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## **NI 43-101 Technical Report and Mineral Resource Estimate for the Flordin Project, Quebec, Canada**

Prepared for



**Abcourt Mines Inc.**  
475 avenue de l'Église,  
Rouyn-Noranda, Quebec, Canada, J0Z 1Y1

**Project Location**  
Latitude: 49° 18' North; Longitude: -76°56' West  
Province of Quebec, Canada

**Prepared by:**

Olivier Vadnais-Leblanc, P.Geo.  
Carl Pelletier, P.Geo.  
Alain Carrier, P.Geo.  
Simon Boudreau, P.Eng.  
Eric Lecomte, P.Eng.

**InnovExplo Inc.**  
**Val-d'Or (Quebec)**

Effective Date: May 15, 2023  
Signature Date: June 29, 2023

SIGNATURE PAGE – INNOVEXPLO

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Effective Date: May 15, 2023

*(Original signed and sealed)*

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## CERTIFICATE OF AUTHOR – OLIVIER VADNAIS-LEBLANC

I, Olivier Vadnais-Leblanc, P.Geo. (OGQ No. 1082), do hereby certify that:

1. I am a professional geoscientist working for InnovExplo Inc., located at 560 3<sup>e</sup> Avenue, Val-d'Or, Quebec, Canada, J9P 1S4.
2. This certificate applies to the report entitled "NI 43-101 Technical Report and Mineral Resource Estimate for the Flordin Project, Quebec, Canada" (the "Technical Report") with an effective date of May 15, 2023, and a signature date of June 29, 2023. The Technical Report was prepared for Abcourt Mines Inc. (the "issuer").
3. I graduated with a Bachelor's degree in Geology (B.Sc.) from Université du Québec à Montréal (Montreal, Quebec) in 2006.
4. I am a member in good standing of the Ordre des Géologues du Québec (OGQ, No. 1082).
5. My relevant experience includes a total of 16 years since graduating from university. I acquired my mining expertise in the Goldcorp Eleonore mine and my exploration experience at Goldcorp's Eleonore project. I have been a consulting geologist for SGS from 2017 to 2022 and a consulting geologist for InnovExplo Inc. since February 2022.
6. I have read the definition of a qualified person ("QP") set out in National Instrument 43-101/Regulation 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a QP for the purposes of NI 43-101.
7. I am a co-author of and share responsibility for all items of the Technical Report.
8. I have not visited the Property for the purpose of the Technical Report.
9. I have not had any prior involvement with the property that is the subject of the Technical Report.
10. As of 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 Technical Report not misleading.
11. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
12. I have read NI 43-101 and Form 43-101F1, and the items of the Report for which I was responsible have been prepared in accordance with that instrument and form.

Signed this 29<sup>th</sup> of June 2023 in Montreal, Quebec.

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I, Carl Pelletier, P.Geo. (OGQ No. 384, PGO No. 1713, EGBC No. 43167 and NAPEG No. L4160), do hereby certify that:

1. I am a professional geoscientist and Co-President Founder of InnovExplo Inc., located at 560, 3e Avenue, Val-d'Or, Quebec, Canada, J9P 1S4.
2. This certificate applies to the report entitled "NI 43-101 Technical Report and Mineral Resource Estimate for the Flordin Project, Quebec, Canada" (the "Technical Report") with an effective date of May 15, 2023, and a signature date of June 29, 2023. The Technical Report was prepared for Abcourt Mines Inc. (the "issuer").
3. I graduated with a Bachelor's degree in Geology (B.Sc.) from Université du Québec à Montréal (Montréal, Quebec) in 1992. I initiated a Master's degree at the same university for which I completed the course program but not the thesis.
4. I am a member in good standing of the Ordre des Géologues du Québec (OGQ, No. 384), the Association of Professional Geoscientists of Ontario (PGO, No. 1713), the Association of Professional Engineers and Geoscientists of British Columbia (EGBC, No. 43167), the Northwest Territories Association of Professional Engineers and Geoscientists (NAPEG, No. L4160), and the Canadian Institute of Mines (CIM).
5. My relevant experience includes a total of 31 years since my graduation from university. My mining expertise has been acquired at the Silidor, Sleeping Giant, Bousquet II, Sigma-Lamaque and Beaufor mines. My exploration experience has been acquired with Cambior Inc. and McWatters Mining Inc. I have been a consulting geologist for InnovExplo Inc. since February 2004.
6. I have read the definition of a qualified person ("QP") set out in National Instrument 43-101/ Regulation 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a QP for the purposes of NI 43-101.
7. I have not visited the Property for the purpose of the Technical Report.
8. I am the co-author of items 1 to 3, 12, 14 and 25 to 27 of the Technical Report, for which I share responsibility.
9. I am independent of the issuer applying all the tests in section 1.5 of NI 43-101.
10. I have been involved in the supervision of field assignments and mineral resource estimates in the past on the Project.
11. I have read NI 43-101, and the items of the Technical Report for which I am responsible have been prepared in compliance with that instrument.
12. As of 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 Technical Report not misleading.

Signed this 29th of June 2023 in Val-d'Or, Quebec, Canada.

*(Original signed and sealed)*

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## CERTIFICATE OF AUTHOR – ALAIN CARRIER

I, Alain Carrier, P.Geo., M.Sc. (OGQ No. 00281, PGO No. 1719, NAPEG No. L2701), do hereby certify that:

1. I am a professional geoscientist, employed as Co-President Founder of InnovExplo Inc., located at 560, 3e Avenue, Val-d'Or, Québec, Canada, J9P 1S4.
2. This certificate applies to the report entitled "NI 43-101 Technical Report and Mineral Resource Estimate for the Flordin Project, Quebec, Canada " (the "Technical Report") with an effective date of May 15, 2023, and a signature date of June 29, 2023. The Technical Report was prepared for Abcourt Mines Inc. (the "issuer").
3. I graduated with a mining technician degree in geology (1989) from Cégep de l'Abitibi-Témiscamingue) and with a Bachelor's degree in Geology (1992; B.Sc.) and a Master's in Earth Sciences (1994; M.Sc.) from Université du Québec à Montréal (Montréal, Québec). I initiated a PhD in geology at INRS-Géoresources (Sainte-Foy, Québec), for which I completed the course program but not the thesis.
4. I am a member in good standing of the Ordre des Géologues du Québec (OGQ licence No. 00281), the Professional Geoscientists of Ontario (PGO licence No. 1719), Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG No. L2701), the Canadian Institute of Mines, Metallurgy and Petroleum (CIM 91323), and of the Society of Economic Geologists (SEG 132243).
5. I have practiced my profession continuously as a geologist for a total of twenty-eight (28) years, during which time I have been involved in mineral exploration, mine geology, grade control and mineral resource modelling projects for gold, copper, zinc, silver, nickel, lithium, graphite and uranium properties in Canada and internationally.
6. I have read the definition of a qualified person ("QP") set out in National Instrument 43-101/Regulation 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a QP for the purposes of NI 43-101.
7. I visited the property and reviewed drill core on November 8, 2022, for the purpose of the Technical Report.
8. I am responsible for the overall supervision of the Technical Report, and I am the co-author of items 1 to 13 and 23-27).
9. I am independent of the issuer applying all the tests in section 1.5 of NI 43-101.
10. I have been involved in the supervision of field assignments and mineral resource estimates in the past on the Project.
11. I have read NI 43-101, and the items of the Technical Report for which I am responsible have been prepared in compliance with that instrument.
12. As of 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 Technical Report not misleading.

Signed this 29<sup>th</sup> day of June 2023 in Val-d'Or, Québec, Canada.

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I, Simon Boudreau, P. Eng. (OIQ No.132338, NAPEG No. L5047), do hereby certify that:

1. I am a professional engineer employed as Senior Mining Engineer with the firm InnovExplo Inc., located at 560, 3e Avenue, Val-d'Or, Quebec, Canada, J9P 1S4.
2. This certificate applies to the report entitled "NI 43-101 Technical Report and Mineral Resource Estimate for the Flordin Project, Quebec, Canada" (the "Technical Report") with an effective date of May 15, 2023, and a signature date of June 29, 2023. The Technical Report was prepared for Abcourt Mines Inc. (the "issuer").
3. I graduated with a Bachelor's degree in mining engineering (B.Eng.) from Université Laval (Quebec City, Quebec) in 2003.
4. I am a member in good standing of the Ordre des Ingénieurs du Québec (No. 132338).
5. My relevant experience includes a total of nineteen (19) years since my graduation from university. I have been involved in mine engineering and production at the Troilus mine for four (4) years, at HRG Taparko mine for four (4) years, and at Dumas Contracting for three (3) years. I have also worked as an independent consultant for the mining industry for five (5) years and with InnovExplo for three (3) years. As a consultant, I have been involved in many base metals and gold mining projects.
6. I have read the definition of a qualified person ("QP") set out in National Instrument 43-101/Regulation 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a QP for the purposes of NI 43-101.
7. I have not visited the property for the purpose of the Technical Report.
8. I am the co-author of items 1-3 and 25-26 and section 14.1.11 of the Technical Report.
9. I am independent of the issuer applying all the tests in section 1.5 of NI 43-101.
10. I have not had any prior involvement with the property that is the subject of the Technical Report.
11. I have read NI 43-101 and Form 43-101F1, and the items of the Technical Report for which I am responsible have been prepared in accordance with that instrument and form.
12. As of 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 Technical Report not misleading.

Signed this 29<sup>th</sup> day of June 2023 in Trois-Rivières, Quebec, Canada.

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I, Eric Lecomte, P.Eng. (OIQ No. 122047), do hereby certify that:

1. I am a Senior Engineer working for InnovExplo Inc., located at 560 3<sup>e</sup> Avenue, Val-d'Or, Quebec, Canada, J9P 1S4.
2. This certificate applies to the report entitled "NI 43-101 Technical Report and Mineral Resource Estimate for the Flordin Project, Quebec, Canada" (the "Technical Report") with an effective date of May 15, 2023, and a signature date of June 29, 2023. The Technical Report was prepared for Abcourt Mines Inc. (the "issuer").
3. I graduated with a Bachelor's degree in Mining Engineering (B.Sc.A.) from Université Laval (Quebec City, Quebec) in 1998.
4. I am a member in good standing of the Ordre des Ingénieurs du Québec (OIQ, No. 122047).
5. I have worked as a mining engineer for a total of twenty-one (21) years since graduating from university. My expertise was acquired while working as a mining engineer. During these years, I occupied different technical and operational positions related to mining engineering in underground and open-pit operations.
6. I have read the definition of a qualified person ("QP") set out in National Instrument 43-101/Regulation 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a QP for the purposes of NI 43-101.
7. I am a co-author of items 1 to 3, sections 14.1.11, 14.1.13, and items 25 and 26 of the Technical Report.
8. I have not visited the property for the purpose of the Technical Report.
9. I have not had any prior involvement with the property that is the subject of the Technical Report.
10. I am independent of the issuer applying all the tests in section 1.5 of NI 43-101.
11. I have read NI 43-101, and the items of the Technical Report for which I am responsible have been prepared in compliance with that instrument.
12. As of 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 Technical Report not misleading.

Signed this 29<sup>th</sup> day of June 2023 in Val-d'Or, Canada.

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## **1. SUMMARY**

### **1.1 Introduction**

Abcourt Mines Inc. (“Abcourt” or the “issuer”) commissioned InnovExplo Inc. (“InnovExplo”) to prepare an updated mineral resource estimate (the “2023 MRE”) for the Flordin Project (the “Property” or the “Project”) in Quebec, Canada, and a supporting technical report (the “Technical Report”).

The Technical Report has been prepared in accordance with Canadian Securities Administrators’ National Instrument 43-101 Respecting Standards of Disclosure for Mineral Projects (“NI 43-101”) and its related Form 43 101F1.

The mandate was assigned by Pascal Hamelin, Abcourt’s chief executive officer. The intent of this Technical Report is to update 2023 MRE. The 2023 MRE has an effective date of May 15, 2023.

InnovExplo is an independent mining and exploration consulting firm based in Val-d’Or (Quebec), Canada.

As part of the mandate, InnovExplo has reviewed the following with respect to the Project: the mining titles and their status on the GESTIM website (the Government of Quebec’s online claim management system); agreements and technical data supplied by the issuer (or its agents); and the issuer’s filings on SEDAR (press releases and MD&A reports).

This Technical Report was prepared by InnovExplo employees Olivier Vadnais-Leblanc (P.Geo.), Alain Carrier (P.Geo.), Carl Pelletier (P. Geo.), Simon Boudreau (P.Eng.) and Eric Lecomte (, P.Eng.). They all are independent and qualified persons (“QPs”) as defined by NI 43-101.

Alain Carrier visited the Property on November 8, 2023, for the purpose of this mandate.

The effective date of the 2023 MRE and the Technical Report is May 15, 2023.

The signature date of the Technical Report is June 29, 2023.

### **1.2 Property Description and Location**

The Flordin Project is approximately 40 km north of the town of Lebel-sur-Quévillon, Quebec, on NTS map sheet 32F/07 (Figure 4-1). The project is located in Desjardins and Franquet Townships.

The Project consists of one contiguous block of twenty-five (25) mining titles covering a total of 975.8 ha in the Desjardins and Franquet townships located about 25 km to the north of the Lebel-Sur-Quévillon, Quebec.

The issuer owns a 100% interest in the Property, and no royalty has been payable since its purchase in 2016.

The authors are unaware of any environmental liabilities associated with the mining titles of the Property. However, the authors have not thoroughly verified the mining titles. Exploration activities to date have been planned in such a way as to have a minimal impact on the environment.

### 1.3 Geology

The Archean Abitibi Greenstone Belt is located in the southern portion of the Archean Superior Province. It is one of the most extensive continuous expanses of low metamorphic grade Archean volcanic and sedimentary rocks on Earth (Card and Poulsen 1998). It also happens to be one of the richest mining regions in the world and has produced large amounts of gold, copper, zinc, silver and iron from the Timmins, Kirkland Lake, Rouyn-Noranda, Val-d'Or, Matagami and Chibougamau mining districts.

The Abitibi Greenstone Belt is divided into Southern ("SVZ") and Northern Volcanic zones ("NVZ"; Chown et al. 1992), representing a collage of two arcs delineated by the Destor-Porcupine-Manneville Fault Zone ("DPMFZ"; Mueller et al. 1996). The SVZ is separated from the Pontiac sedimentary rocks, an accretionary prism (Calvert and Ludden 1999) to the south, by the Cadillac-Larder Lake Fault Zone ("CLLFZ"). The fault zones are terrane zippers that show the change from thrusting to transcurrent motion as documented in the turbiditic flysch basins overlain unconformably by, or in structural contact with, coarse clastic deposits in strike-slip basins (Mueller et al. 1991, 1994a, 1996; Daigneault et al. 2002). A further subdivision of the NVZ into external and internal segments is warranted and based on distinct structural patterns with the intra-arc Chicobi sedimentary sequence representing the line of demarcation (Daigneault et al. 2004).

The Property lies within the volcano-sedimentary band (Figure 7-3). The Vezza-Bruneau volcanic and sedimentary units were intruded by Proterozoic diabase dykes (Joly, 1994). The units form a homoclinal sequence-oriented east-west to northwest-southeast with

subvertical dips and stratigraphic tops to the north (Joly, 1994). The sequence begins with massive to pillowed volcanic flows surmounted by sedimentary rocks of the Taibi Group. The sedimentary rocks are covered by another volcanic unit composed of mafic and felsic lavas (Joly, 1994). The sequence was intruded by the felsic Lac Cameron and Franquet plutons. The Marest Batholith lies west of the sequence.

The property is notably transected by the northwest-southeast Cameron Deformation Zone ("CDZ"; Fig. 7.6). This shear zone is at least 80 km long and reaches up to 5 km wide (Daigneault and Archambault, 1990; Proulx, 1990 and 1991; Lacroix, 1993; Joly, 1994). The corridor is characterized by a steep, subvertical, mylonitic foliation (N115°) and a subhorizontal stretching lineation. The CDZ is an intense deformation zone cutting the east-west regional schistosity, and kinematic indicators reveal a main dextral component of displacement (Daigneault and Archambault, 1990). The younger, NE-trending, left-lateral Wedding fault displaced the Cameron corridor almost 4

### 1.4 Mineralization

Following the compilation of the latest drilling on the property, a new interpretation model based on the Sigma-Lamaque mineralization-style is proposed.

The numerous shear zones are the dominant structural features of the Sigma-Lamaque deposit. Gold-bearing veins at the Sigma mine consist of quartz and tourmaline with lesser carbonates, sericite, pyrite, scheelite, chlorite and chalcopyrite (Robert and Brown, 1986a, b). Four types have been distinguished based on host rock associations and geometries: (1) steeply to moderately dipping fault-fill veins within shear zones; (2) subhorizontal extensional veins; (3) arrays of subhorizontal extensional veins hosted

within the feldspar porphyry dykes, referred to as dyke stringers; and (4) moderately north-dipping extensional-shear veins, referred to as the North Dipper veins.

## **1.5 Data Verification**

All drilling information used for the 2023 MRE was reviewed and validated by the mineral resource QP (Olivier Vadnais-Leblanc). 14 drill holes have been completed on the Property since the historical 2011 MRE was published: 6 drill holes by North American Palladium in 2018, and 8 by the issuer in 2020. Basic cross-check routines were performed between the 2011 and 2020 drill hole databases. The comparison revealed that the overall thickness and grade of the mineralized zones were comparable (same order of magnitude).

The validation included all aspects of the drill hole database (i.e., collar location, drilling protocols, downhole surveys, logging protocols, sampling protocols, QA/QC protocols, validation sampling, density measurement review, and checks against assay certificates).

The 2023 MRE database is considered to be of good overall quality, and the mineral resource QP considers it to be valid and reliable.

## **1.6 Mineral Processing and Metallurgical Testing**

Tardif (1987) reported on metallurgical testing of Flordin ore from the “B” Zone before it was milled. The program was carried out at Lakefield Research Laboratories. The main results and conclusions are summarized below. The tests were done on ore crushed to a grind of 70% at minus 200 mesh.

In mid-June 1987, a total of 5,173.95 (dry) metric tons was processed at the mill belonging to Bachelor Lake Gold Mines. Project geologists estimated a pre-processing grade of 2.57 g/t Au. Once processed, mill recovery was 91.7% and the final grade 2.51 g/t Au. A total of 372.05 ounces was sold to the Royal Canadian Mint and 10.51 ounces were kept in the mill inventories (Tardif, 1987).

## **1.7 Mineral Resource Estimates**

This MRE includes all blocks (“must-take blocks”) that fall within a potentially mineable shape to satisfy the “reasonable prospects for eventual economic extraction” under CIM MRMR Best Practice Guidelines (2019)

**Table 1-1 Mineral Resources of the Flordin Gold Project**

Possible resources in Open Pit (cut-off grade 0.5 g/tAu)			Possible resources from Long Hole minable shapes (cut-off grade 3.1 g/tAu)			Possible resources from Room and Pillar minable shapes (cut-off grade 4.6 g/tAu)		
Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au
<b>Measured Resources</b>								
86,000	2.58	7,100	0	0	0	0	0	0
<b>Indicated Resources</b>								
1,444,000	2.15	99,900	227,000	3.75	27,500	1000	5.46	200
<b>Measured and Indicated Resources</b>								
1,530,000	2.18	107,000	227,000	3.75	27,500	1000	5.46	200
<b>Inferred Resources</b>								
244,000	2.38	18,600	323,000	3.83	39,800	8000	5.16	1,300

**Notes to the 2023 MRE**

1. The effective date of the 2023 MRE is May 15, 2023.
2. The independent and qualified persons (as defined by NI 43-101) for the 2023 MRE are Olivier Vadnais-Leblanc, P.Geo., Carl Pelletier, P.Geo., Eric Lecomte, P.Eng., and Simon Boudreau, P.Eng., from InnovExplo Inc.
3. The mineral resource estimate follows the CIM Definition Standards (2014) and follows the CIM MRMR Best Practice Guidelines (2019).
4. These mineral resources are not mineral reserves because they do not have demonstrated economic viability. The results are presented undiluted and are considered to have reasonable prospects for eventual economic extraction (RPEEE).
5. The estimate encompasses 364 mineralized veins and structures developed using Genesis and interpolated using LeapFrog Edge.
6. 1 m composites were calculated within the mineralized zones using the grade of the adjacent material when assayed or a value of zero when not assayed. High-grade capping supported by statistical analysis was done on composites and was set to 25 g/t Au.
7. The estimate was completed using a sub-block model in Leapfrog Edge. A 10m x 2m x 2m (X,Y,Z) parent block size and a 1.25m x 0.25m x 0.25m (X,Y,Z) sub block size was used.
8. Grade interpolation was obtained by Inverse Distance Squared (ID2) using hard boundaries.
9. A density value of 2.8 g/cm<sup>3</sup> was assigned to all mineralized zones.
10. Mineral resources were classified into Measured, Indicated and Inferred. Measured resources are defined within a distance of 8m from underground or surface channel and from a minimum of three (3) drill holes in areas where the drill spacing is less than 50 m. Indicated resources are defined with a minimum of three (3) drill holes in areas where the drill spacing is less than 50 m. The Inferred category is defined with two (2) drill hole in areas where the drill spacing is less than 75 m where there is reasonable geological and grade continuity.
11. The requirement of a reasonable prospect of eventual economic extraction is satisfied by having cut-off grades based on reasonable parameters for potential surface and underground extraction scenarios, minimum widths and constraining volumes. The estimate is presented for potential underground scenarios (realized in Deswik) over a width of 1.7m for blocks 16m high by 16m long at a cut-off grade of 3.10 g/t Au for the long-hole method (LT) and 4.60 g/t Au for the conventional room and pillar (CP) method. Cut-off grades reflect the actual geometry and dip of the mineralized envelopes. The pit of the 2023 mineral resource estimate is locally constrained by an optimized surface in Whittle using a rounded cut-off grade of 0.5 g/t Au. Cut-off grades reflect the actual geometry and dip of the mineralized envelopes. The cut-off grades were calculated using the following parameters: a slope of 50° in the rock and 30° in the overburden, a pit mining cost = C\$4.65/t, an underground mining cost of C \$169.50/t for LT and C\$262.00/t for CP, a processing cost of C\$21.50/t, general and administrative costs of C\$12.00/t, selling costs of C\$5.00/oz, a price of gold of US\$1,650 per ounce, a USD/CAD exchange rate of 1.33 and a mill recovery rate of 91.7%. Cut-off grades should be re-evaluated in light of future market conditions (metal prices, exchange rates, mining cost, etc.).
12. The number of metric tonnes was rounded to the nearest thousand, following the recommendations in NI 43-101 and any discrepancies in the totals are due to rounding effects. The metal contents are presented in troy ounces (tonnes x grade / 31.10348) rounded to the nearest hundred. Numbers may not add up due to rounding.
13. The independent and qualified persons for the 2023 MRE are not aware of any known environmental, permitting, legal, political, title-related, taxation, socio-political, or marketing issues that could materially affect the Mineral Resource Estimate.

## **1.8 Interpretation and Conclusions**

The objective of InnovExplo's mandate was to generate a mineral resource estimate for the Property (the "2023 MRE") and provide a supporting Technical Report in compliance with NI 43-101 and Form 43-101F1.

InnovExplo used Geovia's Whittle to evaluate the open pit portion of the deposit and Deswik Stope Optimizer ("DSO") to evaluate the underground portions of the the deposit considered potentially profitable for underground mining and follows CIM Guidelines, which state that "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". The 2023 MRE was established using blocks in potentially mineable shapes.

InnovExplo considers the present 2023 MRE to be reliable and thorough, based on quality data, reasonable hypotheses, and parameters compliant with NI 43-101 criteria and CIM Definition Standards.

## **1.9 Recommendations**

A preliminary economic analysis should be carried out with new exploration drilling results.

An infill and exploration drilling program should be conducted, guided by the current geological reinterpretation of zones in the lower part of the deposit. All sections of the deposit could eventually be linked together.

Drilling should further investigate the east, west and depth extensions to increase the extent of the inferred resources.

## **2. INTRODUCTION**

Abcourt Mines Inc. (“Abcourt” or the “issuer”) commissioned InnovExplo Inc. (“InnovExplo”) to prepare an updated mineral resource estimate (the “2023 MRE”) for the Flordin Project (the “Property” or the “Project”) in Quebec, Canada, and a supporting technical report (the “Technical Report”).

The Technical Report has been prepared in accordance with Canadian Securities Administrators’ National Instrument 43-101 Respecting Standards of Disclosure for Mineral Projects (“NI 43-101”) and its related Form 43-101F1.

Pascal Hamelin, Abcourt’s CEO, assigned the mandate. The 2023 MRE has an effective date of May 15, 2023. It represents an update of the previous mineral resource estimate for the Flordin Property (the “2011 MRE”), which was published in a 43-101 technical report dated August 24, 2011 (Richard and Pelletier, 2011).

InnovExplo is an independent mining and exploration consulting firm based in Val-d’Or (Quebec), Canada.

### **2.1 Issuer**

The issuer is a gold producer and a Canadian exploration corporation trading publicly on the TSX Venture Exchange under the symbol (TSXV: ABI). Its head office is located 475 avenue de l’Église, Rouyn-Noranda, Quebec, Canada, J0Z 1Y1.

The Project consists of twenty-five (25) mining titles covering a total of 975.8 ha in the Desjardins and Franquet townships about 25 km to the north of Lebel-Sur-Quévillon, Quebec. The issuer owns a 100% interest in the Flordin Property, and no royalty has been payable since its purchase in 2016.

### **2.2 Terms of reference**

InnovExplo has prepared the 2023 MRE for the issuer. The Technical Report follows the format and content required under NI 43-101 regulations of the Canadian Securities Administrators, including Form 43-101F1 and other related guidelines.

Unless otherwise stated, the issuer provided the information and data contained in this report or used in its preparation.

### **2.3 Report Responsibility and Qualified Persons**

This Technical Report was prepared by the InnovExplo employees listed in Table 2-1, all independent and qualified persons (“QPs”) as defined by NI 43-101. The QPs are in good standing with their respective professional orders. The table provides a breakdown of report responsibilities.

None of the QPs have nor have they previously had any material interest in the issuer or its related entities. The relationship with the issuer is solely a professional association between the issuer and the independent consulting firm. The Technical Report was prepared in exchange for fees based upon an agreed commercial rate, and the payment of these fees is in no way contingent on the results of the Technical Report.

**Table 2-1 – Qualified Person Responsibilities**

Qualified Person	Professional affiliation	Company / Position	Site visits	Item or section responsibility
Olivier Vadnais-Leblanc	P.Geo. (OGQ No. 1082)	InnovExplo Inc. Senior Geologist, Mineral Resource Estimates	No visit	All items of the report (other than 14.1.11 to 14.1.13)
Carl Pelletier	P.Geo. (OGQ No. 0384)	InnovExplo Inc. Co-President	No visit	All items of the report (other than 14.1.11 to 14.1.13)
Alain Carrier	P.Geo. (OGQ No. 0281)	InnovExplo Inc. Co-President	November 8, 2022	All items of the report (other than 14.1.11 to 14.1.13)
Simon Boudreau	P.Eng. (OIQ No. 132338)	InnovExplo Inc. Senior Mine Engineer	No visit	Sections 14.1.11 to 14.1.13 and items 1, 2, 3, 14, 25, 26 and 27
Eric Lecomte	P.Eng. (OIQ No. 122047)	InnovExplo Inc. Senior Mine Engineer	No visit	Sections 14.1.11 to 14.1.13 and items 1, 2, 3, 14, 25, 26 and 27

## 2.4 Principal Sources of Information

As part of the mandate, InnovExplo has reviewed the following with respect to the Project: the mining titles and their status on the GESTIM website (the Government of Quebec's online claim management system); agreements and technical data supplied by the issuer (or its agents); and the issuer's filings on SEDAR (press releases and MD&A reports).

The QP's has no known reason to believe that any information used to prepare this Technical Report is invalid or contains misrepresentations. The authors have sourced the information for the Technical Report from the reports listed in Item 27.

The QP's reviewed and appraised the information used to prepare the Technical Report, including the conclusions and recommendations. The QP's believes this information is valid and appropriate, considering the status of the project and the purpose for which the Technical Report is prepared.

None of the authors involved in the Technical Report have, or have previously had, any material interest in the issuer or its related entities. The relationship with the issuer is solely a professional association between the issuer and the independent consultants. This Technical Report was prepared in return for fees based upon agreed commercial rates, and the payment of these fees is in no way contingent on the results of the Technical Report.

## 2.5 Site Visits

Alain Carrier visited the Property on November 8, 2022, for the purpose of this mandate. During his visit, the author verified drill collar and channel samples locations, performed data verification (including a visual assessment of the access roads), examined diamond drill core from past and recent drilling programs, reviewed drill core logs and assay results, and conducted independent re-sampling.

## 2.6 Effective Date

The effective date of the 2023 MRE and this Technical Report is May 15, 2023.

The signature date of this Technical Report is June 29, 2023.

## 2.7 Currency, Units of Measure, and Abbreviations

The abbreviations and units used in this report are provided in Table 2-2 and Table 2-3. All currency amounts are stated in Canadian Dollars (\$, C\$, CAD) or US dollars (US\$, USD). Quantities are stated in metric units, as per standard Canadian and international practice, including metric tons (tonnes, t) and kilograms (kg) for weight, kilometres (km) or metres (m) for distance, hectares (ha) for area, percentage (%) for copper and nickel grades, and gram per metric ton (g/t) for precious metal grades. Wherever applicable, imperial units have been converted to the International System of Units (SI units) for consistency (Table 2-4).

**Table 2-2 – List of Abbreviations**

Acronyms	Term
43-101	National Instrument 43-101 (Regulation 43-101 in Quebec)
Ai	Abrasion index
AMIS	Abandoned Mines Information System
ASTM	American Society for Testing and Materials
APR	Annual percentage rate

Acronyms	Term
BAPE	Bureau d'audience publique du Quebec
BWi	Bond work index
CofA	Certificate of authorization
CA	Core angle
CAD:USD	Canadian-American exchange rate
CNSC	Canadian Nuclear Safety Commission
CAPEX	Capital expenditure
CDPNQ	Centre de données sur le patrimoine naturel du Quebec
CEAA 2012	Canadian Environmental Assessment Act (2012)
CEAAg	Canadian Environmental Assessment Agency
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CIM Definition Standards	CIM Definition Standards for Mineral Resources and Mineral Reserves
CL	Core length
CMS	Cavity monitoring system
CoG	cut-off grade
CRM	Certified reference material
CSA	Canadian Securities Administrators
CSS	Contact support services
CV	Coefficient of variation
CWi	Crusher work index
DEM	Digital elevation model
DDH	Diamond drill hole
Directive 019	Directive 019 sur l'industrie minière
EA	Environmental assessment
EBITDA	Earnings before interest, taxes, depreciation and amortization
ECA	Environmental Compliance Approval
ECCC	Environment and Climate Change Canada
EDO	Effluent discharge objectives
EEM	Environmental Effects Monitoring
EIA	Environmental impact assessment
EIS	Environmental impact study
EPCM	Engineering, procurement, construction, management
EQA	Environment Quality Act
ESA	Environmental site assessment
ESIA	Environmental and social impact assessment
F <sub>100</sub>	100% passing - Feed
F <sub>80</sub>	80% passing - Feed

Acronyms	Term
FIFO	Fly in fly out
FOB	Freight on board
FS	Feasibility study
FWR	Fresh water reservoir
G&A	General and administration
GESTIM	Gestion des titres miniers (the MERN's online claim management system)
GHG	Greenhouse gas
GPR	Ground penetrating radar
ID2	Inverse distance squared
ID3	Inverse distance cubed
ID6	Inverse distance power six
IDW	Inverse distance weighting
IEC	International Electrotechnical Commission
IRR	Internal rate of return
ISA	Inter-ramp slope angle
ISO	International Organization for Standardization
ISRM	International Society for Rock Mechanics
IT	Information technology
JBNQA	James Bay and Northern Quebec Agreement
JV	Joint venture
JVA	Joint venture agreement
LLC	Limited liability company
LOM	Life of mine
LOMP	Life of mine plan
LUP	Land Use Permit
MACRS	Modified accelerated cost recovery system
MCC	Ministère de la Culture et des Communications du Québec (Quebec's Ministry of Culture and Communications)
MCCCF	Former name of the MCC
MDDELCC	Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques du Québec (Quebec's Ministry of Sustainable Energy, Environment and the Fight Against Climate Change)
MDI	Mineral Deposit Inventory
MERN	Ministère de l'Énergie et des Ressources Naturelles du Québec (Quebec's Ministry of Energy and Natural Resources)
mesh	US mesh
MFFP	Ministère des Forêts, de la Faune et des Parcs (Quebec's Ministry of Forests, Wildlife and Parks)
MIK	Multiple indicator kriging

Acronyms	Term
MLO	Mining Licence of Occupation
MMER	Metal mining effluent regulations
MNDM	Ontario Ministry of Northern Development and Mines
MNR	Ontario Ministry of Natural Resources
MRC	Municipalité régionale de comté (Regional county municipality in English)
MRE	Mineral resource estimate
MRMR	Mineral resources and mineral reserves
MRN	Former name of MERN
MSHA	Mine Safety & Health Administration
MSO	Mineable Shape Optimizer
MTSMTE	Ministère des Transports, de la Mobilité durable et de l'Électrification des transports du Québec (Quebec's Ministry of Transport, Sustainable Mobility and Transport Electrification)
MWMP	Meteoric water mobility potential
n/a	Not applicable
N/A	Not available
NAD	North American Datum
NAD 27	North American Datum of 1927
NAD 83	North American Datum of 1983
nd	Not determined
NI 43-101	National Instrument 43-101 (Regulation 43-101 in Quebec)
NN	Nearest neighbour
NPI	Net profits interest
NPV	Net present value
NRC	Natural Resources Canada
NSR	Net smelter return
NTS	National Topographic System
OER	Objectifs environnementaux de rejet (Quebec)
OK	Ordinary kriging
OPEX	Operational expenditure
P <sub>80</sub>	80% passing - Product
P <sub>100</sub>	100% passing - Product
PAG	Potentially acid generating
PFS	Prefeasibility study
PM	Particulate matter
PMF	Probable maximum flood
PMP	Probable maximum precipitation
POF	Probability of failure

Acronyms	Term
Q	Value expressing quality of rock mass (Q-system for rock mass classification)
QA	Quality assurance
QA/QC	Quality assurance/quality control
QBBA	Quebec Breeding Bird Atlas
QC	Quality control
QP	Qualified person (as defined in National Instrument 43-101)
R&D	Research and development
RBQ	Régie du Bâtiment du Québec
RC	Reverse circulation (drilling)
Regulation 43-101	National Instrument 43-101 (name in Quebec)
RMR	Rock mass rating
ROM	Run of mine
RQD	Rock quality designation
RQI	Rock quality index
RWi	Rod work index
SABC	Comminution circuit consisting of a SAG mill, ball mill and pebble crusher
SAG	Semi-autogenous-grinding
SARA	Species at Risk Public Registry
SCC	Standards Council of Canada
SD	Standard deviation
SF	Safety factor
SG	Specific gravity
SIGÉOM	Système d'information géominière (the MERN's online spatial reference geominig information system)
SMC	SAG mill comminution
SMU	Selective mining unit
SPLP	Synthetic Precipitation Leaching Procedure
TCLP	Toxicity characteristic leaching procedure
TDS	Total dissolved solids
TMF	Tailings management facility
TSP	Total suspended particulate matter
UCoG	Underground cut-off grade
UCS	Uniaxial compressive strength
UG	Underground
UTM	Universal Transverse Mercator coordinate system
VOD	Ventilation on demand
WBS	Work breakdown structure

Acronyms	Term
WSR	Water storage reservoir

**Table 2-3 – List of units**

Symbol	Unit
%	Percent
% solids	Percent solids by weight
\$, C\$	Canadian dollar
\$/t	Dollars per metric ton
°	Angular degree
°C	Degree Celsius
µm	Micron (micrometre)
µS/cm	Micro-siemens per centimetre
A	Ampere
avdp	Avoirdupois
Btu	British thermal unit
cfm	Cubic feet per minute
cfs	Cubic feet per second
cm	Centimetre
cm <sup>2</sup>	Square centimetre
cm <sup>2</sup> /d	Square centimetre per day
cm <sup>3</sup>	Cubic centimetre
cP	Centipoise (viscosity)
d	Day (24 hours)
dm	Decametre
ft	Foot (12 inches)
g	Gram
G	Billion
Ga	Billion years
gal/min	Gallon per minute
g-Cal	Gram-calories
g/cm <sup>3</sup>	Gram per cubic centimetre
g/L	Gram per litre
g/t	Gram per metric ton (tonne)
GW	Gigawatt
h	Hour (60 minutes)
ha	Hectare

Symbol	Unit
hp	Horsepower
Hz	Hertz
in	Inch
k	Thousand (000)
ka	Thousand years
kbar	Kilobar
kg	Kilogram
kg/h	Kilogram per hour
kg/t	Kilogram per metric ton
kJ	Kilojoule
km	Kilometre
km <sup>2</sup>	Square kilometre
km/h	Kilometres per hour
koz	Thousand ounces
kPa	Kilopascal
kW	Kilowatt
kWh	Kilowatt-hour
kWh/t	Kilowatt-hour per metric ton
kVA	Kilo-volt-ampere
L	Litre
lb	Pound
lb/gal	Pounds per gallon
lb/st	Pounds per short ton
L/h	Litre per hour
L/min	Litre per minute
lbs NiEq	Nickel equivalent pounds
M	Million
m	Metre
m <sup>2</sup>	Square metre
m <sup>3</sup>	Cubic metre
m/d	Metre per day
m <sup>3</sup> /h	Cubic metres per hour
m <sup>3</sup> /min	Cubic metres per minute
m/s	Metre per second
m <sup>3</sup> /s	Cubic metres per second
Ma	Million years (annum)
masl	Metres above mean sea level

Symbol	Unit
Mbgs	Metres below ground surface
Mbps	Megabits per second
MBtu	Million British thermal units
mi	Mile
min	Minute (60 seconds)
Mlbs	Million pounds
ML/d	Million litres per day
mm	Millimetre
mm <sup>2</sup>	Square millimetres
mm Hg	Millimetres of mercury
mm WC	Millimetres water column
Moz	Million (troy) ounces
mph	Mile per hour
Mt	Million metric tons
MW	Megawatt
ng	Nanogram
NiEq	Nickel equivalent
oz	Troy ounce
oz/t	Ounce (troy) per short ton (2,000 lbs)
ppb	Parts per billion
ppm	Parts per million
psf	Pounds per square foot
psi	Pounds per square inch
rpm	Revolutions per minute
s	Second
s <sup>2</sup>	Second squared
scfm	Standard cubic feet per minute
st/d	Short tons per day
st/h	Short tons per hour
t	Metric tonne (1,000 kg)
ton	Short ton (2,000 lbs)
tpy	Metric tonnes per year
tpd	Metric tonnes per day
tph	Metric tonnes per hour
US\$	American dollar
usgpm	US gallons per minute
V	Volt

Symbol	Unit
vol%	Percent by volume
wt%	Weight percent
y	Year (365 days)
yd <sup>3</sup>	Cubic yard

**Table 2-4 – Conversion Factors for Measurements**

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

### 3. RELIANCE ON OTHER EXPERTS

This Technical Report is based upon information the QPs believed to be accurate at the time of writing, considering the status of the Project and the purpose for which the report was prepared. The data have been verified where possible. The QPs have no reason to believe that the data were not collected in a professional manner.

The QPs have not relied on other experts to prepare this Technical Report. It was prepared by InnovExplo at the request of the issuer. Olivier Vadnais-Leblanc (P.Geo.), Alain Carrier (P.Geo.), Carl Pelletier (P.Geo.), Simon Boudreau (P.Eng.) and Eric Lecomte (P.Eng.) are the QPs responsible for reviewing the technical documentation relevant to the Technical Report, preparing a mineral resource estimate for the Project and recommending a work program.

The QPs have not verified the legal status of or the legal title to any claims on the Project nor the legality of any underlying agreements concerning the Project as described in Item 4 of this report. The QPs have relied on the issuer's information about mining titles, option agreements, royalty agreements, environmental liabilities, and permits. Neither the QPs nor InnovExplo are qualified to express any legal opinion concerning Project titles, current ownership or possible litigation.

The QPs consulted GESTIM and SIGEOM over the course of the mandate. The following websites were last consulted on May 25, 2023:

- [gestim.mines.gouv.qc.ca/MRN\\_GestimP\\_Presentation/ODM02101\\_login.aspx](http://gestim.mines.gouv.qc.ca/MRN_GestimP_Presentation/ODM02101_login.aspx)
- [sigeom.mines.gouv.qc.ca/signet/classes/l1102\\_indexAccueil?l=a](http://sigeom.mines.gouv.qc.ca/signet/classes/l1102_indexAccueil?l=a)

## **4. PROPERTY DESCRIPTION AND LOCATION**

The text of this section was taken and modified from Richard and Pelletier, 2011.

### **4.1 Location**

The Flordin Project is approximately 40 km north of the town of Lebel-sur-Quévillon, Quebec, on NTS map sheet 32F/07 (Figure 4-1). The project is located in Desjardins and Franquet Townships. The approximate UTM coordinates for the geographic centre of the property are -76°56'36" West and 49°18'39" North (UTM coordinates: 358740E and 5463840N, NAD83, Zone 18). The property is located in the Lac Simon Algonquin category III territory.

### **4.2 Mining Title Status**

The issuer supplied InnovExplo with information on the status of the mineral titles. InnovExplo verified this information using GESTIM, the Government of Quebec's online claim management system ([gestim.mines.gouv.qc.ca](http://gestim.mines.gouv.qc.ca)). All mining titles are registered 100% to the issuer under the name Mines Abcourt Inc. (Table 4-1).

The Project consists of one contiguous block of twenty-five (25) mining titles covering a total of 975.8 ha in the Desjardins and Franquet townships about 25 km to the north of the Lebel-Sur-Quévillon, Quebec (Figure 4-2).

All mining titles are in good standing as of June 5, 2023.

### **4.3 Ownership, Royalties and Agreements**

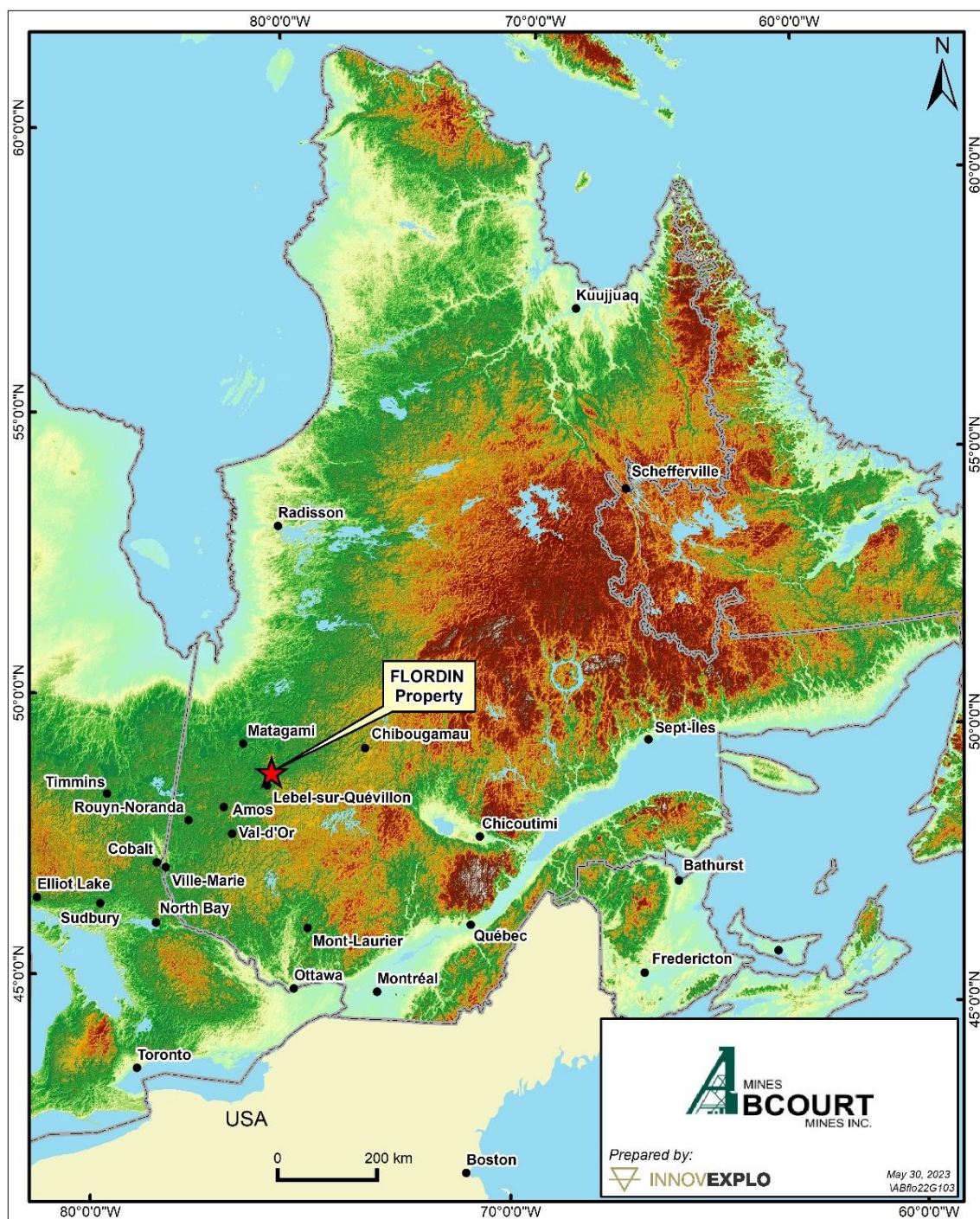
On June 20, 2016, the issuer completed its acquisition of the Sleeping Giant mine and mill and several other properties containing gold showings. These mining assets were acquired from the firm Deloitte Restructuring Inc., acting as court-appointed receiver for the assets of Aurbec Mines Inc. ("Aurbec"). The issuer owns a 100% interest in the Property, and no royalty has been payable since its purchase in 2016.

### **4.4 Environnement**

There are no known environmental concerns or land claim issues pending with respect to the Property. It is understood and agreed that the Property was received by the issuer "as is" and that the issuer shall ensure that all exploration programs on the Property are conducted in an environmentally sound manner.

The authors are unaware of any environmental liabilities associated with the mining titles of the Property. However, the authors have not thoroughly verified the mining titles. Exploration activities to date have been planned in such a way as to have a minimal impact on the environment.

The issuer is responsible for obtaining all authorizations and permits from the Ministère des Ressources naturelles et des Forêts (Quebec's Ministry of Natural Resources and Forests) or the Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs du Québec (Quebec's Ministry of Environment, the Fight Against Climate Change, Wildlife and Parks).

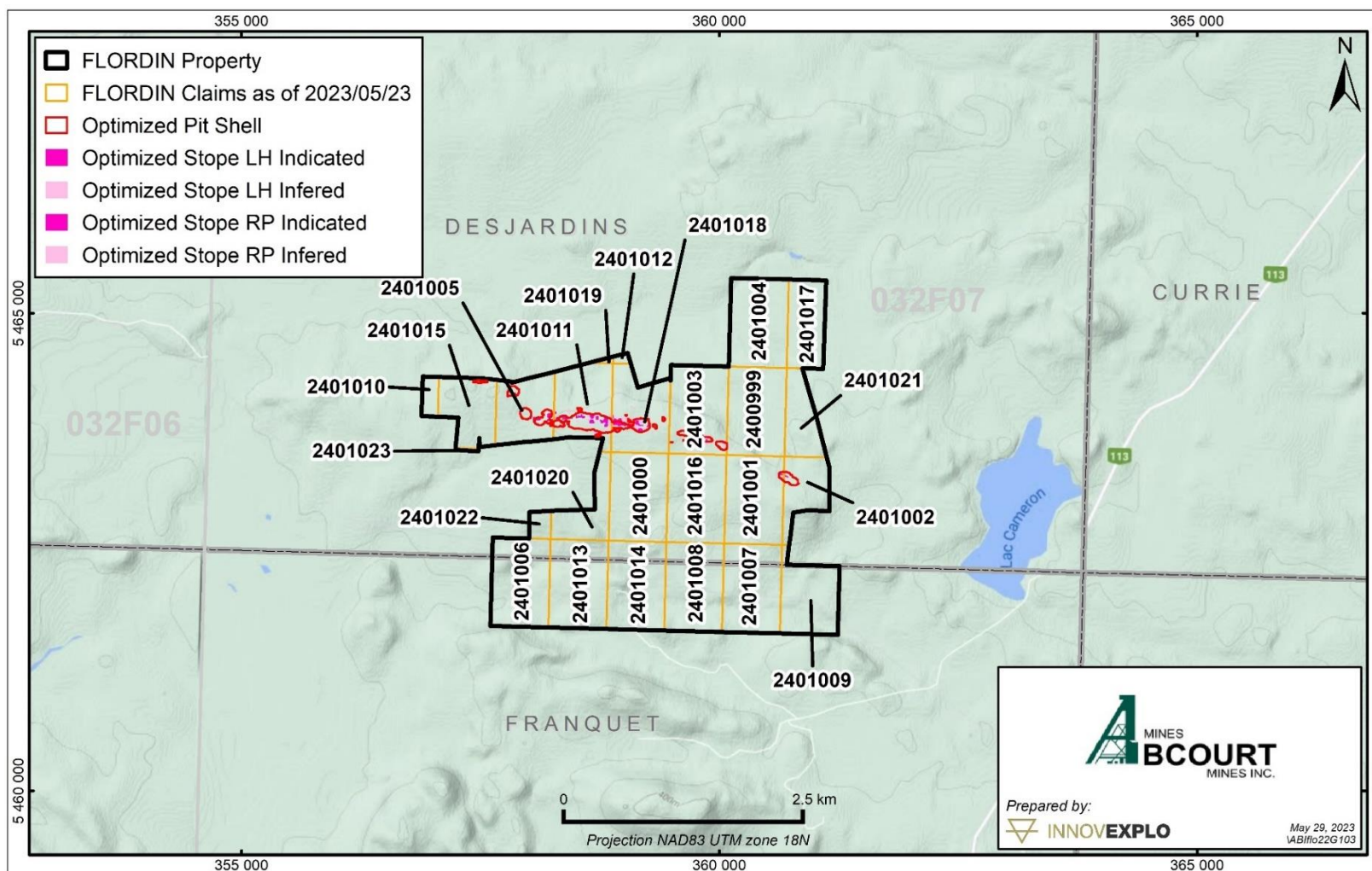


**Figure 4-1 – General location map for the Flordin Property**

**Table 4-1 Flordin Property mining titles**

Title type	Title ID	Status	Area (ha)	Emission Date	Expiration Date	Credits (\$)	Owner
CDC	2400999	Actif	56,14	2014-03-27 00:00	2024-06-18 23:59	491 147,90 \$	Mines Abcourt inc.
CDC	2401000	Actif	56,15	2014-03-27 00:00	2024-06-18 23:59	491 236,56 \$	Mines Abcourt inc.
CDC	2401001	Actif	56,15	2014-03-27 00:00	2024-06-18 23:59	491 236,56 \$	Mines Abcourt inc.
CDC	2401002	Actif	56,15	2014-03-27 00:00	2024-06-18 23:59	491 236,56 \$	Mines Abcourt inc.
CDC	2401003	Actif	56,14	2014-03-27 00:00	2024-06-18 23:59	557 630,15 \$	Mines Abcourt inc.
CDC	2401004	Actif	56,13	2014-03-27 00:00	2024-06-18 23:59	491 059,23 \$	Mines Abcourt inc.
CDC	2401005	Actif	40,69	2014-03-27 00:00	2024-06-18 23:59	416 191,66 \$	Mines Abcourt inc.
CDC	2401006	Actif	56,16	2014-03-27 00:00	2024-06-18 23:59	33 718,19 \$	Mines Abcourt inc.
CDC	2401007	Actif	56,16	2014-03-27 00:00	2024-06-18 23:59	104 119,27 \$	Mines Abcourt inc.
CDC	2401008	Actif	56,16	2014-03-27 00:00	2024-06-18 23:59	103 675,94 \$	Mines Abcourt inc.
CDC	2401009	Actif	44,91	2014-03-27 00:00	2024-06-18 23:59	4 812,96 \$	Mines Abcourt inc.
CDC	2401010	Actif	7,07	2014-03-27 00:00	2024-06-18 23:59	60 037,11 \$	Mines Abcourt inc.
CDC	2401011	Actif	47,36	2014-03-27 00:00	2024-06-18 23:59	435 662,94 \$	Mines Abcourt inc.
CDC	2401012	Actif	1,61	2014-03-27 00:00	2024-06-18 23:59	11 625,27 \$	Mines Abcourt inc.
CDC	2401013	Actif	56,16	2014-03-27 00:00	2024-06-18 23:59	63 066,74 \$	Mines Abcourt inc.
CDC	2401014	Actif	56,16	2014-03-27 00:00	2024-06-18 23:59	103 321,28 \$	Mines Abcourt inc.
CDC	2401015	Actif	37,53	2014-03-27 00:00	2024-06-18 23:59	326 139,82 \$	Mines Abcourt inc.
CDC	2401016	Actif	30,20	2014-03-27 00:00	2024-06-18 23:59	261 147,38 \$	Mines Abcourt inc.
CDC	2401017	Actif	35,46	2014-03-27 00:00	2024-06-18 23:59	26 004,22 \$	Mines Abcourt inc.
CDC	2401018	Actif	48,70	2014-03-27 00:00	2024-06-18 23:59	689 967,41 \$	Mines Abcourt inc.
CDC	2401019	Actif	0,93	2014-03-27 00:00	2024-06-18 23:59	5 595,97 \$	Mines Abcourt inc.
CDC	2401020	Actif	28,12	2014-03-27 00:00	2024-06-18 23:59	242 704,78 \$	Mines Abcourt inc.
CDC	2401021	Actif	28,51	2014-03-27 00:00	2024-06-18 23:59	246 162,77 \$	Mines Abcourt inc.

Title type	Title ID	Status	Area (ha)	Emission Date	Expiration Date	Credits (\$)	Owner
CDC	2401022	Actif	6,49	2014-03-27 00:00	2024-06-18 23:59	54 894,46 \$	Mines Abcourt inc.
CDC	2401023	Actif	0,56	2014-03-27 00:00	2024-06-18 23:59	2 315,32 \$	Mines Abcourt inc.
			975,80			6204710,45	



**Figure 4-2 Mining Titles**

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

The text of this section was taken and modified from Richard and Pelletier, 2011.

### **5.1 Accessibility**

The Property is located in the James Bay administrative region in the western part of the province of Quebec. It lies approximately 25 km north of the town of Lebel-sur-Quévillon in the Jamésie region (Figure 5-1).

Access from Val-d'Or (a 150-km drive) is by Highway 117 toward Louvicourt and then by Highway 113 (the turn-off just before Louvicourt) toward Lebel-sur-Quévillon. The property is readily accessible by turning off Highway 113 onto a seasonal gravel road that was built to access the property's interior.

### **5.2 Climate**

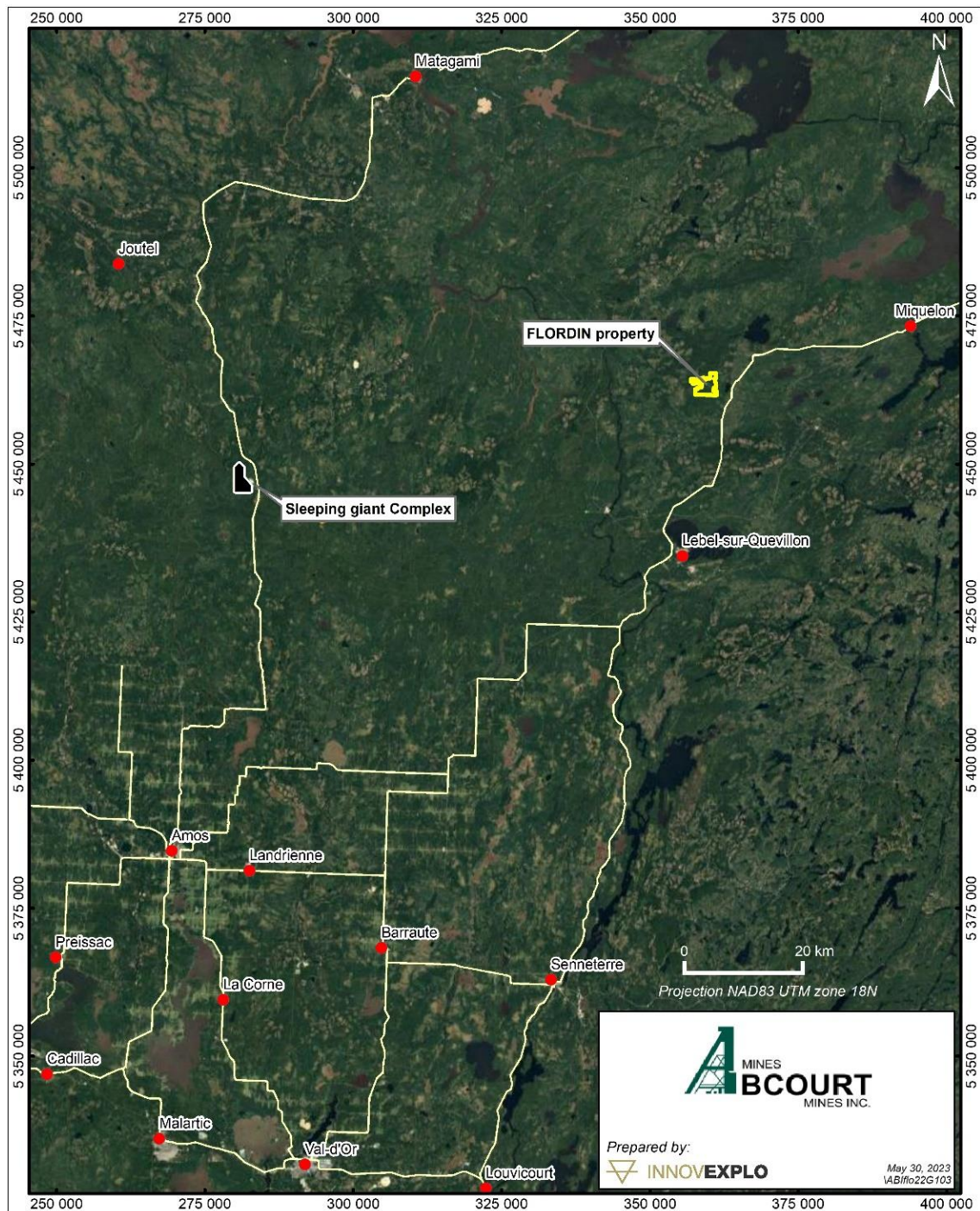
The Property is characterized by a relatively cold and humid continental climate. Minimum winter temperatures are close to -20 °C, with a record low of -43 °C. Maximum summer temperatures are close to 23 °C, with a record high of 36 °C. The average annual snow accumulation is 300 cm (3 m), and the average annual rainfall is 625 mm.

### **5.3 Local Resources**

Lebel-sur-Quévillon is a small town with a population of approximately 2,000. The forestry and mining industries constitute the cornerstones of Lebel-sur-Quévillon's local economy. The town has motels, restaurants, a gas station and a grocery store. Full infrastructure and an experienced mining workforce are also available in several well-established nearby mining towns, such as Val-d'Or, Rouyn-Noranda, La Sarre, Matagami and Chibougamau. Hydro-Québec could provide electric power to the Property, and ample water is available from rivers and lakes for processing purposes. Several exploration and mining contractors are located within a few hours' drive from the Property. Although Lebel-sur-Quévillon has its own small airport, Val-d'Or has the closest commercial airport with regularly scheduled direct flights to Montreal.

### **5.4 Physiography**

The Property is in the Canadian Shield. The area's topography is characterized by low ridges and hills (up to 50 m of relief) flanked by generally flat areas of glacial outwash and swamps with numerous lakes and bogs. Overburden ranges from 0 to 10 m deep and consists of stratified clays as well as glacial and fluvio-glacial Pleistocene deposits.



**Figure 5-1 – Regional topography and access routes to the Flordin Property**

## 6. HISTORY

The text of this section was taken and updated from Richard and Pelletier, 2011.

The current Flordin claim group has been the subject of several exploration ventures since 1935. These are summarized below and in Table 6-1.

From 1935 to 1936, Coniagas Mines Ltd and Hollinger Mines Ltd carried out the first reconnaissance work in the Flordin claim group area and discovered mineralization. Extensive surface work included 100 diamond drill holes (4,745 m) along a 3 km trend of gold-bearing veins. The work delineated the #1, #2 and Carthwright zones, of which the first two were later renamed the “E” and “B” zones, respectively. A total of 4,877 m of trenching were excavated on the property, and historical reserves were established. ***This mineral reserve estimate is historical and should not be relied upon. It is mentioned in this item for illustrative purposes only. The QPs have not completed sufficient work to classify it as current. Neither the author nor the issuer considers this estimate as current mineral reserves.***

In 1939, International Mining Corporation optioned the project from the new owner, Flordin Mines Ltd, and followed up on the positive earlier results by sinking a shaft in the Carthwright Zone to a vertical depth of 115 m. Other work included the development of about 375 m of drifts and crosscuts driven on three (3) levels. A total of 283 m in 150 test holes and 540 m in 24 diamond drill holes were completed in underground workings from 1939 to 1941. A preliminary study of the results from the 1940 program indicated a vertically dipping gold-bearing structure. An apparently lenticular zone was developed, with widths ranging from 2 in. (5 cm) to 9 ft (2.75 m). Overall results were disappointing, and the project was suspended in February of 1941.

In 1949, New Jersey Zinc Exploration Company Ltd held an extensive property in Desjardins township. Work during 1949 consisted of line-cutting, surveying two (2) fractional claims, prospecting with some stripping and trenching, and mapping the geology of the claims. The southeast fractional claim (#2) is adjacent to the Flordin mine property, and the Flordin shaft is about 600 ft west of the west boundary of this claim. Work located mineralization in outcrops, but the assays generally returned negligible amounts of gold. (Goranson, E. A., and Parliament, H., 1950).

In 1952, The Mining Corporation of Canada performed a drilling program on their Cameron Lake West property. Of the six (6) holes drilled, one was sunk at the eastern end of Flordin. No significant results were obtained in Hole 4B (Spencer, R. W., 1952).

Later in 1979, Matagami Lake Mines Ltd. carried out geophysics and limited diamond drilling in the northeastern sector of the property in 1979. Three holes were drilled to test EM anomalies. Hole TA-79-1 was sunk on the property. Weak pyrite mineralization was noted in andesite and agglomerate. This material assayed only trace gold values. (Sullivan, J. A., and Sullivan, D. L., 1979; Sullivan, J. A., 1979).

In 1978, The Flordin property was optioned by Dalhousie Oil Corporation. Five (5) surface diamond drill holes were drilled on the Carthwright Zone, for a total of 461 m. Hobbs (1978b) described the mineralized zone as a lean iron formation in banded tuffs. According to Hobbs (1978b), gold values appeared to be related to the more heavily mineralized sections of the iron formation, particularly where pink aplitic or syenite dykes were present.

In 1980, Sullivan Mining Group optioned the Flordin property. After a preliminary study by Veilleux (1980), the #2 Zone (“B” Zone) was labelled the most favourable for pursuing exploration. In 1981, an agreement was reached with SOQUEM allowing them to acquire 50% of Sullivan’s interest in Flordin. From October 20, 1980, to May 7, 1982, sixteen (16) additional claims were added to the existing claim group.

In 1981, Canada Nickel Company (Canico) conducted geological and geophysical surveys in the northern and western portions of the Flordin property. No new areas of mineralization were located. The magnetic surveys have effectively outlined various magnetic rock units and some magnetic sulphides. Electromagnetic surveying has only been partially completed but has already located conductors likely related to magnetic sulphides. Drilling was recommended to test some of the electromagnetic conductors where the geology is favourable and there is a good correlation with sulphide-type magnetic anomalies. No holes were drilled on the property. (Phipps, D., and Ginghty, G. J. 1981).

From July 1981 to October 1982, 71.8 km of lines were cut on the Flordin property. Geophysical and pedogeochemical surveys were performed, and fifty-five (55) diamond holes were drilled for 9,029 m. Geophysics consisted of magnetometer and VLF surveys over most of the grid and induced polarization and resistivity on 9.8 km of lines. Several anomalies were revealed and drilled. The details of these surveys are recorded in reports by Laverdière (1982) and Lavoie (1982). A summary of the drilling results is presented in Gauthier (1983). A total of 617 samples of the Ah (humus) horizon were analyzed for gold. Several spectacular results were obtained in the vicinity of the “B” and Carthwright zones.

Geological reserves were established for the “B” Zone between sections 2+40 W and 8+70 W, where the drilling density and a number of intersections were sufficient (Gauthier, 1983). ***This mineral reserve estimate is historical and should not be relied upon. It is mentioned in this item for illustrative purposes only. The QPs have not completed sufficient work to classify it as current. Neither the author nor the issuer considers this estimate as current mineral reserves.***

In September 1986, Sullivan Mining Group Ltd and Bachelor Lake Gold Mines Inc signed an agreement to explore and develop the “B” Zone. The exploration program included the construction of an access road, ramp excavation, drifting, crosscutting, and surface diamond drilling (Buro, 1988).

A road was constructed about 5 m wide and 6.1 km long to gain access to the property. Construction began in mid-August 1986 and finished in mid-October of the same year. In addition, sixty-eight (68) diamond drill holes totalling 9,705 m were drilled on the Flordin prospect, testing several geologic structures for which economic grades had been reported and historical reserves established (Duhaime and Veilleux, 1987). The primary drilling objective was to test the “B” Zone. Also tested were the “B” Zone extension and other zones (“E”, “D”, “D”, “C” and “A”). Hole S-60 intersected two new zones: South-1 and South-2.

The first phase of underground exploration was from October 1986 to February 1987. The first round of the portal was blasted on October 7, 1986, before the access road was finished. The last blast in the raises took place on February 20, 1987 (Duhaime and Veilleux, 1987). The contractor’s equipment was kept for a few more days to provide heating, pumping and washing while underground geology was being completed. The main underground openings consisted of a decline ramp (2.74 m x 3.35 m) at a grade of

16.6%, down to 50 m below surface (Fig. 6.1). The total excavated length along the ramp was 202.4 m.



**Figure 6-1 – Decline ramp on the Flordin property (photo obtained from North American Palladium archives)**

The “B” vein was exposed along its strike length over 203 m in a drift (2.44 m x 2.44 m), 133 m in three (3) raises (1.83 m x 1.83 m), and 23 m in crosscuts (2.44 m x 2.44 m). The total advance was 563.2 m, excluding safety bays. A total of 5,511 t of ore and 7,905 t of waste were excavated. Excellent continuity was found in the drift and raises. A significant portion of the boudinaged “B” vein exposed in the drift yielded economic gold grades from what was described as interconnected lenses (Buro, 1989). Channel samples were collected from each round in the drift face and the floor of the raise. The South-1 vein, discovered by surface drilling, was intersected by the ramp sump.

While previous historical reserves were calculated for the “B” Zone only, Duhaime and Veilleux (1987) included historical reserves for all known zones at the time. A dilution of 10% was included for all zones, except the South-1 and South-2 zones, where the dilution was 15%. ***This mineral reserve estimate is historical and should not be relied upon. It is mentioned in this item for illustrative purposes only. The QPs have not completed sufficient work to classify it as current. Neither the author nor the issuer considers this estimate as current mineral reserves.***

The broken muck from drifts and raises was piled on a pad made from rock taken out of the portal and the decline. The first part of both drifts (about 5 m each) was put aside because the decline reached the “B” Zone in a low-grade part. The same was done for the first 22 m of a raise. This broken muck was later transported some 70 km to a mill near Desmaraisville owned by Bachelor Lake Gold Mines Inc, where it awaited milling scheduled for June. It was estimated that 5,191 metric tons of muck were transported with an average grade of 3.20 g/t Au (Duhaime and Veilleux, 1987). In mid-June 1987, a

total of 5,174 (dry) metric tons was processed at the mill, where geologists estimated the pre-processing grade to be 2.57 g/t Au. Once processed, mill recovery was 91.7% and the final grade was 2.51 g/t Au (Tardif, 1987). A second phase of underground exploration comprising 2,277 m of diamond drilling was carried out from June 1987 to August 1987. This program was designed to distinguish the various mineralized veins and correlate them with surface diamond drill hole data. At the same time, it would provide definition drilling of the South-1 Zone.

In 1986, Bachelor Lake Gold Mines Inc obtained a 49% interest in the Flordin project after investing \$1,549,000 in exploration work. On October 15, 1987, Cambior Inc acquired Sullivan Mining Group Ltd and its 51% interest in the project, becoming project manager. An important diamond drilling program was carried out from September 1987 to January 1988, totalling 9,868 m in forty-seven (47) holes (Perrier, 1988). Most of the drilling followed up on earlier work in the Flordin deposit area and led to an increase in potential reserves for the “B” Zone (more precisely, its eastern and western parts). Also, the mineral inventory of subsidiary zones (“D”, “E” and South-2) was re-evaluated and increased. ***This mineral inventory is historical and should not be relied upon. It is mentioned in this item for illustrative purposes only. The QPs have not completed sufficient work to classify it as current resources or reserves. Neither the author nor the issuer considers this inventory as current mineral resources or reserves.***

All mineralized structures were explored along a strike length of almost 1 km and to a vertical depth of about 250 m. Total gold reserves (undiluted) were increased (Perrier, 1988) ***This mineral reserve estimate is historical and should not be relied upon. It is mentioned in this item for illustrative purposes only. The QPs have not completed sufficient work to classify it as current. Neither the author nor the issuer considers this estimate as current mineral reserves.*** During this time, outcrop stripping, geological mapping and channel sampling were carried out on the property surface.

In 1987, a reinterpretation of the Questor Input tapes was undertaken by Geodatem Airborne Consultants of Palgrave, Ontario. A basal till sampling program was carried out at 69 sites on the Forth Rupert Resources property in the Spring of 1987, which straddles the northeastern part of the Flordin property. Anomalous gold, zinc and copper values are present in the basal till. Most of these anomalous values appear to be associated with Input conductive zones or their extensions (Smith, P. H., 1987).

In 1987-1988, Brex Exploration performed 156.5 km of line-cutting and a magnetic and electromagnetic survey on their Franquet property which encompassed the southern part of the current Flordin property. Three (3) holes were also drilled but none on the property. No significant results were obtained (Methot, Y., and Turcotte, D., 1988).

In September 1988, Charteris (1988) calculated a new reserve estimate for gold mineralization in the Flordin deposit. ***This mineral reserve estimate is historical and should not be relied upon. It is mentioned in this item for illustrative purposes only. The QPs have not completed sufficient work to classify it as current. Neither the author nor the issuer considers this estimate as current mineral reserves.***

Between September 1988 and January 1989, Western Premium Resources Corp, a successor to Bachelor Lake Gold Mines Inc, carried out an underground exploration program (Buro, 1989) and decided to investigate the South-1 vein by drifting and raising and to investigate the South-1 and “B” veins by opening a few stopes. Testing of the “E” vein near the ramp section and extending the ramp to the second level were also planned,

but these ideas were eventually dropped. The purpose of the test stopes was to determine whether the Flordin mineralization could be mined profitably.

Enlargement of the existing ramp to 3.7 x 4.6 m was carried out from October 15 to 25, 1988. Five (5) stopes were opened in the “B” vein, and 109 m of narrow drifting (1.22 m) were driven into the South-1 vein. One 16-metre raise, and a 14-metre-long cut of ore were excavated in the South-1 vein (Fig. 6.2). By the end of program, on January 31, 1989, some 11,000 t had been broken of which 4,879 t was ore grading 4.71 g/t Au. Overall dilution was about 36%. A total of 4,053 t of ore grading 4.71 g/t was milled and the recovery grade was 4.25 g/t Au.

About 1,100 chip samples were collected, coming from virtually every raise, drift or stope face. These were analyzed at the Bachelor Lake Gold Mines laboratory using the atomic absorption method. All mine workings were mapped, and the data were plotted on surveyed base maps and sections. One muck sample was collected from each 10-tonne truck by the miners. About 800 such samples were analyzed.

From January 23 to 26, 1989, H. Hugon, a consulting structural geologist, examined the veins and structural features exposed in the underground workings. He concluded the Flordin mineralized veins are hosted in a shear zone that is part of a regional shear exhibiting overall dextral horizontal displacement (Hugon, 1989).



**Figure 6-2 – Drift driven within the South-1 vein (photo from NAP archives)**

In 1998, Cambior Inc. acquired a 100% interest in the Flordin Property. In 1999, Cambior proceeded with the rehabilitation of the Flordin site. The ramp and old openings could not be accessed. The drill core was placed in the ramp, and the collar of the ramp was banked using waste. No buildings were present on the site at the time of this work.

In July 2007, Cadiscor acquired a 100% interest in the Flordin property after signing a purchase agreement with IAMGOLD Corporation (Cadiscor press release of July 9, 2007).

In 2007-2008, Cadiscor Resources Inc completed a geological compilation using all available data for the Flordin property. During this time, Cadiscor also carried out a diamond drilling program on the property to test the continuity of the major gold-bearing trend to a depth of about 425 m below surface (Pelletier and Jourdain, 2008a). Previously delineated mineralized zones were encountered, as well as the Boundary Zone, a new zone in the southern part of the property that was intersected by two (2) underground holes (Pelletier and Jourdain, 2008a).

In May 2009, North American Palladium Ltd (“NAP”) completed the acquisition of Cadiscor Resources Inc., renamed NAP Quebec Mines Ltd. in March 2011, and thus became 100% owner of the Flordin property.

In 2010, NAP Quebec conducted a mechanical stripping program on the Flordin deposit over the “A”, “B,” and “C” zones approximately 150 m east of the historical decline. The total exposed area was 3,534 m<sup>2</sup>. Mapping, followed by a sampling program on the stripped area, produced 75 samples for a total of 68.7 m sampled and sent to ALS Chemex/Chimitec in Val-d’Or. A new channel sampling of 164 samples for a total of 144.95 m was also performed in 2011. The samples were sent to the AGAT Laboratory in Sudbury (Garry, J., Birkett, T., 2013).

In December 2010, NAP Quebec commissioned InnovExplo to prepare a resource estimate and a Technical Report compliant with NI 43-101 and Form 43-101F1 on the Flordin property (Richard, P.-L., Pelletier, C., 2011). ***This mineral resource estimate is historical and should not be relied upon. It is mentioned in this item for illustrative purposes only. The QPs have not completed sufficient work to classify it as current. Neither the author nor the issuer considers this estimate as current mineral resources.***

In 2010-2011, NAP Quebec undertook a diamond drilling campaign of 248 holes totalling 30,577 m. The work was carried out in two stages, from April 27 to December 17, 2010, and from 1 to 20 December 2011, by the company Forages Rouillier d’Amos. A single value was greater than 31 g/t (FL 10-039: 62.88 g/t Au), and it was cut at 31.1 g/t Au. Of the thirty-six (36) holes drilled in 2011, the only significant intersection was obtained in hole FL 11-251, where a one-meter sample returned a value of 103.7 g/t Au (Richard, P.-L., Pelletier, C., 2011).

**Table 6-1 – Review of historical exploration work on the Flordin Project**

Year	Company	Work description	Other records	References
1933-1935	Coniagas Mines Ltd. Hollinger Mines Ltd	100 surface DDH totalling 4,745 m (H-1 to H-99 and H-67A) Trenching (4,877 m)	Delineation of Carthwright, “B” and “E” zones  Historical reserve estimate for the Carthwright Zone <i>This mineral reserve estimate is historical and should not be relied upon. It is mentioned in this item for illustrative purposes only. The QPs have not completed sufficient work to classify it as current. Neither the author nor the issuer considers this estimate as current mineral reserves.</i>	Buro, 1988 Bartlett, 1936 GM-45239
1939-1941	International Mining Corporation	Sinking of shallow shaft on Carthwright zone with levels at 15m, 56m and 110m 150 underground test holes (283 m) 24 underground DDH totalling 540 m (U-1 to U-24)	Project suspended	Buro, 1988 GM-45239 GM-08179 GM-08180
1949	New Jersey Zinc Exploration Company Ltd.	Line-cutting, prospecting, stripping, trenching, geological mapping	Some mineralization in outcrops	GM-00637
1952	The Mining Corporation of Canada	6 surface DDH (1B to 6B)	No significant results obtained in Hole 4B	GM-02117
1977-1979	Matagami Lake Mines Ltd.	Geophysical surveys 3 surface DDH (TA-79-1 to TA-79-3)	Trace gold values	GM-49005 GM- 34570
1978	Dalhousie Oil Corporation	Property optioned 5 surface DDH totalling 461 m (FD78-1 to FD78-5)	Carthwright Zone established as lean iron formation within banded tuffs	Buro, 1988 GM-45239 GM-34553 GM-33911
1980	Sullivan Mining Group Ltd.	Property optioned Preliminary study	#2 Zone (“B” Zone) identified as most favourable zone for pursuing exploration work	Buro, 1988 Veilleux, 1980

Year	Company	Work description	Other records	References
				GM-45239
1981	Compagnie du nickel du Canada (Canico)	Geological mapping Mag and EM surveys	Located conductors that are likely related to magnetic sulphides	GM-37622
1981	Sullivan Mining Group SOQUEM	Line-cutting (71.8 km) Mag and VLF surveys (62 km) 13 surface DDH totalling 2,450 m (S-1 to S-13)	Several geophysical anomalies were revealed	Buro, 1988 GM-45239 GM-38405 GM-39903
1982	Sullivan Mining Group Ltd. SOQUEM	42 surface DDH totalling 6,579 m (S-14 to S-55); IP survey (9.8 km) Pedogeochemical survey (617 humus samples) Trenching; Geological mapping	Correlation of humus samples with "B" and Carthwright zones  Historical mineral resource estimate for the "B" Zone <i>This mineral resource estimate is historical and should not be relied upon. It is mentioned in this item for illustrative purposes only. The QPs have not completed sufficient work to classify it as current. Neither the author nor the issuer considers this estimate as current mineral resources.</i>	Buro, 1988 GM-45239 GM-39904 GM-39903
1986-1987	Sullivan Mining Group Ltd. Bachelor Lake Gold Mines Inc.	Access road constructed (6.1 km) Ramp excavated (202.4 m) Cross-cut developed (23 m) Raises excavated (133 m) 68 surface DDH totalling 9,705 m (S-56 to S-123) 29 underground DDH totalling 2,277 m (Su-1 to Su-29) 5,174 t processed at Bachelor Lake Gold Mines mill	Excellent continuity in drift and raises ("B" Zone)  Discovery of South-1 Zone  Historical mineral resource estimate for all known zones <i>This mineral resource estimate is historical and should not be relied upon. It is mentioned in this item for illustrative purposes only. The QPs have not completed sufficient work to classify it as current. Neither the author nor the issuer considers this estimate as current mineral resources.</i>	Buro, 1988; 1989 Bugnon, 1987 Tardif, 1987 GM-45239 GM-46856
1987	Forth Rupert Resources	69 sites, basal till sampling	Anomalous gold, zinc and copper values are present in the basal till	GM-46095
1987-	Brex Exploration	156.6 km line-cutting,		GM-47108

Year	Company	Work description	Other records	References
1988		Mag and EM survey 3 surface DDH (FR-88-01 to FR-88-03)		
1987-1988	Cambior Inc Bachelor Lake Gold Mines Inc.	47 surface DDH totalling 9,868 m (S-124 to S-170) Outcrop stripping Geological mapping Channel sampling Two reserve estimates	Historical mineral reserve estimates <i>These mineral reserve estimates are historical and should not be relied upon. They are mentioned in this item for illustrative purposes only. The QPs have not completed sufficient work to classify them as current. Neither the author nor the issuer considers these estimates as current mineral reserves.</i>	Buro, 1988; 1989 Charteris, 1988 GM-46856
1988-1989	Western Premium Resources Corp Cambior Inc.	Enlargement of existing ramp Drifting and raising Opening of 5 stopes Channelling and sampling 4,879 t of ore broken with grade of 4.71 g/t Au Structural study		Buro, 1989 Hugon (1989)
2007-2008	Cadiscor Resources Inc.	7 surface DDH totalling 1,892 m (FD07-01 to FD07-03 and FD07-01A; FD08-04 to FD08-06) Geological compilation	Previously identified mineralized zones intersected by drilling Discovery of Boundary Zone	GM-64061
2009-2011	North American Palladium Ltd (NAP) NAP Quebec Mines Ltd.	Acquisition of Cadiscor Resources Inc., renamed NAP Quebec Mines Ltd.  Mechanical stripping Mapping, channel sampling  Resource Estimate  248 surface DDH totalling 30,577 m (FL-10-001 to FL-10-211 and FL-11-212 to FL-11-238; FL-11-244 to FL-11-246; FL-11-248; FL-11-250 to FL-11-251)	Historical mineral resource estimate, Flordin deposit <i>This mineral resource estimate is historical and should not be relied upon. It is mentioned in this item for illustrative purposes only. The QPs have not completed sufficient work to classify it as current. Neither the author nor the issuer considers this estimate as current mineral resources.</i>	GM-67662 Richard and Pelletier (2011)

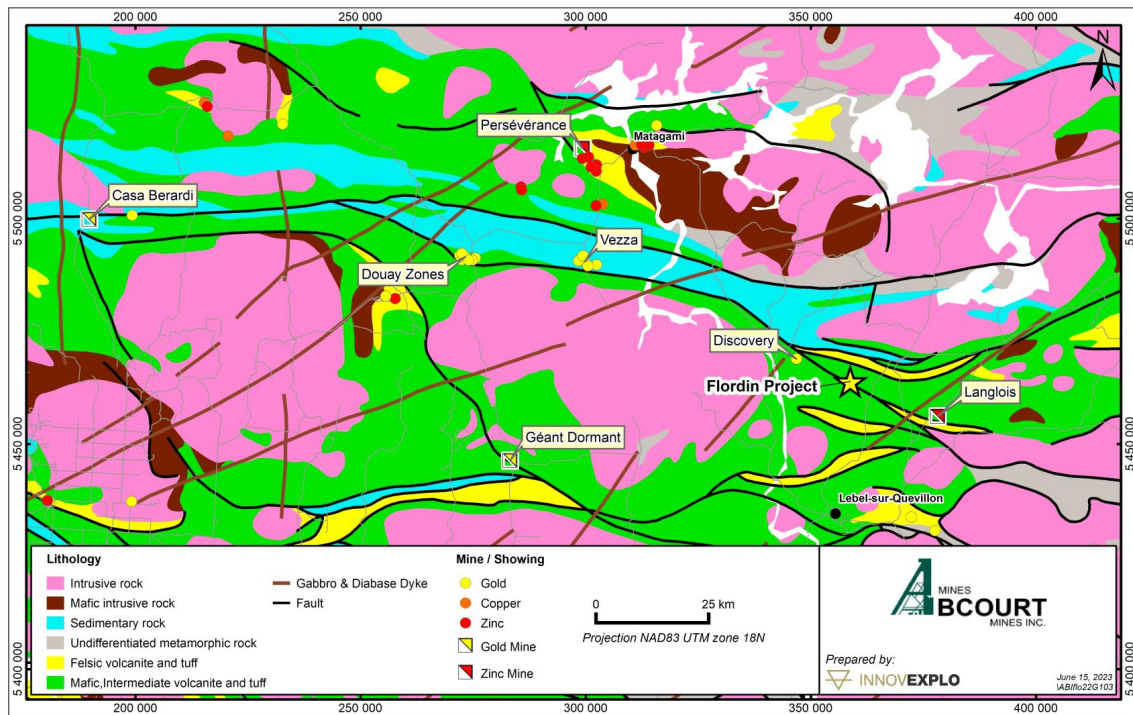
## **7. GEOLOGICAL SETTING AND MINERALIZATION**

The text of this section was taken and modified from Richard and Pelletier, 2011.

### **7.1 Regional Geological Setting (The Archean Superior Province)**

The Archean Superior Craton forms the core of the North American continent and is surrounded and truncated on all sides by Proterozoic orogens—the collisional zones along which elements of the Precambrian Canadian Shield were amalgamated (Hoffman 1988, 1989). The Superior Province represents two million square kilometres of this craton that is free of significant post-Archean cover rocks and deformation (Card and Poulsen 1998). Tectonic stability has prevailed since ca. 2.6 Ga in large parts of the Superior Province (Percival 2007). The rocks of the Superior Province are mainly Mesoproterozoic and Neoproterozoic in age and have been significantly affected by post-Archean deformation only along boundaries with Proterozoic orogens, such as the Trans-Hudson and Grenville orogens or along major internal fault zones, such as the Kapuskasing Structural Zone. The rest of the Superior Province has remained stable since the end of the Archean (Goodwin et al. 1972).

Proterozoic and younger activity are limited to rifting along the margins, emplacement of numerous mafic dyke swarms (Buchan and Ernst 2004), compressional re-activation, large-scale rotation at ca. 1.9 Ga, and failed rifting at ca 1.1 Ga. With the exception of the northwest and northeast Superior margins that were pervasively deformed and metamorphosed at 1.9 to 1.8 Ga, the craton has escaped ductile deformation. A first-order feature of the Superior Province is its linear subprovinces of distinctive lithological and structural character, accentuated by subparallel boundary faults (e.g., Card and Ciesielski 1986). Trends in the Superior Province are generally easterly in the south, westerly to northwesterly in the northwest, and northwesterly in the northeast (Figure 7-1). The southern Superior Province (to latitude 52°N) is a major source of mineral wealth. Owing to its potential for base metals, gold and other commodities, the Superior Province continues attracting mineral exploration in established and frontier regions.



**Figure 7-1 – Regional geology**

## 7.2 Local Geological Setting (The Abitibi Greenstone Belt)

The Archean Abitibi Greenstone Belt (Figure 7-2) is located in the southern portion of the Archean Superior Province. It is one of the most extensive continuous expanses of low metamorphic grade Archean volcanic and sedimentary rocks on Earth (Card and Poulsen, 1998). It also happens to be one of the richest mining regions in the world and has produced large amounts of gold, copper, zinc, silver and iron from the Timmins, Kirkland Lake, Rouyn-Noranda, Val-d'Or, Matagami and Chibougamau mining districts. For these reasons, the Abitibi Greenstone Belt has been the focus of numerous studies. Most of this work is summarized by Card and Poulsen (1998) and presented on a compilation map of the southern Superior Province produced by the Ministère de l'Énergie et des Ressources du Québec and the Ontario Geological Survey in 1983. Several articles have also been published about the Abitibi belt, namely by Dimroth et al. (1982; 1983a, b; 1984a, b; 1985a,b), Hodgson (1983), Gélinas and Ludden (1984), Allard et al. (1985), Jensen (1985), Ludden et al. (1986), Card (1990), Jackson and Fyon (1991) and more recently Daigneault et al. (2004). Large portions of the following text have been taken from the latter, and the reader is invited to consult the original paper for more details.

The Abitibi Greenstone Belt (Figure 7-2) is divided into Southern ("SVZ") and Northern Volcanic zones ("NVZ"; Chown et al., 1992), representing a collage of two arcs delineated by the Destor-Porcupine-Manneville Fault Zone ("DPMFZ"; Mueller et al. 1996). The Cadillac-Larder Lake Fault Zone ("CLLFZ") separates the SVZ from the Pontiac sedimentary (accretionary prism) rocks to the south (Calvert and Ludden, 1999). The fault zones are terrane zippers that show the change from thrusting to transcurrent motion as documented in the turbiditic flysch basins overlain unconformably by, or in structural

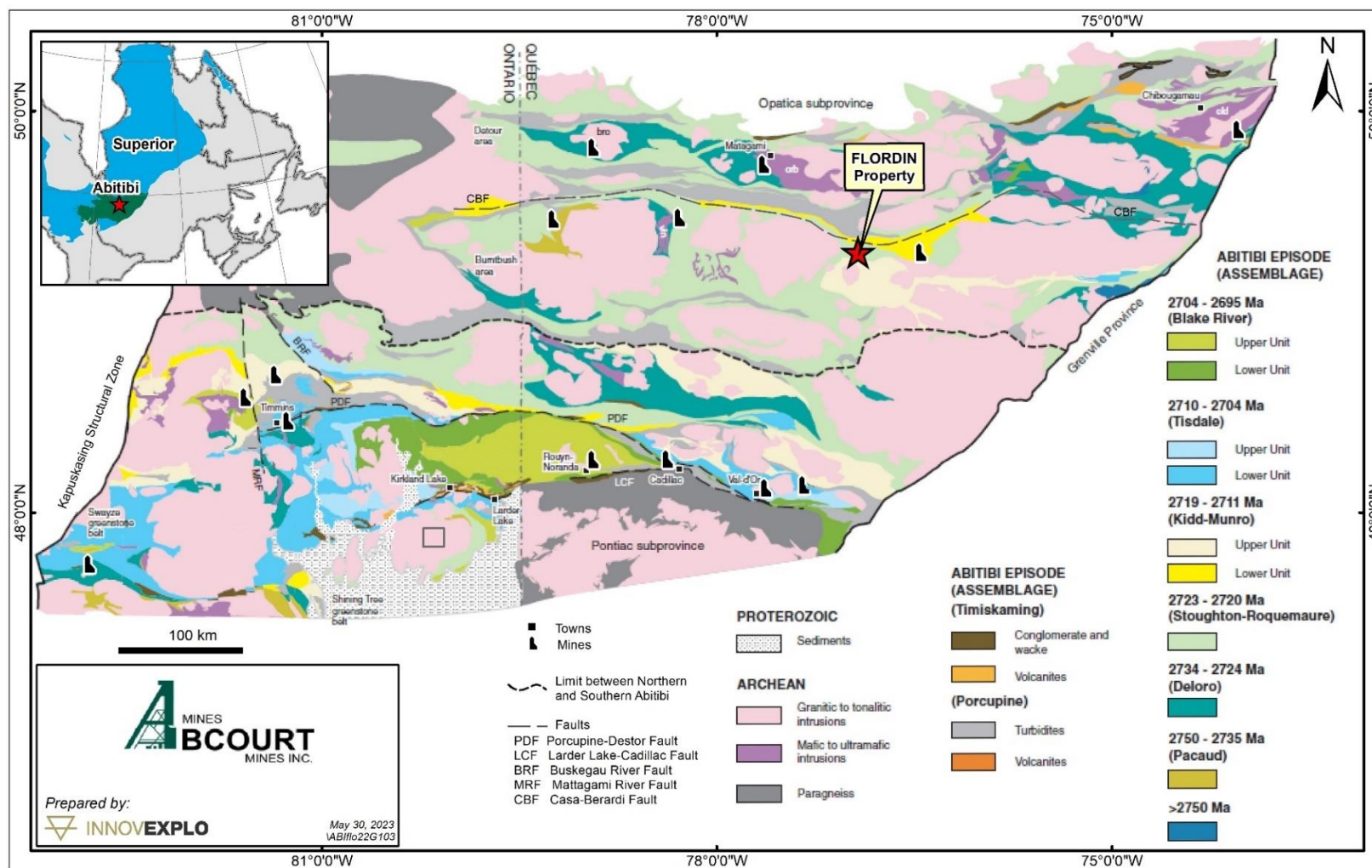
contact with, coarse clastic deposits in strike-slip basins (Mueller et al., 1991, 1994a, 1996; Daigneault et al. 2002). A further subdivision of the NVZ into external and internal segments is warranted and based on distinct structural patterns with the intra-arc Chicobi sedimentary sequence (Figure 7-2) representing the line of demarcation (Daigneault et al. 2004).

The 2735-2705 Ma NVZ is ten times larger than the 2715-2697 Ma SVZ, and both granitoid bodies and layered complexes are abundant in the former (Daigneault et al. 2004). In contrast, plume-generated komatiites, a distinct feature of the SVZ, are only a minor component of the NVZ (Daigneault et al. 2004).

The Abitibi Greenstone Belt comprises extensive Neoproterozoic volcano-sedimentary sequences and a multitude of intrusions ranging from synvolcanic to post-tectonic in age and from ultramafic to felsic in composition. The vast majority of volcanic episodes took place from 2.75 to 2.70 Ga and were closely followed by deformation, regional metamorphism and an episode of plutonism during the period from 2.70 to 2.65 Ga (Card and Poulsen 1998). Hocq (1990) explains that early ductile to brittle deformation (folding and faulting) subsequently became increasingly brittle, eventually producing a tectonic collage with diamond-shaped, weakly deformed domains separated by strongly deformed zones. Clastic sedimentary basins and shoshonitic-alkaline volcanic rocks were emplaced near the end of deformation (Mueller and Donaldson 1992).

In many parts of the Abitibi Greenstone Belt, the succession may be divided into two major cycles typically characterized by a mafic to ultramafic volcanic sequence at the base, overlain by a mafic to felsic, tholeiitic to calc-alkaline sequence at the top (Card and Poulsen 1998). Local accumulations of sedimentary rocks, either turbiditic and alluvial and/or fluvial, occur in association with alkaline to shoshonitic volcanic rocks, as well as a few intrusions (Dimroth et al. 1982; Jensen 1985). According to Dimroth et al. (1985a, b), these sequences may be correlated with three major physiographic settings, namely extensive subaqueous lava flows, subaqueous to subaerial volcanic complexes, and intra-arc basins.

A series of major volcanic episodes took place from 2750 to 2698 Ma, producing the vast majority of volcanic sequences in the Abitibi Greenstone Belt (Card and Poulsen 1998). One of these sequences, dated from 2710 to 2698 Ma and restricted to the southern part of the Abitibi Greenstone Belt, forms a volcano-plutonic assemblage that is very widespread throughout the belt. This sequence is composed of a basal komatiitic unit, followed by a bimodal assemblage alternating from basaltic to rhyolitic in composition, and capped by a tholeiitic and calc-alkaline assemblage (Card and Poulsen 1998). This sequence hosts the vast majority of volcanogenic massive sulphide deposits in the southern part of the Abitibi Greenstone Belt. Many older volcanic sequences (2720 to 2713 Ma; 2730 to 2725 Ma) are widely scattered throughout the Abitibi Greenstone Belt (Card and Poulsen 1998). These sequences, in the south part of the belt, host the Kidd Creek (2712 Ma) and Prosser (2716 Ma) rhyolites, the Deloro (2725, 2727 Ma),



**Figure 7-2 – Location of Flordin Project in the Abitibi Subprovince of the Superior Province**

Wabewawa-Catherine (2720 Ma), Normetal (2728 Ma) and Hunter Mine (2730 Ma) groups, and the Rand (2713 Ma) and Ghost Range (2713 Ma) mafic to ultramafic complexes. In the north part of the belt, these volcanic sequences include the Joutel (2730 Ma), Dumagami (2723 Ma), Watson Lake (2725 Ma) and Garon Lake (2721 Ma) rhyolites, as well as the Waconichi Formation (2728, 2730 Ma), the Bell River (2725 Ma) and Lac Doré (2724, 2728 Ma) gabbro and anorthosite complexes, and the Cummings mafic to ultramafic complex (2717 Ma).

Metasedimentary units in the Abitibi Greenstone Belt include turbiditic flysch sequences overlain by conglomeratic molasse-type sequences (Mueller and Donaldson 1992). The Porcupine, Cadillac and Kewagama groups occur in the southern Abitibi, whereas the Taibi, Caopatina and Chicobi Lake groups occur in the northern Abitibi. Mueller and Donaldson (1992) explain that these sedimentary units were deposited from 2730 to 2720 Ma in the northern Abitibi and from 2700 to 2687 Ma in the south.

According to Daigneault et al. (2004), the Abitibi Greenstone Belt evolved over ~100 Ma with volcano-sedimentary sequences developing between 2735 and 2670 Ma and late plutonic activity occurring between 2670 and 2640 Ma. The belt displays the salient features of arc evolution, arc-arc collision, and arc fragmentation with the recognition of strike-slip basins.

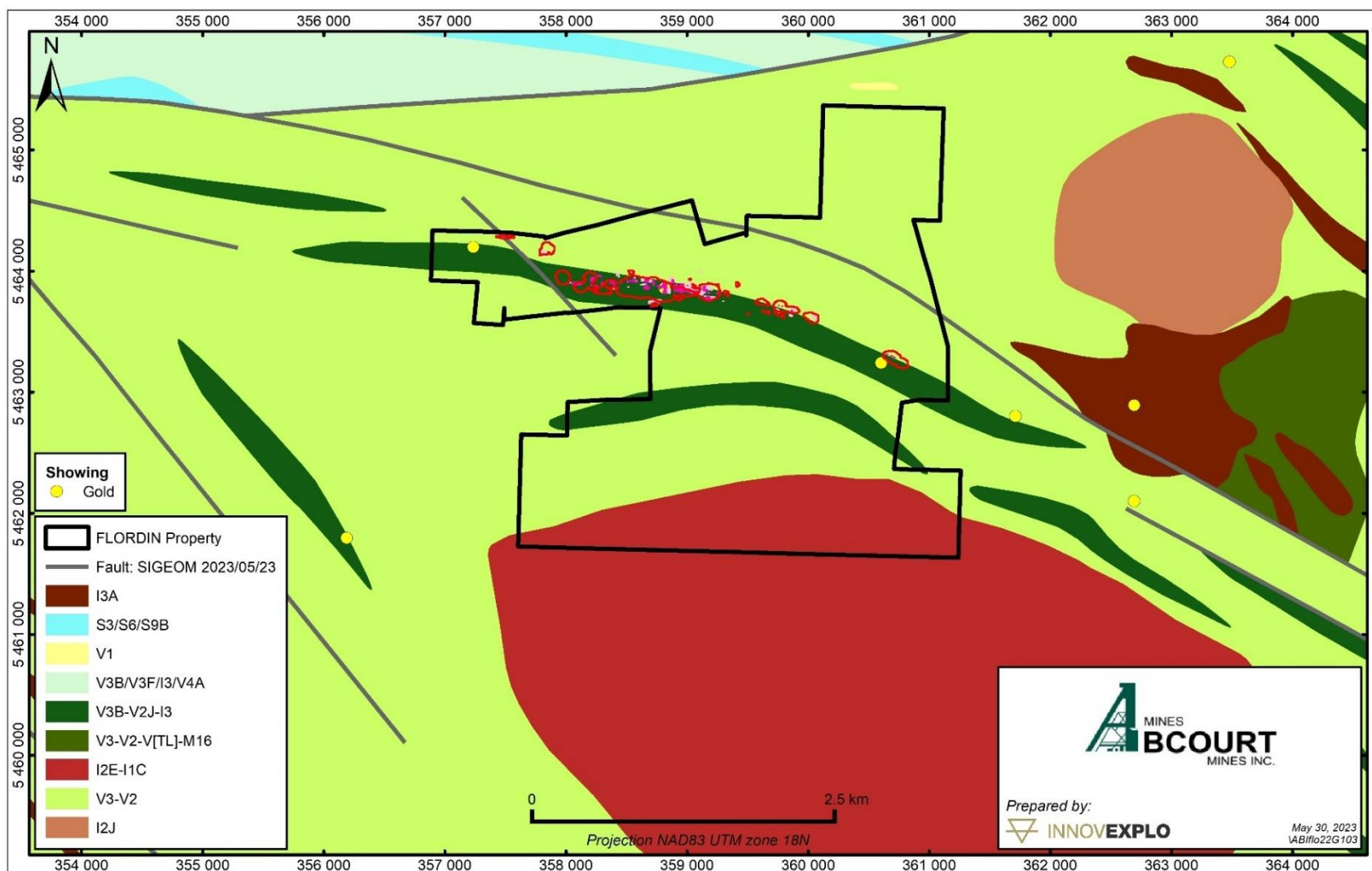
The stratigraphic relationships and detrital zircons show that sedimentary basins of cycles 1 and 3 had a protracted history from inception to subsequent stages of deformation (Daigneault et al. 2004). Sedimentary Cycle 4 strike-slip basins are well-constrained and are restricted to the major faults; they best display the diachronous development of basin-forming events (Daigneault et al. 2004). All the deformation history is recorded in the sedimentary basins, especially along the major fault zones (Daigneault et al. 2004).

The DPMFZ and the CLLFZ, two terrane boundaries, are considered suture zones representing relict subduction zones (Daigneault et al. 2004). Oblique convergence can explain the observed complex fault pattern (Daigneault et al. 2004). Individual fault-bounded blocks are not isolated terranes but rather part of an ongoing sequence of deformational events (Daigneault et al. 2004).

Daigneault et al. (2004) conclude that the structural events in the Abitibi Greenstone Belt display the classical features of a modern orogenic belt with the constant interplay between thrusting and strike-slip motion, as well as a final extension which is generally due to overstacking in modern sequences. Alternatively, exhumation in Archean greenstone belts could also be readily explained by plume upwelling. In the areas where exhumation is a prominent feature, komatiites are an important constituent of the sequence. Although the tectonic influence of plumes is difficult to quantify, extensional structures, active during the terminal stage of arc evolution after plate forces had dissipated, may have been related to plume activity. However, the time-space sequence of volcanic and plutonic activities with the southwards-migrating deformation front is more compatible with a plate-tectonic process dominated by subduction and oblique collision.

### **7.3 Property (Geology of the Flordin Property)**

The Property lies within the volcano-sedimentary band (Figure 7-3). The Vezza-Bruneau volcanic and sedimentary units were intruded by Proterozoic diabase dykes (Joly, 1994). The units form a homoclinal sequence-oriented east-west to northwest-southeast with



**Figure 7-3 – Local geological setting of the Flordin gold deposit**

subvertical dips and stratigraphic tops to the north (Joly, 1994). The sequence begins with massive to pillowed volcanic flows surmounted by sedimentary rocks of the Taibi Group. The sedimentary rocks are covered by another volcanic unit composed of mafic and felsic lavas (Joly, 1994). The sequence was intruded by the felsic Lac Cameron and Franquet plutons. The Marest Batholith lies west of the sequence.

The property is notably transected by the northwest-southeast Cameron Deformation Zone ("CDZ"; Fig. 7.6). This shear zone is at least 80 km long and reaches up to 5 km wide (Daigneault and Archambault, 1990; Proulx, 1990 and 1991; Lacroix, 1993; Joly, 1994). The corridor is characterized by a steep, subvertical, mylonitic foliation (N115°) and a subhorizontal stretching lineation. The CDZ is an intense deformation zone cutting the east-west regional schistosity, and kinematic indicators reveal a main dextral component of displacement (Daigneault and Archambault, 1990). The younger, NE-trending, left-lateral Wedding fault displaced the Cameron corridor almost 4 km.

At the scale of the property, a sequence of east-trending mafic volcanics with minor interbedded lapilli tuffs was intruded by granitic to syenitic dykes. The units show structural deformation, low-grade metamorphism, carbonate-potassic alteration and some significant mineralization (Duhaime and Veilleux, 1987).

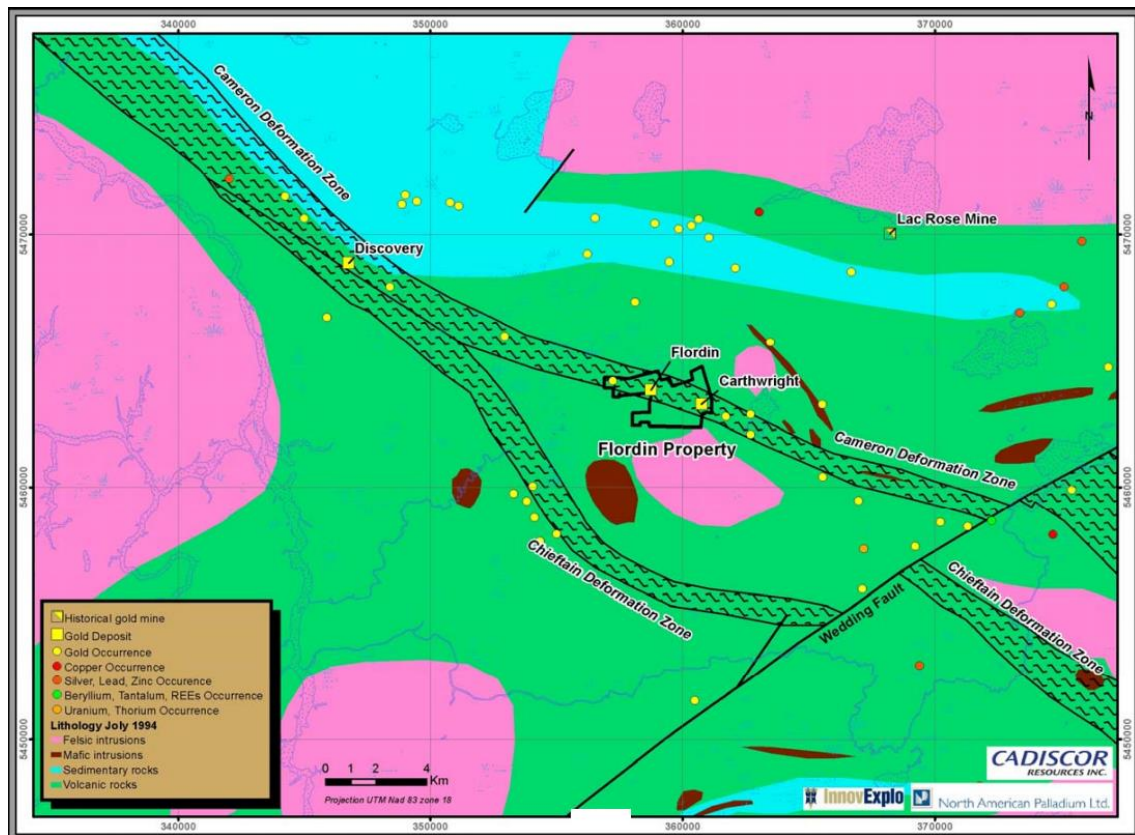
Volcanic rocks were mapped and logged predominantly as basalts, although some authors describe them as andesites. The basalts are homogeneous and display distinct lithofacies: massive, amygdaloidal, pillowed and pegmatitic. They are generally fine-grained, medium to dark green, and highly magnetic. They form a narrow easterly- to southeasterly-trending magnetic high.

Interbedded with the volcanics are several units logged as tuffs and lapilli tuffs. These are generally fine-grained and well-foliated. Composition and colour vary from buff-coloured sericitic schist to dark grey-green, weakly laminated chloritic varieties. The matrix is often brick-red, reflecting its oxidized state. In some places, the sericitic schist may represent highly deformed pillow basalt pervasively altered by potassic carbonate-rich fluids.

Sedimentary rocks are present in the extreme northern part of the property, where the magnetic signature is typically low. Some rocks described as tuffs may be of sedimentary origin, but their spatial proximity to volcanic units caused them to be mapped and logged as volcanoclastics.

Intrusive rocks are present as narrow alkalic dykes. They may be genetically related to a granite/syenite body northwest of Cameron Lake. These rocks are generally pinkish, medium-grained and homogeneous; some varieties are buff-coloured and contain up to 10% quartz phenocrysts. Very few mafic to intermediate varieties have been observed.

Schistosity is well-developed and characterized by the alignment of chlorite and the stretching of amygdules. Schistosity is oriented east-west with a dip of about -79°.



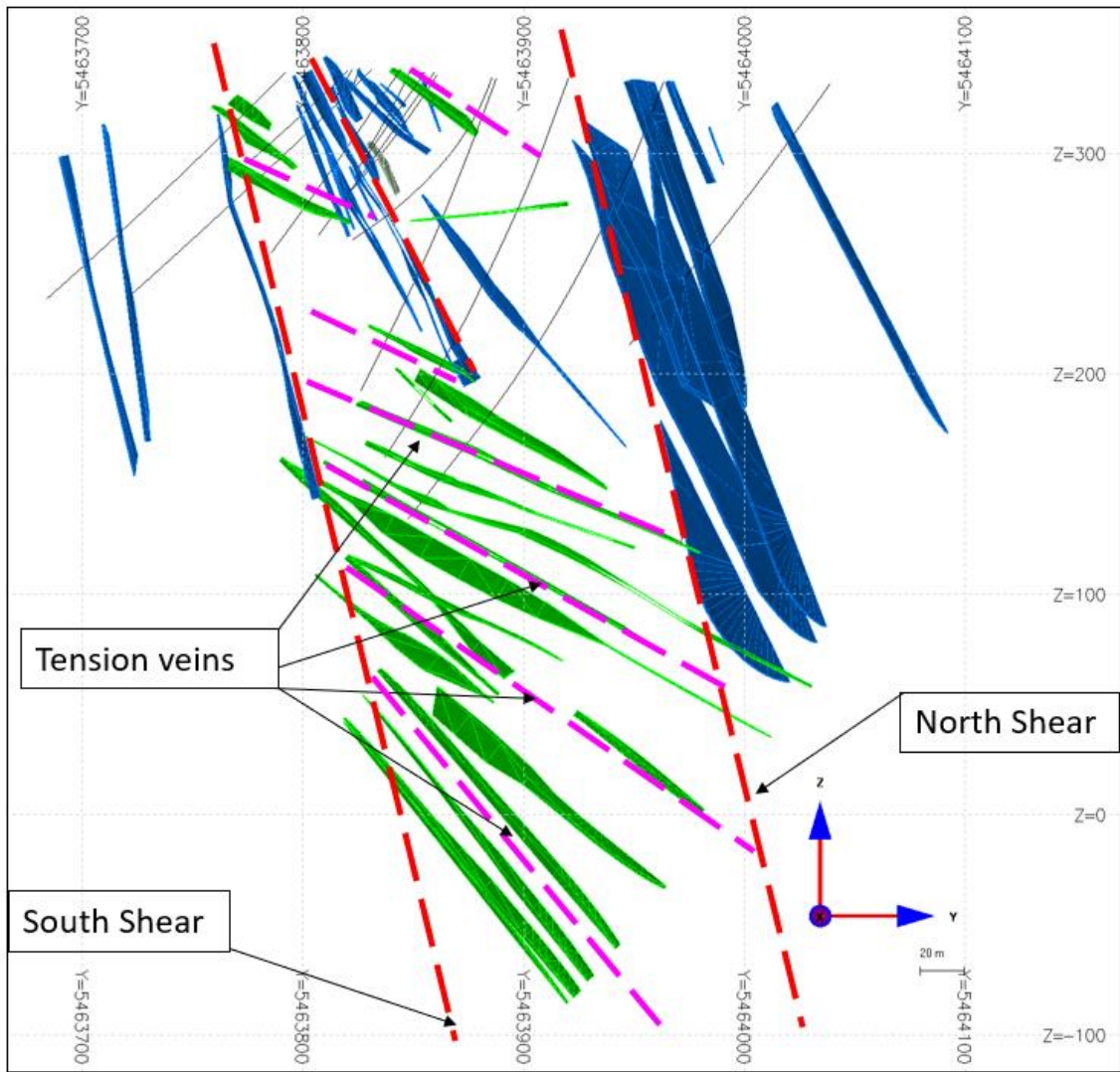
**Figure 7-4 – Regional geology of the Flordin Project area (adapted and modified from Joly and Dussault, 1991; Proulx, 1990 and 1991; Joly, 1994; Labbé et al., 1995)**

### 7.3.1 Gold mineralization

Following the compilation of the latest drilling on the property, a new interpretation model was proposed based on the Sigma-Lamaque mineralization style.

Descriptions of the gold-bearing vein systems of the Sigma and Lamaque Mines have been published for decades. Among the many scientific papers and other publications devoted to those two exceptional ore deposits, the most relevant include Robert (1983), Robert and Brown (1986a, 1986b), Robert et al. (1995), Garofalo (2000), Gaboury et al. (2001) and Olivo et al. (2006) for the Sigma mine, and Daigneault et al. (1983), Perrault et al., (1984) and Karvinen, (1985) for the Lamaque mine.

The numerous shear zones are the dominant structural features of the Sigma-Lamaque deposit. Gold-bearing veins at the Sigma mine consist of quartz and tourmaline with lesser carbonates, sericite, pyrite, scheelite, chlorite and chalcopyrite (Robert and Brown, 1986a, b). Four types of veins are distinguished based on geometry and host rock associations: (1) steeply to moderately dipping fault-fill veins within shear zones; (2) subhorizontal extensional veins; (3) arrays of subhorizontal extensional veins hosted within the feldspar porphyry dykes, referred to as dyke stringers; and (4) moderately north-dipping extensional-shear veins, referred to as the North Dipper veins.



**Figure 7-5 – Section (N-S) of the Flordin Deposit**

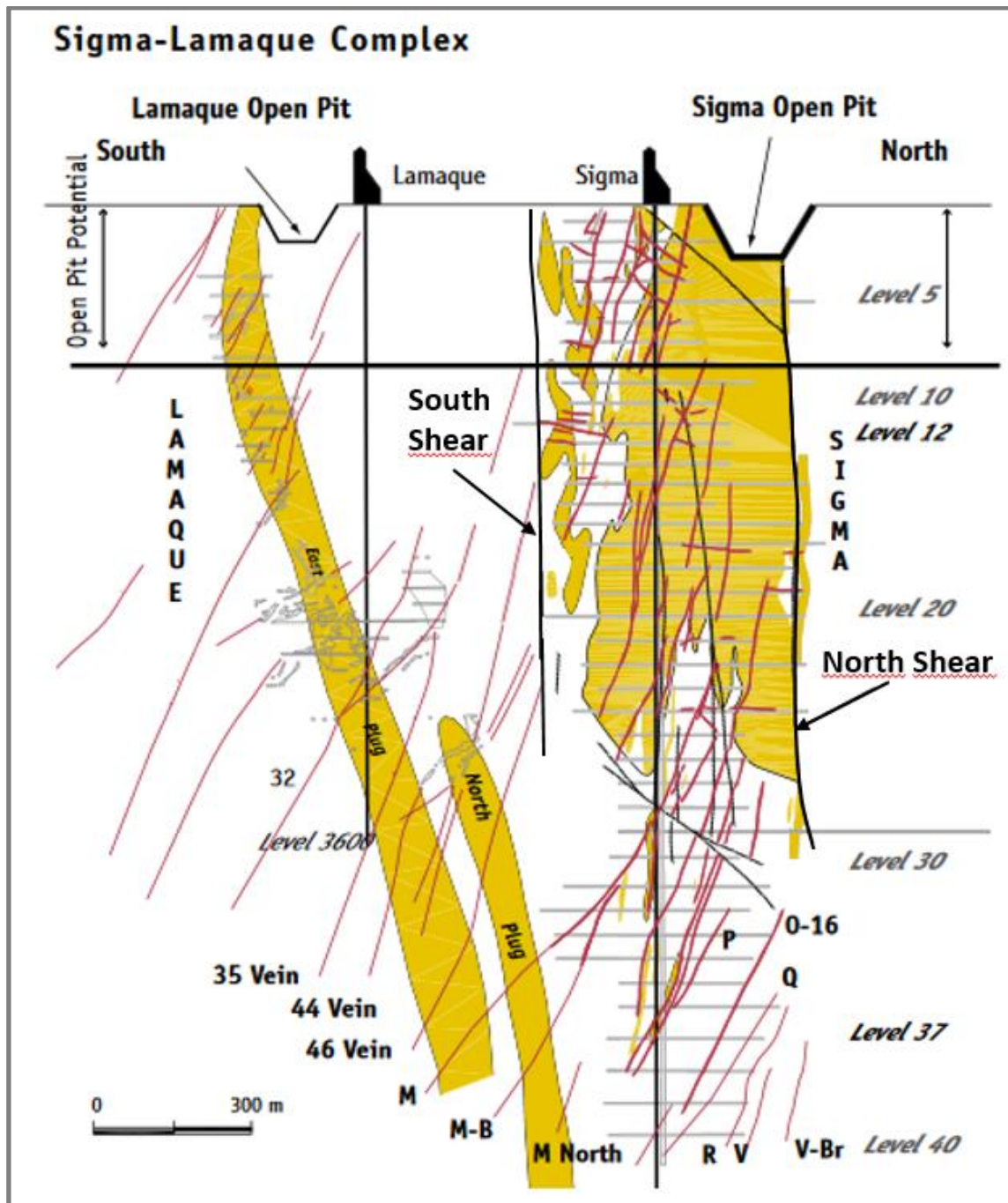


Figure 7-6 Typical north-south cross-section through the Sigma and Lamaque mines at the deposit scale, showing the en-echelon distribution of fault-fill veins between both bordering shear zones and the branching of moderately and steeply dipping fault-fill veins that isolate lozenge-shaped blocks. Dashed horizontal lines are mine levels. Figure modified from the 1999 Annual Report of McWatters Mining Inc.

### 7.3.1.1 Alteration

Early alteration occurred as weak to strong chloritization accompanied by carbonatization. Carbonatization both preceded and was synchronous with gold mineralization. Potassic enrichment is also recognized and closely linked to gold mineralization. Rocks in the mineralized zones are beige to brown in colour. In many places, the rocks appear bleached. Sericitization and/or biotization appear to be directly associated with silicification, sulphidation and gold.

The shear zones are a zone of intensely altered and mylonitized host volcanics. Very strong hydrothermal alteration caused silicification, sericitization, pyritization (5-20%; often as deformed grains), and local carbonate alteration. The development of alkali feldspar in the matrix may indicate that potassic alteration also took place.

Very strong silicification, intense carbonatization and moderate sericitization affected the rocks in the South zone. The relic intersertal texture of the volcanic protolith is still recognizable. Biotite veinlets developed during a hydrothermal event that post-dated silicification and carbonatization. This event has not been observed in the shear zone.

### 7.3.1.2 Structure

Deformation is quite significant and to such a degree that veins are fractured, folded in places, and pervasively boudinaged. In the shear zones, the average dip of the shear envelope is approximately 70° to the north and varies from 35° to 80°. The dip changes abruptly in some places, as observed in one of the raises (01-B-650W; Duhaime and Veilleux, 1987). At this location, the dip of the shear zone swings 42° over only 3 m, reflecting the presence of an isoclinal fold.

H. Hugon, a consulting structural geologist, examined the veins and structural features exposed in underground workings. He concluded that the Flordin mineralized veins are hosted in a shear zone that is part of a regional shear exhibiting an overall dextral-horizontal displacement (Hugon, 1989).

In Hugon's interpretation (Hugon, 1989), shear zones can be hosted in an E-W extension shear fracture (Riedel), whereas other shears are locked in a WNW ductile shear zone ("C" fabric) that evolved simultaneously. This explains the occurrence of a relatively wide quartz vein in the Riedel shear zone compared to the minute injections characterizing the WNW shear zone. He also concluded that the folding of the Riedel zone originated during shearing and nucleated at irregularities in the planar shear zone.

According to Buro (1989), three folded zones with a westerly plunge of 40° were delineated above the 01-B drift within the Riedel zone. In the 7+65 W stope, a complex fold was observed over 60 m. A clearly identifiable fold in the 7+00 W stope became blurry after mining a couple of lifts, and in its place appeared two or three parallel veins and shear zones that could be followed along the 40-metre stope. Buro suggested that the gradual disappearance of the well-developed fold may be due to stronger compression along a ridge, but according to Hugon (1989), its disappearance may reflect the geometry of an incipient sheath fold. Regardless, gold is unequivocally concentrated in folded zones.

Unlike the relatively wide quartz vein at the centre of altered host rocks in the Riedel shear zone, the WNW shear zone material is made up of quartz veinlets interspersed

with bands of altered host rock (Buro, 1989). Boudinage occurred in both zones, and the appearance of alteration is similar.

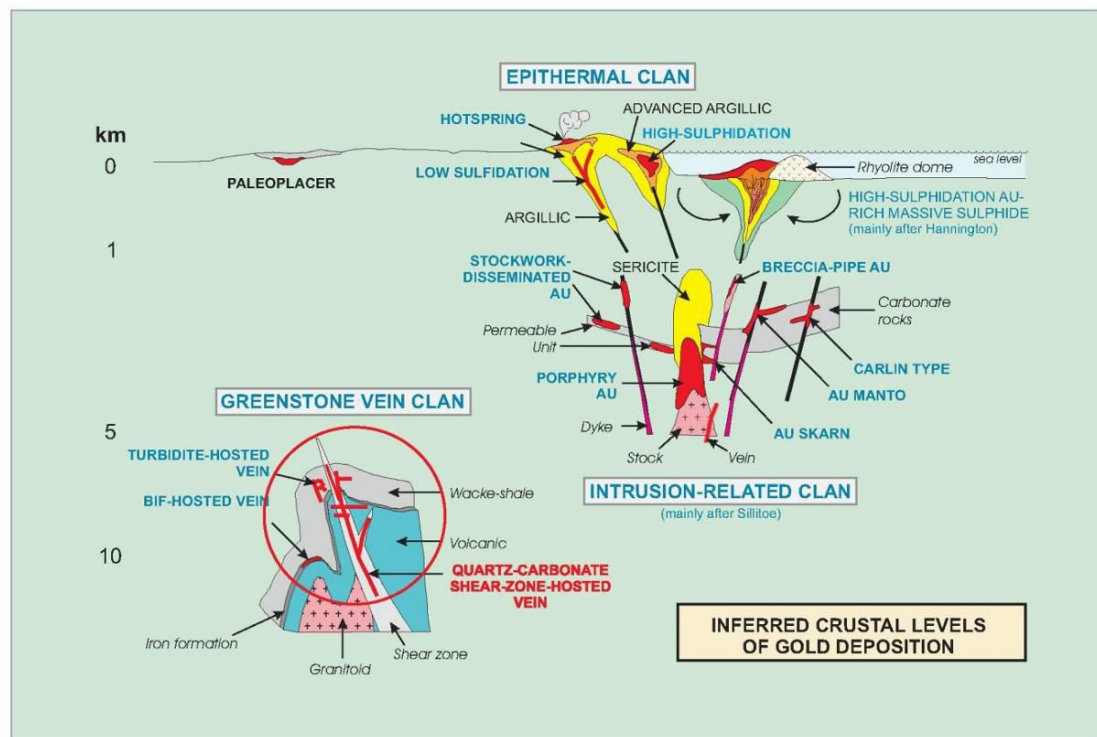
This suggested to Buro that the two zones were coeval but formed under different stress conditions.

The new interpretation model (this report) led to the identification of 364 different zones in the Flordin deposit.

## 8. DEPOSIT TYPES

The text of this section was taken and modified from Richard and Pelletier, 2011.

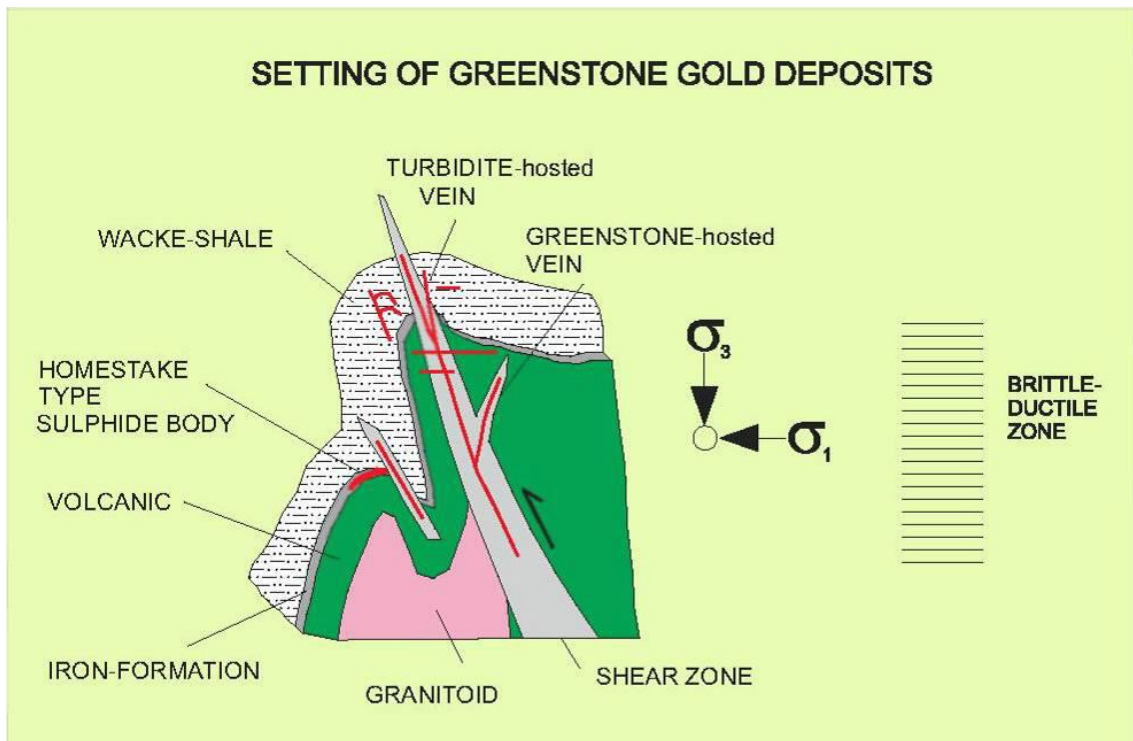
Lode gold deposits (gold from bedrock sources: Figure 8-1) occur dominantly in terranes with an abundance of volcanic and clastic sedimentary rocks of a low to medium metamorphic grade (Poulsen, 1996). The Flordin deposit is an orogenic gold occurrence related to longitudinal shear zones (greenstone-hosted quartz-carbonate vein deposit). Greenstone-hosted quartz-carbonate vein deposits are a subtype of lode-gold deposits (Poulsen et al., 2000). They correspond to structurally controlled, complex epigenetic deposits hosted in deformed metamorphosed terranes (Dubé and Gosselin, 2007).



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

Greenstone-hosted quartz-carbonate vein deposits consist of simple to complex networks of gold-bearing, laminated quartz-carbonate fault-fill veins in moderately to steeply dipping, compressional brittle-ductile shear zones and faults with locally associated shallow-dipping extensional veins and hydrothermal breccias. They are hosted by greenschist to locally amphibolite-facies metamorphic rocks of dominantly mafic composition and formed at intermediate depth in the crust (5-10 km). They are distributed along major compressional to transtensional crustal-scale fault zones in deformed greenstone terranes of all ages but are more abundant and significant, in terms of total gold content, in Archean terranes. Greenstone-hosted quartz-carbonate veins are thought to represent a major component of the greenstone deposit clan (Figure 8-1) (Dubé and Gosselin, 2007). They can coexist regionally with iron formation-hosted vein

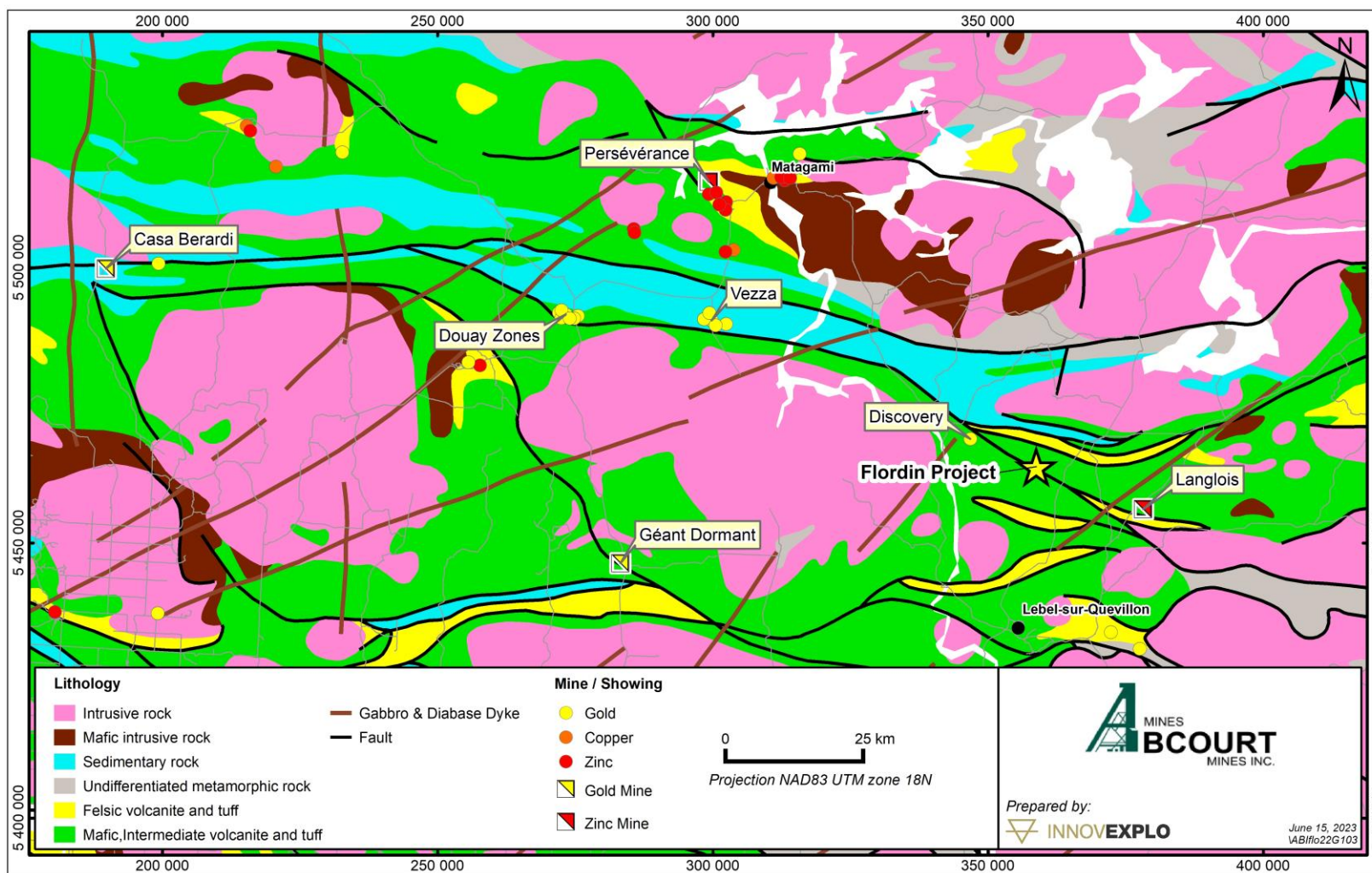
and disseminated deposits, as well as with turbidite-hosted quartz-carbonate vein deposits (Figure 8-2).



**Figure 8-2 Schematic diagram illustrating the setting of greenstone-hosted quartz-carbonate vein deposits (from Poulsen et al., 2000)**

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 ore. The main ore minerals are native gold with pyrite, pyrrhotite and chalcopyrite without significant vertical zoning (Dubé and Gosselin, 2007).

The Flordin gold deposit lies within the Cameron Deformation Zone ("CDZ"), a major NW-SE structural discontinuity. Figure 8-3 shows the deposits associated with the CDZ: Douay, Vezza, Discovery, Flordin, Carthwright and Langlois (Dussault, 1990; Lacroix, 1993; Labbé et al., 1995; Roy et al., 1997).



**Figure 8-3 – Location of main gold and base metal deposits in the northern part of the Abitibi greenstone belt**

## **9. EXPLORATION**

The issuer did not conduct any exploration work on the Property since its acquisition.

## 10. DRILLING

This item summarizes the drilling methodologies and procedures from the 2007-2008 Cadiscor and 2010-2011 North American Palladium (“NAP”) programs and Abcourt’s recent drilling programs using information available to the author.

Since acquiring the Property, Abcourt has completed two surface diamond drilling programs (in 2018 and 2020). Abcourt intends to conduct more drilling as part of its future exploration work on the Property.

### 10.1 2007-2008 Program

Following the compilation of all available geological data for the Flordin property, Cadiscor carried out a two-phase diamond drilling program (Pelletier and Jourdain, 2008a).

The first phase took place from December 17, 2007, to January 29, 2008. The 2007-2008 drill contract was awarded to Foramex of Rouyn-Noranda, Quebec. A total of five (5) diamond drill holes totalling 1,541 m were drilled. All holes were drilled from north to south (Table 10.1). All recovered core was NQ diameter. The casing for each hole was left in place and surveyed in the field by a surveyor from the firm of Jean-Luc Corriveau Arpenteur-Géomètre based in Val-d’Or, Quebec.

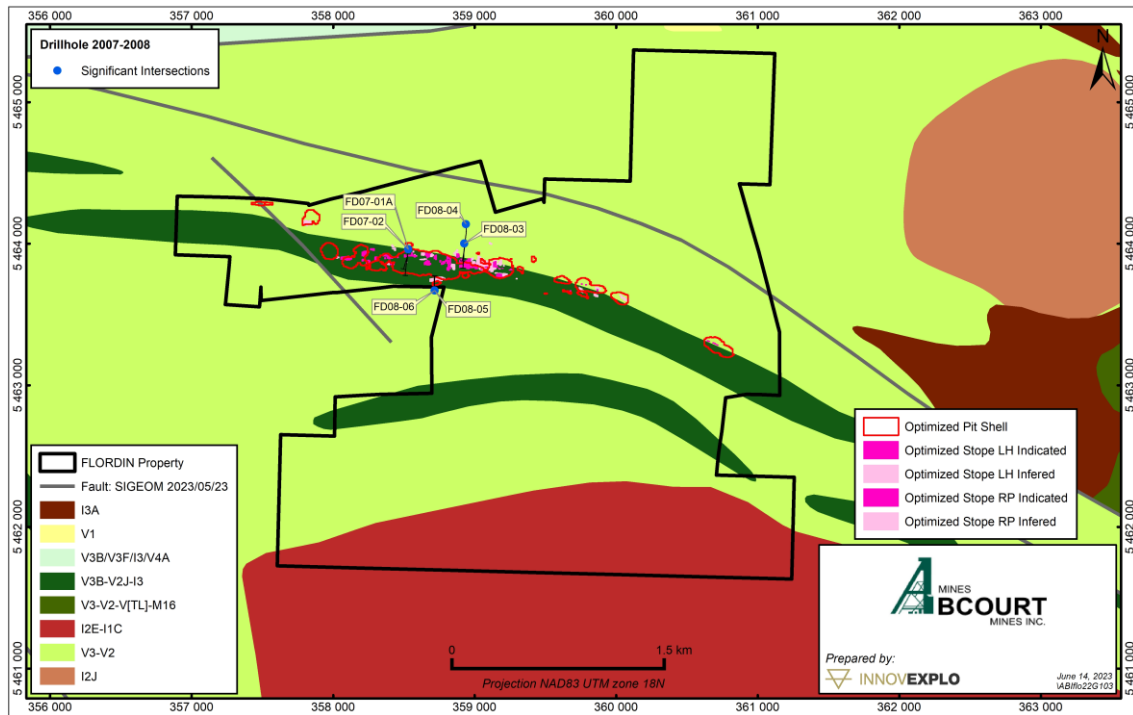
The first phase drilling program intersected eighteen (18) of the nineteen (19) mineralized zones described in 2008 and 2011 (the South-7 Zone was not intersected). Many occurrences of gold mineralization were observed during drilling. The best assay results are presented in Table 10.1. Additional details for the mineralized zone intersections are available in the reports by Pelletier and Jourdain, 2008a and Richard and Pelletier, 2011. Figure 10.1 shows the location of the collars.

Benoit Drilling of Val-d’Or, Quebec, was awarded the 2008 drill contract. Drilling ran from May 14 to May 23, 2008. A total of two (2) NQ diamond drill holes were completed for a total of 351 m. The holes were drilled from south to north, and the casings were left in place. The overall objective of the 2008 program was to follow up on a possible new zone that had been intersected by two earlier underground diamond drill holes: Su-16 and Su-29.

The second phase drilling program intersected three (3) of the nineteen (19) mineralized zones described in 2008 and 2011 (South-5, South-6 and South-7 zones). The best assay results are shown in Table 10.1. Additional details of the mineralized zone intersections are available in the report by Pelletier and Jourdain, 2008a and Richard and Pelletier, 2011.

During the 2007-2008 drilling programs, deviation surveys used a Flex-It instrument. Single-shot measurements were routinely taken while drilling and multi-shot measurements were taken once the survey was completed. The casings were all left in place. Holes deviations FD07-01A, FD07-02 and FD08-03 were recorded using a Gyro instrument that takes data when entering and exiting the hole.

All core from 2007 and 2008 is stored in tagged core boxes at the Cadiscor core shack on Rue Des Cormiers in Lebel-sur-Quévillon, Quebec.



**Figure 10-1 – 2007-2008-Significant Drilling Intersections**

**Table 10-1 – Significant Intersections from the 2007-2008 drilling program**

Hole ID	From (m)	To (m)	Length (m)	Grade (g/t Au)	Zone
FD07-01A	111.80	113.85	2.05	4.18	E
FD07-01A	126.15	130.60	4.45	1.17	D
FD07-01A	189.85	190.35	0.50	1.20	C
FD07-01A	209.68	210.20	0.52	2.73	B
FD07-01A	337.45	338.30	0.85	10.05	S3
FD07-01A	342.40	343.90	1.50	2.05	S4
FD07-02	95.90	98.90	3.00	2.52	E
FD07-02	115.25	116.00	0.75	6.68	D
FD07-02	149.65	150.80	1.15	14.51	B

Hole ID	From (m)	To (m)	Length (m)	Grade (g/t Au)	Zone
FD07-02	154.80	155.65	0.85	2.23	S1
FD07-02	183.30	183.80	0.50	1.84	S2
FD08-03	219.00	220.00	1.00	1.79	C
FD08-03	227.20	228.50	1.30	4.64	B
FD08-03	289.50	291.00	1.50	1.79	S1
FD08-03	317.10	319.20	2.10	1.48	S2
FD08-04	323.60	324.15	0.55	2.72	D
FD08-04	359.80	360.55	0.75	3.58	B
FD08-04	439.75	441.25	1.50	1.76	S1
FD08-04	472.25	473.00	0.75	3.41	S2
FD08-05	116.10	120.40	4.30	1.59	Boundary
FD08-06	103.80	105.70	1.90	3.27	Boundary

Source: Garry & Birkett, 2013

## 10.2 2010-2011 Program

NAP completed a drilling program in 2010-2011 following the merger between NAP and Cadiscor on May 26, 2009.

The 2010 drilling took place from April 27, 2010, to December 17, 2010. A total of 212 diamond drill holes for 25,720 m were completed from surface to 100 m at depth (Figure 10-2). A total of 203 drill holes were drilled from north to south, and the remainder (9) from south to north. Drilling was designed to increase the confidence in mineral resources and extend zones to the east and west from previous mineral resource estimates. Some holes were positioned to determine whether the Flordin deposit could be linked to the Carthwright Zone.

The 2010 drilling program intersected eighteen (18) of the nineteen (19) mineralized zones described in 2008 and 2011 (the “J” Zone was not intersected). Additional details for the mineralized zone intersections are available in the reports by Pelletier and Jourdain (2008a) and Richard and Pelletier (2011). Many occurrences of gold mineralization were observed during drilling. The best assay results are presented in Table 10-2.

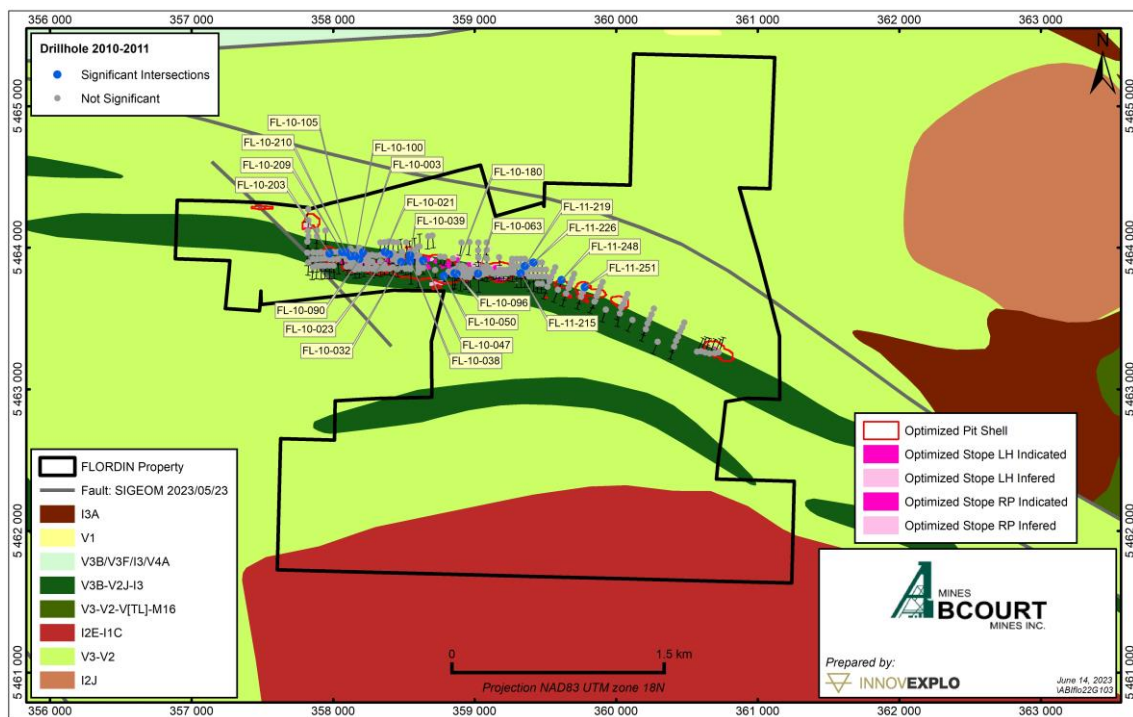
The 2011 drilling took place from December 1 to December 20, 2011, totalling thirty-six (36) holes for 4,857 m. The only significant intersection was obtained in hole FL 11-251,

where a 1-m sample returned a value of 103.7 g/t Au. Abcourt targeted the depth extension of this intersection with hole FL 18-254.

The 2010-2011 drill contract was awarded to Forage M. Rouillier of Amos, Quebec. All recovered core was NQ diameter. The casing for each hole was left in place with only a few exceptions. All but 14 casings of the 2010 holes were surveyed in the field by a surveyor from the firm of Jean-Luc Corriveau Arpenteur-Géomètre based in Val-d'Or, Quebec.

Deviation surveys in 2010-2011 consisted of single-shot measurements taken every 30 to 40 m while drilling using Flex-It and Reflex tools (REFLEX EZ-SHOT™).

Core from the 2010-2011 program was logged by Maria Sokolov, Denis Decharte, Sophia Yee, Julie Garry and Ramin Salkhi. All the core from 2010-2011 is stored in tagged core boxes at the Cadiscor core shack on Rue Des Cormiers in Lebel-sur-Quévillon, Quebec.



**Figure 10-2 – 2010-2011-Significant Drilling Intersections**

**Table 10-2 – Significant Intersections from the 2010-2011 drilling program**

Hole ID	From (m)	To (m)	Length (m)	Grade (g/t Au)
FL10-003	75.00	75.90	0.90	18.15
FL10-021	90.05	91.55	1.50	10.20
FL10-021	88.35	89.50	1.15	24.15
FL10-023	74.70	76.65	1.95	8.29
FL10-032	79.70	84.70	5.00	3.16
FL10-038	84.70	87.30	2.60	9.68
FL10-039	69.05	69.90	0.85	31.10
FL10-047	94.60	95.60	1.00	30.42
FL10-047	33.55	35.55	2.00	8.95
FL10-050	11.75	15.00	3.25	10.19
FL10-050	16.25	20.45	4.20	7.50
FL10-063	3.20	5.00	1.80	15.48
FL10-090	34.70	35.70	1.00	23.60
FL10-096	2.95	4.95	2.00	11.12
FL10-100	97.00	98.00	1.00	16.43
FL10-105	78.40	81.50	3.10	5.71
FL10-180	6.55	7.70	1.15	18.95
FL10-203	39.00	41.60	2.60	9.53
FL10-209	118.00	119.60	1.60	17.31
FL10-210	109.00	112.30	3.30	8.90
FL-11-215	6.30	7.30	1.00	9.68
FL-11-219	56.50	57.50	1.00	7.99
FL-11-226	4.60	5.60	1.00	6.26
FL-11-248	36.40	37.40	1.00	8.71
FL-11-251	98.60	99.60	1.00	103.71

Source: Bérubé, 2019 and Garry & Birkett, 2013

### 10.3 2018 Program

Drilling took place from November 28 to December 6, 2018. The 2018 drill contract was awarded to Forage Pikogan Inc. of Pikogan (Quebec). A total of six (6) diamond drill holes for 990.8 m were drilled (Figure 10-3). The samples were analyzed at the AGAT Laboratory in Mississauga (Ontario), accredited ISO 17025 by the Canadian Council of Standards and independent of Abcourt Mines Inc.

Of the 491 samples assayed for the 2018 drilling program, forty-four (44) were blanks, standards or duplicates, representing 10% of assays done for QA/QC. The casing for each hole was left in place except for FL 18-252. Only hole FL 18-253 was cemented. All casings were surveyed in the field by a surveyor from the firm of Jean-Luc Corriveau Arpenteur-Géomètre based in Val-d'Or, Quebec.

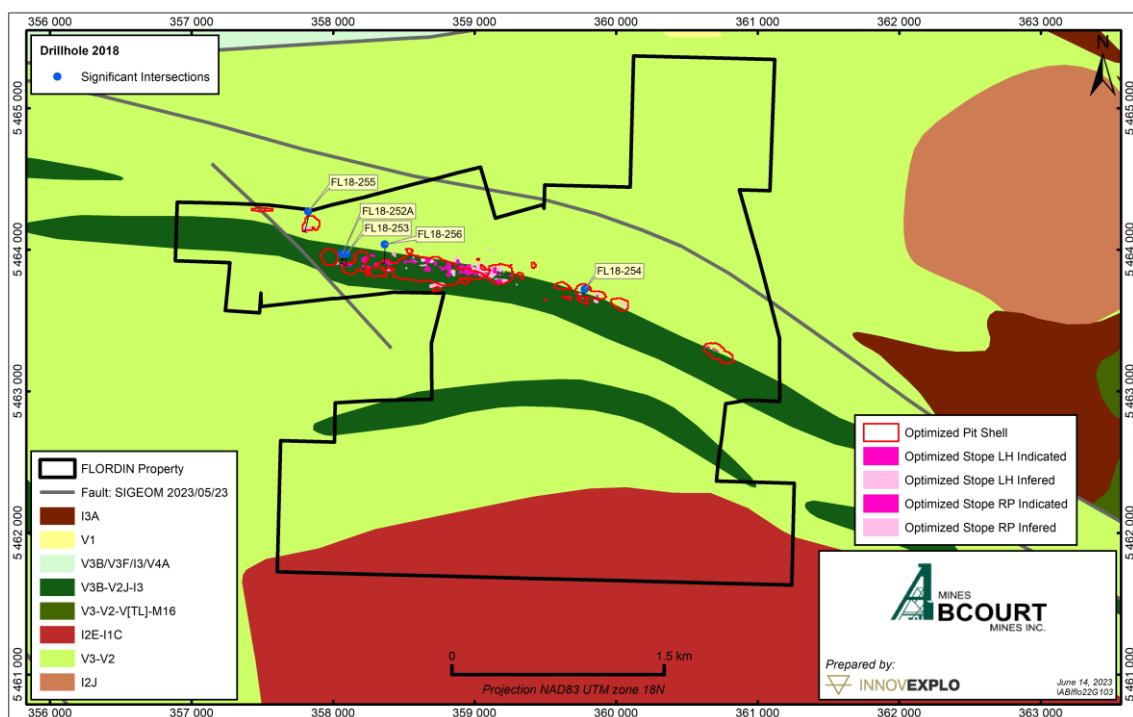
The objective of the 2018 drilling campaign was to outline at depth some of the best gold intersections obtained previously in the 2010 and 2011 drilling by NAP Quebec Inc. Excepted hole FL 18-254, the results of analyses show that the extensions of the zones can be traced although the grades are generally very low ( $\pm 1-2$  g/t Au). The FL18-254 hole intersected two gold zones. The first one, from 38.25 to 40.35 m, is in the bottom part of a sheared basalt associated with a silicified and hematized zone that may contain up to 3% pyrite. The second zone, from 47.7 to 51.2 m, is also in sheared basalt, with ankerite-hematite alteration and 8% disseminated fine pyrite. The high grades found in hole FL18-254 (6.49 g/t Au over 2.1 m and 22.63 g/t Au over 3.50 m) confirm the excellent results given by hole FL11-251 (7.98 g/t Au over 2.10 m and 103.10 g/t Au over 1.0 m) drilled in 2011.

Although these high grades do not appear to be related, the sector has good potential for several reasons:

1. Results in hole FL18-254 are the most encouraging found on the Property since 2011;
2. The pyrite mineralization is found in a strongly altered zone with ankerite and hematite;
3. The gold enrichment zone is not associated with quartz-carbonate veinlets in the basalt shear zone, which is sometimes magnetic;
4. The structure is open laterally and at depth.

Core from the 2018 program was logged by Jean-Pierre Bérubé (P.Eng.). All core from 2018 was stored in Lebel-sur-Quévillon, Quebec.

Table 10-3 shows the assay results above 1 g/t Au obtained during the fall 2018 drilling program. The length of the intersections along the core does not represent the true width of the mineralized zones.



**Figure 10-3 – 2018 Significant Drilling Interceptions**

**Table 10-3 – Significant Intersections from the 2018 drilling program**

Hole ID	From (m)	To (m)	Length (m)	Grade (g/t Au)	Target Zone
FL18-252A	11.00	13.80	2.80	1.36	near hole FL18-252 at a steeper angle
FL18-252A	143.00	144.65	1.65	1.58	near hole FL18-252 at a steeper angle
FL18-253	65.80	66.95	1.15	1.54	Extension of FL10-210
FL18-253	123.00	126.15	3.15	1.95	Extension of FL10-210
FL18-253	128.00	131.00	3.00	1.29	Extension of FL10-210
FL18-254	38.25	40.35	2.10	6.49	Extension of FL11-251
FL18-254	47.70	51.20	3.50	22.63	Extension of FL11-251
FL18-255	81.00	82.00	1.00	2.94	Extension of FL10-113
FL18-255	159.40	160.00	0.60	1.03	Extension of FL10-113
FL18-256	56.50	57.50	1.00	1.51	Extension of FL10-021
FL18-256	162.50	163.50	1.00	1.38	Extension of FL10-021

Source: Bérubé, 2019

#### 10.4 2020 Program

The following is taken and modified from the issuer's annual MD&A, available on SEDAR.

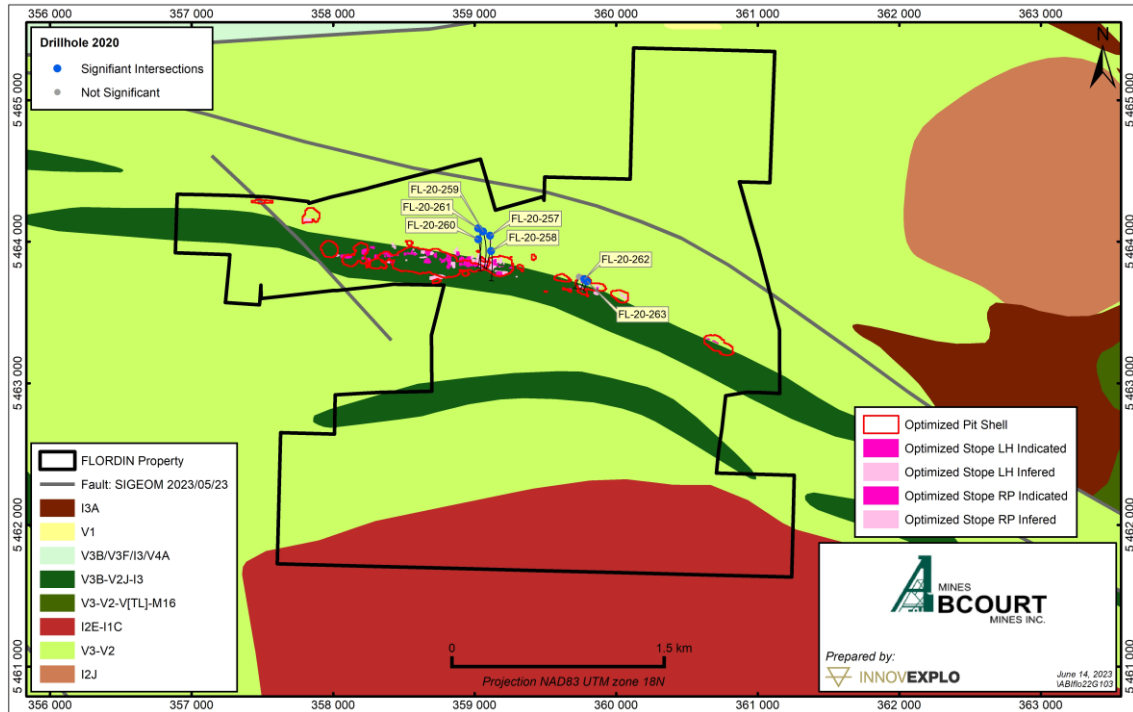
Abcourt drilled eight (8) holes for a total of 3,323.5 m in the fall of 2020 (November to December) (Figure 10-4). The 2020 drill contract was awarded to Forage Pikogan Inc. of Pikogan (Quebec). The objective of the drilling campaign was to outline at depth some of the best gold intersections obtained previously in 2010 and 2011 by NAP Quebec Inc.

A total of 962 samples were taken from NQ core size and 97 blanks, standards or duplicates, representing 10% of assays done for QA/QC. The samples were sent for analysis at Abcourt's laboratory at the Sleeping Giant mine. The laboratory was not certified but the accuracy of the analyses was very good. Twenty (20) samples were sent to two certified laboratories. None of the holes were cemented. All casings were surveyed in the field by a surveyor from the firm of Jean-Luc Corriveau Arpenteur-Géomètre based in Val-d'Or, Quebec.

The downhole plunge and azimuth were surveyed using a Reflex or Flexit tool.

Core from the 2020 program was logged by Denis Tremblay (P.Eng.). Except for holes FL-20-260 and FL-20-261, all core from 2020 was stored in Lebel-sur-Quévillon, Quebec.

Table 10-4 shows the assay results above 1 g/t Au obtained during the fall 2020 drilling program. The length of the intersections along the core does not represent the true width of the mineralized zones.



**Figure 10-4 – 2020 Significant Drilling Interceptions**

**Table 10-4 – Significant Intersections from the 2020 drilling program**

Hole ID	From (m)	To (m)	Length (m)	Grade (g/t Au)
FL-20-257	4.55	5.82	1.27	1.33
FL-20-257	112.3	113.3	1.00	8.94
FL-20-257	244.00	245.20	1.20	3.30
FL-20-257	249.10	250.10	1.00	1.25
FL-20-257	338.30	339.00	0.70	1.03
FL-20-257	377.50	378.00	0.50	3.68
FL-20-257	439.80	440.80	1.00	1.91
FL-20-257	452.70	453.70	1.00	1.39
FL-20-257	565.30	566.20	0.90	1.07
FL-20-258	168.00	168.50	0.50	3.48
FL-20-258	264.90	269.60	4.70	2.94
FL-20-258	277.30	278.60	1.30	7.50
FL-20-258	361.00	362.00	1.00	1.95
FL-20-259	211.60	213.20	1.60	1.13

Hole ID	From (m)	To (m)	Length (m)	Grade (g/t Au)
FL-20-259	226.00	227.00	1.00	1.16
FL-20-259	233.50	234.50	1.00	1.25
FL-20-259	450.60	451.60	1.00	10.57
FL-20-259	509.30	510.20	0.90	1.10
FL-20-259	550.20	551.20	1.00	1.44
FL-20-259	564.00	565.00	1.00	1.36
FL-20-259	572.40	574.00	1.60	2.52
FL-20-259	583.60	584.60	1.00	1.42
FL-20-259	586.60	587.60	1.00	1.67
FL-20-260	18.00	19.00	1.00	1.34
FL-20-260	78.10	79.60	1.50	1.66
FL-20-260	117.80	118.80	1.00	1.47
FL-20-260	123.80	124.80	1.00	1.16
FL-20-260	143.00	144.00	1.00	1.59
FL-20-260	159.50	160.50	1.00	2.03
FL-20-260	199.90	200.90	1.00	1.23
FL-20-260	293.00	294.80	1.80	13.91
Inc.	293.00	293.60	0.60	28.83
Inc.	293.60	294.20	0.60	10.47
FL-20-260	359.90	362.00	2.10	4.82
FL-20-260	364.90	367.00	2.10	1.60
FL-20-260	370.90	371.50	0.60	23.64
FL-20-260	493.00	494.00	1.00	1.15
FL-20-260	497.50	499.50	2.00	2.10
FL-20-260	507.00	508.00	1.00	1.31
FL-20-261	255.90	257.10	1.20	1.03
FL-20-261	346.00	346.50	0.50	1.18
FL-20-261	512.60	513.70	1.10	7.25
FL-20-261	566.80	567.80	1.00	3.62
FL-20-261	574.40	575.40	1.00	1.90
FL-20-262	66.00	66.60	0.60	1.83
FL-20-262	112.90	114.00	1.10	1.11
FL-20-262	149.40	151.00	1.60	2.00
FL-20-263	48.20	51.80	3.60	2.32
Inc.	48.20	49.20	1.00	6.47

## 11. SAMPLE PREPARATION, ANALYSES AND SECURITY

The text of this section was taken and modified from Richard and Pelletier, 2011.

This item describes the issuer's sample preparation, analysis and security procedures for the 2018 and 2020 diamond drill programs for the Property. The QPs reviewed the quality assurance–quality control (“QA/QC”) procedures and results.

It is assumed that historical assays performed for the Property before NI 43-101 are accurate and reproducible, although the authors of this report have no way of verifying the data or whether a QA/QC control program was in place.

A QA/QC control program was present for the Cadiscor 2007-2008 diamond drilling program and the 2010 North American Palladium (“NAP”) program.

The objectives of the QA/QC program were to monitor and document the quality and integrity of the sampling, preparation and assaying of samples from the Project. Using a series of quality control samples, the protocol stipulates that the entire sampling, sample preparation and assaying process be monitored and evaluated for:

- Suitability of field sample size by measuring the precision of field duplicate samples;
- Integrity of field sampling and sample shipment by monitoring the results for field blanks and the sample shipment procedures;
- Possible contamination during the sample preparation or the assaying process by monitoring the results of field blanks submitted as regular samples and monitoring laboratory analytical blank standard results;
- Suitability of crushing/splitting/pulverization sizes by measuring the precision of coarse and pulp duplicate samples;
- Level of assaying accuracy by measuring the accuracy of the laboratory internal certified reference standards and by assaying blind certified reference standards in each batch of samples.

The reader should refer to Pelletier and Jourdain (2008a) for details of the 2007-2008 drilling program and Richard and Pelletier (2011) and Gary and Birkett (2013) for the 2010-2011 drilling program.

### 11.1 2018 Program

The text of this section was taken and modified from Berube (2019).

Of the 491 samples analyzed during the fall 2018 drilling program, forty-four (44) were blanks, standards, or duplicates, representing 10% of the QA/QC results. To obtain more representative statistical data, the author of the report combined the results of QA/QC analyses from the Discovery and Flordin projects. The properties are only 10 km apart and share similar geological units affected by the Cameron Deformation Corridor. It is, therefore, likely that the source of gold enrichment and the emplacement of mineralizing fluids are contemporaneous for both projects.

### **11.1.1 Sample Preparation and Analyses and Security**

The NQ core was transported daily to the Barraute core storage facilities for description and sampling. The samples, 0.50 to 1.25 m long, were identified and numbered. The core sections to be analyzed were sawn into two equal parts. One-half went into bags with his identification number for the laboratory. The other half was kept in its box in its original position. The core samples were shipped to AGAT in Val-d'Or. From there, each sample was prepared for gold analysis at the AGAT laboratory in Mississauga, which is ISO 17025 accredited by the Standards Council of Canada and independent of the issuer.

Core samples submitted to AGAT were crushed to 75% passing 2 mm (-10 mesh). The crushed material was divided into 250 g samples, which were pulverized to > 85% passing 0.75 mm (-200 mesh). A 30 g sample ("pulp") was analyzed by fire assay followed by ICP-OES for samples grading between 0.001 and 10 g/t Au and fire assay with gravimetric finish for samples grading more than 10 g/t Au.

### **11.1.2 Quality Assurance and Quality Control Programs**

#### **11.1.2.1 Assay Results (batch sizes and sample types)**

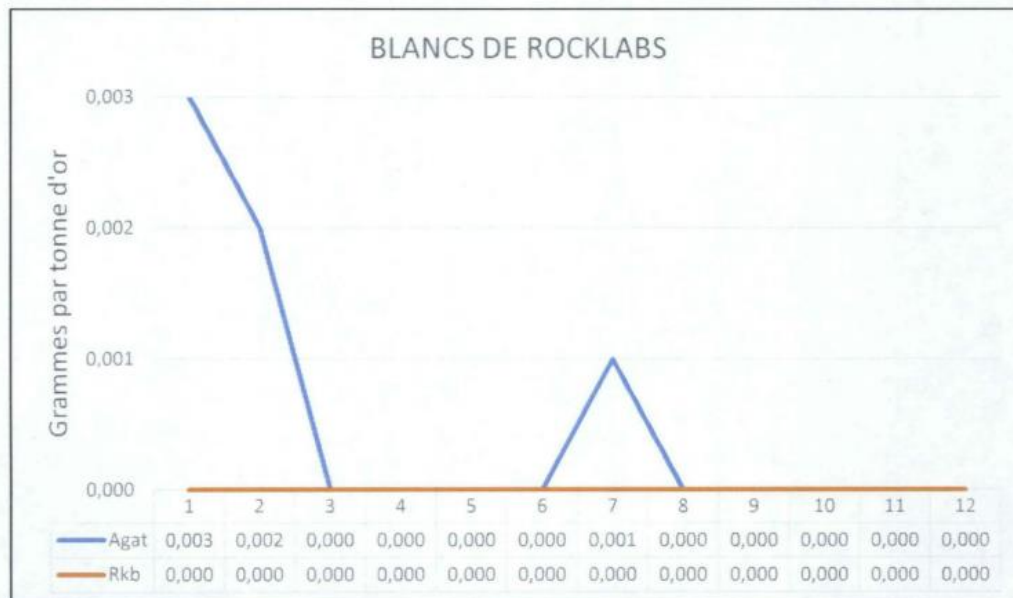
The text of this section was taken and modified from Bérubé, J.-P., 2019.

#### **11.1.2.2 Duplicates**

A series of pulp duplicates were recovered at the Sleeping Giant Mine Laboratory from those used by NAP Quebec during their 2010 and 2011 drilling programs. Fifteen (15) duplicates with various grades were analyzed by AGAT during the 2018 program. Figure 9.3.4 shows only thirteen (13) of the fifteen (15) analyses to clarify the representation of the lower grades. It is important to note that AGAT's assay results were close to the original grade of 73.36 g/t Au or 73.0 and 76.0 g/ Au. Except for sample number 13, the graph shows that the difference in readings between the two laboratories remained within an acceptable limit of  $\pm 10\%$ .

#### **11.1.2.3 Blanks**

Blanks were supplied by Rocklabs in individual 50 g bags. Twelve (12) were randomly inserted into batches from areas likely to contain gold (Figure 11-1).



**Graphique 9.2.1** Teneurs des blancs de Rocklabs (Rkb) expédiés au laboratoire Agat (Agat).

**Figure 11-1 – Rocklab blank 111 sent to AGAT, 2018 drilling program**

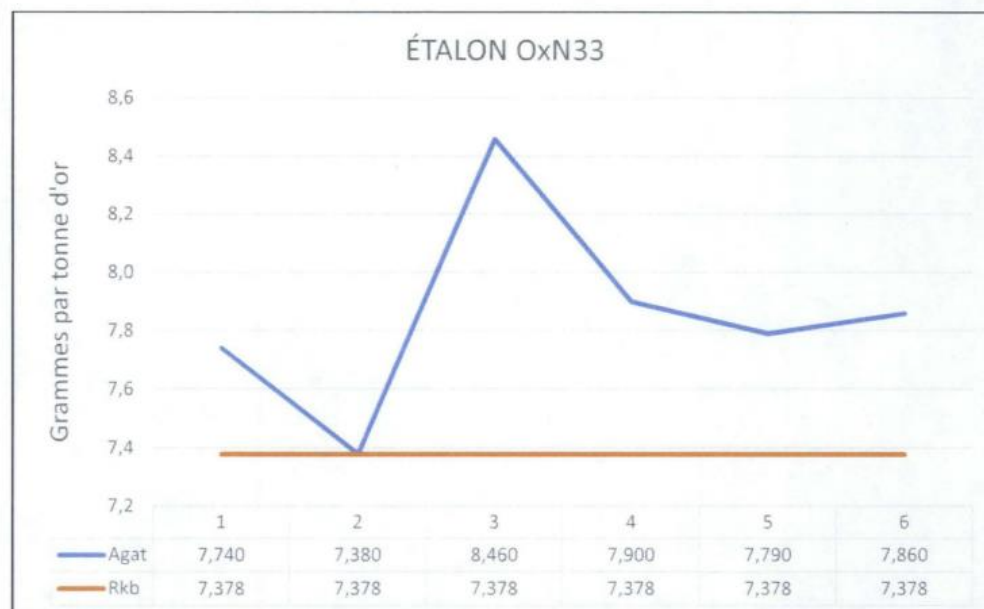
#### 11.1.2.4 Standards

The Rocklabs SH35 standard contains a recommended concentration of 1.323 g/t Au  $\pm$  0.017 at a 95% confidence interval. A sample of approximately 50 g was taken from the 2.5 kg container and placed in a numbered bag during the core sampling process. Eleven (11) such samples were sent to AGAT for analysis. Although the results were generally above 1.323 g/t, they are generally within 5% of the expected value. Therefore, the results are considered very reliable (Figure 11-2).

The Rocklabs OxN33 standard contains a recommended concentration of 7.378 g/t Au  $\pm$  0.088 at a 95% confidence interval. A sample of approximately 50 g was taken from the 2.5 kg container and placed in a numbered bag during the core sampling process. Six (6) such samples were sent to AGAT for analysis (Figure 9.3.3). Sample number 3 (8.46 g/t) is 15% higher than expected (7.378 g/t). As a statistical interpretation cannot be made with so few assays, the author of the report did not draw any conclusions other than that AGAT obtained results above the expected average, just as for the SH35 standard (Figure 11-3).



**Figure 11-2 – Rocklabs standard SH35 sent to AGAT, 2018 drilling program**



**Figure 11-3 – Rocklabs standard OxN33 sent to AGAT, 2018 drilling program**

#### 11.1.2.5 AGAT Laboratory QAQC

The AGAT laboratory carried out internal quality control measures. In addition to analyzing its own blanks and standards, the laboratory re-analyzed a very small number of samples that yielded more than 1 g/t Au (Table 11-1). The issuer considers the number of samples too small to draw conclusions.

**Table 11-1 – Original (Ori) and Duplicate (Dup) Assay Results From AGAT**

Abcourt No.	AGAT No.	Original (g/t)	Duplicate (g/t)	Variation (%)
E5971680	9767153	1.04	1.03	1.0
E5971542	9767015	1.03	1.04	1.0
E5971400	9712287	6.81	7.80	13.6
E5971687	9767160	19.80	18.50	6.8

## 11.2 2020 Program

### 11.2.1 Sample Preparation and Analyses and Security

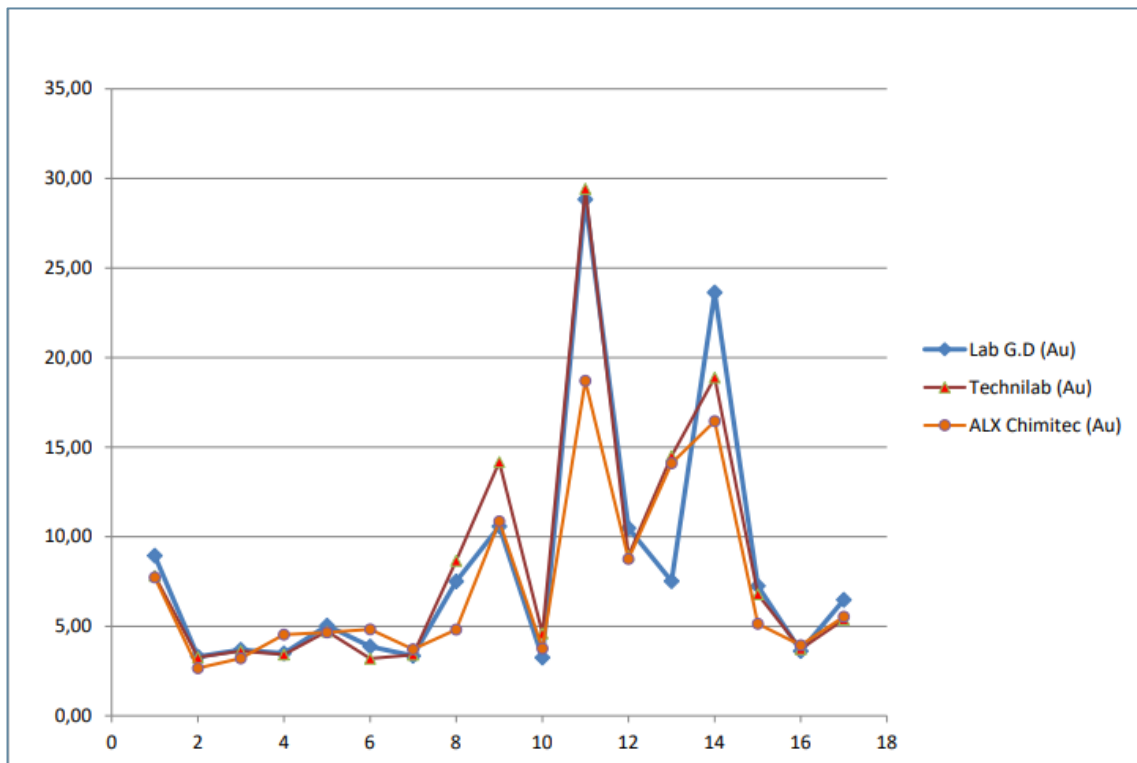
The NQ samples were analyzed at Abcourt's laboratory at the Sleeping Giant mine.

Sample preparation was done onsite at the Sleeping Giant Mine Laboratory. The rejects (i.e., the fraction of the sample (~70%) with particle size finer than -10 mesh or 1.7 mm) were kept for future reference.

The samples were crushed to 70% passing 10 mesh, then 250 g subsamples were pulverized to 90% passing 200 mesh (74µm). Gold analysis was carried out by fire assay on a 15g pulp sample and finished with atomic absorption (code ALFA2). No gravimetric finishes were done on samples analyzed at the internal laboratory during the 2020-2022 drilling campaign.

### 11.2.2 Quality Assurance and Quality Control Programs

Because Abcourt's Sleeping Giant Mine Laboratory is not certified, twenty (20) samples from the 2020 campaign were subject to a re-assay and quality control program using two (2) certified and independent laboratories to verify and validate the results obtained from the internal laboratory. The results of the independent re-assays confirmed the validity of the internal laboratory results (Figure 11-4).



**Figure 11-4 – Quality control (2021)**

### 11.2.3 Independent Sampling

QP Alain Carrier conducted independent sampling during his 2022 site visit (see section 12.2.2 - *Independent Re-Sampling*), yielding satisfactory results.

## 11.3 Conclusions

During the most recent drilling campaigns described in this item, the QA/QC results demonstrated acceptable levels of accuracy. The assay results in the database are therefore considered reliable for mineral resource estimation purposes.

## **12. DATA VERIFICATION**

This item covers the data verification for the 2023 MRE (item 14 of this report), including a personal inspection by one of the QPs (Alain Carrier) during his visit to the Project.

### **12.1 2023 MRE Database**

All drilling information used for the 2023 MRE was reviewed and validated by the mineral resource QP (Olivier Vadnais-Leblanc). 14 drill holes have been completed on the Property since the historical 2011 MRE was published: 6 drill holes by North American Palladium (“NAP”) in 2018, and 8 by the issuer in 2020. Basic cross-check routines were performed between the 2011 and 2020 drill hole databases. The comparison revealed that the overall thickness and grade of the mineralized zones were comparable (same order of magnitude).

The validation included all aspects of the drill hole database (i.e., collar location, drilling protocols, downhole surveys, logging protocols, sampling protocols, QA/QC protocols, validation sampling, density measurement review, and checks against assay certificates).

The QP considers the 2023 MRE database of good overall quality and the mineral resource valid and reliable.

#### **12.1.1 Drill Hole Location and Downhole Surveys**

Drill hole collars were routinely surveyed from 2011 to 2020.

During the site visit, the QP’s verification included several field checks of collar locations using a handheld GPS. The coordinates of five (5) surface drill holes and surface channel samples from the main outcrop area were confirmed (Figure 12-2). All results had acceptable precision. The collar locations in the database are considered adequate and reliable.

Drill hole deviation data is very scarce for historical drill holes but has been systematically collected from single shots since the early 2000s. Downhole surveys (using single-shot deviation instruments by Reflex, Gyro or FlexIT) were performed in most surface drill holes. Single shots were taken approximately every 30m. The historical drill holes on the Project were generally monitored for dip deviation by performing downhole “acid tests” at regular intervals (25 to 50 m).

The verification also included a check of all the drill hole traces in 3D for irregular deviations. Minor errors of the type normally encountered were identified, investigated and corrected.

#### **12.1.2 Drill Hole Database and Assay Certificates**

The QPs had access to the assay certificates and previous QA/QC programs from assessment work reports for the most historical and recent drill holes in the 2023 MRE database. Assays were verified for the selected drill holes (5% of the database). The assays in the database were compared to the original certificates in assessment work reports. No errors or discrepancies were found.

## 12.2 Property Site Visit and Core Review

QP Alain Carrier visited the Project on November 8, 2022, accompanied by David Bélisle, InnovExplo's geology mining technician. Onsite data verification included a general visual inspection of the Property (Figure 12.1), a field check of drill collar and channel samples coordinates (Figure 12.2), a geological review of the main outcrop area, a visit to the core storage facilities in Lebel-sur-Quévillon (Figure 12.3), and a review of selected mineralized core intervals (Figure 12.4), including the log descriptions of lithologies, alteration and mineralization, and the accompanying assay results.



A) Typical northern vegetation near the Property and main forestry access road; B) Flordin main outcrop area stripped, mapped and channel sampled (historical work).

**Figure 12-1 – Access roads and outcrop on the Property**



A) and B) Surface exposure of Flordin mineralized material and veins. Surface channel sampling on Flordin's main outcrop area. C) to G) Examples of casing left in historical and recent drill holes on the Flordin deposit. (QP site visit, November 8, 2022).

**Figure 12-2 – Field validation of drill hole collar and channel sample locations**

### 12.2.1 Core Review

The core boxes are stored in core racks in Lebel-sur-Quévillon (Figure 12.3). The QP found the boxes in good order and properly labelled with the sample tags in place. The wooden blocks at the beginning and end of each drill run were still present, matching the indicated footage on each box. The QP validated the sample numbers and confirmed the presence of mineralization in the witness half-core samples.

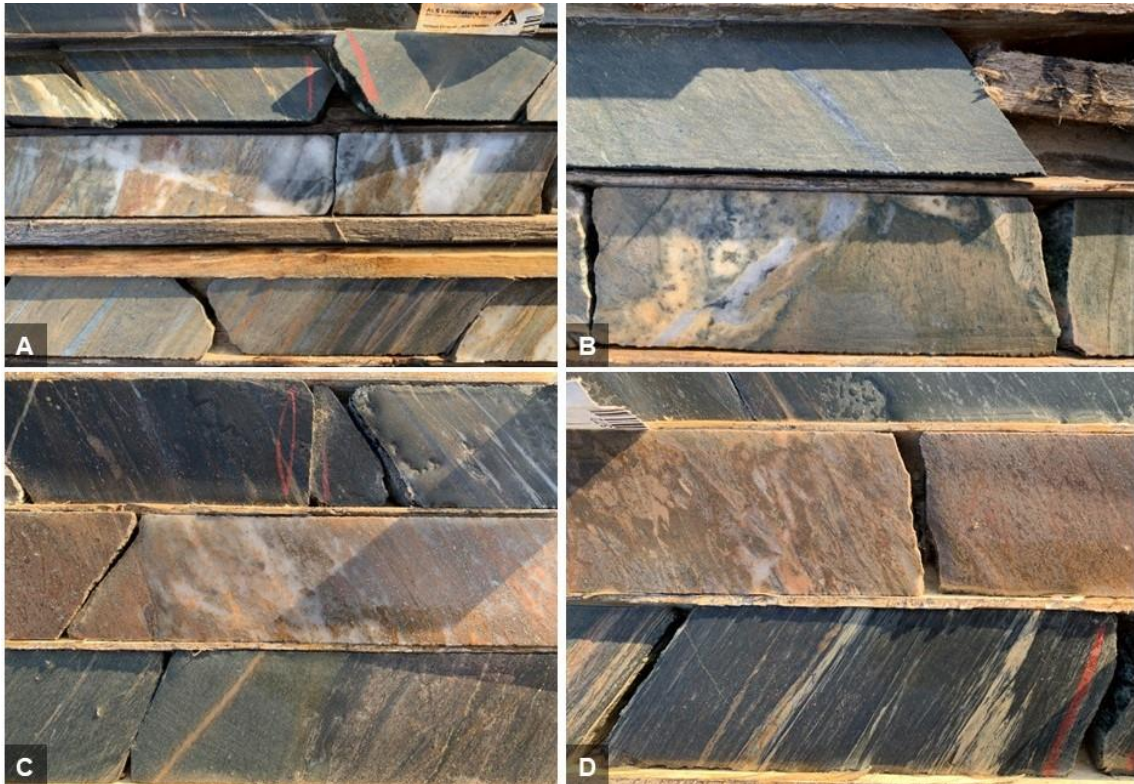


A) Outdoor core shed adequately fenced and secured, located on Rue des Cormiers in Lebel-sur-Quévillon; B) Exterior core shed with metal roof and appropriately marked core boxes.

### Figure 12-3 – Drill core storage in Lebel-sur-Quévillon

The QP examined mineralized intervals of witness half-core from five (5) drill holes from the 2010 and 2011 programs (drill holes FL-10-013, FL-10-021, FL-10-023, FL-10-180 and FL-11-251). It was possible to validate sample numbers, confirm the presence of gold mineralization by comparing the intervals against the gold assay results from the laboratory, and check the final geological logs against the witness core.

The QP observed metre-scale thicknesses of mineralized zones from the Flordin mineral resource area. Gold values are associated with millimetric to centimetric quartz-carbonate veins (shear and tensional-extensional veins and veinlets), disseminated sulphides (mostly pyrite), and immediate albite-carbonate altered and mineralized wall-rocks. The mineralized zones are mostly hosted in mafic volcanic rocks and are locally associated with porphyry dykes. Figure 12.4 shows some of these mineralized zones with significant gold values above 5 g/t Au over metric intervals.



QP core review: A) and B) Mineralized interval in drill hole FL-10-013 (5.40 g/t Au over 3.50m, from 46.0 to 49.5m); C) and D) Mineralized interval of 8.29 g/t Au in drill hole FL-10-023 (8.29 g/t Au over 1.95m, from 74.70 to 76.65m). For all examples, the core diameter is 47 mm. The lengths of the mineralized intersections are expressed as lengths measured along the drill core and do not represent true width. (QP's site visit, November 8, 2022).

**Figure 12-4 – Core review of selected mineralized intervals**

### 12.2.2 Independent Re-Sampling

On November 8, 2022, during the site visit, the QP re-sampled eight (8) gold-bearing drill core intervals from two (2) drill holes at the issuer's core facilities located on Rue des Cormiers in Lebel-sur-Quévillon. The re-sampling work was conducted for the purpose of this Technical Report.

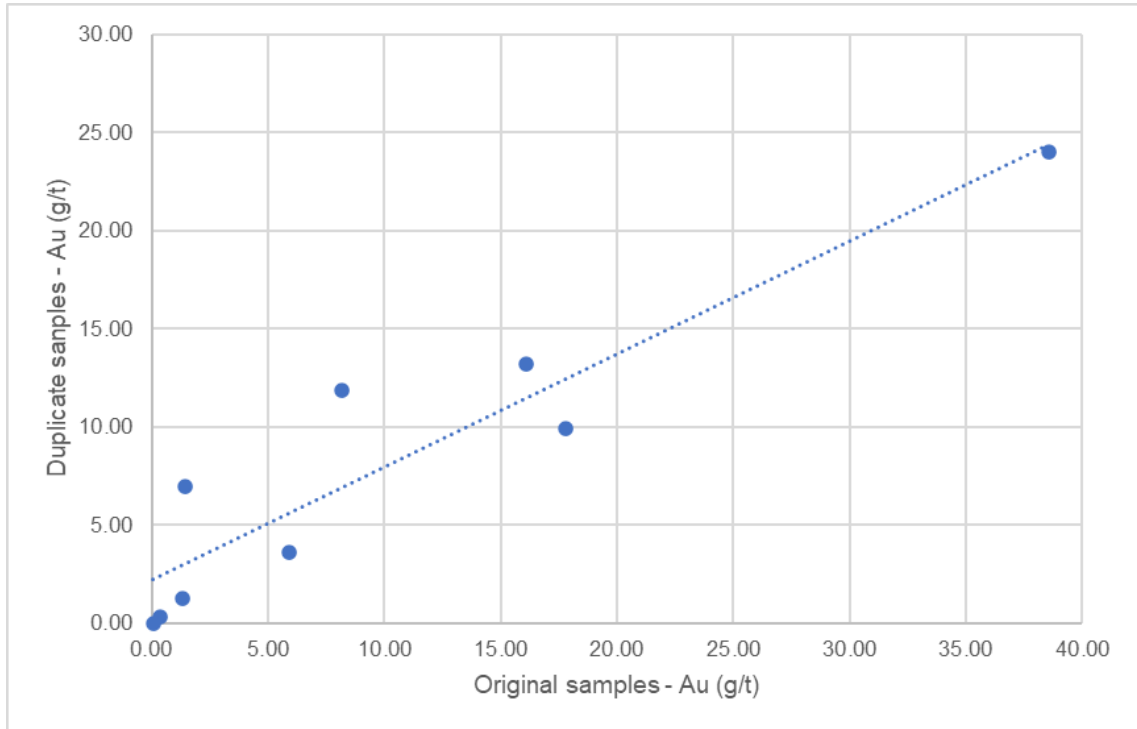
The witness half-cores were sent in their entirety for re-assaying. Assisted by David Bélisle, the author performed the sample handling, bagging, numbering and QA/QC sample insertion. InnovExplo personnel also delivered the samples directly to the ALS laboratory in Val-d'Or.

Analytical procedures at ALS had the following codes and descriptions: CRU-31 crushing -70% < 2 mm, SPL-21 split sample with riffle, PUL-31 pulverized at 85% < 75 um, OA-GRA08 specific gravity, Au-AA26 FA Au 50g AA finish. The results of the analysis appear on ALS Canada Ltd certificate No. VO22329797, dated December 12, 2022.

A comparison between original and duplicate samples for gold results and specific gravity is presented in Table 12 1 and Figure 12 5. Gold grades display good overall correlation because local variability is expected in lode gold deposits (i.e., the nugget effect). The correlation coefficient of 0.93 between the original and duplicate samples from drill holes FL-10-013 and FL-10-021 (n=8) is good for a gold deposit.

Specific gravity measurements on the control samples yielded an average of 2.88 g/cm<sup>3</sup>, which is in the same order of magnitude as the mean density value of 2.80 g/cm<sup>3</sup> used for the mineralized zones in the 2023 MRE.

The results of the QP's independent re-sampling program are satisfactory.



Scatterplot diagram with a resulting correlation coefficient of 0.93 (n=8).

**Figure 12-5 – Scatterplot diagram of Au (g/t) grades, original versus duplicate samples**

**Table 12-1 – Results from the QP's independent re-sampling program**

Drill hole	Sample interval (m)			Original sample		Duplicate sample		
	From	To	Length	Sample No.	Au (g/t)	Au (g/t)	Sample No.	Density
FL-10-013	47.00	48.00	1.00	H671503	1.44	6.95	W035176	2.88
	48.00	48.50	0.50	H671506	8.19	11.90	W035177	2.83
FL-10-021	87.90	88.35	0.45	J717516	0.37	0.36	W035178	2.88
	88.35	88.95	0.60	J717517	38.55	24.00	W035179	2.93
	88.95	89.50	0.55	J717518	16.08	13.25	W035180	2.89
	89.50	90.05	0.55	J717519	0.07	0.03	W035181	2.79
	90.05	90.55	0.50	J717520	17.80	9.94	W035182	2.89
	90.55	91.55	1.00	J717521	5.93	3.64	W035183	2.94
Standard	na	na	na	SH 65	1.35	1.30	W035184	
Average (*)					11.05	8.76		2.88
Minimum (*)					0.07	0.03		2.79
Maximum (*)					38.55	24.00		2.94
Correlation coefficient (*)					0.93	8.76		

(\*) Exclusive of standards.

### 13. MINERAL PROCESSING AND METALLURGICAL TESTING

The text of this section was taken and modified from Richard and Pelletier (2011).

Tardif (1987) reported on metallurgical testing of Flordin ore from the “B” Zone before it was milled. The program was carried out at Lakefield Research Laboratories. The main results and conclusions are summarized below (Table 13.1). The tests were done on ore crushed to a grind of 70% at minus 200 mesh.

**Table 13-1 – Results of tests obtained at Lakefield Research Laboratories**

Test	Head grade (g/t Au)	Time (hours)	Reject grade (g/t Au)	% Recovery
1	0.99	4	0.09	90.9
2	0.99	12	0.08	86.8
		24		90.2
		48		91.0
3	5.53	48	0.286	94.8
4	5.62	12	0.338	79.4
		24		92.9
		48		94.0
5	5.27	48	0.27	94.9
6	4.76	12	0.300	86.7
		24		92.7
		48		93.8

In mid-June 1987, 5,173.95 (dry) metric tons were processed at the mill belonging to Bachelor Lake Gold Mines. Project geologists estimated a pre-processing grade of 2.57 g/t Au. Once processed, mill recovery was 91.7% once processed, and the final grade was 2.51 g/t Au. A total of 372.05 ounces were sold to the Royal Canadian Mint, and 10.51 oz were kept in the mill inventories (Tardif, 1987). Results are presented in Table 13.2.

**Table 13-2 – Results from mineral processing carried out in 1987**

	Amount of material (metric tons)	Grade (g/t Au)	Ounces gold
Total processed muck	5,173.95	2.571	
Head	5,173.95	2.507	419.07
Reject	5,050.207	0.213	34.51
Solid in inventory	123.74		
Final Inventory			17.59
Gold sold to Ottawa			372.05
Initial inventory			(7.07)
TOTAL (Head)			417.07

## **14. MINERAL RESOURCE ESTIMATES**

### **14.1 Methodology**

The Mineral Resource Estimate for the Flordin Property (the “2023 MRE”) presented herein was prepared by Olivier Vadnais-Leblanc (P.Geo.) of InnovExplo, Simon Boudreau (P.Eng.) and Eric Lecomte (P.Eng.) using all available information.

The main objective of the mandate was to update the previous mineral resource estimate (the “2011 MRE”), which was published in a report titled “43-101 Technical Report and Resource Estimate on the Flordin Property”, dated August 24, 2011 (Richard, 2011). The result of the 2023 study was a mineral resource estimate for 364 gold-bearing zones. The 2023 MRE included measured, indicated, and inferred resources.

The mineral resources presented in this item are not mineral reserves as they have not demonstrated economic viability.

The effective date of the 2023 MRE is May 15, 2023. This study does not include mineral reserves.

#### **14.1.1 Drill hole and channel sample database**

The database contains 578 surface and underground drill holes, 14 surface channels and 353 underground channels. The database also includes conventional analytical gold assay results and coded lithologies. The channels were used for 3D modelling purposes but not for the resource estimate.

The drill holes cover the Flordin property over an east-west distance of approximately 3,200 m (see Figure 14.1 in Item 9.5).

All header data (collar coordinates), down-hole survey data, lithological information and assay results were integrated into a Leapfrog and Genesis database.

Genesis generates mineralized intersections between drill holes and wireframe solids. These intersections are used for statistical evaluation and resource block modelling.

The database holds 35,986 assays (33,947.93 m of core) from 578 drill holes and 1247 assays (834.47 m of rock) from 367 channels.

The DDH intervals used for the interpretation contain 6,423 assays taken from drill holes and channels (5,837.08 m of core and channel samples).

#### **14.1.2 Interpretation of mineralized zones**

The mandate delivered to InnovExplo was to update the resources with all new data added since the 2011 MRE. The solid margin extent after the last drill hole used for interpretation is 50 m. If an unselected drill hole is located within the 50m margin, the margin will diminish to half the distance between both drill holes. Veins were adjusted to underground and surface channels. The 3D modelling was done using Genesis, and LeapFrog Edge was used to perform the estimation.

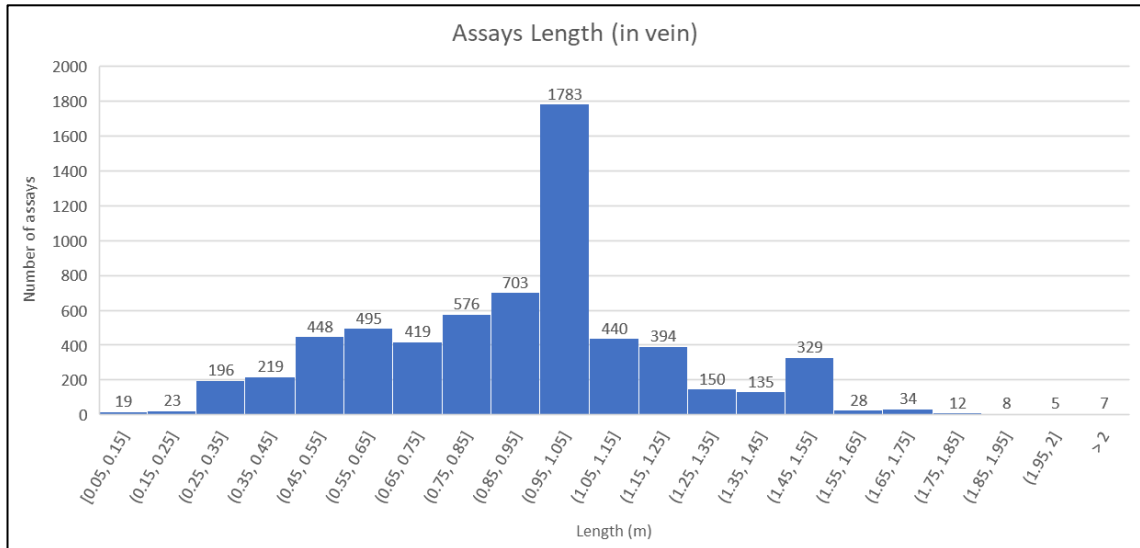
A total of 364 mineralized veins were created with a modelling cut-off grade of 0.25 g/t Au.

The average vein thickness is 1.75 m.

### 14.1.3 Compositing

Gold assays were composited to represent 1.0 m of core (“1m composites”) within all DDH intervals defining each mineralized zone to minimize any bias introduced by variable sample lengths. The average assay length in veins is 0.91 m. All DDH sample composites less than 25 cm long were redistributed among the other composites of this interval (Figure 14-1).

Each mineralized-zone solid (lens) was estimated separately using its own composites. A grade of 0 g/t Au was assigned to missing sample intervals.

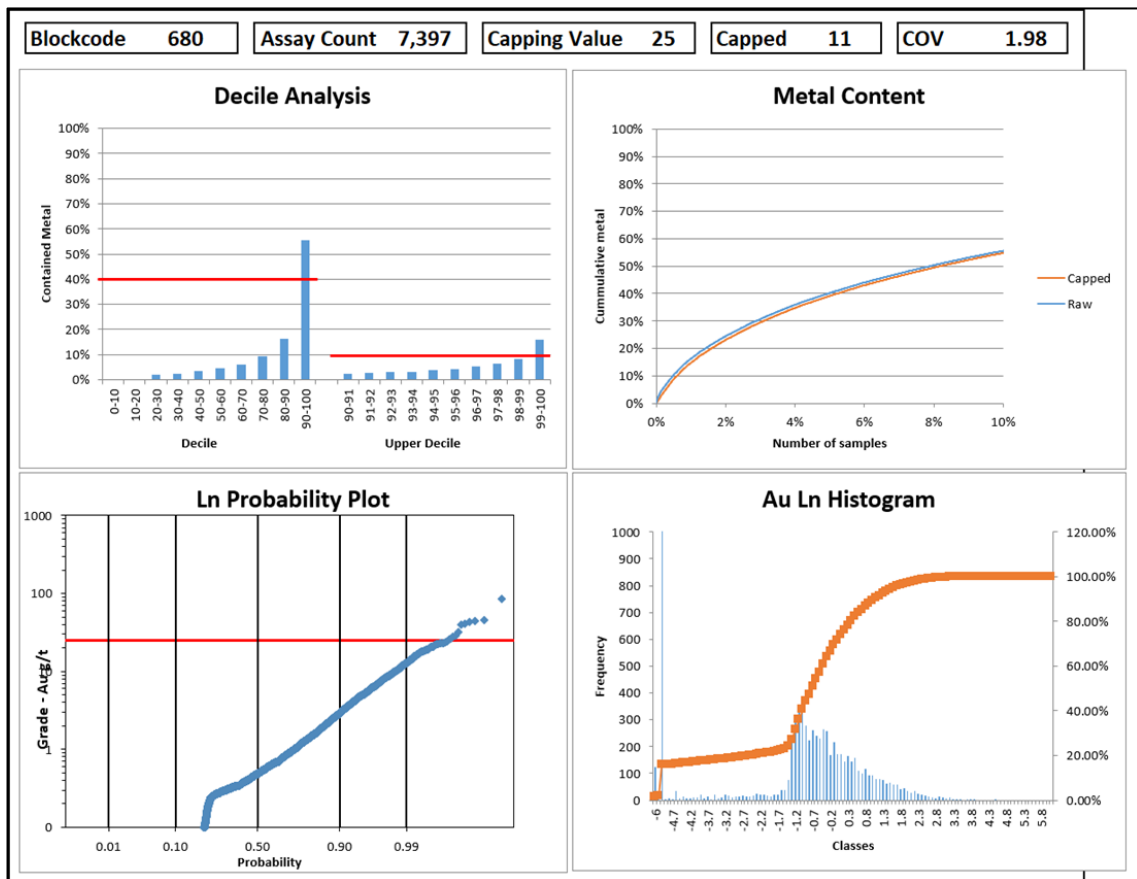


**Figure 14-1 – Assay Length in veins**

### 14.1.4 Capping

Drill hole intervals intersecting interpreted mineralized zones were used to analyze sample lengths and generate statistics, composites and variography.

The capping value was set at 25 g/t Au. Out of 7,397 composites, only 11 composites were capped (Figure 14-2).



**Figure 14-2 – Capping**

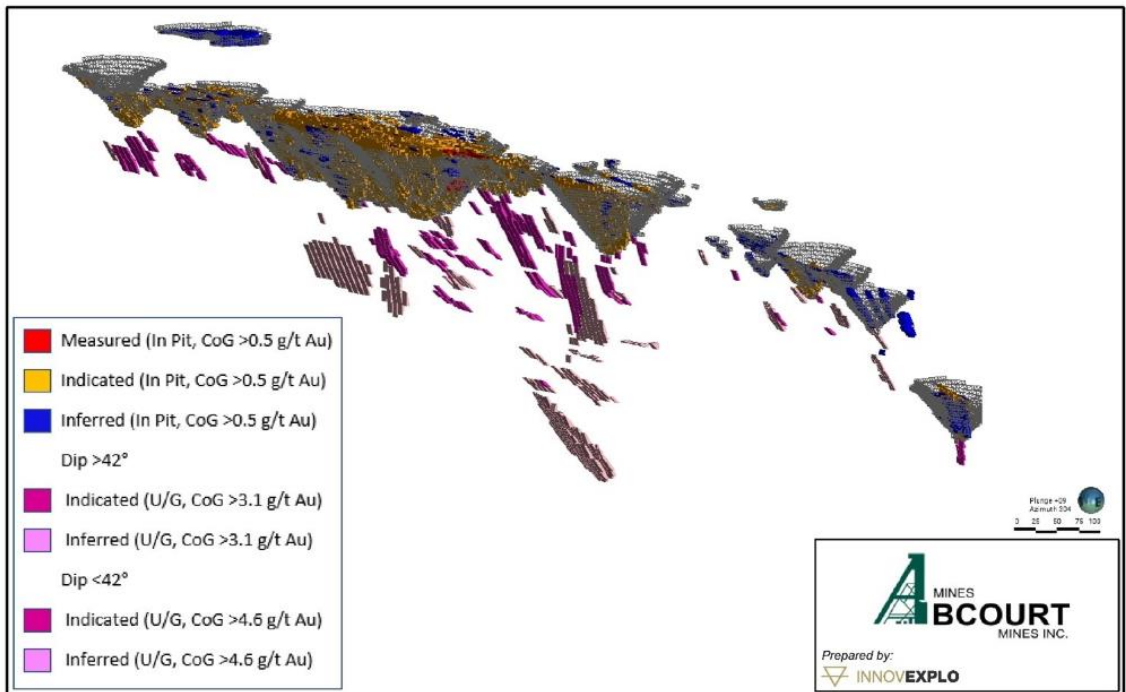
### 14.1.5 Variography

Variography has been undertaken on the Flordin deposit (Figure 14-3). Results were not satisfactory enough to use ordinary kriging as an estimation method. However, a grade continuity range was determined and used to set ellipsoids sizes. Long and medium ranges were set at 50 m. The short range was set at 10 m.

### 14.1.6 Bulk Density

### 14.1.7 Block Model Geometry

The model was intersected with an overburden surface model to exclude blocks that extend above the bedrock surface.



**Figure 14-4 – Flordin Resources Block Model**

#### 14.1.8 Mineralized Zones Block Model

Blocks are of five different types: blocks from (i) mineralized veins, (ii) basalt hosting mineralized veins, (iii) overburden, and overlapping all these, (iv) blocks located in the pit and underground development.

#### 14.1.9 Grade Block Model

A grade model was interpolated using capped 1m composites from the conventional assay grade data to produce the best possible grade estimate for the defined resources in the Flordin deposit. The method retained for the final resource estimation was ID2 with capping of high-grade values using LeapFrog Edge.

#### 14.1.10 Estimation Settings

A 3D semi-variography analysis of mineralized points by vein domain was completed for vein structures in the Flordin deposit using Genesis and Snowden Supervisor. The analysis did not determine continuity and search ellipses of sufficient quality to be used for geostatistical grade estimation (Ordinary Kriging).

The Nearest Neighbor (“NN”) method was also attempted, but this method placed too much emphasis on high grades and probably yielded overestimated results and clustered the high grades in some areas, which also did not properly represent the nature of this gold deposit.

The search ellipsoid sizes were still based on the maximum variographic range (50 m) and the average drill hole spacing (25 m). The first pass ellipsoid was set at 25 m, the

second pass was set to twice the size of the first pass (50 m), and the third pass was set at 75 m to catch most composites and populate as many blocks as possible (Table 14-1).

**Table 14-1 – Estimation Settings**

Flordin	Ellipsoid Long range	Ellipsoid Medium range	Ellipsoid Short range	Minimum composites	Maximum composites	Maximum composite /Drill holes	Minimum Drill holes
Pass 1	25m	25m	10m	7	15	3	3
Pass 2	50m	50m	10m	7	15	3	3
Pass 3	75m	75m	15m	1	15	3	2

#### 14.1.11 Economic Parameters and Cut-off Grades

Cut-off grade (“CoG”) parameters were determined by QPs Simon Boudreau and Eric Lecomte using the parameters presented in Table 14-2 and Table 14-3. The deposit is reported at a rounded CoG of 0.5 g/t Au using the surface open pit mining method (“OP”), 3.1 g/t Au using the potential Long-Hole mining method (“LH”), and 4.6 g/t Au using the potential room and pillars mining method (“RP”). DSO was run using the LH or RP methods, addressing the blocks not included in the surface optimization created by Whittle.

The QP considers the selected CoGs of 0.50 g/t Au, 3.10 g/t Au and 4.6 g/t Au to be adequate based on the current knowledge of the Project. The CoGs are considered instrumental in outlining mineral resources with reasonable prospects for eventual economic extraction for a surface and an underground mining scenario.

**Table 14-2 – Input Parameters Used to Calculate the Surface Cut-off Grade (using the Open-pit Mining Method) for the Flordin Project**

Input parameter	Value
Gold price (US\$/oz)	1,650
Exchange rate (USD:CAD)	1.33
Gold Price (\$/oz)	2,194.50
Royalty (%)	0.00
Recovery (%)	91.7
Minimum stope angle overburden (°)	30
Minimum stope angle bedrock (°)	50
Global mining costs overburden (\$/t)	3.70
Global mining costs bedrock (\$/t)	4.65
Processing & transport costs (\$/t)	21.50
G&A costs (\$/t)	12.00
Total cost (\$/t)	33.50
Mineral resource cut-off grade (g/t Au)	0.50

**Table 14-3 – Input Parameters Used to Calculate the Underground Cut-off Grade (using the Long-hole Mining Method) for the Flordin Project**

Input parameter	Value
Gold price (US\$/oz)	1,650
Exchange rate (USD:CAD)	1.33
Gold Price (\$/oz)	2,194.50
Royalty (%)	0.00
Recovery (%)	91.7
Global mining costs (\$/t)	169.50
Processing & transport costs (\$/t)	21.50
G&A costs (\$/t)	12.00
Total cost (\$/t)	203.00
Mineral resource cut-off grade (g/t Au)	3.10

**Table 14-4 – Input Parameters Used to Calculate the Underground Cut-off Grade (using the Room & Pillars Mining Method) for the Flordin Project**

Input parameter	Value
Gold price (US\$/oz)	1,650
Exchange rate (USD:CAD)	1.33
Gold Price (\$/oz)	2,194.50

Input parameter	Value
Royalty (%)	0.00
Recovery (%)	91.7
Global mining costs (\$/t)	262.00
Processing & transport costs (\$/t)	21.50
G&A costs (\$/t)	12.00
Total cost (\$/t)	295.50
Mineral resource cut-off grade (g/t Au)	4.60

#### 14.1.12 Geological Resources Category Block Model

Mineral resources were classified into Measured, Indicated and Inferred. Measured resources are defined within a distance of 8 m from underground or surface channel and from a minimum of three (3) drill holes in areas where the drill spacing is less than 50 m. Indicated resources are defined with a minimum of three (3) drill holes in areas where the drill spacing is less than 50 m. The Inferred category is defined with two (2) drill holes in areas where the drill spacing is less than 75 m and where there is reasonable geological and grade continuity.

The final block classification will be reorganized during the stope optimization procedure, but the impacts of this reclassification are expected to be minor.

#### 14.1.13 Mineral Resources Reclassification by Stope Optimizer

To ensure potentially mineable resources following CIM's MRMR Best Practice Guidelines (2019), DSO was used to optimize stope shapes (Deswik software). The block model used was generated after completing the aforementioned geological estimation. This allowed for more flexibility during optimization, including sub-shapes and anneal parameters to ensure maximum resource conversion to DSO. The additional parameters used for the optimization process are summarized in Table 14-5 and Table 14-6 for the LH and RP mining methods, respectively.

**Table 14-5 – DSO Parameters Used to Optimize Underground Movable shapes(using the Long-hole Mining Method) for the Flordin Project**

Mining Method		
Parameters	Units	Long-hole
Cut-Off Grade	g/t	3.10
Level (Height)	m	16
Section (Length)	m	10
Stope Width (Min)	m	1.7
Side Ratio	N/A	5
Dip (Min/Max)	Deg	43/90

**Table 14-6 – DSO Parameters Used to Optimize Underground Minable Shaped (using the Room & Pillars Mining Method) for the Flordin Project**

Mining Method		
Parameters	Units	Room & Pillars
Cut-Off Grade	g/t	4.60
Level (Height)	m	8
Section (Length)	m	8
Stope Width (Min)	m	2
Side Ratio	N/A	5
Dip (Min/Max)	Deg	0/42

Regarding the DSO-based resource classification, the dominant system ensures all resources are associated with one of the evaluated categories (measured, indicated, or inferred). The category of each DSO is dictated by the most prominent category by volume included in each solid.

For the LH method, the DSO parameters used a standard length of 10.0 m longitudinally along the strike of the deposit, a height of 16.0 m and a minimum width of 1.7 m. The minimum shape measures 5.0 m x 4.0 m x 1.7 m. The standard shape was optimized first. If it was not potentially economic, smaller stope shapes were optimized until they reached the minimum mining shape.

For the RP method, the DSO parameters used a standard length of 8.0 m longitudinally along the strike of the deposit, a height of 8.0 m and a minimum width of 2.0 m. The minimum shape measures 4.0 m x 4.0 m x 2.0 m. The standard shape was optimized first. If it was not potentially economic, smaller stope shapes were optimized until they reached the minimum mining shape.

Using conceptual mining shapes at a specific cutoff grade as constraints to report mineral resource estimates fulfils the criterion of “reasonable prospects for eventual economic extraction”, as defined in CIM MRMR Best Practice Guidelines (2019).

## 14.2 Mineral Resource Classification, Category or Definition

The resource classification definitions used for this report are those published by the Canadian Institute of Mining, Metallurgy and Petroleum in their document “CIM Standards on Mineral Resources and Reserves – Definitions and Guidelines” (“CIM Definition Standards”).

### Measured Mineral Resource

That part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

### Indicated Mineral Resource

That part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

### Inferred Mineral Resource

That part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

## 14.3 Global Resources Estimation

This 2023 MRE includes all blocks (“must-take blocks”) that fall within a potentially mineable shape to satisfy the “reasonable prospects for eventual economic extraction” under CIM’s MRMR Best Practice Guidelines (2019)

**Table 14-7 – Mineral Resources of the Flordin Gold Project**

Resources in Open Pit (cut-off grade 0.5 g/tAu)			Resources from Long Hole mineable shapes (cut-off grade 3.1 g/tAu)			Resources from Room and Pillar mineable shapes (cut-off grade 4.6 g/tAu)		
Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au
<b>Measured Resources</b>								
86,000	2.58	7,100	0	0	0	0	0	0
<b>Indicated Resources</b>								
1,444,000	2.15	99,900	227,000	3.75	27,500	1000	5.46	200
<b>Measured and Indicated Resources</b>								
1,530,000	2.18	107,000	227,000	3.75	27,500	1000	5.46	200
<b>Inferred Resources</b>								
244,000	2.38	18,600	323,000	3.83	39,800	8000	5.16	1,300

Notes to the 2023 MRE

1. The effective date of the 2023 MRE is May 15, 2023.
2. The independent and qualified persons (as defined by NI 43-101) for the 2023 MRE are Olivier Vadnais-Leblanc, P.Geo., Carl Pelletier, P.Geo., Eric Lecomte, P.Eng., and Simon Boudreau, P.Eng., from InnovExplo Inc.
3. The mineral resource estimate follows the CIM Definition Standards (2014) and CIM MRMR Best Practice Guidelines (2019).
4. These mineral resources are not mineral reserves because they do not have demonstrated economic viability. The results are presented undiluted and are considered to have reasonable prospects for eventual economic extraction (RPEEE).
5. The estimate encompasses 364 mineralized veins and structures developed using Genesis and interpolated using LeapFrog Edge.
6. 1-m composites were calculated within the mineralized zones using the grade of the adjacent material when assayed or a value of zero when not assayed. High-grade capping supported by statistical analysis was done on composites and was set to 25 g/t Au.
7. The estimate was completed using a sub-block model in Leapfrog Edge. A 10m x 2m x 2m (X,Y,Z) parent block size and a 1.25m x 0.25m x 0.25m (X,Y,Z) sub-block size was used.
8. Grade interpolation was obtained by Inverse Distance Squared (ID2) using hard boundaries.
9. A density value of 2.8 g/cm<sup>3</sup> was assigned to all mineralized zones.
10. Mineral resources were classified into Measured, Indicated and Inferred. Measured resources are defined within a distance of 8m from underground or surface channels and from a minimum of three (3) drill holes in areas where the drill spacing is less than 50 m. Indicated resources are defined with a minimum of three (3) drill holes in areas where the drill spacing is less than 50 m. The Inferred category is defined with two (2) drill holes in areas where the drill spacing is less than 75 m and where there is reasonable geological and grade continuity.
11. The requirement of a reasonable prospect of eventual economic extraction is satisfied by having cut-off grades based on reasonable parameters for potential surface and underground extraction scenarios, minimum widths and constraining volumes. The estimate is presented for potential underground scenarios (realized in Deswik) over a width of 1.7m for blocks 16m high by 16m long at a cut-off grade of 3.10 g/t Au for the long-hole method (LT) and 4.60 g/t Au for the conventional room and pillar (CP) method. Cut-off grades reflect the actual geometry and dip of the mineralized envelopes. The pit of the 2023 MRE is locally constrained by an optimized surface in Whittle using a rounded cut-off grade of 0.5 g/t Au. Cut-off grades reflect the actual geometry and dip of the mineralized envelopes. The cut-off grades were calculated using the following parameters: a slope of 50° in the rock and 30° in the overburden, a pit mining cost = C\$4.65/t, an underground mining cost of C \$169.50/t for LT and C\$262.00/t for CP, a processing cost of C\$21.50/t, general and administrative costs of C\$12.00/t, selling costs of C\$5.00/oz, a price of gold of US\$1,650 per ounce, a USD/CAD exchange rate of 1.33 and a mill recovery rate of 91.7%. Cut-off grades should be re-evaluated in light of future market conditions (metal prices, exchange rates, mining cost, etc.).
12. The number of metric tons (tonnes) was rounded to the nearest thousand, following the recommendations in NI 43-101, and any discrepancies in the totals are due to rounding effects. The metal contents are presented in troy ounces (tonnes x grade / 31.10348) rounded to the nearest hundred. Numbers may not add up due to rounding.
13. The independent and qualified persons for the 2023 MRE are not aware of any known environmental, permitting, legal, political, title-related, taxation, socio-political, or marketing issues that could materially affect the Mineral Resource Estimate.

### 14.3.1 Sensitivity

The following tables (Table 14-8) present the resources at different cut-off grades to demonstrate the sensitivity of the deposit. The base case at 3 g/t Au for the underground stopes and 0.5 g/t Au for the open pit are the official cut-off grades retained for the resources herein. All other cut-off grades are presented for comparative purposes only. A grade-tonnage curve is also presented in Figure 14-9.

**Table 14-8 – Sensitivities of Flordin Deposit**

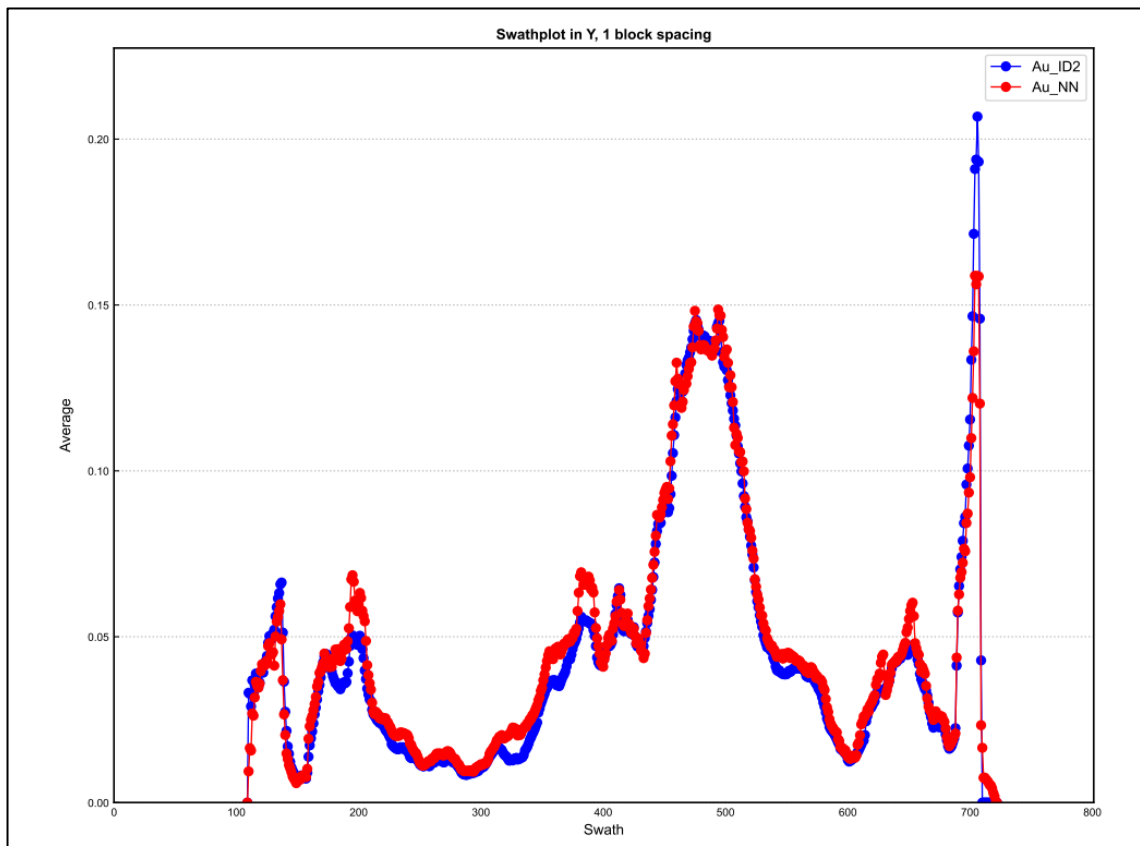
Sensitivities											
			Measured Resources			Indicated Resources			Inferred resources		
Potential mining method	Gold Price (\$US)	Cutoff grade (g/t Au)	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au
Open pit	1,320 \$	0.65	37,000	3.93	4,600	587,000	2.82	53,100	133,000	2.67	11,400
Long holes		3.9				137,000	4.68	20,600	146,000	4.62	21,600
Rooms& Pillars		5.7				2,000	6.21	300	3,000	6.39	700
Open pit	1,485 \$	0.6	80,000	2.71	7,000	1,102,000	2.36	83,600	193,000	2.55	15,800
Long holes		3.5				165,000	4.27	22,700	212,000	4.22	28,800
Rooms& Pillars		5.1				2,000	5.43	400	5,000	5.56	900
Open pit	Base Case 1,650 \$	0.5	86,000	2.58	7,100	1,444,000	2.15	99,900	244,000	2.38	18,600
Long holes		3.1				227,000	3.75	27,500	323,000	3.83	39,800
Rooms& Pillars		4.6				1,000	5.46	200	8,000	5.16	1,300
Open pit	1,815 \$	0.45	90,000	2.50	7,200	2,432,000	1.90	148,500	504,000	1.94	31,300
Long holes		2.9				199,000	3.55	22,700	376,000	3.64	44,000
Rooms& Pillars		4.2				2,000	5.10	300	13,000	4.82	1,900
Open pit	2,063 \$	0.4	93,000	2.44	7,300	4,041,000	1.69	219,100	961,000	1.76	54,500
Long holes		2.5				152,000	3.14	15,300	522,000	3.21	53,900
Rooms& Pillars		3.7				4,000	4.38	500	17,000	4.16	2,200

### 14.3.2 Block Model Validation

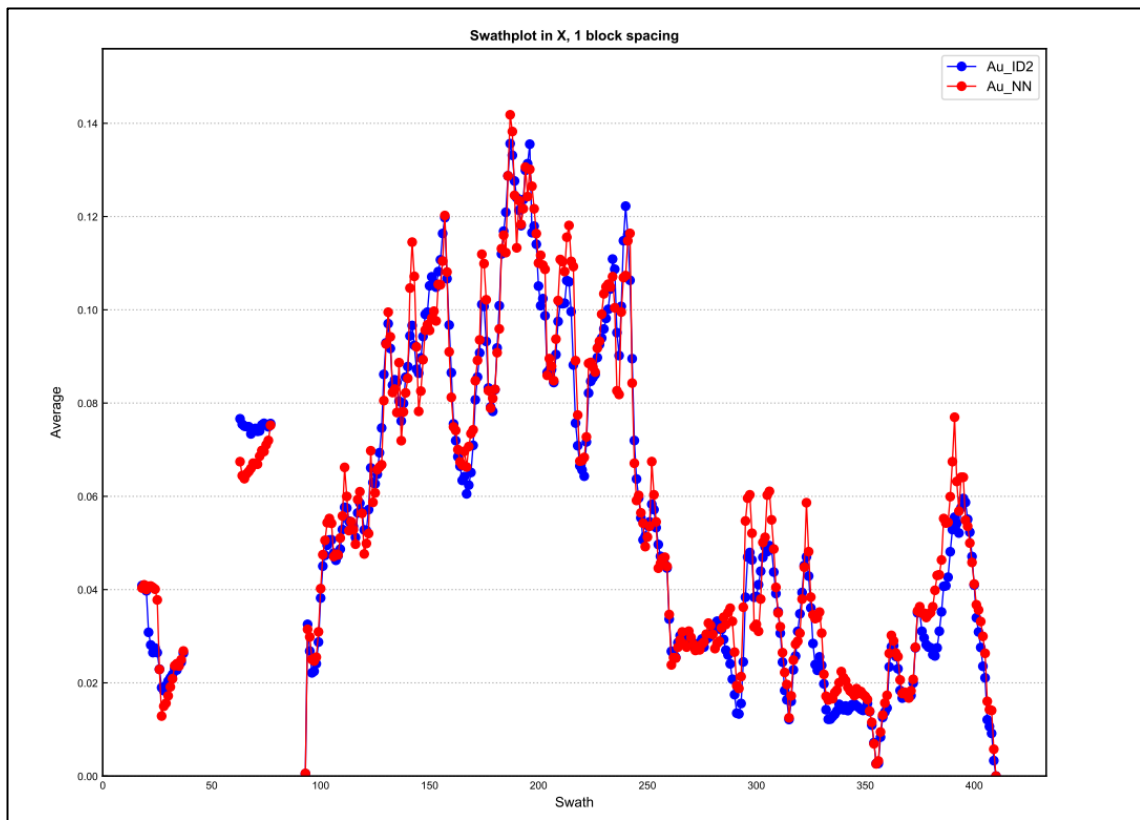
The nearest neighbour (“NN”) method was also attempted, but this method usually place too much emphasis on high grades and probably yielded slightly overestimated results and clustered the high grades in some areas, which did not properly represent the nature of this gold deposit.

ID2 was the preferred method to interpolate blocks on the Property. It was compared to the ID2 method (Figure 14-5, Figure 14-6, Figure 14-7).

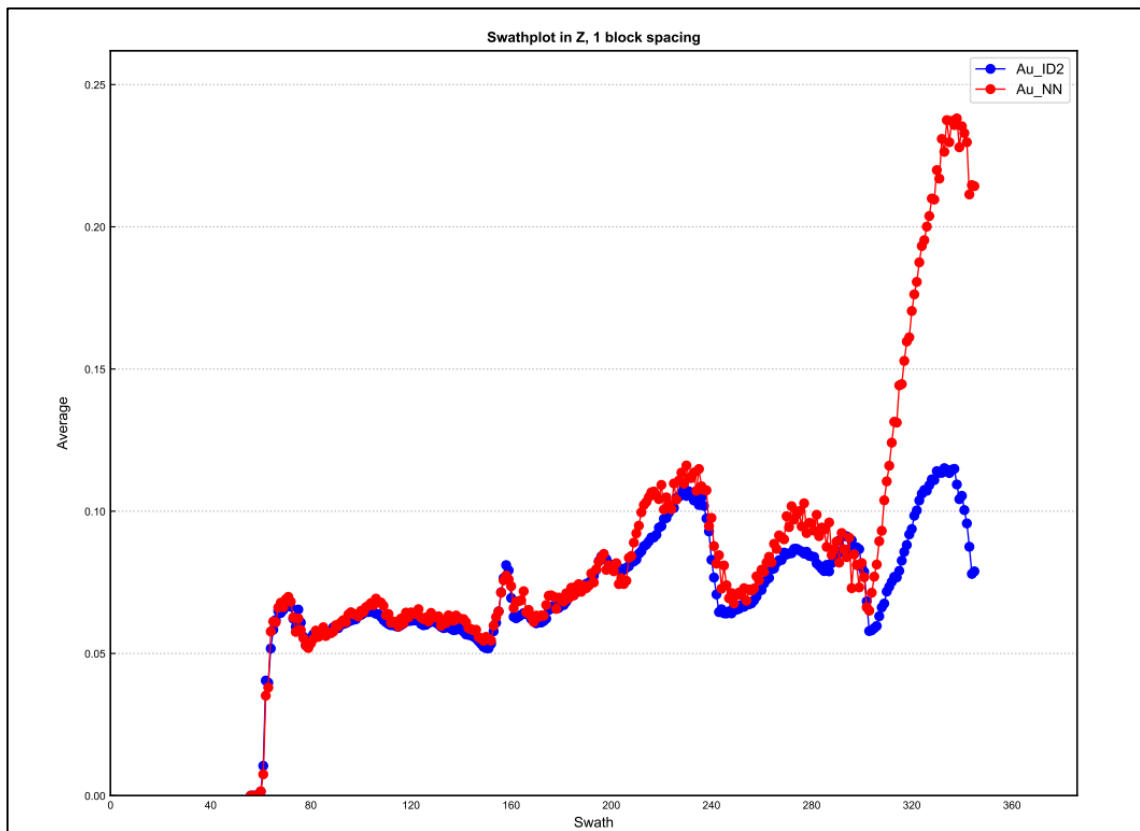
A block model validation was done between the assays, the composites and the blocks to compare the grades and the frequency (Figure 14-8). A table (Table 14-9) with statistics also shows the relation between assays, composites and the blocks. Figure 14-9, Figure 14-10 and Figure 14-11 show the relation between the blocks, the composites and the volume of material on X, Y and Z axis



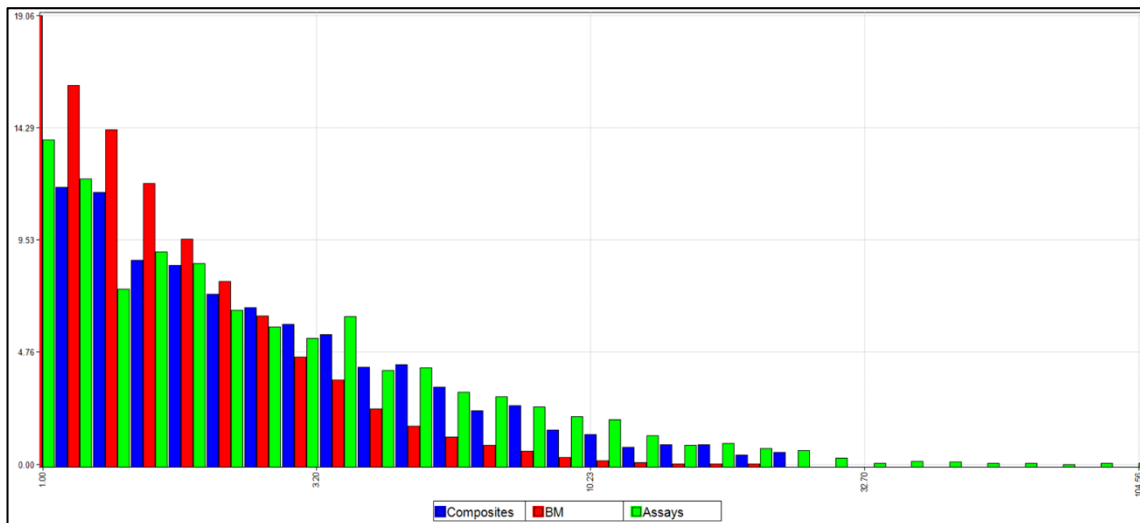
**Figure 14-5 – ID2 vs ID3 on the Y Axis**



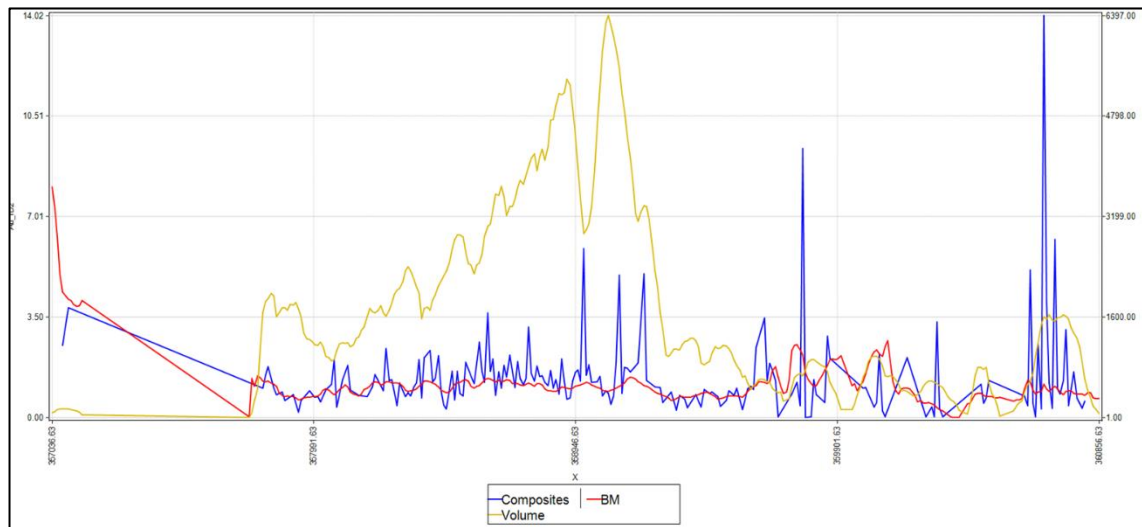
**Figure 14-6 – ID2 vs ID3 on the X Axis**



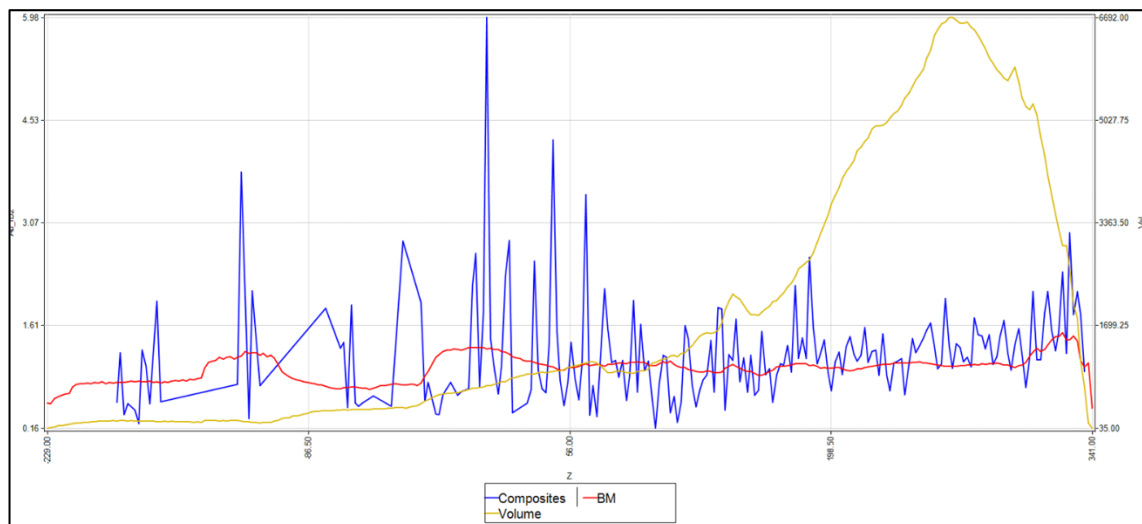
**Figure 14-7 – ID2 vs ID3 on the Z Axis**



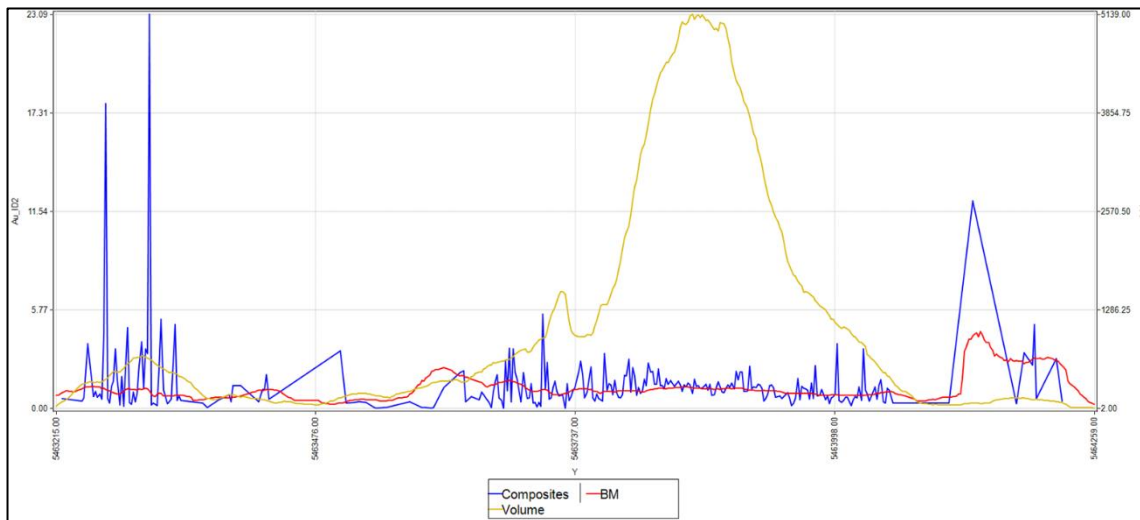
**Figure 14-8 – Block vs Composites vs Assays**



**Figure 14-9 – Block Model validation on the X axis**



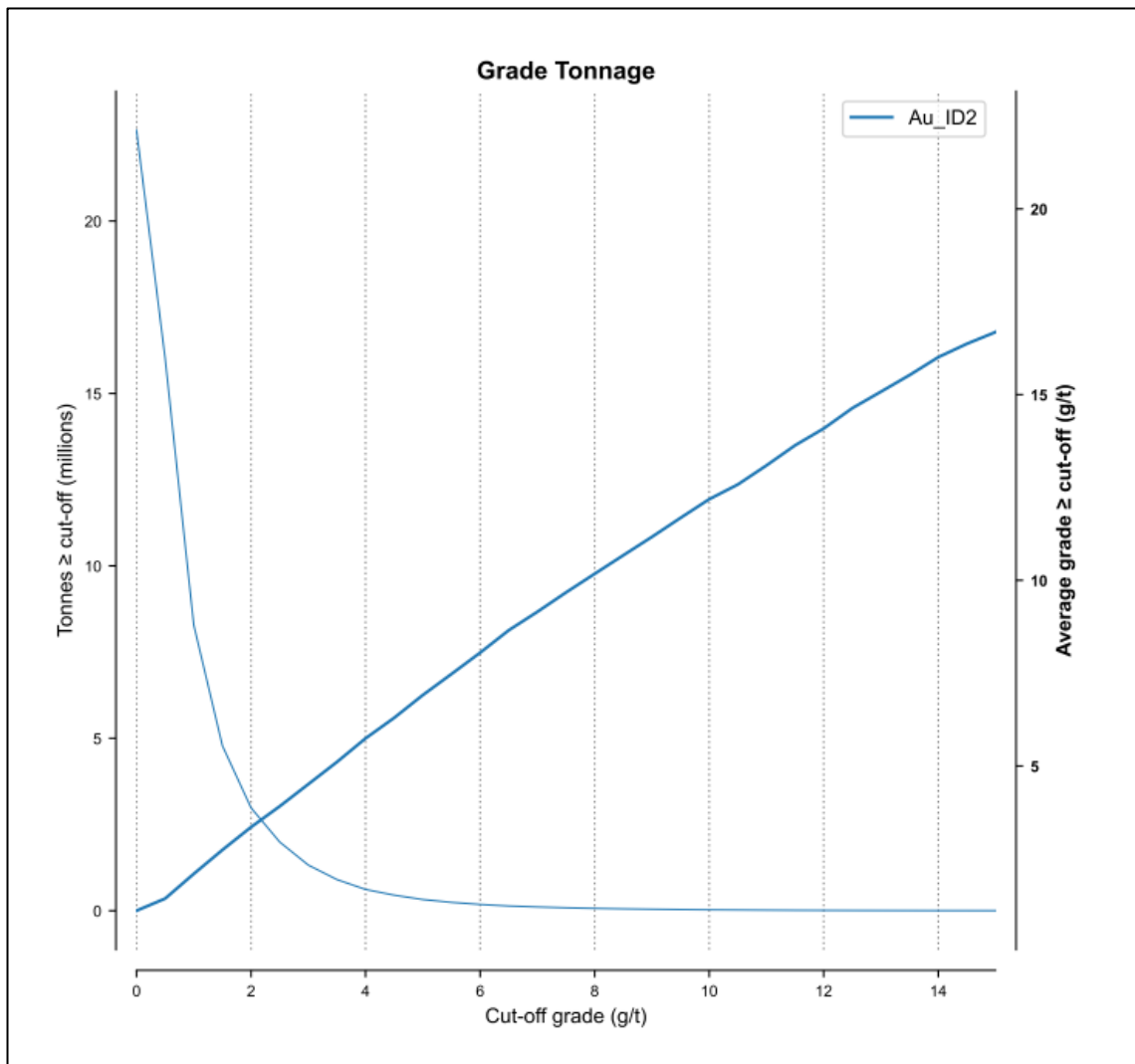
**Figure 14-10 – Block Model Validation on the Z Axis**



**Figure 14-11 – Block Model validation on the Y Axis**

**Table 14-9 – Relation between assays, composites and blocks**

	Composites	Block Model	Assays
Min Value	0.0000	0.0000	0.0000
Max Value	25.0000	22.1190	122.7400
Average	1.2982	1.0675	1.6922
Length Weighted Average	1.3052		1.5407
Sum of Length	5667.6420		5821.2400
Variance	6.1286	1.3189	15.8559
Standard Deviation	2.4756	1.1484	3.9820
% Variation	1.9070	1.0758	2.3531
Median	0.5186	0.7161	0.6200
First Quartile	0.2700	0.4296	0.3400
Third Quartile	1.2665	1.2617	1.4550
Count	5967	520961	6403



**Figure 14-12 – Grade Tonnage Curve**

**15. MINERAL RESERVE ESTIMATES**

This section does not apply to the Project.

**16. MINING METHODS**

This section does not apply to the Project.

**17. RECOVERY METHODS**

This section does not apply to the Project.

**18. PROJECT INFRASTRUCTURE**

This section does not apply to the Project.

**19. MARKET STUDIES AND CONTRACTS**

This section does not apply to the Project.

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

This section does not apply to the Project.

**21. CAPITAL AND OPERATING COSTS**

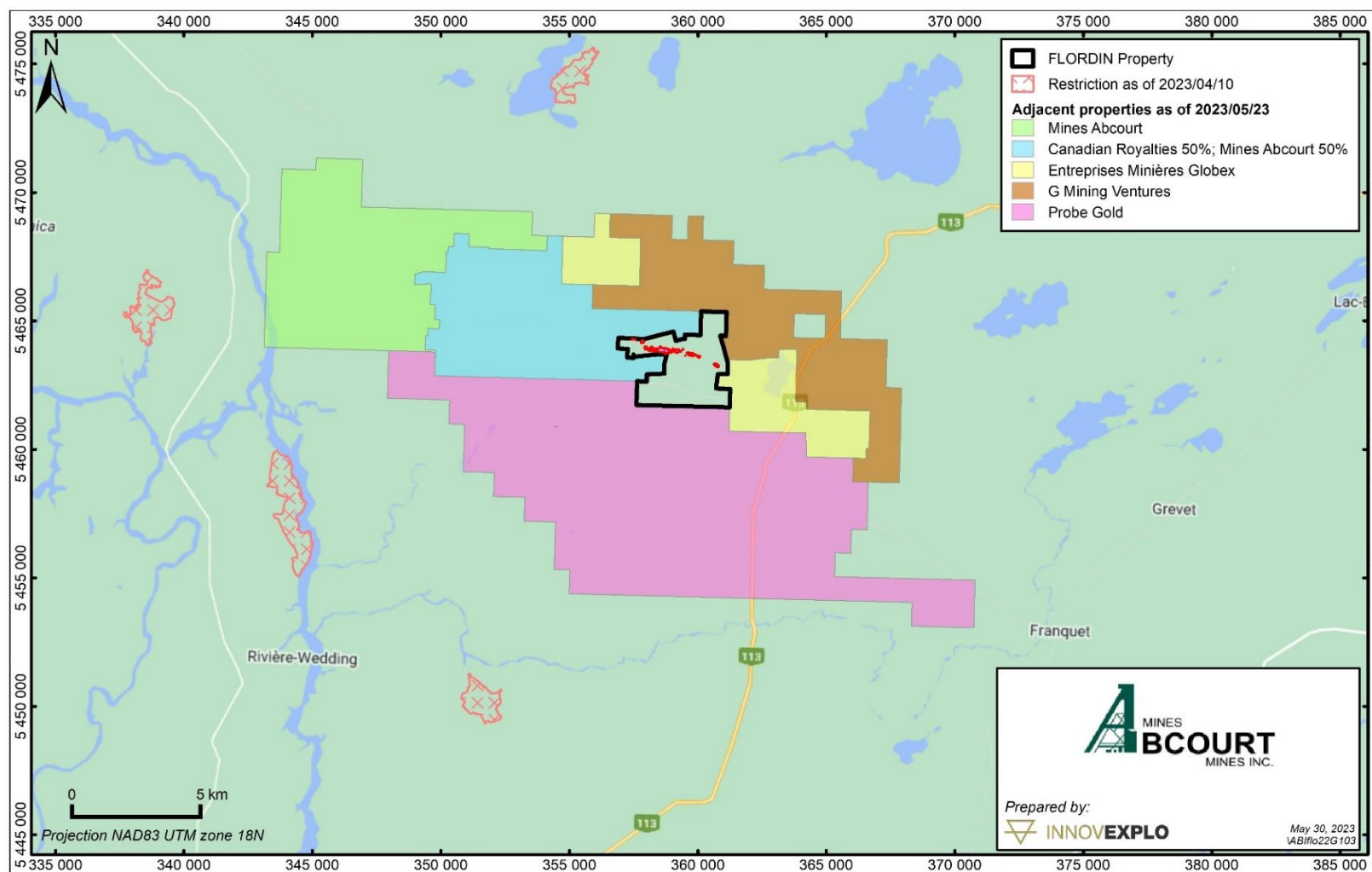
This section does not apply to the Project.

**22. ECONOMIC ANALYSIS**

This section does not apply to the Project.

## **23. ADJACENT PROPERTIES**

According to the GESTIM database on June 5, 2023, four (4) mining properties are adjacent to the Flordin Property (Fig. 23.1): Cameron Lake to the north (G Mining Ventures Corp.), Florence to the south (Probe Gold Inc), Cameron Shear (Joint Venture 50% Canadian Royalties Inc./50% Abcourt)) to the west and Cameron to the east (Globex Mining Entreprises Inc.) (Figure 23.1). They all host known mineralization.



**Figure 23-1 – Adjacent properties**

#### **24. OTHER RELEVANT DATA AND INFORMATION**

No other relevant data or information are provided in this technical report.

## 25. INTERPRETATION AND CONCLUSIONS

The objective of InnovExplo's mandate was to generate a mineral resource estimate for the Property (the "2023 MRE") and provide a supporting Technical Report in compliance with NI 43-101 and Form 43-101F1.

InnovExplo used Geovia's Whittle to evaluate the open pit portion of the deposit and Deswik Stope Optimizer ("DSO") to evaluate the underground portions of the deposit considered potentially profitable for underground mining and follows CIM MRMR Best Practice Guidelines, which state that "*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*". The 2023 MRE was established using blocks in potentially mineable shapes.

InnovExplo considers the present 2023 MRE reliable and thorough and based on quality data, reasonable hypotheses, and parameters compliant with NI 43-101 criteria and CIM Definition Standards.

### 25.1 Mineral Resource Estimate

The 2023 MRE presented herein was prepared by Olivier Vadnais-Leblanc, P.Geo. of InnovExplo, using all available information.

The mineral resources presented in Item 14 are not mineral reserves since they have not demonstrated economic viability.

The effective date of this MRE is May 15, 2023.

InnovExplo's mandate was to generate resources with all available information. Three hundred and sixty-four (364) different 3D solids have been created. A margin of 50 m was set around the most external drill hole intercept to limit the wireframes. If a drill hole not selected for the interpreted vein was located in the margin area, the margin was automatically set at half the distance between drill holes. The average thickness of the veins is 1.75 m, and the minimum modelling grade is 0.25 g/t Au. 3D modelling was done using LeapFrog Geo.

The 2023 MRE was prepared using 3D block modelling and the inverse distance squared ("ID2") interpolation method in a LeapFrog Edge block model.

The database contains 578 surface drill holes and 367 channels. The database also includes conventional analytical gold assay results and coded lithologies. Channels were used for 3D modelling purposes only.

**Table 25-1 – 2023 Mineral Resource Estimate for the Flordin Deposit**

Potential open pit (0.5 g/t Au cut-off)			Potential underground long holes (3.1 g/t Au cut-off)			Potential underground room & pillars (4.6 g/t Au cut-off)		
Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au
<b>Measured Resources</b>								
86 000	2,58	7 100	0	0,00	0	0	0,00	0
<b>Indicated Resources</b>								
1 444 000	2,15	99 900	227 000	3,75	27 500	1 000	5,46	200
<b>Measured + Indicated Resources</b>								
1 530 000	2,18	107 000	227 000	3,77	27 500	1 000	6,22	200
<b>Inferred Resources</b>								
244 000	2,38	18 600	323 000	3,83	39 800	8 000	5,16	1 300

Notes to the 2023 MRE

1. The effective date of the 2023 MRE is May 15, 2023.
2. The independent and qualified persons (as defined by NI 43-101) for the 2023 MRE are Olivier Vadnais-Leblanc, P.Geo., Carl Pelletier, P.Geo., Eric Lecomte, P.Eng., and Simon Boudreau, P.Eng., from InnovExplo Inc.
3. The mineral resource estimate follows the CIM Definition Standards (2014) and follows the CIM MRMR Best Practice Guidelines (2019).
4. These mineral resources are not mineral reserves because they do not have demonstrated economic viability. The results are presented undiluted and are considered to have reasonable prospects for eventual economic extraction (RPEEE).
5. The estimate encompasses 364 mineralized veins and structures developed using Genesis and interpolated using LeapFrog Edge.
6. 1 m composites were calculated within the mineralized zones using the grade of the adjacent material when assayed or a value of zero when not assayed. High-grade capping supported by statistical analysis was done on composites and was set to 25 g/t Au.
7. The estimate was completed using a sub-block model in Leapfrog Edge. A 10m x 2m x 2m (X,Y,Z) parent block size and a 1.25m x 0.25m x 0.25m (X,Y,Z) sub block size was used.
8. Grade interpolation was obtained by Inverse Distance Squared (ID2) using hard boundaries.
9. A density value of 2.8 g/cm<sup>3</sup> was assigned to all mineralized zones.
10. Mineral resources were classified into Measured, Indicated and Inferred. Measured resources are defined within a distance of 8m from underground or surface channel and from a minimum of three (3) drill holes in areas where the drill spacing is less than 50 m. Indicated resources are defined with a minimum of three (3) drill holes in areas where the drill spacing is less than 50 m. The Inferred category is defined with two (2) drill hole in areas where the drill spacing is less than 75 m where there is reasonable geological and grade continuity.
11. The requirement of a reasonable prospect of eventual economic extraction is satisfied by having cut-off grades based on reasonable parameters for potential surface and underground extraction scenarios, minimum widths and constraining volumes. The estimate is presented for potential underground scenarios (realized in Deswik) over a width of 1.7m for blocks 16m high by 16m long at a cut-off grade of 3.10 g/t Au for the long-hole method (LT) and 4.60 g/t Au for the conventional room and pillar (CP) method. Cut-off grades reflect the actual geometry and dip of the mineralized envelopes. The pit of the 2023 mineral resource estimate is locally constrained by an optimized surface in Whittle using a rounded cut-off grade of 0.5 g/t Au. Cut-off grades reflect the actual geometry and dip of the mineralized envelopes. The cut-off grades were calculated using the following parameters: a slope of 50° in the rock and 30° in the overburden, a pit mining cost = C\$4.65/t, an underground mining cost of C\$169.50/t for LT and C\$262.00/t for CP, a processing cost of C\$21.50/t, general and administrative costs of C\$12.00/t, selling costs of C\$5.00/oz, a price of gold of US\$1,650 per ounce, a USD/CAD exchange rate of 1.33 and a mill recovery rate of 91.7%. Cut-off grades should be re-evaluated in light of future market conditions (metal prices, exchange rates, mining cost, etc.).
12. The number of metric tons (tonnes) was rounded to the nearest thousand, following the recommendations in NI 43-101 and any discrepancies in the totals are due to rounding effects. The metal contents are presented in

troy ounces (tonnes x grade / 31.10348) rounded to the nearest hundred. Numbers may not add up due to rounding.

13. The independent and qualified persons for the 2023 MRE are not aware of any known environmental, permitting, legal, political, title-related, taxation, socio-political, or marketing issues that could materially affect the Mineral Resource Estimate.

Several factors may affect the mineral resource and mineral reserve estimates, including metal price, exchange rate (CAD:USD), unusual or unexpected geological or geotechnical formations, seismic activity that could be encountered, ore grades lower than expected, physical or metallurgical characteristics of mineralization that could be less amenable to mining or treatment than expected, data on which engineering assumptions are made that prove faulty, and an increase in dilution.

## 25.2 Risks and Opportunities

Table 25-3 identifies the significant internal risks, potential impacts and possible risk mitigation measures that could affect the future economic outcome of the Project. The list does not include the external risks that apply to all mining projects (e.g., changes in metal prices, exchange rates, availability of investment capital, change in government regulations, etc.). Significant opportunities that could improve the economics, timing and permitting are identified in Table 25-3. Further information and study are required before these opportunities can be included in the project economics.

**Table 25-2 – Risks for the Project**

RISK	POTENTIAL IMPACT	POSSIBLE RISK MITIGATION
Geological complexity of the deposit greater than expected	Resources not located at expected locations during mining	Interpret at a lower cut-off grade to see different trends. Closely follow new drilling interceptions and readjust the interpretation to the new drill holes.
Inability to attract experienced professionals	The ability to attract and retain competent, experienced professionals is a key factor to success	An early search for professionals will help identify and attract critical people through all project phases, from early exploration to more advanced

**Table 25-3 – Opportunities for the Project**

OPPORTUNITIES	EXPLANATION	POTENTIAL BENEFIT
Deeper drilling	Where deep drill holes are drilled, mineralization is generally intercepted.	The chances are good that deeper drilling will intersect high-grade zones. This could greatly improve underground resources.
Infill drilling between drill sections	In some areas, especially in the western part of the deposit, drilling sections are far apart, sometimes by as much as 200 m	With more infill drilling, some mineralized veins could be linked together. High grades are often encountered in shallow drill holes. Those drill holes could improve the size and depth of the pits.
Surface trenches	Trenches can be sampled using surface channels	Surveying surface channels can yield resources with a better classification than by drilling alone.

## 26. RECOMMENDATIONS

The results of the 2023 MRE illustrate that the project has reasonable prospects for eventual economic extraction (“RPEEE”) and sufficient merit for further exploration work and engineering studies.

However, some areas in the deposit lack the necessary information to further expand the mineralized zones. Those areas may carry valuable gold grades as they are positioned near the margins of interpreted mineralized zones or between two known mineralized zones. Many interpreted zones could be expanded, increasing the number of ounces in the resources.

Linking parts of the deposits into a single large deposit may be possible with more drilling.

### 26.1 Costs Estimate for Recommended Work

InnovExplo has prepared a cost estimate for the recommended work program as a guideline. The budget for the proposed program is presented in Table 26-1.

**Table 26-1 – Estimated Costs for the Recommended Work Program**

WORK PROGRAM	BUDGET COST
Exploration and definition drilling (approx. 20,000 m at \$175/m)	\$3,500,000
Potentially upgrade resources categories for a PEA Study	\$1,200,000
Surface exploration, surface sampling, trenches	\$800,000
Contingencies (+15%)	\$825,000
<b>TOTAL</b>	<b>\$6,325,000</b>

The recommended program is provided in Table 26-1 and described below. Drilling and surface exploration could be conducted simultaneously. A preliminary economic analysis should be conducted using the new exploration drilling results.

The recommended infill and exploration drilling program should be guided by the current geological reinterpretation for the zones in the lower part of the deposit. All sections of the deposit could eventually be linked together.

Drilling should further investigate the eastern, western and depth extensions to increase the extent of the inferred resources.

The QPs believe that the recommended work program and proposed expenditures are appropriate and well thought out, and the proposed budget reasonably reflects the type and amount of contemplated activities.

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