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NI 43-101 Technical Report and Mineral Resource Estimate for the Fayolle Gold Project, Québec, Canada

Prepared for

MONARCH GOLD

Monarch Gold Corporation
68, Avenue de la Gare, office 205
Saint-Sauveur, Québec
Canada J0R 1R0

Project Location
UTM: 5,365,248 North; 664,513 East
(NAD 83, Zone 17)
Province of Québec, Canada

Prepared by:

Alain Carrier, M.Sc., P.Geo.
Christine Beausoleil, P.Geo.
InnovExplo Inc.

Effective Date: August 30, 2019
Signature Date: October 22, 2019

SIGNATURE PAGE – INNOVEXPLO

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Signed at Val-d'Or on October 22, 2019

Alain Carrier, M.Sc., P.Geo.
(OGQ 281)
InnovExplo Inc.
Val-d'Or (Québec)

(Original signed and sealed)

Signed at Val-d'Or on October 22, 2019

Christine Beausoleil, P.Geo.
(OGQ 656)
InnovExplo Inc.
Val-d'Or (Québec)

CERTIFICATE OF AUTHOR – ALAIN CARRIER

I, Alain Carrier, M.Sc., P.Geo. (OGQ No. 281, PGO No. 1719, NAPEG No. L2701), do hereby certify that:

1. I am a professional geoscientist, employed as Co-President Founder of InnovExplo Inc., located at 560, 3e Avenue, Val-d'Or, Québec, Canada, J9P 1S4.
2. This certificate applies to the technical report entitled "NI 43-101 Technical Report and Mineral Resource Estimate for the Fayolle Gold Project, Québec, Canada" (the "Technical Report") with an effective date of August 30, 2019, and a signature date of October 22, 2019, prepared for Monarch Gold Corporation.
3. I am a member in good standing of the Ordre des Géologues du Québec (OGQ licence No. 281), the Association of Professional Geoscientists of Ontario (PGO licence No. 1719), Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG No. L2701), the Canadian Institute of Mines, Metallurgy and Petroleum (CIM 91323), and of the Society of Economic Geologists (SEG 132243). I graduated with a mining technician degree in geology (1989) from Cégep de l'Abitibi-Témiscamingue) and with a Bachelor's degree in Geology (1992; B.Sc.) and a Master's in Earth Sciences (1994; M.Sc.) from Université du Québec à Montréal (Montréal, Québec). I initiated a PhD in geology at INRS-Géoressources (Sainte-Foy, Québec) for which I completed the course program but not the thesis.
4. I have practiced my profession continuously as a geologist for a total of twenty-seven (27) years during which time I have been involved in mineral exploration, mine geology, ore control and resource modelling projects for gold, copper, zinc, silver, nickel, lithium, graphite and uranium properties in Canada and internationally.
5. I have read the definition of "qualified person" set out in National Instrument 43 101/Regulation 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a qualified person for the purposes of NI 43-101.
6. I have visited the Fayolle Property multiple times and on August 22, 2019, specifically for this technical report.
7. I am the author of items 12 and 14 of the Technical Report, and I am a co-author and share responsibility for all other items.
8. I have prior involvement with the property by having been the author and/or co-author of technical reports in 2005, 2007, 2012 and 2013 which are the subject of this technical report.
9. I am independent of the issuer in accordance with the application of Section 1.5 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1, and the sections of the Technical Report for which I am responsible have been prepared in accordance with that instrument and form.
11. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

Signed this 22nd day of October 2019 in Val-d'Or, Québec.

(Original signed and sealed)

Alain Carrier, M.Sc., P.Geo. (OGQ 281)
InnovExplo Inc.
alain.carrier@innovexplo.com

CERTIFICATE OF AUTHOR – CHRISTINE BEAUSOLEIL

I, Christine Beausoleil, P.Geo. (OGQ No. 656, PGO No. 2958, EGBC No. 36156), do hereby certify that:

1. I am a professional geoscientist, employed as Geology Director at InnovExplo Inc., located at 560, 3e Avenue, Val-d'Or, Québec, Canada, J9P 1S4.
2. This certificate applies to the technical report entitled "NI 43-101 Technical Report and Mineral Resource Estimate for the Fayolle Gold Project, Québec, Canada" (the "Technical Report") with an effective date of August 30, 2019, and a signature date of October 22, 2019, prepared for Monarch Gold Corporation.
3. I am a member in good standing of the Ordre des Géologues du Québec (OGQ licence No. 656), the Association of Professional Geoscientists of Ontario (PGO licence No. 2958) and of the Engineers & Geoscientists of British Columbia (EGBC licence No. 36156). I graduated with a Bachelor of Geology degree from Université du Québec à Montréal (Montréal, Québec) in 1997.
4. I have practiced my profession continuously as a geologist for a total of twenty-two (22) years during which time I have been involved in mineral exploration, mine geology, ore control and resource modelling projects for gold, copper, zinc and silver properties in Canada.
5. I have read the definition of "qualified person" set out in National Instrument 43-101/Regulation 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a qualified person for the purposes of NI 43-101.
6. I did not visit the Fayolle Property.
7. I am the co-author of all items of the Technical Report, except for items 12 and 14.
8. I have not had prior involvement with the property that is the subject of this Technical Report.
9. I am independent of the issuer in accordance with the application of Section 1.5 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1, and the sections of the Technical Report for which I am responsible have been prepared in accordance with that instrument and form.
11. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

Signed this 22nd day of October 2019 in Val d'Or, Québec.

(Original signed and sealed)

Christine Beausoleil., P.Geo. (OGQ 656)
InnovExplo Inc.
christine.beausoleil@innovexplo.com

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1. SUMMARY

1.1 Introduction

Monarch Gold Corporation ("Monarch" or the "issuer") retained InnovExplo Inc. ("InnovExplo") to prepare a Technical Report (the "Technical Report") to present and support the results of the Mineral Resource Estimate (the "2019 MRE") for the Fayolle Gold Project (the "Project") in accordance with Canadian Securities Administrators' National Instrument 43-101 Respecting Standards of Disclosure for Mineral Projects ("NI 43-101") and Form 43-101F1. The mandate was assigned by Jean-Marc Lacoste, President and CEO of Monarch.

InnovExplo is an independent mining and exploration consulting firm based in Val-d'Or, Québec, Canada.

Monarch is a Canadian gold producer trading publicly on the Toronto Stock Exchange (TSX) under the symbol MQR.

The 2019 MRE follows CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Definition Standards").

1.2 Contributors and Qualified Persons

This Technical Report was prepared by Alain Carrier, (M.Sc., P.Geo.), Co-President Founder of InnovExplo and by Christine Beausoleil, (P.Geo.), Geology Director of InnovExplo. Mr. Carrier and Mrs. Beausoleil are independent qualified persons ("QPs") as defined by NI 43-101.

Mr. Carrier is a professional geologist in good standing with the Ordre des Géologues du Québec (OGQ No. 281), the Association of Professional Geoscientists of Ontario (PGO No. 1719), and the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG No. L2701). He is the author of items 12 and 14 of the Technical Report, and co-author of all other items for which he shares responsibility.

Ms. Beausoleil is a professional geologist in good standing with the Ordre des Géologues du Québec (OGQ No. 656), the Association of Professional Geoscientists of Ontario (PGO No. 2958), and the Engineers & Geoscientists of British Columbia (EGBC No. 36156). She is the co-author of all items of the Technical Report, except for items 12 and 14.

1.3 Property Description and Location

The Project is located in the Abitibi-Témiscamingue region in the northwestern part of Southern Québec in the municipality of Rouyn-Noranda (borough of St-Norbert-de-Mont-Brun), 35 km northeast of the Rouyn-Noranda city centre. The Project is 1.4 km south of Parc National d'Aiguebelle, a provincial park. Access is afforded from the village of St-Norbert-de-Mont-Brun.

The Project consists of 39 mineral claims (37 contiguous and 2 isolated claims) covering an area of 1,373 ha (14 km^2) in Aiguebelle and Cléricy townships. In August 2019, Monarch announced the acquisition of those 39 claims. The transaction also included private land and a building located on Abijevis Range, designated Lot No. 4 820 860 of in the Cadastre of Québec cadastre (Rouyn-Noranda district) (previously designated Lot No. 21 of Range X).

Globex currently owned owns 2% NSR on the Fayolle Property.

1.4 Environment and Community

Of the 39 claims, 14 are under a "protocol agreement" concluded by the former owner of the Property. The "protocol agreement" for exploration in the vicinity of the Aiguebelle provincial park included these statements:

- Minimize the impact of mining-related activities (exploration and extraction) on wildlife, wildlife habitats, and the environment in general;
- Foster the [continuous] remediation of any places altered by mining-related activities; and
- Preserve the visual landscape as seen from the observation sites within Parc National d'Aiguebelle.

Typhoon and now Monarch have agreed to comply with this protocol.

Monarch is committed to consulting with the local (adjacent and neighbouring) communities and to keep them informed of the plan, and future steps as the Project advances.

1.5 Accessibility, Climate, Local resources, Infrastructure and Physiography

The project is accessed from provincial highway 117 in Rouyn-Noranda by turning north onto highway 101 and driving for 12 km, then turning east on Route d'Aiguebelle before taking Chemin de la Montagne, an asphalt road, and then a gravel road that leads into the property. The Project area is well serviced by mining and milling industries in Rouyn-Noranda (35 km) and Val d'Or (105 km).

The issuer's project offices and related facilities are located at the Beacon site about 15 km east of Val-d'Or via highway 117.

Based on Environment Canada statistics from 1971 to 2000 (Rivière Kinojévis station), the area is characterized by a mean daily temperature of 1.7°C. The month of July has an average temperature of 17.5°C, and the month of January averages -17.4°C. The extreme minimum recorded temperature was -52.0°C, whereas the highest recorded temperature was 37.8°C. The average annual precipitation is 882.8 mm in water equivalent. August receives the highest monthly average precipitation with 110.3 mm. Snow falls from October to May, with the highest amounts in December and January with 59.6 and 52.7 cm of snow, respectively.

Kinojévis River flows approximately 7 km southeast of the Property. Several creeks and small rivers drain into the Kinojévis River. Paré Creek runs east-west along the southern property boundary. Two lakes, Matissard and Caste, are present in the eastern part of the Property.

The vegetation consists of a mixture of deciduous (30%) and coniferous (70%) trees. Swampy areas are present near and around Paré Creek in the southern part of the Property.

1.6 Geological Setting and Mineralization

The Project is located within the Abitibi Terrane. The Abitibi Terrane hosts some of the richest mineral deposits of the Superior Province, including the giant Kidd Creek massive sulphide deposit and the large gold camps of Ontario and Québec.

The northern part of the Project, where the Fayolle deposit is located, is underlain primarily by the Lanaudière Formation, which corresponds to the summit of the Kinojevis Group. Basalt is the dominant rock type, and basalt layers are intercalated with felsic and ultramafic rocks. Also observed are ultramafic flows, magnesian basalt, and komatiite characterized by breccia, cumulates and spinifex texture. The east-trending Manneville North Fault bifurcates as it passes through this part of the property, placing a wedge of the Lac Caste Formation of the Kewagama Group into faulted contact with the Lanaudière Formation along the north and south sides of the fault. The Lac Caste Formation comprises bands of turbiditic sedimentary rocks, consisting of beds of sandstone and mudrock with black siliceous argillic horizons.

The Fayolle deposit is characterized by disseminated pyrite (2-5%) spatially associated with quartz-carbonate-pyrite veinlets. Gold mineralization is found either in dykes or in the wall rocks along dyke contacts. Gold occurs within pyrite grains, along fractures in pyrite, on pyrite surfaces, or as free gold in quartz veinlets. These veinlets generally do not display any systematic orientation. Gold mineralization appears to be synchronous with D2 and likely represents a variant of classic orogenic deposits. Sericitization (fuchsite) and carbonatization are common forms of alteration and vary greatly in intensity (weak to strong). There is a consistent positive relationship between the presence of sericite and auriferous pyrite. Silica leaching is also typically observed within mineralized zones. These types of alteration are commonly associated with subtype 1b and 2a mineralization styles.

1.7 Drilling, Sampling Method, Approach and Analysis

The issuer did not conduct any drilling, sampling or analyses since it acquired the Project. However, Typhoon completed a diamond drilling program during 2019 (the “2019 Program”). The objective was to define the continuity of mineralization 30 m below the surface exposure with an average lateral drill spacing of 15 m. A total of 14 holes were drilled.

The 2019 Program was performed by Hébert Drilling Inc. of Amos, Québec, using NQ calibre (47.6 mm core diameter) and a crawler drill rig. Collar locations were determined by surveyors from Corriveau J.L. & Associés, and the downhole dip and azimuth were surveyed using a DerviShot tool from DeviCore by the drill operators.

The drill core was transported to a secured core shack facility on the Project site where the core was cleaned of drilling additives and mud, and metres were marked before collecting the data. All data were recorded using GeoticLog software. Sample intervals and pertinent information on lithology, mineralization and alteration were all marked on the core.

Once logged and labelled, the core of each selected interval was sawed in half, one half for shipment to the laboratory, and the other half returned to the core box as a witness (reference) sample.

The witness drill core is stored onsite, either outside in core racks or in the Megadome structure for future reference. Numbered security tags accompanied the samples to satisfy chain-of-custody requirements. Samples were sent to Bourlamaque Assay Laboratories Ltd ("Bourlamaque") in Val-d'Or for analysis.

InnovExplo did not find anything in the drilling, core handling and sampling procedures, or in the sampling methods, analyses and security, that could have had a negative impact on the reliability of the reported assay results.

1.8 Data Verification

InnovExplo's data verification included visits to the Project (including the drill sites, strippings, outcrops, and core logging facilities), as well as an independent review of the data for selected drill holes (surveyor certificates, assay certificates, QA/QC program and results, downhole surveys, lithologies, alteration and structures).

The historical information used in this report was taken mainly from reports produced before the implementation of NI 43-101. These reports typically contain little information is available about sample preparation or analytical and security procedures. However, InnovExplo assumes that the exploration activities conducted by earlier companies were in accordance with prevailing industry standards at the time. Since 2006, strict protocols and industry best practices have been implemented for sample preparation, analyses and security.

The Monarch database was verified for consistency against original certificates (collar and downhole survey data, assay certificates, etc.). No significant discrepancies were found. Minor corrections were made, and some drill holes were excluded.

InnovExplo considers the Monarch databases to be of good overall quality, valid and reliable.

During the site visit (August 22, 2019), Alain Carrier, P.Geo. (InnovExplo) and Ronald Leber, P.Geo. (Monarch) reviewed the Project's core logging and sampling facilities as well as several sections of mineralized core from the 2019 Program. The author compared the lithological, alteration, structural and mineralization descriptions in the drill core logs to the selected intervals and concluded that the information recorded in the logs was accurate and consistent with established procedures. Visual observations of the mineralization corresponded as expected to assay results.

Overall, InnovExplo's data verification demonstrates that the data, protocols and QAQC results for the Project are acceptable. InnovExplo considers the Monarch database to be valid and of sufficient quality to be used for the 2019 MRE herein.

1.9 Metallurgical Testwork

Metallurgical testing was carried out by SGS Mineral Services on two (2) composites to evaluate the various process options for gold recovery: a Komatiite composite with a head grade of 7.78 g/t Au and an Intrusive composite with a head grade of 4.87 g/t Au.

Whole ore cyanidation testing yielded gold recoveries ranging from 88% to 94% for the Komatiite composite and 85% to 96% for the Intrusive composite. For both composites, finer grinding increased the Au recovery but also the cyanide (NaCN) consumption.

Gravity separation testing was carried at a target P_{80} size of 150 microns and yielded gold recoveries of 27% for the Komatiite composite and 41% for the Intrusive composite.

By combining gravity separation with gravity tailing cyanidation, gold recoveries ranges increased to 93 to 97% for the Komatiite composite and to 88 to 98% for the Intrusive composite.

1.10 Mineral Resource Estimates

The 2019 Mineral Resource Estimate herein (the "2019 MRE") was prepared by Alain Carrier, M.Sc., P.Geo., of InnovExplo Inc., a qualified and independent person as defined by NI 43-101.

The 2019 MRE covers a strike length of 1.15 km east-west, a width of 0.9 km, and extends to a vertical depth of 0.7 km below surface.

The Geotic-MS Access database for the Project was provided by the issuer on July 15, 2019. It includes all diamond drill holes completed as of March 31, 2019. Of the 418 drill holes in the database, 295 were used for the 2019 MRE. The database includes analytical gold assay results as well as lithological, alteration and structural descriptions taken from drill core logs.

The interpretation consists of the update of the three (3) mineralized zones (Zone 1, Zone 2 and Zone 3) and one (1) low-grade dilution envelope enclosing the three gold zones from the 2012 MRE.

InnovExplo is of the opinion that the current mineral resource estimate can be categorized as Indicated mineral Resources based on data density, search ellipse criteria, drill hole density, and interpolation parameters. InnovExplo considers the 2019 MRE to be reliable and based on quality data and the most current geological understanding using parameters that follow CIM Definition Standards.

The table below displays the results of the 2019 MRE for the Project at the official 0.9 g/t Au cut-off grade for the in-pit resource, and at the official 2.2 g/t Au cut-off grade for the underground resource, outside the Whittle optimized pit-shell.

2019 Fayolle Project Mineral Resource Estimate for a combined pit-constrained and underground scenario at cut-off grades of 0.9 g/t Au (in-pit) and 2.2 g/t Au (underground)

FAYOLLE DEPOSIT	Indicated Resources		
	Tonnes	Grade Au (g/t)	Ounces Au
In-pit (> 0.9 g/t Au)	405,600	5.42	70,630
Underground (> 2.2 g/t Au)	300,800	4.17	40,380
TOTAL	706,400	4.89	111,010

Notes to the mineral resource table:

1. The independent and qualified person for the mineral resource estimate, as defined by NI 43-101, is Alain Carrier, M.Sc., P.Geo. (InnovExplo), and the effective date of the estimate is August 30, 2019.
2. These mineral resources are not mineral reserves as they do not have demonstrated economic viability.
3. The mineral resource estimate is classified as Indicated resources and followa the 2014 CIM Definition Standards..
4. Results are presented in situ and undiluted and are considered to have reasonable prospects for economic extraction.

5. The estimate encompasses three (3) mineralized zones and one (1) dilution envelope with a minimum true thickness of 2.5 m using the grade of the adjacent material when assayed or a value of zero when not assayed.
6. High-grade capping of 40 and 90 g/t Au (5 g/t Au for the dilution envelope) was applied to assay grades prior to compositing (over 1.5 m). Interpolation was done using an ID2 interpolation method based on a block size of 5 m x 5 m x 5 m, with bulk density values of 2.82 g/cm^3 applied to rocks and 2.0 g/cm^3 applied to overburden.
7. The estimate is reported for a potential scenario combining pit-constrained and underground resources at cut-off grades of 0.9 g/t Au (in-pit) and 2.2 g/t Au (underground). The cut-off grades were calculated using a gold price of USD1,300/oz, a CAD:USD exchange rate of 1.33, and the following parameters (CAD): (a) Pit-constrained scenario: mining cost $4.94/t; processing cost $27.00/t; G&A $4.00/t; and pit slopes of 45° (rock) and 30° (overburden) during Whittle optimization; (b) Underground scenario: mining cost $65.00/t; processing cost $27.00/t; and G&A $8.00/t. Cut-off grades should be re-evaluated in light of future prevailing market conditions (metal prices, exchange rate, mining cost, etc.).
8. The number of metric tons was rounded to the nearest hundred, and the metal contents are presented in troy ounces (tonne x grade / 31.10348) rounded to the nearest tenth.
9. InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political or marketing issues, or any other relevant issue not reported in this Technical Report that could materially affect the mineral resource estimate.

1.11 Interpretation and Conclusions

The objective of InnovExplo's mandate was to prepare a mineral resource estimate for the Project (the “2019 MRE”) and a supporting Technical Report.

After conducting a detailed review of all pertinent information and completing the mandate, InnovExplo concludes the following:

- The database supporting the 2019 MRE is complete, valid and up to date (includes new drilling data from the 2012, 2014 and 2019 programs).
- The geological and grade continuity of gold mineralization (Zone 1, Zone 2, Zone 3 and dilution envelope) is demonstrated and supported by surface exposures (main stripping and outcrops) and by a densely drilled area (within 20 to 25 m drill hole spacing).
- The 2019 MRE key parameters (density, capping, compositing, interpolation search ellipsoid, etc.) are supported by the data and their statistical and/or geostatistical analyses.
- The 2019 MRE was prepared for a potential scenario combining pit-constrained resources at a cut-off grade of 0.9 g/t Au within a Whittle optimized pit shell, and underground resources at a cut-off grade of 2.2 g/t Au.
- Cut-off grades were calculated at a gold price of USD1,300 per troy ounce with an exchange rate of 1.33 USD/CAD and using reasonable mining, processing, and G&A costs.
- All blocks were classified as indicated resources. There are no measured or inferred resources.
- The new estimate shows a pit-constrained Indicated resource of 405,600 tonnes at an average grade of 5.42 g/t Au for a total of 70,630 ounces of gold, and an underground Indicated Resource of 300,800 tonnes at an average grade of 4.17 g/t Au for a total of 40,380 ounces of gold.
- The 2019 MRE is considered to be reliable, thorough, and based on quality data, reasonable hypotheses, and parameters compliant with NI 43-101 requirements and following the CIM Definition Standards.
- The 2019 MRE results support the recommendations to advance the Project to the pre-feasibility or feasibility stage.
- There is potential for adding Inferred resources at depth through exploration drilling.
- Opportunities exist for new discoveries and to potentially add more mineral resources to the Project.

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1.12 Recommendations

Based on the 2019 MRE results, InnovExplo recommends that the Project move to an advanced phase of development, which would involve assessing different economic scenarios followed by a feasibility study.

InnovExplo has prepared a cost estimate for the recommended program to serve as a guideline for the Project (cost estimated table below). The estimated cost for Phase 1 is C$1,360,000 (incl. 20% for contingencies) and C$2,436,000 for Phase 2 (incl. 20% for contingencies). The grand total is C$3,796,000 for both phases. Phase 2 is contingent upon the success of Phase 1.

InnovExplo is of the opinion that the recommended work program and proposed expenditures are appropriate and well thought out. InnovExplo believes that the proposed budget reasonably reflects the type and quantity of the contemplated activities.

Estimated costs for the recommended work program

Phase 1 – Assessment of different economic scenarios and Feasibility study	**Cost Estimate ($)**
1A) Social licence and communication plan	20,000
1B) Environmental baseline study	110,000
1C) Assessment of different potential mining scenarios	110,000
1D) Feasibility study	900,000
Subtotal	1,140,000
Contingency (20%)	220,000
Total Phase 1	**1,360,000**
Phase 2 – Project permitting, pre-production work and further exploration	**Cost Estimate ($)**
2A) Social licence and communication plan	80,000
2B) Permitting *(see note 1)*	350,000
2C) Exploration program and drilling (± 10,000 m)	1,600,000
Subtotal	2,030,000
Contingency (20%)	406,000
Total Phase 2	**2,436,000**
TOTAL Phase 1 and 2	**3,796,000**
Note 1: The estimated permitting cost of the Project will have to be adjusted according to the feasibility study results	

2. INTRODUCTION

2.1 Overview

Monarch Gold Corporation ("Monarch" or the "issuer") retained InnovExplo Inc. ("InnovExplo") to prepare a Technical Report (the "Technical Report") to present and support the results of the Mineral Resource Estimate (the "2019 MRE") for the Fayolle Gold Project (the "Project") in accordance with Canadian Securities Administrators' National Instrument 43-101 Respecting Standards of Disclosure for Mineral Projects ("NI 43-101") and Form 43-101F1. The mandate was assigned by Jean-Marc Lacoste, President and CEO of Monarch.

InnovExplo is an independent mining and exploration consulting firm based in Val-d'Or, Québec.

Monarch is a Canadian gold producer trading publicly on the Toronto Stock Exchange (TSX) under the symbol MQR.

The 2019 MRE follows CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Definition Standards").

2.2 Report Responsibility and Qualified Persons

This Technical Report was prepared by Alain Carrier, (M.Sc., P.Geo.), Co-President Founder of InnovExplo and by Christine Beausoleil, (P.Geo.), Geology Director of InnovExplo. Mr. Carrier and Mrs. Beausoleil are independent qualified persons ("QPs") as defined by NI 43-101.

Mr. Carrier is a professional geologist in good standing with the Ordre des Géologues du Québec (OGQ No. 281), the Association of Professional Geoscientists of Ontario (PGO No. 1719), and the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG No. L2701). He is the author of items 12 and 14 of the Technical Report, and co-author of all other items for which he shares responsibility.

Ms. Beausoleil is a professional geologist in good standing with the Ordre des Géologues du Québec (OGQ No. 656), the Association of Professional Geoscientists of Ontario (PGO No. 2958), and the Engineers & Geoscientists of British Columbia (EGBC No. 36156). She is the co-author of all items of the Technical Report, except for items 12 and 14.

Mr. Carrier visited the project multiple times and was author or co-author of independent NI 43-101 technical reports on the Fayolle Property (the "Property") in 2005, 2007, 2012 and 2013. For the purpose of this Technical Report, a site visit was conducted on August 22, 2019, which included visit to the core logging and sampling facilities, a review of selected core intervals from the 2019 drilling program and several drill hole collars (historical and recent holes), and a verification of the project databases. Ms. Beausoleil did not visit the Property.

2.3 Effective Date

The effective date of the MRE database is July 15, 2019 and the effective date of the 2019 MRE is August 30, 2019.

The effective and signature date of this Technical Report is October 22, 2019.

2.4 Sources of Information

The documentation listed in items 3 and 27 were used to support this Technical Report. Excerpts or summaries from documents authored by other consultants are indicated in the text.

The authors' assessment of the Project was based on published material in addition to data, professional opinions and unpublished material submitted by the issuer. The author reviewed all relevant information provided by the issuer and/or by its agents.

The author also consulted other sources of information, mainly the Government of Québec's online claim management and assessment work databases (GESTIM and SIGEOM, respectively), as well as Monarch's technical reports, annual information forms, MD&A reports and press releases published on SEDAR (www.sedar.com).

The author reviewed and appraised the information used to prepare this Technical Report, including the conclusions and recommendations, and believe that such information is valid and appropriate considering the status of the project and the purpose for which this Technical Report is prepared. The authors have fully researched and documented the conclusions and recommendations made in this Technical Report.

2.5 Currency, Units of Measure, and Abbreviations

The abbreviations, acronyms and units used in this report are provided in Table 2.1 and Table 2.2. All currency amounts are stated in Canadian Dollars ($, C$, CAD) or US dollars (US$, USD). Quantities are stated in metric units, as per standard Canadian and international practice, including metric tons (tonnes, t) and kilograms (kg) for weight, kilometres (km) or metres (m) for distance, hectares (ha) for area, percentage (%) for copper and nickel grades, and gram per metric ton (g/t) for precious metal grades. Wherever applicable, imperial units have been converted to the International System of Units (SI units) for consistency (Table 2.3).

Table 2.1 – List of abbreviations and acronyms

Abbreviations and Acronyms	Definitions
43-101	National Instrument 43-101 – Standards of Disclosure for Mineral Projects (*Regulation 43-101* in Québec)
Ag	Silver
As	Arsenic
Au	Gold
Az	Azimuth
cb, CB	Carbonate
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CIM Definition Standards	CIM Definition Standards on Mineral Resources and Reserves (adopted in 2014)
CN	Cyanide
CoG	Cut-off grade
CoG_{UG}	Cut-off grade underground scenario
CoG_{OP}	Cut-off grade open-pit scenario

Abbreviations and Acronyms	**Definitions**
COV	Coefficient of variation
cpy, CPY	Chalcopyrite
CMP	Composites
CN	Cyanide
CRM	Certified reference material
Cu	Copper
DDH	Diamond drill hole
FA	Fire Assay
Fe	Iron
G&A	General and administration
ICP	Inductively coupled plasma
ICP-AES	Inductively coupled plasma atomic emission spectroscopy
ICP-MS	Inductively coupled plasma mass spectroscopy
Test ID	Test Identification
ID2	Inverse distance squared
IP	Induced polarization
ISO	International Organization for Standardization
IT	Information technology
LIDAR	Light Detection and Ranging (remote sensing method)
Mag, MAG	Magnetometer, magnetometric
MD&A	Management's Discussion and Analysis
mesh	US mesh
MRE	Mineral resource estimate
n/a, N/A	Not available or not applicable
NaCN	Sodium cyanide
NAD 83	North American Datum of 1983
NAPEG	Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists
Ni	Nickel
NI 43-101	National Instrument 43-101 – Standards of Disclosure for Mineral Projects (*Regulation 43-101* in Québec)
NN	Nearest neighbour
No	N
NSR	Net smelter return
NTS	National Topographic System
OB	Overburden
OGQ	Ordre des Géologues du Québec (Québec Order of Geologists)
OIQ	Ordre des ingénieurs du Québec (Québec order of engineer)
OK	Ordinary kriging
P_{80}	80% passing - Product
P.Geo.	Professional geologist
P.Eng.	Professional engineer
PGO	Professional Geoscientists Ontario
po, PO	Pyrrhotite
Pulse-EM	Type of TDEM survey
py, PY	Pyrite
Q	Value expressing quality of rock mass (Q-system for rock mass classification)
QA	Quality assurance
QA/QC, QAQC	Quality assurance/quality control

Abbreviations and Acronyms	Definitions
QFP	Quartz-feldspar porphyry
QP	Qualified person (as defined in NI 43-101)
qtz, qz, QZ	Quartz
Regulation 43-101	National Instrument 43-101 (Québec)
RQD	Rock quality designation
SD	Standard deviation
SEDAR	System for Electronic Document Analysis and Retrieval
SEG	Society of Economic Geologists
SG	Specific gravity
Sr	Strontium
TDEM	Time-domain electromagnetics
TSX	Toronto Stock Exchange
UG, U/G	Underground
U-Pb	Uranium-lead (dating)
UTM	Universal Transverse Mercator (coordinate system)
VG	Visible gold
VLF	Very low frequency
Y	Yttrium
Zr	Zirconium

Table 2.2 – List of units

Symbol	Unit
A	Ampere
cm	Centimetre
ft	Foot (12 inches)
g	Gram
G	Billion
g/cm^3	Gram per cubic centimetre
g/t	Gram per metric ton (tonne)
in	Inch
kg	Kilogram
km^2	Square kilometre
L	Litre
M	Million
m	Metre
Ma	Million years (annum)
masl	Metres above mean sea level
min	Minute (60 seconds)
mm	Millimetre
Moz	Million (troy) ounces
Mt	Million metric tons
oz	Troy ounce
oz/t	Ounce (troy) per short ton (2,000 lbs)
s^2	Second squared
t	Metric tonne (1,000 kg)
ton	Short ton (2,000 lbs)
tpd	Metric tonnes per day
µm	Micrometre

Table 2.3 – Conversion factors for measurements

Imperial Unit	Multiplied by	Metric Unit
1 inch	25.4	mm
1 foot	0.3048	m
1 acre	0.405	ha
1 ounce (troy)	31.1035	g
1 pound (avdp)	0.4535	kg
1 ton (short)	0.9072	t
1 ounce (troy) / ton (short)	34.2857	g/t

3. RELIANCE ON OTHER EXPERTS

This Technical Report has been prepared by InnovExplo at the request of Monarch.

The QPs assigned to the current mandate are Alain Carrier (M.Sc., P.Geo.) and Christine Beausoleil (P.Geo.) of InnovExplo. The mandate included a mineral resource estimate for the Project, and recommendations for a future work program.

The QPs relied on the following people or sources of information during the preparation of this Technical Report:

- In addition to technical information, Monarch also supplied information on mining titles, option agreements, royalty agreements, environmental liabilities, permits, and negotiations with First Nations. InnovExplo verified the status of the mining titles online and consulted the information provided by Monarch as well as public sources of relevant technical information. InnovExplo is not qualified to express any legal opinion with respect to property titles, current ownership or possible litigation;
- Simon Boudreau, P.Eng., of InnovExplo, provided the parameters used to calculate the official cut-off grade and pit shell for the mineral resource estimate;
- Marcel St-Laurent, P.Eng., of InnovExplo, provided the parameters used to calculate the official cut-off grade for underground potential resources; and
- Venetia Bodycomb, M.Sc., of Vee Geoservices, provided critical and linguistic editing of a draft version of this Technical Report.

4. PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Project is located in the province of Québec, Canada, within the municipality of Rouyn-Noranda (borough of St-Norbert-de-Mont-Brun), 35 km northeast of the Rouyn-Noranda city centre. The Project is 1.4 km south of Parc National d'Aiguebelle, a provincial park. Access is afforded from the village of St-Norbert-de-Mont-Brun (Figure 4.1 and Figure 4.2).

The UTM coordinates of the approximate centre of the property are 664,513 E, 5,365,248 N (NAD 83, Zone 17). The Project lies on NTS maps sheet 32D07.

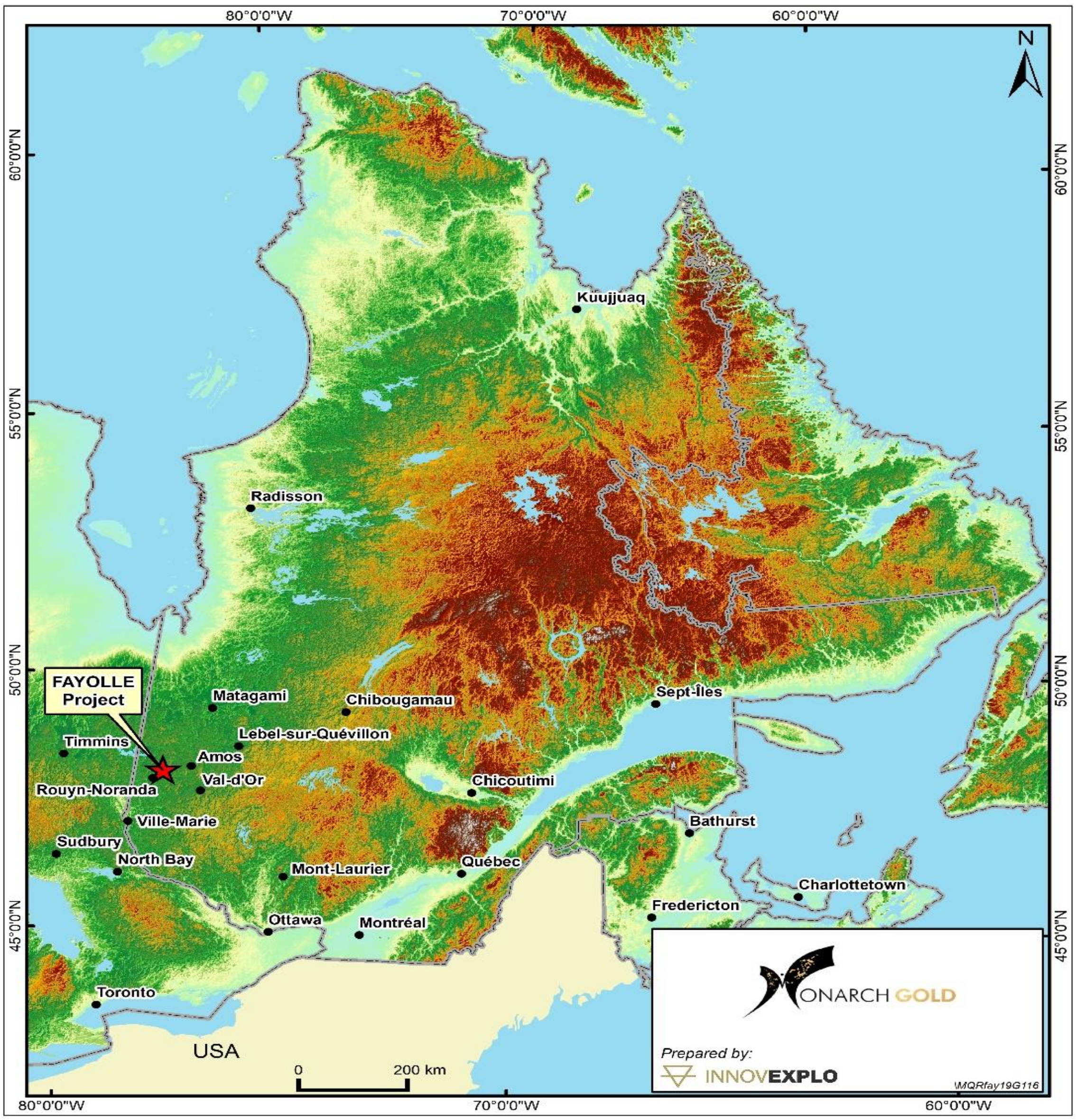


Figure 4.1 – Location of the Fayolle Project

4.2 Claim Status

The Fayolle property consists of 39 mineral claims (37 contiguous and 2 isolated claims) covering an area of 1,373 ha (14 km^2) in Aiguebelle and Cléricy townships. In August 2019, Monarch announced the acquisition of those 39 claims. The transaction also included private land and a building located on Abijevis Range, designated Lot No. 4 820 860 in the Québec cadastre (Rouyn-Noranda district), previously designated Lot No. 21 of Range X. The mining titles are illustrated on Figure 4.2 and listed and described in Table 4.1.

4.3 Acquisition of the Fayolle Project

According to the issuer's press release of August 20, 2019, Monarch announced it had acquired an aggregate 100% interest in the Fayolle Property from Hecla Quebec Inc. ("Hecla") (NYSE: HL), formerly known as Aurizon Mines Ltd, and Typhoon Exploration Inc. ("Typhoon") (TSXV: TYP).

In exchange, Monarch had issued 12 million shares to Hecla and 3.4 million shares to Typhoon. Monarch had also paid Typhoon an amount of $500,000 and will pay an additional $500,000 in five (5) months and $150,000 in 12 months. The shares issued to Hecla and Typhoon are subject to restrictions on their transfer for periods of up to 24 months.

4.4 Agreement and Royalties

In 2007, Raymond Chabot Inc. was in possession of a royalty equal to a 2% NSR on the claims constituting the Fayolle Property. This royalty was previously owned by McWatters Mining Inc. Raymond Chabot entered into an agreement of purchase and sale of this royalty with Globex Mining Enterprises Inc. ("Globex"). Raymond Chabot Inc. agreed to sell, transfer and assign to Globex all of its right, title and interest in and to the royalty. Globex is the current owner of this 2% NSR on the Fayolle Property.

Monarch is committed to this royalty. According to the Royalty Assumption Agreement:

A. Pursuant to an Asset Purchase Agreement dated August 19, 2019, between Vendor and Purchaser (the "APA"), Purchaser has agreed to buy from Vendor certain assets, including a 50% interest in claims in Québec as more particularly described in Schedule 1.1(f) to the APA (the "Fayolle Property");

B. Pursuant to the terms of an Agreement of Purchase and Sale dated April 20, 2007, between Raymond Chabot Inc. in its capacity as receiver of McWatters Mining Inc.("McWatters") and Globex, Globex is the holder of a 2% NSR royalty on the Fayolle Property (the "Royalty");

C. The Royalty was created by virtue of a contract executed between McWatters and Exploration Typhoon Inc. ("Typhoon") as of April 14, 2004, a copy thereof having been provided to Purchaser;

D. Vendor acquired its 50% interest in the Fayolle Property pursuant to an Option Agreement dated May 17, 2010, made between Aurizon Mines Ltd. (now the Vendor) and Typhoon (the "Option Agreement") which states in Schedule E thereof that a transfer of an interest in the Fayolle Property will not be effective as against the Royalty Holder (as defined therein) until Purchaser has delivered to the Royalty Holder a written and enforceable acknowledgement of all the terms and conditions detailed in said Schedule

E. By way of this Royalty Assumption Agreement which Purchaser undertook to deliver to Vendor pursuant to Section 4.3 of the APA, Purchaser wishes to assume the obligations of Vendor pursuant to the Royalty.

4.5 Environment

In 2006, the plan to expand the wildlife reserve was abolished and the Fayolle claims consequently no longer fell within a restricted area, although specific conditions still apply to exploration in some areas (see Figure 4.2, exploration allowed under specific conditions). None of the other claims of the Project have other restrictions, except normal compliance with the Québec Mining Act.

Prior to Typhoon involvements on the Fayolle Project (and Aurizon afterwards), a "protocol agreement" regarding exploration in the vicinity of the Aiguebelle provincial park included these statements:

- Minimize the impact of mining-related activities (exploration and extraction) on wildlife, wildlife habitats, and the environment in general;
- Foster the [continuous] remediation of any places altered by mining-related activities; and
- Preserve the visual landscape as seen from the observation sites within Parc National d'Aiguebelle.

The parties involved in the "protocol agreement" were the regional county municipality (MRC) of Rouyn-Noranda, and the Association des prospecteurs du Québec (APQ), the Association Minière du Québec (AMQ), and two (2) corporations, Cambior Inc. and Ressources Orco Inc. Typhoon and Aurizon have agreed to comply with the protocol.

Now Monarch have agreed to comply with the protocol.

4.6 Communication and Consultation with the Community

Monarch is committed to consulting with the local (adjacent and neighbouring) communities and to keep them informed of the plan and future steps as the Project advances.

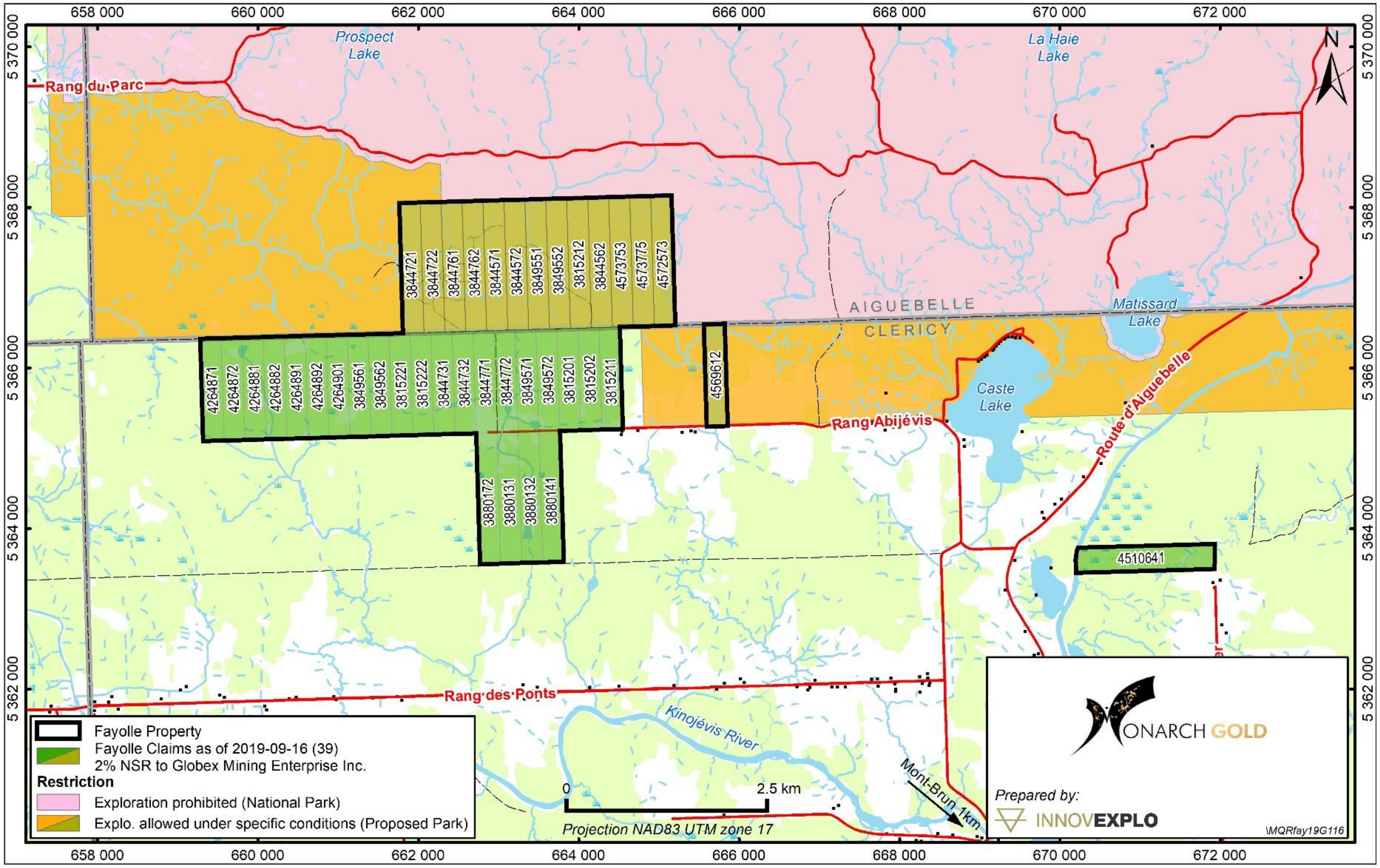


Figure 4.2 – Claim map for the Fayolle Project

Table 4.1 – List of claims constituting the Fayolle Project

NTS	TITLE NUMBER	AREA (ha)	STATUS	REGISTRATION DATE	EXPIRATION DATE	OWNERSHIP	ROYALTY
32D07	3815201	33.3	Active	05-Oct-79	16-Sep-21	Exploration Typhon Inc. (20052) 100 %	2% NSR
32D07	3815202	33.35	Active	05-Oct-79	16-Sep-21	Exploration Typhon Inc. (20052) 100 %	2% NSR
32D07	3815211	33.28	Active	05-Oct-79	16-Sep-21	Exploration Typhon Inc. (20052) 100 %	2% NSR
32D07	3815212	42.53	Active	05-Oct-79	16-Sep-21	Exploration Typhon Inc. (20052) 100 %	2% NSR
32D07	3815221	33.34	Active	05-Oct-79	18-Sep-21	Exploration Typhon Inc. (20052) 100 %	2% NSR
32D07	3815222	33.33	Active	05-Oct-79	18-Sep-21	Exploration Typhon Inc. (20052) 100 %	2% NSR
32D07	3844562	42.37	Active	05-Oct-79	13-Sep-21	Exploration Typhon Inc. (20052) 100 %	2% NSR
32D07	3844571	42.35	Active	05-Oct-79	15-Sep-21	Exploration Typhon Inc. (20052) 100 %	2% NSR
32D07	3844572	42.31	Active	05-Oct-79	15-Sep-21	Exploration Typhon Inc. (20052) 100 %	2% NSR
32D07	3844721	42.29	Active	05-Oct-79	15-Sep-21	Exploration Typhon Inc. (20052) 100 %	2% NSR
32D07	3844722	42.39	Active	05-Oct-79	15-Sep-21	Exploration Typhon Inc. (20052) 100 %	2% NSR
32D07	3844731	33.3	Active	05-Oct-79	17-Sep-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3844732	33.3	Active	05-Oct-79	17-Sep-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3844761	42.35	Active	05-Oct-79	15-Sep-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3844762	42.35	Active	05-Oct-79	15-Sep-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3844771	33.26	Active	05-Oct-79	17-Sep-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3844772	33.31	Active	05-Oct-79	17-Sep-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3849551	42.36	Active	05-Oct-79	18-Sep-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3849552	42.37	Active	05-Oct-79	18-Sep-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3849561	33.35	Active	05-Oct-79	18-Sep-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3849562	33.33	Active	05-Oct-79	18-Sep-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR

NTS	TITLE NUMBER	AREA (ha)	STATUS	REGISTRATION DATE	EXPIRATION DATE	OWNERSHIP	ROYALTY
32D07	3849571	33.36	Active	05-Oct-79	18-Sep-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3849572	33.31	Active	05-Oct-79	18-Sep-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3880131	42.68	Active	18-Mar-80	01-Mar-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3880132	42.6	Active	18-Mar-80	01-Mar-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3880141	42.67	Active	18-Mar-80	01-Mar-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	3880172	42.56	Active	18-Mar-80	01-Mar-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	4264871	33.4	Active	15-Jul-85	13-Jun-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	4264872	33.4	Active	15-Jul-85	13-Jun-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	4264881	33.37	Active	15-Jul-85	13-Jun-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	4264882	33.35	Active	15-Jul-85	13-Jun-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	4264891	33.38	Active	15-Jul-85	13-Jun-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	4264892	33.38	Active	15-Jul-85	13-Jun-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	4264901	33.37	Active	15-Jul-85	13-Jun-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	4510641	53.88	Active	06-Nov-86	04-Oct-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	4569612	33.37	Active	26-Nov-87	07-Oct-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	4572573	42.34	Active	11-Aug-87	10-Aug-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	4573753	42.25	Active	11-Aug-87	10-Aug-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR
32D07	4573775	42.36	Active	11-Aug-87	10-Aug-21	*Exploration Typhon Inc. (20052) 100 %*	2% NSR

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

5.1 Accessibility

The Project is located in the Abitibi-Témiscamingue region in the northwestern part of Southern Québec (Canada) in the municipality of Rouyn-Noranda (borough of St-Norbert-de-Mont-Brun), 35 km northeast of the Rouyn-Noranda city centre. The Project area is accessible via Chemin de la Montagne from St-Norbert-de-Mont-Brun, an asphalt road, and then a gravel road leading onto the property. St-Norbert-de-Mont-Brun is accessible from Route d'Aiguebelle from highway 101, 12 km north of the provincial highway 117 at Rouyn-Noranda (Figure 5.1).

The issuer’s project offices and related facilities are located at the Beacon site about 15 km east of Val-d’Or via highway 117.

5.2 Infrastructure and Local Resources

The Project area is well serviced by mining and milling industries. The city of Rouyn-Noranda, with a working-age population of 28,000, is the closest service community at a distance of 35 km from the Project. Rouyn-Noranda has quality manpower and is a place where firms can hire reliable, qualified and experienced staff. The second largest population centre in the region is the city of Val d'Or, located 105 km southeast of Rouyn-Noranda, where the same quality of manpower is found among the working-age population of 22,000.

5.3 Climate

Based on Environment Canada statistics from 1971 to 2000 (Rivière Kinojevis station), the region is characterized by a mean daily temperature of 1.7°C. The month of July has an average temperature of 17.5°C, and the month of January averages -17.4°C. The extreme minimum recorded temperature was -52.0°C, whereas the highest recorded temperature was 37.8°C. The average annual precipitation is 882.8 mm in water equivalent. August receives the highest monthly average precipitation with 110.3 mm. Snow falls from October to May, with the highest amounts in December and January with 59.6 and 52.7 cm of snow, respectively.

5.4 Physiography

Kinojévis River flows approximately 7 km southeast of the Property. This river drains several creeks and small rivers in the area (Dunn, Cloutier, Paré, Marcoux, Mercier, etc.). Paré Creek runs east-west along the southern property boundary.

The average altitude of the Property is approximately 290 masl. Some hills reach 350 masl in the northern part of the Property where there is more topographic relief and consequently more outcrops. Two (2) lakes, Matissard and Caste, are present in the eastern part of the Property.

The vegetation consists of a mixture of deciduous (30%) and coniferous (70%) trees. Swampy areas are present near and around Paré Creek in the southern part of the Property.

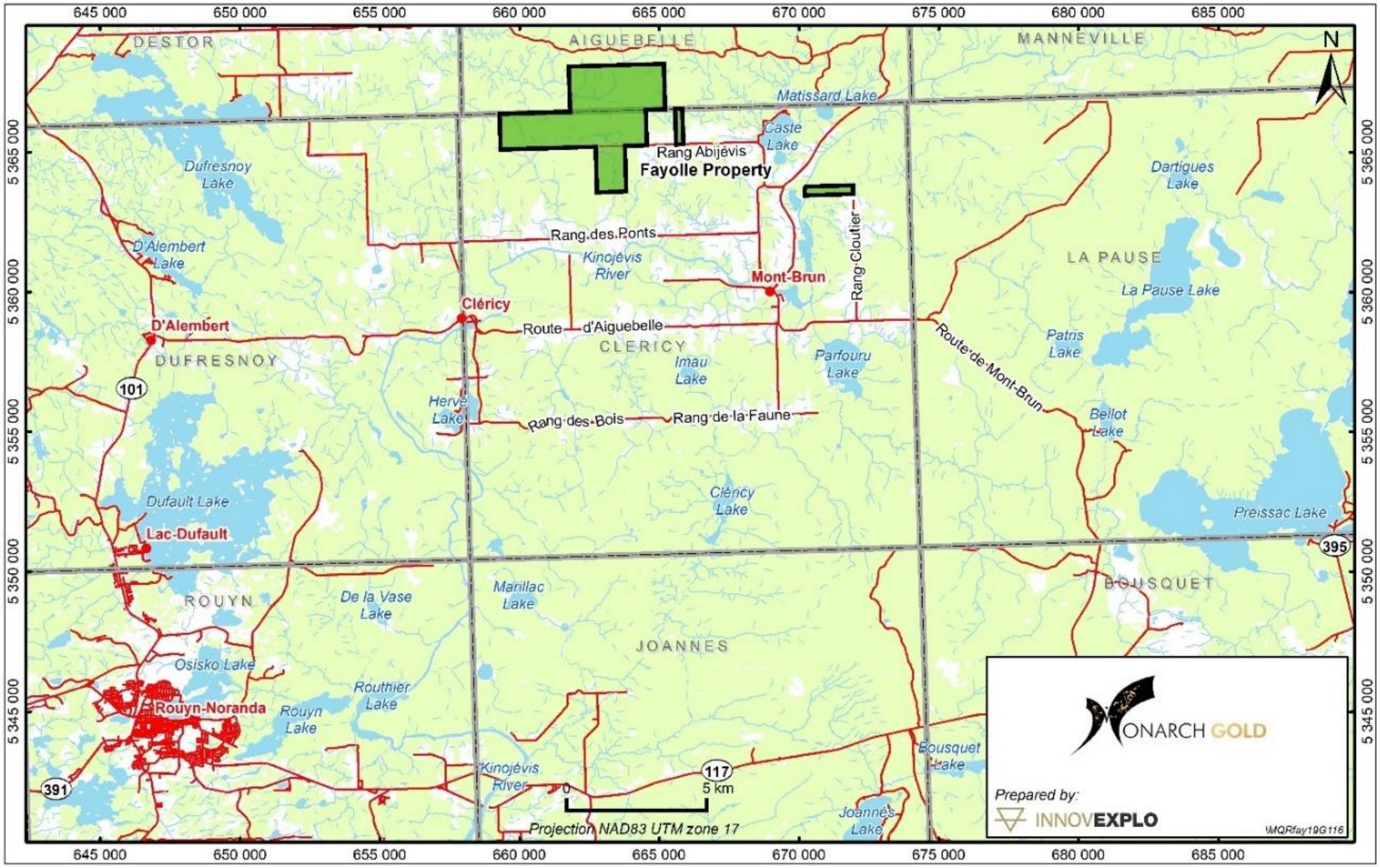


Figure 5.1 – Project accessibility

Figure 5.2 – Project physiography (photo August 22, 2019)

6. HISTORY

Since the initial gold discoveries of Destorbelle, Aiguebelle Goldfields and Hardrock in 1946, various mining companies have held mineral rights to the Project. History of the ownership of the Project can be summarized in the follow periods:

- 1946 – 1956: initial gold discoveries and early exploration work (including historical drilling) by Destorbelle Mines, Aiguebelle Goldfields, Hard Rock Gold Mines, Tobruc, Aldu, Leric Mines, Victoria Zinc Copper Mines, Rio Canadian Exploration, Malrago and Fayolle;
- 1968 – 1977: early exploration works (geophysics, drilling, etc.) by Noranda, SOQUEM, Copcanda, Fontaine and East Bay;
- 1979 – 1996: early exploration works (geophysics, drilling, etc.) by Aiguebelle, Utah, Elder, Essor, Orco, Temisca, SOQUEM, Santa Fe and Cristobal;
- 1996 – 1997: geophysics, mapping and drilling by Barrick / Minorca;
- 1998 – 2002: compilation and historic resource estimate (not NI 43-101) by McWatters;
- 2003 – 2019: geophysics, geochemistry, mapping, stripping, drilling, NI 43-101 ressource estimates and PEA by Typhoon including works with its option agreement partner (Aurizon starting in 2010 and then Hecla since 2013).

In that last period, the Project was advanced to the NI 43-101 resource stage with publication of an initial NI 43-101 resource estimate in 2005 (Carrier et al., 2005), new mineral resource estimates in 2007 and 2012 (Carrier, 2007; Carrier et al., 2012), to a preliminary economic assessment stage (PEA) in 2013 (Poirier et al., 2013), and to NI 43-101 exploration stage technical report in 2015 (Beauregard and Gaudreault, 2015).

In August 2019, Monarch announce the closing of the acquisition of an aggregate 100% interest in the Project from Hecla (formerly Aurizon) and Typhoon.

Table 6.1 summarizes the historical work carried out on the Project completed from 1946 until 2018. The recent drilling program (2019) is described in Item 10.

Table 6.1 – Summary of historical work carried out on the Fayolle Property

Year	Company	Work	Results	References
1946	Destorbelle Mines Ltd	Drilling: 25 DDH (DB-1 to DB-25) Trenching	DB-4: 8.2 g/t Au over 6.6 m Discovery of Destorbelle showing	GM 00027
	Aiguebelle Goldfields Ltd	Drilling: 11 DDH	2.74 g/t Au over 12.3 m 4.87 g/t Au over 12.5 m	GM 00025A
	Hard Rock Gold Mines Ltd	Mapping Drilling: 25 DDH	Discovery of Hard Rock showing	GM 05753
1947	Aiguebelle Mines	Resistivity survey Drilling: 2 DDH		
	Tobruc Cléricy Mines Ltd	Drilling: 4 DDH		GM 09136
	Aldu Mines	Drilling: 2 DDH (#4 and #8)		

Year	Company	Work	Results	References
1948 - 1949	Leric Mines Ltd	Drilling: 7 DDH (#1 to #7)	5.1 g/t Au over 1.5 m 8.23 g/t and 8.16 g/t Au over 0.4 m	GM 05956 GM 53124
1952	Victoria Zinc Copper Mines	Drilling: 6 DDH (C-16 to C-21)	3.0 g/t Au over 6 m 1.78 g/t Au over 15 m	
	Alba Exploration Ltd	Drilling: 3 DDH (AB-1 to AB-3)		
1956	Rio Canadian Exploration Ltd	Drilling: 2 DDH (J1 and J2)		GM 05281
	Maralgo Mines Ltd	Drilling: 2 DDH (M-4 and M-5)		GM 04480
1958	Claims Fayolle	Drilling: 11 DDH (1 to 11)	Discovery: Fayolle showing (Mr. Antoine Fayolle)	GM 06722
1968	Exploration Noranda	Drilling: 3 DDH (C-68-1 and -2; A-26-2)		GM 23832
1971	SOQUEM	IP survey		GM 31875
1973	Copconda Mines	Magnetic survey Drilling: 6 DDH (CA-1 to CA-6)		GM 28770 GM 29910 GM 31173
1974	Fontaine International	Drilling: 2 DDH		
1977	East Bay Gold Mines			GM 34857
1979-1980	Kerr-Addison Mines	Acquisition of Aiguebelle + Fayolle properties Mag, IP and EM surveys Drilling: 50 DDH (KAB-81-1 to-18; KACD-81-1 to -5; LD-80-1 and -2; KA7-82-1 to -4; KA7-83-1 to -10; KAA-82-5; KAA-83-6)	KAA-82-5: 2.2 g/t Au over 0.66 m	GM 36409 GM 36522 GM 37645 GM 37646
1980-1985	Exploration Aiguebelle	Acquisition of Aiguebelle showing Mag, EM and IP surveys Drilling: 21 DDH (83-1 to 83-5; 84-6 to 84-8; 85-9 to 85-21)		GM 40081 GM 42321 GM 42567 GM 42637
1984-1985	Assayers Limited	Drilling: 4 DDH (LMG-1 to LMG-4)		GM 41232
	Utah Mines Ltd	EM survey, IP survey		GM 42006
1985	Ressources Eldor & Kerr-	Drilling: 11 DDH	Destorbelle: 583-85-2: 101 g/t Au over 0.5 m	Press Release 2004-02 Press

Year	Company	Work	Results	References
	Addison Mines	On Destorbelle and Vang showings)	583-85-5: 2.54 g/t Au over 1.47 m Vang: 583-85-7: 1.03 g/t Au over 1.32 m	Release 2004-04
1986-1987	Ressources Eldor	Stripping and Mapping Drilling: 18 DDH (583-86-1 @ 583-86-18) On Fayolle, Destorbelle and Vang showings	583-86-9 (Vang): 1.03 g/t Au over 3.28 m; 583-86-11 (Vang): 1.19 g/ Au over 0.54 m; 583-86-13 (Vang): 6.69 g/t Au over 0.5 m.	Press Release 2004-02 Press Release 2004-04
	Exploration Essor / Ressources Eldor & Kerr-Addison Mines	Mag and IP survey Mapping Drilling: 7 DDH (AIG-87-19 to AIG-87-25) Drilling (1987): 52 DDH (AIG-87-26 to AIG-87-46) Drilling: 31 vertical DDH	On Destorbelle showing: AIG-87-19: 4.06 g/t Au over 0.56 m; AIG-87-24 (Vang): 0.346 g/t Au over 9.18 m.	Press Release 2004-02 Press Release 2004-04 Press Release 2004-05
1988	Dighem Ltd	Aerial survey	Increased quality of 1988 geophysical information	
	Exploration Fairfield	Drilling: V-88-1 to V-88-3		GM 48759
1989	Exploration Essor	Mag survey		GM 49940
1991-1992	Orco Resources Inc. (= Exploration Essor)	Mapping Lithogeochemistry Stripping HLEM and IP survey Drilling: 8 DDH (AIG-92-47 to AIG-92-52)		
1992-1993	Ressources Témisca and SOQUEM	Drilling: 16 DDH (EB-92-01 to -06, EB-93-01B, EB-93-07 to EB-93-15)		GM 51892 GM 52314
1994	Santa Fe Canadian Mining	Drilling: (V-94-1 to -5)		GM 48759 GM 53124
1994-1995	Orco Resources Inc. and Ressources Cristobal Inc.	Structural study Drilling (1994): 4 DDH (FA-4-01 to FA- 94-04) Drilling (1995): 3 DDH (FA-95-01 to FA-95-03)	On Fayolle showing: FA-94-01: 11.4 g/t Au over 4.5 m FA-94-02: 13.1 g/t Au over 2.2 m FA-94-04: 31.7 g/t Au over 0.1 m	GM 53438 Press Release 2004-05
1996	Barrick Gold Corp	Compilation of Aero Mag and DIGHEM geophysical surveys HEM and IP Surveys	Confirmation of ultramafic lavas on the Fayolle, Destorbelle, Victoria and Vang showings	
1997		Exploration on Aiguebelle Property Reinterpretation Mapping at 1:5,000 scale Resampling	AIG-97-08: 441 ppb Au over 8.63 m Resampling of Fayolle and Vang deposits to confirm Au anomalies Second phase: confirmation of	

Year	Company	Work	Results	References
		Drilling: 13 DDH totalling 4,130 m (AIG-97-01 to AIG-97-13) Drilling: 3 DDH totalling 913.5 m	geological model	
1998	Mines McWatters Inc.	Acquisition of property by Ressources Minorca (formerly Ress. Orco) / Merger agreement with McWatters Mining Data compilation and digitization Resource estimation	Resource compilation non-compliant with NI43-101	
2002	D. Gaudreault (for McWatters Mines)	Technical Report		
2003	Typhoon Exploration Inc.	Acquisition of Fayolle Property Exploration Line cutting In-hole IP survey	Some IP anomalies in northern part: E-W orientation	GM 61985
2004	Typhoon Exploration Inc.	2D and 3D modelling of Fayolle deposit Drilling: FA-04-01 to FA-04-14 Airborne and downhole mag surveys IP surveys Lithostructural and thin section studies	9.81 g/t Au over 4.29 m 4.26 g/t Au over 14.7 m 3.37 g/t Au over 18.54 m 32.83 g/t Au over 3.0 m Several NW-SE and NE-SW structures with E-W stratigraphic alignment defined by mag survey Borehole geophysics reveals that mineralized zones do not coincide with chargeability	GM 61729 GM 61949 GM 61905 GM 61906 GM 61950
2005		Drilling totalling 7,232 m FA-05-01 to FA-05-18	1.38 g/t Au over 12.97 m 6.32 g/t Au over 5.0 m 6.14 g/t Au over 4.68 m 79.67 g/t Au over 13.0 m 18.37 g/t Au over 12.05 m	
2006	Typhoon Exploration Inc.	Drilling program: 31 DDH totalling 5,462 m (FA-06-01 to FA-06-31) Thin section study (7 thin sections)	27 g/t Au over 31.5 m 3.47 g/t Au over 20 m 3.02 g/t Au over 25 m 4.43 g/t Au over 27 m	Internal report
2007		Drilling: 28 DDH totalling 8,207.84 m (FA-07-01 to FA-07-28)	10.35 g/t Au over 1.5 m 2.94 g/t Au over 6 m 2.81 g/t Au over 4.5 m 2.7 g/t Au over 5 m 20.31 g/t Au over 8 m 21.82 g/t Au over 6 m	

Year	Company	Work	Results	References
	Earthmetrix for Typhoon Exploration Inc.	Lithostratigraphic and satellite photo studies	Definition of brittle and shear structures	
	InnovExplo for Typhoon Exploration Inc.	Technical report (NI43-101 compliant)		
2008	Typhoon Exploration Inc.	GOCAD 3D Compilation drilling: 19 DDH totalling 7,274.82 m (FA-08-01 to FA-08-19) Thin section study (10 thin sections)	Compilation of all available data 1.45 g/t Au over 6 m 5.98 g/t Au over 3 m 4.26 g/t Au over 7 m 2.51 g/t Au over 12 m 10.84 g/t Au over 19 m 18.76 g/t Au over 4 m	
2009		Drilling: 4 DDH totalling 1,169.81 m (FA-09-01 to FA-09-04)	2.12 g/t Au over 30 m 2.43 g/t Au over 8.0 m	Press release November 10, 2009
2011	Typhoon Exploration Inc.	Geological Report outcrops	No significant results	GM 65762
2012	Typhoon Exploration Inc.	Drilling: 167 DDH totalling 58,656.92 m (FA-10-01 to FA-12-100)		Beauregard et Gaudreault, 2012
2012	Typhoon Exploration Inc.	Metallurgical testwork	Combined gravity and cyanide process show a possible recovery of 93-97% for the Komatiite unit and 88-97% for the intrusive unit	DiLauro and Dymov (2012)
2012	Typhoon Exploration Inc.	Technical Report (NI 43-101 compliant)	Mineral resource estimate at 2.50 g/t Au cut-off: Indicated Resources of 548,500 t @ 5.75 g/t Au for a total of 101,300 oz Au (UG) PEA including 2 scenarios (UG and open pit): InnovExplo concluded open pit best option	Poirier et al., 2013
2013	Typhoon Exploration Inc. (Hecla Québec as operator)	175 rock samples	Cinco: 4.08 g/t Au; 2.82 g/t Au; Wang: 2.2 g/t Au	Hecla 2015
		300 channel samples	Cinco: 0.8 g/t Au over 13.7 m (including 3.7 g/t Au over 1.8 m) Cinco: 1.3 g/t Au over 1 m FAX-24-W: 3.1 g/t Au Fayolle: 32.0 g/t Au over 8.3 m Wang: 0.1 g/t Au over 3 m	Beauregard et al. (2015)
2013	Typhoon Exploration Inc. (Hecla	MMI survey 25-m spacing on 100-m N-S lines	Define an E-W ellipse of significant values, 400 m west of the Cinco showing	Hecla Québec (2015)

Year	Company	Work	Results	References
	Québec as operator)	(1,035 soil samples)		
2013	Typhoon Exploration Inc. (Hecla Québec as operator)	Mag ground survey (225 km of linear coverage)	Definition of contacts between volcanic and sedimentary units; Identification of a brittle fault system	GM 61985 Lambert, Gérard (2014) Abitibi Géophysique (2013a)
2014	Typhoon Exploration Inc. (Hecla Québec as operator)	IP Survey	More than 30 anomalies in bedrock at depths between 20 and 50-60 m	GM 61985 MB Géosolutions, géophysicien consultants (2014)
2014	Typhoon Exploration Inc. (Hecla Québec as operator)	Drilling: 11 DDH totalling 4,202 m (FAX-14-65 to FAX-14-75)	Fayolle:1.6 g/t Au over 3.1 m (including 3.6 g/t Au over 1.1 m); Cinco: 2.6 g/t Au over 8.2 m; Cinco: 2.5 g/t Au over 6.2 m; Cinco: 16.5 g/t Au over 0.8 m; Cinco: 2.4 g/t Au over 3.0 m; McDonald: 0.8 g/t Au over 0.9 m.	Hecla Québec (2014), Lavoie-Deraspe, J et Al (2014)
2017	Typhoon Exploration Inc. (Hecla Québec as operator)	LIDAR survey over the Fayolle Project / RME Geomatics, supervised by Corriveau & Associates	High-res topographic survey	RME Geomatics, (2018)

7. GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geological Setting

7.1.1 Archean superior province

The Archean Superior Province (Figure 7.1) forms the core of the North American continent and is surrounded by provinces of Paleoproterozoic age to the west, north and east, and the Grenville Province of Mesoproterozoic age to the southeast. Tectonic stability has prevailed since approximately 2.6 Ga in large parts of the Superior Province. Proterozoic and younger activity is limited to rifting of the margins, emplacement of numerous mafic dyke swarms (Buchan and Ernst, 2004), compressional reactivation, large-scale rotation at approximately 1.9 Ga, and failed rifting at approximately 1.1 Ga. With the exception of the northwest and northeast Superior margins that were pervasively deformed and metamorphosed at 1.9 to 1.8 Ga, the craton has escaped ductile deformation.

A first-order feature of the Superior Province is its linear subprovinces, or “terranes”, of distinctive lithological and structural character, accentuated by subparallel boundary faults (e.g., Card and Ciesielski, 1986). Trends are generally east-west in the south, west-northwest in the northwest, and northwest in the northeast. In Figure 7.1, the term “terrane” is used in the sense of a geological domain with a distinct geological history prior to its amalgamation into the Superior Province during the 2.72 Ga to 2.68 Ga assembly events, and a “superterrane” shows evidence for internal amalgamation of terranes prior to the Neoarchean assembly. “Domains” are defined as distinct regions within a terrane or superterrane.

The Fayolle Project is located within the Abitibi Terrane. The Abitibi Terrane hosts some of the richest mineral deposits of the Superior Province (Figure 7.1), including the giant Kidd Creek massive sulphide deposit (Hannington et al., 1999) and the large gold camps of Ontario and Québec (Robert and Poulsen, 1997; Poulsen et al., 2000).

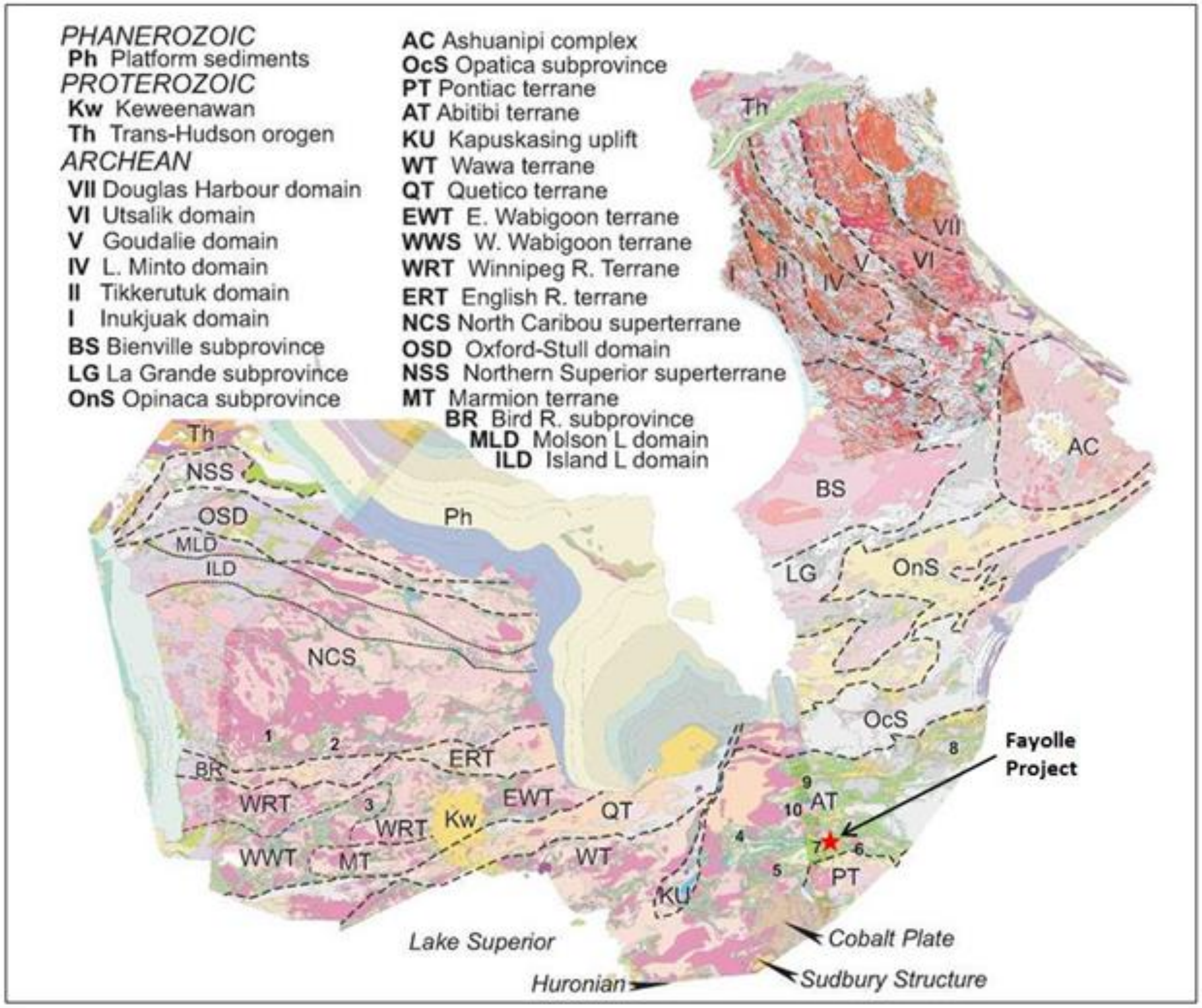
7.1.2 Abitibi Terrane (Abitibi Subprovince)

The Abitibi Subprovince (Abitibi Greenstone Belt) is located in the southern portion of the Superior Province (Figure 7.1). The Abitibi Subprovince is divided into the Southern and Northern volcanic zones (SVZ and NVZ; Chown et al. 1992) representing a collage of two (2) arcs delineated by the Porcupine-Destor-Manneville Fault Zone (PDMFZ; Mueller et al. 1996). The SVZ is separated from the sedimentary rocks of the Pontiac Terrane accretionary prism (Calvert and Ludden 1999) to the south by the Cadillac-Larder Lake Fault Zone (CLLFZ). The fault zones are terrane “zippers” that display the change from thrusting to transcurrent motion as documented in the turbiditic flysch basins unconformably overlain by, or in structural contact with, coarse clastic deposits in strike-slip basins (Mueller et al. 1991, 1994, 1996; Daigneault et al. 2002). A further subdivision of the NVZ into internal and external segments is warranted, based on distinct structural patterns with the intra-arc Chicobi sedimentary sequence representing the line of demarcation. Dimroth et al. (1982, 1983a) recognized this difference and used it to define internal and external zones (Figure 7.2) of the Abitibi Greenstone Belt. Subsequently, numerous alternative Abitibi divisions were proposed (refer to Chown et al. 1992), but all models revolved around a plate tectonic theme. The identification of a remnant Archean north-dipping subduction zone by Calvert et al. (1999) corroborated these early studies.

The 2735-2705 Ma NVZ is ten times larger than the 2715-2697 Ma SVZ, and both granitoid bodies and layered complexes are abundant in the former. In contrast, plume-generated komatiites, a distinct feature of the SVZ, are only a minor component of the NVZ, observed only in the Cartwright Hills and Lake Abitibi area (Daigneault et al. 2004). Komatiites rarely constitute more than 5% of greenstone sequences and the Abitibi is no exception (Sproule et al. 2002). The linear sedimentary basins are significant in the history because they link arcs and best chronicle the structural evolution and tempo of Archean accretionary processes. The NVZ is composed of volcanics cycles 1 and 2, which are synchronous with sedimentary cycles 1 and 2, whereas the SVZ exhibits volcanic cycles 2 and 3, with sedimentary cycles 3 and 4 (Mueller et al. 1989; Chown et al. 1992; Mueller and Donaldson 1992; Mueller et al. 1996).

The Abitibi Subprovince displays a prominent E-W structural trend resulting from regional E-trending folds with an axial-planar schistosity that is characteristic of the Abitibi belt (Daigneault et al. 2002). The schistosity displays local variations in strike and dip, which are attributed to either oblique faults cross-cutting the regional trend, or deformation aureoles around resistant plutonic suites. Although dominant steeply-dipping fabrics are prevalent in Abitibi Subprovince, shallow-dipping fabrics are recorded in the Pontiac Subprovince and at the SVZ-NVZ interface in the Preissac-Lacorne area.

The metamorphic grade in the Abitibi Subprovince displays greenschist to sub-greenschist facies (Joly, 1978; Powell et al., 1993; Dimroth et al., 1983b; Benn et al., 1994) except around plutons where amphibolite grade prevails (Joly, 1978). In contrast, two (2) extensive high-grade zones coincide with areas of shallow-dipping fabrics. They are: (1) the turbiditic sandstone and mudstone of the Pontiac Subprovince at the SVZ contact which exhibit a staurolite-garnet-hornblende-biotite assemblage (Joly, 1978; Benn et al., 1994); and (2) the Lac Caste Formation turbidites at the SVZ-NVZ interface (Malartic segment) with sandstone and mudstone metamorphosed to biotite schist with garnet and staurolite. Feng and Kerrich (1992) suggested that the juxtaposition of greenschist and amphibolite grade domains indicates uplift occurred during the compressional stage of collisional tectonics.



Data sources: Manitoba (1965), Ontario (1992), Thériault (2002), Leclair (2005). Major mineral districts: 1 = Red Lake; 2 = Confederation Lake; 3 = Sturgeon Lake; 4 = Timmins; 5 = Kirkland Lake; 6 = Cadillac; 7 = Noranda; 8 = Chibougamau; 9 = Casa Berardi; 10 = Normétal

Figure 7.1 – Mosaic map of the Superior Province showing major tectonic elements from Percival (2007)

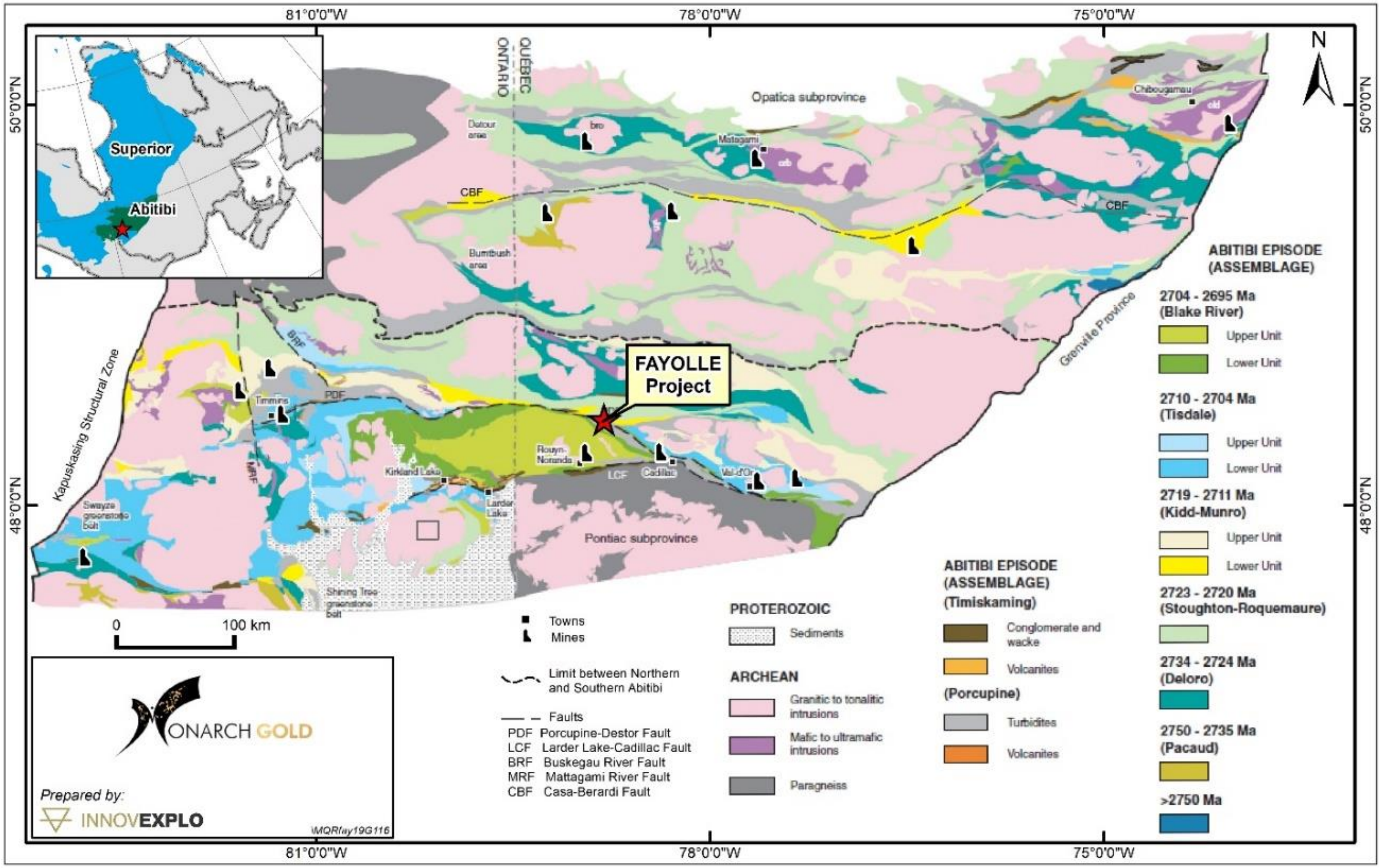
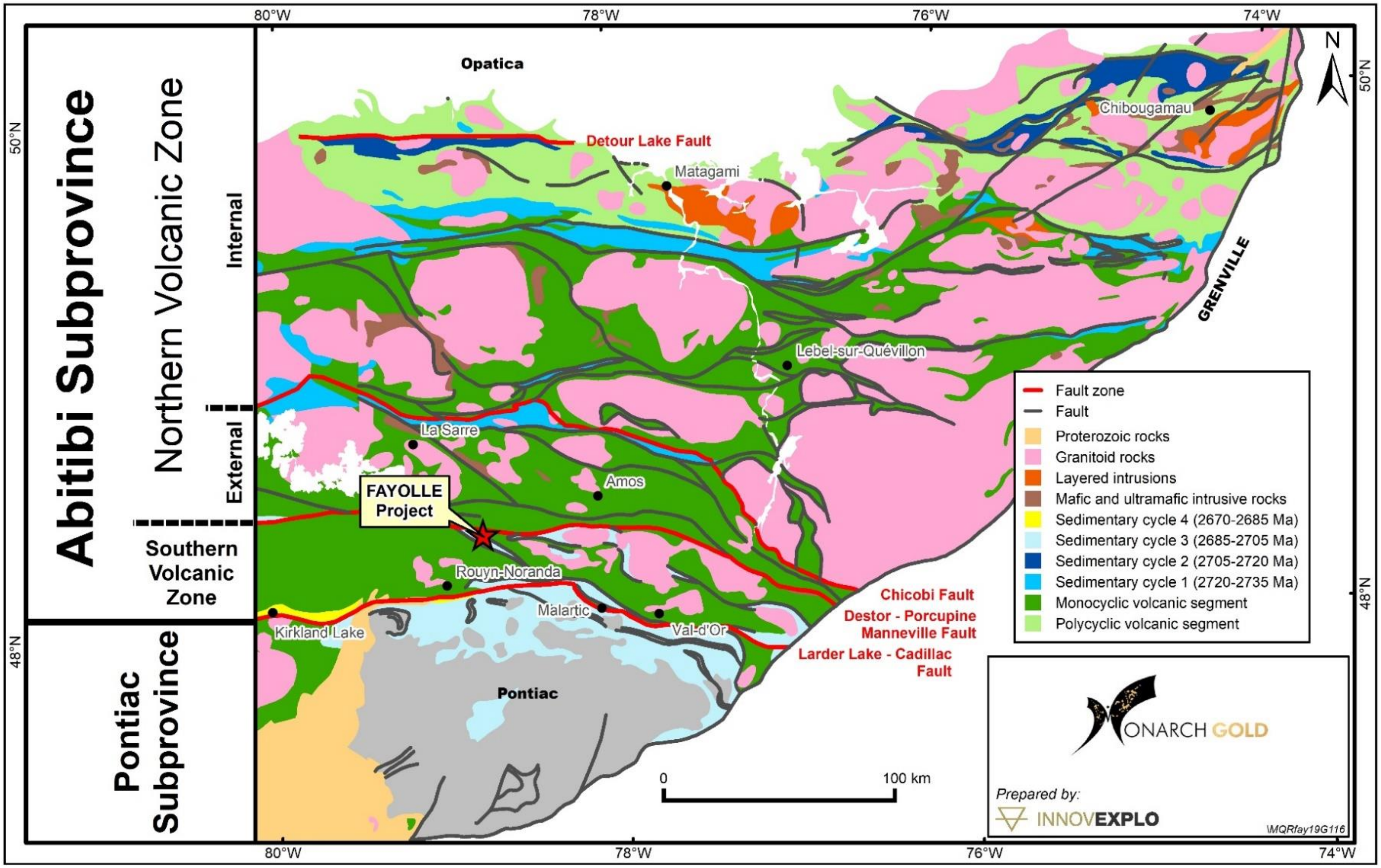


Figure 7.2 – Location of the Fayolle Project in the Abitibi Subprovince



Modified from Chown et al. (1992) and Daigneault et al. (2002, 2004); southern volcanic zone (SVZ); northern volcanic zone (NVZ) with internal and external segments in the NVZ.

Figure 7.3 – Abitibi greenstone belt divisions

7.2 Local Geological Setting

7.2.1 Porcupine-Destor region

The geology of the Porcupine-Destor region (Figure 7.3 and Figure 7.4) consists of an Archean volcano-sedimentary assemblage divided into three volcanic groups and two sedimentary groups (Goutier et Lacroix, 1992; Goutier, 1997). At the base is the Kinojevis Group encompassing two volcanic units: the Deguisier Formation (2718-2722 Ma; Zhang et al., 1993; Barrie, 1999), consisting of ferriferous and magnesian tholeiites, overlain by the Lanaudière Formation (2718 Ma; Zhang et al., 1993), composed of basalts, andesites, rhyolites and komatiites. The Malartic Group (2714 Ma; Pilote et al., 1998), which is in fault contact with the other units, is composed chiefly of ultramafic rocks, andesites and lapilli tuffs. The Hébécourt Formation (2701-2706 Ma; Corfu and Noble, 1992) of the Blake River Group consists of ferriferous and magnesian tholeiites characterized by variolitic and glomeroporphyritic textures. The Reneault-Dufresnoy Formation of the Blake River Group (2698 Ma; Mortensen, 1993) conformably overlies the Hébécourt Formation. The lower part is composed of andesites intercalated with intermediate pyroclastics. The sedimentary rocks making up the Mont-Brun and Caste formations of the Kewagama Group (2684-2686 Ma; Mortensen, 1993; Davis, 2002) are younger than the volcanic rocks and originated as turbiditic sediments deposited in deep basins. The Duparquet Formation of the Timiskaming Group (< 2682 Ma; Mueller et al., 1996) is the youngest stratigraphic unit in the region. It is composed of polygenetic coarse-grained, poorly sorted sedimentary rocks that were deposited in alluvial and fluvial environments. In several locations, the Timiskaming Group lies with angular unconformity over deformed volcanics and over alkaline and calc-alkaline porphyritic intrusions.

Many ultramafic to felsic and alkaline intrusions cut the rocks in the region. A number of mafic to ultramafic intrusions are synvolcanic sills. Quartz-feldspar porphyries (2689 ± 3 Ma; Mueller et al., 1996) are observed throughout the region and are characterized by the presence of phenocrysts of feldspar±quartz and weak to intense iron carbonate and sericite alteration. These intrusions have an andesitic to rhyodacitic composition and a calc-alkaline affinity, and they exhibit significant fractionation of light rare earth elements (Legault et al., 2006).

The region is characterized by the presence of the Porcupine-Destor-Manneville Fault Zone (PDMFZ). This major fault zone is a regional east-west striking structure that extends for over 450 km in the Abitibi greenstone belt (Figure 7.2). The PDMFZ consists of altered units that were isoclinally folded, as indicated by the numerous facing reversals and transposition of primary structures.

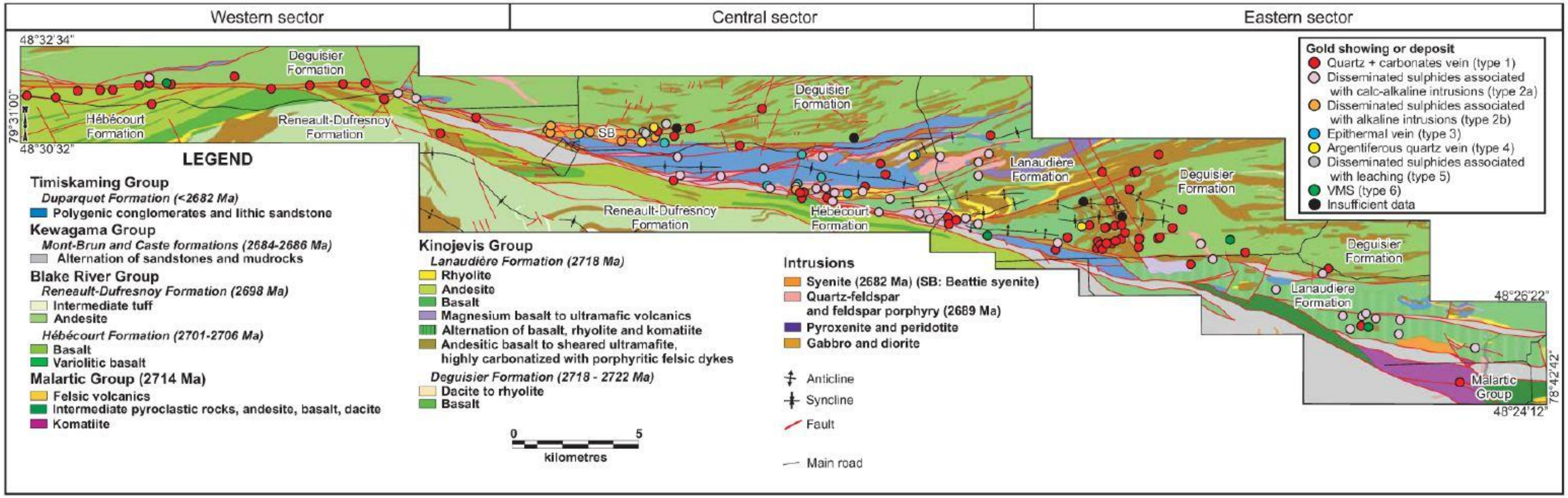
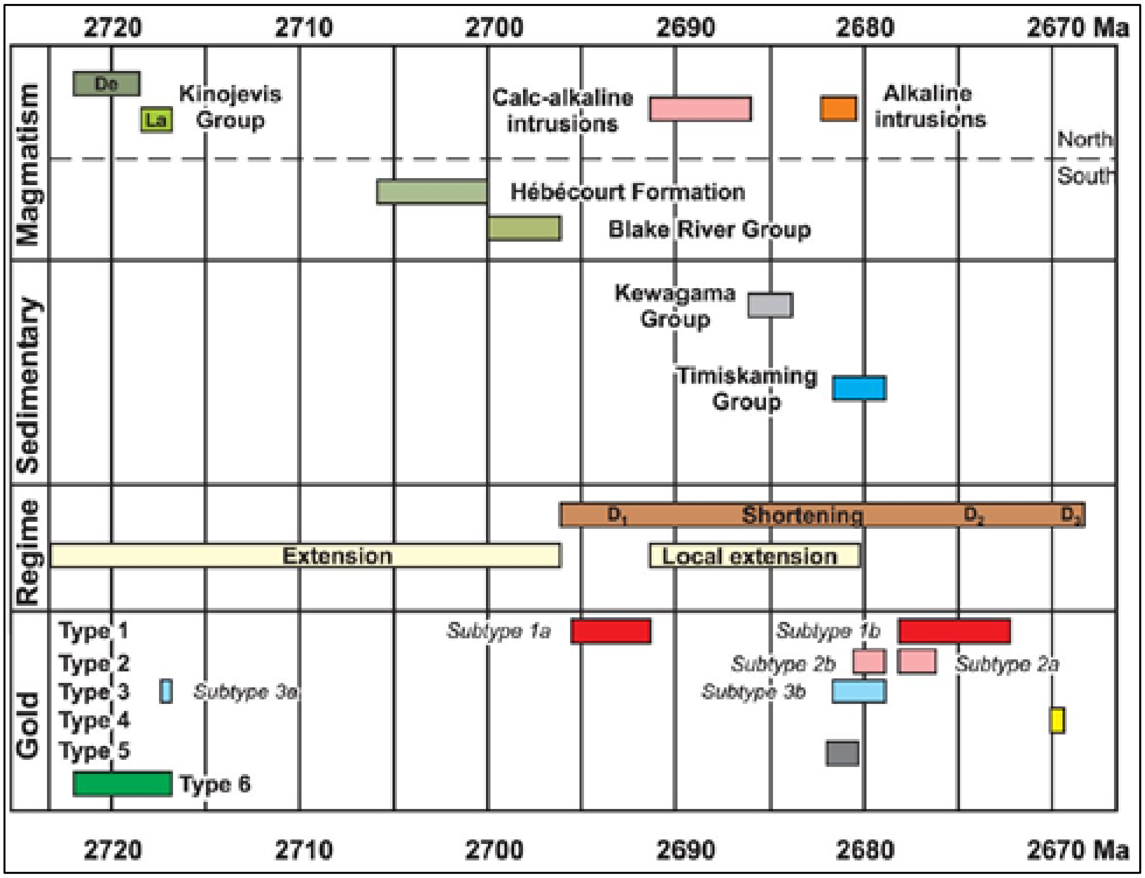


Figure 7.4 – Regional geological map of the Porcupine-Destor-Manneville Fault Zone (Legault et al., 2006)



De = Deguisier Formation; La = Lanaudière Formation; D1, D2 and D3 = deformation episodes. The types of gold mineralization are described in section 8.0, Deposit Types.

Evolution determined on the basis of U-Pb dating (refer to text for geochronology references) and on the relationships between gold mineralization and structural elements, porphyritic intrusions, and Duparquet Formation conglomerates (from Legault et al., 2006).

Figure 7.5 – Geological and metallogenic evolution of the Porcupine-Destor-Manneville Fault Zone.

7.2.2 Property geology

The following description of property geology (Figure 7.5) is based primarily on information provided in Goutier (1997), unless indicated otherwise.

The northern part of the Fayolle Property is underlain primarily by the Lanaudière Formation, which corresponds to the summit of the Kinojevis Group (Figure 7.5). Basalt is the dominant rock type, and basalt layers are intercalated with felsic and ultramafic rocks. Also observed are ultramafic flows, magnesian basalt, and komatiite characterized by breccia, cumulates and spinifex texture. The east-trending Manneville North Fault bifurcates as it passes through this part of the Property, placing a wedge of the Lac Caste Formation of the Kewagama Group into faulted contact with the Lanaudière Formation along the north and south sides of the fault. The Lac Caste Formation comprises bands of turbiditic sedimentary rocks, consisting of beds of sandstone and mudrock with black siliceous argillic horizons.

The roughly central part of the Fayolle Property is underlain, from north to south, by the Lac Caste Formation of the Kewagama Group and the Malartic Group. The faulted contacts between these formations and with the Lanaudière Formation to the north represent bifurcations of the Manneville South Fault. The Malartic Group is composed of ultramafic flows, andesite and intrusions.

The southernmost and westernmost ends of the Property are occupied by the Mont-Brun Formation, which represents a central band of turbiditic sediments within the Kewagama Group. This formation is composed of pale grey sandstone and grey mudrock representing thin beds deposited by turbidity currents. The contact between the Mont-Brun Formation and the volcanic units of the Malartic Group is marked by the southeast-trending La Pause Fault.

A limited occurrence of polygenic breccia, known as the Davangus Breccia, is present in the northeast part of the Property in angular unconformity with the surrounding older volcanic rocks of the Lanaudière Formation (Dimroth et al., 1973). The Davangus Breccia forms the base of the Duparquet Formation of the Timiskaming Group and is composed of angular to subrounded clasts derived from basalt, rhyolite, komatiite, gabbro, black chert, mudrock, and quartz-feldspar porphyry.

Many felsic dykes are located in a zone of imbrication between the Aiguebelle Fault to the north of the Fayolle Property and the La Pause Fault at its southern end. The dykes correspond to centimetre- to decametre-scale intrusions of tonalite and albitite. They are aphyric or porphyritic with feldspar or quartz-feldspar. The dykes are white or beige and associated with strong ankeritization and sericitization of the enclosing rocks. The dykes are younger than the volcanic rocks (Goutier and Lacroix, 1992) and cut most of the lithologies of the Porcupine-Destor area with the exception of the Duparquet Formation, the syenites and the lamprophyres. The Fayolle deposit is intruded by dykes ranging from monzonitic to dioritic and/or granodioritic composition.

The Fayolle Property covers the structural imbrication zone involving the Manneville North, Manneville South and La Pause faults along a strike length of more than 3 km. This imbrication zone is generally considered to be part of the Porcupine-Destor-Manneville Fault Zone (PDMFZ), where it splits into several secondary faults. This notion is challenged by the findings of Goutier (1997), which suggest that the faults in this sector are superimposed and converge in the west to form the Porcupine-Destor Fault, and therefore are not subsidiary to the latter. In either case, these faults are associated with either the D1 event (Figure 7.4) or with the opening of the Duparquet Basin.

7.3 Mineralization

Several gold occurrences are present on the Fayolle Project. They all occur along interfaces marked by strong magnetic contrasts, which are evident on local and regional magnetic maps (Figure 7.5). The most important known occurrence is the Fayolle gold deposit for which resources have been estimated (refer to Section 14: Mineral Resource Estimates). Other gold occurrences of the Project remain within less than 1 km from the Fayolle deposit.

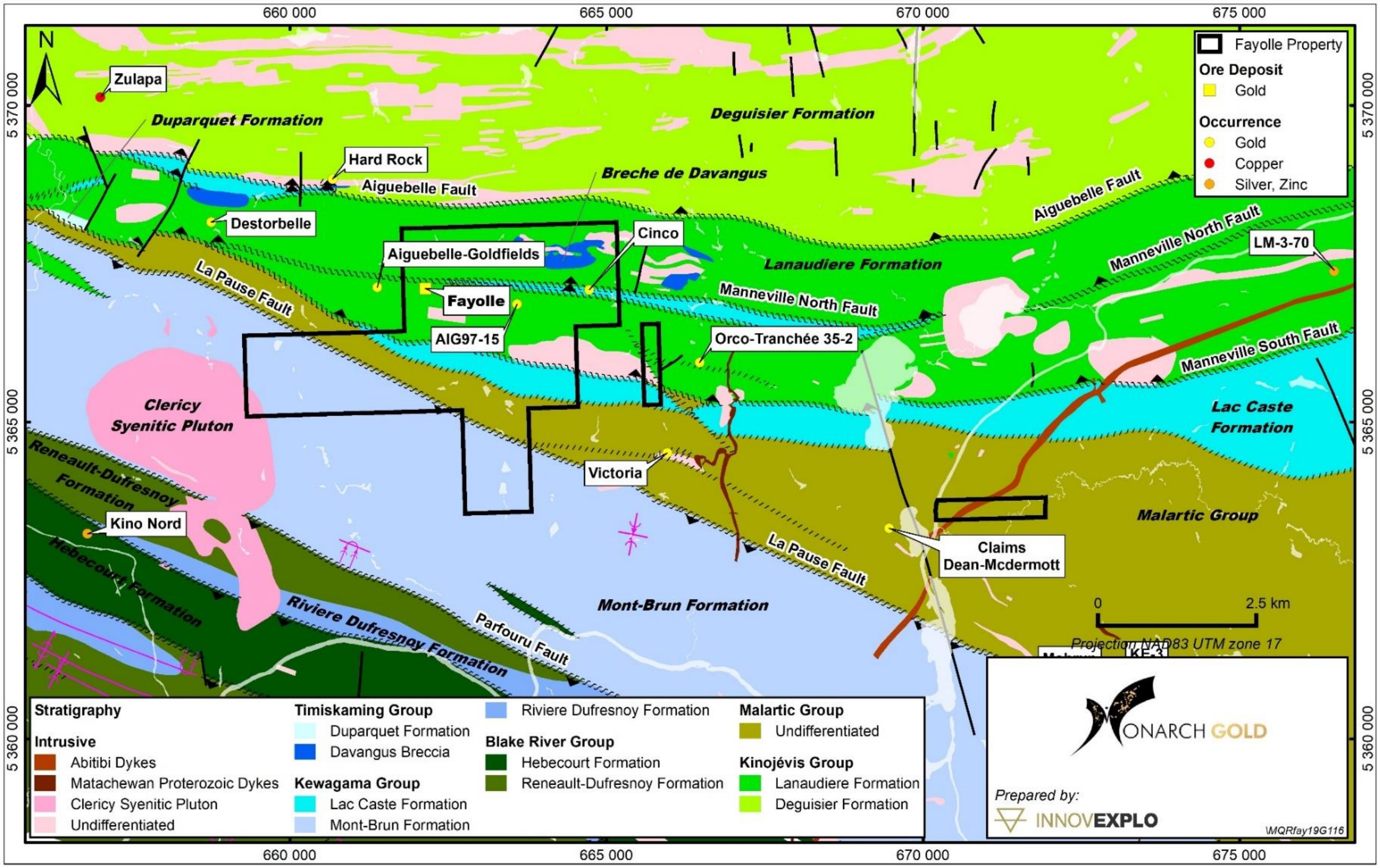


Figure 7.6 – Geological setting of the Fayolle Project

7.3.1 Fayolle deposit

The Fayolle deposit (Figure 7.6 for location) comprises wide alteration zones that contain brecciated mineralized zones. Gold mineralization is hosted in porphyritic dykes of intermediate composition and in volcanic rocks (Gaudreault and Beauregard, 2009). The main lithology intersected in drill hole is magnetic komatiite. Locally, primary volcanic textures, such as varioles and spinifex, are observed beyond the mineralized zones (Carrier, 2007). Spinifex texture was observed in komatiites, whereas the varioles suggest that mafic volcanic rocks are intercalated with the komatiites. Most examples of varioles from the southwestern Abitibi Subprovince are plagioclase spherulites, which are always found in aphyric tholeiitic basalts inferred to have been superheated during eruption (Arndt and Fowler, 2004). The volcanic rocks of the Fayolle deposit are intruded by dykes ranging from monzonitic to dioritic and/or granodioritic composition. The rocks are generally brecciated with little clast rotation and cemented with ankerite.

The volcanic rocks are variably carbonatized. Acid colouration tests reveal carbonate zonation, with calcite as the distal phase and ankerite in the core of the gold mineralization (Carrier, 2007). Just beyond the limits of the mineralized zones, carbonatization is represented by scattered calcite and ankerite in the matrix of volcanic rocks, grading to dominant ankeritization inside the zones. Fuchsite alteration is also observed within the mineralized zones. In general, silicification is only locally developed in volcanic rocks and intermediate dykes when these are mineralized. Diffuse silicification and quartz veining have been documented in many drill holes. Albitization is well developed, particularly in the dykes. Magnetism decreases upon approaching the mineralized zone, likely caused by leaching of magnetite in the volcanic rocks. The volcanics and intermediate dykes are weakly to moderately hematized. Hematization seems to increase progressively in pyritic and chloritic zones.

Most of the ankerite and quartz-ankerite veins occur in brecciated rocks. Several ankerite and quartz ankerite veins, 0.5 to 2 cm wide, as well as chlorite-filled fractures and gouge with irregular orientations, have been observed within and near the mineralized zones. Vein density increases from 5% to 80% in the mineralized zone, and fuchsite alteration is locally observed.

Mineralization is characterized by disseminated pyrite (generally 1-5%) spatially associated with or contained within veinlets of quartz and/or carbonate minerals. Gold is present in the pyrite or as grains of free gold in quartz veinlets. Pyrite is generally found as pods and fine-grained disseminations along schistosity planes and chloritized fractures which are variably deformed at dyke contacts. Pyrite also occurs as barren cubic grains (up to 12%) in the host rocks, and pyrite content is therefore not a direct indicator of gold mineralization in the Fayolle deposit (Carrier, 2007).

Gold is directly associated with ankeritized and pyritized deformation zones (brittle-ductile shears) displaying variable degrees of potassic alteration (fuchsite-sericite) and albitization. The location of gold zones location corresponds to increased structural complex zones. Four (4) categories of brecciation and intrusion (dyke contacts) have been recognized (Demers, 2019). Alteration indicators for these levels are: replacement of talc-dolomite by chlorite-ankerite, ankerite and albite dyke alteration, hematization of intrusives, and decreased percentage and grain size of pyrite. Gold content is erratic or displays a strong nugget effect characterized by generally low or nil assay values punctuated by occasional spikes.

Other metallic minerals are also present, such as chalcopyrite and more rarely pyrrhotite and molybdenite. Some drilling programs have intersected local concentrations of molybdenite veinlets, although gold mineralization is rarely associated with molybdenite.

7.3.2 Other gold-bearing areas on the property

The following descriptions of other gold-bearing areas on the Property are based on information from the Typhoon website and Demers (2019).

7.3.2.1 Vang Trend

Hole FAX-11-15 intersected a quartz vein with visible gold as it passed through an E-W-trending gabbro intrusion. The gabbro intrusion extends for 1 km and has a polymetallic signature (Figure 7.5). All other gold-bearing drill intersections were associated with altered dykes of intermediate composition, found in three corridors forming the roughly E-W-trending Vang Trend. Small amounts (several percent) of finely disseminated pyrite are usually associated with the gold mineralization.

7.3.2.2 Fayolle Extension Trend

The Fayolle Extension is the most northern gold-bearing trend (Figure 7.6). It is related to WNW-trending hematite-altered dykes in contact with basalt layers and crosscut by E-W-trending mafic intrusions. This corridor is located directly along the extension of the Fayolle deposit and is represented by the intersections in drill holes FAX-11-06 and FAX-11-26. Mineralization encountered in these holes is concentrated mainly in dykes and accompanied by finely disseminated pyrite.

7.3.2.3 Paré Trend

The Paré Trend is located immediately south of the Fayolle deposit. It is similar in that it contains dismembered intermediate dykes interlayered with strongly deformed and carbonated komatiite flows associated with minor sedimentary units and gabbro intrusions (Figure 7.6). The general orientation of the main units is E-W but cross faults are suspected. Mineralized intersections in drill holes FAX-11-04B, FAX-11-28 and FAX-11-33 are described mainly as disseminated pyrite in altered intermediate dykes brecciated by hematite veinlets.

7.3.2.4 Vang Extension Trend

The Vang Extension is the southernmost gold trend (Figure 7.6). It marks the contact between Lac Caste Formation sedimentary rocks to the south and brecciated komatiites cut by altered intermediate dykes to the north. The latter context is similar to that of the Fayolle deposit. The Vang Extension (geology and mineralization) has a strong NW-SE component. Cross-cutting structures with a N-S to NNE-SSW orientation may have a strong influence on the location of gold mineralization. The best results in holes FAX-10-05, FAX-11-01, FAX-11-05 and FAX-11-34 were encountered in strongly brecciated komatiite and altered intermediate dykes. This context is very similar to that of the Fayolle deposit.

8. DEPOSIT TYPES

8.1 Porcupine-Destor Fault Area

The Porcupine-Destor-Manneville Fault Zone (PDMFZ) trends E-W and extends for almost 350 km from Timmins in Ontario to the Grenville Front in Québec, to the east-northeast of Val-d'Or. Many gold deposits are known along the fault on both sides of the border, notably those hosting the Beattie, Donchester, Duquesne, Yvan-Vézina and Davangus mines in Québec, and the Holt-McDermott and Harker-Holloway ore deposits and most of the gold mines in the Matheson and Timmins camps in Ontario. The Project straddles the DPMFZ, a major metallotect for gold in the Abitibi.

In 2006, a regional metallogenic synthesis of the PDMFZ was performed for the Abitibi Subprovince (Legault et al., 2006). The synthesis identified six types of gold mineralization (Figure 7.3 and Table 8.1), each with specific characteristics:

1. Quartz + carbonate veins found in deformation zones with strong iron carbonate, sericite, and pyrite alteration, characteristic of orogenic deposits (type 1);
2. Disseminated sulphides associated with a porphyritic intrusion (subtype 2a = calc-alkaline intrusion; subtype 2b = alkaline intrusion);
3. Epithermal veins with open-space crystallization textures and anomalous concentrations of Zn, Pb and Hg typical of neutral epithermal mineralization (type 3);
4. Argentiferous quartz-filled extension veins rich in Cu, Sb, Zn and Hg, analogous to Ag-Pb-Zn veins enclosed in clastic metasedimentary rocks (type 4);
5. Disseminated sulphides associated with leaching represented by a massive quartz + pyrite (5-10%) residue reminiscent of acidic epithermal deposits (type 5);
6. Volcanogenic massive sulphide showings associated with quartz + pyrite + chalcopyrite replacement in basaltic flow breccia (type 6).

The main characteristics of these mineralization types are summarized in Table 8.1.

INNOVEXPLO

Table 8.1 – Characteristics of the six types of gold mineralization found along the Porcupine-Destor-Manneville Fault Zone (Legault et al., 2006)

Type 1	**1**	**2**		**3**	**4**	**5**	**6**
Subtype	----	2a	2b	----	----	----	----
Number of showings	68	38	9	8	5	4	4
Style	Vein, veinlets	Disseminated sulphides, QZ + CB veinlets	Disseminated sulphides	CQ + QZ + CB veins, veinlets	QZ + CB veins, veinlets	QZ + PY massive residue	Pockets of QZ + CB + SF, disseminated
Quartz texture in vein	Heterogranular; banded	Comb; heterogranular	----	Cockade; colloform; crustiform; comb; mosaic	Comb	----	Colloform; crustiform
Alteration	Sericitization, carbonatization, sulphurization	Sericitization, carbonatization, sulphurization	Carbonatization, sericitization, silicification, sulphurization	Silicification, carbonatization, sericitization, sulphurization	Silicification, carbonatization, sulphurization	Sericitization, carbonatization, sulphurization	Carbonatization, silicification, chloritization, sulphurization
Metallic minerals	PY, AS	PY, MO	PY, AS	PY, SP, CP, GL, MO, TH	TH, PY, CP, SP, GL	PY	PY, CP
Gold occurrence	Native Au (included in PY, fractures in PY, PY surfaces, free in VN)	Native Au (included in PY, fractures in PY, PY surfaces, free in VN)	Native Au (included in PY)	Native Au/electrum (included in PY), in pyrite structure?	In tetrahedrite structure, native gold (free in vein)	Native Au (included in PY, fractures in PY)	?
Metals	As, W	Ag, Mo	As, Mo	Ag, Zn, Cu, Pb, Mo, Hg, Sb	Ag, Cu, Sb, Zn, Hg	----	Ag, Cu, Zn
Au values 2	< 25 g/t	< 100 g/t	< 15 g/t	< 100 g/t	< 10 g/t	< 20 g/t	< 5 g/t
Au/Ag 3	7.4 ±12.7 (75)	3.6 ±2.3 (39)	5.6 ±4.2 (14)	2.4 ±2.8 (61)	0.19 ±0.47 (12)5	13.1 ±18.9 (15)	0.09 ±0.06 (3)
Main host 4	Basalt, komatiite, sandstone, QFP/FP, gabbro	QFP/FP, QFP/FP contact, rhyolite	Syenite, syenite contact	QFP/FP basalt	Gabbro, syenite, basalt	Basalt intermediate tuff, QFP/FP	Basalt, intermediate tuff
Control	Secondary and tertiary faults, lithological contacts	Rheological, lithological contacts	Secondary faults, lithological contacts	Synvolcanic or sedimentary faults?	Rheological, near E-W shear	Secondary faults (synsedimentary faults ?)	Synvolcanic faults
Chronology	Early (D1, subtype 1a) to late (D2, subtype 1b) regional deformation	Synregional deformation (D2)	Synregional deformation (D2)	Pre-(subtype 3a) to syn-(between D1 and D2 – subtype 3b) regional deformation	Late regional deformation (D3)	Synregional deformation (D2)	Preregional deformation
Classification	Orogenic deposits	Variation of classic orogenic deposits	Disseminated sulphides associated with syenites	Neutral epithermal deposits	Ag-Pb-Zn veins in clastic metasedimentary rocks	Acidic epithermal deposits	Stockworks associated with VMS deposits
Economic potential	Medium to high	Medium	Medium to high	Medium	Low	Medium	Promising
Examples	Yvan-Vézina, Structure 71, Liz	Duquesne, Fayolle, Touriet	Beattie, Donchester, Central Duparquet 1	Nipissing, East Stinger, Golconda	Nipissing Ouest, Central Duparquet 2, Claims Silver	Fox	Zulapa, Eik Lake 2

AS – arsenopyrite; CB_ carbonates; CQ chalcedony; CP chalcopyrite; CL - galena; MO ._ molybdenum; QZ = quartz; PY - pyrite; SF = sulphides; SP - sphalerite; Tti tetrahedrite; VN vein.

I . Type 1 = Quartz .+ carbonates vein; Type 2 = Disseminated sulphides associated with a porphyritic intrusion (subtype 2a = Calc-alkaline intrusions; subtype 2b = Alkaline intrusions); Type 3 = Epithermal vein (subtype 3a = Synvolcanic; subtype 3b = synsedimentary); Type 4 = Argentir'erous quartz vein; Type 5 = Disseminated sulphides associated with leaching; Type 6 = Sulphides associated with VMS.

2. Indicates the generally observed upper limit in selected samples and drill intersections.

3. Mean ± standard deviation (number of analyses).

4. QFP quartz-feldspar porphyry; FP feldspar porphyry.

5. 0.04±0.10 if one removes the isolated analysis for Central Duparquet 2.

8.2 Fayolle Deposit

Intrusion-associated disseminated sulphide mineralization is commonly found along the PDMFZ and, as its name implies, is spatially related to porphyritic intrusions. Two areas have a large number of these mineralized zones: the periphery of the Duparquet basin and the Fayolle deposit area. Two subtypes have been identified based on intrusion composition: calc-alkaline and alkaline (Legault et al., 2006).

The Fayolle occurrence has been described in the past as a calc-alkaline quartz-feldspar porphyry (QFP) or feldspar-porphyry (FP) intrusion-related disseminated sulphide deposit (Legault et al., 2006), refer to Table 8.1. However, the newly geological understanding of the Fayolle deposit differs from this earlier description.

The Fayolle deposit is characterized by the komatiite flows of the Lanaudiere Formation (Goutier, 1997) intruded by a swarm of quartz-feldspar porphyry and/or feldspar porphyry dykes (Figure 8.2). A post-intrusive brecciation event seems to control gold deposition. The breccia zones mostly affect the ultramafic flows, but also locally contain felsic dyke fragments.

There appears to be no direct correlation between pyrite content and gold grade, contrary to what was proposed by Legault et al. (2006). Gold mostly occurs as free grains in brecciated komatiite with quartz-carbonate veinlets. Gold is also found in the porphyritic dykes, especially when the dykes are bordered by brecciated komatiite. Komatiite-hosted gold mineralization tends to generate high-grade intercepts of narrow to moderate width, and porphyritic dyke-hosted gold mineralization tends to return long, lower-grade (0.3-1.0 g/t Au) intersections. There is a positive correlation between the intensity and complexity of the brecciation and the gold grades in the komatiite flows. Folding seems to control the brecciation event, as is observed in the “C”-shaped grade model mimicking a fold nose. The porphyritic dyke swarm does not follow a preferential orientation.

The alteration of the komatiite flows is characterized by the presence of fuchsite, carbonates and sericite. However, the intensity of each alteration type varies greatly. Black hairline veinlets of chlorite are commonly associated with high-grade gold values in komatiite. Porphyritic dykes have mostly undergone hematite alteration, which does not seem to correlate with gold grades.

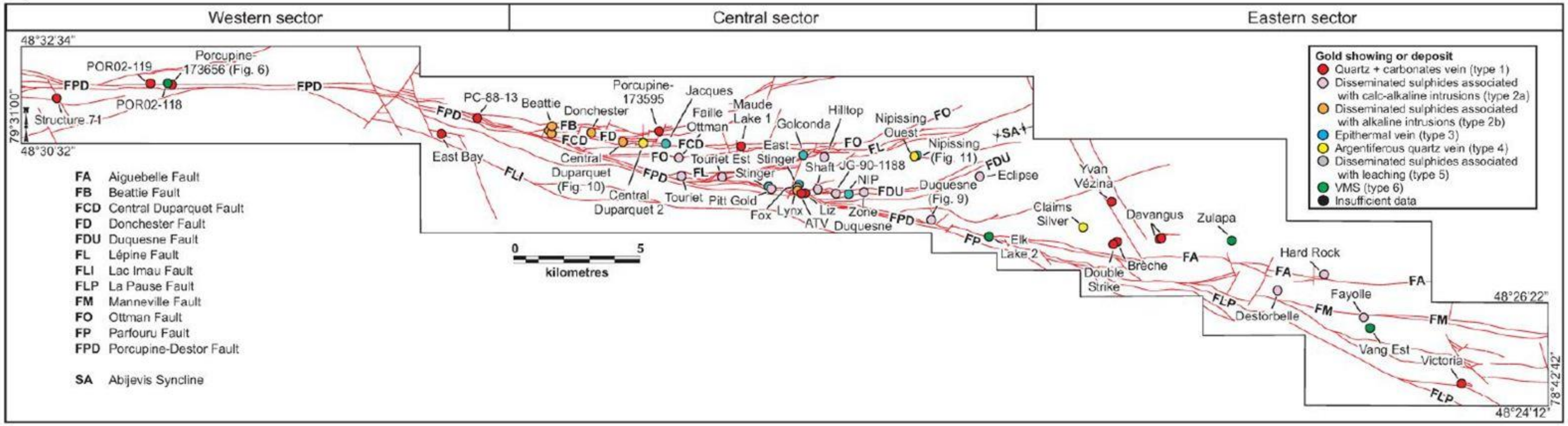


Figure 8.1 – Identification of showings in the Porcupine-Destor-Manneville area (Legault et al., 2006)

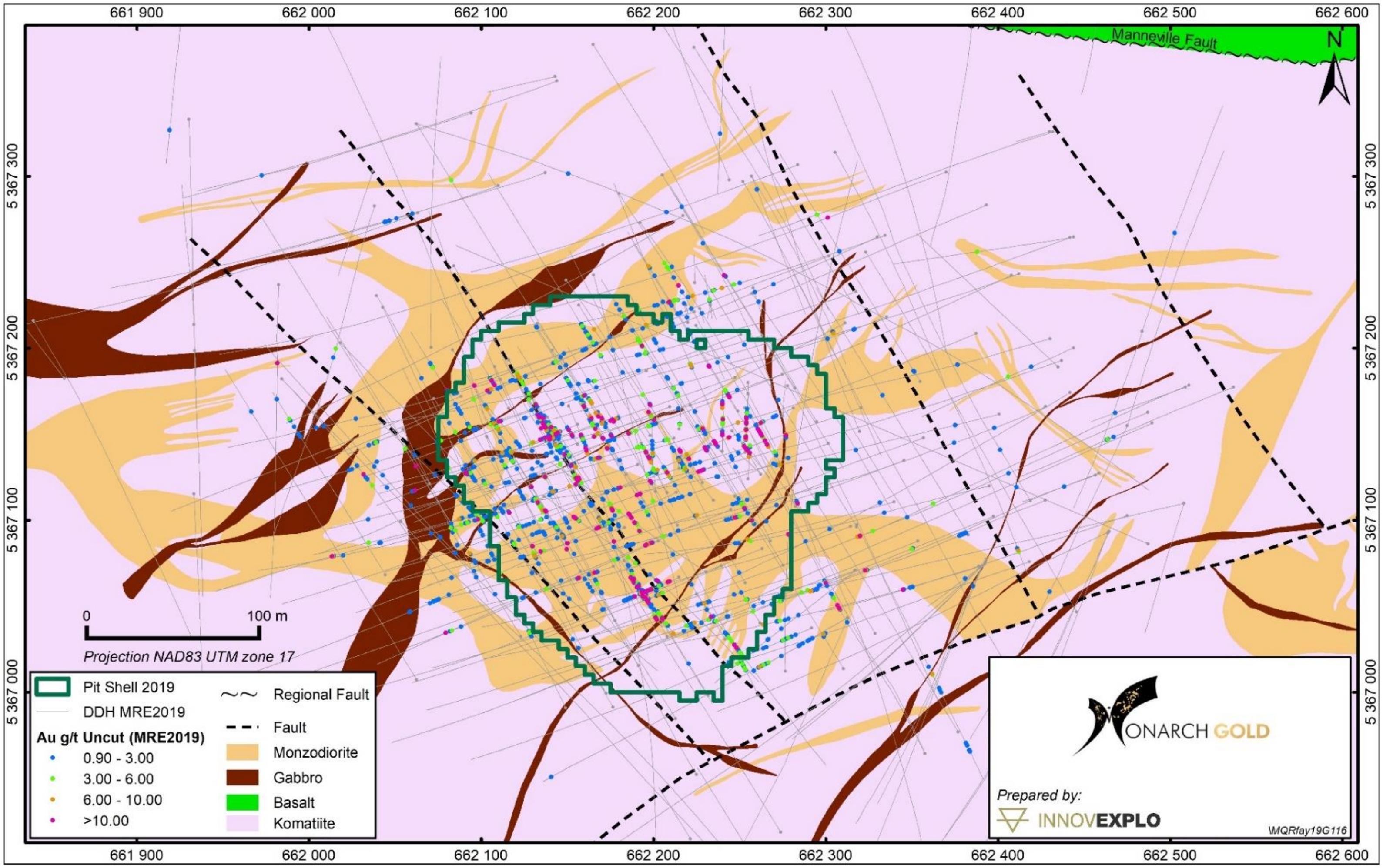


Figure 8.2 – Geology of the Fayolle deposit showing drill holes and assay results

9. EXPLORATION

The issuer did not conduct any exploration work since it acquired the Project. Previous exploration work programs are summarized in Item 6.

10. DRILLING

The issuer did not conduct any drilling since it acquired the Project. However, this item covers the most recent drilling program (the “2019 Program”) completed by Typhoon. The 2019 Program has been followed and completed under the direct supervision of Martin Demers, P.Geo. (OGQ No. 770) for Typhoon (Demers, 2019). Previous drilling programs on the Project are summarized in Item 6.

10.1 Drilling Methodology

The 2019 Program was performed by Hébert Drilling Inc. based in Amos, Québec. The drilling was conducted with NQ caliber (47.6 mm core diameter) using a crawler drill rig (Figure 10.1).

Collar locations were determined using surveyors from Corriveau J.L. & Associés. The locations of nine (9) collars were determined by mathematical triangulation based on surveyed collars using a chain. The casings were left in the ground to allow for hole re-entry and are adequately identified with markers (Figure 10.2).

Drills were lined up using a Brompton compass. The downhole dip and azimuth were surveyed using a DerviShot tool from DeviCore. A first survey was taken after completing the casing (3 to 12 m) and another at the bottom of the hole. For holes deeper than 30 m, a survey was taken at mid-distance from the first survey and the end of hole. The instrument was handled by the drilling contractors and the survey information was transcribed and provided in paper format to Typhoon geologists.

At the drill rig, the drill helpers placed the core into core boxes and marked off the 3-m drill runs using labeled wooden blocks.

Figure 10.1 – Hébert Drilling Inc. drill rig used for the 2019 drilling program (photo August 22, 2019)

Figure 10.2 – Drill hole casing on the Project (photo August 22, 2019)

10.2 Core Logging Procedure

The drill core was transported to a secured core shack facility on the Project site where the core was cleaned of drilling additives and muds, and metres were marked before collecting the data.

All data were recorded using GeoticLog software. Sample intervals and pertinent information on lithology, mineralization and alteration were all marked on the core.

Sample lengths typically range from 0.5 to 1.50 m. Once logged and labelled, the core of each selected interval was sawed in half using a typical table-feed circular rock saw. One half was placed in a numbered plastic bag with the corresponding ID tag, for shipment to the laboratory, and the other half returned to the core box as a witness (reference) sample. A tag bearing the sample number was left in the box at the end of each sampled interval. Each box was labelled with an aluminum tag displaying the hole number, box number and depth interval. An Excel spreadsheet serves as an inventory of the location of every box in the core storage area.

The witness drill cores are stored onsite either outside in core racks or in the Megadome structure for future reference. Numbered security tags were applied to laboratory shipments for chain-of-custody requirements. Samples were then shipped to the laboratory at Bourlamaque Assay Laboratories Ltd ("Bourlamaque") in Val-d'Or for analysis.

10.3 2019 Program

The 2019 Program was concentrated on the stripped area of the Project where gold mineralization has been documented at surface. The objective was to define the continuity of mineralization 30 m below the surface exposure with an average lateral drill spacing of 15 m.

Fourteen (14) holes were completed for a total of 583 m on a N-S section between section 662,200E and 662,275E (Figure 10.3). Table 10.1 summarizes the 2019 drilling program and Table 10.2 lists significant gold intercepts.

The following significant drilling intercepts from the 2019 Program, as presented in the Monarch press release of September 5, 2019, confirm the near-surface potential of the deposit:

- Hole FA-19-107, returned 50.94 g/t Au over 2.70 m, including 124.08 g/t Au over 1.00 m.
- Hole FA-19-103, located 25 m northeast of hole FA-19-107, returned 40.50 g/t Au over 4.86 m, including 132.01 g/t Au over 1.00 m.
- Hole FA-19-103 also returned an assay of 8.37 g/t Au over 6.10 m (from 8.90 to 15.00 m), including 30.72 g/t Au over 1.00 m. The hole intersected two other significant intervals as well, returning 17.23 g/t Au over 5.3 m (from 21.70 to 27.00 m), including 43.79 g/t Au over 1.55 m, and 11.03 g/t Au over 7.5 m (from 34.5 to 42.0 m), including 73.11 g/t Au over 0.56 m.

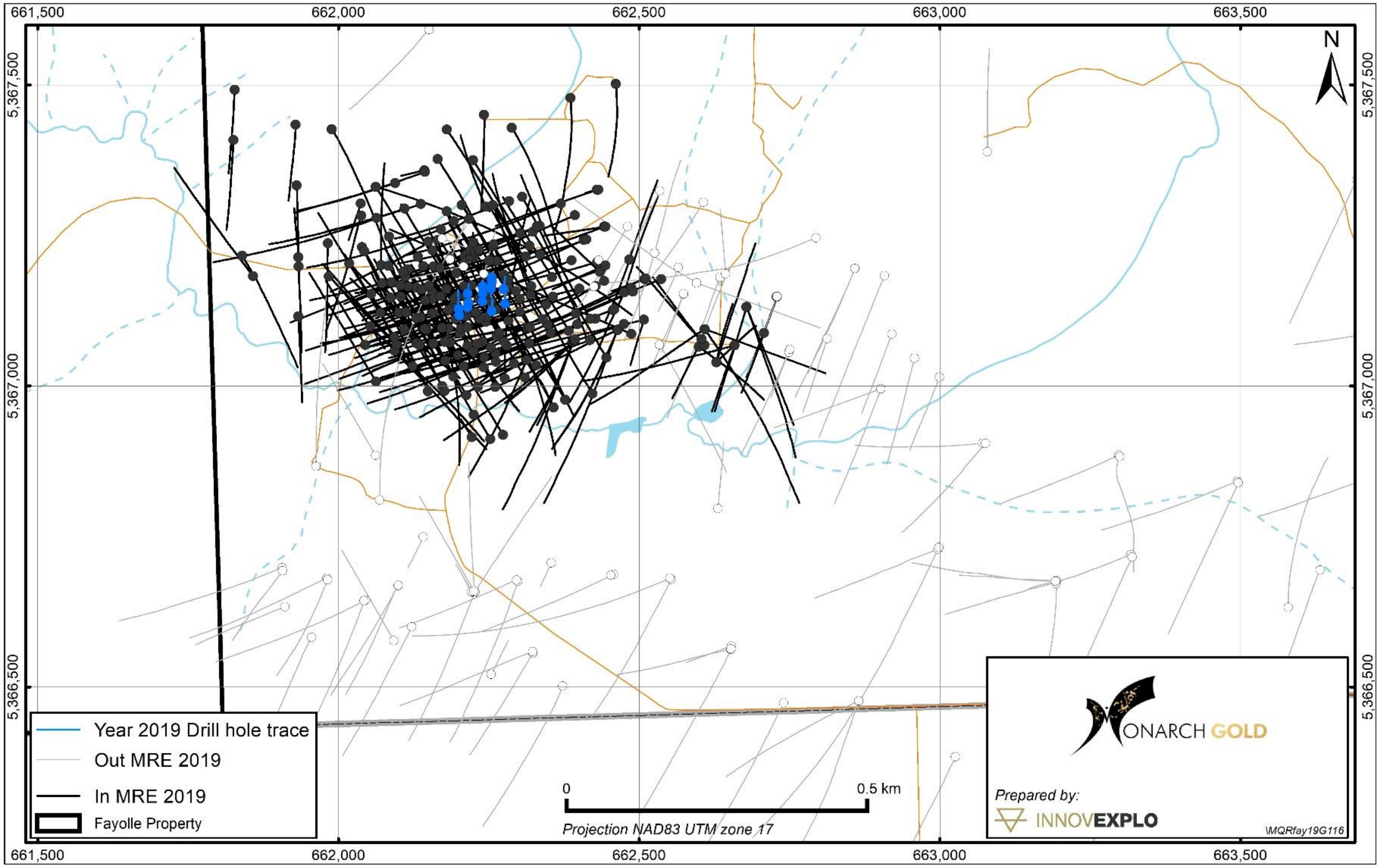


Figure 10.3 – Drill hole locations for the 2019 drilling program

Table 10.1 – Drill hole locations – 2019 drilling program

Hole ID	East	North	Elevation (m)	Azimut (°)	Dip (°)	EOH (m)
FA-19-101	662,255	5,367,180	300.8	182	-70	39
FA-19-102	662,255	5,367,173	300.4	184	-63	37
FA-19-103	662,254	5,367,161	297.8	181	-72	42
FA-19-104	662,253	5,367,135	296.9	180	-74	Abandoned
FA-19-105	662,215	5,367,153	297.9	360	-65	36
FA-19-106	662,216	5,367,137	297.4	352	-78	39
FA-19-107	662,240	5,367,140	297.2	359	-64	45
FA-19-108	662,240	5,367,165	297.6	359	-77	42
FA-19-109	662,240	5,367,153	296.1	3	-65	36
FA-19-110	662,215	5,367,130	296.8	347	-80	42
FA-19-111	662,201	5,367,117	292.8	360	-65	51
FA-19-112	662,200	5,367,128	294.3	360	-42	42
FA-19-113	662,277	5,367,136	295.4	359	-59	45
FA-19-114	662,275	5,367,161	299.7	360	-62	45
FA-19-115	662,255	5,367,124	296.3	360	-62	42

Table 10.2 – Selected assay results – 2019 Drilling Program

Hole number	Hole length (m)	From (m)	To (m)	Width* (m)	Grade Au (g/t)
FA-19-101	39	31.26	33.00	1.74	0.06
FA-19-102	37	18.00	21.00	2.00	1.33
FA-19-103	42	2.64	7.50	4.86	40.50
Including		5.00	6.00	1.00	132.01
FA-19-103		8.90	15.00	6.10	8.37
Including		14.00	15.00	1.00	30.72
FA-19-103		21.70	27.00	5.30	17.23
Including		24.00	25.55	1.55	43.79
FA-19-103		34.50	42.00	7.50	11.03
Including		35.84	36.40	0.56	73.11
FA-19-104	0	Abandoned			
FA-19-105	36	5.65	7.40	1.75	2.27
FA-19-106	39	14.85	20.10	5.25	9.70
Including		14.85	15.52	0.67	18.54
Including		17.82	19.00	1.18	16.24
FA-19-107	45	20.30	23.00	2.70	50.94

Hole number	Hole length (m)	From (m)	To (m)	Width* (m)	Grade Au (g/t)
Including		22.00	23.00	1.00	124.08
FA-19-108	45	0.00	3.05	3.05	5.08
FA-19-108		8.60	11.58	2.98	37.97
Including		8.60	10.05	1.45	43.73
FA-19-109	36	5.50	9.00	3.50	2.98
FA-19-109		11.00	15.00	4.00	15.79
Including		12.00	13.60	1.60	31.46
FA-19-110	42	7.80	8.50	0.70	0.15
FA-19-111	51	28.00	30.00	2.00	5.30
FA-19-112	42	12.50	15.80	3.30	4.19
FA-19-112		18.00	25.00	7.00	1.27
FA-19-113	45	22.00	27.15	5.15	7.09
FA-19-114	45	13.50	18.00	4.50	0.26
FA-19-115	42	26.60	29.60	3.00	4.25
FA-19-115		38.00	42.00	3.00	3.31
Total	586				

* The widths shown are core lengths.

11. SAMPLE PREPARATION, ANALYSES AND SECURITY

The issuer did not conduct any sampling or analyses since acquiring the Project.

From 2006 to the most recent program in 2019 (Carrier, 2007; Carrier et al., 2012; Poirier et al., 2013; Beauregard and Gaudreault, 2015; Demers, 2019), strict protocols have been implemented for the Project's sample preparation, analyses and security. Some adaptations were made to those protocols over the course of different drilling programs (such as the choice of the accredited laboratories for assaying, use of different CRM standards, number of samples to send to a second laboratory for validation, etc.).

All core boxes were labeled and properly stored. Sample tags were placed in the core box and properly attached to the box at the end of each sampled interval. All drill core is kept in good order in core facilities on the Project site (located on a private lot acquired by Monarch: Lot 21, Range IX, Cléricy Township).

According to InnovExplo, there is no indication of anything in the drilling, core handling and sampling procedures, or in the sampling methods, analyses and security, which could have had a negative impact on the reliability of the reported assay results.

12. DATA VERIFICATION

This item covers the data verification of the diamond drill hole database used for the 2019 MRE (the “Fayolle database”).

The last drilling program was completed in March 2019 by former owner (Typhoon). The issuer did not conduct any exploration or drilling programs since acquiring the Project.

The database close-out date for the 2019 MRE is July 15, 2019.

InnovExplo’s data verification included visits to the Project (including the drill sites, strippings, outcrops, and core logging facilities), as well as an independent review of the data for selected drill holes (surveyor certificates, assay certificates, QA/QC program and results, downhole surveys, lithologies, alteration, and structures).

12.1 Historical Work

The historical information used in this report was taken mainly from reports produced before the implementation of NI 43-101. Little information is available about sample preparation or analytical and security procedures for the historical work in the reviewed documents. However, InnovExplo assumes that the exploration activities conducted by earlier companies were in accordance with prevailing industry standards at the time. Since 2006, strict protocols and high industry standards have been implemented and followed for the Project’s sample preparation, analyses and security.

12.2 Fayolle Database

The Geotic-MS Access database for the Project was provided on July 15, 2019 and includes all drill holes completed up to the end of March 2019. It contains a total of 1,087 records (drill holes, channel samples, grabs and pits) from across the Project.

Of the 418 DDH in the database, 295 were used for the 2019 MRE. Excluded drill holes are either outside the 2019 MRE model (exploration holes on the Property) or failed the validation process (e.g., no surveys and/or assays, etc.).

During the site visit (August 22, 2019), Alain Carrier, P.Geo. (InnovExplo) conducted field checks of collar locations for historical and 2019 drill holes, and examined channels on the Fayolle stripping (Figure 12.1).

The Fayolle database was verified for consistency against original certificates (collar and downhole survey data, assay certificates, etc.). No significant discrepancies were found. Minor corrections were made, and some drill holes were excluded.

The final database is considered to be of good overall quality. InnovExplo considers the Monarch databases to be valid and reliable.

12.3 Assays

InnovExplo had access to the assay certificates for all historical and current holes in the Fayolle database. All assays were verified for drill holes from the latest (2019) drilling program. The assays recorded in the databases were compared to the original certificates from Laboratoire d’Analyse Bourlamaque Ltée (Val-d’Or). The laboratory results were sent to the issuer by e-mail. Monarch personnel then transferred the results electronically into the database, which allowed for immediate error detection and prevented any typing errors.

No errors or discrepancies were found. The final database is considered to be of good overall quality. InnovExplo considers the assay database to be valid and reliable.

12.4 Logging, Sampling and Assaying Procedures

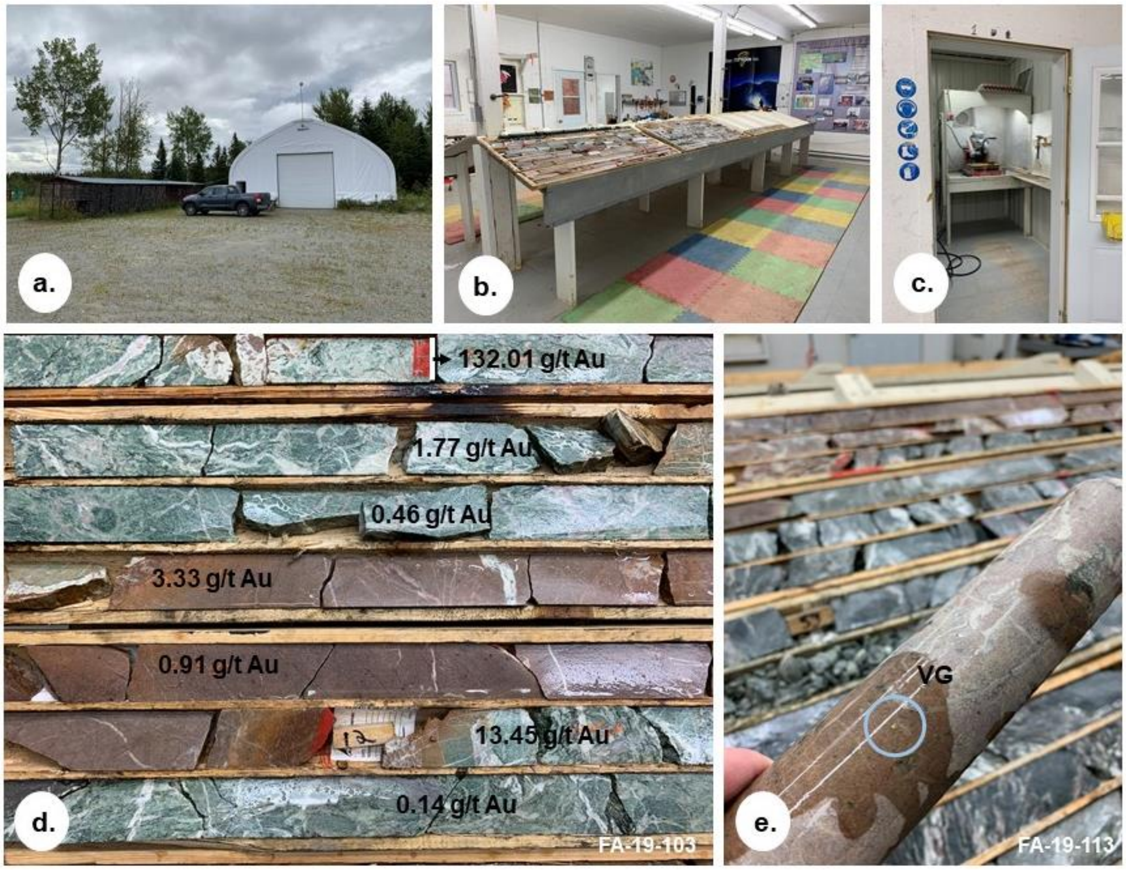
In July 2019, a discussion and review of the Project procedures with Martin Demers, P.Geo., a consultant for Typhoon, convinced InnovExplo that the logging, sampling and assaying procedures in place are adequate.

During the site visit (August 22, 2019), Alain Carrier, P.Geo. (InnovExplo) and Ronald Leber, P.Geo. (Monarch) also reviewed the Project's core logging and sampling facilities as well as several sections of mineralized core from the 2019 Program (Figure 12.2).

A review of mineralized intervals from drill holes FA-19-103, FA19-106, FA-19-107, FA-19-108, FA-19-109, FA-19-112, FA-19-113, and FA-19-115 was also done. The author compared the lithological, alteration, structural and mineralization descriptions in the drill core logs to the selected intervals and concluded that the information recorded in the logs was accurate and consistent with established procedures. Visual observations of the mineralization corresponded as expected to assay results.

a) Fayolle main stripping (exposure of Zone 3 gold mineralization) and drilling/channel sites; b) Historical drill hole casings on the main stripping area; c) Drill hole casing from the 2019 program (FA-19-105); d) Historical drill hole casing from the 2010 program (FA-10-07).

Figure 12.1 – Photographs from site visit: verification of drill holes and channels (August 22, 2019)



a) Fayolle's core logging and sampling facilities (Megadome structure) and outdoor core storage racks on the Property; b) Core logging facilities (inside the Megadome); c) One of three core sawing and sampling rooms (inside the Megadome); d) Review of core intervals from the 2019 drilling program: mineralized, carbonatized and brecciated komatiites (green) and massive mineralized and altered syenite intrusion (reddish) (drill hole FA-19-103); e) Review of core intervals from the 2019 program: massive mineralized and altered syenite intrusion (reddish) with visible gold (VG) hosted in massive syenite (drill hole FA-19-113).

Figure 12.2 – Photographs from site visit: verification of the 2019 drilling program procedures and review of selected core intervals (August 22, 2019)

12.5 Conclusion

Overall, InnovExplo's data verification demonstrates that the data, protocols and QAQC results for the Project are acceptable. InnovExplo considers the Fayolle database to be valid and of sufficient quality to be used for the 2019 MRE herein.

13. MINERAL PROCESSING AND METALLURGICAL TESTING

Metallurgical testing was carried out SGS Mineral Services (DiLauro and Dymov, 2012) on two (2) composites to evaluate the various process options for gold recovery: a komatiite composite with a head grade of 7.78 g/t Au ("Komatiite") and an intrusive composite with a head grade of 4.87 g/t Au ("Intrusive"). Mineralogical testing included SGS QEM-ARMS to provide bulk mineralogy information. Grindability testing consisted of Bond ball mill work index. Metallurgical testing included head assaying, whole ore cyanidation, gravity separation, gravity tailing cyanidation and gravity tailing flotation. Environmental testing included acid/base accounting and net acid generation testing.

Whole ore cyanidation testing (Table 13.1) reported gold recoveries ranging from 88% to 94% for the Komatiite composite. The Intrusive composite reported gold recoveries ranging from 85% to 96%. For both composites. finer grinding increased the Au recovery but also the cyanide (NaCN) consumption.

Table 13.1 – Whole ore cyanidation results (DiLauro and Dymov, 2012)

Sample	Test ID	Size P_{80} µm	Reagent Addition kg/t CN Feed		Reagent Cons. kg/t CN Feed		% Extraction Au			Residue g/t Au	Head (calc) g/t Au	Head (direct) g/t Au
			NaCN	CaO	NaCN	CaO	7h	24h	48h			
Komatiite	CN 7	141	0.80	0.68	0.16	0.68	73	86	87.9	0.81	6.65	7.78
Komatiite	CN 8	119	0.86	0.72	0.20	0.72	80	94	94.4	0.43	7.57	7.78
Komatiite	CN 9	67	0.82	0.75	0.19	0.75	79	92	93.6	0.45	6.96	7.78
Intrusive	CN 10	191	0.69	0.41	0.13	0.41	64	83	85.0	0.61	4.04	4.87
Intrusive	CN 11	103	0.88	0.47	0.17	0.46	73	94	94.6	0.25	4.93	4.87
Intrusive	CN 12	69	1.27	0.40	0.54	0.40	68	96	96.3	0.17	4.51	4.87

Note: All cyanidations were conducted at 40% solids, 0.5g/L NaCN, pH 10.5-11.0 and for 48 hours.

Gravity separation testing (Table 13.2) was carried at a target P80 size of 150 microns and showed results of Au recoveries of 27% for the Komatiite composite and 41% for the Intrusive composite.

Table 13.2 – Gravity separation results (DiLauro and Dymov, 2012)

Test ID	Sample	Tailing k80 (micron)	Conc. wt. (%)	Conc. Au (g/t)	Recovery Au (g/t)	Tailing Au* (g/t)	Head Grade Au Calc (g/t)	Head Grade Au Direct (g/t)
GV-1	Komatiite	149	0.042	4.281	27.3	4.82	6.62	7.78
GV-2	Intrusif	159	0.054	3.793	41.4	2.89	4.93	4.87

Note: Average of multiple gravity tailing assays

Gravity tailing cyanidation testing (Table 13.3) was done on the composites for three (3) grind sizes to investigate gold recovery when combining the recoveries from the gravity tests with those from the gravity tailing cyanidations. The Komatiite composite showed recoveries ranging from 91% to 96%, whereas recoveries for the Intrusive composite ranged from 80% to 94%. Higher recoveries were seen at the finer grinds: 80% for a P80 of 154 microns to 96% for a P80 of 67 microns. An increase was observed in the NaCN consumption. The combined gravity plus gravity tailing cyanidation gold recoveries for the Komatiite composite ranged from 93% to 97%, whereas those for the Intrusive composite ranged from 88% to 97%.

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Table 13.3 – Gravity tailing cyanidation results (DiLauro and Dymov, 2012)

Sample	Test ID	Size P_{80} µm	Reagent Addition kg/t CN Feed		Reagent Cons. kg/t CN Feed		% Extraction Au			Au Extraction Gravity + CN %	Residue g/t Au	Head (calc) g/t Au	Head (direct) g/t Au
			NaCN	CaO	NaCN	CaO	7h	24h	48h				
Komatiite	CN 1	154	0.82	0.72	0.16	0.72	79	88	90.6	93.2	0.47	4.94	4.82
Komatiite	CN 2	93	0.83	0.73	0.18	0.73	88	92	93.3	95.1	0.33	4.92	4.82
Komatiite	CN 3	69	1.21	0.65	0.51	0.65	90	95	96.4	97.4	0.18	4.91	4.82
Intrusive	CN 4	154	0.82	0.42	0.02	0.42	64	77	79.8	88.2	0.57	2.83	2.89
Intrusive	CN 5	103	1.13	0.39	0.28	0.39	73	88	89.5	93.8	0.31	2.94	2.89
Intrusive	CN 6	67	1.49	0.32	0.75	0.29	68	93	94.4	96.7	0.17	2.94	2.89

Note: All cyanidations were conducted at 40% solids, 0.5g/L NaCN, pH 10.5-11.0 and for 48 hours.

14. MINERAL RESOURCE ESTIMATE

The 2019 Mineral Resource Estimate herein (the "2019 MRE") was prepared by Alain Carrier, M.Sc., P.Geo., of InnovExplo Inc., a qualified and independent person as defined by NI 43-101.

The estimate was prepared using all available information, including new results from the 2012, 2014 and 2019 drilling programs and data from the 2017 LIDAR survey. The effective date of the MRE database is July 15, 2019.

The 2019 MRE includes three mineralized zones and a dilution envelope. Basic univariate statistics and geostatistical analyses were performed on datasets of individual raw gold assays and composites for each mineralized zone and the dilution envelope.

In the current resource statement, all blocks were classified in the Indicated resource category. The 2019 MRE was prepared for a potential scenario combining pit-constrained and underground resources.

The effective date of the 2019 MRE is August 30, 2019.

14.1 Methodology

The 2019 MRE covers a strike length of 1.15 km east-west, a width of 0.9 km, and extends down to a vertical depth of 0.7 km below surface.

The Project's resource block model was prepared using GEOVIA GEMS software v.6.8.2.2 ("GEMS"). GEMS was used for modelling, including the construction of the three (3) mineralized solids and the dilution envelope, and for the resource estimation consisting of 3D block modelling and interpolation using the Inverse Distance Squared ("ID2") method. Statistical studies and variography were done using Snowden Supervisor v.8.9 software ("Supervisor"). Capping and several validations were carried out in Microsoft Excel and Supervisor.

The main steps in the methodology were as follows:

- Compile and validate the diamond drill hole database used for mineral resource estimation;
- Update and validate topographic and bedrock surfaces, the geological model, and the interpretation of the mineralized zones based on validated historical and recent work (i.e., LIDAR survey, additional new information, results from the 2019 drilling program);
- Capping study on assay data per zone;
- Grade compositing;
- Geostatistics (spatial statistics);
- Grade interpolation;
- Validation of the grade interpolation;
- Resource classification;
- Assessment of resources with "reasonable prospects for economic extraction" and selection of appropriate cut-off grades for open pit and underground scenarios; and
- 2019 MRE statement following NI 43-101 and CIM guidelines.

14.2 Drill Hole Database

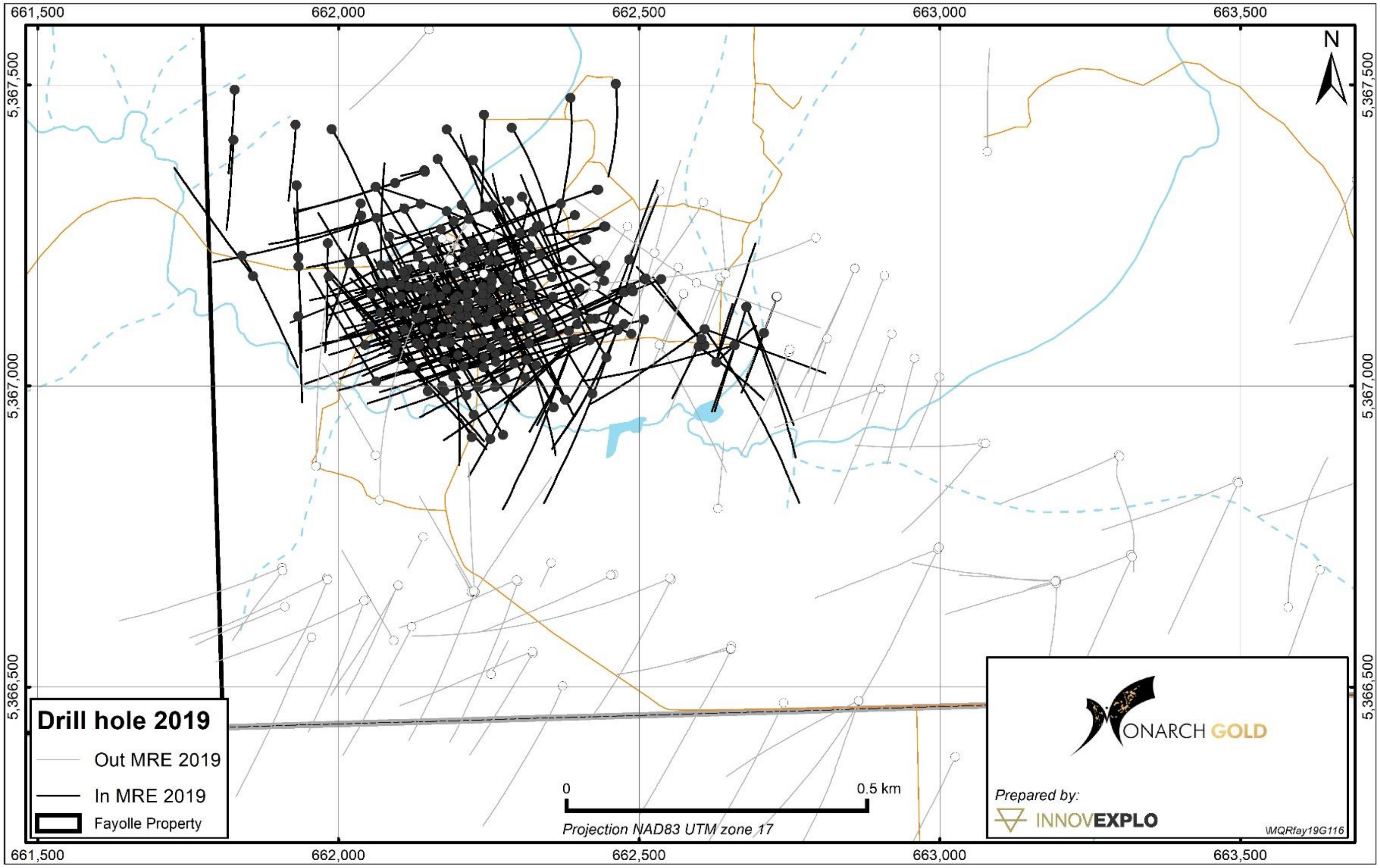
The Geotic-MS Access database for the Project was provided by the issuer on July 15, 2019. It includes all diamond drill holes completed as of March 31, 2019. It contains 1,087 records (drill holes, channel samples and pits) from across the Property.

Of the 418 drill holes in the database, 295 were used for the 2019 MRE. Excluded drill holes are either outside the 2019 MRE model (exploration drill holes on the Property) or failed the validation process (e.g., not surveyed or assayed). (Figure 14.1).

The database includes analytical gold assay results as well as lithological, alteration and structural descriptions taken from drill core logs.

The 295 holes retained for the estimate were generally drilled at a regular spacing of 20 m along two main perpendicular orientations, resulting in a very densely drilled grid area.

In addition to the basic tables of raw data, the database includes several tables of the calculated drill hole composites and wireframe solid intersections required for statistical evaluation and resource block modelling. The database contains a total of 60,310 analyses taken from 77,930.86 m of drilled core.



Black outlines are validated drill holes used to support the 2019 MRE. Other drill holes with grey outlines were not retained as they are either outside of the MRE model or failed the validation process (e.g., not surveyed, not assayed, etc.).

Figure 14.1 – Validated drill holes used for the 2019 MRE (surface plan view)

14.3 Geological Model

The 2019 geological model was updated by Alain Carrier, P.Geo., with the technical assistance of Martin Barrette of InnovExplo, based on previous MRE model (Carrier et al., 2012; Poirier et al., 2013) and considering all new and validated information (i.e., results of new holes from the 2012, 2014 and 2019 drilling programs and integration of the 2017 LIDAR survey).

The interpretation consists of three (3) mineralized zones (Zone 1, Zone 2 and Zone 3) and one (1) low-grade dilution envelope enclosing the three gold zones (Figure 14.2).

Mineralized zones are characterized by breccia facies at or close to the contact between ultramafic volcanics and intrusive units. The interpreted dilution envelope mimics the geometry of all three (3) mineralized zones and respects the structural geometry of the area.

For the 2019 MRE, modifications were made to original wireframe solids of the 2012 MRE. Originally, the wireframe solids of the model for the mineralized zones and dilution envelope were created by digitizing an interpretation onto plan views spaced 10 m apart, and then using tie-lines between plan views to complete the wireframes for each solid (Carrier et al., 2012). The mineralized zones were interpreted to the mid-distance between the last known mineralized occurrence and barren holes.

Two surfaces were created to define the topography and bedrock (Figure 14.3 and LIDAR-generated topography combined with a drone aerial photograph

Figure 14.4). The topography was created using data from a 2017 LIDAR survey (RME Geomatics, 2018). The bedrock surface was generated using casing depths, outcrop occurrences and the surveyed stripping area. The solids for the mineralized zones and dilution envelope were clipped to the bedrock surface.

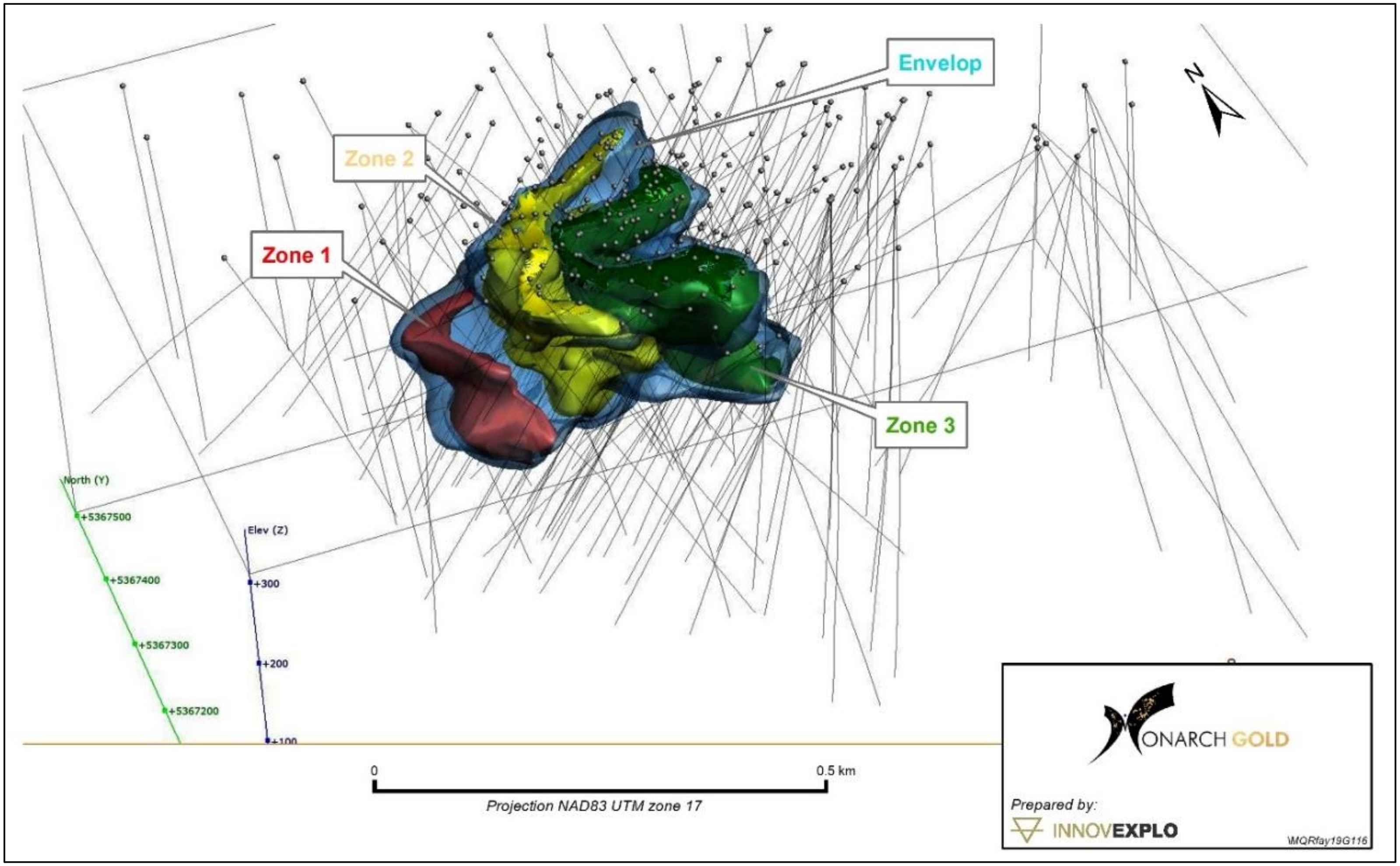


Figure 14.2 – Mineralized zones in the 2019 MRE (3D isometric view)

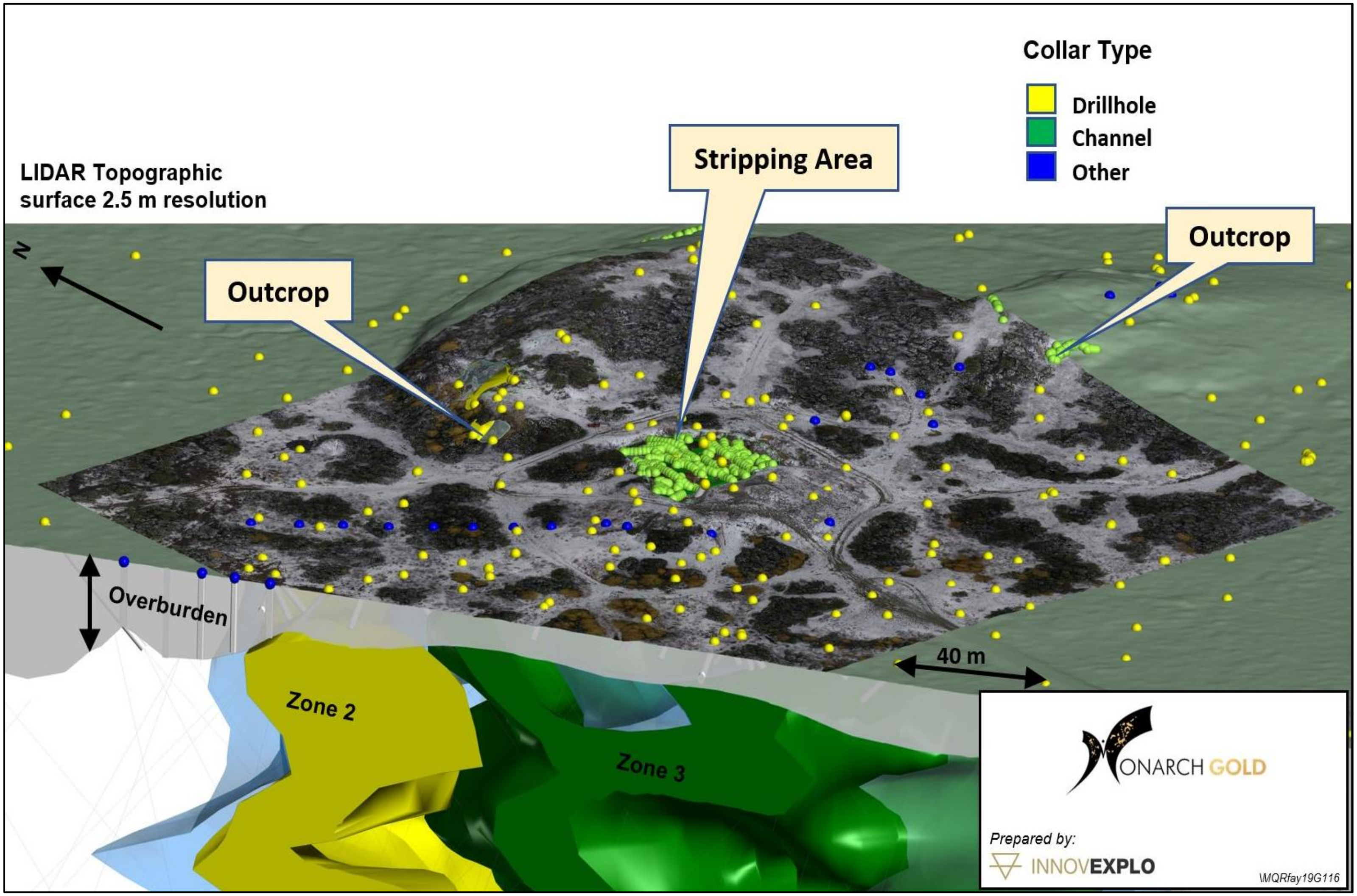
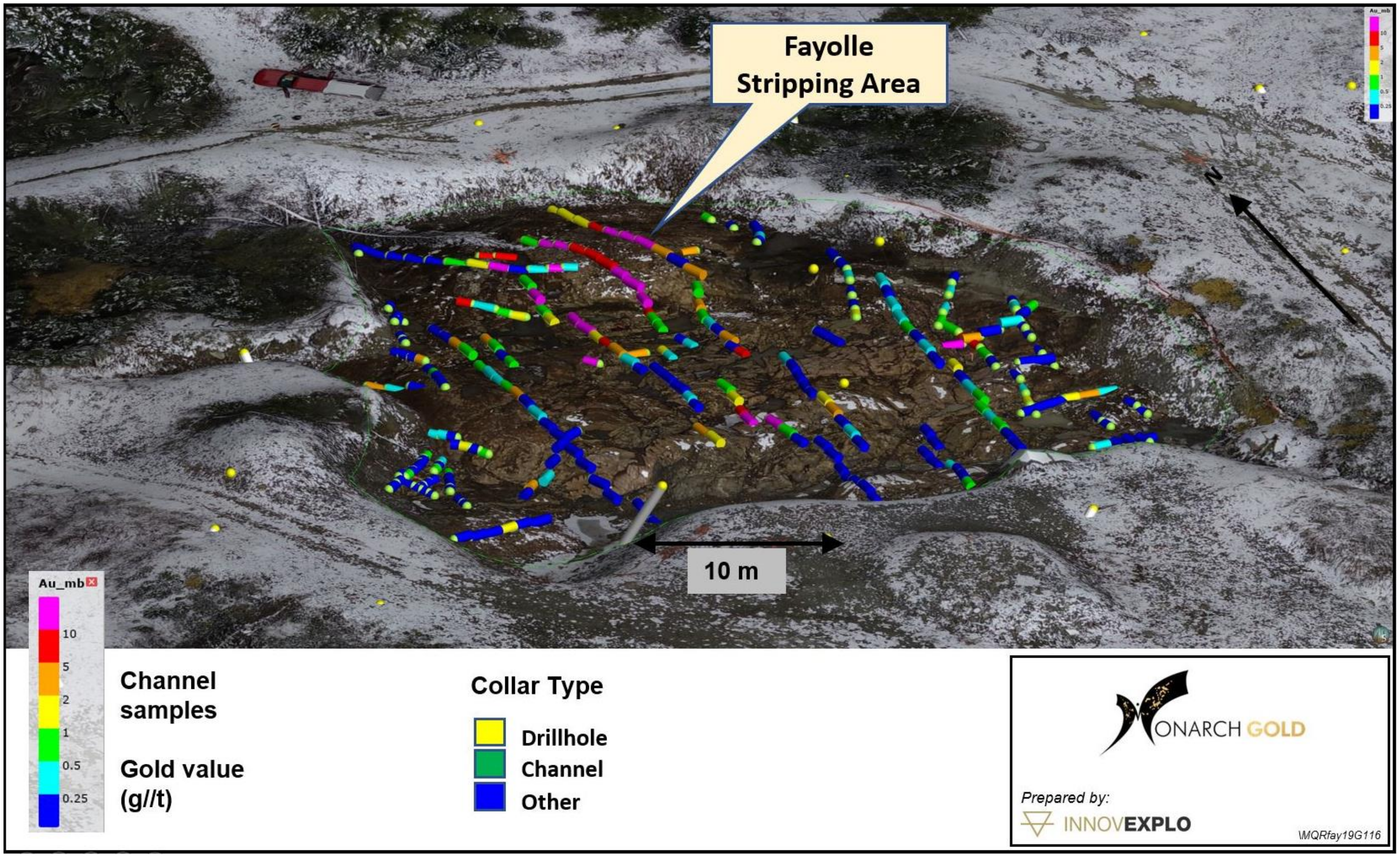


Figure 14.3 – 3D isometric view of the topographic surface and control points of the Fayolle Project



LIDAR-generated topography combined with a drone aerial photograph

Figure 14.4 –3D isometric view of the Fayolle stripping area

14.4 High-Grade Capping

Basic univariate statistics were completed on the overall assay data and on datasets grouped by individual zone. The capping on raw assays was a single top cap of 40 g/t Au for Zone 1 and Zone 2, 90 g/t Au for Zone 3, and 5 g/t Au for the dilution envelope. The different capping values were selected by combining the dataset analysis (COV, decile analysis, metal content) with the probability plot and log normal distribution of grades. Table 14.1 presents a summary of the statistical analysis for each zone. Figure 14.5 shows an example of graphs supporting the capping value for rock codes 303 (Zone 3).

Table 14.1 – Summary statistics for the DDH raw assays

FAYOLLE	Block code	Number of samples	Max Au (g/t)	Uncut Mean Au (g/t)	COV uncut	Capping Au (g/t)	Number of samples cut	Percent samples cut	Cut Mean Au (g/t)	COV cut	Metal loss factor (%)
Zone 1	301	404	20.20	0.53	3.26	40	0	0.00	0.53	3.26	0.00
Zone 2	302	4,245	1,285.00	1.23	17.48	40	8	0.19	0.72	3.84	33.54
Zone 3	303	3,607	448.15	2.55	6.11	90	11	0.30	2.16	4.02	16.29
Dilution envelope	350	10,792	36.50	0.11	5.70	5	11	0.10	0.10	2.78	10.81

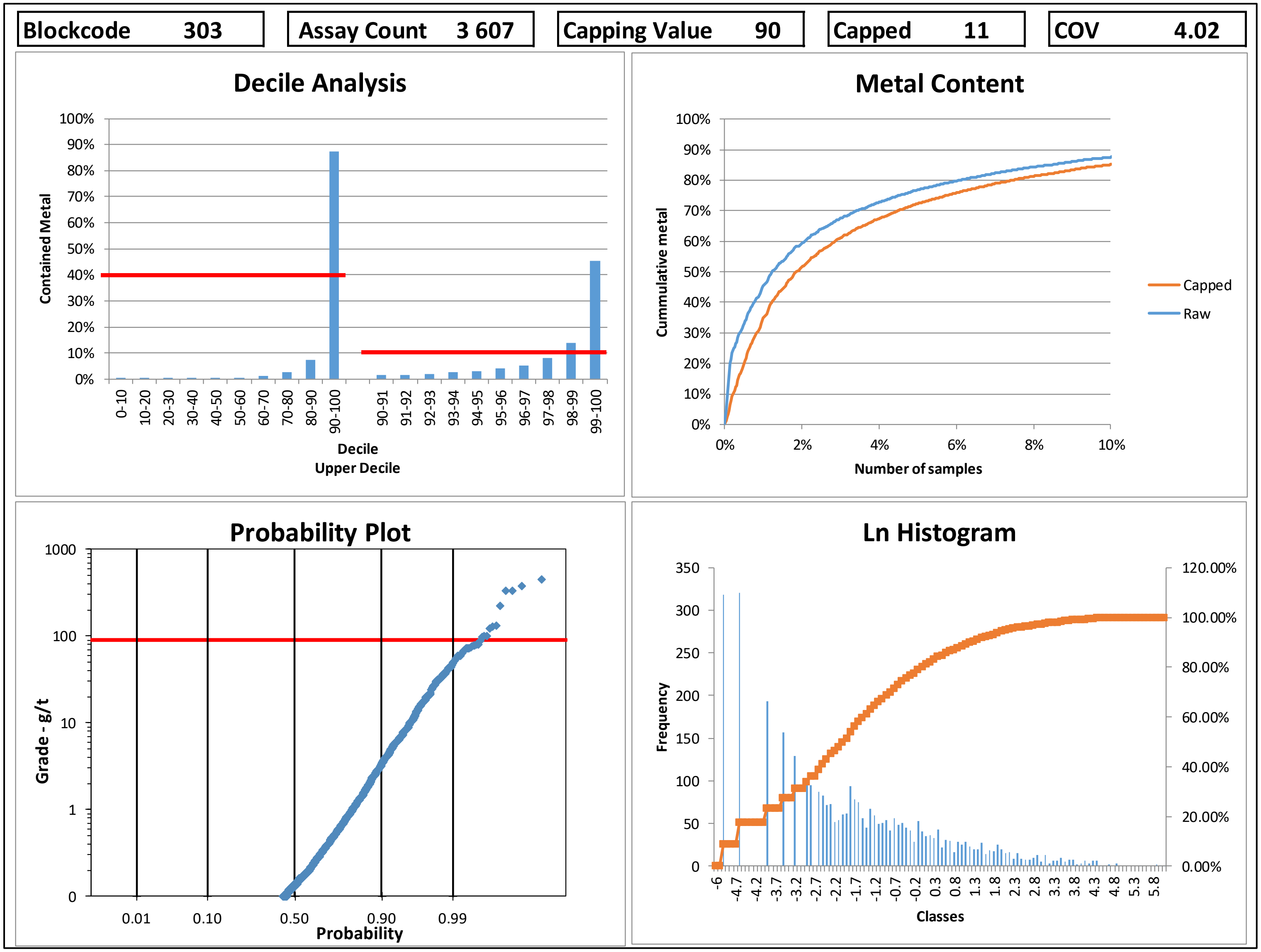


Figure 14.5 – Graphs supporting a capping value of 90 g/t Au for Zone 3

14.5 Compositing

In order to minimize any bias introduced by the variable sample lengths, the gold assays of the DDH data were composited within each of the mineralized veins. The thickness of the mineralized veins, the proposed block size, and the original sample length were taken into consideration for the selected composite length, which was set at 1 m. All intervals defining each of the mineralized zones were composited to 1-m equal lengths. A grade of 0.00 g/t Au was assigned to missing sample intervals. A total of 20,232 composites were generated within the mineralized zones or dilution envelope.

Table 14.2 summarizes the basics statistics for the DDH composites and Table 14.3 illustrates the effect of capping and compositing on the original COV of the raw data.

Table 14.2 – Summary statistics for the DDH composites

FAYOLLE	Block code	Number of Composites	Max Au Cut (g/t)	COV	Mean Au Cut (g/t)	SD (Au)
Zone 1	301	420	10.69	2.59	0.46	1.19
Zone 2	302	4299	40.00	3.47	0.59	2.04
Zone 3	303	3,633	90.00	3.63	2.12	7.69
Dilution envelope	350	11,880	5.00	2.71	0.08	0.23

Table 14.3 – Coefficient of variation summary for assays and composites

FAYOLLE	COV		
	Raw assays		After compositing
	Uncut	Cut	
Zone 1	3.26	3.26	2.59
Zone 2	17.48	3.84	3.47
Zone 3	6.11	4.02	3.63
Dilution envelope	5.70	2.78	2.71

14.6 Bulk Density

Bulk densities are used to calculate tonnages from volume estimates in the resource-grade block model.

In 2012, InnovExplo conducted a density study for the Project as part of a resource estimation mandate (Carrier et al., 2012). A total of 44 bulk specific gravity (“SG”) measurements were available in the area of interest. The specific gravity values retrieved from the database have been linked to the sampled lithologies in order to calculate the mean density of each major lithology type present within the deposit (Table 14.4). Due to the low number of density measurements, a weighted average density of 2.82 g/cm^3 was calculated based on the overall proportion of lithologies within the mineralized zones and was applied to the mineralized zones and dilution envelope.

Table 14.4 – Mean specific gravity for the principal lithologies

Lithology	Number of measurements	Mean Density (g/cm^3)
Breccia 1	15	2.929
Breccia 2	3	2.903
Komatiite	4	2.843
Monzodiorite	10	2.741
Porphyritic Diorite	3	2.743
Intermediate intrusion	3	2.743
Granodiorite	3	2.697
Tonalite	1	2.660

For the 2019 MRE, InnovExplo reviewed the 2012 density study and concludes that 2.82 g/cm^3 remains reasonable to use as bulk density value. Also, a density of 2.00 g/cm^3 was assigned to overburden.

14.7 Block Model

A block model was established to cover the entire drilled area and a wide buffer zone. The 2019 MRE block model corresponds to a multi-folder percent block model in GEMS and was not rotated. All blocks with more than 0.01% of their volume falling within a selected solid were assigned the corresponding solid block code in their respective folder. A percent block model was generated, reflecting the proportion of every block inside each solid: individual mineralized zones; dilution envelope; overburden; and waste.

The block model origins correspond to the lower left corner. Block dimensions reflect the sizes of mineralized zones and plausible mining methods.

Table 14.5 shows the properties of the block model.

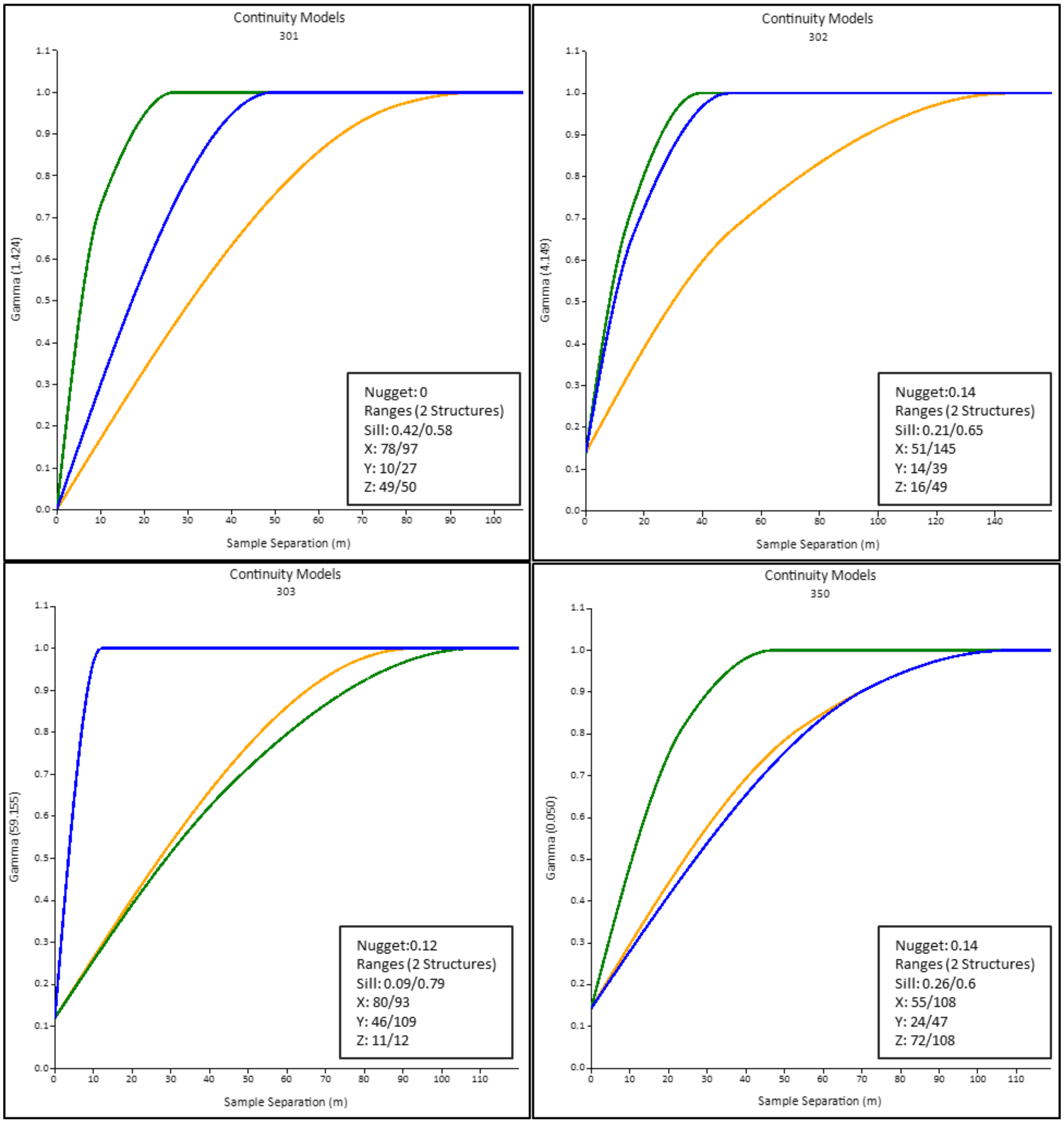
Table 14.5 – Block model property

Properties	X (Columns)	Y (Columns)	Z (Columns)
Number of blocks	230	170	140
Block size (m)	5	5	5
Block extent (m)	1,150	850	700

14.8 Variography and Search Ellipsoids

The 3D variography, carried out in Snowden Supervisor 8.11.0.3, yielded the best-fit model along an orientation that roughly corresponds to the strike and dip of the mineralized zones. This best-fit model was adjusted to fit the mean orientation (azimuth and dip) of each mineralized zone. Zone 2 and Zone 3 each have two (2) sub-sets that best fit the mean orientation of the complex geometry of their wireframes (Figure 14.2).

The ranges of the search ellipsoids are based on the ranges used in the 2012 MRE and were slightly adjusted to the new variography ranges results for the first interpolation pass of each zone.



Zone 1 (301), Zone 2 (302), Zone 3 (303) and dilution envelope (350).

Figure 14.6 – Continuity models for the Project search ellipsoids

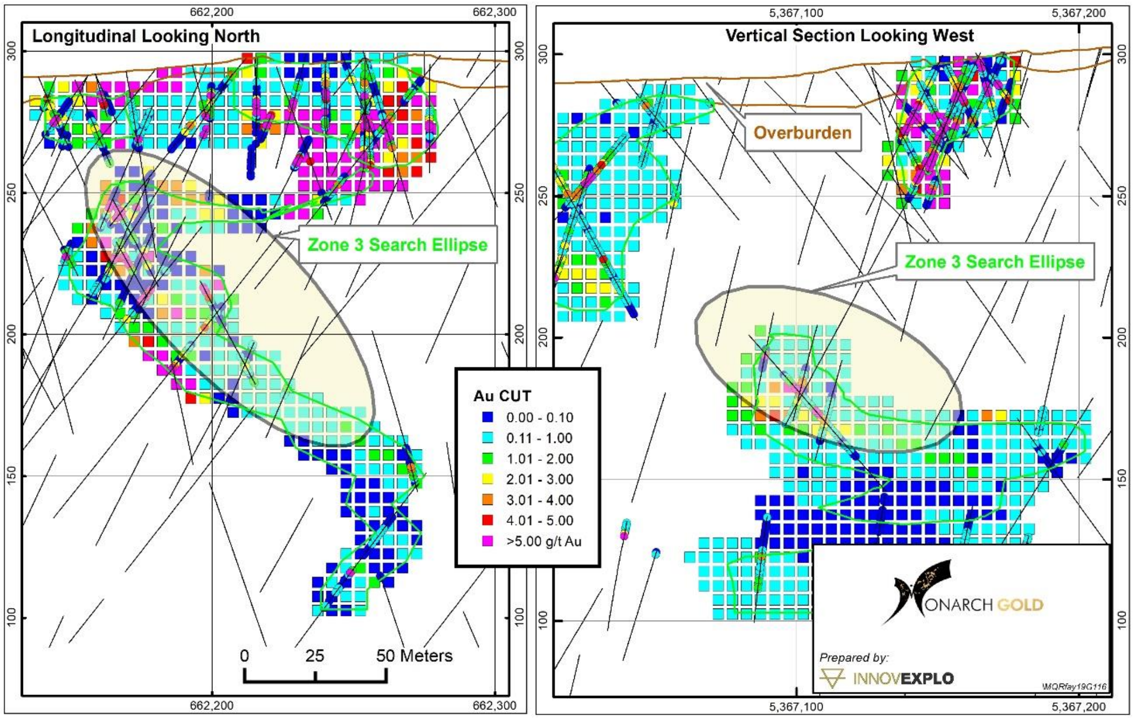


Figure 14.7 – Section view (longitudinal and vertical) of the search ellipsoid used for Zone 3 (303) for the first pass

14.9 Grade Interpolation

The interpolation profiles were customized for the three mineralized zones and the dilution envelope using hard boundaries.

The variography study provided the parameters used to interpolate the grade model using capped composites. The interpolation was run on a point area workspace extracted from the composite dataset in GEMS. A 1-pass search was used for the resource estimate.

The ID2 method was selected for the final resource estimate as it better honours the grade distribution for the deposit.

The parameters for the grade estimation are summarized in Table 14.6.

Zone	Pass	Min Cmp.	Max Cmp.	Max DDH	Min DDH	Orientation			Ranges		
						Az.	Dip	Az.	X (m)	Y (m)	Z (m)
Zone_1	1	2	12	6	1	355.00	55.00	165.00	100	40	40
Zone_2	1	2	12	6	1	281.05	54.47	165.31	100	30	50
Zone_2N	1	2	12	6	1	305.00	70.00	255.00	60	100	25
Zone_3	1	2	12	6	1	35.48	-46.08	321.83	60	100	25
Zone_3N	1	2	12	6	1	305.00	70.00	255.00	60	100	25
Dilution envelope	1	2	12	6	1	316.68	24.18	199.81	100	50	100

14.10 Block Model Validation

The block models were validated visually and statistically. The visual validation confirmed that the block model honours the drill hole composite data (Figure 14.8).

Nearest neighbor ("NN") model was produced to check the local bias in the model. The NN model matched well with the ID2 model and the differences in the high-grade composite areas are within acceptable limits. The trend and local variation of the estimated ID2 model was compared to the NN model and to the composites in the three (3) direction of the swath plots (North, East and Elevation) for blocks estimated during the first pass show similar trends in grades and an amount of smoothing expected (Figure 14.9).

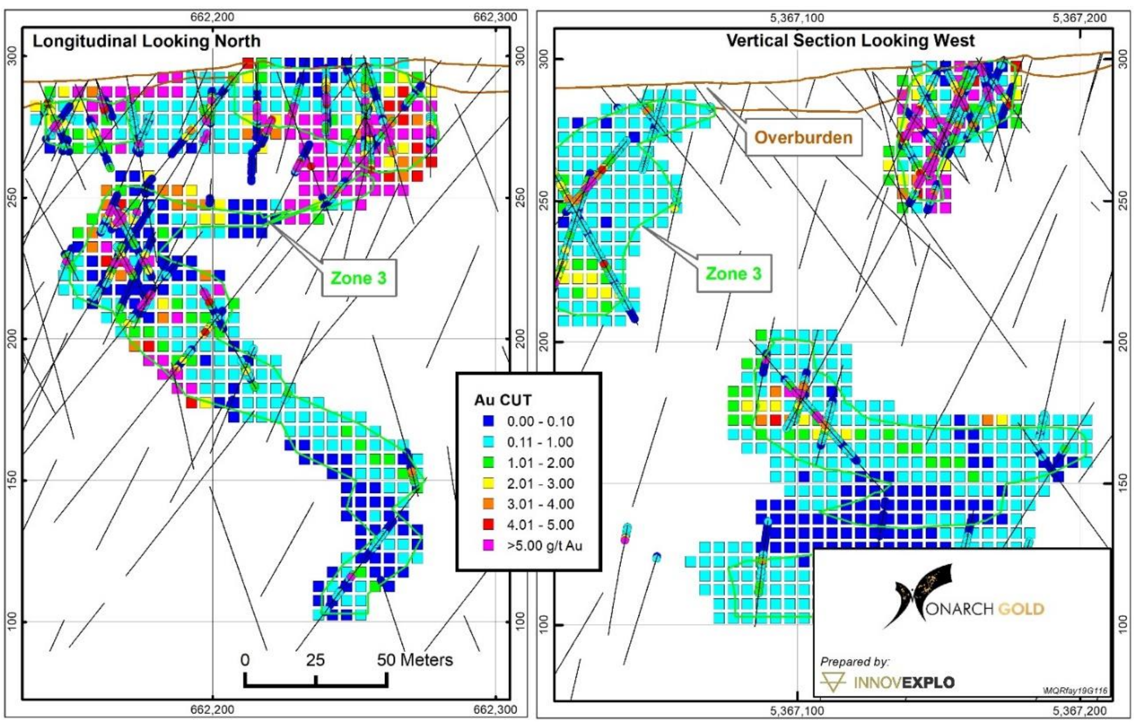


Figure 14.8 – Validation of the Zone 3 interpolation results, comparing drill hole composites and block model grade values

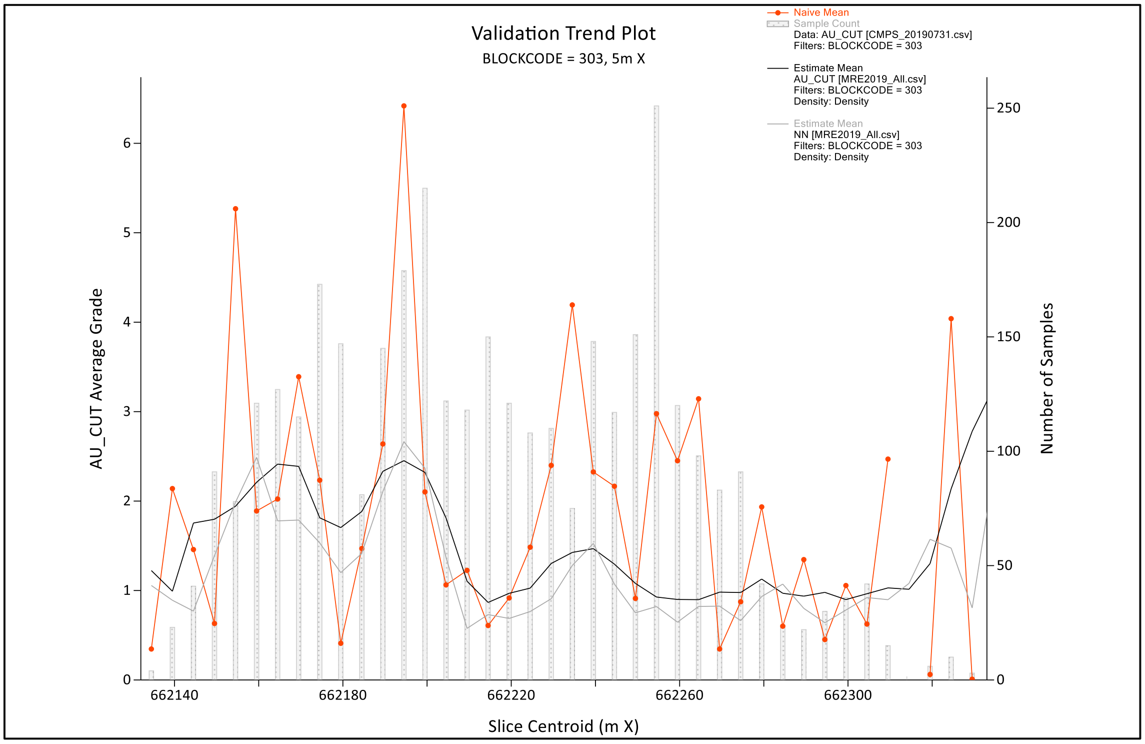


Figure 14.9 – Validation swath plot for Zone 3 (easting cross-section)

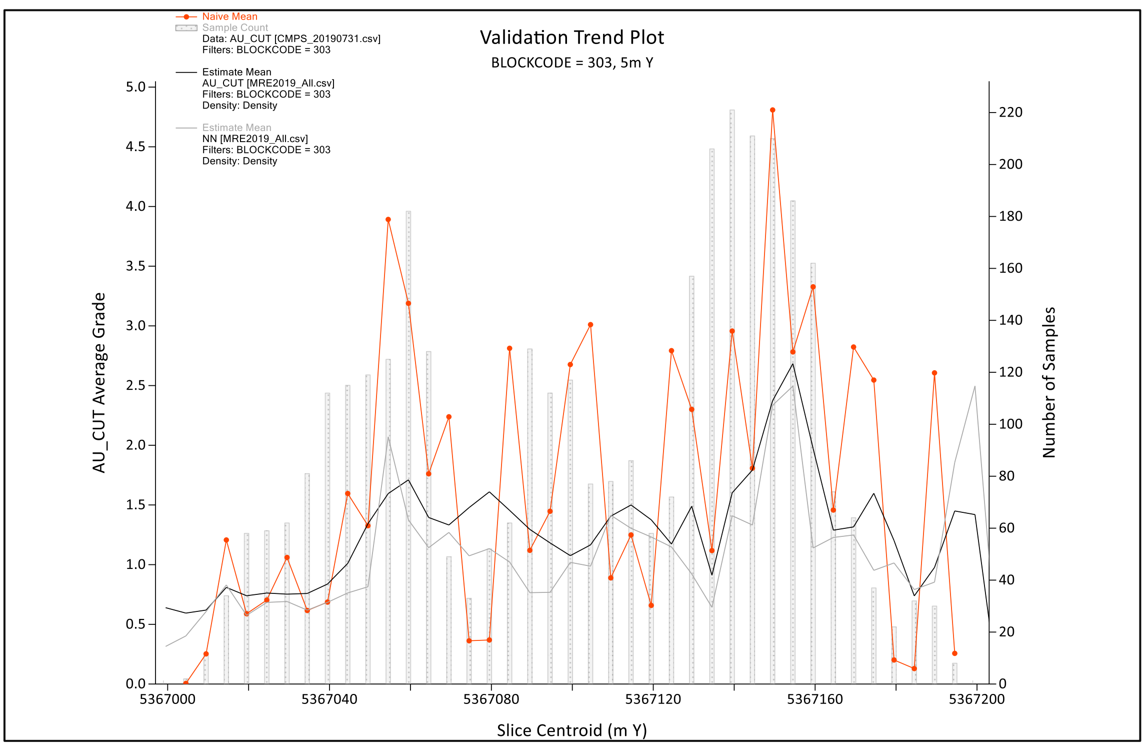


Figure 14.10 – Validation swath plot for Zone 3 (northing cross-section)

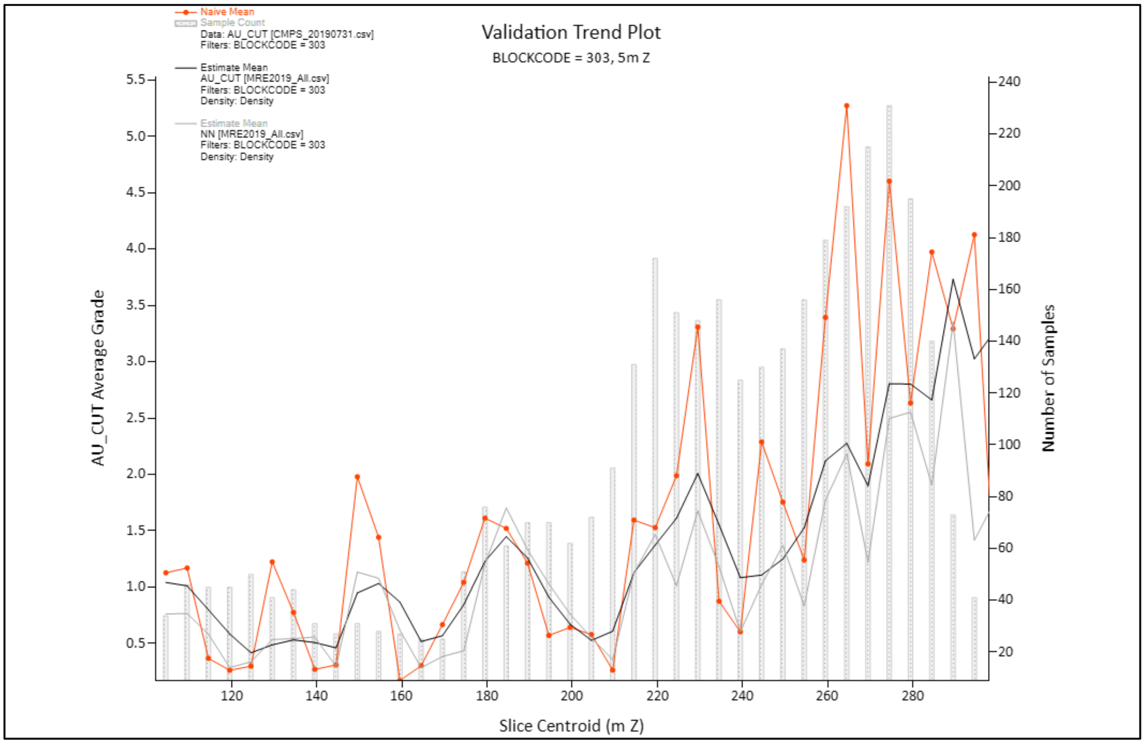


Figure 14.11 – Validation swath plot for Zone 3 (elevation cross-section)

14.11 Cut-off Parameters

The 2019 MRE combines open pit and underground potential scenarios, each of which was assigned a cut-off grade as described below.

Specific extraction methods are only used to establish reasonable cut-off grades for various portions of the deposit. No PEA, PFS or FS studies have been completed to support the economic viability or technical feasibility of exploiting any portion of the mineral resource by any particular mining method.

The cut-off grade must be re-evaluated in light of prevailing market conditions and other factors, such as gold price, exchange rate, mining method, related costs, etc.

14.11.1 In-pit cut-off grade

The final selected Whittle input parameters and the cut-off grade (CoG_{OP}) used for the in-pit resource estimation are defined inTable 14.7.

The Whittle pit shell optimization respects a 30-m buffer around lakes, rivers and streams, according to federal requirements.

Table 14.7 – Input parameters used for the in-pit cut-off grade estimation and Whittle pit shell

Parameters	Unit	Value
Gold price	CAD/oz	1,733
Sell cost	CAD/oz	5.00
Exchange rate	USD:CAD	1.33
Mining cost	CAD/t mined	4.94
Overburden removal cost	CAD/t excavated	3.95
G&A cost	CAD/t milled	4.00
Mill recovery	%	95
Mine recovery	%	100
Dilution	%	5
Processing Cost	CAD/t milled	27.00
Ore transportation	CAD/t milled	15.00
Slope angle in Overburden	degree	30°
Slope angle in bedrock	degree	45°
Calculated cut-off grade	**Au g/t**	**0.87**
Resource in-pit cut-off grade (rounded)	**Au g/t**	**0.9**

A cut-off grade of 0.87 g/t Au was calculated for the Whittle pit shell optimization using the following formula:

$$CoG_{OP} = \frac{(Processing\ +\ G\&A + Transportation)\ \times\ (1\ + Dilution)\ \times\ 31.1035}{((Gold\ Price - \ sell\ Cost) \times\ (Mill\ recovery)\ \times\ Mine\ Recovery)}$$

The result was rounded to 0.9 g/t Au for the official in-pit cut-off grade.

14.11.2 Underground cut-off grade

The estimation of the underground cut-off grade (CoG_{UG}) was based on the parameters presented inTable 14.8.

Table 14.8 – Input parameters used for the underground cut-off grade estimation

Parameters	Unit	Value
Gold price	CAD/oz	1733
Sell cost	CAD/oz	5.00
Exchange rate	USD:CAD	1.33
Mining cost	CAD/t mined	65.00
G&A cost	CAD/t milled	8.00
Mill recovery	%	95
Mine recovery	%	100
Processing cost	CAD/t milled	27.00
Ore transportation	CAD/t milled	15.00
Calculated cut-off grade	**Au g/t**	**2.18**
Resource underground cut-off grade (rounded)	**Au g/t**	**2.2**

A cut-off grade of 2.18 g/t Au was calculated using the following formula:

$$CoG_{UG} = \frac{(Mining + Processing + G\&A + Transportation) \times 31.1035}{(Gold\ price - Sell\ cost) \times Mill\ recovery \times Mine\ recovery}$$

The result was rounded to 2.2 g/t Au for the official underground cut-off grade. This cut-off was used to outline the underground mining option outside the Whittle optimized pit-shell.

14.12 Mineral Resource Classification

In the 2019 MRE, all blocks were classified as Indicated resources. Indicated corresponds to a densely drilled area (within 20 to 25 m spacing) interpolated in Pass 1 using a minimum of two (2) drill holes. Indicated blocks have an average closest composite distance of 10 m and a minimum of 10 composites were used during the interpolation.

The Figure 14.12 and Figure 14.13 show the results of those criteria for all blocks.

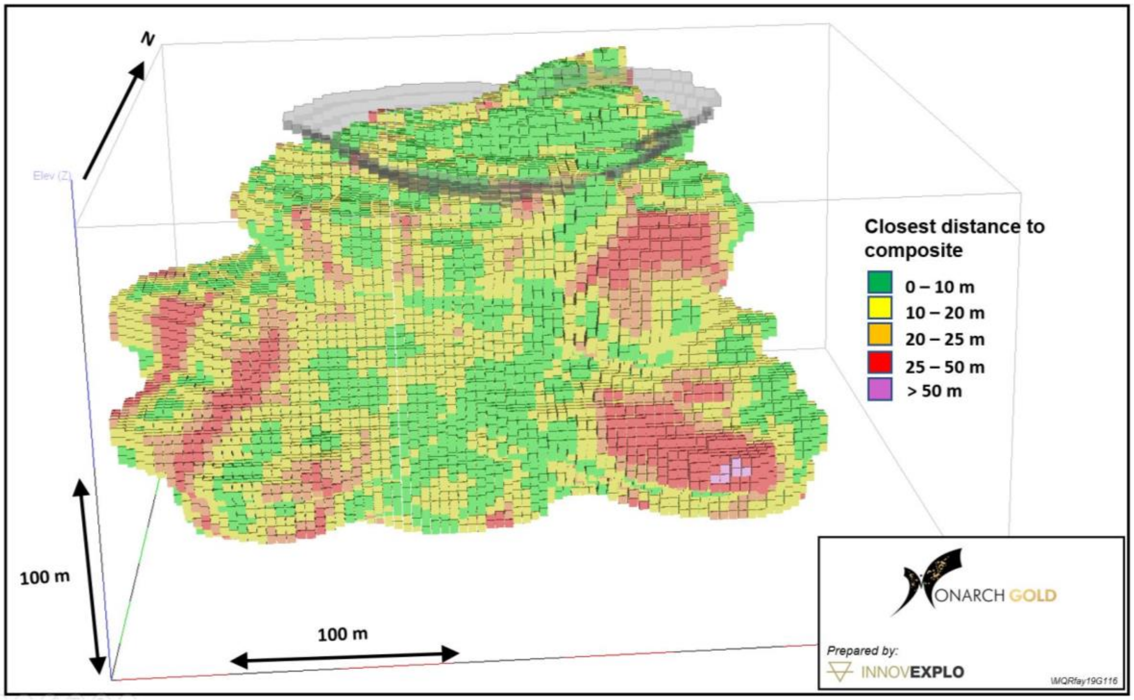


Figure 14.12 – Interpolate blocks coloured according to distance to closest composite (3D isometric view)

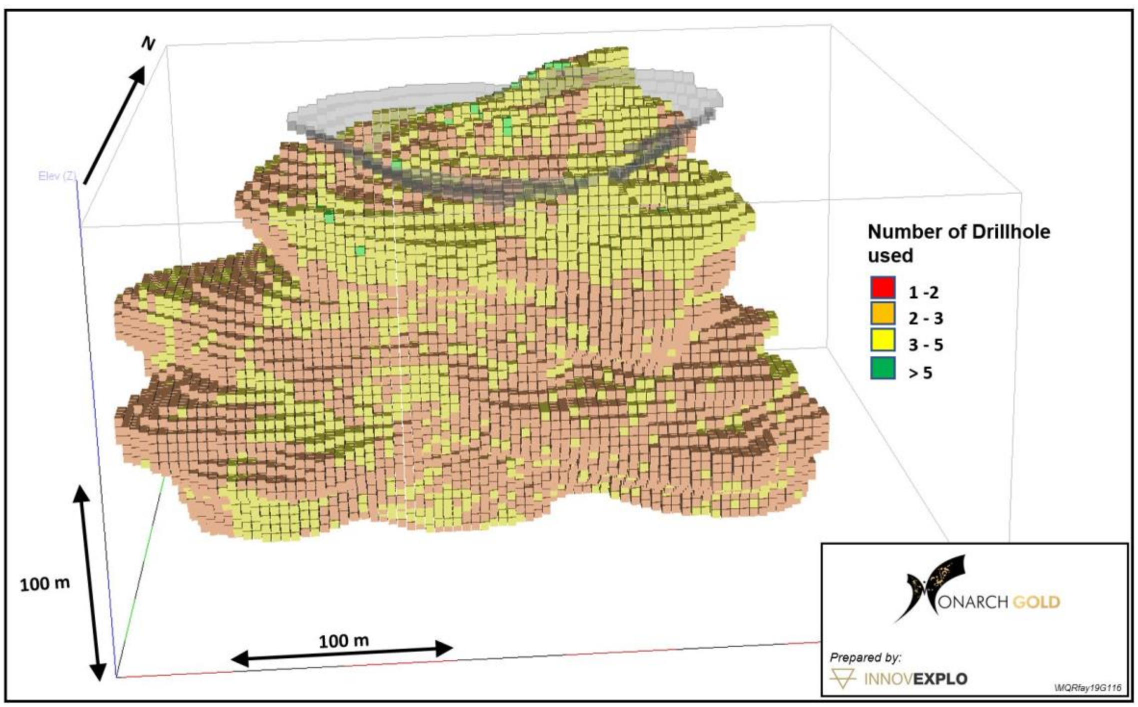


Figure 14.13 – Interpolate blocks coloured according to number of drill holes used (3D isometric view)

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14.13 Mineral Resource Estimate

InnovExplo is of the opinion that the current mineral resource estimate can be categorized as Indicated mineral resources based on data density, search ellipse criteria, drill hole density, and interpolation parameters. InnovExplo considers the 2019 MRE to be reliable and based on quality data and the most current geological understanding using parameters that follow CIM Definition Standards.

Table 14.9 displays the results of the 2019 MRE for the Project at the official 0.9 g/t Au cut-off grade for the in-pit resource, and at the official 2.2 g/t Au cut-off grade for the underground resource, outside the Whittle optimized pit-shell.

Table 14.10 and Table 14.11 show the cut-off grade sensitivity analysis of the 2019 MRE. The reader should be cautioned that the figures provided in Table 14.10 and Table 14.11 should not be interpreted as a mineral resource statement. The reported quantities and grade estimates at different cut-off grades are presented for the sole purpose of demonstrating the sensitivity of the resource model to the selection of a reporting cut-off grade.

Table 14.9 – 2019 Fayolle Project Mineral Resource Estimate for a combined pit-constrained and underground scenario at cut-off grades of 0.9 g/t Au (in-pit) and 2.2 g/t Au (underground)

FAYOLLE DEPOSIT	Indicated Resources		
	Tonnes	Grade Au (g/t)	Ounces Au
In-pit (> 0.9 g/t Au)	405,600	5.42	70,630
Underground (> 2.2 g/t Au)	300,800	4.17	40,380
TOTAL	706,400	4.89	111,010

Notes to the mineral resource table:

1. The independent and qualified person for the mineral resource estimate, as defined by NI 43-101, is Alain Carrier, M.Sc., P.Geo. (InnovExplo), and the effective date of the estimate is August 30, 2019.
2. These mineral resources are not mineral reserves as they do not have demonstrated economic viability.
3. The mineral resource estimate is classified as Indicated Resources and follows the 2014 CIM Definition Standards.
4. Results are presented in situ and undiluted and are considered to have reasonable prospects for economic extraction.
5. The estimate encompasses three (3) mineralized zones and one (1) dilution envelope with a minimum true thickness of 2.5 m using the grade of the adjacent material when assayed or a value of zero when not assayed.
6. High-grade capping of 40 g/t Au (Zones 1 and 2), 90 g/t Au (Zone 3) and 5 g/t Au (dilution envelope) were applied to assay grades prior to compositing (over 1.5 m). Interpolation was done using an ID2 interpolation method based on a block size of 5 m x 5 m x 5 m, with bulk density values of 2.82 g/cm3 applied to rocks and 2.0 g/cm3 applied to overburden.
7. All blocks were classified as Indicated resources. The Indicated category corresponds to a densely drilled area (20 to 25 m spacing) interpolated in Pass 1 using a minimum of 2 drill holes.
8. The estimate is reported for a potential scenario combining pit-constrained and underground resources at cut-off grades of 0.9 g/t Au (in-pit) and 2.2 g/t Au (underground). The cut-off grades were calculated using a gold price of USD1,300/oz, a CAD:USD exchange rate of 1.33, and the following parameters (CAD): (a) Pit-constrained scenario: mining cost $4.94/t; processing cost $27.00/t; G&A $4.00/t; and pit slopes of 45° (rock) and 30° (overburden) during Whittle optimization; (b) Underground scenario: mining cost $65.00/t; processing cost $27.00/t; and G&A $8.00/t. The cut-off grades should be re-evaluated in light of future prevailing market conditions (metal prices, exchange rate, mining cost, etc.).
9. The number of metric tons was rounded to the nearest hundred and the metal contents are presented in troy ounces (tonne x grade / 31.10348) rounded to the nearest tenth.
10. InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political or marketing issues, or any other relevant issue not reported in this Technical Report that could materially affect the mineral resource estimate.

Table 14.10 – Cut-off grade sensitivity analysis of the Indicated Resources for the pit-constrained portion

Cut-off grade	Indicated Resources		
	Tonnes	Grade Au (g/t)	Ounces Au
> 0.6 g/t Au	460,500	4.86	71,920
> 0.7 g/t Au	436,900	5.09	71,420
> 0.8 g/t Au	420,000	5.26	71,020
> 0.9 g/t Au	**405,600**	**5.42**	**70,630**
> 1.0 g/t Au	389,700	5.60	70,140
> 1.5 g/t Au	334,200	6.32	67,910

Table 14.11 – Cut-off grade sensitivity analysis of the Indicated Resources for the underground portion

Cut-off grade	Indicated Resources		
	Tonnes	Grade Au (g/t)	Ounces Au
> 2.0 g/t Au	347,600	3.90	43,530
> 2.2 g/t Au	**300,800**	**4.17**	**40,380**
> 2.5 g/t Au	246,400	4.58	36,290
> 3.0 g/t Au	174,100	5.36	30,000
> 4.0 g/t Au	105,200	6.62	22,400
> 5.0 g/t Au	70,800	7.67	17,480

15. MINERAL RESERVE ESTIMATES

Not applicable at the current stage of the Project.

16. MINING METHODS

Not applicable at the current stage of the Project.

17. RECOVERY METHOD

Not applicable at the current stage of the Project.

18. PROJECT INFRASTRUCTURE

Not applicable at the current stage of the Project.

19. MARKET STUDIES AND CONTRACTS

Not applicable at the current stage of the Project.

20. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Not applicable at the current stage of the Project.

21. CAPITAL AND OPERATING COSTS

Not applicable at the current stage of the Project.

22. ECONOMIC ANALYSIS

Not applicable at the current stage of the Project.

23. ADJACENT PROPERTIES

All information on properties adjacent to the Property was obtained from the public domain and have not been verified by InnovExplo. The nearby occurrences are not necessarily indicative that the Property hosts similar types of mineralization.

23.1 Victoria West Property

Globex Mining Enterprises owns the Victoria West Property adjacent to the east end of the Fayolle Property (www.globexmining.com; Figure 23.1).

The Victoria gold showing is the only significantly mineralized and altered area on the property to date. Historical drilling yielded 8.16 g/t Au over 0.42 m in a diamond drill hole from 1949 (Québec Government SIGEOM database). The showing is characterized by iron carbonates and fuchsite cut by quartz-tourmaline veins. The rocks are foliated and sheared at N280° to N300°. Mineralization occurs in mafic flows in the form of lenses within iron carbonate- and fuchsite-altered komatiites. The flows are foliated at N250° to N280° with a steep dip to the north. Numerous quartz-carbonate veins are present in the basalts and altered komatiites. They vary from several millimetres to many metres in width. Fine-grained pyrite and traces of chalcopyrite are often present in quantities up to 3%.

23.2 Dunn Property

Midland Exploration owns the Dunn Property located immediately east of the Victoria West Property (Figure 23.1). The geological setting of the Dunn Property is similar to the South Barnat deposit on Osisko's Canadian Malartic Property; i.e., a faulted juxtaposition of clastic sediments and ultramafic units, intruded by a porphyry dyke swarm. The property covers the PDMFZ over a strike length of more than 8 km, along a structural imbrication zone involving the Manneville North and South faults, and the Aiguebelle and La Pause faults. This property has the potential for orogenic gold mineralization.

The Orco-Tranché showing is a trench, excavated in 1991, that crosses a carbonate felsic dyke and a quartz vein less than 1 m thick (Turcotte, D. 1991). The following values were obtained on the showing: 1,410 ppb Au over 1.40 m (sample 5673, trench 35-2; Turcotte, 1991) and 964 ppb Au over 0.80 m (sample 5674, trench 35-2; Turcotte, 1991). The Dean-McDermott showing is an outcrop discovered around 1924 by prospecting. This showing consists of several quartz veins parallel to schistosity. The best results are 8.56 g/t Au over 1.20 m (drill hole EB-92-03); 10.56 g/t Au over 1.48 m (drill hole EB-92-01); 39.25 g/t Au over 1.79 m (drill hole EB-92-02); and 12.47 g/t Au over 0.88 m (drill hole EB-92-04); (GM 512898, Lefebvre, 1992).

23.3 Aiguebelle-Goldfield Property

Typhoon owns the Aiguebelle-Goldfield Property located immediately west of the Fayolle Property (www.typhoonexploration.com; Figure 23.1). Typhoon acquired a 51% interest in the Aiguebelle-Goldfields Property following its completion of the required work required and after fulfilling its contractual obligations towards Agnico-Eagle Mines Ltd.

In 1946, Aiguebelle-Goldfields Ltd drilled nine (9) holes leading to the discovery of three showings. The most important remains the Aiguebelle-Goldfields showing where an intersection of 4.87 g/t Au over 12.53 m, including 7.09 g/t Au over 6.10 m, was obtained. Gold is mainly associated with small dykes of syenite. These dykes are hematized, silicified, chloritized and display carbonatization. Typhoon drilled the Aiguebelle-Goldfields showing, confirming the presence of mineralization as well as its lateral continuity. The auriferous drill hole sections demonstrate that the mineralized zone is present at depths between 50 and 100 m below surface, with an east-west trend and dipping 60° to 65° to the south (parallel to the lithological units). The true thickness ranges from 2 to 10 m.

The observed gold mineralization is mainly concentrated in felsic to intermediate intrusions (syenitic appearance), generally massive, aphanitic and slightly altered, and containing finely disseminated pyrite veins and veinlets of quartz-carbonate-albite. A second gold mineralized zone was intersected 150 m below the surface and approximately 150 m north of the main zone (hole AIG-06-04). This zone shows the same characteristics as the main zone and has thus far been intersected by two holes with gold values better than 1.0 g/t Au over 1.5 m.

23.4 Destorbelle Property

The Destorbelle Property is owned 50% by Typhoon and 50% by Exploration Diamond Frank. The property is located immediately west of the Aiguebelle-Goldfield Property (www.typhoonexploration.com; Figure 23.1).

The Destorbelle showing (8.20 g/t Au over 6.20 m) is located within a sequence of steeply dipping ultramafic volcanic rocks, weakly to moderately sheared and deformed. The mineralized zone is spatially associated with brecciated and altered ultramafic rock and a graphitic tectonic breccia. Breccia horizons are oriented E-W to WNW-ESE and dips are steep to the S or SW.

23.5 Deltador Property

Britannica Resources owns the Deltador Property located immediately southwest of the Fayolle Property (www.brrgold.com; Figure 23.1). The property lies at the west end of the major La Pause anticline. The main rock types are metasedimentary and metavolcanic units with lesser syenite, ultramafic to felsic intrusions, and Proterozoic diabase dykes. All units have E to ESE orientations with the exception of the crosscutting diabase dykes and the syenite intrusion. The southeast leg of the major SE-trending PDMFZ transects the property, dividing it into two distinct domains: volcanic rocks of the Malartic Group to the north and sedimentary rocks of the Kewagama Group to the south. Several other faults also occur on the property, mostly subparallel to this segment of the PDMFZ, although some cut across the general trend. Rocks on the property generally reached greenschist facies. The property is at an early stage of exploration.

23.6 Aiguebelle-Stellar Property

Stelmine Canada Ltd owns the Aiguebelle-Stellar Property located immediately north of the Aiguebelle-Goldfield Property (www.stelmine.com; Figure 23.1). The property hosts the Hard Rock gold showing, which was discovered in 1946. Gold mineralization is mainly concentrated in basalt belonging to the Kinojevis Group and is described as being disseminated in quartz veins.

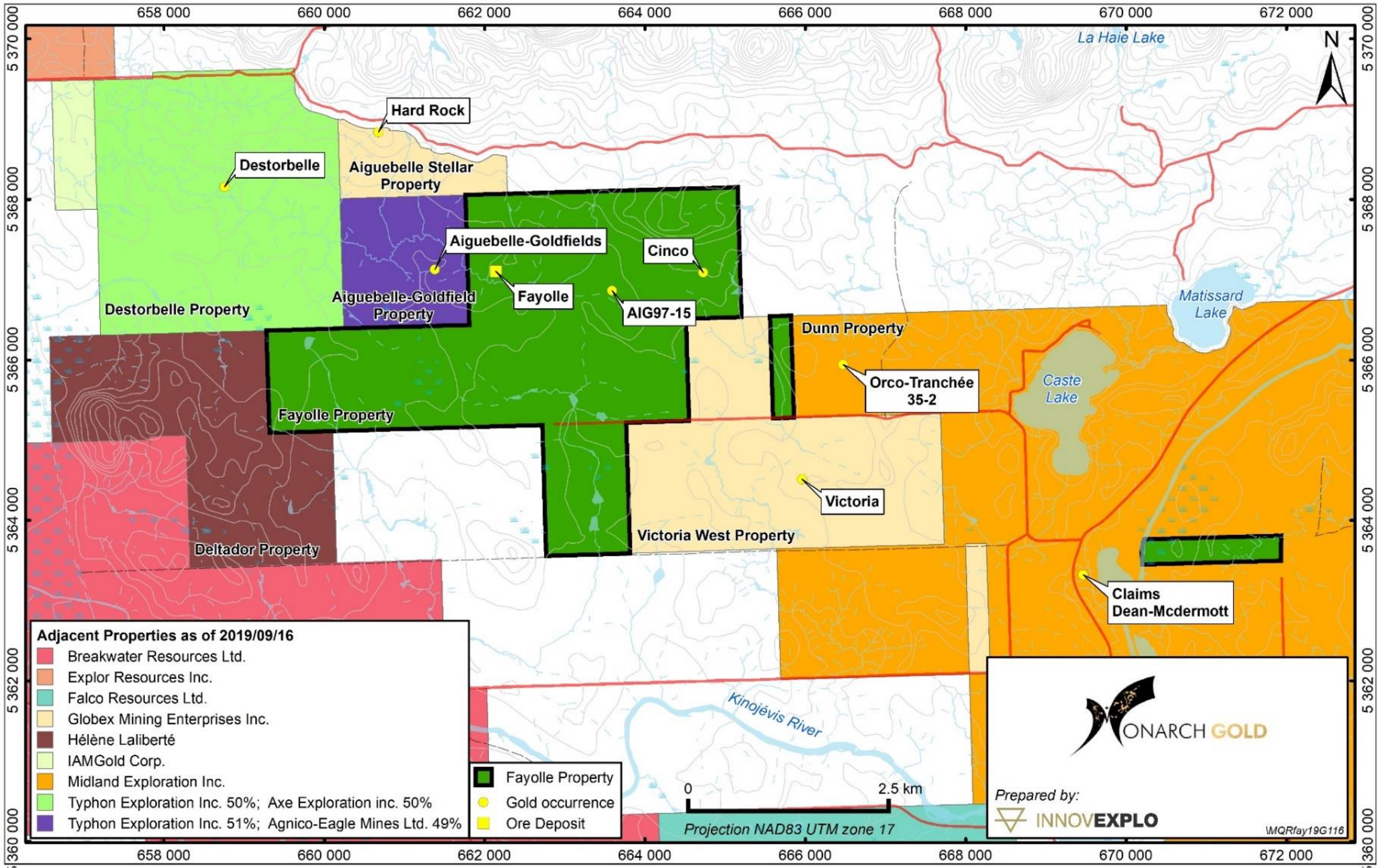

Figure 23.1 – Adjacent properties to the Fayolle Property

24. OTHER RELEVANT DATA AND INFORMATION

Not applicable at the current stage of the Project.

25. INTERPRETATION AND CONCLUSIONS

The objective of InnovExplo's mandate was to prepare a mineral resource estimate for the Project (the “2019 MRE”) and a supporting Technical Report.

After conducting a detailed review of all pertinent information and completing the mandate, InnovExplo concludes the following:

- The database supporting the 2019 MRE is complete, valid and up to date (includes new drilling data from the 2012, 2014 and 2019 programs).
- The geological and grade continuity of gold mineralization (Zone 1, Zone 2, Zone 3 and dilution envelope) is demonstrated and supported by surface exposures (main stripping and outcrops) and by a densely drilled area (within 20 to 25 m drill hole spacing).
- The 2019 MRE key parameters (density, capping, compositing, interpolation search ellipsoid, etc.) are supported by the data and their statistical and/or geostatistical analyses.
- The 2019 MRE was prepared for a potential scenario combining pit-constrained resources at a cut-off grade of 0.9 g/t Au within a Whittle optimized pit shell, and underground resources at a cut-off grade of 2.2 g/t Au.
- Cut-off grades were calculated at a gold price of USD1,300 per troy ounce with an exchange rate of 1.33 USD/CAD and using reasonable mining, processing, and G&A costs.
- All blocks were classified as indicated resources. There are no measured or inferred resources.
- The new estimate shows a pit-constrained Indicated Resource of 405,600 tonnes at an average grade of 5.42 g/t Au for a total of 70,630 ounces of gold, and an underground Indicated Resource of 300,800 tonnes at an average grade of 4.17 g/t Au for a total of 40,380 ounces of gold.
- The 2019 MRE is considered to be reliable, thorough, and based on quality data, reasonable hypotheses and parameters compliant with NI 43-101 requirements and CIM Definition Standards.
- The 2019 MRE results support the recommendations to advance the Project to the pre-feasibility or feasibility stage.
- There is potential for adding Inferred resources at depth through exploration drilling.
- Opportunities exist for new discoveries and to potentially add more mineral resources to the Project.

Table 25.1 identifies any important internal risks, potential impacts and possible risk mitigation measures that could affect the economic outcome of the Project. This excludes the external risks that apply to all mining projects (e.g., changes in metal prices, exchange rates, availability of investment capital, change in government regulations, etc.). Significant opportunities that could improve the economics; timing and permitting of the project are also identified in this table. Further information and evaluation are required before these opportunities can be included in the project economics.

Table 25.1 – Project risks and opportunities

RISK	Potential Impact	Possible Risk Mitigation
Proximity to local communities (St-Norbert-de-Montbrun and Rouyn-Noranda)	Possibility that the population does not accept the mining Project	Maintain a pro-active and transparent strategy to identify all stakeholders and maintain a communication plan. The main stakeholders have been identified and their needs/concerns understood. Continue to organize information sessions, publish information on the mining project, and meet with host communities.
Proximity to provincial park (Parc national d'Aiguebelle)	Possibility that the population does not accept the mining Project.	Maintain in force the Memorandum of Understanding. Maintain a pro-active and transparent strategy and communication plan.
Difficulty in attracting experienced professionals	The ability to attract and retain competent, experienced professionals is a key factor for success.	An early search for professionals will help identify and attract critical people. It may be necessary to provide accommodation for key people (not included in project costs).
Metallurgical recoveries are based on limited testwork	Recovery might be lower than what is currently being assumed	Conduct additional metallurgical tests
OPPORTUNITIES	**Explanation**	**Potential benefit**
Potential reserves and short-term economic potential	Potential to upgrade indicated resources to probable reserves by completing a PFS or FS	Adding probable reserves increases the economic value of the Project.
Potential synergy with Monarch milling capacity	Potential to mill material from the Project at the Camflo milling facilities	Increase short-term economic value of the Project
Exploration potential at depth	Potential to identify inferred resources	Adding inferred resources increases the economic value of the Project.
Potential new discoveries	Comprehensive geoscience compilation, target generation and exploration drilling	Add more mineral resources to the Project

26. RECOMMENDATIONS

Based on the 2019 MRE results, InnovExplo recommends that the Project move to an advanced phase of development, which would involve assessing different economic scenarios followed by a feasibility study.

The first recommendations address the Project's social licence and acceptability. InnovExplo recommends maintaining a pro-active and transparent strategy and to establish a communication plan with the local communities. Monarch is committed to maintaining in force the Memorandum of Understanding regarding mining and exploration activities near the provincial park (Parc national d'Aiguebelle) and the commitments therein.

The Project's initial environmental baseline characterization by Englobe, currently underway for Monarch, should be finalized.

As part of or prior to a feasibility study, InnovExplo recommends assessing five different potential scenarios:

1. Small open pit – pit-constrained only
2. Big open pit – pit-constrained only
3. Small open pit – combined pit-constrained and underground
4. Big open pit – combined pit-constrained and underground
5. Underground-only

The chosen scenario would then be brought to the feasibility level. The recommended feasibility study will have to include those documents:

- General characteristics and parameters of the proposed mining project;
- Metallurgical testing, processing and transport;
- Mine designs;
- Technical parameters required for additional test work;
- Project infrastructure;
- Environmental studies, permitting, social impact and community relations;
- Closure plan;
- Extent of investment and operation costs;
- Project economic viability analysis;
- Sensitivity analysis;
- Impact of taxation;
- NI 43-101 Technical Report.

Concurrently, InnovExplo recommends that Monarch continue its exploration program with detailed compilation, target generation and exploration drilling programs.

In summary, InnovExplo recommends the following two-phase work program:

Phase 1 – Assessment of different economic scenarios and feasibility study:

- 1A) Pro-active and transparent strategy and communication plan;
- 1B) Environmental baseline study;
- 1C) Assessment of different potential mining scenarios;
- 1D) Feasibility study (for the chosen scenario, including additional test work and studies when required).

Phase 2 – Project permitting, pre-production work and further exploration (conditional on the success of Phase 1):

- 2A) Pro-active and transparent strategy and communication plan;
- 2B) Permitting;
- 2C) Exploration program for potential additional resources, 3D geoscience compilation, target generation, and exploration drilling (provisional 10,000 m of drilling).

InnovExplo has prepared a cost estimate for the recommended program to serve as a guideline for the Project (Table 26.1). The estimated cost for Phase 1 is C$1,360,000 (incl. 20% for contingencies) and C$2,436,000 for Phase 2 (incl. 20% for contingencies). The grand total is C$3,796,000 for both phases. Phase 2 is contingent upon the success of Phase 1.

InnovExplo is of the opinion that the recommended work program and proposed expenditures are appropriate and well thought out. InnovExplo believes that the proposed budget reasonably reflects the type and quantity of the contemplated activities.

Table 26.1 – Estimated costs for the recommended work program

Phase 1 – Assessment of different economic scenarios and Feasibility study	**Cost Estimate ($)**
1A) Social licence and communication plan	20,000
1B) Environmental baseline study	110,000
1C) Assessment of different potential mining scenarios	110,000
1D) Feasibility study	900,000
Subtotal	1,140,000
Contingency (20%)	220,000
Total Phase 1	**1,360,000**
Phase 2 – Project permitting, pre-production work and further exploration	**Cost Estimate ($)**
2A) Social licence and communication plan	80,000
2B) Permitting *(see note 1)*	350,000
2C) Exploration program and drilling (± 10,000 m)	1,600,000
Subtotal	2,030,000
Contingency (20%)	406,000
Total Phase 2	**2,436,000**
TOTAL Phase 1 and 2	**3,796,000**
Note 1: The estimated permitting cost of the Project will have to be adjusted according to the feasibility study results	

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