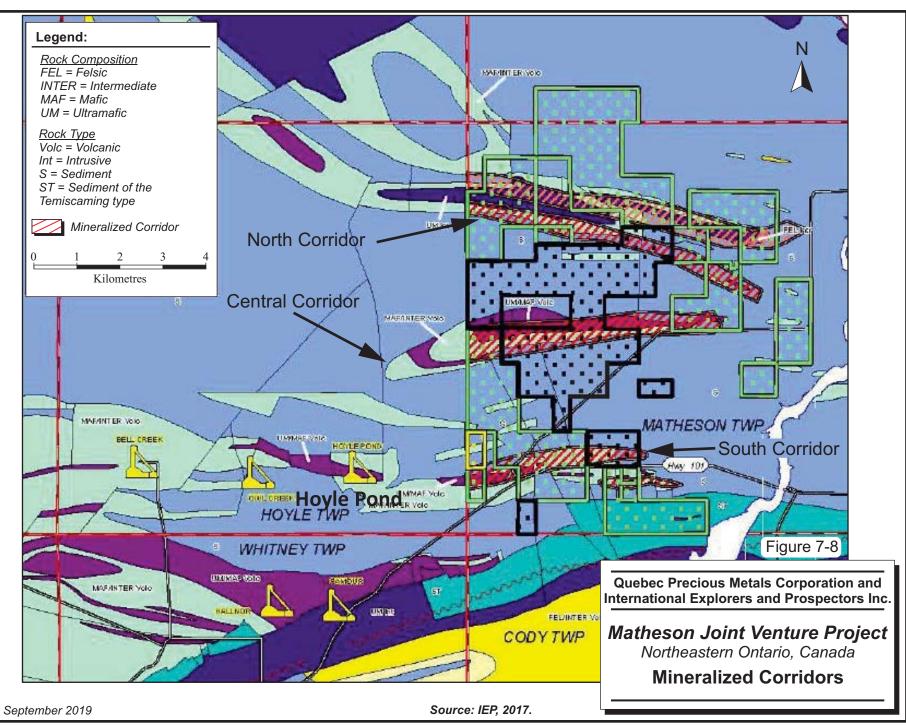
The Central Corridor was tested by Bongold and Kinross. Anomalous gold values not exceeding 1.91 g/t Au were found in fuchsite-altered pillowed volcanic flows, highly carbonatized ultramafic volcanics, variolitic mafic volcanics and quartz feldspar porphyries



(Kovala, 1997). Despite the significant number of drill holes in the Central Corridor, not many samples seemed to have been taken during exploration programs undertaken by Bongold. Pervasive sericite alteration and numerous quartz-carbonates veins and stringers, however, indicate a favourable environment for mineralization.

SOUTHERN CORRIDOR

The Southern Corridor runs through the South Block of the Property. It represents the eastern extension of volcanic rocks of the Tisdale assemblage which hosts the Hoyle Pond mine located approximately six kilometres to the west. Highest gold values were found in this corridor and visible gold is frequently observed. On the South Block of the Property, gold mineralization is generally hosted in brecciated mafic flows, presenting a grey carbonate alteration with disseminated pyrite and occasional arsenopyrite. Gold mineralization within the corridor ranges from 0.7 g/t Au to 3.4 g/t Au with the longest intersection of 1.5 m and at an average depth of 185 m (MacIsaac, 1995 and Kovala, 1997).





8 DEPOSIT TYPES

The Project has the potential to host structurally controlled, Archean epigenetic gold deposits.

ARCHEAN STRUCTURALLY HOSTED GOLD DEPOSITS

The following is taken from Dubé and Gosselin (2006).

Greenstone-hosted quartz-carbonate vein deposits occur in deformed greenstone belts of all ages elsewhere in the world, especially those with variolitic tholeiitic basalts and ultramafic flows intruded by intermediate to felsic porphyry intrusions, and sometimes with swarms of albitite or lamprophyre dykes.

They are distributed along major compressional to transpressional crustal-scale fault zones in deformed greenstone terranes commonly marking the convergent margins between major lithological boundaries, such as volcano-plutonic and sedimentary domains. The large greenstone hosted quartz-carbonate vein deposits are commonly spatially associated with fluvio-alluvial conglomerate (e.g., Timiskaming-type) distributed along major crustal fault zones. This association suggests an empirical time and space relationship between large scale deposits and regional unconformities.

These types of deposits are most abundant and significant, in terms of total gold content, in Archean terranes, however, a significant number of "world-class" deposits are also found in Proterozoic and Paleozoic terranes. In Canada, they represent the main source of gold and are mainly located in the Archean greenstone belts of the Superior and Slave provinces. They also occur in the Paleozoic greenstone terranes of the Appalachian orogen and in the oceanic terranes of the Cordillera.

The greenstone hosted quartz-carbonate vein deposits correspond to structurally controlled, complex epigenetic deposits characterized by simple to complex networks of gold bearing, laminated quartz-carbonate fault-fill veins. These veins are hosted by moderately to steeply dipping, compressional, brittle-ductile shear zones and faults with locally associated shallow dipping extensional veins and hydrothermal breccias. These deposits are hosted by greenschist to locally amphibolite facies metamorphic rocks of dominantly mafic composition



and formed at intermediate depth (5 km to 10 km). The mineralization is syn- to latedeformation and typically post-peak greenschist-facies or syn-peak amphibolite-facies metamorphism. These deposits are typically associated with iron-carbonate alteration. Gold is largely confined to the quartz-carbonate vein network but may also be present in significant amounts within iron-rich sulphidized wall rock selvages or within silicified and arsenopyrite-rich replacement zones.

There is a general consensus that the greenstone hosted quartz-carbonate vein deposits are related to metamorphic fluids from accretionary processes and generated by prograde metamorphism and thermal re-equilibration of subducted volcano-sedimentary terranes. The deep seated gold transporting metamorphic fluid has been channelled to higher crustal levels through major crustal faults or deformation zones. Along its pathway, the fluid has dissolved various components, notably gold, from volcano-sedimentary packages, including a potential gold-rich precursor. The fluid is then precipitated as vein material or wall rock replacement in second and third order structures at higher crustal levels through fluid pressure cycling processes and temperature, pH, and other physico-chemical variations.



9 EXPLORATION

In 2008, Matamec completed an exploration program consisting of 15 diamond drill holes totalling 5,367 m on behalf of the Matheson Joint Venture on claims that are no longer part of the Project. The reader is referred to Giguère and Marcotte (2009) for a description of the 2008 drilling.

MATAMEC EXPLORATIONS 2009-2010

GROUND GEOPHYSICAL SURVEYS

From mid-November 2009 to February 2010, Matamec completed line-cutting and ground magnetic surveys on six, separate grids, two of which are located wholly or partially within the Main Block of the current Property. The line-cutting was contracted to Les Explorations CARAT of Val d'Or, Québec, and the magnetic surveying was contracted to DC Geophysics Inc. of Senneterre, Québec. Gérard Lambert of Lambert Géosciences Ltée of Gatineau, Québec interpreted the survey results.

The surveys indicated a generally quiet magnetic relief, suggesting that the majority of the survey area is underlain by non-magnetic sedimentary rocks. A number of moderately magnetic and a few more strongly magnetic lithologies, probably originating from mafic units such as gabbros or peridotites, were partially and incompletely mapped by the surveys (Lambert, 2010).

LITHOGEOCHEMICAL SAMPLING

As part of the 2010 diamond drilling program, Matamec took 70 samples in order to characterize various lithologies. These samples were analyzed by ACME Labs in Vancouver for major oxides including loss on ignition (LOI) and sulphur by inductively coupled plasma emission spectroscopy (ICP-ES). The samples were also analyzed for a suite of trace elements, base metals, and rare earth elements (REE) by inductively coupled plasma mass spectroscopy (ICP-MS).

Based on REE profiles and Y/Zr binary diagrams, all the volcanic rocks sampled had a tholeiitic affinity except for some intermediate lapilli tuffs which had a calc-alkaline affinity. The volcanics of tholeiitic affinity corresponded to komatilites, komatilitic basalts, high Mg tholeiitic



basalts, and high Fe-tholeiitic basalts. The calc-alkaline rocks sampled plotted as andesites, dacites, and occasional rhyolites (Marcotte and Giguère, 2010).

SURFICIAL GEOLOGY

Les Consultants Inlandsis (Inlandsis) was commissioned to review all historical data including publicly available reports and the results of RC overburden drilling in assessment reports. Inlandsis combined gold concentrations in overburden samples and striation data in an attempt to outline gold dispersal trends in overburden. A dominant west-southwesterly (250° to 260°) trend associated with an older ice flow event and lesser south-southeasterly and south-southwesterly trends associated with younger ice flow events were identified (Charbonneau, 2010).

Charbonneau (2010) identified three target areas, one of which (Target "C"), occurs immediately north of the northeastern part of the Main Block.

The drilling completed by Matamec in 2010 is discussed in Section 10 of this report.



10 DRILLING

DIAMOND DRILLING UP TO 1997

The following summary of diamond drilling on the Property prior to the establishment of the Joint Venture in 2007 is taken from Robillard (2007). Figure 10-1 illustrates the collar locations of the diamond drill holes completed on the Property historically.

From 1982 to 1986, Cominco completed eight diamond drill holes to test IP anomalies in the northeastern most portion of the Main Block (Grosl, 1986). Holes HD-1 to HD-6 were drilled in a north-south direction and HD-7 and HD-8 were drilled in a southwest direction after anomalous gold values were found in HD-1 and HD-2 (0.86 g/t Au and 0.34 g/t Au, respectively). HD-7 encountered a mineralized intersection averaging 0.872 g/t Au over 11.6 m.

In the central part of the Main Block, drilling was completed by Bongold and later by Kinross under an option agreement with International Larder. Thirteen diamond holes (plus one abandoned hole) were drilled in the Main Block by Bongold and Kinross (Bradshaw, 1976; Bradshaw, 1979; Bradshaw, 1981; and Kovala, 1997). The average depth reached was approximately 200 m or less, with the exception of two holes (79-1 and 81-1) where total depths of 595 m and 333 m were reached, respectively (Bradshaw, 1979 and Bradshaw, 1981). Overburden is quite thick in this area and commonly exceeds 50 m. According to the drill logs, little core had been analyzed although visible gold was reported and recoveries were poor when any shearing was encountered. Rocks were identified as greywackes and mafic volcanics and were described as intensively altered, with widespread carbonatization, silicification, and sericitization sometimes accompanied with fuchsite, ankerite, and acicular arsenopyrite (Bradshaw, 1976).

On the South Block, exploration work targeted the contact between mafic volcanic and sediment assemblages. A 1.5 m interval grading 1.02 g/t Au was intersected at the bottom of drill hole 76-7, in an "altered intermediate agglomerate buff to grey coloured, carbonatized and with disseminated pyrite and arsenopyrite" (Bradshaw, 1976). This is similar to the description of a grey zone. From 1994 to 1995 and in 1997, International Larder and Kinross drilled five additional holes in this area. The average overburden thickness ranges from 40 m to 75 m and holes were drilled to depths from 200 m to 363 m. Grey zones were encountered as well



as thin layers of quartz-feldspar porphyry. Anomalous gold values, up to 3.39 g/t Au, were found in each hole (Kovala, 1997).

In 1997, Kinross completed six holes totalling 1,691 m on claims optioned from International Larder in two separate drilling campaigns. Two holes were drilled on the South Block and four were drilled on the Main Block. Targets were chosen based on a combination of stratigraphy, geophysics, and RC anomalies. Highly anomalous intersections were achieved on both the South and Main blocks and additional drilling was recommended on both (Kovala, 1997).

Table 10-1 summarizes the historical diamond drilling completed on the Property prior to the formation of the Matheson Joint Venture.

TABLE 10-1 SUMMARY OF HISTORICAL DIAMOND DRILLING UP TO 1997 QPM and IEP - Matheson Joint Venture Project

Year	Company	No. of Holes	Hole Numbers	Meterage (m)
1976	Bongold Exploration & Development	7	76-1 to 76-7	1,351
1979	Bongold Exploration & Development	1	79-1	595
1981	Bongold Exploration & Development	2	81-1 to 81-2	455
1982 - 1986	Cominco Ltd.	8	HD-1 to HD-8	2,051
1994	International Larder Minerals Ltd.	1	94-1	N/A
1995	International Larder Minerals Ltd.	2	95-2 to 95-3	N/A
1997	Kinross Gold Corporation	6	MA-97-1 to MA-97-6	1,691

Table 10-2 lists the significant assay results achieved from the drilling on the Property prior to the Matheson Joint Venture.



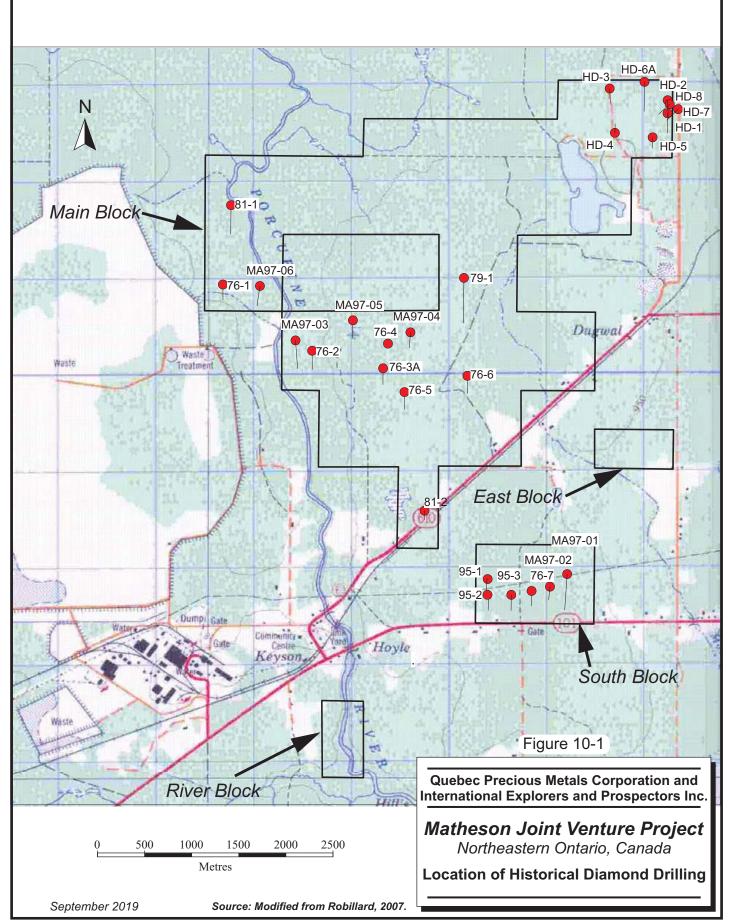
TABLE 10-2 SIGNIFICANT INTERSECTIONS FROM HISTORICAL DIAMOND **DRILLING UP TO 1997** t

QPM and IEP –	Matheson Joint	Venture	Project
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Hole	From (m)	То (m)	Interval (m)	Grade (Au g/t)
MA97-1	227.00	228.00	1.00	3.39
	229.00	230.00	1.00	2.95
MA97-2	127.50	129.00	1.50	2.03
	154.50	156.00	1.50	1.90
	159.00	160.50	1.50	1.43
MA97-4	71.00	72.00	1.00	1.10
	201.10	202.02	0.92	1.91

RPA is not aware of the drilling procedures followed by various operators prior to the drilling by Matamec in 2010.







DIAMOND DRILLING SINCE 2007

Since 2007, the Partners completed 11 drill holes, only five of which (MMP-10-04, MMP-10-05, MMP-10-05A, MMP-10-06 and MMP-10-07) were collared on the claims currently included in the Project. Figure 10-2 illustrates the collar locations of the diamond drill holes completed on the Property by the Matheson Joint Venture.

Holes MMP-10-04 and MMP-10-05 were designed to complete a north-south stratigraphic section along Line 400E with holes MMP-10-01 and MMP-10-02, which were drilled on claims to the south that are no longer part of the Property. Hole MMP-10-05 was collared at a dip of -60° but was lost in overburden at a depth of 79 m. It was re-drilled, however, as hole MMP-10-05A at a dip of -75°. Hole MMP-10-04 was collared on the Property but crossed the southern claim line at a distance down hole of approximately 250 m.

Hole MMP-10-05 intersected well laminated red siltstone and massive greywacke followed by mafic volcanic rocks. Only a few areas with calcite/quartz/albite and pyrite were intersected. No significant assays were returned (Marcotte and Giguère, 2011).

Hole MMP-10-04, drilled 300m south of MMP-10-05A, intersected high Mg tholeiitic basalt, peridotitic komatiite, and quartz feldspar porphyry, basalt, at which point it crossed the southern claim boundary. Although the komatiite is strongly fuchsitic in places, no significant gold assays were returned from the portion of the hole drilled on the Property (Marcotte and Giguère, 2011).

Holes MMP-10-06 and MMP-10-07 were drilled to complete a north-south stratigraphic section along Line 600E. Hole MMP-10-06 was collared on the Property, however, crossed the southern claim line at a distance down hole of approximately 300 m.

Hole MMP-10-07 intersected high-Mg tholeiitic basalt, an aphanitic mafic unit, possibly a dyke, basaltic komatiite, gabbro, or a massive mafic volcanic unit intruded by quartz-feldspar porphyry, an aphanitic mafic volcanic rock, basaltic komatiite, peridotitic komatiite, and high-Mg tholeiitic basalt. No significant gold assays were returned (Marcotte and Giguère, 2011).

Hole MMP-10-06, drilled 250 m south of MMP-10-07, intersected altered mafic volcanics, high-Mg tholeiitic basalt, basaltic komatiite, altered peridotitic komatiite intruded by quartz-feldspar porphyry, high-Mg tholeiitic basalt, either a mafic volcanic unit or intrusive with high-Fe tholeiitic basaltic composition at which point it crossed the Property boundary. No significant gold assays were returned in the portion of the hole drilled on the Property (Marcotte and Giguère, 2011).

Table 10-3 summarizes diamond drilling completed on the Project in 2010 by the Matheson Joint Venture.

Year	Company	Hole	UTM Co-Ordinates*		Attitude	Length**	
		No.	Easting	Northing	Azimuth	Dip	(m)
2010	Matamec	MMP-10-04	498140	5377768	180	-60	250
2010	Matamec	MMP-10-05	498139	5378041	180	-60	79
2010	Matamec	MMP-10-05A	498139	5378041	180	-75	206
2010	Matamec	MMP-10-06	498337	5377803	180	-60	300
2010	Matamec	MMP-10-07	498337	5378046	180	-60	383

TABLE 10-3 MATHESON JOINT VENTURE DIAMOND DRILLING SUMMARY QPM and IEP - Matheson Joint Venture Report

Note: * Zone 17, NAD 83

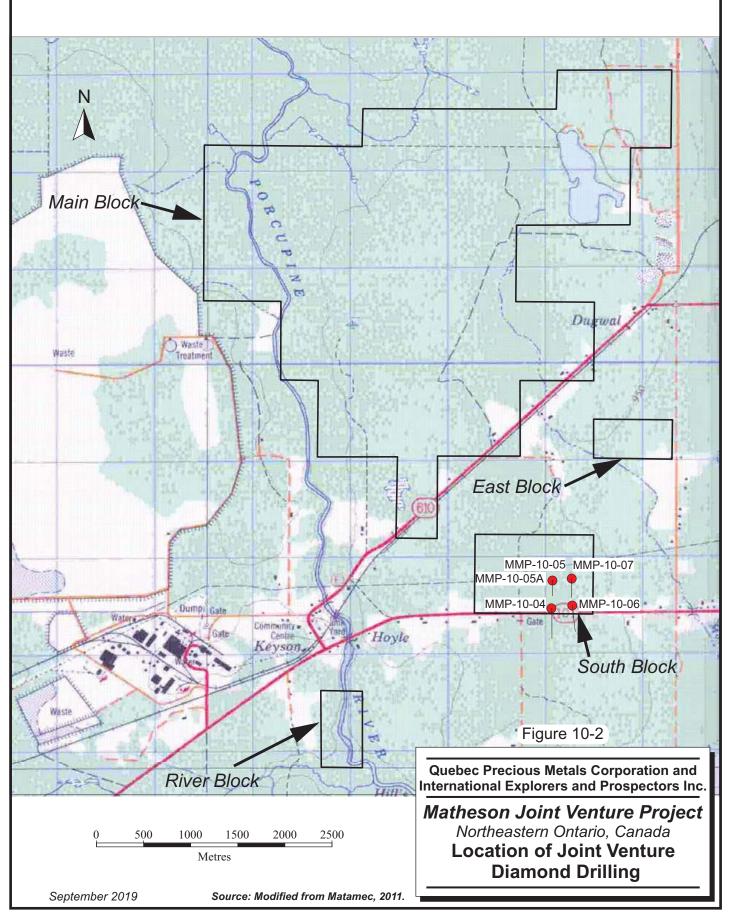
** Estimated length drilled on Property

Table 10-4 lists the significant assay results achieved from the diamond drilling on the Property in 2010 by the Matheson Joint Venture.

TABLE 10-4 MATHESON JOINT VENTURE SIGNIFICANT INTERSECTIONS QPM and IEP – Matheson Joint Venture Project

Hole	From	То	Interval	Grade	
	(m)	(m)	(m)	(Au g/t)	
MMP-10-06	425.30	425.80	0.50	1,.38	







11 SAMPLE PREPARATION, ANALYSES AND SECURITY

RPA is not aware of the sample preparation, analyses, and security procedures followed prior to the diamond drilling completed by Matamec in 2010.

The following description of Matamec's 2010 drilling procedures is taken from Marcotte and Giguère (2011).

All drill core was logged, sampled, and stored at Matamec's secure facility located in Timmins. The drill core was logged by geologists and split by diamond saw by a trained technician, all of whom were contracted from Gestion Aline Leclerc inc.

In total, 1,592 split core samples were assayed for gold. Samples were delivered to, and prepared at, ALS Chemex' sample preparation facility in Timmins, Ontario. Pulps from these samples were sent by ALS Chemex to their facility in Vancouver, British Columbia for assay. Gold was assayed by fire assay fusion with an atomic absorption spectrometry (AAS) finish. Samples assaying greater than 1.0 g/t Au were re-assayed with a gravimetric finish.

A total of 159 quality control samples including blanks and standards varying in expected gold values from less than one gram to over 30 g were inserted into the sample stream.

Seventy samples were sent to ACME Labs of Vancouver, British Columbia for analysis of major oxides by ICP-ES following a lithium meta-borate/tetra-borate fusion and nitric acid digestion of a 0.2 g sample. Loss on ignition (LOI) was determined by weight difference after ignition at 1,000°C. These samples were also analyzed for trace elements, REEs, and refractory elements by ICP-MS following a lithium meta-borate/tetra-borate fusion and nitric acid digestion of a 0.2 g sample. In addition, a separate 0.5 g split was digested in aqua regia and analyzed by ICP-MS for precious and base metals.

Both ALS Chemex and ACME Labs are independent of QPM and IEP. Both these laboratories are accredited to ISO/IEC standard 17025:2005 for laboratory analysis.



Given the Property's early stage of development, RPA concurs with the adequacy of the samples taken, the security of the shipping procedures, and the sample preparation and analytical procedures employed during the 2010 drilling programs.



12 DATA VERIFICATION

Paul Chamois, P. Geo., Principal Geologist with RPA and an independent QP, visited the Property from August 7 to 8, 2019.

At the time of the visit, no exploration activities were ongoing on the Project. The purpose of the site visit was to inspect the Property, assess logistical aspects relating to access and conducting exploration work in the area, confirm the geological setting and carry out independent sampling of the drill core. RPA was given full access to the Project data and no limitations were placed on Mr. Chamois.

During the visit, core from the Kinross 1997 and the Matamec 2010 drilling programs was inspected, and samples from holes MA97-1, MMP-10-04, and MMP-10-06 were marked out and duplicate samples taken under Mr. Chamois' supervision. The duplicate samples were chosen on the basis of gold values achieved in Kinross' and Matamec's sampling. The specified samples were quarter sawn and the samples were then bagged, tagged, and sealed in a larger rice bag and remained in Mr. Chamois' possession for the duration of the visit and trip home. The samples were then sent to the SGS Minerals Services laboratory (SGS) in Lakefield, Ontario, by courier. SGS is accredited to the ISO 17025 Standard by Certificate number 456.

The samples were dried, crushed to 75% passing two millimetres, split to 250 g, and pulverized to 85% passing 75 µm according to SGS's sample preparation lab code PRP89. Thirty-gram charges were analyzed for gold by fire assay with an AAS finish (SGS lab code FAA313). Table 12-1 lists those samples taken for duplicate analysis and the corresponding results.

Hole	Compony	Core F		From To Interva		Original Assay		RPA Assay	
Number	Company	Size	(m)	(m)	(m)	Sample No.	(g/t Au)	Sample No.	(g/t Au)
MMP-10-04	Matamec	NQ	479.15	479.65	0.50	102219	1.416	306116	1.355
MMP-10-04	Matamec	NQ	479.65	480.00	0.35	102220	7.740	306117	1.090
MMP-10-04	Matamec	NQ	480.00	480.50	0.50	102221	1.275	308118	1.392
MMP-10-04	Matamec	NQ	484.50	485.00	0.50	102228	2.190	306119	0.359
MMP-10-06	Matamec	NQ	425.30	425.80	0.50	102735	1.380	306120	0.492
MA97-1	Kinross	BQ	227.00	228.00	1.00	134321	3.39	306121	<5 ppb
MA97-1	Kinross	BQ	229.00	230.00	1.00	1343222	2.95	306122	<5 ppb

TABLE 12-1 INDEPENDENT CHECK SAMPLING QPM and IEP – Matheson Joint Venture Project



Seven quarter sawn samples are insufficient to make a meaningful statistical comparison, however, RPA's sampling confirms that significant gold mineralization exists on the Property in the holes drilled by Matamec in 2010. Two samples taken from holes drilled by Kinross in 1997 did not return significant gold values. RPA understands that the Kinross core was moved several times and that some boxes were damaged during these moves. The core box from which samples 306121 and 306122 were taken appeared to be relatively new, suggesting that the core may have moved to that box at a later date placing it out of sequence resulting in the wrong core being sampled.

The Certificate of Analysis for RPA's samples can be found in Section 30, Appendix 1 of this report.

RPA, QPM, and IEP are independent of SGS.



13 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing or metallurgical testing has been done on any material from the Project to RPA's knowledge.



14 MINERAL RESOURCE ESTIMATE

There is no current Mineral Resource estimate on the Project.



15 MINERAL RESERVE ESTIMATE

There is no current Mineral Reserve estimate on the Project.



16 MINING METHODS

This section is not applicable.



17 RECOVERY METHODS



18 PROJECT INFRASTRUCTURE



19 MARKET STUDIES AND CONTRACTS



20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT



21 CAPITAL AND OPERATING COSTS



22 ECONOMIC ANALYSIS



23 ADJACENT PROPERTIES

The Property is contiguous with claims held by various companies and individuals. RPA has not relied upon information from these adjacent properties in the writing of this report. RPA has not independently verified the information presented in this section and this information is not necessarily indicative of the mineralization on the Project (Figure 23-1).

HOYLE POND

The Hoyle Pond mine is located in southern Hoyle Township, approximately six kilometres west of the South Block and approximately five kilometres southwest of the Main Block.

The Hoyle Pond discovery was made by Texas Gulf in 1980. Underground development was undertaken in 1980 by establishing ramp access and production began in 1985. To the end of 2018, the mine has produced 3,983,281 ounces of gold at an average grade of 0.36 oz/st Au (Van Hees et al., 2019).

The following description of the geological setting of the Hoyle Pond mine is abridged from Dinel et al. (2008). Figure 23-2 is a simplified geological map of the mine but illustrates the relationship between structure, lithologies, and mineralization.

The Hoyle Pond mineralization is associated with fault-fill and extensional quartz-carbonate veins along second-order shear zones and faults spatially related to the PDFZ. It is hosted by ultramafic and mafic metavolcanic rocks of the Tisdale assemblage, which was sub-divided in the mine area into three volcanic packages, namely the north volcanic, the central volcanic, and the south volcanic packages (NVP, CVP and SVP, respectively).

Prior to 1994, most of the ore was mined from the 13-14 and 16 veins of the Hoyle Pond zone hosted by mafic rocks of the NVP. With the discovery in 1994 of the 1060, A Vein, and the 7 Vein zones, much of the production has shifted to the SVP. The A Vein and 1060 zones extend to vertical depths of greater than 1,000 m.

The volcanic belt hosting the mine is bounded on all sides by metasedimentary rocks of the Porcupine assemblage. The volcanics are thrust bounded to the north by south facing greywackes and siltstones of the Porcupine assemblage and to the south by discordance



(either a fault or an unconformity) at their contact with south facing siltstones and greywackes, also belonging to the Porcupine assemblage. The volcanic rocks are intruded by quartz-feldspar porphyries and quartz porphyries. The volcano-sedimentary rocks in the Hoyle Pond area were subjected to greenschist facies regional metamorphism.

NORTH VOLCANIC PACKAGE

The NVP consists of interbedded mafic and ultramafic volcanic rocks. The mafic rocks are dominated by pillowed flows, pillowed breccias, and locally massive flows. The pillows are generally undeformed and south facing outside of shear zones, consistent with the facing direction of the Porcupine metasedimentary rocks bounding the mine stratigraphy to the north and south.

CENTRAL VOLCANIC PACKAGE

The CVP consists of a sequence of interbedded komatiite and basaltic komatiites, approximately 200 m in apparent thickness. The contacts between the basaltic komatiites and komatiites are gradational and commonly overprinted by strong carbonate alteration and deformation, which has resulted in an intense fabric and associated quartz-carbonate stringer zones. The basaltic komatiites are carbonatized fine to medium grained dark green to black chlorite schists with minor talc. The komatiites are talc-chlorite schists or talc schists, with colour varying from dark grey-black to cream grey-beige due to carbonatization.

SOUTH VOLCANIC PACKAGE

The SVP rocks are strongly carbonatized basalts and possess a more pervasive foliation than rocks of the NVP and CVP. They occur as pale to dark green massive to pillowed flows approximately 10 m to 40 m thick with local flow top breccias, which were deformed to coarse grained chloritic schist.

OTHER LITHOLOGIC UNITS

Younger quartz-feldspar porphyries and quartz porphyries cut the SVP. The quartz porphyries are 2 m to 4 m thick, 200 m long, sericitized and foliated sills composed of approximately 5 vol. % quartz phenocrysts with rare fuchsitic clasts. The quartz porphyries are intersected by dominant S_3 fabric and folded by D_4 . The quartz-feldspar porphyries cut across stratigraphy. They are moderately foliated by S_4 and have very weak to no metamorphic halos. They are composed of 30 vol. % to 40 vol. % albite phenocrysts (5 mm to 1.5 cm) and approximately 5 vol % quartz phenocrysts varying in size from 2 mm to 5 mm within a matrix composed of very fine grained quartz, albite, and muscovite. They have a trachytic texture defined by an



alignment of feldspar phenocrysts. The quartz-feldspar porphyry and the quartz porphyry have very similar compositions.

Geochronological dating of quartz and quartz-feldspar porphyries that locally intrude the prospective mafic to ultramafic volcanics and sediments indicates that they are co-eval with porphyries that are spatially related to other gold deposits in the Timmins camp (Harvey, 2005).

STRUCTURE

The mine stratigraphy consists of a south facing homoclinal sequence of stacked volcanic rocks, previously interpreted to be an anticlinal fold cored by ultramafic volcanic rocks. The volcanic rocks are foliated by a dominant S₃ fabric parallel to bedding that strikes generally eastward. When compared to the deformation history in the rest of the Porcupine gold camp, the Hoyle Pond mine main fabric (S_3) is comparable to what Bateman et al. (2005) describes as S₂. If correct, the S₃ fabric of Bateman et al. (2005) is not observed at the mine and is restricted to the PDFZ. S₃ is re-folded at the mine scale by D₄. The S₄ fabric trends approximately 070° and is axial planar to isoclinal F4 folds in the 1060 fault zone and to Zshaped F₄ folds northwest of the 1060 fault zone. The timing of the D₃ is constrained between 2687.6 Ma \pm 2.2 Ma and 2684.4 Ma \pm 1.9 Ma, based on a crosscutting relationship of S₃ and S_4 with the quartz feldspar porphyries and quartz porphyries. The quartz porphyries are pre- D_3 and are foliated by S_3 ; the quartz-feldspar porphyries are post- D_3 and pre- D_4 , because they lack the penetrative S₃ fabric, yet possess the S₄ fabric. The loci of mineralization in the 1060 fault zone are coincident with the contacts of the various lithologic units on the limbs of the isoclinal F₄ folds. The 1060 shear zone is a corridor of intense deformation, where S₄, oriented approximately 070°, is very penetrative and acted as a shear foliation.

MINERALIZATION

Both extensional and fault-fill veins are observed at Hoyle Pond. The extensional veins are straight to S shaped, cut across the S₃ and S₄ foliations at high angles, and have a general sinistral rotation. They are generally massive and composed of white to greyish quartz, with local pyrite along the wallrock vein contact. Locally, some extension veins have a black appearance due to graphite and tourmaline filled fractures. The fault-fill veins are generally oriented approximately 070° and have a more diverse mineralogy consisting of massive white to grey quartz, with interstitial tourmaline and/or stylolitic chlorite and, locally, muscovite or Cr muscovite. Other fault-fill veins are mainly composed of massive white quartz and are commonly associated with variable concentrations of graphite in the wallrock selvages. In the



NVP, the fault-fill veins (e.g., 16 vein) are parallel to S_3 ; while in the SVP, the fault-fill veins are parallel to S_4 .

Fault-fill and extensional veins contain free gold flakes ranging from micron to two centimetre size found along stylolites in the veins or randomly distributed in massive veins as millimetre to centimetre gold veinlets.

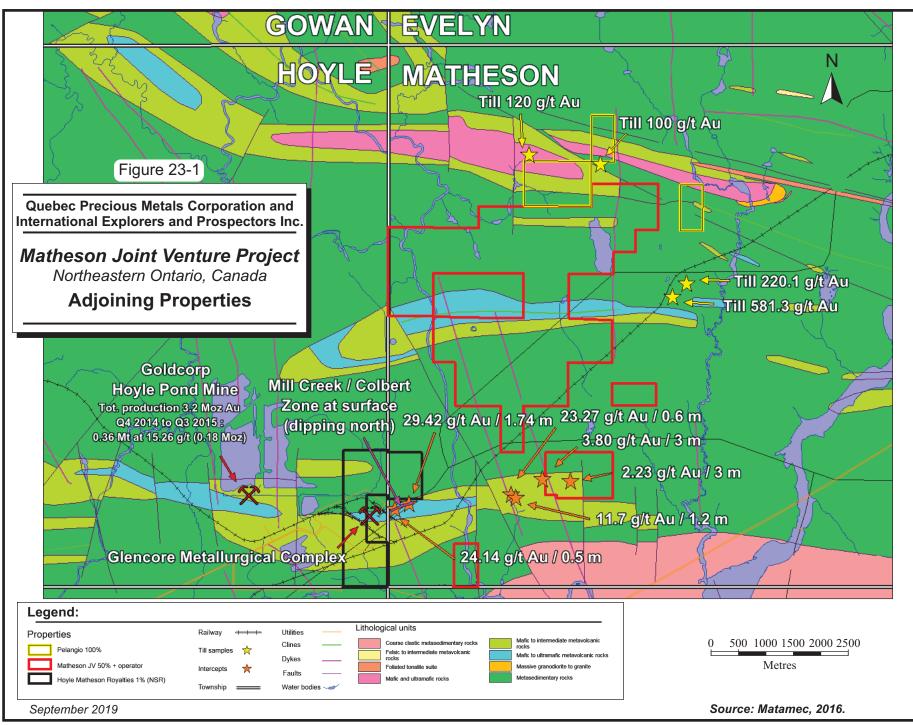
At the mine scale, a broad carbonate alteration is evident. Two alteration zones surrounding the veins were mapped at the metre scale: an inner sericite alteration zone composed of sericite (muscovite), fuchsite (Cr muscovite), quartz, arsenopyrite, pyrite, ferroan dolomite, dolomite, and graphite plus tourmaline, and an outer zone of albite alteration consisting of albite, quartz, ferroan dolomite, and dolomite.

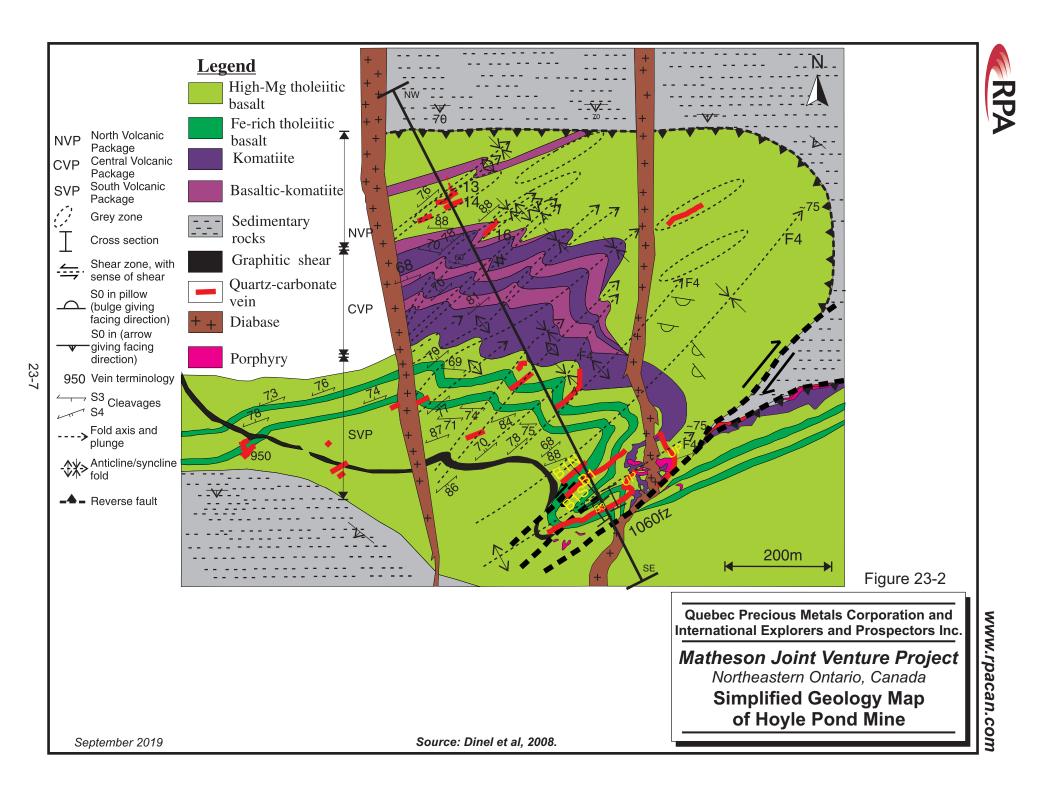
MILL CREEK/COLBERT

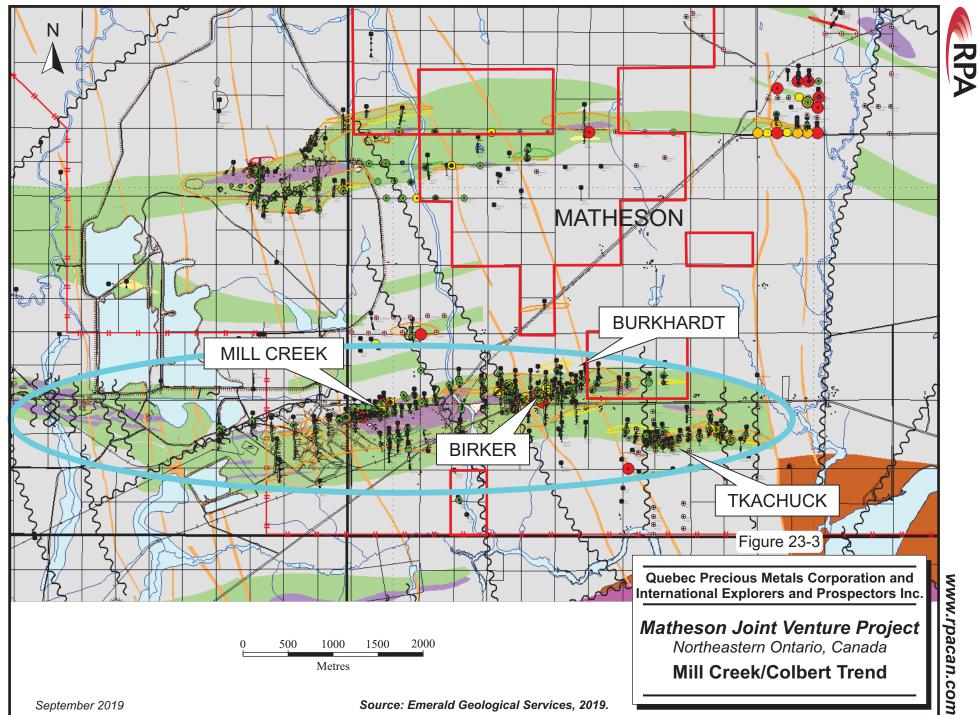
Extensive drilling has taken place on the Mill Creek/Colbert (MCC) mineralized trend which extends eastward from the Hoyle Township–Matheson Township border through the Birker and Burkhardt properties towards the South Block. The mineralization on the Tkachuk property, located south of the South Block, appears to be the faulted extension of the MCC. Figure 23-3 illustrates the location of the zone and documents the amount of drilling completed along it.

The MCC is described as the eastward continuation along strike of the mineralized mafic volcanic unit that hosts the Main, 7 Vein, and 1060 zones of the Hoyle Creek mine. The MCC is thought to trend east-northeast to west-northwest, dip at 55° to the north, and young to the south. The MCC has returned several high grade gold intersections over a distance of approximately four kilometres, including 12.62 g/t Au across one metre, 11.67 g/t Au across 0.7 m, 22.55 g/t Au across 0.3 m, and 15.25 g/t Au across 0.5 m (Kusins et al., 2003). Significant alteration is present with zones of extensive carbonate alteration and lesser sericite, silica, and fuchsite. It straddles the long limb of the faulted, tight synclinal axis hosting the 1060 Zone to the west (Marcotte and Giguère, 2010). The mafic volcanic rocks of the MCC are interpreted to belong to the SVP (Denil, 2008).

Historical drilling on the Tkachuk property immediately south of the South Block intersected grey carbonaceous alteration (grey zones) and moderately to strongly carbonatized and weakly to moderately sericitized zones. These prospective assemblages dip moderately to the north onto the South Block at depth (Aultmann, 1991). The highest gold values intersected on the Tkachuk property are associated with arsenopyrite within strongly carbonatized and variably sericitized mafic volcanic rocks (Der Weduwen, 1986).







23-8



24 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.



25 INTERPRETATION AND CONCLUSIONS

The Project consists of four non-contiguous blocks of patented, leased, and single cell mining claims totalling 1,276.84 ha located in western Matheson Township, Porcupine Mining District, northeast Ontario. It is held 50% by QPM and 50% by IEP under the terms of a joint venture agreement entered into in June 2007. QPM is the manager of the Matheson Joint Venture.

The Project is underlain primarily by lithologies belonging to the Tisdale and Porcupine assemblages of the Southern Abitibi Greenstone Belt but is mantled by an extensive, and locally quite thick, layer of Quaternary glaciofluvial and glaciolacustrine deposits and tills. This surficial cover has hampered historical exploration efforts which have relied heavily of RC drilling, diamond drilling, and ground and airborne geophysical surveys.

The various blocks comprising the Property cover lithological and structural extensions of the Hoyle Pond mine. Hoyle Pond has produced 3,983,281 ounces of gold at an average grade of 0.36 oz/st Au from 1985 to the end of 2018, making it one of the highest-grade deposits in the Timmins camp based on production to date (Table 3, van Hees et al., 2019).

In RPA's opinion, maximizing the exploration potential of the Project depends on understanding the geological and structural setting of the Hoyle Pond mine and recognizing analogous environments on the Project.

The Hoyle Pond gold deposit is located in complexly deformed mafic-ultramafic volcanic rocks of the Hersey Lake and Central formations of the Tisdale assemblage. The most recent study suggests that the deposit is hosted within a homoclinal sequence of south facing, stacked volcanic flows of high Mg tholeiitic basalt, basaltic komatiite and komatiite flows, and interbedded high Mg tholeiitic basalt and Fe-rich tholeiitic basalts. The metavolcanic rocks in the mine area have been divided into three volcanic packages, NVP, CVP, and SVP (Dinel et al., 2008).

Geochronological dating of quartz and quartz-feldspar porphyries that locally intrude the prospective mafic to ultramafic volcanics and sediments indicates that they are co-eval with the porphyries related to other gold deposits in the Timmins camp (Harvey, 2005).



Prior to 1994, most of the ore was mined from the 13-14 and 16 veins of the Hoyle Pond zone hosted by mafic rocks of the NVP. With the discovery in 1994 of the 1060, A Vein, and the 7 Vein zones, much of the production has shifted to the SVP. The A-vein and 1060 zones extend to vertical depths of greater than 1,000 m.

The bulk of the gold mineralization was emplaced at lithologic contacts along the shear zones associated with isoclinal folding and thrusting. Mineralization consists of micron to centimetre sized flakes of free gold or veinlets associated with quartz-carbonate (dolomite and ferroan dolomite) shear and extension vein arrays along second-order shear zones and faults spatially related to the PDFZ (Dinel et al., 2008). Mineralization at Hoyle Pond occurred during D_3 and D_4

The alteration mineral formation appears to have been synchronous with vein development and gold mineralization as indicated by alteration halos which envelope but do not crosscut the veins. The alteration zones have been identified: an inner sericite zone surrounding the veins, an outer albite zone, and a graphitic alteration zone (grey zone). Carbonate alteration is pervasive and occurs throughout the mine. The intensity of carbonate, sericite, and "fuchsite" alteration increases locally and is best developed in the vicinity of the veins. Grey zones form anastomosing three dimensional networks surrounding lenses of less altered rock. It is not necessarily mineralized, however, when the zone is cut by veining, it can contain significant amounts of gold (Dinel et al., 2008).

Three higher potential corridors have been identified on the Property based on favourable volcanic lithologies, structurally controlled contacts with metasediments of the Porcupine Group, and quartz and quartz-feldspar porphyritic intrusions locally. The North and Central Corridors, which transect portions of the Main Block, are interpreted to be cut by the northeasterly extensions of the Hoyle Pond and 1060 faults. Both of these faults host high grade gold mineralization currently being mined at Hoyle Pond. The potential for other, as yet unrecognized northeasterly striking faults, which may also gold mineralization, exists.

A recent study of the historical RC drilling results in the area of the Project by the Timmins Regional Resident Geologist Ed van Hees highlighted a number of significant gold in till anomalies, some of which occur in close proximity to the North and Central corridors where they appear to be intersected by the inferred extensions of the Hoyle Pond and 1060 veins (van Hees et al, 2016). The sources of the gold in till anomalies have yet to be identified. The



distribution and flow directions of various till sheets of different ages in the area is complex and may not be fully understood. Van Hees (2016) suggests that some of the till anomalies identified in Matheson Township may be related to fluvial processes resulting in paleo-placer deposits and that the source of the gold may be more than a kilometre from the till anomalies.

The South Corridor hosts the eastward strike extension of the mineralized mafic volcanic stratigraphy that hosts the Main, 7 Vein, and 1060 zones at Hoyle Pond. Several significant mineralized intervals have been drilled over an approximately four-kilometre interval referred to as the MCC. The MCC is thought to trend east-northeasterly, dip at 55° to the north, and young to the south. Mineralization has been intersected along a favourable mafic volcanic/sedimentary contact along the faulted extension of the MCC on the Tkachuk property immediately south of the South Block which dips to the north. Given that many of the more recently discovered zones at Hoyle Pond were found at depth along favourable structures, the potential of Tkachuk mineralization to the north warrants additional drilling.

Some of the historical drilling on the Project appears to have identified lithologically and structurally favourable environments with no evidence of sampling or evidence of very limited sampling. In some instances, drill holes were terminated short of prospective contacts and structures.

Given the high grades currently being mined at Hoyle Pond, high grade mineralization may be expected to exist elsewhere along its structural and lithological extensions or along yet unrecognized structures, particularly at depth where the more recent veins have been discovered at Hoyle Pond.

Targets recommended for follow-up in previous reports have yet to be tested.

RPA is of the opinion that the Project has the potential to host significant quartz-carbonate gold mineralization and warrants additional exploration.



26 RECOMMENDATIONS

RPA considers the Matheson Joint Venture a very attractive early stage exploration project meriting a significant exploration program. In RPA's opinion, the Hoyle Pond geological and structural model is well understood. Work to date suggests that the Project may host analogous targets which require additional work.

RPA has reviewed and concurs with the Partners' proposed exploration programs and budgets which consist of two phases. Recommended Phase I work, to be initiated as soon as operationally possible and envisioned to take six to eight months to complete, consists of the following:

- Completion of a GIS-based compilation of all available historical work on, and in the vicinity of, the Project,
- Re-logging and detailed sampling of all available historical core, and
- Diamond drilling to evaluate prospective lithologies, structures and contacts at depth (at least 500 m) in the following areas:
 - South Corridor (1,000 m): Deepen holes 95-3, MMP-10-05 and MMP-10-07 to test the mafic volcanic/sediment contact.
 - Central Corridor (2,500 m): establish fences of holes to test: higher priority areas at depth based on the results of the proposed GIS-based compilation and re-logging/sampling.

Details of the recommended Phase I exploration program, can be found in Table 26-1.

Item	C\$
Head Office Expenses	25,000
Project Management/Staff Costs	50,000
Property Holding Costs	4,000
GIS Compilation	25,000
Core re-logging and sampling	50,000
Diamond Drilling (3,500 m @ \$150/m)	525,000
Assays	10,000
Social/Consultation	10,000
Sub-total	699,000
Contingency	50,000
Total	749,000

TABLE 26-1 PROPOSED BUDGET - PHASE I QPM and IEP – Matheson Joint Venture Project



RPA also recommends that the Partners institute robust QA/QC protocols as part of its historical core sampling and diamond drilling program, including the insertion of duplicates, standards, and blanks into the sample stream.

Contingent on the Phase I program results, a recommended Phase II program, envisioned to be initiated in the summer of 2020, will consist primarily of diamond drilling to follow up on high potential target areas developed during Phase I. The expected Phase II program budget is \$2,500,000.



27 REFERENCES

- Aultmann, J.Y\T., 1991: Annual Progress Report January 1990 December 1990, Tkachuk Option, Matheson Township, NTS 41A/11. An unpublished report prepared by Falconbridge Limited, 22 p.
- Ayer, J.A., Thurston, P.C., Bateman, R., Dube, B., Gibson, H.L., Hamilton, M.A., Hathaway, B., Hocker, S.M., Houle, M.G., Hudak, G., Ispolatov, V.O., Lafrance, B., Lesher, C.M., MacDonald, P.J., Peloquin, A.S., Piercy, S.J., Reed, L.E., and Thompson, P.H., 2005: Overview of results from the Greenstone Architecture Project: Discover Abitibi Initiative: OGS Open File 6154, 146 p.
- Ayer, J.A., Thurston, P.C., Dubé, B., Gibson, H.L., Hudak, G., Lafrance, B., Lesher, C.M., Piercey, S.J., Reed, L.E., and Thompson, P.H., 2004: Discover Abitibi Greenstone Architecture Project: Overview of results and belt-scale implications: Ontario Geological Survey Open File Report 6145, pp. 37-1–37-15.
- Ayer, J.A., Barr, E., Bleeker, W., Creaser, R.A., Hall, G., Ketchum, J.W.F., Powers, D., Salier, B., Still, A., and Trowell, N.F., 2003: New geochronological results from the Timmins area: Implications for the timing of late-tectonic stratigraphy, magmatism and gold mineralization: Ontario Geological Survey Open File Report 6120, pp. 33-1–33-11.
- Ayer, J., Amelin, Y., Corfu, F., Kamo, S., Ketchum, J., Kwok, K., and Trowell, N., 2002a: Evolution of the southern Abitibi greenstone belt based on U-Pb geochronology: Autochthonous volcanic construction followed by plutonism, regional deformation and sedimentation: Precambrian Research, v. 115, pp. 63–95.
- Ayer, J.A., Ketchum, J.W.F., and Trowell, N.F., 2002b: New geochronological and neodymium isotopic results from the Abitibi greenstone belt, with emphasis on the timing and the tectonic implications of Neoarchean sedimentation and volcanism: Ontario Geological Survey Open File Report 6100, pp. 5-1–5-16.
- Ayer, J.A., Trowell, N.F., Madon, Z., Kamo, S., Kwok, Y.Y., and Amelin, Y., 1999: Compilation of the Abitibi Greenstone Belt in the Timmins-Kirkland Lake Area: Revisions to Stratigraphy and new Geochronological Results; in Summary of Field Work and Other Activities 1999, Ontario Geological Survey, Open File Report 6000, pp. 4-1 to 4-13.
- Ayer, J., Berger, B., Johns, G., Trowell, N., Born, P., and Mueller, W.U., 1999: Late Archean rock types and controls on gold mineralization in the southern Abitibi greenstone belt of Ontario: Geological Association of Canada- Mineralogical Association of Canada Joint Annual Meeting, Sudbury, Canada, 1999, Field Trip B3 Guidebook, 73 p.
- Ayer, J.A., and Trowell, N.F., 1998: Geological Compilation of the Timmins area, Abitibi Greenstone Belt, Ontario Geological Survey Preliminary Map P.3379, scale 1:100,000.
- Barrie, C.O., 2003: Operations Report, Tri-Sensor High Sensitivity Magnetic Airborne Survey, Timmins Project, Ontario. A report prepared by Terraquest Ltd. on behalf of the Porcupine Joint Venture, 9p. Ontario Assessment Record 42A10SW2034.

- Bateman, R., Ayer, J.A., and Dubé, B., 2008: The Timmins-Porcupine gold camp, Ontario: Anatomy of an Archean greenstone belt and ontogeny of gold mineralization: Economic Geology, v. 103, pp. 1285–1308.
- Bateman, R., Ayer, J.A., Dubé, B., and Hamilton, M.A., 2005: The Timmins- Porcupine gold camp, northern Ontario: The anatomy of an Archean greenstone belt and its gold mineralization: Discover Abitibi Initiative: Ontario Geological Survey Open File Report 6158, 90 p.
- Bateman, R., Ayer, J.A., Barr, E., Dubé, B., and Hamilton, M.A., 2004: Protracted structural evolution of the Timmins-Porcupine gold camp and the Porcupine-Destor deformation zone: Ontario Geological Survey Open File Report 6145, pp. 41-1–41-10.
- Benn, K., Ayer, J.A., Berger, B.R., Vaillancourt, C., Dinel, É., and Luinstra, B., 2001: Structural style and kinematics of the Porcupine-Destor deformation zone, Abitibi greenstone belt, Ontario: Ontario Geological Survey Open File Report 6070, pp. 6-1–6-13.
- Berger, B.R., 2001: Variation in styles of gold mineralization along the Porcupine–Destor deformation zone in Ontario: An exploration guide: Ontario Geological Survey Open File Report 6070, pp. 9-1–9-13.
- Bleeker, W., Atkinson, B.T., and Stalker, M., 2014: A "new" occurrence of Timiskaming sedimentary rocks in the northern Swayze greenstone belt, Abitibi Sub-province—with implications for the western continuation of the Porcupine-Destor fault zone and nearby gold mineralization: Ontario Geological Survey Open File Report 6300, pp. 43-1–43-10.
- Bleeker, W., 2012: Lode gold deposits in ancient deformed and metamorphosed terranes: The role of extension in the formation of Timiskaming basins and large gold deposits, Abitibi greenstone belt – A discussion: Ontario Geological Survey Open File Report 6280, pp. 47-1–47-12.
- Bleeker, W., 1999: Structure, stratigraphy, and primary setting of the Kidd Creek volcanogenic massive sulfide deposit: A semiquantitative reconstruction: Economic Geology Monograph 10, pp. 71–122.
- Born, P., 1995: A sedimentary basin analysis of the Abitibi greenstone belt in the Timmins area, northern Ontario, Canada: Unpublished Ph.D. thesis, Ottawa, Canada, Carleton University, 489 p.
- Bousquet, R., Beauchamp, S.A., Daniels, C.M., Debicki, R.L., van Hees, E., and Wilson, A.C., 2016: Timmins Regional Resident Geologist (Timmins District) 2015 <u>In</u> Van Hees, E.H., Bousquet, P., Pace, A., Daniels, C.M., Debicki, R.L., Wilson, A.C., Beauchamp, S.A., and Walmsley, J., 2016: Report of Activities 2015, Resident Geologist Program, Timmins Regional Resident Geologist Report: Timmins and Sault Ste. Marie Districts, Ontario Geological Survey, Open File Report 6317, 91p.
- Bradshaw, R.A., 1981: Diamond Drill Log for Hole 81-2 by Bongold Exploration and Development on J.V. Bonhomme Property, Matheson Township. Ontario Assessment Record 42A11SE0020.



- Bradshaw, R.A., 1979: Diamond Drill Log for Hole 79-1 by Bongold Exploration and Development on J.V. Bonhomme Property, Matheson Township. Ontario Assessment Record 42A11SE0026.
- Bradshaw, R.A., 1978: Magnetic and Electromagnetic Survey on the Bongold Exploration and Development Property, Matheson Township, Ontario., 4p. Ontario Assessment Record 42A11SE0027.
- Bradshaw, R.A., 1976: Diamond Drill Program on the Properties of J.V. Bonhomme, Matheson Township. Ontario Assessment Record 42A11SE0029.
- Bradshaw, R.A., 1972a: Magnetic-Electromagnetic Survey on the J.V. Bonhomme Property, Matheson Township, Ontario, 3p. Ontario Assessment Record 42A11SE0038.
- Bradshaw, R.A., 1972b: Magnetic-Electromagnetic Survey on the J.V. Bonhomme Property, Matheson Township, Ontario, 8p. Ontario Assessment Record 42A11SE0036.
- Brisbin, D.I., 1997: Geological setting of gold deposits in the Porcupine gold camp, Timmins, Ontario: Unpublished Ph.D. thesis, Kingston, Ontario, Canada, Queen's University, 523 p.
- Buffam, B.S.W., 1948a: Moneta Porcupine mine [ext. abs.]: Structural Geology of Canadian Ore Deposits, A Symposium Arranged by a Committee of the Geology Division, Canadian Institute of Mining and Metallurgy, pp. 457–464.
- Buffam, B.S.W., 1948b: Aunor mine [ext. abs.]: Structural Geology of Canadian Ore Deposits, A Symposium Arranged by a Committee of the Geology Division, Canadian Institute of Mining and Metallurgy, pp. 507–515.
- Burrows, A.G., 1915: The Porcupine gold area: Ontario Bureau of Mines Annual Report, v. 24, pt. 3, 73 p., Map 24d.
- Burrows, A.G., 1911: The Porcupine gold area: Ontario Bureau of Mines Annual Report, v. 20, pt. 2, 39 p., Maps 20e and 20f.
- Burrows, D.R., Spooner, E.T.C., Wood, P.C., and Jemielita, R.A., 1993: Structural controls on formation of the Hollinger-McIntyre Au quartz vein system in the Hollinger shear zone, Timmins, southern Abitibi greenstone belt, Ontario: Economic Geology, v. 88, pp. 1643– 1663.
- Carter, O.F., 1948: Coniaurum mine [ext. abs.]: Structural Geology of Canadian Ore Deposits, A Symposium Arranged by a Committee of the Geology Division, Canadian Institute of Mining and Metallurgy, pp. 497–503.
- Charbonneau, R., 2010: Interpretation of Gold in Till Provenance, Matheson Property. A report prepared by Les Consultants Inlandsis for Matamec Explorations Inc, 5 p.
- Corfu, F., Krogh, T.E., Kwok, Y.Y., and Jensen, L.S., 1989: U-Pb zircon geochronology in the southwestern Abitibi greenstone belt, Superior Province: Canadian Journal of Earth Sciences, v. 26, pp. 1747–1763.



- Couture, J.F., 2003: Independent Technical Report on the Porcupine Joint Venture, Ontario, Canada. A technical report prepared by SRK (Canada) In. of behalf of Kinross Gold Corporation, 106 p.
- Davies, J.F., 1977: Structural interpretation of the Timmins mining area, Ontario: Canadian Journal of Earth Sciences, v. 14, pp. 1046–1053.
- Der Weduwen, J., 1986: Third Quarter Progress Report, July September, 1986. Umex/Kidd Matheson Township, Agreement, Timmins, Ontario, NTS 42A/11. An unpublished report prepared by Falconbridge Limited, 7 p.
- Dinel, E., Fowler, A.D., Ayer, J., Still, A., Tylee, K. and Barr, E., 2008: Lithogeochemical and stratigraphic controls on gold mineralization within the metavolcanic rocks of the Hoyle Pond Mine, Timmins, Ontario. Economic Geology, v. 103, pp. 1341-1363.
- Dubé, B., and Gosselin, P., 2006: Greenstone-hosted Quartz-Carbonate Vein Deposits; Consolidation and Synthesis of Mineral Deposits Knowledge web site, Geological Survey of Canada (http://gsc.gc.ca/mindep/synth_dep/gold/greenstone).
- Dubé, B., Mercier-Langevin, P., Ayer, J., Atkinson, B., and Monecke, T., 2017: Orogenic Greenstone-Hosted Quartz-Carbonate Gold Deposits of the Timmins-Porcupine Camp in Archean Base and Precious Metals Deposits, Southern Abitibi Greenstone Belt, Canada, editors Monecke, T., Mercier-Langevin, P., and Dubé, B., Society of Economic Geologists Inc. Reviews in Economic Geology, Volume 19, Chapter 2, pp. 51-76.
- Dunbar, W.R., 1948: Structural relations of the Porcupine ore deposits [ext. abs.]: Structural Geology of Canadian Ore Deposits, A Symposium Arranged by a Committee of the Geology Division, Canadian Institute of Mining and Metallurgy, pp. 442–456.
- Ferguson, S.A., Buffam, B.S.W., Carter, O.F., Griffis, A.T., Holmes, T.C., Hurst, M.E., Jones, W.A., Lane, H.C., and Longley, C.S., 1968: Geology and ore deposits of Tisdale Township, District of Cochrane: Ontario Department of Mines Geological Report 58, 177 p.
- Gasteiger, W.A., 1982: Report on Geophysical Work, Matheson Township, NTS 42A/10. A report prepared by Kidd Creek Mines Ltd., 4p. Ontario Assessment Record 42A10SW1082.
- Giguère, E., and Marcotte, J.A., 2009: Report on the Matheson JV Property, Matheson Area, Province of Ontario, Canada. A report prepared by Gestion Aline Leclerc Inc. on behalf of Matamec Explorations Inc., 49p.
- Gliddon, D.J., 2005: Summary Report on the 2005 HEN Exploration Programs, Timmins, ON. An unpublished report prepared by Placer Dome Inc., 19p.
- Graton, L.C., McKinstry, H.E., and others, 1933: Outstanding features of Hollinger geology: Transactions of the Canadian Institute of Mining and Metallurgy, v. 36, pp. 1–20.
- Gray, M.D., and Hutchinson, R.W., 2001: New evidence for multiple periods of gold emplacement in the Porcupine mining district, Timmins area, Ontario, Canada: Economic Geology, v. 96, pp. 453–475.



- Griffis, A.T., 1962: A geological study of the McIntyre mine: Transactions of the Canadian Institute of Mining and Metallurgy, v. 65, pp. 47–54.
- Harvey, P., 2005: Report on the 2004 Exploration Program, HEN (Hoyle East and North) Project, Timmins, Ontario. An unpublished report prepared for the Porcupine Joint Venture, 13p.
- Heather, K.B., 1998: New insights on the stratigraphy and structural geology of the southwestern Abitibi greenstone belt: Implications for the tectonic evolution and setting of mineral deposits in the Superior Province: in The first age of giant ore formation: stratigraphy, tectonics and mineralization in the Late Archean and Early Proterozoic; Papers presented at the PDAC, pp. 63 -101.
- Heather, K.B., Percival, J.A., Moser, D., and Bleeker, W., 1995: Tectonics and metallogeny of Archean crust in the Abitibi-Kapuskasing-Wawa region: Geological Survey of Canada Open File 3141, 148 p.
- Holmes, T.C., 1968: Dome Mines Limited: Ontario Department of Mines Geological Report 58, pp. 82–98.
- Holmes, T.C., 1964: Dome Mines Limited: Ontario Department of Mines Preliminary Report 1964-5, pp. 28–49.
- Hurst, M.E., 1939: Porcupine area, District of Cochrane, Ontario: Ontario Department of Mines Annual Report, v. 47, Third Edition, Map 47a.
- International Explorers and Prospectors Inc., 2017: Regional Gold Metallogeny and Montclerg and Matheson JV Project Review. A presentation prepared for the Porcupine Geological Discussion G.
- Jones, W.A., 1968: Hollinger Consolidated Gold Mines Limited: Ontario Department of Mines Geological Report 58, pp. 102–115.
- Kovala, J.M., 1997: Progress Report on 1997 Diamond Drilling, Matheson Project, International Larder Option, Matheson Township. A report prepared by Kinross Gold Corporation, 8 p. Ontario Assessment Record 42A10SW0121.
- Kusins, R., Corstorphine, MacLachlan, and Londry, J., 2003: Matheson Target Evaluation Report. An unpublished report prepared by Emerald Geological Services on behalf of the Porcupine Joint Venture, 11p.
- Lambert, G., 2010: Report on Ground Magnetometer Surveys, Matheson Township, Cochrane District, Ontario. NTS 41A/10, 42A/11. A report prepared by Lambert Géosciences Ltée for Matamec Explorations Inc., 6 p.
- Lane, H.C., 1968: Preston Mines Limited-Preston East Dome mine: Ontario Department of Mines Geological Report 58, pp. 143–151.
- Lorsong, J., 1975: Stratigraphy and sedimentology of the Porcupine Group (Early Precambrian), northeastern Ontario: Unpublished B.Sc. thesis, Toronto, Canada, University of Toronto, 42 p.



- MacDonald, P.J., Piercey, S.J., and Hamilton, M.A., 2005: An integrated study of intrusive rocks spatially associated with gold and base metal mineralization in the Abitibi greenstone belt, Timmins area and Clifford Township: Discovery Abitibi Initiative: Ontario Geological Survey Open File Report 6160, 190 p.
- MacIsaac, N., 1995: International Larder Lake Minerals Inc. diamond drill logs, Matheson Township.
- MacNeil, K.A. and Averill, S.A., 1996: Reverse Circulation Overburden Drilling and Heavy Mineral Geochemical Sampling, Matheson Township Properties. A report prepared by Overburden Drilling Management Limited on behalf of BHP Minerals Canada Ltd., 55 p. Ontario Assessment Record 42A10SW0065.
- Marcotte, J.A., and Giguère, E., 2011: Exploration Report on the Matheson Property, Matheson Area, Ontario. NTS 42A/10 and 42A/11. A report prepared by Gestion Aline Leclerc Inc. for Matamec Explorations Inc., 22 p. Ontario Assessment Record 20000006765.
- Marcotte, J.A., and Giguère, E., 2010: Exploration Report on the Matheson Property, Matheson Area, Ontario. NTS 42A/10 and 42A/11. A report prepared by Gestion Aline Leclerc Inc. for Matamec Explorations Inc., 68 p.
- Marmont, S., and Corfu, F., 1989: Timing of gold introduction in the Late Archean tectonic framework of the Canadian Shield: Evidence from U-Pb zircon geochronology of the Abitibi Sub-province: Economic Geology Monograph 6, pp. 101–111.
- Marshall, I.B., and Schutt, P.H., 1999: A national ecological framework for Canada Overview. A co-operative product by Ecosystems Science Directorate, Environment Canada and Research Branch, Agriculture and Agri-Food Canada.
- Mason, R., Melnik, N., Edmunds, C.F., Hall, D.J., Jones, R., and Mountain, B., 1986: The McIntyre-Hollinger investigation, Timmins, Ontario: Stratigraphy, lithology and structure: Geological Survey of Canada Current Research 86-1B, pp. 567–575.
- McAuley, J.B., 1983: A petrographic and geochemical study of the Preston, Preston West and Paymaster porphyries, Timmins, Ontario. Unpublished M.Sc. thesis, Sudbury, Ontario, Canada, Laurentian University, 118 p.
- Poulsen, K.H., Robert, F., and Dubé, B., 2000: Geological classification of Canadian gold deposits: Geological Survey of Canada Bulletin 540, 106 p.
- Pyke, D.R., 1994: J.C. Bonhomme Properties Geological Report, Matheson Township, Timmins Area. A report prepared by D.R. Pyke and Associates Inc., 7 p.
- Pyke, D.R.,1982: Geology of the Timmins area, District of Cochrane: Ontario Geological Survey Report 219, 141 p.
- Ratcliffe, J.H., 1953: Interpretation of Ground Magnetometer Survey, Matheson Township Claims, Province of Ontario. A report prepared by Dominion Gulf Company, 5p. Ontario Assessment Record 42A10SW0095.



- Robert, F., Poulsen, K.H., Cassidy, K.F., and Hodgson, C.J., 2005: Gold metallogeny of the Superior and Yilgarn cratons: Economic Geology 100th Anniversary Volume, pp. 1001– 1033.
- Robert, F., and Poulsen, K.H., 1997: World-class Archaean gold deposits in Canada: An overview: Australian Journal of Earth Sciences, v. 44, pp. 329–351.
- Robert, F., 1990: Structural setting and control of gold-quartz veins of the Val d'Or area, southeastern Abitibi Sub-province, in Ho, S.E., Robert, F., and Groves, D.I., eds., Gold and base-metal mineralization in the Abitibi Sub-province, Canada, with emphasis on the Quebec segment, Short Course Notes, University of Western Australia, Publication No. 24, pp. 167–209.
- Roberts, R.G., 1981: The volcanic-tectonic setting of gold deposits in the Timmins area, Ontario: Ontario Geological Survey Miscellaneous Paper 97, pp. 16–28.
- Robillard, I., 2007: Technical Report on the Matheson and Matheson-Anglo Properties, Porcupine Mining Division, Ontario. A technical report prepared by Inlandsis Consultant s.e.n.c. for Matamec Explorations Inc., 22 p.
- Rocque, P., Mah, S., Hamilton, R., Wilson, G., and Kilpatrick, R., 2006: Review of the Porcupine Joint Venture Operation, Ontario, Canada. A technical report prepared by AMEC Americas Limited on behalf of Goldcorp Inc., 235 p.
- Rogers, D.S., 1982: The geology and ore deposits of the No. 8 Shaft area, Dome mine, in Hodder, R.W., and Petruk, W., eds., Geology of Canadian gold deposits, Canadian Institute of Mining and Metallurgy Special Volume 24, pp. 161–168.
- Snyder, D.B., Bleeker, W., Reed, L.E., Ayer, J.A., Houlé, M.G., and Bateman, R., 2008: Tectonic and metallogenic implications of regional seismic profiles in the Timmins mining camp: Economic Geology, v. 103, pp. 1135–1150.
- Steele, K.G., Baker, C.L., and Clenaghan, M.B., 1989: Models of Glacial Stratigraphy Determined from Drill Core, Matheson Area, Northeastern Ontario <u>In</u> Drift Prospecting, Geological Survey of Canada Paper 89-20, R.N.W. DiLabio and W.B. Coker, editors, pp. 127-138.
- Veillette, J.J. and McClenaghan, M.B., 1996: Sequence of Glacial Ice Flows in Abitibi-Temiskaming: Implications for Mineral Exploration and Dispersal of Calcareous Rocks from the Hudson Bay Basin, Quebec and Ontario. Geological Survey of Canada Open File 3033. Map Scale 1:500,000.
- Van Hees, E.H., Bousquet, P., Bustard, A., Daniels, C.M., Fudge, S.P., Patterson, C., Pressacco, R.E., Streit, L., Walker, J., and Wang, L., 2019: Timmins Regional Resident Geologist (Timmins District) – 2018 <u>In</u> Van Hees, E.H., Bousquet, P., Bustard, A., Pressacco, R.E., Daniels, C.M., Fudge, S.P., Walker, J., Streit, L., Wang, L., Sword, P., and Patterson, C., 2019 Report of Activities 2018, Resident Geologist Program, Timmins Regional Resident Geologist Report: Timmins and Sault Ste. Marie Districts; Ontario Geological Survey, Open File Report 6354, 1-117.



Van Hees, E. H., 2016: Targeting Gold in the Timmins Area *In* Report of Activities, 2015 Resident Geologist Program, Timmins Regional Geologist Report: Timmins and Sault Ste. Marie Districts, Ontario Geological Survey, Open File 6317, pp. 21-27.

Van Hees, E.H., 1988: Review of Matheson and Hoyle Townships Exploration Potential, 34 p.



28 DATE AND SIGNATURE PAGE

This report titled "Technical Report on the Matheson Joint Venture Project, Cochrane District, Northeast Ontario, Canada" and dated September 5, 2019 was prepared and signed by the following author:

(Signed & Sealed) Paul Chamois

Dated at Toronto, ON September 5, 2019 Paul Chamois, M.Sc.(A), P.Geo. Principal Geologist



29 CERTIFICATE OF QUALIFIED PERSON

PAUL CHAMOIS

I, Paul Chamois, M.Sc.(A), P.Geo., as the author of this report entitled "Technical Report on the Matheson Joint Venture Project, Cochrane District, Northeastern Ontario, Canada" prepared for Quebec Precious Metals Corporation and International Explorers and Prospectors Inc. with an effective date of September 5, 2019, do hereby certify that:

- 1. I am a Principal Geologist with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON M5J 2H7.
- 2. I am a graduate of Carleton University, Ottawa, Ontario, Canada in 1977 with a Bachelor of Science (Honours) in Geology degree and McGill University, Montreal, Quebec, Canada in 1979 with a Master of Science (Applied) in Mineral Exploration degree.
- 3. I am registered as a Professional Geoscientist in the Province of Ontario (Reg. #0771), in the Province of Newfoundland and Labrador (Reg. #03480), and in the Province of Saskatchewan (Reg. #14155). I have worked as a geologist for a total of 39 years since my graduation. My relevant experience for the purpose of this Technical Report is:
 - Review and report on exploration and mining projects for due diligence and regulatory requirements
 - Vice President Exploration with a Canadian mineral exploration and development company responsible for technical aspects of exploration programs and evaluation of new property submissions
 - District Geologist with a major Canadian mining company in charge of technical and budgetary aspects of exploration programs in Eastern Canada
 - Project Geologist with a major Canadian mining company responsible for field mapping and sampling, area selection and management of drilling programs across Ontario and Quebec
- 4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and my past relevant experience, I fulfill the requirements to be a 'qualified person" for the purpose of NI 43-101.
- 5. I visited the Matheson Joint Venture Project from August 7 to 8, 2019.
- 6. I am responsible for all sections of the Technical Report.
- 7. I am independent of the Partners (Quebec Precious Metals Corporation and International Explorers and Prospectors Inc.) and the Property applying the test set out in Section 1.5 of NI 43-101.
- 8. I have not had prior involvement with the property that is the subject of the Technical Report



- 9. I have read NI 43-101 and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 5th day of September, 2019

(Signed & Sealed) Paul Chamois

Paul Chamois, M.Sc.(A), P.Geo.



30 APPENDIX 1

CERTIFICATE OF ANALYSIS FOR RPA'S SAMPLES



Certificate of Analysis Work Order : LK1901509 [Report File No.: 0000021632]

Date: September 04, 2019

To: Paul Chamois COD SGS MINERALS - GEOCHEM LAKEFIELD 55 University ave Toronto ON M5J2H7

P.O. No.: RPA Inc Project No.: _DEFAULT Samples: 7 Received: Aug 13, 2019 Pages: Page 1 to 2 (Inclusive of Cover Sheet)

Methods Summary

No. Of Samples	Method Code	Description
7	GE_FAA313	@Au, FAS, AAS, 30g-5ml
7	G_WGH79	Weighing of samples and reporting of weights
7	G_PRP89	Weigh, Dry, to 3kg, Crush 75% -2mm, Split to 250g, Pulverize to 85% -75 μm

Comments:

Assays not suitable for commercial exchange.

bie Waldon Certified By : Debbie Waldon

Project Coordinator

SGS Minerals Services (Lakefield) is accredited by Standards Council of Canada (SCC) and conforms to the requirements of ISO/IEC 17025 for specific tests as indicated on the scope of accreditation to be found at http://www.scc.ca/en/programs/lab/mineral.shtml

 Report Footer:
 L.N.R.
 = Listed not received
 I.S.
 = Insufficient Sample

 n.a.
 = Not applicable
 - = No result

 *INF
 = Composition of this sample makes detection impossible by this method

 M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

 Methods marked with an asterisk (e.g. *NAA08V) were subcontracted

 Elements marked with the @ symbol (e.g. @Cu) denote assays performed using accredited test methods

This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was (were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativity of the goods and strictly relate to the sample (s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted. The findings report on the samples provided by the client and are not intended for commercial or contractual settlement purposes. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Canada Inc. Minerals 185 Concession Street Lakefield ON K0L 2H0 t+1(705) 652-2000 f+1(705) 652-6365 www.ca.sgs.com



Final : LK1901509 Order: RPA Inc

Report File No.: 0000021632

	Element Method Det.Lim. Units	@Au GE FAA313	WtKg G WGH79
		5	0.001
		ppb	kg
306116		1355	0.568
306117		1090	0.515
306118		1392	0.605
306119		359	0.551
306120		492	0.502
306121		<5	0.561
306122		<5	0.620
*Rep 306120		492	
*Std OREAS-222		1227	

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