NOTICE TO READER

October 18, 2021

The attached "Monarch Mining Corporation NI 43-101 Technical Report “Mineral Resource Estimate for the Beaufor Mine Project” (the “Report”) which was originally filed on Sedar on August 23, 2021, has been amended to replace Clovis C.Auger as qualified person by Mr. Pierre-Luc Richard. There were no changes to the report's conclusions, recommendations, calculations or numerical values. There are no material changes to the Report.

NI 43-101 Technical Report

MINERAL RESOURCE ESTIMATE FOR THE
BEAUFOR MINE PROJECT

Val-d'Or, Québec, CANADA

Prepared for:

Monarch Mining Corporation

Effective Date: **July 23, 2021**

Signature Date: **August 23, 2021;**
Amended on October 13, 2021

Prepared by the following Qualified Persons:

- Charlotte Athurion, P. Geo.........BBA Inc.
- Pierre-Luc Richard, P. Geo........BBA Inc.
- Dario Evangelista, P. Eng..........BBA Inc.

DATE AND SIGNATURE PAGE

This report is effective as of the 23rd day of July 2021.

"Signed and sealed original on file"	October 13, 2021
Charlotte Athurion, P. Geo. BBA Inc.	Date

"Signed and sealed original on file"	October 13, 2021
Pierre-Luc Richard, P. Geo. BBA Inc.	Date

"Signed and sealed original on file"	October 13, 2021
Dario Evangelista, P. Eng. BBA Inc.	Date

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CERTIFICATE OF QUALIFIED PERSON

Charlotte Athurion, P. Geo.

This certificate applies to the NI 43-101 Technical Report and Mineral Resource Estimate for the Beaufor Mine Project, Val-d'Or, Québec, Canada, prepared for Monarch Mining Corporation (Monarch) issued on August 23, 2021, and amended on October 13, 2021 (the "Technical Report"), and effective as of July 23, 2021.

I, Charlotte Athurion, P. Geo., do hereby certify that:

1. At the time of working on this mandate, I was a Geologist with BBA Inc. located at 1034, 3rd avenue, Suite 202, Val-d'Or, Québec J9P 1T6 Canada.
2. I graduated with an equivalent of a bachelor's degree in geology (B.Sc.) from Université Joseph Fourier (Grenoble, France) in 2010. In addition, I obtained a M.Sc. from the Institut National de la Recherche Scientifique (INRS, city of Québec, Québec) in 2013.
3. I am a member in good standing of the Ordre des Géologues du Québec (OGQ Member No. 1784) and the Association of Professional Geoscientists of Ontario (APGO Member No. 3122).
4. I have worked in the exploration and mining industry for more than 8 years. My expertise has been acquired with Les Mines J.A.G. Ltd., Explorateurs-Innovateurs de Québec Inc., Canadian Malartic (exploration branch) and, since November 2016, with numerous companies through my career as a consultant.
5. I have read the definition of "qualified person" set out in NI 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a qualified person for the purposes of NI 43-101.
6. I am independent of the issuer applying all the tests in Section 1.5 of NI 43-101.
7. I am author and responsible for the preparation of chapters 7, 8, 11, 13, 15 to 22, and 24. I am co-author and responsible for the relevant portions of chapters 1, 2, 3, 12, 14, 25, 26, and 27 of the Technical Report.
8. I visited the Beaufor Mine Property on April 12, 2021 as part of this current mandate.
9. I have had no prior involvement with the property that is the subject of the Technical Report
10. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.
11. As at the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.

Signed and sealed this 13th day of October 2021.

"Signed and sealed original on file"

Charlotte Athurion, P. Geo.

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CERTIFICATE OF QUALIFIED PERSON

Pierre-Luc Richard, P. Geo., M.Sc.

This certificate applies to the NI 43-101 Technical Report and Mineral Resource Estimate for the Beaufor Mine Project, Val-d'Or, Québec, Canada, prepared for Monarch Mining Corporation (Monarch) issued on August 23, 2021, and amended on October 13, 2021 (the "Technical Report"), effective as of July 23, 2021.

I, Pierre-Luc Richard, P. Geo., M.Sc., do hereby certify that:

1. I am a Principal Geologist with BBA Inc. located at 2020 Robert-Bourassa Blvd, Suite 300, Montréal, Québec, Canada, H3A 2A5.
2. I am a graduate of Université du Québec à Montréal in Resource Geology in 2004. I also obtained a M.Sc. from Université du Québec à Chicoutimi in Earth Sciences in 2012.
3. I am a member in good standing of the Ordre des Géologues du Québec (OGQ Member No. 1119), the Association of Professional Geoscientists of Ontario (APGO Member No. 1714), and the Northwest Territories Association of Professional Engineers and Geoscientists (NAPEG Member No. L2465).
4. I have worked in the mining industry for more than 17 years. My exploration expertise has been acquired with Richmont Mines Inc., the Ministry of Natural Resources of Québec (Geology Branch), and numerous companies through my career as a consultant. My mining expertise was acquired at the Beaufor mine where I worked from 2003 to 2007 and several other producers through my career. I managed numerous technical reports, mineral resource estimates and audits as a consultant for InnovExplo from February 2007 to March 2018 and as a consultant for BBA since.
5. I have read the definition of "qualified person" set out in NI 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101) and certify that, by reason of my education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a qualified person for the purposes of NI 43-101.
6. I am independent of the issuer applying all the tests in Section 1.5 of NI 43-101.
7. I am responsible for the preparation of Chapters 4 to 6, 9,10 and 23. I am also responsible for the relevant portions of chapters 1, 2, 3, 12, 25, 26, and 27.
8. I visited the Beaufor Mine Project that is the subject of this Technical Report on April 12, 2021 as part of this current mandate and on a previous occasions since 2003.
9. I have been involved with the Property that is the subject of the Technical Report from 2003 to 2007 as I worked for Richmont, the owner of the property at that time. I also completed a master's degree on the property.
10. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.
11. As at the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.

Signed and sealed this 13th day of October 2021.

"Signed and sealed original on file"

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CERTIFICATE OF QUALIFIED PERSON

Dario Evangelista, P. Eng.

This certificate applies to the NI 43-101 Technical Report and Mineral Resource Estimate for the Beaufor Mine Project, Val-d'Or, Québec, Canada, prepared for Monarch Mining Corporation (Monarch) issued on August 23, 2021, and amended on October 13, 2021 (the "Technical Report"), and effective as of July 23, 2021.

I, Dario Evangelista, P. Eng., do hereby certify that:

1. I am a Mining Engineer with BBA Inc. located at 1050 West Pender Street, Suite 800, Vancouver, British Columbia, Canada, V6E 3S7.
2. I am a graduate of McGill University with a bachelor's degree in Mining Engineering obtained in 2009.
3. I am a member in good standing of the Ordre des ingénieurs du Québec (OIQ Member No. 5011259) and of the Association of Professional Engineers and Geoscientists of the Province of British Columbia (EGBC Member No. 50612).
4. I have worked in the mining industry for more than 11 years. My relevant experience includes working for several mining operations and as a consultant on numerous mining projects. I have participated in the production of several NI 43-101 technical reports.
5. I have read the definition of "qualified person" set out in NI 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a qualified person for the purposes of NI 43-101.
6. I am independent of the issuer applying all the tests in Section 1.5 of NI 43-101.
7. I am author and responsible for the preparation of Section 14.8. I am also co-author and responsible for the relevant portions of chapters 1 and 25 of the Technical Report.
8. I have not visited the Beaufor Mine Property that is the subject of the Technical Report.
9. I have had prior involvement with the property that is the subject of the Technical Report. I participated in the preparation of the "NI 43-101 Technical Report on the Mineral Resource and Mineral Reserve Estimates of the Beaufor Mine" with effective date September 30, 2017.
10. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.
11. As at the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.

Signed and sealed this 13th day of October 2021.

"Signed and sealed original on file"

Dario Evangelista, P. Eng.
BBA Inc.

LIST OF ABBREVIATIONS AND UNITS OF MEASURE

TABLE OF ABBREVIATIONS	
Abbreviation	**Description**
3D	Three dimensional
a	Annum (year)
AA	Atomic absorption
AGB	Abitibi greenstone belt
Al	Aluminum
APS	Azimuth Pointing System
Au	Gold
B	Billion
BBA	BBA Inc.
C	Carbon
Ca	Calcium
CAD or $ or C$	Canadian dollar (examples of use: CAD 2.5M / $2.5M)
CALA	Canadian Association for Laboratory Accreditation Inc.
CaO	Lime
Ce	Cerium
CF	Callahan Fault
CG	Cadillac Group
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CL	Core length
CO_2	Carbon dioxide
CRM(s)	Certified reference material(s)
Cu	Copper
DDH	Diamond drillhole(s)
DF	Dubuisson Formation
DPFZ	Destor-Porcupine fault zone
EOH	End of hole
et al.	and others
FA	Fire assay
Fe	Iron
G&A	General and Administration
GPS	Global Positioning System
HF	Héva Formation
ID^2	Inverse distance squared
JF	Jacola Formation
K	Thousand (000)

TABLE OF ABBREVIATIONS	
Abbreviation	**Description**
KNA	Kriging Neighbourhood Analysis
KSZ	K Shear Zone
LG	Louvicourt Group
LLCFZ	Larder Lake-Cadillac Fault Zone
LVF	La Motte-Vassan Formation
M	Million
Ma	Mega annum (million years)
MF	Marbenite Fault
MFFP	Ministère des Forêts, de la Faune et des Parcs
Mg	Magnesium
MG	Malartic Group
Monarch Mining Corporation	Monarch
MRE	Mineral Resource Estimate
NAD	North American Datum
NF	Norbenite Fault
Ni	Nickel
NN	Nearest neighbour
No.	Number
NQ	NQ-Caliber drillhole
NSR	Net smelter return
NTS	National topographic system
O_2	Oxygen
OK	Ordinary kriging
Pb	Lead
PF	Parfouru Fault
PFS	Prefeasibility Study
PG	Piché Group
pH	Potential of hydrogen
PhD	Doctor of philosophy
PO	Pontiac Group
QA/QC	Quality Assurance / Quality Control
QP(s)	Qualified person(s)
RC	Reverse Circulation
RF	Revenue Factor
RHF	Rivière Héva Fault
RQD	Rock Quality Designation
S	Sulphur

TABLE OF ABBREVIATIONS	
Abbreviation	**Description**
SEDAR	System for electronic document analysis and retrieval
SG	Specific gravity
Std	Standard
U	Uranium
USD or US$	United States dollar (example of use: USD 2.5M)
UTM	Universal Transverse Mercator
VDF	Val-d'Or Formation
vs	Versus
Zn	Zinc

TABLE OF ABBREVIATIONS – UNITS OF MEASURE	
Unit	**Description**
Ø	diameter
$/t	Canadian dollars per metric tonne
%	percent
°C	Degrees Celsius
µm	micron
d	day (24 hours)
deg. or °	angular degree
g	gram
g/t	grams per (metric) tonne
h	hour (60 minutes)
ha	hectare
in. or ”	inch
km	kilometre
L	litre
m	metre
m^3	cubic metre
mesh	US Mesh
mm	millimetre
Mt	million metric tonne
oz	troy ounce
s	second
st	short ton (2,000 lbs)
t	tonne (1,000 kg) (metric ton)
tpa	tonnes per annum
tpd	tonnes per day
tpy	tonnes per year
y	year (365 days)

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1. SUMMARY

1.1 Introduction

The Beaufor Mine Project (the "Project") is a gold mine currently in care and maintenance located in the Province of Québec, in the Abitibi region.

In April 2021, Monarch Mining Corporation ("Monarch") commissioned BBA Inc. (BBA) to lead and perform a Mineral Resource Estimate (MRE) on the Project in accordance with the guidelines of the Canadian Securities Administrators National Instrument 43-101 (NI 43-101) and Form 43-101 F1.

This Report is in support of the Monarch Press Release, dated July 28, 2021, entitled "Monarch Mining Announces 136% Increase in Measured and Indicated Gold Resource at the Beaufor Mine". The Report has a number of close-out dates for information:

- Drill Database close-out date: May 18, 2021;
- Effective date of the mineral resource: July 23, 2021;
- Mineral Lease and Claim Status: July 23, 2021.

It should be understood that the mineral resources presented in this Report are estimates of the size and grade of the deposits. The estimates are based on a certain number of drillholes and samples, and on assumptions and parameters currently available. The level of confidence in the estimates depends on a number of uncertainties. These uncertainties include, but are not limited to, future changes in metal prices and/or production costs, differences in size, grade and recovery rates from those expected, and changes in Project parameters. In addition, there is no assurance that the Project implementation will be carried out.

1.2 Property Description and Location

The Property, located in the Abitibi region in the Province of Québec, is centred at latitude 48.16°' North and longitude 77.56° West, about 20 km northeast of the town of Val-d'Or and 16 km northwest of the municipality of Louvicourt.

As of July 23, 2021, the Beaufor Mine Property consists of a contiguous group of 27 mineral titles (23 claims, 3 mining leases and 1 mining concession). All the claims are registered in the name of Monarch Mining Corporation (Monarch) for a total area of 691.6 ha. A number of agreements are in place concerning the Beaufor Mine Project, and the Property is also subject to royalties.

There are no known environmental concerns or land claim issues pending with respect to the Property. Monarch conducts all exploration programs on the Property in an environmentally sound manner. To the QP's knowledge, there are no significant factors, risks or legal issues that may affect access, title, the right or ability to perform work on the Property.

1.3 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Project is easily accessible via paved highways from local communities, such as Val-d'Or. The Project is located approximately 20 km east of Val-d'Or Township, along Provincial Highway 117 and turning north on the chemin Pascalis gravel access road.

The Val-d'Or area experiences a continental subarctic subhumid climate, characterized by short, cool summers and long, cold winters. The climatic conditions at the Property do not significantly impede the Project or hinder exploration or mining activities, beyond seasonal consideration for some work (e.g., drilling muskeg swamps during winter freeze).

The town of Val-d'Or, with a population of approximately 32,900 residents has developed into a centre for mining services. Val-d'Or is one of the largest communities in the Abitibi region and has all major services including an airport with scheduled service from Montréal. CN railway line crosses the western part of the Property, connecting east through to Montréal and west to the North American rail network.

The Project area lies approximately from 300 m to 340 m above sea level. The Project area is part of the Canadian Shield, characterized by low local relief with occasional hills and abundant lakes. Sparse to dense tree cover consisting mainly of spruce, pine, fir and larch is the dominant vegetation with swamps.

1.4 Geological Setting and Mineralization

The Beaufor Mine lies in the southeast corner of the Abitibi Subprovince and is located within the Bourlamaque Batholith at the eastern contact with the Dubuisson Formation. The Bourlamaque Batholith, a massive, circular, syn-volcanic intrusion with a diameter of approximately 12 km (at surface) is a major geological feature of the Val-d'Or mining camp.

The Beaufor Mine Project mineralization presents characteristics of typical Archean greenstone-hosted orogenic gold deposits. In those deposits, gold mineralization occurs in all rock types but is more commonly located within intrusive bodies that acted as competent rock units promoting fracture during deformation. In the Val-d'Or district, there are two main generations of gold quartz veins: young deposits in which the gold mineralization did not experience much deformation after its emplacement; and early mineralization in which mineralized bodies are commonly affected by D_2 asymmetric folds, are highly strained and locally dismembered. In a few deposits, both generations are present.

In the Beaufor Mine, gold mineralization occurs in quartz-tourmaline fault-fill veins associated with extension fractures in shear zones, which dip moderately south. Gold-bearing veins show a close association with the mafic dikes that intrude the granodiorite. All the gold-bearing veins are contained in a strongly altered granodiorite in the form of chlorite-silica forming anastomosing corridors 5 m to 30 m thick. Some major mineralized zones, e.g., the C and Q zones, have been traced along strike and down dip for 450 m x 250 m and 550 m x 250 m, respectively.

1.5 Drilling, Sampling Method, Approach and Analysis

The Mineral Resource Estimate in this Report is based on drill data from several eras of drilling on the Perron and Beaufor properties that include Matthews Gold Mines, Cournor Mining, Louvem, Aurizon Mines, Richmont and now Monarch since 2017. Monarch has been exploring the Property from 2017 to today and has completed 301 diamond drillholes (DDH) as of May 18, 2021 – the closure date of the resource database. They carried out 5,066.6 m of drilling in 22 surface DDH, and 12,729.3 m of drilling in 131 underground DDH focusing on the Beaufor Mine. The results are incorporated in the resource estimate.

Since the close-out date of the last MRE (October 27, 2020; Pelletier and Langton, 2020), the samples were shipped to ALS and to AGAT Laboratories in Val-d'Or, Québec. Both the ALS and AGAT laboratories have ISO/IEC 17025:2005 accreditation through the CALA (Canadian Association for Laboratory Accreditation Inc.). They are both independent commercial laboratories.

Quality control samples are inserted into the sample batches sent to the laboratory. Inserts include blank samples and standards. Pulp duplicates are requested after the batch analysis on specific samples.

The QP, Charlotte Athurion, reviewed the sample preparation, analytical and security procedures, as well as insertion rates and the performance of blanks, standards and duplicates for the 2020-2021 drilling programs and concluded that the observed failure rates are within expected ranges and that no significant assay biases are present. According to the QP's opinion, the procedure and the quality of the data are adequate to industry standards and support this Mineral Resource Estimate.

1.6 Data Verification

Charlotte Athurion, P. Geo., and Pierre-Luc Richard, P. Geo., both QPs from BBA, visited the Beaufor Mine on April 12, 2021, as part of the current mandate. The purpose of the visit was to review the Beaufor Mine Project with the Monarch team and to observe the underground geology. The 2021 site visit included visual inspections of drill cores, a tour of the core storage facility, a field tour of the underground's main geological features, and discussions of the current geological interpretations with geologists from Beaufor. The QP was also able to see one of the drill rigs in operation on the site. A review of sampling procedures, QA/QC and drillhole procedures, downhole survey methodologies, and descriptions of lithologies, alterations and structures were also completed during the site visit.

For the purpose of this MRE, BBA performed a basic verification on the entire Project database. All data were provided by Monarch in UTM NAD 83 zone 18N. The original assay certificate, localization survey and downhole survey data for the 2020-2021 drilling programs were checked against the Geotic database. The data verification shows that the database for the Beaufor Mine Project is of good overall quality as the observed failure rates are within expected ranges and that no significant assay biases are present.

The QP is of the opinion that the drilling, sampling and assaying protocols in place are adequate. According to the opinion of the QP, the Project database is suitable for use in the estimation of mineral resources.

1.7 2021 Beaufor Mine Project Mineral Resource Estimate

The 2021 Beaufor Mine Mineral Resource Estimate (the "2021 MRE") was prepared by Charlotte Athurion, P. Geo., using all available information including historical and recent diamond drillholes.

The geological wireframes were constructed in Leapfrog Geo™ by BBA's geologists in collaboration with Martin Lacaille, P. Geo., and Christian Tessier, P. Geo., both from Monarch. Leapfrog Geo V.2021.1.2 was also used to generate mineralized intercepts and for the compositing. Leapfrog Edge V.2021.1.2 was used for the 3D block modelling, interpolation, classification and reporting. Statistical studies were undertaken using Excel and Snowden Supervisor v. 8.14. Deswik version 2021.1.552 was used for the stope optimizations. The Leapfrog project was set-up in the UTM NAD 83 zone 18N coordinate system.

The database close-out date for the resource estimate is May 18, 2021. The resource database contains 10,572 drillholes. Of these 10,572 drillholes, a subset of 6,509 holes cuts across the mineralized zones with a total of 45,513 assays. The resource database was validated before proceeding to the resource estimation.

The herein Block Model comprises 166 mineralized lenses (which have a minimum thickness of 2.4 m). All the lenses were modelled in 3D for the purpose of the 2021 MRE in order to convert the previous polygonal mineral resource estimate into block model mineral resource estimate.

The estimate is categorized as Measured, Indicated and Inferred Resources based on data density, geological continuity, search ellipse criteria, drillhole density and specific interpolation parameters. The effective date of the estimate is July 23, 2020. The cut-off grades used for this Mineral Resource Estimate are 2.80 g/t Au for the mineralized zones with a dip greater than or equal to 45° and 3.20 g/t Au for mineralized zones with a dip less than 45°. Mineral resources were estimated for an underground scenario.

Table 1-1: Measured, Indicated and Inferred 2021 Mineral Resource Statement for the Beaufor Mine Project

	Tonnage (t)	Grade (Au g/t)	Ounces Au (oz)
Measured + Indicated	**1 284 900**	**5.3**	**219 200**
Measured	328 500	5.7	59 900
Indicated	956 400	5.2	159 300
Inferred	818 900	4.7	122 500

Notes to Table 1-1:

1. The independent qualified person for the 2021 MRE, as defined by National Instrument ("NI") 43-101 guidelines, is Charlotte Athurion, P. Geo., of BBA Inc. The effective date of this MRE is July 23, 2021.
2. These mineral resources are not mineral reserves as they do not have demonstrated economic viability.
3. The mineral resource estimate follows CIM definitions (2014) for mineral resources.
4. Results are presented diluted and considered to have reasonable prospects for economic extraction. Isolated and discontinuous blocks above the stated cut-off grades are excluded from the mineral resource estimate. Must-take material, i.e. isolated blocks below cut-off grade located within a potentially mineable volume, was included in the mineral resource statement.
5. The resources include 166 mineralized zones with a minimum true thickness of 2.4 m using the grade of the adjacent material when assayed or a value of 0.00025 when not assayed. High-grade capping varies from 20 to 65 g/t Au (when required) and was applied to composited assay grades for interpolation using an Ordinary Kriging interpolation method (ID^2 for 96_02, 96_03, 20 zones, 21_01, 140, 367 zones and 350 zones) based on 1.5 m composite and block size of 5 m x 5 m x 5 m, with bulk density values of 2.75 (g/cm^3). A second capping was applied for the second and third passes in order to restrict high-grade impact at greater distance.
6. Inferred Mineral Resources were defined for blocks within the units that have been informed by a minimum of two drillholes within 50 m of a drillhole (100 m of drill spacing); Indicated Mineral Resources were defined for blocks within the units that have been informed by a minimum of three drillholes within 12.5 m of a drillhole (25 m of drill spacing); Measured Mineral Resources were defined for blocks within the units that have been informed by a minimum of three drillholes within 5 m of a drillholes (10 m of drill spacing) or 3 m around voids. Measured Mineral Resources were only defined for zones with a good reliability of the geological continuity or supported by underground workings.
7. The estimate is reported for potential underground scenario at cut-off grades of 2.8 g/t Au (>=45 degree dip) and 3.2 g/t Au (<45 degree dip). The cut-off grades were calculated using a gold price of US$1,550 per ounce, a USD:CAD exchange rate of 1.32 (resulting in C$1,914 per ounce gold price); mining cost C$125/t (>=45 degree dip); C$150/t (<45 degree dip); processing cost C$35/t; G&A C$16/t; metallurgical recovery of 97%; royalties of US$37.52 per ounce; and refining and transport cost of US$1.50 per ounce.
8. The number of metric tonnes and ounces were rounded to the nearest hundred and the metal contents are presented in troy ounces (tonne x grade/31.10348). Rounding may result in apparent summation differences between tonnes, grades and contained metals content.
9. The QP is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political or marketing issues, or any other relevant issues not reported in this Report that could materially affect the mineral resource estimate.

1.8 Interpretation and Conclusion

The understanding of the regional geology, lithological and structural controls of the mineralization at Beaufor are sufficient to support the estimation of mineral resources.

The QP, Charlotte Athurion, considers the 2021 MRE to be reliable and based on quality data, reasonable hypotheses and parameters that follow CIM Definition Standards and guidelines. After completing the MRE and a detailed review of all pertinent information, the QP concluded the following:

- The 2021 MRE is constrained within 3D wireframes of 166 mineralized zones;
- The Measured, Indicated and Inferred resources are reported within constrained volumes of the mineralized zones;
- The estimate is reported for a potential underground scenario at cut-off grades of 2.8 g/t Au (>=45 degree dip) and 3.2 g/t Au (<45 degree dip). The Beaufor Mine contains an estimated Measured Resource of 328,500 tonnes grading at 5.7 g/t Au for a total of 59,900 ounces of gold, an Indicated Resource of 956,400 tonnes grading at 5.2 g/t Au for a total of 159,300 ounces, and an Inferred Resource of 818,900 tonnes grading 4.7 g/t Au for a total of 122,500 ounces;
- Approximately 30% of the Measured resources, 59% of the Indicated resources, and 76% of the Inferred resources are located in the 367-350-140-W-Q zones;
- It is likely that further diamond drilling would upgrade most of the Inferred resources to Indicated resources.

As with all mineral projects, there is an inherent risk associated with mineral exploration. Many of these risks are based on a lack of detailed knowledge and can be managed as more sampling, testing, design, and engineering are conducted at the next study stages. The mineral resources may be affected by a future conceptual study assessment of mining, processing, environmental, permitting, taxation, socio-economic and other factors.

External risks are, to a certain extent, beyond the control of the Project proponents and are much more difficult to anticipate and mitigate, although, in many instances, some risk reductions can be achieved. External risks can include the political situation in the Project's region, metal prices, exchange rates and government legislation. These external risks are generally applicable to all mining projects.

1.9 Recommendations

Based on the results from the 2021 MRE, the QPs recommend the two-phase work program described below in which Phase 2 depends on the success of Phase 1.

Phase 1:

- Improvements to the database;
- Definition and Exploration drilling.

Phase 2:

- Prefeasibility study (PFS).

Expenditures for Phase 1 are estimated at $2,222,000 (including 10% for contingencies). Expenditures for Phase 2 are estimated at $1,100,000 (including 10% for contingencies). The grand total is estimated at $3,222,000 (including 10% for contingencies).

2. INTRODUCTION

The Beaufor Mine Project (the "Project") is a gold exploration project located in the Province of Quebec, in the Abitibi region, approximately 20 km east of the town of Val-d'Or.

In April 2021, Monarch Mining Corporation (Monarch or the Company) commissioned BBA Inc. (BBA) to lead and perform a Mineral Resource Estimate (MRE) on the Project in accordance with the guidelines of the Canadian Securities Administrators National Instrument 43-101 (NI 43-101) and Form 43-101 F1.

BBA is an independent engineering consulting firm headquartered in Mont-Saint-Hilaire, Québec. The firm's expertise is recognized in the fields of energy, mining and metals, biofuels and oil and gas. BBA is supported by a network of offices across Canada to serve its clients and carry out mandates at local, national and international levels.

2.1 Scope of Study

The following Technical Report (the "Report") presents the results of the Mineral Resource Estimate for the Beaufor Mine Project. As of the date of this Report, Monarch is a Québec based junior exploration company listed on the TSX Exchange (TSX) under the trading symbol GBAR and listed on the OTCQX under GBARF with its head office located at:

68 Avenue de la Gare, Office 205
Saint-Sauveur, Québec, Canada, J0R 1R0.

This Report, titled "NI 43-101 Technical Report and Mineral Resource Estimate for the Beaufor Mine Project, Val-d'Or, Québec, Canada", was prepared by Qualified Persons (QPs) following the guidelines of the NI 43-101, and in conformity with the guidelines of the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Standards on Mineral Resources and Reserves (CIM, 2014).

2.2 Report Responsibility and Qualified Persons

The following individuals, by virtue of their education, experience and professional association, are considered QPs as defined in the NI 43-101, and are members in good standing of appropriate professional institutions.

- Charlotte Athurion, P. Geo. BBA Inc.
- Pierre-Luc Richard, P. Geo. BBA Inc.
- Dario Evangelista, P. Eng. BBA Inc.

The QPs have contributed to the writing of this Report and have provided QP certificates, included at the beginning of this Report. The information contained in the certificates outlines the sections in this Report for which each QP is responsible. Some QPs have also contributed figures, tables and portions of Chapters 1 (Summary), 2 (Introduction), 3 (Reliance on Other Experts), 25 (Interpretation and Conclusions), 26 (Recommendations), and 27 (References). Table 2-1 outlines the responsibilities for the various chapters of the Report and the name of the corresponding Qualified Person.

Table 2-1: Qualified Persons and areas of report responsibility

Chapter	Description	Qualified Person	Company
1.	Executive Summary	C. Athurion P.-L. Richard D. Evangelista	BBA
2.	Introduction	C. Athurion P.-L. Richard	BBA
3.	Reliance on Other Experts	C. Athurion P.-L. Richard	BBA
4.	Project Property Description and Location	P.-L. Richard	BBA
5.	Accessibility, Climate, Local Resource, Infrastructure and Physiography	P.-L. Richard	BBA
6.	History	P.-L. Richard	BBA
7.	Geological Setting and Mineralization	C. Athurion	BBA
8.	Deposit Types	C. Athurion	BBA
9.	Exploration	P.-L. Richard	BBA
10.	Drilling	P.-L. Richard	BBA
11.	Sample Preparation, Analyses and Security	C. Athurion	BBA
12.	Data Verification	C. Athurion P.-L. Richard	BBA
13.	Mineral Processing and Metallurgical Testing	C. Athurion	BBA
14.	Mineral Resource Estimate	C. Athurion D. Evangelista	BBA
15.	Mineral Reserve Estimate	C. Athurion	BBA
16.	Mining Methods	C. Athurion	BBA
17.	Recovery Methods	C. Athurion	BBA
18.	Project Infrastructure	C. Athurion	BBA
19.	Market Studies and Contracts	C. Athurion	BBA
20.	Environmental Studies, Permitting, and Social or Community Impact	C. Athurion	BBA
21.	Capital and Operating Costs	C. Athurion	BBA
22.	Economic Analysis	C. Athurion	BBA
23.	Adjacent Properties	P.-L. Richard	BBA
24.	Other Relevant Data and Information	C. Athurion	BBA

Chapter	Description	Qualified Person	Company
25.	Interpretation and Conclusions	C. Athurion P.-L. Richard D. Evangelista	BBA
26.	Recommendations	C. Athurion P.-L. Richard	BBA
27.	References	C. Athurion P.-L. Richard	BBA

2.3 Effective Dates and Declaration

This Report is in support of the Monarch Press Release, dated July 28, 2021, entitled “Monarch Mining Announces 136% Increase in Measured and Indicated Gold Resource at the Beaufor Mine”. The Report has a number of close-out dates for information:

- Drill Database close-out date: May 18, 2021;
- Effective date of the mineral resource: July 23, 2021;
- Mineral Lease and Claim Status: July 23, 2021.

This Report was prepared as a National Instrument 43-101 Technical Report for Monarch by Qualified Persons from BBA Inc. collectively the “Report Authors”.

The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in the Report Authors’ services, based on: i) information available at the time of preparation; ii) data supplied by outside sources; and iii) the assumptions, conditions and qualifications set forth in this Report. This Report is intended for use by Monarch subject to terms and conditions of its respective contracts with the Report Authors. Except for the purposes legislated under Canadian provincial and territorial security laws, any other uses of this Report by any third party are at that party’s sole risk.

It should be understood that the mineral resources presented in this Report are estimates of the size and grade of the deposits. The estimates are based on a certain number of drillholes and samples, and on assumptions and parameters currently available. The level of confidence in the estimates depends on a number of uncertainties. These uncertainties include, but are not limited to, future changes in metal prices and/or production costs, differences in size, grade and recovery rates from those expected, and changes in Project parameters. In addition, there is no assurance that the Project implementation will be carried out.

As of the effective date of this Report, the QPs are not aware of any known litigation potentially affecting the Project. The QPs did not verify the legality or terms of any underlying agreement(s) that may exist concerning the Project’s ownership, permits, off-take agreements, license agreements, royalties or other agreement(s) between Monarch and any third parties.

BBA is not an insider, associate or an affiliate of Monarch and neither BBA nor any affiliate has acted as Advisor to Monarch, its subsidiaries or its affiliates, in connection with this Project. The results of the technical review by BBA are not dependent on any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings. The QPs are being paid fees for this work in accordance with the normal professional consulting practice.

The opinions contained herein are based on information collected throughout the course of investigations by the QPs, which in turn reflects various technical and economic conditions at the time of writing. Given the nature of the mining business, these conditions can change significantly over relatively short periods of time. Consequently, actual results can be significantly more or less favourable.

2.4 Sources of Information

This Report is based in part on internal company reports, maps, published government reports, company letters and memoranda, and public information, as listed in Chapter 27 “References” of this Report. Sections from reports authored by others may have been directly quoted or summarized in this Report and are so indicated, where appropriate.

This MRE has been completed using available information contained in, but not limited to, the following reports, documents and discussions:

- Technical discussions with Monarch management and personnel;
- QPs’ personal inspection of the Beaufor Mine Project site, including drill core and facilities;
- Historical and recent drillhole database;
- Review of exploration data collected by Monarch;
- Technical data and internal technical documents supplied by Monarch;
- Internal unpublished reports from Monarch;
- Additional information from public domain sources (SEDAR, SIGEOM, etc.).

The QPs believe that the basic assumptions contained in the information above are factual and accurate, and that the interpretations are reasonable. The QPs have relied on this data and have no reason to believe that any material facts have been withheld or doubt the reliability of the information used to evaluate the mineral resources presented herein. The authors have sourced the information for this Report from the collection of documents listed in Chapter 27 (References).

2.5 Site Visit

Charlotte Athurion, P. Geo., and Pierre-Luc Richard, P. Geo., both QPs, visited the Beaufor Mine on April 12, 2021 as part of the current mandate. The purpose of the visit was to review the Beaufor Mine Project with the Beaufor's team and to observe the underground geology.

The 2021 site visit included visual inspections of drill cores, a tour of the core storage facility, a field tour of the underground main geological features and discussions of the current geological interpretations with geologists from Beaufor. The QP was also able to see one of the drill rigs in operation on site. A review of sampling procedures, QA/QC and drillhole procedures, downhole survey methodologies, and descriptions of lithologies, alterations and structures were also completed during the site visit.

Dario Evangelista, QP and employee of BBA, did not visit the Property that is the subject of this Technical Report.

2.6 Currency, Units of Measure, and Calculations

Unless otherwise specified or noted, the units used in this Report are metric. Every effort has been made to clearly display the appropriate units being used throughout this Report.

- Currency is in Canadian dollars ("CAD", "C$" or "$"), unless otherwise stated;
- A United States dollar (USD or US$): Canadian dollar exchange rate of 1.32 was considered;
- Grid coordinates for the block model and the drillhole database are given in the UTM NAD 83 and latitude/longitude system; maps are either in UTM coordinates or latitude/longitude system.

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

2.7 Acknowledgment

The Report Authors would like to acknowledge the general support provided by Monarch personnel during this assignment. Their collaboration is greatly appreciated. The Project also benefitted from the inputs of the following specific individuals:

- Christian Tessier, Geology Superintendent – Beaufor Mine, Monarch;
- Martin Lacaille, Project Geologist – Beaufor Mine, Monarch;
- Benoit Carrier, Engineering Superintendent – Beaufor Mine, Monarch;
- Louis Martin, Consulting Geologist;
- Clovis Auger, Geologist – BBA;
- Christina Thouvenot, Engineer in Geology – BBA;
- Alexis Foglia, Junior Engineer in Mining – BBA;
- Eder Basilio, Engineer in Mining – BBA;
- Manon Dussault, Project Assistant – BBA.

Their commitment, contributions and team work are gratefully acknowledged and appreciated.

3. RELIANCE ON OTHER EXPERTS

The Qualified Persons have relied upon reports, information sources and opinions provided by Monarch for information related to the Project's mineral rights, 3rd party agreements, surface rights, property agreements, royalties, and environmental status.

As of the effective date of this Report, Monarch indicates that there are no known litigations potentially affecting the Beaufor Mine Project.

A draft copy of the Report has been reviewed by Monarch for factual errors. Any changes made as a result of these reviews did not involve any alteration to the conclusions made. Hence, the statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are neither false nor misleading at the date of this Report.

3.1 Mineral Tenure, Surface Rights and Royalties

Monarch supplied information about mining titles, options agreements, royalty agreements, environmental liabilities and permits. The QPs from BBA consulted the GESTIM online claim management system for the latest status regarding ownership and mining titles.

The QPs are not qualified to express any legal opinion with respect to the property titles, current ownership or possible litigations. A description of such agreements, the property, and ownership thereof, is provided for general information purposes only. In this regard, the QPs have relied on information supplied by Monarch.

This information is used in Chapter 4 of the Report. The information is also used in support of the Mineral Resource Estimate in Chapter 14.

3.2 Environmental Studies, Permitting, and Social or Community Impact

With respect to the Project's environmental status, permits and, social and community impact, the QPs relied on information provided by Marc-André Joly, Environment Coordinator, Monarch. This information is used in Chapter 4 of the Report.

4. PROPERTY DESCRIPTION AND LOCATION

4.1 Property Description and Location

The Beaufor Mine Project (the “Project”) is a gold mine currently in care and maintenance located in the Province of Quebec, in the Abitibi region.

The Property is centred at latitude 48.16° North and longitude 77.56° West (309464E, 5336894N UTM NAD83 Zone 18), about 20 km northeast of the town of Val-d’Or and 16 km northwest of the municipality of Louvicourt (Figure 4-1). The Project underlies National Topographic Service (NTS) map sheet 32C/04

Figure 4-1: Property overview map

4.2 Mineral Tenure

In the province of Québec, the Mining Act governs the management of mineral resources and the granting of exploration rights for mineral substances during the exploration phase. It also deals with the granting of rights pertaining to the use of these substances during the mining phase. Finally, the act establishes the rights and obligations of the holders of mining rights to ensure maximum development of Québec's mineral resources.

Claim status was verified using GESTIM, the Québec government's online claim management system. As of July 23, 2021, the Beaufor Mine Property consists of a contiguous group of 27 mineral titles (23 claims, 3 mining leases and 1 mining concession (Figure 4-2)). All the claims are registered in the name of Monarch Mining Corporation for a total area of 691.6 ha. A detailed list of the Beaufor mining titles is presented in Table 4-4.

The QP has not verified the legal titles to the Property or any underlying agreement(s) that may exist concerning the licenses or other agreement(s) between third parties.

4.3 Royalties, Agreement and Encumbrances

Royalties and agreement status were provided by the Beaufor's technical team and management. The QP did not verify the legality or terms of any underlying agreement(s) that may exist concerning the Project ownership, permits, off-take agreements, license agreements, royalties, or other agreement(s) between Monarch and any third parties.

Royalties and financial contractual obligations are different on the seven individual Beaufor Division Properties. Figure 4-2 shows the various royalties on the Property.

According to Jean-Marc Lacoste, President and CEO of Monarch, since the previous technical report on the Property (Pelletier and Langton, 2020), some historical royalties have been removed from the list as there is no actual contract between the former holder of the royalty and Monarch and, therefore, they have not been recognized by Monarch Mining Corp.

Entire Beaufor Mine Property Royalties

In May 2020, Monarch announced it had signed an agreement with Caisse de dépôt et placement du Québec (CDPQ) to sell a 3% net smelter return (NSR) royalty on gold production at the Beaufor Mine for $5 million. Monarch will also have the option of redeeming a maximum of 2% NSR in accordance with the following terms:

- 1% once the Corporation has repaid the capital invested by CDPQ; and, thereafter;
- 1% in consideration of $2.5 million, payable within 5 years following the closing of the transaction (Monarch press release of May 7, 2020).

Following the 2020 - Yamana Gold Inc. agreement (see below) the former Richmont's royalty of 1% NSR after 100,000 oz is now payable to Metalla Royalty and Streaming Ltd.

2020 – Yamana Gold Inc. Agreement

On November 2, 2020, Yamana Gold Inc. ("Yamana") and Monarch Gold announced that they had entered into a definitive agreement (the "Agreement"), pursuant to which Yamana would acquire the Wasamac property and the Camflo property and mill through the acquisition of all the outstanding shares of Monarch Gold (not already owned by Yamana) for total consideration of approximately $200 million or $0.63 per Monarch Gold share on a fully diluted basis, under a plan of arrangement. The total consideration to be paid by Yamana to the shareholders of Monarch Gold ("Monarch Gold Shareholders") is approximately $60.8 million in cash and $91.2 million in Yamana shares. Under the plan of the arrangement, Monarch Gold will first complete a spin-out to Monarch Gold Shareholders through a newly-formed company Monarch Mining Corporation (or "Monarch Mining") that will hold its other mineral properties and certain other assets and liabilities of Monarch Gold, by issuing as consideration common shares of Monarch Mining (the "Monarch Mining Shares") having an implied value of approximately $47.5 million (the "Spin-Out").

Upon implementation of the plan of arrangement (the "Transaction"), the following assets and liabilities will be transferred by Monarch Gold to Monarch Mining in consideration for the issuance of the Monarch Mining Shares to Monarch Gold Shareholders:

- The Beaufor Mine and the Beacon Gold mill and property, the McKenzie Break property, the Croinor Gold property and the Swanson property (the "Monarch Mining Properties'');
- $14 million cash;
- All assets and liabilities related to the Monarch Mining Properties.

Following the completion of the transaction, Monarch Gold Shareholders will own approximately 1.3% of Yamana and 100% of Monarch Mining, and Yamana will own 100% of Monarch Gold.

Beaufor Block

The Beaufor Block is subject to a quarterly royalty payment to Hecla Mining Company (formerly Aurizon Mines Ltd.) as outlined in Table 4-1.

Table 4-1: Royalties payable to Hecla Mining for the Beaufor Property

Gold Price (USD/oz)	Royalties per ounce on 50% of ounces produced (CAD)
<300	0.00
300 – 325	17.00
325 – 350	18.50
350 – 375	20.00
375 – 400	22.50
400 – 500	24.00
>500	30.00

Perron Block

The Perron Block is subject to a quarterly royalty payment to Hecla Mining Company (formerly Aurizon Mines Ltd.) as outlined in Table 4-2.

Table 4-2: Royalties payable to Hecla Mining for the Perron Block

Gold Price (USD/oz)	Royalties per ounce produced (CAD)
<300	0.00
300 – 325	17.00
325 – 350	18.50
350 – 375	20.00
375 – 400	22.50
400 – 500	24.00
>500	30.00

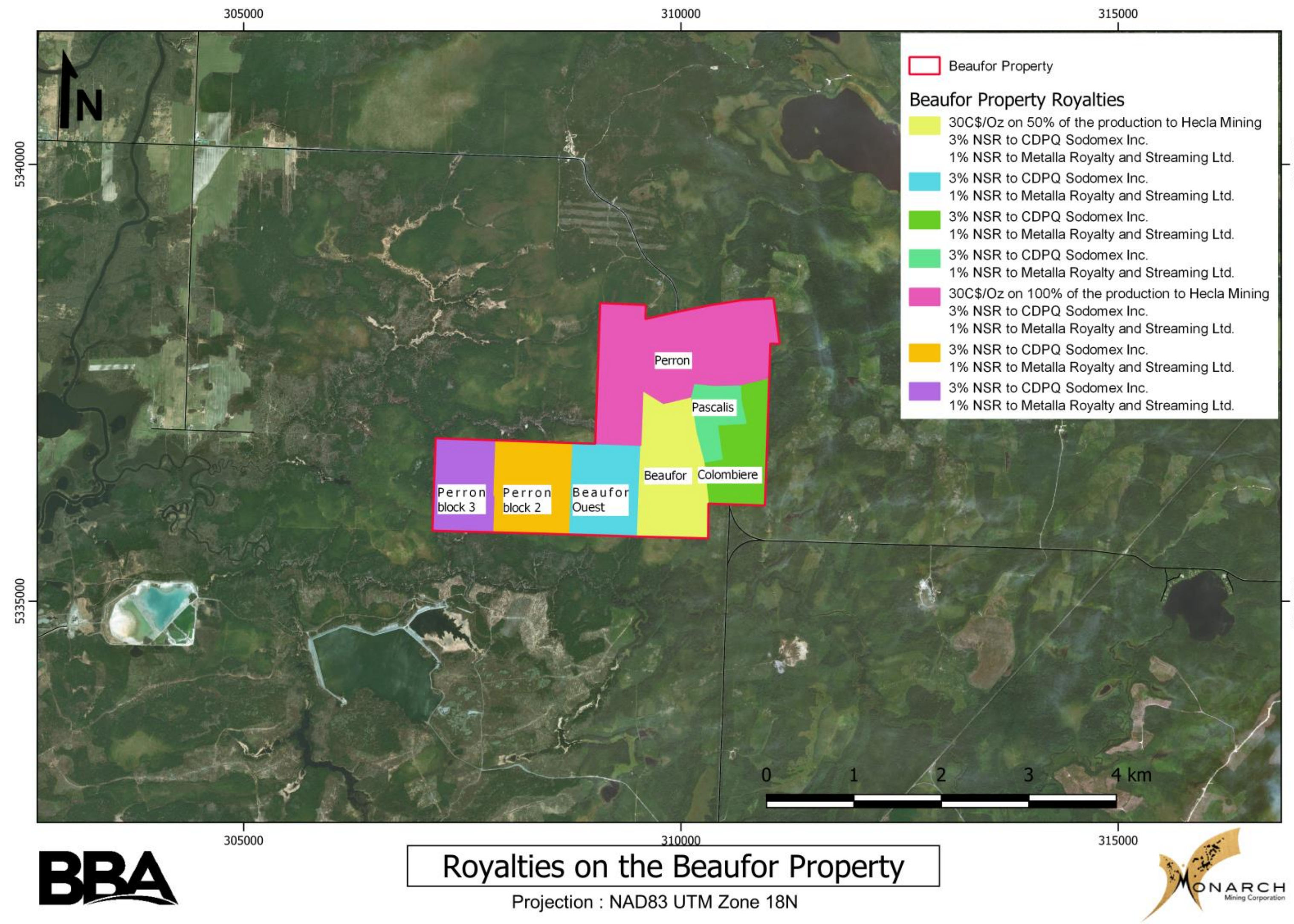


Figure 4-2: Royalty map for the Beaufor Division Properties

4.4 Environmental Liabilities

There are no known environmental concerns or land claim issues pending with respect to the Property. Monarch conducts all exploration programs on the Property in an environmentally sound manner.

4.5 Permitting

Permits are required for any exploration program that involves tree cutting (to create access roads or drill pads or, in preparation for mechanical outcrop stripping, for example). Permits are issued by the *Ministère des Forêts, de la Faune et des Parcs* (MFFP). Permitting timelines is typically of three to four weeks. Additional permitting requirements are needed when drilling on the historical tailings sites.

Monarch has obtained all necessary permits from government agencies to allow for surface drilling on the Beaufor Property.

Table 4-3 shows the list of authorizations currently held by Monarch. All certificates of authorization were provided by Marc-André Joly, Environment Coordinator at Monarch Mining.

Table 4-3: Authorization certificates held by Monarch Mining

Authorization number	Description
7610-08-01-70086-22	Pascalis-Nord and Beaufor mining site exploitation
7610-08-01-70086-23	Hazardous waste storage
7610-08-01-70086-31	Excavation of a new ventilation chimney and relocation of the fans
7610-08-01-70086-32	Expansion of the waste rock pile
7610-08-01-70086-33	Ore extraction by ramp for Zone W
7610-08-01-70086-34	Installation and operation of an oil separator
7610-08-01-70086-35	Increase in the capacity of the wastewater treatment system
7610-08-01-70086-37	Installation of Zone W permanent ventilation
7610-08-01-70086-38	Upgrading of the domestic wastewater treatment system
7610-08-01-70086-39	Valorization of waste rock as a construction material
7610-08-01-70086-40	Groundwater withdrawal and installations

4.6 Other Significant Factors and Risks

To the QP's knowledge, there are no significant factors, risks or legal issues that may affect access, title, the right or ability to perform work on the Property.

Table 4-4: Mining titles list and details

Claim No.	Claim status	Issue date	Anniversary date	Area (ha)	Owner	Claim name	Type
403637784	Active	2003-03-12	2023-03-11	21.83	Monarch Mining Corporation (100%)	858	BM
403626742	Active	2013-09-17	2033-09-16	32.62	Monarch Mining Corporation (100%)	1018	BM
403637783	Active	1986-06-03	2026-06-02	37.5	Monarch Mining Corporation (100%)	750	BM
403639966	Active	1936-05-09	NA	112.91	Monarch Mining Corporation (100%)	280PTA	CM
403640450	Active	2015-10-07	2022-09-20	16.75	Monarch Mining Corporation (100%)	2432929	CDC
403640451	Active	2015-10-07	2022-09-20	14.61	Monarch Mining Corporation (100%)	2432930	CDC
403640448	Active	2015-10-07	2022-09-20	23.09	Monarch Mining Corporation (100%)	2432927	CDC
403640449	Active	2015-10-07	2022-09-20	26.72	Monarch Mining Corporation (100%)	2432928	CDC
403641270	Active	2015-10-19	2023-11-23	25.59	Monarch Mining Corporation (100%)	2433334	CDC
403641271	Active	2015-10-19	2023-11-23	2.86	Monarch Mining Corporation (100%)	2433335	CDC
403641268	Active	2015-10-19	2023-11-23	10.51	Monarch Mining Corporation (100%)	2433332	CDC
403641269	Active	2015-10-19	2023-11-23	25.3	Monarch Mining Corporation (100%)	2433333	CDC
403641266	Active	2015-10-19	2023-11-23	39.79	Monarch Mining Corporation (100%)	2433330	CDC
403641267	Active	2015-10-19	2023-11-23	16.67	Monarch Mining Corporation (100%)	2433331	CDC
403641264	Active	2015-10-19	2023-11-23	4.39	Monarch Mining Corporation (100%)	2433328	CDC
403641265	Active	2015-10-19	2023-11-23	39.85	Monarch Mining Corporation (100%)	2433329	CDC
403641501	Active	2015-10-22	2022-05-04	31.58	Monarch Mining Corporation (100%)	2433294	CDC
403641497	Active	2015-10-22	2022-05-04	53.79	Monarch Mining Corporation (100%)	2433290	CDC
403641495	Active	2015-10-22	2022-05-04	5.94	Monarch Mining Corporation (100%)	2433288	CDC
403641490	Active	2015-10-22	2022-05-04	3.23	Monarch Mining Corporation (100%)	2433283	CDC
403641487	Active	2015-10-22	2022-05-04	43.32	Monarch Mining Corporation (100%)	2433280	CDC
403641513	Active	2015-10-22	2022-05-04	4	Monarch Mining Corporation (100%)	2433306	CDC
403641514	Active	2015-10-22	2022-05-04	29.92	Monarch Mining Corporation (100%)	2433307	CDC
403641512	Active	2015-10-22	2022-05-04	21.84	Monarch Mining Corporation (100%)	2433305	CDC
403641529	Active	2015-10-22	2022-05-04	22.4	Monarch Mining Corporation (100%)	2433322	CDC
403641524	Active	2015-10-22	2022-05-04	21.62	Monarch Mining Corporation (100%)	2433317	CDC
403641519	Active	2015-10-22	2022-05-04	2.98	Monarch Mining Corporation (100%)	2433312	CDC

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

5.1 Accessibility

The Project is easily accessible via paved highways from local communities, such as Val-d'Or. The Project is located approximately 20 km northeast of Val-d'Or Township nearby the Provincial Highway 117 and turning north on the chemin Pascalis gravel access road (Figure 5-1). The Property can be accessed and operated on a year-round basis. Surface exploration work (mapping, channel sampling) should be planned from mid-May to mid-October to avoid snow. Electric installations are already on site.

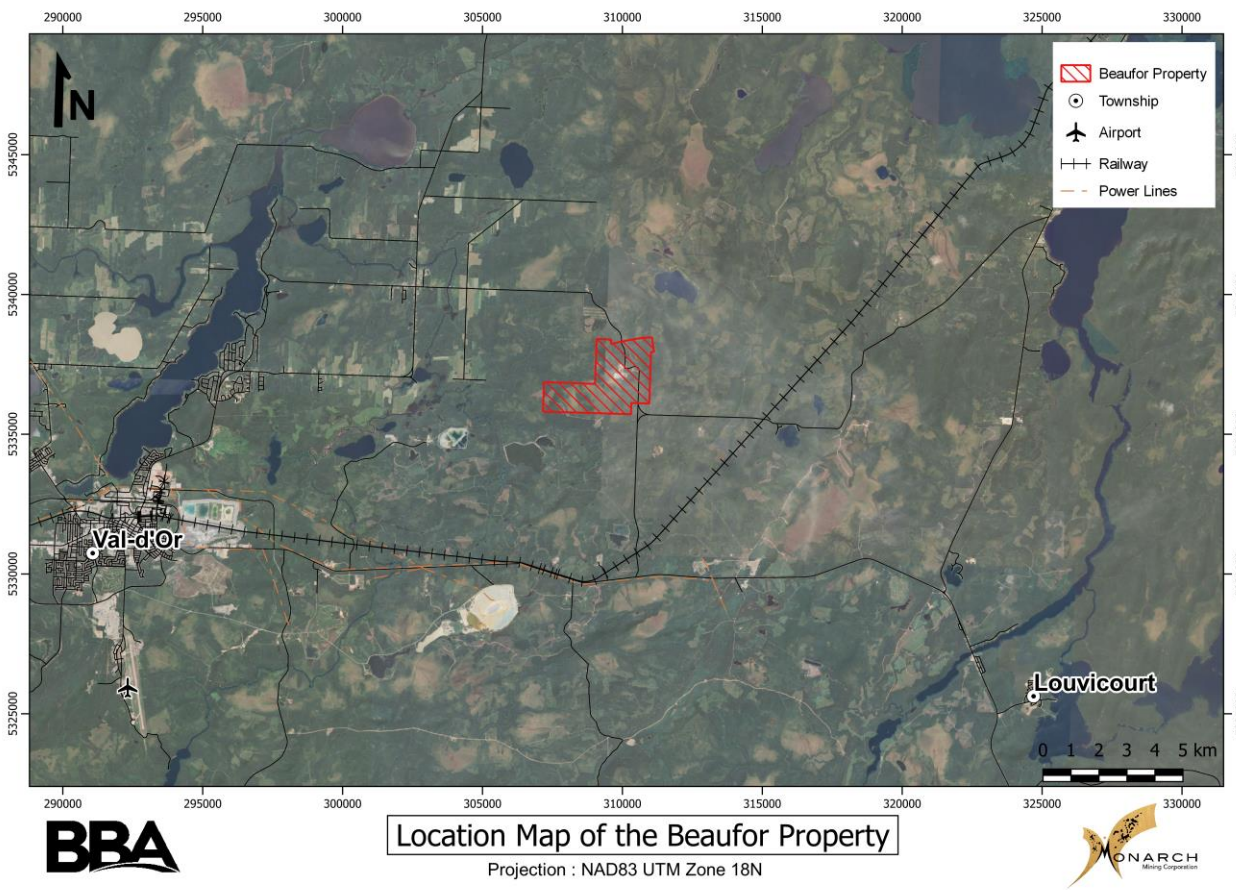


Figure 5-1: Location of the Beaufor Property

5.2 Climate

The Val-d'Or area experiences a continental subarctic subhumid climate, characterized by short, cool summers and long, cold winters. The nearest weather monitoring station with data on climate normals maintained by Environment Canada (climat.meteo.gc.ca) is the Amos station, approximately 70 km northwest of the Property. According to the available data collected at this weather station from 1981-2010, the daily average temperature for January was -17.2°C and the daily average temperature in July was 17.4°C. The record low during this period was -52.8°C, and the record high was 37.2°C.

Data collected from the Amos weather station from 1981 to 2010 indicates that the total annual precipitation was 929.0 mm, with peak rainfall occurring during July (112.1 mm average), August (98.3 mm average) and September (106.7 mm average). Snowfall is light to moderate, with an annual average of 253.3 cm. Snow typically accumulates from October to April, with a peak snowfall occurring in November (45.0 cm average), December (58.5 cm average) and January (55.6 cm average); during this period, snowpack averages 39 cm depth, with a maximum depth of approximately 142 cm. On average, the Property is frost-free for 97 days, though discontinuous permafrost exists in the area. Hours of sunlight vary from 15.5 hours at the summer solstice in June to 8.1 hours at the winter solstice in December.

The climatic conditions at the Property do not significantly impede the Project or hinder exploration or mining activities, beyond seasonal consideration for certain work (e.g., drilling muskeg swamps during winter freeze).

5.3 Local Resources and Infrastructure

5.3.1 Airports, Rail Terminals and Bus Services

The town of Val-d'Or, with a population of approximately 32,500 residents (Statistics Canada, 2016), is located 20 km southwest of the Beaufor Property, along the Provincial Highway 117. Since Val-d'Or was founded in the 1920s it has been a mining service centre. Val-d'Or is one of the largest communities in the Abitibi region and has all major services including an airport with scheduled service from Montréal. CN railway line is about 5 km southeast of the Property, connecting east through to Montréal and west to the North American rail network. Val-d'Or is a 6-hour drive from Montréal, and there are daily bus services between Montréal and the other cities and town in the Abitibi region.

5.3.2 Local Work Force

According to the 2016 census prepared by Statistics Canada, the population of the MRC of La Vallée-de-l'Or was 43,226 people, with 66% of the residents aged 15-64, and an average of 41 years old. Male population accounts for 51% of the population, 49% is female, and 8.5% is Aboriginal. In 2016, 64.4% of the population participated in the labour force, with 14.2% of the labour force employed in the "mining, quarrying, and oil and gas extraction" category. This portion of the workforce is experienced in mining operations, as they are currently employed at exploration and gold mines located elsewhere in the Abitibi region. Local resources also include commercial laboratories, drilling companies, exploration service companies, engineering consultants, construction contractors and equipment suppliers.

5.3.3 Additional Support Services

Additional services within the town of Val-d'Or include the Val-d'Or Hospital, grocery stores, fuel stations, financial institutions and hotels. Val-d'Or has a Canada Post office and additional shipping/freight services by several providers. Landline telephone, mobile service, high-speed internet and satellite internet are available in town and the nearby vicinity.

Monarch Mining has offices at the Beaufor Mine including a well-equipped core logging area. The core boxes are stored in roofed core racks in the outdoor core storage area on the mine site.

The mining infrastructure are currently under care and maintenance.

5.4 Physiography

The Project area lies approximately from 300 m to 340 m above sea level. The Project area is part of the Canadian Shield, characterized by low local relief with occasional hills and abundant lakes. Sparse to dense tree cover consisting mainly of spruce, pine, fir and larch is the dominant vegetation with swamps.

Figure 5-2: Picture of the Property during the drilling campaign

6. HISTORY

The following sections describe the exploration and development history of the Property. The information in Sections 6.1 to 6.4 was taken from Pelletier and Langton (2020) and reference therein.

6.1 Perron Mine (1931–1951)

The Perron Property was staked by prospector Jack Matthews, who discovered spectacular surface gold veining in Pascalis Township in the spring of 1931. The Property was then optioned by Noranda Inc. ("Noranda"), which proceeded with trenching and diamond drilling on the Matthews Vein in January 1932. Due to mediocre results, Noranda abandoned its option, which was subsequently procured by Alex J. Perron, who established Matthews Gold Mines Limited ("Matthews Gold").

In January 1933, a test mill with a capacity of 10 short tons (st) per day was built on site to treat the mineralized material from the Matthews Vein. The Perron No. 2 shaft was sunk to a depth of 53 m and several gold bearing veins were discovered and developed. In 1934, Perron Gold Mines Limited ("Perron Gold") was formed and the Perron No. 2 shaft reached its ultimate depth of 99 m. In 1935, Perron Gold signed an agreement with the Beaufor Mine Corporation ("Beaufor") that led to the construction of a new mill, and the sinking of a shaft on the adjacent property. The Beaufor No. 4 shaft was connected to the underground workings of the Perron Mine in 1936, and the milling capacity of the project was increased to 125 tons per day. The mill capacity reached 320 tons per day in 1937. At that time, the Beaufor No. 4 shaft was deepened to 191 m and three levels were developed. In 1938, the last shaft, Perron No. 5, was sunk on the Perron property, reaching a depth of 648 m in 1941. The mine was in production until 1951 and produced 1,605,428 t of mineralized material at an average grade of 8.48 g/t Au for a total of 437,511 ounces of gold.

6.2 Beaufor Mine (1930-1942)

The original Beaufor property was staked during the fall of 1930 by George Bussières. The discovery by Matthews on the neighbouring Perron property prompted prospectors to explore for the extension of the Matthews Vein on their own ground. Beaufor Gold Mines Limited ("Beaufor Gold") was incorporated in July 1931, and in the spring of 1932, an inclined shaft was sunk along the Matthews Vein to a depth of 76 m. Mine workings were developed on two levels, but due to great irregularities in both shape and grade of the mineralized zones, works were suspended in December 1932. While Perron Gold was pursuing underground development on the Beaufor property, it was purchased by the Cournor Mining Company Limited ("Cournor") in 1939. Mineralized material from Beaufor Mine was milled at Cournor's Bussières Mine (the Old Cournor Mine) located a few kilometres to the south. The Beaufor Mine remained in operation until 1942 when a forest fire destroyed the village of Pascalis and the Cournor office at the Bussières Mine. From 1945 to 1950, exploration work was carried out from the underground workings in Perron Mine, but results were not successful enough to restart the Beaufor operations. Total production from the Beaufor property was 161,287 tonnes at an average grade of 7.01 g/t Au for 36,342 ounces of gold.

6.3 Pascalis Property

Pascalis Gold Mines Limited ("Pascalis Gold") carried out surface trenching and diamond drilling on their property in 1934 and 1935. Exploration work indicated that the Perron deposit extended onto the Pascalis property. As Pascalis Gold and Perron Gold could not reach an agreement to share their underground and surface infrastructures, the Pascalis No. 1 shaft was sunk in 1941. In the context of World War II and for other unknown reasons, work on Pascalis was suspended and no production was ever achieved. In 1962, the company was reorganized into New Pascalis Gold Mines Limited ("New Pascalis Gold"). In 1981, SOQUEM Inc. ("SOQUEM") acquired three claims that became the Pascalis property. In 1983, Société Minière Louvem Inc. ("Louvem"), owned by SOQUEM, became independent and the operator of the Pascalis Project. Under an agreement with Perron Gold, Louvem rebuilt the headframe over the Perron No. 5 shaft in 1984. Louvem carried out exploration work and test-mining on the extension of the Perron deposit on the Pascalis property. A total of 54,450 tonnes were extracted at an average grade of 6.91 g/t Au, for a total gold production of 12,097 ounces. Due to a lack of funding, Louvem ceased mining operations at Pascalis in 1988.

6.4 Perron, Pascalis and Beaufor Consolidated History (1960–2015)

During the 1960s, Cournor carried out exploration work on the Beaufor property. In 1965, surface drill hole C-108 intersected two mineralized zones approximately 400 m south of the Perron shafts, on the Beaufor ground. Little exploration work was carried out until 1983, when Cournor ceded their mineral rights in the Beaufor and Bussières mines to Louvem. In 1987, while Louvem was conducting its mining program on Pascalis, the company formed a joint venture with D'Or Val Mines Limited ("D'Or Val") to conduct a vast exploration program on the Beaufor property. Surface drilling in the vicinity of drill hole C-108 successfully outlined gold structures, namely the B and C zones. Underground drilling, drifting and development was initiated during that period.

Based on the long-term economic extraction envisaged at the time, a second phase of exploration was developed. In 1988, D'Or Val merged with Perron Gold to form Aurizon Mines Limited ("Aurizon"). In 1989, Aurizon earned a 50% interest in the Beaufor property by incurring the required exploration expenses. Drilling and drifting were suspended for property assessment and geological compilation.

In 1993, the project was reactivated with Aurizon as the operator. The Perron, Beaufor and Pascalis properties were then regrouped as the Beaufor project. In 1994, mineralized material from Beaufor was processed at Richmont's Camflo Mill near the town of Malartic. Richmont became involved in the project through its growing shareholder position in Louvem. In January 1996, commercial production was declared, but underground operations were suspended in August 2000 because Aurizon suspected that crown pillar conditions were not safe enough to fully guarantee the safety of underground workers. In 2001, Richmont acquired Aurizon's interest and became operator of the Beaufor Mine. After consolidation work on the crown pillar and in the shaft, the Beaufor Mine resumed operations in January 2002. In March 2010, the Beaufor Mine reached the 1-million-ounce production milestone, nearly 80 years after the original discovery of the deposit. In July 2010, Richmont completed the acquisition of Louvem's interest and became the sole owner of the Beaufor Mine. Ownership changed again in September 2017 when Monarch Gold purchased the Beaufor Mine.

From the start of commercial production in the 1930's to the end of 2015, the Perron, Beaufor and Pascalis mines have produced approximately 4,854,000 tonnes at an average grade of 7.5 g/t Au, for a total of 1,169,000 ounces of recovered gold.

6.4.1 2016-2017 Drilling Programs

A total of 227 drill holes, aggregating approximately 45,418.2 m of drilling, were completed at the Beaufor Mine in 2016 by Richmont. Drilling comprised approximately 13,000 m of definition drilling (30%) and 32,000 m of exploration drilling (70%).

A total of 12 exploration target areas were drill-tested within the mine area. Approximately 35% of exploration drilling focused on lateral and vertical extensions of Zone Q. Surface exploration drilling was carried out to test dike-associated mineralization between the Beaufor and Perron faults, on the west side of the mine.

From January 2017 to the end of September 2017 (the effective date of the 2017 Technical Report by Pelletier et al., 2017), a total of 20,263.95 m had been drilled in 126 drill holes, all from the underground infrastructure, and drilling was ongoing. The 2017 drilling program was designed to define known mineralization as well as to test lateral and vertical extensions. Monarch Gold became operator of the mine in October of 2017 and completed an additional 65 underground holes (5,899 m) by year-end. Plans for further drilling to test the areas south of the Beaufor Fault and between the Perron/Central and Beaufor faults in 2018 were tabled.

6.5 Historic Resource Estimates (2015-2017)

In 2015, Richmont completed an in-house mineral resource and mineral reserve estimate accompanied by a technical report as of December 31, 2015 (Thelland and Manda Mbomba, 2016).

Economic parameters used for the 2015 estimates are shown in Table 6-1.

Measured and Indicated category materials totalled 842,800 tonnes at an average grade of 6.34 g/t Au for, 171,900 ounces, whereas the Inferred category materials were estimated at 135,100 tonnes at an average grade of 6.44 g/t Au, for 28,000 ounces. The Proven and Probable Reserves materials totalled 302,100 tonnes at an average grade of 6.57 g/t Au, for 63,850 ounces.

These “Resources” and “Reserves” are historical in nature and should not be relied upon. The qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves. Although they were most likely prepared using the CIM Definition Standards and Best Practice Guidelines that were in effect at that time and most likely disclosed according to the current NI 43-101 Standard, their relevance and reliability have not been verified. They are included in this section for illustrative purposes only and the issuer is not treating the historical estimate as current mineral resources.

Table 6-1: Economic parameters used for the 2015 historical estimate

Parameter	Value
Exchange rate ($US:$C)	1.00:1.2037
Price of gold ($US:$C)	1,080:1,300
Capping value for high-grade	68.5 g/t on assays. If grade of drill hole intercept is higher than 16.5 g/t over 2.40 m width, the intercept is capped at 16.5 g/t
Cut-off grade for stopes	4.31 g/t for long-hole and 5.25 g/t for room-and-pillar
Cut-off grade for development	1.0 g/t
Stope dilution	10% for long-hole and 5% for room-and-pillar
Dilution grade	0.0 g/t Au
Mineral reserve recovery factors	100% for long-hole stopes for which permanent pillars have been laid out and excluded from Mineral Reserves
	90% for long-hole stopes for which permanent pillars have not been laid out
	80% for room-and-pillar stopes for which permanent pillars have been laid out and excluded from Mineral Reserves
Mill recovery (not used for estimation)	98.00%
Specific gravity	2.75 t/m^3
Minimum mining width	2.40 m

After acquiring the Beaufor Mine from Richmont in late 2017, Monarch Gold updated their mineral resource and mineral reserve estimates (the “2017 MRE”) for the Project supported by a technical report (Pelletier et al., 2017).

The database used for the 2017 MRE contained 10,308 DDH, including 184,520 assays and lithological information, and a total of 63 distinct mineralized zones. The estimation method was polygonal on cross-section.

Economic parameters used for the 2017 Historical Estimate are shown in Table 6-2.

Measured and Indicated category material totalled 345,400 tonnes at an average grade of 7.68 g/t Au, for 85,200 oz; Inferred category material totalled 46,100 tonnes at an average grade of 8.34 g/t Au, for 12,400 oz. The Proven and Probable reserves materials totalled 139,500 tonnes at an average grade of 6.83 g/t Au, for 30,600 ounces.

These "Resources" and "Reserves" are historical in nature and should not be relied upon. The qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves. Although they were most likely prepared using the CIM Definition Standards and Best Practice Guidelines that were in effect at that time and most likely disclosed according to the current NI 43-101 Standard, their relevance and reliability have not been verified. They are included in this section for illustrative purposes only and the issuer is not treating the historical estimate as current mineral resources.

Table 6-2: Economic parameters used for the 2017 historical estimate

Parameter	Value
Exchange rate ($US:$C)	1.00:1.28
Price of gold ($US:$C)	1,280:1,638.40
Capping* value for high-grade (*used raw assay values)	68.5 g/t Au for zones 8, B, M, M1 and Q, whereas all other zones were capped at 34.25 g/t Au and drill hole intersections were capped at 16.5 g/t over 2.40 m
Cut-off grade for stopes	3.95 g/t Au for long-hole and 4.66 g/t Au for room-and-pillar
Stope dilution	Varies from 10% to 15% for long-hole stopes, based on the position of the dike, and 0% for the room-and-pillar stopes, as the stope width is less than the 2.40 m minimum mining width
Mining recovery rates	85% - 90% for long-hole stopes, based on the position of the dike
	90% for room-and-pillar stopes
Mill recovery (not used for estimation)	98,00%
Specific gravity	2.75 t/m^3
Minimum mining width	2.40 m
Polygons for Measured category material	Extend 8 m above and below development and up to 10 m laterally
Polygons for Indicated category material	Do not extend more than 20 m from drill hole intercepts, along dip and along strike
Polygons for Inferred category material	Do not extend more than 40 m from drill hole intercepts, along dip and along strike

6.6 Monarch Gold Corporation acquisition (2017)

On September 11, 2017, Richmont Mines Inc. entered into a definitive agreement with Monarch Gold, to acquire Richmont's Québec-based assets including the Beaufor Mine. In addition, Monarch Gold issued additional common shares to Richmont (19.9%) of the undiluted issued and outstanding common shares of Monarch Gold, inclusive of the Subscription Shares.

Monarch Gold also assumed responsibility for all environmental and other liabilities related to the Québec Assets and announced the closing of the Transaction in a press release on October 2, 2017.

In 2018, Monarch Gold mandated Pioneer Aerial Survey Ltd. to complete a high-resolution low altitude drone magnetic survey. A total of 160.82 km linear was flew on the entire Property from September 26 to 29 and November 19 in 2018. Anomalies that may be associated to similar geological and structural context as Beaufor were identified and further interpretation before additional exploration work is recommended.

6.7 Property Production and Reconciliation

The information provided in this section was taken from the previous MRE (2020 MRE) produced by Pelletier and Langton (2020).

The total production for the Beaufor Division Property, which includes the Beaufor Mine (1939 to 2019) and the former Perron Mine (1933 to 1951), is presented in the Table 6-3. The mines are located on the Perron, Pascalis and Beaufor properties and have produced approximately 5.1 Mt of mineralized material at an average grade of 7.3 g/t Au for 1.2 Moz gold.

The Beaufor mineralized material has been processed at the Camflo Mill since 1994. The mill is located approximately 50 km west of the mine and approximately 8 km east of the Town of Malartic. The Camflo Mill had crushing and grinding circuits as well as a Merrill-Crow concentrating circuit that uses cyanidation and zinc powder precipitation for gold recovery. The mill capacity was 1,600 tpd. Gold recovery was approximately 98%. The mill was also permitted for custom milling and was therefore subject to redistribution of gold ounces between mill clients (Pelletier et al., 2017).

Table 6-3: Past production on Perron, Beaufor and Pascalis Properties

Mine (years)	Operator	Property	Tonnes	Grade (Au g/t)	Gold Ounce
Perron (1933-1951)	Perron Gold Mines Limited	Perron	1,605,428	8.48	437,511
Beaufor (1939-1942)	Cournor Mining Company Limited	Beaufor	161,287	7.01	36,342
Pascalis (1984-1987)	Société Minière Louvem Inc.	Pascalis	54,450	6.91	12,097
Beaufor (1989-2000)	Aurizon Mines Limited	Perron/Pascalis/Beaufor	777,145	8.26	206,289
Beaufor (2002-2017/09)	Richmont Mines Inc.	Perron/Pascalis/Beaufor	2,339,521	6.52	490,578
Beaufor (2017/10 to 2019/06)	Monarch Gold Corporation	Perron/Pascalis/Beaufor	194,606	4.55	28,467
Total:			**5,132,437**	**7.34**	**1,211,284**

The mine to mill (mine-mill) reconciliation at Beaufor Mine consists of comparing grade and tonnage at different key points/areas in the process with respect to production (mine), mill belt and mill results (calculated mill head grade).

The accuracy of the reconciliation (grade and tonnage) depends on many estimation points and sources of error, such as the sampling protocol (representativity, quality of samples), the tonnage of mucked-out stopes, the tonnage of surveyed development, the weighted tonnage of transported mineralized material, the weighted tonnage of milled tonnes, and as the mill has custom milling, the redistribution of gold ounces between the mill and the clients can also be a source of error.

Mine-mill reconciliation is based on muck samples and has used the same sampling protocols for decades. The muck sampling procedure (i.e.: the quantity and volume of the samples) varies according to the excavation method.

Given the nuggety nature of the deposit and the wide range of grades between the different zones of the mine, as well as the current sampling protocols, small estimation errors on all of the above can lead to appreciable variations in the final hoisted grade.

Table 6-4 presents the source material for mine-mill reconciliation from the end of 2017 to July 2019 (the end of production from Monarch Gold).

From this table, it can be concluded that mine-mill reconciliation is rarely achievable on a monthly basis and can only be achieved on a quarterly (Table 6-5) or more of cumulative production basis. During the period from October 2017 to July 2019, reconciliation was +/-15%, which is considered acceptable in nuggety gold deposits. Before being trucked to the Camflo Mill (October 2017 to July 2019 period), mineralized material was sampled by underground miners (mine tonnes and grades). At the mill, samples of the mill feed were collected on the main conveyor (belt grade) before entering the rod mill. The calculated head grade was the final calculated mill grade that was compared to the mine grade.

Table 6-4: Monthly mine to mill reconciliation

Month - Year	Mine tonnes	Mine grade (g/t Au)	Mill tonnes	Belt grade (g/t Au)	Calc. head grade (g/t Au)	Rec. grade (g/t Au)	Gold rec. (%)	Ounces of gold produced	Mine grade vs Mill grade (%)
Oct-17	11,167	5.26	10,485	4.05	4.80	4.73	98.56	1,595	-10
Nov-17	12,185	5.62	11,043	3.77	4.28	4.20	98.27	1,492	-31
Dec-17	12,728	6.06	13,477	4.56	5.58	5.53	99.01	2,395	-9
Jan-18	7,716	6.39	8,460	5.97	4.88	4.83	99.07	1,314	-31
Feb-18	12,004	6.33	11,767	4.92	5.40	5.35	99.00	2,024	-17
Mar-18	11,638	4.56	12,639	3.80	3.97	3.92	98.67	1,593	-15
Apr-18	9,431	4.65	-	-	-	-	-	-	-
May-18	8,361	5.34	15,342	4.24	4.32	4.26	98.60	2,099	-24
Jun-18	13,534	4.85	15,181	4.86	5.45	5.39	98.80	2,629	11
Jul-18	9,985	4.54	10,426	3.77	3.58	3.50	97.92	1,173	-27
Aug-18	8,433	5.24	6,953	4.68	4.03	3.97	98.50	887	-30
Sep-18	10,806	4.79	11,996	4.64	4.90	4.79	97.79	1,847	2
Oct-18	10,174	6.20	4,773	5.21	3.80	3.69	97.24	567	-63
Nov-18	9,356	5.78	9,885	5.84	4.81	4.72	98.25	1,501	-20
Dec-18	5,091	6.38	11,421	4.64	6.47	6.40	98.96	2,350	1
Jan-19	4,593	5.46	-	-	-	-	-	-	-
Feb-19	6,437	5.36	3,094	3.85	6.04	5.94	98.41	591	11
Mar-19	7,255	5.25	10,016	3.50	2.91	2.83	97.37	912	-80
Apr-19	8,219	4.33	12,476	3.10	3.79	3.74	98.64	1,499	-14
May-19	7,073	4.57	7,141	2.60	3.30	3.23	97.82	742	-38
Jun-19	4,833	5.17	7,244	5.42	5.05	4.96	98.30	1,155	-2
Jul-19	-	-	787	5.58	5.56	5.29	95.17	134	100
Total	**191,019**	**5.33**	**194,606**	**4.38**	**4.63**	**4.56**	**98.4**	**28,467**	**15**

Table 6-5: Quarterly mine to mill reconciliation

Month - Year	Mine tonnes	Mine grade (g/t Au)	Mill tonnes	Belt grade (g/t Au)	Calc. head grade (g/t Au)	Rec. grade (g/t Au)	Gold rec. (%)	Ounces of gold produced	Mine grade vs Mill grade (%)
2017-Q4	36,080	5.66	35,005	4.16	4.94	4.87	0.99	5,481	15
2018-Q1	31,358	5.69	32,866	4.76	4.72	4.67	0.99	4,932	21
2018-Q2	31,326	4.92	30,523	4.55	4.88	4.82	0.99	4,696	1
2018-Q3	29,224	4.83	29,375	4.34	4.22	4.14	0.98	3,908	14
2018-Q4	24,621	6.08	26,079	5.20	5.35	5.27	0.98	4,417	14
2019-Q1	18,285	5.34	13,110	3.59	3.65	3.57	0.98	1,504	46
2019-Q2*	20,125	4.62	27,648	3.65	4.04	3.97	0.98	3,530	14

* 2019-Q2 includes July, the last month of production before the mine was put under care and maintenance.

6.8 Monarch Mining Corporation (2020)

Following the agreement between Yamana Gold Inc. and Monarch Gold, Monarch Mining Corporation (Monarch) published an updated Mineral Resource Estimate (2020 MRE) (Pelletier and Langton, 2020).

The database used for the 2020 MRE contained 10,009 DDH, including 178,242 assays and lithological information, for a total of 63 distinct mineralized zones. The estimation method was polygonal on longitudinal with additional data from cross-sections.

The parameters used for the 2020 Estimate are shown in Table 6-6.

Measured and Indicated categories material totalled 431,000 tonnes at an average grade of 6.68 g/t Au, for 92,700 oz; the Inferred category material totalled 134,600 tonnes at an average grade of 6.96 g/t Au, for 30,100 oz.

These "Resources" are historical in nature and should not be relied upon. The qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves. Although they were most likely prepared using the CIM Definition Standards and Best Practice Guidelines that were in effect at that time and most likely disclosed according to the current NI 43-101 Standard, their relevance and reliability have not been verified. They are included in this section for illustrative purposes only and the issuer is not treating the historical estimate as current mineral resources.

Table 6-6: Parameters used for the 2020 MRE

Parameter	Value
Exchange rate ($US:$C)	1.00:1.34
Price of gold ($US:$C)	1,612:2,160
Capping* value for high-grade (*used raw assay values)	68.5 g/t Au for zones 8, B, M, M1 and Q, whereas all other zones were capped at 34.25 g/t Au and drill hole intersections were capped at 16.5 g/t over 2.40 m
Cut-off grade for stopes	2.50 g/t Au for long-hole and 3.20 g/t Au for room-and-pillar
Specific gravity	2.75 t/m^3
Minimum mining width	2.40 m
Polygons for Measured category material	Extend 8 m above and below development and up to 10 m laterally
Polygons for Indicated category material	Do not extend more than 20 m from drill hole intercepts, along dip and along strike
Polygons for Inferred category material	Do not extend more than 40 m from drill hole intercepts, along dip and along strike

7. GEOLOGICAL SETTING AND MINERALIZATION

7.1 Abitibi Greenstone Belt

The following description of the Abitibi Greenstone Belt (AGB) is mostly modified and summarized from Monecke et al. (2017) and references therein.

The Neoarchean AGB forms the northeastern portion of the Abitibi-Wawa Subprovince in the southeastern portion of the Superior Province (Figure 7-1). The southern Superior Province consists of a collage of E-trending Mesoarchean to Neoarchean terranes that underwent a complex history of aggregation between 2720 and 2680 Ma (Percival, 2007). To the north, the AGB is bounded by the Opatica Subprovince (Figure 7-1), a high-grade metamorphic terrain that consists of tonalite, granodiorite, and granite intrusions, with minor outcrop areas of volcanic and sedimentary rocks (Benn et al., 1992; Sawyer and Benn, 1993; Davis et al., 1994). Geophysical constraints indicate that rocks of the Opatica Subprovince structurally underlie the supracrustal rocks of the AGB (Benn and Moyen, 2008).

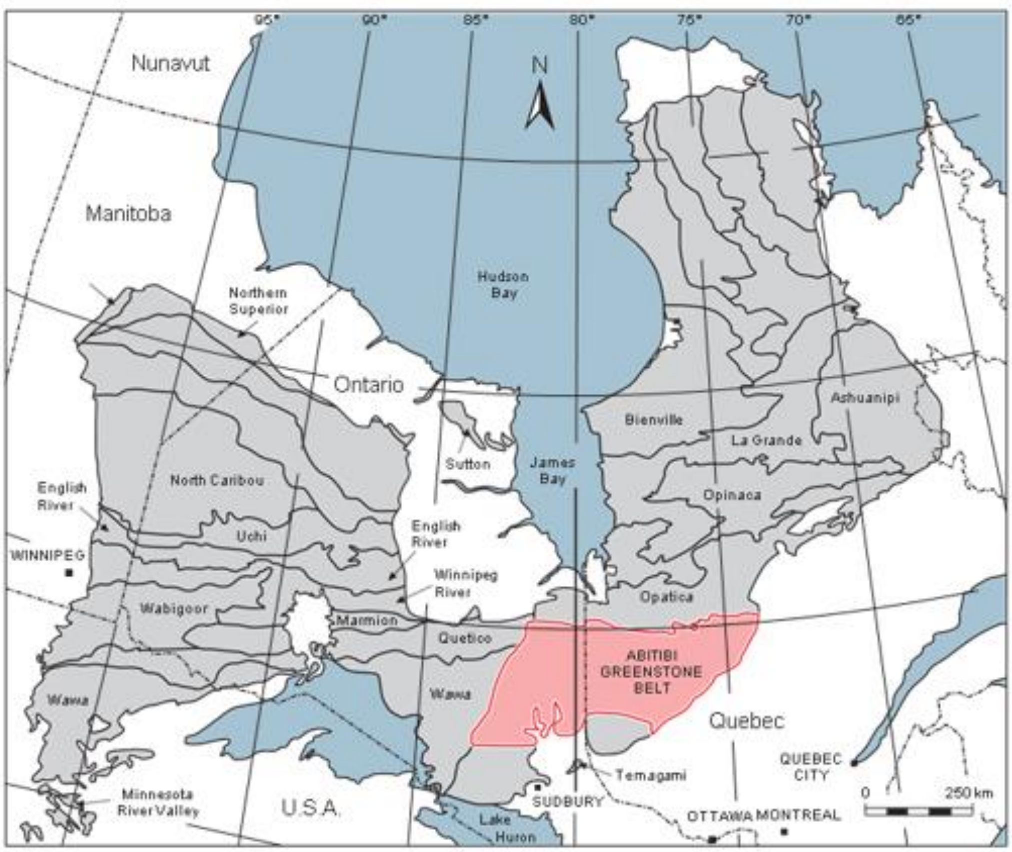


Figure 7-1: Location of the Abitibi Greenstone Belt within the Superior Province Subdivision of Superior Province from Thurston et al. (2008) and Stott et al. (2010); modified from Monecke et al. (2017)

To the east and southeast, the AGB is truncated by the Mesoproterozoic Grenville front tectonic zone, which is a southeasterly dipping zone of thrusts that juxtapose granulite facies metamorphic rocks with low-grade of the AGB (Indares and Martignole, 1989; Daigneault et al., 1990; Culshaw et al., 1997; Ludden and Hynes, 2000). To the southeast, the AGB is bounded by the Pontiac Subprovince (Figure 7-2). Structural studies along the Abitibi-Pontiac contact indicate that the AGB was thrust over the Pontiac Subprovince from the north (Camiré and Burg, 1993; Benn et al., 1994; Daigneault et al., 2002; Bedeaux et al., 2017). To the west, the AGB is interrupted by the 500-km-long NNE-trending Kapuskasing structural zone that exposes granulite facies metamorphic rocks (Percival and West, 1994). The Kapuskasing structural zone is a W-dipping thrust of Paleoproterozoic age along which Archean lower continental crust was upthrust (Percival et al., 1989). The uppermost part of the stratigraphy of the Wawa Greenstone Belt (Williams et al., 1991) to the west of the Kapuskasing structural zone is correlative with the AGB to the east (Percival and Card, 1983; Ayer et al., 2010).

The AGB comprises E-trending successions of folded and faulted volcanic and sedimentary rocks and intervening domes of intrusive rocks (Daigneault et al., 2004; Goutier and Melançon, 2007; Thurston et al., 2008; Ayer and Chartrand, 2011). The volcanic successions in the AGB typically have a steep dip and commonly young away from major intervening domes of intrusive rock (Thurston et al., 2008). Submarine mafic volcanic rocks prevail, forming approximately 90% of the outcrop area. Felsic volcanic rocks account for most of the remainder (Goodwin and Ridler, 1970; Goodwin, 1977; Hannington et al., 1999), with komatiites forming a small but important part of many of the volcanic successions (Imreh, 1984; Sproule et al., 2002; Houlé and Lesher, 2011; Dostal and Mueller, 2013).

An important geologic feature of the AGB is the occurrence of major, E-trending ductile-brittle fault zones. These zones cut across the entire belt from the Kapuskasing structural zone in the west to the Grenville front in the east, dividing the supracrustal rocks and intervening domes into distinct lozenge-shaped domains. The two most important fault zones in the southern AGB are Destor-Porcupine Fault Zone (DPFZ) in the north and Larder Lake-Cadillac Fault Zone (LLCFZ) in the south (Figure 7-2). These faults are subvertical (70°-90°) and dip either to the north or the south. They have highly variable widths, ranging from tens to hundreds of metres (Poulsen, 2017), and are generally marked by intense ductile-brittle deformation and penetrative fabric development. Most geologists agree that the fault zones are long-lived structures that controlled sedimentation and volcanism in the AGB since at least 2679 Ma. (Dimroth et al., 1982; Mueller et al., 1991, 1994; Cameron, 1993; Mueller and Corcoran, 1998; Daigneault et al. 2002; Bleeker, 2012).

According to Monecke et al. (2017 and references therein), the AGB is subdivided into eight discrete stratigraphic episodes or assemblages, depending on the authors (Figure 7-2), based on groupings of U-Pb zircon ages. Submarine volcanism mostly occurred between 2750 and 2695 Ma and was followed by sedimentation in large deep basins and then by large-scale thin-skin folding and thrusting. New U-Pb zircon ages and recent mapping by the Ontario Geological Survey and *Géologie Québec* clearly shows similarity in timing of volcanic episodes and ages of plutonic activity between the northern and southern AGB. Two ages of unconformable sedimentary basins are recognized: early, widely and laterally extensive distributed Porcupine-style basins of fine-grained clastic rocks (turbidites), followed by Timiskaming-style basins of coarser aerial clastic and minor volcanic rocks, which are largely proximal to major faults where strike-slip movements occurred (Thurston and Chivers, 1990; Mueller et al., 1992; Ayer et al., 2002; Goutier and Melançon, 2007).

These assemblages spans over 50 Ma and are listed below from oldest to youngest:

- Pacaud Assemblage (2750-2735 Ma);
- Deloro Assemblage (2734-2724 Ma);
- Stoughton-Roquemaure Assemblage (2723-2720 Ma);
- Kidd-Munro Assemblage (2720-2710 Ma);
- Tisdale Assemblage (2710-2704 Ma);
- Blake River Assemblage (2704-2695 Ma);
- Porcupine Assemblage (<2690-2685 Ma);
- Timiskaming Assemblage (<2679-2669 Ma).

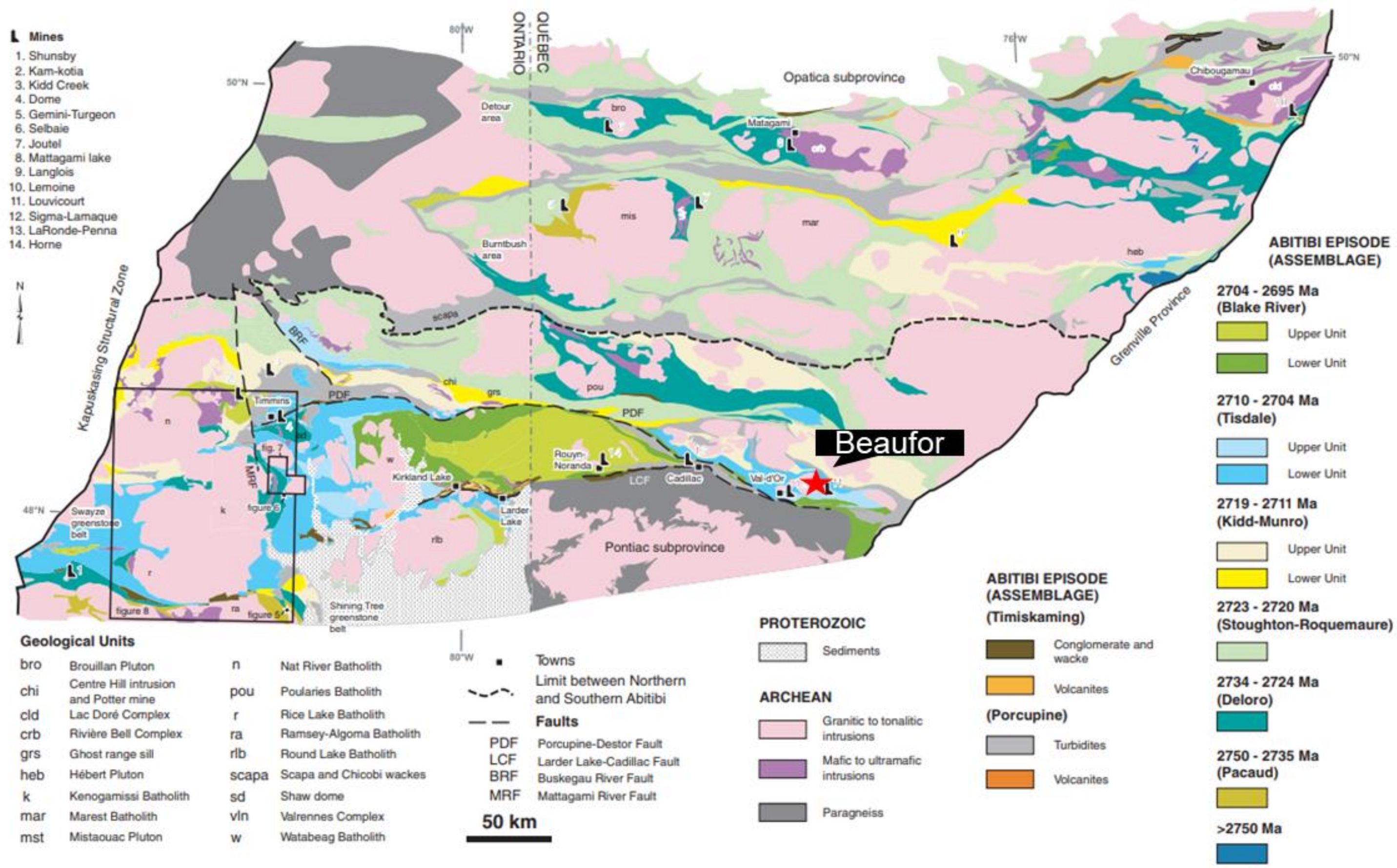


Figure 7-2: Stratigraphic map of the Abitibi greenstone belt with the location of the Beaufor Property (Modified from Thurston et al. (2008))

Volcanic rocks older than 2750 Ma locally are found in the AGB, as indicated by recent studies southwest of Chibougamau, where 2795 to 2759 Ma volcanic rocks were mapped (Mortensen, 1993; Bandyayera et al., 2004; Davis and Dion, 2010; Leclerc et al., 2011, 2012)

In the southern Abitibi Greenstone Belt, the ≤2690 to ≤2685 Ma Porcupine assemblage consists of flysch-like deposits that records sedimentation in a deep submarine environment (Rocheleau, 1980; Lajoie and Ludden, 1984; Stone, 1990; Born, 1995; Frieman et al., 2017). The Porcupine assemblage locally includes minor calc-alkaline volcanic rocks (i.e., the Krist Formation in the Timmins area; Ayer et al., 2002b). The ≤2679 to ≤2669 Ma Timiskaming assemblage in the southern AGB is characterized by molasse-like clastic rocks deposited in a terrestrial setting (Hewitt, 1963; Dimroth and Rocheleau, 1979; Hyde, 1980; Rocheleau, 1980; Mueller et al., 1991, 1994; Legault and Hattori, 1994; Born, 1995). The clastic deposits of this assemblage are locally intercalated with predominately alkaline volcanic rocks (Cooke and Moorhouse, 1969; Mueller et al., 1994; Wilkinson et al., 1999; Ispolatov et al., 2008).

The supracrustal rocks of the AGB are intruded by plutons of variable compositions and sizes. Depending on emplacement age, several groups of plutons can be distinguished (Rive et al., 1990; Feng and Kerrich, 1992a, 1992b; Sutcliffe et al., 1993; Mueller et al., 1995; Chown et al., 2002; Beakhouse, 2011). Pre-2695 Ma intrusions in the southern AGB are commonly tonalitic to granodioritic composition and their ages overlap with those of supracrustal rocks. The intrusions are weakly to well foliated and complexly deformed, suggesting that they were folded together with volcanic host-rock successions (Beakhouse, 2011). Pre-2695 Ma mafic to ultramafic intrusions are found throughout the southern AGB. Many of these intrusions form sills or lenticular units that crosscut stratigraphy at a low angle. Compositionally, the intrusions range from peridotite to gabbro and diorite. A large number of intrusions in the southern AGB range in age 2695 to 2660 Ma, which broadly corresponds to the timing of sedimentation in the Porcupine and Timiskaming successor basins. Intrusions of this age range are typically of grandioritic to granitic and dioritic to quartz monzodioritic composition. Post 2660 Ma intrusions of granitic or granodioritic compositions are rare in the southern AGB and mostly form part of large, multiphase batholithic complexes (Beakhouse, 2011).

Three large intrusions are found within the local stratigraphy:

1. The Bourlamaque Batholith (Campiglio, 1977), a coarse-grained quartz-diorite synvolcanic (2700 ±1 Ma (Wong et al., 1991); 2706 ± 3 Ma (Goutier et al., 1994); 2704.7 ± 0.8 Ma (David, 2019, 2020)) intrusive of transitional affinity, which is interpreted to be the magma chamber that fed the Val-d'Or Formation volcanism.
2. The Bevcon pluton, a similar but higher level and more differentiated medium- to fine-grained tonalite of transitional affinity.
3. The East Sullivan stock, a postkinematic (2684 ±1 Ma) alkaline composite monzonitic stock (Taner, 1996).

The greenstone belt is affected by a widespread greenschist facies metamorphism (Jolly, 1978; Powell et al., 1993; Dimroth et al., 1983; Benn et al., 1994). The grade of metamorphism increases to amphibolite at the fringes of some plutons and approaching the Pontiac and Opatica Subprovinces or the Grenville front tectonic zone.

7.2 Regional Geology

The southern Abitibi Greenstone Belt in the Beaufor Mine Project area consists of 2714–2700 Ma volcano-plutonic assemblages, including the Malartic and Louvicourt groups, intruded by calc-alkaline plutonic rocks (Figure 7-3). The Malartic Group comprises mainly komatiitic and tholeiitic basalt flows and sills, with minor sedimentary rocks, which are interpreted as an oceanic floor in an extensional environment related to mantle plumes, whereas the Louvicourt Group is mainly composed of mafic to felsic volcanic rocks that formed in a subduction-related arc setting (Desrochers et al. 1993; Daigneault et al. 2002; Scott et al. 2002).

The volcanic and structural architecture of the Val-d'Or mining camp is intruded by two vast batholiths, the Bourlamaque and La Corne batholiths, as well as several other smaller satellite intrusions.

The following description of the Beaufor Mine area geology is mostly modified and summarized from Champagne et al. (2002), Champagne (2004), Scott et al. (2002), Olivo and Williams-Jones, (2002), Scott (2005), Pilote et al. (1998a, 1998b, 1999, 2014a, 2014b, 2015a, 2015b, 2015c), Pilote (2015a, 2015b), Monecke et al., 2017, and references therein.

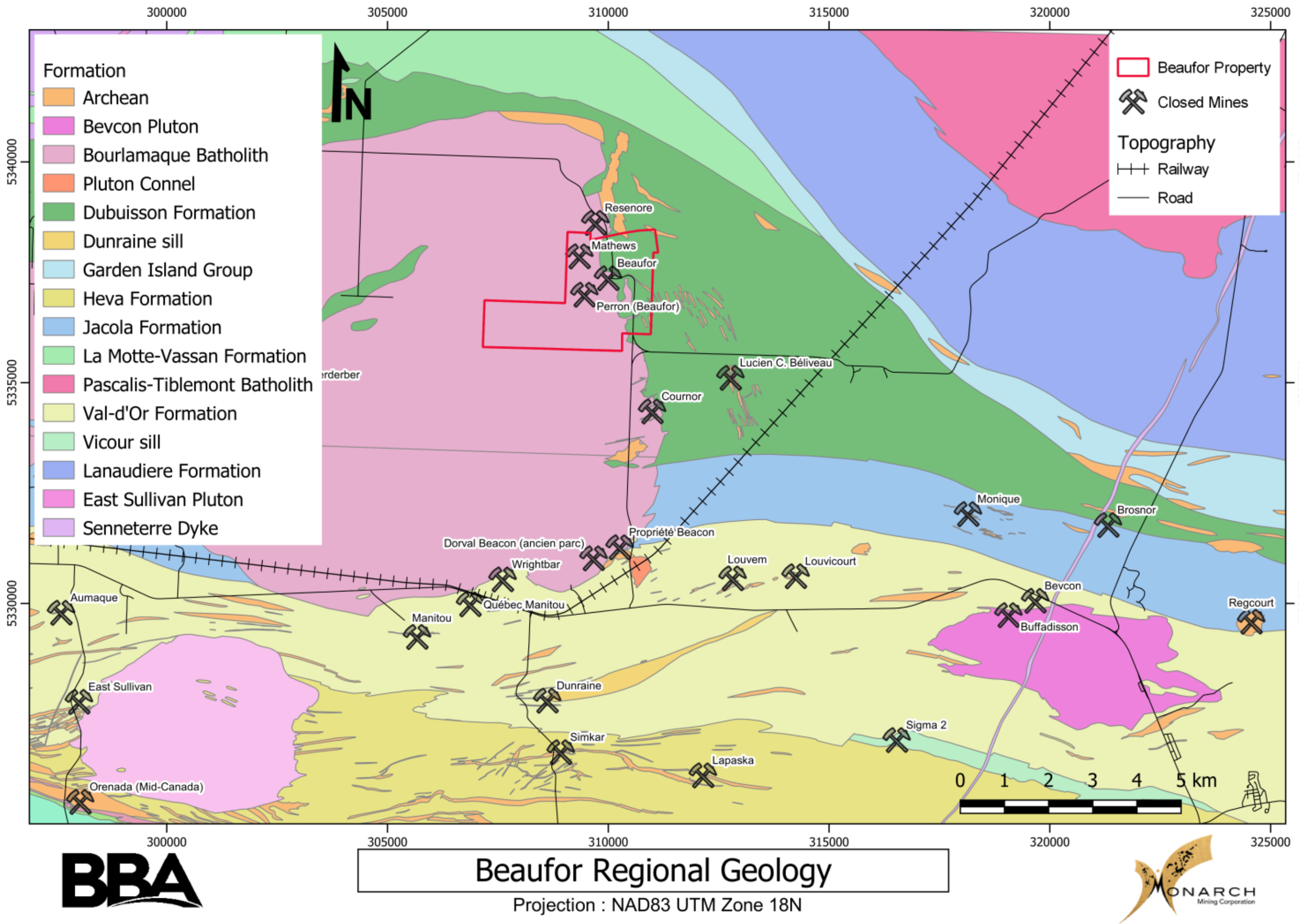


Figure 7-3: Beaufor regional geology with historic mines (Adapted and modified from Pilote (2013, 2015a, 2015b))

7.2.1 Stratigraphy

Stratigraphic concepts were used to subdivide the E-Trending successions of folded and faulted volcanic rocks from the AGB into formally named rock units Stratigraphic criteria have been successfully applied in mapping individual mining camp from the AGB. However, stratigraphic correlation at the larger scale across and between mining camps is hampered by the fact that boundaries between lithostratigraphic units of higher rank are often structural in nature. In addition, the glacial cover is extensive in some areas, further complicating stratigraphic correlation.

The AGB in the Val-d'Or–Malartic region has been divided into two stratigraphic groups based on regional tectonics and volcano-sedimentary stratigraphy: the basal Malartic Group comprising the La Motte-Vassan (LVF), Dubuisson (DF) and Jacola Formations (JF), and the upper Louvicourt Group comprising the Val-d'Or (VDF) and Héva Formations (HF).

Originally, the volcanic rocks in the Val-d'Or–Malartic region were assigned to the Malartic Group (Gunning and Ambrose, 1940). Latulippe (1976) revised the stratigraphic nomenclature and distinguished a Lower and Upper Malartic Group. According this stratigraphic nomenclature, the La Motte-Vassan and Dubuisson Formations form the Lower Malartic Group, whereas the Jacola, Héva, and Val-d'Or Formations represent the Upper Malartic Group. Based on a subsequent revision of the stratigraphic nomenclature by Scott et al. (2002), the Malartic Group today encompasses the La Motte-Vassan, Dubuisson, and Jacola Formations. Scott et al. (2002) added the Louvicourt Group in the recent stratigraphic nomenclature, which was further divided into the Héva and Val-d'Or formations.

7.2.1.1 Pontiac Group (PO)

The Pontiac Group (PO) covers the sector to the south of the LLCFZ. The PO, located only in the Pontiac Subprovince, consists of turbiditic units (mostly greywacke and siltstone) with rare monomict conglomerate intercalations intruded by thin ultramafic units (Dimroth et al., 1982; Goulet, 1978, Ludden and Hubert, 1986). It is interpreted as an accretionary prism created by the subduction of the Pontiac Subprovince under the Abitibi Subprovince (Camiré and Burg, 1993; Card, 1990; Davis, 2002). It is contemporaneous with the Cadillac Group with a maximum age between 2682 Ma and 2685 Ma (Davis, 2002; Mortensen, 1993). The sedimentary strata of the Pontiac and Cadillac groups are interpreted as synorogenic flysch-type assemblages (Mueller et al., 1996; Daigneault et al., 2002), whereas Dimroth et al. (1982) considered the Pontiac Group to have been deposited in a foreland belt.

7.2.1.2 Piché Group (PG)

The Piché Group (PG), at the contact between the Cadillac and Pontiac sedimentary successions, forms a relatively narrow (<2 km) band that marks the trace of the LLCFZ (Latulippe, 1976; Dimroth et al., 1982; Doucet and Lafrance, 2005). The LLCFZ was then delimited (Ambrose, 1944; Gunning, 1937; Gunning and Ambrose, 1940) based on the presence of talc-schist and chlorite-schist correlated to the PG. The PG consists mainly of highly strained and metamorphosed volcanic rocks (tholeiitic basalts, porphyritic andesites, calc-alkaline tuffs, and komatiites) crosscut by felsic to mafic dikes and sills (Latulippe, 1976; Dimroth et al., 1982; Imreh, 1984; Landry, 1991; Beaudoin and Trudel, 1989). However, it has since been shown that the rocks of the LLCFZ were not uniformly affected due to heterogeneities in the distribution and intensity of deformation. Primary textures, such as spinifex and cumulates, have been preserved in areas where deformation is less intense. These less deformed rocks are typically discontinuous and encompassed by bands of schists. Latulippe (1976) proposed that the Piché Group be considered as a lithostratigraphic unit, whereas Imreh (1984) proposed that the Piché Group be considered as a discordant unit.

The minimal age for the PG is constrained by a U-Pb age of 2708.8 ±1.0 Ma obtained from a tonalite dike that cuts the ultramafic units of the Buckshot pit near the Canadian Malartic deposit (David et al., 2018).

7.2.1.3 Cadillac Group (CG)

The Cadillac Group (CG) (Figure 7-11) crops out extensively immediately to the north of the LLCFZ, stretching from Rouyn Noranda in the west (Dimroth et al., 1982; Rocheleau, 1980) to Louvicourt (Figure 7-4) in the east (Pilote, 2015a). The CG (≤2687 Ma; Davis, 2002) consists of sedimentary rocks including greywacke, pelitic schists, polymictic conglomerates, and iron formations (Trudel et al., 1992). Daigneault et al. (2002) proposed that the sedimentary rocks of the Cadillac Group represent an extensive volcano-sedimentary apron sequence that straddles the LLCFZ.

The CG is a flysch-type sedimentary basin that rests unconformably over volcanic assemblages (Mueller and Donaldson, 1992). The CG is a 150 km by 5 km basin located along the LLCFZ to the north. The group is interpreted to be a lateral equivalent of the Porcupine Group in Ontario (Ayer et al., 2002a; Thurston et al., 2008).

The sedimentary basin pinches out to a 100 m thick southeast of the East Sullivan pluton (Figure 7-4). It is mostly composed of turbiditic sedimentary rocks with rare local interlayering of polymictic conglomerates. The CG is identified based on its distinctive banded iron formations (Dimroth et al., 1982). Deposition ages for sediments are estimated at 2687 Ma ±3 (Davis, 2002).

7.2.1.4 Louvicourt Group (LG)

The Louvicourt Group (LG) is divided into the Héva (HF) and Val-d'Or Formations (VDF) (Scott et al., 2002).

Héva Formation (HF)

The Héva Formation (HF) can be as thick as 2.5 km and is composed of laterally extensive massive to pillowed basalt flows, gabbroic sills and dikes, and minor felsic to mafic volcaniclastic deposits (Scott et al., 2002). Volcaniclastic units are characterized by coarse or fine tuff horizons with millimetre-scale laminations, intruded by gabbro. The volcanic rocks of the HF have a U-Pb age of 2702 ±2 Ma (Scott et al., 2002). The HF belongs to the Blake River assemblage.

Val-d'Or Formation (VDF)

The Val-d'Or Formation (VDF) has a stratigraphic thickness of 3 km to 5 km and is dominated by massive to pillowed andesitic to rhyolitic lavas and associated volcaniclastic deposits. Diorite intrusions represent a minor component. Andesites form up to 1-km-thick and 9-km-long amalgamed flow units. Individual flow can be as thick as 80 m. The flows are intercalated with amalgamated volcaniclastic beds 5 m to 40 m thick. The pillows exhibit a variety of forms, from strongly amoeboid to lobed. Felsic lavas are laterally more restricted, but can be traced for 1 km to 3 km along strike. Volcaniclastic units reach up to 40 m in thickness. The volcaniclastic beds are composed of lapilli tuff, lapilli and blocks tuffs, and, to a lesser extent, fine to coarse tuffs. The VDF yielded a U-Pb age of 2704 ±2 Ma (Scott et al., 2002). The VDF belongs to the Blake River assemblage.

7.2.1.5 Malartic Group (MG)

The Malartic Group (MG) encompasses the La Motte-Vassan (LVF), Dubuisson (DF), and Jacola Formations (JF) (Scott et al.,2002).

Jacola Formation (JF)

The Jacola Formation (JF) has an apparent stratigraphic thickness of 1 km to 2 km and consists of basalts and komatiites. Basaltic flows are typically non-vesicular, ranging from massive to pillowed, and sometimes are in the form of flow breccias. Mafic volcaniclastic deposits, primarily formed by quench fragmentation, are locally abundant. Individual basalt units can be traced for distances of up to 5 km along strike. Individual komatiite units reach thicknesses of 100 m to 200 m and range from massive to pillowed. Occasionally, spinifex-textured komatiite flows can be observed. The top of the JF has a U-Pb age of 2703.8 ±1.3 Ma (Scott et al., 2002). The JF belongs to the Tisdale assemblage.

Dubuisson Formation (DF)

The Dubuisson Formation (DF) (2708 ±2 Ma) consists mainly of pillowed and massive basalt with various interbedded komatiitic flows (Imreh, 1980; Pilote et al., 1999). Ultramafic and mafic flows are similar to those described in the LVF but in different proportions. The DF belongs to the Tisdale assemblage.

La Motte-Vassan Formation (LVF)

The La Motte-Vassan Formation (LVF) crops out on the north side of Lac De Montigny. Komatiites occur as sheet and tube-shaped flows that are intercalated with pillowed or massive basalt flows (Latulippe, 1976; Imreh, 1984, Pilote et al., 2009). Komatiites are more abundant than basalts (Imreh, 1980). A well-exposed example of spinifex-textured komatiite flow of the Kidd-Munro assemblage is located at Spinifex Ridge north of Rivière-Héva (Champagne et al., 2002; Champagne, 2004; Houlé et al., 2017). The komatiite succession at Spinifex Ridge is interpreted to be age-equivalent to the 2714 ±2 Ma komatiite succession of the LVF at Marbridge Ni deposit to the southwest (Pilote et al., 2009; Houlé et al., 2017).

The age of the LVF (2714 ±2 Ma) suggests it may be contemporaneous with the upper part of the Kidd-Munro Assemblage (Figure 7-1). The LVF consists of komatiites, tholeiitic basalts and magnesian basalts metamorphosed to amphibolite facies. The base of the sequence is mostly represented by komatiites with some minor intercalated basalt. However, a decrease in the proportion of komatiites is observed towards the top of the sequence (Imreh, 1984). Komatiites are mainly found as two morphofacies: classic sheet flows with spinifex textures or tube-shaped flows, or mega-pillows. The basalt flows are usually massive or pillowed (Imreh, 1980).

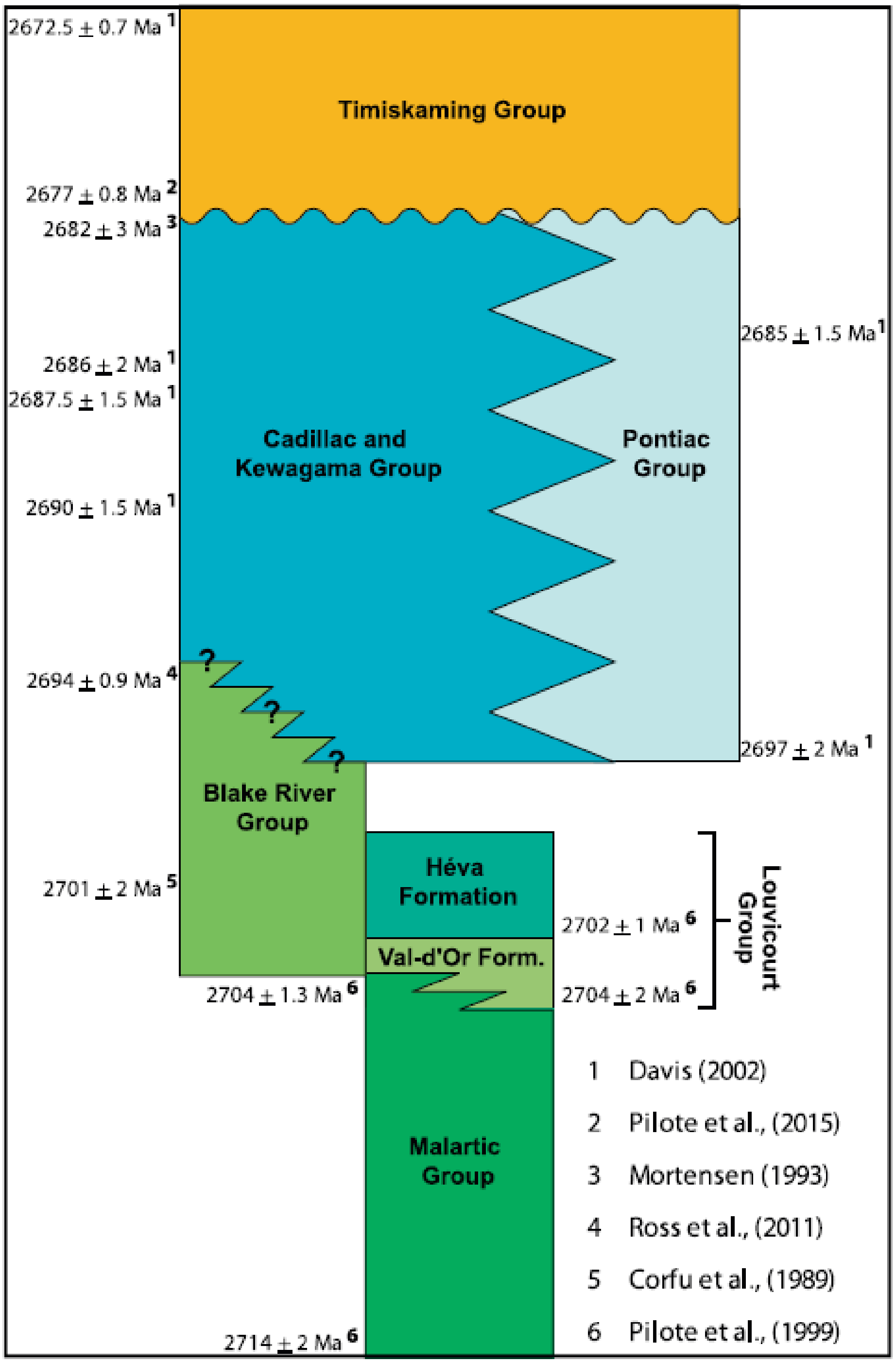


Figure 7-4: Stratigraphic chart of the area with relevant isotopic ages
Stratigraphic relationships based on Dimroth et al., (1982); Mueller et al., (1996); Scott et al., (2002); Tourigny et al., (1988). Figure from Bedeaux et al. (2017)

7.2.2 Intrusive Rocks

Pre-2695 Ma mafic to ultramafic intrusions are found throughout the southern AGB. Many of these intrusions form sills or lenticular units that crosscut stratigraphy at a low angle. Compositionally, the intrusions range from peridotite to gabbro and diorite. In the Beaufor area, the pre-2695 Ma Bourlamaque Batholith (2699 ±1 Ma; Wong et al., 1991) is a good example of synvolcanic intrusive rocks.

A large number of intrusions in the southern AGB range in age from 2695 to 2660 Ma, which broadly corresponds to the timing of sedimentation in the Porcupine and Timiskaming successor basins. Intrusions of this age range are typically of granodioritic to granitic and dioritic to quartz monzodiorite composition.

In the region, intrusions with ages between 2695–2685 Ma were emplaced immediately prior to the deposition of the Temiscaming assemblage. A number of small granodiorite, tonalite and monzonite range in age 2694 to 2685 Ma. This includes Camflo stock (Jemielita et al., 1990), Kiena porphyry dikes (Morasse et al., 1995), Lamaque stock (Jemielita et al., 1989), Norlartic dikes (Pilote et al., 1993), Sigma-Lamaque feldspar porphyry dikes (Wong et al., 1991), and Snowshoe stock (Morasse et al., 1995).

Intrusions emplaced at 2679 to 2660 Ma formed during and immediately after the deposition of the Timiskaming assemblage. Several small monzonite intrusions from the Malartic area yielded U-Pb zircon and titanite ages of ~2678 Ma (De Souza et al., 2017).

Post-2660 Ma intrusions of granitic or granodioritic compositions are rare in the southern AGB and mostly form part of large, multiphase batholithic complexes (Beakhouse, 2011). The La Corne batholith is a good example and represents a large intrusion post-2660 Ma (Feng and Kerrich, 1991; Powell et al., 1995; Ducharme et al., 1997).

The youngest igneous activity in the area corresponds to the emplacement of Proterozoic diabase dikes that cut across the Superior Province along a NE trend.

7.2.3 Structural Elements in the Beaufor Area

Although the structural geology of individual mining camps is well established, there is no widely agreed upon model for the structural evolution and generation of structures in the southern Abitibi Greenstone Belt (Monecke et al., 2017). This is in part due to the highly variable quality of exposures, strain heterogeneity, the lack of temporal constraints and, most importantly, variable preservation of early structures in the different mining camps. Actually, the structural and tectonic evolution of the southern AGB is not yet widely accepted.

Pilote et al. (2015c) established the nomenclature for the various structural elements in the Beaufor area, as described below.

The oldest regional schistosity is S1. It is systematically subparallel to bedding, S0. Within the formations of the Malartic Group, the overall S1 trend is NW-SE. Both fabrics, S0 and S1, are coplanar and show a moderate to steep dip to the north. S1 contains the primary stretching lineation L1. In the southern and central parts of the Property, S0 and S1 are jointly folded into Z-folds, with an average axial plane of N095°/85° and generally E-W axially planar cleavage (S2). The axes of F1 and F2 folds are parallel to the plunges of the L1 stretching lineation contained in S1.

A late S3 cleavage is the product of kinking and chevron folds in highly altered units showing a strong pre-existing anisotropy. Dikes, mainly tonalite and monzonite, are deformed and affected by S2. They trend to the SE, subparallel to the trace of the La Pause Fault. In places, they exhibit a stretching lineation with a shallow westward plunge.

7.2.4 Large-scale Fault Zones

The region has a series of large-scale shear zones and related subsidiary faults trending ESE-WNW to SE-NW, subparallel to stratigraphy and dipping steeply to the north. They are, from south to north: Larder Lake-Cadillac Fault Zone (LLCFZ); Parfouru Fault (PF); Marbenite Fault (MF), Norbenite Fault (NF); Callahan Fault (CF); K Shear Zone (KSZ); and Rivière Héva Fault (RHF).

The shear zones contain dikes or stocks of monzonitic or tonalitic composition that vary widely in age (pre-, syn- or post-tectonic) and are spatially associated with gold mines (Norlartic, Marban, Kiena, Sullivan, Goldex, Siscoe, Joubi, Sigma and Lamaque). The observed diversity in the styles and ages of gold mineralization related to these large-scale shear zones demonstrates that several distinct episodes of mineralization occurred.

7.2.4.1 Larder Lake-Cadillac Fault Zone (LLCFZ)

The LLCFZ in the AGB is a first order gold-bearing structure on a province-wide scale, accounting for half of the gold production and reserves in Abitibi and more than 25% in Canada (based on data by Dubé and Gosselin, 2007). The LLCFZ is a 250-km-long, moderately to steeply dipping structure with a curvilinear trace. It dips northward or southward depending on location along its strike. A remarkable characteristic of the LLCFZ is that over much of its 250-km length it marks the contact of a persistent band of volcanic rocks, which in places is only 1 km to 100 m thick. Composed mainly of ultramafic komatiite and tholeiitic basalt, the volcanic rocks provide sharp lithologic contrasts with adjacent sedimentary units.

The LLCFZ is confined to a 200-m-wide high-strain zone containing thin, strongly deformed, but distinctive lithologic units. From north to south, these are porphyritic diorite that intrudes mafic rocks of the Malartic Group, graywacke and mudstone with lenses of conglomerate (assigned by most workers to the Cadillac Group), and felsic to ultramafic volcanic rocks of the Piché Group (Robert, 1989). The ultramafic talc-chlorite-carbonate schist of the Piché Group is compositionally a komatiitic to komatiitic basalt. Spinifex textures are locally preserved (Robert, 1990). The anomalous high strain is manifested by shape fabrics in primary lithic clasts and phenocrysts, intense schistosity, and common minor folds that result in strong transposition of layers (Robert, 1989).

Located about 17 km south of the Beaufor Property, the LLCFZ is generally oriented N110° and dips steeply to the NNE.

7.2.4.2 Parfouru Fault (PF)

The PF is an ESE-WNW shear zone that dips steeply (75°) to the north or northeast and is interpreted as an early synvolcanic structure (Daigneault, 1996; Bedeaux et al., 2017). The shear zone can reach 300 m wide and has been traced for tens of kilometres.

7.2.4.3 Rivière-Héva Fault (RHF)

The RHF is an 18-km-long ESE-WNW shear zone that dips steeply (80°) to the north or northeast (Daigneault, 1996). The shear zone can reach 300 m wide and has been traced over many kilometres. This structure corresponds to a change in metamorphic grade, from greenschist facies in the south to amphibolite in the north.

7.2.4.4 Perron Fault

The Perron Fault (Figure 7-5) is roughly the northern limit of the Beaufor Mine. It is located at the contact between the Bourlamaque Batholith and the volcanic units. The Perron Fault is seen on levels 725 and 1025 at the Beaufor Mine (Richard, 2011). The orientation of the Perron Fault is mainly between N280° to N300° and its dip is northward between 65° to 80°. The Perron Fault is a ductile deformation zone about 5-m thick characterized by intense schistosity. Quartz veins, carbonates and chlorite are also found in abundance within the deformation zone. Those quartz veins can be up to 0.5 m thick but the continuity is limited (Richard, 2011).

7.2.4.5 Central Fault

The Central Fault (Figure 7-5) is cross-cutting the totality of the deposit from west to east. In section, it seems that it limits the mineralization continuity. It is also observed on different levels at the Beaufor Mine (1250, 1500, 1750). The orientation of the fault is mainly between N068° to N093° and its dip is southward between 56° to 73° (Richard, 2011). The Central Fault corridor ranges from a couple of metres up to 40 m thick.

7.2.4.6 Beaufor Fault

The Beaufor Fault (Figure 7-5) is cross-cutting the deposit from west to east. In section, it seems that it limits numerous mineralized zones. The Beaufor Fault is seen on different levels at the Beaufor Mine (1250,1500,1750) and sub-levels. The orientation of the fault is mainly between N275° to N297°. The fault dips northward between 44° and 73°.

The Beaufor deformation corridor is 3 m to 8 m thick. A mafic dike is commonly observed in the centre of the corridor. The dominant movement of the fault is dextral strike-slip (Richard, 2011).

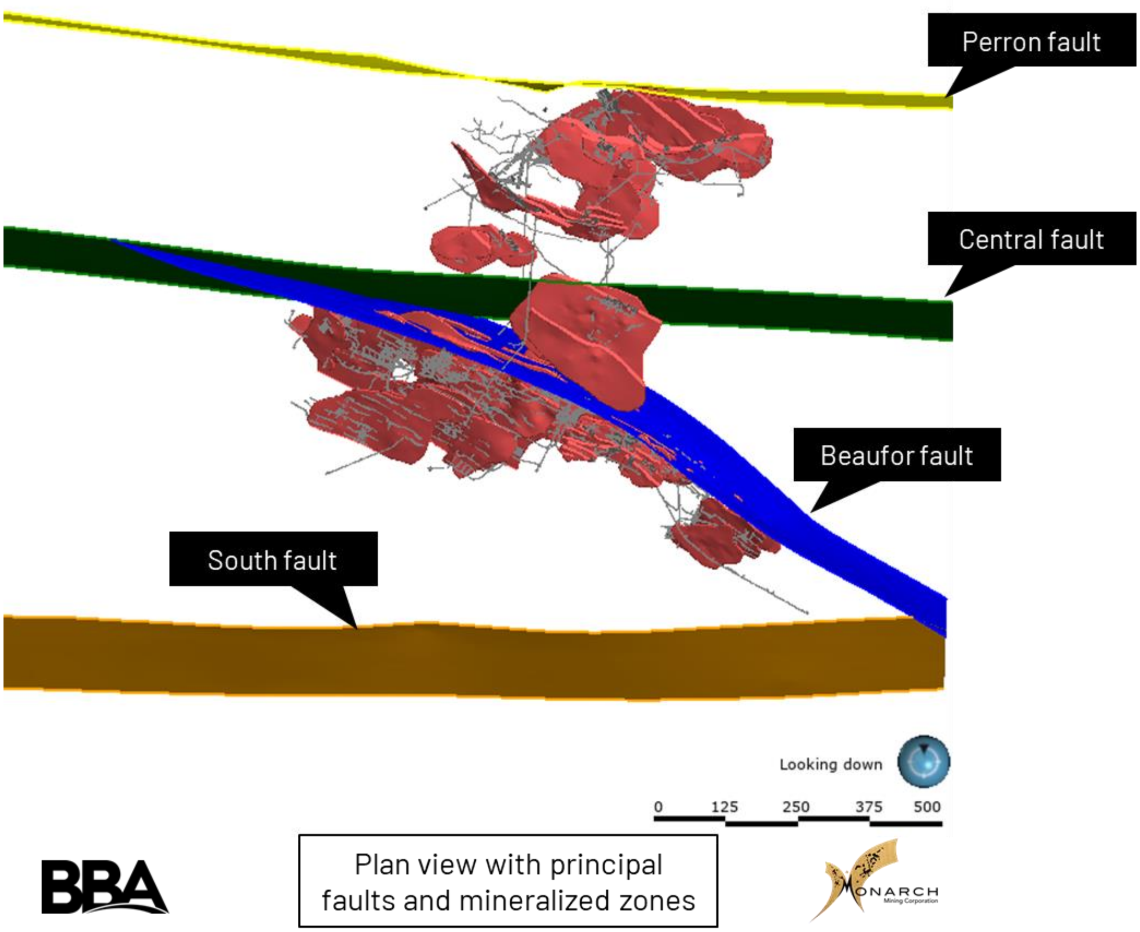


Figure 7-5: Plan view of the Beaufor Mine with the 3D modelled principal fault zones

7.3 Geology of the Beaufor Mine

The Beaufor Mine is located within the Bourlamaque Batholith at the eastern contact with the Dubuisson Formation (Figure 7-11). The Bourlamaque Batholith, a massive, circular, syn-volcanic intrusion with a diameter of approximately 12 km (at surface) is a major geological feature of the Val-d'Or mining camp. This quartziferous granodiorite batholith, intruded by fine-grained dioritic dikes, intrudes the mafic and ultramafic rocks of the Dubuisson and Jacola formations (Malartic Group), as well as the intermediate rocks of the Val-d'Or Formation (Louvicourt Group). The batholith hosts several past-producing mines, such as Belmoral, Wrightbar, Bussières (Old Cournor), Bras d'Or (Dumont) and Lac Herbin.

7.3.1 Lithologies

The principal lithologies found at the Beaufor Mine, as shown on Figure 7-11, are the following:

Granodiorite

According to Tessier (1990), the granodiorite is composed of 51% plagioclase, 24% quartz, 17% chlorite, 3% epidote, 1% carbonate, 1% hornblende, 1% opaque minerals, 1% sericite and traces of apatite, sphene, rutile and zircon. It has mostly an equigranular texture with large blue quartz eyes, especially in the unaltered zones. It is also known as the Bourlamaque Batholith (Figure 7-6).

Figure 7-6: Picture of the granodiorite unit at the Beaufor Mine

Altered granodiorite

The altered granodiorite is characterized by intense chloritization and silicification (Figure 7-7). This alteration facies brings a dark and glassy hue to the granodiorite. Most gold bearing veins are contained in 5 m to 30 m wide corridors characterized by this alteration.

Figure 7-7: Picture of the altered granodiorite unit at the Beaufor Mine

Basalt

The Beaufor basalts are tholeiitic in composition. They are mostly massive or flows belonging to the Dubuisson formation (Latulippe, 1976, Imreh, 1984). Locally, the contact zones between the basalts and the Bourlamaque Batholith are sheared and dismembered into decametric lenses of basalts (Figure 7-8).

Figure 7-8: Picture of the basalt unit at the Beaufor Mine

Mineralized Quartz+Tourmaline+Carbonate and Pyrite Veins

Gold mineralization at the Beaufor Mine occurs mainly as coarse pyrite with gold inclusions and occasionally as free gold within a complex vein system (Figure 7-9). These veins are spatially related and parallel to late dioritic dikes that cross-cut the granodiorites.

According to Tessier (1990), two main mineralization episodes have been observed at Beaufor. The first is associated to the late stages of crystallization of the Bourlamaque Batholith. This magmatic hydrothermal mineralization can be observed in sub-vertical centimetric quartz, chlorite, pyrite, chalcopyrite and molybdenite veinlets. These veinlets usually strike towards the northeast and grade below 5 g/t Au.

The second event contains most of the gold bearing veins, which have been mined to this point. These gold bearing veins are sub-metric to metric in thickness and composed of quartz, tourmaline and carbonate containing 5-10% of large cubic pyrite aggregates with occasional traces of chalcopyrite and pyrrhotite. These veins typically strike at N115° and dip south from 30° to 65°.

Figure 7-9: Picture of the mineralized quartz+tourmaline+carbonate and pyrite veins at the Beaufor Mine

Diorite

Intrinsically related to the formation of the gold bearing quartz veins, these aphanitic dikes are composed of plagioclase, carbonate, chlorite, quartz, sericite, biotite, pyrite and epidote. Some of these are magnetic and present localized feldspar phenocrysts (Figure 7-10).

Figure 7-10: Picture of the diorite unit at the Beaufor Mine

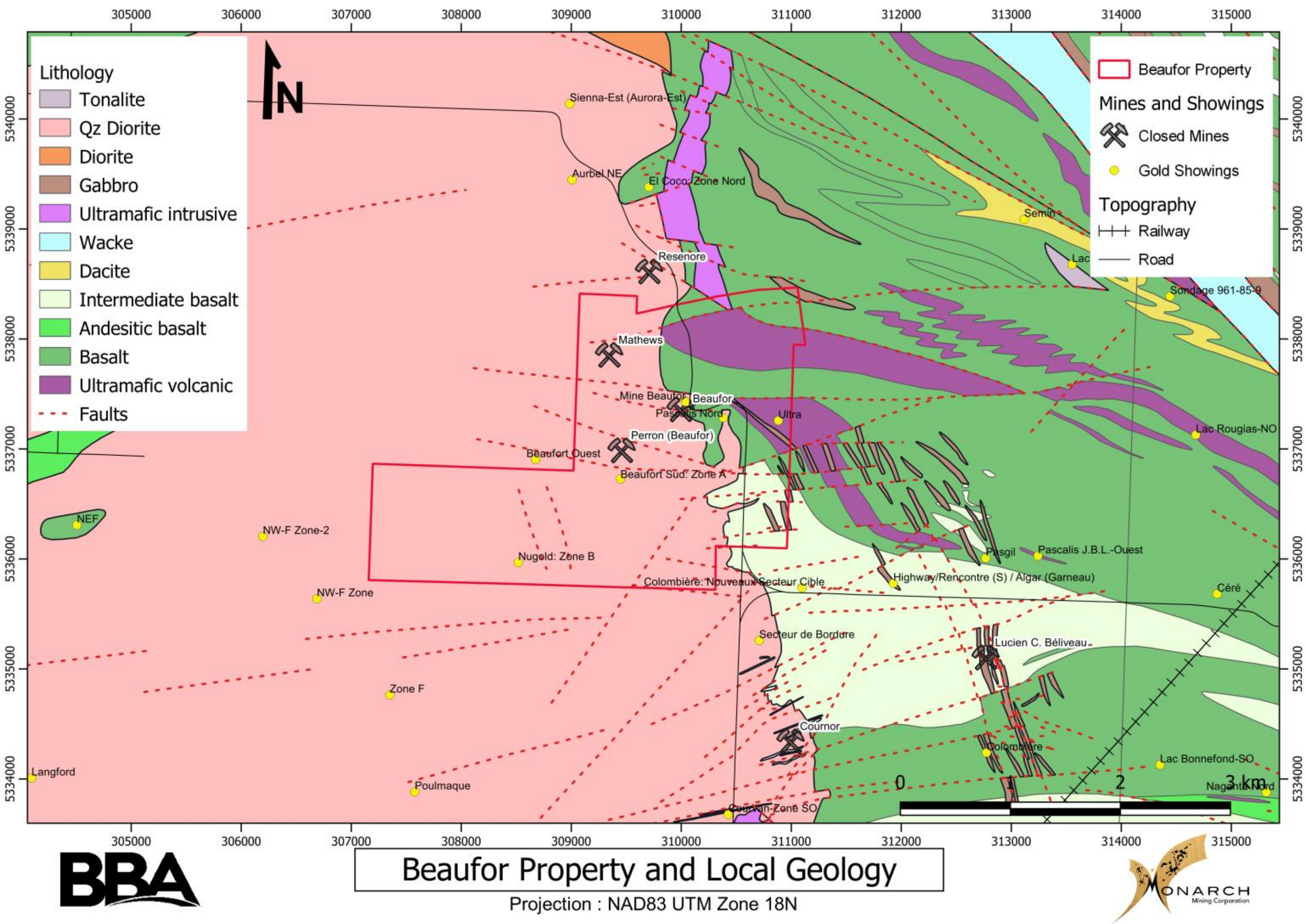


Figure 7-11: Beaufor property geology with historic mines and gold showings (Adapted and modified from Pilote (2013, 2015a, 2015b))

7.3.2 Mineralization Types

Gold mineralization occurs in quartz-tourmaline fault-fill veins associated with extension fractures in shear zones, which dip moderately south. Gold-bearing veins show a close association with the mafic dikes that intrude the granodiorite. The dikes are interpreted to have influenced the structural control of the gold-bearing veins. The sulphide content within the veins is generally less than 10%, and the principal mineral is pyrite with some minor chalcopyrite and pyrrhotite. Locally, native gold is seen to have infilled voids inside pyrite crystals (Pelletier and Langton, 2020).

Veins strike at N115° and dip moderately to the south from 30° to 65° (Thelland and Manda Mbomba, 2016). The thickness of the veins varies from 5 cm to 5 m, but generally, the thickness of the quartz veining system is 30 cm to 120 cm. All the gold-bearing veins are contained in a strongly altered granodiorite in the form of chlorite-silica forming anastomosing corridors 5 m to 30 m thick. The veins at the Beaufor Mine sometimes form extended panels (Pelletier and Langton, 2020). Some major mineralized zones, e.g., the C and Q zones, have been traced along strike and down dip for 450 m x 250 m and 550 m x 250 m, respectively.

The multiple vein systems of the Beaufor deposit are cut and split apart by numerous steeply dipping discreet shear zones. The Beaufor Fault marks the limits of several major mineralized zones. The Beaufor Fault may have been one of the main conduits for mineralizing hydrothermal fluids at the Beaufor Mine. Several post-mineralization faults intersect and displace the quartz veins. Mafic dikes that predate mineralization are associated with shear-hosted gold-bearing veins. Shallowly dipping extensional gold-bearing veins are commonly observed at the Beaufor Mine. The main gold-bearing quartz veins are intimately associated with dioritic dikes (Pelletier and Langton, 2020).

3D views and typical cross-sections of the geological 3D model of the Beaufor Mine Project are presented in Chapter 14 of this report.

8. DEPOSIT TYPES

8.1 Archean Greenstone-Hosted Orogenic Gold Deposits

The Beaufor Mine mineralization presents characteristics of typical Archean greenstone-hosted orogenic gold deposits. The following description is taken from Simard et al. (2013) unless specified otherwise.

Greenstone-hosted quartz carbonate vein deposits occur in deformed greenstone belts of all ages elsewhere in the world, especially those with variolitic tholeiitic basalts and ultramafic flows intruded by intermediate to felsic porphyry intrusions, and sometimes with swarms of albitite or lamprophyre dikes (Dubé and Gosselin, 2007).

Archean greenstone-hosted orogenic gold deposits are typically distributed along first-order compressional to transpressional crustal-scale fault zones (Figure 8-1) characterized by several strain increments (e.g., Larder Lake-Cadillac Fault Zone) that mark the convergent margins between major lithological boundaries, such as volcano-plutonic and sedimentary domains. Large-scale carbonate alteration is also commonly distributed along those major fault zones and associated subsidiary structures (Dubé and Gosselin, 2007). This gold deposit type is, however, seldom located within these first-order structures. Major, or first-order faults are interpreted as primary hydrothermal pathways to higher crustal levels (Eisenlohr et al., 1989; Colvine, 1989; McCuaig and Kerrich, 1998; Kerrich et al., 2000; Neumayr and Hagemann, 2002; Kolb et al., 2004; Dubé and Gosselin, 2007); however, only a few significant gold deposits are hosted in major faults such as the Ajjanahalli mine, Dharwar Craton, South India (Kolb et al., 2004), and the McWatters mine and the Orenada deposit, Abitibi Subprovince, Canada (Robert, 1989; Morin et al., 1993; Neumayr et al., 2000; 2007). Significant mineralized quartz veins are commonly hosted in second- and third-order shear zones (Eisenlohr et al., 1989). Structurally, these shear zones vary from brittle–ductile to ductile, depending on their depth of formation (Hodgson 1993; Robert and Poulsen, 2001). They are formed at intermediate depth ranging from 5 km to 10 km (Dubé and Gosselin, 2007). At depths greater than 10 km, quartz veins are seldom located within shear zones and gold mineralization is mostly associated with disseminated sulfides (Witt and Vanderhor, 1998).

At the deposit scale, the nature, distribution and intensity of the wall-rock alteration is largely controlled by the composition and competence of the host rocks and their metamorphic grade. Typically, the alteration haloes are zoned and characterized at greenschist facies by iron-carbonatization and sericitization, with sulphidation of the immediate vein selvages (mainly pyrite, less commonly arsenopyrite; Dubé and Gosselin, 2007).

The main gangue minerals are quartz and carbonate with variable amounts of white micas, chlorite, scheelite and tourmaline. The sulphide minerals typically constitute less than 10% of the mineralized material. The main mineralized minerals are native gold with pyrite, pyrrhotite and chalcopyrite without significant vertical zoning. The mineralization is syn- to late-deformation and typically post-peak greenschist-facies or syn-peak amphibolite-facies metamorphism (Dubé and Gosselin, 2007).

There is a general consensus that the greenstone-hosted quartz-carbonate vein deposits are related to metamorphic fluids from accretionary processes and generated by prograde metamorphism and thermal re-equilibration of subducted volcano-sedimentary terranes. The deep-seated gold transporting metamorphic fluid has been channelled to higher crustal levels through major crustal faults or deformation zones. Along its pathway, the fluid has dissolved various components, notably gold, from volcano-sedimentary packages, including a potential gold-rich precursor. These hydrothermal fluids are characterized by a low salinity, a neutral to alkaline pH, and are mainly composed of $H_2O + CO_2$-$H_2S \pm CH_4 \pm N_2$ (Ridley and Diamond, 2000). The fluid is then precipitated as vein material or wall rock replacement in second and third order structures at higher crustal levels through fluid pressure cycling processes and temperature, pH and other physico-chemical variations (Dubé and Gosselin, 2007).

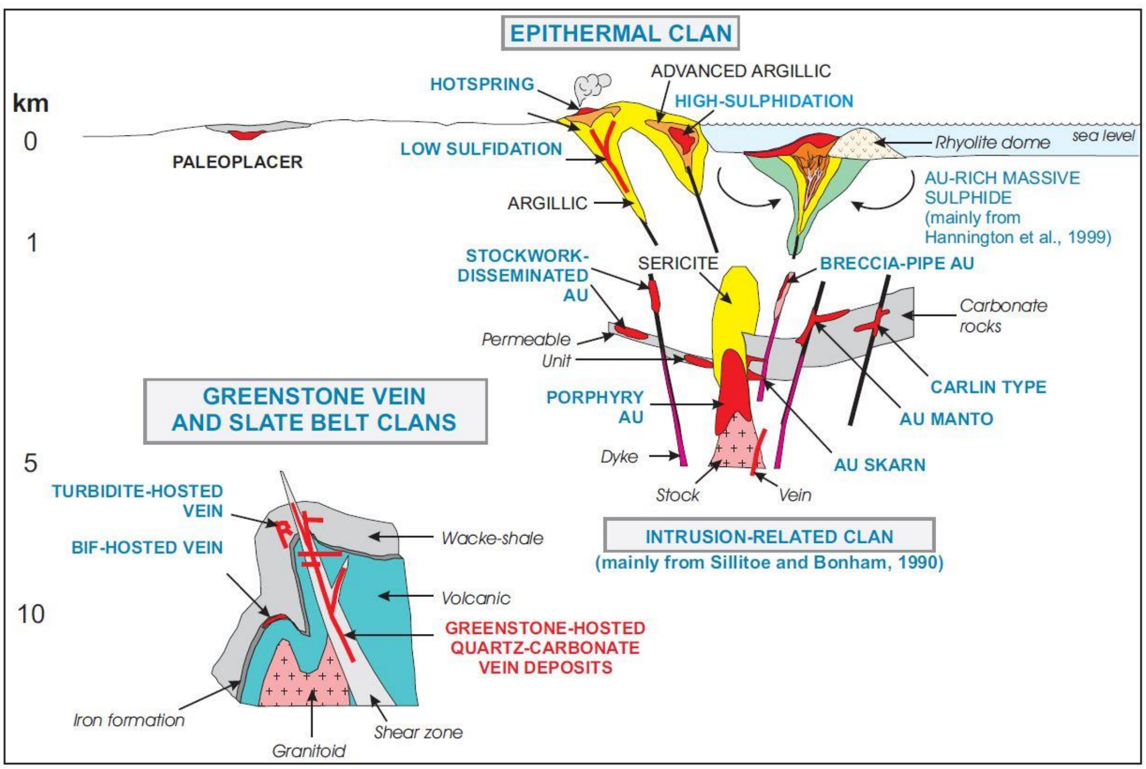


Figure 8-1: Inferred crustal levels of gold deposition showing the different types of gold deposits and the inferred deposit clan (from Dubé et al., 2001; modified from Poulsen et al., 2000)

8.2 Gold Mineralization in the Val-d'Or District

The following is taken from Couture et al., (1994) who published a detailed description and chronology of the Archean greenstone-hosted quartz carbonate vein of the Val-d'Or district.

Gold mineralization occurs in all rock types but is more commonly located within intrusive bodies that acted as competent rock units promoting fracture during deformation. In the Val-d'Or district, there are two main generations of gold quartz veins: young deposits in which the gold mineralization did not experience much deformation after its emplacement; and early mineralization in which mineralized bodies are commonly affected by D_2 asymmetric folds, are highly strained and locally dismembered. In a few deposits both generations are present.

Young gold mineralization is characterized by networks of shear-hosted quartz-carbonate±tourmaline±scheelite veins and associated subhorizontal extension veins. This is well documented at the Sigma mine and also occurs in other deposits east of Val-d'Or, namely Lamaque, Perron, and L.C. Béliveau. Mineralized veins and associated structures crosscut all rock types except Proterozoic dikes. In the Sigma deposit (Robert and Brown, 1986) the gold-bearing quartz-tourmaline vein system is hosted by andesite of the Val-d'Or domain (2705 ±1 Ma, Wong et al., 1991; 2706 ±3 Ma, Machado et al., 1991), porphyritic diorite, and feldspar porphyries (2704 ±3 Ma and 2694 ±2 Ma, respectively, Wong et al., 1991) metamorphosed to greenschist facies. The porphyritic diorite is deformed, but feldspar porphyry dikes cut D_2 folds and thus postdate regional D_2 folding (Robert and Brown, 1986). The vein network consists of coeval and cogenetic steeply dipping shear-hosted veins and subhorizontal extensional veins (Robert and Brown, 1986; Figure 8-2). Preserved delicate vein-filling textures and crosscutting relationship indicate that gold mineralization postdates the youngest intrusion as well as metamorphism and much of the deformation (Robert and Brown, 1986). Rutile associated with the mineralization has been dated by U-Pb at 2599 ±9 Ma (Wong et al., 1991). Similar vein geometry and morphology were also described in the Lamaque mine (Daigneault, 1983), where most of the mineralization is hosted by small circular tonalite plugs crosscutting porphyry intrusion similar to that of Sigma. Jemielita et al. (1990) reported zircon U-Pb ages of 2685 ±3 and 2682 ±2 Ma for the Lamaque Main tonalite plug and 2593 ±5 Ma for rutile associated with gold mineralization. Similar age relationships can be inferred from structural studies at the Perron and Béliveau mines (Tessier, 1990; Gaumond, 1986, respectively).

West of Val-d'Or, significant gold was extracted from the post-D_2 Camflo quartz monzonite dated by U-Pb on zircon at 2680 ±6 Ma (Jemielita et al., 1990) and 2685 ±10 Ma (Zweng et al., 1993) whereas titanite and rutile associated with the gold mineralization yield U-Pb ages of 2625 ±7 Ma (Jemielita et al., 1990) and 2621 Ma (Zweng et al., 1993).

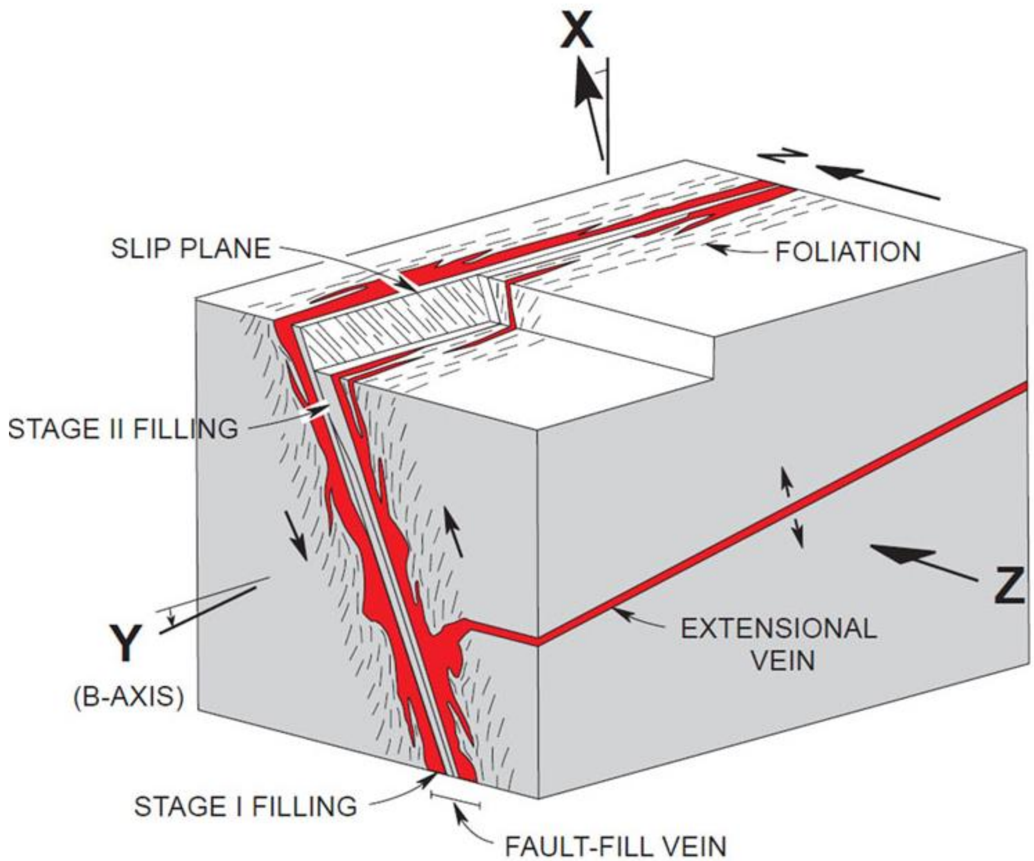


Figure 8-2: Schematic diagram of the geometric relationships between the structural elements of veins and shear zones and the deposit-scale strain axes (Robert, 1990; Modified after Dubé and Gosselin, 2007)

9. EXPLORATION

Besides the actual drilling program, Monarch did not carry out exploration work since the previous MRE (2020).

10. DRILLING

This chapter presents the 2020-2021 drilling program carried out by Monarch between October 27, 2020 and May 18, 2021 (2020-2021 Drilling Program). Drilling was still ongoing as the effective date of this Report.

10.1 Drilling Methodology

The majority of the drillholes are underground, but the drilling campaign also includes surface DDH.

The surface drilling program was performed mainly by Forage Spektra and used one drill rig.

The underground drilling program was performed by Forage Rouillier. Drilling was conducted with LTK48 caliber. A total of up to four air diamond drill rigs were used in the 2020-2021 drilling program.

Every hole was drilled with light stabilization using one 3 m hexagonal core barrels and a 10-inch shell. The host rock on the Beaufor Property is exceptionally competent and massive, which reduces deviation to a minimum (usually less than 1 degree per 100 m).

10.1.1 Drillhole Location and Set-up

Diamond drillholes are planned using 3D GIS software (Gocad) and verified against plans and sections for underground development. The coordinate system in use is UTM NAD83 Zone 18.

When drilling from surface on the Beaufor Mine Project, drill collar locations are pre-surveyed by Monarch's technician using a hand-held GPS.

A wooden stake or picket is hammered into the ground to mark the collar location. The stake is then inscribed with the predetermined drillhole number, the azimuth and anticipated depth of the hole. A separate set of clearly marked and inscribed wooden stakes/pickets mark the foresights for the alignment of the drill rig.

The collar location is subsequently prepared to allow easy access of the drilling equipment as required. In many cases, this involves brushing and the removal of some trees (the latter is kept to a minimum as per government regulations). As required, the on-site geologists visit and inspect the proposed collar location with the drill supervisor to confirm that each party is satisfied, that all health and safety criteria are met and that there is sufficient space available to operate safely.

Prior to the commencement of each surface diamond drillhole (DDH), the drilling company supervisor will communicate the alignment and set the inclination of the drill rig, as measured by the APS (Azimuth Pointing System), to the geologist in charge of the Project. The drilling contractor shall not initiate any activity until approval has been received from Monarch's geologist in charge of the Project.

Underground drillhole collars are established by a surveyor who draws a line between the front sight spad and the back sight spad. The drillers align themselves according to the surveyed line and collar the hole at the most suitable place. After drilling, drillhole collars are surveyed by an external or internal surveyor. The collar azimuth and dip may be calculated subsequently by Arpentage J L Corriveau & Associés inc.

10.1.2 Drillhole Orientation during Operation

Once the drilling has started, the technician goes to the drill site to regularly check on the drilling progress and inspect the drill site for any environmental or safety issues. The hole orientation is checked and monitored using a downhole surveying device (EZ-Trac from Reflex) as follows:

- On surface, the first reading is taken 9 m past the end of the casing or at 9 m for underground DDH;
- Subsequent readings while drilling are not taken as the holes are too short and tend not to deviate. This practice will be revised if the mine enters into production stages, mainly for health and safety reasons;
- A final continuous reading going up is taken from the end of the hole, with a strike/dip measurement every 3 m.

Readings are taken by the drill crew during operation with results recorded on the spreadsheet form provided by the drilling contractor and transmitted daily to Monarch with the drilling report. Test results are also transmitted immediately, 24/7, via text messages to the geologist in charge to prevent major deviation of the hole.

Any significant deviation in azimuth or inclination may require a repeat reading at the designated depth until a satisfactory reading is obtained or an explanation of the discrepancy has been determined.

At the end of each drillhole, the site geologist, or field technician, collects the downhole survey from the drillers. The downhole survey data is added to the geological logging database and bad readings are flagged in the database.

10.1.3 Drillhole Coring

Drill cores are provided by the drilling contractor in LTK48 size (35.3 mm of core diameter). The core is collected in a standard drilling tube and the drillers place the core into wooden core boxes or trays. The driller marks the depth in metres after each run, usually every 3 m.

The drillhole is completed by the Monarch geologist once the targeted depth is reached and the core at the drill site is reviewed with respect to target lithologies, alteration and mineralization.

Once the drillhole is terminated and the final downhole survey reading collected, the drill crew pull the rods for mobilization to the next drill site.

On surface the drillhole is capped and the casing left in the hole. The casing is capped with a secure casing cap, which is inscribed with the hole number. Surface drillholes from the 2020-2021 drilling program were subsequently grouted. Underground holes are systematically grouted and surveyed once completed.

Once all the equipment is removed and the site is cleaned, the site technician can take a GPS reading of the drill collar location, which is added to the drillhole database. However, a surveying company is tasked with the final collar pick-up at the end of the drilling campaign.

10.1.4 Drilling and Core Handling

Diamond drill cores are collected in up to 3-m lengths or runs in an NQ core barrel for the surface diamond drill cores and in an LTK48 size for the underground diamond drill cores. Core is deposited into the wooden core trays at the drill rig by the driller's helper after completion of each drill run under the supervision of the driller. Core trays are numbered with a permanent marker by the driller's helper indicating the drillhole number and the sequential box number, beginning with box 1 after collaring the casing into bedrock. Numbering will be placed on the end piece of the core tray next to the first core placed in the row.

The driller's helper inserts a meterage tag (wooden block) at the downhole end of the last piece of core taken from the core tube. The block identifies the exact depth at the end of each drill run measured from the collar or stand pipe of the drill. Although the drill barrel is designed to take a 3-m run, often rock conditions or mechanical failures will dictate a run length.

The wooden depth markers are clearly marked in metres in clean and legible writing. Additional notations can be provided on additional wooden blocks indicating if unsuitable ground, water conditions or cavities in the bedrock are encountered that result in core loss when encountered. Once the core tray is filled, it is set aside, secured shut using armed tape and carefully stacked for transport..

Securely-boxed drill core is transported daily to the core logging facility of the Beaufor Mine. Care is exercised to ensure that the lids are securely attached to minimize core disturbance, breakage and loss during transport from the site.

All core trays are verified in the logging facility, checking the wooden marker blocks before logging is initiated. If blocks do not correspond with the observed core, the shift driller and/or drill supervisor is consulted at the first available opportunity.

10.1.5 Core Recovery and RQD Measurements

Core recovery and rock quality designation have been sparsely collected on the Project since 2002 (starting at hole 170-01) and systematically since 2012 (starting at hole 92-48).

Core Recovery

The core recovery is calculated by measurement in centimetres of core in the core tray divided by the centimetres claimed to be drilled on the meterage blocks. This number, multiplied by 100, is recorded as percent recovery. Core recovery is recorded for each drill run. Specific areas of loss are noted if possible and marked by placement of a wooden marker and the estimated loss. One hundred percent (100%) core recovery is ideal; however, it is not always possible due to ground conditions or sometimes loss of drill core during the coring process, e.g. grinding, etc. The average core recovery for the Project is 99.73%.

Rock Quality Designation (RQD)

The rock quality designation is designed to give qualitative and quantitative information on the stability of rock surrounding and included in mineralized material. This information is used to determine the mineability and ground control procedures that will be required to extract the mineralized material.

RQD is a quantitative index of rock quality based on a core recovery procedure in which the core recovery is determined incorporating only those pieces of hard, solid core longer than twice the diameter of the core. For NQ core, the nominal diameter is 5 cm, so the length index is 10 cm. Shorter lengths of core are ignored. RQD is determined for each core run as these are the only definitively known distance markers. RQD is determined using the following formula:

RQD (%) = 100 x the sum of the length of the core pieces equal to or longer than 10 cm length of the core run.

It is important to distinguish between mechanical breaks and natural breaks identified in the core.

RQD is valid for solid core only and should not be used for very poorly disaggregated materials such as highly weathered rock, clays or un-cemented aggregates.

10.1.6 Core Photography

Once logged by the geologist, all drill cores are photographed wet. The object of core photos is to have a digital image record of sufficient detail to clearly see core features prior to destructive sampling procedures.

After the core is photographed, the core is assigned to the core saw operator for splitting and sampling.

10.1.7 Core Storage

Following sampling, the core trays are labelled using a metal tag. The core tray metal tags are marked with the hole number, the tray number, and the From-To meterage. The final tray in a hole is marked with end of hole (EOH). The core box is stored on roofed racks in the outdoor core storage area enclosed by secure fencing. The exact location of each hole in the outdoor core library is recorded in an Excel spreadsheet for future reference.

10.2 Recent Diamond Drilling

At the closure date of the resource database (May 18, 2021), Monarch has completed 153 diamond drillholes on the Property since October 27, 2020, and 301 diamond drillholes since their acquisition of the Beaufor Mine in 2017. Since October 27, 2020, 5,066.6 m of drilling has been undertaken in 22 surface DDH, and 12,729.3 m of drilling has been undertaken in 131 underground DDH focusing on the Beaufor Mine.

Table 10-1 summarizes the drilling completed by Monarch on the Beaufor Mine Project since October 27, 2020. The holes drilled since the 2021 MRE are listed in Table 10-2.

Figure 10-1 shows the location of both recent and historical drillholes throughout the Property and Figure 10-2 shows typical cross-section throughout the Project.

In 2020-2021, Monarch undertook a planned 42,500 m exploration diamond drilling campaign to test two types of targets: the areas around historical high-grade intersections near the existing underground infrastructure, and isolated resource blocks, which are typically defined by a single drill intersection. Notable results from the 2020-2021 Drilling Program include intercepts returning 187.0 g/t Au over 0.5 m (core length), 151.5 g/t Au over 0.5 m (CL) and 147.5 g/t Au over 0.3 m (CL) (Monarch Mining Corporation news release of April 29, 2021).

Table 10-1: Summary of the drilling completed on the Property since October 27, 2020

Year	Drillholes count (Underground DDH + Surface DDH)	Total length (m) (Underground DDH + Surface DDH)
2020	95 + 19	9,455.3 + 4,247.1
2021	36 + 3	3,274 + 819.5
Total	**153**	**17,795.9**

Table 10-2: List of drillholes on the Beaufor Mine Project since October 27, 2020 (UTM NAD83 Zone 18)

Hole-ID	Easting	Northing	Elevation	Final Depth (m)	Location	Year
20-103-62	309823.0	5336844.8	2358.7	41.1	UG	2020
20-103-63	309823.0	5336844.7	2360.7	31.0	UG	2020
20-106-158	309936.0	5336989.5	2518.0	85.2	UG	2020
20-106-159	309937.4	5336988.9	2518.0	51.3	UG	2020
20-106-160	309937.8	5336988.9	2518.0	65.5	UG	2020
20-113-70	309922.8	5336819.8	2447.1	70.1	UG	2020
20-113-71	309923.9	5336819.6	2447.1	66.8	UG	2020
20-114-167	310000.8	5336938.6	2331.6	192.9	UG	2020
20-114-168	310000.9	5336938.3	2331.7	162.0	UG	2020
20-114-168A	310000.9	5336938.4	2331.8	224.2	UG	2020
20-115-105	310006.7	5336925.9	2331.9	93.7	UG	2020
20-116-122	310025.0	5336939.8	2328.0	145.7	UG	2020
20-116-123	310024.7	5336939.6	2327.7	131.3	UG	2020
20-116-124	310025.5	5336939.7	2327.6	102.8	UG	2020
20-116-125	310024.6	5336932.8	2256.1	28.0	UG	2020
20-116-125A	310025.5	5336932.9	2256.3	82.4	UG	2020
20-120-190	310058.4	5336916.1	2260.3	70.8	UG	2020
20-122-135	310108.3	5336987.7	2521.7	43.4	UG	2020
20-122-136	310110.1	5336987.3	2521.6	40.3	UG	2020
20-122-137	310110.2	5336988.4	2521.7	23.0	UG	2020
20-122-137A	310109.6	5336987.2	2521.7	21.1	UG	2020
20-122-138	310110.8	5336987.8	2521.7	40.3	UG	2020
20-123-92	310123.4	5336981.4	2319.4	63.0	UG	2020
20-125-69	310092.5	5336879.6	2739.9	173.0	UG	2020
20-126-79	310129.5	5336923.3	2275.9	184.0	UG	2020
20-126-80	310129.7	5336923.1	2275.7	178.6	UG	2020
20-128-104	310156.4	5336928.6	2520.5	87.0	UG	2020
20-132-55	310113.2	5336760.7	2739.8	77.5	UG	2020
20-132-56	310113.7	5336759.9	2739.8	82.2	UG	2020
20-132-57	310114.0	5336761.3	2739.8	65.5	UG	2020
20-132-58	310114.6	5336761.8	2740.5	77.0	UG	2020
20-132-59	310114.6	5336760.2	2739.8	91.8	UG	2020
20-132-60	310115.5	5336760.4	2739.8	84.5	UG	2020
20-133-61	310163.0	5336838.4	2741.0	90.2	UG	2020
20-133-62	310163.8	5336838.2	2742.0	113.4	UG	2020
20-133-63	310164.0	5336838.1	2741.6	124.0	UG	2020
20-133-64	310163.8	5336838.0	2742.1	127.7	UG	2020
20-133-65	310164.1	5336837.6	2741.4	108.0	UG	2020

Hole-ID	Easting	Northing	Elevation	Final Depth (m)	Location	Year
20-133-66	310163.6	5336837.4	2741.8	192.3	UG	2020
20-133-67	310162.6	5336837.7	2742.3	157.7	UG	2020
20-133-68	310164.0	5336837.9	2741.8	144.7	UG	2020
20-133-69	310158.6	5336841.5	2739.1	132.0	UG	2020
20-133-70	310158.8	5336841.4	2739.2	119.4	UG	2020
20-133-71	310158.5	5336841.3	2739.2	148.0	UG	2020
20-133-72	310158.9	5336841.4	2739.2	130.0	UG	2020
20-133-73	310160.0	5336841.0	2739.3	150.6	UG	2020
20-133-74	310159.3	5336841.2	2739.2	131.7	UG	2020
20-133-75	310159.1	5336842.6	2742.0	155.8	UG	2020
20-133-76	310159.1	5336842.6	2742.0	152.4	UG	2020
20-134-50	310146.6	5336781.1	2741.3	39.0	UG	2020
20-146-40	310282.6	5336788.1	2521.1	81.6	UG	2020
20-146-42	310304.8	5336841.9	2598.7	75.0	UG	2020
20-151-16	310349.9	5336809.1	2598.9	57.5	UG	2020
20-151-17	310350.1	5336808.9	2597.9	80.6	UG	2020
20-151-18	310349.9	5336810.2	2599.6	65.1	UG	2020
20-151-19	310350.4	5336808.4	2598.2	73.0	UG	2020
20-151-20	310351.2	5336808.4	2599.3	66.3	UG	2020
20-152-19	310357.1	5336803.1	2598.8	126.8	UG	2020
20-152-20	310357.8	5336803.8	2566.0	9.9	UG	2020
20-152-20A	310357.8	5336803.7	2599.0	159.1	UG	2020
20-97-68	309760.3	5336847.2	2365.9	167.1	UG	2020
20-97-69	309759.8	5336847.4	2365.8	175.5	UG	2020
20-97-70	309759.5	5336848.1	2366.6	30.9	UG	2020
20-97-71	309760.2	5336847.5	2366.0	149.4	UG	2020
20-97-72	309760.5	5336847.3	2365.8	145.8	UG	2020
20-97-73	309761.4	5336847.8	2366.5	25.8	UG	2020
BES-20-001	309523.9	5336836.1	3048.5	354.0	Surface	2020
BES-20-002	309505.5	5336823.0	3048.2	396.0	Surface	2020
BES-20-003	309558.7	5336824.3	3048.7	365.5	Surface	2020
BES-20-004	309545.0	5336810.0	3048.5	402.0	Surface	2020
BES-20-005	309762.9	5337305.1	3048.7	216.1	Surface	2020
BES-20-007	309845.8	5337468.4	3047.8	95.0	Surface	2020
BES-20-008	310452.3	5337226.4	3057.9	234.1	Surface	2020
BES-20-009	310434.7	5337263.3	3059.1	207.0	Surface	2020
BES-20-011	310463.7	5337084.6	3065.0	105.0	Surface	2020
BES-20-012	309244.9	5337134.8	3045.7	195.2	Surface	2020
BES-20-013	309220.6	5337027.2	3045.5	282.0	Surface	2020

Hole-ID	Easting	Northing	Elevation	Final Depth (m)	Location	Year
BES-20-014	309220.2	5337028.4	3045.5	105.0	Surface	2020
BES-20-015	309220.2	5337027.6	3045.4	288.0	Surface	2020
BES-20-016	309409.9	5337052.0	3047.7	213.0	Surface	2020
BES-20-017	309404.2	5337071.6	3047.1	195.0	Surface	2020
BES-20-018	309813.8	5336864.1	3051.6	78.2	Surface	2020
BES-20-019	309821.0	5336847.6	3051.0	90.0	Surface	2020
BES-20-020	309797.3	5336879.9	3051.2	111.1	Surface	2020
BES-20-021	309553.9	5336845.7	3049.4	315.0	Surface	2020
BES-21-036	309516.6	5336804.8	3047.9	85.5	Surface	2021
BES-21-036A	309517.7	5336803.6	3047.9	354.0	Surface	2021
BES-21-037	309513.9	5336802.3	3048.1	380.0	Surface	2021
BEU-20-10-001	310093.0	5336878.8	2739.6	168.5	UG	2020
BEU-20-15-001	310439.8	5336657.7	2598.4	106.1	UG	2020
BEU-20-15-002	310440.5	5336661.3	2598.8	94.6	UG	2020
BEU-20-15-003	310440.6	5336661.4	2597.6	58.5	UG	2020
BEU-20-15-004	310439.5	5336661.4	2598.3	65.6	UG	2020
BEU-20-15-005	310391.7	5336687.5	2596.6	116.6	UG	2020
BEU-20-15-006	310332.5	5336720.2	2596.2	171.0	UG	2020
BEU-20-15-008	310330.9	5336720.4	2599.0	191.8	UG	2020
BEU-20-17-001A	309656.4	5337094.7	2519.0	152.7	UG	2020
BEU-20-17-001B	309652.2	5337094.5	2518.9	162.2	UG	2020
BEU-20-17-002	309655.9	5337095.2	2518.9	142.7	UG	2020
BEU-20-17-003	309662.8	5337100.1	2519.6	64.6	UG	2020
BEU-20-17-004	309729.2	5337042.3	2518.5	35.5	UG	2020
BEU-20-17-005	309722.9	5337047.9	2518.6	39.7	UG	2020
BEU-20-17-006	309731.1	5337042.6	2518.6	39.5	UG	2020
BEU-20-17-008	309797.1	5337161.9	2519.3	196.5	UG	2020
BEU-20-17-010	309796.5	5337162.3	2519.9	205.0	UG	2020
BEU-20-17-011	309901.3	5337002.3	2517.9	101.0	UG	2020
BEU-20-20-001	309851.8	5337004.4	2442.0	26.0	UG	2020
BEU-20-20-002	309823.7	5337048.8	2443.9	22.0	UG	2020
BEU-20-20-003	309847.8	5337064.5	2444.5	22.5	UG	2020
BEU-20-20-004	309823.1	5337048.6	2442.8	26.0	UG	2020
BEU-20-20-005	309787.6	5337071.1	2445.1	30.0	UG	2020
BEU-20-20-006	309786.6	5337073.3	2444.7	55.0	UG	2020
BEU-20-20-007	309786.7	5337072.1	2444.9	35.0	UG	2020
BEU-20-20-008	309786.2	5337071.0	2444.6	35.0	UG	2020
BEU-20-20-009	309760.0	5337074.5	2442.9	50.0	UG	2020
BEU-20-20-013	309894.8	5336918.5	2443.6	126.0	UG	2020

Hole-ID	Easting	Northing	Elevation	Final Depth (m)	Location	Year
BEU-20-30-001	310007.9	5336910.0	2251.5	233.3	UG	2020
BEU-21-10-003	310092.5	5336879.4	2739.7	196.5	UG	2021
BEU-21-10-005	310092.4	5336879.8	2739.5	144.6	UG	2021
BEU-21-10-006	310061.5	5337182.3	2737.9	55.4	UG	2021
BEU-21-10-013	310100.1	5337295.3	2737.2	54.0	UG	2021
BEU-21-10-014	310115.5	5337330.5	2736.5	55.5	UG	2021
BEU-21-10-015	310115.3	5337331.0	2737.4	57.7	UG	2021
BEU-21-12-002	310004.3	5337007.6	2673.1	105.0	UG	2021
BEU-21-12-003	310005.2	5337007.6	2672.9	183.0	UG	2021
BEU-21-15-009	310331.9	5336720.4	2596.3	161.0	UG	2021
BEU-21-15-010	310005.2	5336935.4	2595.3	139.8	UG	2021
BEU-21-15-011	310005.4	5336935.3	2595.7	82.1	UG	2021
BEU-21-15-012	310005.5	5336935.1	2595.0	128.3	UG	2021
BEU-21-15-013	310005.9	5336935.2	2595.8	94.8	UG	2021
BEU-21-15-014	310083.3	5336970.9	2594.5	44.0	UG	2021
BEU-21-15-015	310109.4	5337023.6	2593.9	35.5	UG	2021
BEU-21-15-016	310110.4	5337023.4	2593.9	31.0	UG	2021
BEU-21-15-017	310188.4	5337271.9	2592.7	66.3	UG	2021
BEU-21-15-019	310167.3	5337309.8	2592.5	60.0	UG	2021
BEU-21-15-020	310168.2	5337309.8	2592.6	43.2	UG	2021
BEU-21-17-007	309798.0	5337161.4	2520.1	130.8	UG	2021
BEU-21-20-010	309936.8	5336993.9	2442.7	38.0	UG	2021
BEU-21-20-011	309971.6	5337004.7	2444.1	31.8	UG	2021
BEU-21-20-012	309983.7	5336991.2	2444.8	35.0	UG	2021
BEU-21-30-004	310027.2	5336902.8	2248.4	78.1	UG	2021
BEU-21-30-005	310026.5	5336902.7	2248.1	80.2	UG	2021
BEU-21-30-006	310026.7	5336901.8	2248.2	69.6	UG	2021
BEU-21-30-007	310094.8	5336911.0	2240.1	174.0	UG	2021
BEU-21-30-008	310097.7	5336942.9	2235.4	30.5	UG	2021
BEU-21-30-010	310140.7	5337057.0	2223.2	46.0	UG	2021
BEU-21-30-011	310138.2	5337058.1	2221.6	46.6	UG	2021
BEU-21-30-012	310138.4	5337057.9	2220.6	59.0	UG	2021
BEU-21-30-013	310087.9	5337060.2	2200.1	109.0	UG	2021
BEU-21-30-028	310293.0	5336925.5	2200.9	147.9	UG	2021
BEU-21-30-029	310293.1	5336925.5	2201.2	117.4	UG	2021
BEU-21-30-030	310293.4	5336925.2	2200.7	165.0	UG	2021
BEU-21-30-031	310293.8	5336925.0	2201.0	177.4	UG	2021

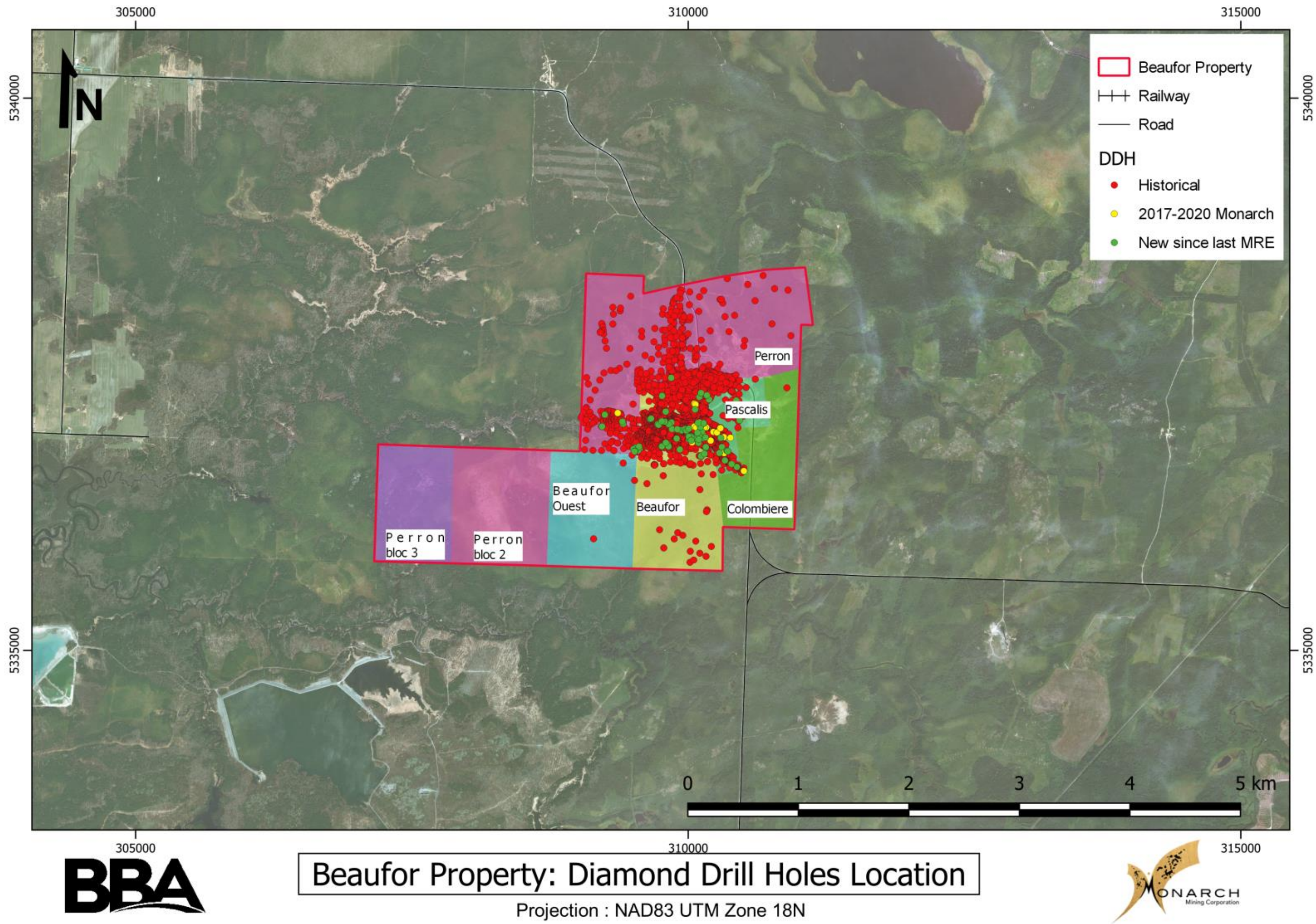


Figure 10-1: Recent and historic DDH location on the Beaufor Project Property

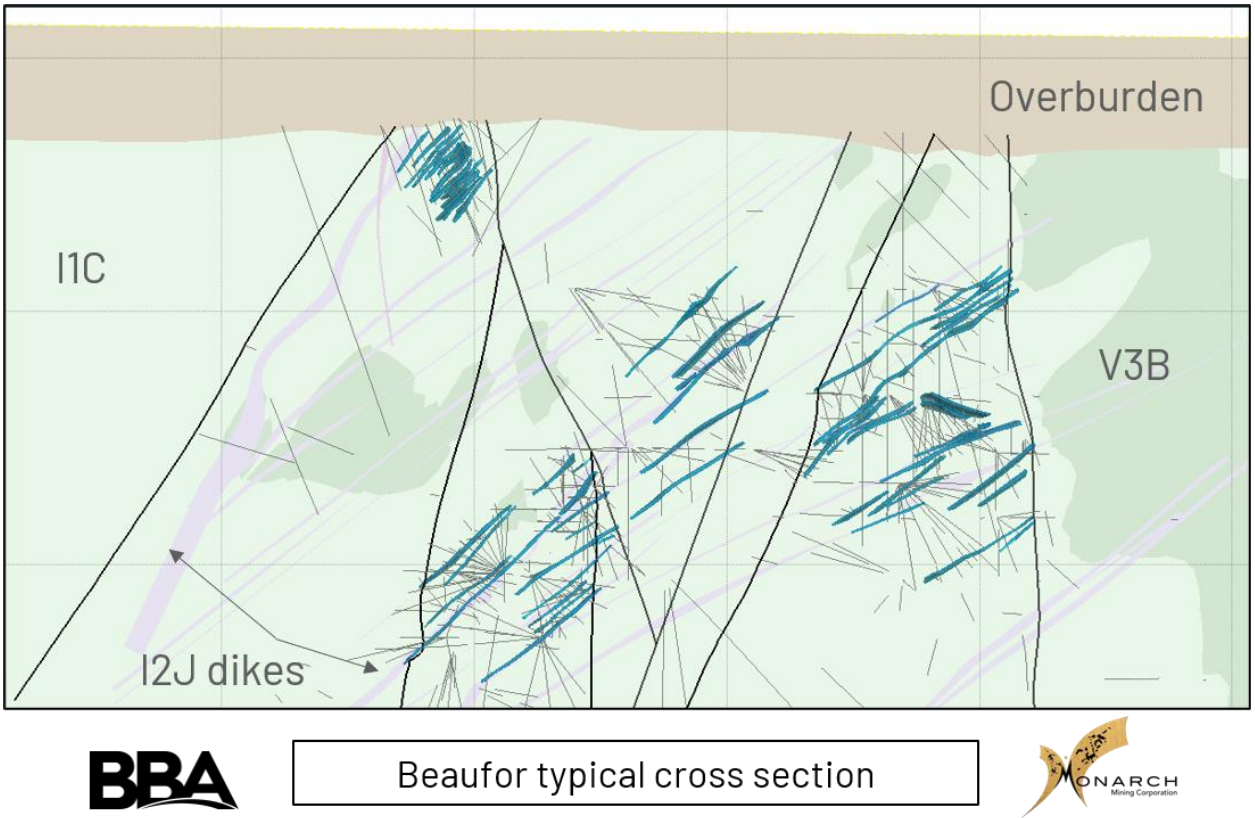


Figure 10-2: Typical cross-section of the Beaufor Mine Project looking northwest showing DDH, geological model and mineralized zones

11. SAMPLE PREPARATION, ANALYSES AND SECURITY

Monarch has been performing work on the property since September 2017. Production stopped on June 27, 2019, but exploration drilling is ongoing.

11.1 Core Handling, Sampling and Security

The following sections describe Monarch's core handling, sampling and security procedures for the diamond drilling programs since the close-out date of the last MRE (October 27, 2020, Pelletier and Langton, 2020). The QP did not conduct any drilling or sampling on the Project and the data provided in this section was provided by Monarch's Project Geologist, Martin Lacaille.

11.1.1 Assays Samples

In general, only mineralized intervals are sampled. To create representative and homogenous samples, sampling honours lithological contacts, i.e. no sample crosses a major lithological boundary, an alteration boundary or a mineralization boundary.

The sample length for the majority of intervals collected varied from 0.50 m to 1.50 m (with few exception from 0.25 m to 2.2 m), and the recommended sample length is 1.0 m. Sampling intervals are determined by the geologist during logging and marked on the core boxes or on the core itself using coloured lumber pencils with a line drawn at right angles to the core axis. Two shoulder samples, each having a sample length of approximately 1.0 m to 1.5 m, were collected from the non-mineralized core above and below the mineralized intervals.

Samples are numbered in consecutive order utilizing sample tag books containing numerical sequences of 50 pre-labelled triplicate water durable sample tags (three tags per sheet). The first tag remains with the sample tag book as an archival record of the samples parameters. The second tag is used to indicate the position of the sample in the core box; this is a permanent sample reference that remains on the wooden core box. And the last tag is inserted inside the sample bag. From each sample sheet, the last two are separated from the page and tucked under the core at the beginning of each sample by the geologist.

The sample sequence includes blank samples, duplicate samples and Certified Reference Materials (CRMs) that are inserted into the sample stream using sample numbers that are in sequence with the core samples. A CRM sample, consisting of material of known metal content and internationally recognized and verified, is included in the sample sequence by the trained core sampler. A "blank" sample is material technically devoid of any metals. Blanks and CRMs are stored in a designated secure area in the Monarch Core Shack. No written reference is ever made to the location of control samples on sample bags, sample tags, or dispatch documentation for the assay lab.

The core saw operator, trained in core cutting procedures, executes the core cutting at the Monarch core shack. The logging geologist has already clearly marked out all pertinent cores for cutting and sampling. The core is then sawn in half lengthwise with a diamond saw. One half is placed into the plastic sample bag and the other half is retained and kept in the core box for later reference. The paired sample tags were then torn off, with one tag stapled to the core box at the start of its sample interval and the other tag placed into the sample bag with the core sample.

The bag will then be closed using staples and stored in sequence prior to sample dispatch preparation. The sample bags are packed in large “rice” bags and the rice bag is also closed with a zip tie, which is only opened at the assay laboratories.

The range of sample numbers inside the bag is written on the ‘rice’ bag. The sealed rice bags are stored in the core shack until shipping to the laboratories. For the 2020-2021 drilling campaigns, samples were shipped to ALS and to AGAT Laboratories in Val-d’Or, Quebec.

11.1.2 Lab Methods of Preparation, Processing and Analysis

11.1.2.1 Lab Accreditation and Certification

Both the ALS and AGAT laboratories have ISO/IEC 17025:2005 accreditation through the CALA (Canadian Association for Laboratory Accreditation Inc.).

They are both independent commercial laboratories.

11.1.2.2 ALS Sample Analysis Procedure

At ALS laboratories, samples are sorted, bar-coded and logged into the ALS Webtrieve program. Samples are dried to constant weight and weighted (WEI-21). The sample is then crushed to P_{70} 2,000 µm (CRU-31). A split is collected using a riffle splitter (SPL-21). A pulverization split of 250 g is then prepared for both the original and duplicate split (PUL-31) at P_{85} 75 µm. If visible gold is seen by the logging geologist a metallic sieve analysis is conducted (Au-SCR21), a pulverization of 1,000 g P_{95} 106 µm is done (PUL-35a).

Samples are then analyzed by fire assay (FA) with atomic absorption (AA) spectroscopy from 50 g pulps (Au-AA24). The lower detection limit is 0.005 g/t. When assay results are higher than 10 g/t, the sample is re-assayed with a gravimetric finish (Au-GRAV22) on a 50 g pulp.

Results are provided through a secure server and downloaded, by the geologist in charge of the Project, in Excel format and the official certificate (sealed and signed) in PDF format.

As part of ALS internal quality control program, six QA/QC samples are inserted by ALS per batch of 77 samples (one blank, two standards and three pulp duplicate). A method blank and certified reference material is applied and reported for each furnace load to monitor the fire assay process. A duplicate crushed sample is drawn after each 50 client samples (excluding pulp) and assayed for each work order to monitor precision.

11.1.2.3 AGAT Sample Analysis Procedure

Once the samples are received at the AGAT facility in Val-d'Or, they are sorted, barcoded and logged into AGAT's LIMS program. They are then placed in the sample drying room and dried at 60°C. Any samples received in a damaged state (i.e. punctured sample bag, loose core) are documented and the client is informed with pictures.

Samples are crushed to 75% passing 10 mesh, and split using a Jones riffle splitter. A 250 g split is pulverized to 85% passing 200 mesh. A pulp duplicate is collected from every 15th sample and a reject duplicate is collected from every 25th sample of each work order during sample preparation. These are reported on the QA/QC portion of the Report. Sieve tests are performed on the crusher at the beginning of each day and on the pulp of the 20th sample. If there is a failure, the samples are re-milled to ensure that they pass.

The gold analyses are performed by fire assay on 50 grams of pulp with an atomic absorption finish. Repeats are carried out by fire assay with a gravimetric finish on each sample containing 10.0 g/t Au or more. When visible gold is observed by the geologist, a Metallic Sieve assay is requested.

For the metallic sieve, a 1,000 g split of crushed material (90% passing 10 mesh) is pulverized using a ring and puck mill to ensure approximately 95% passing 140 mesh. The material on top of the screen is referred to as the "plus" (+) fraction, and the material passing through the screen is the "minus" (-) fraction. The weights of both fractions are recorded. The entire "plus" fraction is sent for fire assay determination, whereas two 30 g replicates of the "minus" fraction are taken for determination of gold by fire assay. The finish is gravimetric, AA or ICP-OES. "Plus" and "minus" gold assay fractions, their weights, and the calculated "total gold" of the sample are included in every report. Upon request, individual gold assays may be reported for every fraction.

Blanks, sample replicates, duplicates, and internal reference materials (both aqueous and geochemical standards) are routinely used as part of AGAT's QA program.

11.1.3 Sample Shipping and Security

The following procedures are applied to ensure a safe and secure management of materials and data as it pertains to core samples at Beaufor:

- All core samples submitted for preparation and analysis to the laboratories are secured in rice bags with zip ties and collected directly at the core shack by the laboratory employee;
- The lab is notified by email that the samples are en route and is instructed to notify Monarch's geologist, Martin Lacaille, when the samples arrive at the prep lab in Val-d'Or;
- The sample shipment contains a sample submittal form;

- Samples are now only sent to

  AGAT Laboratories
  1185 Rue des Foreurs, Val-d'Or, QC
  J9P 6X9, Canada

- Results are received by email as Excel (csv) and PDF files;
- QA/QC data is evaluated as soon as the samples are integrated into a master database;
- The core boxes are stored to roofed racks in the outdoor core storage area on the mine site. The exact location of each hole in the outdoor core library is recorded in an Excel spreadsheet for future reference;
- The sample pulps and rejects are returned to mine site for storage

11.2 Quality Assurance and Quality Control (QA/QC)

Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects recommends mining companies reporting results in Canada to follow CIM Best Practice Guidelines. The guidelines describe which items are recommended to be in the reports, but do not provide guidance for Quality Assurance and Quality Control (QA/QC) programs.

QA/QC programs have two components: Quality Assurance (QA) deals with the prevention of problems using established procedures, while Quality Control (QC) aims to detect problems, assess them and take corrective actions. QA/QC programs are implemented, overseen and reported on by a Qualified Person as defined by NI 43-101.

QA programs should be rigorous, applied to all types and stages of data acquisition and include written protocols for: sample location, logging and core handling; sampling procedures; laboratories and analysis; data management and reporting.

QC programs are designed to assess the quality of analytical results for accuracy, precision and bias. This is accomplished through the regular submission of standards, blanks and duplicates with regular batches of samples submitted to the lab, and the submission of batches of samples to a second laboratory for check assays.

The materials conventionally used in mineral exploration QC programs include standards, blanks, duplicates, and check assays. Definitions of these materials are presented hereunder:

- Standards are samples of known composition that are inserted into sample batches to independently test the accuracy of an analytical procedure. They are acquired from a known and trusted commercial source. Standards are selected to fit the grade distribution identified in the Beaufor mineralization;
- Blanks consist of material that is predetermined to be free of elements of economic interest to monitor for potential sample contamination during analytical procedures at the laboratory;

- Duplicate samples are submitted to assess both assay precision (repeatability) and to assess the homogeneity of mineralization. Duplicates can be submitted from all stages of sample preparation with the expectation that better precision is demonstrated by duplicates further along in the preparation process;

Quality control samples are inserted into the sample batches sent to the laboratory. Inserts include blank samples and standards. Pulp duplicate are requested after the batch analysis on specific samples.

Table 11-1 summarizes the QA/QC samples submitted to the laboratories along with routine drill core samples since the closure date of the previous MRE.

Table 11-1: Samples analysis sent from the laboratories during the 2020-2021 drilling campaigns
Numbers in parenthesis represent the samples sent but without results as of May 18, 2021

Type of sample	Quantity	%
Drill core samples	9,707 (630)	90.70%
Field blanks	497 (35)	4.60%
CRM	475 (38)	4.40%
Pulp duplicates	27	0.25%

As part of their standard internal quality control, AGAT and ALS laboratories also run duplicates, standards and blanks.

11.2.1 Duplicates

Duplicate samples are submitted to assess both assay precision (repeatability) and to assess the homogeneity of mineralization.

Pulp duplicates consist of second splits of prepared samples ready to be analyzed and are indicators of analytical precision, which may be also affected by the quality of pulverization and homogenization.

Monarch's geologists inserted one pulp duplicate sample for every 20 samples (5%) since drillhole 20-103-62. Figure 11-1 and Figure 11-2 are scatterplots of the 27 pairs of pulp duplicates showing a linear regression slope of 0.90 and a correlation coefficient of 0.99. These results show good reproducibility.

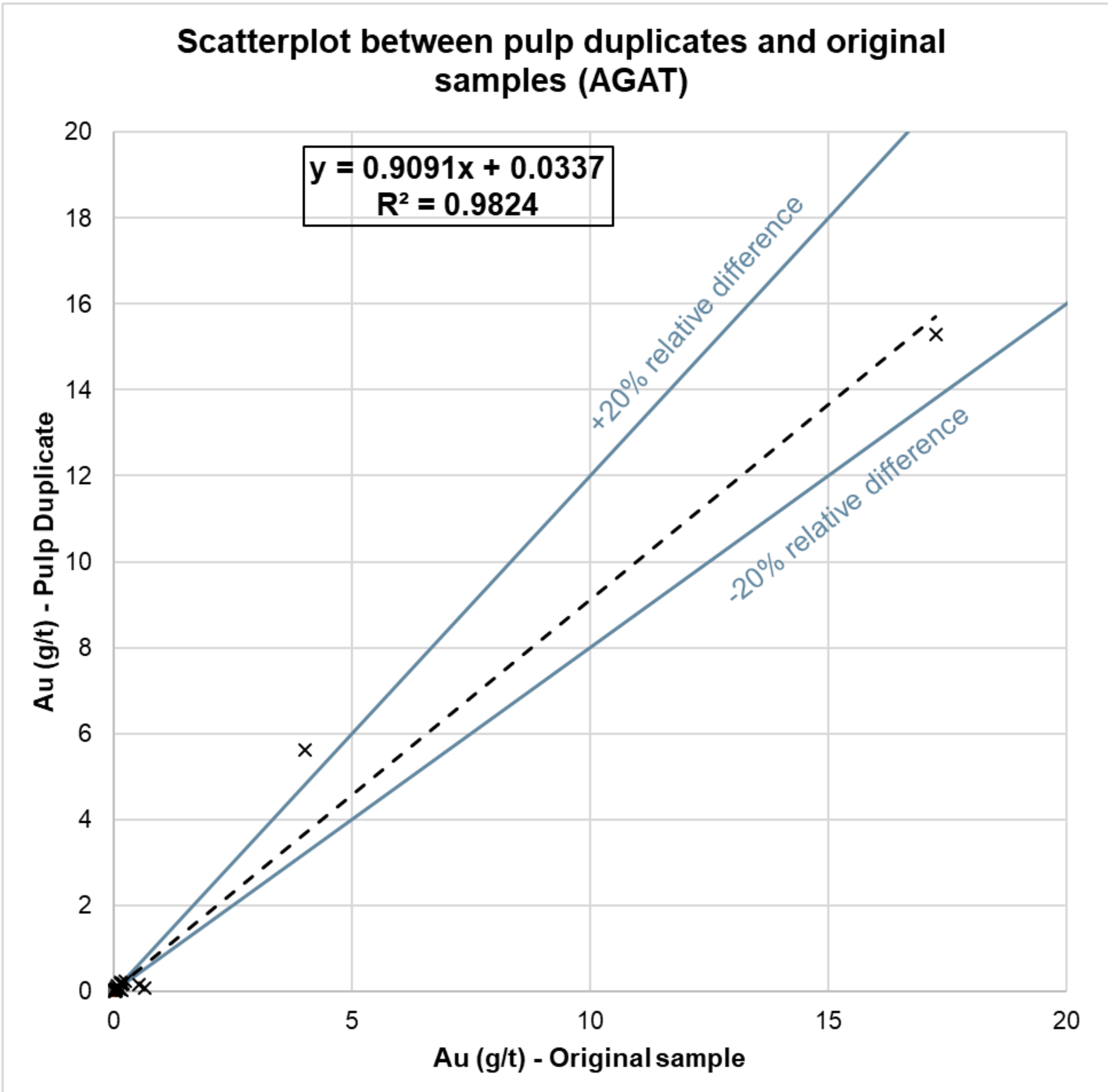


Figure 11-1: Scatterplot between pulp duplicates and original samples for the 2020-2021 drilling campaigns (n=27)

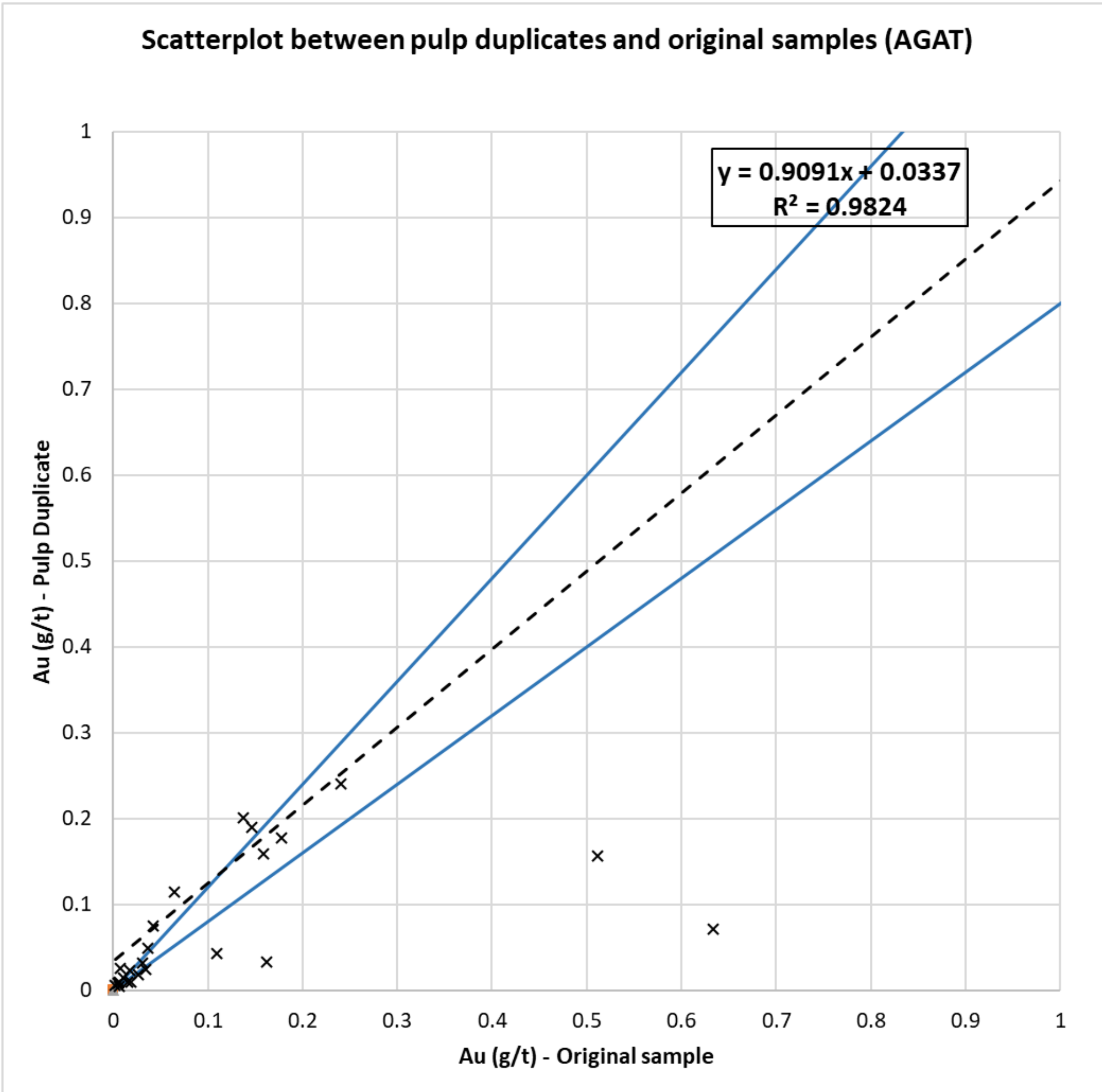


Figure 11-2: Close-up view of Figure 11-1 of the scatterplot comparing original samples to pulp duplicates for the 2020-2021 drilling campaigns (n= 27)

11.2.2 Blanks

Blanks are used to monitor for potential sample contamination that may take place during sample preparation and/or assaying procedures at the laboratory. Sample of coarse marble were used by Monarch as part of their QA/QC program. One blank sample was inserted for every 20 samples.

According to Monarch's QA/QC protocol, if any blank yields a gold value above 0.025 g/t Au for ALS Mineral et above 0.01 g/t for AGAT laboratory (5 times the limit detection), the anomalous blank is investigated and if no explanation is found, re-assayed. Figure 11-3 shows the results of the blank material used during the 2020-2021 drilling programs on the Project.

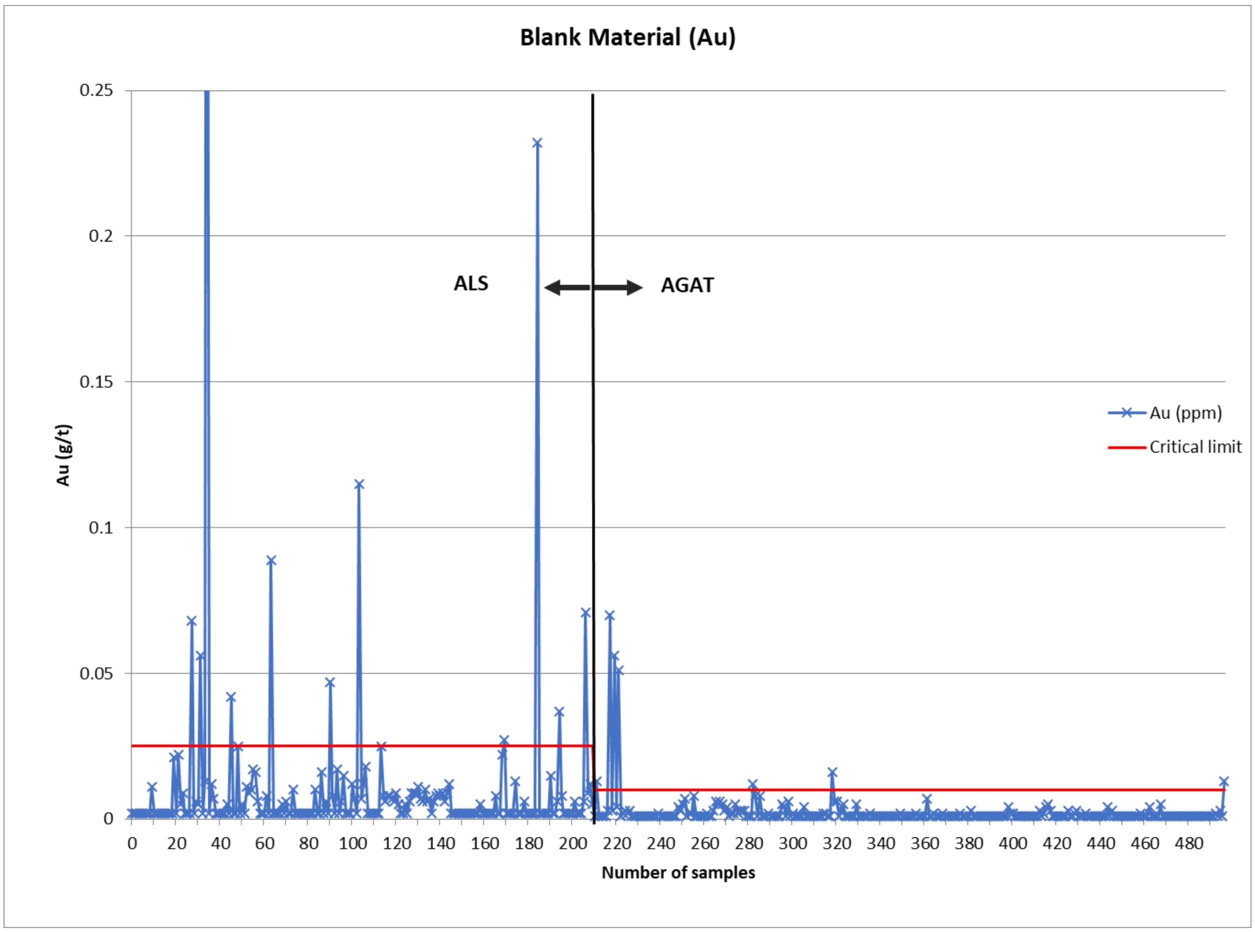


Figure 11-3: Results for blanks used by Monarch during the 2020-2021 drilling programs on the Project

Generally, the blank indicates little contamination at the laboratories. There were 18 (3.6%) failures during the program. The laboratory was called and verifications were made. For some samples, blanks were following a high-grade assay so contamination was probably the cause.

11.2.3 Certified Reference Materials (Standards)

Accuracy and precision are monitored by the insertion of CRMs. A suite of commercially available CRMs are used at the Beaufor Mine (Table 11-2). One CRM sample was inserted for every 20 samples.

Table 11-2: Standard reference materials used at the Beaufor Project for the 2020-2021 drilling campaigns

Standard (CRMs)	Certified gold value (g/t)	Quantity inserted	Mean grade	Lower process limit	Upper process limit	Failed	Gross outliers	(%) passing QC
			(Au g/t) w/o gross outliers	(certified value - 10%)	(certified value + 10%)	(outliers)		
HK4	3.463	147	3.453	3.117	3.809	2	0	98.6
HP3	12.240	45 (15)*	11.750	11.016	13.464	0	3	100.0
SF100	0.860	6	0.882	0.774	0.946	0	0	100.0
SG84	1.026	9	1.021	0.923	1.129	0	0	100.0
SH82	1.333	16	1.287	1.200	1.466	0	0	100.0
SJ95	2.789	7	2.770	2.510	3.068	0	0	100.0
SK78	4.134	45	4.062	3.721	4.547	0	0	100.0
SL76	5.960	10	5.874	5.364	6.556	0	0	100.0
SN103	8.520	100	8.491	7.668	9.372	2	0	98.0
SN106	8.461	75	8.534	7.615	9.307	1	0	98.7
SN91	8.679	1	8.680	7.811	9.547	0	0	100.0
SP73	18.170	14 (6)*	18.370	16.353	19.987	0	0	100.0
Total		**416**				12	3	97.1

* For HP3 and SP73; the number in parenthesis represents the quantity of sample with a gravimetric finish, mean grade is calculated from gravimetric finish; others are >10g/t.

The selection of the CRMs was based on anticipated gold grades and anticipated cut-off grade ranging from low-grade samples (0.860/t Au) to average grade mineralized material (3.463 g/t to 8.679 g/t Au) and higher grade samples (12.240 g/t to 18.170 g/t Au).

For the 2020-2021 QA/QC samples, CRMs were considered failed by Monarch when a gold result showed a difference of ±10% from the expected value. If the analytical value exceeded the 10% control limits, systematic re-assaying was not always requested, particularly if the value was on the threshold of the limits or if there was an explanation to the failure. During the drilling programs, 12 CRMs (2.9%) failed; three other CRMs were considered gross outliers and were probably mislabelled CRMs (HP3 instead of HK4). Considering the low failure rate, the QP is of the opinion that the few failed CRMs are not material for the purpose of this Mineral Resource Estimate and show the natural statistical spread in the data.

The QP also noticed that, in most cases, the mean of the CRM samples assayed by Monarch was lower than the certified gold value.

11.3 Conclusions

The QP reviewed the sample preparation, analytical and security procedures, as well as insertion rates and the performance of blanks, standards and duplicates for the 2020-2021 drilling programs and concluded that the observed failure rates are within expected ranges and that no significant assay biases are present. According to the QP's opinion, the procedure and the quality of the data are adequate to industry standards and support this Mineral Resource Estimate.

However, for the next stage of the Project, the QP recommends the following:

- Establish a clear protocol and follow a consistent approach in selecting the same side of each half-core piece to avoid biased sampling;
- Set the critical limit for the CRMs at three times the standard deviation as for industry standards, and check and explain each failure to this rule. If the explanation warrants it, the batch should be re-assayed;
- Systematically re-assay the CRMs above 10 g/t Au with a gravimetric finish;
- Systematically submit pulp duplicate with each batch to the laboratory to assess both assay precision (repeatability) and homogeneity of mineralization;
- Restrict the CRM to only 5-6 distinct CRMs in order to perform statistics. In some cases, there was not enough of each CRM to be able to run statistics;
- At this stage of exploration, field and coarse duplicates should be inserted in the protocol. Moreover, a check assay program of 10% of the pulp samples (preferably in the mineralized zones) should be conducted in another laboratory.

12. DATA VERIFICATION

The Mineral Resource Estimate (MRE) in this Report is based on drill data from several eras of drilling on the Perron and Beaufor properties that include Matthews Gold Mines, Cournor Mining, Louvem, Aurizon Mines, Richmont and now Monarch since 2017.

For the purpose of this MRE, BBA performed a basic verification on the entire Project database. All data were provided by Monarch in UTM NAD 83 zone 18N. The database close-out date for the resource estimate is May 18, 2021.

The Project database contains 10,572 drillholes. Of these 10,572 drillholes, a subset of 6,509 holes cuts across the mineralized zones with a total of 45,513 assays. The last drillhole included in the resource database is hole BES-21-037.

12.1 Site Visits

Charlotte Athurion, P. Geo., and Pierre-Luc Richard, P. Geo., both QPs from BBA, visited the Beaufor Mine on April 12, 2021 as part of the current mandate. The purpose of the visits was to review the Beaufor Mine Project with Beaufor's team and to observe the underground geology.

The 2021 site visit included visual inspections of drill cores, a tour of the core storage facility, a field tour of the underground main geological features and discussions of the current geological interpretations with geologists from Beaufor (Figure 12-1 and Figure 12-2). The QP was also able to see one of the drill rig in operation on site.

A review of sampling procedures, QA/QC and drillhole procedures, downhole survey methodologies, and descriptions of lithologies, alterations and structures were also completed during the site visit (Figure 12-3).

12.2 Sample Preparation, Analytical, QA/QC and Security Procedures

Monarch procedures are described in Chapter 11 of the current report. Discussions held with on-site geologists allowed to confirm said procedures were adequately applied.

BBA reviewed several sections of mineralized core while visiting the Project. All core boxes were labelled and properly stored. Sample tags were present in the boxes and it was possible to validate sample numbers and confirm the presence of mineralization in witness half-core samples from the mineralized zones (Figure 12-3).

Due to the historical aspect of the Beaufor Mine, some data used in this MRE have been taken before the implementation of current QA/QC procedures. Little information is available about sample preparation, analytical, QA/QC or security procedures. Although it is reasonable to assume that these companies conducted their exploration activities in accordance with prevailing industry standards at the time, the QP conducted statistic analysis in order to ensure that there was no bias between the two sets of data.

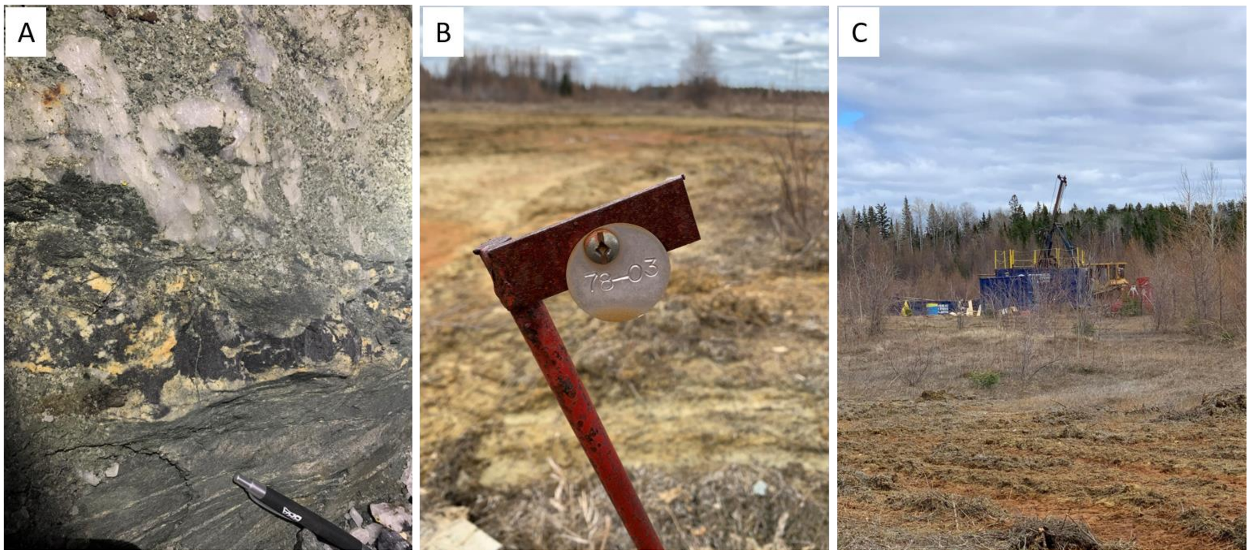


Figure 12-1: A) Underground mineralized zone; B) Surface drill collar review during the site visit; C) Drill rig in operation during the site visit

Figure 12-2: A) Sample preparation room; B) Core storage on site ; C) Samples ready for shipment to the laboratory; D) Mineralized zone half-core in storage

**Figure 12-3: A) CRM storage; B) Core box with identification tags;
C) and D) Core review in the core logging facility**

12.3 Drillhole Database

12.3.1 Drillhole Location

For underground drilling conducted between 2020 and 2021, all drill collars were surveyed by an external surveyor. For surface drilling, collars were surveyed using differential GPS equipment by an external contractor. BBA compared the drill hole location from Monarch's database with the data provided by the surveyor for approximately 30% of the new DDH. No discrepancies were noted.

12.3.2 Downhole Survey

Downhole surveys from the Geotic database were verified for consistency. Spurious measurements were tagged by the Beaufor geologist as “false” in the database and were not considered by the software for the modelling.

BBA also checked the consistency of the entire downhole survey table by visually searching for unrealistic pathways and by automatically checking for large variations of dip or azimuth in Excel.

12.3.3 Assays

BBA was granted access to the original assay certificates directly from the laboratories for all holes drilled by Monarch between 2020 and 2021 on the Project. Most of the historical original logs and assay certificates are available at the Beaufor Mine but have not been verified for this mandate.

Approximatively 50% of the assay results for holes that were drilled since the closing date of the previous MRE (Pelletier and Langton, 2020) were verified (up to April 8, 2021). The assays recorded in the database were compared to the original certificates from the different laboratories and no significant discrepancies were detected.

In the assay table, the gravimetric finish result always replaces a value obtained by AA finish and when a sample was assayed using the screen metallic procedure, the value recorded as “Au final” always corresponds to the Au value obtained by metallic sieve method. Following BBA’s recommendations, the values lower than the detection limits were set to half the detection limit. In some cases, two assays from the same method were averaged.

In the historical assays, some discrepancies were noted. After verification in the historical database from the Beaufor team, modifications in the database were made to fix those errors.

12.4 Conclusion

The QP is of the opinion that the drilling, sampling and assaying protocols in place are adequate. The database for the Beaufor Mine is of good overall quality. According to the opinion of the QP, the Project database is suitable for use in the estimation of mineral resources.

13. MINERAL PROCESSING AND METALLURGICAL TESTING

Monarch Mining Corporation has not carried out mineral processing or metallurgical testing analyses on the Project.

14. MINERAL RESOURCE ESTIMATE

14.1 Methodology

The herein MRE covers the entire Beaufor Mine Project (Figure 14-1).

The geological wireframes were constructed in Leapfrog Geo™ by BBA's geologists in collaboration with Martin Lacaille, P. Geo., and Christian Tessier, P. Geo., both from Monarch. Leapfrog Geo V.2021.1.2 was also used to generate mineralized intercepts and for the compositing. Leapfrog Edge V.2021.1.2 was used for the 3D block modelling, interpolation, classification and reporting. Statistical studies were undertaken using Excel and Snowden Supervisor v. 8.14. Deswik version 2021.1.552 was used for the stope optimizations. As requested by Monarch, the Leapfrog project was set-up in the UTM NAD 83 coordinates system.

The methodology for the estimation of the mineral resources involved the following steps:

- Database verification and validation;
- 3D interpretation and modelling;
- Drillhole intercept;
- Basic statistics and composite generation for each unit;
- Capping;
- Geostatistical analysis including variography;
- Block modelling and grade interpolation;
- Block model validation;
- Resource classification;
- Cut-off grade calculation;
- Reasonable prospects of eventual economic extraction assessment with DSO;
- Preparation of the mineral resource statement.

For this 2021 MRE, the previous polygonal mineral resource estimate was converted into block model mineral resource estimate.

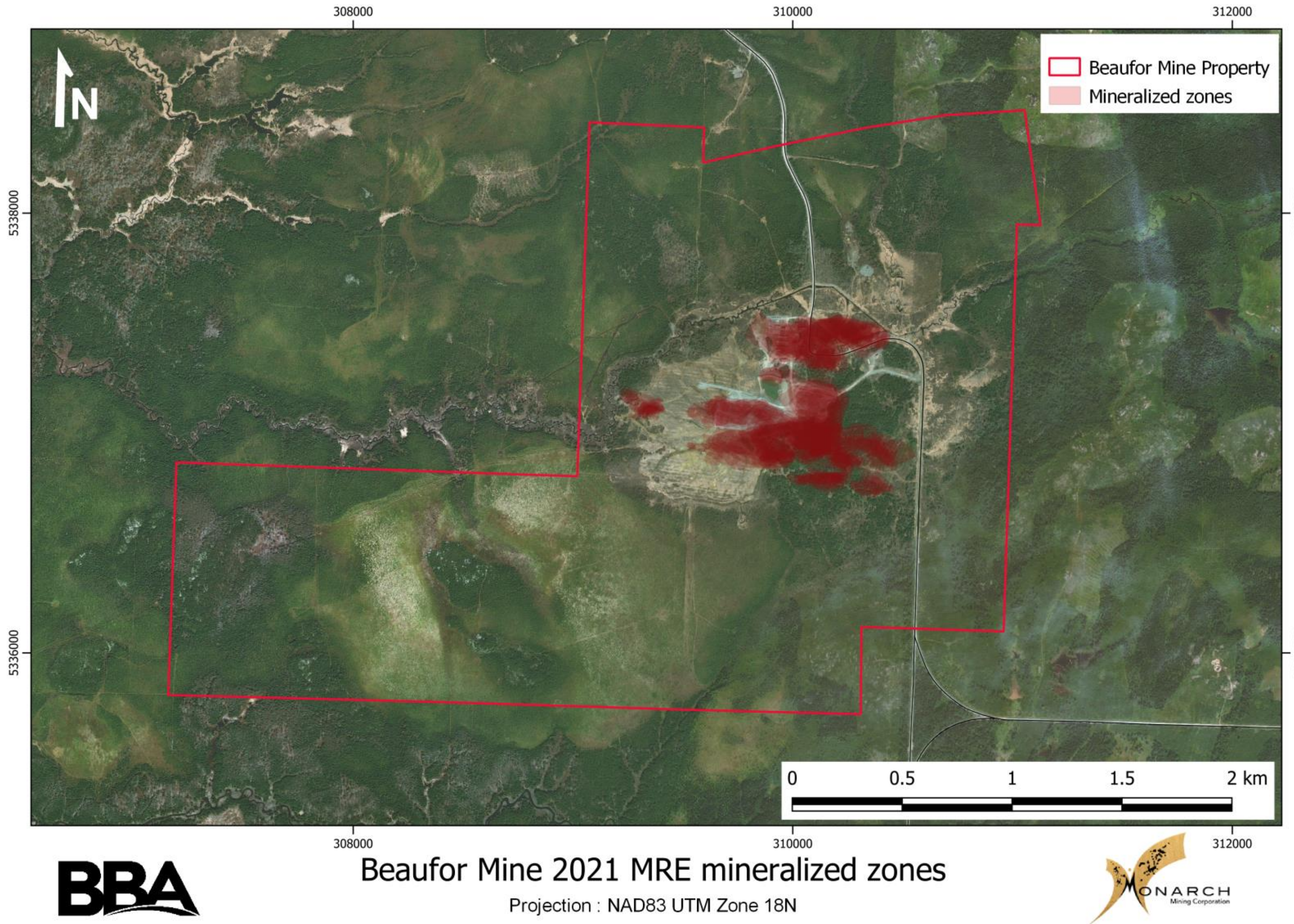


Figure 14-1: 2021 MRE mineralized zones location

14.2 Resource Database

The Project resource database, as of May 18, 2021, consisted of 997 surface collared and 9,595 underground collared diamond drillholes with a cumulative length of 971,620.21 m (Figure 14-2). The average length of a diamond drillhole (DDH) is 91.9 m. Of these 10,572 DDH, a subset of 6,509 DDH cut across the mineralized lenses.

The resource estimation for the Project relies on historical and recent drilling programs. BBA included the historical drillhole information into the resource. Some recent drillholes were drilled in the vicinity of historical drillholes and the results show comparable geology and mineralization outlines. A statistical analysis was performed by BBA to compare the two populations and no bias exists between historical and recent holes (Figure 14-13).

The resource database was validated before proceeding to the resource estimation. The validation steps are detailed in Chapter 12 of this Report. Minor variations have been noted during the validation process but they have no material impact on the 2021 MRE.

The QP is of the opinion that the database is appropriate for the purposes of the mineral resource estimation and that the sample density allows a reliable estimate to be made of the size, tonnage and grade of the mineralization in accordance with the level of confidence established by the mineral resource categories as set forth in the CIM Standards.

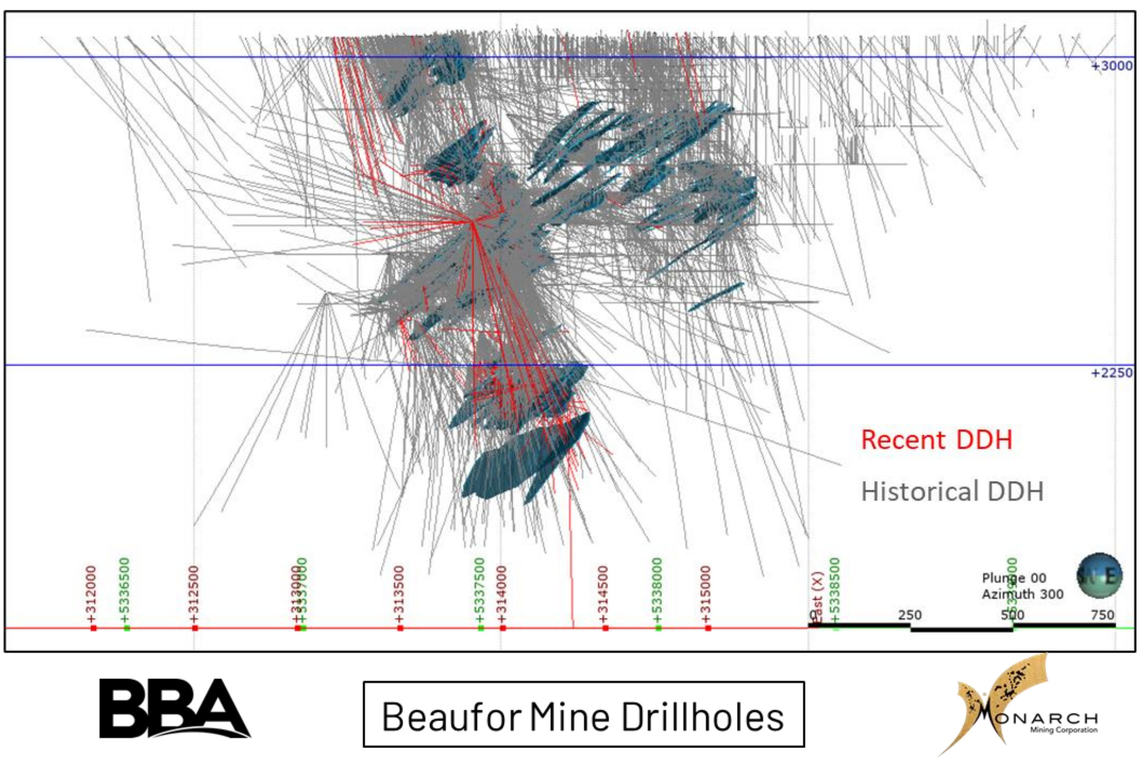


Figure 14-2: 3D view looking northwest on the 3D model including the drillholes of this MRE

14.3 Geological Interpretation and Modelling

A total of 166 mineralized lenses were interpreted for the purpose of the 2021 MRE (Table 14-1)

Table 14-1: Mineralized lenses of the 2021 MRE

#	Rockcode	#	Rockcode	#	Rockcode	#	Rockcode	#	Rockcode	#	Rockcode
1	08V_01	30	21_01	59	367_07	88	B_02	117	CH_05	146	M1_02
2	12_01	31	21_02	60	367_08	89	B_03	118	CH_06	147	Q_01
3	12_02	32	22V_01	61	367_09	90	B_04	119	CH_07	148	Q_02
4	12_03	33	32_01	62	367_10	91	B_05	120	CH_09	149	Q_03
5	12_04	34	32_02	63	367_11	92	BF_01	121	D_01	150	Q1_01
6	13V_01	35	33_01	64	367_12	93	BF_02	122	D_02	151	Q1_02
7	13V_02	36	33_02	65	86_01	94	BF_03	123	D_03	152	Q1_03
8	13V_03	37	33_03	66	86_02	95	BF_04	124	D_04	153	Q1_04
9	13V_04	38	33_04	67	86_03	96	BF_05	125	D_05	154	Q1_05
10	13V_05	39	33_05	68	86_04	97	C_01	126	E_01	155	QF1_01
11	13V_06	40	33_06	69	96_01	98	C_02	127	E_02	156	QF1_02
12	13V_07	41	33H_01	70	96_02	99	C_03	128	EF_01	157	QF1_03
13	13V_08	42	33H_02	71	96_03	100	C_04	129	EF_02	158	QH1_01
14	13V_09	43	350_01	72	A_01	101	C_05	130	EH_01	159	QH2_01
15	140_01	44	350F_01	73	A_02	102	C_06	131	F_01	160	QH2_02
16	140_02	45	350F_02	74	A_03	103	C_07	132	F_02	161	QH2_03
17	140_03	46	350H_01	75	A1_01	104	C_08	133	FF_01	162	QH2_04
18	140_04	47	350H_02	76	A2_01	105	CF_01	134	FF3_01	163	W_01
19	140_05	48	350H_03	77	A2_02	106	CF2_01	135	FF4_01	164	W_02
20	140_06	49	350H_04	78	A2_03	107	CF3_01	136	G_01	165	W_03
21	140_07	50	350H_05	79	A2_04	108	CF4_01	137	G_02	166	WH_01
22	140_08	51	350H_06	80	A2_05	109	CF4_02	138	HI_01		
23	140_09	52	350H_07	81	A2_06	110	CF5_01	139	HI_02		
24	140_10	53	367_01	82	A4_01	111	CF6_01	140	HI_03		
25	16_01	54	367_02	83	A5_01	112	CF6_02	141	HI_04		
26	18_01	55	367_03	84	A5_02	113	CH_01	142	HI_05		
27	18_02	56	367_04	85	A6_01	114	CH_02	143	M_01		
28	20_01	57	367_05	86	A7_01	115	CH_03	144	M_02		
29	20_02	58	367_06	87	B_01	116	CH_04	145	M1_01		

14.3.1 Geological Model

The herein block model comprises 166 mineralized lenses. All the lenses were modelled in 3D for the purpose of the 2021 MRE, in order to convert previous Polygonal mineral resource estimate into the block model mineral resource estimate.

The geological wireframes were constructed in Leapfrog Geo™ by BBA's geologists with the collaboration of Monarch's geologists. All the mineralized lenses have a minimum thickness of 2.4 m. They were modelled using geological knowledge of the deposit, grade continuity and geological information provided in the DDH logs, i.e., lithology, alteration, veins, and structure, and the historical underground voids (Figure 14-3 and Figure 14-4). Geological interpretation of the host rock units and structures were also carried out for the purpose of better constraining the mineralized lenses. The structures (mostly faults) were provided by Monarch; BBA did not reinterpret these structures.

The QP reviewed the geological model in 3D view, plan view and cross-section and is of the opinion that the level of detail to which the geology model was constructed represents adequately the Complexity of the deposit. In the QP's opinion, the geological model is appropriate for the size, grade distribution and geometry of the mineralized lenses and is suitable for the resource estimation of the Beaufor Mine.

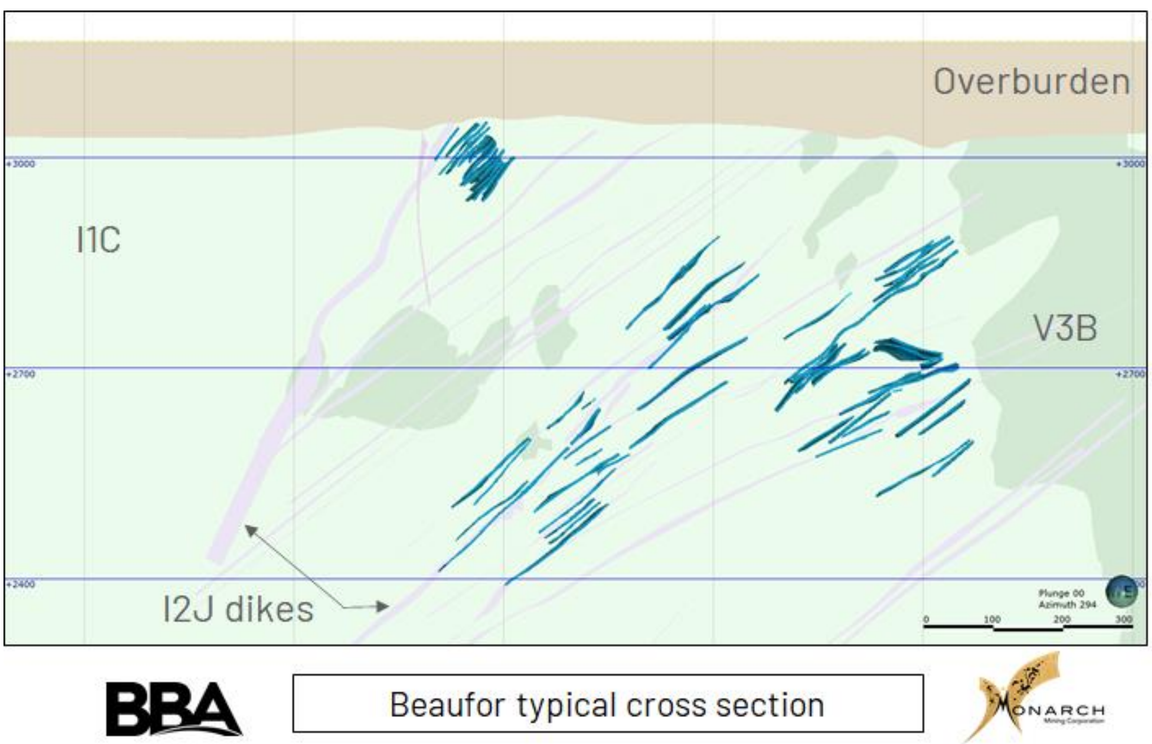


Figure 14-3: Beaufor Mine Project typical cross-section showing the mineralized zones and the geological model

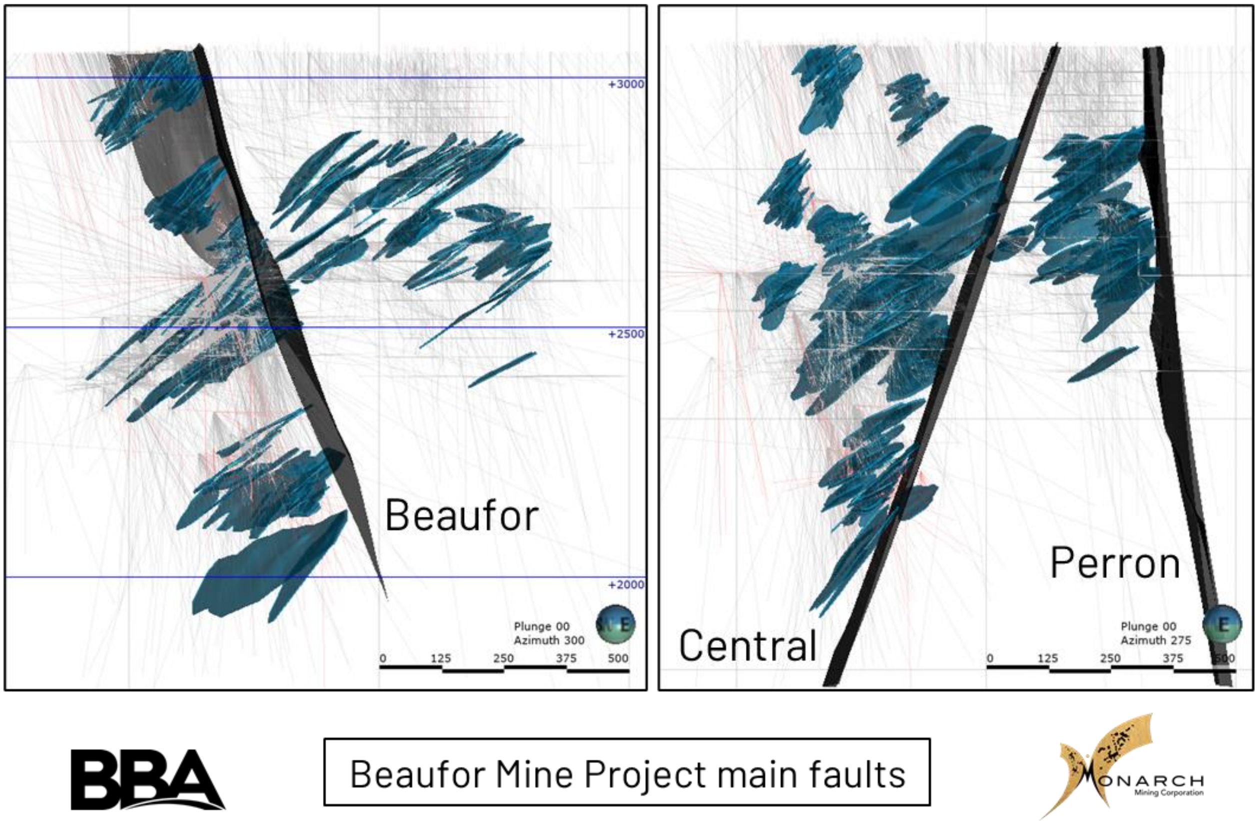


Figure 14-4: 3D views showing the mineralized zones and the main faults of the Beaufor Mine Project

14.3.2 Voids Model

The void model for the 2021 MRE was provided by BBA and Monarch. Figure 14-5 presents a 3D view of the underground voids used for the 2021 MRE. Validations were made to make sure that any new developments had been considered for the 2021 MRE. A buffer zone of 3 m around all voids was created to deplete the MRE in order to meet the reasonable prospect of economic extraction criteria. In some areas (upper levels) of the mine that were mined in the early stages, information on voids was incomplete. Therefore, the mineralized zones crossing those areas were discarded from this MRE. Consequently, 11 zones were discarded from the MRE (13V zones and 32 zones).

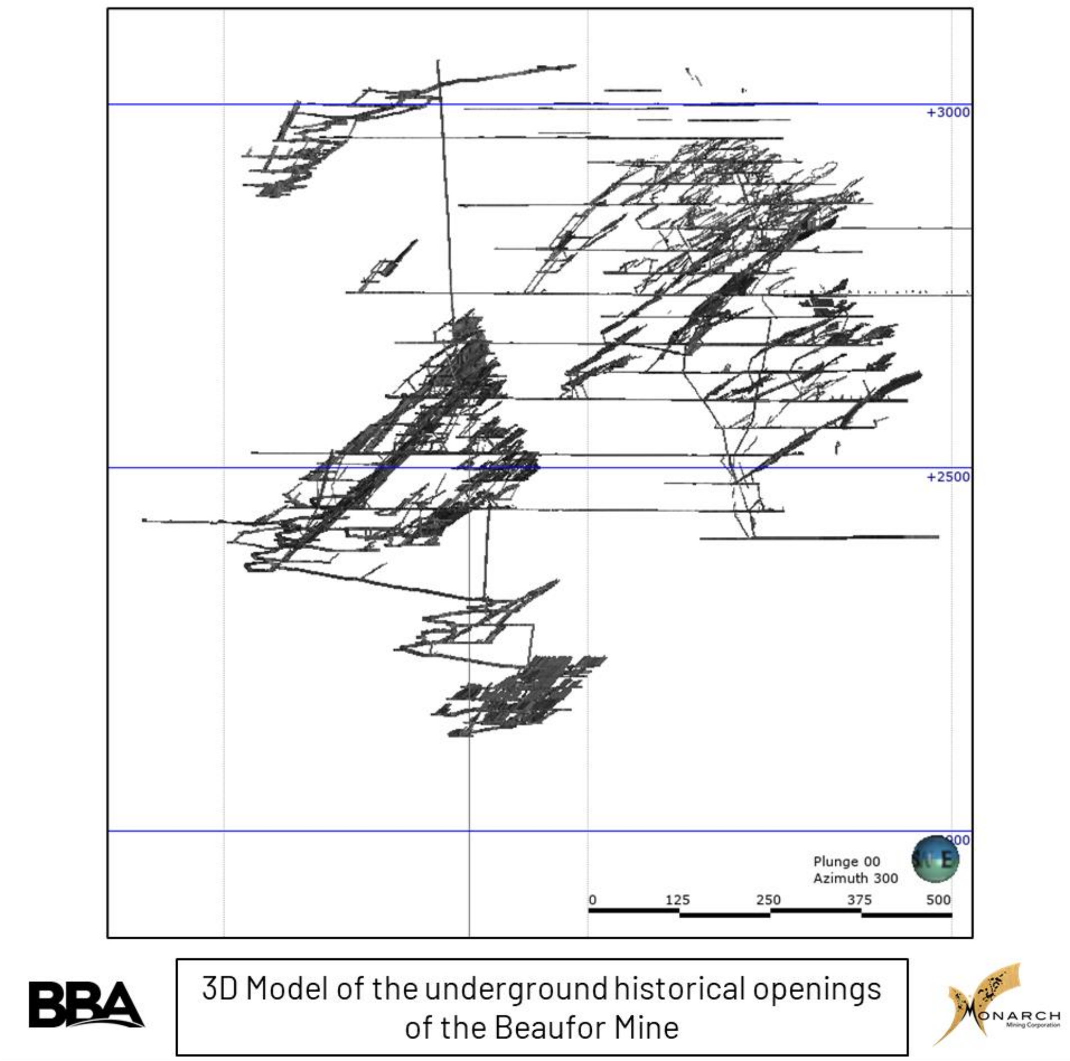


Figure 14-5: 3D view of the 3D model of the historical underground openings of the Beaufor Mine

14.3.3 Overburden and Topography

The topographic surface and the overburden-rock interface were created by BBA in Leapfrog Geo software and are based on the collar elevation coordinates of the drillholes and the lithological description.

14.4 Data Analysis

14.4.1 Raw Assay Statistics

All raw assay data that intersected the mineralized lenses were assigned individual zones. These coded intercepts were used to produce basic statistics on sample lengths and grades.

A total of 46,514 assays are included in the modelled wireframes.

Basic statistics on the raw assays are presented in Table 14-2.

Table 14-2: Basic statistics on raw assays for each zone

	Raw Assays					
Sector	Count sample	Average (g/t Au)	Median (g/t Au)	Minimum (g/t Au)	Maximum (g/t Au)	COV
08V_01	543	3.69	0.04	0.00025	292.00	5.52
12_01	272	4.30	0.04	0.00025	301.30	4.92
12_02	63	1.96	0.02	0.00025	46.25	3.39
12_03	91	1.95	0.01	0.00025	158.00	6.93
12_04	73	0.86	0.01	0.00025	50.75	5.43
13V_01	350	5.00	0.00	0.00025	777.00	7.10
13V_02	215	5.96	0.00	0.00025	660.43	5.96
13V_03	271	5.81	0.00	0.00025	575.73	5.79
13V_04	223	6.80	0.00	0.00025	715.98	5.78
13V_05	361	5.28	0.00	0.00025	515.72	5.97
13V_06	184	6.69	0.00	0.00025	2077.29	9.34
13V_07	129	2.80	0.00	0.00025	94.64	3.64
13V_08	84	4.66	0.00	0.00025	174.88	3.68
13V_09	69	4.33	0.00	0.00025	276.38	5.78
140_01	367	2.20	0.03	0.00025	98.70	3.66
140_02	282	1.96	0.02	0.00025	69.70	3.64
140_03	260	1.92	0.05	0.00025	44.10	2.69
140_04	164	3.20	0.01	0.00025	147.50	3.76
140_05	88	2.13	0.03	0.00025	91.50	4.26
140_06	299	2.10	0.05	0.00025	67.45	3.50
140_07	117	0.84	0.01	0.00025	20.05	3.37
140_08	19	2.80	0.00	0.00025	33.85	2.87
140_09	86	1.97	0.01	0.00025	98.30	4.99
140_10	141	2.09	0.01	0.00025	218.00	6.85
16_01	43	1.19	0.00	0.00025	15.25	2.83

	Raw Assays					
Sector	Count sample	Average (g/t Au)	Median (g/t Au)	Minimum (g/t Au)	Maximum (g/t Au)	COV
18_01	197	6.32	0.02	0.00025	748.89	6.97
18_02	73	2.68	0.00	0.00025	97.04	3.92
20_01	81	3.01	0.01	0.00025	100.00	3.86
20_02	87	3.51	0.00	0.00025	181.50	6.00
21_01	70	2.33	0.02	0.00025	62.40	3.47
21_02	244	1.62	0.00	0.00025	68.58	4.21
22V_01	460	1.98	0.02	0.00025	173.83	6.14
32_01	492	5.18	0.00	0.00025	543.84	5.99
32_02	254	7.39	0.00	0.00025	758.84	5.59
33_01	446	3.13	0.01	0.00025	249.00	5.18
33_02	320	2.09	0.01	0.00025	134.88	4.88
33_03	171	3.67	0.04	0.00025	262.32	4.46
33_04	181	1.43	0.00	0.00025	70.50	4.82
33_05	312	1.13	0.00	0.00025	80.24	5.67
33_06	230	1.84	0.01	0.00025	159.11	5.77
33H_01	125	2.38	0.02	0.00025	100.00	4.40
33H_02	176	0.81	0.00	0.00025	38.45	4.30
350_01	317	3.56	0.02	0.00025	154.00	4.13
350F_01	73	3.49	0.00	0.00025	141.00	4.86
350F_02	36	2.65	0.00	0.00025	81.90	4.01
350H_01	73	1.66	0.01	0.00025	27.25	3.08
350H_02	257	2.00	0.01	0.00025	85.20	3.76
350H_03	57	1.35	0.00	0.00025	34.70	3.84
350H_04	48	13.85	0.13	0.00025	535.00	4.90
350H_05	83	3.65	0.01	0.00025	125.00	4.11
350H_06	54	6.20	0.04	0.00025	87.80	2.80
350H_07	115	3.10	0.02	0.00025	148.50	4.37
367_01	352	3.51	0.10	0.00025	334.40	5.66
367_02	177	2.42	0.04	0.00025	150.90	5.30
367_03	124	1.96	0.01	0.00025	85.95	3.91
367_04	143	1.44	0.01	0.00025	49.90	4.11
367_05	188	3.60	0.00	0.00025	307.90	7.38
367_06	116	4.91	0.00	0.00025	160.00	4.23
367_07	130	3.88	0.02	0.00025	125.00	4.61
367_08	174	3.75	0.14	0.00025	121.97	3.31
367_09	183	2.10	0.01	0.00025	75.05	3.73

	Raw Assays					
Sector	Count sample	Average (g/t Au)	Median (g/t Au)	Minimum (g/t Au)	Maximum (g/t Au)	COV
367_10	98	2.66	0.00	0.00025	106.90	4.28
367_11	197	2.48	0.10	0.00025	100.00	4.12
367_12	145	1.73	0.10	0.00025	67.40	3.69
86_01	492	4.04	0.04	0.00025	272.40	4.39
86_02	274	1.55	0.00	0.00025	233.86	6.34
86_03	448	2.67	0.00	0.00025	259.23	6.17
86_04	95	1.89	0.00	0.00025	94.95	5.23
96_01	127	3.90	0.06	0.00025	103.77	3.21
96_02	323	3.88	0.01	0.00025	137.00	3.75
96_03	238	1.77	0.00	0.00025	150.00	5.47
A_01	237	4.38	0.06	0.00025	155.25	3.53
A_02	140	3.73	0.13	0.00025	114.70	3.15
A_03	48	5.83	0.02	0.00025	100.00	2.73
A1_01	106	2.66	0.02	0.00025	78.95	3.43
A2_01	536	3.94	0.06	0.00025	163.30	3.82
A2_02	89	3.21	0.24	0.00025	80.35	2.78
A2_03	204	2.82	0.13	0.00025	63.05	2.82
A2_04	349	2.41	0.01	0.00025	171.50	5.24
A2_05	344	2.56	0.04	0.00025	100.00	4.41
A2_06	169	1.08	0.01	0.00025	79.63	5.25
A4_01	314	3.30	0.10	0.00025	148.00	3.83
A5_01	229	6.40	0.15	0.00025	393.35	4.57
A5_02	318	8.37	0.08	0.00025	631.31	5.51
A6_01	113	4.28	0.11	0.00025	100.00	2.95
A7_01	75	8.01	0.03	0.00025	494.00	5.78
B_01	378	11.85	0.04	0.00025	991.78	3.94
B_02	685	3.87	0.01	0.00025	342.53	4.63
B_03	200	4.47	0.01	0.00025	258.25	5.03
B_04	218	3.79	0.02	0.00025	424.11	5.69
B_05	463	9.19	0.00	0.00025	2175.00	7.26
BF_01	415	4.98	0.07	0.00025	126.63	3.63
BF_02	204	2.75	0.04	0.00025	129.40	3.94
BF_03	152	2.71	0.09	0.00025	100.00	4.61
BF_04	254	9.09	0.05	0.00025	257.70	3.41
BF_05	703	8.55	0.00	0.00025	710.10	4.21
C_01	829	8.90	0.00	0.00025	955.05	5.62

	Raw Assays					
Sector	Count sample	Average (g/t Au)	Median (g/t Au)	Minimum (g/t Au)	Maximum (g/t Au)	COV
C_02	61	8.42	0.33	0.00025	343.50	4.92
C_03	641	2.69	0.01	0.00025	302.00	5.48
C_04	74	5.41	0.01	0.00025	330.62	7.08
C_05	271	3.37	0.04	0.00025	108.40	3.31
C_06	138	14.11	0.00	0.00025	2218.80	8.72
C_07	479	2.33	0.01	0.00025	928.00	14.33
C_08	68	0.96	0.00	0.00025	58.60	6.00
CF_01	489	9.87	0.01	0.00025	1939.30	7.11
CF2_01	78	2.00	0.00	0.00025	36.83	2.87
CF3_01	252	2.41	0.02	0.00025	81.20	3.39
CF4_01	622	1.29	0.00	0.00025	122.20	5.52
CF4_02	705	1.99	0.01	0.00025	127.25	4.99
CF5_01	148	3.96	0.01	0.00025	222.00	4.95
CF6_01	806	2.54	0.01	0.00025	115.99	3.98
CF6_02	663	4.79	0.03	0.00025	297.00	4.49
CH_01	587	6.94	0.13	0.00025	701.50	4.93
CH_02	281	3.11	0.04	0.00025	100.00	3.75
CH_03	468	2.94	0.04	0.00025	116.00	3.86
CH_04	2 470	5.03	0.02	0.00025	1072.90	5.69
CH_05	742	3.26	0.01	0.00025	500.90	6.79
CH_06	234	2.08	0.01	0.00025	97.95	4.11
CH_07	112	2.71	0.04	0.00025	187.00	4.88
CH_09	134	2.44	0.10	0.00025	59.75	2.96
D_01	713	2.57	0.01	0.00025	413.00	6.14
D_02	393	2.83	0.00	0.00025	318.85	6.31
D_03	109	3.11	0.05	0.00025	74.55	3.53
D_04	97	7.31	0.11	0.00025	100.00	2.75
D_05	265	2.25	0.00	0.00025	163.90	5.56
E_01	379	2.58	0.02	0.00025	191.50	4.45
E_02	286	6.61	0.10	0.00025	135.55	2.92
EF_01	1 285	3.29	0.04	0.00025	232.43	4.71
EF_02	283	1.56	0.00	0.00025	100.00	5.65
EH_01	23	2.13	0.01	0.00025	20.48	2.49
F_01	376	1.76	0.04	0.00025	200.00	6.56
F_02	1 133	3.57	0.03	0.00025	366.90	4.64
FF_01	693	3.90	0.02	0.00025	210.55	4.60

	Raw Assays					
Sector	Count sample	Average (g/t Au)	Median (g/t Au)	Minimum (g/t Au)	Maximum (g/t Au)	COV
FF3_01	363	3.51	0.00	0.00025	184.25	4.54
FF4_01	255	2.68	0.00	0.00025	113.97	4.81
G_01	148	4.34	0.18	0.00025	128.65	3.53
G_02	112	1.76	0.00	0.00025	232.00	9.74
HI_01	100	2.53	0.00	0.00025	179.40	5.77
HI_02	125	4.45	0.01	0.00025	144.55	3.72
HI_03	143	2.68	0.01	0.00025	106.60	4.51
HI_04	194	2.19	0.00	0.00025	147.10	5.47
HI_05	103	1.60	0.00	0.00025	53.84	3.32
M_01	675	4.73	0.02	0.00025	1110.00	9.17
M_02	140	4.09	0.03	0.00025	100.00	3.56
M1_01	600	2.41	0.01	0.00025	170.50	4.81
M1_02	255	1.37	0.00	0.00025	75.10	4.89
Q_01	1 851	4.58	0.03	0.00025	368.00	4.02
Q_02	106	4.14	0.04	0.00025	89.80	2.92
Q_03	59	9.90	0.08	0.00025	361.00	4.83
Q1_01	61	5.85	0.02	0.00025	63.60	2.50
Q1_02	69	1.51	0.01	0.00025	43.00	3.95
Q1_03	364	5.71	0.03	0.00025	1310.00	10.03
Q1_04	88	3.35	0.06	0.00025	72.80	3.30
Q1_05	57	6.23	0.06	0.00025	209.00	4.54
QF1_01	227	4.27	0.05	0.00025	163.00	4.22
QF1_02	222	4.25	0.01	0.00025	251.00	4.99
QF1_03	76	4.69	0.02	0.00025	176.00	4.02
QH1_01	75	10.64	0.01	0.00025	351.00	4.67
QH2_01	94	2.28	0.06	0.00025	26.25	2.44
QH2_02	116	6.08	0.09	0.00025	137.00	3.24
QH2_03	275	1.85	0.01	0.00025	180.50	5.79
QH2_04	412	0.99	0.01	0.00025	93.45	5.29
W_01	406	5.03	0.02	0.00025	175.50	3.71
W_02	472	4.27	0.01	0.00025	229.50	4.62
W_03	62	3.40	0.01	0.00025	119.50	4.60
WH_01	28	3.51	0.07	0.00025	27.75	2.19

14.4.2 Compositing

Compositing of drillhole samples was performed in order to homogenize the database for the statistical analysis and remove any bias associated with the sample length that may exist in the original database. The composite length was determined using original sample length statistics and the thickness of the mineralized zones.

Figure 14-6 shows the sample length distribution within the mineralized lenses for the Beaufor Mine.

As a result, 41,671 composites with an average length of 1,50 m were generated with a minimal length of 0.75 m, when necessary, to redistribute the tails evenly between all the composites of the drillhole.

Compositing was done within each mineralized lens in order to ensure that composite samples did not cross domain boundaries.

Grades of 0.00025 g/t Au were assigned to all missing intervals prior to the compositing process.

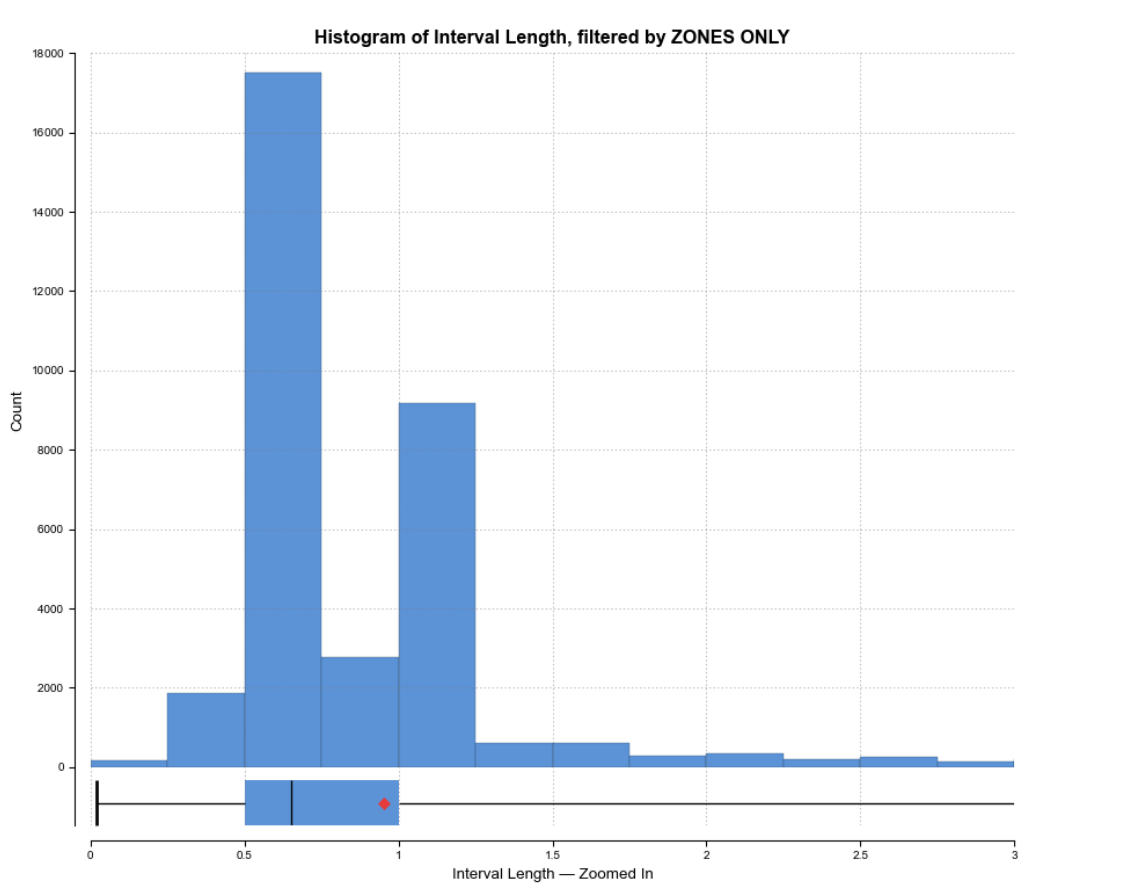


Figure 14-6: Sample length distribution within the Beaufor Mine before compositing

14.4.3 Outlier Handling

An outlier is an observation that appears to be inconsistent with most of the data. It is common practice to statistically examine the higher grades within a population and to trim the outlier to a lower grade value based on the results of a statistical study. The capping is performed on high-grade values considered to be outliers. High-grade capping was done on the composited assay data and established on a per zone or group of zones with a similar geological setting and location type basis.

The capping values were defined using various statistical methods allowing the selection of the capping threshold in a more objective and justified manner.

The capping values were determined by:

- Searching for abnormal breaks or change of slope on the grade distribution probability plot;
- Checking that the coefficient of variation of the capped data was ideally lower than, or around 2.00;
- Examining if the last decile contained more than 40% of the quantity of metal (Parrish decile analysis method; Parrish, 1997). In this case capping is warranted. An analysis then proceeded to split the top decile into percentiles. If the highest percentiles had more than 10% of the total metal content, a capping threshold was chosen. The threshold was selected by reducing all assays from the high metal content percentiles to the percentile below which the metal content did not exceed 10% of the total.
- Otherwise, if the last decile contained less than 40% of the metal content, the uncapped dataset may be used (Table 14-3).
- In addition, when the coefficient of variation was significantly higher than 2.00, a second capping value was defined allowing to reach that coefficient of variation of 2.00. This value will be used for the second and third pass grade interpolation to restrict high-grade impact at greater distance from the drillhole intersect for some zones.

Table 14-3: Basic statistics on composites and high-grade capping value for each zone

	Composite												
Zone	Count sample	COV	Max (g/t Au)	Min (g/t Au)	Uncut mean (g/t Au)	Capping value	Number capped	% capped	Metal loss (%)	Cut COV	Cut mean (g/t Au)	Cut median (g/t Au)	2nd capping (g/t Au)
08V_01; 22V_01; C_07; C_08	731	5.01	310.54	0.0005	2.90	**25.00**	20.00	2.74%	35.75%	2.65	1.84	0.11	15.00
18_01;16_01; 18_02; 21_02; HI_04; HI_05	514	3.79	205.49	0.00	3.89	**35.00**	9.00	1.75%	20.74%	2.16	2.99	0.28	15.00
20_01; 20_02; 21_01	111	2.62	59.35	0.00	3.69	**25.00**	4.00	3.60%	23.00%	2.00	2.82	0.38	-
A2_01; CH_01	726	3.55	439.92	0.0003	6.06	**45.00**	17.00	2.34%	21.78%	2.02	4.70	0.50	15.00
B_01	237	2.26	208.43	0.0018	13.33	**45.00**	16.00	6.75%	32.42%	1.56	9.06	1.46	-
B_05	262	3.08	511.79	0.0022	15.14	**60.00**	15.00	5.73%	38.39%	1.84	9.15	1.07	-
BF_05	377	2.57	341.98	0.0011	12.06	**65.00**	12.00	3.18%	21.98%	1.75	9.44	1.53	-
C_01	432	2.83	421.39	0.0006	13.05	**65.00**	24.00	5.56%	31.07%	1.88	8.83	1.37	25.00
CH_04	1 324	3.30	373.94	0.0005	6.29	**60.00**	31.00	2.34%	17.66%	2.39	5.17	0.21	30.00
Q_01; (Q_02)	792	2.25	107.76	0.0003	5.01	**40.00**	14.00	1.18%	9.09%	1.88	4.55	0.71	20.00

	Composite												
Zone	Count sample	COV	Max (g/t Au)	Min (g/t Au)	Uncut mean (g/t Au)	Capping value	Number capped	% capped	Metal loss (%)	Cut COV	Cut mean (g/t Au)	Cut median (g/t Au)	2nd capping (g/t Au)
140_01; 140_02; 140_03; 140_04; 140_05; 140_06; 140_07; 140_08; 140_09; 140_10	885	2.31	72.84	0.0003	2.34	**30.00**	6.00	0.68%	3.25%	2.07	2.26	0.41	-
33_01; 33_02; 33_03; 33_04; 33_05; 33_06; 33H_01; 33H_02; 96_01	1 035	3.22	152.36	0.0003	2.63	**35.00**	15.00	1.45%	10.45%	2.53	2.33	0.22	20.00
350_01; 350F_01; 350F_02; 350H_01; 350H_02; 350H_03; 350H_04; 350H_05; 350H_06; 350H_07	535	3.03	193.97	0.0003	3.82	**35.00**	12.00	2.24%	13.70%	2.13	3.29	0.53	-

	Composite												
Zone	Count sample	COV	Max (g/t Au)	Min (g/t Au)	Uncut mean (g/t Au)	Capping value	Number capped	% capped	Metal loss (%)	Cut COV	Cut mean (g/t Au)	Cut median (g/t Au)	2nd capping (g/t Au)
367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	1 195	3.86	305.44	0.0004	3.26	**35.00**	24.00	2.01%	18.10%	2.39	2.67	0.38	-
A_01; A_02; A2_03; A2_04; A2_05; A2_06; BF_01; BF_02; BF_03; C_02	1 418	2.96	135.49	0.0004	3.82	**30.00**	39.00	2.75%	21.26%	2.14	3.00	0.36	25.00
A1_01; A2_02; A4_01; A5_01; A5_02; A6_01; A7_01	755	3.97	422.00	0.0005	6.55	**50.00**	15.00	1.99%	26.48%	2.07	4.76	0.59	25.00

	Composite												
Zone	Count sample	COV	Max (g/t Au)	Min (g/t Au)	Uncut mean (g/t Au)	Capping value	Number capped	% capped	Metal loss (%)	Cut COV	Cut mean (g/t Au)	Cut median (g/t Au)	2nd capping (g/t Au)
B_02; B_03; B_04; BF_04; A_03	801	2.69	200.11	0.0007	5.67	**40.00**	26.00	3.25%	17.66%	2.04	4.68	0.34	
C_03; C_04; C_05; C_06; CF_01; CF2_01; CF3_01; CH_05; CH_06	1 700	5.00	704.17	0.0006	5.91	**60.00**	31.00	1.82%	32.54%	2.58	3.97	0.35	30.00
CF4_01; CF4_02; CF5_01; CF6_01; CF6_02; D_05	1 786	2.89	142.24	0.0003	3.34	**55.00**	11.00	0.62%	4.51%	2.59	3.17	0.30	35.00
CH_02; CH_03; CH_07; CH_09	583	2.37	61.38	0.0008	3.05	**20.00**	21.00	3.60%	16.02%	1.90	2.57	0.29	-
FF3_01; FF4_01	301	2.90	184.25	0.0006	5.34	**35.00**	10.00	3.32%	18.30%	2.06	4.18	0.37	-
M_01; M_02; M1_01; M1_02; QH2_03; QH2_04	1 172	5.38	444.17	0.0003	2.71	**25.00**	22.00	1.88%	24.84%	2.35	2.04	0.11	15.00

	Composite												
Zone	Count sample	COV	Max (g/t Au)	Min (g/t Au)	Uncut mean (g/t Au)	Capping value	Number capped	% capped	Metal loss (%)	Cut COV	Cut mean (g/t Au)	Cut median (g/t Au)	2nd capping (g/t Au)
Q_03; QH1_01; QH2_02; QH2_01	150	2.92	157.93	0.0007	7.21	**45.00**	4.00	2.67%	29.06%	1.95	5.15	0.85	20.00
Q1_03; Q1_04; Q1_05; QF1_01; Q1_01; Q1_02	406	4.72	422.67	0.0004	4.88	**35.00**	10.00	2.46%	29.95%	2.17	3.43	0.36	-
W_01; W_02; W_03; WH_01	438	3.02	214.00	0.0003	5.49	**50.00**	7.00	1.60%	13.15%	2.19	4.58	0.30	25.00
D_01; D_02; D_03; E_02; EF_01; F_02	2 291	2.82	139.43	0.0004	4.04	**30.00**	78.00	3.40%	20.85%	2.14	3.20	0.30	-
D_04; E_01; EF_02; EH_01; F_01; FF_01	959	3.31	152.06	0.0005	3.29	**30.00**	29.00	3.02%	22.61%	2.43	2.52	0.13	-
QF1_02; QF1_03	139	2.85	139.47	0.0004	5.44	**30.00**	8.00	5.76%	24.94%	1.98	3.90	0.29	10.00

	Composite												
Zone	**Count sample**	**COV**	**Max (g/t Au)**	**Min (g/t Au)**	**Uncut mean (g/t Au)**	**Capping value**	**Number capped**	**% capped**	**Metal loss (%)**	**Cut COV**	**Cut mean (g/t Au)**	**Cut median (g/t Au)**	**2nd capping (g/t Au)**
12_01; 12_02; 12_03; 12_04	224	3.03	82.74	0.0009	3.35	**20.00**	8.00	3.57%	29.32%	2.11	2.30	0.29	10.00
G_01; HI_02; HI_03; G_02; HI_01	353	2.76	93.95	0.0012	3.99	**30.00**	11.00	3.12%	19.75%	2.11	3.23	0.32	15.00
86_01; 86_02; 86_03; 86_04	681	2.93	114.25	0.0003	3.77	**30.00**	13.00	1.91%	19.73%	2.09	3.01	0.44	-
32_01; 32_02	395	2.83	340.91	0.0012	9.06	**40.00**	17.00	4.30%	28.97%	1.68	6.49	1.32	15.00
96_02; 96_03	262	2.15	53.21	0.0015	3.96	**30.00**	10.00	3.82%	8.37%	1.95	3.64	0.50	-
13V_01; 13V_02; 13V_03; 13V_04; 13V_05; 13V_06; 13V_07; 13V_08; 13V_09	1 101	2.97	288.92	0.0022	7.50	**60.00**	26.00	2.36%	20.41%	2.97	6.00	1.18	-

Basic statistics for composited assays and capped composites are summarized in Table 14-3. For the mineralized lenses where a multi-capping strategy was applied, the statistics of the capped composites correspond to the statistics of the first capping value. Figure 14-7 to Figure 14-12 show examples of the graphs supporting the capping threshold decisions.

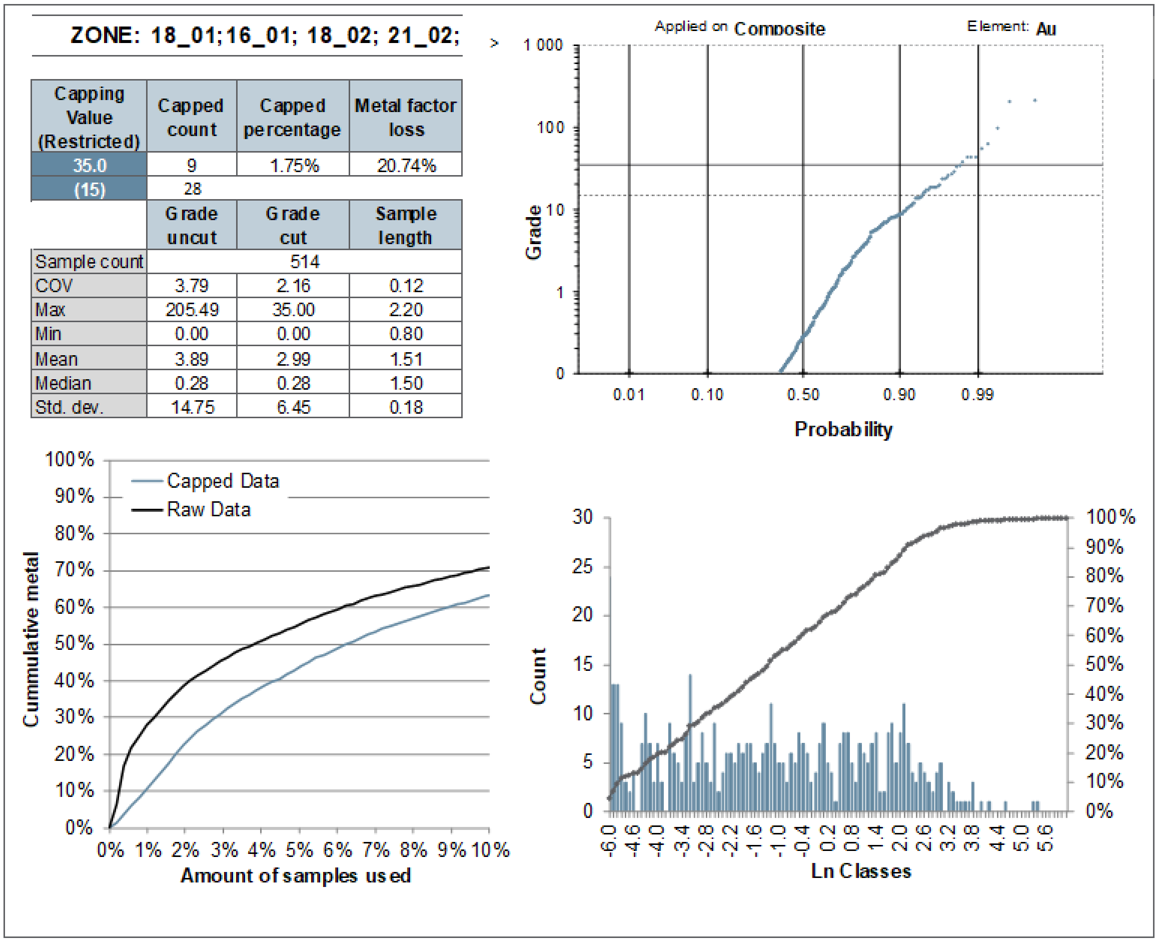
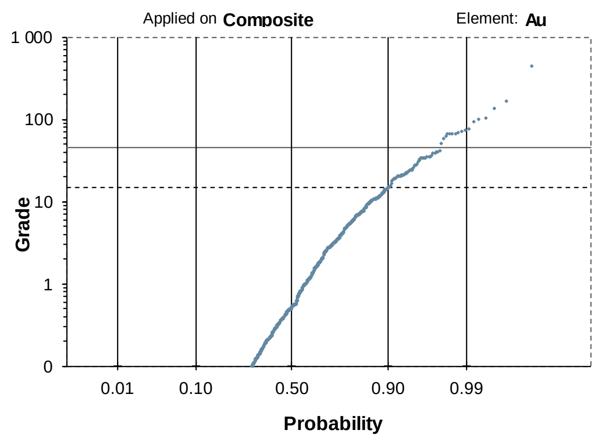
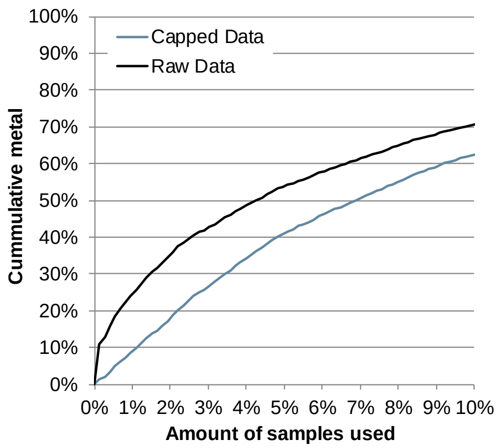


Figure 14-7: Graphs supporting capping threshold decisions on composites for the 18_01 group of zones

ZONE: A2_01; CH_01

Capping Value (Restricted)	Capped count	Capped percentage	Metal factor loss
45.0	17	2.34%	21.78%
(15)	69		
	Grade uncut	**Grade cut**	**Sample length**
Sample count	726		
COV	3.55	2.02	0.14
Max	439.92	45.00	2.23
Min	0.00	0.00	0.76
Mean	6.06	4.70	1.51
Median	0.50	0.50	1.50
Std. dev.	21.48	9.47	0.21





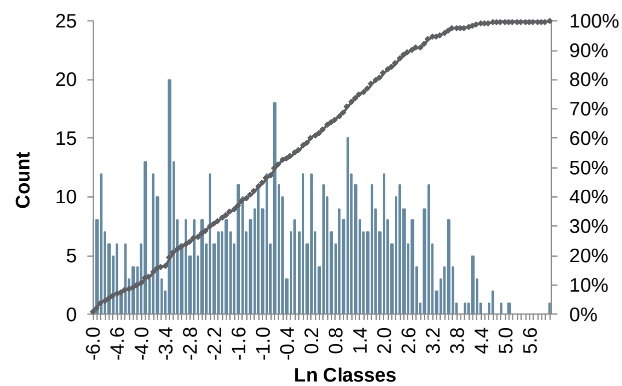
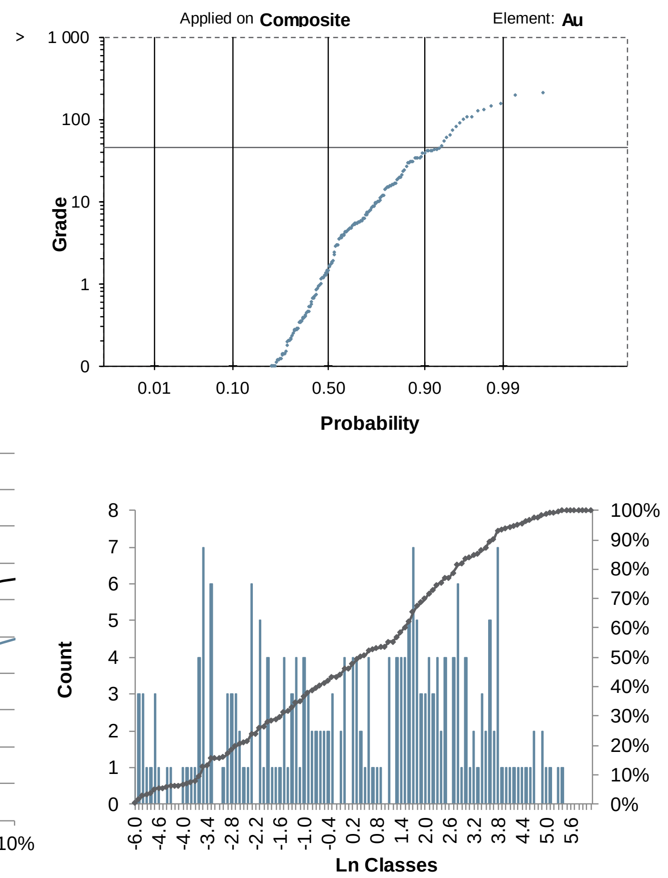


Figure 14-8: Graphs supporting capping threshold decisions on composites for the A2_01; CH_01 zones

ZONE: B_01

Capping Value (Restricted)	Capped count	Capped percentage	Metal factor loss
45.0	16	6.75%	32.42%
-	0		
	Grade uncut	**Grade cut**	**Sample length**
Sample count	237		
COV	2.26	1.56	0.15
Max	208.43	45.00	2.20
Min	0.00	0.00	0.75
Mean	13.33	9.06	1.52
Median	1.46	1.46	1.50
Std. dev.	30.11	14.13	0.23



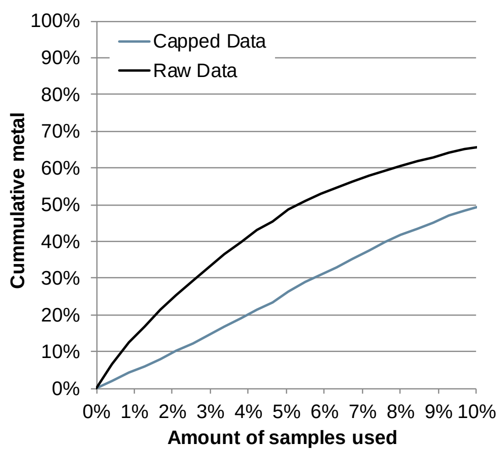
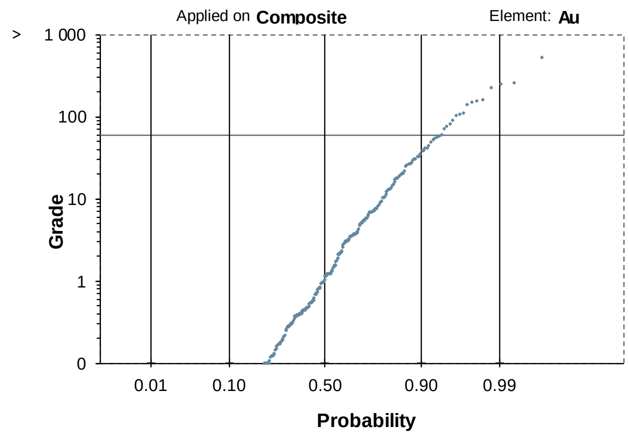
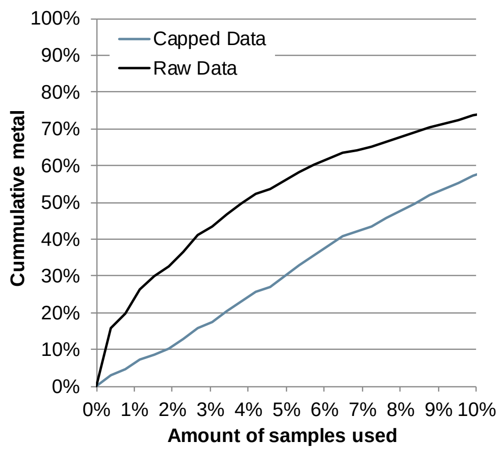


Figure 14-9: Graphs supporting capping threshold decisions on composites for the B_01 zone

ZONE: B_05

Capping Value (Restricted)	Capped count	Capped percentage	Metal factor loss
60.0	15	5.73%	38.39%
-	0		
	Grade uncut	**Grade cut**	**Sample length**
Sample count	262		
COV	3.08	1.84	0.14
Max	511.79	60.00	1.85
Min	0.00	0.00	0.79
Mean	15.14	9.15	1.51
Median	1.07	1.07	1.50
Std. dev.	46.56	16.86	0.21





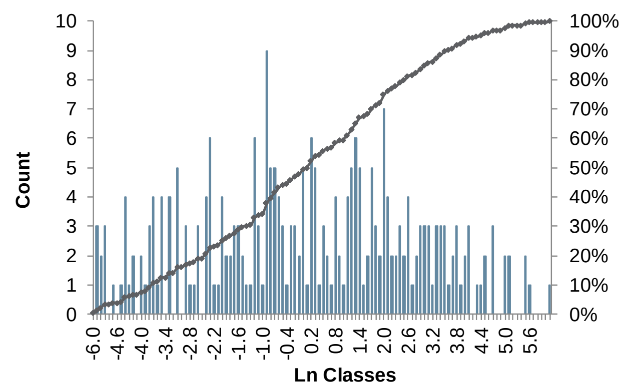
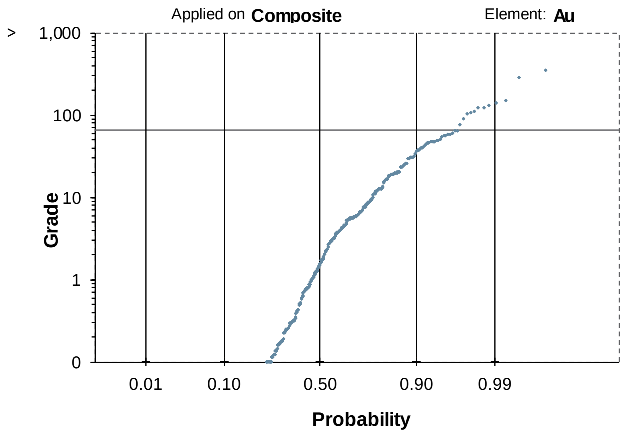
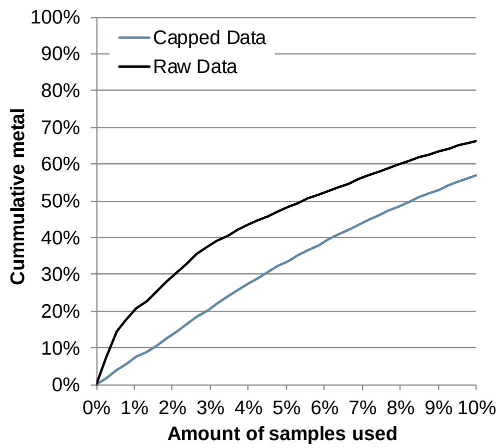


Figure 14-10: Graphs supporting capping threshold decisions on composites for the B_05 zone

ZONE: BF_05

Capping Value (Restricted)	Capped count	Capped percentage	Metal factor loss
65.0	12	3.18%	21.98%
(-)	0		
	Grade uncut	Grade cut	Sample length
Sample count	377		
COV	2.57	1.75	0.09
Max	341.98	65.00	2.24
Min	0.00	0.00	0.77
Mean	12.06	9.44	1.51
Median	1.53	1.53	1.50
Std. dev.	31.01	16.52	0.14





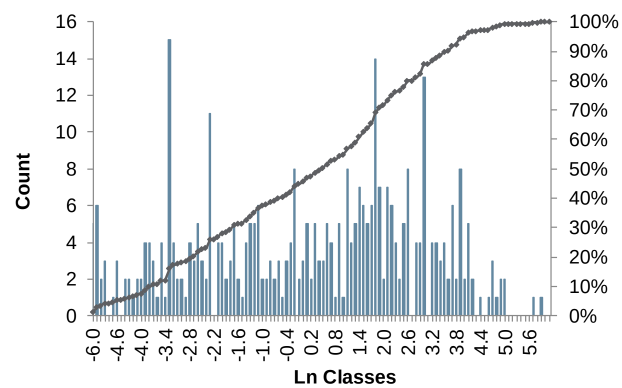


Figure 14-11: Graphs supporting capping threshold decisions on composites for the BF_05 zone

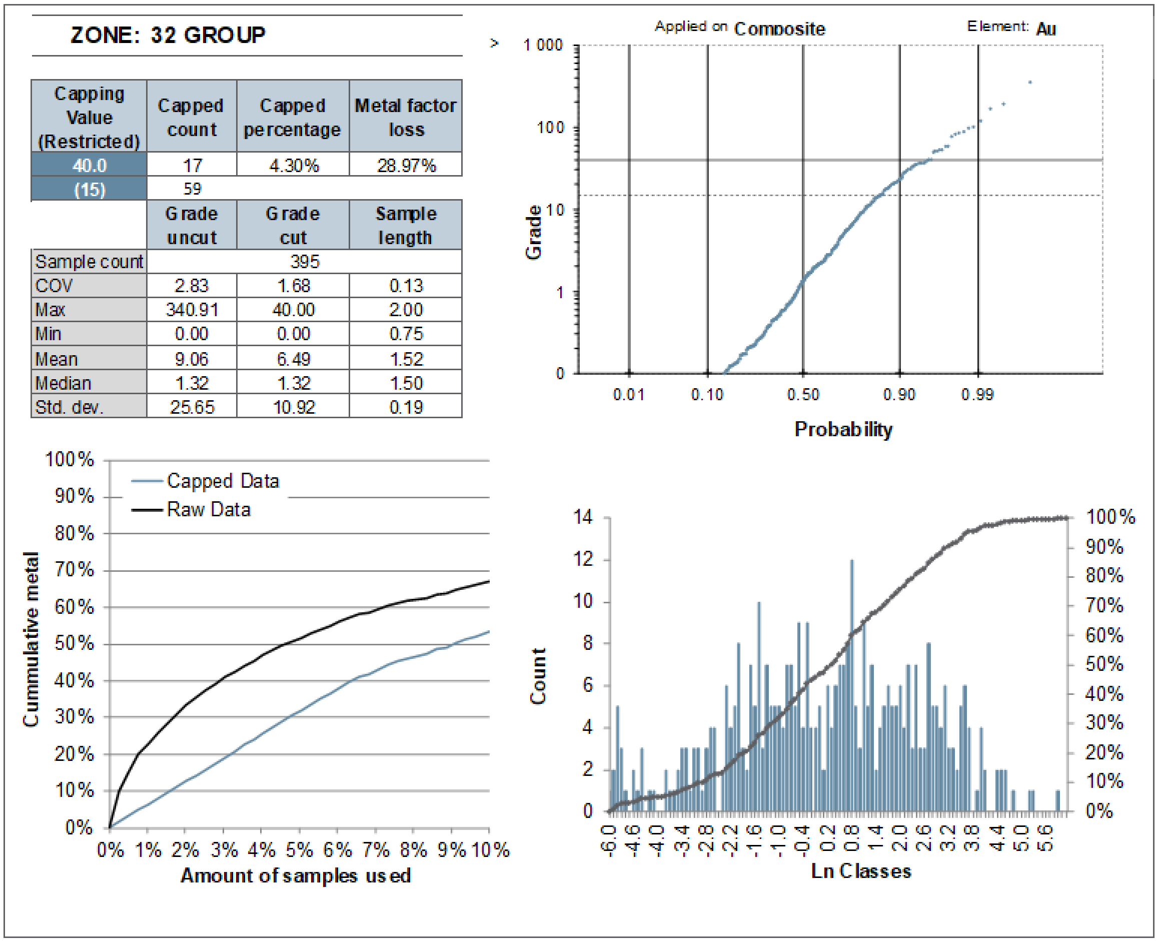


Figure 14-12: Graphs supporting capping threshold decisions on composites for the 32 group of zones

14.4.4 Density

Bulk density is an important parameter used to calculate tonnages for the estimated volumes derived from the resource-grade block model.

For the 2021 MRE, a fixed density value of 2.75 was used for all mineralized zones of the Project corresponding to the density value used when the mine was operating.

A fixed density of 2.00 g/cm^3 was assigned to the overburden and 0.00 g/cm^3 was assigned to underground workings.

14.4.5 Contact Plot

Contact plots compare the nature of grade between two domains; they graphically display average grades of all pairs of data from both populations at increasing distances. Commonly used to determine if a hard or a soft interpolation boundary is justified, it can also be used to compare different populations within a mineralized zone. If there is a significant difference in grade across a domain boundary or different datasets (i.e. RC versus DDH, historical holes versus recent holes, etc.), the resource geologist must find a way to take that into consideration in the model, and in some cases, discard one of the populations. Conversely, if a more gradual change in grade occurs across the boundary, the two datasets can be used as if they come from a single dataset.

A significant portion of the drillhole database is historical. As part of the historical data validation process, and in order to ensure that there was no bias between recent and historical data, contact plots were generated comparing both populations. The resulting distributions demonstrated that both populations are similar in nature and that no bias is believed to exist; therefore, both datasets can be used for the mineral resource estimate (Figure 14-13).

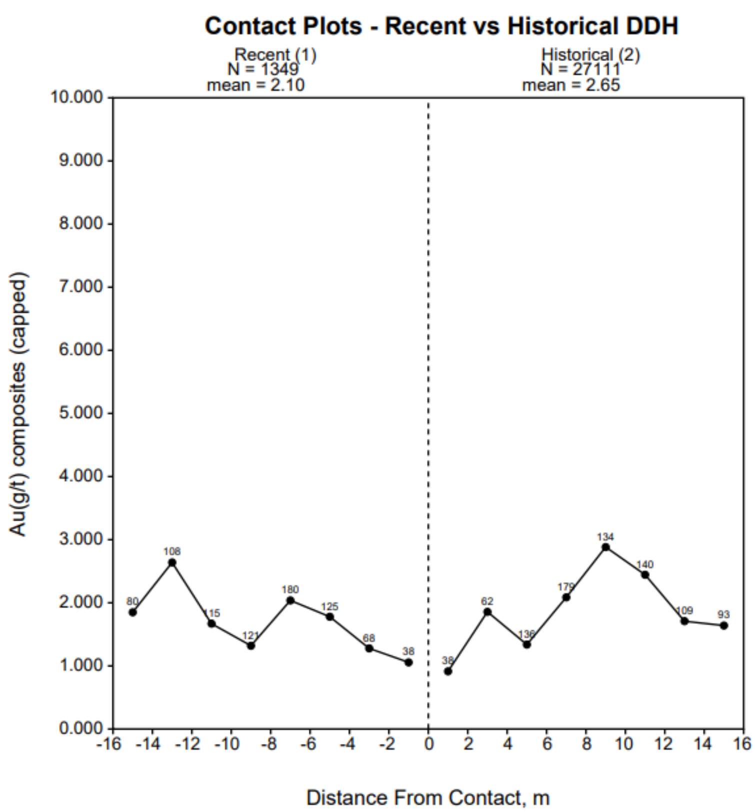


Figure 14-13: Contact analysis on the capped composites between the historical and recent diamond drillholes

14.4.6 Variogram Analysis

A semi-variogram is a common tool used to measure the spatial variability within a zone. Typically, samples taken far apart will vary more than samples taken close to each other. A variogram gives a measure of how much two samples taken from the same mineralized zone will vary in grade depending on the spatial distance between those samples, and allow building of search ellipsoids to be used during interpolation. Three dimensional directional variography using the Snowden Supervisor v8.14 software was carried out on the composites. Variograms were modelled in the three orthogonal directions to define a 3D ellipsoid for each domain. Variography was performed on major mineralized zones (containing more than 300 composites) and/or geographical groups of zones in each area. In some case, due to the variability of the grades within the mineralized zones and the moderately high nugget effect and the lack of information (too few composites) in some zones or groups of zones, it was decided to refer to the variography analysis based on the most representative zones in each group. The three directions of ellipsoid axes were set by using the variogram fans and visually confirmed with geological knowledge of the zone. Lag distances were set according to drillhole grid spacing specific to the structural domain analyzed.

Then, a mathematical model was interpreted in order to best-fit the shape of the calculated variogram for each direction. Three components were defined for the mathematical model: the nugget effect, the sill, and the range.

All variography tests were modelled with a nugget effect, as determined from the downhole semi-variograms and two spherical structures.

Table 14-4 presents the chosen variogram model parameters for each zone. Figure 14-15 to Figure 14-17 illustrate examples of the variography results. The nugget effect values range from 10% to 55% and are typical of gold deposits.

The variography study was not conclusive for zones 20_01, 20_02, 21_01, 96_01 and 96_02. Therefore ID^2 interpolation was chosen for those mineralized zones.

Table 14-4: Variogram model parameters for each mineralized zone

Zone	Group	Nugget	First structure				Second structure			
			Sill	Range X (m)	Range Y (m)	Range Z (m)	Sill	Range X (m)	Range Y (m)	Range Z (m)
08V_01	08V_01; 22V_01; C_07; C_08	0.40	0.30	40.00	20.00	10.00	0.30	60.00	30.00	15.00
22V_01	08V_01; 22V_01; C_07; C_08	0.20	0.35	30.00	25.00	10.00	0.45	40.00	30.00	15.00
C_07	08V_01; 22V_01; C_07; C_08	0.30	0.30	30.00	25.00	10.00	0.40	45.00	30.00	15.00
C_08	08V_01; 22V_01; C_07; C_08	same as C_07								
18_01	18_01;16_01; 18_02; 21_02; HI_04; HI_05	0.30	0.10	30.00	20.00	10.00	0.60	40.00	25.00	15.00
16_01	18_01;16_01; 18_02; 21_02; HI_04; HI_05	same as 18_01								
18_02	18_01;16_01; 18_02; 21_02; HI_04; HI_05	same as 18_01								
21_02	18_01;16_01; 18_02; 21_02; HI_04; HI_05	same as 18_01								
HI_04	18_01;16_01; 18_02; 21_02; HI_04; HI_05	same as 18_01								
HI_05	18_01;16_01; 18_02; 21_02; HI_04; HI_05	same as 18_01								
20_01	20_01; 20_02; 21_01	Not conclusive								
21_01	20_01; 20_02; 21_01									
20_02	20_01; 20_02; 21_01									
A2_01	A2_01; CH_01	0.30	0.45	30.00	25.00	10.00	0.25	60.00	40.00	15.00
CH_01	A2_01; CH_01	0.40	0.10	15.00	15.00	10.00	0.50	40.00	27.00	15.00
B_01	B_01	0.40	0.20	15.00	30.00	10.00	0.40	40.00	37.00	15.00
B_05	B_05	0.40	0.10	35.00	17.00	10.00	0.50	45.00	26.00	15.00
BF_05	BF_05	0.45	0.15	15.00	25.00	10.00	0.40	25.00	29.00	15.00
C_01	C_01	0.30	0.40	30.00	25.00	10.00	0.30	40.00	30.00	15.00
CH_04	CH_04	0.40	0.30	25.00	15.00	10.00	0.30	30.00	22.00	15.00
Q_01	Q_01; Q_02	0.50	0.15	40.00	15.00	10.00	0.35	61.00	20.00	15.00
Q_02	Q_01; Q_02	same as Q_01								

			First structure				Second structure			
Zone	Group	Nugget	Sill	Range X (m)	Range Y (m)	Range Z (m)	Sill	Range X (m)	Range Y (m)	Range Z (m)
140_01	140_01; 140_02; 140_03; 140_04; 140_05; 140_06; 140_07; 140_08; 140_09; 140_10	same as 140_03								
140_02	140_01; 140_02; 140_03; 140_04; 140_05; 140_06; 140_07; 140_08; 140_09; 140_10	same as 140_03								
140_03	140_01; 140_02; 140_03; 140_04; 140_05; 140_06; 140_07; 140_08; 140_09; 140_10	0.25	0.50	50.00	25.00	10.00	0.25	70.00	40.00	15.00
140_04	140_01; 140_02; 140_03; 140_04; 140_05; 140_06; 140_07; 140_08; 140_09; 140_10	same as 140_03								
140_05	140_01; 140_02; 140_03; 140_04; 140_05; 140_06; 140_07; 140_08; 140_09; 140_10	same as 140_03								
140_06	140_01; 140_02; 140_03; 140_04; 140_05; 140_06; 140_07; 140_08; 140_09; 140_10	same as 140_03								
140_07	140_01; 140_02; 140_03; 140_04; 140_05; 140_06; 140_07; 140_08; 140_09; 140_10	same as 140_03								
140_08	140_01; 140_02; 140_03; 140_04; 140_05; 140_06; 140_07; 140_08; 140_09; 140_10	same as 140_03								
140_09	140_01; 140_02; 140_03; 140_04; 140_05; 140_06; 140_07; 140_08; 140_09; 140_10	same as 140_03								
140_10	140_01; 140_02; 140_03; 140_04; 140_05; 140_06; 140_07; 140_08; 140_09; 140_10	same as 140_03								
33_01	33_01; 33_02; 33_03; 33_04; 33_05; 33_06; 33H_01; 33H_02; 96_01	same as 33_05								
33_02	33_01; 33_02; 33_03; 33_04; 33_05; 33_06; 33H_01; 33H_02; 96_01	same as 33_05								
33_03	33_01; 33_02; 33_03; 33_04; 33_05; 33_06; 33H_01; 33H_02; 96_01	same as 33_05								
33_04	33_01; 33_02; 33_03; 33_04; 33_05; 33_06; 33H_01; 33H_02; 96_01	same as 33_05								

Zone	Group	Nugget	First structure				Second structure			
			Sill	Range X (m)	Range Y (m)	Range Z (m)	Sill	Range X (m)	Range Y (m)	Range Z (m)
33_05	33_01; 33_02; 33_03; 33_04; 33_05; 33_06; 33H_01; 33H_02; 96_01	0.30	0.35	30.00	20.00	10.00	0.35	50.00	30.00	15.00
33_06	33_01; 33_02; 33_03; 33_04; 33_05; 33_06; 33H_01; 33H_02; 96_01	same as 33_05								
33H_01	33_01; 33_02; 33_03; 33_04; 33_05; 33_06; 33H_01; 33H_02; 96_01	same as 33_05								
33H_02	33_01; 33_02; 33_03; 33_04; 33_05; 33_06; 33H_01; 33H_02; 96_01	same as 33_05								
96_01	33_01; 33_02; 33_03; 33_04; 33_05; 33_06; 33H_01; 33H_02; 96_01	same as 33_05								
350_01	350_01; 350F_01; 350F_02; 350H_01; 350H_02; 350H_03; 350H_04; 350H_05; 350H_06; 350H_07	0.50	0.05	45.00	20.00	10.00	0.45	65.00	35.00	15.00
350F_01	350_01; 350F_01; 350F_02; 350H_01; 350H_02; 350H_03; 350H_04; 350H_05; 350H_06; 350H_07									
350F_02	350_01; 350F_01; 350F_02; 350H_01; 350H_02; 350H_03; 350H_04; 350H_05; 350H_06; 350H_07									
350H_01	350_01; 350F_01; 350F_02; 350H_01; 350H_02; 350H_03; 350H_04; 350H_05; 350H_06; 350H_07									
350H_02	350_01; 350F_01; 350F_02; 350H_01; 350H_02; 350H_03; 350H_04; 350H_05; 350H_06; 350H_07									
350H_03	350_01; 350F_01; 350F_02; 350H_01; 350H_02; 350H_03; 350H_04; 350H_05; 350H_06; 350H_07									

			First structure				Second structure			
Zone	**Group**	**Nugget**	**Sill**	**Range X (m)**	**Range Y (m)**	**Range Z (m)**	**Sill**	**Range X (m)**	**Range Y (m)**	**Range Z (m)**
350H_04	350_01; 350F_01; 350F_02; 350H_01; 350H_02; 350H_03; 350H_04; 350H_05; 350H_06; 350H_07									
350H_05	350_01; 350F_01; 350F_02; 350H_01; 350H_02; 350H_03; 350H_04; 350H_05; 350H_06; 350H_07									
350H_06	350_01; 350F_01; 350F_02; 350H_01; 350H_02; 350H_03; 350H_04; 350H_05; 350H_06; 350H_07									
350H_07	350_01; 350F_01; 350F_02; 350H_01; 350H_02; 350H_03; 350H_04; 350H_05; 350H_06; 350H_07									
367_01	367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	0.40	0.20	30.00	20.00	10.00	0.40	45.00	35.00	15.00
367_02	367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	same as 367_01								
367_03	367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	same as 367_01								
367_04	367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	same as 367_01								
367_05	367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	same as 367_01								
367_06	367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	same as 367_01								

			First structure				Second structure			
Zone	**Group**	**Nugget**	**Sill**	**Range X (m)**	**Range Y (m)**	**Range Z (m)**	**Sill**	**Range X (m)**	**Range Y (m)**	**Range Z (m)**
367_07	367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	same as 367_01								
367_08	367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	same as 367_01								
367_09	367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	same as 367_01								
367_10	367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	same as 367_01								
367_11	367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	same as 367_01								
367_12	367_01; 367_02; 367_03; 367_04; 367_05; 367_06; 367_07; 367_08; 367_09; 367_10; 367_11; 367_12	same as 367_01								
A_01	A_01; A_02; A2_03; A2_04; A2_05; A2_06; BF_01; BF_02; BF_03; C_02	0.45	0.15	20.00	15.00	10.00	0.40	30.00	20.00	15.00
A_02	A_01; A_02; A2_03; A2_04; A2_05; A2_06; BF_01; BF_02; BF_03; C_02	same as A_01								
A2_03	A_01; A_02; A2_03; A2_04; A2_05; A2_06; BF_01; BF_02; BF_03; C_02	same as A_01								
BF_01	A_01; A_02; A2_03; A2_04; A2_05; A2_06; BF_01; BF_02; BF_03; C_02	0.45	0.15	20.00	15.00	10.00	0.40	30.00	20.00	15.00
BF_02	A_01; A_02; A2_03; A2_04; A2_05; A2_06; BF_01; BF_02; BF_03; C_02	same as A_01								
BF_03	A_01; A_02; A2_03; A2_04; A2_05; A2_06; BF_01; BF_02; BF_03; C_02	same as A_01								

			First structure				Second structure			
Zone	Group	Nugget	Sill	Range X (m)	Range Y (m)	Range Z (m)	Sill	Range X (m)	Range Y (m)	Range Z (m)
C_02	A_01; A_02; A2_03; A2_04; A2_05; A2_06; BF_01; BF_02; BF_03; C_02	same as A_01								
A2_04	A_01; A_02; A2_03; A2_04; A2_05; A2_06; BF_01; BF_02; BF_03; C_02	0.45	0.15	15.00	15.00	10.00	0.40	20.00	20.00	15.00
A2_05	A_01; A_02; A2_03; A2_04; A2_05; A2_06; BF_01; BF_02; BF_03; C_02	Same as A2_04								
A2_06	A_01; A_02; A2_03; A2_04; A2_05; A2_06; BF_01; BF_02; BF_03; C_02	Same as A2_04								
A1_01	A1_01; A2_02; A4_01; A5_01; A5_02; A6_01; A7_01	same as A4_01								
A2_02	A1_01; A2_02; A4_01; A5_01; A5_02; A6_01; A7_01	same as A4_01								
A4_01	A1_01; A2_02; A4_01; A5_01; A5_02; A6_01; A7_01	0.10	0.50	35.00	15.00	10.00	0.40	50.00	20.00	15.00
A5_01	A1_01; A2_02; A4_01; A5_01; A5_02; A6_01; A7_01	same as A4_01								
A5_02	A1_01; A2_02; A4_01; A5_01; A5_02; A6_01; A7_01	same as A4_01								
A6_01	A1_01; A2_02; A4_01; A5_01; A5_02; A6_01; A7_01	same as A4_01								
A7_01	A1_01; A2_02; A4_01; A5_01; A5_02; A6_01; A7_01	same as A4_01								
B_02	B_02; B_03; B_04; BF_04; A_03	0.40	0.20	20.00	15.00	10.00	0.40	30.00	20.00	15.00
B_03	B_02; B_03; B_04; BF_04; A_03	same as B_02								
B_04	B_02; B_03; B_04; BF_04; A_03	same as B_02								
BF_04	B_02; B_03; B_04; BF_04; A_03	same as B_02								
A_03	B_02; B_03; B_04; BF_04; A_03	same as B_02								

			First structure				Second structure			
Zone	Group	Nugget	Sill	Range X (m)	Range Y (m)	Range Z (m)	Sill	Range X (m)	Range Y (m)	Range Z (m)
C_03	C_03; C_04; C_05; C_06; CF_01; CF2_01; CF3_01; CH_05; CH_06	0.40	0.30	20.00	25.00	10.00	0.30	30.00	30.00	15.00
C_04	C_03; C_04; C_05; C_06; CF_01; CF2_01; CF3_01; CH_05; CH_06	same as CF_01								
C_05	C_03; C_04; C_05; C_06; CF_01; CF2_01; CF3_01; CH_05; CH_06	same as CF_01								
C_06	C_03; C_04; C_05; C_06; CF_01; CF2_01; CF3_01; CH_05; CH_06	same as CF_01								
CF_01	C_03; C_04; C_05; C_06; CF_01; CF2_01; CF3_01; CH_05; CH_06	0.40	0.30	30.00	20.00	10.00	0.30	40.00	27.00	15.00
CF2_01	C_03; C_04; C_05; C_06; CF_01; CF2_01; CF3_01; CH_05; CH_06	same as CF_01								
CF3_01	C_03; C_04; C_05; C_06; CF_01; CF2_01; CF3_01; CH_05; CH_06	same as CF_01								
CH_05	C_03; C_04; C_05; C_06; CF_01; CF2_01; CF3_01; CH_05; CH_06	0.40	0.10	30.00	15.00	10.00	0.50	40.00	20.00	15.00
CH_06	C_03; C_04; C_05; C_06; CF_01; CF2_01; CF3_01; CH_05; CH_06	same as CF_01								
CF5_01	CF5_01; CF6_01; CF6_02; CF4_01; CF4_02; D_05	same as CF6_01								
CF6_01	CF5_01; CF6_01; CF6_02; CF4_01; CF4_02; D_05	0.50	0.30	20.00	25.00	10.00	0.20	30.00	30.00	15.00
CF6_02	CF5_01; CF6_01; CF6_02; CF4_01; CF4_02; D_05	0.55	0.20	30.00	30.00	10.00	0.25	40.00	40.00	15.00
CF4_01	CF5_01; CF6_01; CF6_02; CF4_01; CF4_02; D_05	0.50	0.20	20.00	20.00	10.00	0.30	30.00	30.00	15.00
CF4_02	CF5_01; CF6_01; CF6_02; CF4_01; CF4_02; D_05	same as CF4_01								

			First structure				Second structure			
Zone	Group	Nugget	Sill	Range X (m)	Range Y (m)	Range Z (m)	Sill	Range X (m)	Range Y (m)	Range Z (m)
D_05	CF5_01; CF6_01; CF6_02; CF4_01; CF4_02; D_05	same as CF4_01								
CH_02	CH_02; CH_03; CH_07; CH_09	same as CH_03								
CH_03	CH_02; CH_03; CH_07; CH_09	0.50	0.10	20.00	10.00	10.00	0.40	35.00	20.00	15.00
CH_07	CH_02; CH_03; CH_07; CH_09	same as CH_03								
CH_09	CH_02; CH_03; CH_07; CH_09	same as CH_03								
FF3_01	FF3_01; FF4_01	0.35	0.25	20.00	10.00	10.00	0.40	30.00	30.00	15.00
FF4_01	FF3_01; FF4_01	same as FF3_01								
M_01	M_01; M_02; M1_01; M1_02; QH2_03; QH2_04	same as M1_01								
M_02	M_01; M_02; M1_01; M1_02; QH2_03; QH2_04	same as M1_01								
M1_01	M_01; M_02; M1_01; M1_02; QH2_03; QH2_04	0.30	0.35	20.00	15.00	10.00	0.35	30.00	20.00	15.00
M1_02	M_01; M_02; M1_01; M1_02; QH2_03; QH2_04	same as M1_01								
QH2_03	M_01; M_02; M1_01; M1_02; QH2_03; QH2_04	same as M1_01								
QH2_04	M_01; M_02; M1_01; M1_02; QH2_03; QH2_04	same as M1_01								
Q_03	Q_03; QH1_01; QH2_02; QH2_01	same as Q1_03								
QH1_01	Q_03; QH1_01; QH2_02; QH2_01	same as Q1_03								
QH2_02	Q_03; QH1_01; QH2_02; QH2_01	same as Q1_03								
QH2_01	Q_03; QH1_01; QH2_02; QH2_01	same as Q1_03								
Q1_03	Q1_03; Q1_04; Q1_05; QF1_01; Q1_01; Q1_02	0.40	0.30	30.00	25.00	10.00	0.30	60.00	35.00	15.00

			First structure				Second structure			
Zone	Group	Nugget	Sill	Range X (m)	Range Y (m)	Range Z (m)	Sill	Range X (m)	Range Y (m)	Range Z (m)
Q1_04	Q1_03; Q1_04; Q1_05; QF1_01; Q1_01; Q1_02	same as Q1_03								
Q1_05	Q1_03; Q1_04; Q1_05; QF1_01; Q1_01; Q1_02	same as Q1_03								
QF1_01	Q1_03; Q1_04; Q1_05; QF1_01; Q1_01; Q1_02	same as Q1_03								
Q1_01	Q1_03; Q1_04; Q1_05; QF1_01; Q1_01; Q1_02	same as Q1_03								
Q1_02	Q1_03; Q1_04; Q1_05; QF1_01; Q1_01; Q1_02	same as Q1_03								
W_01	W_01; W_02; W_03; WH_01	0.45	0.15	45.00	25.00	10.00	0.40	60.00	30.00	15.00
W_02	W_01; W_02; W_03; WH_01	same as W_01								
W_03	W_01; W_02; W_03; WH_01	same as W_01								
WH_01	W_01; W_02; W_03; WH_01	same as W_01								
D_01	D_01; D_02; D_03; E_02; EF_01; F_02	0.40	0.20	20.00	15.00	10.00	0.40	21.00	20.00	15.00
D_02	D_01; D_02; D_03; E_02; EF_01; F_02	same as EF_01								
D_03	D_01; D_02; D_03; E_02; EF_01; F_02	same as EF_01								
E_02	D_01; D_02; D_03; E_02; EF_01; F_02	same as EF_01								
EF_01	D_01; D_02; D_03; E_02; EF_01; F_02	0.20	0.50	20.00	25.00	10.00	0.30	30.00	30.00	15.00
F_02	D_01; D_02; D_03; E_02; EF_01; F_02	0.40	0.30	20.00	30.00	10.00	0.30	30.00	36.00	15.00
D_04	D_04; E_01; EF_02; EH_01; F_01; FF_01	same as FF_01								
E_01	D_04; E_01; EF_02; EH_01; F_01; FF_01	same as FF_01								
EF_02	D_04; E_01; EF_02; EH_01; F_01; FF_01	same as FF_01								
EH_01	D_04; E_01; EF_02; EH_01; F_01; FF_01	same as FF_01								
F_01	D_04; E_01; EF_02; EH_01; F_01; FF_01	same as FF_01								
FF_01	D_04; E_01; EF_02; EH_01; F_01; FF_01	0.45	0.30	40.00	25.00	10.00	0.25	60.00	30.00	15.00

			First structure				Second structure			
Zone	Group	Nugget	Sill	Range X (m)	Range Y (m)	Range Z (m)	Sill	Range X (m)	Range Y (m)	Range Z (m)
QF1_02	QF1_02; QF1_03	same as Q_01								
QF1_03	QF1_02; QF1_03	same as Q_01								
12_01	12_01; 12_02; 12_03; 12_04	0.40	0.20	15.00	15.00	10.00	0.40	30.00	20.00	15.00
12_02	12_01; 12_02; 12_03; 12_04	same as 12_01								
12_03	12_01; 12_02; 12_03; 12_04	same as 12_01								
12_04	12_01; 12_02; 12_03; 12_04	same as 12_01								
G_01	G_01; HI_02; HI_03	0.30	0.30	25.00	20.00	10.00	0.40	40.00	30.00	15.00
HI_02	G_01; HI_02; HI_03									
HI_03	G_01; HI_02; HI_03									
G_02	G_02; HI_01									
HI_01	G_02; HI_01									
86_01	86_01; 86_02; 86_03; 86_04	same as 86_03								
86_02	86_01; 86_02; 86_03; 86_04	same as 86_03								
86_03	86_01; 86_02; 86_03; 86_04	0.30	0.35	15.00	15.00	10.00	0.35	30.00	20.00	15.00
86_04	86_01; 86_02; 86_03; 86_04	same as 86_03								
32_01	32_01; 32_02	0.30	0.35	25.00	20.00	10.00	0.35	30.00	30.00	15.00
32_02	32_01; 32_02	same as 32_01								
96_02	96_02; 96_03	Not conclusive								
96_03	96_02; 96_03	Not conclusive								
13V_01	13V_01; 13V_02; 13V_03; 13V_04; 13V_05; 13V_06; 13V_07; 13V_08; 13V_09	same as 13V_05								
13V_02	13V_01; 13V_02; 13V_03; 13V_04; 13V_05; 13V_06; 13V_07; 13V_08; 13V_09	same as 13V_05								
13V_03	13V_01; 13V_02; 13V_03; 13V_04; 13V_05; 13V_06; 13V_07; 13V_08; 13V_09	same as 13V_05								

			First structure				Second structure			
Zone	Group	Nugget	Sill	Range X (m)	Range Y (m)	Range Z (m)	Sill	Range X (m)	Range Y (m)	Range Z (m)
13V_04	13V_01; 13V_02; 13V_03; 13V_04; 13V_05; 13V_06; 13V_07; 13V_08; 13V_09	same as 13V_05								
13V_05	13V_01; 13V_02; 13V_03; 13V_04; 13V_05; 13V_06; 13V_07; 13V_08; 13V_09	0.30	0.20	20.00	15.00	10.00	0.50	30.00	20.00	15.00
13V_06	13V_01; 13V_02; 13V_03; 13V_04; 13V_05; 13V_06; 13V_07; 13V_08; 13V_09	same as 13V_05								
13V_07	13V_01; 13V_02; 13V_03; 13V_04; 13V_05; 13V_06; 13V_07; 13V_08; 13V_09	same as 13V_05								
13V_08	13V_01; 13V_02; 13V_03; 13V_04; 13V_05; 13V_06; 13V_07; 13V_08; 13V_09	same as 13V_05								
13V_09	13V_01; 13V_02; 13V_03; 13V_04; 13V_05; 13V_06; 13V_07; 13V_08; 13V_09	same as 13V_05								

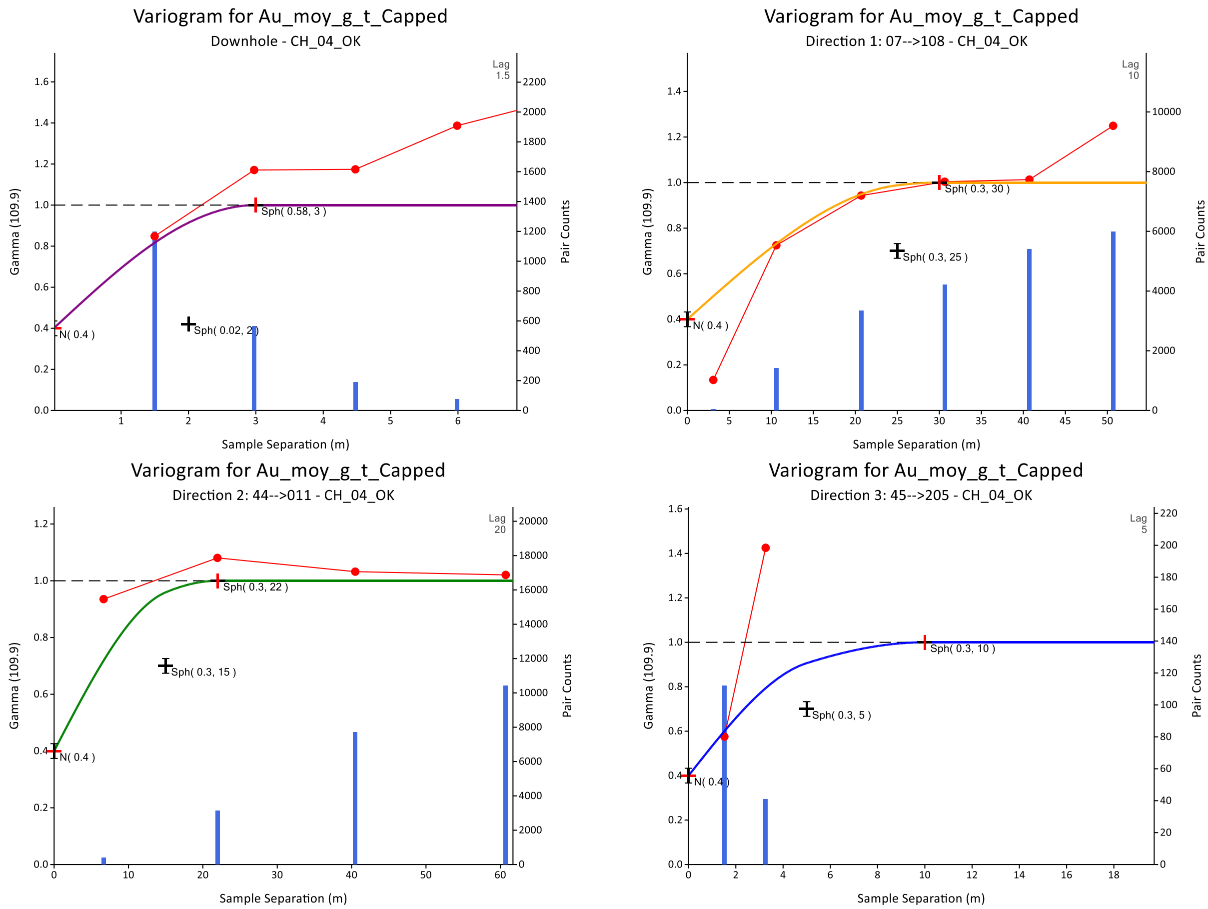


Figure 14-14: Variograms for Au for CH_04

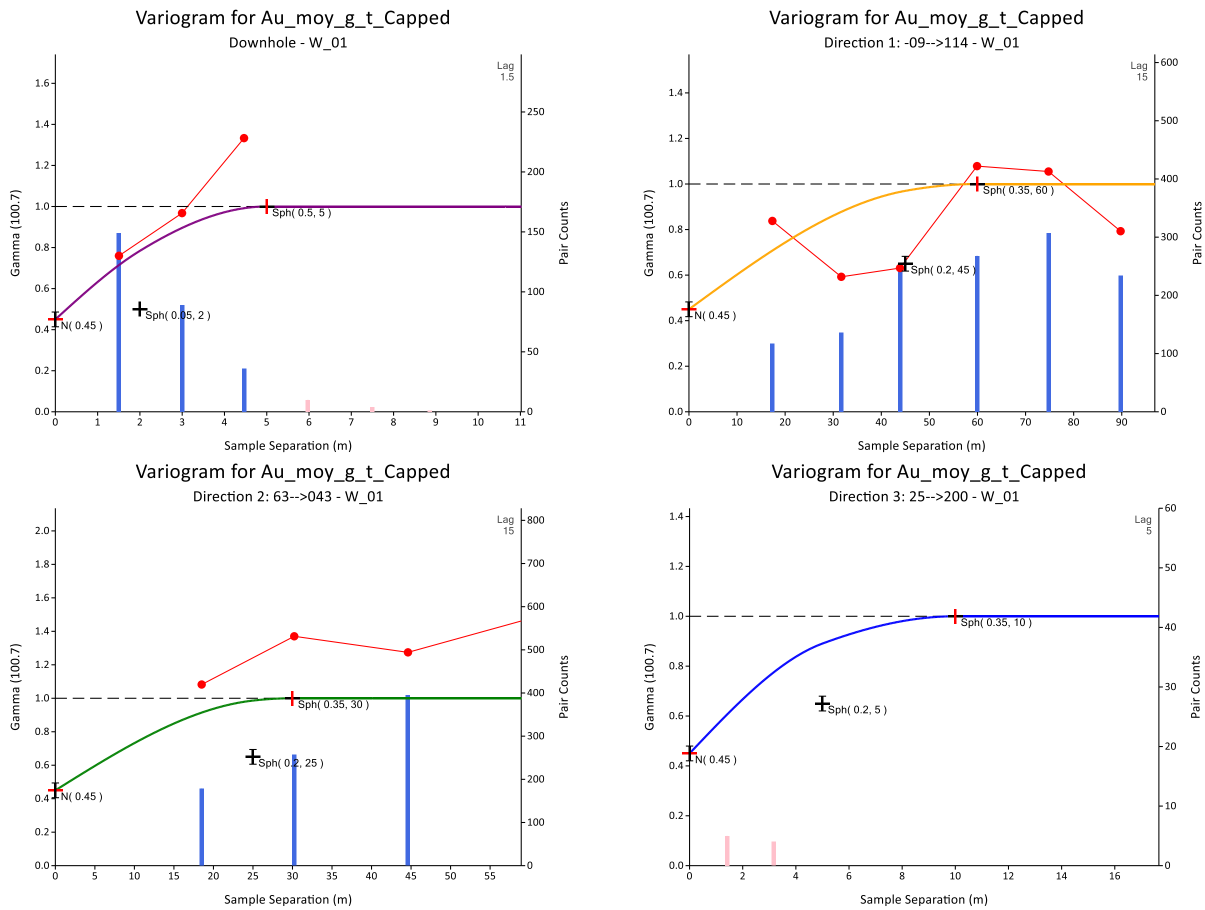


Figure 14-15: Example of the variography study for the W_01

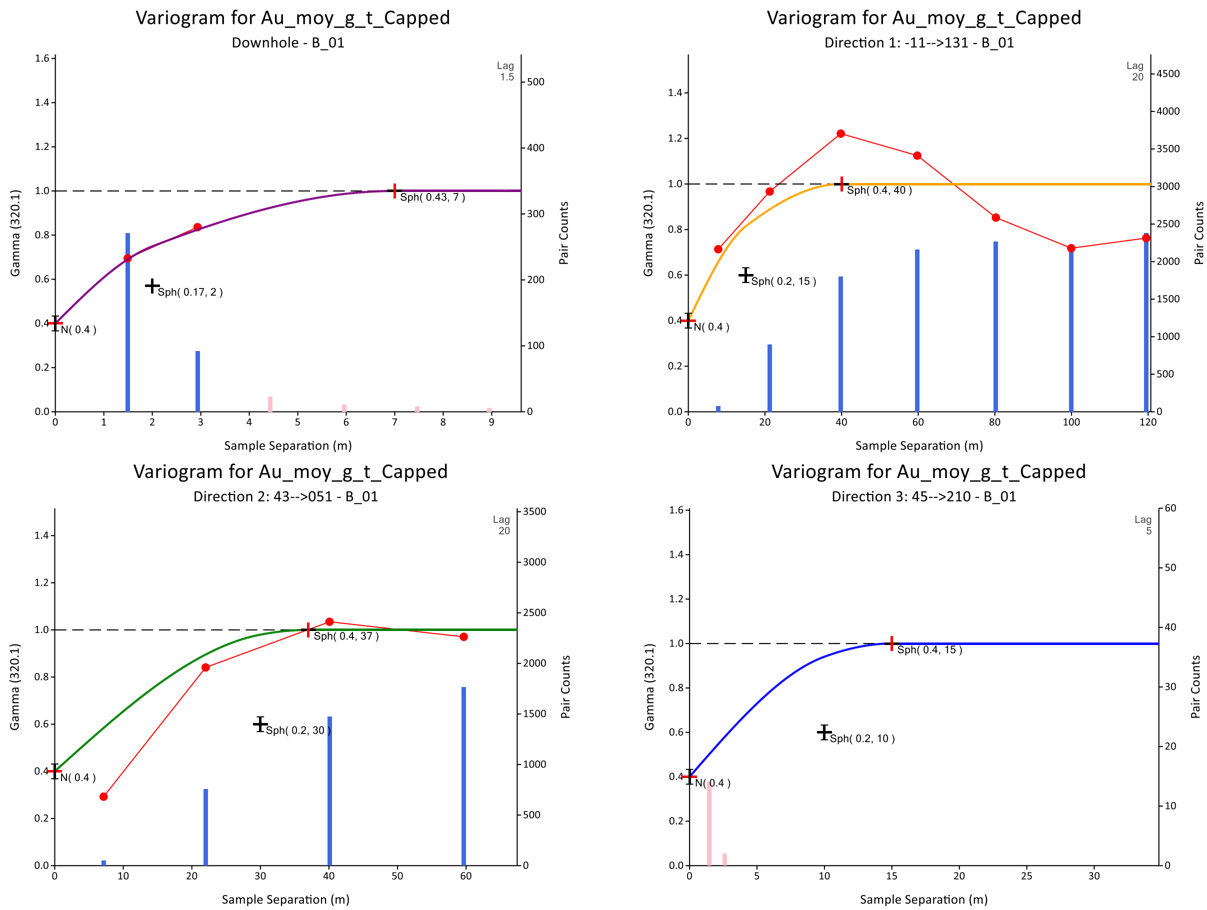


Figure 14-16: Example of the variography study for the B_01 zone

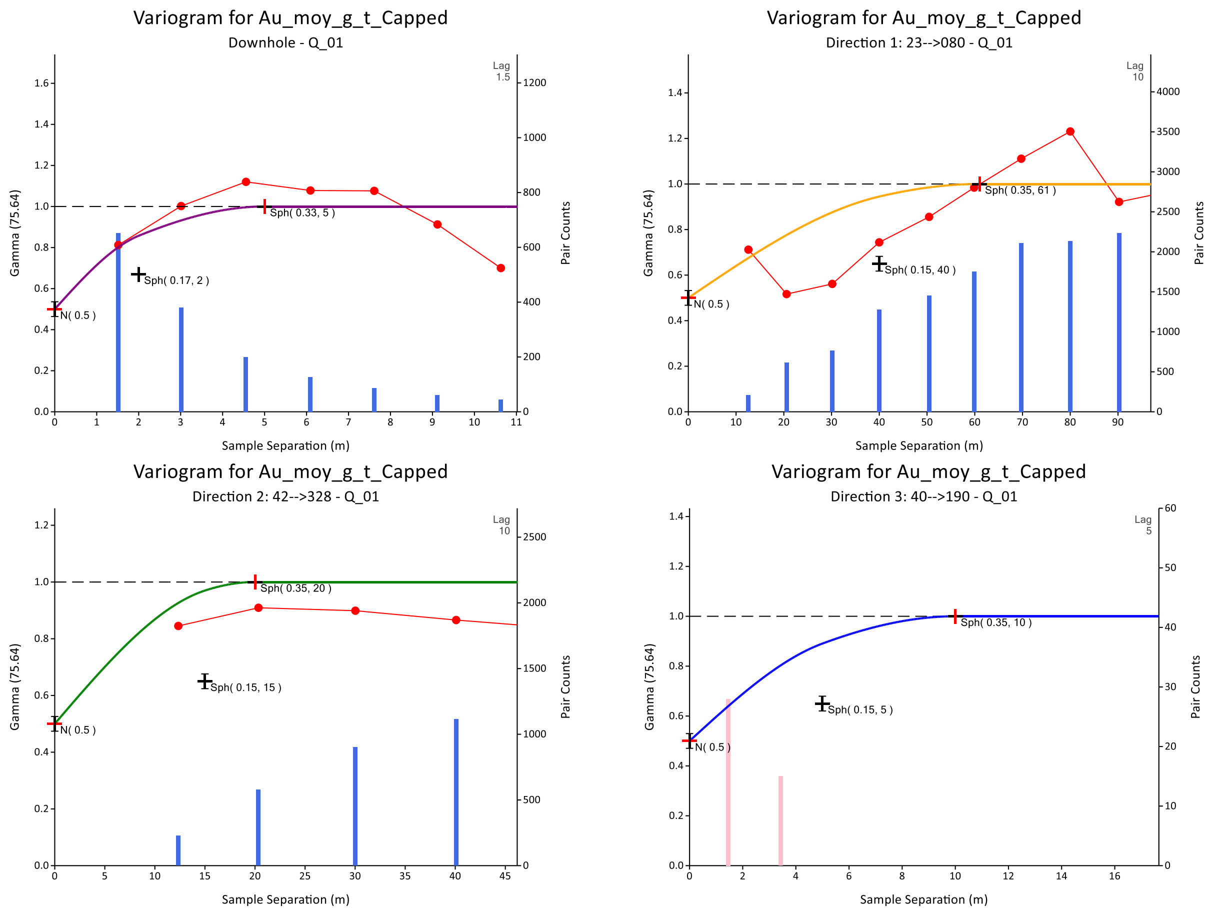


Figure 14-17: Example of the variography study for the Q_01 zone

14.5 Block Modelling

The block models for the Beaufor Mine Project were set in Leapfrog Edge V.2021.1.2.

14.5.1 Block Model Parameters

For the current 2021 mineral resource estimate, one block model was created.

Table 14-5 provides the parameters used for the block model. Individual parent block cells have dimensions of 5 m long (X-axis) by 5 m wide (Y-axis) by 5 m vertical (Z-axis).

The size of the parent cells was chosen to best match the drilling pattern, thickness of the lenses, complexity of the geology model and underground mine planning.

The block model was coded using the sub-blocking method. Parent blocks were divided into sub-blocks when intersected wireframes. Sub-blocking allows you to subdivide the parent cells into smaller blocks to better fit the dimensions and volumes of the wireframes. A resolution of 5 m in each axis direction was applied in the division of the parent blocks for all of the block models. Consequently, the minimum sub-block size is 1.0 m long (X-axis) by 1.0 m wide (Y-axis) by 1.0 m vertical (Z-axis). All blocks falling within a wireframe were assigned the corresponding solid block code. A discretization of 3x3x3 was applied.

Table 14-5: Parameters of the Beaufor Mine block models

Block Model (NAD83/UTM Zone 18)			
Properties	**X**	**Y**	**Z**
Origin coordinates	309,000	5,336,900	3,095
Block extent (m)	1,600	1,200	1,250
Parent Cell size (m)	5	5	5
Sub-Cell size (m)	1	1	1
Number of Parent Cell	320	240	250
Rotation Azimuth	20		
Rotation Dip	N/A		

14.5.2 Search Ellipsoid Strategy

The ranges of the ellipsoids used for the interpolation were established using the variography study and correspond to the range of the first structure for the first pass, to the second structure for the second pass and to three times the second structure for the third pass. For zones QF1_02 and QF1_03, a fourth pass corresponding to five times the second structure was added as the drill spacing is larger in this zone. The third and fourth passes were designed to adequately populate all the block of the mineralized zones.

It is noteworthy to mention at this point that the classification was mostly based on drillhole spacing and, therefore, some interpolated blocks were not converted into the Inferred classification. Refer to section Mineral Resource Classification (Section 14.7) for more details.

Figure 14-18 shows an example of a search ellipse for the first interpolation pass. Table 14-6 presents the orientation and ranges of the search ellipsoids for each pass.

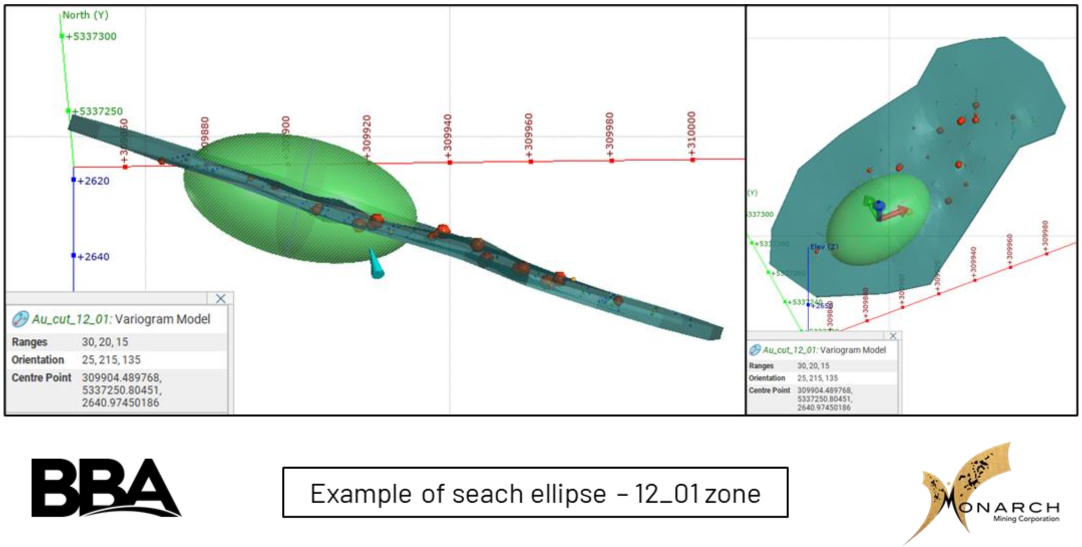


Figure 14-18: Example of search ellipse for the first pass of zone 12_01

Table 14-6: Search ellipsoid ranges and orientation by interpolation passes

				Pass 1 = first structure			Pass 2 = second structure			Pass 3 = 3 x Pass 2		
	Leapfrog orientation			Search ellipsoid ranges			Search ellipsoid ranges			Search ellipsoid ranges		
Zone	Azimut	Dip	Azimut	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)
08V_01	205	45	50	40	20	10	60	30	15	180	90	45
22V_01	215	40	60	30	25	10	40	30	15	120	90	45
C_07	215	40	10	30	25	10	45	30	15	135	90	45
C_08	230	40	10	30	25	10	45	30	15	135	90	45
18_01	205	35	140	30	20	10	40	25	15	120	75	45
16_01	200	30	140	30	20	10	40	25	15	120	75	45
18_02	210	40	140	30	20	10	40	25	15	120	75	45
21_02	210	40	140	30	20	10	40	25	15	120	75	45
HI_04	220	40	140	30	20	10	40	25	15	120	75	45
HI_05	220	40	140	30	20	10	40	25	15	120	75	45
20_01	230	25	45	15	15	10	30	25	15	90	75	45
21_01	230	25	45	15	15	10	30	25	15	90	75	45
20_02	230	25	45	15	15	10	30	25	15	90	75	45
A2_01	210	35	25	30	25	10	60	40	15	180	120	45
CH_01	205	40	25	15	15	10	40	27	15	120	81	45
B_01	210	45	15	15	30	10	40	37	15	120	111	45

				Pass 1 = first structure			Pass 2 = second structure			Pass 3 = 3 x Pass 2		
	Leapfrog orientation			Search ellipsoid ranges			Search ellipsoid ranges			Search ellipsoid ranges		
Zone	Azimut	Dip	Azimut	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)
B_05	210	45	130	35	17	10	45	26	15	135	78	45
BF_05	210	40	50	15	25	10	25	29	15	75	87	45
C_01	205	40	25	30	25	10	40	30	15	120	90	45
CH_04	205	45	170	25	15	10	30	22	15	90	66	45
Q_01	190	50	150	40	15	10	61	20	15	183	60	45
Q_02	190	50	150	40	15	10	61	20	15	183	60	45
140_01	195	45	160	50	25	10	70	40	15	210	120	45
140_02	195	45	160	50	25	10	70	40	15	210	120	45
140_03	195	45	160	50	25	10	70	40	15	210	120	45
140_04	195	45	160	50	25	10	70	40	15	210	120	45
140_05	195	45	160	50	25	10	70	40	15	210	120	45
140_06	195	45	160	50	25	10	70	40	15	210	120	45
140_07	195	45	160	50	25	10	70	40	15	210	120	45
140_08	195	45	160	50	25	10	70	40	15	210	120	45
140_09	195	45	160	50	25	10	70	40	15	210	120	45
140_10	195	45	160	50	25	10	70	40	15	210	120	45
33_01	190	20	135	30	20	10	50	30	15	150	90	45
33_02	190	20	135	30	20	10	50	30	15	150	90	45
33_03	195	25	135	30	20	10	50	30	15	150	90	45
33_04	205	20	135	30	20	10	50	30	15	150	90	45
33_05	195	20	135	30	20	10	50	30	15	150	90	45
33_06	200	25	135	30	20	10	50	30	15	150	90	45
33H_01	205	20	135	30	20	10	50	30	15	150	90	45
33H_02	210	20	135	30	20	10	50	30	15	150	90	45
96_01	260	25	135	30	20	10	50	30	15	150	90	45
350_01	195	35	130	45	20	10	65	35	15	195	105	45
350F_01	195	35	130	45	20	10	65	35	15	195	105	45
350F_02	195	35	130	45	20	10	65	35	15	195	105	45
350H_01	195	35	130	45	20	10	65	35	15	195	105	45
350H_02	210	35	150	45	20	10	65	35	15	195	105	45
350H_03	210	35	150	45	20	10	65	35	15	195	105	45
350H_04	210	35	150	45	20	10	65	35	15	195	105	45
350H_05	210	35	150	45	20	10	65	35	15	195	105	45
350H_06	210	35	150	45	20	10	65	35	15	195	105	45
350H_07	210	35	150	45	20	10	65	35	15	195	105	45

	Leapfrog orientation			Pass 1 = first structure Search ellipsoid ranges			Pass 2 = second structure Search ellipsoid ranges			Pass 3 = 3 x Pass 2 Search ellipsoid ranges		
Zone	Azimut	Dip	Azimut	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)
367_01	190	45	30	30	20	10	45	35	15	135	105	45
367_02	190	45	30	30	20	10	45	35	15	135	105	45
367_03	190	45	30	30	20	10	45	35	15	135	105	45
367_04	190	45	30	30	20	10	45	35	15	135	105	45
367_05	190	45	30	30	20	10	45	35	15	135	105	45
367_06	190	45	30	30	20	10	45	35	15	135	105	45
367_07	190	45	30	30	20	10	45	35	15	135	105	45
367_08	190	45	30	30	20	10	45	35	15	135	105	45
367_09	190	45	30	30	20	10	45	35	15	135	105	45
367_10	190	45	30	30	20	10	45	35	15	135	105	45
367_11	190	45	30	30	20	10	45	35	15	135	105	45
367_12	190	45	30	30	20	10	45	35	15	135	105	45
A_01	230	35	5	20	15	10	30	20	15	90	60	45
A_02	230	35	5	20	15	10	30	20	15	90	60	45
A2_03	230	35	5	20	15	10	30	20	15	90	60	45
BF_01	230	35	5	20	15	10	30	20	15	90	60	45
BF_02	230	35	5	20	15	10	30	20	15	90	60	45
BF_03	230	35	5	20	15	10	30	20	15	90	60	45
C_02	230	35	5	20	15	10	30	20	15	90	60	45
A2_04	220	45	5	15	15	10	20	20	15	60	60	45
A2_05	220	45	5	15	15	10	20	20	15	60	60	45
A2_06	215	45	5	15	15	10	20	20	15	60	60	45
A1_01	205	35	10	35	15	10	50	20	15	150	60	45
A2_02	195	40	10	35	15	10	50	20	15	150	60	45
A4_01	195	40	10	35	15	10	50	20	15	150	60	45
A5_01	195	40	10	35	15	10	50	20	15	150	60	45
A5_02	195	40	10	35	15	10	50	20	15	150	60	45
A6_01	205	35	10	35	15	10	50	20	15	150	60	45
A7_01	205	35	10	35	15	10	50	20	15	150	60	45
B_02	205	45	145	20	15	10	30	20	15	90	60	45
B_03	205	45	145	20	15	10	30	20	15	90	60	45
B_04	205	45	145	20	15	10	30	20	15	90	60	45
BF_04	205	45	145	20	15	10	30	20	15	90	60	45
A_03	205	45	145	20	15	10	30	20	15	90	60	45
C_03	210	45	130	20	25	10	30	30	15	90	90	45

	Leapfrog orientation			Pass 1 = first structure Search ellipsoid ranges			Pass 2 = second structure Search ellipsoid ranges			Pass 3 = 3 x Pass 2 Search ellipsoid ranges		
Zone	Azimut	Dip	Azimut	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)
C_04	215	40	130	30	20	10	40	27	15	120	81	45
C_05	215	40	130	30	20	10	40	27	15	120	81	45
C_06	215	40	130	30	20	10	40	27	15	120	81	45
CF_01	205	45	130	30	20	10	40	27	15	120	81	45
CF2_01	205	45	130	30	20	10	40	27	15	120	81	45
CF3_01	205	45	130	30	20	10	40	27	15	120	81	45
CH_05	215	40	130	30	15	10	40	20	15	120	60	45
CH_06	215	40	130	30	20	10	40	27	15	120	81	45
CF5_01	210	35	25	20	25	10	30	30	15	90	90	45
CF6_01	190	35	25	20	25	10	30	30	15	90	90	45
CF6_02	200	30	25	30	30	10	40	40	15	120	120	45
CF4_01	205	35	140	20	20	10	30	30	15	90	90	45
CF4_02	205	35	140	20	20	10	30	30	15	90	90	45
D_05	215	40	140	20	20	10	30	30	15	90	90	45
CH_02	210	45	150	20	10	10	35	20	15	105	60	45
CH_03	220	55	150	20	10	10	35	20	15	105	60	45
CH_07	210	45	150	20	10	10	35	20	15	105	60	45
CH_09	195	35	150	20	10	10	35	20	15	105	60	45
FF3_01	245	20	165	20	10	10	30	30	15	90	90	45
FF4_01	245	20	165	20	10	10	30	30	15	90	90	45
M_01	200	30	110	20	15	10	30	20	15	90	60	45
M_02	200	30	110	20	15	10	30	20	15	90	60	45
M1_01	200	30	110	20	15	10	30	20	15	90	60	45
M1_02	200	30	110	20	15	10	30	20	15	90	60	45
QH2_03	200	30	110	20	15	10	30	20	15	90	60	45
QH2_04	180	20	110	20	15	10	30	20	15	90	60	45
Q_03	200	35	125	30	25	10	60	35	15	180	105	45
QH1_01	200	35	125	30	25	10	60	35	15	180	105	45
QH2_02	200	35	125	30	25	10	60	35	15	180	105	45
QH2_01	150	25	125	30	25	10	60	35	15	180	105	45
Q1_03	200	35	125	30	25	10	60	35	15	180	105	45
Q1_04	200	35	125	30	25	10	60	35	15	180	105	45
Q1_05	200	35	125	30	25	10	60	35	15	180	105	45
QF1_01	200	35	125	30	25	10	60	35	15	180	105	45
Q1_01	205	55	125	30	25	10	60	35	15	180	105	45

	Leapfrog orientation			Pass 1 = first structure Search ellipsoid ranges			Pass 2 = second structure Search ellipsoid ranges			Pass 3 = 3 x Pass 2 Search ellipsoid ranges		
Zone	Azimut	Dip	Azimut	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)
Q1_02	205	55	125	30	25	10	60	35	15	180	105	45
W_01	200	65	10	45	25	10	60	30	15	180	90	45
W_02	200	65	10	45	25	10	60	30	15	180	90	45
W_03	200	65	10	45	25	10	60	30	15	180	90	45
WH_01	200	65	10	45	25	10	60	30	15	180	90	45
D_01	200	40	145	20	15	10	21	20	15	63	60	45
D_02	205	40	140	20	25	10	30	30	15	90	90	45
D_03	205	40	140	20	25	10	30	30	15	90	90	45
E_02	205	40	140	20	25	10	30	30	15	90	90	45
EF_01	205	40	140	20	25	10	30	30	15	90	90	45
F_02	195	35	145	20	30	10	30	36	15	90	108	45
D_04	200	45	145	40	25	10	60	30	15	180	90	45
E_01	200	45	145	40	25	10	60	30	15	180	90	45
EF_02	210	35	145	40	25	10	60	30	15	180	90	45
EH_01	200	45	145	40	25	10	60	30	15	180	90	45
F_01	210	35	145	40	25	10	60	30	15	180	90	45
FF_01	210	35	145	40	25	10	60	30	15	180	90	45
QF1_02*	190	50	150	40	15	10	61	20	15	183	60	45
QF1_03*	190	50	150	40	15	10	61	20	15	183	60	45
12_01	215	25	135	15	15	10	30	20	15	90	60	45
12_02	225	25	135	15	15	10	30	20	15	90	60	45
12_03	205	30	135	15	15	10	30	20	15	90	60	45
12_04	230	25	135	15	15	10	30	20	15	90	60	45
G_01	200	25	55	25	20	10	40	30	15	120	90	45
HI_02	200	25	55	25	20	10	40	30	15	120	90	45
HI_03	200	25	55	25	20	10	40	30	15	120	90	45
G_02	215	40	55	25	20	10	40	30	15	120	90	45
HI_01	220	35	55	25	20	10	40	30	15	120	90	45
86_01	200	45	180	15	15	10	30	20	15	90	60	45
86_02	195	35	180	15	15	10	30	20	15	90	60	45
86_03	205	45	180	15	15	10	30	20	15	90	60	45
86_04	195	35	180	15	15	10	30	20	15	90	60	45
32_01	200	40	105	25	20	10	30	30	15	90	90	45
32_02	200	40	105	25	20	10	30	30	15	90	90	45
96_02	315	45	0	10	10	10	15	15	15	45	45	45

	Leapfrog orientation			Pass 1 = first structure Search ellipsoid ranges			Pass 2 = second structure Search ellipsoid ranges			Pass 3 = 3 x Pass 2 Search ellipsoid ranges		
Zone	**Azimut**	**Dip**	**Azimut**	**X (m)**	**Y (m)**	**Z (m)**	**X (m)**	**Y (m)**	**Z (m)**	**X (m)**	**Y (m)**	**Z (m)**
96_03	320	40	0	10	10	10	15	15	15	45	45	45
13V_01	210	30	155	20	15	10	30	20	15	90	60	45
13V_02	205	35	155	20	15	10	30	20	15	90	60	45
13V_03	205	35	155	20	15	10	30	20	15	90	60	45
13V_04	205	35	155	20	15	10	30	20	15	90	60	45
13V_05	210	35	155	20	15	10	30	20	15	90	60	45
13V_06	210	35	155	20	15	10	30	20	15	90	60	45
13V_07	210	30	155	20	15	10	30	20	15	90	60	45
13V_08	210	40	155	20	15	10	30	20	15	90	60	45
13V_09	210	40	155	20	15	10	30	20	15	90	60	45

*For QF1_02 and QF1_03 a fourth pass corresponding to 5x the pass 2 was applied.

14.5.3 Interpolation Parameters

Estimation and search parameters were evaluated through Kriging Neighbourhood Analysis (KNA).

KNA was conducted on each unit and on the most representative mineralized lenses or on a group of lenses sharing similar geological environment and azimuth/dip orientation with the Snowden Supervisor software. KNA provides a quantitative method of testing different estimation parameters (i.e. block size, discretization and min/max of composites used for the interpolation) by evaluating their impact on the quality of the results. The interpretation of these helps select the optimal value for each parameter.

Following this study, the parameters provided in Table 14-7 were chosen for the interpolation of the block model.

Table 14-7: Interpolation parameters

Interpolation parameters	Pass 1	Pass 2	Pass 3
Minimum number of composites used	8	5	5
Maximum number of composites per drill hole used	3	3	3
Maximum number of composites used	18	18	18
Minimum number of drill hole used	3	2	2

14.5.4 Interpolation Methodology

The interpolation was performed on the capped composited data with three (or four for QF1_02 and QF1_03) passes characterized by increasing search ranges (Table 14-6).

On some zones (Table 14-3), a second capping was applied on composites to limit extrapolation of very high-grade samples at higher distances. In those cases, the first interpolation pass used composites with the highest capping value and following passes used lower capping values on composites. For example, in the C_01 zone, composites were capped at 65 g/t Au for the first pass and 25 g/t Au for the second and third passes.

The block model grades were estimated using ordinary kriging (OK) methods, except for the 96_01 and 96_02 zones, and 20, 367, 350 and 140 group of mineralized zones that have been estimated using inverse distance squared (ID^2) methods as the ID^2 method honoured best the composites than the OK method.

Hard boundaries between the mineralized zones were used in order to prevent grades from adjacent lenses being used during interpolation. As a block was estimated, it was tagged with the corresponding pass number.

For comparison purposes, additional grade models were generated using: 1) inverse distance squared (ID^2); and 2) nearest neighbour (NN).

14.6 Block Model Validation

Every step of the block modelling process was revised to ensure fair representation of the available data in the Project resource models.

More specific validations were completed on the block model including visual review of the interpolated grades in relation to the raw and composited data, checks for global and local bias, graphical validation (swath plots), statistical analysis of the model and comparison to other estimation methods. The block model was also reproduced in Datamine Studio RM in order to compare results between Edge and Datamine software.

14.6.1 Visual Validation

Block model grades were visually compared against drillhole composite grades and raw assays in cross-section, plan, longitudinal and 3D views (Figure 14-19). This visual validation process also included confirming that the proper coding was done within the various mineralized lenses and checks for global and local bias.

The visual comparison shows that the block models are consistent and correlate well with the primary data without excessive smoothing.

Visual comparisons were also conducted between ID², OK and NN interpolation scenarios (Figure 14-20). The OK scenario produced a grade distribution honouring drillhole data and the style of mineralization observed on the Beaufor Mine Project for the majority of the zones and was therefore retained as the interpolation method for all the block models except for the zones 367, 350 and 140.

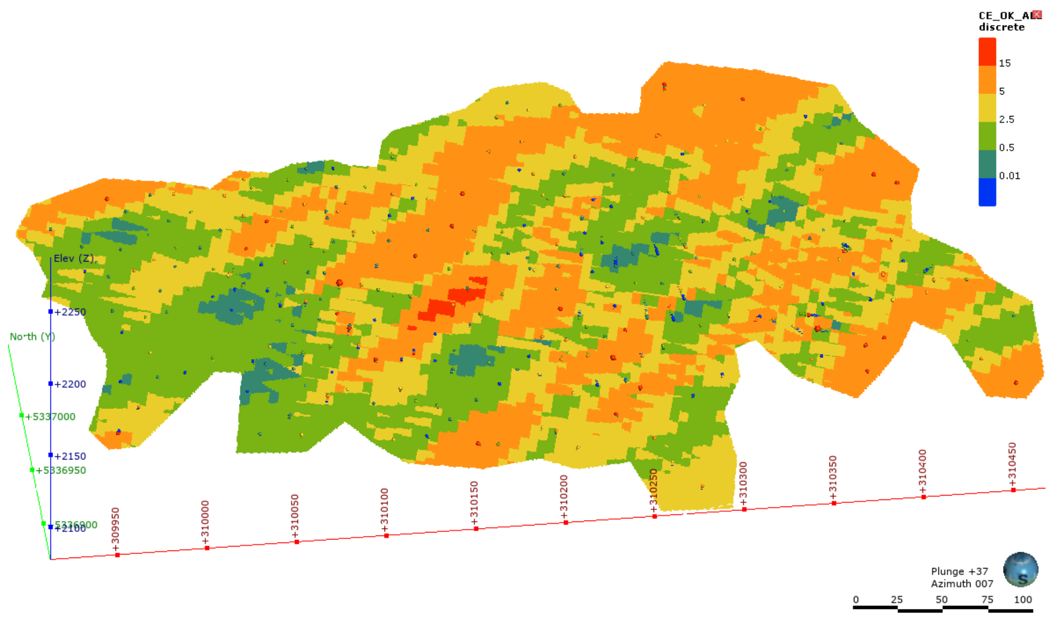


Figure 14-19: Comparative example: Grade distribution between blocks and composites - zone Q_01

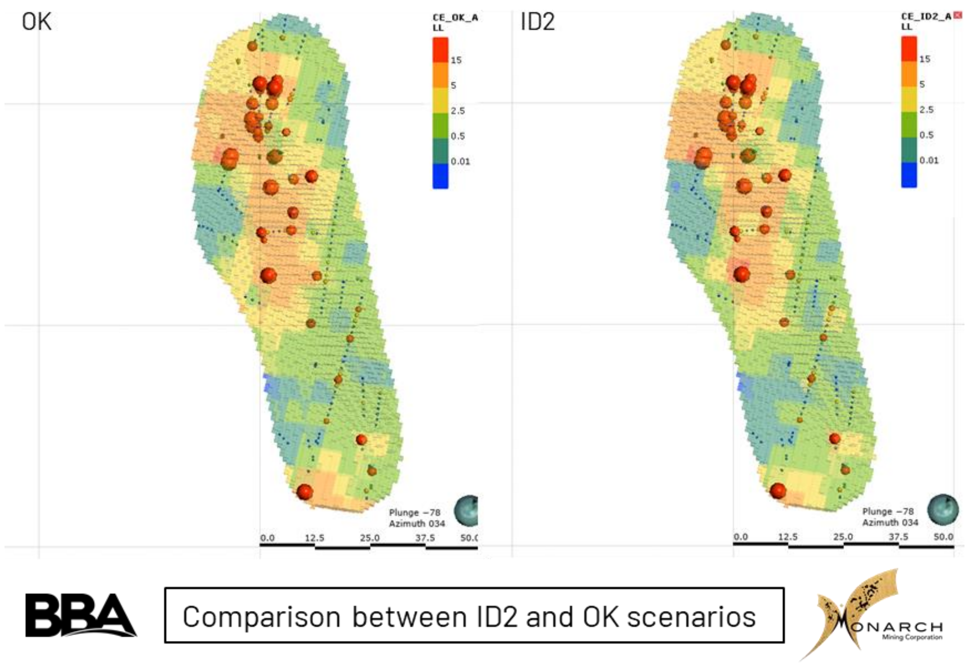


Figure 14-20: Comparative example: Grade distribution between ID^2 and OK scenarios - 96_02 zone

14.6.2 Statistical Validation

Grade averages for the OK, NN and the ID^2 models were compared with the composites grades (Table 14-8). Initial grades were well represented throughout the estimation process.

The average grades generated by the ID^2 and NN interpolation methods are very close to those reported from the OK interpolation method and to the capped composites grade. This information provides a general indication that the resource model is reasonable.

Table 14-8: Grade averages for the OK, NN and the ID^2 models comparing with the composites grades by sector

Sector	Composites count	Capped composite average (Au g/t)	OK scenario (Au g/t)	ID2 scenario (Au g/t)	NN scenario (Au g/t)
08V-22V	765	1.270	0.954	0.927	0.920
12	365	1.409	1.308	1.271	1.392
18	498	1.544	1.396	1.423	1.320
20-21	532	1.281	1.248	1.379	1.161
32	1 015	2.525	2.299	2.159	2.374
33-33H	1 647	1.325	1.761	1.694	2.096

Sector	Composites count	Capped composite average (Au g/t)	OK scenario (Au g/t)	ID2 scenario (Au g/t)	NN scenario (Au g/t)
86	1 220	1.680	1.834	1.890	2.133
96	473	2.492	2.313	2.405	2.379
140*	1 229	1.624	1.747	1.597	1.628
350-350F-350H*	832	2.114	2.115	2.070	2.185
367*	1 552	2.058	2.057	2.045	2.079
A-A1-A2-A4-A5-A6-A7	2 941	2.618	2.854	2.765	2.836
B	3 686	3.585	3.641	3.649	3.697
C-CF-CF2-CF3-CF4-CF5-CF6	5 978	2.404	1.991	1.994	1.921
CH	4 300	2.854	2.911	2.891	2.930
D	1 808	1.620	1.345	1.306	1.090
E-EF-EH	1 875	2.122	1.639	1.711	1.610
F-FF-FF3-FF4	2 153	2.139	2.023	2.011	2.009
G	526	1.311	1.282	1.349	1.097
HI	831	1.295	1.207	1.161	1.300
M-M1	1 330	1.445	1.785	1.730	1.865
Q	2 389	2.917	2.768	2.692	3.317
W-WH	530	3.782	3.443	3.372	3.566

(*) ID^2 scenario was chosen for the zones in those sectors.

This comparison did not identify significant issues. In minor case, the average block grade was higher than the capped composites grade because of the historical definition strategy: due to the high nuggety effect of this Project, multiple drillholes with smaller drill spacing were conducted when no gold grade was encounter in quartz vein lithology to be sure that the grade continuity was truly over in a mineralized zone. In the case of a good grade intercept, the mining company decided to mine the area instead of drilling more holes, resulting in a wider drill spacing in area with good grades. Visual validation was made when the average block grade was higher than the capped composite grade with the muck samples when available and no significant issues was identified.

14.6.3 Swath Plots

Swath plots were also generated as part of the block model validation. A swath plot is a graphical display of the grade distribution derived from a series of bands (or swaths), generated in several directions throughout the deposit. Using the swath plots, grade variations from the OK model are compared to the distribution of grade interpolated with the NN and ID^2 methods and to the composite grades. This validation method also works as a visual mean to identify possible bias in the interpolation.

Figure 14-21 and Figure 14-22 illustrate a series of swath plots in the three directions for the Beaufor Mine Project. Generally, the grades estimated in the blocks are close to the average grades provided by the data source; no bias was found in the resource estimate in this regard.

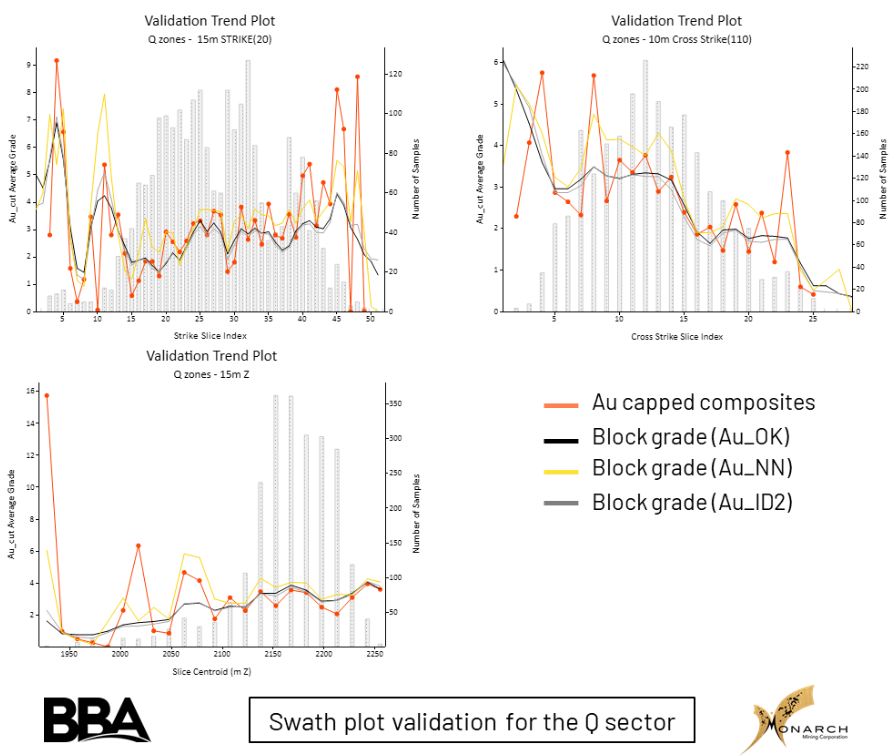


Figure 14-21: Example of block model validation swath plot for the Q sector

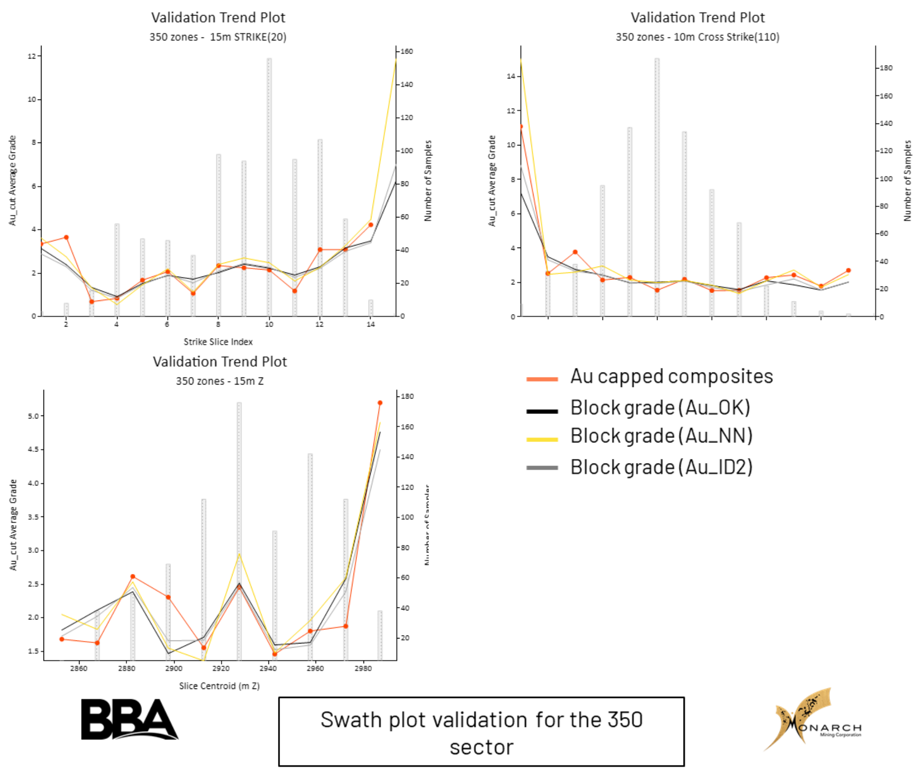


Figure 14-22: Example of block model validation swath plots for the 350 sector

14.6.4 Other Software Validation

The block modelling steps were also reproduced in Datamine Studio RM from the sub-blocking to the reporting inside the potential mineable shapes in order to compare results between Edge and Datamine software on a portion of the MRE area (116 zones). The total final result from Datamine Studio RM software for the 116 zones inside the potential mineable shapes was 2.7% less ounces than in the Leapfrog Edge project, which is considered by the QP as a minor difference therefore acceptable.

Based on visual and statistical reviews, it is the QP's opinion that the Beaufor Mine block model provide a reasonable estimate of in situ gold resources.

14.7 Mineral Resource Classification

The mineral resources for the Beaufor Mine were classified in accordance with CIM definitions.

14.7.1 Mineral Resource Definition

The "CIM Definition Standards for Mineral Resources and Reserves" prepared by the CIM Standing Committee on Resource Definitions and adopted by the CIM council on May 10, 2014, provides standards for the classification of Mineral Resources and Mineral Reserves estimates as follows:

Inferred Mineral Resource:

An ***Inferred Mineral Resource*** *is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.*

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

Indicated Mineral Resource:

An ***Indicated Mineral Resource*** *is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.*

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation.

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

Measured Mineral Resource:

A ***Measured Mineral Resource*** *is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.*

Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation.

A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

14.7.2 Mineral Resource Classification for the Beaufor Mine

Following the previous definitions, the estimated block grades were classified into Inferred, Indicated and Measured Mineral Resource categories using drill spacing, a minimum number of drillholes, underground voids, geological confidence in the 3D modelling and the level of confidence in the continuity and the geological understanding of the mineralized zones.

The following parameters were used for the classification of the zones at the Beaufor Mine:

- Inferred Mineral Resources were defined for blocks within the units that have been informed by a minimum of two drillholes within 50 m of a drillhole (100 m of drill spacing);
- Indicated Mineral Resources were defined for blocks within the units that have been informed by a minimum of three drillholes within 12.5 m of a drillhole (25 m of drill spacing);
- Measured Mineral Resources were defined for blocks within the units that have been informed by a minimum of three drillholes within 5 m of a drillholes (10 m of drill spacing) or 3 m around voids. Measured Mineral Resources were only defined for zones with a good reliability of the geological continuity and supported by underground workings.

A series of clipping boundaries were created manually for each mineralized zone on longitudinal views using the classification criteria described above. The resource boundaries were drawn, keeping in mind that a significant cluster of blocks is necessary to delineate a resource category. In some cases, blocks that did not meet the criteria of a category were upgraded to that category to homogenize the class group (i.e. no “spotted dog” effect).

Blocks were assigned to the chosen resource category based on the classification clipping boundaries.

In some areas, interpolated blocks remained unclassified due to the lack of confidence in grade and/or mineralization continuity (Figure 14-23). This declassification mainly occurs where drill hole spacing is wide.

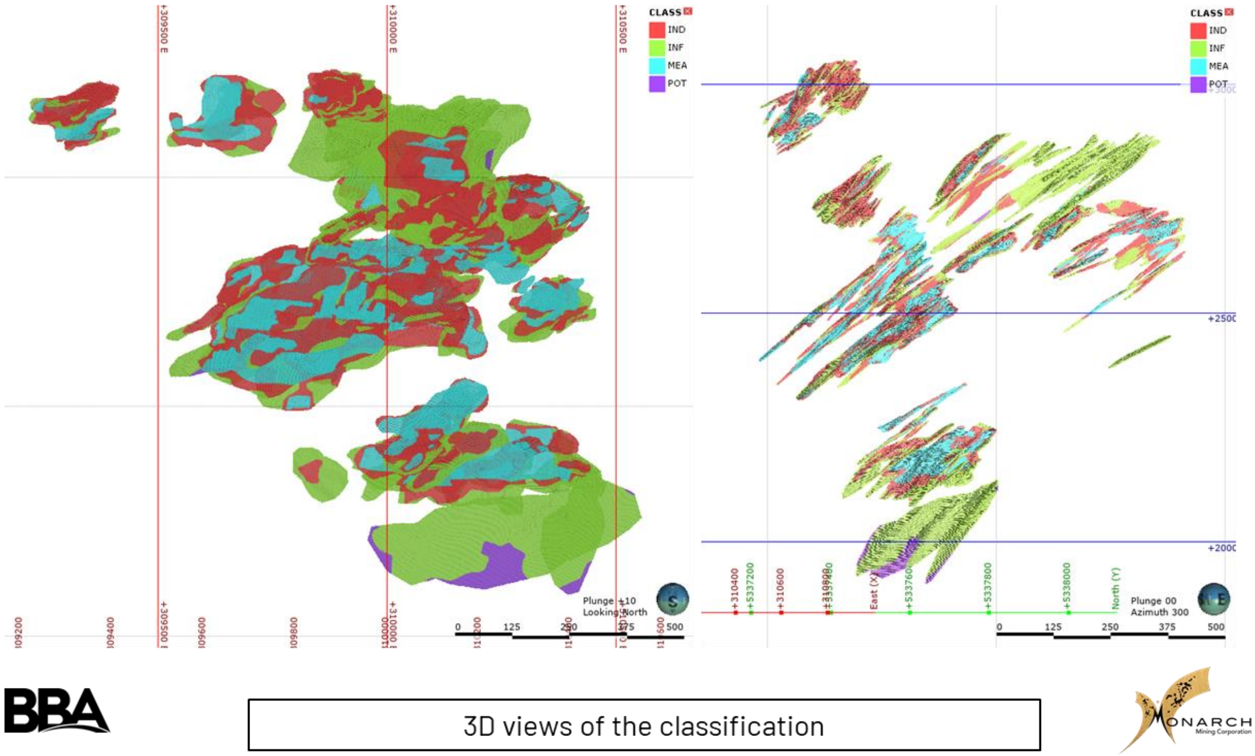


Figure 14-23: 3D views of the classification of the Beaufor Mine Project looking north (left side) and south-west (right side)

14.8 Reasonable Prospects for Economic Extraction

According to CIM's Definition Standards, for a deposit to be considered a mineral resource it must be proven that there are "reasonable prospects for economic extraction". This requirement implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade that considers extraction scenarios and processing recoveries. Furthermore, according to the CIM best practice guidelines, mineral resource statements for underground mining scenarios must satisfy the reasonable prospects for eventual economic extraction by demonstration of the spatial continuity of the mineralization within a potentially mineable shape. In cases where this potentially mineable volume contains smaller zones of mineralization with grades or values below the stated cut-off (sometimes referred to as "must take" material), this material must be included in the Mineral Resource estimate.

The underground cut-off grade parameters are presented in Table 14-9. The cut-off grades used for this Mineral Resource Estimate are 2.80 g/t Au for the mineralized zones with a dip greater than or equal to 45° and 3.20 g/t Au for mineralized zones with a dip less than 45°.

It should be noted that these parameters are based on information provided by Monarch, similar projects, or reasonable technical and economic factors. The QP for this section of the Report is of the opinion that the calculated cut-off grades and the parameters used are relevant for a Mineral Resource Estimate, as they are relevant to the grade distribution of the Project and that the mineralization exhibits sufficient continuity. However, these parameters must be analyzed in future studies and, subsequently, may change. Furthermore, the results of this analysis are used solely for testing the reasonable prospects for economic extraction by underground mining methods and do not represent an economic study.

Table 14-9: Cut-off grade parameters

Parameters	Unit	Value for Zones >=45°	Value for Zones <45°
Conversion factor	g/oz	31.1035	31.1035
Metal price	USD/oz	1,550	1,550
Exchange rate	CAD/USD	1.32	1.32
Metallurgical recovery	%	97.0%	97.0%
Total royalties	USD/oz	37.52	37.52
Refining & transport cost	USD/oz	1.50	1.50
Saleable metal price	USD/oz	1,464.48	1,464.48
Saleable metal price	USD/g	47.08	47.08
Mining cost	CAD/t milled	125.00	150.00
Processing cost	CAD/t milled	35.00	35.00
G&A cost	CAD/t milled	16.00	16.00
Total cost (CAD)	**CAD/t milled**	**176.00**	**201.00**
Total cost (USD)	**USD/t milled**	**133.33**	**152.27**
Cut-off grade	**Au g/t**	**2.80**	**3.20**

To evaluate the constraining volumes of this underground deposit, optimized stope shapes were created using Deswik.SO 2021.1.552. The results of these optimizations were then reviewed for location and spatial continuity, and limiting contours (or clipping boundaries) were created. Optimized stope shapes that did not present continuity or were isolated were excluded from the limiting contours. Furthermore, areas below the cut-off grade (i.e. must-take material) deemed necessary to be mined were included. The mineralized zones were constrained to the limiting contours, and the resulting volumes were used to report the Mineral Resource Estimate.

14.9 Beaufor Mine Project Mineral Resource Statement

The Measured, Indicated and Inferred 2021 Mineral Resource statement for the Beaufor Mine is presented in Table 14-10:

Table 14-10: Measured, Indicated and Inferred 2021 Mineral Resource Statement for the Beaufor Mine Project

	Tonnage (t)	Grade (Au g/t)	Ounces Au (oz)
Measured + Indicated	**1 284 900**	**5.3**	**219 200**
Measured	328 500	5.7	59 900
Indicated	956 400	5.2	159 300
Inferred	818 900	4.7	122 500

Notes to Table 14-10:

(1) The independent qualified person for the 2021 MRE, as defined by National Instrument ("NI") 43-101 guidelines, is Charlotte Athurion, P. Geo., of BBA Inc. The effective date of this MRE is July 23, 2021.

(2) These mineral resources are not mineral reserves as they do not have demonstrated economic viability.

(3) The mineral resource estimate follows CIM definitions (2014) for mineral resources.

(4) Results are presented diluted and considered to have reasonable prospects for economic extraction. Isolated and discontinuous blocks above the stated cut-off grades are excluded from the mineral resource estimate. Must-take material, i.e. isolated blocks below cut-off grade located within a potentially mineable volume, was included in the mineral resource statement.

(5) The resources include 166 mineralized zones with a minimum true thickness of 2.4 m using the grade of the adjacent material when assayed or a value of 0.00025 when not assayed. High-grade capping varies from 20 to 65 g/t Au (when required) and was applied to composited assay grades for interpolation using an Ordinary Kriging interpolation method (ID^2 for 96_02, 96_03, 20 zones, 21_01, 140, 367 zones and 350 zones) based on 1.5 m composite and block size of 5 m x 5 m x 5 m, with bulk density values of 2.75 (g/cm^3). A second capping was applied for the second and third passes in order to restrict high-grade impact at greater distance.

(6) Inferred Mineral Resources were defined for blocks within the units that have been informed by a minimum of two drillholes within 50 m of a drillhole (100 m of drill spacing); Indicated Mineral Resources were defined for blocks within the units that have been informed by a minimum of three drillholes within 12.5 m of a drillhole (25 m of drill spacing); Measured Mineral Resources were defined for blocks within the units that have been informed by a minimum of three drillholes within 5 m of a drillholes (10 m of drill spacing) or 3 m around voids. Measured Mineral Resources were only defined for zones with a good reliability of the geological continuity or supported by underground workings.

(7) The estimate is reported for potential underground scenario at cut-off grades of 2.8 g/t Au (>=45 degree dip) and 3.2 g/t Au (<45 degree dip). The cut-off grades were calculated using a gold price of US$1,550 per ounce, a USD:CAD exchange rate of 1.32 (resulting in C$1,914 per ounce gold price); mining cost C$125/t (>=45 degree dip); C$150/t (<45 degree dip); processing cost C$35/t; G&A C$16/t; metallurgical recovery of 97%; royalties of US$37.52 per ounce; and refining and transport cost of US$1.50 per ounce.

(8) The number of metric tonnes and ounces were rounded to the nearest hundred and the metal contents are presented in troy ounces (tonne x grade/31.10348). Rounding may result in apparent summation differences between tonnes, grades and contained metals content.

(9) The QP is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political or marketing issues, or any other relevant issues not reported in this Report that could materially affect the mineral resource estimate.

14.10 Comparison to Previous Mineral Resource Estimate

The previous MRE published on the Beaufor Mine Project was filed on December 21, 2020 (see Technical Report entitled "NI 43-101 Technical Report and Mineral Resource Estimate for the Beaufor Mine, Québec, Canada", effective date December 18, 2020) (Pelletier and Langton, 2020) and is available on SEDAR under Monarch Mining Corporation.

Compared to the MRE published in 2020, the Beaufor resource has increased by 136% (adding 126,500 ounces) in the measured and indicated resource categories, and increased by 307% (adding 92,400 ounces) in the inferred category.

The significant change between the 2020 MRE and the 2021 MRE is the methodology approach: in the 2020 MRE, the mineral resource was estimated using the polygonal methodology in 2D with a total of 63 mineralized zones. In the 2021 MRE, a block modelling methodology was implemented with the interpretation and 3D modelling of 166 mineralized zones with the software Leapfrog Geo.

Moreover, since the closure date of the previous MRE database (Pelletier and Langton, 2020), 5,066.6 m of drilling have been undertaken in 22 surface diamond drillholes, and 12,729.3 m of drilling has been undertaken in 131 underground DDH. This 2020-2021 drilling program has provided significant amounts of new geological and assay information, specifically in the Q area.

Approximately 30% of the measured resources, 59% of the indicated resources, and 76% of the inferred resources are located in the 367-350-140-W-Q zones.

15. MINERAL RESERVE ESTIMATE

This chapter is not required for a Technical Report on Mineral Resources.

16. MINERAL RESOURCE ESTIMATE

This chapter is not required for a Technical Report on Mineral Resources.

17. RECOVERY METHODS

This chapter is not required for a Technical Report on Mineral Resources.

18. PROJECT INFRASTRUCTURE

This chapter is not required for a Technical Report on Mineral Resources.

19. MARKET STUDIES AND CONTRACTS

This chapter is not required for a Technical Report on Mineral Resources.

20. ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

This chapter is not required for a Technical Report on Mineral Resources.

21. CAPITAL AND OPERATING COSTS

This chapter is not required for a Technical Report on Mineral Resources.

22. ECONOMIC ANALYSES

This chapter is not required for a Technical Report on Mineral Resources.

23. ADJACENT PROPERTIES

The Beaufor Mine Project is located in the Val-d'Or mining camp. As illustrated in Figure 23-1, several mining and junior exploration companies are active all around the Project. The QP has not been able to verify the information presented below and the information is not necessarily indicative of the mineralization at the Beaufor Mine (the subject of this Report).

23.1 Eldorado Gold (QMX Gold Corporation)

Eldorado Gold (QMX Gold Corporation until April 6, 2021) owns a large block of claims to the west and south of the Beaufor Property, and is divided into four zones (East, Southwestern, Central and Bourlamaque Zones) with many mineralized showings and closed mines.

The East Zone held the Bevcon and Buffadison closed mines that produced 3,170,000 short tons at 4.35 g/t Au between 1951 and 1965 (Sauvé et al., 1993).

The Central Zone held two mines that are currently closed. The Louvem closed mine produced 2,358,200 t at 0.21% Cu, 5.59% Zn, 34.29 g/t Ag and 0.69 g/t Au from 1970 to 1978, and the Dunraine (Rainville) closed mine produced 280,768 t at 1.41% Cu, 0.17 g/t Au and 3.08 g/t Ag between 1956 and 1958 (Pagé, 1981).

Bourlamaque Zone has two targets for Eldorado Gold (formerly QMX Gold Corp.); they are the Poulmaque and River. The Poulmaque target is located 3 km west of the Courvan gold trend (Probe Metals) and 5 km from the Pascalis gold trend (Probe metals).

The QP has not been able to verify the information presented above and the information is not necessarily indicative of the mineralization on the Beaufor Mine area.

23.2 Teck Resources Ltd. and Glencore Canada

The closed Louvicourt Mine, owned at 55% by Teck Resources Ltd. (Teck) and 45% by Glencore Corp. (Glencore) is located south of the Project. It produced 13,865,841 t at 3.52% Cu, 1.53% Zn, 25.88 g/t Ag and 0.92 g/t Au from 1995 to 2001 (Géologie Québec, 2004).

The QP has not been able to verify the information presented above and the information is not necessarily indicative of the mineralization on the Beaufor Mine area.

23.3 Probe Metals Inc.

Probe Metals Inc. (Probe) owns the Val-d'Or East Project that consists of 293 claims (11,904 hectares) located north of the Beaufor Mine Property. The Val-d'Or East Project includes the Pascalis, Lapaska and Megiscane-Tavernier properties. An updated MRE was released with a NI 43-101 Technical Report of the Val-d'Or East Property in 2019 (Beauregard et al., 2019), which included 10 deposits. Probe completed several drilling campaigns on the Val-d'Or East Project since 2016.

Three closed mines are also located on the Val-d'Or East Project:

- The Courvan Mine (Bussières or Cournor), which produced 225,019 t of mineralized material at 5.76 g/t Au and 0.87 g/t Ag between 1932 and 1942 (Sauvé et al., 1993);
- The Lucien C. Béliveau Mine (New Pascalis), which produced 1,800,298 t of mineralized material at 3.17 g/t Au between 1988 and 1993 (Beauregard et al., 2018); and
- The Monique Mine.

Probes Metals also owns claims south of the Property consisting of their Cadillac Break East Property.

The QP has not been able to verify the information presented above and the information is not necessarily indicative of the mineralization on the Beaufor Mine area.

23.4 O3 Mining (Alexandria Minerals)

South of the Beaufor Mine Property, O3 Mining holds the 35-km long Alpha Property. The property group hosts four historic gold deposits: Orenada, Mid-Canada, Akasaba, and Sleepy. Two of them, Mid-Canada and Akasaba, are former producing mines. Orenada has had underground development in the form of a 300-m shaft and two horizontal exploration drifts. On August 1, 2019, O3 Mining announced the completion of the acquisition of Alexandria Minerals (O3 Mining Press Release of August 1, 2019).

The QP has not been able to verify the information presented above and the information is not necessarily indicative of the mineralization on the Beaufor Mine area.

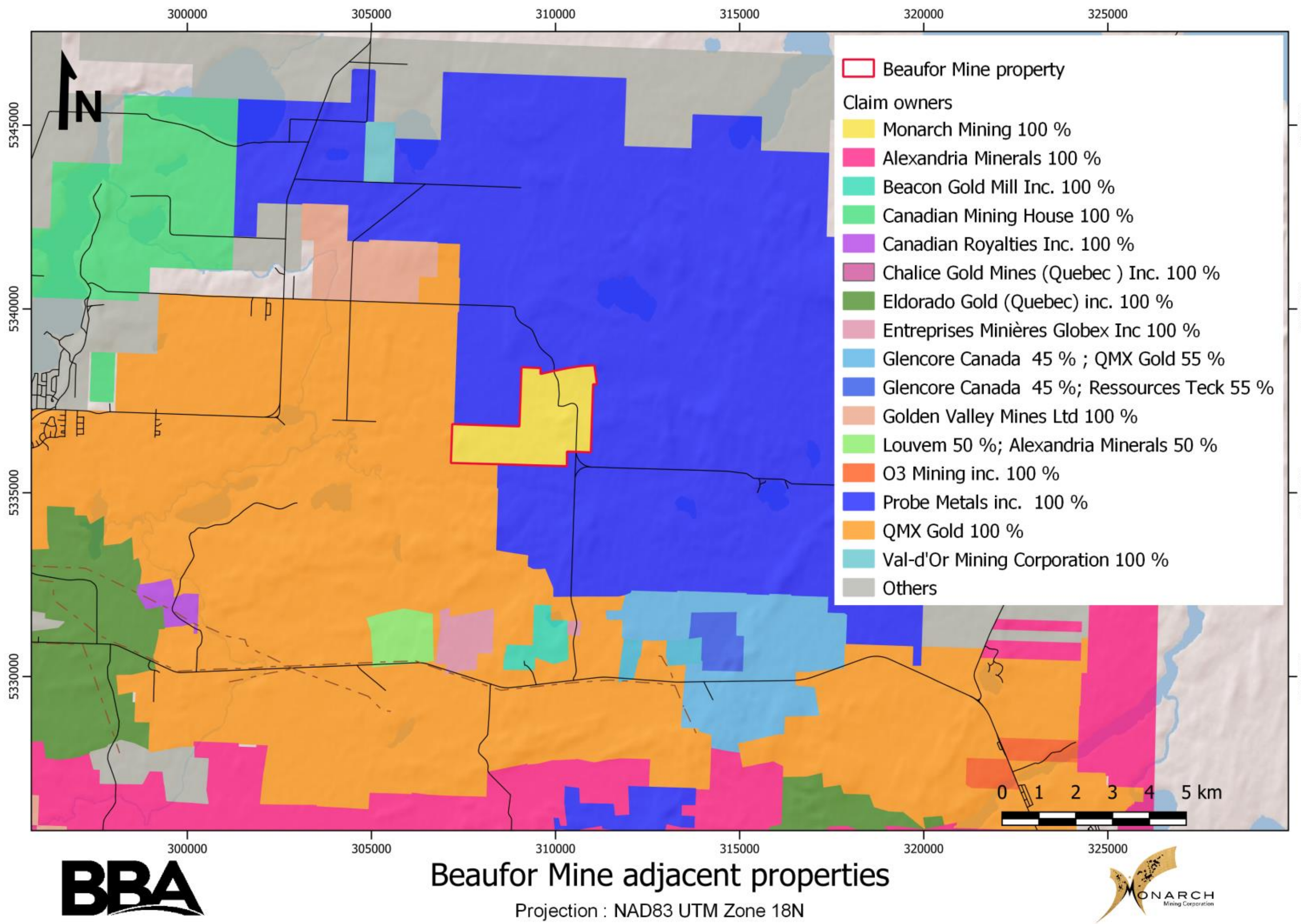


Figure 23-1: Beaufor Mine adjacent properties as of July 12, 2021

24. OTHER RELEVANT DATA AND INFORMATION

The QP, Charlotte Athurion, P. Geo., is not aware of any other relevant data that could have a significant impact on the interpretations and conclusions presented in this Technical Report.

25. INTERPRETATION AND CONCLUSIONS

25.1 Overview

The objective of BBA's mandate was to produce a Mineral Resource Estimate (MRE) for the Beaufor Mine Project and a supporting NI 43-101 Technical Report. This Report and the 2021 MRE herein meet this objective.

Mineralized zone wireframes were constructed by BBA's geologists with the assistance of Monarch's geologists. The mineral resource estimation parameters for the Beaufor Mine Project were established by BBA.

25.2 Mineral Tenure, Surface Rights, Agreements and Royalties

The information provided by Monarch supports the conclusion that the claims held are valid. The Project is entirely (100%) owned by Monarch. Various agreements are in place concerning the Beaufor Mine Project and the Property is also subject to royalties. The QP did not verify the legality or terms of any underlying agreement(s) that may exist concerning the Project.

The effective date of this Mineral Resource Estimate is July 23, 2021. On the same day, Monarch issued a press release announcing an upcoming agreement with Gold Royalty Corp. for a $2.50 per tonne royalty on all material processed through the Beacon mill originating from the Beaufor mine operations. The transaction was closed on August 5, 2021. Dario Evangelista, the QP of Section 14.8, was not aware of this royalty, therefore it was not included in the cut-off grade evaluation. The impact of this new royalty is not significant for the herein MRE. However, this new royalty must be considered in future studies of the Beaufor Project.

25.3 Environmental

The Project is not subject to any known environmental liabilities. As the area has a long history of exploration and mining, the QP does not anticipate any barriers to access the Project for work planned going forward.

25.4 Geology and Mineralization

The Beaufor Mine is located within the Bourlamaque Batholith at the eastern contact with the Dubuisson Formation. The Bourlamaque Batholith, a massive, circular, syn-volcanic intrusion with a diameter of approximately 12 km (at surface) is a major geological feature of the Val-d'Or mining camp. This quartziferous granodiorite batholith, intruded by fine-grained dioritic dikes, intrudes the mafic and ultramafic rocks of the Dubuisson and Jacola formations (Malartic Group), as well as the intermediate rocks of the Val-d'Or Formation (Louvicourt Group). The batholith hosts several past-producing mines.

Gold mineralization of the Beaufor Mine Project occurs in quartz-tourmaline fault-fill veins associated with extension fractures in shear zones, which dip moderately south. Gold-bearing veins show a close association with the mafic dikes that intrude the granodiorite. The mineralized zones are mostly oriented N090° to N130° and are dipping south from 30° to 65°.

The understanding of the regional geology, lithological and structural controls of the mineralization at Beaufor are sufficient to support the estimation of mineral resources.

25.5 Resources Database

The resource database for the Project, as of May 18, 2021, consisted of 997 surface drillholes and 9,595 underground drillholes with a cumulative length of 971,620.21 m.

The QP, Charlotte Athurion, reviewed the drilling, sample preparation, analytical and security procedures, as well as insertion rates and the performance of blanks, standards and duplicates for the 2020-2021 drilling programs, and concluded that the observed failure rates are within expected ranges and that no significant assay biases are present.

The QP is of the opinion that the protocols in place are followed but could be improved following recommendations in Chapter 11. The database for the Beaufor Mine Project is of good overall quality and adequate to industry standards. The QP is of the opinion that the database is appropriate for the purposes of mineral resource estimation, and that the sample density is sufficient to reliably estimate the size, tonnage and grade of the mineralization, in accordance with the level of confidence established by the mineral resource categories in the CIM Standards.

25.6 2021 Beaufor Mine Mineral Resource Estimate

The 2021 Beaufor Mine Mineral Resource Estimate (the “2021 MRE”) was prepared by Charlotte Athurion, P. Geo., using all available information including historical and recent diamond drillholes.

The mineral resources are not mineral reserves as they do not have demonstrated economic viability. The estimate is categorized as Measured, Indicated and Inferred Resources based on data density, geological and grade continuity, search ellipse criteria, drillhole density and specific interpolation parameters. The effective date of the estimate is July 23, 2021.

The QP, Charlotte Athurion, considers the 2021 MRE to be reliable and based on quality data, reasonable hypotheses and parameters that follow CIM Definition Standards and guidelines. After completing the MRE and a detailed review of all pertinent information, the QP concluded the following:

- The 2021 MRE is constrained within 3D wireframes of 166 mineralized zones;
- The Measured, Indicated and Inferred resources are reported within constrained volumes of the mineralized zones;

- The estimate is reported for a potential underground scenario at cut-off grades of 2.8 g/t Au (>=45 degree dip) and 3.2 g/t Au (<45 degree dip). The Beaufor mine contains an estimated Measured Resource of 328,500 tonnes grading at 5.7 g/t Au for a total of 59,900 ounces of gold, an Indicated Resource of 956,400 tonnes grading at 5.2 g/t Au for a total of 159,300 ounces, and an Inferred Resource of 818,900 tonnes grading 4.7 g/t Au for a total of 122,500 ounces;
- Approximately 30% of the Measured resources, 59% of the Indicated resources, and 76% of the Inferred resources are located in the 367-350-140-W-Q zones;
- It is likely that further diamond drilling would upgrade most of the Inferred resources to Indicated resources.

25.7 Risk and Opportunities

As noted in Chapter 4, BBA is not aware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or relevant issues could be expected to affect the reliability or confidence in the information and mineral resource discussed herein or the right or ability to perform future work on the Beaufor Mine Project.

As with all mineral projects, there is an inherent risk associated with mineral exploration. Many of these risks are based on a lack of detailed knowledge and can be managed as more sampling, testing, design, and engineering are conducted at the next study stages. The mineral resources may be affected by a future conceptual study assessment of mining, processing, environmental, permitting, taxation, socio-economic and other factors.

Table 25-1 identifies what are currently deemed to be the most significant internal project risks, potential impacts, and possible mitigation approaches that could affect the Project.

External risks are, to a certain extent, beyond the control of the Project proponents and are much more difficult to anticipate and mitigate, although, in many instances, some risk reduction can be achieved. External risks can include the political situation in the Project's region, metal prices, exchange rates and government legislation. These external risks are generally applicable to all mining projects.

There are opportunities that could improve the Project. The major opportunities that have been identified at this time are summarized in Table 25-2 excluding those typical to all mining projects, such as changes in metal prices, exchange rates, etc. Further information and assessments are needed before these opportunities should be included in the Project economics.

Table 25-1: Project risks (preliminary risk assessment)

Risk description and potential impact	Mitigation approach
The interpreted mineralized zones could be affected by some structures (faults or folds) that could displace or stop the mineralized zones and/or have slightly different shapes and orientations due to the complex geometry of the deposit.	Definition drilling and underground geological mapping will improve the confidence in the interpretation, especially in the zones classified as Inferred and Indicated.
The presence of a nugget effect in the gold distribution of the deposit could lead to local variability within the mineralized zones.	A check assay program could give a better understanding of the nugget effect on this Project. Conducting additional drilling could also decrease the uncertainty.
Inaccurate density could lead to bias in tonnage estimate.	Add density measurement to the sampling protocol to test the various host rocks and areas of the Project.
As the Project is a historical mine under care and maintenance since 2019, the access to some of the resources could be limited.	Rehabilitation work can be needed to restart the operations or require new additional development.
Inaccuracy of the historical underground openings' location could affect the Mineral Resource Estimate.	Direct verification and survey of the underground openings when possible (in UTM and grid mine) could decrease the uncertainty.

Table 25-2: Project opportunities

Opportunity explanation	Benefit
Additional exploration drilling as the deposit remains open at depth.	Potential to add new mineralized zones and to increase resources.
Reducing the drill spacing by adding infill drilling.	Could potentially upgrade some Inferred resources to the Indicated category.

Additional technical factors that may impact the MRE include:

- Mill terms and valuation assumptions;
- Changes to technical inputs used to estimate gold content (e.g. bulk density estimation and grade model methodology);
- Changes to mining assumptions including the application of alternative mining methods;
- Changes to process plant recovery estimates, if the metallurgical recovery is less or greater than currently assumed, including the application of alternative processing methods;
- Social acceptability is an inherent risk for all mining projects. This could affect the Project's development.

26. RECOMMENDATIONS

26.1 Overview

Based on the results of the 2021 MRE, the QPs recommend the two-phase work program described below, in which Phase 2 depends on the success of Phase 1.

26.2 Recommended Activities – Phase 1

The following activities are recommended for the Phase 1 work program.

26.2.1 Definition and Exploration Drilling

Conversion drilling should be done at a drill spacing of about 25 m or less, in order to further delineate the geological and resources model, and to potentially upgrade Inferred resources to the Indicated category before doing the prefeasibility study (PFS).

The QPs also recommend drilling underneath the known mineralized "Q" sector zones using the newly completed exploration drift in order to investigate the potential of the sector.

A compilation of historical geological data across the entire Property is recommended to identify additional targets.

26.2.2 Improvements to the Database

QA/QC protocols can be improved by adding field and coarse duplicates, along with a check assay program. These recommendations would improve the quality and robustness of the database.

A density measurement program of the mineralized zones and the main lithologies should be established in order to confirm the density of each area. On future drilling programs, Monarch should collect SG samples from the various rock types lithologies.

26.3 Recommended Activities – Phase 2

Conditional to the success of Phase 1, the following activities are suggested for the Phase 2 work program.

26.3.1 Prefeasibility Study

A PFS is recommended following the results of Phase 1 activities to update the mineral resource estimate and renew the reserves, in preparation to resume production (including the Beacon mill refurbishment).

26.4 Work Programs Budget

The recommendations are estimated based on current site costs with details provided in Table 26-1.

Table 26-1: Work programs budget

Description	Quantity	Cost ($)
Phase 1 – Work Program		
Definition drilling	20,000 m	2,000,000
Improvement to QA/QC protocols		20,000
Contingencies (10%)		202,000
Total Phase 1		**2,222,000**
Phase 2 – Work Program		
Prefeasibility Study (PFS)		1,000,000
Contingencies (10%)		100,000
Total Phase 2		**1,100,000**
Total Phase 1 and Phase 2		**3,322,000**

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